PIPING MATERIAL CLASSES

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ATTACHMENT 1 - **PIPING ITEM CODE LIST(*e-file* with complete description-*261* pages -)**

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1. DOCUMENT SCOPE

This document defines the main principles to be considered for the design and the implementation of the selection of materials for process and utility piping systems used for South Pars Gas Field Development (Phases 17 and 18), at ASSALUYEH, Iran.for the Onshore facilities.

2. INTRODUCTION

The IDRO/OIEC/IOEC Consortium has been contracted by the National Iranian Oil Company (NIOC/POGC) to conduct the EPCC for South Pars Phases 17 & 18 Project. This Project includes Offshore Facilities, platform and undersea pipelines, and Onshore Facilities for the processing of the reservoir fluid.

WorleyParsons Pty Ltd has in turn been contracted by the IDRO/OIEC Consortium to conduct the Basic Engineering and FEED for South Pars Phases 17 & 18 for the Onshore facilities.

The South Pars Phases 17 & 18 Project offshore work-scope is being carried out by a separate Offshore Consultant. WorleyParsons will lead, identify and coordinate deliverables required to manage the physical interfaces between the Onshore and Offshore Design Consultants.

3. PROJECT OVERVIEW

The Iranian South Pars field is the largest discovered offshore gas field in the world, located 100 km offshore in the Persian Gulf. Reservoir fluids are transported to shore via two sea lines to the mainland (ASSALUYEH) at a distance of approximately 105 km for further treatment.

South Pars Phases 17 & 18 are a further development of the South Pars gas field consisting of two 1000 MMSCFD phases(Four 500 MMSCFD Gas Treating Units).

The facilities shall be developed on the basis of supplying treated lean gas to the domestic gas network and ethane gas to the nearby petrochemical complex at the required specifications while maximising liquid recovery as propane and butane and stabilised hydrocarbon condensate for export.

A new interconnecting pipeline shall transport the lean gas produced to the domestic gas distribution network via fiscal metering facilities.

The produced condensate shall be stored in dedicated storage facilities, periodically pumped through a condensate export pipeline to a SBM via fiscal metering facilities.

The treated propane and butane shall be stored separately in refrigerated atmospheric double wall storage tanks, periodically pumped through a dedicated loading pipelines network to LPG carriers berthed at a jetty via fiscal metering facilities.

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3.1 Plant Description

The main functions of the Onshore processing facilities are:

- Reception facilities for the HP fluids and separation of the raw gas and condensate/water/MEG mixture.
- Condensate stabilisation producing stabilised condensate for storage and export. The light ends are recycled to the HP gas system. One condensate flashing unit, normally not operated, is provided as a back-up to the stabilisation facilities.
- Gas treatment facilities producing sales gas, gaseous ethane and NGL's consisting of:
  - H_2S removal from gas / CO_2 total removal from gas.
  - Dehydration unit, using molecular sieves technology.
  - Mercury guard.
  - Ethane extraction unit, producing sales gas, gaseous ethane and NGL.
- Ethane trace sulphur removal for further export.
- NGL fractionation facilities to produce sour liquid propane, butane and condensate. This condensate is routed to the condensate stabilisation system for treatment.
- Propane and butane treatment for mercaptans removal and drying for storage and export.
- Propane and butane separate atmospheric storage tanks, double wall, and full containment, refrigerated with reinforced concrete external walls.
- MEG regeneration and injection unit.
- Sulphur recovery producing liquid sulphur for solidification, granulation and export.
- Utilities, offsites as required for operation.
- Gas export compression.

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4. CODES AND STANDARDS

All work shall be completed in accordance with engineering codes and standards listed in document:

DB-1718-999-P332-0203: List of Applicable Codes & Industry Standards.

The following Section contains lists of National, and International specifications, codes and standards which have been reviewed for extracts or referred to in the Piping Classes contained within this specification document. The latest edition, to date, of the following standards have been used.

4.1 International Codes & Standards

ASME Standards

B1.1	Unified Inch Screw Threads
B1.2	Gages and Gaging for unified inch screw threads
B1.20.1	Pipe Threads
B16.5	Steel Pipe Flanges and Pipe Fittings (up to 24")
B16.9	Butt weld Fittings
B16.10	Face to face and end to end dimensions of Valves
B16.11	Socket weld and Screwed Fittings
B16.20	Metallic Gaskets for Pipe Flanges – Ring Joint, Spiral Wound and Jacketed
B16.21	Non Metallic Gaskets for Pipe Flanges
B16.24	Cast Copper Alloy Pipe Flanges and Flanged Fittings
B16.28	Wrought Steel Butt welding Short Radius Elbows & Returns.
B16.25	Butt welding Ends
B16.34	Steel Valves
B16.36	Orifice Flanges
B16.47	Large Diameter Steel Flanges (26" NB and Larger)
B16.48	Steel Line Blanks
B18.2.1	Square and Hexagonal Bolts and Screws
B18.2.2	Square and Hexagonal Nuts
B31.1	Power Piping
B31.3	Process Piping
B31.4	Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
B31.8	Gas transmission and distribution piping systems
B36.10M	Welded and Seamless wrought steel pipe
B36.19M	Stainless Steel Pipe Dimensions
B46.1	Surface Texture

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ASTM Standards

A105	Carbon Steel Forgings for Piping Applications
A106	Seamless Killed Carbon Steel Pipe for High Temperature Service
A182	Standard Specification for Forged or Rolled Alloy Steel Pipe Flanges
A193	Alloy Steel and Stainless Steel Bolting Materials for High Temperature Service
A194	Carbon and Alloy Steel Nuts for Bolts
A216	Specification for Carbon Steel Castings
A234	Seamless and Welded Carbon Steel and Alloy Steel Pipe Fittings
A240	Stainless Steel Plate
A269	Standard Specification For Seamless and Welded Austenitic Stainless Steel Tubing
A312	Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipes
A320	Alloy Steel Bolting Materials for Low Temperature Service
A333	Standard Specification for Seamless and Welded Steel Pipe for Low Temperature Service
A335	Seamless Ferritic Alloy Steel Pipe for HT Service
A350	Standard Specification for Carbon and Low Alloy Steel Forgings, Requiring Notch Toughness Testing
A352	Steel Castings Ferritic and Martensitic for Pressure Containing Parts suitable for Low Temperature Service
A358	Standard Specification for Electric Fusion Welded Chromium-Nickel Alloy Steel Pipe for High Temperature Service
A387	Pressure Vessel Plates, Alloy Steel ,Chromium-Molybdenum.
A403	Wrought Austenitic Stainless Steel Piping Fittings
A420	Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low Temperature Service
B466	Standard Specification for Seamless Copper-Nickel Pipe
B467	Standard Specification for Welded Copper-Nickel Pipe
A516	Impact Tested Carbon Steel Plate
A671	Standard Specification for Electric Fusion Welded Steel Pipe for Atmospheric and Lower Temperature
A691	Carbon and Alloy Steel Pipe EFW for HP Service at High Temperature.
A790	Standard Specification for Seamless and Welded Ferritic/Austenitic Stainless Steel Pipe
A815	Standard Specification for Wrought Ferritic, Ferritic/Austenitic, and Martensitic Stainless Steel Piping Fittings

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A928	Standard Specification for Ferritic/Austenitic (Duplex) Stainless Steel Pipe Electric Fusion Welded with Addition of Filler Meta
A453	Standard specification for high-temperature bolting materials,with expansion coefficients comparable to austenitic stainless steel.
B88	Standard Specification for Copper Alloy
B148	Standard Specification for Aluminium-Bronze Sand Castings
B265	Specification for Titanium and Titanium Alloy Strip Sheet and Plate
B337	Specification for Seamless and Welded Titanium Alloy Pipe
B348	Specification for Titanium and Titanium Alloy Bars
B363	Specification for Seamless and Unalloyed Titanium and Titanium Alloy Welding Fittings
B367	Specification for Titanium and Titanium Alloy Forgings
B381	Specification for Titanium and Titanium Alloy Castings
D2310	Classification for Machine Made Fibreglass Pipe
D2996	Specification for Filament Wound Fibreglass Pipe

British Standards

BS 1133	Protective Coating Standard
BS 1873	Specification for Cast Globe Valve
BS 1868	Specification for Cast Check Valve
BS 5155	Specification for Lined Butterfly Valves
BS 5351	Specification for Quarter Turn Ball Valves
BS 5352	Specification for Forged Globe and Check Valves
BS 5353	Specification for Steel Plug Valves
BS 6755-2	Testing of Valves-Specification for fire type testing requirements

API Standards

API 5L	Specification for Seamless and Welded Steel Line Pipe
API 590	Specification for Fig 8 Blinds (Refer to ASME B16.48)
API 594	Specification for Wafer Type Check Valves
API 598	Specification for Valves Inspection and Test
API 600	Specification for Cast Gate Valves
API 601	Superseded by ASME B16.20
API 602	Specification for Forged Gate Valves
API 607	Fire testing for Soft Seated Quarter Turn Valves

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API 609	Specification for High Performance Butterfly Valves
API 6FA	Specification for Fire Testing of Valves
API 6D	Specification for Gate, Globe and Check Valves for Pipelines
API 15LR	Specification for low pressure fibreglass line pipe and fitting

MSS-SP Standards

MSS-SP-6	Standard Finishes for Contact Faces of Pipe Flanges and Connecting-Ends Flanges of Valves and Fittings
MSS-SP-9	Spot Facing of Bronze, Iron and Steel Flanges
MSS-SP-25	Standard Marking Requirements for Equipment
MSS-SP-42	Corrosion Resistant Gate, Globe, Angle and Check Valves with Flanged and Butt Weld Ends
MSS-SP-43	Dimensional Tolerances for Stainless Steel and Nickel Alloy Butt weld Fittings
MSS-SP-45	By-pass and Drain Connection Standard
MSS-SP-61	Pressure Testing of Steel Valves
MSS-SP-70	Cast Iron Gate Valves Flanged and Threaded Ends
MSS-SP-72	Ball Valves with Flanged or Butt-welding Ends for General Service
MSS-SP-75	Specification for High Test Wrought Butt-welding Fittings
MSS-SP-80	Bronze Gate, Globe, Angle and Check Valves
MSS-SP-95	Swage(d) Nipples
MSS-SP-97	Integrally Reinforced Forged Branch Outlet Fittings

NACE Standards

NACE MR.01-75/ /ISO 15156:2003	Petroleum and natural gas industries-materials for use in H2S-containing environments in oil and gas production
TM.02-84	Evaluation of Pipeline and Pressure Vessel Steels for Resistance to Hydrogen Induced Cracking
TM 01-77	Laboratory Testing of Material For Resistance to Sulphide Stress Cracking in H2S Environments

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EEMUA Standards

EEMUA 144 Offshore Specification For 90-10 Cu-Ni Tubing

EEMUA 145 Offshore Specification For 90-10 Cu-Ni Flanges

EEMUA 146 Offshore Specification For 90-10 Cu-Ni Fittings

5. REFERENCE DOCUMENTS

The following Section contains lists of Project specifications and standards which have been reviewed for extracts or referred to in the Piping Classes contained within this specification document. The latest edition, to date, of the following standards have been used.

5.1 Project Specifications and Standards

RP-1718-999-1300-0020 Design of GRP Piping Job Specification

RP-1718-999-1300-0021 Valves Job Specification

RP-1718-999-1300-0022 Pipe Job Specification

RP-1718-999-1300-0023 Pipe Fittings Job Specification

RP-1718-999-1300-0024 Flanges, Spectacle Blinds, Blanks and Spacers Job Specification

RP-1718-999-1300-0025 Bolting Job Specification

RP-1718-999-1300-0026 Gaskets Job Specification

RP-1718-999-1300-0028 Valves (cryogenic service) Job Specification

RP-1718-125-1300-0001 Specification For Glass Reinforced Plastic Piping Materials (Tubes & Accessories) - Sea Water Service

RP-1718-999-6300-0002 Job Specification Metallurgical Requirements for Carbon Steel in Sour Wet Service (SSCC & HIC)

RP-1718-999-6300-0003 Job Specification Metallurgical Requirements for Carbon Steel in Sour Service (SSCC only)

RP-1718-999-6300-0004 Valve Material Requirements for use in Sour Service Job Specification

RP-1718-999-6300-0006 Specification for Fabrication and Welding of Piping Systems in Cupronickel and Associated Materials

RP-1718-999-1300-0033 Colour Coding for Piping Material Identification

RP-1718-999-6300-0007 Steel Piping Fabrication Procedures

RP-1718-999-6600-0001 Shop & Field Painting Specification

RP-1718-999-1482-0002 External Corrosion Protection for Underground Steel Pipes

RP-1718-171-6300-0002 Corrosion and Material Selection review

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RP-1718-999-1300-0003 Hydrostatic Testing of Piping Systems

RP-1718-999-1300-0030 Pneumatic testing of Above Ground Piping Systems

RP-1718-999-1300-0070 List of Piping Engineering Documentation

RP-1718-999-1300-0006 Flexibility Analysis

RP-1718-999-0400-0003 Allowable Nozzle Loads on Static Equipment

RP-1718-999-1300-0043 Model Review Check List

RP-1718-999-1300-0007 Engineering Design Specification for Piping Support

RP-1718-999-1300-0004 Piping Design Specification

RP-1718-999-1300-0071 Spring Hangers and Supports

RP-1718-999-1300-0062 Job Specification Installation Rules for Jacketed Piping

The following are applicable to X65 or equivalent pipeline materials of construction:

RP-1718-999-1300-0073 Carbon Steel Tees for Pipelines

RP-1718-999-1300-0074 Fabrication of Seamless Pipes for Pipelines (sour service)

RP-1718-999-1300-0075 Fabrication of Longitudinally Submerged Arc Welded Pipes for Pipelines (sour effluent)

RP-1718-999-1300-0076 Carbon Steel Flanges and other Forgings for Pipelines (sour effluent)

RP-1718-999-1300-0077 Material and Fabrication of Hot Formed Elbows and Hot Pressed Elbows for Pipelines (sour effluent)

RP-1718-999-1300-0078 Fabrication of Longitudinally Submerged Arc Welded Pipes for Pipelines (sweet effluent)

RP-1718-999-1300-0079 Carbon Steel Flanges and other Forgings for Pipelines (sweet effluent)

RP-1718-999-1300-0080 Material and Fabrication of Hot Formed Elbows and Hot Pressed Elbows for Pipelines (sweet effluent)

RP-1718-999-1300-0081 Material and Fabrication of Hot Pressed Plates for Cap (sour effluent)

5.2 Other Documents

DB-1718-999-P332-0204 Basic Engineering Design Data for On-shore Facilities

DW-1718-999-1301-0001 Piping Typical Detail Drawing

6. ABBREVIATIONS

AFC	Approved for Construction
AFD	Approved for Design
AISI	American Iron and Steel Institute
AIT	Auto-Ignition Temperature

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ANSI	American National Standard Institute
API	American Petroleum Institute
ASA	Advanced Safety Audit
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing And Materials
BA	Ball Valve
BB	Bolted Bonnet
BC	Bolted Cover
BE	Bevelled End
BG	Bolted Gland
bbl	Barrels
BPM	Business Processing Maps
Br	Bronze
BU	Butterfly Valve
BW	Butt Welding
CAD	Computer Aided Design
CAPEX	Capital Expenditure
CAS	Cast Alloy Steel
CCS	Cast Carbon Steel
CGR	Condensate Gas Ratio
CH	Check Valve
CL	Class
CLR	Crack Length Ratio
CNAF	Compressed Non Asbestos Fibre
CONC	Concentric
CP	Capillary End
C-PCV	Chlorinated Poly Vinyl Chloride
Cr	Chromium
CS	Carbon Steel
CSR	Crack Sensitivity Ratio
CTR	Crack Thickness Ratio
Cu Ni	Copper-Nickel
DCN	Design Change Notice
DEG	Degree

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DIAPH	Diaphragm
ECC	Eccentric
EFW	Electric Fusion Welded
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement, Construction
EPCC	Engineering, Procurement, Construction and Commissioning
ERW	Electric Resistance Welded
ES	Extended Spindle
FAS	Forged Alloy Steel
FCS	Forged Carbon Steel
FEED	Front End Engineering Design
FF	Flat Face
FFQ	Full Face
FLEX	Flexible
GA	Gate Valve
GALV	Galvanised
GL	Globe Valve
GO	Gear Operated
Gr.	Grade
GRP	Glass Reinforced Plastic
HAZOP	Hazard and Operability
HCP	Hard Chrome Plated
HEX	Hexagonal
HIC	Hydrogen Induced Cracking
HORIZ	Horizontal
HP	High Pressure
HSE	Health, Safety & Environment
IDRO	Industrial Development and Renovation Organisation
IM	Information Management
INSTL	Installation
IOEC	Iranian Offshore Engineering and Construction Company
ISO	International Organisation for Standardisation
ISRS	Inside Screw Riser Spindle
ITCS	Impact Tested Carbon Steel

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ITT	Invitation to Tender
IVB	Independent Verification Body
KPI	Key Performance Indicators
LONGIT	Longitudinal
LJ	Lap Joint
LR	Long Radius (R = 1.5 D)
LTCS	Low Temperature Carbon Steel
MAWP	Maximum Allowable Working Pressure
MDR	Master Document Register
MEG	Mono Ethylene Glycol
MFD	Material Flow Diagram
MI	Malleable Cast Iron
mmscf/d	Million standard cubic feet per day
Mo	Molybdenum
MSDS	Material Safety Data Sheets
MSS	Manufacturers Standardisation Society
NGL	Natural Gas Liquids
NIOC	National Iranian Oil Company
NPS	Nominal Pipe Size
NPT	Nominal Pipe Thread
OIEC	Oil Industries Engineering and Construction
OLET	Weldolet, Sockolet, Nipolet, Sweepolet
OPEX	Operational Expenditure
OSHA	Occupational Health and Safety Administration
OS & Y	Outside Screw And Yoke
PFD	Process Flow Diagram
P&ID	Piping & Instrumentation Diagram
PDMS	Plant Design Management System
PEP	Project Execution Plan
PE	Plain End
PO	Purchase Order
POGC	Pars Oil and Gas Company
PQMS	Project Quality Management System
PQP	Project Quality Plan

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PRES	Pressure
PTFE	Poly Tetra Fluoro Ethylene
PWHT	Post Weld Heat Treatment
QA	Quality Assurance
QC	Quality Control
QMS	Quality Management System
RED	Reducer
RF	Raised Face
RFG	Reinforced Flexible Graphite
RFQ	Request For Quotation
RTJ / RJ	Ring Joint – Roughness R $\leq$ 1.6 μ in AARH)
RTRP	Reinforced Thermal set Resin Pipe
RTRE	Reinforced Thermal set Resin epoxy
SAW	Submerged Arc Weld
SB	Screwed Bonnet
SBM	Single Buoy Mooring
SCH	Schedule
SCRD	Screwed End (NPT)
SF	Small Female Face
SHEAMS	Safety, Health & Environmental Action Monitoring System
SM	Small Male Face
SMLS	Seamless
SO	Slip On
SP	Standard Practice (MSS)
SPB	Split Body
SS(1)	Stainless Steel
SS(2)	Sour Service (Example: A105 SS)
SSCC	Sulphide Stress Corrosion Cracking
STBPD	Stock tank barrels per day
STD	Standard
STEL	Stellite
SW	Socket Welding
TE	Threaded End
THK	Thickness

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THR	Threaded
TM	Trunnion Mounted
TPE	Top Entry
UFD	Utility Flow Diagram
USD	United States Dollars
VIP	Value Improving Practices
VO	Variation Order
WAF	Wafer
WB	Welded Bonnet
WBS	Work Breakdown Structure
WN	Welded Neck
WP	WorleyParsons Services Pty Ltd

7. DEFINITIONS

Within this specification the following definitions shall apply:

COMPANY: Shall mean NATIONAL IRANIAN OIL COMPANY (NIOC - POGC), or their representative.

CONTRACTOR: Shall mean the Consortium of IDRO, OIEC and IOEC in charge of EPCC realisation of SOUTH PARS Phases 17 & 18 in the CONTRACT with COMPANY, or his representative.

CONSTRUCTION CONTRACTOR: Shall mean the party sub-contracted by the CONTRACTOR for construction WORK, or his representative.

WORK: Shall mean all and any of the works and / or services and/or materials required to be provided by the CONTRACTOR or CONSTRUCTION CONTRACTOR.

INSPECTION AGENCY: This term designates the inspection bodies as third party agencies which will be nominated by contractor and approved by company to carry out the inspection and certification tasks independently based on the approved inspection and test plans**.**

SITE: Shall mean the premises and places on, under, in, over or through which the WORK is to be executed or carried out including CONTRACTOR's engineering office and the PLANT.

VENDOR: Shall mean any person, firm or business which manufacture or supply materials, equipment or services for the performance of any item of WORK.

QUALITY: Shall mean the degree to which a set of inherent characteristics fulfil requirements.

QUALITY MANAGEMENT SYSTEM: Shall mean the management system that directs and controls an organisation with regard to quality.

CONTINUED IMPROVEMENT: Shall mean a culture that encourages each team member to try to increase Project quality at every opportunity.

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PROCESS MAPS: Shall mean flow diagrams detailing a set of interrelated or interacting activities that transform inputs into outputs.

PREVENTATIVE ACTION: Shall mean an action taken to eliminate the cause of a potential non-conformity or other potentially undesirable situation.

CORRECTIVE ACTION: Shall mean an action taken to eliminate the cause of a detected non-conformity or other undesirable situation.

VERIFICATION: Shall mean confirmation, by the provision of objective evidence, that specified requirements have been fulfilled.

VALIDATION: Shall mean confirmation, by the provision of objective evidence, that the requirements for an intended use have been fulfilled.

8. Use of language

Throughout this specification, the words "will", "may", "shall" and "should" when used, have meaning as follows:

- "Will" is used normally in conjunction with a request from CONTRACTOR;
- "May" is used where alternatives are equally acceptable;
- "Shall" is used where a provision is mandatory;
- "Should" is used where a solution is preferred.

9. Class numbering principles

9.1 Generation of Number

The class number shall consist of a capital letter representing the ASME flange rating, and a two-digit number representing the main material of composition of pipes, fittings, flanges, valves, etc of the piping material class in question, plus an optional suffix.

For example: B 01 N

The letters and numbers to be used for numbering piping classes are explained below.

9.2 LETTERS Representing the Flanges Rating of the Class

Rating	125	150	250	300	400	600	900	1500	2500	(Tracing)
Letter	A (1)	B	C (1)	D	E (1)	F	G	H	J	Y

(1) Note: these ratings are not normally used

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9.3 NUMBERS Representing the Main Material of the Class

01 to 30: Carbon steels (digits "X"1 to "X"6 also indicate the corrosion allowance for carbon steels, namely 1.27 to 6 mm)

31 to 45: Alloy steels

46 to 70: Stainless steels

71 to 85: Special alloys (Monel, Hastelloy, etc)

86 to 99: Other materials (Cast-iron, copper alloy, GRP, etc)

9.4 Suffixes

The following optional suffixes are used to indicate specific service conditions:

D = Jacketed pipe

S = Sour Wet Service (SSCC and HIC) (Specifications RP-1718-999-6300-0002, to be used for wet Sour H2S service)

N = Sour Service (SSCC only) (Specifications RP-1718-999-6300-0003, to be used for H2S service where HIC is not considered or for amine service)

T = High temperature service (typically 300°C and above)

P = Indicates Pipeline classes derived from the present document, but entirely governed by a pipeline code and not complying with the ASME B31.3 code.

X = Standard specification but with special requirement

10 GENERAL NOTES

10.1 Units

All units are expressed in the International SI system, except for nominal bore sizes of pipes, which are in inches. Pressures are gauge pressures (in bars), unless otherwise stated. Temperatures are in degrees Celsius. Pressure-Temperature ratings of flanges are based on the latest version of the ASME B16.5 Standard applicable to this project (Feb 2005).

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10.2 Design Limits and Pipe Wall Thickness

10.2.1 Design Limits

Pipe wall thickness values specified in individual pipe classes are suitable for the full range of pressure/temperature combinations tabulated.

At the Final Detail Design Stage pipe wall thicknesses, for 20" NB and above in pipe classes 900 Lbs and above, should be reviewed and a reduction in wall thickness considered with regard to the individual line conditions applied.

10.2.2 Pipe Wall Thickness Calculation Principle

Pipe wall thickness shall be calculated in accordance with the requirements of the ASME Code for Pressure Piping – "Process piping", ASME B31.3 (latest edition, and latest Addenda), unless stated otherwise in individual pipe classes (e.g. "Gas transmission and distribution piping systems", ASME B31.8, is specified for slug-catcher service. ASME B31.4 Pipeline Transportation System for Liquid Hydrocarbons and other Liquids for export condensate. And manufacturers' standard for reinforced plastic pipes).

Thickness calculations shall include a corrosion allowance and mill tolerances as applicable. No such reduction will be permitted when the corrosion allowance is specified as "minimum". The weld efficiency coefficient of welded pipes and fittings shall be equal to 1 (i.e. full radiography).

a) Corrosion allowance

All carbon steel and low alloy steel materials shall incorporate a minimum corrosion allowance of 1.27mm. Stainless steels, copper nickels, galvanised carbon steels, glass reinforced materials, and other corrosion resistant materials shall be used without extra-thickness for corrosion allowance.

b) Mill tolerance

The mill tolerance on wall thickness shall be as follows:

- Minus 8% for API 5LX grades in diameters 20" and above
- Minus 12 1/2% for all other materials or diameters, to be determined by the related ASTM Standard

(These rules take into account the fabrication tolerances applicable to fittings, with a particular reference to Pipe Fittings Specification RP-1718-999-1300-0023).

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c) Retirement thickness

The minimum wall thickness after reduction by: -

a) Corrosion Allowance

b) Mill Tolerance

c) Threading Allowance, where applicable, in accordance with ASME B1.20.1 (NPT)

shall not be less than the following:

Nominal Pipe Size (NPS)	Minimum Corroded Thickness (Retirement Thickness)
½" - ¾"	1.0 mm
1" - 8"	1.5 mm
10"	2.3 mm
12" - 14"	2.8 mm
16" - 24"	3.1 mm
26" - 36"	3.8 mm
38" - 46"	4.6 mm
48"	5.3 mm
Above 48"	6.4 mm

If the metal thickness required for pressure containment is less than the "Minimum Corroded Thickness", the "Minimum Corroded Thickness" shall be used.

If vacuum conditions are required, pipes wall thickness shall be verified and modified in order to withstand full vacuum conditions. Whenever vacuum conditions are required, pipe wall thickness will be modified and verified to withstand full vacuum conditions by Engineering Company and submitted to Company for approval

Additionally, schedules 5S shall not be used for stainless steels, and schedule 80 shall be selected as a minimum for pipes 1½"diameter and below

10.3 Pipe Diameters

Minimum pipe size shall be ½" unless stated otherwise in the individual piping classes. Smaller sizes may be permitted for instrument connections and steam tracing etc., only where specifically stated.

Non-standard pipe sizes 1¼",2 ½", 3½", 5", 7", 9" and 22" shall not be used in any piping class, except where specifically shown on P & I diagrams. For diameters above 24", sizes 30", 36", 42", 48", 56" and 60" are preferred dimensions.

Where equipment is supplied with non-standard nozzle sizes, these shall be adjusted to a standard size by means of a reducing fitting immediately adjacent to the equipment.

The non-standard adapter component shall be supplied by the Equipment manufacturer. Wall thickness of such fittings shall be as per the next standard size up. Bushings shall not be used.

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10.4 Threaded Joints

10.4.1 Threads Standards

All screwed connections shall have taper threads in accordance with ASME-B1.20.1 (NPT) (formerly ASME B2.1), and limited to 2" NPS or less, unless specifically required in larger sizes as determined in the Piping Class and Company Approval.

10.4.2 Threaded Connections Limitations

As a general design policy to reduce the incidence of leakage, the use of threaded joints and unions (where permitted by the Pipe Class) shall be kept to a minimum consistent with ease of pipe work fabrication, installation and maintenance. Threaded joints shall not be used on process service. Threaded joints are only authorized on utility lines if and where listed on the relevant piping material class, with the exception of instrument connections that are located downstream of a block valve. In such a case, the upstream side of this block valve shall be flanged, or may be socket welded on a nipple with a flanged joint immediately upstream to facilitate possible future maintenance operations.

All threaded connections which require seal welding, shall meet the requirements of the relevant fabrication specification. Threaded plugs on hydrostatic vents not provided with a valve, shall be seal welded after testing has been carried out. Threaded connections (230°C and below) shall be sealed using PTFE Jointing Tape, or approved jointing compound.

However, threaded connections are absolutely not authorised in the following cases (related to particular fluids or services):

a) Hazardous Service, e.g.:

- Liquids above their auto-ignition temperature (AIT), or at temperatures greater than 210°C if the AIT is not known.
- Flammable liquids flashing on leakage to form a substantial vapour cloud. This includes LNG condensate.
- Fluids liable to cause a hazard by blockage due to hydrate formation or solids deposits.
- Toxic substances, including H_2S gas.
- High pressure air injection (ratings ≥ CL900)

b) General chemical service

c) Highly corrosive fluids (e.g. hydrochloric or fluorohydric acids)

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10.5 Jointing of Small Bore Pipes

With the exception of galvanised piping systems (which shall be joined together only by threaded connections), small-bore piping (1½" and smaller) shall be joined together by socket welding.

Threaded connections may only be used where permitted under paragraph 10.4.2 of this specification.

10.6 Bends and Elbows in Small Bore Piping

10.6.1 In small bore welded piping (1½" and smaller), hot or cold formed bends with a radius of 5D min. may be used in lieu of elbows if and where authorised in the relevant piping material class.

10.6.2 Normally, butt weld elbows with a radius of 1.5 D shall be used for all sizes. Miter bends may only be used for lines not requiring more than 5 % radiographic examination, or stress relief, or lines not subject to sour, corrosive or severe cyclic services with approval of the Company. In case of Company approval, a re-run of the flexibility analysis of the corresponding line is necessary.

10.7 Pipes

All metallic pipes shall comply with the requirements of project Doc no. RP-1718-999-1300-0022 "Pipe".

All grade X65 or equivalent pipeline materials of construction shall comply with the requirements of the following project Doc nos.

RP-1718-999-1300-0074 Fabrication of Seamless Pipes for Pipelines (sour service)

RP-1718-999-1300-0075 Fabrication of Longitudinally Submerged Arc Welded Pipes for Pipelines (sour effluent)

RP-1718-999-1300-0078 Fabrication of Longitudinally Submerged Arc Welded Pipes for Pipelines (sweet effluent)

Underground Steel Piping shall be externally protected according to project specification:

RP-1718-999-1482-0002 External Corrosion Protection for Underground Steel Piping

10.8 Fittings

All pipe fittings shall comply with the requirements of project Doc no. RP-1718-999-1300-0023 "Fittings".

All grade X65 or equivalent pipeline materials of construction shall comply with the requirements of the following project Doc nos.

RP-1718-999-1300-0073 Carbon Steel Tees for Pipelines

RP-1718-999-1300-0077 Material and Fabrication of Hot Formed Elbows and Hot Pressed Elbows for Pipelines (sour effluent)

RP-1718-999-1300-0080 Material and Fabrication of Hot Formed Elbows and Hot Pressed Elbows for Pipelines (sweet effluent)

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RP-1718-999-1300-0081 Material and Fabrication of Hot Pressed Plates for Cap (sour effluent)

10.9 Unions

Unions may only be used where indicated on Piping Classes, they shall not be used in: -

- Hydrogen service
- Steam service
- Systems Class 600 and above
- Where design temperatures are above 250 °C
- Toxic and highly corrosive fluids (including H_2S)
- Low temperature service (design temperatures < minus 45°C)
- Fuel gas service

10.10 Flanges, Spectacle Blinds, Blanks and Spacers

All metallic pipe flanges shall comply with the requirements of project Doc no. RP-1718-999-1300-0024 “Flanges, Spectacle Blinds, Blanks and Spacers”.

All grade X65 or equivalent pipeline materials of construction shall comply with the requirements of the following project Doc nos.

RP-1718-999-1300-0076 Carbon Steel Flanges and other Forgings for Pipelines (sour effluent)

RP-1718-999-1300-0079 Carbon Steel Flanges and other Forgings for Pipelines (sweet effluent)

Flanges up to and including 24" shall be in accordance with ASME B16.5, and flanges 26" & above shall be in accordance with ASME B16.47 series A (formerly MSS SP 44) unless otherwise stated. Contact faces shall undergo finishing machining in accordance with ASME B16.5; 125 to 250 AARH for Raised Face flanges, 150 micron for Flat Face flanges and 63 AARH for Ring joint flanges.

Spectacle Blinds, Blanks and Spacers up to and including 24” shall be in accordance with ASME B16.48, 26” and above shall be calculated.

Material for Spectacle Blinds, Blanks and Spacers to be compatible with the associated material pipe spec.

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Spectacle Blinds, Blanks and Spacers to be installed using the following rule:

SIZE	PIPING CLASS				SIZE
	150 lbs	300 lbs	600 lbs	>600 lbs	
≤ 3"	Spec Blinds (Note)	Spec Blinds (Note)	Spec Blinds	Spec Blinds	≤ 3"
4"-8"	Spec Blinds	Spec Blinds		Blank & spacer Blank & Spacer	4"-8"
10"			Blank & Spacer		10"
12"		Blank & Spacer			12"
≥14"	Blank & Spacer				≥14"

NOTE:When spacers are not installed, no alternative to spacers shall be considered as lines are assumed to be flexible enough.

10.11 Slip-on Flanges

The use of slip-on flanges is not generally permitted. They may be used, however, where necessary as out-of-spec flanges, for tie-ins, subject to the following restrictions:

- Maximum pressure / temperature rating of Class 300.
- Maximum design temperature 260 °C.
- Carbon steel and Cu-Ni 90/10 materials only.
- Shall not be used when the corrosion allowance is above 3.0 mm.
- Shall not be used in sour, corrosive or severe cyclic services.

10.12 Bolting

All bolting for piping shall comply with the requirements of project doc no. RP-1718-999-1300-0025 " Bolting for Piping".

10.13 Bolt Tensioners

All bolt tensioning shall comply with the requirements of the project document "Controlled tightening of bolted joints using hydraulic tensioning or torque tightening". In system rating 600 and above , provision shall be made for the use of hydraulic bolt tensioners on flange stud bolts 50mm in diameter and larger.

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10.14 Gaskets

All gaskets shall comply with the requirements of project Doc no. RP-1718-999-1300-0025 "Gaskets for piping".

ALL GASKETS SHALL BE ASBESTOS FREE.

“Flexible Graphite” compounds shall contain min. 95% pure Carbon grade, except where specific Service requirement is determined otherwise. Drinking water for human consumption shall be supplied with gaskets certified as suitable for this service.

RTJ gaskets, when specified, shall comply with ASME B16.20.

10.15 Valves

All valves shall comply with the requirements of project Doc no. RP-1718-999-1300-0021“Valves", Valve Data Sheets attached to the Requisition, and all referenced Standards and specifications.

Full bore Ball valves shall only be used when specifically indicated on P & I diagrams, however all valves ≤11/2” shall be supplied Full Bore

All wrench-operated ball valves in insulated lines, other than for heat conservation, shall have extended spindles (100mm ± 10mm, measured from the valve bonnet, for lines 2” and below, 150mm ± 10mm for lines greater than 2”) to ensure that the wrench clears valve insulation. The spindle shall have a weather seal at the wrench end. Extended bonnets shall be considered for Cold Service, as noted in the relevant Pipe Class.

For flanged valves, the extended spindle length is measured from the top of an end flange; for screwed or socket-weld valves it is measured form the top of the valve body.

Gate and globe valves located below ground level shall be installed in valve pits, unless otherwise specified. Butterfly valves may be buried, but they shall be provided with an extended spindle with oil filled outer casing and an above ground waterproof gearbox.

Forged materials are acceptable in lieu of cast materials. Dual plate check valves are acceptable in lieu of swing check valves. Wafer type check valves are acceptable in lieu of flanged check valves.

Instrument connections on either piping or pressure vessels requiring either single or double block and bleed facilities shall be made of an integrated manifold comprising one or two ball valves or needle valves used as block valves and one needle valve used as a bleed. The side of this integrated manifold that connects to the piping or the pressure vessel must be flanged, but the instrument connection side may be threaded, as required.

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Valve standards in all piping classes, except,B90, B91, B91X, B92, B93 and B94 shall be as follows:-

Gate valves 1 ½" and below	API 602
Gate valves 2" and above	API 600 & ASME B16.10
Ball valves 1 ½" and below	BS 5351
Ball valves 2" and above	API 6D & MSS SP 72
Globe valves 1 ½ " and below	BS 5352
Globe valves 2" and above	BS 1873 & ASME B16.10
Plug valves 1 ½" and below	API 599 , BS 5353
Plug valves 2" and above	API 599 & ASME B16.10
Check valves 1 ½" and below	BS 5352
Wafer check valves 2" and above	API 594
Swing check valves 2" and above	API 6D
Butterfly valves 2" and above	API 609 & BS EN 593 & EN 558-2

10.16 Glass Reinforced Plastic Materials (GRP)

GRP materials shall comply with the requirements of project Doc no. RP-1718-125-1300-0001, "Specification for Supply of Glass Reinforced Plastic Piping Material (tubes & accessories).

10.17 Branch Reinforcement

Branch reinforcement shall be in accordance with Appendix B of this Specification and design is based on ASME B31.3.

The design principle is as follows:

Connections of equal sizes always require an equal tee.

Connections where both header and branch are of a diameter less than 2" are made using tees (equal or reducing).

All other connections are normally made by welding set-on type branches on to the main header, with or without reinforcing pads (depending on calculation results). The reinforcing pad width shall be equal to half the branch nominal diameter, rounded up to the nearest 5mm dimension above that value; its thickness is equal to the header nominal thickness. As an allowed substitution to reinforcing pads, or where reinforcing pads do not result in sufficient reinforcement, and if the branch diameter is at least equal to half the header diameter, reducing tees shall be used. If the branch diameter is less than half the header diameter, weldolets, sockolets, etc, may be used.

Special cases may require different rules or means of reinforcing branch connections (including the used of extruded headers, etc), subject to COMPANY approval.

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Except for branch connections required to use equal or reducing tees, the use of integral reinforced connections, comprising in one single piece the required reinforcement, a nipple, and an end flange, is permitted.

10.18 Swaged Nipples

Swaged nipples shall be in accordance with MSS-SP-95.

11. List of fluids

The following list includes the fluid types and designations used on this project, as identified on the P&I Diagrams.

AIR	
EA	EXHAUST AIR
IA	INSTRUMENT AIR
PA	PROCESS AIR
UA	UTILITY AIR
CLOSED DRAINS	
DA	AMINE DRAIN
DC	CAUSTIC DRAIN
DP	COLD DRAIN
DR	HYDROCARBON DRAIN
DS	SOUR WATER DRAIN
MD	GLYCOL DRAIN (MEG)
MT	METHANOL DRAIN
SD	DISULFIDE OIL DRAIN
CHEMICALS	
AS	ANTI SCALE
AF	ANTI FOAM
AV	VOLATILE AMINE
BI	BIOCIDE
CD	CLEANING AGENT (DISTILLATION)
CE	CLEANING AGENT (ELECTROCHLORINATION)
CG	COAGULANT
CK	CORROSION INHIBITOR
DE	DEMULSIFIER
HY	SODIUM HYPOCHLORITE
ME	METHANOL
MO	MORPHOLINE
OX	OXYGEN SCAVENGER
PH	PHOSPHATE
RE	REVERSE DEMULSIFIER
SA	SULPHURIC ACID
SU	SULPHITE
SY	SODIUM HYDROXIDE
STEAM	
SH	HIGH PRESSURE STEAM
SL	LOW PRESSURE STEAM
STEAM CONDENSATES	
CC	COLD STEAM CONDENSATES
CH	HP STEAM CONDENSATES
CL	LP STEAM CONDENSATES
CP	POLLUTED STEAM CONDENSATES

FUEL	
DO	DIESEL OIL
FG	FUEL GAS (HP AND LP)
INERT GAS	
IG	INERGEN GAS
N	NITROGEN
PROCESS	
AM	AMINE
CF	FRESH CAUSTIC
DF	DISULFIDE OIL (DSO)
G	HYDROCARBON GAS
GA	ACID GAS (H2S + CO2)
GM	GLYCOL (MEG)
HC	HYDROCARBON (LIQUID GAS)
L	HYDROCARBON LIQUID
LC	LEAN CAUSTIC
PR	PROPANE REFRIGERANT
RC	RICH CAUSTIC
SC	SPENT CAUSTIC
LS	SULPHUR (LIQUID)
SS	SULPHUR (SOLID)
SEWER	
AOC	ACIIDENTALLY OIL CONTAMINATED SEWER
CS	CHEMICAL SEWER
HW	HOT NON-CONTAMINATED SEWER
NW	NON-CONTAMINATED SEWER
OD	OILY WATER SEWER (OPEN DRAIN)
WD	DOMESTIC SEWER
WATER	
BW	BOILER FEED WATER
CW	COOLING WATER
DW	DRINKING WATER
FW	FIRE WATER
PW	PROCESS WATER (OILY WATER)
RW	DESALINATED WATER
SW	SEA WATER
TW	DEMINERALISED WATER
UW	UTILITY WATER
WA	FOAM SOLUTION WATER (FIRE FIGHTING)
WS	SOUR WATER
WT	STRIPPED WATER
WW	SPENT OR WASTE WATER
WO	WASH OUT

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LIST OF FLUIDS CONT'D

FLARE

FA17(18)	HP WET GAS FLARE PHASE 17 (PHASE18)
FB17(18)	LP WET GAS FLARE PHASE 17 (PHASE18)
FC17(18)	HP DRY & COLD GAS FLARE PHASE 17 (PHASE18)
FD17(18)	LP COLD GAS FLARE PHASE 17 (PHASE18)
FS17(18)	MP WET GAS FLARE PHASE 17 (PHASE18)
FT17(18)	MP COLD & DRY GAS FLARE PHASE 17 (PHASE18)
FJ	JETTY FLARE (BY OTHERS)
FK	LLP GAS HEADER
FL	LPG FLARE

MISCELLANEOUS

ATM	ATMOSPHERIC VENT
BB	BOILER BLOWDOWN
BR	BRINE REJECT
CA	CATALYST
HO	HYDRAULIC CIRCUIT
LO	LUBE OIL
SG	SEAL GAS
SO	SEAL OIL

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12. PIPING class summary

The pipe classes summarised within this section include all the pipe classes identified for use on the South Pars Gas Field Development Project (Phases 17 and 18), at Assaluyeh, Iran.

Class Number	Class Number	Class Number
B01	D21	G48
B03	D23	G48X
B03D	D23N	H01
B03N	D23S	H03
B03S	D42	J 01
B06	D46	J 03
B06N	D48	
B06S	D48X	
B10	D49	
B12	D49N	
B19	D71X	
B21	F01	
B23	F03	
B23N	F03N	
B23S	F03S	
B42	F12	
B43	F21	
B46	F23	
B48	F23S	
B48X	F42	
B49	F46	
B49N	F48	
B90	F48X	
B91	G01	
B91X	G01P3	
B92	G03	
B93	G03N	
B94	G03S	
D01	G03P2	
D01P	G05P4	
D03	G21	
D03N	G23N	
D03S	G23N	
D12	G46	

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim) (Note 1)	Services & Design Code	Service symbols
B01	ASME CL150 RF	-29/+330 deg C 19.6/9.13 barg ASME B16.5 1.1 FV @ 270 deg C	Carbon Steel 1.27 mm B7/2H RFG	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug, Ne, ***B'fly***	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**NON SOUR** – ANTI-FOAM ATMOSPHERIC VENT BOILER BLOWDOWN BOILER FEED WATER COLD STEAM CONDENSATES LP STEAM CONDENSATES POLLUTED STEAM COLDCONDENSATES COOLING WATER PROCESS WATER DIESEL OIL HP WET GAS FLARE LP WET GAS FLARE GAS HP DRY & COLD GAS FLARE FUEL GAS FUEL OIL MP WET GAS FLARE MP COLD & DRY GAS FLARE HYDROCARBON GAS HYDROCARBON (LIQUID GAS) GLYCOL (MEG) INSTRUMENT AIR HYDROCARBON LIQUID METHANOL NITROGEN OILY WATER SEWER (OPEN DRAIN) PRESSURE DRAIN PROCESS AIR DESALINATED WATER LOW PRESSURE STEAM UTILITY AIR UTILITY WATER ASME B31.3	 AF ATM BB BW CC CL CP CW PW DO FA FB FC FG FS FT G HC GM IA L ME N OD PA RW SL UA UW

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
B03	ASME CL 150 RF	-29/+360 deg C 19.6/8 barg ASME B16.5 1.1 FV @ 360 deg C	Carbon Steel 3.0 mm B7/2H RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED.	**LIGHT CORROSIVE SERVICES** – AMINE EXHAUST AIR HP WET GAS FLARE LP WET GAS FLARE FUEL GAS LLP GAS HEADER MP WET GAS FLARE HYDROCARBON GAS ACID GAS (H2S & CO2) GLYCOL (MEG) HYDROCARBON LIQUID NITROGEN LOW PRESSURE STEAM UTILITY WATER SOUR WATER STRIPPED WATER **UNDERGROUND SYSTEM** – HYDROCARBON DRAIN COLD DRAIN SOUR WATER DRAIN GLYCOL DRAIN (MEG) METHANOL DRAIN ASME B31.3	 AM EA FA FB FG FK FS G GA GM L N SL UW WS WT DR DP DS MD MT
B03D	ASME CL 150 RF	-29/+270 deg C 19.6/11.3 barg ASME B16.5 1.1 Ext. Pressure 8 bar g @ +270 deg C	Carbon Steel 3.0 mm B7/2H RFG	BW, Flgd	Ch, Plug	13%CR, STELLITED	**JACKETED LINES** – SULPHUR (LIQUID) ACID GAS	 LS GA

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B03N	ASME CL 150 RF	-29/+270 deg C 19.6/11.3 barg ASME B16.5 1.1 FV @ 270 deg C	Carbon Steel SSCC 3.0 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**ALKALINE / SSCC SERVICES** – (NACE) RICH AMINE COLD STEAM CONDENSATES FRESH CAUSTIC HP WET GAS FLARE (HOLD) HYDROCARBON GAS ACID GAS (H2S & CO2) HYDROCARBON LIQUID NITROGEN SPENT CAUSTIC LP STEAM SEA WATER (HOLD) SOUR WATER SPENT OR WASTE WATER SODIUM HYDROXIDE **UNDERGROUND SYSTEM** – (NACE) AMINE DRAIN COLD DRAIN ASME B31.3	 AM CC CF FA G GA L N SC SL SW WS WW SY DA DP
B03S	ASME CL 150 RF	-29/+225 deg C 19.6/13.9 barg ASME B16.5 1.1	Carbon Steel SSCC & HIC 3.0 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES** –(NACE) AMINE DISULPHIDE OIL HP WET GAS FLARE (HOLD) MP WET GAS FLARE (HOLD) FUEL GAS HYDROCARBON GAS ACID GAS (H2S & CO2) HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID NITROGEN SOUR WATER ASME B31.3	 AM DF FA FA FG G GA HC L N WS
B06	ASME CL 150 RF	-29/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Carbon Steel 6.0 mm B7/2H RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES –** LP WET GAS FLARE (HOLD) CORROSIVE HYDROCARBONS ASME B31.3	 FB HC

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
B06N	ASME CL 150 RF	-29/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Carbon Steel SSCC 6.0 mm B7/2H RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES** – (NACE) SOUR WATER ACID GAS ASME B31.3	 WS GA
B06S	***ASME CL 150 RF***	***-29/+200 deg C 19.6/13.9 barg ASME B16.5 1.1***	***Carbon Steel SSCC & HIC 6.0 mm B7/2H RFG***	***SW, BW, Flgd***	***Ga, Gl, Ba, Ch***	***316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT***	***HEAVY CORROSIVE SERVICES – (NACE) RICH AMINE ASME B31.3***	 ***AM***
B10	ASME CL 150 RF	-29/+85 deg C 19.6/17.6 barg ASME B16.5 1.1	Carbon Steel (Galv. up to 2") 1.27 mm B7/2H RFG	SCRD, BW, Flgd	Ga, Gl, Ch	13%CR, STELLITED	INSTRUMENT AIR HALON GAS ASME B31.3	IA IG
B12	ASME CL 150 RF	0/+270 deg C 19.6/11.3 barg ASME B16.5 1.1 FV @ 48 deg C	Carbon Steel 1.27 mm B7/2H RFG	SW, BW, Flgd	Ga, Gl, Ch	13%CR, STELLITED.	BOILER BLOWDOWN BOILER FEED WATER HP STEAM CONDENSATES (HOLD) LP STEAM CONDENSATES POLLUTED STEAM CONDENSATES HP STEAM (HOLD) LP STEAM ASME B31.3	BB BW CH CL CP SH SL
B19	ASME CL 150 FF	-29/+85 deg C 14.2 bar g ASME B16.5 1.1	Carbon Steel (Galvanised) 1.27 mm B7/2H Neoprene	SCRD, Flgd	Ga, Gl, Ch	13%CR, STELLITED.	DRINKING WATER ASME B31.3	DW
B21	ASME CL 150 RF	-46/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Low Temperature Carbon Steel 1.27 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**NON-CORROSIVE SERVICES –** COLD DRAIN HP WET GAS FLARE (HOLD) LP WET GAS FLARE (HOLD) LP COLD GAS FLARE FUEL GAS (HOLD) LPG FLARE MP WET GAS FLARE (HOLD) MP COLD & DRY GAS FLARE HYDROCARBON GAS HYDROCARBON LIQUID PROPANE REFRIGERANT ASME B31.3	 DP FA FB FD FG FL FS FT G L PR

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
B23	ASME CL 150 RF	-46/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Low Temperature Carbon Steel 3.0 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**LIGHT CORROSIVE SERVICES** – COLD DRAIN HYDROCARBON DRAIN HP WET GAS FLARE (HOLD) MP WET GAS FLARE (HOLD) LP COLD GAS FLARE HYDROCARBON GAS HYDROCARBON LIQUID PROPANE REFRIGERANT SOUR WATER ASME B31.3	 DP DR FA FS FD G L PR WS
B23N	ASME CL 150 RF	-46/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC 3.0 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES** –(NACE) HP WET GAS FLARE (HOLD) LP WET GAS FLARE MP WET GAS FLARE (HOLD) HYDROCARBON LIQUID ASME B31.3	 FA FB FS L
B23S	ASME CL 150 RF	-46/+200 deg C 19.6/13.9 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC & HIC 3.0 mm B7M/2HM RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES** –(NACE) AMINE (HOLD) HP WET GAS FLARE (HOLD) LP WET GAS FLARE (HOLD) HYDROCARBOS (GAS) HYDROCARBONS (LIQUID) ASME B31.3	 AM FA FB G L
B42	ASME CL 150 RF	-29/+405 deg C 19.9/6.3 barg ASME B16.5 1.9 FV @ 48 deg C	Alloy Steel 1.25Cr 0.5Mo 1.27 mm B16/4 RFG	SW, BW, Flgd	Ga, Gl, Ch,	13%CR, STELLITED	**NON-CORROSIVE SERVICES** LP SUPER HEATED STEAM ASME B31.3	 SL
B43	ASME CL 150 RF	-29/+425 deg C 19.9/5.5 barg ASME B16.5 1.9 FV @ 48 deg C	Alloy Steel 1.25Cr 0.5Mo 3.0 mm B16/4 RFG	SW, BW, Flgd	Ga, Gl, Ch,	13%CR, STELLITED	**NON-CORROSIVE SERVICES** LP SUPER HEATED STEAM PROCESS GAS ASME B31.3	 SL G
B46	ASME CL 150 RF	-196/+200 deg C 15.8/11.1 barg ASME B16.5 2.3	Stainless Steel 304L 0 mm B8M Cl.2 / 8MA RFG	BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT	**NON-CORROSIVE HC LIQUID / GAS** (CRYOGENIC SERVICE) COLD DRAIN HYDROCARBON DRAIN HP DRY & COLD GAS FLARE (HOLD) MP WET GAS FLARE (HOLD) MP COLD & DRY GAS FLARE HYDROCARBON LIQUID ASME B31.3	 DP DR FC FS FT L

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
B48	ASME CL 150 RF	-45/+200 deg C 18.9/13.8 barg ASME B16.5 2.4 FV @ 200 deg C	Stainless Steel 321 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug, B'fly	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES –** AMINE FRESH CAUSTIC HYDROCARBON DRAIN HP WET GAS FLARE (HOLD) HP DRY & COLD GAS FLARE (HOLD) MP WET GAS FLARE (HOLD) HYDROCARBON GAS HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID SOUR WATER JET FUEL INSTRUNENT GAS **CHEMICALS –** VOLATILE AMINE BIOCIDE CATALYST CORROSION INHIBITOR OXYGEN SCAVENGER **LUBE AND SEAL SYSTEMS** LUBE OIL SEAL OIL ASME B31.3	 AM CF DR FA FC FS G HC L WS IA AV BI CA CK OX LO SO
B48X	ASME CL 150 RF	-45/+200 deg C 18.9/13.8 barg ASME B16.5 2.4 FV @ 200 deg C	Stainless Steel 321 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, B'fly	316+ SOFT SEAT	**HEAVY CORROSIVE SERVICES** AMINE ASME B31.3	 AM
B49	ASME CL 150 RF	-45/+200 deg C 15.8/11.1 barg ASME B16.5 2.3	Stainless Steel 316L 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, B'fly Ne	316+ SOFT SEAT	**CORROSIVE HYDROCARBONS** jet fuel Lube- oil (after filter) Seal oil (after filter) Instrument gas (after filter) Catalyst ASME B31.3	HC LO SO IA CA
B49N	ASME CL 150 RF	-45/+200 deg C 15.8/11.1 barg ASME B16.5 2.3	Stainless Steel 316L 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Ne	316+ SOFT SEAT	**HEAVY CORROSIVE SERVICES** Alkaline Services Chemical Sewer Rich Amine Process Gas Anti Foam ASME B31.3	 L CS AM G AF

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
B90	ASME CL 150 FF	-29/+90 deg C 19.6/18 bar g N/A	RTRE +Cu Ni 0 mm B7/2H Neoprene	Bell & Spigot, Flgd	Ga, Gl, Ch, B'fly Ne	Al-bronze	CATALYST LP STEAM CONDENSATES CHEMICAL SEWER DRINKING WATER FIRE WATER SODIUM HYPOCHLORITE DESALINATED WATER SEA WATER DEMINERALISED WATER SOUR WATER SPENT OR WASTE WATER COOLING WATER UTILITY WATER	CA CL CS DW FW HY RW SW TW WS WW CW UW
B91	ASME CL 150 FF	0/+65 deg C 15 bar g N/A	RTRV +Cu Ni 0 mm B7/2H Neoprene	Bell & Spigot, Flgd	Ga, Gl, Ch, B'fly	Al-bronze	HYPOCHLORITE CHLORINE INJECTION	HY
B91X	ASME CL 150 FF	0/+85 deg C 16 bar g N/A	RTRE 0 mm B7/2H Neoprene	"Plain", SW, Flgd	Ga, Gl, Ch, B'fly	Al-bronze	SEA WATER (26" to 40") (for underground pipework consult manufacturer)	SW
B92	ASME CL 150 FF	-29/+90 deg C 19.6/18 bar g N/A	Cu + Ni 0 mm B7/2H Neoprene	SW, BW Flgd	Ga, Gl, Ch, B'fly	Al-bronze	FIRE FIGHTING WATER (DRY SYSTEMS) - CORROSIVE	WA
B93	ASME CL 150 FF	0/+65 deg C 10 bar g N/A	RTRE 0 mm B7/2H Neoprene	Bell & Spigot, Flgd	Ch	Al-bronze	OILY CONTAMINATED SEWER (BY ACCIDENT) CHEMICAL SEWER LP CONDENSATES WASTE WATER PROCESS WATER HOT NON CONTAMINATED SEWER DOMESTIC SEWER	AOC CS WW PW HW WD
B94	ASME CL 150 FF	0/+65 deg C 5 bar g N/A	HDPE 0 mm B7/2H Neoprene	PE	N/A		CHLORINATION	

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D01	ASME CL300 RF	-29/+340 deg C 51/31.1 barg ASME B16.5 1.1 FV @ 270 deg C	Carbon Steel 1.27 mm B7/2H Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**NON CORROSIVE SERVICES** – BOILER FEED WATER COLD STEAM CONDENSATES LP STEAM CONDENSATES POLLUTED STEAM CONDENSATES (HOLD) HP CONDENSATES HYDROCARBON DRAIN HP WET GAS FLARE (HOLD) FUEL GAS FUEL OIL LPG FLARE HYDROCARBON GAS HYDROCARBON (LIQUID GAS) GLYCOL (MEG) HYDROCARBON LIQUID PRESSURE DRAINS NITROGEN METHANOL ASME B31.3	 BW CC CL CP CH DR FA FG FL G HC GM L N ME
D01P	ASME CL 300 RF	55 deg C 51 barg ASME B16.5 1.1	Carbon Steel 1.27 mm B7/2H RFG	BW, Flgd	Ba,Ch	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT .	**NON SOUR** – EXPORT CONDENSATE ASME B31.4	 L
D03	ASME CL300 RF	-29/+200 deg C 51/43.8 barg ASME B16.5 1.1	Carbon Steel 3 mm B7/2H Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT .	**LIGHT CORROSIVE SERVICES** – LIQUID HYDROCARBONS HYDROCARBON DRAINS RAW ETHANE ASME B31.3	 L DR G
D03N	ASME CL 300 RF	-29/+325 deg C 51/30.3 barg ASME B16.5 1.1	Carbon Steel SSCC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT .	**ALKALINE SERVICES / SSCC –(NACE)** AMINE FRESH CAUSTIC LEAN CAUSTIC RICH CAUSTIC AMINE DRAIN HYDROCARBON GAS SPENT OR WASTE WATER CAUSTIC SODA ASME B31.3	 AM CF LC RC DA G WW SC

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D03S	ASME CL 300 RF	-29/+200 deg C 51/43.8 barg ASME B16.5 1.1	Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT .	**HEAVY CORROSIVE SERVICES –(NACE)** HYDROCARBON GAS HYDROCARBON LIQUID GLYCOL (MEG) ASME B31.3	G L GM
D12	ASME CL 300 RF	-29/+270 deg C 51/40.8 barg ASME B16.5 1.1 FV @ 48 deg C	Carbon Steel 1.27 mm B7/2H Spiral Wound	SW, BW, Flgd	Ga, Gl, Ch Ne	13%CR, STELLITED	COLD STEAM CONDENSATES LP STEAM CONDENSATES LP STEAM MP STEAM ASME B31.3	CC CL SL SH
D21	ASME CL 300 RF	-46/+340 deg C 51/11 bar g ASME B16.5 1.1	Low Temperature Carbon Steel 1.27 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**NON-CORROSIVE SERVICES** – HYDROCARBON GAS HYDROCARBON LIQUID PROPANE REFRIGERANT GAS FLARE ASME B31.3	G L PR
D23	ASME CL 300 RF	-46/+200 deg C 51/43.8 barg ASME B16.5 1.1	Low Temperature Carbon Steel 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**NON-CORROSIVE SERVICES** HYDROCARBON GAS HYDROCARBON LIQUID GAS FLARE ASME B31.3	G L
D23N	ASME CL 300 RF	-46/+325 deg C 51/24 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**HEAVY CORROSIVE SERVICES –(NACE)** COLD DRAIN HYDROCARBON DRAIN HYDROCARBON GAS HYDROCARBON LIQUID SOUR WATER ASME B31.3	DP DR G L WS
D23S	ASME CL 300 RF	-46/+200 deg C 51/43.8 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC + HIC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**HEAVY CORROSIVE SERVICES –(NACE)** HYDROCARBON GAS HYDROCARBON LIQUID GAS FLARE ASME B31.3	G L

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D42	ASME CL 300 RF	-29/+405 deg C 51.7/36.2 barg ASME B16.5 1.9 FV @ 48 deg C	Alloy Steel 1.25Cr 0.5Mo 1.27 mm B16/4 RFG	SW, BW, Flgd	Ga, Gl, Ch,	13%CR, STELLITED	**NON-CORROSIVE SERVICES** SUPER HEATED STEAM ASME B31.3	 SH
D46	ASME CL 300 RF	-196/+200 deg C 41.3/28.8 barg 41.3 bar g 2.3	Stainless Steel 304L 0 mm B8M Cl.2 / 8MA Spiral Wound	BW, Flgd	Ga, Gl, Ba, Ch, Plug, B'fly Ne	316 + SOFT SEAT	**NON-CORROSIVE HC LIQUID / GAS (CRYOGENIC SERVICE)** COLD DRAIN HYDROCARBON DRAIN HYDROCARBON GAS HYDROCARBON (LIQUID / GAS) HYDROCARBON LIQUID ASME B31.3	 DP DR G HC L
D48	ASME CL 300 RF	-45/+200 deg C 49.6/38.1 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug, B'fly Ne	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** – AMINE FRESH CAUSTIC HYDROCARBON GAS GLYCOL (MEG) SOUR WATER CHEMICALS – DEMULSIFIER CORROSION INHIBITOR LUBE AND SEAL SYSTEMS LUBE OIL SEAL OIL ASME B31.3	 AM CF G GM WS DE CK LO SO
D48X	ASME CL 300 RF	-45/+200 deg C 49.6/38.1 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, B'fly	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** – AMINE ASME B31.3	 AM

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D49	ASME CL 300 RF	-45/+200 deg C 41.3/28.8 barg ASME B16.5 2.3	Stainless Steel 316L 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, B'fly Ne	316 + SOFT SEAT	**CORROSIVE HYDROCARBONS** JET FUEL LUBE-OIL(AFTER FILTER) SEAL OIL(AFTER FILTER) INSTRUMENT GAS (AFTER FILTER) ASME B31.3	HC FG LO SO IA
D49N	ASME CL 300 RF	-45/+200 deg C 41.3/28.8 barg ASME B16.5 2.3	Stainless Steel 316L 0 mm B8M Cl.2 / 8MA RFG	SW, BW, Flgd	Ga, Gl, Ba, Ch, Ne	316 + SOFT SEAT	**CORROSIVE HYDROCARBONS** ALKALINE SERVICES RICH AMINE ASME B31.3	L AM
D71X	ASME CL 300 RF	+38/+200 deg C 51.7/28.8 barg ASME B16.5 2.8	Super Duplex Stainless Steel 0 mm B8M CL.2 / 8MA Spiral Wound	SW, BW, Flgd	Ga, Gl, Ch	DUPLEX	COOLING SEA WATER ASME B31.3	SW

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
F01	ASME CL600 RF	-29/+315 deg C 102/75.5 barg ASME B16.5 1.1	Carbon Steel 1.27 mm B7/2H Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**NON CORROSIVE SERVICES** – BOILER FEED WATER HYDROCARBON GAS HYDROCARBON (LIQUID GAS) GLYCOL (MEG) HYDROCARBON LIQUID METHANOL LOW PRESSURE HYDRAULIC SYSTEMS ASME B31.3	BW G HC GM L ME
F03	ASME CL 600 RF	-29/+260 deg C 102/82.8 barg ASME B16.5 1.1	Carbon Steel 3.0 mm B7/2H Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**LIGHT CORROSIVE SERVICES** – HYDROCARBON GAS HYDROCARBON LIQUID UNDERGROUND SYSTEM – HYDROCARBON DRAIN ASME B31.3	G L DR

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
F03N	ASME CL 600 RF	-29/+200 deg C 102/87.8 barg ASME B16.5 1.1	Carbon Steel SSCC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**ALKALINE SERVICES / SSCC –(NACE)** RICH AMINE FRESH CAUSTIC AMINE DRAIN HYDROCARBON DRAIN ASME B31.3	 AM CF DA DR
F03S	ASME CL 600 RF	-29/+200 deg C 102/87.8 barg ASME B16.5 1.1	Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES –(NACE)** AMINE HYDROCARBON GAS HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID ASME B31.3	 AM G HC L
F12	ASME CL 600 RTJ	-29/+330 deg C 102/74.7 barg ASME B16.5 1.1 FV @ 48 deg C	Carbon Steel 1.27 mm B7/2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ch	13%CR, STELLITED	COLD STEAM CONDENSATES HP STEAM CONDENSATES LP STEAM CONDENSATES HP STEAM LP STEAM BOILER BLOW DOWN ASME B31.3	CC CH CL SH SL BW
F21	ASME CL 600 RF	-46/+315 deg C 102/75.6 barg ASME B16.5 1.1	Low Temperature Carbon Steel 1.27 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**NON-CORROSIVE SERVICES** – HYDROCARBON DRAIN HYDROCARBON GAS HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID ASME B31.3	 DR G HC L
F23	ASME CL 600 RF	-46/+200 deg C 102/87.8 barg ASME B16.5 1.1	Low Temperature Carbon Steel 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**LIGHT CORROSIVE SERVICES** – HYDROCARBON DRAIN MP COLD & DRY GAS FLARE (HOLD) HYDROCARBON GAS HYDROCARBON LIQUID SOUR WATER ASME B31.3	 DR FT G L WS

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
F23S	ASME CL 600 RF	-46/+200 deg C 102/87.8 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES –(NACE)** AMINE COLD STEAM CONDENSATES HYDROCARBON GAS HYDROCARBON LIQUID ASME B31.3	 AM CC G L
F42	ASME CL 600 RJ	-29/+405 deg C 103.4/72.6 barg ASME B16.5 1.9 FV @ 48 deg C	Alloy Steel 1.25Cr 0.5Mo 1.27 mm B16/4 5Cr-0.5Mo Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ch,	13%CR, STELLITED	**NON-CORROSIVE SERVICES** HP SUPER HEATED STEAM ASME B31.3	 SH
F46	ASME CL 600 RF	-196/+325 deg C 82.6/45.4 barg ASME B16.5 2.3	Stainless Steel 304L 0 mm B8M Cl.2 / 8MA Spiral Wound	BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT	**NON-CORROSIVE HC LIQUID / GAS (CRYOGENIC SERVICE)** COLD DRAIN HYDROCARBON DRAIN HYDROCARBON (LIQUID / GAS) HYDROCARBON LIQUID ASME B31.3	 DP DR HC L
F48	ASME CL 600 RF	-45/+200 deg C 99.2/76.6 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** – FRESH CAUSTIC SOUR WATER DRAIN HYDROCARBON (LIQUID / GAS) HYDROCARBON LIQUID DESALINATED WATER SOUR WATER CHEMICALS – PHOSPHATE ASME B31.3	 CF WS HC L RW WS PH
F48X	ASME CL 600 RF	-45/+200 deg C 99.2/76.6 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA Spiral Wound	SW, BW, Flgd	Ga, Gl, Ba, Ch, B'fly Ne	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** – AMINE ASME B31.3	 AM

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
G01	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+315 deg C 153/113.3 barg ASME B16.5 1.1	Carbon Steel 1.27 mm B7/2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**NON CORROSIVE SERVICES** – FUEL GAS HYDROCARBON GAS PRODUCTION GAS GLYCOL (MEG) METHANOL ASME B31.3	 FG G G GM ME
G01P3	ASME CL900 RJ	+75deg C 115 barg ASME B16.5 1.1	Carbon Steel 1.27 mm B7/2H Soft Iron Octagonal Ring	BW, Flgd	N/A	N/A	EXPORT GAS ASME B31.8	G
G03	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+315 deg C 153/113.3 barg ASME B16.5 1.1	Carbon Steel 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**LIGHT CORROSIVE SERVICES** – HYDROCARBON DRAIN HYDROCARBON GAS ASME B31.3	 DR G

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
G03N	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+315 deg C 153/113.3 barg ASME B16.5 1.1	Carbon Steel SSCC 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT OR 316 + METAL SEAT (TUNGSTEN CARBIDE COATED) OR A105 ENP min. 75 microns + METAL SEAT (TUNGSTEN CARBIDE COATED)	**ALKALINE SERVICES / SSCC –(NACE)** AMINE HYDROCARBON GAS PRODUCTION GAS ASME B31.3	AM G G
G03S	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+200 deg C 153/113.3 barg ASME B16.5 1.1	Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES – (NACE)** HYDROCARBON DRAIN HYDROCARBON GAS HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID ASME B31.3	DR G HC L
G03P2	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+85 deg C 139 barg 1.1	Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES – (NACE)** HYDROCARBON GAS HYDROCARBON (LIQUID GAS) ASME B31.8	G HC

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
G05P4	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-29/+85 deg C 139 barg 1.1	Carbon Steel SSCC & HIC 5.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**HEAVY CORROSIVE SERVICES – (NACE)** HYDROCARBON GAS HYDROCARBON (LIQUID GAS) HYDROCARBON LIQUID ASME B31.8	G HC L
G21	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-46/+200 deg C 153/131.3 barg ASME B16.5 1.1	Low Temperature Carbon Steel 1.27 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**NON-CORROSIVE SERVICES** – HYDROCARBON GAS ASME B31.3	G
G23N	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-46/+200 deg C 153/131.3 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**INTERMEDIATE CORROSIVE SERVICES – (NACE)** AMINE HYDROCARBON GAS ASME B31.3	AM G
G23S	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-46/+200 deg C 153/131.3 barg ASME B16.5 1.1	Low Temperature Carbon Steel SSCC & HIC 3.0 mm B7M/2HM Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A350 ENP min. 75 microns + SOFT SEAT T	**HEAVY CORROSIVE SERVICES – (NACE)** AMINE HYDROCARBON GAS ASME B31.3	AM G

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Line Class	Flange Rating Flange Finish	Temp Range Max. Press. Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
G46	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-196/+55 deg C 124.1 barg ASME B16.5 2.3	Stainless Steel 304L 0 mm B8M Cl.2 / 8MA 316L SS Octagonal Ring	BW, Flgd	Ga, Gl, Ba, Ch	316 + SOFT SEAT	**NON-CORROSIVE HC LIQUID / GAS (CRYOGENIC SERVICE)** COLD DRAIN HYDROCARBON GAS HYDROCARBON (LIQUID / GAS) HYDROCARBON LIQUID ASME B31.3	 DP G HC L
G48	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-45/+200 deg C 148.9/114.8 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA 316L SS Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug Ne	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** HYDROCARBON DRAIN HP WET GAS FLARE HYDROCARBON GAS SOUR WATER ASME B31.3	 DR FA G WS
G48X	ASME CL900 RJ (ASME CL1500 RJ to 1-1/2")	-45/+200 deg C 148.9/114.8 barg ASME B16.5 2.4	Stainless Steel 321 0 mm B8M Cl.2 / 8MA 316L SS Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch,	316 + SOFT SEAT	**HEAVY CORROSIVE SERVICES** HYDROCARBON DRAIN HYDROCARBON GAS ASME B31.3	 DR G
H01	ASME CL1500 RJ	-29/+200 deg C 255.4/219.1 barg ASME B16.5 1.1	Carbon Steel 1.27 mm B7/2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba,Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**NON CORROSIVE SERVICES** – GLYCOL (MEG) HYDROCARBONS PRODUCTION GAS INJECTION WATER MP HYDRAULIC SYSTEMS METHANOL ASME B31.3	 GM HC G ME

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Line Class	Flange Rating Flange Finish	Temp Range Press Range Mat'l Group	Pipe Material Corr. Allow. Bolting Gaskets	Construction	Valves	Valve Trim (API Trim)	Services & Design Code	Service symbols
H03	ASME CL1500 RJ	-29/+200 deg C 255.4/219.1 barg ASME B16.5 1.1	Carbon Steel 3.0 mm B7/2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**LIGHT CORROSIVE SERVICES** – GLYCOL DRAIN (MEG) HYDROCARBONS PRODUCTION GAS ASME B31.3	DM HC
J 01	ASME, 2500 Lbs RJ	-20 / +100 dec C 300.0 barg API 5L X60 (PSL 1)	Carbon Steel 1.27 mm B7 / 2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**NON-CORROSIVE SERVICES** – METHANOL, GLYCOL, HYDROCARBONS, PRODUCTION GAS, INJECTION WATER & MP HYDRAULIC SYSTEMS ASME B31.3	ME GM HC
J 03	ASME, 2500 Lbs RJ	-20 / +100 dec C 300.0 barg API 5L X60 (PSL 1)	Carbon Steel 3.00 mm B7 / 2H Soft Iron Octagonal Ring	SW, BW, Flgd	Ga, Gl, Ba, Ch, Plug	316 + SOFT SEAT OR A105 ENP min. 75 microns + SOFT SEAT	**NON-CORROSIVE SERVICES** – METHANOL, GLYCOL, HYDROCARBONS, PRODUCTION GAS, INJECTION WATER & MP HYDRAULIC SYSTEMS ASME B31.3	ME GM HC

Note 1: Trim materials only apply to ball valves except where ball valve is not specified in pipe classes.

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APPENDIX A - PIPING MATERIAL CLASSES

APPENDIX B - BRANCH TABLES (90 deg and 45 deg)

ATTACHEMENT #1 - PIPING ITEM CODE LIST

Detail of all items with complete description included in the 3D model catalogue have been listed in attachment 1.

ATTACHMENT 1-PIPING ITEM CODE LIST.pdf

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APPENDIX A - PIPING MATERIAL CLASSES.

Piping Material Classes
B01
B03
B03D
B03N
B03S
B06
B06N
B06S
B10
B12
B19
B21
B23
B23N
B23S
B42
B43
B46
B48
B48X
B49
B49N
B90
B91
B91X
B92
B93
B94
D01
D01P
D03

Piping Material Classes
D03N
D03S
D12
D21
D23
D23N
D23S
D42
D46
D48
D48X
D49
D49N
D71X
F01
F03
F03N
F03S
F12
F21
F23
F23S
F42
F46
F48
F48X
G01
G01P3
G03
G03N
G03S

Piping Material Classes
G03P2
G05P4
G21
G23N
G23S
G46
G48
G48X
H01
H03
J 01
J 03

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class B 01

SERVICE : (14)
Hydrocarbons (gas or liquids) (non corrosive), Pressure drains, Non corrosive flare gas, Fuel gas, Fuel oil, Diesel oil, Nitrogen, Oily water sewers, Cooling water (non corrosive), Non corrosive process water Methanol, Glycol

Pressure/Temperature limits					
Pressure (barg)	19.6	19.6	17.6	13.2	9.13
Temperature(°C)	-29	+37	+100	+220	+330

Pipes(12)																							
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26						***48***
Schedule	80				40				20			10				20	Larger sizes according to table below						
Ends	PE				BE																		
Mat. Spec.	API 5L Gr.B (PSL 1) seamless																API 5L Gr.B (PSL 1) – SAW – 100% radiography						

Fittings	3000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001,VGFAB001 ,VGXAK001(4)	CS valves,150 Lbs, GO for 14" and above to data shts. VGAAB001, VGAAB002, VGAAB003 and VGAAB011 (3)(4)
Ball valves	CS valves, 800 Lbs to data sht. VBFAK001, VBFAK005, VBFAK009 and VBFAKS01 (8)	CS valves,150 Lbs, GO for 8" and above to data shts. VBRAB001, VBRAB002 ,VBRAB003,VBRAB011, VBRAB012, VBRAB028, VBRABS01 and VBRABT01 for reduced bore VBFAB001,VBFAB002,VBFAB003,VBFAB011,VBFAB012,VBFAB018, VBFAB019, VBFAB028, VBFAB029, VBFABS01 and VBFABT01 for full bore. (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht. VLAAK001 (9)	CS valves, 150 Lbs, GO for 8" ***and above*** to data shts. VLAAB001 and VLAAB003 (9)
Plug valves	CS valves, 800 Lbs to data sht. . VPLAF001 (6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB001 and VPLAB002(6)
Butterfly Valves		CS valves,150Lbs,to data shts VUFAB001,VUFAB002 ***and VUFAB003***
Check valves	CS valves,800 Lbs to data sht.VCHAK001(7)	CS valves, 150 Lbs to data shts. VCAAB001, VCAAB002 and VCAAB009 (3)
Needle Valves	CS valves,800Lbs to data sht VNEAK001	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED Viton seals temperature limit = 200°C, ELASTOLION 985 Seals temperature limit = 180°C and metal for temperature limit>200°C
(9) Swivel plug disc.
(10) Firesafe and Anti-static
(11) Note removed
(12) For sizes (20",26" up to 36",46") sch (20,STD,STD,STD,XS,XS,XS,13.85) shall be consider for full vacuum at 220°C
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary.
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets.

26	28	30	32	34	36	***38***	40	42	44	46	***48***
10			Std			XS					

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** B 03

SERVICE : (14)
Corrosive hydrocarbons (gas or liquids) (CO2 light corrosion)
Corrosive flare gas lines (CO2 light corrosion)
Light Corrosive Services
Process Gas

Pressure/Temperature limits						
Pressure (barg)	19.6	19.6	17.6	13.9	10.2	8.0
Temperature(°C)	-29	+37	+100	+200	+300	+360

Pipes(12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			72
	Schedule	160				80	40			20		30	20					Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW – 100% radiography						

Fittings	6000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001(SW x THRD) ,VGFAB001(150Lbs, FLGD-RF) (4)	CS valves,150 Lbs, GO for 14" and above to data shts. VGAAB001, VGAAB002, VGAAB003 andVGAAB011 (3)(4)
Ball valves	CS valves,800 Lbs to data ht.VBFAK002,VBFAKX02(8) 10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB004, VBRAB005 and VBRAB006 for reduced bore VBFAB004,VBFAB005,VBFAB006 , VBFAB020 AND VBFAB030 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht. VLAAK001(9)	CS valves, 150 Lbs, GO for 8" to data shts. VLAAB001 and VLAAB003(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF002(6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB001 and VPLAB002(6)
Butterfly Valves		CS valves,150 Lbs, GO for 8" and above to data shts VUFAB001, VUFAB002, VUFAB003
Check valves	CS valves,800 Lbs to data sht. VCHAK001(7)	CS valves, 150 Lbs to data shts. VCAAB001 and VCAAB002 ,VCAAB009(3)
Needle Valves	CS valves,800Lbs to data sht VNEAK001	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

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DOCUMENT TITLE	DOCUMENT No.						Doc. Class: 1
PIPING MATERIAL CLASSES	DOC. TYPE	PROJECT	UNIT NO.	MAT. CODE	S/N	REV.	
	RP	1718	999	1300	0001	6	Page 56 of 165

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) AED Viton seals temperature limit = 200°C, ELASTOLION 985 Seals temperature limit = 180°C and metal for temperature limit>200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed.
(12) For sizes (18",24", 26", 28", 36", 40", 42", 46", 48") sch(STD,XS,XS,XS,30,14.25,14.8,15.88,16.42) shall be consider for full vacuum at 360°C
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) Wall thickness of 72" for line with 4bar design pressure and 350°C design temperature

26	28	30	32	34	36	38	40	42	44	46	48	52	***72***
Std		20				XS				14.27 mm			***12.7 Mm (16)***

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** B 03 D

SERVICE : (9)

Liquid sulphur (jacketed line) Acid gas

Pressure/Temperature limits					
Pressure (barg)	19.6	19.6	17.6	13.9	11.3
Temperature(°C)	-29	+37	+100	+200	+270

Pipes(5)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	***14***	16	18	20	24	26	28			
	Schedule					80	***40***												19.05mm			
	Ends	BE																				
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless												API 5L Gr.B (PSL 1) – SAW – 100% radiography								
Fittings		A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps, crosses																				
Flanges		Reducing slip on flange, 150 Lbs RF, A105 as per pipe schedule, blind flanges (2)																				
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting																				
Gate valves																						
Ball valves																						
Globe valves																						
Plug valves						CS valves, 150 Lbs, GO for 8" and above to data shts.RVPAB005 and RVPAB006 (3)(6)(7)																
Butterfly Valves																						
Check valves		CS valves, 150 Lbs to data sht. RVCAB001 (3)(6)																				
Filters																						
Gaskets		Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21																				
Bolting		Studs A 193 B7, Hex Head nuts A 194 2H																				
Blanks/Spacers		C. Stl. plate ASTM A516 Gr 70, 150# RF Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (8)																				
Miscellaneous																						

Notes

(1) See table of connections Appendix B
(2) Flanges as per ASME B16.5 for diameters up to 24"
and as per ASME B16.47 Series A for diameters 26" and above.
(3) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(4) Note removed
(5) All schedules are acceptable for external pressure 8 barg @ 270°C
(6) Valves to be designed with oversized flanges of one diameter of nominal size
(7) Heating jacket with 2 nozzles SW :
NPS 1/2" for valves with a nominal diameter up to 2"
NPS 3/4" for valves with a nominal diameter up to 6"
NPS 1" for larger diameter
(8) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(9) For full range of services see para.12 Piping class summary
(10) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel (12)	Revision : 6	**Class** B 03 N
	Corrosion allowance : 3 mm	Date : 3-01-10	

SERVICE : (15)
Light Corrosive Services, Process Gas
Sodium hydroxide, Rich amine

Pressure/Temperature limits

Pressure (barg)	19.6	19.6	17.6	13.9	11.3	10.2	8.0
Temperature(°C)	-29	+37	+100	+200	+270	+300	+360

Pipes(13)																					
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			48
Schedule	160				80	40			20		30	20					Larger sizes according to table below			
Ends	PE				BE															
Mat. Spec.	API 5L Gr.B (PSL 1) seamless				API 5L Gr.B (PSL 2) seamless							API 5L Gr.B (PSL 2)– SAW – 100% radiography								

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW) VGXAK002(SW x THRD),VGFAB002(150 Lbs,FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB004, VGAAB006 and VGAAB007 (3)(4)
Ball valves	CS valves,800 Lbs to data sht. VBFAK003, VBFAKX03 (8)(10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB007,VBRAB008,VBRAB009,VBRAB025,VBRAB026 and VBRAB027 for reduced bore VBFAB007,VBFAB008,VBFAB009,VBFAB025,VBFAB026 and VBFAB027 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht.VLAAK003(9)	CS valves, 150 Lbs, GO for 8" ***and above*** to data shts. VLAAB002 and VLAAB006(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004(6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB003 and VPLAB004(6)
Check valves	CS valves,800 Lbs to data sht. VCHAK003(7)	CS valves, 150 Lbs to data shts. VCAAB003 and VCAAB004,VCAAB010 (3)
Needle valves	CS valves,800Lbs VNEAK002	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B 16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180° . AFLAS Seals temperature limit = 200° C
(9) Swivel plug disc
(10) Fire safe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO 15156 & TM 01 77 Standard & with RP-1718-999-6300-0003Valve materials shall also conform to RP-1718-999-6300-0004
(13) For sizes(18",24",26",28",36") sch(STD,XS,XS,XS,30)shall be consider for full vacuum at 270˚C.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46	48
Std		20				XS				14.27mm	

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class B 03 S

SERVICE : (14)
Corrosive hydrocarbons (gas or liquids)
(wet H2S service), Acid Gas, Process Gas
Corrosive flare gas lines (wet H2S service)

Pressure/Temperature limits						
Pressure (barg)	19.6	19.6	17.6	13.9	10.2	8.0
Temperature(°C)	-29	+37	+100	+200	+300	+360

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				***50***
	Schedule	160				80	40			20		30	20					Larger sizes according to table below				
	Ends	PE				BE																
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless																API 5L Gr.B (PSL 2)– SAW – 100% radiography				

Fittings	6000 Lbs SW, A105 45˚or 90˚elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW) VGXAK002(SW x THRD),VGFAB002(150Lbs,FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB004, VGAAB006 and VGAAB007 (3)(4)
Ball valves	CS valves,800 Lbs to data sht. VBFAK003, VBFAKX03 (8)(10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB007,VBRAB008,VBRAB009,VBRAB025,VBRAB026 and VBRAB027 for reduced bore VBFAB007,VBFAB008,VBFAB009,VBFAB025,VBFAB026 and VBFAB027 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht.VLAAK003(9)	CS valves, 150 Lbs, GO for 8" ***and above*** to data shts. VLAAB002 and VLAAB006(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004(6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB003 and VPLAB004(6)
Check valves	CS valves,800 Lbs to data sht. VCHAK003(7)	CS valves, 150 Lbs to data shts. VCAAB003 and VCAAB004,VCAAB010 (3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes
(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C.
AFLAS seals temperature limit = 200°C.
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0284&TM0177 Standard & with the RP-1718-999-6300-0002.Valve materials shall also conform to RP-1718-999-6300-0004
(13)Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15)Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46	48	***50***
Std		20				XS				14.27 mm		

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 6 mm (12)	Revision : 6 Date : 3-01-10	class B 06

SERVICE : (14)

Corrosive hydrocarbons (gas or liquids)
(CO2 heavy corrosion)

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-29	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36
	Schedule	XXS				160		120	80	60		40			30		XS	20		30	
	Ends	PE				BE															
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1)– SAW – 100% radiography						

Fittings	6000 Lbs SW, A105 45˚or 90˚elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001(SW x THRD),VGFAB001(150 Lbs FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB001, VGAAB002, VGAA003 and VGAAB011 (3)(4)
Ball valves	CS valves,800 Lbs to data sht. VBFAK004 (8)(10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB004, VBRAB005 and VBRAB006 for reduced bore VBFAB004,VBFAB005 and VBFAB006 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht.VLAAK001 (9)	CS valves, 150 Lbs, GO for 8" to data shts. VLAAB001 and VLAAB003(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF003 (6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB001 and VPLAB002(6)
Check valves	CS valves,800 Lbs to data sht.VCHAK001 (7)	CS valves, 150 Lbs to data shts. VCAAB001 and VCAAB002 ,VCAAB009(3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Corrosion allowance limited to 5mm only for sizes below 1 inch and 3.1mm only for fittings below 2 inches
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 6 mm (12)	Revision : 6 Date : 3-01-10	class B 06N

SERVICE : (15)

(CO2 heavy corrosion - SSCC)
Heavy Corrosive Services-(NACE)
Acid Gas

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-29	+37	+100	+200

Pipes																				
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			40
Schedule	XXS				160		120	80	60		40			30		XS	Larger sizes according to table below			
Ends	PE				BE															
Mat. Spec.	API 5L Gr.B (PSL 1) seamless						API 5L Gr.B (PSL 2) seamless							API 5L Gr.B (PSL 2)– SAW – 100% radiography						

Fittings	6000 Lbs SW, A105 45˚or 90˚elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002(SW x THRD), VGFAB002(150Lbs FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB004, VGAAB006 and VGAA007 (3)(4)
Ball valves	CS valves,800 Lbs to data sht. VBFAK006 (8)(10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB007, VBRAB008 and VBRAB009 for reduced bore VBFAB007,VBFAB008,VBFAB009 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht.VLAAK003 (9)	CS valves, 150 Lbs, GO for 8" to data shts. VLAAB002 and VLAAB006(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF009 (6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB003 and VPLAB004(6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht.VCHAK003 (7)	CS valves, 150 Lbs to data shts. VCAAB003, VCAAB004 and VCAAB010(3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AFLAS seals temperature limit = 200°C
ELASTOLION 985 seals = 180°C
(9) Swivel plug disc
(10) Fire safe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with RP-1718-999-6300-0003Valve materials shall also conform to RP-1718-999-6300-0004
(13) Corrosion allowance limited to 5mm only for sizes below 1 inch and 3.1mm only for fittings below 2 inches
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(17) Forsizes(12",34",36")sch(60,40,40,)shall be considered for full vacuum conditions at 160˚C.

26	28	30	32	34	36	38	40
20		30				15.88mm	

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 6 mm (12)	Revision : 6 Date : 3-01-10	class B 06S

SERVICE : (15)

Heavy Corrosive Services-(NACE)
Amine

Pressure/Temperature limits

Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-29	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14		16	18	20	24	
	Schedule	XXS				160		120	80	60		40				30		XS	
	Ends	PE				BE													
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless				API 5L Gr.B (PSL 2) seamless						API 5L Gr.B (PSL 2)– SAW – 100% radiography							

Fittings	6000 Lbs SW, A105 45°or 90°elbows (2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002(SWxTHRD) , VGFAB002(150Lbs FLGD-RF) (4)	CS valves, 150 Lbs. GO for 14" and above to data shts. VGAAB004, VGAAB006 and VGAA007 (3)(4)
Ball valves	CS valves,800 Lbs to data sht. VBFAK006 (8)(10)	CS valves, 150 Lbs, GO for 8" and above to data shts. VBRAB007, VBRAB008 and VBRAB009 for reduced bore VBFAB007,VBFAB008,VBFAB009 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht.VLAAK003 (9)	CS valves, 150 Lbs, GO for 8" to data shts. VLAAB002 and VLAAB006(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF009 (6)	CS valves, 150 Lbs, GO for 8" and above to data shts. VPLAB003 and VPLAB004(6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht.VCHAK003 (7)	CS valves, 150 Lbs to data shts. VCAAB003, VCAAB004 and VCAAB010(3)
Filters	600 Class, SW, A105,Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AFLAS seals temperature limit = 200°C ELASTOLION 985 seals = 180°C
(9) Swivel plug disc
(10) Fire safe and Anti-static
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with RP-1718-999-6300-0002Valve materials shall also conform to RP-1718-999-6300-0004
(13) Corrosion allowance limited to 5mm only for sizes below 1 inch and 3.1mm only for fittings below 2 inches
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(17) Forsize 12" sch60 shall be considered for full vacuum conditions at 160°C.

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel (Galvanised up to 2 inches) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class B 10

SERVICE : (9)

Instrument air, Halon gas

Pressure/Temperature limits			
Pressure (barg)	19.6	19.6	***18.2***
Temperature(°C)	-29	+37	+85

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26	30	32	36		
	Schedule	160					40			20			10				20	10		Std			
	Ends	NPT					BE																
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless Galvanised to A120(11)					API 5L Gr B (PSL 1) seamless									API 5L Gr.B (PSL 1) – SAW – 100% radiography							

Fittings	3000 Lbs threaded, A105, 45° or 90° elbows(2), couplings, tees, plugs, caps, unions, threadolets,elbolets , Galvanised to A120(11)	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps
Swaged nipples	Eccentric & concentric, threaded ends, sch 160, A234 *WPB* (Galv)(11)	
Flanges (3)	150 Lbs RF, threaded A105, Galvanised to A120(11)	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK003(THRD), VGFAB003(150Lbs FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB012, VGAAB013, VGAAB014 and VGAAB015 (3)(4)
Ball valves		
Globe valves	CS valves, 800 Lbs to data sht. VLAAK002 (7)	CS valves, 150 Lbs, GO 8" to data shts. VLAAB007 and VLAAB008(7)
Plug valves		
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK002 (6)	CS valves, 150 Lbs to data shts. VCAAB007 and VCAAB008
Filters	600 Class, threaded, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (8)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
Note removed
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Note removed
(6) Horizontal installation
(7) Swivel plug disc
(8) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(9) For full range of services see para.12 Piping class summary
(10) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(11) Hot dip galvanized to ASTM A53 or A123, A153 is acceptable alternatively.

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	**class** B 12

SERVICE : (14) LP steam

Pressure/Temperature limits

Pressure (barg) (6)	19.6	19.6	17.6	13.9	11.3	
Temperature(°C)	0	+37	+100	+200	+270	

pipes																						
	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				48
	Schedule	80				40				20			10			20		Larger sizes according to table below				
	Ends	PE				BE																
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless																API 5L Gr.B (PSL 1)– SAW – 100% radiography				

Fittings	3000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings,tees,plugs,caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) (10) concentric / eccentric reducers, tees, (1), crosses (11), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	150 Lbs RF, SW A105	WN, 150 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001(SW x THRD), VGFAB001 (150Lbs FLGD-RF) (4)	CS valves, 150 Lbs, GO for 14" and above to data shts. VGAAB001, VGAAB002,VGAAB003 and VGAAB011 (3)(4)
Ball valves		
Globe valves	CS valves,800 Lbs to data sht.VLAAK001 (9)	CS valves,150 Lbs, GO 8" to data sht. VLAAB001 and VLAAB003 (3)(9)
Plug valves		
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK001 (7)	CS valves, 150 Lbs to data shts. VCAAB001 ,VCAAB002,VCAAB009(3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes
(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Note removed
(6) All schedules acceptable for full vacuum @48°C,
(7) Horizontal installation
(8) Note removed
(9) Swivel plug disc
(10) R=1 dia. Can be used for jacketing line only
(11) SplitCrosses can be used for jacketing line only
(12) Deleted
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	***46***	48
Std			XS							***14.27*** mm	

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : Carbon steel (Galvanised) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class B 19

SERVICE :

Drinking water

Pressure/Temperature limits				
Pressure (barg)	14.2	14.2	14.2	14.2
Temperature(°C)	-29	+37	+60	+85

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24					
	Schedule	160				80																
	Ends	NPT																				
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless Galvanised to A120(11)																				
Fittings		3000 Lbs threaded, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, unions, Galvanised to A 120(11)																				
Swaged nipples		Eccentric & concentric, threaded ends, sch to suit pipe, A234 WPB Galv.(11)																				
Flanges (3)		150 Lbs FF, threaded A105, Galvanised to A120 (11)																				
Gate valves		SS valves,800 Lbs to data sht. VGACK003(THRD),VGFCB003 (150Lbs FLGD - FF) (4)					SS valves, 150 lbs to data sht.VGACB004															
Ball valves																						
Globe valves		SS valves,800 Lbs to data sht.VLACK004 (7)					SS valves, 150 lbs to data sht.VLACB003															
Plug valves																						
Butterfly Valves																						
Check valves		SS valves, 800 Lbs to data sht. VCHCK004 (6)					SS valves, 150 lbs to data sht.VCACB003															
Filters		600 Class, threaded, SS A182 F316, Y type, stainless steel strainer																				
Gaskets		Neoprene flat gaskets, 3mm thick, SHORE hardness 60 to 70 maximum																				
Bolting		Studs A 193 B7, Hex Head nuts A 194 2H																				
Blanks/Spacers		C. Stl. plate ASTM A516 Gr 70 Galvanised to A120, 150# FF, Spectacle blinds as per ASME B16.48 (9) (11)																				

Notes

(1) See table of connections Appendix B
(2) Note removed
(3) Flanges as per ASME B16.5, flat finish facing
(4) Single-piece wedge
(5) Note removed
(6) Horizontal installation
(7) Swivel plug disc
(8) For larger sizes refer to pipe class B90.
(9) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(10) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(11) Hot dip galvanized to ASTM A53, A123 or A153 is acceptable alternatively.

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class B 21

SERVICE : (13)

Non corrosive hydrocarbons (low temperature)
Non corrosive flare gas (low temperature)

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			48
	Schedule	80				40				20			10				20	Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	ASTM A333 Gr6 seamless															A 671 CC65 CI22 W/S2 at -46°C				

Fittings	3000 Lbs SW, 45° or 90° elbows (2), couplings, tees, sockolets, plugs, caps, elbolets, latrolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets & latrolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	150 Lbs RF, SW A350 LF2 CL.1	WN, 150 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves,800 Lbs to data sht. VGABK001(SW), VGXBK001 (SW x THRD), VGFBB001(150 Lbs FLGD-RF) (4)	LTCS valves, 150 Lbs, GO for 14" and above to data shts. VGABB001, VGABB002, VGABB003 and VGABB004 (3)(4)
Ball valves	LTCS valves,800 Lbs to data sht. VBFBK001 and VBFBKS01,VBFBKX01, VBFBK005 (8)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. . VBRBB001, VBRBB002, VBRBB003, VBRBBS01 and VBRBBT01 for reduced bore VBFBB001,VBFBB002, VBFBB003, VBFBBS01 and VBFBBT01 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves,800 Lbs to data sht. VLABK001 (9)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VLABB001 and VLABB003(9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF001 (6)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VPLBB001 and VPLBB002 (6)
Check valves	LTCS valves, 800 Lbs to data sht. VCHBK001 (7)	LTCS valves, 150 Lbs to data shts. VCABB001 ,VCABB002 ,VCABB005(3)
Filters	600 Class,SW, A350 LF2 CL.1, Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70W/S5@-46°C, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (12)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C ELASTOLION 985 seals = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14)Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46	48
10			Std				XS				

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** B 23

SERVICE : (13)
Low Temperature Hydrocarbons (CO2 Light Corrosion)
Low Temperature Flare Gas (CO2 Light Corrosion)

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			48
	Schedule	160				80	40			20		30	20					Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	ASTM A333 Gr6 seamless																A 671 CC65 Cl22 W/S2 at -46˚C			

Fittings	6000 Lbs SW 45º or 90º elbows (2) couplings, tees Sockolets, plugs, caps, elbolets, latrolets, A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric/ eccentric, reducers, tees (1), caps. Weldolets & latrolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	150 Lbs RF, SW, A 350 LF2 CL.1	WN, 150 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK001(SW), VGXBK001(SW x THRD),VGFBB001 (150 LbS FLGD-RF) (4)	LTCS valves, 150 Lbs, GO for 14" and above to data shts. VGABB001, VGABB002, VGABB003 and VGABB004 (3)(4)
Ball valves	LTCS valves,800 Lbs to data sht. VBFBK002 and VBFBKS02 (8)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VBRBB004, VBRBB005, VBRBB006, VBRBBS04 and VBRBBT04 for reduced bore VBFBB004,VBFBB005, VBFBB006, VBFBBS04 and VBFBBT04 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK001 (9)	LTCS valves,150 Lbs, GO for 8" and above to data shts. VLABB001 and VLABB003 (9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF002 (6)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VPLBB001 and VPLBB002 (6)
Check valves	LTCS valves, 800 Lbs to data sht. VCHBK001 (7)	LTCS valves, 150 Lbs to data shts. VCABB001 ,VCABB002,VCABB005(3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr.70 W/S5 @-46˚C 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (12) (15)(16)	

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(15) LT CS plate shall undergo toughness testing equivalent to and in accordance with that required for pipe material.
(16) S5 Plate testing @ -46°C
(17)

26	28	30	32	34	36	38	40	42	44	46	48
Std		20				XS				14.27 mm	

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** B 23N

SERVICE : (14)
Low Temperature Flare Gas (SSCC Corrosion)

Pressure/Temperature limits

Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			54
	Schedule	160				80	40			20		30	20					Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	ASTM A333 Gr6 seamless											A 671 CC65 CI22 W/S2 at -46°C								

Fittings	6000 Lbs SW 45º or 90º elbows (2) couplings, tees, Sockolets, elbolets, latrolets, , plugs, caps, A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	150 Lbs RF, SW, A 350 LF2 CL.1	WN, 150 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. . VGABK002 (SW), VGXBK002(SW x THRD), VGFBB002 (150Lbs FLGD-RF) (4)	LTCS valves, 150 Lbs, GO for 14" and above to data shts. VGABB005, VGABB006 and VGABB007 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK003 (8)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VBRBB007, VBRBB008 and VBRBB009 for reduced bore VBFBB007,VBFBB008,VBFBB009 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK002 (9)	LTCS valves,150 Lbs, GO for 8" and above to data shts. VLABB002 and VLABB004 (9)
Plug valves	LTCS valves,800 Lbs to data sht. VPLBF003 (6)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VPLBB003 and VPLBB004 (6)
Butterfly Valves		
Check valves	LTCS valves,800 Lbs to data sht. VCHBK002 (7)	LTCS valves, 150 Lbs to data shts. VCABB003, VCABB004,VCABB006 (3)
Filters	600 Class, SW , A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. Plate ASTM A516 Gr 70˚ W/S5 @-46˚C , 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with the RP-1718-999-6300-0003.Valve materials shall also conform to RP-1718-999-6300-0004
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46	48	50	52	54
Std		20				XS				14.27mm				

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** B 23S

SERVICE : (14)

Low Temperature Hydrocarbons (wet H2S service)
Low Temperature Flare Gas (wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	17.6	13.9
Temperature(°C)	-46	+37	+100	+200

PIPES	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	160				80	40			20		30	20					Larger sizes according to table below				
	Ends	PE					BE															
	Mat. pec.	ASTM A333 Gr6 seamless																A 671 CC65 Cl22 W/S2 at -46˚C				

Fittings	6000 Lbs SW 45º or 90º elbows (2) couplings, tees, plugs, caps, Sockets, elbolets, latrolets,A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	150 Lbs RF, SW A 350 LF2 CL.1	WN, 150 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. . VGABK002 (SW), VGXBK002(SW x THRD),VGFBB002(150Lbs FLGD-RF) (4)	LTCS valves, 150 Lbs, GO for 14" and above to data shts. VGABB005, VGABB006 and VGABB007 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK003 (8)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VBRBB007, VBRBB008 and VBRBB009 for reduced bore VBFBB007,VBFBB008,VBFBB009 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to dat sht. VLABK002 (9)	LTCS valves,150 Lbs, GO for 8" and above to data shts. VLABB002 and VLABB004 (9)
Plug valves	LTCS valves,800 Lbs to data sht. VPLBF003 (6)	LTCS valves, 150 Lbs, GO for 8" and above to data shts. VPLBB003 and VPLBB004 (6)
Butterfly Valves		
Check valves	LTCS valves,800 Lbs to data sht. VCHBK002 (7)	LTCS valves, 150 Lbs to data shts. VCABB003, VCABB004,VCABB006 (3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. Plate ASTM A516 Gr 70 W/S5 @-46˚C, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0 284,TM 01 77 Standard & with the RP-1718-999-6300-0002.Valve materials shall also conform to RP-1718-999-6300-0004
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
Std		20				XS				14.27 mm

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Alloy steel 1.25Cr 0.5Mo	Revision : 6	class B 42
	Corrosion allowance : 1.27 mm	Date : 3-01-10	

SERVICE : (10)

LP Steam super heat

Pressure/Temperature limits						
Pressure (barg)	19.9	19.9	17.6	13.9	10.2	5.5
Temperature(°C)	-29	+37	+100	+200	+300	+425

Pipes(6)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80				40				20			10			20		
	Ends	PE				BE												
	Mat. Spec.	ASTM A335 GrP11 seamless														A 691 1.25Cr SAW 100% radiography		

Fittings	3 000 Lbs SW A182 Gr.F11 CL.2 45º or 90º elbows (2) couplings, tees, plugs, caps, Sockolets, elbolets	A 234 WP11 CL.1 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric / eccentric reducers, tees (1), caps. Weldolets (A182 Gr.F11 CL.2)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WP11 CL.1	
Flanges	150 Lbs RF, SW A 182 Gr.F11 CL.2	WN, 150 Lbs RF, A182 GR.F11 CL.2 as per pipe schedule, blind flanges (3)
		WN, 300Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	AS valves, 800 Lbs to data sht. VGADK001(SW), VGXDK001 (SW x THRD), VGFDB001(150Lbs FLGD-RF) (4)	AS valves, 150 Lbs, GO for 14" and above to data shts. VGADB001 and VGADB002 (3)(4)
Ball valves		
Globe valves	AS valves, 800 Lbs to data sht. VLADK001 (5)	AS valves, 150 Lbs to data sht. VLADB001 (3)(5)
Plug valves		
Butterfly Valves		
Check valves	AS valves, 800 Lbs to data sht. VCHDK001 (7)(8)	AS valves, 150 Lbs to data shts. VCHDB001 and VCHDB002 (3)
Filters	600 Class, SW, A182 F11 CL.2 Y type, stainless steel strainer	
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B16, Hex Head nuts A 194 Gr.4	
Blanks/Spacers	S.S. plate ASTM A387 Gr.11 Cl.2, 150# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (9)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 1 1/2" and Flexible wedge for diameters 2" and above
(5) Swivel plug disc
(6) All schedules are acceptable for full vacuum @ 48°C
(7) Horizontal installation
(8) Horizontal piston lift
(9) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(10) For full range of services see para.12 Piping class summary
(11) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : Alloy steel 1.25Cr 0.5Mo	Revision : 6	class B 43
	Corrosion allowance : 3 mm	Date : 3-01-10	

SERVICE : (10)

LP Super heated Steam
Process Gas

Pressure/Temperature limits

Pressure (barg)	19.9	19.9	17.6	13.9	10.2	5.5
Temperature(°C)	-29	+37	+100	+200	+300	+425

Pipes(6)																				
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26		36
Schedule	160				80	40			20		30	20					Larger sizes according to table below		
Ends	PE				BE														
Mat. Spec.	ASTM A335 GrP11 seamless																A 691 1.25Cr SAW 100% radiography		

Fittings	3 000 Lbs SW A182 Gr.F11 CL.2 45º or 90º elbows (2) couplings, tees, plugs, caps, Sockolets, elbolets	A 234 WP11 CL.1 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric / eccentric reducers, tees (1), caps. Weldolets (A182 Gr.F11 CL.2)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WP11 CL.1	
Flanges	150 Lbs RF, SW A 182 Gr.F11 CL.2	WN, 150 Lbs RF, A182 GR.F11 CL.2 as per pipe schedule, blind flanges (3)
		WN, 300Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	AS valves, 800 Lbs to data sht. VGADK001(SW), VGXDK001 (SW x THRD), VGFDB001(150Lbs FLGD-RF) (4)	AS valves, 150 Lbs, GO for 14" and above to data shts. VGADB001 and VGADB002 (3)(4)
Ball valves		
Globe valves	AS valves, 800 Lbs to data sht. VLADK001 (5)	AS valves, 150 Lbs to data sht. VLADB001 (3)(5)
Plug valves		
Butterfly Valves		
Check valves	AS valves, 800 Lbs to data sht. VCHDK001 (7)(8)	AS valves, 150 Lbs to data shts. VCHDB001 and VCHDB002 (3)
Filters	600 Class, SW, A182 F11 CL.2 Y type, stainless steel strainer	
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B16, Hex Head nuts A 194 Gr.4	
Blanks/Spacers	S.S. plate ASTM A387 Gr.11 Cl.2, 150# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (9)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 1 1/2" and
Flexible wedge for diameters 2" and above
(5) Swivel plug disc
(6) All schedules are acceptable for full vacuum @ 48°C
(7) Horizontal installation
(8) Horizontal piston lift
(9) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(10) For full range of services see para.12 Piping class summary
(11) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36
9.53mm		10.31mm		11.13mm	

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : stainless steel TP 304L Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class B 46

SERVICE : (16)

Cryogenic temperature hydrocarbons

Pressure/Temperature limits				
Pressure (barg)	15.8	15.8	13.2	11.1
Temperature(°C)	-196	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			46
	Schedule	80S				10S												Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	A312 TP304L Seamless				ASTM A358 Gr.304L class 1 –EFW - 100% radiography															

Fittings	3000 Lbs, A 182 F304L SW, 45º or 90º elbows (6) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 304L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric / eccentric reducers, tees (1), caps, swaged nipples. Weldolets, latrolets, elbolets (A182 F304L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP304L	
Flanges (11)	150 Lbs RF, SW A182F 304L	WN, 150 Lbs RF, A 182 F304L, as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves (14)	SS valves, 800 Lbs to data sht. VGACK004(SW), VGXCK004(SW x THRD), VGFCB004(150Lbs FLGD-RF) (4)(12)(19)	SS valves, 150 Lbs, GO for 14" and above to data shts. VGACB005, VGACB006 and VGACB007 (3)(4)(13)
Ball valves (14)	SS valves, 800 Lbs to data sht. VBFCK001, VBFCK004 (8)(10)(12)(19)	SS valves, 150 Lbs, GO for 8" and above to data shts. VBRCB001, VBRCB002, VBRCB003,VBRCB014,VBRCB015 and VBRCB016 for reduced bore VBFCB001,VBFCB002,VBFCB003,VBFCB014,VBFCB015 and VBFCB016 for full bore (3)(5)(8)(10)(13)
Globe valves (14)	SS valves, 800 Lbs to data sht. VLACK005 (9)(12)(19)	SS valves,150 Lbs to data sht.VLACB001 (9)(13)
Plug valves (14)	SS valves, 800 Lbs to data sht. VPLCF001(6)(12)(19)	SS valves, 150 Lbs, GO for 8" and above to data shts. VPLCB001 and VPLCB002 (3)(6)
Butterfly valves		SS valves, 150 Lbs, GO for 8" and above to data shts. VUFCB001, VUFCB002 and VUFCB003 (3)(13)
Check valves	SS valves , 800 Lbs to data sht. VCHCK005 (7)(12)(19)	SS valves, 150 Lbs to data sht. VCACB001 and VCACB004 (3)(13)
Needle valves	SS valves, , 800 Lbs to data sht. VNECK004 (12)	
Filters	600 Class, BW, A182 F304L Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP304L, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, SS304L reinf., 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2 , Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr304L, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

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Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Min/Max operating temperature for KELF seats and PTFE and ELGILOY seals are -150/100 °C Min/Max operating temperature for PTFE seats and ELASTOLION 985 seals are -40/180 °C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F304L is an acceptable alternate for body materials
(14) Extended bonnet
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Deleted
(19) BW ends shall be used where specified on PID's

26	28	30	32	34	36	38	40	42	44	46
10						Std				

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** B 48

SERVICE : (19)
Corrosive hydrocarbons (H2S+ CO2 heavy corrosion), jet fuel
Lube- oil (after filter)
Seal oil (after filter), Instrument gas (after filter)

Pressure/Temperature limits				
Pressure (barg)	18.9	18.9	16.7	***13.9***
Temperature(°C)	-45 (see note 14)	+37	+100	+200

Pipes(15)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			46
	Schedule	80S				10S												Larger sizes according to table below			
	Ends	PE				BE															
	Mat. Spec.	A 312 TP 321 seamless				ASTM A 358 Gr. 321 class 1 – EFW - 100% radiography															

Fittings	3 000 Lbs, A 182 F321 SW, 45º or 90º elbows couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F321)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	150 Lbs RF, SW A182F 321	WN, 150 Lbs RF, A 182 F321 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW), VGXCK001(SW x THRD), VGFCB001(150Lbs FLGD-RF) (4)(12)	SS valves, 150 Lbs, GO for 14" and above to data shts. VGACB001, VGACB002 and VGACB003 (3)(4)(13)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK002 and VBFCK005 (8)(10)	SS valves, 150 Lbs, GO for 8" and above to data shts. VBRCB004, VBRCB005 ,VBRCB006,VBRCB017,VBRCB018 and VBRCB019 for reduced bore VBFCB004,VBFCB005,VBFCB006,VBFCB017and VBFCB018,VBFCB019 for full bore (3)(5)(8)(10)(13)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(12)	SS valves,150 Lbs to data sht. VLACB002 (9)(13)
Plug valves	SS valves, 800 Lbs to data sht. VPLCF002 (6)(12)	SS valves, 150 Lbs, GO for 8" and above to data shts. VPLCB003 and VPLCB004 (13)
Butterfly Valves		SS valves, 150 Lbs, GO for 8" and above to data shts. VUFCB004, VUFCB005 and VUFCB006 (3)(13)
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(12)	SS valves, 150 Lbs to data sht. VCACB002 and VCACB005 (3)(13)
Needle valves	CS valves,800 Lbs to data sht.VNECK001	
Filters	600 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.321, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (18)	

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Min/Max operating temperature for KELF seats and PTFE and ELGILOY seals are -150/100 °C AED VITON seals temperature limit = 200°C
(9) Swivel plug disc ***[Deleted]***
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between -45°C and –140"C for blow down situation only(no valve operated below -45°C).
(15) Schedules are acceptable for vacuum at 200˚C.
(16) delete
(17) delete
(18) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document
(19) For full range of services see para.12 Piping class summary
(20) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
10						Std				

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** B 48X

SERVICE : (19)
Amine service

Pressure/Temperature limits

Pressure (barg)	18.9	18.9	16.7	***13.9***
Temperature(°C)	-45 (See note 14)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S							10S									
	Ends	PE							BE									
	Mat. Spec.	A 312 TP 321 seamless							ASTM A 358 Gr. 321 class 1 – EFW - 100% radiography									

Fittings	3 000 Lbs, A 182 F321 SW, 45º or 90º elbows couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F321)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	150 Lbs RF, SW A182F 321	WN, 150 Lbs RF, A 182 F321 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW),VGXCK001(SW x THRD), VGFCB001(150Lbs FLGD-RF) (4)(12)	SS valves, 150 Lbs, GO for 14" and above to data shts. VGACB001 and VGACB002 (3)(4)(13)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK003 (8)(10)	SS valves, 150 Lbs, GO for 8" and above to data shts. VBRCB007 and VBRCB008 for reduced bore VBFCB007 and VBFCB008 for full bore (3)(5)(8)(10)(13)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(12)	SS valves,150 Lbs to data sht. VLACB002 (9)(13)
Plug valves		
Butterfly Valves		SS valves, 150 Lbs, GO for 8" and above to data shts. VUFCB004 and VUFCB005 (3)(13)
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(12)	SS valves, 150 Lbs to data sht. VCACB002 (3)(13)
Needle valves	CS valves,800 Lbs to data sht.VNECK001	
Filters	600 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.321, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (18)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between -45°C and –140"C for blow down situation only(no valve operated below -45°C).
(15) DELETE
(16) DELETE
(17) DELETE
(18) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document
(19) For full range of services see para.12 Piping class summary
(20) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : stainless steel TP 316L	Revision : 6	class B 49
	Corrosion allowance : 0 mm	Date : 3-01-10	

SERVICE : (15)

Corrosive hydrocarbons, jet fuel
Lube- oil (after filter)
Seal oil (after filter)
Instrument gas (after filter)
Catalyst

Pressure/Temperature limits

Pressure (barg)	15.8	15.8	13.2	11.1
Temperature(°C)	-46 (see note 13)	+37	+100	+200

Pipes (13)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24
	Schedule	80S				10S											
	Ends	PE				BE											
	Mat. Spec.	A 312 TP 316L seamless				ASTM A 358 Gr. 316L class 1 – EFW - 100% radiography											

Fittings	3 000 Lbs, A 182 F316L SW, 45º or 90º elbows(2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 316L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F316L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP316L	
Flanges	150 Lbs RF, SW A182 F316L	WN, 150 Lbs RF, A 182 F316L as per pipe schedule, blind flanges (3) (11)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK005(SW), VGXCK005(SW x THRD), VGFCB005(150Lbs FLGD-RF) (4)	SS valves, 150 Lbs, GO for 14" and above to data shts. VGACB008 and VGACB009 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK006 (8)(10)	SS valves, 150 Lbs, GO for 8" and above to data shts. VBRCB020 and VBRCB021 for reduced bore VBFCB020 and VBFCB021 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK006 (9)	SS valves,150 Lbs to data sht. VLACB004 (9)(12)
Plug valves	SS valves, 800 Lbs to data sht. VPLCF008 (6)	SS valves, 150 Lbs, GO for 8" and above to data shts. VPLCB005 and VPLCB006 (12)
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK006 (7)	SS valves, 150 Lbs to data sht. VCACB006 (3)(12)
Needle valves	CS valves,800 Lbs to data sht VNECK005	
Filters	600 class, SW, A 182 F316L, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP316L, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.316L, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Blind flange may be in A182 F316
(12) Forged steel to ASTM A182 F316/316L is an acceptable alternate for body materials
(13) Schedules up to 24" are acceptable for full vacuum at 200 C
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 5.10. of this document
(15) For full range of services see para.7 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 150 Lbs RF	Material : stainless steel TP 316L (17)	Revision : 6	**class** B 49N
	Corrosion allowance : 0 mm	Date : 3-01-10	

SERVICE : (15)

Alkaline Services
Chemical Sewer
Rich Amine, Process Gas, Anti Foam

Pressure/Temperature limits				
Pressure (barg)	15.8	15.8	13.2	11.1
Temperature(°C)	-196 (see note 13)	+37	+100	+200

Pipes (13)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24
	Schedule	80S				10S											
	Ends	PE				BE											
	Mat. Spec.	A 312 TP 316L seamless								ASTM A 358 Gr. 316L class 1 – EFW - 100% radiography							

Fittings	3 000 Lbs, A 182 F316L SW, 45º or 90º elbows(2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 316L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F316L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP316L	
Flanges	150 Lbs RF, SW A182 F316L	WN, 150 Lbs RF, A 182 F316L as per pipe schedule, blind flanges (3) (11)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK006(SW), VGXCK065(SWxTHRD), VGFCB006(150Lbs FLGD-RF) (4)	SS valves, 150 Lbs, GO for 14" and above to data shts. VGACB010 and VGACB011 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK008 (8)(10)	SS valves, 150 Lbs, GO for 8" and above to data shts. VBRCB022 and VBRCB023 for reduced bore VBFCB022 and VBFCB023 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK007 (9)	SS valves,150 Lbs to data sht. VLACB005 (9)(12)
Plug valves		
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK007 (7)	SS valves, 150 Lbs to data sht. VCACB007 (3)(12)
Needle valves	CS valves,800 Lbs to data sht VNECK006	
Filters	600 class, SW, A 182 F316L, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP316L, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.316L, 150# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Blind flange may be in A182 F316
(12) Forged steel to ASTM A182 F316/316L is an acceptable alternate for body materials
(13) Schedules up to 24" are acceptable for full vacuum at 200 C
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 5.10. of this document
(15) For full range of services see para.7 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
17) All materials shall comply with the NACE MR 01 75/ISO 15156 & TM 01 77 Standard & with RP-1718-999-6300-0003Valve materials shall also conform to RP-1718-999-6300-0004

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : RTR(Epoxy) + Copper Nickel Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** B 90

SERVICE : (8)
Fire fighting water (Wet systems) (corrosive)
Cooling Water (corrosive)
Utility water (corrosive)
Seawater (corrosive)

Pressure/Temperature limits				
Pressure (barg)	***18.0***	***18.0***	***18.0***	18.0
Temperature(°C)	-29	+37	+65	+90

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	28	32	36			
	Schedule	(6)		Per manufacturer's standards														(6)					
	Ends	(6)		Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System To Manufacturer's Standard														(6)					
	Mat. Spec.	(6)		RTR(Epoxy) identical to pipe material, To Manufacturer's Standard														(6)					
Fittings		(6)		RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System, to Manufacturer's Standard, 45° or 90° elbows(r=1.5dia.),concentric/eccentric reducers, tees(13), caps														(6)					
Flanges		(6)		150Lbs FF, RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System to Manufacturer's Standard, to ASME B16.5 150Lbs FF, Blind Flange, C.Stl ASTM A105 with Epoxy Coating approx. 0.2mm thick on all surfaces and to ASME B16.5														(6)					
Gate valves (1) (3)(4) (5)		Al Br valves to B148 C95200, 150 Lbs to data sht. VGAGB001, VGTGB001(THRD) VGXGB001				Al Br valves to B148 C95800, 150 Lbs, GO for 14" and above to data shts. VGAGB002 and VGAGB003																	
Ball valves																							
Globe valves (1) (3)(4) (5)		Al BR valves to B148 C95200, 150 Lbs to data sht. VLAGB001				Al Br valves to B148 C95800, 150 Lbs, GO for 8" to data shts. VLAGB002 and VLAGB003																	
Plug valves																							
Butterfly Valves (5)(10)						Al Br valves to B148 C95800, 150 Lbs, GO for 8" and above to data shts VUFGB001, VUFGB002																	
Check valves (1) (4) (5)		Al BR valves to B148 C95200, 150 Lbs to data sht. VCHGB001				Al Br valves to B148 C95800, 150 Lbs to data sht. VCAGB002																	
Filters		150 class flanged, Alu-Br Y type, SS or bronze strainer								Tee type filters, flanged, Cu- Ni as per manufacturer's standard													
Gaskets		(6)		Neoprene flat gaskets, 3mm thick for diameters up to 6 inches, and 5mm thick for diameters above 6 inches, SHORE hardness 60 to 70 maximum (suitable for use with 150Lbs FF, ASME B16.5 flanges)														(6)					
Bolting		Studs A 193 B7, Hex Head nuts A 194 Gr.2H																					
Blanks/spacers		Spectacle blinds, Blanks/Spacers(7), Cu-Ni to B171 UNS C70600																					

Notes

(1) All valve etc., flanges up to 20" must be Flat facing as they are designed to connect to a RTR(Epoxy) system
(2) Note removed
(3) Valves packing to CRANE 1066 type, or approved equal
(4) Bores of all valves to suit pipe bores
(5) UNS C95800 is an acceptable alternate material
(6) Sizes below 1" should be avoided,[Deleted] if absolutely required shall be made of Cu-Ni material, including facing of flanges and gaskets as per spec B92.Sizes above 24"shall be made of RTR (Epoxy)
(7) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(8) For full range of services see para.12 Piping class summary
(9) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(10) Valves to be suitable for mating with RTR(Epoxy) piping. Chord of disc to clear I/D of piping. Inside diameter to be quoted on requisiton
(11) Material shall comply with RP-1718-125-1300-0001
(12) Manufacturer to advise wall thickness to suit line design conditions
(13) Branch connections to Manufacturer's Standard.

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : RTR(Vinylester) + Copper Nickel	Revision : 6	class
	Corrosion allowance : 0 mm	Date : 3-01-10	B 91

SERVICE : (8)
Hypochlorite (200ppm), Chlorine injection

Pressure/Temperature limits				
Pressure (barg)	15	15	15	
Temperature(°C)	0	+37	+65	

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20					
	Schedule	(6)	Per manufacturer's standards																		
	Ends	(6)	Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System To Manufacturer's Standard																		
	Mat. Spec.	(6)	RTR(Vinylester), To Manufacturer's Standard																		
Fittings		(6)	RTR(Vinylester) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System, to Manufacturer's Standard, 45° or 90° elbows(r=1.5dia.),concentric/eccentric reducers, tees(13), caps																		
Flanges		(6)	150Lbs FF, RTR(Vinylester) identical to pipe material l,Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System to Manufacturer's Standard, to ASME B16.5 150Lbs FF, Blind Flange, C.Stl ASTM A105 with Epoxy Coating approx. 0.2mm thick on all surfaces and to ASME B16.5																		
Gate valves (1)(3)(4)(5)		Al Br valves to B148 C95200, 150 Lbs to data sht. VGAGB001								Al Br valves to B148 C95800, 150 Lbs, GO for 14" and above to data shts. VGAGB002 and VGAGB003											
Ball valves																					
Globe valves (1)(3) (4)(5)		Al Br valves to B148 C95200, 150 Lbs to data sht. VLAGB001								Al Br valves to B148 C95800, 150 Lbs, VLAGB002											
Plug valves																					
Butterfly Valves (5)(10)										Al Br valves to B148 C95800, 150 Lbs, GO for 8" and above to data shts VUFGB001 and VUFGB002											
Check valves (1)(4 (5)		Al Br valves to B148 C95200, 150 Lbs to data sht. VCHGB001								Al Br valves to B148 C95800, 150 Lbs to data sht VCAGB002											
Diaphragm valves										Al Br valves for 3" to B148 C95800, 150 Lbs, VDAGB001											
Filters		150 class flanged, Alu-Br Y type, SS or bronze strainer								Tee type filters, flanged, Cu- Ni as per manufacturer's standard											
Gaskets		(6)	Neoprene flat gaskets, 3mm thick for diameters up to 6 inches, and 5mm thick for diameters above 6 inches, SHORE hardness 60 to 70 maximum (suitable for use with 150 Lbs FF, ASME B16.5 flanges)																		
Bolting		Studs A 193 B7, Hex Head nuts A 194 Gr.2H																			
Blanks/spacers		Spectacle blinds, Blanks/Spacers(7), Cu-Ni to B171 UNS C70600																			

Notes

(1) All valve etc., flanges up to 20" must be Flat facing as they are designed to connect to a RTR(Vinlyester) system
(2) Note removed
(3) Valves packing to CRANE 1066 type, or approved equal
(4) Bores of all valves to suit pipe bores
(5) UNS C95800 is an acceptable alternate material
(6) Sizes below 1" should be avoided.
Sizes below 1", if absolutely required, shall be made of Cu- Ni material, including for facing of flanges and gaskets,as per spec B92
(7) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(8) For full range of services see para.12 Piping class summary
(9) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(10) Valves to be suitable for mating with RTR(Vinylester) piping. Chord of disc to clear I/D of piping. Inside diameter to be quoted on requisiton
(11) All RTR(Vinylester) material shall comply with RP-1718-125-1300-0001
(12) Manufacturer to advise wall thickness to suit line design conditions
(13) Branch connections to Manufacturer's Standard.

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : RTR(Epoxy) Corrosion allowance : 0 mm	Revision : Date : 05-12-03	class B 91X

SERVICE : (67)
Seawater (corrosive)

Pressure/Temperature limits			
Pressure (barg)	16	16	
Temperature(°C)	0	+85	

Pipes	Diameter	½ to 1 ½	26 to 40
	Schedule	(69)	Per manufacturer's standards
	Ends	(69)	Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System To Manufacturer's Standard
	Mat. Spec.	(69)	RTR(Epoxy), To Manufacturer's Standard
Fittings		(69)	RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System, to Manufacturer's Standard, 45° or 90°elbows(r=1.5dia.),concentric/eccentric reducers, tees(64), caps
Flanges		(69)	150Lbs FF, RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System to Manufacturer's Standard, to ASME B16.47 Series A, 150Lbs FF, Blind Flange, C.Stl ASTM A105 with Epoxy Coating approx. 0.2mm thick on all surfaces and to ASME B16.47 Series A
Gate valves (38)(41)		(69)	Al Br valves, 150 Lbs, GO to data sht. VGAGB003, VGAGB004
Ball valves			
Globe valves		(69)	
Plug valves			
Butterfly Valves (38)(41)(42)(43)			Al Br valves, 150 Lbs, GO to data shts. VUFGB003
Check valves (38)(40)		(69)	Al Br valves, 150 Lbs to data shts. VCAGB002,VCAGB003
Filters		150 class flanged, Alu-Br Y type, SS or bronze strainer	Tee type filters, flanged, Cu- Ni as per manufacturer's standard
Gaskets		(69)	Neoprene flat gaskets, B16.21 (suitable for use with ASME B16.47 series A Flanges), Thk= 5mm, shore hardness 60 to 70 maximum
Bolting .		(69)	Studs A 193 B7, with 2 Heavy Hex. Nuts A 194 Gr.2H
Blanks/Spacers		Spectacle blinds, Blanks/Spacers(7), Cu-Ni to B171 UNS C70600	

Notes

(35) Note removed
(38) Bores of all valves to suit pipe bores.
(39) Note removed
(40) Flanged swing type (Inconel spring), is an Acceptable alternative.
(41) Valve packing to be Crane 1066 type, or approved equal.
(42) Or carbon steel body plus Nitril sleeve, wafer Type is an acceptable alternative.
(43) Valves to be suitable for mating with RTR(Epoxy) piping. Chord of disc to clear I/D of piping. Inside diameter to be quoted on requisition.
(64) Branch connections to Manufacturer's Standard
(65) Manufacturer to advise wall thickness to suit line design conditions
(66) All material shall comply with GRP Spec RP RP-1718-125-1300-0001For full range of services see para.12 Piping class summary
(67) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(68) For 1 ½" and below use pipe spec B92
(69) For underground pipework the Manufacturer should be consulted regarding suitable wall thickness, etc.

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : 90/10 Copper - Nickel Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class B 92

SERVICE : (7)
Fire fighting water (Dry systems) (corrosive)

Pressure/Temperature limits				
Pressure (barg)	19.6	19.6	18.7	18.0
Temperature(°C)	-29	+37	+65	+90

Tubes																						
	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24					
	Wall thick.	3	3	3	3	3	3	3	3.5	4.5	5.5	7	8	9	9.5	11	13					
	Ends	PE				BE																
	Mat. Spec. (10)	ASTM B466 UNS C70600 (annealed) & EEMUA 144, section 1, seamless (8)								ASTM B467 UNS C70600 & EEMUA 144 section 2,welded, annealed, and 100% radiographed (9)												

Fittings(1)(11)	MAWP 20 bar, SW, tees,45° or 90° elbows, couplings, plugs, caps, sockolets, 90/10 Cu-Ni grade and bore to match pipe (per EEMUA 146)	90/10 Cu-Ni, grade and bore to match pipe (per EEMUA 146), BW, 45° or 90° elbows (r=1.5dia.), 100%radiographed if welded, concentric/eccentric reducers, tees, caps, weldolets	
Flanges (12)	150Lbs. slip on, 90/10 Cu-Ni grade to match pipe(per EEMUA 145, section 4)	150 Lbs, backing flange, (per EEMUA 145, section 1), ASTM A105 hot dipped Galvanised to A120 Blinds: ASTM A105 hot dipped Galvanised to A120 plus 6mm thick 90/10 Cu/Ni liner disc	
Stub ends (12)		Lapped Joint, BW end, long type (per EEMUA 145, section 1) 90/10 Cu/Ni grade and bore to match pipe	
Gate valves (2) (3) (4)	Al Br valves to B148 C95200, 150 Lbs to data sht VGAGB001, VGTGB001(THRD), VGXGB001 (SWxTHRD)	Al Br valves to B148 C95800, 150 Lbs, GO for 14" and above to data shts. VGAGB002 and VGACB003	
Ball valves			
Globe valves (2) (3) (4)	Al BR valves to B148 C95200, 150 Lbs to data sht. VLAGB001	Al Br valves to B148 C95800, 150 Lbs, VLAGB002	
Plug valves			
Butterfly Valves (3)(4)		Al Br valves to B148 C95800, 150 Lbs, GO for 8" and above to data shts VUFGB001 and VUFGB002	
Check valves (3) (4)	Al BR valves to B148 C95200, 150 Lbs to data sht. VCHGB001	Al Br valves to B148 C95800, 150 Lbs to data sht. VCAGB002	
Filters	150Lbs flanged (EEMUA 145), 90/10 Cu-Ni, Y type, SS or bronze strainer	Tee type filters, 150 Lbs Flanged(EEMUA 145), 90/10 Cu-Ni as per manufacturer's standard	
Gaskets	Neoprene flat gaskets, 3mm thick for diameters up to 6 inches, and 5mm thick for diameters above 6 inches, SHORE hardness 60 to 70 maximum		
Bolting	Studs A 193 B7, Hex Head nuts A 194 Gr.2H		
Blanks/spacers	Spectacle blinds, Blanks/Spacers (5), Cu-Ni to B171 UNS C70600		

Notes

(1) See table of connections appendix B
(2) Valves packing to CRANE 1066 type, or approved equal
(3) Bores of all valves to suit pipe bores
(4) UNS C95800 is an acceptable alternate material.
(5) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(6) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(7) For full range of services see para. 12 piping class summary
(8) BS EN 12449 CW352H is an acceptable alternative material.
(9) BS EN 1172 CW024A is an acceptable alternative material.
(10) Pipe dimensions, tolerance and test requirements shall be in accordance with EEMUA 144
(11) Fittings dimensions, tolerance and test requirements shall be in accordance with EEMUA 146.
(12) Flange dimensions, tolerance and test requirements shall be in accordance with EEMUA 145

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : RTR(Epoxy) (11) Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class B 93

SERVICE : (8)
chemical sewer, waste water, process water, hot non contaminated sewer, oily water sewer, domestic sewer

Pressure/Temperature limits				
Pressure (barg)	10	10	10	
Temperature(°C)	0	+37	+65	

Pipes	Diameter	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	28	32	36	
	Schedule	Per manufacturer's standards																	
	Ends	Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System To Manufacturer's Standard																	
	Mat. Spec.	RTR(Epoxy) material																	
Fittings		RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System, to Manufacturer's Standard, 45° or 90° elbows(r=1.5dia.),concentric/eccentric reducers, tees(12), caps																	
Flanges		150Lbs FF, RTR(Epoxy) identical to pipe material, Rubber Seal Lock Joint or Bell and Spigot Adhesive Bonded System to Manufacturer's Standard, to ASME B16.5 and ASME B16.47 Series A (for above 24") 150Lbs FF, Blind Flange, C.Stl ASTM A105 with Epoxy Coating approx. 0.2mm thick on all surfaces and to ASME B16.5 and ASME B16.47 Series A (for above 24")																	
Gate valves																			
Ball valves																			
Globe valves																			
Plug valves																			
Butterfly Valves (5)(13)(1)(3)								Al Br valves to B148 C95800, 150 Lbs, GO for 8" and above to data shts VUFGB001, VUFGB002 and VUFGB003											
Check valves (1) (4) (5)		Al BR valves to B148 C95200, 150 Lbs to data sht. VCHGB001						Al Br valves to B148 C95200, 150 Lbs to data sht. VCAGB002 and VCAGB003											
Filters																			
Gaskets		Neoprene flat gaskets, 3mm thick for diameters up to 6 inches, and 5mm thick for diameters above 6 inches, SHORE hardness 60 to 70 maximum (suitable for use with 150Lbs FF, ASME B16.5 flanges)																	
Bolting		Studs A 193 B7, Hex Head nuts A 194 Gr.2H																	
Blanks/spacers		Spectacle blinds, Blanks/Spacers(7), Cu-Ni to B171 UNS C70600																	

Notes

(1) All valve etc., flanges must be Flat facing as they are designed to connect to a RTR(Epoxy) system
(2) Note removed
(3) Valves packing to CRANE 1066 type, or approved equal
(4) Bores of all valves to suit pipe bores
(5) UNS C95800 is an acceptable alternate material
(6) Note removed
(7) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(8) For full range of services see para.12 Piping class summary
(9) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(10) All RTR(Epoxy) material shall comply with RP-1718-999-1300-0027
(11) Vinylester resins are an acceptable alternative material.
(12) Branch connections to Manufacturer's Standard.
(13) Valves to be suitable for mating with RTR(Epoxy) piping. Chord of disc to clear I/D of piping. Inside diameter to be quoted on requisition.

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PIPING MATERIALS

Rating : 150 Lbs FF	Material : HDPE Corrosion allowance : 0 mm	Revision : Date : 05-12-03	class B 94

SERVICE : (2)
Chlorination

Pressure/Temperature limits				
Pressure (barg)	***10***	***10***	***10***	
Temperature(°C)	0	+37	+65	

Pipes	Diameter			1	1 1/2	2	3						
	Schedule		Per manufacturer's standards for 5 barg										
	Ends		PE										
	Mat. Spec.		HDPE material (manufacturer's standards)										
Fittings			HDPE material (manufacturer's standards)										
Flanges			WN Flange, HDPE material (manufacturer's standards)										
Gate valves													
Ball valves													
Globe valves													
Plug valves													
Butterfly Valves													
Check valves													
Filters													
Gaskets			Enveloped Gasket, PTFE + Aramidic insert										
Bolting			Studs A 193 B7, Hex Head nuts A 194 Gr.2H										
Miscellaneous													

Notes

(1) Branch connections to Manufacturer's Standard
(2) For full range of services see para.12 Piping class summary
(3) All pipe, fitting and flange shall have the same manufacturer**.**

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel	Revision : 6	**class** D 01
	Corrosion allowance : 1.27 mm	Date : 3-01-10	

SERVICE : (14)
Hydrocarbons (non corrosive),
Pressure drains, hydrocarbons (non corrosive)
Fuel oil (medium pressure)
Nitrogen (medium pressure)
Methanol, Glycol

Pressure/Temperature limits						
Pressure (barg)	51.0	51.0	46.3	43.8	37.9	***37***
Temperature(°C)	-29	+37	+100	+200	315	340

Pipes(12)																							
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			48
Schedule	80					40			20	30			40	30			Larger sizes according to table below			
Ends	PE					BE														
Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW – 100% radiography						

Fittings	3000 Lbs SW, A105, 45° or 90° elbows (2), tees, plugs, caps, couplings, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45° or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps, Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	300 Lbs RF, SW A105	WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001,VGFAD001, VGXAK001 (4)	CS valves, 300 Lbs, GO for 10" and above to data shts. VGAAD001, VGAAD002, VGAAD003 and VGAAD006 (3)(4)
Ball valves	CS valves, 800 Lbs to data sht.VBFAK001, VBFAK005, VBFAKS01 (8)(10)(16).	CS valves, 300 Lbs, GO for 8" and above to data shts. VBRAD001, VBRAD002, VBRAD003 and VBRAD004, VBRAD017, VBRAD018, VBRAD019, VBRAD020, VBRADS01, VBRADT01, VBRADT02for reduce bore VBFAD001, VBFAD002, VBFAD003 and VBFAD004, VBFAD017, VBFAD018, VBFAD019, VBFAD020, VBFADS01, VBFADT01, VBFADT02 for full bore (3)(5)(8)(10)
Globe valves	CS valves, 800 Lbs to data sht. VLAAK001(9)	CS valves, 300 Lbs to data sht. VLAAD001, VLAAD004 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF001(6)	CS valves, 300 Lbs, GO for 8" and above to data shts. VPLAD001 and VPLAD002(6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht.VCHAK001 (7)	CS valves, 300 Lbs to data shts. VCAAD001 and VCAAD002 ,VCAAD005 (3)
Needle valves	CS valves,800 Lbs, to data sht.VNEAK001	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 300# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes
(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C(.Metal seats for over 200°C).
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Schedules up to 48" are acceptable for full vacuum at 270°C.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) AED VITON seals temperature limit = 200°C
Graphite seals for over 200°C

26	28	30	32	34	36	38	40	42	44	46	48
15.88 mm	17.48 mm	17.48 mm	19.05 mm	20.62 mm	20.62 mm	22.23 mm	23.83 mm	23.83 mm	25.40 mm	26.97 mm	26.97 mm

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class D 01P

SERVICE : (14) Export condensate		Pressure/Temperature limits					
		Pressure (barg)	***30***				
		Temperature(°C)	55				
Pipes(5)	Diameter	30					
	Schedule (5)	7.92 mm					
	Ends	BE					
	Mat. Spec.	API 5L Gr.B (PSL 1) – SAW – 100% radiography					
Fittings (2)		A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers ,tees and caps .					
Swaged nipples							
Flanges		WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)					
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting					
Gate valves							
Ball valves		CS valves, 300 Lbs, GO for 8” and above to data shts. VBFAD004 (3)(7)(8)(9)					
Globe valves							
Plug valves							
Butterfly Valves							
Check valves		CS valves, 300 Lbs to data shts. VCAAD001 and VCAAD002 ,VCAAD005 (3)					
Filters							
Gaskets		Spiral wound ,graphite filler,4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME B16.20					
Bolting		Studs A 193 B7, Hex Head nuts A 194 2H					
Blanks/Spacers		C. Stl. plate ASTM A516 Gr 70, 150# RF, Spectacle blinds, Blanks and Spacers – calculate(4)					

Notes

(1) Design code ASME B31.4
(2) Outer surface of piping shall be PE coated for underground services.
(3) Flanges as per ASME B16.47 Series A for 26” and above
(4) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document. of this document.
(5) Wall thickness to be checked for surge pressure.***Wall thickness allows design pressure of 30barg however the shut off pressure of Condensate loading pumps is 21.5barg.***
(6) DELETE
(7) Removable seat
(8) AED VITON temperature limit = 200°Cand PTFE seats temperature limit = 200°C(.Metal seats for over 200°C).
(9) Firesafe and Anti-static

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 03

SERVICE : (13)

Corrosive hydrocarbons (CO2 light corrosion)

Pressure/Temperature limits				
Pressure (barg)	51.0	51.0	46.3	43.8
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW – 100% radiography			

Fittings	6000 Lbs SW, A105, 45° or 90° elbows (2), couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	300 Lbs RF, SW A105	WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001 (SW x THRD), VGFAD001 (300Lbs FLGD-RF) (4)	CS valves, 300 Lbs, GO for 10" and above to data shts. VGAAD001, VGAAD002 and VGAAD003 (3)(4)
Ball valves	CS valves, 800 Lbs to data sht. VBFAK002 and VBFAKS02 (8)(10)	CS valves, 300 Lbs, GO for 8" and above to data shts. VBRAD005, VBRAD006, VBRAD007,VBRADS05, VBRADT05 and VBRADT06 for reduced bore VBFAD005,VBFAD006, VBFAD007, VBFADS05, VBFADT05 and VBFADT06 for full bore (3)(5)(8)(10)
Globe valves	CS valves, 800 Lbs to data sht. VLAAK001 (9)	CS valves, 300 Lbs, GO for 8" to data sht. VLAAD001 and VLAAD004 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF002 (6)	CS valves, 300 Lbs, GO for 8" and above to data shts. VPLAD001 and VPLAD002 (6)
Butterfly Valves		CS valve,300 Lbs, for 8" to data sht. VUFAD004
Check valves	CS valves, 800 Lbs to data sht. VCHAK001 (7)	CS valves, 300 Lbs to data shts. VCAAD001 and VCAAD002 (3)
Needle Valves	CS valves, 800 Lbs to data sht. VNEAK001	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (12)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 03N

SERVICE : (14)

Rich caustic
Lean caustic
Caustic soda

Pressure/Temperature limits

Pressure (barg)	51.0	51.0	46.3	43.8	***37.6***
Temperature(°C)	-29	+37	+100	+200	325

Pipes(12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless					API 5L Gr.B (PSL 2) seamless								API 5L Gr.B (PSL 2) – SAW – 100% radiography			

Fittings	6000 Lbs SW, A105 45° or 90°elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	300 Lbs RF, SW A105	WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002 (SW x THRD) ,VGFAD002 (300Lbs FLGD-RF) (4)	CS valves, 300 Lbs, GO for 10" and above to data shts. VGAAD004 and VGAAD005(3)(4)
Ball valves	CS valves, 800 Lbs to data sht. VBFAK003 and VBFAKS03 (10)(16)	CS valves, 300 Lbs, GO for 8" and above to data shts. VBRAD009, VBRAD010, VBRAD011, VBRAD021, VBRAD022, VBRAD023,VBRADS09, VBRADT09 and VBRADT10 for reduced bore VBFAD009,VBFAD010, VBFAD011, VBFAD021, VBFAD022, VBFAD023, VBFADS09, VBFADT09 and VBFADT10 for full bore (3)(5)(8)(10)(16)
Globe valves	CS valves, 800 Lbs to data sht. VLAAK003 (9)	CS valves, 300 Lbs, GO for 8" to data shts. VLAAD002 and VLAAD003 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004 (6)	CS valves, 300 Lbs, GO for 8" and above to data shts. VPLAD003 and VPLAD004 (6)
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK003 (7)	CS valves, 300 Lbs to data shts. VCAAD003 and VCAAD004 (3)
Needle valves	CS valves, 800 Lbs to data sht. VNEAK002	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. Plate ASTM A516 Gr 70, 300# RF, Spectacle blinds, Blanks and Spacers 24" as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/**ISO15156** & TM 01 77 Standard & with the RP-1718-999-6300-0003. Valve materials shall also conform to RP-1718-999-6300-0004
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C, AFLAS seals temperature limit = 200°C

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 03S

SERVICE : (14)

Corrosive Hydrocarbons (wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	51.0	51.0	46.3	43.8
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	API 5L Gr.B API 5L Gr.B (PSL 1) seamless					API 5L Gr.B API 5L Gr.B (PSL 2) seamless								API 5L Gr.B API 5L Gr.B (PSL 2)seamless – SAW – 100% radiography			

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2), couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	300 Lbs RF, SW A105	WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002 (SW x THRD), VGFAD002 (300Lbs FLGD-RF) (4)	CS valves, 300 Lbs, GO for 10" and above to data shts. VGAAD004 and VGAAD005 (3)(4)
Ball valves	CS valves, 800 Lbs to data sht. VBFAK003,VBFAKX03 (10)(16)	CS valves, 300 Lbs, GO for 8" and above to data shts. VBRAD009, VBRAD010 ,VBRAD011,VBRAD021,VBRAD022 and VBRAD023 for reduced bore VBFAD009,VBFAD010,VBFAD011,VBFAD021,VBFAD022 and VBFAD023 for full bore (3)(5)(8)(10)(16)
Globe valves	CS valves, 800 Lbs to data sht. VLAAK003 (9)	CS valves, 300 Lbs, GO for 8" to data shts. VLAAD002 and VLAAD003 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004 (6)	CS valves, 300 Lbs, GO for 8" and above to data shts. VPLAD003 and VPLAD004 (6)
Butterfly Valves		CS valve,150 Lbs, for 10" to data sht. VUFAD002
Check valves	CS valves, 800 Lbs to data sht. VCHAK003 (7)	CS valves, 300 Lbs to data shts. VCAAD003 and VCAAD004 (3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 300# RF, Spectacle blinds, Blanks and Spacers 24" as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0284,TM01 77 Standard & with the RP-1718-999-6300-0002.Valve materials shall also conform to RP-1718-999-6300-0004.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C, AFLAS seals temperature limit = 200°C

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class D 12

SERVICE : (12)

MP steam

Pressure/Temperature limits					
Pressure (barg)	51.0	51.0	46.3	43.8	40.8
Temperature(°C)	-29	+37	+100	+200	270

	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
Pipes(6)	Schedule	80					40			20	30			40	30			
	Ends	PE				BE												
	Mat. Spec.	API 5 L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW 100% radiography			

Fittings	3000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	300 Lbs RF, SW A105	WN, 300 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves (14)	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001 (SW x THRD),VGFAD001(300 Lbs FLGD-RF) (4)	CS valves, 300 Lbs, GO for 10" and above to data shts. VGAAD001, VGAAD002 and VGAAD003 (3)(4)
Ball valves		
Globe valves	CS valves, 800 Lbs todata sht. VLAAK001 (9)	CS valves, 300 Lbs to data sht. VLAAD001 (9)
Plug valves		
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK001 (7)	CS valves, 300 Lbs to data shts. VCAAD001 and VCAAD002 (3)
Needle valve	CS valves,800 Lbs to data sht.VNEAK001	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (11)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Note removed
(6) All schedules up to 24" are acceptable for full vacuum at 48°C
(7) Horizontal installation
(8) Note removed
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(12) For full range of services see para.12 Piping class summary
(13) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class D 21

SERVICE : (14)

Non corrosive hydrocarbons (low temperature)
Non corrosive flare gas (low temperature)

Pressure/Temperature limits																	
Pressure (barg)	51.0						51.0						46.3			43.8	37
Temperature(°C)	-46						+37						+100			+200	340

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80					40			20	30			40		30		
	Ends	PE				BE												
	Mat. Spec.	ASTM A333 Gr.6 seamless														A 671 CC65 CI22 W/S2 at -46°C		

Fittings	3000 Lbs SW, 45° or 90° elbows (2), couplings, tees, plugs, capssockolets, elbolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL-6	
Flanges	300 Lbs RF, SW A350 LF2 CL.1	WN, 300 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK001(SW), VGXBK001(SW x THRD),VGFBD001 (300Lbs. FLGD-RF) (4)	LTCS valves, 300 Lbs, GO for 10" and above to data shts. VGABD001, VGABD002 and VGABD003 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK001 and VBFBKS01,VBFBK005 (8)(10)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VBRBD001, VBRBD002, VBRBD003, VBRBD010, VBRBDS01, VBRBDT01 and VBRBDT02 for reduced bore VBFBD001, VBFBD002, VBFBD003, VBFBDS01, VBFBDT01 and VBFBDT02 for full bore. (3)(5)(8)(10)(16)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK001 (9)	LTCS valves, 300 Lbs, GO 8" to data shts. VLABD001 and VLABD003 (9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF001 (6)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VPLBD001 and VPLBD002 (6)
Butterfly Valves		LTCS valve,300 Lbs, for 10" to data sht. VUFBD001
Check valves	CS valves, 800 Lbs to data sht. VCHBK001 (7)	CS valves, 300 Lbs to data shts. VCABD001 and VCABD002 (3)
Needle valves	CS valves,800 Lbs to data sht. VNEBK001	
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (12)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C and ELASTILION 985 temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material: Low Temperature Carbon Steel (LTCS) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 23

SERVICE : (13)

Low Temperature Hydrocarbons (CO_2 light corrosion)
Low Temperature flare gas (CO_2 light corrosion)

Pressure/Temperature limits				
Pressure (barg)	51.0	51.0	46.3	43.8
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	ASTM A333 Gr.6 seamless													A 671 CC65 Cl22 W/S2 at -46°C			

Fittings	6000 Lbs SW 45º or 90º elbows (2) couplings, tees, Sockolets, plugs, caps, elbolets, A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric/ eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	300 Lbs RF, SW A 350 LF2 CL.1	WN, 300 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK001(SW), VBXBK001(SW x THRD), VGFBD001(300Lbs. FLGD-RF) (4)	LTCS valves, 300 Lbs, GO for 10" and above to data shts. VGABD001, VGABD002 and VGABD003 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK002 (8)(10)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VBRBD007, VBRBD008 and VBRBD009 for reduced bore VBFBD007,VBFBD008 and VBFBD009 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK001 (9)	LTCS valves, 300 Lbs, GO 8" to data sht. VLABD001 and VLABD003 (9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF002 (6)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VPLBD001 and VPLBD002 (6)
Butterfly Valves		
Check valves	LTCS valves, 800 Lbs to data sht. VCHBK001 (7)	LTCS valves, 300 Lbs to data shts. VCABD001 and VCABD002 (3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (11)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (12)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 23N

SERVICE : (15)

Low Temperature Hydrocarbons (SSCC Corrosion)

Pressure/Temperature limits					
Pressure (barg)	51.0	51.0	46.3	43.8	37.6
Temperature(°C)	-46	+37	+100	+200	325

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	ASTM A333 Gr.6 seamless																A 671 CC65 Cl22 W/S2 at -46°C

Fittings	6000 Lbs SW 45º or 90º elbows (2) couplings, tees, Sockolets, plugs, caps, elbolets, A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric/ eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	300 Lbs RF, SW A 350 LF2 CL.1	WN, 300 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK002(SW) VGXBK002(SW x THRD) VGFBD002 (300 Lbs FLGD-RF) (4)	LTCS valves, 300 Lbs, GO for 10" and above to data shts. VGABD004 and VGABD005 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK003 (8)(10)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VBRBD004, VBRBD005 and VBRBD006 for reduced bore VBFBD004,VBFBD005 and VBFBD006 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK002 (9)	LTCS valves, 300 Lbs to data sht. VLABD002 (9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF003 (6)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VPLBD003 and VPLBD004 (6)
Butterfly Valves		
Check valves	LTCS valves, 800 Lbs to data sht. VCHBK002 (7)	LTCS valves, 300 Lbs to data shts. VCABD003 and VCABD004 (3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (13)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with the RP-1718-999-6300-0003.Valve materials shall also conform to RP-1718-999-6300-0004.
(13) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) (11) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class D 23S

SERVICE : (14)

Low Temperature Hydrocarbons (Severe sour service)
Low Temperature flare gas (Severe sour service)

Pressure/Temperature limits				
Pressure (barg)	51.0	51.0	46.3	43.8
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160				80	40											
	Ends	PE				BE												
	Mat. Spec.	ASTM A333 Gr.6 seamless																A 671 CC65 CI22 W/S2 at --46°C

Fittings	6000 Lbs SW 45º or 90º elbows(2), couplings, tees, plugs, caps, Sockolets, elbolets, A350 LF2 CL.1	A 420 WPL-6 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric / eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL6	
Flanges	300 Lbs RF, SW A 350 LF2 CL.1	WN, 300 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK002(SW), VGXBK002(SW x THRD),VGFBD002 (300 Lbs FLGD-RF) (4)	LTCS valves, 300 Lbs, GO for 10" and above to data shts. VGABD004 and VGABD005 (3)(4)
Ball valves	LTCS valves, 800 Lbs to data sht. VBFBK003 (8)(10)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VBRBD004, VBRBD005 and VBRBD006 for reduced bore VBFBD004,VBFBD005 and VBFBD006(3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht. VLABK002 (9)	LTCS valves, 300 Lbs to data sht. VLABD002 (9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF003 (6)	LTCS valves, 300 Lbs, GO for 8" and above to data shts. VPLBD003 and VPLBD004(6)
Butterfly Valves		
Check valves	LTCS valves, 800 Lbs to data sht. VCHBK002 (7)	LTCS valves, 300 Lbs to data shts. VCABD003 and VCABD004 (3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (12)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0284,TM 01 77 Standard & with the RP-1718-999-6300-0002.Valve materials shall also conform to RP-1718-999-6300-0004.
(12) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Alloy steel 1.25Cr 0.5Mo	Revision : 6	class D 42
	Corrosion allowance : 1.27 mm	Date : 3-01-10	

SERVICE : (10)

LP Steam superheated

Pressure/Temperature limits

Pressure (barg)	51.7	51.7	51.4	48.0	***43.4***	36.2
Temperature(°C)	-29	+37	+100	+200	+300	+405

Pipes(6)																		
	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80				40				30		Std		40	30		40	
	Ends	PE				BE												
	Mat. Spec.	ASTM A335 GrP11 seamless													A 691 1.25Cr SAW 100%radiography			

Fittings	3000 Lbs SW A182 Gr.F11 CL.2 45º or 90º elbows (2), couplings, tees, plugs, caps, Sockolets, elbolets	A 234 WP11 CL.1 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric / eccentric reducers, tees (1), caps. Weldolets (A182 Gr.F11)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WP11 CL.1	
Flanges	300 Lbs RF, SW A 182 Gr.F11 CL.2	WN, 300 Lbs RF, A182 GR.F11 CL.2 as per pipe schedule, blind flanges (3)
		WN, 300Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	AS valves, 800 Lbs to data sht. VGADK001(SW), VGXDK001(SW x THRD),VGFDD001 (300 LbS FLGD-RF)(4)	AS valves, 300 Lbs, GO for 10" and above to data shts. VGADD001 and VGADD002 (3)(4)
Ball valves		
Globe valves	AS valves, 800 Lbs to data sht. VLADK001 (5)	AS valves, 300 Lbs to data sht. VLADD001 (3)(5)
Plug valves		
Butterfly Valves		
Check valves	AS valves, 800 Lbs to data sht.VCHDK001 (7)(8)	AS valves, 300 Lbs to data shts. VCHDD001 and VCHDD002 (3)
Filters	600 Class, SW, A182 F11 CL.2 Y type, stainless steel strainer	
Gaskets	Spiral wound, graphite filler, 4mm thick 316L winding, 3.2 mm thick external centering ring per ASME B16.20	
Bolting	Studs A 193 B16, Hex Head nuts A 194 Gr.4	
Blanks/Spacers	C. Stl. plate ASTM A387 Gr11 Cl.2, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (9)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 1 1/2" and Flexible wedge for diameters 2" and above
(5) Swivel plug disc
(6) All schedules are acceptable for full vacuum @ 48°C
(7) Horizontal installation
(8) Horizontal piston lift
(9) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(10) For full range of services see para.12 Piping class summary
(11) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : stainless steel TP 304L	Revision : 6	class D 46
	Corrosion allowance : 0 mm	Date : 3-01-10	

SERVICE : (16)

Cryogenic temperature hydrocarbons

Pressure/Temperature limits				
Pressure (barg)	41.3	41.3	34.4	28.8
Temperature(°C)	-196	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46	
	Schedule	80S				10S			40S				STD			XS		Larger sizes according to table below					
	Ends	PE				BE																	
	Mat. Spec.	A312 TP304L Seamless				ASTM 358 Gr.304L class 1 – EFW- 100% radiography																	

Fittings	3000 Lbs, A 182 F304L SW, 45º or 90º elbows(2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 304L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric / eccentric reducers, tees (1), caps, swaged nipples. Weldolets, latrolets, elbolets (A182 F304L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP304L	
Flanges	300 Lbs RF, SW A182F 304L	WN, 300 Lbs RF, A 182 F304L, as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves (14)	SS valves, 800 Lbs to data sht. VGACK004(SW), VGXCK004(SW x THRD),VGFCD004 (300 LbS FLGD-RF) (4)(12)(19)	SS valves, 300 Lbs, GO for 10" and above to data shts. VGACD005, VGACD006 and VGACD007 (3)(4)(13)
Ball valves (14)	SS valves, 800 Lbs to data sht. VBFCK001, VBFCK004,VBFCKX01(8) (10)(12)(19)	SS valves, 300 Lbs, GO for 8" and above to data shts. VBRCD001, VBRCD002, VBRCD003 .VBRCD004,VBRCD013,VBRCD014,VBRCD015 and VBRCD016 for reduced bore VBFCD001,VBFCD002,VBFCD003,VBFCD004,VBFCD013,VBFCD014,VBFCD015 and VBFCD016 for full bore(3)(5)(8)(10)(13)
Globe valves (14)	SS valves, 800 Lbs to data sht. VLACK005(9)(12)(19)	SS valves,300 Lbs, GO for 8" and above to data sht. VLACD001 and VLACD004 (9)(13)
Plug valves (14)	SS valves, 800 Lbs to data sht. VPLCF001(6)(12)(19)	SS valves, 300 Lbs, GO for 8" and above to data shts. VPLCD001 and VPLCD002 (3)(6)(13)
Butterfly Valves		SS valves, 300 Lbs, GO for 8" and above to data shts. VUFCD001,VUFCD002 and VUFCD003 (3)(13)
Check valves	SS valves, 800 Lbs to data sht. VCHCK005 (7)(12)(19)	SS valves, 300 Lbs to data shts. VCACD001 and VCACD004(3)(13)
Needle valves	CS valves,800 Lbs to data sht.VNECK004	
Filters	600 Class, SW, A182 F304L Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP304L, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 304LSS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8 M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr304L, 300# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

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DOCUMENT TITLE	DOCUMENT No.						Doc. Class: 1
PIPING MATERIAL CLASSES	DOC. TYPE	PROJECT	UNIT NO.	MAT. CODE	S/N	REV.	
	RP	1718	999	1300	0001	6	Page 96 of 165

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Min/Max operating temperature for KELF seats and PTFE and ELGILOY seals are -150/100 °C Min/Max operating temperature for ELASTOLION 985 seals are -40/180 °C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F304L is an acceptable alternate for body materials
(14) Extended bonnet
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Deleted
(19) BW ends shall be used where specified on PID's

26	**28**	30	32	34	36	38	40	42	44	46
14.2 mm	30		40			20.6 mm	20.6 mm	22.2 mm	23.8 mm	23.8 mm

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** D 48

SERVICE : (16)
Corrosive hydrocarbons (H2S+ CO2) (heavy corrosion)
Lube- oil (after filter)
Seal oil (after filter)

Pressure/Temperature limits				
Pressure (barg)	49.6	49.6	44.0	38.1
Temperature(°C)	-45 (see note 14)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 ½	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S				10S			40S				20	8.74 mm	Std	10.3 mm	XS	
	Ends	PE				BE												
	Mat. Spec.	A 312 TP 321 seamless											ASTM A358 Gr.321 class 1 - EFW - 100%radiography					

Fittings	3 000 Lbs, A 182F321 SW, 45º or 90º elbows, couplings, tees, plugs, caps, sockolets, elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps. Weldolets (A182 F321) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	300 Lbs RF, SW A182F 321	WN, 300 Lbs RF, A 182 F 321, as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW),VGXCK001(SW x THRD),VGFCD001(300 LbS FLGD-RF) (4)(12)	SS valves, 300 Lbs, GO for 10" and above to data shts. VGACD001 and VGACD002 (3)(4)(13)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK002 (8)(10)(12)	SS valves, 300 Lbs, GO for 8" and above to data shts. VBRCD005, VBRCD006 and VBRCD007 for reduced bore VBFCD005,VBFCD006 and VBFCD007 for full bore (3)(5)(8)(10)(13)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(12)	SS valves, 300 Lbs to data sht. VLACD002 (9)(13)
Plug valves	SS valves, 800 Lbs to data sht. VPLCF002 (6)(12)	SS valves, 300 Lbs, GO for 8" and above to data shts. VPLCD003 and VPLCD004 (3)(8)(13)
Butterfly Valves		SS valves, 300 Lbs, GO for 8" and above to data shts. VUFCD004 and VUFCD005 (3)(13)
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(12)	SS valves, 300 Lbs to data shts. VCACD002 (3)(13)
Needle valves	SS valves,800 Lbs to data sht.VNECK001	
Filters	600 class, SW, A 182 F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. Plate ASTM A240 Gr321, 300# RF , Spectacle blinds, Blanks and Spacers as per ASME B16.48 (15)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between –45°C and –140"C for blow down situation only (no valve operated below –45°C).
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** D 48X

SERVICE : (15) Amine

Pressure/Temperature limits				
Pressure (barg)	49.6	49.6	44.0	38.1
Temperature(°C)	-45 (see note 13)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 ½	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S				10S			40S				20	8.74 mm	Std	10.3 mm	XS	
	Ends	PE				BE												
	Mat. Spec.	A 312 TP 321 seamless								ASTM A358 Gr.321 class 1 - **EFW** - 100%radiography								

Fittings	3 000 Lbs, A 182F321 SW, 45º or 90º elbows, couplings, tees, plugs, caps, sockolets, elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps. Weldolets (A182 F321) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	300 Lbs RF, SW A182F 321	WN, 300 Lbs RF, A 182 F 321, as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW), VGXCK001(SW x THRD), VGFCD001 (300 Lbs FLGD-RF) (4)(11)	SS valves, 300 Lbs, GO for 10" and above to data shts. VGACD001 and VGACD002 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK003 (8)(10)(11)	SS valves, 300 Lbs, GO for 8" and above to data shts. VBRCD008, VBRCD009 and VBRCD010 for reduced bore VBFCD008,VBFCD009 and VBFCD010 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(11)	SS valves, 300 Lbs to data sht. VLACD002 (9)(12)
Plug valves		
Butterfly Valves		SS valves, 300 Lbs, GO for 8" and above to data shts. VUFCD004 and VUFCD005 (3)(12)
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(11)	SS valves, 300 Lbs to data shts. VCACD002 (3)(12)
Filters	600 class, SW, A 182 F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. Plate ASTM A240 Gr321, 300# RF , Spectacle blinds, Blanks and Spacers as per ASME B16.48 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Valve bodies may be SS TP 316L
(12) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(13) Acceptable between –45°C and –140"C for blow down situation only (no valve operated below –45°C).
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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DOCUMENT TITLE	DOCUMENT No.						Doc. Class: 1
PIPING MATERIAL CLASSES	DOC. TYPE	PROJECT	UNIT NO.	MAT. CODE	S/N	REV.	Page 99 of 165
	RP	1718	999	1300	0001	6	

PIPING MATERIALS

Rating : 300 Lbs RF	Material : stainless steel TP 316L	Revision : 6	class D 49
	Corrosion allowance : 0 mm	Date : 3-01-10	

SERVICE : (16)

Corrosive hydrocarbons, jet fuel
Lube- oil (after filter)
Seal oil (after filter)
Instrument gas (after filter)

Pressure/Temperature limits				
Pressure (barg)	41.3	41.3	34.4	28.8
Temperature(°C)	-46 (see note 13)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24
	Schedule	80S				10S				40S			20	30			
	Ends	PE				BE											
	Mat. Spec.	A 312 TP 316L seamless								ASTM A 358 Gr. 316L class 1 – EFW - 100% radiography							

Fittings	3 000 Lbs, A 182 F316L SW, 45º or 90º elbows(2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 316L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F316L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP316L	
Flanges	300 Lbs RF, SW A182 F316L	WN, 300 Lbs RF, A 182 F316L as per pipe schedule, blind flanges (3) (11)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK005(SW), VGXCK005(SW x THRD), VGFCD005(300Lbs FLGD-RF) (4)	SS valves, 300 Lbs, GO for 14" and above to data shts. VGACD008 and VGACD009 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK006 (8)(10)	SS valves, 300 Lbs, GO for 8" and above to data shts. VBRCD017, VBRCD018 and VBRCD019 for reduced bore, VBFCD017, VBFCD018 and VBFCD019 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK006 (9)	SS valves,300 Lbs to data sht. VLACD005 (9)(12)
Plug valves	SS valves, 800 Lbs to data sht. VPLCF008 (6)	SS valves, 300 Lbs, GO for 8" and above to data shts. VPLCD005 and VPLCD006 (12)
Butterfly Valves		SS valves, 150 Lbs, GO for 8" and above to data shts. VUFCB004 and VUFCB005 (3)(13)
Check valves	SS valves, 800 Lbs to data sht. VCHCK006 (7)	SS valves, 300 Lbs to data sht. VCACD005 (3)(12)
Needle valves	CS valves,800 Lbs to data sht.VNECK005	
Filters	600 class, SW, A 182 F316L, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP316L, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.316L, 300# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Blind flange may be in A182 F316
(12) Forged steel to ASTM A182 F316/316L is an acceptable alternate for body materials
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 5.10. of this document
(14) For full range of services see para.7 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : stainless steel TP 316L (16)	Revision : 6	class D 49N
	Corrosion allowance : 0 mm	Date : 3-01-10	

SERVICE : (16)
Alkaline Services
Rich Amine

Pressure/Temperature limits				
Pressure (barg)	41.3	41.3	34.4	28.8
Temperature(°C)	-175 (see note 13)	+37	+100	+200

Pipes																		
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24		
Schedule	80S				10S				40S			20	30					
Ends	PE				BE													
Mat. Spec.	A 312 TP 316L seamless								ASTM A 358 Gr. 316L class 1 – EFW - 100% radiography									

Fittings	3 000 Lbs, A 182 F316L SW, 45º or 90º elbows(2) couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 316L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets & latrolets (A182 F316L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP316L	
Flanges	300 Lbs RF, SW A182 F316L	WN, 300 Lbs RF, A 182 F316L as per pipe schedule, blind flanges (3) (11)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK006(SW), VGXCK006(SW x THRD), VGFCD006(300Lbs FLGD-RF) (4)	SS valves, 300 Lbs, GO for 14" and above to data shts. VGACD010 and VGACD011 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK008 (8)(10)	SS valves, 300 Lbs, GO for 8" and above to data shts. VBRCD020, VBRCD021 and VBRCD022 for reduced bore, VBFCD020, VBFCD021 and VBFCD022 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK007 (9)	SS valves,300 Lbs to data sht. VLACD007 (9)(12)
Plug valves		
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK007 (7)	SS valves, 300 Lbs to data sht. VCACD006 (3)(12)
Needle valves	CS valves,800 Lbs to data sht.VNECK006	
Filters	600 class, SW, A 182 F316L, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP316L, as per manufacturer's standard
Gaskets	Reinforced flexible graphite gaskets, 1.5mm thick for all diameters as per ASME B16.21	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr.316L, 300# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Blind flange may be in A182 F316
(12) Forged steel to ASTM A182 F316/316L is an acceptable alternate for body materials
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 5.10. of this document
(14) For full range of services see para.7 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) All materials shall comply with the NACE MR 01 75/ISO 15156 & TM 01 77 Standard & with RP-1718-999-6300-0003 Valve materials shall also conform to RP-1718-999-6300-0004

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PIPING MATERIALS

Rating : 300 Lbs RF	Material : Super duplex Stainless Steel Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class D 71X

SERVICE : (14)

Cooling Sea Water

Pressure/Temperature limits				
Pressure (barg)	51.7	51.7	***49.1***	***42.1***
Temperature(°C)	+38	+85	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	
	Schedule	***80S***				10S							
	Ends	PE				BE							
	Mat. Spec.	ASTM A790 S 32750 SMLS				ASTM A928 S 32750 EFW/SAW (100%radiography)							

Fittings	3000 Lbs, A 182 F53 SW, 45º or 90º elbows couplings, tees, plugs, caps, sockolets, elbolets	A 815 UNS 32750 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees (1), caps. Weldolets (A182 F53)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A815 UNS 32750	
Flanges	300 Lbs RF, SW A182 F53	WN, 300 Lbs RF, A 182 F53 as per pipe schedule, blind flanges (3)
		WN, 300 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK002 (SW), VGXCK002 (SW x THRD), VGFCD002 (300Lbs FLGD-RF) (4)	SS valves, 300 Lbs, GO for 10" and above to data shts. VGACD003 and VGACD004 (3)(4)
Ball valves		
Globe valves	SS valves, 800 Lbs to data sht. VLACK003 (9)	SS valves, 300 Lbs to data sht. VLACD003 (9)
Plug valves		
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK003 (7)	SS valves, 300 Lbs to data sht. VCACD003
Filters		
Gaskets	Spiral wound gasket- graphite filler-4.5 mm thick UNS 32750 winding, 3.2 mm thick external centering ring per ASME B 16.20	
Bolting	Studs A 193 B8 M Class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 UNS. 32750, 300# RF, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (12)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Flexible wedge
(5) Note removed
(7) Horizontal installation
(9) Swivel plug disc
(11) Note removed
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	**class** F 01

SERVICE : (13)
Hydrocarbons (non corrosive)
Low pressure hydraulic systems
Methanol, glycol

Pressure/Temperature limits					
Pressure (barg)	102.0	102.0	92.7	87.8	75.5
Temperature(°C)	-29	+37	+100	+200	+315

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				34
	Schedule	80					40	80			60	80						Larger sizes according to table below				
	Ends	PE					BE															
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW – 100% radiography							

Fittings	3000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps,sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	600 Lbs RF, SW A105	WN, 600 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001(SW x THRD), VGFAF001 (600 LbS FLGD-RF) (4)	CS valves, 600 Lbs, GO for 8" and above to data shts. VGAAF001, VGAAF002, VGAAF003 and VGAAF004 (3)(4)
Ball valves	CS valves,800 Lbs to data sht.VBFAK001, VBFAK005, VBFAK009 and VBFAKS01 (8)(10)(15)	CS valves, 600 Lbs, GO for 6" and above to data shts. VBRAF001, VBRAF002 ,VBRAF003,VBRAF009,VBRAF010,VBRAF013,VBRAF014, VBRAFS01 and VBRAFT01 for reduced bore VBFAF001,VBFAF002,VBFAF003,VBFAF010,VBFAF011,VBFAF015, VBFAF016, VBFAFS01 and VBFAFT01 for full bore(3)(5)(8)(10)(15)
Globe valves	CS valves,800 Lbs to data sht.VLAAK001(9)	CS valves, 600 Lbs, GO for 6" to data shts. VLAAF001 and VLAAF004 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF001(6)	CS valves, 600 Lbs, GO for 6" and above to data shts. VPLAF005 and VPLAF006 (6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht.VCHAK001 (7)	CS valves, 600 Lbs to data shts. VCAAF001, VCAAF002 and VCAAF007 (3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound, Graphite filler, 4.5mm thick 316 SS winding, 3.2 mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (12)	

Notes
(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(15) AED VITON seals temperature limit = 200°C,ELASTILION seals temperature limit = 180°C, GRAPHITE seals for temperatures over 200°C

26	28	30	32	34
28.58 mm	30.64 mm	32.72 mm	34.83 mm	36.91 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Carbon steel Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class F 03

SERVICE : (15)

Corrosive hydrocarbons (CO2 light corrosion)

Pressure/Temperature limits

Pressure (barg)	102.0	102.0	92.7	87.8	82.8
Temperature(°C)	-29	+37	+100	+200	260

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26					46
	Schedule	160					80											Larger sizes according to table below					
	Ends	PE				BE																	
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless												API 5L Gr B (PSL 1)SAW (100% radiography)				API 5L X60 (PSL 1) -SAW – 100% radiography					

Fittings	6000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1)(12), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	600 Lbs RF, SW A105	WN, 600 Lbs RF, A 105 as per pipe schedule, blind flanges (3)(13)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001(SW x THRD), VGFAF001(600Lbs FLGD-RF) (4)	CS valves, 600 Lbs, GO for 8” and above to data shts. VGAAF001, VGAAF002, VGAAF003 and VGAAF004 (3)(4)
Ball valves	CS valves,800 Lbs to data sht.VBFAK002,VBFAK007 VBFAKX02(8)(10)	CS valves, 600 Lbs, GO for 6” and above to data shts. VBRAF004, VBRAF005,VBRAF006,VBRAF017,VBRAF018, VBRAF026, VBRAFS04 for reduced bore VBFAF004,VBFAF005,VBFAF006,VBFAF022 and VBFAF023 for full bore (3)(5)(8)(10)
Globe valves	CS valves,800 Lbs to data sht VLAAK001 (9)	CS valves, 600 Lbs, GO for 6” to data shts. VLAAF001 and VLAAF004 (9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF002 (6)	CS valves, 600 Lbs, GO for 6” and above to data shts. VPLAF005 and VPLAF006 (6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht.VCHAK001 (7)	CS valves, 600 Lbs to data shts. VCAAF001, VCAAF002 and VCAAF007(3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer’s standard
Gaskets	Spiral wound, Graphite filler, 4.5 mm thick 316 SS winding, 3.2 mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 600# RF, Spectacle blinds, Blanks and Spacers 24” and below as per ASME B16.48, 26” and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24” and as per ASME B16.47 Series A for diameters 26” and above.
(4) Single-piece wedge for diameters up to 24” and Flexible wedge for diameters 26” and above
(5) Removable seat
(6) Service pressure according to temperature and supplier’s recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200° .GRAPHITE seals for temperature over 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) For diameters 26 inches and above, fittings according to ASTM A 860 class WPH Y 60, Wall thickness to suit matching pipe
(13) For diameters 26 inches and above, flange s per ASTM A 694 grade F60, to match pipe wall thickness.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
24.0 mm	25.6 mm	27.2 mm	28.8 mm	30.4 mm	32.0 mm	33.6 mm	35.2 mm	36.8 mm	38.4 mm	40.0 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** F 03N

SERVICE : (14)

Rich Amine

Pressure/Temperature limits				
Pressure (barg)	102.0	102.0	92.7	87.8
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26
	Schedule	160					80											30.6 mm
	Ends	PE				BE												
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless					API 5L Gr.B (PSL 2) seamless								API 5L Gr.B (PSL 2) – SAW – 100% radiography			

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	600 Lbs RF, SW A105	WN, 600 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002(SW x THRD), VGFAF002(600Lbs FLGD-RF) (4)	CS valves, 600 Lbs, GO for 8" and above to data shts. VGAAF005, VGAAF006 and VGAAF010 (3)(4)
Ball valves	CS valves, 800 Lbs to data sht. VBFAK003 (10)(16)	CS valves, 600 Lbs, GO for 6" and above to data shts. VBRAF007,VBRAF008,VBRAF024 and VBRAF025 for reduced bore VBFAF007,VBFAF008, VBFAF024 and VBFAF025 for full bore(3)(5)(8)(10)(16)
Globe valves	CS valves, 800 Lbs to data sht. VLAAK003 (9)	CS valves, 600 Lbs, GO for 6" t data shts. VLAAF002 and VLAAF005(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004 (6)	CS valves, 600 Lbs, GO for 6" and above to data shts. VPLAF007 and VPLAF008 (6)
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK003 (7)	CS valves, 600 Lbs to data shts. VCAAF003, VCAAF004 and VCAAF009 (3)
Needle valves	CS valves,800 Lbs to data sht.VNEAK002	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound, Graphite filler, 4.5 mm thick 316 SS winding, 3.2 mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with the RP-1718-999-6300-0003. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C.AFLAS seals temperature limit = 200°C

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** F 03S

SERVICE : (14)

Corrosive hydrocarbons (wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	102.0	102.0	92.7	87.8
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	Schedule	160					80											30.6 mm	32.67 mm	34.75 mm
	Ends	PE					BE													
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless					API 5L Gr.B (PSL 2) seamless								API 5L Gr.B (PSL 2) – SAW – 100% radiography					

Fittings	6000 Lbs SW, A105, 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges	600 Lbs RF, SW A105	WN, 600 Lbs RF, A 105 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK002(SW), VGXAK002(SW x THRD), VGFAF002(600Lbs FLGD-RF) (4)	CS valves, 600 Lbs, GO for 8" and above to data shts. VGAAF005, VGAAF006 and VGAAF010 (3)(4)
Ball valves	CS valves,800 Lbs to data sht.VBFAK003, VBFAK010, VBFAKX03 (10)(16)	CS valves, 600 Lbs, GO for 6" and above to data shts. VBRAF007,VBRAF008,VBRAF024 and VBRAF025, VBRAF026, VBRAF027 for reduced bore VBFAF007,VBFAF008, VBFAF024 and VBFAF025, VBFAF026, VBFAF027 for full bore(3)(5)(8)(10)
Globe valves	CS valves, 800 Lbs to data sht.VLAAK003 (9)	CS valves, 600 Lbs, GO for 6 to data shts. VLAAF002 and VLAAF005(9)
Plug valves	CS valves, 800 Lbs to data sht. VPLAF004 (6)	CS valves, 600 Lbs, GO for 6" and above to data shts. VPLAF007 and VPLAF008 (6)
Butterfly Valves		
Check valves	CS valves,800 Lbs to data sht. VCHAK003 (7)	CS valves, 600 Lbs to data shts. VCAAF003, VCAAF004, VCAAF009 and VCHAF003 (3)
Needle valves	CS valves,800 Lbs to data sht.VNEAK002	
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Spiral wound, Graphite filler, 4.5 mm thick 316 SS winding, 3.2 mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) PTFE seats temperature limit = 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0284,TM 01 77 Standard & with the RP-1718-999-6300-0002. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C.AFLAS seals temperature limit = 200°C

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PIPING MATERIALS

Rating : 600 Lbs RJ	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class F 12

SERVICE : (11)

HP steam saturated
HP condensate
Boiler Blow Down
High Pressure Steam

Pressure/Temperature limits

Pressure (barg)	102.0	102.0	92.7	87.8	77.5	74.7
Temperature(°C)	-29	+37	+100	+200	+300	+330

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			46
	Schedule	80					40	80			60	80						Larger sizes according to table below			
	Ends	PE					BE														
	Mat. Spec.	API5L Gr.B(PSL 1) seamless													API 5L Gr B(PSL 1) -SAW 100% radiography						

Fittings	3000 Lbs SW, A105 45° or 90° elbows (2), tees couplings, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A105)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (9)	600 Lbs RJ, SW A105	WN, 600 Lbs RJ, A 105 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 800 Lbs to data sht. VGAAK001(SW), VGXAK001((SW x THRD), VGFAF010(600Lbs FLGD-RJ) (4)	CS valves, 600 Lbs, GO for 8" and above to data shts. VGAAF007, VGAAF008 andVGAAF009 (3)(4)
Ball valves		
Globe valves	CS valves, 800 Lbs to data sht. VLAAK001 (8)	CS valves,600 Lbs, GO for 6" to data shts. VLAAF003 and VLAAF006 (3)(8)
Plug valves		
Butterfly Valves		
Check valves	CS valves, 800 Lbs to data sht. VCHAK001 (7)	CS valves, 600 Lbs to data shts. VCHAF001 and VCHAF002 (3)
Filters	600 Class, SW, A105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (Armco), per ASME B 16.20-90 HRB max, 600 Lbs rating	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 600# RJ, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (10)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 2" and Flexible wedge for diameters 3" and above
(5) Removable seat
(6) All schedules up to 46" are acceptable for full vacuum at 48°C.
(7) Horizontal installation
(8) Swivel plug disc
(9) Ring joint facing
(10) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(11) For full range of services see para.12 Piping class summary
(12) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"
30.18 mm	31.75 mm	33.32 mm	34.9 mm	37.0 mm	39.0 mm	41.1 mm	43.2 mm	45.3 mm	47.4 mm	49.5 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class F 21

SERVICE : (14)

Non corrosive hydrocarbons (low temperature)

Pressure/Temperature limits					
Pressure (barg)	102.0	102.0	92.7	87.8	75.5
Temperature(°C)	-46	+37	+100	+200	+315

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26					46
	Schedule	80					40	80			60	80						Larger sizes according to table below					
	Ends	PE						BE															
	Mat. Spec.	ASTM A333 Gr6 seamless																A 671 CC65 CI22 W/S2 at -46°C					

Fittings	3000 Lbs SW, 45° or 90° elbows (2), couplings, tees, sockolets, plugs, caps, elbolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6	
Flanges	600 Lbs RF, SW A350 LF2 CL.1	WN, 600 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves,800 Lbs to data sht. VGABK001(SW), VGXBK001((SW x THRD), VGFBF001 (600Lbs FLGD-RF) (4)	LTCS valves, 600 Lbs, GO for 8" and above to data shts. VGABF001, VGABF002, VGABF003 and VGABF004 (3)(4)
Ball valves	LTCS valves,800 Lbs to data sht.VBFBK001, VBFBK004, VBFBK005, VBFBKS01 (8)(10)	LTCS valves, 600 Lbs, GO for 6" and above to data shts. VBRBF001, VBRBF002, VBRBF003,VBRBF010 and VBRBF011,VBRBFS01,VBRBFT01 for reduced bore VBFBF001,VBFBF002,VBFBF003,VBFBF010 and VBFBF011,VBFBFS01,VBFBFT01 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves, 800 Lbs to data sht.VLABK001 (9)	LTCS valves, 600 Lbs, GO for 6" to data shts. VLABF001 and VLABF006(9)
Plug valves	LTCS valves, 800 Lbs to data sht. VPLBF001 (6)	LTCS valves, 600 Lbs, GO for 6" and above to data shts. VPLBF004 and VPLBF005 (6)
Butterfly Valves		
Check valves	LTCS valves, 800 Lbs to data sht.VCHBK001 (7)	LTCS valves, 600 Lbs to data shts. VCABF001,VCABF002 and VCABF007 (3)
Needle valves	LTCS valves, 800 Lbs to data sht.VNEBK001	
Filters	600 Class,SW, A350 LF2 CL.1, Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6 as per manufacturer's standard
Gaskets	Spiral wound. Graphite filter, 4.5mm thick 316SS winding .3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (12)	LTC Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C,ELASTOLION seals temperature limit = 180°C,GRAPHITE seals temperature limit above 200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
28.6 mm	30.7 mm	32.8 mm	34.9 mm	37.0 mm	39.0 mm	41.1 mm	43.2 mm	45.3 mm	47.4 mm	49.4 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** F 23

SERVICE : (14)

Low temperature hydrocarbons (CO2 light corrosion)

Pressure/Temperature limits				
Pressure (barg)	102.0	102.0	92.7	87.8
Temperature(°C)	-46	+37	+100	+200

pipes																						
Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
Schedule	160					80											Larger sizes according to table below				
Ends	PE					BE															
Mat. Spec.	ASTM A333 Gr6 seamless																A 671 CC65 CI22 W/S2 at -46°C				

Fittings	6000 Lbs SW, 45° or 90° elbows(2),couplings, tees, plugs, caps, sockolets, elbolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6	
Flanges	600 Lbs RF, SW A350 LF2 CL.1	WN, 600 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 800 Lbs to data sht. VGABK001(SW), VGXBK001(SW x THRD), VGFBF001 (600LbS FLGD-RF) (4)	LTCS valves, 600 Lbs, GO for 8" and above to data shts. VGABF001, VGABF002, VGABF003 and VGABF004 (3)(4)
Ball valves	LTCS valves,800 Lbs to data sht.VBFBK002, VBFBK006(8)(10)	LTCS valves, 600 Lbs, GO for 6" and above to data shts. VBRBF004, VBRBF005 and VBRBF006 for reduced bore VBFBF004, VBFBF005 and VBFBF006 for full bore (3)(5)(8)(10)
Globe valves	LTCS valves,800 Lbs to data sht.VLABK001(9)	LTCS valves, 600 Lbs, GO for 6" to data shts. VLABF001 and VLABF006(9)
Plug valves	LTCS valves, 800 Lbs to data sht.VPLBF002 (6)	LTCS valves, 600 Lbs, GO for 6" and above to data shts. VPLBF004 and VPLBF005 (6)
Butterfly Valves		
Check valves	LTCS valves, 800 Lbs to data sht.VCHBK001 (7)	LTCS valves, 600 Lbs to data shts. VCABF001, VCABF002 and VCABF007(3)
Filters	600 Class, SW, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6 as per manufacturer's standard
Gaskets	Spiral wound, Graphite filler, 4.5mm thick 316SS winding .3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (12)	LTC Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C and ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
30.6 mm	32.7 mm	34.8 mm	36.8 mm	38.9 mm	41.0 mm	43.1 mm	45.2 mm	47.3 mm	49.4 mm	51.4 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Low Temperature Carbon Steel (LTCS) (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class F 23S

SERVICE : (15) Low temperature hydrocarbons (wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	102.0	102.0	92.7	87.8
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	160					80											Larger sizes according to table below				
	Ends	PE					BE															
	Mat. Spec.	ASTM A333 Gr6 seamless												A 671 CC65 Cl22 W/S2 at -46°C								
Fittings		6000 Lbs SW, 45° or 90° elbows(2),couplings, tees, sockolets plugs, caps, elbolets, A350 LF2 CL.1					A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees (1), caps. Weldolets (A350 LF2 CL.1)															
Swaged nipples		Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6																				
Flanges		600 Lbs RF, SW A350 LF2 CL.1					WN, 600 Lbs RF, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)															
							WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting															
Gate valves		LTCS valves, 800 Lbs to data sht. VGABK002(SW), VGXBK002(SW x THRD), VGFBF002(600Lbs FLGD-RF) (4)					LTCS valves, 600 Lbs, GO for 8" and above to data shts. VGABF005, VGABF006 and VGABF007 (3)(4)															
Ball valves		LTCS valves,800 Lbs to data sht.VBFBK003 and VBFBKS03, VBFBK007, VBFBK008, VBFBKX07(8)(10)					LTCS valves, 600 Lbs, GO for 6" and above to data shts. VBRBF007, VBRBF008, VBRBF009, VBRBF012, VBRBF013,VBRBFS07 and VBRBFT07 for reduced bore VBFBF007,VBFBF008, VBFBF009, VBFBF012, VBFBF013,VBFBFS07 and VBFBFT07 for full bore(3)(5)(8)(10)													
Globe valves		LTCS valves, 800 Lbs to data sht.VLABK002 (9)					LTCS valves, 600 Lbs, GO 6" and above to data shts. VLABF002 andVLABF004(9)															
Plug valves		LTCS valves, 800 Lbs to data sht. VPLBF003 (6)					LTCS valves, 600 Lbs, GO for 6" and above to data shts. VPLBF006 and VPLBF007 (6)															
Butterfly Valves																						
Check valves		LTCS valves, 800 Lbs to data sht.VCHBK002 (7)					LTCS valves, 600 Lbs to data shts. VCABF003, VCABF004 and VCABF011(3)															
Needle valves		LTCS valves,800 Lbs to data sht.VNEBK002																				
Filters		600 Class,SW, A350 LF2 CL.1, Y type, stainless steel strainer					Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard															
Gaskets		Spiral wound. Graphite filler, 4.5mm thick 316SS winding .3.2mm thick external centering ring per ASME 16.20																				
Bolting		Studs A 193 B7M, Hex Head nuts A 194 2HM																				
Blanks/Spacers (13)		LTC Stl. Plate ASTM A516 Gr 70 W/S5 @-46°C, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)																				

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Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C and ELASTOLION 985 seals temperature limit = 180°C Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 0284,TM 01 77 Standard & with the RP- 1718-999-6300-0002. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(17) deleted

26	28	30	32	34	36	38	40	42	44	46
30.6 mm	32.7 mm	34.8 mm	36.8 mm	38.9 mm	41.0 mm	43.1 mm	45.2 mm	47.3 mm	49.4 mm	51.4 mm

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PIPING MATERIALS

Rating : 600 Lbs RJ	Material : Alloy steel 1.25Cr 0.5Mo Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class F 42

SERVICE : (12)

HP Steam superheated

Pressure/Temperature limits

Pressure (barg)	103.4	103.4	102.9	95.8	85.7	72.6
Temperature(°C)	-29	+37	+100	+200	+300	+405

Pipes(6)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			46
	Schedule	80					40	80										Larger sizes according to table below			
	Ends	PE					BE														
	Mat. Spec.	ASTM A335 GrP11 seamless													A 691 1.25Cr SAW 100%radiography						

Fittings	3 000 Lbs SW A182 Gr.F11 CL.2 45º or 90º elbows (2), tees, plugs couplings, caps Sockolets, elbolets	A 234 WP11 CL.1 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric / eccentric reducers, tees, caps. Weldolets (A182 Gr.F11) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WP11 CL.1	
Flanges (10)	600 Lbs RJ, SW A 182 Gr.F11 CL.2	WN, 600 Lbs RJ, A182 GR.F11 CL.2 as per pipe schedule, blind flanges (3)
		WN, 600Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	AS valves, 800 Lbs to data sht. VGADK002(SW), VGXDK002 (SW x THRD), VGFDF002 (600Lbs FLGD-RJ) (4)(5)	AS valves, 600 Lbs, GO for 8" and above to data shts. VGADF001and VGADF002 (3)(4)
Ball valves		
Globe valves	AS valves, 800 Lbs to data sht. VLADK002 (5)(9)	AS valves, 600 Lbs to data sht. VLADF001(3)(9)
Check valves	AS valves,800 Lbs to data sht.VCHDK002 (5)(7)(8)	AS valves, 600 Lbs to data sht. VCHDF001 (3)
Filters	600 Class, SW, A182 F11 CL.2, Y type, stainless steel strainer	
Gaskets (10)	Octagonal Ring joint, 5 Cr 0.5Mo, Maxi 130HRB	
Bolting	Studs A 193 B16, Hex Head nuts A 194 Gr.4	
Blanks/Spacers	C. Stl. plate ASTM A387 Gr 11 Cl.2, 600# RJ, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above – calculate(11)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 1 1/2" and Flexible wedge for diameters 2" and above
(5) Bellow seal
(6) All schedules up to 46" are acceptable for full vacuum at 48°C
(7) Horizontal installation
(8) Horizontal piston lift
(9) Swivel plug disc
(10) Ring joint facing
(11) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(12) For full range of services see para.12 Piping class summary
(13) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
29.0 mm	31.1 mm	33.2 mm	35.3 mm	37.4 mm	39.5 mm	41.6 mm	43.8 mm	45.9 mm	48.0 mm	50.1 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : Stainless steel TP304L Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** F 46

SERVICE : (16)

Cryogenic temperature hydrocarbons

Pressure/Temperature limits					
Pressure (barg)	82.6	82.6	69.1	57.3	***49.1***
Temperature(°C)	-196	+37	+100	+200	325

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	80S				10S	40S			80S		60						Larger sizes according to table below				
	Ends	PE				BE																
	Mat. Spec.	ASTM A312 TP304L Seamless								ASTM A358 Gr.304L class 1 – EFW - 100% radiography												

Fittings	3000 Lbs, A 182 F304L SW, 45º or 90º elbows (2), couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 304L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric / eccentric reducers, tees (1), caps, swaged nipples. Weldolets, latrolets, elbolets (A182 F304L)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP304L	
Flanges	600 Lbs RF, SW A182F 304L	WN, 600 Lbs RF, A 182 F304L, as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, Orifice Support Assembly, supplied with bolting
Gate valves (14)	SS valves, 800 Lbs to data sht. VGACK004(SW), VGXCK004(SW x THRD), VGFCF004(600Lbs FLGD-RF) (4)(12)(18)(19)	SS valves, 600 Lbs, GO for 8" and above to data shts. VGACF004, VGACF005 and VGACF006 (3)(4)(13)
Ball valves (14)	SS valves, 800 Lbs to data sht. VBFCK001,VBFCK004 (8)(10)(12)(18)(19)	SS valves, 600 Lbs, GO for 6" and above to data shts. VBRCF001, VBRCF002 ,VBRCF003,VBRCF011 and VBRCF012 for reduced bore VBFCF001,VBFCF002,VBFCF003,VBFCF013 and VBFCF014 for full bore(5)(8)(10)(13)
Globe valves (14)	SS valves, 800 Lbs to data sht. VLACK005 (9)(12)(18)(19)	SS valves, 600 Lbs, GO for 6" to data shts. VLACF001 and VLACF003 (9)(13)
Plug valves (14)	SS valves, 800 Lbs to data sht. VPLCF001(6)(12)(18)(19)	SS valves, 600 Lbs, GO for 6" and above to data shts. VPLCF003 and VPLCF004 (6)(13)
Butterfly Valves		
Check valves	SS valves 800 Lbs to data sht. VCHCK005 (7)(12)(18)(19)	SS valves, 600 Lbs to data shts. VCACF001 and VCACF003 (3)(13)
Needle valves	SS valves,800 Lbs to data sht.VNECK004	
Filters	600 Class, SW, A182 F304L, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP304L, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding .3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr. 8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr304L, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

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Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Flexible wedge
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Min/Max operating temperature for KELF seats and PTFE and ELGILOY seals are -150/100 °C Min/Max operating temperature for PTFE seats and ELASTOLION 985 seals are -40/180 °C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valves bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F304L is an acceptable alternate for body materials
(14) Extended bonnet
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.7 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Deleted
(19) BW ends shall be used where specified on PID's

26	28	30	32	34	36	38	40	42	44	46
26.4 mm	28.4 mm	31.7 mm	32.5 mm	34.5 mm	36.5 mm	38.5 mm	40.6 mm	42.6 mm	44.6 mm	46.6mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class F 48

SERVICE : (16)
Corrosive hydrocarbons (H2S+ CO2) (heavy corrosion)

Pressure/Temperature limits				
Pressure (barg)	99.2	99.2	88.1	76.6
Temperature(°C)	-45 (see note 14)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	80S				40S			80S			60	14.2 mm	60	19.0 mm	20.6 mm	60	Larger sizes according to table below				
	Ends	PE				BE																
	Mat. Spec.	A 312 TP 321 seamless				ASTM A358 Gr.321 class 1 - EFW - 100%radiography																

Fittings	3 000 Lbs, A 182F321 SW, 45º or 90º elbows, couplings, tees, plugs, caps, sockolets, elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . Weldolets (A182 F321) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	600 Lbs RF, SW A182F 321	WN, 600 Lbs RF, A 182 F321, as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW), VGXCK001(SW x THRD),VGFCF001(600L bs FLGD-RF)((4)(12)	SS valves, 600 Lbs, GO for 8" and above to data shts. VGACF001, VGACF002 and VGACF003 (3)(4)(13)
Ball valves	SS valves, 800 Lbs to data sht.VBFCK002, VBFCK005 and VBFCKS02,VBFCKX01 (8)(10)(12)	SS valves, 600 Lbs, GO for 6" and above to data shts. VBRCF004, VBRCF005, VBRCF006,VBRCF015,VBRCF016, VBRCF017, VBRCFS04 and VBRCFT04 for reduced bore VBFCF004,VBFCF005,VBFCF006,VBFCF015,VBFCF016, VBFCF017, VBFCFS04 and VBFCFT04 for full bore(3)(5)(8)(10)(13)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(12)	SS valves,600 Lbs, GO for 6" to data shts.VLACF002 and VLACF004(9)(13)
Plug valves	SS valves, 800 Lbs to data sht. VPLCF002 (6)(12)	SS valves, 600 Lbs, GO for 6" and above to data shts. VPLCF005 and VPLCF006 (6)(13)
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(12)	SS valves, 600 Lbs to data shts. VCACF002 and VCACF005 (3)(13)
Filters	600 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding , 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr321, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) AED VITON seals temperature limit = 200°C and PTFE & ELGILOY seals temperature limit is -70/200°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Note removed
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between -45°C and –140°C for blow down situation only (no valve operated below -45°C).
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

26	28	30	32	34	36	38	40	42	44	46
26.9 mm	28.5 mm	31.7 mm	33.3 mm	34.9 mm	36.5 mm	38.8 mm	46.0 mm	46.0 mm	46.0 mm	52.3 mm

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PIPING MATERIALS

Rating : 600 Lbs RF	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** F 48X

SERVICE : (15) Amine

Pressure/Temperature limits				
Pressure (barg)	99.2	99.2	88.1	76.6
Temperature(°C)	-45 (see note 13)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S				40S			80S			60	14.2 mm	60	19.0 mm	20.6 mm	60	
	Ends	PE				BE												
	Mat. Spec.	A 312 TP 321 seamless								ASTM A358 Gr.321 class 1 - EFW - 100%radiography								

Fittings	3 000 Lbs, A 182F321 SW, 45º or 90º elbows, couplings, tees, plugs, caps, sockolets, elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . Weldolets (A182 F321) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP321	
Flanges	600 Lbs RF, SW A182F 321	WN, 600 Lbs RF, A 182 F321, as per pipe schedule, blind flanges (3)
		WN, 600 Lbs RF, orifice support assembly, supplied with bolting
Gate valves	SS valves, 800 Lbs to data sht. VGACK001(SW), VGXCK001(SW x THRD),VGFCF001(600Lbs FLGD-RF) (4)(11)	SS valves, 600 Lbs, GO for 8" and above to data shts. VGACF001 and VGACF002 (3)(4)(12)
Ball valves	SS valves, 800 Lbs to data sht. VBFCK003 (8)(10)(11)	SS valves, 600 Lbs, GO for 6" and above to data shts. VBRCF007 and VBRCF008 for reduced bore VBFCF007 and VBFCF008 for full bore (3)(5)(8)(10)(12)
Globe valves	SS valves, 800 Lbs to data sht. VLACK002 (9)(11)	SS valves,600 Lbs, GO for 6" to data shts.VLACF002 and VLACF004(9)(13)
Plug valves		
Butterfly Valves		
Check valves	SS valves, 800 Lbs to data sht. VCHCK002 (7)(11)	SS valves, 600 Lbs to data shts. VCACF002 (3)(12)
Needle valves	SS valves,800 Lbs to data sht.VNECK001	
Filters	600 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321L, as per manufacturer's standard
Gaskets	Spiral wound. Graphite filler, 4.5mm thick 316SS winding , 3.2mm thick external centering ring per ASME 16.20	
Bolting	Studs A 193 B8M class 2, Hex Head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr321, 600# RF, Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) ELASTOLION 985 seals temperature limit = 180°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Valve bodies may be SS TP 316L
(12) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(13) Acceptable between -45°C and –140°C for blow down situation only (no valve operated below -45°C).
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class G 01

SERVICE : (13)
Hydrocarbons (non corrosive)
Production gas (HP sweet gas)
Methanol, glycol

Pressure/Temperature limits					
Pressure (barg)	153.0	153.0	139.1	131.3	113.3
Temperature(°C)	-29	+37	+100	+200	315

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			42
	Schedule	80							120	100								Larger sizes according to table below			
	Ends	PE							BE												
	Mat. Spec.	API 5L Gr.B seamless														API 5L Gr.B – SAW – 100% radiography					

Fittings	3000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees, caps. Weldolets (A105) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (11)	1500 Lbs RJ, SW A105	WN, 900 Lbs RJ, A 105 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 1500 Lbs to data sht. VGAAH001(SW), VGXAH001 (SW x THRD), VGFAH001 (FLGD-RJ) (4)	CS valves, 900 Lbs, GO for 6" and above to data shts. VGAAG001, VGAAG002 and VGAAG011 (3)(4)
Ball valves	CS valves,1500 Lbs to data sht. VBFAH001(SW), VBFAH011(SW x THRD), VBFAH012 (FLGD-RJ)(8)(10)(15)	CS valves, 900 Lbs, GO for 6" and above to data shts. VBRAG001,VBRAG002,VBRAG009,VBRAG012,VBRAG013,VBRAG019 and VBRAG020 for reduced bore VBFAG001,VBFAG002,VBFAG009,VBFAG014,VBFAG015,VBFAG019 and VBFAG020 for full bore (3)(5)(8)(10)(15)
Globe valves	CS valves, 1500 Lbs to data sht. VLAAH001 (9)	CS valves, 900 Lbs, GO 4" and above to data shts. VLAAG001 and VLAAG003(9)
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH001 (6)	CS valves, 900 Lbs, GO for 4" and above to data shts. VPLAG001 and VPLAG002 (6)
Butterfly Valves		
Check valves	CS valves, 1500 Lbs to data sht. VCHAH001 (7)	CS valves, 900 Lbs to data shts. VCAAG001, VCAAG002 and VCAAG007(3)
Needle valves	CS valves,1500 Lbs to data sht.VNEAH001	
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating (1500Lbs up to 11/2")	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ (1500# RJ up to 1.1/2"), Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (12)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(15) AED VITON seals temperature limit = 200°C Graphite seals for over 200°C
(16) Thickness for unit 106 Export gas with 116bar design pressure.

26	28	30	32	34	36	38	40	42
41.6 mm	46.02 mm	47.8 mm	50.9 mm	53.9 mm	57.0 mm	60.1 mm	63.2 mm	***53.2*** mm(***16***)

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel (2) Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class G 01P3

SERVICE : Export gas

Pressure/Temperature limits					
Pressure (barg)	115				
Temperature(°C)	75				

Pipes	Diameter		42
	Schedule		24.61 mm
	Ends		BE
	Mat. Spec.		API 5L Gr.X65 (PSL 1) SAW
Fittings (2)			A860WPHY65 as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, caps,tees
Swaged nipples			
Flanges			WN, 900 Lbs RJ, A 694 Gr.F65 as per pipe schedule, blind flanges (4)
			WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves			
Ball valves			CS valves, 900 Lbs, GO for 6” and above to data shts, VBFAG009,. VBFAG014, VBFAG015(6)(7)(8)(9)
Globe valves			
Plug valves			CS valves, 900 Lbs, GO for 4” and above to data shts. VPLAG005
Butterfly Valves			
Check valves			
Filters			
Gaskets			Octagonal ring joint, soft iron (ARMCO), per ASME B16.20, 90 HRB Max, 900 Lbs rating
Bolting			Studs A 193 B7, Hex Head nuts A 194 2H
Blanks/Spacers			C. Stl. plate ASTM A516 Gr 70, 900# RJ, Spectacle blinds, Blanks and Spacers – calculate (5)

Notes

(1) Design code ASME B31.8-1999 edition, design factor: 0.6
(2) All materials shall comply with the following docs. for SAW pipes, flanges and fittings respectively; RP-1718-999-1300-0078, RP-1718-999-1300-079, RP-1718-999-1300-0080.
(3) Outer surface of piping shall be PE coated for UG services per RP-1718-999-1482-0002.
(4) Flanges as per ASME B16.47 Series A for 26” and above
(5) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document. of this document.
(6) AED VITON seals temperature limit = 200°C
(7) Flanges as per ASME B16.5 for diameters up to 24” and as per ASME B16.47 Series A for diameters 26” and above.
(8) Removable seat
(9) Firesafe and Anti-static

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** G 03

SERVICE : (14)
Corrosive hydrocarbon (CO2) (light corrosion)
Corrosive production gas (HP gas, CO2 light corrosion)

Pressure/Temperature limits						
Pressure (barg)	153.0	153.0	153.0	139.1	131.3	113.3
Temperature(°C)	-29	-29	+37	+100	+200	+315

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160						120										
	Ends	PE						BE										
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless													API 5L Gr.B (PSL 1) – SAW – 100% radiography			

Fittings	6000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	A234 WPB as per pipe schedule, BW, 45°or 90° elbows (r=1.5 dia.) concentric/eccentric reducers, tees, caps. Weldolets (A105) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (11)	1500 Lbs RJ, SW A105	WN, 900 Lbs RJ, A 105 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves,1500 Lbs to data sht. VGAAH001(SW), VGXAH001 (SW x THRD), VGFAH001 (FLGD-RJ) (4)	CS valves, 900 Lbs, GO for 6" and above to data shts. VGAAG001 and VGAAG002 (3)(4)
Ball valves	CS valves,1500 Lbs to data sht.VBFAH002(8)(10)(16)	CS valves, 900 Lbs, GO for 6" and above to data shts. VBRAG003 and VBRAG004,VBRAG014and VBRAG015 for reduced bore,VBFAG003,VBFAG004,VBFAG017 and VBFAG018 for full bore (3)(5)(8)(10)(16)
Globe valves	CS valves,1500 Lbs to data sht.VLAAH001(9)	CS valves, 900 Lbs, GO 4" and above to data shts. VLAAG001 and VLAAG003 (9)
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH002 (6)	CS valves, 900 Lbs, GO for 4" and above to data shts. VPLAG001 and VPLAG002 (6)
Butterfly Valves		
Check valves	CS valves,1500 Lbs to data sht.VCHAH001 (7)	CS valves, 900 Lbs to data shts. VCAAG001 and VCAAG002 (3)
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500 Lbs up to 11/2")	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ(1500Lbs up to 11/2"), Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48(13)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) Note removed
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) AED VITON seals temperature limit = 200°C

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class G 03N

SERVICE : (14)
Corrosive hydrocarbon SSCC only)
Corrosive production (SSCC only)

Pressure/Temperature limits				
Pressure (barg)	153.0	153.0	139.1	113.3
Temperature(°C)	-29	+37	+100	+315

Pipes(12)																						
Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			46
Schedule	160						120										Larger sizes according to table below			
Ends	PE						BE													
Mat. Spec.	API 5L Gr.B (PSL 1) seamless						API 5L Gr.B (PSL 2) seamless							API 5L Gr.B(PSL 2)–SAW– 100% radiography						

Fittings	6000 Lbs SW, A105 45˚or 90˚elbows (2) couplings, tees, plugs, caps, sockolets,elbolets	A234 WPB as per pipe schedule, BW, 45˚or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees, caps. Weldolets (A105) (1)	
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB		
Flanges (11)	1500 Lbs RJ, SW 105	WN, 900 Lbs RJ, A 105 as per pipe schedule, blind flanges (3)	
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting	
Gate valves	CS valves, 1500 Lbs to data sht.VGAAH002(SW) VGXAH002 (SW xTHRD) VGFAH002(FLGD-RJ)(4)	CS valves, 900 Lbs, GO for 6” and above to data shts. VGAAG003, VGAAG004 and VGAAG005 (3)(4)	
Ball valves	CS valves,1500 Lbs to data sht.VBFAH003, VBFAH014(8)(10)(16)	CS valves, 900 Lbs, GO for 6” and above to data shts. VBRAG005, VBRAG006,VBRAG007,VBRAG021 and VBRAG022 for reduced bore VBFAG005,VBFAG006,VBFAG007,VBFAG021 and VBFAG022 for full bore (3)(5)(8)(10)(16)	
Globe valves	CS valves,1500 Lbs to data sht.VLAAH002 (9)	CS valves,900 Lbs, GO 4” and above to data shts. VLAAG002 and VLAAG004(9)	
Plug valves	CS valves,1500 Lbs to data sht. VPLAH003 (6)	CS valves, 900 Lbs, GO for 4” and above to data shts. VPLAG003 and VPLAG004 (6)	
Butterfly Valves			
Check valves	CS valves, 1500 Lbs to data sht.VCHAH002 (7)	CS valves, 900 Lbs to data shts. VCAAG003, VCAAG004 and VCAAG008 (3)	
Needle valves	CS valves,1500 Lbs to data sht.VNEAH002		
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer’s standard	
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lbs up to 11/2”)		
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM		
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ,(1500Lbs up to 11/2”) Spectacle blinds, Blanks and Spacers 24” and below as per ASME B16.48, 26” and above to ASME B31.3 (13)		

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24” and as per ASME B16.47 Series A for diameters 26” and above.
(4) Single-piece wedge for diameters up to 24” and Flexible wedge for diameters 26” and above
(5) Removable seat
(6) Service pressure according to temperature and supplier’s recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with the RP-1718-999-6300-0003. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C ,GRAPHITE seals temperature is over 200°C

26	28	30	32	34	36	38	40	42	44	46
43.5 mm	46.6 mm	49.7 mm	52.8 mm	55.9 mm	59.0 mm	62.1 mm	65.2 mm	68.2 mm	71.3 mm	74.4 mm

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DOCUMENT TITLE	DOCUMENT No.						Doc. Class: 1
PIPING MATERIAL CLASSES	DOC. TYPE	PROJECT	UNIT NO.	MAT. CODE	S/N	REV.	Page 120 of 165
	RP	1718	999	1300	0001	6	

PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class G 03S

SERVICE : (14)
Corrosive hydrocarbons (wet H2S service)
rrosive production gas (wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	153.0	153.0	139.1	113.3
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	160						120										Larger sizes according to table below				
	Ends	PE						BE														
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless						API 5L Gr.B (PSL 2) seamless							API 5L Gr.B(PSL 2)–SAW– 100% radiography							

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings, tees, plugs, caps, sockolets,elbolets	A234 WPB as per pipe schedule, BW, 45˚ or 90˚ elbows (r=1.5 dia.) concentric/eccentric reducers, tees, caps. Weldolets (A105)(1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (11)	1500 Lbs RJ, SW A105	WN, 900 Lbs RJ, A 105 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	CS valves, 1500 Lbs to data sht. VGAAH002(SW), VGXAH002 (SW x THRD), VGFAH002 (FLGD-RJ) (4)	CS valves, 900 Lbs, GO for 6” and above to data shts. VGAAG003, VGAAG004 and VGAAG005 (3)(4)
Ball valves	CS valves,1500 Lbs to data sht.VBFAH003, VBFAH013 (8)(10)(16)	CS valves, 900 Lbs, GO for 6” and above to data shts. VBRAG005, VBRAG006 and VBRAG007 for reduced bore VBFAG005,VBFAG006 and VBFAG007, VBFAG023, VBFAG024 for full bore (3)(5)(8)(10)(16)
Globe valves	CS valves,1500 Lbs to data sht.VLAAH002 (9)	CS valves,900 Lbs, GO for 4” and above to data shts. VLAAG002 and VLAAG004 (9))
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH003 (6)	CS valves, 900 Lbs, GO for 4” and above to data shts. VPLAG003 and VPLAG004 (6)
Butterfly Valves		
Check valves	CS valves,1500 Lbs to data sht.VCHAH002 (7)	CS valves, 900 Lbs to data shts. VCAAG003, VCAAG004 and VCAAG008 (3)
Needle valves	CS valves,1500 Lbs to data sht.VNEAH002	
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer’s standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2”)	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ,(1500Lb up to 11/2”) Spectacle blinds, Blanks and Spacers 24” and below as per ASME B16.48, 26” and above to ASME B31.3 (13)	

Notes
(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary
(3) Flanges as per ASME B16.5 for diameters up to 24” and as per ASME B16.47 Series A for diameters 26” and above.
(4) Single-piece wedge for diameters up to 24” and Flexible wedge for diameters 26” and above
(5) Removable seat
(6) Service pressure according to temperature and supplier’s recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO 15156 & TM 0284,TM01 77 Standard & with the RP-1718-999-6300-0002. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) ELASTOLION 985 seals temperature limit = 180°C

26	28	30	32	34	36	38	40	42	44	46
43.5 mm	46.6 mm	49.7 mm	52.8 mm	55.9 mm	59.0 mm	62.1 mm	65.2 mm	68.2 mm	71.3 mm	74.4 mm

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel(12) (14) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	class G03P2

SERVICE : (17)
Gas to slug catcher (lethal service)

Pressure/Temperature limits

Pressure (barg)	139	139	139	
Temperature(°C)	-29	+37	+85	

Pipes(12)																			
Diameter			1	1 1/2	2	3	4	6	8	10	12					30	32	46	
Schedule			160				120	8.7 mm	11.1 mm	12.7 mm	14.3 mm					27 mm	28.6 mm	40 mm	
Ends	PE						BE												
Mat. Spec.	API 5L Gr.B (PSL 1) seamless						API 5L X65 (PSL 2) seamless					API 5L X65 (PSL 2) SAW							

Fittings	6000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets	A234 WPB up to 4" and A 860 WPHY65 over as per pipe schedule, BW, 45° or 90° elbows (r=1.5dia) concentric/ eccentric reducers, tees, caps . Weldolets (A105) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (11)	1500 Lbs RJ, SW A105	WN, 900 Lbs RJ, A105 up to 4" and A694 F65 over, as per pipe schedule, blind flanges(3)
		WN, 900 Lbs RJ, Orifice support assembly, supplied with bolting
Gate valves (16)	CS valves, 1500 Lbs to data shts. VGAAH002(SW), VGXAH002(SW x THRD), VGFAH002(FLGD-RJ) (4)	CS valves, 900 Lbs, GO for 6" and above to data shts. VGAAG003, VGAAG004, VGAAG005 (3)(4)
Ball valves (16)	CS valves,1500 Lbs to data sht. VBFAH003, VBFAHX03 and VBEAH001 (8)(10)(19)	CS valves, 900 Lbs, GO for 6" and above to data shts. VBRAG005, VBRAG006, VBRAG007 for reduced bore VBEAG001, VBEAG002, VBEAG003,VBFAG005,VBFAG006 and VBFAG007 for full bore (3)(5)(8)(10)(19)
Globe valves (16)	CS valves,1500 Lbs to data sht. VLAAH002 (9)	CS valves,900 Lbs, GO for 4" and above to data shts.VLAAG002, VLAAG004 (9)
Plug valves (16)	CS valves, 1500 Lbs to data sht. VPLAH003 (6)	CS valves, 900 Lbs, GO for 4" and above to data shts. VPLAG003, VPLAG004 (6)
Butterfly Valves		
Check Valves (16)	CS valves,1500 Lbs to data sht.VCHAH002 (7)	CS valves, 900 Lbs to data shts. VCAAG003, VCAAG004 and VCAAG008 (3)
Needle valves	CS valves,1500 Lbs to data sht.VNEAH002	
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2")	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ,(1500Lb up to 11/2") Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary.
(3) Flanges as per ANSI B16.5 for diameters up 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single- piece wedge for diameters up to 24"and flexible wedge for diameters 26" and above.
(5) Removable seal
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Soft seats min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM0284,TM 01 77 Standards & with Metallurgical Requirements Carbon Steel in Wet Sour Service (piping and equipment subject to SSC and HIC), document number RP-1718-999-6300-0002, for PIPELINE APPLICATIONS seamless pipes, SAW pipes, flanges and fittings respectively; RP-1718-999-1300-0074, RP-1718-999-1300-0075, RP-1718-999-1300-0076 and RP-1718-999-1300-0077.
(13) Gearbox for diameters 4"and above.
(14) Design code ASME B31.8-1999 Edition design factor: 0.5
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 5.10. of this document.
(16) Valves adjacent to pig launcher or pig receiver to be service class 'E' as per Valves Job Specification RP-1718-999-1300-0021, section 3.4 table 1
(17) For full range of services see para.7 Piping class summary
(18) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(19) ELASTOLION 985 seals temperature limit = 180°C

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Carbon steel(12) (14) Corrosion allowance : 5 mm	Revision : 6 Date : 3-01-10	**class** G05P4

SERVICE : (16)
Liquid to slug catcher (lethal service)

Pressure/Temperature limits			
Pressure (barg)	139	139	139
Temperature(°C)	-29	+37	+85

Pipes(12)	Diameter			1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24				46
	Schedule			XXS			160		11.1 mm	12.7 mm	14.3 mm	15.9 mm	16.1 mm	17.7 mm	19.2 mm	22.2 mm	25.4 mm				42 mm
	Ends	PE						BE													
	Mat. Spec.	API 5L Gr.B (PSL 1) seamless						API 5L X65 (PSL 2) seamless					API 5L X65 (PSL 2) SAW								

Fittings	9000 Lbs SW, A105 45° or 90° elbows (2) couplings, tees, plugs, caps, sockolets	A234 WPB up to 4" and A 860 WPHY65 over as per pipe schedule, BW, 45° or 90° elbows (r=1.5dia) concentric/ eccentric reducers, stub- in, tees, caps. Weldolets (A105)(1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A234 WPB	
Flanges (11)	1500 Lbs RJ, SW A105	WN, 900 Lbs RJ, A105 up to 4" and A694 F65 over, as per pipe schedule, blind flanges(3)
		WN, 1500 Lbs RJ, Orifice support assembly, supplied with bolting
Gate valves	CS valves,1500 Lbs to data sht.VGAAH002(SW), VGXAH002(SW x THRD), VGFAH002 (FLGD-RJ) (4)	CS valves, 900 Lbs, GO for 6" and above to data shts. VGAAG003, VGAAG004 and VGAAG005 (3)(4)
Ball valves	CS valves,1500 Lbs to data sht.VBFAH010, VBFAHX03 (8)(10)(18)	CS valves, 900 Lbs, GO for 6" and above to data shts. VBRAG005 , VBRAG006 and VBRAG007 reduced bore VBFAG005 and VBFAG006 and VBFAG007 for full bore (3)(5)(8)(10)(18)
Globe valves	CS valves,1500 Lbs to data sht.VLAAH002 (9)	CS valves,900 Lbs, GO 4" and above to data shts.VLAAG002 and VLAAG004 (9)
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH004 (6)	CS valves, 900 Lbs, GO for 4" and above to data shts. VPLAG003 and VPLAG004 (6)
Butterfly Valves		
Check valves	CS valves,1500 Lbs to data sht.VCHAH002 (7)	CS valves, 900 Lbs to data shts. VCAAG003, VCAAG004 and VCAAG008 (3)
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, ASTM A234 WPB, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2")	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 900# RJ,(1500 Lb up to 11/2")Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (15)	

Notes

(1) See table of connections Appendix B
(2) Bending R=5 dia. To be used wherever necessary.
(3) Flanges as per ANSI B16.5 for diameters up 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single- piece wedge for diameters up to 24"and flexible wedge for diameters 26" and above.
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seats min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM0284,TM 01 77 Standards & with Metallurgical Requirements Carbon Steel in Wet Sour Service (piping and equipment subject to SSC and HIC), document number RP-1718-999-6300-0002, for PIPELINE APPLICATIONS seamless pipes, SAW pipes, flanges and fittings respectively; RP-1718-999-1300-0074, RP-1718-999-1300-0075, RP-1718-999-1300-0076 and RP-1718-999-1300-0077.
(13) Note removed
(14) Design code ASME B31.8-1999 Edition design factor: 0.5
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) ELASTOLION 985 seals temperature limit = 180°C

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Low Temperature Carbon Steel (LTCS)	Revision : 6	**class** G21
	Corrosion allowance : 1.27 mm	Date : 3-01-10	

SERVICE : (14)

Non corrosive hydrocarbons (low temperature)

Pressure/Temperature limits				
Pressure (barg)	153.0	153.0	139.1	131.3
Temperature(°C)	-46	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26					46
	Schedule	80							120	100								Larger sizes according to table below					
	Ends	PE							BE														
	Mat. Spec.	ASTM A333 Gr6 seamless													A 671 CC65 CI22 W/S2 at -46°C								

Fittings	3000 Lbs SW, 45° or 90° elbows (2), couplings, tees, sockolets, plugs, caps, elbolets, A350 LF2 CL.1	A420 WPL 6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric / eccentric reducers, tees, caps. Weldolets (A350 LF2 CL.1)(1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6	
Flanges (11)	1500 Lbs RJ, SW A350 LF2 CL.1	WN, 900 Lbs RJ, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 1500 Lbs to data sht.VGABH001(SW), VGXBH001(SW x THRD), VGFBH001(FLGD-RJ) (4)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VGABG001, VGABG002 and VGABG003 (3)(4)
Ball valves	LTCS valves,1500 Lbs to data sht. VBFBH001,VBFBH003(8)(10)(16)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VBRBG001, VBRBG002 and VBRBG003 for reduced bore VBFBG001,VBFBG002,VBFBG003,VBFBG007 and VBFBG008 for full bore (3)(5)(8)(10)(16)
Globe valves	LTCS valves,1500 Lbs to data sht.VLABH001 (9)	LTCS valves,900 Lbs, GO for 4" and above to data shts. VLABG001 and VLABG003(9))
Plug valves	LTCS valves, 1500 Lbs to data sht.VPLBH001 (6)	LTCS valves, 900 Lbs, GO for 4" and above to data shts. VPLBG001 and VPLBG002 (6)
Check valves	LTCS valves,1500 Lbs to data sht.VCHBH001 (7)	LTCS valves, 900 Lbs to data shts. VCABG001, VCABG002 and VCABG005 (3)
Filters	1500 Class, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2")	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (12)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 900# RJ,(1500Lb up to 11/2") Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) AED VITON seals temperature limit = 180°C

26	28	30	32	34	36	38	40	42	44	46
41.6 mm	44.7 mm	47.8 mm	50.9 mm	53.9 mm	57.0 mm	60.1 mm	63.2 mm	66.3 mm	69.4 mm	72.4 mm

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Low Temperature Carbon Steel (LTCS) (12)	Revision : 6	**class** G23N
	Corrosion allowance : 3 mm	Date : 3-01-10	

SERVICE : (15)

Low temperature hydrocarbons (Intermediate sour service)

Pressure/Temperature limits				
Pressure (barg)	153.0	153.0	139.1	131.3
Temperature(°C)	-46	+37	+100	+200

Pipes (12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	160						120										
	Ends	PE						BE										
	Mat. Spec.	ASTM A333 Gr6 seamless													A 671 CC65 Cl22 W/S2 at -46°C			

Fittings	6000 Lbs SW, 45° or 90° elbows (2), couplings, tees, sockolets plugs, caps,elbolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees. Weldolets (A350 LF2 CL.1) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6	
Flanges (11)	1500 Lbs RJ, SW A350 LF2 CL.1	WN, 900 Lbs RJ, A 350 LF2 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves,1500 Lbs to data sht.VGABH002(SW),VGXBH002(S W x THRD),VGFBH002(FLGD-RJ (4)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VGABG004 and VGABG005 (3)(4)
Ball valves	LTCS valves,1500 Lbs to data sht.VBFBH002 (8)(10)(17)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VBRBG004 and VBRBG005 for reduced bore VBFBG004 and VBFBG005 for full bore (3)(5)(8)(10)(17)
Globe valves	LTCS valves,1500 Lbs to data sht.VLABH002 (9)	LTCS valves,900 Lbs, GO for 4" and above to data shts.VLABG002 and VLABG004 (9)
Plug valves	LTCS valves,1500 Lbs to data sht.VPLBH002 (6)	LTCS valves, 900 Lbs, GO for 4" and above to data shts. VPLBG003 and VPLBG004 (6)
Butterfly Valves		
Check valves	LTCS valves,1500 Lbs to data sht.VCHBH002 (7)	LTCS valves, 900 Lbs to data shts. VCABG003 and VCABG004 (3)
Filters	1500 Class, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2")	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (13)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 900# RJ,(1500Lb up to 11/2")Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48(14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM 01 77 Standard & with the RP-1718-999-6300-0003. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(17) ELASTOLION seals temperature limit = 180°C

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Low Temperature Carbon Steel (LTCS) (12) Corrosion allowance : 3 mm	Revision : 6 Date : 3-01-10	**class** G23S

SERVICE : (15)

Low temperature hydrocarbons (Wet H2S service)

Pressure/Temperature limits				
Pressure (barg)	153.0	153.0	139.1	131.3
Temperature(°C)	-46	+37	+100	+200

Pipes (12)	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26				46
	Schedule	160						120										Larger sizes according to table below				
	Ends	PE						BE														
	Mat. Spec.	ASTM A333 Gr6 seamless													A 671 CC65 Cl22 W/S2 at -46°C							

Fittings	6000 Lbs SW, 45° or 90° elbows (2), couplings, tees, sockolets, plugs, caps, elbolets, A350 LF2 CL.1	A420 WPL-6 as per pipe schedule, BW, 45°or 90°elbows (r=1.5 dia.) concentric/eccentric reducers, tees, caps . Weldolets (A350 LF2 CL.1) (1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A420 WPL 6	
Flanges (11)	1500 Lbs RJ, SW A350 LF2 CL.1	WN, 900 Lbs RJ, A 350 LF2 CL.1 as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves	LTCS valves, 1500 Lbs to data sht. VGABH002(SW), VGXBH002 (SW x THRD), VGFBH002 (FLGD-RJ) (4)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VGABG004, VGABG005 and VGABG006 (3)(4)
Ball valves	LTCS valves, 1500 Lbs to data sht. VBFBH002 (8)(10)(17)	LTCS valves, 900 Lbs, GO for 6" and above to data shts. VBRBG004, VBRBG005 and VBRBG006 for reduced bore VBFBG004,VBFBG005 and VBFBG006 for full bore. (3)(5)(8)(10)(17)
Globe valves	LTCS valves, 1500 Lbs to data sht.VLABH002 (9)	LTCS valves,900 Lbs, GO 4" and above to data shts.VLABG002 and VLABG004 (9)
Plug valves	LTCS valves, 1500 Lbs to data sht. VPLBH002 (6)	LTCS valves, 900 Lbs, GO for 4" and above to data shts. VPLBG003 and VPLBG004 (6)
Butterfly Valves		
Check valves	LTCS valves,1500 Lbs to data sht.VCHBH002 (7)	LTCS valves, 900 Lbs to data shts. VCABG003, VCABG004 and VCABG006 (3)
Filters	1500 Class, A350 LF2 CL.1 Y type, stainless steel strainer	Tee type filters, BW, ASTM A420 WPL6, as per manufacturer's standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 900 Lbs rating(1500Lb up to 11/2")	
Bolting	Studs A 193 B7M, Hex Head nuts A 194 2HM	
Blanks/Spacers (13)	LTC. Stl. plate ASTM A516 Gr 70 W/S5 @-46°C, 900# RJ,(1500 Lb up to 11/2") Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications.
Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing
(12) All materials shall comply with the NACE MR 01 75/ISO15156 & TM0284,TM 01 77 Standard & with the RP-1718-999-6300-0002. Valve materials shall also conform to RP-1718-999-6300-0004.
(13) LTCS plate shall undergo toughness testing equivalent to and in accordance with toughness testing for pipe material spec.
(14) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(15) For full range of services see para.12 Piping class summary
(16) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(17) ELASTOLION seals temperature limit = 180°C

26	28	30	32	34	36	38	40	42	44	46
43.5 mm	46.6 mm	49.7 mm	52.8 mm	55.9 mm	59.0 mm	62.1 mm	65.2 mm	68.2 mm	71.3 mm	74.4 mm

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : Stainless steel TP304L Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	class G 46

SERVICE : (15)

Cryogenic temperature hydrocarbons

Pressure/Temperature limits				
Pressure (barg)	124.1	124.1	***118.1***	
Temperature(°C)	-196	+38	+55	

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S				40S		80S		100								
	Ends	PE				BE												
	Mat. Spec.	A312 TP304L Seamless								ASTM A358 Gr.304L class 1 (100% radiography) EFW								

Fittings	3000 Lbs, A 182 F304L SW, 45º or 90º elbows couplings, tees, plugs, caps, sockolets, elbolets, latrolets	A 403 WP 304L as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) concentric / eccentric reducers, tees, caps, swaged nipples. Elbolets, weldolets (A182F304L)(1),
Flanges	1500 Lbs RJ, SW A 182 F304L	WN, 900 Lbs RJ, A 182 F304L, as per pipe schedule, blind flanges (3)
		WN, 900 Lbs RJ, Orifice Support Assembly, supplied with bolting
Gate valves (14)	SS valves,1500 Lbs to data sht.VGACH002 (SW), VGXCH002(SW x THRD, VGFCH002(FLGD-RJ) (4)(12)(18)	SS valves, 900 Lbs, GO for 6" and above to data shts. VGACG004 and VGACG005 (3)(10)(13)
Ball valves (14)	SS valves,1500 Lbs to data sht.VBFCH001,VBFCH003, VBFCHX01 (8)(10)(12)(18)	SS valves, 900 Lbs, GO for 6" and above to data shts. VBRCG001,VBRCG002,VBRCG010 and VBRCG011 for reduced bore VBFCG001,VBFCG002,VBFCG011and VBFCG012 for full bore (3)(5)(8)(10)(13)
Globe valves (14)	SS valves,1500 Lbs to data sht VLACH001 (9)(12)(18)	SS valves, 900 Lbs, GO for 4" and above to data shts. VLACG001 and VLACG003(9)(13)
Plug valves		
Butterfly Valves		
Check valves	SS valves,1500 Lbs to data sht.VCHCH001 (7)(12)(18)	SS valves, 900 Lbs to data sht. VCACG001
Needle valves	SS valves,1500Lbs	
Filters	1500 Class, BW, A182 F304L,Y type, stainless steel strainer Cryogenic	Tee type filters, BW, ASTM A403 WP304L, as per manufacturer's standard
Gaskets	Octagonal ring joint, TP 316L SS, per ASME B16.20 –135 HRB max, 900 Lbs rating(1500 Lbs up to 11/2")	
Bolting	Studs A 193 B8M class2, Hex head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr304L, 900# RJ,(1500Lbs up to11/2") Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48, 26" and above to ASME B31.3 (14)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seal
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Min/Max operating temperature for KELF seats and PTFE and ELGILOY seals are -150/100 °C Min/Max operating temperature for PTFE seats and ELASTOLION 985 seals are -40/180 °C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(12) Valves bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F304 is an acceptable alternate for body materials
(14) Extended bonnet
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.7 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Deleted
(19) BW ends shall be used where specified on PID's

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** G 48

SERVICE : (16)
Corrosive hydrocarbons (H2S+ CO2 heavy corrosion)

Pressure/Temperature limits				
Pressure (barg)	148.9	148.9	132.1	114.8
Temperature(°C)	-45 (See note 14)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	26			34
	Schedule	80S							12.7 mm	14.2 mm	18.2 mm	20.6 mm	22.2 mm	25.4 mm	28.5 mm	30.1 mm	36.5 mm	Larger sizes according to table below			
	Ends	PE							BE												
	Mat. Spec.	A 312 TP 321 seamless							ASTM A358 Gr.321 class 1 – EFW 100%radiography												

Fittings	3000 Lbs,A 182 F321 SW 45º or 90º elbows plugs, caps, tees, Unions, sockolets elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . Weldolets (A182 F321)((1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP 321	
Flanges (11)	1500 Lbs RJ, SW A182F 321	WN, 900 Lbs RJ, A 182 F321 as per pipe schedule, blind flanges RJ contact facing (3)
		WN, 900 Lbs RJ, orifice support assembly, supplied with bolting
Gate valves (14)	SS valves,1500 Lbs to data sht. VGACH001(SW), VGXCH001 (SW x THRD), VGFCH001 (FLGD –RJ) (4)(12)	SS valves, 900 Lbs, GO for 6” and above to data shts. VGACG001,VGACG002 and VGACG003 (3)(4)(13)
Ball valves (14)	SS valves,1500 Lbs to data sht.VBFCH002 and VBFCH004 (8)(10)(12)(18)	SS valves, 900 Lbs, GO for 6” and above to data shts. VBRCG003, VBRCG004, VBRCG005, VBRCG006, VBRCG007 and VBRCG008 for reduced bore VBFCG003, VBFCG004, VBFCG005, VBFCG006, VBFCG007 and VBFCG008 for full bore (3)(5)(8)(10)(13)(18)
Globe valves (14)	SS valves, 1500 Lbs to data sht.VLACH002 (9)(12)	SS valves, 900 Lbs, GO for 4” and above to data shts. VLACG002 and VLACG004 (9)
Plug valves (14)	SS valves, 1500 Lbs to data sht VPLCH001 (6)(12)	SS valves, 900 Lbs to data shts. VPLCG001 and VPLCG002 (6)(13)
Butterfly Valves		
Check valves	SS valves,1500 Lbs to data sht VCHCH002 (7)	SS valves, 900 Lbs to data sht. VCACG002 and VCACG003 (3)(13)
Needle valves	CS valves,1500 Lbs to data sht.VNECH001	
Filters	1500 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer’s standard
Gaskets	Octagonal ring joint, TP 316L SS, per ASME B16.20 –135 HRB max, 900 Lbs rating (1500Lb up to 11/2”)	
Bolting	Studs A 193 B8M class 2, Hex head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr321, 900# RJ,(1500 Lb RJ up to 11/2”) Spectacle blinds,Blanks and Spacers 24” and below as per ASME B16.48, 26” and above to ASME B31.3 (15)	

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Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seats min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing, minimum hardness 150 HRB
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between -46°C and –140°C for blow down situation only (no valve operated below -46°C).
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Min/Max operating temperature for PTFE and ELGILOY seals are -150/100 °C Min/Max operating temperature for ELASTOLION 985 seals are -40/180 °C

26	28	30	32	34
39.1 mm	42.1 mm	45.1 mm	48.1 mm	51.1 mm

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PIPING MATERIALS

Rating : 900 Lbs RJ	Material : stainless steel TP 321 Corrosion allowance : 0 mm	Revision : 6 Date : 3-01-10	**class** G 48X

SERVICE : (16)
Amine

Pressure/Temperature limits				
Pressure (barg)	148.9	148.9	132.1	114.8
Temperature(°C)	-45 (See note 14)	+37	+100	+200

Pipes	Diameter	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24	
	Schedule	80S							12.7mm	14.2 mm	18.2 mm	20.6 mm	22.2 mm	25.4 mm	28.5 mm	30.1 mm	36.5 mm	
	Ends	PE							BE									
	Mat. Spec.	A 312 TP 321 seamless							ASTM A358 Gr.321 class 1 – EFW - 100%radiography									

Fittings	3000 Lbs,A 182 F321 SW 45º or 90º elbows plugs, caps, tees, Unions, sockolets, elbolets	A 403 WP 321 as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . Weldolets (A182 F321)(1)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe, A403 WP 321	
Flanges (11)	1500 Lbs RJ, SW A182F 321	WN, 900 Lbs RJ, A 182 F321 as per pipe schedule, blind flanges RJ contact facing (3)
		WN, 900 Lbs RJ, orifice support assembly, supplied with bolting
Gate valves (14)	SS valves,1500 Lbs to data sht.VGACH001(SW), VGXCH001(SW x THRD), VGFCH001(FLGD-RJ) (4)(12)	SS valves, 900 Lbs, GO for 6" and above to data shts. VGACG001 and VGACG002 (3)(4)(13)
Ball valves (14)	SS valves,1500 Lbs to data sht.VBFCH002(8)(10)(12)(18)	SS valves, 900 Lbs, GO for 6" and above to data shts. VBRCG003 and VBRCG004 for reduced bore VBFCG003 and VBFCG004 for full bore (3)(5)(8)(10)(13)(18)
Globe valves (14)	SS valves, 1500 Lbs to data sht.VLACH002 (9)(12)	SS valves, 900 Lbs, GO for 4" and above to data shts. VLACG002 and VLACG004 (9)
Plug valves		
Butterfly Valves		
Check valves	SS valves,1500 Lbs to data sht VCHCH002 (7)	SS valves, 900 Lbs to data sht. VCACG002 (3)(13)
Filters	1500 class, SW, A 182F321, Y type, stainless steel strainer	Tee type filters, BW, ASTM A403 WP321, as per manufacturer's standard
Gaskets	Octagonal ring joint, TP 316L SS, per ASME B16.20 –135 HRB max, 900 Lbs rating(1500Lb up to 11/2"	
Bolting	Studs A 193 B8M class 2, Hex head nuts A 194 Gr.8MA	
Blanks/Spacers	S. Stl. plate ASTM A240 Gr321, 900# RJ,(1500Lb up to 11/2") Spectacle blinds, Blanks and Spacers 24" and below as per ASME B16.48 (15)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges as per ASME B16.5 for diameters up to 24" and as per ASME B16.47 Series A for diameters 26" and above.
(4) Single-piece wedge for diameters up to 24" and Flexible wedge for diameters 26" and above
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) Ring joint facing, minimum hardness 150 HRB
(12) Valve bodies may be SS TP 316L
(13) Forged steel to ASTM A182 F321 or F347 is an acceptable alternate for body materials
(14) Acceptable between -45°C and –140°C for blow down situation only (no valve operated below -45°C).
(15) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(16) For full range of services see para.12 Piping class summary
(17) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(18) Min/Max operating temperature for ELASTOLION 985 seals are -40/180 °C

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PIPING MATERIALS

Rating : 1500 Lbs RJ	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class H 01

SERVICE : (13)
Hydrocarbons (non corrosive)
Production gas (HP sweet gas)
Injection water (de-aerated sea water, non-corrosive)
M.P. hydraulic systems
Methanol, glycol

Pressure/Temperature limits				
Pressure (barg)	255.4	255.4	231.9	219.1
Temperature(°C)	-29	+37	+100	+200

Pipes(12)	Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24
	Schedule	160						120	160	140							
	Ends	PE						BE									
	Mat. Spec.	API 5L X60 (PSL 1) seamless													API 5L X60(PSL 1)–SAW–100% radiography		

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	Thickness as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . Weldolets (A105)(1)(11)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe (11)(15)	
Flanges	1500 Lbs RJ, SW A105	WN, 1500 Lbs RJ, Hub thickness as per pipe schedule, blind flanges (3)
		WN, 1500 Lbs RJ, Orifice support assembly, supplied with bolting
Gate valves	CS valves,1500 Lbs to data sht.VGAAH001(SW), VGXAH001 (SW x THRD), VGFAH001(FLGD-RJ) (4)	CS valves, 1500 Lbs, GO for 4” and above to data shts. VGAAH003, VGAAH004 and VGAAH005 (4)
Ball valves	CS valves,1500 Lbs to data sht. VBFAH004(8)(10)(16)	CS valves,1500 Lbs, GO for 4” and above to data shts. VBRAH001 and VBRAH002 for reduced bore VBFAH006 and VBFAH007 for full bore(8)(10)(16)
Globe valves	CS valves, 1500 Lbs to data sht. VLAAH001 (9)	CS valves,1500 Lbs, GO 3” and above to data shts. VLAAH003 and VLAAH006 (9)
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH002 (6)	CS valves, 1500 Lbs, GO for 3” and above to data shts. VPLAH005 and VPLAH006 (6)
Butterfly Valves		
Check valves	CS valves,1500 Lbs to data sht. VCHAH001 (7)	CS valves, 1500 Lbs to data shts. VCAAH001 and VCAAH002
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, CL.WPHY60 (MSS SP75), as per manufacturer’s standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 1500 Lbs rating	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 1500# RJ, Spectacle blinds, Blanks and Spacers 24” and below as per ASME B16.48(12)	

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Ring joint facing material ASTM A694 grade F60. All flanges of diameters 24” and below shall conform to ASME B16.5.
(4) Single- piece wedge for diameters up to 24”and flexible wedge for diameters 26” and above.
(5) Removable seat
(6) Service pressure according to temperature and supplier’s recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -40/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) All wrought fittings per ASTM A860 Gr WPHY60.
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping class summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(15) Swage nipple dimensions to MSS SP 95.
(16) AED VITON temperature limit is =200 °C

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PIPING MATERIALS

Rating : 1500 Lbs RJ	Material : Carbon steel Corrosion allowance : 3 mm(12)	Revision : 6 Date : 3-01-10	**class** H 03

SERVICE : (14)
Corrosive hydrocarbon (CO2 light corrosion)
Corrosive production gas (HP, CO2 light corrosion)

Pressure/Temperature limits				
Pressure (barg)	255.4	255.4	231.9	219.1
Temperature(°C)	-29	+37	+100	+200

Pipes(12)																		
Diameter	½	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24		
Schedule	XXS				160				XXS	140	160		140	160	140			
Ends	PE				BE													
Mat. Spec.	API 5 L X60 (PSL 1) seamless													API 5L X60(PSL1)– SAW–100% radiography				

Fittings	6000 Lbs SW, A105 45˚ or 90˚ elbows (2) couplings, tees, plugs, caps, sockolets, elbolets	Thickness as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps. Weldolets (A105) (1)(11)
Swaged nipples	Eccentric & concentric, plain ends, schedule as per pipe (11)(16)	
Flanges	1500 Lbs RJ, SW A105	WN, 1500 Lbs RJ, Hub thickness as per pipe schedule, blind flanges (3)
		WN, 1500 Lbs RJ, Orifice support assembly, supplied with bolting
Gate valves	CS valves, 1500 Lbs to data sht. VGAAH001(SW), VGXAH001(SW x THRD),VGFAH001(FLGD-RJ) (4)	CS valves, 1500 Lbs, GO for 4” and above to data shts. VGAAH003, VGAAH004 and VGAAH005 (4)
Ball valves	CS valves,1500 Lbs to data sht. VBFAH005 (8)(10)(17)	CS valves,1500 Lbs, GO for 4” and above to data shts. VBRAH003 and VBRAH004 for reduced bore VBFAH008 and VBFAH009 for full bore(5)(8)(10)(17)
Globe valves	CS valves,1500 Lbs to data sht.VLAAH001 (9)	CS valves,1500 Lbs, GO 3” and above to data shts. VLAAH003 and VLAAH006 (9)
Plug valves	CS valves, 1500 Lbs to data sht. VPLAH008 (6)	CS valves, 1500 Lbs, GO for 3” and above to data shts. VPLAH005 and VPLAH006 (6)
Butterfly Valves		
Check valves	CS valves,1500 Lbs to data sht. VCHAH001 (7)	CS valves, 1500 Lbs to data shts. VCAAH001 and VCAAH002
Filters	1500 Lbs, SW, A 105, Y type, stainless steel strainer	Tee type filters, BW, CL.WPHY60 (MSS SP75), as per manufacturer’s standard
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 1500 Lbs rating	
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H	
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 1500# RJ, Spectacle blinds, Blanks and Spacers 24” and below as per ASME B16.48 (13)	

Notes

(1) See table of connections Appendix B
(2) Bending not permitted
(3) Ring joint facing material. ASTM A694 grade F60.
(6) All flanges of diameters 24” and below shall conform
(7) to ANSI B16.5
(4) Single-piece wedge for diameters up to 24” and Flexible wedge for diameters 26” and above
(5) Removable seat
(6) Service pressure according to temperature and supplier’s recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -20/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) All wrought fittings per ASTM A860 Gr WPHY60
(12) Corrosion allowance limited to 2.6 mm only for fittings below 2 inches
(13) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(14) For full range of services see para.12 Piping class summary
(15) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets
(16) Swage nipple dimensions to MSS SP 95.
(17) AED VITON temperature limit is =200 °C

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PIPING MATERIALS

Rating : 2500 Lbs RJ or Hub Connectors	Material : Carbon steel Corrosion allowance : 1.27 mm	Revision : 6 Date : 3-01-10	class J01

SERVICE : (13)
Hydrocarbons (non corrosive)
Production gas (HP sweet gas)
Injection water (de-aerated sea water, non-corrosive)
M.P. hydraulic systems, Methanol, glycol

Pressure/Temperature limits				
Pressure (barg)	300.0	300.0	300.0	
Temperature(°C)	-20	+38	+100	

pipes	Diameter	½	3/4	1	1 1/2	2	3	4	6									
	Schedule	160																
	Ends	BE																
	Mat. Spec.	API 5L X60 (PSL 1) Seamless																
Fittings		Thickness as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . (1) (11) Weldolets (3)																
Swaged nipples		No																
Flanges		WN, 2500 Lbs RJ, Hub thickness as per pipe schedule, blind flanges (3) or Hub Connectors																
						WN, 2500 Lbs RJ, Orifice support assembly, supplied with bolting												
Gate valves		CS valves,2500 Lbs BW. (4)				CS valves, 2500 Lbs, RTJ.GO for 4" and above, (4)												
						CS valves, 2500 Lbs, BW.GO for 4" and above, (4)												
Ball valves		CS valves,2500 Lbs BW.(8) (10)				CS valves,2500 Lbs, RTJ.GO for 4" and above (8)(10)												
						CS valves,2500 Lbs, BW.GO for 4" and above (8)(10)												
Globe valves		CS valves, 2500 Lbs. BW (5) (9)				CS valves,2500 Lbs, RTJ. GO for 3" and above (9)												
						CS valves,2500 Lbs, BW. GO for 3" and above (9)												
Plug valves		CS valves, 2500 Lbs. BW (6)				CS valves, 2500 Lbs, RTJ.GO for 3" and above. (6)												
						CS valves, 2500 Lbs, BW.GO for 3" and above. (6)												
Check valves		CS valves,2500 Lbs BW (5) (7)				CS valves, 2500 Lbs. RTJ												
						CS valves, 2500 Lbs. BW												
Filters		2500 Lbs, BW, A694 grade F60, Y type, stainless steel strainer					Tee type filters, BW, A860 CL.WPHY60 (MSS SP75), as per manufacturer's standard											
Gaskets		Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 2500 Lbs rating																
Bolting		Studs A 193 B7, Hex Head nuts A 194 2H																
Blanks/Spacers		C. Stl. plate ASTM A516 Gr 70, 2500# RJ, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (12)																

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges/Hubs to be ASTM A694 grade F60. All flanges shall conform to ASME B16.5.
(4) Single- piece wedge for diameters up to 2"and flexible wedge for diameters 3" and above.
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°
(7) Horizontal installation
(8) Seat min/max temperature limit = -20/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) All fittings per MSS SP75, A860 class WPHY60. Dimensions to ASME B16.9.
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping Class Summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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PIPING MATERIALS

Rating : 2500 Lbs RJ or Hub Connectors	Material : Carbon steel Corrosion allowance : 3.0 mm	Revision : 6 Date : 3-01-10	class J03

SERVICE : (13)
Hydrocarbons (non corrosive)
Production gas (HP sweet gas)
Injection water (de-aerated sea water, non-corrosive)
M.P. hydraulic systems
Methanol, glycol

Pressure/Temperature limits				
Pressure (barg)	300.0	300.0	300.0	
Temperature(°C)	-20	+38	+100	

pipes	Diameter	½	3/4	1	1 1/2	2	3	4	6
	Schedule	XXS							
	Ends	BE							
	Mat. Spec.	API 5L X60 (PSL 1) Seamless							

Fittings	Thickness as per pipe schedule, BW, 45º or 90º elbows (r= 1.5 dia.) Concentric/ eccentric reducers, tees, caps . (1) (11) Weldolets (3)		
Swaged nipples			
Flanges	WN, 2500 Lbs RJ, Hub thickness as per pipe schedule, blind flanges (3) or Hub Connectors		
		WN, 2500 Lbs RJ, Orifice support assembly, supplied with bolting	
Gate valves (14)	CS valves,2500 Lbs BW. (4)	CS valves, 2500 Lbs, RTJ.GO for 4" and above, (4)	
		CS valves, 2500 Lbs, BW.GO for 4" and above, (4)	
Ball valves (14)	CS valves,2500 Lbs BW.(8) (10)	CS valves,2500 Lbs, RTJ.GO for 4" and above (8)(10)	
		CS valves,2500 Lbs, BW.GO for 4" and above (8)(10)	
Globe valves (14)	CS valves,2500 Lbs BW (5)(9)	CS valves, 2500 Lbs, RTJ. GO for 3" and above (9)	
		CS valves, 2500 Lbs, BW. GO for 3" and above (9)	
Plug valves (14)	CS valves, 2500 Lbs. BW (6)	CS valves, 2500 Lbs, RTJ.GO for 3" and above. (6)	
		CS valves, 2500 Lbs, BW.GO for 3" and above. (6)	
Check valves (14)	CS valves,2500 Lbs BW (5) (7)	CS valves, 2500 Lbs. RTJ	
		CS valves, 2500 Lbs. BW	
Filters	2500 Lbs, BW, A694 grade F60, Y type, stainless steel strainer	Tee type filters, BW, A860 CL.WPHY60 (MSS SP75), as per manufacturer's standard	
Gaskets	Octagonal ring joint, soft iron (ARMCO), per ASME B16.20 –90 HRB max, 2500 Lbs rating		
Bolting	Studs A 193 B7, Hex Head nuts A 194 2H		
Blanks/Spacers	C. Stl. plate ASTM A516 Gr 70, 2500# RJ, Spectacle blinds, Blanks and Spacers as per ASME B16.48 (12)		

Notes
(1) See table of connections Appendix B
(2) Bending not permitted
(3) Flanges/Hubs to be ASTM A694 grade F60. All flanges shall conform to ASME B16.5.
(4) Single- piece wedge for diameters up to 2"and flexible wedge for diameters 3" and above.
(5) Removable seat
(6) Service pressure according to temperature and supplier's recommendations. Use as per P&ID indications. Maximum temperature = 180°C
(7) Horizontal installation
(8) Seat min/max temperature limit = -20/100°C
(9) Swivel plug disc
(10) Firesafe and Anti-static
(11) All fittings per MSS SP75, A860 class WPHY60. Dimensions to ASME B16.9.
(12) Installation of spectacle blinds, blanks and spacers as per table in para. 10.10. of this document.
(13) For full range of services see para.12 Piping Class Summary
(14) Refer to doc. no SP-1718-999-1350-0001 for valve data sheets

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APPENDIX B :

BRANCH TABLES (90DEG & 45DEG)

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE																											
50	T																										
48	R	T																									
46	R	R	T																								
42	RP	R	R	T																							
40	RP	RP	R	R	T																						
36	RP	RP	RP	R	R	T																					
34	RP	RP	RP	RP	R	R	T																				
32	RP	RP	RP	RP	RP	R	R	T																			
30	RP	RP	RP	RP	RP	RP	R	R	T																		
28	RP	RP	RP	RP	RP	RP	RP	R	R	T																	
26	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																
24	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T															
20	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T														
18	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T													
16	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
14	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T								
6	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T							
4	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T						
3	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T					
2	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T				
1 1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B01, B12,B21**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
52	T																											
50	R	T																										
48	R	R	T																									
46	RP	R	R	T																								
42	RP	RP	R	R	T																							
40	RP	RP	RP	R	R	T																						
36	RP	RP	RP	RP	R	R	T																					
34	RP	RP	RP	RP	RP	R	R	T																				
32	RP	RP	RP	RP	RP	RP	R	R	T																			
30	RP	RP	RP	RP	RP	RP	RP	R	R	T																		
28	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																	
26	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																
24	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T															
20	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T														
18	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T													
16	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
14	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T					
2	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T				
1 1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
HEADER SIZE																												

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B03, B03N, B03S**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE 50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36																											
34																											
32																											
30																											
28										T																	
26										R																	
24										R																	
20										TR																	
18										TR																	
16										TR																	
14										TR						***T***											
12										TR						***R***	T										
10										TR						***R***	R	T									
8										TR						***R***	R	R	T								
6										TR						***TR***	R	R	R	T							
4										TR						***TR***	TR	R	R	R	T						
3										TR						***TR***	TR	TR	TR	R	R	T					
2										TR						***TR***	TR	TR	TR	TR	R	R	T				
1 1/2										S						***S***	S	S	S	S	S	S	S	T			
1										S						***S***	S	S	S	S	S	S	S	E	T		
3/4										S						***S***	S	S	S	S	S	S	S	E	E	T	
1/2										S						***S***	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B03D**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3
TR	=	Equal Tee + Concentric Reducer	

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40					T																						
36					R	T																					
34					R	R	T																				
32					RP	R	R	T																			
30					RP	RP	R	R	T																		
28					RP	RP	RP	R	R	T																	
26					RP	RP	RP	RP	R	R	T																
24					RP	RP	RP	RP	RP	R	R	T															
20					RP	RP	RP	RP	RP	RP	R	R	T														
18					RP	RP	RP	RP	RP	RP	RP	R	R	T													
16					RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
14					RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12					RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10					RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8					W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6					W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T							
4					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T						
3					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T					
2					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T				
1 1/2					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B06, B06N, *B06S***

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE 50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36						T																					
34						R	T																				
32						R	R	T																			
30						RP	R	R	T																		
28						RP	RP	R	R	T																	
26						RP	RP	RP	R	R	T																
24						RP	RP	RP	RP	R	R	T															
20						RP	RP	RP	RP	RP	R	R	T														
18						RP	RP	RP	RP	RP	RP	R	R	T													
16						RP	RP	RP	RP	RP	RP	RP	R	R	T												
14						RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12						RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10						RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8						W	W	W	W	W	W	W	W	W	W	W	P	R	T								
6						W	W	W	W	W	W	W	W	W	W	P	P	P	R	T							
4						W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T						
3						W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T					
2						TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	T				
1 1/2						TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	Et	T			
1						TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	Et	Et	T		
3/4						TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	Et	Et	Et	T	
1/2						TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	TL	Et	Et	Et	Et	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B10**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Threaded)	ASME B16.9 & ASME B16.11
Et	=	Threaded Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
TL	=	Threadolet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE																										
50																										
48																										
46																										
42																										
40																										
36																										
34																										
32																										
30																										
28																										
26																										
24																										
20																										
18																										
16																										
14																										
12																										
10																										
8																										
6																										
4																					Tt					
3																					Et	Tt				
2																					Et	Et	Tt			
1 1/2																					Et	Et	Et	Tt		
1																					ES	Et	Et	Et	Tt	
3/4																					ES	ES	Et	Et	Et	Tt
1/2																					ES	ES	ES	Et	Et	Et
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4
	HEADER SIZE																									

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B19**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

Tt	=	Equal Tee (Threaded)	ASME B16.9 & ASME B16.11
Et	=	Threaded Reducing Tee	ASME B16.11
ES	=	Threaded Reducing Tee + Swaged nipple	ASME B16.11 & MSS SP 95

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	54	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
54	T																												
52	R	T																											
50	R	R	T																										
48	RP	R	R	T																									
46	RP	RP	R	R	T																								
42	RP	RP	RP	R	R	T																							
40	RP	RP	RP	RP	R	R	T																						
36	RP	RP	RP	RP	RP	R	R	T																					
34	RP	RP	RP	RP	RP	RP	R	R	T																				
32	RP	RP	RP	RP	RP	RP	RP	R	R	T																			
30	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																		
28	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																	
26	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T																
24	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T															
20	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T														
18	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T													
16	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
14	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T					
2	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T				
1 1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	54	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																												

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B23, B23N, B23S**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																									
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36						T																				
34						R	T																			
32						R	R	T																		
30						RP	R	R	T																	
28						RP	RP	R	R	T																
26						RP	RP	RP	R	R	T															
24						RP	RP	RP	RP	R	R	T														
20						RP	RP	RP	RP	RP	R	R	T													
18						RP	RP	RP	RP	RP	RP	R	R	T												
16						RP	RP	RP	RP	RP	RP	RP	R	R	T											
14						RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
12						RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
10						RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T								
8						W	W	W	W	W	W	W	W	W	W	W	P	R	T							
6						W	W	W	W	W	W	W	W	W	W	W	P	P	R	T						
4						W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T					
3						W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T				
2						W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T			
1 1/2						S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T		
1						S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T	
3/4						S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T
1/2						S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B42 & B43**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			RP	R	R	R	R	R	R	R	R	R	T														
18			RP	RP	RP	R	R	R	R	R	R	R	R	T													
16			RP	RP	RP	RP	RP	R	R	R	R	R	R	R	T												
14			RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	R	T											
12			RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T										
10			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B46**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			RP	R	R	R	R	R	R	R	R	R	T														
18			RP	RP	RP	R	R	R	R	R	R	R	R	T													
16			RP	RP	RP	RP	RP	R	R	R	R	R	R	R	T												
14			RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	R	T											
12			RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T										
10			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B48, B48X**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36																											
34																											
32																											
30																											
28																											
26																											
24												T															
20												R	T														
18												R	R	T													
16												R	R	R	T												
14												R	R	R	R	T											
12												R	R	R	R	R	T										
10												R	R	R	R	R	R	T									
8												W	W	W	W	W	R	R	T								
6												W	W	W	W	W	W	R	R	T							
4												W	W	W	W	W	W	W	R	R	T						
3												W	W	W	W	W	W	W	W	P	R	T					
2												W	W	W	W	W	W	W	W	P	P	R	T				
1 1/2												S	S	S	S	S	S	S	S	S	S	S	S	T			
1												S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4												S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2												S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B49 & B49N**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40					T																						
36					R	T																					
34					R	R	T																				
32					R	R	R	T																			
30					R	R	R	R	T																		
28					R	R	R	R	R	T																	
26					R	R	R	R	R	R	T																
24					R	R	R	R	R	R	R	T															
20					R	R	R	R	R	R	R	R	T														
18					R	R	R	R	R	R	R	R	R	T													
16					R	R	R	R	R	R	R	R	R	R	T												
14					R	R	R	R	R	R	R	R	R	R	R	T											
12					R	R	R	R	R	R	R	R	R	R	R	R	T										
10					R	R	R	R	R	R	R	R	R	R	R	R	R	T									
8					R	R	R	R	R	R	R	R	R	R	R	R	R	R	T								
6					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T							
4					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T						
3					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T					
2					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T				
1 1/2					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T			
1					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	T		
3/4					D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	RS	RS	TS		
1/2					D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	RS	RS	E	TS	
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld or Threaded up to & incl. "3/4" NPS. (Cu-Ni)
Bell and spigot adhesive bonded in sizes 1" and larger. (GRP)

Piping Class : **B90,B91,B91X,B93**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Bell end, Adhesive bonded type)	Manufacturer's Standard
R	=	Reducing Outlet Tee (Bell end, Adhesive bonded type)	Manufacturer's Standard
D	=	Deluge Coupling (Bell end(Header) x NPT-F(Branch w/bushing))	Manufacturer's Standard
RS	=	Reducing Tee (Bell end(Header) x NPT-F(Branch w/bushing))	Manufacturer's Standard
TS	=	Equal Tee (Socketweld)	EEMUA 146
E	=	Socketweld Reducing Tee	EEMUA 146

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36																											
34																											
32																											
30																											
28																											
26																											
24												T															
20												R	T														
18												R	R	T													
16												W	R	R	T												
14												W	W	R	R	T											
12												W	W	W	R	R	T										
10												W	W	W	W	R	R	T									
8												W	W	W	W	W	R	R	T								
6												W	W	W	W	W	W	R	R	T							
4												W	W	W	W	W	W	W	R	R	T						
3												W	W	W	W	W	W	W	W	R	R	T					
2												W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2												S	S	S	S	S	S	S	S	S	S	S	S	T			
1												S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4												S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2												S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B92**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	EEMUA 146
E	=	Socketweld Reducing Tee	EEMUA 146
R	=	Buttweld Reducing Outlet Tee	EEMUA 146
W	=	Weldolet type - BW outlet	EEMUA 146
S	=	Sockolet type - SW outlet	EEMUA 146
E	=	Socketweld Reducing Tee	EEMUA 146

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																								
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1
50																									
48																									
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18																									
16																									
14																									
12																									
10																									
8																									
6																									
4																									
3																						T			
2																						R	T		
1 1/2																						R	R	T	
1																						R	R	R	T

Piping Class Construction : Butt Fusion type

Piping Class : **B94**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Fusion Buttweld)	Manufacturer's Standard
R	=	Reducing Outlet Tee (Fusion Buttweld)	Manufacturer's Standard

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	50																										
	48	T																									
	46	R	T																								
	42	R	R	T																							
	40	RP	R	R	T																						
	36	RP	RP	R	R	T																					
	34	RP	RP	RP	R	R	T																				
	32	RP	RP	RP	RP	R	R	T																			
	30	RP	RP	RP	RP	RP	R	R	T																		
	28	RP	RP	RP	RP	RP	RP	R	R	T																	
	26	RP	RP	RP	RP	RP	RP	RP	R	R	T																
	24	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T															
	20	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T														
	18	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T													
	16	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
	14	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
	12	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
	10	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
	8	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
	6	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
	4	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
	3	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T					
	2	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T				
	1 1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
	1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
	3/4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
	1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **D01, D12, D21**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
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26																											
24												T															
20												R	T														
18												R	R	T													
16												RP	R	R	T												
14												RP	RP	R	R	T											
12												RP	RP	RP	R	R	T										
10												RP	RP	RP	RP	R	R	T									
8												W	W	W	W	W	R	R	T								
6												W	W	W	W	W	W	R	R	T							
4												W	W	W	W	W	W	W	R	R	T						
3												W	W	W	W	W	W	W	W	R	R	T					
2												W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2												S	S	S	S	S	S	S	S	S	S	S	S	T			
1												S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4												S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2												S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **D03, D03N, D03S, D23, D23N, D23S, D42**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			RP	R	R	R	R	R	R	R	R	R	T														
18			RP	RP	RP	RP	R	R	R	R	R	R	R	T													
16			RP	RP	RP	RP	RP	R	R	R	R	R	R	R	T												
14			RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	R	T											
12			RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T										
10			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **D46, D48, D48X,D71X**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
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24												T															
20												R	T														
18												R	R	T													
16												R	R	R	T												
14												R	R	R	R	T											
12												R	R	R	R	R	T										
10												R	R	R	R	R	R	T									
8												W	W	W	W	W	R	R	T								
6												W	W	W	W	W	W	R	R	T							
4												W	W	W	W	W	W	W	R	R	T						
3												W	W	W	W	W	W	W	W	R	R	T					
2												W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2												S	S	S	S	S	S	S	S	S	S	S	S	T			
1												S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4												S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2												S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **D49 & D49N**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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BRANCH SIZE	HEADER SIZE 50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			RP	R	R	T																					
34			RP	RP	R	R	T																				
32			RP	RP	RP	R	R	T																			
30			RP	RP	RP	RP	R	R	T																		
28			RP	RP	RP	RP	RP	R	R	T																	
26			RP	RP	RP	RP	RP	RP	R	R	T																
24			RP	RP	RP	RP	RP	RP	RP	R	R	T															
20			RP	RP	RP	RP	RP	RP	RP	RP	R	R	T														
18			RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T													
16			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T												
14			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T											
12			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T										
10			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **F01, F03, F03N, F03S, F12, F21, F23, F23S, F42**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																									
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			RP	R	R	R	R	R	R	R	R	R	T														
18			RP	RP	RP	R	R	R	R	R	R	R	R	T													
16			RP	RP	RP	RP	R	R	R	R	R	R	R	R	T												
14			RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	R	T											
12			RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T										
10			RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **F46, F48, F48X**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																										
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			W	W	R	R	R	R	R	R	R	R	T														
18			W	W	W	R	R	R	R	R	R	R	R	T													
16			W	W	W	W	W	R	R	R	R	R	R	R	T												
14			W	W	W	W	W	W	W	R	R	R	R	R	R	T											
12			W	W	W	W	W	W	W	W	W	R	R	R	R	R	T										
10			W	W	W	W	W	W	W	W	W	W	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	R	R	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **G01, G03, G03N, G03S, G21, G23, G23N, G23S, G48, G48X, H01, H03**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			T																								
42			R	T																							
40			R	R	T																						
36			R	R	R	T																					
34			R	R	R	R	T																				
32			R	R	R	R	R	T																			
30			R	R	R	R	R	R	T																		
28			R	R	R	R	R	R	R	T																	
26			R	R	R	R	R	R	R	R	T																
24			R	R	R	R	R	R	R	R	R	T															
20			W	W	R	R	R	R	R	R	R	R	T														
18			W	W	W	R	R	R	R	R	R	R	R	T													
16			W	W	W	R	R	R	R	R	R	R	R	R	T												
14			W	W	W	W	W	R	R	R	R	R	R	R	R	T											
12			W	W	W	W	W	W	R	R	R	R	R	R	R	R	T										
10			W	W	W	W	W	W	W	W	W	R	R	R	R	R	R	T									
8			W	W	W	W	W	W	W	W	W	W	W	W	R	R	R	R	T								
6			W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	R	T							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T					
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T				
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T			
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T		
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T	
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **G03P2, G05P4**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.8
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.8

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36																											
34																											
32																											
30																											
28																											
26																											
24												T															
20												R	T														
18												R	R	T													
16												R	R	R	T												
14												R	R	R	R	T											
12												R	R	R	R	R	T										
10												W	R	R	R	R	R	T									
8												W	W	W	R	R	R	R	T								
6												W	W	W	W	W	R	R	R	T							
4												W	W	W	W	W	W	W	R	R	T						
3												W	W	W	W	W	W	W	W	R	R	T					
2												W	W	W	W	W	W	W	W	W	R	R	T				
1 1/2												S	S	S	S	S	S	S	S	S	S	S	S	T			
1												S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4												S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2												S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **G46**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 90 DEG CONNECTION

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40																											
36																											
34																											
32																											
30																											
28																											
26																											
24																											
20																											
18																											
16																											
14																											
12																											
10																											
8																											
6																				T_W							
4																				R	T_W						
3																				R	R	T_W					
2																				W	R	R	T_W				
1 1/2																				W	W	R	R	T_W			
1																				W	W	W	R	R	T_W		
3/4																				W	W	W	W	R	R	T_W	
1/2																				W	W	W	W	R	R	R	T_W
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Buttweld connection for all sizes

Piping Class : **J01, J03**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T_W	=	Equal Tee (Buttweld)	ASME B16.9
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3
RP	=	Fabricated branch with addition of Reinforcing Pad	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	HEADER SIZE																								
	50																								
	48																								
	46			TL																					
	42			B	TL																				
	40			RL	B	TL																			
	36			RL	RL	B	TL																		
	34			RL	RL	RL	B	TL																	
	32			RL	RL	RL	RL	B	TL																
	30			RL	RL	RL	RL	RL	B	TL															
	28			RL	RL	RL	RL	RL	RL	B	TL														
	26			RL	RL	RL	RL	RL	RL	RL	B	TL													
	24			RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
	20			RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
	18			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
	16			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
	14			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
	12			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL							
	10			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL						
	8			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL					
	6			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	L	B	TL				
	4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T				
	3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T			
	2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T		
	1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T	
	1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T
	3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E
	1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E
		50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2

APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
52	TL																											
50	B	TL																										
48	RL	B	TL																									
46	RL	RL	B	TL																								
42	RL	RL	RL	B	TL																							
40	RL	RL	RL	RL	B	TL																						
36	RL	RL	RL	RL	RL	B	TL																					
34	RL	RL	RL	RL	RL	RL	B	TL																				
32	RL	RL	RL	RL	RL	RL	RL	B	TL																			
30	RL	RL	RL	RL	RL	RL	RL	RL	B	TL																		
28	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL																	
26	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL																
24	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL															
20	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL														
18	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL													
16	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
14	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
12	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
10	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
8	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
6	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL							
4	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	R	R	T						
3	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T					
2	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T				
1 1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	52	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2

HEADER SIZE

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B03, B03N, B03S, B23, B23N, B23S**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
TL	=	Equal Lateral Tee (Butt weld)	
B	=	Buttweld Lateral Reducing Tee	
RL	=	Fabricated 45 deg branch with addition of Reinforcing Pad	ASME B31.3
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46																											
42																											
40					TL																						
36					B	TL																					
34					RL	B	TL																				
32					RL	RL	B	TL																			
30					RL	RL	RL	B	TL																		
28					RL	RL	RL	RL	B	TL																	
26					RL	RL	RL	RL	RL	B	TL																
24					RL	RL	RL	RL	RL	RL	B	TL															
20					RL	RL	RL	RL	RL	RL	RL	B	TL														
18					RL	RL	RL	RL	RL	RL	RL	RL	B	TL													
16					RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
14					RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
12					RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
10					RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
8					RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
6					RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	L	B	TL							
4					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T						
3					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T					
2					W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T				
1 1/2					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2					S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B06, B06N**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
TL	=	Equal Lateral Tee (Butt weld)	
B	=	Buttweld Lateral Reducing Tee	
L	=	Fabricated branch (45deg pipe - pipe stub-in)	ASME B31.3
RL	=	Fabricated 45 deg branch with addition of Reinforcing Pad	ASME B31.3
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48		TL																									
46		B	TL																								
42		RL	B	TL																							
40		RL	RL	B	TL																						
36		RL	RL	RL	B	TL																					
34		RL	RL	RL	RL	B	TL																				
32		RL	RL	RL	RL	RL	B	TL																			
30		RL	RL	RL	RL	RL	RL	B	TL																		
28		RL	RL	RL	RL	RL	RL	RL	B	TL																	
26		RL	RL	RL	RL	RL	RL	RL	RL	B	TL																
24		RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL															
20		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL														
18		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL													
16		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
14		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
12		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
10		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
8		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
6		RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	L	B	TL							
4		W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T						
3		W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T					
2		W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T				
1 1/2		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	R	T			
1		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B21**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
TL	=	Equal Lateral Tee (Butt weld)	
B	=	Buttweld Lateral Reducing Tee	
L	=	Fabricated branch (45deg pipe - pipe stub-in)	ASME B31.3
RL	=	Fabricated 45 deg branch with addition of Reinforcing Pad	ASME B31.3
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			TL																								
42			B	TL																							
40			RL	B	TL																						
36			RL	RL	B	TL																					
34			RL	RL	RL	B	TL																				
32			RL	RL	RL	RL	B	TL																			
30			RL	RL	RL	RL	RL	B	TL																		
28			RL	RL	RL	RL	RL	RL	B	TL																	
26			RL	RL	RL	RL	RL	RL	RL	B	TL																
24			RL	RL	RL	RL	RL	RL	RL	RL	B	TL															
20			RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL														
18			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL													
16			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
14			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
12			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
10			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
8			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
6			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	P	P	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B46**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
TL	=	Equal Lateral Tee (Butt weld)	
B	=	Buttweld Lateral Reducing Tee	
RL	=	Fabricated 45 deg branch with addition of Reinforcing Pad	ASME B31.3
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION(FLARE)

BRANCH SIZE	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
50																											
48																											
46			TL																								
42			B	TL																							
40			RL	B	TL																						
36			RL	RL	B	TL																					
34			RL	RL	RL	B	TL																				
32			RL	RL	RL	RL	B	TL																			
30			RL	RL	RL	RL	RL	B	TL																		
28			RL	RL	RL	RL	RL	RL	B	TL																	
26			RL	RL	RL	RL	RL	RL	RL	B	TL																
24			RL	RL	RL	RL	RL	RL	RL	RL	B	TL															
20			RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL														
18			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL													
16			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL												
14			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL											
12			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL										
10			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL									
8			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL								
6			RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	B	TL							
4			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	R	T						
3			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	R	T					
2			W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	P	P	P	R	T				
1 1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	T			
1			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	T		
3/4			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	T	
1/2			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	E	E	E	T
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1	3/4	1/2
	HEADER SIZE																										

Piping Class Construction : Socketweld up to & incl. "1 1/2" NPS.
Buttweld in sizes 2" and larger.

Piping Class : **B48**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

T	=	Equal Tee (Buttweld and Socketweld)	ASME B16.9 & ASME B16.11
TL	=	Equal Lateral Tee (Butt weld)	
B	=	Buttweld Lateral Reducing Tee	
RL	=	Fabricated 45 deg branch with addition of Reinforcing Pad	ASME B31.3
E	=	Socketweld Reducing Tee	ASME B16.11
R	=	Buttweld Reducing Outlet Tee	ASME B16.9
W	=	Weldolet type - BW outlet	MSS SP 97
S	=	Sockolet type - SW outlet	MSS SP 97
P	=	Fabricated branch (pipe - pipe stub-in)	ASME B31.3

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APPENDIX B : BRANCH TABLE FOR 45 DEG CONNECTION

BRANCH SIZE	HEADER SIZE																							
	50	48	46	42	40	36	34	32	30	28	26	24	20	18	16	14	12	10	8	6	4	3	2	1 1/2	1
50																									
48																									
46																									
42																									
40																									
36						TL																			
34						LR	TL																		
32						LR	LR	TL																	
30						LR	LR	LR	TL																
28						LR	LR	LR	LR	TL															
26						LR	LR	LR	LR	LR	TL														
24						LR	LR	LR	LR	LR	LR	TL													
20						LR	LR	LR	LR	LR	LR	LR	TL												
18						LR	LR	LR	LR	LR	LR	LR	LR	TL											
16						LR	LR	LR	LR	LR	LR	LR	LR	LR	TL										
14						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL									
12						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL								
10						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL							
8						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL						
6						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL					
4						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL				
3						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL			
2						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL		
1 1/2						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL	
1						LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	TL

Piping Class Construction : Bell ans spigot adhesive bonded in sizes 1" and larger. (GRP)

Piping Class : **B93**

LEGEND. (fittings per Piping Class materials / rating / wall thickness.

TL	=	Equal Lateral Tee (Bell end, Adhesive bonded type)	Manufacturer's Standard
LR	=	Reducing Lateral Tee (Bell end, Adhesive bonded type)	Manufacturer's Standard

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ATTACHMENT #1 - PIPING ITEM CODE LIST

General Notes:

1. Items existing in the PDMS catalogue have been listed in attachment 1.

2. "S CODE" or short code specifies the item type as shown in the SPREF.
The abbreviation for short codes are shown in table 1 of attachement 1.

for ex.;

3. Code only refers to the first 8 digits of item stock code not related to the item size.
For most items (with one size for ex. elbow, flange, …) the size (in the max/min range) may be added for the complete stock code.

4. For valves the code will be the valve data sheet no. as specified in Valve Data Sheet, SP-1718-999-1350-0001.

5. For IBB valves the code will be the valve data sheet no. as specified in , SP-1718-999-1350-0002.

6. The list in table 2 is not final and will be updated based on project requirements and additions to the PDMS catalogue.

SHORT CODE	DESCRIPTION	REMARKS
P	PIPE	
P1/P2/P3	PIPE FOR U/G	
NTB	NIPPLE, THREDED BOTH ENDS	
NTO	NIPPLE, THREADED ONE END	
E9	90-DEG ELBOW-LR	
E9S	90-DEG ELBOW-SR	
EB9	90-DEG ELBOW BEND	
E4	45-DEG ELBOW	
EB4	45-DEG ELBOW BEND	
CE	CROSS	
CES	CROSS, SPLIT TYPE	
TE	STRAIGHT TEE	
TES	STRAIGHT TEE, SPLIT TYPE	
TL	LATERAL Y, EQUAL	
RL	LATERAL Y, REDUCING	
TR/TR1	REDUCING TEE	
RC/RC1	CON. REDUCER	
RE/RE1	ECC. REDUCER	
D	STUB END	
RCB	CON. SWAGE, BE x PE	
RC2	CON. SWAGE, PE x TE	
RC3	CON. SWAGE, BE x TE	
RCP	CON SWAGE, PE	
RCT	CON SWAGE, TE	
REB	ECC. SWAGE, BE x PE	
RE3	ECC. SWAGE, BE x TE	
REP	ECC SWAGE, PE	
RET	ECC SWAGE, TE	
C	CAP	
CT	CAP, THREADED	
PLG	PLUG	
TRD	DELUGE COUPLING	
CF	FULL COUPLING	
CFT	FULL COUPLING, THRD	
TEW	REINFORCED BRANCH ELBOW OUTLET	
TSO/TS1	REINFORCED BRANCH SOCKET OUTLET	
TWO/TW1	REINFORCED BRANCH WELDED OUTLET	
TTO	REINFORCED BRANCH THREADED OUTLET	
F	FLANGE	
F1/F2/F3/F5/F9/F21	SPECIAL FLANGE	
RF/RF1/RF3	REDUCING FLANGE	
FB	FLANGE BLIND	

SHORT CODE	DESCRIPTION	REMARKS
FB1	SPECIAL FLANGE BLIND	
FJ	FLANGE JACK SCREW	
FJ1/FJ5/FJ9	SPECIAL FLANGE JACK SCREW	
FSB/FS1	SPECTACEL BLIND, TAB BLIND & SPACER	
G	GASKET	
G1/G2/G3	SPECIAL GASKET	
RG/RG1	REDUCING GASKET	
B	BOLT / NUT	
VGA	GATE VALVE, SW / FLGD	
VGF	GATE VALVE FLGD (1/2” AND BELLOW)	
VGT	GATE VALVE, THRD	
VGX	GATE VALVE, SW x THRD	
VLA	GLOBE VALVE	
VCH	CHECK VALVE, LIFT / SWING	
VCA	CHECK VALVE, WAFER	
VPL	PLUG VALVE	
VUF	BUTTERFLY VALVE, FLGD	
VBR/VB2/VB4/VB6/VB8	BALL VALVE W/REDUCING BORE	
VBF/VB1/VB3/VB7	BALL VALVE W/FULL BORE	
VBE	BALL VALVE W/SERVICE CLASS “E”	
VNE	NEEDLE VALVE	
RVC	CHECK VALVE, JACKETED	
RVP	PLUG VALVE, JACKETED	
SFA/SPA/SPB/SPC/SLA/ SLB/SLC/SLD/SLE	SINGLE IBB VALVE	
DFA/DPA/DPB/DPC/DLA/ DLB/DLC/DLD/DLE/DLF	DOUBLE IBB VALVE	

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFAB001	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B01
BALL VA	VBF	VBFAB002	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B01
BALL VA	VBF	VBFAB003	26"	46"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B01
BALL VA	VB1	VBFAB011	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	B01
BALL VA	VB1	VBFAB012	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B01
BALL VA	VB3	VBFAB018	2"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING	B01
BALL VA	VB3	VBFAB019	8"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	B01
BALL VA	VB1	VBFAB028	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	B01
BALL VA	VB3	VBFAB029	26"	30"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/ASME B16.47-A FLGD	B01
BALL VA	VB7	VBFABS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B01
BALL VA	VB7	VBFABT01	3"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	B01
BALL VA	VBF	VBFAK001	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B01
BALL VA	VB3	VBFAK005	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) ***TUNGSTEN CARBIDE COATED*** BALL W/METAL SEATSAPI CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS5351 GRAPHITE SEAL/FLOATING	B01
BALL VA	VB1	VBFAK009	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	B01
BALL VA	VB7	VBFAKS01	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B01
BALL VA	VBF	VBFAKX01	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B01
BALL VA	VBR	VBRAB001	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B01
BALL VA	VBR	VBRAB002	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B01
BALL VA	VBR	VBRAB003	26"	***48"***	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B01
BALL VA	VB2	VBRAB011	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	B01
BALL VA	VB2	VBRAB012	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B01
BALL VA	VB2	VBRAB028	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	B01
BALL VA	VB8	VBRABS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B01
BALL VA	VB8	VBRABT01	3"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	B01
BOLTS	B	LB00A000	1/2"	***48"***	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B01
BUTTERFLY VA	VUF	VUFAB001	4"	4"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS ANSI CL150 API 609 TRIPPLE OFFSET DESIGN	B01
BUTTERFLY VA	VUF	VUFAB002	8"	24"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	B01
CAP	C	LC00AA00	14"	20"	CAP A234-WPB SMLS BE SCH10	B01
CAP	C	LC00AB00	8"	12"	CAP A234-WPB SMLS BE SCH20	B01
CAP	C	LC00AD00	2"	6"	CAP A234-WPB SMLS BE SCH40	B01
CAP	C	LC00AL00	32"	38"	CAP A234-WPB SMLS BE STD	B01
CAP	C	LC00AM00	40"	***48"***	CAP A234-WPB SMLS BE XS	B01
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	B01
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	B01
CHECK VA	VCA	VCAAB001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B01
CHECK VA	VCA	VCAAB002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594	B01
CHECK VA	VCA	VCAAB009	26"	***48"***	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B01
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B01
CPLG FULL	CFT	LCFTAP01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL3000	B01
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	B01
CPLG FULL	CFT	LCFTAP01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL3000	B01
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	B01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AA00	14"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH10	B01
ELBOW	E4	LE40AA01	18"	20"	ELBOW A234-WPB DEG-45 WELDED BE SCH10	B01
ELBOW	E4	LE40AB00	8"	12"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	B01
ELBOW	E4	LE40AB01	24"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH20	B01
ELBOW	E4	LE40AD00	2"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B01
ELBOW	E4	LE40AL00	32"	38"	ELBOW A234-WPB DEG-45 WELDED BE STD	B01
ELBOW	E4	LE40AM00	40"	***48"***	ELBOW A234-WPB DEG-45 WELDED BE XS	B01
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	B01
ELBOW	E9	LE90AA00	14"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH10	B01
ELBOW	E9	LE90AA01	18"	20"	ELBOW A234-WPB 90-LR WELDED BE SCH10	B01
ELBOW	E9	LE90AB00	8"	12"	ELBOW A234-WPB 90-LR SMLS BE SCH20	B01
ELBOW	E9	LE90AB01	24"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH20	B01
ELBOW	E9	LE90AD00	2"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	B01
ELBOW	E9	LE90AL00	32"	38"	ELBOW A234-WPB 90-LR WELDED BE STD	B01
ELBOW	E9	LE90AM00	40"	***48"***	ELBOW A234-WPB 90-LR WELDED BE XS	B01
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	B01
ELBOW BEND	EB4	LEB4AD01	2"	2"	BEND API 5L-B PSL1 SMLS BE 45 DEG, R=5D SCH40	B01
ELBOW BEND	EB9	LEB9AD01	2"	2"	BEND API 5L-B PSL1 SMLS BE 90 DEG, R=5D SCH40	B01
FLANGE	F	LF00AD00	14"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH10	B01
FLANGE	F	LF00AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH20	B01
FLANGE	F	LF00AD02	2"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B01
FLANGE	F	LF00AD03	26"	30"	FLANGE A105 WN RF CL150 (ASME B16.47-A) SCH10	B01
FLANGE	F	LF00AD04	32"	38"	FLANGE A105 WN RF CL150 (ASME B16.47-A) STD	B01
FLANGE	F	LF00AD05	40"	***48"***	FLANGE A105 WN RF CL150 (ASME B16.47-A) XS	B01
FLANGE	F	LF00AD06	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) SCH80	B01
FLG BLIND	FB	LFB0AD00	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B01
FLG BLIND	FB	LFB0AD01	26"	***48"***	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B01
FLG BLIND	FB1	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	B01
FLG BLIND	FB1	LFB0AF01	26"	46"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	B01
FLG JACK	FJ	LFJ0AD00	14"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10	B01
FLG JACK	FJ	LFJ0AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B01
FLG JACK	FJ	LFJ0AD02	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B01
FLG JACK	FJ	LFJ0AD50	26"	30"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW SCH10	B01
FLG JACK	FJ	LFJ0AD51	32"	38"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B01
FLG JACK	FJ	LFJ0AD52	40"	***48"***	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW XS	B01
FLG RED	RF	LRF0AD02	2"	3"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) SCH40	B01
FLG RED	RF1	LRF0AF00	3"	3"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH40	B01
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B01
GASKET	G	LG00ZD01	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B01
GATE VA	VGA	VGAAB001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B01
GATE VA	VGA	VGAAB002	6"	12"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B01
GATE VA	VGA	VGAAB003	14"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGA	VGAAB011	26"	46"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B01
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B01
GATE VA	VGF	VGFAB001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 FOR EQUIP NOZZLE CONN.	B01
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B01
GLOBE VA	VLA	VLAAB001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B01
GLOBE VA	VLA	VLAAB003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B01
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B01
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B01
INSUL GASKET	GK1	LGK0ZF00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B01
LATERAL Y	TL	LTL0AA00	14"	16"	LATERAL A234-WPB EQUAL BE SCH10 DEG-45	B01
LATERAL Y	TL	LTL0AB00	8"	12"	LATERAL A234-WPB EQUAL BE SCH20 DEG-45	B01
LATERAL Y	TL	LTL0AD00	2"	6"	LATERAL A234-WPB EQUAL BE SCH40 DEG-45	B01
LATERAL Y	TL	LTL0AL00	32"	38"	LATERAL A234-WPB EQUAL BE STD DEG-45	B01
LATERAL Y	TL	LTL0AM00	40"	46"	LATERAL A234-WPB EQUAL BE XS DEG-45	B01
NEEDLE VA	VNE	VNEAK001	3/4"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	B01
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	B01
NIPPLE TOE	NTT	LNTTAK00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 150mm LONG SCH160	B01
PIPE	P	LP00AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE SCH10	B01
PIPE	P	LP00AA01	18"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH10	B01
PIPE	P	LP00AB00	8"	12"	PIPE API 5L-B PSL1 SMLS BE SCH20	B01
PIPE	P	LP00AB01	24"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20	B01
PIPE	P1	LP00AB16	8"	12"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH20	B01
PIPE	P1	LP00AB17	24"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH20	B01
PIPE	P	LP00AD00	2"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	B01
PIPE	P1	LP00AD17	2"	6"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	B01
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	B01
PIPE	P	LP00AL00	32"	38"	PIPE API 5L-B PSL1 SAW BE 100% RT STD	B01
PIPE	P	LP00AM00	40"	***48"***	PIPE API 5L-B PSL1 SAW BE 100% RT XS	B01
PIPE	P1	LP10AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH10	B01
PIPE	P1	LP10AA01	18"	20"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH10	B01
PIPE	P2	LP10AB02	8"	12"	PIPE API 5L-B PSL1 SMLS BE SCH20 PP COATED	B01
PIPE	P2	LP10AB03	24"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20 PP COATED	B01
PIPE	P2	LP10AD01	2"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED	B01
PIPE	P1	LP10AM00	40"	40"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT XS	B01
PIPE	P2	LP20AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE SCH10 PP COATED	B01
PIPE	P2	LP20AA01	18"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH10 PP COATED	B01
PIPE	P3	LP20AB02	8"	12"	PIPE API 5L-B PSL1 SMLS BE SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B01
PIPE	P3	LP20AB03	24"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B01
PIPE	P3	LP20AD01	2"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	B01
PIPE	P3	LP30AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE SCH10 (SUNLIGHT L-200 WRAPPED AT SITE)	B01
PIPE	P3	LP30AA01	18"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH10 (SUNLIGHT L-200 WRAPPED AT SITE)	B01
PIPE	P3	LP30AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	B01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	B01
PLUG VA	VPL	VPLAB001	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B01
PLUG VA	VPL	VPLAB002	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B01
PLUG VA	VPL	VPLAF001	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	B01
RED CON	RC	LRC0AA00	14"	16"	REDUCER A234-WPB CON. SMLS BE SCH10	B01
RED CON	RC	LRC0AA01	18"	20"	REDUCER A234-WPB CON. WELDED BE SCH10	B01
RED CON	RC	LRC0AB00	8"	12"	REDUCER A234-WPB CON. SMLS BE SCH20	B01
RED CON	RC	LRC0AB01	24"	24"	REDUCER A234-WPB CON. WELDED BE SCH20	B01
RED CON	RC	LRC0AD00	2"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	B01
RED CON	RC	LRC0AL00	32"	38"	REDUCER A234-WPB CON. WELDED BE STD	B01
RED CON	RC	LRC0AM00	40"	***48"***	REDUCER A234-WPB CON. WELDED BE XS	B01
RED ECC	RE	LRE0AA00	14"	16"	REDUCER A234-WPB ECC. SMLS BE SCH10	B01
RED ECC	RE	LRE0AA01	18"	20"	REDUCER A234-WPB ECC. WELDED BE SCH10	B01
RED ECC	RE	LRE0AB00	8"	12"	REDUCER A234-WPB ECC. SMLS BE SCH20	B01
RED ECC	RE	LRE0AB01	24"	24"	REDUCER A234-WPB ECC. WELDED BE SCH20	B01
RED ECC	RE	LRE0AD00	2"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	B01
RED ECC	RE	LRE0AL00	32"	38"	REDUCER A234-WPB ECC. WELDED BE STD	B01
RED ECC	RE	LRE0AM00	40"	***48"***	REDUCER A234-WPB ECC. WELDED BE XS	B01
RED LATERAL Y	RL	LRL0AA00	14"	16"	LATERAL A234-WPB REDUCING BE SCH10 DEG-45	B01
RED LATERAL Y	RL	LRL0AB00	8"	12"	LATERAL A234-WPB REDUCING BE SCH20 DEG-45	B01
RED LATERAL Y	RL	LRL0AD00	6"	6"	LATERAL A234-WPB REDUCING BE SCH40 DEG-45	B01
RED LATERAL Y	RL	LRL0AL00	32"	38"	LATERAL A234-WPB REDUCING BE STD DEG-45	B01
RED LATERAL Y	RL	LRL0AM00	40"	***48"***	LATERAL A234-WPB REDUCING BE XS DEG-45	B01
SINGLE IBB VA	SFA	LSFAAD00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SLA	LSLAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SLB	LSLBAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SLC	LSLCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SPA	LSPAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SINGLE IBB VA	SPC	LSPCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B01
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	B01
SPCL FLANGE	F1	LF00AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	B01
SPCL FLANGE	F1	LF00AF01	2"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B01
SPCL FLANGE	F1	LF00AF02	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH80	B01
SPCL FLANGE	F2	LF00AH00	2"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	B01
SPCL FLANGE	F2	LF00AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH80	B01
SPCL FLANGE	F21	LF00AH38	3"	3"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH40	B01
SPCL FLANGE	F3	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	B01
SPCL FLANGE	F1	LF10AF00	14"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH10	B01
SPCL FLANGE	F1	LF10AF01	26"	30"	FLANGE A105 WN RF CL300 (ASME B16.47-A) SCH10	B01
SPCL FLANGE	F1	LF10AF02	32"	38"	FLANGE A105 WN RF CL300 (ASME B16.47-A) STD	B01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10AF03	40"	***48"***	FLANGE A105 WN RF CL300 (ASME B16.47-A) XS	B01
SPCL FLANGE	F2	LF10AH00	8"	12"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	B01
SPCL FLANGE	F3	LF10AK00	2"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	B01
SPCL FLANGE	F3	LF10AK81	8"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	B01
SPCL FLANGE	F2	LF20AH00	14"	20"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH10	B01
SPCL FLANGE	F3	LF30AK00	14"	20"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH10	B01
SPCL FLANGE	F4	LF40AL00	2"	4"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH40	B01
SPCL FLANGE	F5	LF50AD01	2"	4"	FLANGE A105 WN FF CL150 (ASME B16.5) SCH40	B01
SPCL FLG JACK	FJ1	LFJ0AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B01
SPCL FLG JACK	FJ1	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B01
SPCL FLG JACK	FJ1	LFJ1AF00	14"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10	B01
SPCL GASKET	G1	LG00ZF00	26"	***48"***	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B01
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B01
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B01
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B01
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B01
SPE BLIND	FSB	LFSBAD00	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B01
SPE BLIND	FSB	LFSBAD01	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B01
SPE BLIND	FSB	LFSBAD17	26"	***48"***	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A)	B01
SWG CON B-P	RCB	LRCBAD00	2"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	B01
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	B01
SWG CON P-T	RC2	LRC2AK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) SCH160	B01
SWG ECC B-P	REB	LREBAD00	2"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	B01
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	B01
TEE	TE	LTE0AA00	14"	16"	TEE A234-WPB EQUAL SMLS BE SCH10	B01
TEE	TE	LTE0AA01	18"	20"	TEE A234-WPB EQUAL WELDED BE SCH10	B01
TEE	TE	LTE0AB00	8"	12"	TEE A234-WPB EQUAL SMLS BE SCH20	B01
TEE	TE	LTE0AB01	24"	24"	TEE A234-WPB EQUAL WELDED BE SCH20	B01
TEE	TE	LTE0AD00	2"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	B01
TEE	TE	LTE0AL00	32"	38"	TEE A234-WPB EQUAL WELDED BE STD	B01
TEE	TE	LTE0AM00	40"	***48"***	TEE A234-WPB EQUAL WELDED BE XS	B01
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	B01
TEE RED	TR	LTR0AA00	14"	16"	TEE A234-WPB REDUCING SMLS BE SCH10	B01
TEE RED	TR	LTR0AA01	18"	20"	TEE A234-WPB REDUCING WELDED BE SCH10	B01
TEE RED	TR	LTR0AB00	8"	12"	TEE A234-WPB REDUCING SMLS BE SCH20	B01
TEE RED	TR	LTR0AB01	24"	24"	TEE A234-WPB REDUCING WELDED BE SCH20	B01
TEE RED	TR	LTR0AD00	2"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	B01
TEE RED	TR	LTR0AL00	32"	38"	TEE A234-WPB REDUCING WELDED BE STD	B01
TEE RED	TR	LTR0AM00	40"	***48"***	TEE A234-WPB REDUCING WELDED BE XS	B01
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	B01
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	B01
WELDOLET	TW1	LTW1AD00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	B01
WELDOLET	TWO	LTWOAD00	2"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	B01
BALL VA	VBF	VBFAB006	26"	48"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B03
BALL VA	VBF	VBFAB030	6"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B03
BALL VA	VBF	VBFAK002	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS5351 AED VITON SEAL/FLOATING	B03
BALL VA	***VBF***	***VBFAB020***	***26***	***42***	***BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API6D GRAPHITE SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS***	***B03***
BALL VA	VB3	VBFAK007	3/4"	3/4"	BALL VALVE A105 PE (NIPPLE LENGTH=100) ***TUNGSTEN CARBIDE COATED*** BALL W/METAL SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE)BS 5351 GRAPHITE SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B03
BALL VA	VBF	VBFAKX02	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B03
BALL VA	VBR	VBRAB004	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B03
BALL VA	VBR	VBRAB005	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	B03
BALL VA	VBR	VBRAB006	26"	48"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B03
BOLTS	B	LB00A000	1/2"	52"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B03
BUTTERFLY VA	VUF	VUFAB001	2"	6"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS ANSI CL150 API 609 TRIPPLE OFFSET DESIGN	B03
BUTTERFLY VA	VUF	VUFAB002	8"	24"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	B03
BUTTERFLY VA	VUF	VUFAB003	26"	30"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/ASME B16.47-A FLGD	B03
CAP	C	LC00AB00	8"	10"	CAP A234-WPB SMLS BE SCH20	B03
CAP	C	LC00AC00	12"	12"	CAP A234-WPB SMLS BE SCH30	B03
CAP	C	LC00AD00	3"	6"	CAP A234-WPB SMLS BE SCH40	B03
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	B03
CAP	C	LC00AL00	26"	28"	CAP A234-WPB SMLS BE STD	B03
CAP	C	LC00AM00	38"	44"	CAP A234-WPB SMLS BE XS	B03
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	B03
CAP	C	LC00AZ00	46"	52"	CAP A234-WPB SMLS BE 14.27mm THK	B03
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	B03
CHECK VA	VCA	VCAAB001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B03
CHECK VA	VCA	VCAAB002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594	B03
CHECK VA	VCA	VCAAB009	26"	48"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B03
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B03
CPLG FULL	CFT	LCFTAQ00	3/4"	3/4"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL6000	B03
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	B03
CPLG FULL	CFT	LCFTAQ00	3/4"	3/4"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL6000	B03
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	B03
ELBOW	E4	LE40AB00	8"	10"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	B03
ELBOW	E4	LE40AB01	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH20	B03
ELBOW	E4	LE40AC00	12"	12"	ELBOW A234-WPB DEG-45 SMLS BE SCH30	B03
ELBOW	E4	LE40AD00	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B03
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	B03
ELBOW	E4	LE40AL00	26"	28"	ELBOW A234-WPB DEG-45 WELDED BE STD	B03
ELBOW	E4	LE40AM00	38"	44"	ELBOW A234-WPB DEG-45 WELDED BE XS	B03
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	B03
ELBOW	E4	LE40AZ00	46"	52"	ELBOW A234-WPB DEG-45 WELDED BE 14.27mm THK	B03
ELBOW	***E4***	***LE40AZ28***	***72"***	***72"***	***ELBOW A234-WPB DEG-45 WELDED BE 12.27mm THK***	***B03***

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AB00	8"	10"	ELBOW A234-WPB 90-LR SMLS BE SCH20	B03
ELBOW	E9	LE90AB01	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH20	B03
ELBOW	E9	LE90AC00	12"	12"	ELBOW A234-WPB 90-LR SMLS BE SCH30	B03
ELBOW	E9	LE90AD00	3"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	B03
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	B03
ELBOW	E9	LE90AL00	26"	28"	ELBOW A234-WPB 90-LR WELDED BE STD	B03
ELBOW	E9	LE90AM00	38"	44"	ELBOW A234-WPB 90-LR WELDED BE XS	B03
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	B03
ELBOW	E9	LE90AZ00	46"	52"	ELBOW A234-WPB 90-LR WELDED BE 14.27mm THK	B03
ELBOW	***E4***	***LE90AZ28***	***72"***	***72"***	***ELBOW A234-WPB 90-LR WELDED BE 12.27mm THK***	***B03***
FLANGE	F	LF00AD01	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH20	B03
FLANGE	F	LF00AD02	3"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B03
FLANGE	F	LF00AD04	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) STD	B03
FLANGE	F	LF00AD05	38"	44"	FLANGE A105 WN RF CL150 (ASME B16.47-A) XS	B03
FLANGE	F	LF00AD07	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH30	B03
FLANGE	F	LF00AD08	2"	2"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH80	B03
FLANGE	F	LF00AD09	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) SCH20	B03
FLANGE	F	LF00AD10	46"	52"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 14.27mm THK	B03
FLANGE	***F***	***LF00AZ28***	***72"***	***72"***	***FLANGE A105 WN RF CL150 12.7mm THK***	***B03***
FLANGE	F	LF00AD11	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) SCH160	B03
FLG BLIND	FB	LFB0AD00	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B03
FLG BLIND	FB	LFB0AD01	26"	48"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B03
FLG BLIND	FB1	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	B03
FLG BLIND	FB1	LFB0AF01	26"	48"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	B03
FLG JACK	FJ	LFJ0AD01	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B03
FLG JACK	FJ	LFJ0AD02	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B03
FLG JACK	FJ	LFJ0AD04	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30	B03
FLG JACK	FJ	LFJ0AD51	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B03
FLG JACK	FJ	LFJ0AD52	38"	44"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW XS	B03
FLG JACK	FJ	LFJ0AD53	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW SCH20	B03
FLG JACK	FJ	LFJ0AD54	46"	48"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW 14.27mm THK	B03
FLG RED	RF	LRF0AD02	3"	6"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) SCH40	B03
FLG RED	RF	LRF0AD03	2"	2"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) SCH80	B03
FLG RED	RF1	LRF0AF00	3"	3"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH40 x SCH160	B03
FLG RED	RF3	LRF3AK00	3"	3"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) SCH40	B03
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B03
GASKET	G	LG00ZD01	26"	52"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B03
GATE VA	VGA	VGAAB001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B03
GATE VA	VGA	VGAAB002	6"	12"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B03
GATE VA	VGA	VGAAB003	14"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B03
GATE VA	VGA	VGAAB011	26"	48"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B03
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGF	VGFAB001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B03
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B03
GLOBE VA	VLA	VLAAB001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B03
GLOBE VA	VLA	VLAAB003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B03
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B03
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B03
INSUL GASKET	GK3	LGK0ZK00	3"	3"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE	B03
LATERAL Y	TL	LTL0AB00	8"	10"	LATERAL A234-WPB EQUAL BE SCH20 DEG-45	B03
LATERAL Y	TL	LTL0AC00	12"	12"	LATERAL A234-WPB EQUAL BE SCH30 DEG-45	B03
LATERAL Y	TL	LTL0AD00	6"	6"	LATERAL A234-WPB EQUAL BE SCH40 DEG-45	B03
LATERAL Y	TL	LTL0AL00	26"	28"	LATERAL A234-WPB EQUAL BE STD DEG-45	B03
LATERAL Y	TL	LTL0AM00	38"	44"	LATERAL A234-WPB EQUAL BE XS DEG-45	B03
LATERAL Y	TL	LTL0AZ00	46"	48"	LATERAL A234-WPB EQUAL BE 14.27mm THK DEG-45	B03
LATERAL Y	TLW	LTLWAF00	30"	30"	REINFORCED BRANCH OUTLET A105 LATERAL DEG-45 FORGED BE SCH80	B03
NEEDLE VA	VNE	VNEAK001	3/4"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	B03
NIPPLE TOE	NTO	LNTOAN02	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	B03
NIPPLE TOE	NTT	LNTTAN03	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 150mm LONG XXS	B03
PIPE	P	LP00AB00	8"	10"	PIPE API 5L-B PSL1 SMLS BE SCH20	B03
PIPE	P	LP00AB01	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20	B03
PIPE	P1	LP00AB16	8"	10"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH20	B03
PIPE	P1	LP00AB17	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH20	B03
PIPE	P	LP00AC00	12"	12"	PIPE API 5L-B PSL1 SMLS BE SCH30	B03
PIPE	P1	LP00AC11	12"	12"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH30	B03
PIPE	P	LP00AD00	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	B03
PIPE	P1	LP00AD17	3"	6"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	B03
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	B03
PIPE	P1	LP00AF22	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	B03
PIPE	P	LP00AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160	B03
PIPE	P	LP00AL00	26"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT STD	B03
PIPE	P	LP00AM00	38"	44"	PIPE API 5L-B PSL1 SAW BE 100% RT XS	B03
PIPE	P	LP00AZ00	46"	52"	PIPE API 5L-B PSL1 SAW BE 100% RT 14.27mm THK	B03
PIPE	***P***	***LP00AZ28***	***72"***	***72"***	***PIPE API 5L-B PSL1 SAW BE 100% RT 12.7mm THK***	***B03***
PIPE	P2	LP10AB02	8"	10"	PIPE API 5L-B PSL1 SMLS BE SCH20 PP COATED	B03
PIPE	P2	LP10AB03	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20 PP COATED	B03
PIPE	P2	LP10AC01	12"	12"	PIPE API 5L-B PSL1 SMLS BE SCH30 PP COATED	B03
PIPE	P2	LP10AD01	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED	B03
PIPE	P2	LP10AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED	B03
PIPE	P3	LP20AB02	8"	10"	PIPE API 5L-B PSL1 SMLS BE SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B03
PIPE	P3	LP20AB03	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B03
PIPE	P3	LP20AC01	12"	12"	PIPE API 5L-B PSL1 SMLS BE SCH30 (SUNLIGHT L-200 WRAPPED AT SITE)	B03
PIPE	P3	LP20AD01	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	B03
PIPE	P3	LP20AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	B03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P3	LP30AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	B03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	B03
PLUG VA	VPL	VPLAB001	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B03
PLUG VA	VPL	VPLAB002	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B03
PLUG VA	VPL	VPLAF002	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	B03
RED CON	RC	LRC0AB00	8"	10"	REDUCER A234-WPB CON. SMLS BE SCH20	B03
RED CON	RC	LRC0AB01	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH20	B03
RED CON	RC	LRC0AC00	12"	12"	REDUCER A234-WPB CON. SMLS BE SCH30	B03
RED CON	RC	LRC0AD00	3"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	B03
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	B03
RED CON	RC	LRC0AL00	26"	28"	REDUCER A234-WPB CON. WELDED BE STD	B03
RED CON	RC	LRC0AM00	38"	44"	REDUCER A234-WPB CON. WELDED BE XS	B03
RED CON	RC	LRC0AZ00	46"	48"	REDUCER A234-WPB CON. WELDED BE 14.27mm THK	B03
RED ECC	RE	LRE0AB00	8"	10"	REDUCER A234-WPB ECC. SMLS BE SCH20	B03
RED ECC	RE	LRE0AB01	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH20	B03
RED ECC	RE	LRE0AC00	12"	12"	REDUCER A234-WPB ECC. SMLS BE SCH30	B03
RED ECC	RE	LRE0AD00	3"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	B03
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	B03
RED ECC	RE	LRE0AL00	26"	28"	REDUCER A234-WPB ECC. WELDED BE STD	B03
RED ECC	RE	LRE0AM00	38"	44"	REDUCER A234-WPB ECC. WELDED BE XS	B03
RED ECC	RE	LRE0AZ00	46"	48"	REDUCER A234-WPB ECC. WELDED BE 14.27mm THK	B03
RED LATERAL Y	RL	LRL0AB00	8"	10"	LATERAL A234-WPB REDUCING BE SCH20 DEG-45	B03
RED LATERAL Y	RL	LRL0AC00	12"	12"	LATERAL A234-WPB REDUCING BE SCH30 DEG-45	B03
RED LATERAL Y	RL	LRL0AD00	6"	6"	LATERAL A234-WPB REDUCING BE SCH40 DEG-45	B03
RED LATERAL Y	RL	LRL0AL00	26"	28"	LATERAL A234-WPB REDUCING BE STD DEG-45	B03
RED LATERAL Y	RL	LRL0AM00	38"	44"	LATERAL A234-WPB REDUCING BE XS DEG-45	B03
RED LATERAL Y	RL	LRL0AZ03	46"	48"	LATERAL A234-WPB REDUCING BE 14.27mm THK DEG-45	B03
SINGLE IBB VA	SFA	LSFAAD00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SLA	LSLAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SLB	LSLBAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SLC	LSLCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SPA	LSPAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SINGLE IBB VA	SPC	LSPCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B03
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	B03
SPCL FLANGE	F1	LF00AF00	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	B03
SPCL FLANGE	F1	LF00AF01	3"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B03
SPCL FLANGE	F2	LF00AH00	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	B03
SPCL FLANGE	F3	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	B03
SPCL FLANGE	F3	LF00AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH160	B03
SPCL FLANGE	F1	LF10AF02	26"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) STD	B03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10AF03	38"	44"	FLANGE A105 WN RF CL300 (ASME B16.47-A) XS	B03
SPCL FLANGE	F2	LF10AH00	8"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	B03
SPCL FLANGE	F3	LF10AK00	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	B03
SPCL FLANGE	F3	LF10AK81	8"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	B03
SPCL FLANGE	F3	LF10AK82	12"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH30	B03
SPCL FLANGE	F5	LF50AD01	2"	4"	FLANGE A105 WN FF CL150 (ASME B16.5) SCH40	B03
SPCL FLG JACK	FJ1	LFJ0AF00	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B03
SPCL FLG JACK	FJ1	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B03
SPCL FLG JACK	FJ1	LFJ0AF03	12"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	B03
SPCL GASKET	G1	LG00ZF00	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B03
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B03
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B03
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B03
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B03
SPE BLIND	FSB	LFSBAD00	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B03
SPE BLIND	FSB	LFSBAD01	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B03
SPE BLIND	FSB	LFSBAD17	26"	48"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A)	B03
SWG CON B-P	RCB	LRCBAD00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	B03
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	B03
SWG CON PE	RCP	LRCPAK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH160	B03
SWG CON P-T	RC2	LRC2AN00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) XXS	B03
SWG ECC B-P	REB	LREBAD00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	B03
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	B03
SWG ECC PE	REP	LREPAK00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH160	B03
TEE	TE	LTE0AB00	8"	10"	TEE A234-WPB EQUAL SMLS BE SCH20	B03
TEE	TE	LTE0AB01	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH20	B03
TEE	TE	LTE0AC00	12"	12"	TEE A234-WPB EQUAL SMLS BE SCH30	B03
TEE	TE	LTE0AD00	3"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	B03
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	B03
TEE	TE	LTE0AL00	26"	28"	TEE A234-WPB EQUAL WELDED BE STD	B03
TEE	TE	LTE0AM00	38"	44"	TEE A234-WPB EQUAL WELDED BE XS	B03
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	B03
TEE	TE	LTE0AZ00	46"	52"	TEE A234-WPB EQUAL WELDED BE 14.27mm THK	B03
TEE RED	TR	LTR0AB00	8"	10"	TEE A234-WPB REDUCING SMLS BE SCH20	B03
TEE RED	TR	LTR0AB01	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH20	B03
TEE RED	TR	LTR0AC00	12"	12"	TEE A234-WPB REDUCING SMLS BE SCH30	B03
TEE RED	TR	LTR0AD00	3"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	B03
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	B03
TEE RED	TR	LTR0AL00	26"	28"	TEE A234-WPB REDUCING WELDED BE STD	B03
TEE RED	TR	LTR0AM00	38"	44"	TEE A234-WPB REDUCING WELDED BE XS	B03
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	B03
TEE RED	TR	LTR0AZ00	46"	52"	TEE A234-WPB REDUCING WELDED BE 14.27mm THK	B03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	B03
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	B03
WELDOLET	TWO	LTWOAD00	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	B03
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	B03
BOLTS	B	LB00A000	2"	28"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B03D
CAP	C	LC00AD00	3"	***14"***	CAP A234-WPB SMLS BE SCH40	B03D
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	B03D
CAP	C	LC00AZ01	28"	28"	CAP A234-WPB SMLS BE 19.05mm THK	B03D
CHECK VA	RVC	RVCAB001	2"	10"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC SINGLE PLATE ANSI CL150 API 594 FULL JACKETED	B03D
CROSS EQUAL	CE	LCE0AD00	3"	***14"***	CROSS A234-WPB EQUAL BE SCH40	B03D
CROSS EQUAL	CE	LCE0AF00	2"	2"	CROSS A234-WPB EQUAL BE SCH80	B03D
CROSS EQUAL	CE	LCE0AZ00	28"	28"	CROSS A234-WPB EQUAL BE 19.05mm THK	B03D
ELBOW	E4	LE40AD00	3"	***14"***	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B03D
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	B03D
ELBOW	E4	LE40AZ01	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE 19.05mm THK	B03D
ELBOW	E9	LE90AD00	3"	***14"***	ELBOW A234-WPB 90-LR SMLS BE SCH40	B03D
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	B03D
ELBOW	E9	LE90AZ01	28"	28"	ELBOW A234-WPB 90-LR WELDED BE 19.05mm THK	B03D
FLANGE	F	LF00AD02	3"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B03D
FLANGE	F	LF00AD08	2"	2"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH80	B03D
FLANGE	F	LF00AD77	28"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 19.05mm THK	B03D
FLG BLIND	FB	LFB0AD00	2"	***14"***	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B03D
FLG BLIND	FB	LFB0AD01	28"	30"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B03D
FLG RED	RF	LRF0AD00	2"	2"	FLANGE A105 SO-REDUCING RF CL150 (ASME B16.5)	B03D
FLG RED	RF	LRF0AD01	28"	30"	FLANGE A105 SO-REDUCING RF CL150 (ASME B16.47-A)	B03D
FLG RED	RF1	LRF1AF00	28"	30"	FLANGE A105 SO-REDUCING RF CL300 (ASME B16.47-A)	B03D
FLG RED	RF1	LRF1AF01	2"	2"	FLANGE A105 SO-REDUCING RF CL300 (ASME B16.5)	B03D
GASKET	G	LG00ZD00	2"	***14"***	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B03D
GASKET	G	LG00ZD01	28"	28"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B03D
GASKET RED	RG	LRG0ZD00	2"	10"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5) FOR REDUCING FLANGE	B03D
GASKET RED	RG	LRG0ZD01	28"	30"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A) FOR REDUCING FLANGE	B03D
GASKET RED	RG1	LRG1ZF00	2"	10"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5) FOR REDUCING FLANGE	B03D
GASKET RED	RG1	LRG1ZF01	28"	30"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A) FOR REDUCING FLANGE	B03D
PIPE	P	LP00AD00	3"	***14"***	PIPE API 5L-B PSL1 SMLS BE SCH40	B03D
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	B03D
PIPE	P	LP00AZ01	28"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT 19.05mm THK	B03D
PLUG VA	RVP	RVPAB005	2"	6"	PLUG VALVE A216-WCB FLGD-RF ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599 STELLITED PLUG/PTFE SEAT/FULL JACKETED	B03D
PLUG VA	RVP	RVPAB006	8"	10"	PLUG VALVE A216-WCB FLGD-RF ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 STELLITED PLUG/PTFE SEAT/FULL JACKETED	B03D
RED CON	RC	LRC0AD00	3"	***14"***	REDUCER A234-WPB CON. SMLS BE SCH40	B03D
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	B03D
RED CON	RC	LRC0AZ01	28"	28"	REDUCER A234-WPB CON. WELDED BE 19.05mm THK	B03D
RED ECC	RE	LRE0AD00	3"	***14"***	REDUCER A234-WPB ECC. SMLS BE SCH40	B03D

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	B03D
RED ECC	RE	LRE0AZ01	28"	28"	REDUCER A234-WPB ECC. WELDED BE 19.05mm THK	B03D
SPCL FLANGE	F1	LF00AF01	3"	***14"***	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B03D
SPCL FLANGE	F1	LF00AF04	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH80	B03D
SPCL FLANGE	F1	LF00AF06	28"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 19.05mm THK	B03D
SPCL GASKET	G1	LG00ZF00	28"	28"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B03D
SPCL GASKET	G1	LG10ZF00	2"	***14"***	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B03D
SPE BLIND	FSB	LFSBAD00	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B03D
SPE BLIND	FSB	LFSBAD01	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B03D
TEE	TE	LTE0AD00	3"	***14"***	TEE A234-WPB EQUAL SMLS BE SCH40	B03D
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	B03D
TEE	TE	LTE0AZ01	28"	28"	TEE A234-WPB EQUAL WELDED BE 19.05mm THK	B03D
TEE RED	TR	LTR0AD00	3"	***14"***	TEE A234-WPB EQUAL SMLS BE SCH40	B03D
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	B03D
TEE RED	TR	LTR0AZ01	28"	28"	TEE A234-WPB EQUAL WELDED BE 19.05mm THK	B03D
BALL VA	VBF	VBFAB007	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBF	VBFAB008	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBF	VBFAB009	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/ASME B16-47-A FLGD/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VB1	VBFAB025	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VB1	VBFAB026	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B03N
BALL VA	VB1	VBFAB027	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B03N
BALL VA	VBF	VBFAK003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBF	VBFAKX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXSFULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBR	VBRAB007	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBR	VBRAB008	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VBR	VBRAB009	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/ASME B16-47-A FLGD/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VB2	VBRAB025	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03N
BALL VA	VB2	VBRAB026	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B03N
BALL VA	VB2	VBRAB027	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B03N
BOLTS	B	LB00A001	1/2"	36"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B03N
CAP	C	LC00AB01	8"	10"	CAP A234-WPB SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
CAP	C	LC00AC01	12"	12"	CAP A234-WPB SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
CAP	C	LC00AD01	3"	6"	CAP A234-WPB SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
CAP	C	LC00AF01	2"	2"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
CAP	C	LC00AL01	26"	28"	CAP A234-WPB SMLS BE NACE STD (RP-1718-999-6300-0003)	B03N
CAP	C	LC00AQ01	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
CAP THD	CT	LCT0AQ01	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B03N
CHECK VA	VCA	VCAAB003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B03N
CHECK VA	VCA	VCAAB004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B03N
CHECK VA	VCA	VCAAB010	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 NACE API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	B03N
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B03N
CPLG FULL	CF	LCF0AQ01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOLET	TEW	LTEWAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AB02	8"	10"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AB03	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AC01	12"	12"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AD01	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AF01	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AL01	26"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N
ELBOW	E4	LE40AQ01	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AB02	8"	10"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AB03	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AC01	12"	12"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AD01	3"	6"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AF01	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AL01	26"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N
ELBOW	E9	LE90AQ01	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD12	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD13	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD14	3"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD15	2"	2"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD16	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD17	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0003)	B03N
FLANGE	F	LF00AD18	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B03N
FLG BLIND	FB	LFB0AD02	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B03N
FLG BLIND	FB	LFB0AD03	26"	46"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B03N
FLG BLIND	FB1	LFB0AF02	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B03N
FLG BLIND	FB1	LFB1AF00	26"	46"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B03N
FLG JACK	FJ	LFJ0AD07	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0003)	B03N
FLG JACK	FJ	LFJ0AD08	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B03N
FLG JACK	FJ	LFJ0AD09	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B03N
FLG RED	RF	LRF0AD04	3"	6"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B03N
FLG RED	RF	LRF0AD05	2"	2"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B03N
GATE VA	VGA	VGAAB004	2"	12"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 NACE API 600 (RP-1718-999-6300-0004)	B03N
GATE VA	VGA	VGAAB006	14"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	B03N
GATE VA	VGA	VGAAB007	26"	36"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	B03N
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602RP-1718-999-6300-004	B03N
GATE VA	VGF	VGFAB002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE ANSI CL150 NACE API 602 (RP-1718-999-6300-0004)	B03N
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602RP-1718-999-6300-004	B03N
GLOBE VA	VLA	VLAAB002	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 NACE BS 1873 (RP-1718-999-6300-0004)	B03N
GLOBE VA	VLA	VLAAB006	8"	10"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	B03N
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW ***316SS W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B03N
LATERAL Y	TL	LTL0AB01	8"	10"	LATERAL A234-WPB EQUAL BE NACE SCH20 DEG-45 (RP-1718-999-6300-0003)	B03N
LATERAL Y	TL	LTL0AC01	12"	12"	LATERAL A234-WPB EQUAL BE NACE SCH30 DEG-45 (RP-1718-999-6300-0003)	B03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
LATERAL Y	TL	LTL0AD01	6"	6"	LATERAL A234-WPB EQUAL BE NACE SCH40 DEG-45 (RP-1718-999-6300-0003)	B03N
LATERAL Y	TL	LTL0AL01	26"	28"	LATERAL A234-WPB EQUAL BE NACE STD DEG-45 (RP-1718-999-6300-0003)	B03N
NEEDLE VA	VNE	VNEAK002	3/4"	1"	NEEDLE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	B03N
NIPPLE TOE	NTO	LNTOAN01	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	B03N
NIPPLE TOE	NTT	LNTTAN00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AB02	8"	10"	PIPE API 5L-B PSL2 SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AB03	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH20 (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AB04	8"	10"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH20 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AB05	18"	24"	PIPE API 5L-B PSL2 SAW BE PE COATED 100% RT SCH20 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AC01	12"	12"	PIPE API 5L-B PSL2 SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AC02	12"	12"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH30 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AD01	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AD02	4"	6"	PIPE API 5L-B PSL2 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AD03	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AD04	4"	6"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AF02	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
PIPE	P1	LP00AF03	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AK01	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B03N
PIPE	P	LP00AL01	26"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT STD (RP-1718-999-6300-0003)	B03N
PIPE	P2	LP10AB00	8"	10"	PIPE API 5L-B PSL2 SMLS BE SCH20 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P2	LP10AB01	18"	24"	PIPE API 5L-B PSL2 SAW BE 100% RT SCH20 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P2	LP10AC00	12"	12"	PIPE API 5L-B PSL2 SMLS BE SCH30 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P2	LP10AD00	4"	6"	PIPE API 5L-B PSL2 SMLS BE SCH40 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P2	LP10AF00	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P3	LP20AB00	8"	10"	PIPE API 5L-B PSL2 SMLS BE SCH20 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P3	LP20AB01	18"	24"	PIPE API 5L-B PSL2 SAW BE 100% RT SCH20 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P3	LP20AC00	12"	12"	PIPE API 5L-B PSL2 SMLS BE SCH30 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P3	LP20AD00	4"	6"	PIPE API 5L-B PSL2 SMLS BE SCH40 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P2	LP20AD04	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED NACE(RP-1718-999-6300-0003)	B03N
PIPE	P3	LP20AF00	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P3	LP30AD00	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PIPE	P3	LP30AK03	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	B03N
PLUG	PLG	LPLGAW01	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	B03N
PLUG VA	VPL	VPLAB003	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B03N
PLUG VA	VPL	VPLAB004	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	B03N
PLUG VA	VPL	VPLAF004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B03N
RED CON	RC	LRC0AB02	8"	10"	REDUCER A234-WPB CON. SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
RED CON	RC	LRC0AB03	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
RED CON	RC	LRC0AC01	12"	12"	REDUCER A234-WPB CON. SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
RED CON	RC	LRC0AD01	3"	6"	REDUCER A234-WPB CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
RED CON	RC	LRC0AF01	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
RED CON	RC	LRC0AL01	26"	28"	REDUCER A234-WPB CON. WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AB02	8"	10"	REDUCER A234-WPB ECC. SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
RED ECC	RE	LRE0AB03	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
RED ECC	RE	LRE0AC01	12"	12"	REDUCER A234-WPB ECC. SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
RED ECC	RE	LRE0AD01	3"	6"	REDUCER A234-WPB ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
RED ECC	RE	LRE0AF01	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
RED ECC	RE	LRE0AL01	26"	28"	REDUCER A234-WPB ECC. WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N
RED LATERAL Y	RL	LRL0AB01	8"	10"	LATERAL A234-WPB REDUCING BE NACE SCH20 DEG-45 (RP-1718-999-6300-0003)	B03N
RED LATERAL Y	RL	LRL0AC01	12"	12"	LATERAL A234-WPB REDUCING BE NACE SCH30 DEG-45 (RP-1718-999-6300-0003)	B03N
RED LATERAL Y	RL	LRL0AD01	6"	6"	LATERAL A234-WPB REDUCING BE NACE SCH40 DEG-45 (RP-1718-999-6300-0003)	B03N
RED LATERAL Y	RL	LRL0AL01	26"	28"	LATERAL A234-WPB REDUCING BE NACE STD DEG-45 (RP-1718-999-6300-0003)	B03N
SINGLE IBB VA	SFA	LSFAAD01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SLA	LSLAAD01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SLB	LSLBAD01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SLC	LSLCAD02	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SLC	LSLCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SLF	LSLFAD00	3"	3"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3 FLGD-RF x 3" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SPA	LSPAAD01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SPB	LSPBAF01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SINGLE IBB VA	SPC	LSPCAD01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B03N
SOCKOLET	TSO	LTSOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF00AF07	3"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF00AF08	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF00AF09	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F2	LF00AH04	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F2	LF00AH05	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F3	LF00AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF10AF06	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF10AF07	12"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF10AF08	30"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F1	LF10AF09	26"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F2	LF10AH10	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F3	LF10AK19	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F2	LF20AH01	8"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F2	LF20AH02	12"	12"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F3	LF20AK00	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F3	LF30AK01	8"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B03N
SPCL FLANGE	F3	LF30AK02	12"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B03N
SPCL FLG JACK	FJ1	LFJ0AF06	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B03N
SPCL FLG JACK	FJ1	LFJ1AF01	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0003)	B03N
SPCL FLG JACK	FJ1	LFJ1AF02	12"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B03N
SPE BLIND	FSB	LFSBAD02	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003)	B03N
SPE BLIND	FSB	LFSBAD03	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003)	B03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG CON B-P	RCB	LRCBAD01	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	B03N
SWG CON B-P	RCB	LRCBAF01	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	B03N
SWG CON PE	RCP	LRCPAK01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B03N
SWG CON P-T	RC2	LRC2AN01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0003)	B03N
SWG ECC B-P	REB	LREBAD01	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	B03N
SWG ECC B-P	REB	LREBAF01	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	B03N
SWG ECC PE	REP	LREPAK01	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AB02	8"	10"	TEE A234-WPB EQUAL SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AB03	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AC01	12"	12"	TEE A234-WPB EQUAL SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AD01	3"	6"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AF01	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AL01	26"	28"	TEE A234-WPB EQUAL WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N
TEE	TE	LTE0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AB02	8"	10"	TEE A234-WPB EQUAL SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AB03	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AC01	12"	12"	TEE A234-WPB EQUAL SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AD01	3"	6"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AF01	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AL01	26"	28"	TEE A234-WPB EQUAL WELDED BE NACE STD (RP-1718-999-6300-0003)	B03N
TEE RED	TR	LTR0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B03N
THREADOLET	TTO	LTTOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B03N
WELDOLET	TWO	LTWOAB01	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH20 (RP-1718-999-6300-0003)	B03N
WELDOLET	TWO	LTWOAD01	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0003)	B03N
WELDOLET	TWO	LTWOAF01	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	B03N
BALL VA	VB3	VBFAB022	2"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VB3	VBFAB023	8"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VB3	VBFAB024	26"	30"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/B16.47-A FLGD/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VB3	VBFAK010	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100)***TUNGSTEN CARBIDE COATED*** BALL W/METAL SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE)BS 5351 GRAPHITE SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VBF	VBFAKX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXSFULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE RP-1718-999-6300-0004	B03S
BALL VA	VB4	VBRAB017	2"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VB4	VBRAB018	8"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B03S
BALL VA	VB4	VBRAB019	26"	30"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/B16.47-A FLGD/NACE (RP-1718-999-6300-0004)	B03S
BUTTERFLY VA	VUF	VUFAB004	2"	6"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS ANSI CL150 NACE API 609 TRIPPLE OFFSET DESIGN (RP-1718-999-6300-0004)	B03S
BUTTERFLY VA	VUF	VUFAB005	8"	24"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL150 GEAR OPERATED NACE API 609 TRIPPLE OFFSET DESIGN (RP-1718-999-6300-0004)	B03S
CAP	C	LC00AB02	8"	10"	CAP A234-WPB SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AC02	12"	12"	CAP A234-WPB SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AD02	3"	6"	CAP A234-WPB SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AF02	2"	2"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AL02	26"	28"	CAP A234-WPB SMLS BE NACE STD (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AM01	38"	44"	CAP A234-WPB SMLS BE NACE XS (RP-1718-999-6300-0002)	B03S
CAP	C	LC00AQ02	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00AZ02	46"	***50"***	CAP A234-WPB SMLS BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
CAP THD	CT	LCT0AQ02	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	B03S
CPLG FULL	CF	LCF0AQ02	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
ELBOLET	TEW	LTEWAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AB04	8"	10"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AB05	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AC02	12"	12"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AD02	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AF02	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AL02	26"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AM01	38"	44"	ELBOW A234-WPB DEG-45 WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AQ02	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
ELBOW	E4	LE40AZ02	46"	***50"***	ELBOW A234-WPB DEG-45 WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AB04	8"	10"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AB05	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AC02	12"	12"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AD02	3"	6"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AF02	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AL02	26"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AM01	38"	44"	ELBOW A234-WPB 90-LR WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AQ02	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
ELBOW	E9	LE90AZ02	46"	***50"***	ELBOW A234-WPB 90-LR WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
ELBOW BEND	EB4	LEB4AD00	8"	10"	BEND API 5L-B PSL2 SMLS BE NACE 45 DEG, R=3D SCH40 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	B03S
ELBOW BEND	EB9	LEB9AD00	8"	10"	BEND API 5L-B PSL2 SMLS BE NACE 90 DEG, R=3D SCH40 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	B03S
FLANGE	F	LF00AD19	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD20	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD21	3"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD22	2"	2"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD23	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD24	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD25	38"	44"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD26	46"	***50"***	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
FLANGE	F	LF00AD27	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B03S
FLG BLIND	FB	LFB0AD04	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5) NACE (RP-1718-999-6300-0002)	B03S
FLG BLIND	FB	LFB0AD05	26"	***50"***	FLANGE A105 BLIND RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	B03S
FLG BLIND	FB1	LFB0AF03	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0002)	B03S
FLG BLIND	FB1	LFB1AF01	26"	***50"***	FLANGE A105 BLIND RF CL300 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	B03S
FLG JACK	FJ	LFJ0AD12	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0002)	B03S
FLG JACK	FJ	LFJ0AD13	12"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0002)	B03S
FLG JACK	FJ	LFJ0AD14	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	B03S
FLG JACK	FJ	LFJ0AD59	28"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD NACE (RP-1718-999-6300-0002)	B03S
FLG RED	RF	LRF0AD08	3"	3"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) NACE SCH40 x SCH80 (RP-1718-999-6300-0002)	B03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG RED	RF	LRF0AD09	2"	2"	FLANGE A105 WN-REDUCING RF CL150 (ASME B16.5) NACE SCH80 x SCH160 (RP-1718-999-6300-0002)	B03S
FLG RED	RF1	LRF0AF02	3"	3"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B03S
INSUL GASKET	GK1	LGK0ZF00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B03S
LATERAL Y	TL	LTL0AB02	8"	10"	LATERAL A234-WPB EQUAL BE NACE SCH20 DEG-45 (RP-1718-999-6300-0002)	B03S
LATERAL Y	TL	LTL0AC02	12"	12"	LATERAL A234-WPB EQUAL BE NACE SCH30 DEG-45 (RP-1718-999-6300-0002)	B03S
LATERAL Y	TL	LTL0AD02	6"	6"	LATERAL A234-WPB EQUAL BE NACE SCH40 DEG-45 (RP-1718-999-6300-0002)	B03S
LATERAL Y	TL	LTL0AL02	26"	28"	LATERAL A234-WPB EQUAL BE NACE STD DEG-45 (RP-1718-999-6300-0002)	B03S
LATERAL Y	TL	LTL0AM01	38"	44"	LATERAL A234-WPB EQUAL BE NACE XS DEG-45 (RP-1718-999-6300-0002)	B03S
LATERAL Y	TL	LTL0AZ01	46"	48"	LATERAL A234-WPB EQUAL BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0002)	B03S
NIPPLE TOE	NTO	LNTOAN06	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	B03S
NIPPLE TOE	NTT	LNTTAN01	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AB06	8"	10"	PIPE API 5L-B PSL2 SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AB07	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH20 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AC03	12"	12"	PIPE API 5L-B PSL2 SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AD05	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AD06	4"	6"	PIPE API 5L-B PSL2 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AF04	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AK02	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AL03	26"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT STD (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AM01	38"	44"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT XS (RP-1718-999-6300-0002)	B03S
PIPE	P	LP00AZ02	46"	***50"***	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 14.27mm THK (RP-1718-999-6300-0002)	B03S
PIPE	P1	LP10AD04	4"	6"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0002)	B03S
PIPE	P1	LP10AD06	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0002)	B03S
PLUG	PLG	LPLGAW02	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AB04	8"	10"	REDUCER A234-WPB CON. SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AB05	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AC02	12"	12"	REDUCER A234-WPB CON. SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AD02	3"	6"	REDUCER A234-WPB CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AF02	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AL02	26"	28"	REDUCER A234-WPB CON. WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AM01	38"	44"	REDUCER A234-WPB CON. WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
RED CON	RC	LRC0AZ02	46"	***50"***	REDUCER A234-WPB CON. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AB04	8"	10"	REDUCER A234-WPB ECC. SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AB05	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AC02	12"	12"	REDUCER A234-WPB ECC. SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AD02	3"	6"	REDUCER A234-WPB ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AF02	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AL02	26"	28"	REDUCER A234-WPB ECC. WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AM01	38"	44"	REDUCER A234-WPB ECC. WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
RED ECC	RE	LRE0AZ02	46"	***50"***	REDUCER A234-WPB ECC. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
RED LATERAL Y	RL	LRL0AB02	8"	10"	LATERAL A234-WPB REDUCING BE NACE SCH20 DEG-45 (RP-1718-999-6300-0002)	B03S
RED LATERAL Y	RL	LRL0AC02	12"	12"	LATERAL A234-WPB REDUCING BE NACE SCH30 DEG-45 (RP-1718-999-6300-0002)	B03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED LATERAL Y	RL	LRL0AD02	6"	6"	LATERAL A234-WPB REDUCING BE NACE SCH40 DEG-45 (RP-1718-999-6300-0002)	B03S
RED LATERAL Y	RL	LRL0AL02	26"	28"	LATERAL A234-WPB REDUCING BE NACE STD DEG-45 (RP-1718-999-6300-0002)	B03S
RED LATERAL Y	RL	LRL0AM01	38"	44"	LATERAL A234-WPB REDUCING BE NACE XS DEG-45 (RP-1718-999-6300-0002)	B03S
RED LATERAL Y	RL	LRL0AZ04	46"	48"	LATERAL A234-WPB REDUCING BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0002)	B03S
SINGLE IBB VA	SF1	LSF1AD00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDL EVENT) AED VITON SEAL	B03S
SINGLE IBB VA	SL1	LSL1AD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4 FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLEVENT) AED VITON SEAL	B03S
SINGLE IBB VA	SL2	LSL2AD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)AED VITON SEAL	B03S
SINGLE IBB VA	SL3	LSL3AD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AEDVITON SEAL	B03S
SINGLE IBB VA	SLC	LSLCAD02	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B03S
SINGLE IBB VA	SP1	LSP1AD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLEVENT) AED VITON SEAL	B03S
SINGLE IBB VA	SP2	LSP2AF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)AED VITON SEAL	B03S
SINGLE IBB VA	SP3	LSP3AD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)AED VITON SEAL	B03S
SOCKOLET	TSO	LTSOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF00AF10	3"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF00AF11	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF00AF12	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F2	LF00AH06	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F2	LF00AH07	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F3	LF00AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF10	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF11	12"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF12	30"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF13	26"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF14	38"	44"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F1	LF10AF15	46"	***50"***	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F2	LF10AH11	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F3	LF10AK21	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F2	LF20AH09	8"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F2	LF20AH10	12"	12"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F3	LF20AK06	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F3	LF30AK08	8"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B03S
SPCL FLANGE	F3	LF30AK09	12"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B03S
SPCL FLG JACK	FJ1	LFJ0AF09	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	B03S
SPCL FLG JACK	FJ1	LFJ1AF03	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0002)	B03S
SPCL FLG JACK	FJ1	LFJ1AF04	12"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0002)	B03S
SPE BLIND	FSB	LFSBAD04	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0002)	B03S
SPE BLIND	FSB	LFSBAD05	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0002)	B03S
SPE BLIND	FSB	LFSBAD18	26"	***50"***	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	B03S
SWG CON B-P	RCB	LRCBAD02	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	B03S
SWG CON B-P	RCB	LRCBAF02	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	B03S
SWG CON PE	RCP	LRCPAK02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B03S
SWG CON P-T	RC2	LRC2AN02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0002)	B03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG ECC B-P	REB	LREBAD02	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	B03S
SWG ECC B-P	REB	LREBAF02	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	B03S
SWG ECC PE	REP	LREPAK02	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AB04	8"	10"	TEE A234-WPB EQUAL SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AB05	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AC02	12"	12"	TEE A234-WPB EQUAL SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AD02	3"	6"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AF02	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AL02	26"	28"	TEE A234-WPB EQUAL WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AM01	38"	44"	TEE A234-WPB EQUAL WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AQ02	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
TEE	TE	LTE0AZ02	46"	***50"***	TEE A234-WPB EQUAL WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AB04	8"	10"	TEE A234-WPB REDUCING SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AB05	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AC02	12"	12"	TEE A234-WPB REDUCING SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AD02	3"	6"	TEE A234-WPB REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AF02	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AL02	26"	28"	TEE A234-WPB REDUCING WELDED BE NACE STD (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AM01	38"	44"	TEE A234-WPB REDUCING WELDED BE NACE XS (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AQ02	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B03S
TEE RED	TR	LTR0AZ02	46"	***50"***	TEE A234-WPB EQUAL WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B03S
THREADOLET	TTO	LTTOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	B03S
WELDOLET	TWO	LTWOAB02	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH20 (RP-1718-999-6300-0002)	B03S
WELDOLET	TWO	LTWOAD02	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0002)	B03S
WELDOLET	TW1	LTWOAF02	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	B03S
BALL VA	VBF	VBFAB004	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B06
BALL VA	VBF	VBFAB005	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	B06
BALL VA	VBF	VBFAB006	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B06
BALL VA	VBF	VBFAK004	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B06
BALL VA	VBR	VBRAB004	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B06
BALL VA	VBR	VBRAB005	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	B06
BALL VA	VBR	VBRAB006	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B06
BOLTS	B	LB00A000	1/2"	36"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B06
CAP	C	LC00AB00	26"	28"	CAP A234-WPB SMLS BE SCH20	B06
CAP	C	LC00AC00	18"	20"	CAP A234-WPB SMLS BE SCH30	B06
CAP	C	LC00AD00	12"	16"	CAP A234-WPB SMLS BE SCH40	B06
CAP	C	LC00AE00	8"	10"	CAP A234-WPB SMLS BE SCH60	B06
CAP	C	LC00AF00	6"	6"	CAP A234-WPB SMLS BE SCH80	B06
CAP	C	LC00AH00	4"	4"	CAP A234-WPB SMLS BE SCH120	B06
CAP	C	LC00AK00	2"	3"	CAP A234-WPB SMLS BE SCH160	B06
CAP	C	LC00AM00	24"	24"	CAP A234-WPB SMLS BE XS	B06
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	B06

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	B06
CHECK VA	VCA	VCAAB001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B06
CHECK VA	VCA	VCAAB002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594	B06
CHECK VA	VCA	VCAAB009	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B06
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B06
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	B06
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	B06
ELBOW	E4	LE40AB01	26"	28"	ELBOW A234-WPB DEG-45 WELDED BE SCH20	B06
ELBOW	E4	LE40AC03	18"	20"	ELBOW A234-WPB DEG-45 WELDED BE SCH30	B06
ELBOW	E4	LE40AD00	12"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B06
ELBOW	E4	LE40AE00	8"	10"	ELBOW A234-WPB DEG-45 SMLS BE SCH60	B06
ELBOW	E4	LE40AF00	6"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	B06
ELBOW	E4	LE40AH00	4"	4"	ELBOW A234-WPB DEG-45 SMLS BE SCH120	B06
ELBOW	E4	LE40AK00	2"	3"	ELBOW A234-WPB DEG-45 SMLS BE SCH160	B06
ELBOW	E4	LE40AM00	24"	24"	ELBOW A234-WPB DEG-45 WELDED BE XS	B06
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	B06
ELBOW	E9	LE90AB01	26"	28"	ELBOW A234-WPB 90-LR WELDED BE SCH20	B06
ELBOW	E9	LE90AC03	18"	20"	ELBOW A234-WPB 90-LR WELDED BE SCH30	B06
ELBOW	E9	LE90AD00	12"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH40	B06
ELBOW	E9	LE90AE00	8"	10"	ELBOW A234-WPB 90-LR SMLS BE SCH60	B06
ELBOW	E9	LE90AF00	6"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH80	B06
ELBOW	E9	LE90AH00	4"	4"	ELBOW A234-WPB 90-LR SMLS BE SCH120	B06
ELBOW	E9	LE90AK00	2"	3"	ELBOW A234-WPB 90-LR SMLS BE SCH160	B06
ELBOW	E9	LE90AM00	24"	24"	ELBOW A234-WPB 90-LR WELDED BE XS	B06
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	B06
FLANGE	F	LF00AD02	12"	16"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B06
FLANGE	F	LF00AD07	18"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH30	B06
FLANGE	F	LF00AD08	6"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH80	B06
FLANGE	F	LF00AD09	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) SCH20	B06
FLANGE	F	LF00AD28	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH60	B06
FLANGE	F	LF00AD29	4"	4"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH120	B06
FLANGE	F	LF00AD30	2"	3"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH160	B06
FLANGE	F	LF00AD31	24"	24"	FLANGE A105 WN RF CL150 (ASME B16.5) XS	B06
FLANGE	F	LF00AD32	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) SCH30	B06
FLANGE	F	LF00AD33	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) XXS	B06
FLG BLIND	FB	LFB0AD00	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B06
FLG BLIND	FB	LFB0AD01	26"	46"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B06
FLG BLIND	FB1	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	B06
FLG BLIND	FB1	LFB0AF01	26"	46"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	B06
FLG JACK	FJ	LFJ0AD02	12"	16"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B06
FLG JACK	FJ	LFJ0AD04	18"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30	B06
FLG JACK	FJ	LFJ0AD05	6"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH80	B06

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG JACK	FJ	LFJ0AD17	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH60	B06
FLG JACK	FJ	LFJ0AD18	4"	4"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH120	B06
FLG JACK	FJ	LFJ0AD20	24"	24"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW XS	B06
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B06
GASKET	G	LG00ZD01	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B06
GATE VA	VGA	VGAAB001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B06
GATE VA	VGA	VGAAB002	6"	12"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B06
GATE VA	VGA	VGAAB003	14"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B06
GATE VA	VGA	VGAAB011	26"	36"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B06
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B06
GATE VA	VGF	VGFAB001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B06
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B06
GLOBE VA	VLA	VLAAB001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B06
GLOBE VA	VLA	VLAAB003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B06
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B06
LATERAL Y	TL	LTL0AB00	26"	28"	LATERAL A234-WPB EQUAL BE SCH20 DEG-45	B06
LATERAL Y	TL	LTL0AC00	18"	20"	LATERAL A234-WPB EQUAL BE SCH30 DEG-45	B06
LATERAL Y	TL	LTL0AD00	12"	16"	LATERAL A234-WPB EQUAL BE SCH40 DEG-45	B06
LATERAL Y	TL	LTL0AE00	8"	10"	LATERAL A234-WPB EQUAL BE SCH60 DEG-45	B06
LATERAL Y	TL	LTL0AF00	6"	6"	LATERAL A234-WPB EQUAL BE SCH80 DEG-45	B06
LATERAL Y	TL	LTL0AM00	24"	24"	LATERAL A234-WPB EQUAL BE XS DEG-45	B06
NIPPLE TOE	NTO	LNTOAN02	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	B06
PIPE	P	LP00AB01	26"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20	B06
PIPE	P	LP00AC05	18"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH30	B06
PIPE	P	LP00AD00	12"	16"	PIPE API 5L-B PSL1 SMLS BE SCH40	B06
PIPE	P	LP00AE00	8"	10"	PIPE API 5L-B PSL1 SMLS BE SCH60	B06
PIPE	P	LP00AF01	6"	6"	PIPE API 5L-B PSL1 SMLS BE SCH80	B06
PIPE	P	LP00AH00	4"	4"	PIPE API 5L-B PSL1 SMLS BE SCH120	B06
PIPE	P	LP00AK03	2"	3"	PIPE API 5L-B PSL1 SMLS BE SCH160	B06
PIPE	P	LP00AM00	24"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT XS	B06
PIPE	P	LP00AN00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE XXS	B06
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	B06
PLUG VA	VPL	VPLAB001	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B06
PLUG VA	VPL	VPLAB002	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B06
PLUG VA	VPL	VPLAF003	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/XXS REDUCING BORE, W-OP (F-SAFE) BS 5353	B06
RED CON	RC	LRC0AB01	26"	28"	REDUCER A234-WPB CON. WELDED BE SCH20	B06
RED CON	RC	LRC0AC03	18"	20"	REDUCER A234-WPB CON. WELDED BE SCH30	B06
RED CON	RC	LRC0AD00	12"	16"	REDUCER A234-WPB CON. SMLS BE SCH40	B06
RED CON	RC	LRC0AE00	8"	10"	REDUCER A234-WPB CON. SMLS BE SCH60	B06
RED CON	RC	LRC0AF00	6"	6"	REDUCER A234-WPB CON. SMLS BE SCH80	B06
RED CON	RC	LRC0AH00	4"	4"	REDUCER A234-WPB CON. SMLS BE SCH120	B06
RED CON	RC	LRC0AK00	2"	3"	REDUCER A234-WPB CON. SMLS BE SCH160	B06

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0AM00	24"	24"	REDUCER A234-WPB CON. WELDED BE XS	B06
RED ECC	RE	LRE0AB01	26"	28"	REDUCER A234-WPB ECC. WELDED BE SCH20	B06
RED ECC	RE	LRE0AC03	18"	20"	REDUCER A234-WPB ECC. WELDED BE SCH30	B06
RED ECC	RE	LRE0AD00	12"	16"	REDUCER A234-WPB ECC. SMLS BE SCH40	B06
RED ECC	RE	LRE0AE00	8"	10"	REDUCER A234-WPB ECC. SMLS BE SCH60	B06
RED ECC	RE	LRE0AF00	6"	6"	REDUCER A234-WPB ECC. SMLS BE SCH80	B06
RED ECC	RE	LRE0AH00	4"	4"	REDUCER A234-WPB ECC. SMLS BE SCH120	B06
RED ECC	RE	LRE0AK00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH160	B06
RED ECC	RE	LRE0AM00	24"	24"	REDUCER A234-WPB ECC. WELDED BE XS	B06
RED LATERAL Y	RL	LRL0AB00	26"	28"	LATERAL A234-WPB REDUCING BE SCH20 DEG-45	B06
RED LATERAL Y	RL	LRL0AC00	18"	20"	LATERAL A234-WPB REDUCING BE SCH30 DEG-45	B06
RED LATERAL Y	RL	LRL0AD00	12"	16"	LATERAL A234-WPB REDUCING BE SCH40 DEG-45	B06
RED LATERAL Y	RL	LRL0AE00	8"	10"	LATERAL A234-WPB REDUCING BE SCH60 DEG-45	B06
RED LATERAL Y	RL	LRL0AF00	6"	6"	LATERAL A234-WPB REDUCING BE SCH80 DEG-45	B06
RED LATERAL Y	RL	LRL0AM00	24"	24"	LATERAL A234-WPB REDUCING BE XS DEG-45	B06
SINGLE IBB VA	SFA	LSFAAD00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SLA	LSLAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SLB	LSLBAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SLC	LSLCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SPA	LSPAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SINGLE IBB VA	SPC	LSPCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B06
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	B06
SPCL FLANGE	F1	LF00AF01	12"	16"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B06
SPCL FLANGE	F1	LF00AF03	18"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH30	B06
SPCL FLANGE	F1	LF00AF04	6"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH80	B06
SPCL FLANGE	F2	LF00AH00	12"	16"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	B06
SPCL FLANGE	F2	LF00AH01	6"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	B06
SPCL FLANGE	F2	LF00AH14	8"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH60	B06
SPCL FLANGE	F2	LF00AH20	2"	3"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH160	B06
SPCL FLANGE	F3	LF00AK00	6"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	B06
SPCL FLANGE	F3	LF00AK01	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH160	B06
SPCL FLANGE	F3	LF00AK06	4"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH120	B06
SPCL FLANGE	F3	LF00AL17	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) XXS	B06
SPCL FLANGE	F1	LF10AF04	26"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) SCH20	B06
SPCL FLANGE	F1	LF10AF16	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH60	B06
SPCL FLANGE	F1	LF10AF17	4"	4"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH120	B06
SPCL FLANGE	F1	LF10AF18	2"	3"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH160	B06
SPCL FLANGE	F1	LF10AF19	24"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) XS	B06
SPCL FLANGE	F1	LF10AF20	30"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) SCH30	B06
SPCL FLANGE	F1	LF10AF21	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) XXS	B06

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F2	LF10AH01	18"	20"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH30	B06
SPCL FLANGE	F3	LF10AK00	12"	16"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	B06
SPCL FLANGE	F3	LF10AK01	8"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH60	B06
SPCL FLANGE	F3	LF10AK82	18"	20"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH30	B06
SPCL FLANGE	F2	LF20AH11	4"	4"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH120	B06
SPCL FLANGE	F2	LF20AH12	24"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) XS	B06
SPCL FLANGE	F2	LF20AH13	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) XXS	B06
SPCL FLANGE	F3	LF30AK10	24"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) XS	B06
SPCL FLG JACK	FJ1	LFJ0AF01	12"	16"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B06
SPCL FLG JACK	FJ1	LFJ0AF03	18"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	B06
SPCL FLG JACK	FJ1	LFJ0AF04	6"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH80	B06
SPCL FLG JACK	FJ1	LFJ1AF05	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH60	B06
SPCL FLG JACK	FJ1	LFJ1AF06	4"	4"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH120	B06
SPCL FLG JACK	FJ1	LFJ1AF08	24"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW XS	B06
SPCL GASKET	G1	LG00ZF00	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B06
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B06
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B06
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B06
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B06
SPE BLIND	FSB	LFSBAD00	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B06
SPE BLIND	FSB	LFSBAD01	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B06
SWG CON B-P	RCB	LRCBAH00	4"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH120	B06
SWG CON B-P	RCB	LRCBAK00	2"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH160	B06
SWG CON PE	RCP	LRCPAN00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE XXS	B06
SWG ECC B-P	REB	LREBAH00	4"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH120	B06
SWG ECC B-P	REB	LREBAK00	2"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH160	B06
SWG ECC PE	REP	LREPAN00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE XXS	B06
TEE	TE	LTE0AB01	26"	28"	TEE A234-WPB EQUAL WELDED BE SCH20	B06
TEE	TE	LTE0AC03	18"	20"	TEE A234-WPB EQUAL WELDED BE SCH30	B06
TEE	TE	LTE0AD00	12"	16"	TEE A234-WPB EQUAL SMLS BE SCH40	B06
TEE	TE	LTE0AE00	8"	10"	TEE A234-WPB EQUAL SMLS BE SCH60	B06
TEE	TE	LTE0AF00	6"	6"	TEE A234-WPB EQUAL SMLS BE SCH80	B06
TEE	TE	LTE0AH00	4"	4"	TEE A234-WPB EQUAL SMLS BE SCH120	B06
TEE	TE	LTE0AK00	2"	3"	TEE A234-WPB EQUAL SMLS BE SCH160	B06
TEE	TE	LTE0AM00	24"	24"	TEE A234-WPB EQUAL WELDED BE XS	B06
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	B06
TEE RED	TR	LTR0AB01	26"	28"	TEE A234-WPB REDUCING WELDED BE SCH20	B06
TEE RED	TR	LTR0AC03	18"	20"	TEE A234-WPB REDUCING WELDED BE SCH30	B06
TEE RED	TR	LTR0AD00	12"	16"	TEE A234-WPB REDUCING SMLS BE SCH40	B06
TEE RED	TR	LTR0AE00	8"	10"	TEE A234-WPB REDUCING SMLS BE SCH60	B06
TEE RED	TR	LTR0AF00	6"	6"	TEE A234-WPB REDUCING SMLS BE SCH80	B06
TEE RED	TR	LTR0AH00	4"	4"	TEE A234-WPB REDUCING SMLS BE SCH120	B06

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AK00	2"	3"	TEE A234-WPB REDUCING SMLS BE SCH160	B06
TEE RED	TR	LTR0AM00	24"	24"	TEE A234-WPB REDUCING WELDED BE XS	B06
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	B06
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	B06
WELDOLET	TWO	LTWOAE00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH60	B06
WELDOLET	TWO	LTWOAF00	6"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	B06
WELDOLET	TWO	LTWOAH00	4"	4"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH120	B06
WELDOLET	TWO	LTWOAK00	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160	B06
BALL VA	VBF	VBFAB007	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBF	VBFAB008	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBF	VBFAB009	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/ASME B16-47-A FLGD/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBF	VBFAK006	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBR	VBRAB007	2"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBR	VBRAB008	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	B06N
BALL VA	VBR	VBRAB009	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/ASME B16-47-A FLGD/NACE (RP-1718-999-6300-0004)	B06N
BOLTS	B	LB00A001	1/2"	36"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B06N
CAP	C	LC00AB01	26"	28"	CAP A234-WPB SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AC01	18"	20"	CAP A234-WPB SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AD01	12"	16"	CAP A234-WPB SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AE01	8"	10"	CAP A234-WPB SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AF01	6"	6"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AH01	4"	4"	CAP A234-WPB SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AK01	2"	3"	CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AM02	24"	24"	CAP A234-WPB SMLS BE NACE XS (RP-1718-999-6300-0003)	B06N
CAP	C	LC00AQ01	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
CAP THD	CT	LCT0AQ01	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B06N
CHECK VA	VCA	VCAAB003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B06N
CHECK VA	VCA	VCAAB004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B06N
CHECK VA	VCA	VCAAB010	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 NACE API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	B06N
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B06N
CPLG FULL	CF	LCF0AQ01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
ELBOLET	TEW	LTEWAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AB03	26"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AC04	18"	20"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AD01	12"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AE01	8"	10"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AF01	6"	6"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AH01	4"	4"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AK01	2"	3"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AM02	24"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
ELBOW	E4	LE40AQ01	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AB03	26"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AC04	18"	20"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AD01	12"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AE01	8"	10"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AF01	6"	6"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AH01	4"	4"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AK01	2"	3"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AM02	24"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
ELBOW	E9	LE90AQ01	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
ELBO		***LEB9AE00***	***10***		***BEND API 5L-B PSL2 SMLS BE NACE 90 DEG, R=3D SCH60 (RP-1718-999-6300-0003)***	***B06N***
FLANGE	F	LF00AD13	18"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD14	12"	16"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD15	6"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD16	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD34	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH60 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD35	4"	4"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD36	2"	3"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD37	24"	24"	FLANGE A105 WN RF CL150 (ASME B16.5) NACE XS (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD38	30"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) NACE SCH30 (RP-1718-999-6300-0003)	B06N
FLANGE	F	LF00AD39	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) NACE XXS (RP-1718-999-6300-0003)	B06N
FLG BLIND	FB	LFB0AD02	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B06N
FLG BLIND	FB	LFB0AD03	26"	46"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B06N
FLG BLIND	FB1	LFB0AF02	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B06N
FLG BLIND	FB1	LFB1AF00	26"	46"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD08	18"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD09	12"	16"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD10	6"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD22	8"	10"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH60 NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD23	4"	4"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	B06N
FLG JACK	FJ	LFJ0AD25	24"	24"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW XS NACE (RP-1718-999-6300-0003)	B06N
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B06N
GASKET	G	LG00ZD01	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B06N
GATE VA	VGA	VGAAB004	2"	12"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 NACE API 600 (RP-1718-999-6300-0004)	B06N
GATE VA	VGA	VGAAB006	14"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	B06N
GATE VA	VGA	VGAAB007	26"	36"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	B06N
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	B06N
GATE VA	VGF	VGFAB002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS ***W/STELLITE SEATS & DISC*** TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 NACE API 602 (RP-1718-999-6300-0004)	B06N
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	B06N
GLOBE VA	VLA	VLAAB002	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 NACE BS 1873 (RP-1718-999-6300-0004)	B06N
GLOBE VA	VLA	VLAAB006	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	B06N
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B06N
LATERAL Y	TL	LTL0AB06	26"	28"	LATERAL A234-WPB EQUAL BE SCH20 DEG-45 (RP-1718-999-6300-0003)	B06N
LATERAL Y	TL	LTL0AC06	18"	20"	LATERAL A234-WPB EQUAL BE SCH30 DEG-45 (RP-1718-999-6300-0003)	B06N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
LATERAL Y	TL	LTL0AD06	12"	16"	LATERAL A234-WPB EQUAL BE SCH40 DEG-45 (RP-1718-999-6300-0003)	B06N
LATERAL Y	TL	LTL0AE01	8"	10"	LATERAL A234-WPB EQUAL BE SCH60 DEG-45 (RP-1718-999-6300-0003)	B06N
LATERAL Y	TL	LTL0AF01	6"	6"	LATERAL A234-WPB EQUAL BE SCH80 DEG-45 (RP-1718-999-6300-0003)	B06N
LATERAL Y	TL	LTL0AM05	24"	24"	LATERAL A234-WPB EQUAL BE XS DEG-45 (RP-1718-999-6300-0003)	B06N
NIPPLE TOE	NTO	LNTOAN01	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AB03	26"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH20 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AC06	18"	20"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH30 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AD02	12"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AE01	8"	10"	PIPE API 5L-B PSL2 SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AF06	6"	6"	PIPE API 5L-B PSL2 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AH01	4"	4"	PIPE API 5L-B PSL2 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AK04	2"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AM03	24"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT XS (RP-1718-999-6300-0003)	B06N
PIPE	P	LP00AN01	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE XXS (RP-1718-999-6300-0003)	B06N
PLUG	PLG	LPLGAW01	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	B06N
PLUG VA	VPL	VPLAB003	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B06N
PLUG VA	VPL	VPLAB004	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	B06N
PLUG VA	VPL	VPLAF009	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/XXS REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B06N
RED CON	RC	LRC0AB03	26"	28"	REDUCER A234-WPB CON. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AC04	18"	20"	REDUCER A234-WPB CON. WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AD01	12"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AE01	8"	10"	REDUCER A234-WPB CON. SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AF01	6"	6"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AH01	4"	4"	REDUCER A234-WPB CON. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AK01	2"	3"	REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
RED CON	RC	LRC0AM02	24"	24"	REDUCER A234-WPB CON. WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AB03	26"	28"	REDUCER A234-WPB ECC. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AC04	18"	20"	REDUCER A234-WPB ECC. WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AD01	12"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AE01	8"	10"	REDUCER A234-WPB ECC. SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AF01	6"	6"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AH01	4"	4"	REDUCER A234-WPB ECC. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AK01	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
RED ECC	RE	LRE0AM02	24"	24"	REDUCER A234-WPB ECC. WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AB06	26"	28"	LATERAL A234-WPB REDUCING BE SCH20 DEG-45 (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AC06	18"	20"	LATERAL A234-WPB REDUCING BE SCH30 DEG-45 (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AD06	12"	16"	LATERAL A234-WPB REDUCING BE SCH40 DEG-45 (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AE01	8"	10"	LATERAL A234-WPB REDUCING BE SCH60 DEG-45 (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AF01	6"	6"	LATERAL A234-WPB REDUCING BE SCH80 DEG-45 (RP-1718-999-6300-0003)	B06N
RED LATERAL Y	RL	LRL0AM05	24"	24"	LATERAL A234-WPB REDUCING BE XS DEG-45 (RP-1718-999-6300-0003)	B06N
SINGLE IBB VA	SFA	LSFAAD01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SLA	LSLAAD01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SLB	LSLBAD01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SLC	LSLCAD02	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SLC	LSLCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SPA	LSPAAD01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SPB	LSPBAF01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SINGLE IBB VA	SPC	LSPCAD01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B06N
SOCKOLET	TSO	LTSOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF00AF07	12"	16"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF00AF08	6"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF00AH04	6"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF00AH32	2"	3"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF00AK02	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF00AK17	4"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF07	18"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF08	26"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF22	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH60 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF23	4"	4"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF24	2"	3"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF25	24"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE XS (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF26	30"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) NACE SCH30 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F1	LF10AF27	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) NACE XXS (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF10AH10	12"	16"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF10AK19	6"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF20AH02	18"	20"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF20AH14	8"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH60 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF20AH15	4"	4"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF20AH16	24"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE XS (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F2	LF20AH17	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE XXS (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF20AK00	12"	16"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF30AK02	18"	20"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF30AK11	8"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH60 (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF30AK12	24"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE XS (RP-1718-999-6300-0003)	B06N
SPCL FLANGE	F3	LF30AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE XXS (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ0AF06	12"	16"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ0AF07	6"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ1AF02	18"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ1AF10	8"	10"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH60 NACE (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ1AF11	4"	4"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	B06N
SPCL FLG JACK	FJ1	LFJ1AF13	24"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW XS NACE (RP-1718-999-6300-0003)	B06N
SPCL GASKET	G1	LG00ZF00	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B06N
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B06N
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B06N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B06N
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B06N
SPE BLIND	FSB	LFSBAD02	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003)	B06N
SPE BLIND	FSB	LFSBAD03	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003)	B06N
SWG CON B-P	RCB	LRCBAH01	4"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	B06N
SWG CON B-P	RCB	LRCBAK01	2"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	B06N
SWG CON PE	RCP	LRCPAN01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE XXS (RP-1718-999-6300-0003)	B06N
SWG ECC B-P	REB	LREBAH01	4"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	B06N
SWG ECC B-P	REB	LREBAK01	2"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	B06N
SWG ECC PE	REP	LREPAN01	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE XXS (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AB03	26"	28"	TEE A234-WPB EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AC04	18"	20"	TEE A234-WPB EQUAL WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AD01	12"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AE01	8"	10"	TEE A234-WPB EQUAL SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AF01	6"	6"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AH01	4"	4"	TEE A234-WPB EQUAL SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AK01	2"	3"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AM02	24"	24"	TEE A234-WPB EQUAL WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
TEE	TE	LTE0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AB03	26"	28"	TEE A234-WPB REDUCING WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AC04	18"	20"	TEE A234-WPB REDUCING WELDED BE NACE SCH30 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AD01	12"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AE01	8"	10"	TEE A234-WPB REDUCING SMLS BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AF01	6"	6"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AH01	4"	4"	TEE A234-WPB REDUCING SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AK01	2"	3"	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AM02	24"	24"	TEE A234-WPB REDUCING WELDED BE NACE XS (RP-1718-999-6300-0003)	B06N
TEE RED	TR	LTR0AQ01	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B06N
THREADOLET	TTO	LTTOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B06N
WELDOLET	TWO	LTWOAE01	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH60 (RP-1718-999-6300-0003)	B06N
WELDOLET	TWO	LTWOAF01	6"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	B06N
WELDOLET	TWO	LTWOAH01	4"	4"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-6300-0003)	B06N
WELDOLET	TWO	LTWOAK01	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0003)	B06N
BOLTS	B	LB00A000	1/2"	36"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B10
CAP	C	LC00AA00	14"	20"	CAP A234-WPB SMLS BE SCH10	B10
CAP	C	LC00AB00	8"	12"	CAP A234-WPB SMLS BE SCH20	B10
CAP	C	LC00AD00	3"	6"	CAP A234-WPB SMLS BE SCH40	B10
CAP	C	LC00AL00	32"	36"	CAP A234-WPB SMLS BE STD	B10
CAP THD	CT	LCT0AP01	1/2"	2"	CAP A105 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
CHECK VA	VCA	VCAAB007	3"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594 SERVICE CLASS A	B10
CHECK VA	VCA	VCAAB008	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594 SERVICE CLASS A	B10
CHECK VA	VCH	VCHAK002	1/2"	2"	CHECK VALVE A105 TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352 SERVICE CLASS A	B10

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CPLG FULL	CFT	LCFTAP00	1/2"	2"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
ELBOLET	TEW	LTEWAP01	1/2"	2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
ELBOW	E4	LE40AA00	14"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH10	B10
ELBOW	E4	LE40AA01	18"	20"	ELBOW A234-WPB DEG-45 WELDED BE SCH10	B10
ELBOW	E4	LE40AB00	8"	12"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	B10
ELBOW	E4	LE40AB01	24"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH20	B10
ELBOW	E4	LE40AD00	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B10
ELBOW	E4	LE40AL00	32"	36"	ELBOW A234-WPB DEG-45 WELDED BE STD	B10
ELBOW	E4	LE40AP01	1/2"	2"	ELBOW A105 DEG-45 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
ELBOW	E9	LE90AA00	14"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH10	B10
ELBOW	E9	LE90AA01	18"	20"	ELBOW A234-WPB 90-LR WELDED BE SCH10	B10
ELBOW	E9	LE90AB00	8"	12"	ELBOW A234-WPB 90-LR SMLS BE SCH20	B10
ELBOW	E9	LE90AB01	24"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH20	B10
ELBOW	E9	LE90AD00	3"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	B10
ELBOW	E9	LE90AL00	32"	36"	ELBOW A234-WPB 90-LR WELDED BE STD	B10
ELBOW	E9	LE90AP01	1/2"	2"	ELBOW A105 DEG-90 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
FLANGE	F	LF00AD00	14"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH10	B10
FLANGE	F	LF00AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH20	B10
FLANGE	F	LF00AD02	3"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B10
FLANGE	F	LF00AD03	26"	30"	FLANGE A105 WN RF CL150 (ASME B16.47-A) SCH10	B10
FLANGE	F	LF00AD04	32"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) STD	B10
FLANGE	F	LF00AD74	1/2"	2"	FLANGE A105 THRD(NPT) RF CL150 (ASME B16.5) SCH160 GALVANIZED TO A120	B10
FLG BLIND	FB	LFB0AD00	3"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B10
FLG BLIND	FB	LFB0AD01	26"	46"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B10
FLG BLIND	FB	LFB0AD15	1/2"	2"	FLANGE A105 BLIND RF CL150 (ASME B16.5) GALVANIZED TO A120	B10
FLG BLIND	FB1	LFB0AF00	3"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	B10
FLG BLIND	FB1	LFB0AF01	26"	46"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	B10
FLG BLIND	FB1	LFB1AF05	1/2"	2"	FLANGE A105 BLIND RF CL300 (ASME B16.5) GALVANIZED TO A120	B10
FLG JACK	FJ	LFJ0AD00	14"	20"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10	B10
FLG JACK	FJ	LFJ0AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B10
FLG JACK	FJ	LFJ0AD02	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B10
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B10
GASKET	G	LG00ZD01	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B10
GATE VA	VGA	VGAAB012	3"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600 SERVICE CLASS A	B10
GATE VA	VGA	VGAAB013	6"	12"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600 SERVICE CLASS A	B10
GATE VA	VGA	VGAAB014	14"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 SERVICE CLASS A	B10
GATE VA	VGA	VGAAB015	26"	36"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD SERVICE CLASS A	B10
GATE VA	VGA	VGAAK003	1/2"	2"	GATE VALVE A105 TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 SERVICE CLASS A	B10
GATE VA	VGF	VGFAB003	1/2"	2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 SERVICE CLASS A FOR EQUIP NOZZLE CONN.	B10
GLOBE VA	VLA	VLAAB007	3"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873 SERVICE CLASS A	B10
GLOBE VA	VLA	VLAAB008	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873 SERVICE CLASS A	B10
GLOBE VA	VLA	VLAAK002	1/2"	2"	GLOBE VALVE A105 TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352 SERVICE CLASS A	B10

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
NIPPLE TBE	NTB	LNTBAK00	1/2"	2"	NIPPLE API 5L-B PSL1 SMLS TBE(NPT-M) 75mm LONG SCH160 GALVANIZED TO A120	B10
PIPE	P	LP00AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE SCH10	B10
PIPE	P	LP00AA01	18"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH10	B10
PIPE	P	LP00AB00	8"	12"	PIPE API 5L-B PSL1 SMLS BE SCH20	B10
PIPE	P	LP00AB01	24"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20	B10
PIPE	P	LP00AD00	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	B10
PIPE	P	LP00AK05	1/2"	2"	PIPE API 5L-B PSL1 SMLS T&C(NPT) SCH160 GALVANIZED TO A120	B10
PIPE	P	LP00AL00	32"	36"	PIPE API 5L-B PSL1 SAW BE 100% RT STD	B10
PLUG	PLG	LPLGAK00	1/2"	2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) SCH160 GALVANIZED TO A120	B10
RED CON	RC	LRC0AA00	14"	16"	REDUCER A234-WPB CON. SMLS BE SCH10	B10
RED CON	RC	LRC0AA01	18"	20"	REDUCER A234-WPB CON. WELDED BE SCH10	B10
RED CON	RC	LRC0AB00	8"	12"	REDUCER A234-WPB CON. SMLS BE SCH20	B10
RED CON	RC	LRC0AB01	24"	24"	REDUCER A234-WPB CON. WELDED BE SCH20	B10
RED CON	RC	LRC0AD00	3"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	B10
RED CON	RC	LRC0AL00	32"	36"	REDUCER A234-WPB CON. WELDED BE STD	B10
RED CPLG TE	RCT	LRCTAK00	1/2"	2"	SWAGE A234-WPB CON. SMLS TE(NPT-M) SCH160 GALVANIZED TO A120	B10
RED ECC	RE	LRE0AA00	14"	16"	REDUCER A234-WPB ECC. SMLS BE SCH10	B10
RED ECC	RE	LRE0AA01	18"	20"	REDUCER A234-WPB ECC. WELDED BE SCH10	B10
RED ECC	RE	LRE0AB00	8"	12"	REDUCER A234-WPB ECC. SMLS BE SCH20	B10
RED ECC	RE	LRE0AB01	24"	24"	REDUCER A234-WPB ECC. WELDED BE SCH20	B10
RED ECC	RE	LRE0AD00	3"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	B10
RED ECC	RE	LRE0AL00	32"	36"	REDUCER A234-WPB ECC. WELDED BE STD	B10
SINGLE IBB VA	SFA	LSFAAD00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SLA	LSLAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SLB	LSLBAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SLC	LSLCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SPA	LSPAAD00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SINGLE IBB VA	SPC	LSPCAD00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B10
SPCL FLANGE	F1	LF00AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	B10
SPCL FLANGE	F1	LF00AF01	3"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B10
SPCL FLANGE	F2	LF00AH00	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	B10
SPCL FLANGE	F1	LF10AF00	14"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH10	B10
SPCL FLANGE	F1	LF10AF01	26"	30"	FLANGE A105 WN RF CL300 (ASME B16.47-A) SCH10	B10
SPCL FLANGE	F1	LF10AF02	32"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) STD	B10
SPCL FLANGE	F1	LF10AF49	1/2"	2"	FLANGE A105 THRD(NPT) RF CL300 (ASME B16.5) SCH160 GALVANIZED TO A120	B10
SPCL FLANGE	F2	LF10AH00	8"	12"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	B10
SPCL FLANGE	F3	LF10AK00	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	B10
SPCL FLANGE	F3	LF10AK81	8"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	B10
SPCL FLANGE	F2	LF20AH00	14"	20"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH10	B10
SPCL FLANGE	F2	LF20AH03	1/2"	2"	FLANGE A105 THRD(NPT) RF CL600 (ASME B16.5) SCH160 GALVANIZED TO A120	B10

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F3	LF30AK00	14"	20"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH10	B10
SPCL FLANGE	F3	LF30AL00	1/2"	2"	FLANGE A105 THRD(NPT) RTJ CL1500 (ASME B16.5) SCH160 GALVANIZED TO A120	B10
SPCL FLG JACK	FJ1	LFJ0AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B10
SPCL FLG JACK	FJ1	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B10
SPCL FLG JACK	FJ1	LFJ1AF00	14"	20"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10	B10
SPCL GASKET	G1	LG00ZF00	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B10
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B10
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B10
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B10
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B10
SPE BLIND	FSB	LFSBAD06	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) SCH160	B10
SPE BLIND	FSB	LFSBAD07	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) SCH160	B10
SWG CON B-T	RC3	LRC3AD00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x TSE(NPT-M) SCH40	B10
SWG ECC B-T	RE3	LRE3AD00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x TSE(NPT-M) SCH40	B10
SWG ECC TE	RET	LRETAK00	1/2"	2"	SWAGE A234-WPB ECC. SMLS TE(NPT-M) SCH160 GALVANIZED TO A120	B10
TEE	TE	LTE0AA00	14"	16"	TEE A234-WPB EQUAL SMLS BE SCH10	B10
TEE	TE	LTE0AA01	18"	20"	TEE A234-WPB EQUAL WELDED BE SCH10	B10
TEE	TE	LTE0AB00	8"	12"	TEE A234-WPB EQUAL SMLS BE SCH20	B10
TEE	TE	LTE0AB01	24"	24"	TEE A234-WPB EQUAL WELDED BE SCH20	B10
TEE	TE	LTE0AD00	3"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	B10
TEE	TE	LTE0AL00	32"	36"	TEE A234-WPB EQUAL WELDED BE STD	B10
TEE	TE	LTE0AP01	1/2"	2"	TEE A105 EQUAL FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
TEE RED	TR	LTR0AA00	14"	16"	TEE A234-WPB REDUCING SMLS BE SCH10	B10
TEE RED	TR	LTR0AA01	18"	20"	TEE A234-WPB REDUCING WELDED BE SCH10	B10
TEE RED	TR	LTR0AB00	8"	12"	TEE A234-WPB REDUCING SMLS BE SCH20	B10
TEE RED	TR	LTR0AB01	24"	24"	TEE A234-WPB REDUCING WELDED BE SCH20	B10
TEE RED	TR	LTR0AD00	3"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	B10
TEE RED	TR	LTR0AL00	32"	36"	TEE A234-WPB REDUCING WELDED BE STD	B10
TEE RED	TR	LTR0AP01	1/2"	2"	TEE A105 REDUCING FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
THREADOLET	TTO	LTTOAP01	1/2"	2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B10
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	B10
WELDOLET	TWO	LTWOAD00	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	B10
BOLTS	B	LB00A000	1/2"	48"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B12
CAP	C	LC00AA00	14"	18"	CAP A234-WPB SMLS BE SCH10	B12
CAP	C	LC00AB00	8"	12"	CAP A234-WPB SMLS BE SCH20	B12
CAP	C	LC00AD00	2"	6"	CAP A234-WPB SMLS BE SCH40	B12
CAP	C	LC00AL00	26"	30"	CAP A234-WPB SMLS BE STD	B12
CAP	C	LC00AM00	32"	44"	CAP A234-WPB SMLS BE XS	B12
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	B12
CAP	C	LC00AZ00	46"	48"	CAP A234-WPB SMLS BE 14.27mm THK	B12
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	B12
CHECK VA	VCA	VCAAB001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CHECK VA	VCA	VCAAB002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594	B12
CHECK VA	VCA	VCAAB009	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B12
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B12
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	B12
CROSS EQUAL	CES	LCESAA00	14"	18"	CROSS A234-WPB EQUAL BE SCH10 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
CROSS EQUAL	CES	LCESAB00	8"	12"	CROSS A234-WPB EQUAL BE SCH20 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
CROSS EQUAL	CES	LCESAD00	2"	6"	CROSS A234-WPB EQUAL BE SCH40 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
CROS	CES	***LCE0AD10***	***8"***	***10"***	***CROSS A234-WPB REDUCING BE SCH20***	***B12***
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	B12
ELBOW	E4	LE40AA00	14"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH10	B12
ELBOW	E4	LE40AA01	18"	18"	ELBOW A234-WPB DEG-45 WELDED BE SCH10	B12
ELBOW	E4	LE40AB00	8"	12"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	B12
ELBOW	E4	LE40AB01	20"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH20	B12
ELBOW	E4	LE40AD00	2"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	B12
ELBOW	E4	LE40AL00	26"	30"	ELBOW A234-WPB DEG-45 WELDED BE STD	B12
ELBOW	E4	LE40AM00	32"	44"	ELBOW A234-WPB DEG-45 WELDED BE XS	B12
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	B12
ELBOW	E4	LE40AZ00	46"	48"	ELBOW A234-WPB DEG-45 WELDED BE 14.27mm THK	B12
ELBOW	E9	LE90AA00	14"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH10	B12
ELBOW	E9	LE90AA01	18"	18"	ELBOW A234-WPB 90-LR WELDED BE SCH10	B12
ELBOW	E9	LE90AB00	8"	12"	ELBOW A234-WPB 90-LR SMLS BE SCH20	B12
ELBOW	E9	LE90AB01	20"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH20	B12
ELBOW	E9	LE90AD00	2"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	B12
ELBOW	E9	LE90AL00	26"	30"	ELBOW A234-WPB 90-LR WELDED BE STD	B12
ELBOW	E9	LE90AM00	32"	44"	ELBOW A234-WPB 90-LR WELDED BE XS	B12
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	B12
ELBOW	E9	LE90AZ00	46"	48"	ELBOW A234-WPB 90-LR WELDED BE 14.27mm THK	B12
ELBOW	E9S	LE9SAA00	14"	16"	ELBOW A234-WPB 90-SR SMLS BE SCH10 FOR JACKET PIPING	B12
ELBOW	E9S	LE9SAA01	18"	18"	ELBOW A234-WPB 90-SR WELDED BE SCH10 FOR JACKET PIPING	B12
ELBOW	E9S	LE9SAB00	8"	12"	ELBOW A234-WPB 90-SR SMLS BE SCH20 FOR JACKET PIPING	B12
ELBOW	E9S	LE9SAB01	20"	24"	ELBOW A234-WPB 90-SR WELDED BE SCH20 FOR JACKET PIPING	B12
ELBOW	E9S	LE9SAD00	2"	6"	ELBOW A234-WPB 90-SR SMLS BE SCH40 FOR JACKET PIPING	B12
FLANGE	F	LF00AD00	14"	18"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH10	B12
FLANGE	F	LF00AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH20	B12
FLANGE	F	LF00AD02	2"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) SCH40	B12
FLANGE	F	LF00AD04	26"	30"	FLANGE A105 WN RF CL150 (ASME B16.47-A) STD	B12
FLANGE	F	LF00AD05	32"	44"	FLANGE A105 WN RF CL150 (ASME B16.47-A) XS	B12
FLANGE	F	LF00AD06	1/2"	1 1/2"	FLANGE A105 SW RF CL150 (ASME B16.5) SCH80	B12
FLANGE	F	LF00AD10	46"	48"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 14.27mm THK	B12
FLG BLIND	FB	LFB0AD00	1/2"	24"	FLANGE A105 BLIND RF CL150 (ASME B16.5)	B12
FLG BLIND	FB	LFB0AD01	26"	48"	FLANGE A105 BLIND RF CL150 (ASME B16.47-A)	B12
FLG BLIND	FB1	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	B12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG BLIND	FB1	LFB0AF01	26"	48"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	B12
FLG JACK	FJ	LFJ0AD00	14"	18"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10	B12
FLG JACK	FJ	LFJ0AD01	8"	12"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B12
FLG JACK	FJ	LFJ0AD02	4"	6"	FLANGE A105 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B12
FLG JACK	FJ	LFJ0AD51	30"	30"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B12
FLG JACK	FJ	LFJ0AD54	48"	48"	FLANGE A105 WN RF CL150 (ASME B16.47-A) W/JACK SCREW 14.27mm THK	B12
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B12
GASKET	G	LG00ZD01	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B12
GATE VA	VGA	VGAAB001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B12
GATE VA	VGA	VGAAB002	6"	12"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B12
GATE VA	VGA	VGAAB003	14"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B12
GATE VA	VGA	VGAAB011	26"	48"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B12
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B12
GATE VA	VGF	VGFAB001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B12
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B12
GLOBE VA	VLA	VLAAB001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B12
GLOBE VA	VLA	VLAAB003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B12
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B12
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	B12
PIPE	P	LP00AA00	14"	16"	PIPE API 5L-B PSL1 SMLS BE SCH10	B12
PIPE	P	LP00AA01	18"	18"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH10	B12
PIPE	P	LP00AB00	8"	12"	PIPE API 5L-B PSL1 SMLS BE SCH20	B12
PIPE	P	LP00AB01	20"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH20	B12
PIPE	P	LP00AD00	2"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	B12
PIPE	P1	LP00AD17	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	B12
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	B12
PIPE	P	LP00AL00	26"	30"	PIPE API 5L-B PSL1 SAW BE 100% RT STD	B12
PIPE	P	LP00AM00	32"	44"	PIPE API 5L-B PSL1 SAW BE 100% RT XS	B12
PIPE	P	LP00AZ00	46"	48"	PIPE API 5L-B PSL1 SAW BE 100% RT 14.27mm THK	B12
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	B12
RED CON	RC	LRC0AA00	14"	16"	REDUCER A234-WPB CON. SMLS BE SCH10	B12
RED CON	RC	LRC0AA01	18"	18"	REDUCER A234-WPB CON. WELDED BE SCH10	B12
RED CON	RC	LRC0AB00	8"	12"	REDUCER A234-WPB CON. SMLS BE SCH20	B12
RED CON	RC	LRC0AB01	20"	24"	REDUCER A234-WPB CON. WELDED BE SCH20	B12
RED CON	RC	LRC0AD00	2"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	B12
RED CON	RC	LRC0AL00	26"	30"	REDUCER A234-WPB CON. WELDED BE STD	B12
RED CON	RC	LRC0AM00	32"	44"	REDUCER A234-WPB CON. WELDED BE XS	B12
RED CON	RC	LRC0AZ00	46"	48"	REDUCER A234-WPB CON. WELDED BE 14.27mm THK	B12
RED ECC	RE	LRE0AA00	14"	16"	REDUCER A234-WPB ECC. SMLS BE SCH10	B12
RED ECC	RE	LRE0AA01	18"	18"	REDUCER A234-WPB ECC. WELDED BE SCH10	B12
RED ECC	RE	LRE0AB00	8"	12"	REDUCER A234-WPB ECC. SMLS BE SCH20	B12
RED ECC	RE	LRE0AB01	20"	24"	REDUCER A234-WPB ECC. WELDED BE SCH20	B12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AD00	2"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	B12
RED ECC	RE	LRE0AL00	26"	30"	REDUCER A234-WPB ECC. WELDED BE STD	B12
RED ECC	RE	LRE0AM00	32"	44"	REDUCER A234-WPB ECC. WELDED BE XS	B12
RED ECC	RE	LRE0AZ00	46"	48"	REDUCER A234-WPB ECC. WELDED BE 14.27mm THK	B12
SINGLE IBB VA	SFA	LSFAAD02	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SLA	LSLAAD02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SLB	LSLBAD02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SLC	LSLCAD03	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SLC	LSLCAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SPA	LSPAAD02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SPB	LSPBAF02	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SINGLE IBB VA	SPC	LSPCAD02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B12
SOCKOLET	TS1	LTS1AP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B12
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	B12
SPCL FLANGE	F1	LF00AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	B12
SPCL FLANGE	F1	LF00AF01	2"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	B12
SPCL FLANGE	F1	LF00AF02	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH80	B12
SPCL FLANGE	F2	LF00AH00	2"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	B12
SPCL FLANGE	F2	LF00AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH80	B12
SPCL FLANGE	F21	LF00AH38	2"	6"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH40	B12
SPCL FLANGE	F3	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	B12
SPCL FLANGE	F1	LF10AF00	14"	18"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH10	B12
SPCL FLANGE	F1	LF10AF02	26"	30"	FLANGE A105 WN RF CL300 (ASME B16.47-A) STD	B12
SPCL FLANGE	F1	LF10AF03	32"	44"	FLANGE A105 WN RF CL300 (ASME B16.47-A) XS	B12
SPCL FLANGE	F1	LF10AF05	46"	48"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 14.27mm THK	B12
SPCL FLANGE	F2	LF10AH00	8"	12"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	B12
SPCL FLANGE	F3	LF10AK00	2"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	B12
SPCL FLANGE	F3	LF10AK81	8"	12"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	B12
SPCL FLANGE	F2	LF20AH00	14"	18"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH10	B12
SPCL FLANGE	F21	LF21AH00	8"	12"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH20	B12
SPCL FLANGE	F21	LF21AH01	14"	18"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH10	B12
SPCL FLANGE	F21	LF21AH02	26"	30"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) STD	B12
SPCL FLANGE	F3	LF30AK00	14"	18"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH10	B12
SPCL FLANGE	F5	LF50AD01	2"	4"	FLANGE A105 WN FF CL150 (ASME B16.5) SCH40	B12
SPCL FLG JACK	FJ1	LFJ0AF00	8"	12"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B12
SPCL FLG JACK	FJ1	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B12
SPCL FLG JACK	FJ1	LFJ1AF00	14"	18"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10	B12
SPCL GASKET	G1	LG00ZF00	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B12
SPCL GASKET	G21	LG00ZH07	30"	30"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL600 (ASME B16.47-A) 90 HRB MAX	B12
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B12
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B12
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B12
SPE BLIND	FSB	LFSBAD00	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B12
SPE BLIND	FSB	LFSBAD01	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B12
SPE BLIND	FSB	LFSBAD17	26"	48"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A)	B12
SPECIAL TEE	TES	LTESAA00	14"	18"	TEE A234-WPB EQUAL BE SCH10 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
SPECIAL TEE	TES	LTESAB00	8"	12"	TEE A234-WPB EQUAL BE SCH20 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
SPECIAL TEE	TES	LTESAD00	2"	6"	TEE A234-WPB EQUAL BE SCH40 SPLIT TYPE FOR JACKET FOR JACKET PIPING	B12
SWG CON B-P	RCB	LRCBAD00	2"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	B12
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	B12
SWG CON P-T	RC2	LRC2AK00	3/4"	3/4"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) SCH160 x SCH80	B12
SWG ECC B-P	REB	LREBAD00	2"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	B12
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	B12
TEE	TE	LTE0AA00	14"	16"	TEE A234-WPB EQUAL SMLS BE SCH10	B12
TEE	TE	LTE0AA01	18"	18"	TEE A234-WPB EQUAL WELDED BE SCH10	B12
TEE	TE	LTE0AB00	8"	12"	TEE A234-WPB EQUAL SMLS BE SCH20	B12
TEE	TE	LTE0AB01	20"	24"	TEE A234-WPB EQUAL WELDED BE SCH20	B12
TEE	TE	LTE0AD00	2"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	B12
TEE	TE	LTE0AL00	26"	30"	TEE A234-WPB EQUAL WELDED BE STD	B12
TEE	TE	LTE0AM00	32"	44"	TEE A234-WPB EQUAL WELDED BE XS	B12
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	B12
TEE	TE	LTE0AZ00	46"	48"	TEE A234-WPB EQUAL WELDED BE 14.27mm THK	B12
TEE RED	TR	LTR0AA00	14"	16"	TEE A234-WPB REDUCING SMLS BE SCH10	B12
TEE RED	TR	LTR0AA01	18"	18"	TEE A234-WPB REDUCING WELDED BE SCH10	B12
TEE RED	TR	LTR0AB00	8"	12"	TEE A234-WPB REDUCING SMLS BE SCH20	B12
TEE RED	TR	LTR0AB01	20"	24"	TEE A234-WPB REDUCING WELDED BE SCH20	B12
TEE RED	TR	LTR0AD00	2"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	B12
TEE RED	TR	LTR0AL00	26"	30"	TEE A234-WPB REDUCING WELDED BE STD	B12
TEE RED	TR	LTR0AM00	32"	44"	TEE A234-WPB REDUCING WELDED BE XS	B12
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	B12
TEE RED	TR	LTR0AZ00	46"	48"	TEE A234-WPB REDUCING WELDED BE 14.27mm THK	B12
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	B12
WELDOLET	TW1	LTW1AD00	6"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B12
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	B12
WELDOLET	TWO	LTWOAD00	2"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	B12
BOLTS	B	LB00A000	1/2"	4"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B19
CAP THD	CT	LCT0AP01	1/2"	4"	CAP A105 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
CHECK VA	VCA	VCACB003	3"	4"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B19
CHECK VA	VCH	VCHCK004	1/2"	2"	CHECK VALVE A182-F316 TE(NPT-F) 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	B19
CPLG FULL	CFT	LCFTAP00	1/2"	4"	COUPLING A105 FULL(STRAIGHT) FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
ELBOW	E4	LE40AP01	1/2"	4"	ELBOW A105 DEG-45 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
ELBOW	E9	LE90AP01	1/2"	4"	ELBOW A105 DEG-90 FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
FLANGE	F	LF00AD73	1/2"	4"	FLANGE A105 THRD(NPT) FF CL150 (ASME B16.5) GALVANIZED TO A120	B19

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG BLIND	FB	LFB0AD14	1/2"	4"	FLANGE A105 BLIND FF CL150 (ASME B16.5) GALVANIZED TO A120	B19
FLG BLIND	FB1	LFB1AF06	1/2"	4"	FLANGE A105 BLIND FF CL300 (ASME B16.5) GALVANIZED TO A120	B19
FLG JACK	FJ	LFJ0AD45	4"	4"	FLANGE A105 THRD(NPT) FF CL150 (ASME B16.5) W/JACK SCREW GALVANIZED TO A120	B19
GASKET	G	LG00ZD02	1/2"	4"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B19
GATE VA	VGA	VGACB004	3"	4"	GATE VALVE A351-CF8M FLGD-FF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B19
GATE VA	VGA	VGACK003	1/2"	2"	GATE VALVE A182-F316 TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B19
GATE VA	VGF	VGFCB003	1/2"	2"	GATE VALVE A182-F316 FLGD-FF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B19
GLOBE VA	VLA	VLACB003	3"	4"	GLOBE VALVE A351-CF8M FLGD-FF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B19
GLOBE VA	VLA	VLACK004	1/2"	2"	GLOBE VALVE A182-F316 TE(NPT-F) 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B19
INSUL GASKET	GK	LGK0ZD00	1/2"	4"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B19
INSUL GASKET	GK	LGK0ZD01	1/2"	4"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR FF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B19
NIPPLE TBE	NTB	LNTBAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TBE(NPT-M) 75mm LONG SCH160 GALVANIZED TO A120	B19
PIPE	P	LP00AF26	2"	4"	PIPE API 5L-B PSL1 SMLS T&C(NPT) SCH80 GALVANIZED TO A120	B19
PIPE	P	LP00AK05	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS T&C(NPT) SCH160 GALVANIZED TO A120	B19
PLUG	PLG	LPLGAW08	1/2"	4"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) GALVANIZED TO A120	B19
RED CPLG TE	RCT	LRCTAF00	2"	4"	SWAGE A234-WPB CON. SMLS TE(NPT-M) SCH80 GALVANIZED TO A120	B19
RED CPLG TE	RCT	LRCTAK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS TE(NPT-M) SCH160 GALVANIZED TO A120	B19
SINGLE IBB VA	SFA	LSFACD03	1/2"	1/2"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-FF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SLA	LSLACD03	3/4"	3/4"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-FF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SLB	LSLBCD03	2"	2"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-FF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SLC	LSLCCD00	2"	2"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-FF x 2" FLGD-FF SBB(1 BALL & NEEDLE VENT) AEDVITON SEAL	B19
SINGLE IBB VA	SLC	LSLCCF03	2"	2"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-FF x 2" FLGD-FF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SPA	LSPACD03	3/4"	3/4"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-FF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SPB	LSPBCF03	1"	1"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-FF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SINGLE IBB VA	SPC	LSPCCD03	2"	2"	BALL VALVE A182-F316 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-FF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B19
SPCL FLANGE	F1	LF10AF48	1/2"	4"	FLANGE A105 THRD(NPT) FF CL300 (ASME B16.5) GALVANIZED TO A120	B19
SPCL GASKET	G1	LG10ZF01	1/2"	4"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL300 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B19
SPE BLIND	FSB	LFSBAD08	1/2"	4"	FLANGE A516-70 FIGURE-8 BLANKS FF CL150 (ASME B16.48) GALVANIZED TO A120	B19
SWG ECC TE	RET	LRETAF00	2"	4"	SWAGE A234-WPB ECC. SMLS TE(NPT-M) SCH80 GALVANIZED TO A120	B19
SWG ECC TE	RET	LRETAK00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS TE(NPT-M) SCH160 GALVANIZED TO A120	B19
TEE	TE	LTE0AP01	1/2"	4"	TEE A105 EQUAL FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
TEE RED	TR	LTR0AP01	1/2"	4"	TEE A105 REDUCING FORGED TE(NPT-F) CL3000 GALVANIZED TO A120	B19
BALL VA	VBF	VBFBB001	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B21
BALL VA	VBF	VBFBB002	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B21
BALL VA	VBF	VBFBB003	26"	48"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B21
BALL VA	VB7	VBFBBS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B21
BALL VA	VB7	VBFBBT01	3"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	B21
BALL VA	VBF	VBFBK001	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B21
BALL VA	VBF	VBFBK005	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	B21
BALL VA	VB7	VBFBKS01	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B21
BALL VA	VB9	VBFBKX01	3/4"	3/4"	BALL VALVE A350-LF2 CL1 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 AED VITON SEAL/FLOATING	B21
BALL VA	VBR	VBRBB001	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBR	VBRBB002	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B21
BALL VA	VBR	VBRBB003	26"	40"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B21
BALL VA	VB8	VBRBBS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B21
BALL VA	VB8	VBRBBT01	3"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	B21
BOLTS	B	LB00A001	1/2"	48"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B21
CAP	C	LC00AA01	14"	20"	CAP A420-WPL6 SMLS BE SCH10	B21
CAP	C	LC00AB03	8"	12"	CAP A420-WPL6 SMLS BE SCH20	B21
CAP	C	LC00AD03	2"	6"	CAP A420-WPL6 SMLS BE SCH40	B21
CAP	C	LC00AL03	32"	38"	CAP A420-WPL6 SMLS BE STD	B21
CAP	C	LC00AM03	40"	48"	CAP A420-WPL6 SMLS BE XS	B21
CAP	C	LC00AP01	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL3000	B21
CAP THD	CT	LCT0AP02	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL3000	B21
CHECK VA	VCA	VCABB001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B21
CHECK VA	VCA	VCABB002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B21
CHECK VA	VCA	VCABB005	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B21
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B21
CPLG FULL	CF	LCF0AP01	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL3000	B21
ELBOLET	TEW	LTEWAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL3000	B21
ELBOW	E4	LE40AA02	14"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH10	B21
ELBOW	E4	LE40AA03	18"	20"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH10	B21
ELBOW	E4	LE40AB06	8"	12"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH20	B21
ELBOW	E4	LE40AB07	24"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH20	B21
ELBOW	E4	LE40AD03	2"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH40	B21
ELBOW	E4	LE40AL03	32"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE STD	B21
ELBOW	E4	LE40AM03	40"	48"	ELBOW A420-WPL6 DEG-45 WELDED BE XS	B21
ELBOW	E4	LE40AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL3000	B21
ELBOW	E9	LE90AA02	14"	16"	ELBOW A420-WPL6 90-LR SMLS BE SCH10	B21
ELBOW	E9	LE90AA03	18"	20"	ELBOW A420-WPL6 90-LR WELDED BE SCH10	B21
ELBOW	E9	LE90AB06	8"	12"	ELBOW A420-WPL6 90-LR SMLS BE SCH20	B21
ELBOW	E9	LE90AB07	24"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH20	B21
ELBOW	E9	LE90AD03	2"	6"	ELBOW A420-WPL6 90-LR SMLS BE SCH40	B21
ELBOW	E9	LE90AL03	32"	38"	ELBOW A420-WPL6 90-LR WELDED BE STD	B21
ELBOW	E9	LE90AM03	40"	48"	ELBOW A420-WPL6 90-LR WELDED BE XS	B21
ELBOW	E9	LE90AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL3000	B21
ELBOW	E9S	LE9SAP00	1/2"	4"	ELBOW A350-LF2 CL1 DEG-90 FORGED TE(NPT-F) CL3000	B21
FLANGE	F	LF00AD42	14"	20"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH10	B21
FLANGE	F	LF00AD43	8"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH20	B21
FLANGE	F	LF00AD44	2"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH40	B21
FLANGE	F	LF00AD45	26"	30"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) SCH10	B21
FLANGE	F	LF00AD46	32"	38"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) STD	B21
FLANGE	F	LF00AD47	40"	48"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) XS	B21
FLANGE	F	LF00AD48	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL150 (ASME B16.5) SCH80	B21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG BLIND	FB	LFB0AD07	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.5)	B21
FLG BLIND	FB	LFB0AD08	26"	48"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.47-A)	B21
FLG BLIND	FB1	LFB0AF04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5)	B21
FLG BLIND	FB1	LFB1AF02	26"	48"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.47-A)	B21
FLG JACK	FJ	LFJ0AD28	14"	20"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10	B21
FLG JACK	FJ	LFJ0AD29	8"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B21
FLG JACK	FJ	LFJ0AD30	4"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B21
FLG JACK	FJ	LFJ0AD47	26"	30"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW SCH10	B21
FLG JACK	FJ	LFJ0AD49	40"	48"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW XS	B21
FLG JACK	FJ	LFJ0AD55	32"	38"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B21
FLG RED	RF	LRF0AD06	2"	6"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL150 (ASME B16.5) SCH40	B21
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B21
GASKET	G	LG00ZD01	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B21
GATE VA	VGA	VGABB001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B21
GATE VA	VGA	VGABB002	6"	12"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B21
GATE VA	VGA	VGABB003	14"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B21
GATE VA	VGA	VGABB004	26"	48"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B21
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B21
GATE VA	VGF	VGFBB001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 FOR EQUIP NOZZLE CONN.	B21
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B21
GLOBE VA	VLA	VLABB001	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B21
GLOBE VA	VLA	VLABB003	8"	12"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B21
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B21
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B21
LATERAL Y	TL	LTL0AA01	14"	20"	LATERAL A420-WPL6 EQUAL BE SCH10 DEG-45	B21
LATERAL Y	TL	LTL0AB03	8"	12"	LATERAL A420-WPL6 EQUAL BE SCH20 DEG-45	B21
LATERAL Y	TL	LTL0AD03	6"	6"	LATERAL A420-WPL6 EQUAL BE SCH40 DEG-45	B21
LATERAL Y	TL	LTL0AL03	32"	38"	LATERAL A420-WPL6 EQUAL BE STD DEG-45	B21
LATERAL Y	TL	LTL0AM02	40"	48"	LATERAL A420-WPL6 EQUAL BE XS DEG-45	B21
NIPPLE TOE	NTO	LNTOAK01	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG SCH160	B21
PIPE	P	LP00AA02	14"	16"	PIPE A333-6 SMLS BE SCH10	B21
PIPE	P	LP00AA03	18"	20"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH10 W/S2 AT-46C	B21
PIPE	P	LP00AB10	8"	12"	PIPE A333-6 SMLS BE SCH20	B21
PIPE	P	LP00AB11	24"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C	B21
PIPE	P1	LP00AB18	8"	12"	PIPE A333-6 SMLS BE PE COATED SCH20	B21
PIPE	P1	LP00AB19	24"	24"	PIPE A671-CC65 CL.22 EFW BE PE COATED 100% RT SCH20 W/S2 AT-46C	B21
PIPE	P	LP00AD08	2"	6"	PIPE A333-6 SMLS BE SCH40	B21
PIPE	P1	LP00AD18	2"	6"	PIPE A333-6 SMLS BE PE COATED SCH40	B21
PIPE	P	LP00AF08	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH80	B21
PIPE	P	LP00AL09	32"	38"	PIPE A671-CC65 CL.22 EFW BE 100% RT STD W/S2 AT-46C	B21
PIPE	P	LP00AM09	40"	48"	PIPE A671-CC65 CL.22 EFW BE 100% RT XS W/S2 AT-46C	B21
PIPE	P1	LP10AA02	14"	16"	PIPE A333-6 SMLS BE PE COATED SCH10	B21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P1	LP10AA03	18"	20"	PIPE A671-CC65 CL.22 EFW BE PE COATED 100% RT SCH10 W/S2 AT-46C	B21
PIPE	P2	LP10AB04	8"	12"	PIPE A333-6 SMLS BE SCH20 PP COATED	B21
PIPE	P2	LP10AD02	2"	6"	PIPE A333-6 SMLS BE SCH40 PP COATED	B21
PIPE	P2	LP20AA02	14"	16"	PIPE A333-6 SMLS BE SCH10 PP COATED	B21
PIPE	P2	LP20AA03	18"	20"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH10 W/S2 AT-46C PP COATED	B21
PIPE	P3	LP20AB04	8"	12"	PIPE A333-6 SMLS BE SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PIPE	P3	LP20AB05	24"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PIPE	P2	LP20AB06	24"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C PP COATED	B21
PIPE	P3	LP20AD02	2"	6"	PIPE A333-6 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PIPE	P3	LP30AA02	14"	16"	PIPE A333-6 SMLS BE SCH10 (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PIPE	P3	LP30AA03	18"	20"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH10 W/S2 AT-46C (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PIPE	P3	LP30AF06	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	B21
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	B21
PLUG VA	VPL	VPLBB001	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B21
PLUG VA	VPL	VPLBB002	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B21
PLUG VA	VPL	VPLBF001	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	B21
RED CON	RC	LRC0AA03	18"	20"	REDUCER A420-WPL6 CON. WELDED BE SCH10	B21
RED CON	RC	LRC0AA04	14"	16"	REDUCER A420-WPL6 CON. SMLS BE SCH10	B21
RED CON	RC	LRC0AB06	8"	12"	REDUCER A420-WPL6 CON. SMLS BE SCH20	B21
RED CON	RC	LRC0AB07	24"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH20	B21
RED CON	RC	LRC0AD03	2"	6"	REDUCER A420-WPL6 CON. SMLS BE SCH40	B21
RED CON	RC	LRC0AL03	32"	38"	REDUCER A420-WPL6 CON. WELDED BE STD	B21
RED CON	RC	LRC0AM03	40"	48"	REDUCER A420-WPL6 CON. WELDED BE XS	B21
RED ECC	RE	LRE0AA02	14"	16"	REDUCER A420-WPL6 ECC. SMLS BE SCH10	B21
RED ECC	RE	LRE0AA03	18"	20"	REDUCER A420-WPL6 ECC. WELDED BE SCH10	B21
RED ECC	RE	LRE0AB06	8"	12"	REDUCER A420-WPL6 ECC. SMLS BE SCH20	B21
RED ECC	RE	LRE0AB07	24"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH20	B21
RED ECC	RE	LRE0AD03	2"	6"	REDUCER A420-WPL6 ECC. SMLS BE SCH40	B21
RED ECC	RE	LRE0AL03	32"	38"	REDUCER A420-WPL6 ECC. WELDED BE STD	B21
RED ECC	RE	LRE0AM03	40"	46"	REDUCER A420-WPL6 ECC. WELDED BE XS	B21
RED LATERAL Y	RL	LRL0AA01	14"	20"	LATERAL A420-WPL6 REDUCING BE SCH10 DEG-45	B21
RED LATERAL Y	RL	LRL0AB03	8"	12"	LATERAL A420-WPL6 REDUCING BE SCH20 DEG-45	B21
RED LATERAL Y	RL	LRL0AD03	6"	6"	LATERAL A420-WPL6 REDUCING BE SCH40 DEG-45	B21
RED LATERAL Y	RL	LRL0AL03	32"	38"	LATERAL A420-WPL6 REDUCING BE STD DEG-45	B21
RED LATERAL Y	RL	LRL0AM02	40"	48"	LATERAL A420-WPL6 REDUCING BE XS DEG-45	B21
SINGLE IBB VA	SFA	LSFAAD03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SINGLE IBB VA	SLA	LSLAAD03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SINGLE IBB VA	SLB	LSLBAD03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SINGLE IBB VA	SLC	LSLCAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AEDVITON SEAL	B21
SINGLE IBB VA	SLC	LSLCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SINGLE IBB VA	SPA	LSPAAD03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SINGLE IBB VA	SPB	LSPBAF03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SPC	LSPCAD03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B21
SOCKOLET	TS1	LTS1AP01	2"	24"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B21
SOCKOLET	TSO	LTSOAP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL3000	B21
SPCL FLANGE	F1	LF00AF13	8"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH20	B21
SPCL FLANGE	F1	LF00AF14	2"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH40	B21
SPCL FLANGE	F1	LF00AF15	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) SCH80	B21
SPCL FLANGE	F2	LF00AH08	2"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH40	B21
SPCL FLANGE	F2	LF00AH10	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH80	B21
SPCL FLANGE	F3	LF00AL04	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH80	B21
SPCL FLANGE	F1	LF10AF30	14"	20"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH10	B21
SPCL FLANGE	F1	LF10AF31	26"	30"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) SCH10	B21
SPCL FLANGE	F1	LF10AF32	32"	38"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) STD	B21
SPCL FLANGE	F1	LF10AF33	40"	48"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) XS	B21
SPCL FLANGE	F2	LF10AH12	8"	12"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH20	B21
SPCL FLANGE	F3	LF10AK34	2"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH40	B21
SPCL FLANGE	F2	LF20AH04	14"	20"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH10	B21
SPCL FLANGE	F3	LF20AK01	8"	12"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH20	B21
SPCL FLANGE	F3	LF30AK03	14"	20"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH10	B21
SPCL FLG JACK	FJ1	LFJ0AF12	8"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B21
SPCL FLG JACK	FJ1	LFJ0AF13	4"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B21
SPCL FLG JACK	FJ1	LFJ1AF15	14"	20"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10	B21
SPCL GASKET	G1	LG00ZF00	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B21
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B21
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B21
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B21
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B21
SPE BLIND	FSB	LFSBAD09	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) W/S5 AT-46C	B21
SPE BLIND	FSB	LFSBAD10	26"	48"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A) W/S5 AT-46C	B21
SPE BLIND	FSB	LFSBAD11	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) W/S5 AT-46C	B21
SWG CON B-P	RCB	LRCBAD04	2"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH40	B21
SWG CON PE	RCP	LRCPAF01	1/2"	1 1/2"	SWAGE A350-LF2 CL1 CON. SMLS PE SCH80	B21
SWG CON PE	RCP	LRCPAF02	3/4"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH80 x SCH80	B21
SWG CON P-T	RC2	LRC2AK01	1"	1"	SWAGE A420-WPL6 CON. SMLS PLE x TSE(NPT-M) SCH160 x SCH80	B21
SWG ECC B-P	REB	LREBAD04	2"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH40	B21
SWG ECC PE	REP	LREPAF01	1/2"	1 1/2"	SWAGE A350-LF2 CL1 ECC. SMLS PE SCH80	B21
SWG ECC PE	REP	LREPAF02	3/4"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH80 x SCH80	B21
TEE	TE	LTE0AA02	14"	16"	TEE A420-WPL6 EQUAL SMLS BE SCH10	B21
TEE	TE	LTE0AA03	18"	20"	TEE A420-WPL6 EQUAL WELDED BE SCH10	B21
TEE	TE	LTE0AB06	8"	12"	TEE A420-WPL6 EQUAL SMLS BE SCH20	B21
TEE	TE	LTE0AB07	24"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH20	B21
TEE	TE	LTE0AD03	2"	6"	TEE A420-WPL6 EQUAL SMLS BE SCH40	B21
TEE	TE	LTE0AL03	32"	38"	TEE A420-WPL6 EQUAL WELDED BE STD	B21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0AM03	40"	48"	TEE A420-WPL6 EQUAL WELDED BE XS	B21
TEE	TE	LTE0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL3000	B21
TEE RED	TR	LTR0AA02	14"	16"	TEE A420-WPL6 REDUCING SMLS BE SCH10	B21
TEE RED	TR	LTR0AA03	18"	20"	TEE A420-WPL6 REDUCING WELDED BE SCH10	B21
TEE RED	TR	LTR0AB06	8"	12"	TEE A420-WPL6 REDUCING SMLS BE SCH20	B21
TEE RED	TR	LTR0AB07	24"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH20	B21
TEE RED	TR	LTR0AD03	2"	6"	TEE A420-WPL6 REDUCING SMLS BE SCH40	B21
TEE RED	TR	LTR0AL03	32"	38"	TEE A420-WPL6 REDUCING WELDED BE STD	B21
TEE RED	TR	LTR0AM03	40"	46"	TEE A420-WPL6 REDUCING WELDED BE XS	B21
TEE RED	TR	LTR0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL3000	B21
THREADOLET	TTO	LTTOAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL3000	B21
WELDOLET	TWO	LTWOAB03	8"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH20	B21
WELDOLET	TWO	LTWOAD03	2"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH40	B21
BALL VA	VBF	VBFBB004	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VBF	VBFBB005	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VBF	VBFBB006	26"	48"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VB7	VBFBBS04	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=100MM)	B23
BALL VA	VB7	VBFBBT04	3"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	B23
BALL VA	VBF	VBFBK002	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B23
BALL VA	VB7	VBFBKS02	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	B23
BALL VA	VBR	VBRBB004	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VBR	VBRBB005	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VBR	VBRBB006	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	B23
BALL VA	VB8	VBRBBS04	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=100MM)	B23
BALL VA	VB8	VBRBBT04	3"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	B23
BOLTS	B	LB00A001	1/2"	48"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B23
CAP	C	LC00AB03	8"	10"	CAP A420-WPL6 SMLS BE SCH20	B23
CAP	C	LC00AC03	12"	12"	CAP A420-WPL6 SMLS BE SCH30	B23
CAP	C	LC00AD03	3"	6"	CAP A420-WPL6 SMLS BE SCH40	B23
CAP	C	LC00AF03	2"	2"	CAP A420-WPL6 SMLS BE SCH80	B23
CAP	C	LC00AL03	26"	28"	CAP A420-WPL6 SMLS BE STD	B23
CAP	C	LC00AM03	38"	44"	CAP A420-WPL6 SMLS BE XS	B23
CAP	C	LC00AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL6000	B23
CAP	C	LC00AZ03	46"	48"	CAP A420-WPL6 SMLS BE 14.27mm THK	B23
CAP THD	CT	LCT0AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL6000	B23
CHECK VA	VCA	VCABB001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 API 594	B23
CHECK VA	VCA	VCABB002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B23
CHECK VA	VCA	VCABB005	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B23
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B23
CPLG FULL	CF	LCF0AQ03	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL6000	B23
ELBOLET	TEW	LTEWAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL6000	B23
ELBOW	E4	LE40AB06	8"	10"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH20	B23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AB07	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH20	B23
ELBOW	E4	LE40AC05	12"	12"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH30	B23
ELBOW	E4	LE40AD03	3"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH40	B23
ELBOW	E4	LE40AF03	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	B23
ELBOW	E4	LE40AL03	26"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE STD	B23
ELBOW	E4	LE40AM03	38"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE XS	B23
ELBOW	E4	LE40AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL6000	B23
ELBOW	E4	LE40AZ03	46"	48"	ELBOW A420-WPL6 DEG-45 WELDED BE 14.27mm THK	B23
ELBOW	E9	LE90AB06	8"	10"	ELBOW A420-WPL6 90-LR SMLS BE SCH20	B23
ELBOW	E9	LE90AB07	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH20	B23
ELBOW	E9	LE90AC05	12"	12"	ELBOW A420-WPL6 90-LR SMLS BE SCH30	B23
ELBOW	E9	LE90AD03	3"	6"	ELBOW A420-WPL6 90-LR SMLS BE SCH40	B23
ELBOW	E9	LE90AF03	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	B23
ELBOW	E9	LE90AL03	26"	28"	ELBOW A420-WPL6 90-LR WELDED BE STD	B23
ELBOW	E9	LE90AM03	38"	44"	ELBOW A420-WPL6 90-LR WELDED BE XS	B23
ELBOW	E9	LE90AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL6000	B23
ELBOW	E9	LE90AZ03	46"	48"	ELBOW A420-WPL6 90-LR WELDED BE 14.27mm THK	B23
FLANGE	F	LF00AD43	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH20	B23
FLANGE	F	LF00AD44	3"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH40	B23
FLANGE	F	LF00AD46	26"	28"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) STD	B23
FLANGE	F	LF00AD47	38"	44"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) XS	B23
FLANGE	F	LF00AD49	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH30	B23
FLANGE	F	LF00AD50	2"	2"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) SCH80	B23
FLANGE	F	LF00AD51	30"	36"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) SCH20	B23
FLANGE	F	LF00AD52	46"	48"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) 14.27mm THK	B23
FLANGE	F	LF00AD53	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL150 (ASME B16.5) SCH160	B23
FLG BLIND	FB	LFB0AD07	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.5)	B23
FLG BLIND	FB	LFB0AD08	26"	48"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.47-A)	B23
FLG BLIND	FB1	LFB0AF04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5)	B23
FLG BLIND	FB1	LFB1AF02	26"	48"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.47-A)	B23
FLG JACK	FJ	LFJ0AD29	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B23
FLG JACK	FJ	LFJ0AD30	4"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B23
FLG JACK	FJ	LFJ0AD46	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30	B23
FLG RED	RF	LRF0AD06	3"	6"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL150 (ASME B16.5) SCH40	B23
FLG RED	RF	LRF0AD07	2"	2"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL150 (ASME B16.5) SCH80	B23
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B23
GASKET	G	LG00ZD01	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B23
GATE VA	VGA	VGABB001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B23
GATE VA	VGA	VGABB002	6"	12"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B23
GATE VA	VGA	VGABB003	14"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B23
GATE VA	VGA	VGABB004	26"	48"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B23
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGF	VGFBB001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B23
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B23
GLOBE VA	VLA	VLABB001	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B23
GLOBE VA	VLA	VLABB003	8"	12"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED BS 1873	B23
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B23
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B23
LATERAL Y	TL	LTL0AB03	8"	10"	LATERAL A420-WPL6 EQUAL BE SCH20 DEG-45	B23
LATERAL Y	TL	LTL0AC03	12"	12"	LATERAL A420-WPL6 EQUAL BE SCH30 DEG-45	B23
LATERAL Y	TL	LTL0AD03	6"	6"	LATERAL A420-WPL6 EQUAL BE SCH40 DEG-45	B23
LATERAL Y	TL	LTL0AL03	26"	28"	LATERAL A420-WPL6 EQUAL BE STD DEG-45	B23
LATERAL Y	TL	LTL0AM02	38"	44"	LATERAL A420-WPL6 EQUAL BE XS DEG-45	B23
LATERAL Y	TL	LTL0AZ02	46"	48"	LATERAL A420-WPL6 EQUAL BE 14.27mm THK DEG-45	B23
NIPPLE TOE	NTO	LNTOAN03	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG XXS	B23
PIPE	P	LP00AB10	8"	10"	PIPE A333-6 SMLS BE SCH20	B23
PIPE	P	LP00AB11	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C	B23
PIPE	P1	LP00AB18	8"	10"	PIPE A333-6 SMLS BE PE COATED SCH20	B23
PIPE	P1	LP00AB19	18"	24"	PIPE A671-CC65 CL.22 EFW BE PE COATED 100% RT SCH20 W/S2 AT-46C	B23
PIPE	P	LP00AC07	12"	12"	PIPE A333-6 SMLS BE SCH30	B23
PIPE	P1	LP00AC12	12"	12"	PIPE A333-6 SMLS BE PE COATED SCH30	B23
PIPE	P	LP00AD08	3"	6"	PIPE A333-6 SMLS BE SCH40	B23
PIPE	P1	LP00AD18	3"	6"	PIPE A333-6 SMLS BE PE COATED SCH40	B23
PIPE	P	LP00AF09	2"	2"	PIPE A333-6 SMLS BE SCH80	B23
PIPE	P1	LP00AF27	2"	2"	PIPE A333-6 SMLS BE PE COATED SCH80	B23
PIPE	P	LP00AK07	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH160	B23
PIPE	P	LP00AL09	26"	28"	PIPE A671-CC65 CL.22 EFW BE 100% RT STD W/S2 AT-46C	B23
PIPE	P	LP00AM09	38"	44"	PIPE A671-CC65 CL.22 EFW BE 100% RT XS W/S2 AT-46C	B23
PIPE	P	LP00AZ28	46"	48"	PIPE A671-CC65 CL.22 EFW BE 100% RT 14.27mm THK W/S2 AT-46C	B23
PIPE	P2	LP10AB04	8"	10"	PIPE A333-6 SMLS BE SCH20 PP COATED	B23
PIPE	P2	LP10AC02	12"	12"	PIPE A333-6 SMLS BE SCH30 PP COATED	B23
PIPE	P2	LP10AD02	3"	6"	PIPE A333-6 SMLS BE SCH40 PP COATED	B23
PIPE	P2	LP10AF02	2"	2"	PIPE A333-6 SMLS BE SCH80 PP COATED	B23
PIPE	P3	LP20AB04	8"	10"	PIPE A333-6 SMLS BE SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PIPE	P3	LP20AB05	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PIPE	P2	LP20AB06	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH20 W/S2 AT-46C PP COATED	B23
PIPE	P3	LP20AC02	12"	12"	PIPE A333-6 SMLS BE SCH30 (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PIPE	P3	LP20AD02	3"	6"	PIPE A333-6 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PIPE	P3	LP20AF02	2"	2"	PIPE A333-6 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PIPE	P3	LP30AK02	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	B23
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	B23
PLUG VA	VPL	VPLBB001	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B23
PLUG VA	VPL	VPLBB002	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B23
PLUG VA	VPL	VPLBF002	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	B23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0AB06	8"	10"	REDUCER A420-WPL6 CON. SMLS BE SCH20	B23
RED CON	RC	LRC0AB07	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH20	B23
RED CON	RC	LRC0AC05	12"	12"	REDUCER A420-WPL6 CON. SMLS BE SCH30	B23
RED CON	RC	LRC0AD03	3"	6"	REDUCER A420-WPL6 CON. SMLS BE SCH40	B23
RED CON	RC	LRC0AF03	2"	2"	REDUCER A420-WPL6 CON. SMLS BE SCH80	B23
RED CON	RC	LRC0AL03	26"	28"	REDUCER A420-WPL6 CON. WELDED BE STD	B23
RED CON	RC	LRC0AM03	38"	44"	REDUCER A420-WPL6 CON. WELDED BE XS	B23
RED CON	RC	LRC0AZ03	46"	48"	REDUCER A420-WPL6 CON. WELDED BE 14.27mm THK	B23
RED ECC	RE	LRE0AB06	8"	10"	REDUCER A420-WPL6 ECC. SMLS BE SCH20	B23
RED ECC	RE	LRE0AB07	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH20	B23
RED ECC	RE	LRE0AC05	12"	12"	REDUCER A420-WPL6 ECC. SMLS BE SCH30	B23
RED ECC	RE	LRE0AD03	3"	6"	REDUCER A420-WPL6 ECC. SMLS BE SCH40	B23
RED ECC	RE	LRE0AF03	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	B23
RED ECC	RE	LRE0AL03	26"	28"	REDUCER A420-WPL6 ECC. WELDED BE STD	B23
RED ECC	RE	LRE0AM03	38"	44"	REDUCER A420-WPL6 ECC. WELDED BE XS	B23
RED ECC	RE	LRE0AZ03	46"	48"	REDUCER A420-WPL6 ECC. WELDED BE 14.27mm THK	B23
RED LATERAL Y	RL	LRL0AB03	8"	10"	LATERAL A420-WPL6 REDUCING BE SCH20 DEG-45	B23
RED LATERAL Y	RL	LRL0AC03	12"	12"	LATERAL A420-WPL6 REDUCING BE SCH30 DEG-45	B23
RED LATERAL Y	RL	LRL0AD03	6"	6"	LATERAL A420-WPL6 REDUCING BE SCH40 DEG-45	B23
RED LATERAL Y	RL	LRL0AL03	26"	28"	LATERAL A420-WPL6 REDUCING BE STD DEG-45	B23
RED LATERAL Y	RL	LRL0AM02	38"	44"	LATERAL A420-WPL6 REDUCING BE XS DEG-45	B23
RED LATERAL Y	RL	LRL0AZ00	46"	48"	LATERAL A420-WPL6 REDUCING BE 14.27mm THK DEG-45	B23
SINGLE IBB VA	SFA	LSFAAD03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SLA	LSLAAD03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SLB	LSLBAD03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SLC	LSLCAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AEDVITON SEAL	B23
SINGLE IBB VA	SLC	LSLCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SPA	LSPAAD03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SPB	LSPBAF03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SINGLE IBB VA	SPC	LSPCAD03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23
SOCKOLET	TSO	LTSOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL6000	B23
SPCL FLANGE	F1	LF00AF13	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH20	B23
SPCL FLANGE	F1	LF00AF14	3"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH40	B23
SPCL FLANGE	F1	LF00AF16	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH30	B23
SPCL FLANGE	F1	LF00AF17	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH80	B23
SPCL FLANGE	F1	LF00AF18	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) SCH160	B23
SPCL FLANGE	F2	LF00AH08	3"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH40	B23
SPCL FLANGE	F2	LF00AH09	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH80	B23
SPCL FLANGE	F2	LF00AH11	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH160	B23
SPCL FLANGE	F3	LF00AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	B23
SPCL FLANGE	F1	LF10AF32	26"	28"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) STD	B23
SPCL FLANGE	F1	LF10AF33	38"	44"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) XS	B23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10AF34	30"	36"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) SCH20	B23
SPCL FLANGE	F1	LF10AF35	46"	48"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) 14.27mm THK	B23
SPCL FLANGE	F2	LF10AH12	8"	10"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH20	B23
SPCL FLANGE	F2	LF10AH13	12"	12"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH30	B23
SPCL FLANGE	F3	LF10AK34	3"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH40	B23
SPCL FLANGE	F3	LF10AL00	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH160	B23
SPCL FLANGE	F3	LF20AK01	8"	10"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH20	B23
SPCL FLANGE	F3	LF20AK02	12"	12"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH30	B23
SPCL FLG JACK	FJ1	LFJ0AF12	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B23
SPCL FLG JACK	FJ1	LFJ0AF13	4"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B23
SPCL FLG JACK	FJ1	LFJ0AF21	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	B23
SPCL FLG JACK	FJ2	LFJ0AH08	6"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	B23
SPCL FLG JACK	FJ3	LFJ1AK07	6"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40	B23
SPCL GASKET	G1	LG00ZF00	26"	48"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B23
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B23
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B23
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B23
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B23
SPE BLIND	FSB	LFSBAD09	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) W/S5 AT-46C	B23
SPE BLIND	FSB	LFSBAD10	26"	48"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A) W/S5 AT-46C	B23
SPE BLIND	FSB	LFSBAD11	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) W/S5 AT-46C	B23
SWG CON B-P	RCB	LRCBAD04	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH40	B23
SWG CON B-P	RCB	LRCBAF03	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	B23
SWG CON PE	RCP	LRCPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH160	B23
SWG ECC B-P	REB	LREBAD04	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH40	B23
SWG ECC B-P	REB	LREBAF03	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	B23
SWG ECC PE	REP	LREPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH160	B23
TEE	TE	LTE0AB06	8"	10"	TEE A420-WPL6 EQUAL SMLS BE SCH20	B23
TEE	TE	LTE0AB07	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH20	B23
TEE	TE	LTE0AC05	12"	12"	TEE A420-WPL6 EQUAL SMLS BE SCH30	B23
TEE	TE	LTE0AD03	3"	6"	TEE A420-WPL6 EQUAL SMLS BE SCH40	B23
TEE	TE	LTE0AF03	2"	2"	TEE A420-WPL6 EQUAL SMLS BE SCH80	B23
TEE	TE	LTE0AL03	26"	28"	TEE A420-WPL6 EQUAL WELDED BE STD	B23
TEE	TE	LTE0AM03	38"	44"	TEE A420-WPL6 EQUAL WELDED BE XS	B23
TEE	TE	LTE0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL6000	B23
TEE	TE	LTE0AZ03	46"	48"	TEE A420-WPL6 EQUAL WELDED BE 14.27mm THK	B23
TEE RED	TR	LTR0AB06	8"	10"	TEE A420-WPL6 REDUCING SMLS BE SCH20	B23
TEE RED	TR	LTR0AB07	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH20	B23
TEE RED	TR	LTR0AC05	12"	12"	TEE A420-WPL6 REDUCING SMLS BE SCH30	B23
TEE RED	TR	LTR0AD03	3"	6"	TEE A420-WPL6 REDUCING SMLS BE SCH40	B23
TEE RED	TR	LTR0AF03	2"	2"	TEE A420-WPL6 REDUCING SMLS BE SCH80	B23
TEE RED	TR	LTR0AL03	26"	28"	TEE A420-WPL6 REDUCING WELDED BE STD	B23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AM03	38"	44"	TEE A420-WPL6 REDUCING WELDED BE XS	B23
TEE RED	TR	LTR0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL6000	B23
TEE RED	TR	LTR0AZ03	46"	48"	TEE A420-WPL6 REDUCING WELDED BE 14.27mm THK	B23
THREADOLET	TTO	LTTOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL6000	B23
WELDOLET	TWO	LTWOAB03	8"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH20	B23
WELDOLET	TWO	LTWOAD03	3"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH40	B23
WELDOLET	TWO	LTWOAF03	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	B23
BALL VA	VBF	VBFBB007	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBF	VBFBB008	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBF	VBFBB009	26"	48"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBF	VBFBK003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/ NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBR	VBRBB007	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBR	VBRBB008	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B23N
BALL VA	VBR	VBRBB009	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B23N
BOLTS	B	LB00A001	1/2"	54"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B23N
CAP	C	LC00AB04	8"	10"	CAP A420-WPL6 SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AC04	12"	12"	CAP A420-WPL6 SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AD04	3"	6"	CAP A420-WPL6 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AF04	2"	2"	CAP A420-WPL6 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AL04	26"	28"	CAP A420-WPL6 SMLS BE NACE STD (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AM04	38"	44"	CAP A420-WPL6 SMLS BE NACE XS (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
CAP	C	LC00AZ04	46"	54"	CAP A420-WPL6 SMLS BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
CAP THD	CT	LCT0AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B23N
CHECK VA	VCA	VCABB003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B23N
CHECK VA	VCA	VCABB004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B23N
CHECK VA	VCA	VCABB006	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	B23N
CHECK VA	VCH	VCHBK002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B23N
CPLG FULL	CF	LCF0AQ04	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
ELBOLET	TEW	LTEWAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AB08	8"	10"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AB09	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AC06	12"	12"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AD04	3"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AF04	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AL04	26"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AM04	38"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
ELBOW	E4	LE40AZ04	46"	54"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AB08	8"	10"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AB09	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AC06	12"	12"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AD04	3"	6"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AF04	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AL04	26"	28"	ELBOW A420-WPL6 90-LR WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AM04	38"	44"	ELBOW A420-WPL6 90-LR WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
ELBOW	E9	LE90AZ04	46"	54"	ELBOW A420-WPL6 90-LR WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD54	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD55	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD56	3"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD57	2"	2"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD58	30"	36"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD59	26"	28"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD60	38"	44"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD61	46"	54"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
FLANGE	F	LF00AD62	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL150 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B23N
FLG BLIND	FB	LFB0AD09	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B23N
FLG BLIND	FB	LFB0AD10	26"	54"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B23N
FLG BLIND	FB1	LFB0AF05	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0003)	B23N
FLG BLIND	FB1	LFB1AF03	26"	54"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD37	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD38	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD39	4"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD48	30"	36"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD56	26"	28"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD57	38"	44"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW XS NACE (RP-1718-999-6300-0003)	B23N
FLG JACK	FJ	LFJ0AD58	46"	54"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) W/JACK SCREW 14.27mm THK NACE (RP-1718-999-6300-0003)	B23N
FLG RED	RF	LRF0AD10	3"	3"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL150 (ASME B16.5) NACE SCH40 x SCH160 (RP-1718-999-6300-0003)	B23N
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B23N
GASKET	G	LG00ZD01	26"	54"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B23N
GATE VA	VGA	VGABB005	2"	12"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 NACE API 600 (RP-1718-999-6300-0004)	B23N
GATE VA	VGA	VGABB006	14"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	B23N
GATE VA	VGA	VGABB007	26"	48"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD(RP-1718-999-6300-0004)	B23N
GATE VA	VGA	VGABK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	B23N
GATE VA	VGF	VGFBB002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	B23N
GATE VA	VGX	VGXBK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACEAPI 602 (RP-1718-999-6300-0004)	B23N
GLOBE VA	VLA	VLABB002	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 NACE BS 1873 (RP-1718-999-6300-0004)	B23N
GLOBE VA	VLA	VLABB004	8"	12"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	B23N
GLOBE VA	VLA	VLABK002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B23N
INSUL GASKET	GK	LGK0ZD00	2"	4"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B23N
LATERAL Y	TL	LTL0AB04	8"	10"	LATERAL A420-WPL6 EQUAL BE NACE SCH20 DEG-45 (RP-1718-999-6300-0003)	B23N
LATERAL Y	TL	LTL0AC04	12"	12"	LATERAL A420-WPL6 EQUAL BE NACE SCH30 DEG-45 (RP-1718-999-6300-0003)	B23N
LATERAL Y	TL	LTL0AD04	6"	6"	LATERAL A420-WPL6 EQUAL BE NACE SCH40 DEG-45 (RP-1718-999-6300-0003)	B23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
LATERAL Y	TL	LTL0AL04	26"	28"	LATERAL A420-WPL6 EQUAL BE NACE STD DEG-45 (RP-1718-999-6300-0003)	B23N
LATERAL Y	TL	LTL0AM03	38"	44"	LATERAL A420-WPL6 EQUAL BE NACE XS DEG-45 (RP-1718-999-6300-0003)	B23N
LATERAL Y	TL	LTL0AZ03	46"	54"	LATERAL A420-WPL6 EQUAL BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0003)	B23N
NIPPLE TOE	NTO	LNTOAN05	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS	B23N
NIPPLE TOE	NTO	LNTOAN07	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AB12	8"	10"	PIPE A333-6 SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AB13	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH20 W/S2 AT-46C(RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AC08	12"	12"	PIPE A333-6 SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AD09	3"	6"	PIPE A333-6 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AF10	2"	2"	PIPE A333-6 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AK08	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AL06	26"	28"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT STD W/S2 AT-46C(RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AM05	38"	44"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT XS W/S2 AT-46C(RP-1718-999-6300-0003)	B23N
PIPE	P	LP00AZ05	46"	54"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 14.27mm THK W/S2 AT-46C(RP-1718-999-6300-0003)	B23N
PLUG	PLG	LPLGAW04	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	B23N
PLUG VA	VPL	VPLBB003	2"	6"	PLUG VALVE A352-LCC FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599 PTFE NACE (RP-1718-999-6300-0004)	B23N
PLUG VA	VPL	VPLBB004	8"	16"	PLUG VALVE A352-LCC FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	B23N
PLUG VA	VPL	VPLBF003	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B23N
RED CON	RC	LRC0AB08	8"	10"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AB09	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AC06	12"	12"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AD04	3"	6"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AF04	2"	2"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AL04	26"	28"	REDUCER A420-WPL6 CON. WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AM04	38"	44"	REDUCER A420-WPL6 CON. WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
RED CON	RC	LRC0AZ04	46"	54"	REDUCER A420-WPL6 CON. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AB08	8"	10"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AB09	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AC06	12"	12"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AD04	3"	6"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AF04	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AL04	26"	28"	REDUCER A420-WPL6 ECC. WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AM04	38"	44"	REDUCER A420-WPL6 ECC. WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
RED ECC	RE	LRE0AZ04	46"	54"	REDUCER A420-WPL6 ECC. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AB04	8"	10"	LATERAL A420-WPL6 REDUCING BE NACE SCH20 DEG-45 (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AC04	12"	12"	LATERAL A420-WPL6 REDUCING BE NACE SCH30 DEG-45 (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AD04	6"	6"	LATERAL A420-WPL6 REDUCING BE NACE SCH40 DEG-45 (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AL04	26"	28"	LATERAL A420-WPL6 REDUCING BE NACE STD DEG-45 (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AM03	38"	44"	LATERAL A420-WPL6 REDUCING BE NACE XS DEG-45 (RP-1718-999-6300-0003)	B23N
RED LATERAL Y	RL	LRL0AZ01	46"	54"	LATERAL A420-WPL6 REDUCING BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0003)	B23N
SINGLE IBB VA	SFA	LSFAAD04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SLA	LSLAAD04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SLB	LSLBAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SLC	LSLCAD05	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SLC	LSLCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SPA	LSPAAD04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SPB	LSPBAF04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SINGLE IBB VA	SPC	LSPCAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23N
SOCKOLET	TSO	LTSOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF00AF19	3"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF00AF20	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF00AF21	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F3	LF00AL09	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF36	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF37	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF38	30"	36"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF39	26"	28"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF40	38"	44"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F1	LF10AF41	46"	54"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F2	LF10AH14	3"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F2	LF10AH15	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F2	LF10AH16	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F2	LF20AH05	8"	10"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F2	LF20AH06	12"	12"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F3	LF20AK03	3"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F3	LF20AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F3	LF30AK04	8"	10"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0003)	B23N
SPCL FLANGE	F3	LF30AK05	12"	12"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0003)	B23N
SPCL FLG JACK	FJ1	LFJ0AF15	4"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	B23N
SPCL FLG JACK	FJ1	LFJ1AF21	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0003)	B23N
SPCL FLG JACK	FJ1	LFJ1AF22	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0003)	B23N
SPCL GASKET	G1	LG00ZF00	26"	54"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B23N
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B23N
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B23N
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B23N
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B23N
SPE BLIND	FSB	LFSBAD12	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	B23N
SPE BLIND	FSB	LFSBAD13	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	B23N
SPE BLIND	FSB	LFSBAD16	26"	54"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	B23N
SWG CON B-P	RCB	LRCBAD05	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	B23N
SWG CON B-P	RCB	LRCBAF04	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	B23N
SWG CON PE	RCP	LRCPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B23N
SWG ECC B-P	REB	LREBAD05	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	B23N
SWG ECC B-P	REB	LREBAF04	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	B23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG ECC PE	REP	LREPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AB08	8"	10"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AB09	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AC06	12"	12"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AD04	3"	6"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AF04	2"	2"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AL04	26"	28"	TEE A420-WPL6 EQUAL WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AM04	38"	44"	TEE A420-WPL6 EQUAL WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
TEE	TE	LTE0AZ04	46"	54"	TEE A420-WPL6 EQUAL WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AB08	8"	10"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AB09	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AC06	12"	12"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH30 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AD04	3"	6"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AF04	2"	2"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AL04	26"	28"	TEE A420-WPL6 REDUCING WELDED BE NACE STD (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AM04	38"	44"	TEE A420-WPL6 REDUCING WELDED BE NACE XS (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	B23N
TEE RED	TR	LTR0AZ04	46"	54"	TEE A420-WPL6 REDUCING WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0003)	B23N
THREADOLET	TTO	LTTOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	B23N
WELDOLET	TWO	LTWOAB04	8"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH20 (RP-1718-999-6300-0003)	B23N
WELDOLET	TWO	LTWOAD04	3"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0003)	B23N
WELDOLET	TWO	LTWOAF04	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	B23N
BALL VA	VBF	VBFBB007	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBF	VBFBB008	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBF	VBFBB009	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBF	VBFBK003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBR	VBRBB007	2"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBR	VBRBB008	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B23S
BALL VA	VBR	VBRBB009	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	B23S
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	B23S
CAP	C	LC00AB05	8"	10"	CAP A420-WPL6 SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AC05	12"	12"	CAP A420-WPL6 SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AD05	3"	6"	CAP A420-WPL6 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AF05	2"	2"	CAP A420-WPL6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AL05	26"	28"	CAP A420-WPL6 SMLS BE NACE STD (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AM05	38"	44"	CAP A420-WPL6 SMLS BE NACE XS (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
CAP	C	LC00AZ05	46"	46"	CAP A420-WPL6 SMLS BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
CAP THD	CT	LCT0AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	B23S
CHECK VA	VCA	VCABB003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B23S
CHECK VA	VCA	VCABB004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 NACE API 594 (RP-1718-999-6300-0004)	B23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CHECK VA	VCA	VCABB006	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	B23S
CHECK VA	VCH	VCHBK002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B23S
CPLG FULL	CF	LCF0AQ05	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
ELBOLET	TEW	LTEWAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AB10	8"	10"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AB11	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AC07	12"	12"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AD05	3"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AF05	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AL05	26"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AM05	38"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
ELBOW	E4	LE40AZ05	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AB10	8"	10"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AB11	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AC07	12"	12"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AD05	3"	6"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AF05	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AL05	26"	28"	ELBOW A420-WPL6 90-LR WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AM05	38"	44"	ELBOW A420-WPL6 90-LR WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
ELBOW	E9	LE90AZ05	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD63	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD64	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD65	3"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD66	2"	2"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD67	30"	36"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD68	26"	28"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD69	38"	44"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD70	46"	46"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
FLANGE	F	LF00AD71	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL150 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B23S
FLG BLIND	FB	LFB0AD11	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.5) NACE (RP-1718-999-6300-0002)	B23S
FLG BLIND	FB	LFB0AD12	26"	46"	FLANGE A350-LF2 CL1 BLIND RF CL150 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	B23S
FLG BLIND	FB1	LFB0AF06	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0002)	B23S
FLG BLIND	FB1	LFB1AF04	26"	46"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	B23S
FLG JACK	FJ	LFJ0AD42	8"	10"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0002)	B23S
FLG JACK	FJ	LFJ0AD43	12"	12"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0002)	B23S
FLG JACK	FJ	LFJ0AD44	4"	6"	FLANGE A350-LF2 CL1 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	B23S
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B23S
GASKET	G	LG00ZD01	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B23S
GATE VA	VGA	VGABB005	2"	12"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 NACE API 600 (RP-1718-999-6300-0004)	B23S
GATE VA	VGA	VGABB006	14"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	B23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGA	VGABB007	26"	46"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD(RP-1718-999-6300-0004)	B23S
GATE VA	VGA	VGABK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	B23S
GATE VA	VGF	VGFBB002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 NACE API 602 (RP-1718-999-6300-0004)	B23S
GATE VA	VGX	VGXBK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACEAPI 602 (RP-1718-999-6300-0004)	B23S
GLOBE VA	VLA	VLABB002	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 NACE BS 1873 (RP-1718-999-6300-0004)	B23S
GLOBE VA	VLA	VLABB004	8"	12"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	B23S
GLOBE VA	VLA	VLABK002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	B23S
LATERAL Y	TL	LTL0AB05	8"	10"	LATERAL A420-WPL6 EQUAL BE NACE SCH20 DEG-45 (RP-1718-999-6300-0002)	B23S
LATERAL Y	TL	LTL0AC05	12"	12"	LATERAL A420-WPL6 EQUAL BE NACE SCH30 DEG-45 (RP-1718-999-6300-0002)	B23S
LATERAL Y	TL	LTL0AD05	6"	6"	LATERAL A420-WPL6 EQUAL BE NACE SCH40 DEG-45 (RP-1718-999-6300-0002)	B23S
LATERAL Y	TL	LTL0AL05	26"	28"	LATERAL A420-WPL6 EQUAL BE NACE STD DEG-45 (RP-1718-999-6300-0002)	B23S
LATERAL Y	TL	LTL0AM04	38"	44"	LATERAL A420-WPL6 EQUAL BE NACE XS DEG-45 (RP-1718-999-6300-0002)	B23S
LATERAL Y	TL	LTL0AZ04	46"	46"	LATERAL A420-WPL6 EQUAL BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0002)	B23S
NIPPLE TOE	NTO	LNTOAN04	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AB14	8"	10"	PIPE A333-6 SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AB15	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH20 W/S2 AT-46C(RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AC09	12"	12"	PIPE A333-6 SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AD10	3"	6"	PIPE A333-6 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AF11	2"	2"	PIPE A333-6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AK09	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AL07	26"	28"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT STD W/S2 AT-46C(RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AM06	38"	44"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT XS W/S2 AT-46C(RP-1718-999-6300-0002)	B23S
PIPE	P	LP00AZ06	46"	46"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 14.27mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	B23S
PIPE	P1	LP10AB05	10"	10"	PIPE A333-6 SMLS BE PE COATED SCH20 NACE (RP-1718-999-6300-0002)	B23S
PIPE	P1	LP10AB06	18"	24"	PIPE A671-CC65 CL.22 EFW BE PE COATED 100% RT SCH20 W/S2 AT-46C NACE(RP-1718-999-6300-0002)	B23S
PIPE	P1	LP10AC04	12"	12"	PIPE A333-6 SMLS BE PE COATED SCH30 NACE (RP-1718-999-6300-0002)	B23S
PIPE	P1	LP10AD05	3"	6"	PIPE A333-6 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0002)	B23S
PIPE	P1	LP10AF12	2"	2"	PIPE A333-6 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0002)	B23S
PLUG	PLG	LPLGAW05	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	B23S
PLUG VA	VPL	VPLBB003	2"	6"	PLUG VALVE A352-LCC FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599 PTFE NACE (RP-1718-999-6300-0004)	B23S
PLUG VA	VPL	VPLBB004	8"	16"	PLUG VALVE A352-LCC FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	B23S
PLUG VA	VPL	VPLBF003	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	B23S
RED CON	RC	LRC0AB10	8"	10"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AB11	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AC07	12"	12"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AD05	3"	6"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AF05	2"	2"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AL05	26"	28"	REDUCER A420-WPL6 CON. WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AM05	38"	44"	REDUCER A420-WPL6 CON. WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
RED CON	RC	LRC0AZ05	46"	46"	REDUCER A420-WPL6 CON. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AB10	8"	10"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AB11	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AC07	12"	12"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AD05	3"	6"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AF05	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AL05	26"	28"	REDUCER A420-WPL6 ECC. WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AM05	38"	44"	REDUCER A420-WPL6 ECC. WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
RED ECC	RE	LRE0AZ05	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AB05	8"	10"	LATERAL A420-WPL6 REDUCING BE NACE SCH20 DEG-45 (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AC05	12"	12"	LATERAL A420-WPL6 REDUCING BE NACE SCH30 DEG-45 (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AD05	6"	6"	LATERAL A420-WPL6 REDUCING BE NACE SCH40 DEG-45 (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AL05	26"	28"	LATERAL A420-WPL6 REDUCING BE NACE STD DEG-45 (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AM04	38"	44"	LATERAL A420-WPL6 REDUCING BE NACE XS DEG-45 (RP-1718-999-6300-0002)	B23S
RED LATERAL Y	RL	LRL0AZ02	46"	46"	LATERAL A420-WPL6 REDUCING BE NACE 14.27mm THK DEG-45 (RP-1718-999-6300-0002)	B23S
SINGLE IBB VA	SFA	LSFAAD04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SLA	LSLAAD04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SLB	LSLBAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SLC	LSLCAD05	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SLC	LSLCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SPA	LSPAAD04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SPB	LSPBAF04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SINGLE IBB VA	SPC	LSPCAD04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B23S
SOCKOLET	TSO	LTSOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF00AF22	3"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF00AF23	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF00AF24	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF00AH12	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF00AH13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F3	LF00AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF42	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF43	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF44	30"	36"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF45	26"	28"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF46	38"	44"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE XS (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F1	LF10AF47	46"	46"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.47-A) NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF10AH17	3"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F3	LF10AK58	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF20AH07	8"	10"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF20AH08	12"	12"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF20AH18	30"	30"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE SCH20 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F2	LF20AH19	26"	26"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE STD (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F3	LF20AK05	3"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F3	LF30AK06	8"	10"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH20 (RP-1718-999-6300-0002)	B23S
SPCL FLANGE	F3	LF30AK07	12"	12"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH30 (RP-1718-999-6300-0002)	B23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ0AF18	4"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	B23S
SPCL FLG JACK	FJ1	LFJ1AF23	8"	10"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20 NACE (RP-1718-999-6300-0002)	B23S
SPCL FLG JACK	FJ1	LFJ1AF24	12"	12"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE (RP-1718-999-6300-0002)	B23S
SPCL GASKET	G1	LG00ZF00	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B23S
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B23S
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B23S
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B23S
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B23S
SPE BLIND	FSB	LFSBAD14	1/2"	12"	FLANGE A516-70 FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	B23S
SPE BLIND	FSB	LFSBAD15	14"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	B23S
SWG CON B-P	RCB	LRCBAD06	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	B23S
SWG CON B-P	RCB	LRCBAF05	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	B23S
SWG CON PE	RCP	LRCPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B23S
SWG ECC B-P	REB	LREBAD06	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	B23S
SWG ECC B-P	REB	LREBAF05	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	B23S
SWG ECC PE	REP	LREPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AB10	8"	10"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AB11	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AC07	12"	12"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AD05	3"	6"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AF05	2"	2"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AL05	26"	28"	TEE A420-WPL6 EQUAL WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AM05	38"	44"	TEE A420-WPL6 EQUAL WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
TEE	TE	LTE0AZ05	46"	46"	TEE A420-WPL6 EQUAL WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AB10	8"	10"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AB11	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AC07	12"	12"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH30 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AD05	3"	6"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AF05	2"	2"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AL05	26"	28"	TEE A420-WPL6 REDUCING WELDED BE NACE STD (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AM05	38"	44"	TEE A420-WPL6 REDUCING WELDED BE NACE XS (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	B23S
TEE RED	TR	LTR0AZ05	46"	46"	TEE A420-WPL6 REDUCING WELDED BE NACE 14.27mm THK (RP-1718-999-6300-0002)	B23S
THREADOLET	TTO	LTTOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	B23S
WELDOLET	TWO	LTWOAB05	8"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH20 (RP-1718-999-6300-0002)	B23S
WELDOLET	TWO	LTWOAD05	3"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0002)	B23S
WELDOLET	TWO	LTWOAF05	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002)	B23S
BOLTS	B	LB00A003	1/2"	24"	STUD BOLT A193-B16 W/2 HEAVY HEX. NUTS(B18.2.2) A194-4	B42
CAP	C	LC00DA00	14"	18"	CAP A234-WP11 CL1 SMLS BE SCH10	B42
CAP	C	LC00DB00	8"	12"	CAP A234-WP11 CL1 SMLS BE SCH20	B42
CAP	C	LC00DD00	2"	6"	CAP A234-WP11 CL1 SMLS BE SCH40	B42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED SW CL3000	B42
CAP THD	CT	LCT0DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED TE(NPT-F) CL3000	B42
CHECK VA	VCH	VCHDB001	2"	4"	CHECK VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL150 API 6D	B42
CHECK VA	VCH	VCHDB002	6"	24"	CHECK VALVE A217-WC6 FLGD-RF 13Cr TRIM BC SWING ANSI CL150 API 6D	B42
CHECK VA	VCH	VCHDK001	1/2"	1 1/2"	CHECK VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B42
CPLG FULL	CF	LCF0DP00	1/2"	1 1/2"	COUPLING A182-F11 CL2 FULL(STRAIGHT) FORGED SW CL3000	B42
ELBOLET	TEW	LTEWDP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 ELBOW OUTLET FORGED SW CL3000	B42
ELBOW	E4	LE40DA00	14"	16"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH10	B42
ELBOW	E4	LE40DA01	18"	18"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH10	B42
ELBOW	E4	LE40DB00	8"	12"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH20	B42
ELBOW	E4	LE40DB01	20"	24"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH20	B42
ELBOW	E4	LE40DD00	2"	6"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH40	B42
ELBOW	E4	LE40DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-45 FORGED SW CL3000	B42
ELBOW	E9	LE90DA00	14"	16"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH10	B42
ELBOW	E9	LE90DA01	18"	18"	ELBOW A234-WP11 CL1 90-LR WELDED BE SCH10	B42
ELBOW	E9	LE90DB00	8"	12"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH20	B42
ELBOW	E9	LE90DB01	20"	24"	ELBOW A234-WP11 CL1 90-LR WELDED BE SCH20	B42
ELBOW	E9	LE90DD00	2"	6"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH40	B42
ELBOW	E9	LE90DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-90 FORGED SW CL3000	B42
FLANGE	F	LF00DD00	14"	18"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH10	B42
FLANGE	F	LF00DD01	8"	12"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH20	B42
FLANGE	F	LF00DD02	2"	6"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH40	B42
FLANGE	F	LF00DD03	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL150 (ASME B16.5) SCH80	B42
FLG BLIND	FB	LFB0DD00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL150 (ASME B16.5)	B42
FLG BLIND	FB1	LFB0DF00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL300 (ASME B16.5)	B42
FLG JACK	FJ	LFJ0DD00	14"	18"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10	B42
FLG JACK	FJ	LFJ0DD01	8"	12"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B42
FLG JACK	FJ	LFJ0DD02	4"	6"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B42
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B42
GATE VA	VGA	VGADB001	2"	12"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B42
GATE VA	VGA	VGADB002	14"	24"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B42
GATE VA	VGA	VGADK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B42
GATE VA	VGF	VGFDB001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 FOR EQUIP NOZZLE CONN.	B42
GATE VA	VGX	VGXDK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B42
GLOBE VA	VLA	VLADB001	2"	6"	GLOBE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B42
GLOBE VA	VLA	VLADK001	1/2"	1 1/2"	GLOBE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B42
NIPPLE TOE	NTO	LNTODK00	1/2"	1 1/2"	NIPPLE A335-P11 SMLS TOE(NPT-M) 75mm LONG SCH160	B42
PIPE	P	LP00DA00	14"	16"	PIPE A335-P11 SMLS BE SCH10	B42
PIPE	P	LP00DA01	18"	18"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH10	B42
PIPE	P	LP00DB00	8"	12"	PIPE A335-P11 SMLS BE SCH20	B42
PIPE	P	LP00DB01	20"	24"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH20	B42
PIPE	P	LP00DD00	2"	6"	PIPE A335-P11 SMLS BE SCH40	B42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00DF00	1/2"	1 1/2"	PIPE A335-P11 SMLS PE SCH80	B42
PLUG	PLG	LPLGDW02	1/2"	1 1/2"	PLUG A182-F11 CL2 ROUND HEAD FORGED TE(NPT-M)	B42
RED CON	RC	LRC0DA00	14"	16"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH10	B42
RED CON	RC	LRC0DA01	18"	18"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH10	B42
RED CON	RC	LRC0DB00	8"	12"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH20	B42
RED CON	RC	LRC0DB01	20"	24"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH20	B42
RED CON	RC	LRC0DD00	2"	6"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH40	B42
RED ECC	RE	LRE0DA00	14"	16"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH10	B42
RED ECC	RE	LRE0DA01	18"	18"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH10	B42
RED ECC	RE	LRE0DB00	8"	12"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH20	B42
RED ECC	RE	LRE0DB01	20"	24"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH20	B42
RED ECC	RE	LRE0DD00	2"	6"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH40	B42
SINGLE IBB VA	SFA	LSFADD00	1/2"	1/2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SLA	LSLADD00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SLB	LSLBDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SLC	LSLCDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE &NEEDLE VENT)	B42
SINGLE IBB VA	SLC	LSLCDF00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SPA	LSPADD00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SPB	LSPBDF00	1"	1"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SINGLE IBB VA	SPC	LSPCDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B42
SOCKOLET	TS1	LTS1DP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B42
SOCKOLET	TSO	LTSODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000	B42
SPCL FLANGE	F1	LF00DF00	2"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH40	B42
SPCL FLANGE	F1	LF00DF01	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL300 (ASME B16.5) SCH80	B42
SPCL FLANGE	F1	LF10DF00	14"	18"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH10	B42
SPCL FLANGE	F1	LF10DF01	8"	12"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH20	B42
SPCL FLANGE	F2	LF10DH01	2"	6"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH40	B42
SPCL FLANGE	F2	LF10DH03	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL600 (ASME B16.5) SCH80	B42
SPCL FLANGE	F3	LF10DK00	2"	6"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH40	B42
SPCL FLANGE	F3	LF10DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL1500 (ASME B16.5) SCH80	B42
SPCL FLANGE	F2	LF20DH00	14"	18"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH10	B42
SPCL FLANGE	F2	LF20DH01	8"	12"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH20	B42
SPCL FLANGE	F3	LF30DK00	14"	18"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH10	B42
SPCL FLANGE	F3	LF30DK01	8"	12"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH20	B42
SPCL FLG JACK	FJ1	LFJ0DF00	4"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B42
SPCL FLG JACK	FJ1	LFJ1DF00	14"	18"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10	B42
SPCL FLG JACK	FJ1	LFJ1DF01	8"	12"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B42
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B42
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B42
SPCL GASKET	G3	LG20ZK00	2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B42
SPCL GASKET	G3	LG20ZL00	1/2"	1 1/2"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B42
SPE BLIND	FSB	LFSBDD00	1/2"	12"	FLANGE A387-11CL2 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPE BLIND	FSB	LFSBDD01	14"	24"	FLANGE A387-11CL2 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B42
SWG CON B-P	RCB	LRCBDD00	2"	4"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH40	B42
SWG CON PE	RCP	LRCPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 CON. SMLS PE SCH80	B42
SWG ECC B-P	REB	LREBDD00	2"	4"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH40	B42
SWG ECC PE	REP	LREPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 ECC. SMLS PE SCH80	B42
TEE	TE	LTE0DA00	14"	16"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH10	B42
TEE	TE	LTE0DA01	18"	18"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH10	B42
TEE	TE	LTE0DB00	8"	12"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH20	B42
TEE	TE	LTE0DB01	20"	24"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH20	B42
TEE	TE	LTE0DD00	2"	6"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH40	B42
TEE	TE	LTE0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 EQUAL FORGED SW CL3000	B42
TEE RED	TR	LTR0DA00	14"	16"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH10	B42
TEE RED	TR	LTR0DA01	18"	18"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH10	B42
TEE RED	TR	LTR0DB00	8"	12"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH20	B42
TEE RED	TR	LTR0DB01	20"	24"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH20	B42
TEE RED	TR	LTR0DD00	2"	6"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH40	B42
TEE RED	TR	LTR0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 REDUCING FORGED SW CL3000	B42
THREADOLET	TTO	LTTODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 THREADED OUTLET FORGED TE(NPT-F) CL3000	B42
WELDOLET	TWO	LTWODB00	8"	8"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH20	B42
WELDOLET	TWO	LTWODD00	2"	6"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH40	B42
BOLTS	B	LB00A003	1/2"	36"	STUD BOLT A193-B16 W/2 HEAVY HEX. NUTS(B18.2.2) A194-4	B43
CAP	C	LC00DA00	14"	18"	CAP A234-WP11 CL1 SMLS BE SCH20	B43
CAP	C	LC00DC00	12"	12"	CAP A234-WP11 CL1 SMLS BE SCH30	B43
CAP	C	LC00DB00	8"	10"	CAP A234-WP11 CL1 SMLS BE SCH20	B43
CAP	C	LC00DD00	3"	6"	CAP A234-WP11 CL1 SMLS BE SCH40	B43
CAP	C	LC00DF00	2"	2"	CAP A234-WP11 CL1 SMLS BE SCH80	B43
CAP	C	LC00DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED SW CL3000	B43
CAP THD	CT	LCT0DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED TE(NPT-F) CL3000	B43
CHECK VA	VCH	VCHDB001	2"	4"	CHECK VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL150 API 6D	B43
CHECK VA	VCH	VCHDB002	6"	24"	CHECK VALVE A217-WC6 FLGD-RF 13Cr TRIM BC SWING ANSI CL150 API 6D	B43
CHECK VA	VCH	VCHDB003	26"	36"	CHECK VALVE A217-WC6 FLGD-RF 13Cr TRIM BC SWING ANSI CL150 API 6D ASME B16.47-A FLGD	B43
CHECK VA	VCH	VCHDK001	1/2"	1 1/2"	CHECK VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	B43
CPLG FULL	CF	LCF0DP00	1/2"	1 1/2"	COUPLING A182-F11 CL2 FULL(STRAIGHT) FORGED SW CL3000	B43
ELBOLET	TEW	LTEWDP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 ELBOW OUTLET FORGED SW CL3000	B43
ELBOW	E4	LE40DB00	14"	16"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH20	B43
ELBOW	E4	LE40DZ00	26"	28"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 9.53mm THK	B43
ELBOW	E4	LE40DZ01	30"	32"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 10.31mm THK	B43
ELBOW	E4	LE40DZ02	30"	32"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 11.13mm THK	B43
ELBOW	E4	LE40DC00	12"	12"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH30	B43
ELBOW	E4	LE40DB00	8"	10"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH20	B43
ELBOW	E4	LE40DB01	18"	24"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH20	B43
ELBOW	E4	LE40DD00	3"	6"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH40	B43

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40DF00	2"	2"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH40	B43
ELBOW	E4	LE40DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-45 FORGED SW CL3000	B43
ELBOW	E9	LE90DB00	14"	16"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH20	B43
ELBOW	E9	LE90DZ00	26"	28"	ELBOW A234-WP11 CL1 90-LR WELDED BE 9.53mm THK	B43
ELBOW	E9	LE90DZ01	30"	32"	ELBOW A234-WP11 CL1 90-LR WELDED BE 10.31mm THK	B43
ELBOW	E9	LE90DZ02	34"	36"	ELBOW A234-WP11 CL1 90-LR WELDED BE 11.13mm THK	B43
ELBOW	E9	LE90DC00	12"	12"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH30	B43
ELBOW	E9	LE90DB00	8"	10"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH20	B43
ELBOW	E9	LE90DB01	18"	24"	ELBOW A234-WP11 CL1 90-LR WELDED BE SCH20	B43
ELBOW	E9	LE90DD00	3"	6"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH40	B43
ELBOW	E9	LE90DF00	2"	2"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH40	B43
ELBOW	E9	LE90DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-90 FORGED SW CL3000	B43
FLANGE	F	LF00DD09	34"	36"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 11.13mm THK	B43
FLANGE	F	LF00DD08	30"	32"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 10.31mm THK	B43
FLANGE	F	LF00DD07	26"	28"	FLANGE A105 WN RF CL150 (ASME B16.47-A) 9.53mm THK	B43
FLANGE	F	LF00DD01	14"	24"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH20	B43
FLANGE	F	LF00DD04	12"	12"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH30	B43
FLANGE	F	LF00DD01	8"	10"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH20	B43
FLANGE	F	LF00DD02	3"	6"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH40	B43
FLANGE	F	LF00DD05	2"	2"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) SCH80	B43
FLANGE	F	LF00DD06	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL150 (ASME B16.5) SCH160	B43
FLG BLIND	FB	LFB0DD00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL150 (ASME B16.5)	B43
FLG BLIND	FB	LFB0DD01	26"	36"	FLANGE A182-F11CL2 BLIND RF CL150 (ASME B16.47A)	B43
FLG BLIND	FB1	LFB0DF00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL300 (ASME B16.5)	B43
FLG BLIND	FB1	LFB0DF01	26"	36"	FLANGE A182-F11CL2 BLIND RF CL300 (ASME B16.47A)	B43
FLG JACK	FJ	LFJ0DD01	14"	18"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B43
FLG JACK	FJ	LFJ0DD03	12"	12"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH30	B43
FLG JACK	FJ	LFJ0DD01	8"	10"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH20	B43
FLG JACK	FJ	LFJ0DD02	4"	6"	FLANGE A182-F11CL2 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH40	B43
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B43
GASKET	G	LG00ZD01	26"	36"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B43
GATE VA	VGA	VGADB001	2"	12"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B43
GATE VA	VGA	VGADB002	14"	24"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B43
GATE VA	VGA	VGADB003	26"	36"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B43
GATE VA	VGA	VGADK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B43
GATE VA	VGF	VGFDB001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 FOR EQUIP NOZZLE CONN.	B43
GATE VA	VGX	VGXDK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B43
GLOBE VA	VLA	VLADB001	2"	6"	GLOBE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B43
GLOBE VA	VLA	VLADK001	1/2"	1 1/2"	GLOBE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B43
NIPPLE TOE	NTO	LNTODK00	1/2"	1 1/2"	NIPPLE A335-P11 SMLS TOE(NPT-M) 75mm LONG SCH160	B43
PIPE	P	LP00DB00	14"	16"	PIPE A335-P11 SMLS BE SCH20	B43
PIPE	P	LP00DZ00	26"	28"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 9.53mm THK	B43

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00DZ01	30"	32"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 10.31mm THK	B43
PIPE	P	LP00DZ02	34"	36"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 11.13mm THK	B43
PIPE	P	LP00DB00	8"	10"	PIPE A335-P11 SMLS BE SCH20	B43
PIPE	P	LP00DC00	12"		PIPE A335-P11 SMLS BE SCH30	B43
PIPE	P	LP00DB01	18"	24"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH20	B43
PIPE	P	LP00DD00	3"	6"	PIPE A335-P11 SMLS BE SCH40	B43
PIPE	P	LP00DF01	2"		PIPE A335-P11 SMLS BE SCH80	B43
PIPE	P	LP00DK00	1/2"	1 1/2"	PIPE A335-P11 SMLS PE SCH160	B43
PLUG	PLG	LPLGDW02	1/2"	1 1/2"	PLUG A182-F11 CL2 ROUND HEAD FORGED TE(NPT-M)	B43
RED CON	RC	LRC0DB00	14"	16"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH20	B43
RED CON	RC	LRC0DC00	12"	12"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH30	B43
RED CON	RC	LRC0DB01	18"	24"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH20	B43
RED CON	RC	LRC0DB00	8"	10"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH20	B43
RED CON	RC	LRC0DB01	20"	24"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH20	B43
RED CON	RC	LRC0DZ00	26"	28"	REDUCER A234-WP11 CL1 CON. WELDED BE 9.53mm THK	B43
RED CON	RC	LRC0DZ01	30"	32"	REDUCER A234-WP11 CL1 CON. WELDED BE 10.31mm THK	B43
RED CON	RC	LRC0DZ02	34"	36"	REDUCER A234-WP11 CL1 CON. WELDED BE 11.13mm THK	B43
RED CON	RC	LRC0DD00	3"	6"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH40	B43
RED ECC	RE	LRE0DB00	14"	16"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH20	B43
RED ECC	RE	LRE0DB01	18"	24"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH20	B43
RED ECC	RE	LRE0DB00	8"	10"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH20	B43
RED ECC	RE	LRE0DC00	12"	12"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH30	B43
RED ECC	RE	LRE0DB01	20"	24"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH20	B43
RED ECC	RE	LRE0DZ00	26"	28"	REDUCER A234-WP11 CL1 ECC. WELDED BE 9.53mm THK	B43
RED ECC	RE	LRE0DZ01	30"	32"	REDUCER A234-WP11 CL1 ECC. WELDED BE 10.31mm THK	B43
RED ECC	RE	LRE0DZ02	34"	36"	REDUCER A234-WP11 CL1 ECC. WELDED BE 11.13mm THK	B43
RED ECC	RE	LRE0DD00	3"	6"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH40	B43
SINGLE IBB VA	SFA	LSFADD00	1/2"	1/2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SLA	LSLADD00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SLB	LSLBDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SLC	LSLCDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE &NEEDLE VENT)	B43
SINGLE IBB VA	SLC	LSLCDF00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SPA	LSPADD00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SPB	LSPBDF00	1"	1"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SINGLE IBB VA	SPC	LSPCDD00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	B43
SOCKOLET	TS1	LTS1DP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	B43
SOCKOLET	TSO	LTSODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000	B43
SPCL FLANGE	F1	LF10DF03	3"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH40	B43
SPCL FLANGE	F1	LF10DF04	2"	2"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH80	B43
SPCL FLANGE	F1	LF10DF05	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL300 (ASME B16.5) SCH160	B43
SPCL FLANGE	F1	LF10DF01	14"	18"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH20	B43
SPCL FLANGE	F1	LF10DF02	12"	12"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH30	B43

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10DF01	8"	10"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH20	B43
SPCL FLANGE	F2	LF20DH03	3"	6"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH40	B43
SPCL FLANGE	F2	LF20DH04	2"	2"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH80	B43
SPCL FLANGE	F2	LF20DH05	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL600 (ASME B16.5) SCH160	B43
SPCL FLANGE	F3	LF30DK04	2"	2"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH80	B43
SPCL FLANGE	F3	LF30DK03	3"	6"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH40	B43
SPCL FLANGE	F3	LF30DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL1500 (ASME B16.5) SCH80	B43
SPCL FLANGE	F2	LF20DH01	14"	18"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH20	B43
SPCL FLANGE	F2	LF20DH02	12"	12"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH30	B43
SPCL FLANGE	F2	LF20DH01	8"	10"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH20	B43
SPCL FLANGE	F3	LF30DK01	14"	18"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH20	B43
SPCL FLANGE	F3	LF30DK02	12"	12"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH30	B43
SPCL FLANGE	F3	LF30DK01	8"	10"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH20	B43
SPCL FLG JACK	FJ1	LFJ1DF03	4"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	B43
SPCL FLG JACK	FJ1	LFJ1DF01	14"	18"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B43
SPCL FLG JACK	FJ1	LFJ1DF02	12"	12"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	B43
SPCL FLG JACK	FJ1	LFJ1DF01	8"	10"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	B43
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B43
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B43
SPCL GASKET	G3	LG30ZK00	2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B43
SPCL GASKET	G3	LG30ZL00	1/2"	1 1/2"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B43
SPE BLIND	FSB	LFSBDD00	1/2"	12"	FLANGE A387-11CL2 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B43
SPE BLIND	FSB	LFSBDD01	14"	24"	FLANGE A387-11CL2 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B43
SWG CON B-P	RCB	LRCBDF00	2"	2"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH80	B43
SWG CON B-P	RCB	LRCBDD00	3"	4"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH40	B43
SWG CON PE	RCP	LRCPDK00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 CON. SMLS PE SCH160	B43
SWG ECC B-P	REB	LREBDF00	2"	2"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH80	B43
SWG ECC B-P	REB	LREBDD00	3"	4"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH40	B43
SWG ECC PE	REP	LREPDK00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 ECC. SMLS PE SCH160	B43
TEE	TE	LTE0DB00	14"	16"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH20	B43
TEE	TE	LTE0DC00	12"	12"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH30	B43
TEE	TE	LTE0DB00	8"	10"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH20	B43
TEE	TE	LTE0DB01	18"	24"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH20	B43
TEE	TE	LTE0DZ00	26"	28"	TEE A234-WP11 CL1 EQUAL WELDED BE 9.53mmTHK	B43
TEE	TE	LTE0DZ01	30"	32"	TEE A234-WP11 CL1 EQUAL WELDED BE 10.31mmTHK	B43
TEE	TE	LTE0DZ02	34"	36"	TEE A234-WP11 CL1 EQUAL WELDED BE 11.13mmTHK	B43
TEE	TE	LTE0DD00	3"	6"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH40	B43
TEE	TE	LTE0DF00	2"	2"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH80	B43
TEE	TE	LTE0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 EQUAL FORGED SW CL3000	B43
TEE RED	TR	LTR0DB00	14"	16"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH20	B43
TEE RED	TR	LTR0DC00	12"	12"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH30	B43
TEE RED	TR	LTR0DB00	8"	10"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH20	B43

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0DB01	18"	24"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH20	B43
TEE RED	TR	LTR0DZ00	26"	28"	TEE A234-WP11 CL1 REDUCING WELDED BE 9.53mm THK	B43
TEE RED	TR	LTR0DZ01	30"	32"	TEE A234-WP11 CL1 REDUCING WELDED BE 10.31mm THK	B43
TEE RED	TR	LTR0DZ02	34"	36"	TEE A234-WP11 CL1 REDUCING WELDED BE 11.13mm THK	B43
TEE RED	TR	LTR0DD00	3"	6"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH40	B43
TEE RED	TR	LTR0DF00	2"	2"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH80	B43
TEE RED	TR	LTR0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 REDUCING FORGED SW CL3000	B43
THREADOLET	TTO	LTTODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 THREADED OUTLET FORGED TE(NPT-F) CL3000	B43
WELDOLET	TWO	LTWODB00	8"	8"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH20	B43
WELDOLET	TWO	LTWODD00	3"	6"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH40	B43
WELDOLET	TWO	LTWODF00	2"	2"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH80	B43
BALL VA	VBF	VBFCB001	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VBF	VBFCB002	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VBF	VBFCB003	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VB1	VBFCB014	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B46
BALL VA	VB1	VBFCB015	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B46
BALL VA	VB1	VBFCB016	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	B46
BALL VA	VBF	VBFCK001	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/KELF SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VB1	VBFCK004	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	B46
BALL VA	VBR	VBRCB001	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VBR	VBRCB002	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VBR	VBRCB003	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	B46
BALL VA	VB2	VBRCB014	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	B46
BALL VA	VB2	VBRCB015	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B46
BALL VA	VB2	VBRCB016	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	B46
BOLTS	B	LB00A004	1/2"	46"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	B46
BUTTERFLY VA	VUF	VUFCB001	2"	6"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 API 609 TRIPPLE OFFSET DESIGN/CRYOGENIC(RP-1718-999S1300-0028)	B46
BUTTERFLY VA	VUF	VUFCB002	8"	24"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/CRYOGENIC(RP-1718-999S1300-0028)	B46
BUTTERFLY VA	VUF	VUFCB003	26"	46"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	B46
CAP	C	LC00CA00	26"	36"	CAP A403-WP304L SMLS BE SCH10	B46
CAP	C	LC00CL00	38"	40"	CAP A403-WP304L SMLS BE STD	B46
CAP	C	LC00CP00	1/2"	1 1/2"	CAP A182-F304L FORGED SW CL3000	B46
CAP	C	LC00CQ00	2"	24"	CAP A403-WP304L SMLS BE SCH10S	B46
CAP THD	CT	LCT0CP00	1/2"	1 1/2"	CAP A182-F304L FORGED TE(NPT-F) CL3000	B46
CHECK VA	VCA	VCACB001	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 CRYOGENIC(RP-1718-999-1300-0028)	B46
CHECK VA	VCA	VCACB004	26"	46"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES CRYOGENIC(RP-1718-999-1300-0028)	B46
CHECK VA	VCH	VCHCK005	1/2"	1 1/2"	CHECK VALVE A182-F304L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	B46
CPLG FULL	CF	LCF0CP00	1/2"	1 1/2"	COUPLING A182-F304L FULL(STRAIGHT) FORGED SW CL3000	B46
ELBOLET	TEW	LTEWCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L ELBOW OUTLET FORGED SW CL3000	B46
ELBOW	E4	LE40CA00	26"	36"	ELBOW A403-WP304L DEG-45 WELDED BE SCH10	B46
ELBOW	E4	LE40CL00	38"	46"	ELBOW A403-WP304L DEG-45 WELDED BE STD	B46
ELBOW	E4	LE40CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-45 FORGED SW CL3000	B46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40CQ00	2"	6"	ELBOW A403-WP304L DEG-45 SMLS BE SCH10S	B46
ELBOW	E4	LE40CQ01	8"	24"	ELBOW A403-WP304L DEG-45 WELDED BE SCH10S	B46
ELBOW	E9	LE90CA00	26"	36"	ELBOW A403-WP304L 90-LR WELDED BE SCH10	B46
ELBOW	E9	LE90CL00	38"	46"	ELBOW A403-WP304L 90-LR WELDED BE STD	B46
ELBOW	E9	LE90CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-90 FORGED SW CL3000	B46
ELBOW	E9	LE90CQ00	2"	6"	ELBOW A403-WP304L 90-LR SMLS BE SCH10S	B46
ELBOW	E9	LE90CQ01	8"	24"	ELBOW A403-WP304L 90-LR WELDED BE SCH10S	B46
FLANGE	F	LF00CD00	2"	24"	FLANGE A182-F304L WN RF CL150 (ASME B16.5) SCH10S	B46
FLANGE	F	LF00CD01	26"	36"	FLANGE A182-F304L WN RF CL150 (ASME B16.47-A) SCH10	B46
FLANGE	F	LF00CD02	38"	46"	FLANGE A182-F304L WN RF CL150 (ASME B16.47-A) STD	B46
FLANGE	F	LF00CD03	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL150 (ASME B16.5) SCH80S	B46
FLG BLIND	FB	LFB0CD00	1/2"	24"	FLANGE A182-F304L BLIND RF CL150 (ASME B16.5)	B46
FLG BLIND	FB	LFB0CD01	26"	46"	FLANGE A182-F304L BLIND RF CL150 (ASME B16.47-A)	B46
FLG BLIND	FB1	LFB0CF00	1/2"	24"	FLANGE A182-F304L BLIND RF CL300 (ASME B16.5)	B46
FLG BLIND	FB1	LFB1CF00	26"	46"	FLANGE A182-F304L BLIND RF CL300 (ASME B16.47-A)	B46
FLG JACK	FJ	LFJ0CD00	4"	24"	FLANGE A182-F304L WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10S	B46
FLG JACK	FJ	LFJ0CD04	30"	30"	FLANGE A182-F304L WN RF CL150 (ASME B16.47-A) W/JACK SCREW SCH10	B46
FLG JACK	FJ	LFJ0CD06	40"	40"	FLANGE A182-F304L WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B46
GASKET	G	LG00ZD03	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5) SS304L INSERT	B46
GASKET	G	LG00ZD04	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A) SS304L INSERT	B46
GATE VA	VGA	VGACB005	2"	12"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600 CRYOGENIC(RP-1718-999-1300-0028)	B46
GATE VA	VGA	VGACB006	14"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 CRYOGENIC(RP-1718-999-1300-0028)	B46
GATE VA	VGA	VGACB007	26"	46"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD CRYOGENIC(RP-1718-999-1300-0028)	B46
GATE VA	VGA	VGACK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	B46
GATE VA	VGF	VGFCB004	1/2"	1 1/2"	GATE VALVE A182-F304L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 CRYOGENIC(RP-1718-999-1300-0028)	B46
GATE VA	VGX	VGXCK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	B46
GLOBE VA	VLA	VLACB001	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	B46
GLOBE VA	VLA	VLACK005	1/2"	1 1/2"	GLOBE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	B46
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B46
LATERAL Y	TL	LTL0CA00	26"	36"	LATERAL A403-WP304L EQUAL BE SCH10 DEG-45	B46
LATERAL Y	TL	LTL0CL00	38"	46"	LATERAL A403-WP304L EQUAL BE STD DEG-45	B46
LATERAL Y	TL	LTL0CQ00	6"	24"	LATERAL A403-WP304L EQUAL BE SCH10S DEG-45	B46
NIPPLE TOE	NTO	LNTOCK01	1/2"	1 1/2"	NIPPLE A312-TP304L SMLS TOE(NPT-M) 75mm LONG SCH160	B46
PIPE	P	LP00CA00	26"	36"	PIPE A358-304L CL.1 EFW BE 100% RT SCH10	B46
PIPE	P	LP00CL00	38"	46"	PIPE A358-304L CL.1 EFW BE 100% RT STD	B46
PIPE	P	LP00CQ00	2"	6"	PIPE A312-TP304L SMLS BE SCH10S	B46
PIPE	P	LP00CQ01	8"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH10S	B46
PIPE	P	LP00CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S	B46
PIPE	P1	LP10CQ00	2"	6"	PIPE A312-TP304L SMLS BE PE COATED SCH10S	B46
PIPE	P1	LP10CQ01	8"	24"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH10S	B46
PIPE	P2	LP20CQ00	2"	6"	PIPE A312-TP304L SMLS BE SCH10S PP COATED	B46
PIPE	P2	LP20CQ01	8"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH10S PP COATED	B46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P3	LP30CQ00	2"	6"	PIPE A312-TP304L SMLS BE SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	B46
PIPE	P3	LP30CQ01	8"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	B46
PIPE	P3	LP30CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	B46
PLUG	PLG	LPLGCW00	1/2"	1 1/2"	PLUG A182-F304L ROUND HEAD FORGED TE(NPT-M)	B46
PLUG VA	VPL	VPLCB001	2"	6"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599 PTFE CRYOGENIC(RP-1718-999-1300-0028)	B46
PLUG VA	VPL	VPLCB002	8"	16"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599 PTFE CRYOGENIC(RP-1718-999-1300-0028)	B46
PLUG VA	VPL	VPLCF007	1/2"	1 1/2"	PLUG VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353 CRYOGENIC(RP-1718-999-1300-0028)	B46
RED CON	RC	LRC0CA00	26"	36"	REDUCER A403-WP304L CON. WELDED BE SCH10	B46
RED CON	RC	LRC0CL00	38"	46"	REDUCER A403-WP304L CON. WELDED BE STD	B46
RED CON	RC	LRC0CQ00	2"	6"	REDUCER A403-WP304L CON. SMLS BE SCH10S	B46
RED CON	RC	LRC0CQ01	8"	24"	REDUCER A403-WP304L CON. WELDED BE SCH10S	B46
RED ECC	RE	LRE0CA00	26"	36"	REDUCER A403-WP304L ECC. WELDED BE SCH10	B46
RED ECC	RE	LRE0CL00	38"	40"	REDUCER A403-WP304L ECC. WELDED BE STD	B46
RED ECC	RE	LRE0CQ00	2"	6"	REDUCER A403-WP304L ECC. SMLS BE SCH10S	B46
RED ECC	RE	LRE0CQ01	8"	24"	REDUCER A403-WP304L ECC. WELDED BE SCH10S	B46
RED LATERAL Y	RL	LRL0CA00	26"	36"	LATERAL A403-WP304L EQUAL BE SCH10 DEG-45	B46
RED LATERAL Y	RL	LRL0CL00	38"	46"	LATERAL A403-WP304L EQUAL BE STD DEG-45	B46
RED LATERAL Y	RL	LRL0CQ00	6"	24"	LATERAL A403-WP304L EQUAL BE SCH10S DEG-45	B46
SINGLE IBB VA	SF1	LSF1CD00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SFA	LSFACD05	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SL1	LSL1CD00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SL2	LSL2CD00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SL3	LSL3CD00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SL3	LSL3CF00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SLA	LSLACD05	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SLB	LSLBCD05	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SLC	LSLCCD01	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) FORCRYOGENIC SERVICE	B46
SINGLE IBB VA	SLC	LSLCCF05	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SP1	LSP1CD00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SP2	LSP2CF00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SP3	LSP3CD00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B46
SINGLE IBB VA	SPA	LSPACD05	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SPB	LSPBCF05	1"	1"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SINGLE IBB VA	SPC	LSPCCD05	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	B46
SOCKOLET	TSO	LTSOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L SOCKET OUTLET FORGED SW CL3000	B46
SPCL FLANGE	F1	LF00CF00	2"	24"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) SCH10S	B46
SPCL FLANGE	F1	LF00CF01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL300 (ASME B16.5) SCH80S	B46
SPCL FLANGE	F2	LF00CH00	2"	24"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH10S	B46
SPCL FLANGE	F2	LF00CH01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL600 (ASME B16.5) SCH80S	B46
SPCL FLANGE	F1	LF10CF00	26"	36"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) SCH10	B46
SPCL FLANGE	F1	LF10CF01	38"	46"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) STD	B46
SPCL FLANGE	F3	LF10CK12	2"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH10S	B46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F3	LF10CL12	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) SCH80S	B46
SPCL FLG JACK	FJ1	LFJ0CF00	4"	24"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	B46
SPCL GASKET	G1	LG10ZF02	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5) SS304L INSERT	B46
SPCL GASKET	G1	LG10ZF03	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A) SS304L INSERT	B46
SPCL GASKET	G2	LG20ZH01	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5) SS304L INSERT	B46
SPCL GASKET	G3	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B46
SPCL GASKET	G3	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B46
SPE BLIND	FSB	LFSBCD00	1/2"	12"	FLANGE A240-304L FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B46
SPE BLIND	FSB	LFSBCD01	14"	24"	FLANGE A240-304L PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B46
SPE BLIND	FSB	LFSBCD07	30"	40"	FLANGE A240-304L PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A)	B46
SWG CON B-P	RCB	LRCBCQ00	2"	4"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH10S	B46
SWG CON PE	RCP	LRCPCT00	1/2"	1 1/2"	SWAGE A403-WP304L CON. SMLS PE SCH80S	B46
SWG ECC B-P	REB	LREBCQ00	2"	4"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH10S	B46
SWG ECC PE	REP	LREPCT00	1/2"	1 1/2"	SWAGE A403-WP304L ECC. SMLS PE SCH80S	B46
TEE	TE	LTE0CA00	26"	36"	TEE A403-WP304L EQUAL WELDED BE SCH10	B46
TEE	TE	LTE0CL00	38"	46"	TEE A403-WP304L EQUAL WELDED BE STD	B46
TEE	TE	LTE0CP00	1/2"	1 1/2"	TEE A182-F304L EQUAL FORGED SW CL3000	B46
TEE	TE	LTE0CQ00	2"	6"	TEE A403-WP304L EQUAL SMLS BE SCH10S	B46
TEE	TE	LTE0CQ01	8"	24"	TEE A403-WP304L EQUAL WELDED BE SCH10S	B46
TEE RED	TR	LTR0CA00	26"	36"	TEE A403-WP304L REDUCING WELDED BE SCH10	B46
TEE RED	TR	LTR0CL00	38"	46"	TEE A403-WP304L REDUCING WELDED BE STD	B46
TEE RED	TR	LTR0CP00	1/2"	1 1/2"	TEE A182-F304L REDUCING FORGED SW CL3000	B46
TEE RED	TR	LTR0CQ00	2"	6"	TEE A403-WP304L REDUCING SMLS BE SCH10S	B46
TEE RED	TR	LTR0CQ01	8"	24"	TEE A403-WP304L REDUCING WELDED BE SCH10S	B46
THREADOLET	TTO	LTTOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L THREADED OUTLET FORGED TE(NPT-F) CL3000	B46
WELDOLET	TWO	LTWOCQ00	2"	8"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH10S	B46
BALL VA	VBF	VBFCB004	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B48
BALL VA	VBF	VBFCB005	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B48
BALL VA	VBF	VBFCB006	26"	46"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B48
BALL VA	VB1	VBFCB017	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING	B48
BALL VA	VB1	VBFCB018	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	B48
BALL VA	VB1	VBFCB019	26"	40"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	B48
BALL VA	VBF	VBFCK002	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B48
BALL VA	VB1	VBFCK005	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING	B48
BALL VA	VBR	VBRCB004	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B48
BALL VA	VBR	VBRCB005	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B48
BALL VA	VBR	VBRCB006	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	B48
BALL VA	VB2	VBRCB017	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING	B48
BALL VA	VB2	VBRCB018	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	B48
BALL VA	VB2	VBRCB019	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	B48
BOLTS	B	LB00A004	1/2"	46"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	B48
BUTTERFLY VA	VUF	VUFCB004	2"	6"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 API 609 TRIPPLE OFFSET DESIGN	B48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BUTTERFLY VA	VUF	VUFCB005	8"	24"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	B48
BUTTERFLY VA	VUF	VUFCB006	26"	46"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/ASME B16.47-A FLGD	B48
CAP	C	LC00CA01	26"	36"	CAP A403-WP321 SMLS BE SCH10	B48
CAP	C	LC00CL01	38"	46"	CAP A403-WP321 SMLS BE STD	B48
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	B48
CAP	C	LC00CQ01	2"	24"	CAP A403-WP321 SMLS BE SCH10S	B48
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	B48
CHECK VA	VCA	VCACB002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B48
CHECK VA	VCA	VCACB005	26"	46"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 WAFER FOR ASME B16.47-A RF FLANGES	B48
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	B48
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	B48
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	B48
ELBOW	E4	LE40CA01	26"	36"	ELBOW A403-WP321 DEG-45 WELDED BE SCH10	B48
ELBOW	E4	LE40CL01	38"	46"	ELBOW A403-WP321 DEG-45 WELDED BE STD	B48
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	B48
ELBOW	E4	LE40CQ02	2"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH10S	B48
ELBOW	E4	LE40CQ03	8"	24"	ELBOW A403-WP321 DEG-45 WELDED BE SCH10S	B48
ELBOW	E9	LE90CA01	26"	36"	ELBOW A403-WP321 90-LR WELDED BE SCH10	B48
ELBOW	E9	LE90CL01	38"	46"	ELBOW A403-WP321 90-LR WELDED BE STD	B48
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	B48
ELBOW	E9	LE90CQ02	2"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH10S	B48
ELBOW	E9	LE90CQ03	8"	24"	ELBOW A403-WP321 90-LR WELDED BE SCH10S	B48
FLANGE	F	LF00CD04	2"	24"	FLANGE A182-F321 WN RF CL150 (ASME B16.5) SCH10S	B48
FLANGE	F	LF00CD05	26"	36"	FLANGE A182-F321 WN RF CL150 (ASME B16.47-A) SCH10	B48
FLANGE	F	LF00CD06	38"	46"	FLANGE A182-F321 WN RF CL150 (ASME B16.47-A) STD	B48
FLANGE	F	LF00CD07	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL150 (ASME B16.5) SCH80S	B48
FLG BLIND	FB	LFB0CD02	1/2"	24"	FLANGE A182-F321 BLIND RF CL150 (ASME B16.5)	B48
FLG BLIND	FB	LFB0CD03	26"	46"	FLANGE A182-F321 BLIND RF CL150 (ASME B16.47-A)	B48
FLG BLIND	FB1	LFB0CF01	1/2"	24"	FLANGE A182-F321 BLIND RF CL300 (ASME B16.5)	B48
FLG BLIND	FB1	LFB1CF01	26"	46"	FLANGE A182-F321 BLIND RF CL300 (ASME B16.47-A)	B48
FLG JACK	FJ	LFJ0CD02	4"	24"	FLANGE A182-F321 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10S	B48
FLG JACK	FJ	LFJ0CD03	40"	40"	FLANGE A182-F321 WN RF CL150 (ASME B16.47-A) W/JACK SCREW STD	B48
FLG RED	RF	LRF0CD01	3"	3"	FLANGE A182-F321 WN-REDUCING RF CL150 (ASME B16.5) SCH10S x SCH80S	B48
FLG RED	RF1	LRF0CF03	3"	3"	FLANGE A182-F321 WN-REDUCING RF CL300 (ASME B16.5) SCH10S x SCH80S	B48
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B48
GASKET	G	LG00ZD01	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.47-A)	B48
GATE VA	VGA	VGACB001	2"	12"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B48
GATE VA	VGA	VGACB002	14"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B48
GATE VA	VGA	VGACB003	26"	46"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 ASME B16.47-A FLGD	B48
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B48
GATE VA	VGF	VGFCB001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B48
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GLOBE VA	VLA	VLACB002	2"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B48
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B48
INSUL GASKET	GK	LGK0ZD00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	B48
INSUL GASKET	GK1	LGK0ZF00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B48
LATERAL Y	TL	LTL0CA01	26"	36"	LATERAL A403-WP321 EQUAL BE SCH10 DEG-45	B48
LATERAL Y	TL	LTL0CL01	38"	46"	LATERAL A403-WP321 EQUAL BE STD DEG-45	B48
LATERAL Y	TL	LTL0CQ01	6"	24"	LATERAL A403-WP321 EQUAL BE SCH10S DEG-45	B48
NEEDLE VA	VNE	VNECK001	1/2"	1 1/2"	NEEDLE VALVE A182-F321 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	B48
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	B48
NIPPLE TOE	NTT	LNTTCK00	1/2"	1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 150mm LONG SCH160	B48
PIPE	P	LP00CA01	26"	36"	PIPE A358-321 CL.1 EFW BE 100% RT SCH10	B48
PIPE	P	LP00CL01	38"	46"	PIPE A358-321 CL.1 EFW BE 100% RT STD	B48
PIPE	P	LP00CQ02	2"	6"	PIPE A312-TP321 SMLS BE SCH10S	B48
PIPE	P	LP00CQ03	8"	24"	PIPE A358-321 CL.1 EFW BE 100% RT SCH10S	B48
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	B48
PIPE	P1	LP10CQ02	2"	6"	PIPE A312-TP321 SMLS BE PE COATED SCH10S	B48
PIPE	P1	LP10CQ03	8"	24"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT SCH10S	B48
PIPE	P2	LP20CQ02	2"	6"	PIPE A312-TP321 SMLS BE SCH10S PP COATED	B48
PIPE	P2	LP20CQ03	8"	24"	PIPE A358-321 CL.1 EFW BE 100% RT SCH10S PP COATED	B48
PIPE	P3	LP20CT00	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE) ,	B48
PIPE	P3	LP30CQ02	2"	6"	PIPE A312-TP321 SMLS BE SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	B48
PIPE	P3	LP30CQ03	8"	24"	PIPE A358-321 CL.1 EFW BE 100% RT SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	B48
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	B48
PLUG VA	VPL	VPLCB003	2"	6"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B48
PLUG VA	VPL	VPLCB004	8"	16"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B48
PLUG VA	VPL	VPLCF002	1/2"	1 1/2"	PLUG VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353	B48
RED CON	RC	LRC0CA01	26"	36"	REDUCER A403-WP321 CON. WELDED BE SCH10	B48
RED CON	RC	LRC0CL01	38"	46"	REDUCER A403-WP321 CON. WELDED BE STD	B48
RED CON	RC	LRC0CQ02	2"	6"	REDUCER A403-WP321 CON. SMLS BE SCH10S	B48
RED CON	RC	LRC0CQ03	8"	24"	REDUCER A403-WP321 CON. WELDED BE SCH10S	B48
RED ECC	RE	LRE0CA01	26"	36"	REDUCER A403-WP321 ECC. WELDED BE SCH10	B48
RED ECC	RE	LRE0CL01	38"	46"	REDUCER A403-WP321 ECC. WELDED BE STD	B48
RED ECC	RE	LRE0CQ02	2"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH10S	B48
RED ECC	RE	LRE0CQ03	8"	24"	REDUCER A403-WP321 ECC. WELDED BE SCH10S	B48
RED LATERAL Y	RL	LRL0CA01	26"	36"	LATERAL A403-WP321 REDUCING BE SCH10 DEG-45	B48
RED LATERAL Y	RL	LRL0CL01	38"	46"	LATERAL A403-WP321 REDUCING BE STD DEG-45	B48
RED LATERAL Y	RL	LRL0CQ01	6"	24"	LATERAL A403-WP321 REDUCING BE SCH10S DEG-45	B48
SINGLE IBB VA	SF1	LSF1CD01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 1/2 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) PTFE SEAL	B48
SINGLE IBB VA	SFA	LSFACD01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SL1	LSL1CD01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4 FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) PTFE SEAL	B48
SINGLE IBB VA	SL2	LSL2CD01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)PTFE SEAL	B48
SINGLE IBB VA	SL3	LSL3CD01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) PTFE SEAL	B48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SLA	LSLACD01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SLB	LSLBCD01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SLC	LSLCCD02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SLC	LSLCCF01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SP1	LSP1CD01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) PTFE SEAL	B48
SINGLE IBB VA	SP2	LSP2CF01	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)PTFE SEAL	B48
SINGLE IBB VA	SP3	LSP3CD01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT)PTFE SEAL	B48
SINGLE IBB VA	SPA	LSPACD01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SPB	LSPBCF01	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SINGLE IBB VA	SPC	LSPCCD01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	B48
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	B48
SPCL FLANGE	F1	LF00CF02	2"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH10S	B48
SPCL FLANGE	F1	LF00CF03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL300 (ASME B16.5) SCH80S	B48
SPCL FLANGE	F2	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	B48
SPCL FLANGE	F3	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	B48
SPCL FLANGE	F1	LF10CF02	26"	36"	FLANGE A182-F321 WN RF CL300 (ASME B16.47-A) SCH10	B48
SPCL FLANGE	F1	LF10CF03	38"	46"	FLANGE A182-F321 WN RF CL300 (ASME B16.47-A) STD	B48
SPCL FLANGE	F2	LF10CH12	2"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH10S	B48
SPCL FLANGE	F3	LF20CK00	2"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH10S	B48
SPCL FLANGE	F3	LF30CK00	34"	34"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) SCH10	B48
SPCL FLANGE	F5	LF50CD00	2"	2"	FLANGE A182-F321 WN FF CL150 (ASME B16.5) SCH10S	B48
SPCL FLG JACK	FJ1	LFJ0CF02	4"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	B48
SPCL GASKET	G1	LG00ZF00	26"	46"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.47-A)	B48
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B48
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B48
SPCL GASKET	G3	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B48
SPCL GASKET	G3	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B48
SPE BLIND	FSB	LFSBCD02	1/2"	12"	FLANGE A240-321 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B48
SPE BLIND	FSB	LFSBCD03	14"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B48
SPE BLIND	FSB	LFSBCD04	26"	46"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.47-A)	B48
SWG CON B-P	RCB	LRCBCQ01	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH10S	B48
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	B48
SWG CON P-T	RC2	LRC2CT00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH80S	B48
SWG ECC B-P	REB	LREBCQ01	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH10S	B48
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	B48
TEE	TE	LTE0CA01	26"	36"	TEE A403-WP321 EQUAL WELDED BE SCH10	B48
TEE	TE	LTE0CL01	38"	46"	TEE A403-WP321 EQUAL WELDED BE STD	B48
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	B48
TEE	TE	LTE0CQ02	2"	6"	TEE A403-WP321 EQUAL SMLS BE SCH10S	B48
TEE	TE	LTE0CQ03	8"	24"	TEE A403-WP321 EQUAL WELDED BE SCH10S	B48
TEE RED	TR	LTR0CA01	26"	36"	TEE A403-WP321 REDUCING WELDED BE SCH10	B48
TEE RED	TR	LTR0CL01	38"	46"	TEE A403-WP321 REDUCING WELDED BE STD	B48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	B48
TEE RED	TR	LTR0CQ02	2"	6"	TEE A403-WP321 REDUCING SMLS BE SCH10S	B48
TEE RED	TR	LTR0CQ03	8"	24"	TEE A403-WP321 REDUCING WELDED BE SCH10S	B48
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	B48
WELDOLET	TWO	LTWOCQ01	2"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH10S	B48
BALL VA	VBF	VBFCB007	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	B48X
BALL VA	VBF	VBFCB008	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B48X
BALL VA	VBF	VBFCK003	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	B48X
BALL VA	VBR	VBRCB007	2"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	B48X
BALL VA	VBR	VBRCB008	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	B48X
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	B48X
BUTTERFLY VA	VUF	VUFCB004	2"	6"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 API 609 TRIPPLE OFFSET DESIGN	B48X
BUTTERFLY VA	VUF	VUFCB005	8"	24"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL150 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	B48X
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	B48X
CAP	C	LC00CQ01	2"	24"	CAP A403-WP321 SMLS BE SCH10S	B48X
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	B48X
CHECK VA	VCA	VCACB002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B48X
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	B48X
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	B48X
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	B48X
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	B48X
ELBOW	E4	LE40CQ02	2"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH10S	B48X
ELBOW	E4	LE40CQ03	8"	24"	ELBOW A403-WP321 DEG-45 WELDED BE SCH10S	B48X
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	B48X
ELBOW	E9	LE90CQ02	2"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH10S	B48X
ELBOW	E9	LE90CQ03	8"	24"	ELBOW A403-WP321 90-LR WELDED BE SCH10S	B48X
FLANGE	F	LF00CD04	2"	24"	FLANGE A182-F321 WN RF CL150 (ASME B16.5) SCH10S	B48X
FLANGE	F	LF00CD07	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL150 (ASME B16.5) SCH80S	B48X
FLG BLIND	FB	LFB0CD02	1/2"	24"	FLANGE A182-F321 BLIND RF CL150 (ASME B16.5)	B48X
FLG BLIND	FB1	LFB0CF01	1/2"	24"	FLANGE A182-F321 BLIND RF CL300 (ASME B16.5)	B48X
FLG JACK	FJ	LFJ0CD02	4"	24"	FLANGE A182-F321 WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10S	B48X
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B48X
GATE VA	VGA	VGACB001	2"	12"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B48X
GATE VA	VGA	VGACB002	14"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B48X
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B48X
GATE VA	VGF	VGFCB001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B48X
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B48X
GLOBE VA	VLA	VLACB002	2"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B48X
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B48X
NEEDLE VA	VNE	VNECK001	3/4"	1"	NEEDLE VALVE A182-F321 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	B48X
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	B48X
PIPE	P	LP00CQ02	2"	6"	PIPE A312-TP321 SMLS BE SCH10S	B48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00CQ03	8"	24"	PIPE A358-321 CL.1 EFW BE 100% RT SCH10S	B48X
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	B48X
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	B48X
RED CON	RC	LRC0CQ02	2"	6"	REDUCER A403-WP321 CON. SMLS BE SCH10S	B48X
RED CON	RC	LRC0CQ03	8"	24"	REDUCER A403-WP321 CON. WELDED BE SCH10S	B48X
RED ECC	RE	LRE0CQ02	2"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH10S	B48X
RED ECC	RE	LRE0CQ03	8"	24"	REDUCER A403-WP321 ECC. WELDED BE SCH10S	B48X
SINGLE IBB VA	SFA	LSFACD02	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SLA	LSLACD02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SLB	LSLBCD02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SLC	LSLCCD03	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SLC	LSLCCF02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SPA	LSPACD02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SPB	LSPBCF02	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SINGLE IBB VA	SPC	LSPCCD02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B48X
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	B48X
SPCL FLANGE	F1	LF00CF02	2"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH10S	B48X
SPCL FLANGE	F1	LF00CF03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL300 (ASME B16.5) SCH80S	B48X
SPCL FLANGE	F2	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	B48X
SPCL FLANGE	F3	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	B48X
SPCL FLANGE	F2	LF10CH12	2"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH10S	B48X
SPCL FLANGE	F3	LF20CK00	2"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH10S	B48X
SPCL FLG JACK	FJ1	LFJ0CF02	4"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	B48X
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B48X
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B48X
SPCL GASKET	G3	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B48X
SPCL GASKET	G3	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B48X
SPE BLIND	FSB	LFSBCD02	1/2"	12"	FLANGE A240-321 FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B48X
SPE BLIND	FSB	LFSBCD03	14"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B48X
SWG CON B-P	RCB	LRCBCQ01	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH10S	B48X
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	B48X
SWG CON P-T	RC2	LRC2CK00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH160	B48X
SWG CON P-T	RC2	LRC2CT00	3/4"	1"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH80S x SCH80S	B48X
SWG ECC B-P	REB	LREBCQ01	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH10S	B48X
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	B48X
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	B48X
TEE	TE	LTE0CQ02	2"	6"	TEE A403-WP321 EQUAL SMLS BE SCH10S	B48X
TEE	TE	LTE0CQ03	8"	24"	TEE A403-WP321 EQUAL WELDED BE SCH10S	B48X
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	B48X
TEE RED	TR	LTR0CQ02	2"	6"	TEE A403-WP321 REDUCING SMLS BE SCH10S	B48X
TEE RED	TR	LTR0CQ03	8"	24"	TEE A403-WP321 REDUCING WELDED BE SCH10S	B48X
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	B48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOCQ01	2"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH10S	B48X
BALL VA	VBF	VBFCB020	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B49
BALL VA	VBF	VBFCB021	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B49
BALL VA	VBF	VBFCK006	1/2"	1 1/2"	BALL VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	B49
BALL VA	VBR	VBRCB020	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	B49
BALL VA	VBR	VBRCB021	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	B49
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	B49
CAP	C	LC00CP02	1/2"	1 1/2"	CAP A182-F316L FORGED SW CL3000	B49
CAP	C	LC00CQ03	2"	24"	CAP A403-WP316L SMLS BE SCH10S	B49
CAP	C	LC00CS02	2"	2"	[Deleted]	B49
CAP THD	CT	LCT0CP02	1/2"	1 1/2"	CAP A182-F316L FORGED TE(NPT-F) CL3000	B49
CHECK VA	VCA	VCACB006	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594	B49
CHECK VA	VCH	VCHCK006	1/2"	1 1/2"	CHECK VALVE A182-F316L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	B49
CPLG FULL	CF	LCF0CP02	1/2"	1 1/2"	COUPLING A182-F316L FULL(STRAIGHT) FORGED SW CL3000	B49
ELBOLET	TEW	LTEWCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L ELBOW OUTLET FORGED SW CL3000	B49
ELBOW	E4	LE40CP02	1/2"	1 1/2"	ELBOW A182-F316L DEG-45 FORGED SW CL3000	B49
ELBOW	E4	LE40CQ06	2"	6"	ELBOW A403-WP316L DEG-45 SMLS BE SCH10S	B49
ELBOW	E4	LE40CQ07	8"	24"	ELBOW A403-WP316L DEG-45 WELDED BE SCH10S	B49
ELBOW	E4	LE40CS04	2"	2"	[Deleted]	B49
ELBOW	E9	LE90CP02	1/2"	1 1/2"	ELBOW A182-F316L DEG-90 FORGED SW CL3000	B49
ELBOW	E9	LE90CP03	1/2"	3"	ELBOW A182-F316L DEG-90 FORGED NPT CL3000	B49
ELBOW	E9	LE90CQ06	2"	6"	ELBOW A403-WP316L 90-LR SMLS BE SCH10S	B49
ELBOW	E9	LE90CQ07	8"	24"	ELBOW A403-WP316L 90-LR WELDED BE SCH10S	B49
ELBOW	E9	LE90CS04	2"	2"	[Deleted]	B49
FLANGE	F	LF00CD08	2"	24"	FLANGE A182-F316L WN RF CL150 (ASME B16.5) SCH10S	B49
FLANGE	F	LF00CD09	2"	2"	[Deleted]	B49
FLANGE	F	LF00CD10	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL150 (ASME B16.5) SCH80S	B49
FLG BLIND	FB	LFB0CD04	1/2"	24"	FLANGE A182-F316L BLIND RF CL150 (ASME B16.5)	B49
FLG BLIND	FB1	LFB0CF02	1/2"	24"	FLANGE A182-F316L BLIND RF CL300 (ASME B16.5)	B49
FLG JACK	FJ	LFJ0CD05	4"	24"	FLANGE A182-F316L WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10S	B49
FLG RED	RF	LRF0CD00	3"	3"	FLANGE A182-F316L WN-REDUCING RF CL150 (ASME B16.5) SCH10S x SCH80S	B49
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B49
GATE VA	VGA	VGACB008	2"	12"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600	B49
GATE VA	VGA	VGACB009	14"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600	B49
GATE VA	VGA	VGACK005	1/2"	1 1/2"	***GATE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602***	B49
GATE VA	VGF	VGFCB005	1/2"	1 1/2"	GATE VALVE A182-F316L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602	B49
GATE VA	VGX	VGXCK005	1/2"	1 1/2"	GATE VALVE A182-F316L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	B49
GLOBE VA	VLA	VLACB004	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873	B49
GLOBE VA	VLA	VLACK006	1/2"	1 1/2"	GLOBE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	B49
INSUL GASKET	GK	LGK0ZD00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B49
LATERAL Y	TL	LTL0CQ02	6"	24"	LATERAL A403-WP316L EQUAL BE SCH10S DEG-45	B49
NEEDLE VA	VNE	VNECK005	1/2"	1 1/2"	NEEDLE VALVE A182-F316L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	B49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
NIPPLE TOE	NTO	LNTOCK02	1/2"	1 1/2"	NIPPLE A312-TP316L SMLS TOE(NPT-M) 75mm LONG SCH160	B49
PIPE	P	LP00CQ04	2"	6"	PIPE A312-TP316L SMLS BE SCH10S	B49
PIPE	P	LP00CQ05	8"	24"	PIPE A358-316L CL.1 EFW BE 100% RT SCH10S	B49
PIPE	P	LP00CS06	2"	2"	[Deleted]	B49
PIPE	P	LP00CT06	1/2"	1 1/2"	PIPE A312-TP316L SMLS PE SCH80S	B49
PLUG	PLG	LPLGCW02	1/2"	1 1/2"	PLUG A182-F316L ROUND HEAD FORGED TE(NPT-M)	B49
PLUG VA	VPL	VPLCB005	2"	6"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 599	B49
PLUG VA	VPL	VPLCB006	8"	16"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 599	B49
PLUG VA	VPL	VPLCF008	1/2"	1 1/2"	***PLUG VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OPF-SAFE BS 5353 NACE RP-1718-999-6300-004***	B49
RED CON	RC	LRC0CQ06	2"	6"	REDUCER A403-WP316L CON. SMLS BE SCH10S	B49
RED CON	RC	LRC0CQ07	8"	24"	REDUCER A403-WP316L CON. WELDED BE SCH10S	B49
RED CON	RC	LRC0CS04	2"	2"	[Deleted]	B49
RED ECC	RE	LRE0CQ06	2"	6"	REDUCER A403-WP316L ECC. SMLS BE SCH10S	B49
RED ECC	RE	LRE0CQ07	8"	24"	REDUCER A403-WP316L ECC. WELDED BE SCH10S	B49
RED ECC	RE	LRE0CS04	2"	2"	[Deleted]	B49
RED LATERAL Y	RL	LRL0CQ02	6"	24"	LATERAL A403-WP316L REDUCING BE SCH10S DEG-45	B49
SINGLE IBB VA	SFA	LSFACD04	1/2"	1/2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SLA	LSLACD04	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SLB	LSLBCD04	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SLC	LSLCCD04	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B49
SINGLE IBB VA	SLC	LSLCCF04	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SPA	LSPACD04	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SPB	LSPBCF04	1"	1"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SINGLE IBB VA	SPC	LSPCCD04	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49
SOCKOLET	TSO	LTSOCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L SOCKET OUTLET FORGED SW CL3000	B49
SPCL FLANGE	F1	LF00CF20	2"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) SCH10S	B49
SPCL FLANGE	F1	LF00CF21	2"	2"	[Deleted]	B49
SPCL FLANGE	F1	LF00CF27	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL300 (ASME B16.5) SCH80S	B49
SPCL FLANGE	F2	LF10CH15	2"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) SCH10S	B49
SPCL FLANGE	F2	LF10CH16	2"	2"	[Deleted]	B49
SPCL FLANGE	F2	LF10CH22	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL600 (ASME B16.5) SCH80S	B49
SPCL FLANGE	F3	LF20CK09	2"	24"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) SCH10S	B49
SPCL FLANGE	F3	LF20CK10	2"	2"	[Deleted]	B49
SPCL FLANGE	F3	LF20CL00	1/2"	1 1/2"	FLANGE A182-F316L SW RTJ CL1500 (ASME B16.5) SCH80S	B49
SPCL FLG JACK	FJ1	LFJ0CF14	4"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	B49
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B49
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B49
SPCL GASKET	G3	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B49
SPCL GASKET	G3	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B49
SPE BLIND	FSB	LFSBCD05	1/2"	12"	FLANGE A240-316L FIGURE-8 BLANKS RF CL150 (ASME B16.48)	B49
SPE BLIND	FSB	LFSBCD06	14"	24"	FLANGE A240-316L PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48)	B49
SWG CON B-P	RCB	LRCBCQ03	2"	4"	SWAGE A403-WP316L CON. SMLS BLE x PSE SCH10S	B49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG CON B-P	RCB	LRCBCS02	2"	2"	[Deleted]	B49
SWG CON PE	RCP	LRCPCT02	1/2"	1 1/2"	SWAGE A403-WP316L CON. SMLS PE SCH80S	B49
SWG ECC B-P	REB	LREBCQ03	2"	4"	SWAGE A403-WP316L ECC. SMLS BLE x PSE SCH10S	B49
SWG ECC B-P	REB	LREBCS02	2"	2"	[Deleted]	B49
SWG ECC PE	REP	LREPCT02	1/2"	1 1/2"	SWAGE A403-WP316L ECC. SMLS PE SCH80S	B49
TEE	TE	LTE0CP02	1/2"	1 1/2"	TEE A182-F316L EQUAL FORGED SW CL3000	B49
TEE	TE	LTE0CQ06	2"	6"	TEE A403-WP316L EQUAL SMLS BE SCH10S	B49
TEE	TE	LTE0CQ07	8"	24"	TEE A403-WP316L EQUAL WELDED BE SCH10S	B49
TEE	TE	LTE0CS04	2"	2"	[Deleted]	B49
TEE RED	TR	LTR0CP02	1/2"	1 1/2"	TEE A182-F316L REDUCING FORGED SW CL3000	B49
TEE RED	TR	LTR0CQ06	2"	6"	TEE A403-WP316L REDUCING SMLS BE SCH10S	B49
TEE RED	TR	LTR0CQ07	8"	24"	TEE A403-WP316L REDUCING WELDED BE SCH10S	B49
TEE RED	TR	LTR0CS04	2"	2"	[Deleted]	B49
THREADOLET	TTO	LTTOCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L THREADED OUTLET FORGED TE(NPT-F) CL3000	B49
WELDOLET	TWO	LTWOCQ02	3"	8"	REINFORCED BRANCH OUTLET A182-F316L WELDED OUTLET FORGED BE SCH10S	B49
WELDOLET	TWO	LTWOCS03	2"	2"	[Deleted]	B49
BALL VA	VBF	VBFCB022	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B49N
BALL VA	VBF	VBFCB023	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B49N
BALL VA	VBF	VBFCK008	1/2"	1 1/2"	BALL VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B49N
BALL VA	VBR	VBRCB022	2"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	B49N
BALL VA	VBR	VBRCB023	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL150 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	B49N
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	B49N
CAP	C	LC00CP03	1/2"	1 1/2"	CAP A182-F316L FORGED SW NACE CL3000 (RP-1718-999-6300-0003)	B49N
CAP	C	LC00CQ04	2"	24"	CAP A403-WP316L SMLS BE NACE SCH10S (RP-1718-999-6300-0003)	B49N
CAP THD	CT	LCT0CP03	1/2"	1 1/2"	CAP A182-F316L FORGED TE(NPT-F) NACE CL3000	B49N
CHECK VA	VCA	VCACB007	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL150 API 594 NACE (RP-1718-999-6300-0004)	B49N
CHECK VA	VCH	VCHCK007	1/2"	1 1/2"	CHECK VALVE A182-F316L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352 NACE (RP-1718-999-6300-0004)	B49N
CPLG FULL	CF	LCF0CP03	1/2"	1 1/2"	COUPLING A182-F316L FULL(STRAIGHT) FORGED SW NACE CL3000	B49N
ELBOLET	TEW	LTEWCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L ELBOW OUTLET FORGED SW NACE CL3000	B49N
ELBOW	E4	LE40CP03	1/2"	1 1/2"	ELBOW A182-F316L DEG-45 FORGED SW NACE CL3000	B49N
ELBOW	E4	LE40CQ08	2"	6"	ELBOW A403-WP316L DEG-45 SMLS BE NACE SCH10S	B49N
ELBOW	E4	LE40CQ09	8"	24"	ELBOW A403-WP316L DEG-45 WELDED BE NACE SCH10S	B49N
ELBOW	E9	LE90CP04	1/2"	1 1/2"	ELBOW A182-F316L DEG-90 FORGED SW NACE CL3000	B49N
ELBOW	E9	LE90CP05	1/2"	3"	ELBOW A182-F316L DEG-90 FORGED NPT NACE CL3000	B49N
ELBOW	E9	LE90CQ08	2"	6"	ELBOW A403-WP316L 90-LR SMLS BE NACE SCH10S	B49N
ELBOW	E9	LE90CQ09	8"	24"	ELBOW A403-WP316L 90-LR WELDED BE NACE SCH10S	B49N
FLANGE	F	LF00CD09	2"	24"	FLANGE A182-F316L WN RF CL150 (ASME B16.5) NACE SCH10S	B49N
FLANGE	F	LF00CD11	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL150 (ASME B16.5) NACE SCH80S	B49N
FLG BLIND	FB	LFB0CD05	1/2"	24"	FLANGE A182-F316L BLIND RF CL150 (ASME B16.5) NACE	B49N
FLG BLIND	FB1	LFB1CF02	1/2"	24"	FLANGE A182-F316L BLIND RF CL300 (ASME B16.5) NACE	B49N
FLG JACK	FJ	LFJ0CD07	4"	24"	FLANGE A182-F316L WN RF CL150 (ASME B16.5) W/JACK SCREW SCH10S NACE (RP-1718-999-6300-0003)	B49N
FLG RED	RF	LRF0CD02	3"	3"	FLANGE A182-F316L WN-REDUCING RF CL150 (ASME B16.5) NACE SCH10S x SCH80S	B49N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GASKET	G	LG00ZD00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL150 (ASME B16.5)	B49N
GATE VA	VGA	VGACB010	2"	12"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 API 600 NACE (RP-1718-999-6300-0004)	B49N
GATE VA	VGA	VGACB011	14"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL150 GEAR OPERATED API 600 NACE (RP-1718-999-6300-0004)	B49N
GATE VA	VGA	VGACK006	1/2"	1 1/2"	GATE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 NACE (RP-1718-999-6300-0004)	B49N
GATE VA	VGF	VGFCB006	1/2"	1 1/2"	GATE VALVE A182-F316L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 API 602 NACE (RP-1718-999-6300-0004)	B49N
GATE VA	VGX	VGXCK006	1/2"	1 1/2"	GATE VALVE A182-F316L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 NACE (RP-1718-999-6300-0004)	B49N
GLOBE VA	VLA	VLACB005	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 BS 1873 NACE (RP-1718-999-6300-0004)	B49N
GLOBE VA	VLA	VLACK007	1/2"	1 1/2"	GLOBE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352 NACE (RP-1718-999-6300-0004)	B49N
INSUL GASKET	GK	LGK0ZD00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL150 (ASME B16.5) FOR INSULATION KIT W/SLEEVE &	B49N
LATERAL Y	TL	LTL0CQ03	6"	24"	LATERAL A403-WP316L EQUAL BE NACE SCH10S DEG-45	B49N
NEEDLE VA	VNE	VNECK006	1/2"	1 1/2"	NEEDLE VALVE A182-F316L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602 NACE (RP-1718-999-6300-0004)	B49N
NIPPLE TOE	NTO	LNTOCK03	1/2"	1 1/2"	NIPPLE A312-TP316L SMLS TOE(NPT-M) NACE 75mm LONG SCH160	B49N
PIPE	P	LP00CQ06	2"	6"	PIPE A312-TP316L SMLS BE NACE SCH10S	B49N
PIPE	P	LP00CQ07	8"	24"	PIPE A358-316L CL.1 EFW BE NACE 100% RT SCH10S	B49N
PIPE	P	LP00CT07	1/2"	1 1/2"	PIPE A312-TP316L SMLS PE NACE SCH80S	B49N
PLUG	PLG	LPLGCW03	1/2"	1 1/2"	PLUG A182-F316L ROUND HEAD FORGED TE(NPT-M) NACE	B49N
RED CON	RC	LRC0CQ08	2"	6"	REDUCER A403-WP316L CON. SMLS BE NACE SCH10S	B49N
RED CON	RC	LRC0CQ09	8"	24"	REDUCER A403-WP316L CON. WELDED BE NACE SCH10S	B49N
RED ECC	RE	LRE0CQ08	2"	6"	REDUCER A403-WP316L ECC. SMLS BE NACE SCH10S	B49N
RED ECC	RE	LRE0CQ09	8"	24"	REDUCER A403-WP316L ECC. WELDED BE NACE SCH10S	B49N
RED LATERAL Y	RL	LRL0CQ03	6"	24"	LATERAL A403-WP316L REDUCING BE NACE SCH10S DEG-45	B49N
SINGLE IBB VA	SFA	LSFACD06	1/2"	1/2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SLA	LSLACD06	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SLB	LSLBCD06	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SLC	LSLCCD05	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2 FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT)ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SLC	LSLCCF06	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SPA	LSPACD06	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SPB	LSPBCF06	1"	1"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SINGLE IBB VA	SPC	LSPCCD06	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL150 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	B49N
SOCKOLET	TSO	LTSOCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L SOCKET OUTLET FORGED SW NACE CL3000	B49N
SPCL FLANGE	F1	LF10CF04	2"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) NACE SCH10S	B49N
SPCL FLANGE	F1	LF10CF05	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL300 (ASME B16.5) NACE SCH80S	B49N
SPCL FLANGE	F2	LF20CH00	2"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) NACE SCH10S	B49N
SPCL FLANGE	F2	LF20CH01	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL600 (ASME B16.5) NACE SCH80S	B49N
SPCL FLANGE	F3	LF30CK01	2"	24"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) NACE SCH10S	B49N
SPCL FLANGE	F3	LF30CL00	1/2"	1 1/2"	FLANGE A182-F316L SW RTJ CL1500 (ASME B16.5) NACE SCH80S	B49N
SPCL FLG JACK	FJ1	LFJ1CF00	4"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S NACE	B49N
SPCL GASKET	G1	LG10ZF00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL300 (ASME B16.5)	B49N
SPCL GASKET	G2	LG20ZH00	1/2"	24"	GASKET REINFORCED FLEXIBLE GRAPHITE NONMETALLIC FLAT TO ASME B16.21 FLAT RING 1.5T CL600 (ASME B16.5)	B49N
SPCL GASKET	G3	LG20ZK00	2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	B49N
SPCL GASKET	G3	LG20ZL00	1/2"	1 1/2"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	B49N
SPE BLIND	FSB	LFSBCD08	1/2"	12"	FLANGE A240-316L FIGURE-8 BLANKS RF CL150 (ASME B16.48) NACE	B49N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPE BLIND	FSB	LFSBCD09	14"	24"	FLANGE A240-316L PADDLE SPACER AND BLANKS RF CL150 (ASME B16.48) NACE	B49N
SWG CON B-P	RCB	LRCBCQ04	2"	4"	SWAGE A403-WP316L CON. SMLS BLE x PSE NACE SCH10S	B49N
SWG CON PE	RCP	LRCPCT04	1/2"	1 1/2"	SWAGE A403-WP316L CON. SMLS PE NACE SCH80S	B49N
SWG ECC B-P	REB	LREBCQ04	2"	4"	SWAGE A403-WP316L ECC. SMLS BLE x PSE NACE SCH10S	B49N
SWG ECC PE	REP	LREPCT04	1/2"	1 1/2"	SWAGE A403-WP316L ECC. SMLS PE NACE SCH80S	B49N
TEE	TE	LTE0CP03	1/2"	1 1/2"	TEE A182-F316L EQUAL FORGED SW NACE CL3000	B49N
TEE	TE	LTE0CQ08	2"	6"	TEE A403-WP316L EQUAL SMLS BE NACE SCH10S	B49N
TEE	TE	LTE0CQ09	8"	24"	TEE A403-WP316L EQUAL WELDED BE NACE SCH10S	B49N
TEE RED	TR	LTR0CP03	1/2"	1 1/2"	TEE A182-F316L REDUCING FORGED SW NACE CL3000	B49N
TEE RED	TR	LTR0CQ08	2"	6"	TEE A403-WP316L REDUCING SMLS BE NACE SCH10S	B49N
TEE RED	TR	LTR0CQ09	8"	24"	TEE A403-WP316L REDUCING WELDED BE NACE SCH10S	B49N
THREADOLET	TTO	LTTOCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L THREADED OUTLET FORGED TE(NPT-F) NACE CL3000	B49N
WELDOLET	TWO	LTWOCQ03	2"	8"	REINFORCED BRANCH OUTLET A182-F316L WELDED OUTLET FORGED BE NACE SCH10S	B49N
BOLTS	B	LB00D000	1"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H W/WASHER	B90
BUTTERFLY VA	VUF	VUFGB001	2"	6"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B90
BUTTERFLY VA	VUF	VUFGB002	8"	24"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B90
CAP	C	LC00GW00	1"	24"	CAP RTR(EPOXY) BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
CHECK VA	VCA	VCAGB002	2"	24"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594	B90
CHECK VA	VCH	VCHGB001	1"	1 1/2"	CHECK VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BC PISTON TYPE DISC ANSI CL150 BS 5352	B90
DELUGE CPLG	TRD	LTRDGW04	1"	24"	COUPLING RTR(EPOXY) BELL END DELUGE CPLG W/CU-NI BUSHING(NPT-F) FOR 18 BARG (RP-1718-125-1300-0001)	B90
ELBOW	E4	LE40GW00	1"	36"	ELBOW RTR(EPOXY) DEG-45 BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
ELBOW	E9	LE90GW00	1"	36"	ELBOW RTR(EPOXY) DEG-90 BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
ELBOW	E9	LE90GW03	3/4"	3/4"	ELBOW 90/10 Cu-Ni DEG-90 SW PN20 (PER EEMUA 146)	B90
FLANGE	F	LF00GD00	1"	24"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.5) FOR 18 BARG (RP-1718-125-1300-0001)	B90
FLANGE	F	LF00GD07	3/4"	3/4"	FLANGE 90/10 Cu-Ni SO FF CL150 (PER EEMUA 145)SECTION4	B90
FLG BLIND	FB	LF00AD75	1"	24"	FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXY(0.2MM) COATED	B90
FLG BLIND	FB	LFB0AD16	1"	24"	***FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXCY COATING (0.2mm) ON ALL SURFACE***	B90
FLG RED	RF	LRF0GD00	2"	6"	FLANGE RTR(EPOXY) SO-REDUCING FF CL150 (ASME B16.5) FOR 18 BARG (RP-1718-125-1300-0001)	B90
GASKET	G	LG00ZD02	1"	6"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B90
GASKET	G	LG00ZD06	8"	24"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B90
GASKET	G	LG00ZD12	3/4"	3/4"	GASKET NEOPRENE FULL FACE 3.0T CL150 FOR FLANGES PER EEMUA 145 (SHORE HARDNESS 60 TO 70 MAX)	B90
GATE VA	VGA	VGAGB001	3/4"	1 1/2"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B90
GATE VA	VGA	VGAGB002	2"	12"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150	B90
GATE VA	VGA	VGAGB003	14"	24"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 GEAR OPERATED	B90
GATE VA	VGT	VGTGB001	3/4"	3/4"	GATE VALVE B148-C95200 TE(NPT-F) AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B90
GLOBE VA	VLA	VLAGB001	1"	1 1/2"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLUG TYPE DISC ANSI CL150	B90
GLOBE VA	VLA	VLAGB002	2"	6"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLUG TYPE DISC ANSI CL150	B90
GLOBE VA	VLA	VLAGB003	8"	8"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLUG TYPE DISC ANSI CL150 GEAR OPERATED	B90
PIPE	P	LP00G100	3/4"	3/4"	PIPE B466-C70600 SMLS PE ANNEALED 3.0mm THK (PER EEMUA 144)SECTION1	B90
PIPE	P	LP00GW00	1"	36"	PIPE RTR(EPOXY) BELL & SPIGOT, ADHESIVE BONDED FOR 18 BARG (RP-1718-125-1300-0001)	B90
RED CON	RC	LRC0GW00	1"	24"	REDUCER RTR(EPOXY) CON. BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
RED ECC	RE	LRE0GW00	1"	24"	REDUCER RTR(EPOXY) ECC. BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10GF00	1"	24"	FLANGE RTR(EPOXY) BELL END FF CL300 (ASME B16.5) FOR 18 BARG (RP-1718-125-1300-0001)	B90
SPCL GASKET	G1	LG10ZF01	2"	6"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL300 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B90
SPCL GASKET	G1	LG10ZF04	8"	24"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL300 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B90
SPE BLIND	FSB	LFSBGD04	1"	12"	FLANGE B171-C70600 FIGURE-8 BLANKS FF CL150 (ASME B16.48)	B90
SPE BLIND	FSB	LFSBGD05	14"	24"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (ASME B16.48)	B90
TEE	TE	LTE0GW00	1"	24"	TEE RTR(EPOXY) EQUAL BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
TEE	TE	LTE0GW03	3/4"	3/4"	TEE 90/10 Cu-Ni EQUAL SW PN20 (PER EEMUA 146)	B90
TEE RED	TR	LTR0GW00	1"	36"	TEE RTR(EPOXY) REDUCING BELL END FOR 18 BARG (RP-1718-125-1300-0001)	B90
BOLTS	B	LB00D000	1"	20"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H W/WASHER	B91
BUTTERFLY VA	VUF	VUFGB001	2"	6"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B91
BUTTERFLY VA	VUF	VUFGB002	8"	20"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B91
CAP	C	LC00GW06	1"	20"	CAP RTR(VINYLESTER) BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
CHECK VA	VCA	VCAGB002	2"	20"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594	B91
CHECK VA	VCH	VCHGB001	1"	1 1/2"	CHECK VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BC PISTON TYPE DISC ANSI CL150 BS 5352	B91
DELUGE CPLG	TRD	LTRDGW05	1"	20"	COUPLING RTR(VINYLESTER) BELL END DELUGE CPLG W/CU-NI BUSHING(NPT-F) FOR 15 BARG (RP-1718-125-1300-0001)	B91
DIAPH VA	VDA	VDAGB001	3"	3"	DIAPHRAGM VALVE B148-C95200 FLGD-FF ANSI CL150 WEIR TYPE DIAPHRAGM COATED MSS SP-88	B91
ELBOW	E4	LE40GW01	1"	20"	ELBOW RTR(VINYLESTER) DEG-45 BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
ELBOW	E9	LE90GW01	1"	20"	ELBOW RTR(VINYLESTER) DEG-90 BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
FLANGE	F	LF00GD01	1"	20"	FLANGE RTR(VINYLESTER) BELL END FF CL150 (ASME B16.5) FOR 15 BARG (RP-1718-125-1300-0001)	B91
FLG BLIND	FB	LF00AD75	1"	24"	FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXY(0.2MM) COATED	B91
FLG BLIND	FB	LFB0AD16	1"	24"	***FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXCY COATING (0.2mm) ON ALL SURFACE***	B91
GASKET	G	LG00ZD02	1"	6"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B91
GASKET	G	LG00ZD06	8"	20"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B91
GATE VA	VGA	VGAGB001	1"	1 1/2"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B91
GATE VA	VGA	VGAGB002	2"	12"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150	B91
GATE VA	VGA	VGAGB003	14"	20"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 GEAR OPERATED	B91
GLOBE VA	VLA	VLAGB001	1"	1 1/2"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLUG TYPE DISC ANSI CL150	B91
GLOBE VA	VLA	VLAGB002	2"	6"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLUG TYPE DISC ANSI CL150	B91
PIPE	P	LP00GW01	1"	20"	PIPE RTR(VINYLESTER) BELL & SPIGOT, ADHESIVE BONDED FOR 15 BARG (RP-1718-125-1300-0001)	B91
RED CON	RC	LRC0GW01	1"	20"	REDUCER RTR(VINYLESTER) CON. BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
RED ECC	RE	LRE0GW01	1"	20"	REDUCER RTR(VINYLESTER) ECC. BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
SPE BLIND	FSB	LFSBGD04	1"	12"	FLANGE B171-C70600 FIGURE-8 BLANKS FF CL150 (ASME B16.48)	B91
SPE BLIND	FSB	LFSBGD05	14"	20"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (ASME B16.48)	B91
TEE	TE	LTE0GW01	1"	20"	TEE RTR(VINYLESTER) EQUAL BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
TEE RED	TR	LTR0GW01	1"	20"	TEE RTR(VINYLESTER) REDUCING BELL END FOR 15 BARG (RP-1718-125-1300-0001)	B91
TEE RED	TRM	LTRMGW01	1"	1"	TEE RTR(VINYLESTER) REDUCING BELL END FOR 15 BARG (RP-1718-999-1300-0027) W/CU-NI BUSHING(NPT-F) ***FOR REDUCING OUTLET***	B91
BOLTS	B	LB00D000	26"	40"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H W/WASHER	B91X
BUTTERFLY VA	VUF	VUFGB002	24"	24"	BUTTERFLY VALVE B148-C95800 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT (OR	B91X
BUTTERFLY VA	VUF	VUFGB003	26"	40"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT/ASME B16.47-A FLGD	B91X
CAP	C	LC00GW02	26"	40"	CAP RTR(EPOXY) BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
CHECK VA	VCA	VCAGB002	24"	24"	CHECK VALVE B148-C95800 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594	B91X
CHECK VA	VCA	VCAGB003	26"	40"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594 (ASME B16.47-A WAFER)	B91X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DELUGE CPLG	TRD	LTRDGW06	26"	40"	***COUPLING RTR(EPOXY) BELL END DELUGE CPLG W/CU-NI BUSHING(NPT-F) FOR 16 BARG (RP-1718-125-1300-0001)***	B91X
ELBOW	E4	LE40GW02	26"	40"	ELBOW RTR(EPOXY) DEG-45 BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
ELBOW	E9	LE90GW02	26"	40"	ELBOW RTR(EPOXY) DEG-90 BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
FLANGE	F	LF00GD02	26"	40"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.47-A) FOR 16 BARG (RP-1718-125-1300-0001)	B91X
FLANGE	F	LF00GD10	24"	24"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.5) FOR 16 BARG (RP-1718-125-1300-001)	B91X
FLANGE	F	LFGD10	24"	24"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.5) FOR 16 BARG (RP-1718-125-1300-0001)	B91X
FLG BLIND	FB	LF00AD76	26"	40"	FLANGE A105 BLIND FF CL150 (ASME B16.47-A) W/EPOXY(0.2MM) COATED	B91X
FLG BLIND	FB	LFB0AD16	24"	24"	FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXCY COATING (0.2mm) ON ALL SURFACE	B91X
FLG BLIND	FB	LFB0AD17	26"	40"	FLANGE A105 BLIND FF CL150 (ASME B16.47-A) W/EPOXCY COATING (0.2mm) ON ALL SURFACE	B91X
GASKET	G	LG00ZD06	24"	24"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B91X
GASKET	G	LG00ZD07	26"	40"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.47-A) (SHORE HARDNESS 60 TO 70 MAX)	B91X
GATE VA	VGA	VGAGB003	24"	24"	GATE VALVE B148-C95800 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 GEAR OPERATED	B91X
GATE VA	VGA	VGAGB004	26"	40"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 GEAR OPERATED ASME B16.47-A FLGD	B91X
PIPE	P	LP00GW02	26"	40"	PIPE RTR(EPOXY) BELL & SPIGOT, ADHESIVE BONDED FOR 16 BARG (RP-1718-125-1300-0001)	B91X
RED CON	RC	LRC0GW02	26"	40"	REDUCER RTR(EPOXY) CON. BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
RED ECC	RE	LRE0GW02	26"	40"	REDUCER RTR(EPOXY) ECC. BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
SPE BLIND	FSB	LFSBGD06	26"	40"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (ASME B16.47-A)	B91X
SPE BLIND	FSB	LFSBGD07	24"	24"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (ASME B16.5)	B91X
TEE	TE	LTE0GW02	26"	40"	TEE RTR(EPOXY) EQUAL BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
TEE RED	TR	LTR0GW02	26"	40"	TEE RTR(EPOXY) REDUCING BELL END FOR 16 BARG (RP-1718-125-1300-0001)	B91X
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	B92
BUTTERFLY VA	VUF	VUFGB001	2"	6"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B92
BUTTERFLY VA	VUF	VUFGB002	8"	24"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B92
CAP	C	LC00G100	2"	4"	CAP 90/10 Cu-Ni SMLS BE 3.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00G101	6"	6"	CAP 90/10 Cu-Ni SMLS BE 3.5mm THK (PER EEMUA 146)	B92
CAP	C	LC00G102	8"	8"	CAP 90/10 Cu-Ni SMLS BE 4.5mm THK (PER EEMUA 146)	B92
CAP	C	LC00G103	10"	10"	CAP 90/10 Cu-Ni SMLS BE 5.5mm THK (PER EEMUA 146)	B92
CAP	C	LC00G104	12"	12"	CAP 90/10 Cu-Ni SMLS BE 7.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00G105	14"	14"	CAP 90/10 Cu-Ni SMLS BE 8.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00G106	16"	16"	CAP 90/10 Cu-Ni SMLS BE 9.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00G107	18"	18"	CAP 90/10 Cu-Ni SMLS BE 9.5mm THK (PER EEMUA 146)	B92
CAP	C	LC00G108	20"	20"	CAP 90/10 Cu-Ni SMLS BE 11.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00G109	24"	24"	CAP 90/10 Cu-Ni SMLS BE 13.0mm THK (PER EEMUA 146)	B92
CAP	C	LC00GW03	1/2"	1 1/2"	CAP 90/10 Cu-Ni SW PN20 (PER EEMUA 146)	B92
CAP THD	CT	LCT0GW00	1/2"	1 1/2"	CAP 90/10 Cu-Ni TE(NPT-F) PN20 (PER EEMUA 146)	B92
CHECK VA	VCA	VCAGB002	2"	24"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594	B92
CHECK VA	VCH	VCHGB001	1/2"	1 1/2"	CHECK VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BC PISTON TYPE DISC ANSI CL150 BS 5352	B92
CPLG FULL	CF	LCF0GW00	1/2"	1 1/2"	COUPLING 90/10 Cu-Ni FULL(STRAIGHT) SW PN20 (PER EEMUA 146)	B92
CPLG FULL SW-TH	CFX	LCFXGW00	1/2"	1 1/2"	COUPLING 90/10 Cu-Ni FULL(STRAIGHT) SW x TE(NPT-F) PN20 (PER EEMUA 146)	B92
ELBOLET	TEW	LTEWGW00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni ELBOW OUTLET SW PN20 (PER EEMUA 146)	B92
ELBOW	E4	LE40G100	2"	4"	ELBOW 90/10 Cu-Ni DEG-45 SMLS BE 3.0mm THK (PER EEMUA 146)	B92
ELBOW	E4	LE40G101	6"	6"	ELBOW 90/10 Cu-Ni DEG-45 SMLS BE 3.5mm THK (PER EEMUA 146)	B92

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40G102	8"	8"	ELBOW 90/10 Cu-Ni DEG-45 SMLS BE 4.5mm THK (PER EEMUA 146)	B92
ELBOW	E4	LE40G103	10"	10"	ELBOW 90/10 Cu-Ni DEG-45 SMLS BE 5.5mm THK (PER EEMUA 146)	B92
ELBOW	E4	LE40G104	12"	12"	ELBOW 90/10 Cu-Ni DEG-45 SMLS BE 7.0mm THK (PER EEMUA 146)	B92
ELBOW	E4	LE40G105	14"	14"	ELBOW 90/10 Cu-Ni DEG-45 WELDED BE 8.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E4	LE40G106	16"	16"	ELBOW 90/10 Cu-Ni DEG-45 WELDED BE 9.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E4	LE40G107	18"	18"	ELBOW 90/10 Cu-Ni DEG-45 WELDED BE 9.5mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E4	LE40G108	20"	20"	ELBOW 90/10 Cu-Ni DEG-45 WELDED BE 11.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E4	LE40G109	24"	24"	ELBOW 90/10 Cu-Ni DEG-45 WELDED BE 13.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E4	LE40GW03	1/2"	1 1/2"	ELBOW 90/10 Cu-Ni DEG-45 SW PN20 (PER EEMUA 146)	B92
ELBOW	E9	LE90G100	2"	4"	ELBOW 90/10 Cu-Ni 90-LR SMLS BE 3.0mm THK (PER EEMUA 146)	B92
ELBOW	E9	LE90G101	6"	6"	ELBOW 90/10 Cu-Ni 90-LR SMLS BE 3.5mm THK (PER EEMUA 146)	B92
ELBOW	E9	LE90G102	8"	8"	ELBOW 90/10 Cu-Ni 90-LR SMLS BE 4.5mm THK (PER EEMUA 146)	B92
ELBOW	E9	LE90G103	10"	10"	ELBOW 90/10 Cu-Ni 90-LR SMLS BE 5.5mm THK (PER EEMUA 146)	B92
ELBOW	E9	LE90G104	12"	12"	ELBOW 90/10 Cu-Ni 90-LR SMLS BE 7.0mm THK (PER EEMUA 146)	B92
ELBOW	E9	LE90G105	14"	14"	ELBOW 90/10 Cu-Ni 90-LR WELDED BE 8.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E9	LE90G106	16"	16"	ELBOW 90/10 Cu-Ni 90-LR WELDED BE 9.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E9	LE90G107	18"	18"	ELBOW 90/10 Cu-Ni 90-LR WELDED BE 9.5mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E9	LE90G108	20"	20"	ELBOW 90/10 Cu-Ni 90-LR WELDED BE 11.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E9	LE90G109	24"	24"	ELBOW 90/10 Cu-Ni 90-LR WELDED BE 13.0mm THK 100%RT (PER EEMUA 146)	B92
ELBOW	E9	LE90GW03	1/2"	1 1/2"	ELBOW 90/10 Cu-Ni DEG-90 SW PN20 (PER EEMUA 146)	B92
FLANGE	F	LF00AD72	2"	24"	FLANGE A105 LJ FF CL150 BACKING FLANGE PER EEMUA 145 (GALVANIZED TO A120)SECTION1	B92
FLANGE	F	LF00GD07	1/2"	1 1/2"	FLANGE 90/10 Cu-Ni SO FF CL150 (PER EEMUA 145)SECTION4	B92
FLG BLIND	FB	LFB0AD13	2"	24"	FLANGE A105 BLIND FF CL150 GALVANIZED TO A120 PLUS 6mm THICK 90/10 Cu-Ni LINER DISC	B92
FLG BLIND	FB	LFB0GD07	1/2"	1 1/2"	FLANGE 90/10 Cu-Ni BLIND FF CL150 (PER EEMUA 145)SECTION4	B92
GASKET	G	LG00ZD12	1/2"	6"	GASKET NEOPRENE FULL FACE 3.0T CL150 FOR FLANGES PER EEMUA 145 (SHORE HARDNESS 60 TO 70 MAX)	B92
GASKET	G	LG00ZD13	8"	24"	GASKET NEOPRENE FULL FACE 5.0T CL150 FOR FLANGES PER EEMUA 145 (SHORE HARDNESS 60 TO 70 MAX)	B92
GATE VA	VGA	VGAGB001	1/2"	1 1/2"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B92
GATE VA	VGA	VGAGB002	2"	12"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150	B92
GATE VA	VGA	VGAGB003	14"	24"	GATE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL150 GEAR OPERATED	B92
GATE VA	VGT	VGTGB001	1/2"	1 1/2"	GATE VALVE B148-C95200 TE(NPT-F) AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B92
GATE VA	VGX	VGXGB001	1/2"	1 1/2"	GATE VALVE B148-C95200 SW x TE(NPT-F) AL-BRONZE TRIM SB ISRS PLAIN SOLID WEDGE ANSI CL150	B92
GLOBE VA	VLA	VLAGB001	1/2"	1 1/2"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM SB ISRS PLUG TYPE DISC ANSI CL150	B92
GLOBE VA	VLA	VLAGB002	2"	6"	GLOBE VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BB OS&Y PLUG TYPE DISC ANSI CL150	B92
NIPPLE TBE	NTB	LNTBG101	1/2"	1 1/2"	NIPPLE B466-C70600 SMLS TBE(NPT-M) ANNEALED 75mm LONG 4.5mm THK (PER EEMUA 144)SECTION1	B92
NIPPLE TOE	NTO	LNTOG101	1/2"	1 1/2"	NIPPLE B466-C70600 SMLS TOE(NPT-M) ANNEALED 75mm LONG 4.5mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G100	1/2"	1 1/2"	PIPE B466-C70600 SMLS PE ANNEALED 3.0mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G101	2"	4"	PIPE B466-C70600 SMLS BE ANNEALED 3.0mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G102	6"	6"	PIPE B466-C70600 SMLS BE ANNEALED 3.5mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G103	10"	10"	PIPE B466-C70600 SMLS BE ANNEALED 5.5mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G104	12"	12"	PIPE B466-C70600 SMLS BE ANNEALED 7.0mm THK (PER EEMUA 144)SECTION1	B92
PIPE	P	LP00G105	14"	14"	PIPE B467-C70600 WELDED BE ANNEALED 100% RT 8.0mm THK (PER EEMUA 144)SECTION2	B92
PIPE	P	LP00G106	16"	16"	PIPE B467-C70600 WELDED BE ANNEALED 100% RT 9.0mm THK (PER EEMUA 144)SECTION2	B92

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00G107	18"	18"	PIPE B467-C70600 WELDED BE ANNEALED 100% RT 9.5mm THK (PER EEMUA 144)SECTION2	B92
PIPE	P	LP00G108	20"	20"	PIPE B467-C70600 WELDED BE ANNEALED 100% RT 11.0mm THK (PER EEMUA 144)SECTION2	B92
PIPE	P	LP00G109	24"	24"	PIPE B467-C70600 WELDED BE ANNEALED 100% RT 13.0mm THK (PER EEMUA 144)SECTION2	B92
PIPE	P	LP00G110	8"	8"	PIPE B466-C70600 SMLS BE ANNEALED 4.5mm THK (PER EEMUA 144)SECTION1	B92
PLUG	PLG	LPLGGW00	1/2"	1 1/2"	PLUG 90/10 Cu-Ni ROUND HEAD FORGED TE(NPT-M) (PER EEMUA 146)	B92
RED CON	RC	LRC0G100	2"	4"	REDUCER 90/10 Cu-Ni CON. SMLS BE 3.0mm THK (PER EEMUA 146)	B92
RED CON	RC	LRC0G101	6"	6"	REDUCER 90/10 Cu-Ni CON. SMLS BE 3.5mm THK (PER EEMUA 146)	B92
RED CON	RC	LRC0G102	8"	8"	REDUCER 90/10 Cu-Ni CON. SMLS BE 4.5mm THK (PER EEMUA 146)	B92
RED CON	RC	LRC0G103	10"	10"	REDUCER 90/10 Cu-Ni CON. SMLS BE 5.5mm THK (PER EEMUA 146)	B92
RED CON	RC	LRC0G104	12"	12"	REDUCER 90/10 Cu-Ni CON. SMLS BE 7.0mm THK (PER EEMUA 146)	B92
RED CON	RC	LRC0G105	14"	14"	REDUCER 90/10 Cu-Ni CON. WELDED BE 8.0mm THK 100%RT (PER EEMUA 146)	B92
RED CON	RC	LRC0G106	16"	16"	REDUCER 90/10 Cu-Ni CON. WELDED BE 9.0mm THK 100%RT (PER EEMUA 146)	B92
RED CON	RC	LRC0G107	18"	18"	REDUCER 90/10 Cu-Ni CON. WELDED BE 9.5mm THK 100%RT (PER EEMUA 146)	B92
RED CON	RC	LRC0G108	20"	20"	REDUCER 90/10 Cu-Ni CON. WELDED BE 11.0mm THK 100%RT (PER EEMUA 146)	B92
RED CON	RC	LRC0G109	24"	24"	REDUCER 90/10 Cu-Ni CON. WELDED BE 13.0mm THK 100%RT (PER EEMUA 146)	B92
RED ECC	RE	LRE0G100	2"	4"	REDUCER 90/10 Cu-Ni ECC. SMLS BE 3.0mm THK (PER EEMUA 146)	B92
RED ECC	RE	LRE0G101	6"	6"	REDUCER 90/10 Cu-Ni ECC. SMLS BE 3.5mm THK (PER EEMUA 146)	B92
RED ECC	RE	LRE0G102	8"	8"	REDUCER 90/10 Cu-Ni ECC. SMLS BE 4.5mm THK (PER EEMUA 146)	B92
RED ECC	RE	LRE0G103	10"	10"	REDUCER 90/10 Cu-Ni ECC. SMLS BE 5.5mm THK (PER EEMUA 146)	B92
RED ECC	RE	LRE0G104	12"	12"	REDUCER 90/10 Cu-Ni ECC. SMLS BE 7.0mm THK (PER EEMUA 146)	B92
RED ECC	RE	LRE0G105	14"	14"	REDUCER 90/10 Cu-Ni ECC. WELDED BE 8.0mm THK 100%RT (PER EEMUA 146)	B92
RED ECC	RE	LRE0G106	16"	16"	REDUCER 90/10 Cu-Ni ECC. WELDED BE 9.0mm THK 100%RT (PER EEMUA 146)	B92
RED ECC	RE	LRE0G107	18"	18"	REDUCER 90/10 Cu-Ni ECC. WELDED BE 9.5mm THK 100%RT (PER EEMUA 146)	B92
RED ECC	RE	LRE0G108	20"	20"	REDUCER 90/10 Cu-Ni ECC. WELDED BE 11.0mm THK 100%RT (PER EEMUA 146)	B92
RED ECC	RE	LRE0G109	24"	24"	REDUCER 90/10 Cu-Ni ECC. WELDED BE 13.0mm THK 100%RT (PER EEMUA 146)	B92
SOCKOLET	TSO	LTSOGW00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni SOCKET OUTLET FORGED SW PN20 (PER EEMUA 146)	B92
SPCL FLANGE	F1	LF10GF01	3/4"	3/4"	FLANGE 90/10 Cu-Ni SO FF CL300 EEMUA 145 SECTION4 W/DRILLING & OD PER ASME B16.5 CL300	B92
SPCL GASKET	G1	LG10ZF06	3/4"	3/4"	GASKET NEOPRENE FULL FACE 3.0T CL300 FOR FLANGES PER EEMUA 145 (SHORE HARDNESS 60 TO 70 MAX)	B92
SPE BLIND	FSB	LFSBGD02	1/2"	12"	FLANGE B171-C70600 FIGURE-8 BLANKS FF CL150 (PER EEMUA 145)SECTION1	B92
SPE BLIND	FSB	LFSBGD03	14"	24"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G100	2"	4"	STUB-END 90/10 Cu-Ni SMLS BE 3.0mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G101	6"	6"	STUB-END 90/10 Cu-Ni SMLS BE 3.5mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G102	8"	8"	STUB-END 90/10 Cu-Ni SMLS BE 4.5mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G103	10"	10"	STUB-END 90/10 Cu-Ni SMLS BE 5.5mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G104	12"	12"	STUB-END 90/10 Cu-Ni SMLS BE 7.0mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G105	14"	14"	STUB-END 90/10 Cu-Ni WELDED BE 8.0mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G106	16"	16"	STUB-END 90/10 Cu-Ni WELDED BE 9.0mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G107	18"	18"	STUB-END 90/10 Cu-Ni WELDED BE 9.5mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G108	20"	20"	STUB-END 90/10 Cu-Ni WELDED BE 11.0mm THK (PER EEMUA 145)SECTION1	B92
STUB-END	D	LD00G109	24"	24"	STUB-END 90/10 Cu-Ni WELDED BE 13.0mm THK (PER EEMUA 145)SECTION1	B92
SWG CON B-P	RCB	LRCBG100	2"	4"	SWAGE 90/10 Cu-Ni CON. SMLS BLE x PSE 3.0mm THK (PER EEMUA 146)	B92
SWG CON PE	RCP	LRCPG100	1/2"	1 1/2"	SWAGE 90/10 Cu-Ni CON. SMLS PE 3.0mm THK (PER EEMUA 146)	B92

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG ECC B-P	REB	LREBG100	2"	4"	SWAGE 90/10 Cu-Ni DEG-45 SMLS BLE x PSE 3.0mm THK (PER EEMUA 146)	B92
SWG ECC PE	REP	LREPG100	1/2"	1 1/2"	SWAGE 90/10 Cu-Ni ECC. SMLS PE 3.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G100	2"	4"	TEE 90/10 Cu-Ni EQUAL SMLS BE 3.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G101	6"	6"	TEE 90/10 Cu-Ni EQUAL SMLS BE 3.5mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G102	8"	8"	TEE 90/10 Cu-Ni EQUAL SMLS BE 4.5mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G103	10"	10"	TEE 90/10 Cu-Ni EQUAL SMLS BE 5.5mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G104	12"	12"	TEE 90/10 Cu-Ni EQUAL SMLS BE 7.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G105	14"	14"	TEE 90/10 Cu-Ni EQUAL WELDED BE 8.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G106	16"	16"	TEE 90/10 Cu-Ni EQUAL WELDED BE 9.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G107	18"	18"	TEE 90/10 Cu-Ni EQUAL WELDED BE 9.5mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G108	20"	20"	TEE 90/10 Cu-Ni EQUAL WELDED BE 11.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0G109	24"	24"	TEE 90/10 Cu-Ni EQUAL WELDED BE 13.0mm THK (PER EEMUA 146)	B92
TEE	TE	LTE0GW03	1/2"	1 1/2"	TEE 90/10 Cu-Ni EQUAL SW PN20 (PER EEMUA 146)	B92
TEE RED	TR	LTR0G100	2"	4"	TEE 90/10 Cu-Ni REDUCING SMLS BE 3.0mm THK (PER EEMUA 146)	B92
TEE RED	TR	LTR0G101	6"	6"	TEE 90/10 Cu-Ni REDUCING SMLS BE 3.5mm THK (PER EEMUA 146)	B92
TEE RED	TR	LTR0G102	8"	8"	TEE 90/10 Cu-Ni REDUCING SMLS BE 4.5mm THK (PER EEMUA 146)	B92
TEE RED	TR	LTR0G103	10"	10"	TEE 90/10 Cu-Ni REDUCING SMLS BE 5.5mm THK (PER EEMUA 146)	B92
TEE RED	TR	LTR0G104	12"	12"	TEE 90/10 Cu-Ni REDUCING SMLS BE 7.0mm THK (PER EEMUA 146)	B92
TEE RED	TR	LTR0G105	14"	14"	TEE 90/10 Cu-Ni REDUCING WELDED BE 8.0mm THK 100%RT (PER EEMUA 146)	B92
TEE RED	TR	LTR0G106	16"	16"	TEE 90/10 Cu-Ni REDUCING WELDED BE 9.0mm THK 100%RT (PER EEMUA 146)	B92
TEE RED	TR	LTR0G107	18"	18"	TEE 90/10 Cu-Ni REDUCING WELDED BE 9.5mm THK 100%RT (PER EEMUA 146)	B92
TEE RED	TR	LTR0G108	20"	20"	TEE 90/10 Cu-Ni REDUCING WELDED BE 11.0mm THK 100%RT (PER EEMUA 146)	B92
TEE RED	TR	LTR0G109	24"	24"	TEE 90/10 Cu-Ni REDUCING WELDED BE 13.0mm THK 100%RT (PER EEMUA 146)	B92
TEE RED	TR	LTR0GW03	1/2"	1 1/2"	TEE 90/10 Cu-Ni REDUCING SW PN20 (PER EEMUA 146)	B92
THREADOLET	TTO	LTTOGW00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni THREADED OUTLET TE(NPT-F) PN20 (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG100	2"	4"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 3.0mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG101	6"	6"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 3.5mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG102	8"	8"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 4.5mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG103	10"	10"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 5.5mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG104	12"	12"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 7.0mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG105	14"	14"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 8.0mm THK (PER EEMUA 146)	B92
WELDOLET	TWO	LTWOG106	16"	16"	REINFORCED BRANCH OUTLET 90/10 Cu-Ni WELDED OUTLET FORGED BE 9.0mm THK (PER EEMUA 146)	B92
BOLTS	B	LB00D000	1"	36"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H W/WASHER	B93
BUTTERFLY VA	VUF	VUFGB001	2"	6"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B93
BUTTERFLY VA	VUF	VUFGB002	8"	24"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT	B93
BUTTERFLY VA	VUF	VUFGB003	26"	36"	BUTTERFLY VALVE B148-C95200 FLGD-FF ANSI CL150 GEAR OPERATED API 609 MONEL STEM/AL-BRONZE DISC/BUNA-N SEAT/ASME B16.47-A FLGD	B93
CAP	C	LC00GW04	1"	36"	CAP RTR(EPOXY) BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
CHECK VA	VCA	VCAGB002	2"	24"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594	B93
CHECK VA	VCA	VCAGB003	26"	40"	CHECK VALVE B148-C95200 WAFER AL-BRONZE TRIM DUAL PLATE PLUG TYPE DISC ANSI CL150 API 594 (ASME B16.47-A WAFER)	B93
CHECK VA	VCH	VCHGB001	1"	1 1/2"	CHECK VALVE B148-C95200 FLGD-FF AL-BRONZE TRIM BC PISTON TYPE DISC ANSI CL150 BS 5352	B93
DELUGE CPLG	TRD	LTRDGW07	1"	36"	COUPLING RTR(EPOXY) BELL END DELUGE CPLG W/CU-NI BUSHING(NPT-F) FOR 10 BARG (RP-1718-125-1300-0001)	B93
ELBOW	E4	LE40GW04	1"	36"	ELBOW RTR(EPOXY) DEG-45 BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90GW04	1"	36"	ELBOW RTR(EPOXY) DEG-90 BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
FLANGE	F	LF00GD08	1"	24"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.5) FOR 10 BARG (RP-1718-125-1300-0001)	B93
FLANGE	F	LF00GD09	26"	36"	FLANGE RTR(EPOXY) BELL END FF CL150 (ASME B16.47-A) FOR 10 BARG (RP-1718-125-1300-0001)	B93
FLG BLIND	FB	LF00AD75	1"	24"	FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXY(0.2MM) COATED	B93
FLG BLIND	FB	LF00AD76	26"	36"	FLANGE A105 BLIND FF CL150 (ASME B16.47-A) W/EPOXY(0.2MM) COATED	B93
FLG BLIND	FB	LFB0AD16	1"	24"	FLANGE A105 BLIND FF CL150 (ASME B16.5) W/EPOXCY COATING (0.2mm) ON ALL SURFACE	B93
FLG BLIND	FB	LFB0AD17	26"	40"	FLANGE A105 BLIND FF CL150 (ASME B16.47-A) W/EPOXCY COATING (0.2mm) ON ALL SURFACE	B93
GASKET	G	LG00ZD02	1"	6"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B93
GASKET	G	LG00ZD06	8"	24"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.5) (SHORE HARDNESS 60 TO 70 MAX)	B93
GASKET	G	LG00ZD07	26"	36"	GASKET NEOPRENE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 5.0T CL150 (ASME B16.47-A) (SHORE HARDNESS 60 TO 70 MAX)	B93
LATERAL Y	TL	LTL0GW00	1"	36"	LATERAL RTR(EPOXY) EQUAL BELL END DEG-45 FOR 10 BARG (RP-1718-125-1300-0001)	B93
PIPE	P	LP00GW03	1"	36"	PIPE RTR(EPOXY) BELL & SPIGOT, ADHESIVE BONDED FOR 10 BARG (RP-1718-125-1300-0001)	B93
RED CON	RC	LRC0GW03	1"	36"	REDUCER RTR(EPOXY) CON. BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
RED ECC	RE	LRE0GW03	1"	36"	REDUCER RTR(EPOXY) ECC. BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
RED LATERAL Y	RL	LRL0GW00	1"	36"	LATERAL RTR(EPOXY) REDUCING BELL END DEG-45 FOR 10 BARG (RP-1718-125-1300-0001)	B93
SPE BLIND	FSB	LFSBGD04	1"	12"	FLANGE B171-C70600 FIGURE-8 BLANKS FF CL150 (ASME B16.48)	B93
SPE BLIND	FSB	LFSBGD05	14"	24"	FLANGE B171-C70600 PADDLE SPACER AND BLANKS FF CL150 (ASME B16.48)	B93
TEE	TE	LTE0GW04	1"	36"	TEE RTR(EPOXY) EQUAL BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
TEE RED	TR	LTR0GW04	1"	36"	TEE RTR(EPOXY) REDUCING BELL END FOR 10 BARG (RP-1718-125-1300-0001)	B93
BOLTS	B	LB00D000	1"	3"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H W/WASHER	B94
CAP	C	LC00GW05	1"	3"	CAP HDPE PE FOR 5 BARG (BUTT FUSION TYPE)	B94
ELBOW	E4	LE40GW05	1"	3"	ELBOW HDPE DEG-45 PE FOR 5 BARG (BUTT FUSION TYPE)	B94
ELBOW	E9	LE90GW05	1"	3"	ELBOW HDPE DEG-90 PE FOR 5 BARG (BUTT FUSION TYPE)	B94
FLANGE	F	LF00GD06	1"	3"	FLANGE HDPE WN FF CL150 (ASME B16.5) FOR 5 BARG (BUTT FUSION TYPE)	B94
FLG BLIND	FB	LFB0GD06	1"	3"	FLANGE HDPE BLIND FF CL150 (ASME B16.5) FOR 5 BARG	B94
GASKET	G	LG00ZD10	1"	3"	GASKET PTFE ENVELOPE NONMETALLIC FLAT TO ASME B16.21 FULL FACE 3.0T CL150 (ASME B16.5) ARAMIDIC INSERT	B94
PIPE	P	LP00GW04	1"	3"	PIPE HDPE PE FOR 5 BARG (BUTT FUSION TYPE)	B94
RED CON	RC	LRC0GW04	1"	3"	REDUCER HDPE CON. PE FOR 5 BARG (BUTT FUSION TYPE)	B94
RED ECC	RE	LRE0GW04	1"	3"	REDUCER HDPE ECC. PE FOR 5 BARG (BUTT FUSION TYPE)	B94
TEE	TE	LTE0GW05	1"	3"	TEE HDPE EQUAL PE FOR 5 BARG (BUTT FUSION TYPE)	B94
TEE RED	TR	LTR0GW05	1"	3"	TEE HDPE REDUCING PE FOR 5 BARG (BUTT FUSION TYPE)	B94
BALL VA	VBF	VBFAD001	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D01
BALL VA	VBF	VBFAD002	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D01
BALL VA	VBF	VBFAD003	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D01
BALL VA	VBF	VBFAD004	26"	48"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	D01
BALL VA	VB3	VBFAD017	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING	D01
BALL VA	VB3	VBFAD018	6"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	D01
BALL VA	VB3	VBFAD019	8"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	D01
BALL VA	VB3	VBFAD020	26"	30"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/ASME B16.47-A FLGD	D01
BALL VA	VB7	VBFADS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D01
BALL VA	VB7	VBFADT01	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	D01
BALL VA	VB7	VBFADT02	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFAK001	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D01
BALL VA	VB3	VBFAK005	1/2"	1 1/2"	***BALL VALVE A105 PE (NIPPLE LENGTH=100) TUNGSTEN CARBIDE COATED BALL W/METAL SEATSAPI CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS5351 GRAPHITE SEAL/FLOATING***	D01
BALL VA	VB7	VBFAKS01	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D01
BALL VA	VB9	VBFAKX01	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D01
BALL VA	VBR	VBRAD001	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D01
BALL VA	VBR	VBRAD002	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D01
BALL VA	VBR	VBRAD003	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D01
BALL VA	VBR	VBRAD004	26"	48"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	D01
BALL VA	VB4	VBRAD017	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/FLOATING	D01
BALL VA	VB4	VBRAD018	6"	6"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	D01
BALL VA	VB4	VBRAD019	8"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	D01
BALL VA	VB4	VBRAD020	26"	30"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/ASME B16.47-A FLGD	D01
BALL VA	VB8	VBRADS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D01
BALL VA	VB8	VBRADT01	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	D01
BALL VA	VB8	VBRADT02	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	D01
BOLTS	B	LB00A000	1/2"	48"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	D01
BUTTERFLY VA	VUF	VUFAD001	28"	28"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS ANSI CL300 GEAR OPERATED TRIPPLE OFFSET DESIGN/ASME B16.47-A FLGD	D01
BUTTERFLY VA	VUF	VUFAD003	6"	6"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL300 TRIPPLE OFFSET DESIGN	D01
CAP	C	LC00AB00	8"	8"	CAP A234-WPB SMLS BE SCH20	D01
CAP	C	LC00AC00	10"	14"	CAP A234-WPB SMLS BE SCH30	D01
CAP	C	LC00AD00	3"	6"	CAP A234-WPB SMLS BE SCH40	D01
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	D01
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	D01
CAP	C	LC00AZ01	32"	32"	CAP A234-WPB SMLS BE 19.05mm THK	D01
CAP	C	LC00AZ06	26"	26"	CAP A234-WPB SMLS BE 15.88mm THK	D01
CAP	C	LC00AZ07	28"	30"	CAP A234-WPB SMLS BE 17.47mm THK	D01
CAP	C	LC00AZ08	34"	36"	CAP A234-WPB SMLS BE 20.62mm THK	D01
CAP	C	LC00AZ09	38"	38"	CAP A234-WPB SMLS BE 22.23mm THK	D01
CAP	C	LC00AZ10	40"	42"	CAP A234-WPB SMLS BE 23.83mm THK	D01
CAP	C	LC00AZ11	44"	44"	CAP A234-WPB SMLS BE 25.40mm THK	D01
CAP	C	LC00AZ12	46"	48"	CAP A234-WPB SMLS BE 26.97mm THK	D01
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	D01
CHECK VA	VCA	VCAAD001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 API 594	D01
CHECK VA	VCA	VCAAD002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 API 594	D01
CHECK VA	VCA	VCAAD005	26"	48"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 API 594 WAFER FOR ASME B16.47-A RF FLANGES	D01
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D01
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	D01
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	D01
ELBOW	E4	LE40AB00	8"	8"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	D01
ELBOW	E4	LE40AC00	10"	14"	ELBOW A234-WPB DEG-45 SMLS BE SCH30	D01
ELBOW	E4	LE40AC03	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH30	D01
ELBOW	E4	LE40AD00	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	D01
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	D01
ELBOW	E4	LE40AZ01	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE 19.05mm THK	D01
ELBOW	E4	LE40AZ06	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE 15.88mm THK	D01
ELBOW	E4	LE40AZ07	28"	30"	ELBOW A234-WPB DEG-45 WELDED BE 17.47mm THK	D01
ELBOW	E4	LE40AZ08	34"	36"	ELBOW A234-WPB DEG-45 WELDED BE 20.62mm THK	D01
ELBOW	E4	LE40AZ09	38"	38"	ELBOW A234-WPB DEG-45 WELDED BE 22.23mm THK	D01
ELBOW	E4	LE40AZ10	40"	42"	ELBOW A234-WPB DEG-45 WELDED BE 23.83mm THK	D01
ELBOW	E4	LE40AZ11	44"	44"	ELBOW A234-WPB DEG-45 WELDED BE 25.40mm THK	D01
ELBOW	E4	LE40AZ12	46"	48"	ELBOW A234-WPB DEG-45 WELDED BE 26.97mm THK	D01
ELBOW	E9	LE90AB00	8"	8"	ELBOW A234-WPB 90-LR SMLS BE SCH20	D01
ELBOW	E9	LE90AC00	10"	14"	ELBOW A234-WPB 90-LR SMLS BE SCH30	D01
ELBOW	E9	LE90AC03	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH30	D01
ELBOW	E9	LE90AD00	3"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	D01
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	D01
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	D01
ELBOW	E9	LE90AZ01	32"	32"	ELBOW A234-WPB 90-LR WELDED BE 19.05mm THK	D01
ELBOW	E9	LE90AZ06	26"	26"	ELBOW A234-WPB 90-LR WELDED BE 15.88mm THK	D01
ELBOW	E9	LE90AZ07	28"	30"	ELBOW A234-WPB 90-LR WELDED BE 17.47mm THK	D01
ELBOW	E9	LE90AZ08	34"	36"	ELBOW A234-WPB 90-LR WELDED BE 20.62mm THK	D01
ELBOW	E9	LE90AZ09	38"	38"	ELBOW A234-WPB 90-LR WELDED BE 22.23mm THK	D01
ELBOW	E9	LE90AZ10	40"	42"	ELBOW A234-WPB 90-LR WELDED BE 23.83mm THK	D01
ELBOW	E9	LE90AZ11	44"	44"	ELBOW A234-WPB 90-LR WELDED BE 25.40mm THK	D01
ELBOW	E9	LE90AZ12	46"	48"	ELBOW A234-WPB 90-LR WELDED BE 26.97mm THK	D01
FLANGE	F	LF00AF00	8"	8"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	D01
FLANGE	F	LF00AF01	3"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	D01
FLANGE	F	LF00AF02	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH80	D01
FLANGE	F	LF00AF03	10"	14"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH30	D01
FLANGE	F	LF00AF04	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH80	D01
FLANGE	F	LF00AF06	32"	32"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 19.05mm THK	D01
FLANGE	F	LF00AF25	26"	26"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 15.88mm THK	D01
FLANGE	F	LF00AF26	28"	30"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 17.47mm THK	D01
FLANGE	F	LF00AF27	34"	36"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 20.62mm THK	D01
FLANGE	F	LF00AF28	38"	38"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 22.23mm THK	D01
FLANGE	F	LF00AF29	40"	42"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 23.83mm THK	D01
FLANGE	F	LF00AF30	44"	44"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 25.40mm THK	D01
FLANGE	F	LF00AF31	46"	48"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 26.97mm THK	D01
FLG BLIND	FB	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	D01
FLG BLIND	FB	LFB0AF01	26"	48"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A)	D01
FLG BLIND	FB1	LFB0AH00	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5)	D01
FLG BLIND	FB1	LFB1AH00	26"	48"	FLANGE A105 BLIND RF CL600 (ASME B16.47-A)	D01
FLG JACK	FJ	LFJ0AF00	8"	8"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG JACK	FJ	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D01
FLG JACK	FJ	LFJ0AF03	10"	14"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	D01
FLG JACK	FJ	LFJ0AF22	28"	28"	FLANGE A105 WN RF CL300 (ASME B16.47-A) W/JACK SCREW 17.47mm THK	D01
FLG JACK	FJ	LFJ0AF23	40"	40"	FLANGE A105 WN RF CL300 (ASME B16.47-A) W/JACK SCREW 23.83mm THK	D01
FLG RED	RF	LRF0AF00	3"	6"	***FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH40 x SCH160***	D01
FLG RED	RF	LRF0AF01	2"	2"	***FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH80 x SCH80***	D01
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D01
GASKET	G	LG00ZF02	26"	48"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.47-A) OR-3.2 mm THICK	D01
GATE VA	VGA	VGAAD001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D01
GATE VA	VGA	VGAAD002	6"	8"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D01
GATE VA	VGA	VGAAD003	10"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D01
GATE VA	VGA	VGAAD006	26"	48"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600 ASME B16.47-A FLGD	D01
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D01
GATE VA	VGF	VGFAD001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D01
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D01
GLOBE VA	VLA	VLAAD001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D01
GLOBE VA	VLA	VLAAD004	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873	D01
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D01
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D01
NEEDLE VA	VNE	VNEAK001	3/4"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D01
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	D01
NIPPLE TOE	NTT	LNTTAK00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 150mm LONG SCH160	D01
PIPE	P	LP00AB00	8"	8"	PIPE API 5L-B PSL1 SMLS BE SCH20	D01
PIPE	P1	LP00AB16	8"	8"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH20	D01
PIPE	P	LP00AC00	10"	14"	PIPE API 5L-B PSL1 SMLS BE SCH30	D01
PIPE	P	LP00AC05	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH30	D01
PIPE	P1	LP00AC11	10"	14"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH30	D01
PIPE	P	LP00AD00	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	D01
PIPE	P1	LP00AD17	3"	6"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	D01
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	D01
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	D01
PIPE	P1	LP00AF22	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	D01
PIPE	P	LP00AZ01	32"	32"	PIPE API 5L-B PSL1 SAW BE 100% RT 19.05mm THK	D01
PIPE	P	LP00AZ07	26"	26"	PIPE API 5L-B PSL1 SAW BE 100% RT 15.88mm THK	D01
PIPE	P	LP00AZ08	28"	30"	PIPE API 5L-B PSL1 SAW BE 100% RT 17.47mm THK	D01
PIPE	P	LP00AZ09	34"	36"	PIPE API 5L-B PSL1 SAW BE 100% RT 20.62mm THK	D01
PIPE	P	LP00AZ10	38"	38"	PIPE API 5L-B PSL1 SAW BE 100% RT 22.23mm THK	D01
PIPE	P	LP00AZ11	40"	42"	PIPE API 5L-B PSL1 SAW BE 100% RT 23.83mm THK	D01
PIPE	P	LP00AZ12	44"	44"	PIPE API 5L-B PSL1 SAW BE 100% RT 25.40mm THK	D01
PIPE	P	LP00AZ13	46"	48"	PIPE API 5L-B PSL1 SAW BE 100% RT 26.97mm THK	D01
PIPE	P2	LP10AB02	8"	8"	PIPE API 5L-B PSL1 SMLS BE SCH20 PP COATED	D01
PIPE	P2	LP10AC01	10"	14"	PIPE API 5L-B PSL1 SMLS BE SCH30 PP COATED	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P1	LP10AC03	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH30	D01
PIPE	P2	LP10AD01	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED	D01
PIPE	P2	LP10AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED	D01
PIPE	P3	LP20AB02	8"	8"	PIPE API 5L-B PSL1 SMLS BE SCH20 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PIPE	P3	LP20AC01	10"	14"	PIPE API 5L-B PSL1 SMLS BE SCH30 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PIPE	P2	LP20AC03	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH30 PP COATED	D01
PIPE	P3	LP20AD01	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PIPE	P3	LP20AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PIPE	P3	LP30AC00	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH30 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PIPE	P3	LP30AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	D01
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	D01
PLUG VA	VPL	VPLAD001	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D01
PLUG VA	VPL	VPLAD002	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D01
PLUG VA	VPL	VPLAF001	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	D01
RED CON	RC	LRC0AB00	8"	8"	REDUCER A234-WPB CON. SMLS BE SCH20	D01
RED CON	RC	LRC0AC00	10"	14"	REDUCER A234-WPB CON. SMLS BE SCH30	D01
RED CON	RC	LRC0AC03	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH30	D01
RED CON	RC	LRC0AD00	3"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	D01
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	D01
RED CON	RC	LRC0AZ01	32"	32"	REDUCER A234-WPB CON. WELDED BE 19.05mm THK	D01
RED CON	RC	LRC0AZ06	26"	26"	REDUCER A234-WPB CON. WELDED BE 15.88mm THK	D01
RED CON	RC	LRC0AZ07	28"	30"	REDUCER A234-WPB CON. WELDED BE 17.47mm THK	D01
RED CON	RC	LRC0AZ08	34"	36"	REDUCER A234-WPB CON. WELDED BE 20.62mm THK	D01
RED CON	RC	LRC0AZ09	38"	38"	REDUCER A234-WPB CON. WELDED BE 22.23mm THK	D01
RED CON	RC	LRC0AZ10	40"	42"	REDUCER A234-WPB CON. WELDED BE 23.83mm THK	D01
RED CON	RC	LRC0AZ11	44"	44"	REDUCER A234-WPB CON. WELDED BE 25.40mm THK	D01
RED CON	RC	LRC0AZ12	48"	48"	REDUCER A234-WPB CON. WELDED BE 26.97mm THK	D01
RED ECC	RE	LRE0AB00	8"	8"	REDUCER A234-WPB ECC. SMLS BE SCH20	D01
RED ECC	RE	LRE0AC00	10"	14"	REDUCER A234-WPB ECC. SMLS BE SCH30	D01
RED ECC	RE	LRE0AC03	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH30	D01
RED ECC	RE	LRE0AD00	3"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	D01
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	D01
RED ECC	RE	LRE0AZ01	32"	32"	REDUCER A234-WPB ECC. WELDED BE 19.05mm THK	D01
RED ECC	RE	LRE0AZ06	26"	26"	REDUCER A234-WPB ECC. WELDED BE 15.88mm THK	D01
RED ECC	RE	LRE0AZ07	28"	30"	REDUCER A234-WPB ECC. WELDED BE 17.47mm THK	D01
RED ECC	RE	LRE0AZ08	34"	36"	REDUCER A234-WPB ECC. WELDED BE 20.62mm THK	D01
RED ECC	RE	LRE0AZ09	38"	38"	REDUCER A234-WPB ECC. WELDED BE 22.23mm THK	D01
RED ECC	RE	LRE0AZ10	40"	42"	REDUCER A234-WPB ECC. WELDED BE 23.83mm THK	D01
RED ECC	RE	LRE0AZ11	44"	44"	REDUCER A234-WPB ECC. WELDED BE 25.40mm THK	D01
RED ECC	RE	LRE0AZ12	46"	48"	REDUCER A234-WPB ECC. WELDED BE 26.97mm THK	D01
SINGLE IBB VA	SFA	LSFAAF00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SF1	LSFAAF02	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SLA	LSLAAF00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SL1	LSLAAF02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01
SINGLE IBB VA	SLB	LSLBAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SL2	LSLBAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SL3	LSLCAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	D01
SINGLE IBB VA	SPA	LSPAAF00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SP1	LSPAAF02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SP2	LSPBAF02	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01
SINGLE IBB VA	SPC	LSPCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D01
SINGLE IBB VA	SP3	LSPCAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D01
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	D01
SPCL FLANGE	F1	LF00AH00	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	D01
SPCL FLANGE	F1	LF00AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	D01
SPCL FLANGE	F1	LF00AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH80	D01
SPCL FLANGE	F2	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	D01
SPCL FLANGE	F2	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	D01
SPCL FLANGE	F1	LF10AH00	8"	8"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	D01
SPCL FLANGE	F1	LF10AH01	10"	14"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH30	D01
SPCL FLANGE	F1	LF10AH02	26"	26"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 15.88mm THK	D01
SPCL FLANGE	F1	LF10AH03	28"	30"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 17.47mm THK	D01
SPCL FLANGE	F1	LF10AH04	32"	32"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 19.05mm THK	D01
SPCL FLANGE	F1	LF10AH05	34"	36"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 20.62mm THK	D01
SPCL FLANGE	F1	LF10AH06	38"	38"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 22.23mm THK	D01
SPCL FLANGE	F1	LF10AH07	40"	42"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 23.83mm THK	D01
SPCL FLANGE	F1	LF10AH08	44"	44"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 25.40mm THK	D01
SPCL FLANGE	F1	LF10AH09	46"	48"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 26.97mm THK	D01
SPCL FLANGE	F2	LF10AK00	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	D01
SPCL FLANGE	F2	LF10AK81	8"	8"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	D01
SPCL FLANGE	F2	LF10AK82	10"	14"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH30	D01
SPCL FLG JACK	FJ1	LFJ0AH00	4"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D01
SPCL FLG JACK	FJ1	LFJ1AH00	8"	8"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20	D01
SPCL FLG JACK	FJ1	LFJ1AH01	10"	14"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30	D01
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D01
SPCL GASKET	G1	LG00ZH09	26"	48"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	D01
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D01
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D01
SPE BLIND	FSB	LFSBAF00	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D01
SPE BLIND	FSB	LFSBAF01	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D01
SPE BLIND	FSB	LFSBAF12	26"	40"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.47-A)	D01
SWG CON B-P	RCB	LRCBAD00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	D01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	D01
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	D01
SWG CON P-T	RC2	LRC2AK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) SCH160	D01
SWG ECC B-P	REB	LREBAD00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	D01
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	D01
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	D01
TEE	TE	LTE0AB00	8"	8"	TEE A234-WPB EQUAL SMLS BE SCH20	D01
TEE	TE	LTE0AC00	10"	14"	TEE A234-WPB EQUAL SMLS BE SCH30	D01
TEE	TE	LTE0AC03	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH30	D01
TEE	TE	LTE0AD00	3"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	D01
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	D01
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	D01
TEE	TE	LTE0AZ01	32"	32"	TEE A234-WPB EQUAL WELDED BE 19.05mm THK	D01
TEE	TE	LTE0AZ06	26"	26"	TEE A234-WPB EQUAL WELDED BE 15.88mm THK	D01
TEE	TE	LTE0AZ07	28"	30"	TEE A234-WPB EQUAL WELDED BE 17.47mm THK	D01
TEE	TE	LTE0AZ08	34"	36"	TEE A234-WPB EQUAL WELDED BE 20.62mm THK	D01
TEE	TE	LTE0AZ09	38"	38"	TEE A234-WPB EQUAL WELDED BE 22.23mm THK	D01
TEE	TE	LTE0AZ10	40"	42"	TEE A234-WPB EQUAL WELDED BE 23.83mm THK	D01
TEE	TE	LTE0AZ11	44"	44"	TEE A234-WPB EQUAL WELDED BE 25.40mm THK	D01
TEE	TE	LTE0AZ12	46"	48"	TEE A234-WPB EQUAL WELDED BE 26.97mm THK	D01
TEE RED	TR	LTR0AB00	8"	8"	TEE A234-WPB REDUCING SMLS BE SCH20	D01
TEE RED	TR	LTR0AC00	10"	14"	TEE A234-WPB REDUCING SMLS BE SCH30	D01
TEE RED	TR	LTR0AC03	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH30	D01
TEE RED	TR	LTR0AD00	3"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	D01
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	D01
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	D01
TEE RED	TR	LTR0AZ01	32"	32"	TEE A234-WPB REDUCING WELDED BE 19.05mm THK	D01
TEE RED	TR	LTR0AZ06	26"	26"	TEE A234-WPB REDUCING WELDED BE 15.88mm THK	D01
TEE RED	TR	LTR0AZ07	28"	30"	TEE A234-WPB REDUCING WELDED BE 17.47mm THK	D01
TEE RED	TR	LTR0AZ08	34"	36"	TEE A234-WPB REDUCING WELDED BE 20.62mm THK	D01
TEE RED	TR	LTR0AZ09	38"	38"	TEE A234-WPB REDUCING WELDED BE 22.23mm THK	D01
TEE RED	TR	LTR0AZ10	40"	42"	TEE A234-WPB REDUCING WELDED BE 23.83mm THK	D01
TEE RED	TR	LTR0AZ11	44"	44"	TEE A234-WPB REDUCING WELDED BE 25.40mm THK	D01
TEE RED	TR	LTR0AZ12	46"	48"	TEE A234-WPB REDUCING WELDED BE 26.97mm THK	D01
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	D01
WELDOLET	TW1	LTW1AF00	40"	40"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	D01
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	D01
WELDOLET	TWO	LTWOAD00	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	D01
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	D01
BALL VA	VBF	VBFAK001	1"	1"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D01P
BOLTS	B	LB00A000	30"	30"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	D01P
CAP	C	LC00AZ25	30"	30"	CAP A234-WPB SMLS BE 6.35mm THK (RP-1718-999-1300-0080)	D01P

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AZ25	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE 6.35mm THK (RP-1718-999-1300-0080)	D01P
ELBOW	E9	LE90AP00	1"	1"	ELBOW A105 DEG-90 FORGED SW CL3000	D01P
ELBOW	E9	LE90AZ25	30"	30"	ELBOW A234-WPB 90-LR WELDED BE 6.35mm THK (RP-1718-999-1300-0080)	D01P
FLANGE	F	LF00AF02	1"	1"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH80	D01P
FLANGE	F	LF00AF32	30"	30"	FLANGE A105 WN RF CL300 (ASME B16.47-A) 6.35mm THK (RP-1718-999-1300-0079)	D01P
FLG BLIND	FB	LFB0AF00	1"	1"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	D01P
FLG BLIND	FB	LFB0AF07	30"	30"	FLANGE A105 BLIND RF CL300 (ASME B16.47-A) (RP-1718-999-1300-0079)	D01P
GASKET	G	LG00ZF01	1"	1"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D01P
GASKET	G	LG00ZF02	30"	30"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.47-A) OR-3.2 mm THICK	D01P
PIPE	P	LP00AF00	1"	1"	PIPE API 5L-B PSL1 SMLS PE SCH80	D01P
PIPE	P	LP00AZ29	30"	30"	PIPE API 5L-B PSL1 SAW BE PE COATED 6.35mm THK (RP-1718-999-1300-0078)	D01P
SOCKOLET	TSO	LTSOAP00	30"	30"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	D01P
TEE	TE	LTE0AZ25	30"	30"	TEE A234-WPB EQUAL WELDED BE 6.35mm THK (RP-1718-999-1300-0080)	D01P
BALL VA	VBF	VBFAD005	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VBF	VBFAD006	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VBF	VBFAD007	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VB7	VBFADS05	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=100MM)	D03
BALL VA	VB7	VBFADT05	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	D03
BALL VA	VB7	VBFADT06	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	D03
BALL VA	VBF	VBFAK002	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D03
BALL VA	VB7	VBFAKS02	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D03
BALL VA	VBR	VBRAD005	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VBR	VBRAD006	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VBR	VBRAD007	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D03
BALL VA	VB8	VBRADS05	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=100MM)	D03
BALL VA	VB8	VBRADT05	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	D03
BALL VA	VB8	VBRADT06	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS/EXT STEM(L=150MM)	D03
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	D03
BUTTERFLY VA	VUF	VUFAD004	8"	8"	BUTTERFLY VALVE A216-WCB FLGD-RF 13Cr TRIM ANSI CL300 GEAR OPERATED TRIPPLE OFFSET DESIGN	D03
CAP	C	LC00AD00	3"	16"	CAP A234-WPB SMLS BE SCH40	D03
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	D03
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	D03
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	D03
CHECK VA	VCA	VCAAD001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 API 594	D03
CHECK VA	VCA	VCAAD002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 API 594	D03
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D03
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	D03
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	D03
ELBOW	E4	LE40AD00	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	D03
ELBOW	E4	LE40AD06	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH40	D03
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	D03
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	D03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AD00	3"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH40	D03
ELBOW	E9	LE90AD06	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH40	D03
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	D03
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	D03
FLANGE	F	LF00AF01	3"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	D03
FLANGE	F	LF00AF04	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH80	D03
FLANGE	F	LF00AF05	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH160	D03
FLG BLIND	FB	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	D03
FLG BLIND	FB1	LFB0AH00	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5)	D03
FLG JACK	FJ	LFJ0AF01	4"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D03
FLG RED	RF	LRF0AF00	3"	6"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH40	D03
FLG RED	RF	LRF0AF01	2"	2"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) SCH80	D03
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D03
GATE VA	VGA	VGAAD001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D03
GATE VA	VGA	VGAAD002	6"	8"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D03
GATE VA	VGA	VGAAD003	10"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D03
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D03
GATE VA	VGF	VGFAD001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D03
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D03
GLOBE VA	VLA	VLAAD001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D03
GLOBE VA	VLA	VLAAD004	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873	D03
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D03
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D03
NEEDLE VA	VNE	VNEAK001	3/4"	3/4"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D03
NIPPLE TOE	NTO	LNTOAN02	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	D03
PIPE	P	LP00AD00	3"	16"	PIPE API 5L-B PSL1 SMLS BE SCH40	D03
PIPE	P	LP00AD11	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH40	D03
PIPE	P1	LP00AD17	3"	16"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	D03
PIPE	P1	LP00AD19	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH40	D03
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	D03
PIPE	P1	LP00AF22	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	D03
PIPE	P	LP00AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160	D03
PIPE	P2	LP10AD01	3"	16"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED	D03
PIPE	P2	LP10AD03	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH40 PP COATED	D03
PIPE	P2	LP10AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED	D03
PIPE	P3	LP20AD01	3"	16"	PIPE API 5L-B PSL1 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	D03
PIPE	P3	LP20AD03	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	D03
PIPE	P3	LP20AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	D03
PIPE	P3	LP30AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	D03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	D03
PLUG VA	VPL	VPLAD001	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D03
PLUG VA	VPL	VPLAD002	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PLUG VA	VPL	VPLAF002	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	D03
RED CON	RC	LRC0AD00	3"	16"	REDUCER A234-WPB CON. SMLS BE SCH40	D03
RED CON	RC	LRC0AD06	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH40	D03
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	D03
RED ECC	RE	LRE0AD00	3"	16"	REDUCER A234-WPB ECC. SMLS BE SCH40	D03
RED ECC	RE	LRE0AD06	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH40	D03
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	D03
SINGLE IBB VA	SFA	LSFAAF00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SLA	LSLAAF00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SLB	LSLBAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SLC	LSLCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SPA	LSPAAF00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SPB	LSPBAF00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SINGLE IBB VA	SPC	LSPCAF00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D03
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	D03
SPCL FLANGE	F1	LF00AH00	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	D03
SPCL FLANGE	F1	LF00AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	D03
SPCL FLANGE	F1	LF00AH03	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH160	D03
SPCL FLANGE	F2	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	D03
SPCL FLANGE	F2	LF00AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH160	D03
SPCL FLANGE	F2	LF10AK00	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	D03
SPCL FLANGE	F5	LF50AD00	2"	2"	FLANGE A105 WN FF CL150 (ASME B16.5) SCH80	D03
SPCL FLG JACK	FJ1	LFJ0AH00	4"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D03
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D03
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D03
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D03
SPE BLIND	FSB	LFSBAF00	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D03
SPE BLIND	FSB	LFSBAF01	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D03
SWG CON P-T	RC2	LRC2AN00	3/4"	1"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) XXS	D03
SWG CON B-P	RCB	LRCBAD00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	D03
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	D03
SWG CON PE	RCP	LRCPAK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH160	D03
SWG ECC B-P	REB	LREBAD00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	D03
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	D03
SWG ECC PE	REP	LREPAK00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH160	D03
TEE	TE	LTE0AD00	3"	16"	TEE A234-WPB EQUAL SMLS BE SCH40	D03
TEE	TE	LTE0AD06	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH40	D03
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	D03
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	D03
TEE RED	TR	LTR0AD00	3"	16"	TEE A234-WPB REDUCING SMLS BE SCH40	D03
TEE RED	TR	LTR0AD06	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH40	D03
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	D03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	D03
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	D03
WELDOLET	TWO	LTWOAD00	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	D03
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	D03
BALL VA	VBF	VBFAD009	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VBF	VBFAD010	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VBF	VBFAD011	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VB1	VBFAD021	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VB1	VBFAD022	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03N
BALL VA	VB1	VBFAD023	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03N
BALL VA	VB7	VBFADS09	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)/EXT STEM(L=100MM)	D03N
BALL VA	VB7	VBFADT09	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)/EXT STEM(L=150MM)	D03N
BALL VA	VB7	VBFADT10	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)/EXT STEM(L=150MM)	D03N
BALL VA	VBF	VBFAK003	1/2"	1 1/2"	***OP (F-SAFE) BS5351 ELASTOLION985 SEAL/FLOATING/NACE RP-1718-999-6300-004/316L SS OVERLAY ON SEAL POCKETS***	D03N
BALL VA	VB7	VBFAKS03	1/2"	1 1/2"	***OP (F-SAFE) BS5351 ELASTOLION985 SEAL/FLOATING/NACE RP-1718-999-6300-004/EXT STEML=100MM/316L SS OVERLAY ON SEAL POCKETS***	D03N
BALL VA	VBR	VBRAD009	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VBR	VBRAD010	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VBR	VBRAD011	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VB2	VBRAD021	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03N
BALL VA	VB2	VBRAD022	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03N
BALL VA	VB2	VBRAD023	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03N
BALL VA	VB8	VBRADS09	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)/EXT STEM(L=100MM)	D03N
BALL VA	VB8	VBRADT09	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)/EXT STEM(L=150MM)	D03N
BALL VA	VB8	VBRADT10	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)/EXT STEM(L=150MM)	D03N
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D03N
CAP	C	LC00AD01	3"	24"	CAP A234-WPB SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
CAP	C	LC00AF01	2"	2"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
CAP	C	LC00AQ01	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
CAP THD	CT	LCT0AQ01	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	D03N
CHECK VA	VCA	VCAAD003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D03N
CHECK VA	VCA	VCAAD004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D03N
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D03N
CPLG FULL	CF	LCF0AQ01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
ELBOLET	TEW	LTEWAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
ELBOW	E4	LE40AD01	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
ELBOW	E4	LE40AD07	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
ELBOW	E4	LE40AF01	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
ELBOW	E4	LE40AQ01	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
ELBOW	E9	LE90AD01	3"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
ELBOW	E9	LE90AD07	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
ELBOW	E9	LE90AF01	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
ELBOW	E9	LE90AQ01	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AF07	3"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D03N
FLANGE	F	LF00AF08	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D03N
FLANGE	F	LF00AF09	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D03N
FLG BLIND	FB	LFB0AF02	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0003)	D03N
FLG BLIND	FB1	LFB0AH01	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0003)	D03N
FLG JACK	FJ	LFJ0AF06	4"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	D03N
FLG RED	RF	LRF0AF08	3"	3"	FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) NACE SCH40 x SCH160 (RP-1718-999-6300-0003)	D03N
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D03N
GATE VA	VGA	VGAAD004	2"	8"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 NACE API 600 (RP-1718-999-6300-0004)	D03N
GATE VA	VGA	VGAAD005	10"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	D03N
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03N
GATE VA	VGF	VGFAD002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 NACE API 602 (RP-1718-999-6300-0004)	D03N
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03N
GLOBE VA	VLA	VLAAD002	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 NACE BS 1873 (RP-1718-999-6300-0004)	D03N
GLOBE VA	VLA	VLAAD003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	D03N
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D03N
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D03N
NEEDLE VA	VNE	VNEAK002	3/4"	3/4"	NEEDLE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03N
NIPPLE TOE	NTO	LNTOAN01	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	D03N
NIPPLE TOE	NTT	LNTTAN00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0003)	D03N
PIPE	P	LP00AD01	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
PIPE	P	LP00AD02	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
PIPE	P1	LP00AD03	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0003)	D03N
PIPE	P1	LP00AD04	4"	6"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH40 NACE (RP-1718-999-6300-0003)	D03N
PIPE	P	LP00AD12	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH40 (RP-1718-999-6300-0003)	D03N
PIPE	P	LP00AF02	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
PIPE	P	LP00AK01	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D03N
PLUG	PLG	LPLGAW01	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	D03N
PLUG VA	VPL	VPLAD003	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D03N
PLUG VA	VPL	VPLAD004	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D03N
PLUG VA	VPL	VPLAF004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	D03N
RED CON	RC	LRC0AD01	3"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
RED CON	RC	LRC0AD07	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
RED CON	RC	LRC0AF01	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
RED ECC	RE	LRE0AD01	3"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
RED ECC	RE	LRE0AD07	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
RED ECC	RE	LRE0AF01	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
SINGLE IBB VA	SFA	LSFAAF01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SINGLE IBB VA	SLA	LSLAAF01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SINGLE IBB VA	SLB	LSLBAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SINGLE IBB VA	SLC	LSLCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SINGLE IBB VA	SPA	LSPAAF01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SPB	LSPBAF01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SINGLE IBB VA	SPC	LSPCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03N
SOCKOLET	TSO	LTSOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F1	LF00AH04	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F1	LF00AH05	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F2	LF00AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F1	LF10AH10	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F2	LF10AK19	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D03N
SPCL FLANGE	F2	LF20AK00	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D03N
SPCL FLG JACK	FJ1	LFJ1AH02	4"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	D03N
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D03N
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D03N
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D03N
SPE BLIND	FSB	LFSBAF02	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0003)	D03N
SPE BLIND	FSB	LFSBAF03	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0003)	D03N
SWG CON B-P	RCB	LRCBAD01	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	D03N
SWG CON B-P	RCB	LRCBAF01	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	D03N
SWG CON PE	RCP	LRCPAK01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D03N
SWG ECC B-P	REB	LREBAD01	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	D03N
SWG ECC B-P	REB	LREBAF01	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	D03N
SWG ECC PE	REP	LREPAK01	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D03N
TEE	TE	LTE0AD01	3"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
TEE	TE	LTE0AD07	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
TEE	TE	LTE0AF01	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
TEE	TE	LTE0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
TEE RED	TR	LTR0AD01	3"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
TEE RED	TR	LTR0AD07	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
TEE RED	TR	LTR0AF01	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
TEE RED	TR	LTR0AQ01	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D03N
THREADOLET	TTO	LTTOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	D03N
WELDOLET	TWO	LTWOAD01	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0003)	D03N
WELDOLET	TWO	LTWOAF01	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	D03N
BALL VA	VBF	VBFAD009	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VBF	VBFAD010	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VBF	VBFAD011	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VB1	VBFAD021	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VB1	VBFAD022	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03S
BALL VA	VB1	VBFAD023	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03S
BALL VA	VBF	VBFAK003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VB9	VBFAKX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D03S
BALL VA	VBR	VBRAD009	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VBR	VBRAD010	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBR	VBRAD011	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VB2	VBRAD021	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D03S
BALL VA	VB2	VBRAD022	6"	6"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03S
BALL VA	VB2	VBRAD023	8"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D03S
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D03S
BUTTERFLY VA	VUF	VUFAD002	10"	10"	BUTTERFLY VALVE A216-WCB FLGD-RF 316SS W/STELLITE SEATS ANSI CL300 GEAR OPERATED NACE API 609 TRIPPLE OFFSET DESIGN (RP-1718-999-6300-0004)	D03S
CAP	C	LC00AD02	3"	24"	CAP A234-WPB SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
CAP	C	LC00AF02	2"	2"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
CAP	C	LC00AQ02	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
CAP THD	CT	LCT0AQ02	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	D03S
CHECK VA	VCA	VCAAD003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D03S
CHECK VA	VCA	VCAAD004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D03S
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D03S
CPLG FULL	CF	LCF0AQ02	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
ELBOLET	TEW	LTEWAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
ELBOW	E4	LE40AD02	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
ELBOW	E4	LE40AD08	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
ELBOW	E4	LE40AF02	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
ELBOW	E4	LE40AQ02	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
ELBOW	E9	LE90AD02	3"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
ELBOW	E9	LE90AD08	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
ELBOW	E9	LE90AF02	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
ELBOW	E9	LE90AQ02	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
FLANGE	F	LF00AF10	3"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D03S
FLANGE	F	LF00AF11	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D03S
FLANGE	F	LF00AF12	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D03S
FLG BLIND	FB	LFB0AF03	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0002)	D03S
FLG BLIND	FB1	LFB0AH02	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	D03S
FLG JACK	FJ	LFJ0AF09	4"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	D03S
FLG RED	RF	LRF0AF02	3"	6"	***FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) NACE SCH40 x SCH160 (RP-1718-999-6300-0002)***	D03S
FLG RED	RF	LRF0AF03	2"	2"	***FLANGE A105 WN-REDUCING RF CL300 (ASME B16.5) NACE SCH80 x SCH160 (RP-1718-999-6300-0002)***	D03S
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D03S
GATE VA	VGA	VGAAD004	2"	8"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 NACE API 600 (RP-1718-999-6300-0004)	D03S
GATE VA	VGA	VGAAD005	10"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	D03S
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03S
GATE VA	VGF	VGFAD002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 NACE API 602 (RP-1718-999-6300-0004)	D03S
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03S
GLOBE VA	VLA	VLAAD002	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 NACE BS 1873 (RP-1718-999-6300-0004)	D03S
GLOBE VA	VLA	VLAAD003	8"	8"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	D03S
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D03S
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D03S
NEEDLE VA	VNE	VNEAK002	3/4"	1"	NEEDLE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	D03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
NIPPLE TOE	NTO	LNTOAN06	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	D03S
NIPPLE TOE	NTT	LNTTAN01	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0002)	D03S
PIPE	P	LP00AD05	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
PIPE	P	LP00AD06	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
PIPE	P	LP00AD13	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH40 (RP-1718-999-6300-0002)	D03S
PIPE	P	LP00AF04	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
PIPE	P	LP00AK02	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D03S
PLUG	PLG	LPLGAW02	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	D03S
PLUG VA	VPL	VPLAD003	2"	6"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D03S
PLUG VA	VPL	VPLAD004	8"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D03S
PLUG VA	VPL	VPLAF004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	D03S
RED CON	RC	LRC0AD02	3"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
RED CON	RC	LRC0AD08	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
RED CON	RC	LRC0AF02	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
RED ECC	RE	LRE0AD02	3"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
RED ECC	RE	LRE0AD08	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
RED ECC	RE	LRE0AF02	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
SINGLE IBB VA	SFA	LSFAAF01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SLA	LSLAAF01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SLB	LSLBAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SLC	LSLCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SPA	LSPAAF01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SPB	LSPBAF01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SINGLE IBB VA	SPC	LSPCAF01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D03S
SOCKOLET	TSO	LTSOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F1	LF00AH06	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F1	LF00AH07	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F2	LF00AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F1	LF10AH11	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F2	LF10AK21	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D03S
SPCL FLANGE	F2	LF20AK06	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D03S
SPCL FLG JACK	FJ1	LFJ1AH03	4"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	D03S
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D03S
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D03S
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D03S
SPE BLIND	FS1	LFS1AH00	10"	10"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0002)	D03S
SPE BLIND	FSB	LFSBAF04	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0002)	D03S
SPE BLIND	FSB	LFSBAF05	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0002)	D03S
SWG CON B-P	RCB	LRCBAD02	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	D03S
SWG CON B-P	RCB	LRCBAF02	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	D03S
SWG CON PE	RCP	LRCPAK02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D03S
SWG CON P-T	RC2	LRC2AN02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0002)	D03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG ECC B-P	REB	LREBAD02	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	D03S
SWG ECC B-P	REB	LREBAF02	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	D03S
SWG ECC PE	REP	LREPAK02	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D03S
TEE	TE	LTE0AD02	3"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
TEE	TE	LTE0AD08	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
TEE	TE	LTE0AF02	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
TEE	TE	LTE0AQ02	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
TEE RED	TR	LTR0AD02	3"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
TEE RED	TR	LTR0AD08	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
TEE RED	TR	LTR0AF02	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
TEE RED	TR	LTR0AQ02	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D03S
THREADOLET	TTO	LTTOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	D03S
WELDOLET	TWO	LTWOAD02	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0002)	D03S
WELDOLET	TWO	LTWOAF02	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002)	D03S
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	D12
CAP	C	LC00AB00	8"	8"	CAP A234-WPB SMLS BE SCH20	D12
CAP	C	LC00AC00	10"	14"	CAP A234-WPB SMLS BE SCH30	D12
CAP	C	LC00AD00	3"	6"	CAP A234-WPB SMLS BE SCH40	D12
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	D12
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	D12
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	D12
CHECK VA	VCA	VCAAD001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 API 594	D12
CHECK VA	VCA	VCAAD002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL300 API 594	D12
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D12
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	D12
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	D12
ELBOW	E4	LE40AB00	8"	8"	ELBOW A234-WPB DEG-45 SMLS BE SCH20	D12
ELBOW	E4	LE40AC00	10"	14"	ELBOW A234-WPB DEG-45 SMLS BE SCH30	D12
ELBOW	E4	LE40AC03	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH30	D12
ELBOW	E4	LE40AD00	3"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	D12
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	D12
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	D12
ELBOW	E9	LE90AB00	8"	8"	ELBOW A234-WPB 90-LR SMLS BE SCH20	D12
ELBOW	E9	LE90AC00	10"	14"	ELBOW A234-WPB 90-LR SMLS BE SCH30	D12
ELBOW	E9	LE90AC03	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH30	D12
ELBOW	E9	LE90AD00	3"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH40	D12
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	D12
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	D12
FLANGE	F	LF00AF00	8"	8"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH20	D12
FLANGE	F	LF00AF01	16"	16"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH40	D12
FLANGE	F	LF00AF02	1/2"	1 1/2"	FLANGE A105 SW RF CL300 (ASME B16.5) SCH80	D12
FLANGE	F	LF00AF03	18"	24"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH30	D12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AF04	2"	2"	FLANGE A105 WN RF CL300 (ASME B16.5) SCH80	D12
FLG BLIND	FB	LFB0AF00	1/2"	24"	FLANGE A105 BLIND RF CL300 (ASME B16.5)	D12
FLG BLIND	FB1	LFB0AH00	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5)	D12
FLG JACK	FJ	LFJ0AF00	8"	8"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	D12
FLG JACK	FJ	LFJ0AF01	4"	6"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D12
FLG JACK	FJ	LFJ0AF03	10"	14"	FLANGE A105 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	D12
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D12
GATE VA	VGA	VGAAD001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D12
GATE VA	VGA	VGAAD002	6"	8"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D12
GATE VA	VGA	VGAAD003	10"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D12
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D12
GATE VA	VGF	VGFAD001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D12
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D12
GLOBE VA	VLA	VLAAD001	2"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D12
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D12
NEEDLE VA	VNE	VNEAK001	3/4"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D12
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	D12
NIPPLE TOE	NTT	LNTTAK00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 150mm LONG SCH160	D12
PIPE	P	LP00AB00	8"	8"	PIPE API 5L-B PSL1 SMLS BE SCH20	D12
PIPE	P	LP00AC00	10"	14"	PIPE API 5L-B PSL1 SMLS BE SCH30	D12
PIPE	P	LP00AC05	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH30	D12
PIPE	P	LP00AD00	3"	6"	PIPE API 5L-B PSL1 SMLS BE SCH40	D12
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	D12
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	D12
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	D12
RED CON	RC	LRC0AB00	8"	8"	REDUCER A234-WPB CON. SMLS BE SCH20	D12
RED CON	RC	LRC0AC00	10"	14"	REDUCER A234-WPB CON. SMLS BE SCH30	D12
RED CON	RC	LRC0AC03	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH30	D12
RED CON	RC	LRC0AD00	3"	6"	REDUCER A234-WPB CON. SMLS BE SCH40	D12
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	D12
RED ECC	RE	LRE0AB00	8"	8"	REDUCER A234-WPB ECC. SMLS BE SCH20	D12
RED ECC	RE	LRE0AC00	10"	14"	REDUCER A234-WPB ECC. SMLS BE SCH30	D12
RED ECC	RE	LRE0AC03	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH30	D12
RED ECC	RE	LRE0AD00	3"	6"	REDUCER A234-WPB ECC. SMLS BE SCH40	D12
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	D12
SINGLE IBB VA	SFA	LSFAAF02	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SLA	LSLAAF02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SLB	LSLBAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SLC	LSLCAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SPA	LSPAAF02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SPB	LSPBAF02	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12
SINGLE IBB VA	SPC	LSPCAF02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SOCKOLET	TS1	LTS1AP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	D12
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	D12
SPCL FLANGE	F1	LF00AH00	3"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	D12
SPCL FLANGE	F1	LF00AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	D12
SPCL FLANGE	F1	LF00AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH80	D12
SPCL FLANGE	F11	LF00AH40	2"	2"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH80	D12
SPCL FLANGE	F2	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	D12
SPCL FLANGE	F2	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	D12
SPCL FLANGE	F1	LF10AH00	8"	8"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH20	D12
SPCL FLANGE	F1	LF10AH01	10"	14"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH30	D12
SPCL FLANGE	F2	LF10AK00	3"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	D12
SPCL FLANGE	F2	LF10AK81	8"	8"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH20	D12
SPCL FLANGE	F2	LF10AK82	10"	14"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH30	D12
SPCL FLG JACK	FJ1	LFJ0AH00	4"	6"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D12
SPCL FLG JACK	FJ1	LFJ1AH00	8"	8"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20	D12
SPCL FLG JACK	FJ1	LFJ1AH01	10"	14"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30	D12
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D12
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D12
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D12
SPE BLIND	FSB	LFSBAF00	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D12
SPE BLIND	FSB	LFSBAF01	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D12
SWG CON B-P	RCB	LRCBAD00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	D12
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	D12
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	D12
SWG CON P-T	RC2	LRC2AK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) SCH160	D12
SWG ECC B-P	REB	LREBAD00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	D12
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	D12
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	D12
TEE	TE	LTE0AB00	8"	8"	TEE A234-WPB EQUAL SMLS BE SCH20	D12
TEE	TE	LTE0AC00	10"	14"	TEE A234-WPB EQUAL SMLS BE SCH30	D12
TEE	TE	LTE0AC03	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH30	D12
TEE	TE	LTE0AD00	3"	6"	TEE A234-WPB EQUAL SMLS BE SCH40	D12
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	D12
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	D12
TEE RED	TR	LTR0AB00	8"	8"	TEE A234-WPB REDUCING SMLS BE SCH20	D12
TEE RED	TR	LTR0AC00	10"	14"	TEE A234-WPB REDUCING SMLS BE SCH30	D12
TEE RED	TR	LTR0AC03	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH30	D12
TEE RED	TR	LTR0AD00	3"	6"	TEE A234-WPB REDUCING SMLS BE SCH40	D12
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	D12
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	D12
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	D12
WELDOLET	TWO	LTWOAB00	8"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH20	D12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAD00	3"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	D12
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	D12
BALL VA	VBF	VBFBD001	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D21
BALL VA	VBF	VBFBD002	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D21
BALL VA	VBF	VBFBD003	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D21
BALL VA	VB7	VBFBDS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D21
BALL VA	VB7	VBFBDT01	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	D21
BALL VA	VB7	VBFBDT02	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	D21
BALL VA	VBF	VBFBK001	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D21
BALL VA	VB1	VBFBK005	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	D21
BALL VA	VB7	VBFBKS01	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D21
BALL VA	VBR	VBRBD001	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D21
BALL VA	VBR	VBRBD002	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D21
BALL VA	VBR	VBRBD003	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D21
BALL VA	VB6	VBRBD010	3"	3"	BALL VALVE A352-LCC BE LF2 ENP BALL W/RTFE SEATS ANSI CL300 W/SCH40 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D21
BALL VA	VB8	VBRBDS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	D21
BALL VA	VB8	VBRBDT01	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/EXT STEM(L=150MM)	D21
BALL VA	VB8	VBRBDT02	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	D21
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D21
BUTTERFLY VA	VUF	VUFBD001	10"	10"	BUTTERFLY VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS ANSI CL300 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	D21
CAP	C	LC00AB03	8"	8"	CAP A420-WPL6 SMLS BE SCH20	D21
CAP	C	LC00AC03	10"	14"	CAP A420-WPL6 SMLS BE SCH30	D21
CAP	C	LC00AD03	3"	6"	CAP A420-WPL6 SMLS BE SCH40	D21
CAP	C	LC00AF03	2"	2"	CAP A420-WPL6 SMLS BE SCH80	D21
CAP	C	LC00AP01	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL3000	D21
CAP THD	CT	LCT0AP02	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL3000	D21
CHECK VA	VCA	VCABD001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 API 594	D21
CHECK VA	VCA	VCABD002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594	D21
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D21
CPLG FULL	CF	LCF0AP01	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL3000	D21
ELBOLET	TEW	LTEWAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL3000	D21
ELBOW	E4	LE40AB06	8"	8"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH20	D21
ELBOW	E4	LE40AC05	10"	14"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH30	D21
ELBOW	E4	LE40AC08	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH30	D21
ELBOW	E4	LE40AD03	3"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH40	D21
ELBOW	E4	LE40AF03	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	D21
ELBOW	E4	LE40AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL3000	D21
ELBOW	E9	LE90AB06	8"	8"	ELBOW A420-WPL6 90-LR SMLS BE SCH20	D21
ELBOW	E9	LE90AC05	10"	14"	ELBOW A420-WPL6 90-LR SMLS BE SCH30	D21
ELBOW	E9	LE90AC08	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH30	D21
ELBOW	E9	LE90AD03	3"	6"	ELBOW A420-WPL6 90-LR SMLS BE SCH40	D21
ELBOW	E9	LE90AF03	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	D21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL3000	D21
ELBOW	E9S	LE9SAP00	1/2"	1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED TE(NPT-F) CL3000	D21
FLANGE	F	LF00AF13	8"	8"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH20	D21
FLANGE	F	LF00AF14	16"	16"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH40	D21
FLANGE	F	LF00AF15	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) SCH80	D21
FLANGE	F	LF00AF16	18"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH30	D21
FLANGE	F	LF00AF17	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH80	D21
FLG BLIND	FB	LFB0AF04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5)	D21
FLG BLIND	FB1	LFB0AH03	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5)	D21
FLG JACK	FJ	LFJ0AF12	8"	8"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	D21
FLG JACK	FJ	LFJ0AF13	4"	6"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D21
FLG JACK	FJ	LFJ0AF21	10"	14"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	D21
FLG RED	RF	LRF0AF04	3"	3"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL300 (ASME B16.5) SCH40	D21
FLG RED	RF	LRF0AF05	8"	8"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL300 (ASME B16.5) SCH20	D21
FLG RED	RF	LRF0AF06	20"	20"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL300 (ASME B16.5) SCH30	D21
FLG RED	RF	LRF0AF07	2"	2"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL300 (ASME B16.5) SCH80	D21
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D21
GATE VA	VGA	VGABD001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D21
GATE VA	VGA	VGABD002	6"	8"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D21
GATE VA	VGA	VGABD003	10"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D21
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D21
GATE VA	VGF	VGFBD001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D21
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D21
GLOBE VA	VLA	VLABD001	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D21
GLOBE VA	VLA	VLABD003	8"	8"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873	D21
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D21
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D21
NEEDLE VA	VNE	VNEBK001	3/4"	3/4"	NEEDLE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D21
NIPPLE TOE	NTO	LNTOAK01	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG SCH160	D21
NIPPLE TOE	NTT	LNTTAK01	1/2"	1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 150mm LONG SCH160	D21
PIPE	P	LP00AB10	8"	8"	PIPE A333-6 SMLS BE SCH20	D21
PIPE	P	LP00AC07	10"	14"	PIPE A333-6 SMLS BE SCH30	D21
PIPE	P	LP00AC10	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH30 W/S2 AT-46C	D21
PIPE	P	LP00AD08	3"	6"	PIPE A333-6 SMLS BE SCH40	D21
PIPE	P	LP00AF08	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH80	D21
PIPE	P	LP00AF09	2"	2"	PIPE A333-6 SMLS BE SCH80	D21
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	D21
PLUG VA	VPL	VPLBD001	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D21
PLUG VA	VPL	VPLBD002	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D21
PLUG VA	VPL	VPLBF001	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	D21
RED CON	RC	LRC0AB06	8"	8"	REDUCER A420-WPL6 CON. SMLS BE SCH20	D21
RED CON	RC	LRC0AC05	10"	14"	REDUCER A420-WPL6 CON. SMLS BE SCH30	D21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0AC08	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH30	D21
RED CON	RC	LRC0AD03	3"	6"	REDUCER A420-WPL6 CON. SMLS BE SCH40	D21
RED CON	RC	LRC0AF03	2"	2"	REDUCER A420-WPL6 CON. SMLS BE SCH80	D21
RED ECC	RE	LRE0AB06	8"	8"	REDUCER A420-WPL6 ECC. SMLS BE SCH20	D21
RED ECC	RE	LRE0AC05	10"	14"	REDUCER A420-WPL6 ECC. SMLS BE SCH30	D21
RED ECC	RE	LRE0AC08	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH30	D21
RED ECC	RE	LRE0AD03	3"	6"	REDUCER A420-WPL6 ECC. SMLS BE SCH40	D21
RED ECC	RE	LRE0AF03	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	D21
SINGLE IBB VA	SFA	LSFAAF03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SLA	LSLAAF03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SLB	LSLBAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SLC	LSLCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SPA	LSPAAF03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SPB	LSPBAF03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SINGLE IBB VA	SPC	LSPCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D21
SOCKOLET	TSO	LTSOAP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL3000	D21
SPCL FLANGE	F1	LF00AH08	3"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH40	D21
SPCL FLANGE	F1	LF00AH09	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH80	D21
SPCL FLANGE	F1	LF00AH10	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH80	D21
SPCL FLANGE	F2	LF00AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	D21
SPCL FLANGE	F2	LF00AL04	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH80	D21
SPCL FLANGE	F1	LF10AH12	8"	8"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH20	D21
SPCL FLANGE	F1	LF10AH13	10"	14"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH30	D21
SPCL FLANGE	F2	LF10AK34	3"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH40	D21
SPCL FLANGE	F2	LF20AK01	8"	8"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH20	D21
SPCL FLANGE	F2	LF20AK02	10"	14"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH30	D21
SPCL FLG JACK	FJ1	LFJ0AH08	4"	6"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D21
SPCL FLG JACK	FJ1	LFJ1AH04	8"	8"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20	D21
SPCL FLG JACK	FJ1	LFJ1AH05	10"	14"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30	D21
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D21
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D21
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D21
SPE BLIND	FSB	LFSBAF06	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) W/S5 AT-46C	D21
SPE BLIND	FSB	LFSBAF07	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) W/S5 AT-46C	D21
SWG CON P-T	RC2	LRC2AK01	3/4"	1"	SWAGE A420-WPL6 CON. SMLS PLE x TSE(NPT-M) SCH160 x SCH80	D21
SWG CON B-P	RCB	LRCBAD04	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH40	D21
SWG CON B-P	RCB	LRCBAF03	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	D21
SWG CON PE	RCP	LRCPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH80	D21
SWG ECC B-P	REB	LREBAD04	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH40	D21
SWG ECC B-P	REB	LREBAF03	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	D21
SWG ECC PE	REP	LREPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH80	D21
TEE	TE	LTE0AB06	8"	8"	TEE A420-WPL6 EQUAL SMLS BE SCH20	D21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0AC05	10"	14"	TEE A420-WPL6 EQUAL SMLS BE SCH30	D21
TEE	TE	LTE0AC08	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH30	D21
TEE	TE	LTE0AD03	3"	6"	TEE A420-WPL6 EQUAL SMLS BE SCH40	D21
TEE	TE	LTE0AF03	2"	2"	TEE A420-WPL6 EQUAL SMLS BE SCH80	D21
TEE	TE	LTE0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL3000	D21
TEE RED	TR	LTR0AB06	8"	8"	TEE A420-WPL6 REDUCING SMLS BE SCH20	D21
TEE RED	TR	LTR0AC05	10"	14"	TEE A420-WPL6 REDUCING SMLS BE SCH30	D21
TEE RED	TR	LTR0AC08	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH30	D21
TEE RED	TR	LTR0AD03	3"	6"	TEE A420-WPL6 REDUCING SMLS BE SCH40	D21
TEE RED	TR	LTR0AF03	2"	2"	TEE A420-WPL6 REDUCING SMLS BE SCH80	D21
TEE RED	TR	LTR0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL3000	D21
THREADOLET	TTO	LTTOAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL3000	D21
WELDOLET	TWO	LTWOAB03	8"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH20	D21
WELDOLET	TWO	LTWOAD03	3"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH40	D21
WELDOLET	TWO	LTWOAF03	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	D21
BALL VA	VBF	VBFBD007	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	D23
BALL VA	VBF	VBFBD008	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D23
BALL VA	VBF	VBFBD009	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D23
BALL VA	VBF	VBFBK002	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D23
BALL VA	VBR	VBRBD007	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	D23
BALL VA	VBR	VBRBD008	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D23
BALL VA	VBR	VBRBD009	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	D23
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D23
CAP	C	LC00AD03	3"	24"	CAP A420-WPL6 SMLS BE SCH40	D23
CAP	C	LC00AF03	2"	2"	CAP A420-WPL6 SMLS BE SCH80	D23
CAP	C	LC00AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL6000	D23
CAP THD	CT	LCT0AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL6000	D23
CHECK VA	VCA	VCABD001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 API 594	D23
CHECK VA	VCA	VCABD002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594	D23
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D23
CPLG FULL	CF	LCF0AQ03	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL6000	D23
ELBOLET	TEW	LTEWAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL6000	D23
ELBOW	E4	LE40AD03	3"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH40	D23
ELBOW	E4	LE40AD09	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH40	D23
ELBOW	E4	LE40AF03	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	D23
ELBOW	E4	LE40AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL6000	D23
ELBOW	E9	LE90AD03	3"	16"	ELBOW A420-WPL6 90-LR SMLS BE SCH40	D23
ELBOW	E9	LE90AD09	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH40	D23
ELBOW	E9	LE90AF03	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	D23
ELBOW	E9	LE90AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL6000	D23
FLANGE	F	LF00AF14	3"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH40	D23
FLANGE	F	LF00AF17	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) SCH80	D23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AF18	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) SCH160	D23
FLG BLIND	FB	LFB0AF04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5)	D23
FLG BLIND	FB1	LFB0AH03	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5)	D23
FLG JACK	FJ	LFJ0AF13	4"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D23
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D23
GATE VA	VGA	VGABD001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D23
GATE VA	VGA	VGABD002	6"	8"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D23
GATE VA	VGA	VGABD003	10"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D23
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D23
GATE VA	VGF	VGFBD001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D23
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D23
GLOBE VA	VLA	VLABD001	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D23
GLOBE VA	VLA	VLABD003	8"	8"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873	D23
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D23
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D23
NIPPLE TOE	NTO	LNTOAN03	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG XXS	D23
PIPE	P	LP00AD08	3"	16"	PIPE A333-6 SMLS BE SCH40	D23
PIPE	P	LP00AD14	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH40 W/S2 AT-46C	D23
PIPE	P1	LP00AD18	3"	6"	PIPE A333-6 SMLS BE PE COATED SCH40	D23
PIPE	P	LP00AF09	2"	2"	PIPE A333-6 SMLS BE SCH80	D23
PIPE	P1	LP00AF27	2"	2"	PIPE A333-6 SMLS BE PE COATED SCH80	D23
PIPE	P	LP00AK07	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH160	D23
PIPE	P2	LP10AF02	2"	2"	PIPE A333-6 SMLS BE SCH80 PP COATED	D23
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	D23
PLUG VA	VPL	VPLBD001	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D23
PLUG VA	VPL	VPLBD002	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D23
PLUG VA	VPL	VPLBF002	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	D23
RED CON	RC	LRC0AD03	3"	16"	REDUCER A420-WPL6 CON. SMLS BE SCH40	D23
RED CON	RC	LRC0AD09	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH40	D23
RED CON	RC	LRC0AF03	2"	2"	REDUCER A420-WPL6 CON. SMLS BE SCH80	D23
RED ECC	RE1	LRE0AA03	18"	18"	REDUCER A420-WPL6 ECC. WELDED BE SCH10	D23
RED ECC	RE1	LRE0AB06	12"	12"	REDUCER A420-WPL6 ECC. SMLS BE SCH20	D23
RED ECC	RE	LRE0AD03	3"	16"	REDUCER A420-WPL6 ECC. SMLS BE SCH40	D23
RED ECC	RE	LRE0AD09	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH40	D23
RED ECC	RE	LRE0AF03	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	D23
SINGLE IBB VA	SFA	LSFAAF03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SLA	LSLAAF03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SLB	LSLBAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SLC	LSLCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SPA	LSPAAF03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SPB	LSPBAF03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23
SINGLE IBB VA	SPC	LSPCAF03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SOCKOLET	TSO	LTSOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL6000	D23
SPCL FLANGE	F1	LF00AH08	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH40	D23
SPCL FLANGE	F1	LF00AH09	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH80	D23
SPCL FLANGE	F1	LF00AH11	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH160	D23
SPCL FLANGE	F2	LF00AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	D23
SPCL FLANGE	F2	LF10AK34	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH40	D23
SPCL FLANGE	F2	LF10AL00	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH160	D23
SPCL FLG JACK	FJ1	LFJ0AH08	4"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D23
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D23
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D23
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D23
SPE BLIND	FSB	LFSBAF06	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) W/S5 AT-46C	D23
SPE BLIND	FSB	LFSBAF07	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) W/S5 AT-46C	D23
SWG CON B-P	RCB	LRCBAD04	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH40	D23
SWG CON B-P	RCB	LRCBAF03	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	D23
SWG CON PE	RCP	LRCPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH160	D23
SWG ECC B-P	REB	LREBAD04	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH40	D23
SWG ECC B-P	REB	LREBAF03	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	D23
SWG ECC PE	REP	LREPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH160	D23
TEE	TE	LTE0AD03	3"	16"	TEE A420-WPL6 EQUAL SMLS BE SCH40	D23
TEE	TE	LTE0AD09	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH40	D23
TEE	TE	LTE0AF03	2"	2"	TEE A420-WPL6 EQUAL SMLS BE SCH80	D23
TEE	TE	LTE0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL6000	D23
TEE RED	TR	LTR0AD03	3"	16"	TEE A420-WPL6 REDUCING SMLS BE SCH40	D23
TEE RED	TR	LTR0AD09	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH40	D23
TEE RED	TR	LTR0AF03	2"	2"	TEE A420-WPL6 REDUCING SMLS BE SCH80	D23
TEE RED	TR	LTR0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL6000	D23
THREADOLET	TTO	LTTOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL6000	D23
WELDOLET	TWO	LTWOAD03	3"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH40	D23
WELDOLET	TWO	LTWOAF03	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	D23
BALL VA	VBF	VBFBD004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBF	VBFBD005	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBF	VBFBD006	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBF	VBFBK003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBR	VBRBD004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBR	VBRBD005	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23N
BALL VA	VBR	VBRBD006	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23N
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D23N
CAP	C	LC00AD04	3"	24"	CAP A420-WPL6 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
CAP	C	LC00AF04	2"	2"	CAP A420-WPL6 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
CAP	C	LC00AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
CAP THD	CT	LCT0AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	D23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CHECK VA	VCA	VCABD003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D23N
CHECK VA	VCA	VCABD004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D23N
CHECK VA	VCH	VCHBK002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D23N
CPLG FULL	CF	LCF0AQ04	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
ELBOLET	TEW	LTEWAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
ELBOW	E4	LE40AD04	3"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
ELBOW	E4	LE40AD10	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
ELBOW	E4	LE40AF04	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
ELBOW	E4	LE40AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
ELBOW	E9	LE90AD04	3"	16"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
ELBOW	E9	LE90AD10	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
ELBOW	E9	LE90AF04	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
ELBOW	E9	LE90AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
FLANGE	F	LF00AF19	3"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D23N
FLANGE	F	LF00AF20	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D23N
FLANGE	F	LF00AF21	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D23N
FLG BLIND	FB	LFB0AF05	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0003)	D23N
FLG BLIND	FB1	LFB1AH01	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0003)	D23N
FLG JACK	FJ	LFJ0AF15	4"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	D23N
FLG RED	RF	LRF0AF09	3"	3"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL300 (ASME B16.5) NACE SCH40 x SCH160 (RP-1718-999-6300-0003)	D23N
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D23N
GATE VA	VGA	VGABD004	2"	8"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 NACE API 600 (RP-1718-999-6300-0004)	D23N
GATE VA	VGA	VGABD005	10"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	D23N
GATE VA	VGA	VGABK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D23N
GATE VA	VGF	VGFBD002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 NACE API 602 (RP-1718-999-6300-0004)	D23N
GATE VA	VGX	VGXBK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACEAPI 602 (RP-1718-999-6300-0004)	D23N
GLOBE VA	VLA	VLABD002	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 NACE BS 1873 (RP-1718-999-6300-0004)	D23N
GLOBE VA	VLA	VLABK002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D23N
INSUL GASKET	GK	LGK0ZF00	2"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D23N
NEEDLE VA	VNE	VNEBK002	3/4"	3/4"	NEEDLE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	D23N
NIPPLE TOE	NTO	LNTOAN07	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	D23N
PIPE	P	LP00AD09	3"	16"	PIPE A333-6 SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
PIPE	P	LP00AD15	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH40 W/S2 AT-46C(RP-1718-999-6300-0003)	D23N
PIPE	P	LP00AF10	2"	2"	PIPE A333-6 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
PIPE	P	LP00AK08	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D23N
PLUG	PLG	LPLGAW04	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	D23N
PLUG VA	VPL	VPLBD003	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D23N
PLUG VA	VPL	VPLBD004	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D23N
PLUG VA	VPL	VPLBF003	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	D23N
RED CON	RC	LRC0AD04	3"	16"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
RED CON	RC	LRC0AD10	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
RED CON	RC	LRC0AF04	2"	2"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AD04	3"	16"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
RED ECC	RE	LRE0AD10	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
RED ECC	RE	LRE0AF04	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
SINGLE IBB VA	SFA	LSFAAF04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SLA	LSLAAF04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SLB	LSLBAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SLC	LSLCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SPA	LSPAAF04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SPB	LSPBAF04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SINGLE IBB VA	SPC	LSPCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23N
SOCKOLET	TSO	LTSOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F2	LF00AL09	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F1	LF10AH14	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F1	LF10AH15	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F1	LF10AH16	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F2	LF20AK03	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0003)	D23N
SPCL FLANGE	F2	LF20AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	D23N
SPCL FLG JACK	FJ1	LFJ1AH06	4"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0003)	D23N
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D23N
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D23N
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D23N
SPE BLIND	FS1	LFS1AH01	6"	6"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	D23N
SPE BLIND	FSB	LFSBAF08	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	D23N
SPE BLIND	FSB	LFSBAF09	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	D23N
SWG CON B-P	RCB	LRCBAD05	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	D23N
SWG CON B-P	RCB	LRCBAF04	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	D23N
SWG CON PE	RCP	LRCPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D23N
SWG ECC B-P	REB	LREBAD05	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0003)	D23N
SWG ECC B-P	REB	LREBAF04	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	D23N
SWG ECC PE	REP	LREPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	D23N
TEE	TE	LTE0AD04	3"	16"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
TEE	TE	LTE0AD10	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
TEE	TE	LTE0AF04	2"	2"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
TEE	TE	LTE0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
TEE RED	TR	LTR0AD04	3"	16"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
TEE RED	TR	LTR0AD10	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
TEE RED	TR	LTR0AF04	2"	2"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
TEE RED	TR	LTR0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	D23N
THREADOLET	TTO	LTTOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	D23N
WELDOLET	TWO	LTWOAD04	3"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0003)	D23N
WELDOLET	TWO	LTWOAF04	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	D23N
BALL VA	VBF	VBFBD004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	D23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFBD005	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23S
BALL VA	VBF	VBFBD006	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23S
BALL VA	VBF	VBFBK003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/ NACE(RP-1718-999-6300-0004)	D23S
BALL VA	VBR	VBRBD004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	D23S
BALL VA	VBR	VBRBD005	6"	6"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23S
BALL VA	VBR	VBRBD006	8"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D23S
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	D23S
CAP	C	LC00AD05	3"	24"	CAP A420-WPL6 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
CAP	C	LC00AF05	2"	2"	CAP A420-WPL6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
CAP	C	LC00AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
CAP THD	CT	LCT0AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	D23S
CHECK VA	VCA	VCABD003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D23S
CHECK VA	VCA	VCABD004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL300 NACE API 594 (RP-1718-999-6300-0004)	D23S
CHECK VA	VCH	VCHBK002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D23S
CPLG FULL	CF	LCF0AQ05	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
ELBOLET	TEW	LTEWAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
ELBOW	E4	LE40AD05	3"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
ELBOW	E4	LE40AD11	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
ELBOW	E4	LE40AF05	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
ELBOW	E4	LE40AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
ELBOW	E9	LE90AD05	3"	16"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
ELBOW	E9	LE90AD11	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
ELBOW	E9	LE90AF05	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
ELBOW	E9	LE90AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
FLANGE	F	LF00AF22	3"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D23S
FLANGE	F	LF00AF23	2"	2"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D23S
FLANGE	F	LF00AF24	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL300 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D23S
FLG BLIND	FB	LFB0AF06	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL300 (ASME B16.5) NACE (RP-1718-999-6300-0002)	D23S
FLG BLIND	FB1	LFB0AH04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	D23S
FLG JACK	FJ	LFJ0AF18	4"	24"	FLANGE A350-LF2 CL1 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	D23S
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D23S
GATE VA	VGA	VGABD004	2"	8"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 NACE API 600 (RP-1718-999-6300-0004)	D23S
GATE VA	VGA	VGABD005	10"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	D23S
GATE VA	VGA	VGABK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	D23S
GATE VA	VGF	VGFBD002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 NACE API 602 (RP-1718-999-6300-0004)	D23S
GATE VA	VGX	VGXBK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACEAPI 602 (RP-1718-999-6300-0004)	D23S
GLOBE VA	VLA	VLABD002	2"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 NACE BS 1873 (RP-1718-999-6300-0004)	D23S
GLOBE VA	VLA	VLABK002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	D23S
NIPPLE TOE	NTO	LNTOAN04	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	D23S
PIPE	P	LP00AD10	3"	16"	PIPE A333-6 SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
PIPE	P	LP00AD16	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH40 W/S2 AT-46C(RP-1718-999-6300-0002)	D23S
PIPE	P	LP00AF11	2"	2"	PIPE A333-6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00AK09	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D23S
PLUG	PLG	LPLGAW05	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	D23S
PLUG VA	VPL	VPLBD003	2"	6"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D23S
PLUG VA	VPL	VPLBD004	8"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	D23S
PLUG VA	VPL	VPLBF003	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	D23S
RED CON	RC	LRC0AD05	3"	16"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
RED CON	RC	LRC0AD11	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
RED CON	RC	LRC0AF05	2"	2"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
RED ECC	RE	LRE0AD05	3"	16"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
RED ECC	RE	LRE0AD11	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
RED ECC	RE	LRE0AF05	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
SINGLE IBB VA	SFA	LSFAAF04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SLA	LSLAAF04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SLB	LSLBAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SLC	LSLCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SPA	LSPAAF04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SPB	LSPBAF04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SINGLE IBB VA	SPC	LSPCAF04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D23S
SOCKOLET	TSO	LTSOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F1	LF00AH12	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F1	LF00AH13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F2	LF00AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F1	LF10AH17	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F2	LF10AK58	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	D23S
SPCL FLANGE	F2	LF20AK05	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH40 (RP-1718-999-6300-0002)	D23S
SPCL FLG JACK	FJ1	LFJ1AH09	4"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40 NACE (RP-1718-999-6300-0002)	D23S
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D23S
SPCL GASKET	G2	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D23S
SPCL GASKET	G2	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D23S
SPE BLIND	FSB	LFSBAF10	1/2"	10"	FLANGE A516-70 FIGURE-8 BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	D23S
SPE BLIND	FSB	LFSBAF11	12"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	D23S
SWG CON B-P	RCB	LRCBAD06	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	D23S
SWG CON B-P	RCB	LRCBAF05	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	D23S
SWG CON PE	RCP	LRCPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D23S
SWG ECC B-P	REB	LREBAD06	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH40 (RP-1718-999-6300-0002)	D23S
SWG ECC B-P	REB	LREBAF05	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	D23S
SWG ECC PE	REP	LREPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	D23S
TEE	TE	LTE0AD05	3"	16"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
TEE	TE	LTE0AD11	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
TEE	TE	LTE0AF05	2"	2"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
TEE	TE	LTE0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
TEE RED	TR	LTR0AD05	3"	16"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH40 (RP-1718-999-6300-0002)	D23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AD11	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
TEE RED	TR	LTR0AF05	2"	2"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
TEE RED	TR	LTR0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	D23S
THREADOLET	TTO	LTTOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	D23S
WELDOLET	TWO	LTWOAD05	3"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH40 (RP-1718-999-6300-0002)	D23S
WELDOLET	TWO	LTWOAF05	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002)	D23S
BOLTS	B	LB00A003	1/2"	24"	STUD BOLT A193-B16 W/2 HEAVY HEX. NUTS(B18.2.2) A194-4	D42
CAP	C	LC00DC00	8"	10"	CAP A234-WP11 CL1 SMLS BE SCH30	D42
CAP	C	LC00DD00	2"	6"	CAP A234-WP11 CL1 SMLS BE SCH40	D42
CAP	C	LC00DL00	12"	14"	CAP A234-WP11 CL1 SMLS BE STD	D42
CAP	C	LC00DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED SW CL3000	D42
CAP THD	CT	LCT0DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED TE(NPT-F) CL3000	D42
CHECK VA	VCH	VCHDD001	2"	4"	CHECK VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL300 API 6D	D42
CHECK VA	VCH	VCHDD002	6"	24"	CHECK VALVE A217-WC6 FLGD-RF 13Cr TRIM BC SWING ANSI CL300 API 6D	D42
CHECK VA	VCH	VCHDK001	1/2"	1 1/2"	CHECK VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	D42
CPLG FULL	CF	LCF0DP00	1/2"	1 1/2"	COUPLING A182-F11 CL2 FULL(STRAIGHT) FORGED SW CL3000	D42
ELBOLET	TEW	LTEWDP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 ELBOW OUTLET FORGED SW CL3000	D42
ELBOW	E4	LE40DC00	8"	10"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH30	D42
ELBOW	E4	LE40DC01	18"	20"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH30	D42
ELBOW	E4	LE40DD00	2"	6"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH40	D42
ELBOW	E4	LE40DD01	24"	24"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH40	D42
ELBOW	E4	LE40DL00	12"	14"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE STD	D42
ELBOW	E4	LE40DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-45 FORGED SW CL3000	D42
ELBOW	E9	LE90DC00	8"	10"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH30	D42
ELBOW	E9	LE90DC01	18"	20"	ELBOW A234-WP11 CL1 90-LR WELDED BE SCH30	D42
ELBOW	E9	LE90DD00	2"	6"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH40	D42
ELBOW	E9	LE90DD01	24"	24"	ELBOW A234-WP11 CL1 90-LR WELDED BE SCH40	D42
ELBOW	E9	LE90DL00	12"	14"	ELBOW A234-WP11 CL1 90-LR SMLS BE STD	D42
ELBOW	E9	LE90DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-90 FORGED SW CL3000	D42
FLANGE	F	LF00DF00	2"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH40	D42
FLANGE	F	LF00DF01	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL300 (ASME B16.5) SCH80	D42
FLANGE	F	LF00DF02	8"	10"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) SCH30	D42
FLANGE	F	LF00DF03	12"	14"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) STD	D42
FLG BLIND	FB	LFB0DF00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL300 (ASME B16.5)	D42
FLG BLIND	FB1	LFB1DH00	1/2"	24"	FLANGE A182-F11CL2 BLIND RF CL600 (ASME B16.5)	D42
FLG JACK	FJ	LFJ0DF00	4"	6"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40	D42
FLG JACK	FJ	LFJ0DF02	8"	10"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	D42
FLG JACK	FJ	LFJ0DF03	12"	14"	FLANGE A182-F11CL2 WN RF CL300 (ASME B16.5) W/JACK SCREW STD	D42
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D42
GATE VA	VGA	VGADD001	2"	8"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D42
GATE VA	VGA	VGADD002	10"	24"	GATE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D42
GATE VA	VGA	VGADK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGF	VGFDD001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D42
GATE VA	VGX	VGXDK001	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D42
GLOBE VA	VLA	VLADD001	2"	6"	GLOBE VALVE A217-WC6 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D42
GLOBE VA	VLA	VLADK001	1/2"	1 1/2"	GLOBE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D42
NIPPLE TOE	NTO	LNTODK00	1/2"	1 1/2"	NIPPLE A335-P11 SMLS TOE(NPT-M) 75mm LONG SCH160	D42
PIPE	P	LP00DC00	8"	10"	PIPE A335-P11 SMLS BE SCH30	D42
PIPE	P	LP00DC01	18"	20"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH30	D42
PIPE	P	LP00DD00	2"	6"	PIPE A335-P11 SMLS BE SCH40	D42
PIPE	P	LP00DD01	24"	24"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH40	D42
PIPE	P	LP00DF00	1/2"	1 1/2"	PIPE A335-P11 SMLS PE SCH80	D42
PIPE	P	LP00DL00	12"	14"	PIPE A335-P11 SMLS BE STD	D42
PLUG	PLG	LPLGDW02	1/2"	1 1/2"	PLUG A182-F11 CL2 ROUND HEAD FORGED TE(NPT-M)	D42
RED CON	RC	LRC0DC00	8"	10"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH30	D42
RED CON	RC	LRC0DC01	18"	20"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH30	D42
RED CON	RC	LRC0DD00	2"	6"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH40	D42
RED CON	RC	LRC0DD01	24"	24"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH40	D42
RED CON	RC	LRC0DL00	12"	14"	REDUCER A234-WP11 CL1 CON. SMLS BE STD	D42
RED ECC	RE	LRE0DC00	8"	10"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH30	D42
RED ECC	RE	LRE0DC01	18"	20"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH30	D42
RED ECC	RE	LRE0DD00	2"	6"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH40	D42
RED ECC	RE	LRE0DD01	24"	24"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH40	D42
RED ECC	RE	LRE0DL00	12"	14"	REDUCER A234-WP11 CL1 ECC. SMLS BE STD	D42
SINGLE IBB VA	SFA	LSFADF00	1/2"	1/2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SLA	LSLADF00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SLB	LSLBDF00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SLC	LSLCDF00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SPA	LSPADF00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SPB	LSPBDF00	1"	1"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SINGLE IBB VA	SPC	LSPCDF00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D42
SOCKOLET	TS1	LTS1DP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	D42
SOCKOLET	TSO	LTSODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000	D42
SPCL FLANGE	F1	LF10DH00	8"	10"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH30	D42
SPCL FLANGE	F1	LF10DH01	2"	6"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) SCH40	D42
SPCL FLANGE	F1	LF10DH02	12"	14"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) STD	D42
SPCL FLANGE	F1	LF10DH03	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RF CL600 (ASME B16.5) SCH80	D42
SPCL FLANGE	F2	LF10DK00	2"	6"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH40	D42
SPCL FLANGE	F2	LF10DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL1500 (ASME B16.5) SCH80	D42
SPCL FLANGE	F2	LF20DK00	8"	10"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH30	D42
SPCL FLANGE	F2	LF20DK01	12"	14"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) STD	D42
SPCL FLG JACK	FJ1	LFJ1DH00	8"	10"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30	D42
SPCL FLG JACK	FJ1	LFJ1DH01	4"	6"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	D42
SPCL FLG JACK	FJ1	LFJ1DH02	12"	14"	FLANGE A182-F11CL2 WN RF CL600 (ASME B16.5) W/JACK SCREW STD	D42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D42
SPCL GASKET	G2	LG20ZK00	2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D42
SPCL GASKET	G2	LG20ZL00	1/2"	1 1/2"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D42
SPE BLIND	FS1	LFS1DH00	6"	6"	FLANGE A387-11CL2 FIGURE-8 BLANKS RF CL600 (ASME B16.48)	D42
SPE BLIND	FSB	LFSBDF00	1/2"	10"	FLANGE A387-11CL2 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D42
SPE BLIND	FSB	LFSBDF01	12"	24"	FLANGE A387-11CL2 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D42
SWG CON B-P	RCB	LRCBDD00	2"	4"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH40	D42
SWG CON PE	RCP	LRCPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 CON. SMLS PE SCH80	D42
SWG ECC B-P	REB	LREBDD00	2"	4"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH40	D42
SWG ECC PE	REP	LREPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 ECC. SMLS PE SCH80	D42
TEE	TE	LTE0DC00	8"	10"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH30	D42
TEE	TE	LTE0DC01	18"	20"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH30	D42
TEE	TE	LTE0DD00	2"	6"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH40	D42
TEE	TE	LTE0DD01	24"	24"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH40	D42
TEE	TE	LTE0DL00	12"	14"	TEE A234-WP11 CL1 EQUAL SMLS BE STD	D42
TEE	TE	LTE0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 EQUAL FORGED SW CL3000	D42
TEE RED	TR	LTR0DC00	8"	10"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH30	D42
TEE RED	TR	LTR0DC01	18"	20"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH30	D42
TEE RED	TR	LTR0DD00	2"	6"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH40	D42
TEE RED	TR	LTR0DD01	24"	24"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH40	D42
TEE RED	TR	LTR0DL00	12"	14"	TEE A234-WP11 CL1 REDUCING SMLS BE STD	D42
TEE RED	TR	LTR0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 REDUCING FORGED SW CL3000	D42
THREADOLET	TTO	LTTODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 THREADED OUTLET FORGED TE(NPT-F) CL3000	D42
WELDOLET	TWO	LTWODC00	8"	8"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH30	D42
WELDOLET	TWO	LTWODD00	2"	6"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH40	D42
BALL VA	VBF	VBFCD001	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBF	VBFCD002	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBF	VBFCD003	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBF	VBFCD004	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VB1	VBFCD013	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	D46
BALL VA	VB1	VBFCD014	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D46
BALL VA	VB1	VBFCD015	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D46
BALL VA	VB1	VBFCD016	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	D46
BALL VA	VBF	VBFCK001	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/KELF SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VB1	VBFCK004	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	D46
BALL VA	VB9	VBFCKX01	3/4"	3/4"	API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBR	VBRCD001	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBR	VBRCD002	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBR	VBRCD003	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VBR	VBRCD004	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	D46
BALL VA	VB2	VBRCD013	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	D46
BALL VA	VB2	VBRCD014	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VB2	VBRCD015	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D46
BALL VA	VB2	VBRCD016	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	D46
BOLTS	B	LB00A004	1/2"	46"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D46
BUTTERFLY VA	VUF	VUFCD001	2"	6"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 API 609 TRIPPLE OFFSET DESIGN/CRYOGENIC(RP-1718-999-1300-0028)	D46
BUTTERFLY VA	VUF	VUFCD002	8"	24"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/CRYOGENIC(RP-1718-999-1300-0028)	D46
BUTTERFLY VA	VUF	VUFCD003	26"	46"	BUTTERFLY VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	D46
CAP	C	LC00CC00	28"	30"	CAP A403-WP304L SMLS BE SCH30	D46
CAP	C	LC00CD00	32"	36"	CAP A403-WP304L SMLS BE SCH40	D46
CAP	C	LC00CL00	14"	18"	CAP A403-WP304L SMLS BE STD	D46
CAP	C	LC00CM00	20"	24"	CAP A403-WP304L SMLS BE XS	D46
CAP	C	LC00CP00	1/2"	1 1/2"	CAP A182-F304L FORGED SW CL3000	D46
CAP	C	LC00CQ00	2"	4"	CAP A403-WP304L SMLS BE SCH10S	D46
CAP	C	LC00CS01	6"	12"	CAP A403-WP304L SMLS BE SCH40S	D46
CAP	C	LC00CZ00	26"	26"	CAP A403-WP304L SMLS BE 14.27mm THK	D46
CAP	C	LC00CZ01	38"	40"	CAP A403-WP304L SMLS BE 20.62mm THK	D46
CAP	C	LC00CZ02	42"	42"	CAP A403-WP304L SMLS BE 22.23mm THK	D46
CAP	C	LC00CZ03	44"	46"	CAP A403-WP304L SMLS BE 23.83mm THK	D46
CAP THD	CT	LCT0CP00	1/2"	1 1/2"	CAP A182-F304L FORGED TE(NPT-F) CL3000	D46
CHECK VA	VCA	VCACD001	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594 CRYOGENIC(RP-1718-999-1300-0028)	D46
CHECK VA	VCA	VCACD004	26"	46"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594 WAFER FOR ASME B16.47-A RF FLANGES CRYOGENIC(RP-1718-999-1300-0028)	D46
CHECK VA	VCH	VCHCK005	1/2"	1 1/2"	CHECK VALVE A182-F304L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	D46
CPLG FULL	CF	LCF0CP00	1/2"	1 1/2"	COUPLING A182-F304L FULL(STRAIGHT) FORGED SW CL3000	D46
ELBOLET	TEW	LTEWCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L ELBOW OUTLET FORGED SW CL3000	D46
ELBOW	E4	LE40CC00	28"	30"	ELBOW A403-WP304L DEG-45 WELDED BE SCH30	D46
ELBOW	E4	LE40CD01	32"	36"	ELBOW A403-WP304L DEG-45 WELDED BE SCH40	D46
ELBOW	E4	LE40CL00	14"	18"	ELBOW A403-WP304L DEG-45 WELDED BE STD	D46
ELBOW	E4	LE40CM00	20"	24"	ELBOW A403-WP304L DEG-45 WELDED BE XS	D46
ELBOW	E4	LE40CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-45 FORGED SW CL3000	D46
ELBOW	E4	LE40CQ00	2"	4"	ELBOW A403-WP304L DEG-45 SMLS BE SCH10S	D46
ELBOW	E4	LE40CS02	6"	6"	ELBOW A403-WP304L DEG-45 SMLS BE SCH40S	D46
ELBOW	E4	LE40CS03	8"	12"	ELBOW A403-WP304L DEG-45 WELDED BE SCH40S	D46
ELBOW	E4	LE40CZ00	26"	26"	ELBOW A403-WP304L DEG-45 WELDED BE 14.27mm THK	D46
ELBOW	E4	LE40CZ01	38"	40"	ELBOW A403-WP304L DEG-45 WELDED BE 20.62mm THK	D46
ELBOW	E4	LE40CZ02	42"	42"	ELBOW A403-WP304L DEG-45 WELDED BE 22.23mm THK	D46
ELBOW	E4	LE40CZ03	44"	46"	ELBOW A403-WP304L DEG-45 WELDED BE 23.83mm THK	D46
ELBOW	E9	LE90CC00	28"	30"	ELBOW A403-WP304L 90-LR WELDED BE SCH30	D46
ELBOW	E9	LE90CD01	32"	36"	ELBOW A403-WP304L 90-LR WELDED BE SCH40	D46
ELBOW	E9	LE90CL00	14"	18"	ELBOW A403-WP304L 90-LR WELDED BE STD	D46
ELBOW	E9	LE90CM00	20"	24"	ELBOW A403-WP304L 90-LR WELDED BE XS	D46
ELBOW	E9	LE90CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-90 FORGED SW CL3000	D46
ELBOW	E9	LE90CQ00	2"	4"	ELBOW A403-WP304L 90-LR SMLS BE SCH10S	D46
ELBOW	E9	LE90CS02	6"	6"	ELBOW A403-WP304L 90-LR SMLS BE SCH40S	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90CS03	8"	12"	ELBOW A403-WP304L 90-LR WELDED BE SCH40S	D46
ELBOW	E9	LE90CZ00	26"	26"	ELBOW A403-WP304L 90-LR WELDED BE 14.27mm THK	D46
ELBOW	E9	LE90CZ01	38"	40"	ELBOW A403-WP304L 90-LR WELDED BE 20.62mm THK	D46
ELBOW	E9	LE90CZ02	42"	42"	ELBOW A403-WP304L 90-LR WELDED BE 22.23mm THK	D46
ELBOW	E9	LE90CZ03	44"	46"	ELBOW A403-WP304L 90-LR WELDED BE 23.83mm THK	D46
ELBOW	E9S	LE9SCP00	1/2"	1/2"	ELBOW A182-F304L DEG-90 FORGED TE(NPT-F) CL3000	D46
FLANGE	F	LF00CF00	2"	4"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) SCH10S	D46
FLANGE	F	LF00CF01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL300 (ASME B16.5) SCH80S	D46
FLANGE	F	LF00CF05	14"	18"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) STD	D46
FLANGE	F	LF00CF06	20"	24"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) XS	D46
FLANGE	F	LF00CF07	28"	30"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) SCH30	D46
FLANGE	F	LF00CF08	32"	36"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) SCH40	D46
FLANGE	F	LF00CF09	26"	26"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) 14.27mm THK	D46
FLANGE	F	LF00CF10	38"	40"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) 20.62mm THK	D46
FLANGE	F	LF00CF11	42"	42"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) 22.23mm THK	D46
FLANGE	F	LF00CF12	44"	46"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) 23.83mm THK	D46
FLANGE	F	LF00CF19	6"	12"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) SCH40S	D46
FLG BLIND	FB	LFB0CF00	1/2"	24"	FLANGE A182-F304L BLIND RF CL300 (ASME B16.5)	D46
FLG BLIND	FB1	LFB0CH00	1/2"	24"	FLANGE A182-F304L BLIND RF CL600 (ASME B16.5)	D46
FLG JACK	FJ	LFJ0CF00	4"	4"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	D46
FLG JACK	FJ	LFJ0CF04	14"	18"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) W/JACK SCREW STD	D46
FLG JACK	FJ	LFJ0CF05	20"	24"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) W/JACK SCREW XS	D46
FLG JACK	FJ	LFJ0CF12	28"	28"	FLANGE A182-F304L WN RF CL300 (ASME B16.47-A) W/JACK SCREW SCH30	D46
FLG JACK	FJ	LFJ0CF13	6"	12"	FLANGE A182-F304L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40S	D46
FLG RED	RF	LRF0CF01	2"	4"	***FLANGE A182-F304L WN-REDUCING RF CL300 (ASME B16.5) SCH10S x SCH80S***	D46
FLG RED	RF	LRF0CF02	6"	6"	FLANGE A182-F304L WN-REDUCING RF CL300 (ASME B16.5) SCH40S	D46
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D46
GASKET	G	LG00ZF02	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.47-A) OR-3.2 mm THICK	D46
GATE VA	VGA	VGACD005	2"	8"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600 CRYOGENIC(RP-1718-999-1300-0028)	D46
GATE VA	VGA	VGACD006	10"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600 CRYOGENIC(RP-1718-999-1300-0028)	D46
GATE VA	VGA	VGACD007	26"	46"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600 ASME B16.47-A FLGD CRYOGENIC(RP-1718-999-1300-0028)	D46
GATE VA	VGA	VGACK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	D46
GATE VA	VGF	VGFCD004	1/2"	1 1/2"	GATE VALVE A182-F304L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602 CRYOGENIC(RP-1718-999-1300-0028)	D46
GATE VA	VGX	VGXCK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	D46
GLOBE VA	VLA	VLACD001	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	D46
GLOBE VA	VLA	VLACD004	8"	12"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	D46
GLOBE VA	VLA	VLACK005	1/2"	1 1/2"	GLOBE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	D46
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D46
NEEDLE VA	VNE	VNECK004	3/4"	1"	NEEDLE VALVE A182-F304L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	D46
NIPPLE TOE	NTO	LNTOCK01	1/2"	1 1/2"	NIPPLE A312-TP304L SMLS TOE(NPT-M) 75mm LONG SCH160	D46
PIPE	P	LP00CC00	28"	30"	PIPE A358-304L CL.1 EFW BE 100% RT SCH30	D46
PIPE	P	LP00CD02	32"	36"	PIPE A358-304L CL.1 EFW BE 100% RT SCH40	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00CL00	14"	18"	PIPE A358-304L CL.1 EFW BE 100% RT STD	D46
PIPE	P	LP00CM00	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT XS	D46
PIPE	P	LP00CQ00	2"	4"	PIPE A312-TP304L SMLS BE SCH10S	D46
PIPE	P	LP00CS03	6"	6"	PIPE A312-TP304L SMLS BE SCH40S	D46
PIPE	P	LP00CS05	8"	12"	PIPE A358-304L CL.1 EFW BE 100% RT SCH40S	D46
PIPE	P	LP00CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S	D46
PIPE	P	LP00CZ00	26"	26"	PIPE A358-304L CL.1 EFW BE 100% RT 14.27mm THK	D46
PIPE	P	LP00CZ01	42"	42"	PIPE A358-304L CL.1 EFW BE 100% RT 22.23mm THK	D46
PIPE	P	LP00CZ02	44"	46"	PIPE A358-304L CL.1 EFW BE 100% RT 23.83mm THK	D46
PIPE	P	LP00CZ03	38"	40"	PIPE A358-304L CL.1 EFW BE 100% RT 20.62mm THK	D46
PIPE	P1	LP10CL00	14"	18"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT STD	D46
PIPE	P1	LP10CM00	20"	24"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT XS	D46
PIPE	P1	LP10CQ00	2"	4"	PIPE A312-TP304L SMLS BE PE COATED SCH10S	D46
PIPE	P1	LP10CS00	6"	6"	PIPE A312-TP304L SMLS BE PE COATED SCH40S	D46
PIPE	P1	LP10CS01	8"	12"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH40S	D46
PIPE	P2	LP20CL00	14"	18"	PIPE A358-304L CL.1 EFW BE 100% RT STD PP COATED	D46
PIPE	P2	LP20CM00	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT XS PP COATED	D46
PIPE	P2	LP20CQ00	2"	4"	PIPE A312-TP304L SMLS BE SCH10S PP COATED	D46
PIPE	P2	LP20CS00	6"	6"	PIPE A312-TP304L SMLS BE SCH40S PP COATED	D46
PIPE	P2	LP20CS01	8"	12"	PIPE A358-304L CL.1 EFW BE 100% RT SCH40S PP COATED	D46
PIPE	P3	LP30CL00	14"	18"	PIPE A358-304L CL.1 EFW BE 100% RT STD (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PIPE	P3	LP30CM00	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT XS (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PIPE	P3	LP30CQ00	2"	4"	PIPE A312-TP304L SMLS BE SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PIPE	P3	LP30CS00	6"	6"	PIPE A312-TP304L SMLS BE SCH40S (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PIPE	P3	LP30CS02	8"	12"	PIPE A358-304L CL.1 EFW BE 100% RT SCH40S (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PIPE	P3	LP30CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	D46
PLUG	PLG	LPLGCW00	1/2"	1 1/2"	PLUG A182-F304L ROUND HEAD FORGED TE(NPT-M)	D46
PLUG VA	VPL	VPLCD001	2"	6"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599 CRYOGENIC(RP-1718-999-1300-0028)	D46
PLUG VA	VPL	VPLCD002	8"	16"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599 CRYOGENIC(RP-1718-999-1300-0028)	D46
PLUG VA	VPL	VPLCF007	1/2"	1 1/2"	PLUG VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353 CRYOGENIC(RP-1718-999-1300-0028)	D46
RED CON	RC	LRC0CC00	28"	30"	REDUCER A403-WP304L CON. WELDED BE SCH30	D46
RED CON	RC	LRC0CD01	32"	36"	REDUCER A403-WP304L CON. WELDED BE SCH40	D46
RED CON	RC	LRC0CL00	14"	18"	REDUCER A403-WP304L CON. WELDED BE STD	D46
RED CON	RC	LRC0CM00	20"	24"	REDUCER A403-WP304L CON. WELDED BE XS	D46
RED CON	RC	LRC0CQ00	2"	4"	REDUCER A403-WP304L CON. SMLS BE SCH10S	D46
RED CON	RC	LRC0CS02	6"	6"	REDUCER A403-WP304L CON. SMLS BE SCH40S	D46
RED CON	RC	LRC0CS03	8"	12"	REDUCER A403-WP304L CON. WELDED BE SCH40S	D46
RED CON	RC	LRC0CZ00	26"	26"	REDUCER A403-WP304L CON. WELDED BE 14.27mm THK	D46
RED CON	RC	LRC0CZ01	38"	40"	REDUCER A403-WP304L CON. WELDED BE 20.62mm THK	D46
RED CON	RC	LRC0CZ02	42"	42"	REDUCER A403-WP304L CON. WELDED BE 22.23mm THK	D46
RED CON	RC	LRC0CZ03	44"	46"	REDUCER A403-WP304L CON. WELDED BE 23.83mm THK	D46
RED ECC	RE	LRE0CC00	28"	30"	REDUCER A403-WP304L ECC. WELDED BE SCH30	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0CD01	32"	36"	REDUCER A403-WP304L ECC. WELDED BE SCH40	D46
RED ECC	RE	LRE0CL00	14"	18"	REDUCER A403-WP304L ECC. WELDED BE STD	D46
RED ECC	RE	LRE0CM00	20"	24"	REDUCER A403-WP304L ECC. WELDED BE XS	D46
RED ECC	RE	LRE0CQ00	2"	4"	REDUCER A403-WP304L ECC. SMLS BE SCH10S	D46
RED ECC	RE	LRE0CS02	6"	6"	REDUCER A403-WP304L ECC. SMLS BE SCH40S	D46
RED ECC	RE	LRE0CS03	8"	12"	REDUCER A403-WP304L ECC. WELDED BE SCH40S	D46
RED ECC	RE	LRE0CZ00	26"	26"	REDUCER A403-WP304L ECC. WELDED BE 14.27mm THK	D46
RED ECC	RE	LRE0CZ01	38"	40"	REDUCER A403-WP304L ECC. WELDED BE 20.62mm THK	D46
RED ECC	RE	LRE0CZ02	42"	42"	REDUCER A403-WP304L ECC. WELDED BE 22.23mm THK	D46
RED ECC	RE	LRE0CZ03	44"	46"	REDUCER A403-WP304L ECC. WELDED BE 23.83mm THK	D46
SINGLE IBB VA	SF1	LSF1CF00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SFA	LSFACF04	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SL1	LSL1CF00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SL2	LSL2CF00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SL3	LSL3CF00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SLA	LSLACF04	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SLB	LSLBCF04	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SLC	LSLCCF05	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SP1	LSP1CF00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SP2	LSP2CF00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SP3	LSP3CF00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D46
SINGLE IBB VA	SPA	LSPACF04	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SPB	LSPBCF05	1"	1"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SINGLE IBB VA	SPC	LSPCCF04	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	D46
SOCKOLET	TSO	LTSOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L SOCKET OUTLET FORGED SW CL3000	D46
SPCL FLANGE	F1	LF00CH00	2"	4"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH10S	D46
SPCL FLANGE	F1	LF00CH01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL600 (ASME B16.5) SCH80S	D46
SPCL FLANGE	F1	LF00CH19	6"	12"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH40S	D46
SPCL FLANGE	F2	LF00CK05	6"	12"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH40S	D46
SPCL FLANGE	F1	LF10CH01	14"	18"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) STD	D46
SPCL FLANGE	F1	LF10CH02	20"	24"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) XS	D46
SPCL FLANGE	F1	LF10CH03	28"	30"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) SCH30	D46
SPCL FLANGE	F1	LF10CH04	32"	36"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) SCH40	D46
SPCL FLANGE	F1	LF10CH05	26"	26"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 14.27mm THK	D46
SPCL FLANGE	F1	LF10CH06	38"	40"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 20.62mm THK	D46
SPCL FLANGE	F1	LF10CH07	42"	42"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 22.23mm THK	D46
SPCL FLANGE	F1	LF10CH08	44"	46"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 23.83mm THK	D46
SPCL FLANGE	F2	LF10CK12	2"	4"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH10S	D46
SPCL FLANGE	F2	LF10CL12	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) SCH80S	D46
SPCL FLANGE	FS	LF11CF01	1 1/2"	1 1/2"	FLANGE A182-F304L SO RF CL300 (ASME B16.5)	D46
SPCL FLANGE	F2	LF20CK02	14"	18"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) STD	D46
SPCL FLANGE	F2	LF20CK03	20"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) XS	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	FSR	LRF1CF01	2"	2"	FLANGE A182-F304L SO-REDUCING RF CL300 (ASME B16.5)	D46
SPCL FLG JACK	FJ1	LFJ0CH00	4"	4"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S	D46
SPCL FLG JACK	FJ1	LFJ0CH10	6"	12"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	D46
SPCL FLG JACK	FJ1	LFJ1CH01	14"	18"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW STD	D46
SPCL FLG JACK	FJ1	LFJ1CH02	20"	24"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW XS	D46
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D46
SPCL GASKET	G1	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	D46
SPCL GASKET	G2	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D46
SPCL GASKET	G2	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D46
SPE BLIND	FSB	LFSBCF00	1/2"	10"	FLANGE A240-304L FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D46
SPE BLIND	FSB	LFSBCF01	12"	24"	FLANGE A240-304L PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D46
SPE BLIND	FSB	LFSBCF04	28"	28"	FLANGE A240-304L PADDLE SPACER AND BLANKS RF CL300 (ASME B16.47-A)	D46
SWG CON P-T	RC2	LRC2CT01	3/4"	1"	SWAGE A403-WP304L CON. SMLS PLE x TSE(NPT-M) SCH80S x SCH80S	D46
SWG CON B-P	RCB	LRCBCQ00	2"	4"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH10S	D46
SWG CON PE	RCP	LRCPCT00	1/2"	1 1/2"	SWAGE A403-WP304L CON. SMLS PE SCH80S	D46
SWG ECC B-P	REB	LREBCQ00	2"	4"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH10S	D46
SWG ECC PE	REP	LREPCT00	1/2"	1 1/2"	SWAGE A403-WP304L ECC. SMLS PE SCH80S	D46
TEE	TE	LTE0CC00	28"	30"	TEE A403-WP304L EQUAL WELDED BE SCH30	D46
TEE	TE	LTE0CD01	32"	36"	TEE A403-WP304L EQUAL WELDED BE SCH40	D46
TEE	TE	LTE0CL00	14"	18"	TEE A403-WP304L EQUAL WELDED BE STD	D46
TEE	TE	LTE0CM00	20"	24"	TEE A403-WP304L EQUAL WELDED BE XS	D46
TEE	TE	LTE0CP00	1/2"	1 1/2"	TEE A182-F304L EQUAL FORGED SW CL3000	D46
TEE	TE	LTE0CQ00	2"	4"	TEE A403-WP304L EQUAL SMLS BE SCH10S	D46
TEE	TE	LTE0CS02	6"	6"	TEE A403-WP304L EQUAL SMLS BE SCH40S	D46
TEE	TE	LTE0CS03	8"	12"	TEE A403-WP304L EQUAL WELDED BE SCH40S	D46
TEE	TE	LTE0CZ00	26"	26"	TEE A403-WP304L EQUAL WELDED BE 14.27mm THK	D46
TEE	TE	LTE0CZ01	38"	40"	TEE A403-WP304L EQUAL WELDED BE 20.62mm THK	D46
TEE	TE	LTE0CZ02	42"	42"	TEE A403-WP304L EQUAL WELDED BE 22.23mm THK	D46
TEE	TE	LTE0CZ03	44"	46"	TEE A403-WP304L EQUAL WELDED BE 23.83mm THK	D46
TEE RED	TR	LTR0CC00	28"	30"	TEE A403-WP304L REDUCING WELDED BE SCH30	D46
TEE RED	TR	LTR0CD01	32"	36"	TEE A403-WP304L REDUCING WELDED BE SCH40	D46
TEE RED	TR	LTR0CL00	14"	18"	TEE A403-WP304L REDUCING WELDED BE STD	D46
TEE RED	TR	LTR0CM00	20"	24"	TEE A403-WP304L REDUCING WELDED BE XS	D46
TEE RED	TR	LTR0CP00	1/2"	1 1/2"	TEE A182-F304L REDUCING FORGED SW CL3000	D46
TEE RED	TR	LTR0CQ00	2"	4"	TEE A403-WP304L REDUCING SMLS BE SCH10S	D46
TEE RED	TR	LTR0CS02	6"	6"	TEE A403-WP304L REDUCING SMLS BE SCH40S	D46
TEE RED	TR	LTR0CS03	8"	12"	TEE A403-WP304L REDUCING WELDED BE SCH40S	D46
TEE RED	TR	LTR0CZ00	26"	26"	TEE A403-WP304L REDUCING WELDED BE 14.27mm THK	D46
TEE RED	TR	LTR0CZ01	38"	40"	TEE A403-WP304L REDUCING WELDED BE 20.62mm THK	D46
TEE RED	TR	LTR0CZ02	42"	42"	TEE A403-WP304L REDUCING WELDED BE 22.23mm THK	D46
TEE RED	TR	LTR0CZ03	44"	46"	TEE A403-WP304L REDUCING WELDED BE 23.83mm THK	D46
THREADOLET	TTO	LTTOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L THREADED OUTLET FORGED TE(NPT-F) CL3000	D46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOCQ00	2"	4"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH10S	D46
WELDOLET	TWO	LTWOCS02	6"	8"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH40S	D46
BALL VA	VBF	VBFCD005	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D48
BALL VA	VBF	VBFCD006	6"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D48
BALL VA	VBF	VBFCD007	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D48
BALL VA	VBF	VBFCK002	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	D48
BALL VA	VBR	VBRCD005	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D48
BALL VA	VBR	VBRCD006	6"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D48
BALL VA	VBR	VBRCD007	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D48
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D48
BUTTERFLY VA	VUF	VUFCD004	2"	6"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 API 609 TRIPPLE OFFSET DESIGN	D48
BUTTERFLY VA	VUF	VUFCD005	8"	24"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	D48
CAP	C	LC00CB00	14"	14"	CAP A403-WP321 SMLS BE SCH20	D48
CAP	C	LC00CL01	18"	18"	CAP A403-WP321 SMLS BE STD	D48
CAP	C	LC00CM01	24"	24"	CAP A403-WP321 SMLS BE XS	D48
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	D48
CAP	C	LC00CQ01	2"	4"	CAP A403-WP321 SMLS BE SCH10S	D48
CAP	C	LC00CS00	6"	12"	CAP A403-WP321 SMLS BE SCH40S	D48
CAP	C	LC00CZ04	16"	16"	CAP A403-WP321 SMLS BE 8.74mm THK	D48
CAP	C	LC00CZ05	20"	20"	CAP A403-WP321 SMLS BE 10.31mm THK	D48
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	D48
CHECK VA	VCA	VCACD002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594	D48
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	D48
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	D48
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	D48
ELBOW	E4	LE40CB00	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE SCH20	D48
ELBOW	E4	LE40CL01	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE STD	D48
ELBOW	E4	LE40CM01	24"	24"	ELBOW A403-WP321 DEG-45 WELDED BE XS	D48
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	D48
ELBOW	E4	LE40CQ02	2"	4"	ELBOW A403-WP321 DEG-45 SMLS BE SCH10S	D48
ELBOW	E4	LE40CS00	6"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH40S	D48
ELBOW	E4	LE40CS01	8"	12"	ELBOW A403-WP321 DEG-45 WELDED BE SCH40S	D48
ELBOW	E4	LE40CZ04	16"	16"	ELBOW A403-WP321 DEG-45 WELDED BE 8.74mm THK	D48
ELBOW	E4	LE40CZ05	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 10.31mm THK	D48
ELBOW	E9	LE90CB00	14"	14"	ELBOW A403-WP321 90-LR WELDED BE SCH20	D48
ELBOW	E9	LE90CL01	18"	18"	ELBOW A403-WP321 90-LR WELDED BE STD	D48
ELBOW	E9	LE90CM01	24"	24"	ELBOW A403-WP321 90-LR WELDED BE XS	D48
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	D48
ELBOW	E9	LE90CQ02	2"	4"	ELBOW A403-WP321 90-LR SMLS BE SCH10S	D48
ELBOW	E9	LE90CS00	6"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH40S	D48
ELBOW	E9	LE90CS01	8"	12"	ELBOW A403-WP321 90-LR WELDED BE SCH40S	D48
ELBOW	E9	LE90CZ04	16"	16"	ELBOW A403-WP321 90-LR WELDED BE 8.74mm THK	D48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90CZ05	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 10.31mm THK	D48
FLANGE	F	LF00CF02	2"	4"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH10S	D48
FLANGE	F	LF00CF03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL300 (ASME B16.5) SCH80S	D48
FLANGE	F	LF00CF13	14"	14"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH20	D48
FLANGE	F	LF00CF14	18"	18"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) STD	D48
FLANGE	F	LF00CF15	24"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) XS	D48
FLANGE	F	LF00CF16	6"	12"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH40S	D48
FLANGE	F	LF00CF17	16"	16"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) 8.74mm THK	D48
FLANGE	F	LF00CF18	20"	20"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) 10.31mm THK	D48
FLG BLIND	FB	LFB0CF01	1/2"	24"	FLANGE A182-F321 BLIND RF CL300 (ASME B16.5)	D48
FLG BLIND	FB1	LFB0CH01	1/2"	24"	FLANGE A182-F321 BLIND RF CL600 (ASME B16.5)	D48
FLG JACK	FJ	LFJ0CF02	4"	4"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	D48
FLG JACK	FJ	LFJ0CF06	14"	14"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	D48
FLG JACK	FJ	LFJ0CF07	18"	18"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW STD	D48
FLG JACK	FJ	LFJ0CF08	24"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW XS	D48
FLG JACK	FJ	LFJ0CF09	6"	12"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40S	D48
FLG JACK	FJ	LFJ0CF10	16"	16"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW 8.74mm THK	D48
FLG JACK	FJ	LFJ0CF11	20"	20"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW 10.31mm THK	D48
FLG RED	RF	LRF0CF03	3"	3"	***FLANGE A182-F321 WN-REDUCING RF CL300 (ASME B16.5) SCH10S x SCH80S***	D48
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D48
GATE VA	VGA	VGACD001	2"	8"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D48
GATE VA	VGA	VGACD002	10"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D48
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D48
GATE VA	VGF	VGFCD001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D48
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D48
GLOBE VA	VLA	VLACD002	2"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D48
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D48
INSUL GASKET	GK	LGK0ZF00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL300 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	D48
NEEDLE VA	VNE	VNECK001	3/4"	1"	NEEDLE VALVE A182-F321 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D48
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	D48
PIPE	P	LP00CB00	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT SCH20	D48
PIPE	P	LP00CL01	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT STD	D48
PIPE	P	LP00CM01	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT XS	D48
PIPE	P	LP00CQ02	2"	4"	PIPE A312-TP321 SMLS BE SCH10S	D48
PIPE	P	LP00CS00	6"	6"	PIPE A312-TP321 SMLS BE SCH40S	D48
PIPE	P	LP00CS04	8"	12"	PIPE A358-321 CL.1 EFW BE 100% RT SCH40S	D48
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	D48
PIPE	P	LP00CZ04	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 8.74mm THK	D48
PIPE	P	LP00CZ05	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 10.31mm THK	D48
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	D48
PLUG VA	VPL	VPLCD003	2"	6"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D48
PLUG VA	VPL	VPLCD004	8"	16"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PLUG VA	VPL	VPLCF002	1/2"	1 1/2"	PLUG VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353	D48
RED CON	RC	LRC0CB00	14"	14"	REDUCER A403-WP321 CON. WELDED BE SCH20	D48
RED CON	RC	LRC0CL01	18"	18"	REDUCER A403-WP321 CON. WELDED BE STD	D48
RED CON	RC	LRC0CM01	24"	24"	REDUCER A403-WP321 CON. WELDED BE XS	D48
RED CON	RC	LRC0CQ02	2"	4"	REDUCER A403-WP321 CON. SMLS BE SCH10S	D48
RED CON	RC	LRC0CS00	6"	6"	REDUCER A403-WP321 CON. SMLS BE SCH40S	D48
RED CON	RC	LRC0CS01	8"	12"	REDUCER A403-WP321 CON. WELDED BE SCH40S	D48
RED CON	RC	LRC0CZ04	16"	16"	REDUCER A403-WP321 CON. WELDED BE 8.74mm THK	D48
RED CON	RC	LRC0CZ05	20"	20"	REDUCER A403-WP321 CON. WELDED BE 10.31mm THK	D48
RED ECC	RE	LRE0CB00	14"	14"	REDUCER A403-WP321 ECC. WELDED BE SCH20	D48
RED ECC	RE	LRE0CL01	18"	18"	REDUCER A403-WP321 ECC. WELDED BE STD	D48
RED ECC	RE	LRE0CM01	24"	24"	REDUCER A403-WP321 ECC. WELDED BE XS	D48
RED ECC	RE	LRE0CQ02	2"	4"	REDUCER A403-WP321 ECC. SMLS BE SCH10S	D48
RED ECC	RE	LRE0CS00	6"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH40S	D48
RED ECC	RE	LRE0CS01	8"	12"	REDUCER A403-WP321 ECC. WELDED BE SCH40S	D48
RED ECC	RE	LRE0CZ04	16"	16"	REDUCER A403-WP321 ECC. WELDED BE 8.74mm THK	D48
RED ECC	RE	LRE0CZ05	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 10.31mm THK	D48
SINGLE IBB VA	SFA	LSFACF01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SLA	LSLACF01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SLB	LSLBCF01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SLC	LSLCCF01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SPA	LSPACF01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SPB	LSPBCF01	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SINGLE IBB VA	SPC	LSPCCF01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	D48
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	D48
SPCL FLANGE	F1	LF00CH02	6"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH40S	D48
SPCL FLANGE	F1	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	D48
SPCL FLANGE	F2	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	D48
SPCL FLANGE	F1	LF10CH09	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH20	D48
SPCL FLANGE	F1	LF10CH10	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) STD	D48
SPCL FLANGE	F1	LF10CH11	24"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) XS	D48
SPCL FLANGE	F1	LF10CH12	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH10S	D48
SPCL FLANGE	F1	LF10CH13	16"	16"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 8.74mm THK	D48
SPCL FLANGE	F1	LF10CH14	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 10.31mm THK	D48
SPCL FLANGE	F2	LF10CK01	6"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH40S	D48
SPCL FLANGE	F2	LF20CK00	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH10S	D48
SPCL FLANGE	F2	LF20CK04	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH20	D48
SPCL FLANGE	F2	LF20CK05	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) STD	D48
SPCL FLANGE	F2	LF20CK06	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) XS	D48
SPCL FLANGE	F2	LF20CK07	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 8.74mm THK	D48
SPCL FLANGE	F2	LF20CK08	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 10.31mm THK	D48
SPCL FLANGE	F5	LF50CD00	2"	2"	FLANGE A182-F321 WN FF CL150 (ASME B16.5) SCH10S	D48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ0CH02	6"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	D48
SPCL FLG JACK	FJ1	LFJ1CH03	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20	D48
SPCL FLG JACK	FJ1	LFJ1CH04	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW STD	D48
SPCL FLG JACK	FJ1	LFJ1CH05	24"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW XS	D48
SPCL FLG JACK	FJ1	LFJ1CH06	4"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S	D48
SPCL FLG JACK	FJ1	LFJ1CH07	16"	16"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 8.74mm THK	D48
SPCL FLG JACK	FJ1	LFJ1CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 10.31mm THK	D48
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D48
SPCL GASKET	G2	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D48
SPCL GASKET	G2	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D48
SPE BLIND	FSB	LFSBCF02	1/2"	10"	FLANGE A240-321 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D48
SPE BLIND	FSB	LFSBCF03	12"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D48
SWG CON B-P	RCB	LRCBCQ01	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH10S	D48
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	D48
SWG CON P-T	RC2	LRC2CK00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH160	D48
SWG ECC B-P	REB	LREBCQ01	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH10S	D48
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	D48
TEE	TE	LTE0CB00	14"	14"	TEE A403-WP321 EQUAL WELDED BE SCH20	D48
TEE	TE	LTE0CL01	18"	18"	TEE A403-WP321 EQUAL WELDED BE STD	D48
TEE	TE	LTE0CM01	24"	24"	TEE A403-WP321 EQUAL WELDED BE XS	D48
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	D48
TEE	TE	LTE0CQ02	2"	4"	TEE A403-WP321 EQUAL SMLS BE SCH10S	D48
TEE	TE	LTE0CS00	6"	6"	TEE A403-WP321 EQUAL SMLS BE SCH40S	D48
TEE	TE	LTE0CS01	8"	12"	TEE A403-WP321 EQUAL WELDED BE SCH40S	D48
TEE	TE	LTE0CZ04	16"	16"	TEE A403-WP321 EQUAL WELDED BE 8.74mm THK	D48
TEE	TE	LTE0CZ05	20"	20"	TEE A403-WP321 EQUAL WELDED BE 10.31mm THK	D48
TEE RED	TR	LTR0CB00	14"	14"	TEE A403-WP321 REDUCING WELDED BE SCH20	D48
TEE RED	TR	LTR0CL01	18"	18"	TEE A403-WP321 REDUCING WELDED BE STD	D48
TEE RED	TR	LTR0CM01	24"	24"	TEE A403-WP321 REDUCING WELDED BE XS	D48
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	D48
TEE RED	TR	LTR0CQ02	2"	4"	TEE A403-WP321 REDUCING SMLS BE SCH10S	D48
TEE RED	TR	LTR0CS00	6"	6"	TEE A403-WP321 REDUCING SMLS BE SCH40S	D48
TEE RED	TR	LTR0CS01	8"	12"	TEE A403-WP321 REDUCING WELDED BE SCH40S	D48
TEE RED	TR	LTR0CZ04	16"	16"	TEE A403-WP321 REDUCING WELDED BE 8.74mm THK	D48
TEE RED	TR	LTR0CZ05	20"	20"	TEE A403-WP321 REDUCING WELDED BE 10.31mm THK	D48
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	D48
WELDOLET	TWO	LTWOCQ01	2"	4"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH10S	D48
WELDOLET	TWO	LTWOCS00	6"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH40S	D48
BALL VA	VBF	VBFCD008	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	D48X
BALL VA	VBF	VBFCD009	6"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D48X
BALL VA	VBF	VBFCD010	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D48X
BALL VA	VBF	VBFCK003	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	D48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBR	VBRCD008	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/FLOATING	D48X
BALL VA	VBR	VBRCD009	6"	6"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D48X
BALL VA	VBR	VBRCD010	8"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	D48X
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D48X
BUTTERFLY VA	VUF	VUFCD004	2"	6"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 API 609 TRIPPLE OFFSET DESIGN	D48X
BUTTERFLY VA	VUF	VUFCD005	8"	24"	BUTTERFLY VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC ANSI CL300 GEAR OPERATED API 609 TRIPPLE OFFSET DESIGN	D48X
CAP	C	LC00CB00	14"	14"	CAP A403-WP321 SMLS BE SCH20	D48X
CAP	C	LC00CL01	18"	18"	CAP A403-WP321 SMLS BE STD	D48X
CAP	C	LC00CM01	24"	24"	CAP A403-WP321 SMLS BE XS	D48X
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	D48X
CAP	C	LC00CQ01	2"	4"	CAP A403-WP321 SMLS BE SCH10S	D48X
CAP	C	LC00CS00	6"	12"	CAP A403-WP321 SMLS BE SCH40S	D48X
CAP	C	LC00CZ04	16"	16"	CAP A403-WP321 SMLS BE 8.74mm THK	D48X
CAP	C	LC00CZ05	20"	20"	CAP A403-WP321 SMLS BE 10.31mm THK	D48X
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	D48X
CHECK VA	VCA	VCACD002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594	D48X
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	D48X
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	D48X
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	D48X
ELBOW	E4	LE40CB00	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE SCH20	D48X
ELBOW	E4	LE40CL01	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE STD	D48X
ELBOW	E4	LE40CM01	24"	24"	ELBOW A403-WP321 DEG-45 WELDED BE XS	D48X
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	D48X
ELBOW	E4	LE40CQ02	2"	4"	ELBOW A403-WP321 DEG-45 SMLS BE SCH10S	D48X
ELBOW	E4	LE40CS00	6"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH40S	D48X
ELBOW	E4	LE40CS01	8"	12"	ELBOW A403-WP321 DEG-45 WELDED BE SCH40S	D48X
ELBOW	E4	LE40CZ04	16"	16"	ELBOW A403-WP321 DEG-45 WELDED BE 8.74mm THK	D48X
ELBOW	E4	LE40CZ05	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 10.31mm THK	D48X
ELBOW	E9	LE90CB00	14"	14"	ELBOW A403-WP321 90-LR WELDED BE SCH20	D48X
ELBOW	E9	LE90CL01	18"	18"	ELBOW A403-WP321 90-LR WELDED BE STD	D48X
ELBOW	E9	LE90CM01	24"	24"	ELBOW A403-WP321 90-LR WELDED BE XS	D48X
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	D48X
ELBOW	E9	LE90CQ02	2"	4"	ELBOW A403-WP321 90-LR SMLS BE SCH10S	D48X
ELBOW	E9	LE90CS00	6"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH40S	D48X
ELBOW	E9	LE90CS01	8"	12"	ELBOW A403-WP321 90-LR WELDED BE SCH40S	D48X
ELBOW	E9	LE90CZ04	16"	16"	ELBOW A403-WP321 90-LR WELDED BE 8.74mm THK	D48X
ELBOW	E9	LE90CZ05	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 10.31mm THK	D48X
FLANGE	F	LF00CF02	2"	4"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH10S	D48X
FLANGE	F	LF00CF03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL300 (ASME B16.5) SCH80S	D48X
FLANGE	F	LF00CF13	14"	14"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH20	D48X
FLANGE	F	LF00CF14	18"	18"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) STD	D48X
FLANGE	F	LF00CF15	24"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) XS	D48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00CF16	6"	12"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) SCH40S	D48X
FLANGE	F	LF00CF17	16"	16"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) 8.74mm THK	D48X
FLANGE	F	LF00CF18	20"	20"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) 10.31mm THK	D48X
FLG BLIND	FB	LFB0CF01	1/2"	24"	FLANGE A182-F321 BLIND RF CL300 (ASME B16.5)	D48X
FLG BLIND	FB1	LFB0CH01	1/2"	24"	FLANGE A182-F321 BLIND RF CL600 (ASME B16.5)	D48X
FLG JACK	FJ	LFJ0CF02	4"	4"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	D48X
FLG JACK	FJ	LFJ0CF06	14"	14"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20	D48X
FLG JACK	FJ	LFJ0CF07	18"	18"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW STD	D48X
FLG JACK	FJ	LFJ0CF08	24"	24"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW XS	D48X
FLG JACK	FJ	LFJ0CF09	6"	12"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40S	D48X
FLG JACK	FJ	LFJ0CF10	16"	16"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW 8.74mm THK	D48X
FLG JACK	FJ	LFJ0CF11	20"	20"	FLANGE A182-F321 WN RF CL300 (ASME B16.5) W/JACK SCREW 10.31mm THK	D48X
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D48X
GATE VA	VGA	VGACD001	2"	8"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D48X
GATE VA	VGA	VGACD002	10"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D48X
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D48X
GATE VA	VGF	VGFCD001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602	D48X
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D48X
GLOBE VA	VLA	VLACD002	2"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D48X
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D48X
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	D48X
PIPE	P	LP00CB00	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT SCH20	D48X
PIPE	P	LP00CL01	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT STD	D48X
PIPE	P	LP00CM01	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT XS	D48X
PIPE	P	LP00CQ02	2"	4"	PIPE A312-TP321 SMLS BE SCH10S	D48X
PIPE	P	LP00CS00	6"	6"	PIPE A312-TP321 SMLS BE SCH40S	D48X
PIPE	P	LP00CS04	8"	12"	PIPE A358-321 CL.1 EFW BE 100% RT SCH40S	D48X
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	D48X
PIPE	P	LP00CZ04	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 8.74mm THK	D48X
PIPE	P	LP00CZ05	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 10.31mm THK	D48X
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	D48X
RED CON	RC	LRC0CB00	14"	14"	REDUCER A403-WP321 CON. WELDED BE SCH20	D48X
RED CON	RC	LRC0CL01	18"	18"	REDUCER A403-WP321 CON. WELDED BE STD	D48X
RED CON	RC	LRC0CM01	24"	24"	REDUCER A403-WP321 CON. WELDED BE XS	D48X
RED CON	RC	LRC0CQ02	2"	4"	REDUCER A403-WP321 CON. SMLS BE SCH10S	D48X
RED CON	RC	LRC0CS00	6"	6"	REDUCER A403-WP321 CON. SMLS BE SCH40S	D48X
RED CON	RC	LRC0CS01	8"	12"	REDUCER A403-WP321 CON. WELDED BE SCH40S	D48X
RED CON	RC	LRC0CZ04	16"	16"	REDUCER A403-WP321 CON. WELDED BE 8.74mm THK	D48X
RED CON	RC	LRC0CZ05	20"	20"	REDUCER A403-WP321 CON. WELDED BE 10.31mm THK	D48X
RED ECC	RE	LRE0CB00	14"	14"	REDUCER A403-WP321 ECC. WELDED BE SCH20	D48X
RED ECC	RE	LRE0CL01	18"	18"	REDUCER A403-WP321 ECC. WELDED BE STD	D48X
RED ECC	RE	LRE0CM01	24"	24"	REDUCER A403-WP321 ECC. WELDED BE XS	D48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0CQ02	2"	4"	REDUCER A403-WP321 ECC. SMLS BE SCH10S	D48X
RED ECC	RE	LRE0CS00	6"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH40S	D48X
RED ECC	RE	LRE0CS01	8"	12"	REDUCER A403-WP321 ECC. WELDED BE SCH40S	D48X
RED ECC	RE	LRE0CZ04	16"	16"	REDUCER A403-WP321 ECC. WELDED BE 8.74mm THK	D48X
RED ECC	RE	LRE0CZ05	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 10.31mm THK	D48X
SINGLE IBB VA	SFA	LSFACF02	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SLA	LSLACF02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SLB	LSLBCF02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SLC	LSLCCF02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SPA	LSPACF02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SPB	LSPBCF02	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SINGLE IBB VA	SPC	LSPCCF02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D48X
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	D48X
SPCL FLANGE	F1	LF00CH02	6"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH40S	D48X
SPCL FLANGE	F1	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	D48X
SPCL FLANGE	F2	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	D48X
SPCL FLANGE	F1	LF10CH09	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH20	D48X
SPCL FLANGE	F1	LF10CH10	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) STD	D48X
SPCL FLANGE	F1	LF10CH11	24"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) XS	D48X
SPCL FLANGE	F1	LF10CH12	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH10S	D48X
SPCL FLANGE	F1	LF10CH13	16"	16"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 8.74mm THK	D48X
SPCL FLANGE	F1	LF10CH14	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 10.31mm THK	D48X
SPCL FLANGE	F2	LF10CK01	6"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH40S	D48X
SPCL FLANGE	F2	LF20CK00	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH10S	D48X
SPCL FLANGE	F2	LF20CK04	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH20	D48X
SPCL FLANGE	F2	LF20CK05	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) STD	D48X
SPCL FLANGE	F2	LF20CK06	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) XS	D48X
SPCL FLANGE	F2	LF20CK07	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 8.74mm THK	D48X
SPCL FLANGE	F2	LF20CK08	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 10.31mm THK	D48X
SPCL FLANGE	F5	LF50CD01	6"	6"	FLANGE A182-F321 WN RF CL150 (ASME B16.5) SCH40S	D48X
SPCL FLG JACK	FJ1	LFJ0CH02	6"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	D48X
SPCL FLG JACK	FJ1	LFJ1CH03	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20	D48X
SPCL FLG JACK	FJ1	LFJ1CH04	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW STD	D48X
SPCL FLG JACK	FJ1	LFJ1CH05	24"	24"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW XS	D48X
SPCL FLG JACK	FJ1	LFJ1CH06	4"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S	D48X
SPCL FLG JACK	FJ1	LFJ1CH07	16"	16"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 8.74mm THK	D48X
SPCL FLG JACK	FJ1	LFJ1CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 10.31mm THK	D48X
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D48X
SPCL GASKET	G2	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D48X
SPCL GASKET	G2	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D48X
SPCL GASKET	G5	LG50ZD00	6"	6"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL150 (ASME B16.5) OR-3.2	D48X
SPE BLIND	FSB	LFSBCF02	1/2"	10"	FLANGE A240-321 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPE BLIND	FSB	LFSBCF03	12"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D48X
SWG CON B-P	RCB	LRCBCQ01	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH10S	D48X
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	D48X
SWG ECC B-P	REB	LREBCQ01	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH10S	D48X
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	D48X
TEE	TE	LTE0CB00	14"	14"	TEE A403-WP321 EQUAL WELDED BE SCH20	D48X
TEE	TE	LTE0CL01	18"	18"	TEE A403-WP321 EQUAL WELDED BE STD	D48X
TEE	TE	LTE0CM01	24"	24"	TEE A403-WP321 EQUAL WELDED BE XS	D48X
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	D48X
TEE	TE	LTE0CQ02	2"	4"	TEE A403-WP321 EQUAL SMLS BE SCH10S	D48X
TEE	TE	LTE0CS00	6"	6"	TEE A403-WP321 EQUAL SMLS BE SCH40S	D48X
TEE	TE	LTE0CS01	8"	12"	TEE A403-WP321 EQUAL WELDED BE SCH40S	D48X
TEE	TE	LTE0CZ04	16"	16"	TEE A403-WP321 EQUAL WELDED BE 8.74mm THK	D48X
TEE	TE	LTE0CZ05	20"	20"	TEE A403-WP321 EQUAL WELDED BE 10.31mm THK	D48X
TEE RED	TR	LTR0CB00	14"	14"	TEE A403-WP321 REDUCING WELDED BE SCH20	D48X
TEE RED	TR	LTR0CL01	18"	18"	TEE A403-WP321 REDUCING WELDED BE STD	D48X
TEE RED	TR	LTR0CM01	24"	24"	TEE A403-WP321 REDUCING WELDED BE XS	D48X
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	D48X
TEE RED	TR	LTR0CQ02	2"	4"	TEE A403-WP321 REDUCING SMLS BE SCH10S	D48X
TEE RED	TR	LTR0CS00	6"	6"	TEE A403-WP321 REDUCING SMLS BE SCH40S	D48X
TEE RED	TR	LTR0CS01	8"	12"	TEE A403-WP321 REDUCING WELDED BE SCH40S	D48X
TEE RED	TR	LTR0CZ04	16"	16"	TEE A403-WP321 REDUCING WELDED BE 8.74mm THK	D48X
TEE RED	TR	LTR0CZ05	20"	20"	TEE A403-WP321 REDUCING WELDED BE 10.31mm THK	D48X
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	D48X
WELDOLET	TWO	LTWOCQ01	2"	4"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH10S	D48X
WELDOLET	TWO	LTWOCS00	6"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH40S	D48X
BALL VA	VBF	VBFCD017	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D49
BALL VA	VBF	VBFCD018	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D49
BALL VA	VBF	VBFCD019	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D49
BALL VA	VBF	VBFCK006	1/2"	1 1/2"	BALL VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D49
BALL VA	VBR	VBRCD017	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	D49
BALL VA	VBR	VBRCD018	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D49
BALL VA	VBR	VBRCD019	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	D49
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D49
CAP	C	LC00CP02	1/2"	1 1/2"	CAP A182-F316L FORGED SW CL3000	D49
CAP	C	LC00CQ03	2"	4"	CAP A403-WP316L SMLS BE SCH10S	D49
CAP	C	LC00CS02	2"	2"	[Deleted]	D49
CAP	C	LC00CZ13	14"	14"	CAP A403-WP316L SMLS BE 7.92mm THK	D49
CAP	C	LC00CC01	16"	24"	CAP A403-WP316L SMLS BE SCH30	D49
CAP	C	LC00CZ15	18"	18"	[Deleted]	D49
CAP	C	LC00CZ16	20"	20"	[Deleted]	D49
CAP	C	LC00CZ17	24"	24"	[Deleted]	D49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP THD	CT	LCT0CP02	1/2"	1 1/2"	CAP A182-F316L FORGED TE(NPT-F) CL3000	D49
CHECK VA	VCA	VCACD005	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594	D49
CHECK VA	VCH	VCHCK006	1/2"	1 1/2"	CHECK VALVE A182-F316L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	D49
CPLG FULL	CF	LCF0CP02	1/2"	1 1/2"	COUPLING A182-F316L FULL(STRAIGHT) FORGED SW CL3000	D49
ELBOLET	TEW	LTEWCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L ELBOW OUTLET FORGED SW CL3000	D49
ELBOW	E4	LE40CP02	1/2"	1 1/2"	ELBOW A182-F316L DEG-45 FORGED SW CL3000	D49
ELBOW	E4	LE40CQ06	2"	4"	ELBOW A403-WP316L DEG-45 SMLS BE SCH10S	D49
ELBOW	E4	LE40CS04	2"	2"	[Deleted]	D49
ELBOW	E4	LE40CS05	8"	12"	ELBOW A403-WP316L DEG-45 WELDED BE SCH40S	D49
ELBOW	E4	LE40CZ13	14"	14"	ELBOW A403-WP316L DEG-45 WELDED BE 7.92mm THK	D49
ELBOW	E4	LE40CC02	16"	***24"***	***ELBOW A403-WP316L DEG-45 WELDED BE SCH30***	D49
ELBOW	E4	LE40CZ15	18"	18"	[Deleted]	D49
ELBOW	E4	LE40CZ16	20"	20"	[Deleted]	D49
ELBOW	E4	LE40CZ17	24"	24"	[Deleted]	D49
ELBOW	E9	LE90CP02	1/2"	1 1/2"	ELBOW A182-F316L DEG-90 FORGED SW CL3000	D49
ELBOW	ET9	LE90CP03	1"	2"	ELBOW A182-F316L DEG-90 FORGED NPT CL3000	D49
ELBOW	E9	LE90CQ06	2"	4"	ELBOW A403-WP316L 90-LR SMLS BE SCH10S	D49
ELBOW	E9	LE90CS04	2"	2"	[Deleted]	D49
ELBOW	E9	LE90CS05	8"	12"	ELBOW A403-WP316L 90-LR WELDED BE SCH40S	D49
ELBOW	E9	LE90CZ13	14"	14"	ELBOW A403-WP316L 90-LR WELDED BE 7.92mm THK	D49
ELBOW	E9	LE90CC02	16"	24"	ELBOW A403-WP316L 90-LR WELDED BE SCH30	D49
ELBOW	E9	LE90CZ15	18"	18"	[Deleted]	D49
ELBOW	E9	LE90CZ16	20"	20"	[Deleted]	D49
ELBOW	E9	LE90CZ17	24"	24"	[Deleted]	D49
FLANGE	F	LF00CF20	2"	6"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) SCH10S	D49
FLANGE	F	LF00CF21	8"	12"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) SCH40S	D49
FLANGE	F	LF00CF22	14"	14"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) 7.92mm THK	D49
FLANGE	F	LF00CF23	16"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) SCH30	D49
FLANGE	F	LF00CF24	18"	18"	[Deleted]	D49
FLANGE	F	LF00CF25	20"	20"	[Deleted]	D49
FLANGE	F	LF00CF26	24"	24"	[Deleted]	D49
FLANGE	F	LF00CF27	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL300 (ASME B16.5) SCH80S	D49
FLG BLIND	FB	LFB0CF02	1/2"	24"	FLANGE A182-F316L BLIND RF CL300 (ASME B16.5)	D49
FLG BLIND	FB1	LFB1CH00	1/2"	24"	FLANGE A182-F316L BLIND RF CL600 (ASME B16.5)	D49
FLG JACK	FJ	LFJ0CF14	4"	6"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	D49
FLG JACK	FJ	LFJ0CF15	8"	12"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40S	D49
FLG JACK	FJ	LFJ0CF16	14"	14"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW 7.92mm THK	D49
FLG JACK	FJ	LFJ0CF17	16"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30	D49
FLG JACK	FJ	LFJ0CF18	18"	18"	[Deleted]	D49
FLG JACK	FJ	LFJ0CF19	20"	20"	[Deleted]	D49
FLG JACK	FJ	LFJ0CF20	24"	24"	[Deleted]	D49
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGA	VGACD008	2"	8"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D49
GATE VA	VGA	VGACD009	10"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D49
GATE VA	VGA	VGACK005	1/2"	1 1/2"	GATE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D49
GATE VA	VGF	VGFCD005	1/2"	1 1/2"	GATE VALVE A182-F316L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602 FOR EQUIP NOZZLE CONN.	D49
GATE VA	VGX	VGXCK005	1/2"	1 1/2"	GATE VALVE A182-F316L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D49
GLOBE VA	VLA	VLACD005	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D49
GLOBE VA	VLA	VLACK006	1/2"	1 1/2"	GLOBE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D49
NEEDLE VA	VNE	VNECK005	1/2"	1 1/2"	NEEDLE VALVE A182-F316L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	D49
NIPPLE TOE	NTO	LNTOCK02	1/2"	1 1/2"	NIPPLE A312-TP316L SMLS TOE(NPT-M) 75mm LONG SCH160	D49
PIPE	P	LP00CQ04	2"	6"	PIPE A312-TP316L SMLS BE SCH10S	D49
PIPE	P	LP00CS06	2"	2"	[Deleted]	D49
PIPE	P	LP00CS07	8"	12"	PIPE A358-316L CL.1 EFW BE 100% RT SCH40S	D49
PIPE	P	LP00CT06	1/2"	1 1/2"	PIPE A312-TP316L SMLS PE SCH80S	D49
PIPE	P	LP00CZ20	14"	14"	PIPE A358-316L CL.1 EFW BE 100% RT 7.92mm THK	D49
PIPE	P	LP00CC02	16"	24"	***PIPE A358-316L CL.1 EFW BE 100% RT SCH30***	D49
PIPE	P	LP00CZ22	18"	18"	[Deleted]	D49
PIPE	P	LP00CZ23	20"	20"	[Deleted]	D49
PIPE	P	LP00CZ24	24"	24"	[Deleted]	D49
PLUG	PLG	LPLGCW02	1/2"	1 1/2"	PLUG A182-F316L ROUND HEAD FORGED TE(NPT-M)	D49
PLUG VA	VPL	VPLCD005	2"	6"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 599	D49
PLUG VA	VPL	VPLCD006	8"	16"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 599	D49
PLUG VA	VPL	VPLCF008	1/2"	1 1/2"	PLUG VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353	D49
RED CON	RC	LRC0CQ06	2"	6"	REDUCER A403-WP316L CON. SMLS BE SCH10S	D49
RED CON	RC	LRC0CS04	2"	2"	[Deleted]	D49
RED CON	RC	LRC0CS05	8"	12"	REDUCER A403-WP316L CON. WELDED BE SCH40S	D49
RED CON	RC	LRC0CZ13	14"	14"	REDUCER A403-WP316L CON. WELDED BE 7.92mm THK	D49
RED CON	RC	LRC0CC02	16"	24"	REDUCER A403-WP316L CON. WELDED BE SCH30	D49
RED CON	RC	LRC0CZ15	18"	18"	[Deleted]	D49
RED CON	RC	LRC0CZ16	20"	20"	[Deleted]	D49
RED CON	RC	LRC0CZ17	24"	24"	[Deleted]	D49
RED ECC	RE	LRE0CQ06	2"	6"	REDUCER A403-WP316L ECC. SMLS BE SCH10S	D49
RED ECC	RE	LRE0CS04	2"	2"	[Deleted]	D49
RED ECC	RE	LRE0CS05	8"	12"	REDUCER A403-WP316L ECC. WELDED BE SCH40S	D49
RED ECC	RE	LRE0CZ13	14"	14"	REDUCER A403-WP316L ECC. WELDED BE 7.92mm THK	D49
RED ECC	RE	LRE0CC02	16"	24"	REDUCER A403-WP316L ECC. WELDED BE SCH30	D49
RED ECC	RE	LRE0CZ15	18"	18"	[Deleted]	D49
RED ECC	RE	LRE0CZ16	20"	20"	[Deleted]	D49
RED ECC	RE	LRE0CZ17	24"	24"	[Deleted]	D49
SINGLE IBB VA	SFA	LSFACF03	1/2"	1/2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SINGLE IBB VA	SLA	LSLACF03	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SINGLE IBB VA	SLB	LSLBCF03	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SINGLE IBB VA	SLC	LSLCCF04	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SPA	LSPACF03	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SINGLE IBB VA	SPB	LSPBCF04	1"	1"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SINGLE IBB VA	SPC	LSPCCF03	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49
SOCKOLET	TSO	LTSOCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L SOCKET OUTLET FORGED SW CL3000	D49
SPCL FLANGE	F1	LF10CH15	2"	6"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) SCH10S	D49
SPCL FLANGE	F1	LF10CH16	8"	12"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) SCH40S	D49
SPCL FLANGE	F1	LF10CH17	14"	14"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) 7.92mm THK	D49
SPCL FLANGE	F1	LF10CH18	16"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) SCH30	D49
SPCL FLANGE	F1	LF10CH19	18"	18"	[Deleted]	D49
SPCL FLANGE	F1	LF10CH20	20"	20"	[Deleted]	D49
SPCL FLANGE	F1	LF10CH21	24"	24"	[Deleted]	D49
SPCL FLANGE	F1	LF10CH22	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL600 (ASME B16.5) SCH80S	D49
SPCL FLANGE	F2	LF20CK09	2"	6"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) SCH10S	D49
SPCL FLANGE	F2	LF20CK10	8"	12"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) SCH40S	D49
SPCL FLANGE	F2	LF20CK11	14"	14"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) 7.92mm THK	D49
SPCL FLANGE	F2	LF20CK12	16"	24"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) SCH30	D49
SPCL FLANGE	F2	LF20CK13	18"	18"	[Deleted]	D49
SPCL FLANGE	F2	LF20CK14	20"	20"	[Deleted]	D49
SPCL FLANGE	F2	LF20CK15	24"	24"	[Deleted]	D49
SPCL FLANGE	F2	LF20CL00	1/2"	1 1/2"	FLANGE A182-F316L SW RTJ CL1500 (ASME B16.5) SCH80S	D49
SPCL FLG JACK	FJ1	LFJ1CH09	4"	6"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S	D49
SPCL FLG JACK	FJ1	LFJ1CH10	8"	12"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	D49
SPCL FLG JACK	FJ1	LFJ1CH11	14"	14"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW 7.92mm THK	D49
SPCL FLG JACK	FJ1	LFJ1CH12	16"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30	D49
SPCL FLG JACK	FJ1	LFJ1CH13	18"	18"	[Deleted]	D49
SPCL FLG JACK	FJ1	LFJ1CH14	20"	20"	[Deleted]	D49
SPCL FLG JACK	FJ1	LFJ1CH15	24"	24"	[Deleted]	D49
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D49
SPCL GASKET	G2	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D49
SPCL GASKET	G2	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D49
SPE BLIND	FSB	LFSBCF05	1/2"	10"	FLANGE A240-316L FIGURE-8 BLANKS RF CL300 (ASME B16.5)	D49
SPE BLIND	FSB	LFSBCF06	12"	24"	FLANGE A240-316L PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D49
SWG CON B-P	RCB	LRCBCQ03	2"	4"	SWAGE A403-WP316L CON. SMLS BLE x PSE SCH10S	D49
SWG CON B-P	RCB	LRCBCS02	2"	2"	[Deleted]	D49
SWG CON PE	RCP	LRCPCT02	1/2"	1 1/2"	SWAGE A403-WP316L CON. SMLS PE SCH80S	D49
SWG ECC B-P	REB	LREBCQ03	2"	4"	SWAGE A403-WP316L ECC. SMLS BLE x PSE SCH10S	D49
SWG ECC B-P	REB	LREBCS02	2"	2"	[Deleted]	D49
SWG ECC PE	REP	LREPCT02	1/2"	1 1/2"	SWAGE A403-WP316L ECC. SMLS PE SCH80S	D49
TEE	TE	LTE0CP02	1/2"	1 1/2"	TEE A182-F316L EQUAL FORGED SW CL3000	D49
TEE	TE	LTE0CQ06	2"	6"	TEE A403-WP316L EQUAL SMLS BE SCH10S	D49
TEE	TE	LTE0CS04	2"	2"	***TEE A403-WP316L EQUAL SMLS BE SCH10S***	D49
TEE	TE	LTE0CS05	8"	12"	TEE A403-WP316L EQUAL WELDED BE SCH40S	D49

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0CZ13	14"	14"	TEE A403-WP316L EQUAL WELDED BE 7.92mm THK	D49
TEE	TE	LTE0CC01	16"	24"	TEE A403-WP316L EQUAL WELDED BE SCH30	D49
TEE	TE	LTE0CZ15	18"	18"	[Deleted]	D49
TEE	TE	LTE0CZ16	20"	20"	[Deleted]	D49
TEE	TE	LTE0CZ17	24"	24"	[Deleted]	D49
TEE RED	TR	LTR0CP02	1/2"	1 1/2"	TEE A182-F316L REDUCING FORGED SW CL3000	D49
TEE RED	TR	LTR0CQ06	2"	6"	TEE A403-WP316L REDUCING SMLS BE SCH10S	D49
TEE RED	TR	LTR0CS04	2"	2"	[Deleted]	D49
TEE RED	TR	LTR0CS05	8"	12"	TEE A403-WP316L REDUCING WELDED BE SCH40S	D49
TEE RED	TR	LTR0CZ13	14"	14"	TEE A403-WP316L REDUCING WELDED BE 7.92mm THK	D49
TEE RED	TR	LTR0CC01	16"	24"	TEE A403-WP316L REDUCING WELDED BE SCH30	D49
TEE RED	TR	LTR0CZ15	18"	18"	[Deleted]	D49
TEE RED	TR	LTR0CZ16	20"	20"	[Deleted]	D49
TEE RED	TR	LTR0CZ17	24"	24"	[Deleted]	D49
THREADOLET	TTO	LTTOCP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L THREADED OUTLET FORGED TE(NPT-F) CL3000	D49
WELDOLET	TWO	LTWOCQ02	***2"***	4"	REINFORCED BRANCH OUTLET A182-F316L WELDED OUTLET FORGED BE SCH10S	D49
WELDOLET	TWO	LTWOCS03	2"	2"	[Deleted]	D49
BALL VA	VBF	VBFCD020	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D49N
BALL VA	VBF	VBFCD021	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D49N
BALL VA	VBF	VBFCD022	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D49N
BALL VA	VBF	VBFCK008	1/2"	1 1/2"	BALL VALVE A182-F316L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D49N
BALL VA	VBR	VBRCD020	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	D49N
BALL VA	VBR	VBRCD021	6"	6"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D49N
BALL VA	VBR	VBRCD022	8"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL300 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	D49N
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D49N
CAP	C	LC00CP03	1/2"	1 1/2"	CAP A182-F316L FORGED SW NACE CL3000	D49N
CAP	C	LC00CQ04	2"	6"	CAP A403-WP316L SMLS BE NACE SCH10S	D49N
CAP	C	LC00CS03	8"	12"	CAP A403-WP316L SMLS BE NACE SCH40S	D49N
CAP	C	LC00CB01	14"	14"	CAP A403-WP316L SMLS BE NACE SCH20	D49N
CAP	C	LC00CC02	16"	24"	CAP A403-WP316L SMLS BE NACE SCH30	D49N
CAP THD	CT	LCT0CP03	1/2"	1 1/2"	CAP A182-F316L FORGED TE(NPT-F) NACE CL3000	D49N
CHECK VA	VCA	VCACD006	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL300 API 594 NACE (RP-1718-999-6300-0004)	D49N
CHECK VA	VCH	VCHCK007	1/2"	1 1/2"	CHECK VALVE A182-F316L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352 NACE (RP-1718-999-6300-0004)	D49N
CPLG FULL	CF	LCF0CP03	1/2"	1 1/2"	COUPLING A182-F316L FULL(STRAIGHT) FORGED SW NACE CL3000	D49N
ELBOLET	TEW	LTEWCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L ELBOW OUTLET FORGED SW NACE CL3000	D49N
ELBOW	E4	LE40CP03	1/2"	1 1/2"	ELBOW A182-F316L DEG-45 FORGED SW NACE CL3000	D49N
ELBOW	E4	LE40CQ08	2"	6"	ELBOW A403-WP316L DEG-45 SMLS BE NACE SCH10S	D49N
ELBOW	E4	LE40CS06	8"	12"	ELBOW A403-WP316L DEG-45 WELDED BE NACE SCH40S	D49N
ELBOW	E4	LE40CB01	14"	14"	ELBOW A403-WP316L DEG-45 WELDED BE NACE SCH20	D49N
ELBOW	E4	LE40CC01	16"	24"	ELBOW A403-WP316L DEG-45 WELDED BE NACE SCH30	D49N
ELBOW	E9	LE90CP04	1/2"	1 1/2"	ELBOW A182-F316L DEG-90 FORGED SW NACE CL3000	D49N
ELBOW	ET9	LE90CP05	1"	2"	ELBOW A182-F316L DEG-90 FORGED NPT NACE CL3000	D49N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90CQ08	2"	6"	ELBOW A403-WP316L 90-LR SMLS BE NACE SCH10S	D49N
ELBOW	E9	LE90CS06	8"	12"	ELBOW A403-WP316L 90-LR WELDED BE NACE SCH40S	D49N
ELBOW	E9	LE90CB01	14"	14"	ELBOW A403-WP316L 90-LR WELDED BE NACE SCH20	D49N
ELBOW	E9	LE90CC01	16"	24"	ELBOW A403-WP316L 90-LR WELDED BE NACE SCH30	D49N
FLANGE	F	LF00CF23	2"	6"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) NACE SCH10S	D49N
FLANGE	F	LF00CF24	8"	12"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) NACE SCH40S	D49N
FLANGE	F	LF00CF28	14"	14"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) NACE SCH20	D49N
FLANGE	F	LF00CF29	16"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) NACE SCH30	D49N
FLG BLIND	FB	LFB0CF03	1/2"	24"	FLANGE A182-F316L BLIND RF CL300 (ASME B16.5) NACE	D49N
FLG BLIND	FB1	LFB1CH01	1/2"	24"	FLANGE A182-F316L BLIND RF CL600 (ASME B16.5) NACE	D49N
FLG JACK	FJ	LFJ0CF18	4"	6"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S NACE	D49N
FLG JACK	FJ	LFJ0CF19	8"	12"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH40S NACE	D49N
FLG JACK	FJ	LFJ0CF21	14"	14"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH20 NACE	D49N
FLG JACK	FJ	LFJ0CF22	16"	24"	FLANGE A182-F316L WN RF CL300 (ASME B16.5) W/JACK SCREW SCH30 NACE	D49N
GASKET	G	LG00ZF01	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL300 (ASME B16.5) OR-3.2 mm THICK	D49N
GATE VA	VGA	VGACD010	2"	8"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600 NACE (RP-1718-999-6300-0004)	D49N
GATE VA	VGA	VGACD011	10"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600 NACE (RP-1718-999-6300-0004)	D49N
GATE VA	VGA	VGACK006	1/2"	1 1/2"	GATE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 NACE (RP-1718-999-6300-0004)	D49N
GATE VA	VGF	VGFCD006	1/2"	1 1/2"	GATE VALVE A182-F316L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602 NACE (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	D49N
GATE VA	VGX	VGXCK006	1/2"	1 1/2"	GATE VALVE A182-F316L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 NACE (RP-1718-999-6300-0004)	D49N
GLOBE VA	VLA	VLACD007	2"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873 NACE (RP-1718-999-6300-0004)	D49N
GLOBE VA	VLA	VLACK007	1/2"	1 1/2"	GLOBE VALVE A182-F316L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352 NACE (RP-1718-999-6300-0004)	D49N
NEEDLE VA	VNE	VNECK006	1/2"	1 1/2"	NEEDLE VALVE A182-F316L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602 NACE (RP-1718-999-6300-0004)	D49N
NIPPLE TOE	NTO	LNTOCK03	1/2"	1 1/2"	NIPPLE A312-TP316L SMLS TOE(NPT-M) NACE 75mm LONG SCH160	D49N
PIPE	P	LP00CQ06	2"	6"	PIPE A312-TP316L SMLS BE NACE SCH10S	D49N
PIPE	P	LP00CS08	8"	12"	PIPE A358-316L CL.1 EFW BE NACE 100% RT SCH40S	D49N
PIPE	P	LP00CT07	1/2"	1 1/2"	PIPE A312-TP316L SMLS PE NACE SCH80S	D49N
PIPE	P	LP00CB01	14"	14"	PIPE A358-316L CL.1 EFW BE NACE 100% RT SCH20	D49N
PIPE	P	LP00CC01	16"	24"	PIPE A358-316L CL.1 EFW BE NACE 100% RT SCH30	D49N
PLUG	PLG	LPLGCW03	1/2"	1 1/2"	PLUG A182-F316L ROUND HEAD FORGED TE(NPT-M) NACE	D49N
RED CON	RC	LRC0CQ08	2"	6"	REDUCER A403-WP316L CON. SMLS BE NACE SCH10S	D49N
RED CON	RC	LRC0CS06	8"	12"	REDUCER A403-WP316L CON. WELDED BE NACE SCH40S	D49N
RED CON	RC	LRC0CB01	14"	14"	REDUCER A403-WP316L CON. WELDED BE NACE SCH20	D49N
RED CON	RC	LRC0CC01	16"	24"	REDUCER A403-WP316L CON. WELDED BE NACE SCH30	D49N
RED ECC	RE	LRE0CQ08	2"	6"	REDUCER A403-WP316L ECC. SMLS BE NACE SCH10S	D49N
RED ECC	RE	LRE0CS06	8"	12"	REDUCER A403-WP316L ECC. WELDED BE NACE SCH40S	D49N
RED ECC	RE	LRE0CB01	14"	14"	REDUCER A403-WP316L ECC. WELDED BE NACE SCH20	D49N
RED ECC	RE	LRE0CC01	16"	24"	REDUCER A403-WP316L ECC. WELDED BE NACE SCH30	D49N
SINGLE IBB VA	SFA	LSFACF05	1/2"	1/2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SINGLE IBB VA	SLA	LSLACF05	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SINGLE IBB VA	SLB	LSLBCF05	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SINGLE IBB VA	SLC	LSLCCF06	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SPA	LSPACF05	3/4"	3/4"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SINGLE IBB VA	SPB	LSPBCF06	1"	1"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SINGLE IBB VA	SPC	LSPCCF05	2"	2"	BALL VALVE A182-F316L 316SS BALL W/PTFE SEATS ANSI CL300 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	D49N
SOCKOLET	TSO	LTSOCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L SOCKET OUTLET FORGED SW NACE CL3000	D49N
SPCL FLANGE	F1	LF10CH25	2"	6"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) NACE SCH10S	D49N
SPCL FLANGE	F1	LF10CH27	8"	12"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) NACE SCH40S	D49N
SPCL FLANGE	F1	LF10CH23	14"	14"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) NACE SCH20	D49N
SPCL FLANGE	F1	LF10CH24	16"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) NACE SCH30	D49N
SPCL FLANGE	F1	LF10CH26	1/2"	1 1/2"	FLANGE A182-F316L SW RF CL600 (ASME B16.5) NACE SCH80S	D49N
SPCL FLANGE	F2	LF20CK18	2"	6"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) NACE SCH10S	D49N
SPCL FLANGE	F2	LF20CK10	8"	12"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) NACE SCH40S	D49N
SPCL FLANGE	F2	LF20CK16	14"	14"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) NACE SCH20	D49N
SPCL FLANGE	F2	LF20CK17	16"	24"	FLANGE A182-F316L WN RTJ CL900 (ASME B16.5) NACE SCH30	D49N
SPCL FLANGE	F2	LF20CL01	1/2"	1 1/2"	FLANGE A182-F316L SW RTJ CL1500 (ASME B16.5) NACE SCH80S	D49N
SPCL FLG JACK	FJ1	LFJ1CH16	2"	6"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S NACE	D49N
SPCL FLG JACK	FJ1	LFJ1CH17	8"	12"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S NACE	D49N
SPCL FLG JACK	FJ1	LFJ1CH18	14"	14"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH20 NACE	D49N
SPCL FLG JACK	FJ1	LFJ1CH19	16"	24"	FLANGE A182-F316L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH30 NACE	D49N
SPCL GASKET	G1	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	D49N
SPCL GASKET	G2	LG20ZK01	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	D49N
SPCL GASKET	G2	LG20ZL01	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	D49N
SPE BLIND	FSB	LFSBCF07	1/2"	10"	FLANGE A240-316L FIGURE-8 BLANKS RF CL300 (ASME B16.5) NACE	D49N
SPE BLIND	FSB	LFSBCF08	12"	24"	FLANGE A240-316L PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48) NACE	D49N
SWG CON B-P	RCB	LRCBCQ04	2"	4"	SWAGE A403-WP316L CON. SMLS BLE x PSE NACE SCH10S	D49N
SWG CON PE	RCP	LRCPCT04	1/2"	1 1/2"	SWAGE A403-WP316L CON. SMLS PE NACE SCH80S	D49N
SWG ECC B-P	REB	LREBCQ04	2"	4"	SWAGE A403-WP316L ECC. SMLS BLE x PSE NACE SCH10S	D49N
SWG ECC PE	REP	LREPCT04	1/2"	1 1/2"	SWAGE A403-WP316L ECC. SMLS PE NACE SCH80S	D49N
TEE	TE	LTE0CP03	1/2"	1 1/2"	TEE A182-F316L EQUAL FORGED SW NACE CL3000	D49N
TEE	TE	LTE0CQ08	2"	6"	TEE A403-WP316L EQUAL SMLS BE NACE SCH10S	D49N
TEE	TE	LTE0CS06	8"	12"	TEE A403-WP316L EQUAL WELDED BE NACE SCH40S	D49N
TEE	TE	LTE0CB01	14"	14"	TEE A403-WP316L EQUAL WELDED BE NACE SCH20	D49N
TEE	TE	LTE0CC02	16"	24"	TEE A403-WP316L EQUAL WELDED BE NACE SCH30	D49N
TEE RED	TR	LTR0CP03	1/2"	1 1/2"	TEE A182-F316L REDUCING FORGED SW NACE CL3000	D49N
TEE RED	TR	LTR0CQ08	2"	6"	TEE A403-WP316L REDUCING SMLS BE NACE SCH10S	D49N
TEE RED	TR	LTR0CS05	8"	12"	TEE A403-WP316L REDUCING WELDED BE NACE SCH40S	D49N
TEE RED	TR	LTR0CB01	14"	14"	TEE A403-WP316L REDUCING WELDED BE NACE SCH20	D49N
TEE RED	TR	LTR0CC02	16"	24"	TEE A403-WP316L REDUCING WELDED BE NACE SCH30	D49N
THREADOLET	TTO	LTTOCP03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F316L THREADED OUTLET FORGED TE(NPT-F) NACE CL3000	D49N
WELDOLET	TWO	LTWOCQ03	2"	4"	REINFORCED BRANCH OUTLET A182-F316L WELDED OUTLET FORGED BE NACE SCH10S	D49N
BOLTS	B	LB00A004	1/2"	12"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	D71X
CAP	C	LC00CQ02	2"	12"	CAP A815-S32750 SMLS BE SCH10S	D71X
CAP	C	LC00DP01	1/2"	1 1/2"	CAP A182-F53 FORGED SW CL3000	D71X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP THD	CT	LCT0DP01	1/2"	1 1/2"	CAP A182-F53 FORGED TE(NPT-F) CL3000	D71X
CHECK VA	VCA	VCACD003	2"	12"	CHECK VALVE A890-5A WAFER DUPLEX SS TRIM DUAL PLATE ANSI CL300 API 594	D71X
CHECK VA	VCH	VCHCK003	1/2"	1 1/2"	CHECK VALVE A182-F53 SW DUPLEX SPECIAL TRIM F53 BODY BC PISTON TYPE DISC CL800 BS 5352	D71X
CPLG FULL	CF	LCF0DP01	1/2"	1 1/2"	COUPLING A182-F53 FULL(STRAIGHT) FORGED SW CL3000	D71X
ELBOLET	TEW	LTEWDP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F53 ELBOW OUTLET FORGED SW CL3000	D71X
ELBOW	E4	LE40CQ04	2"	4"	ELBOW A815-S32750 DEG-45 SMLS BE SCH10S	D71X
ELBOW	E4	LE40CQ05	6"	12"	ELBOW A815-S32750 DEG-45 WELDED BE SCH10S	D71X
ELBOW	E4	LE40DP01	1/2"	1 1/2"	ELBOW A182-F53 DEG-45 FORGED SW CL3000	D71X
ELBOW	E9	LE90CQ04	2"	4"	ELBOW A815-S32750 90-LR SMLS BE SCH10S	D71X
ELBOW	E9	LE90CQ05	6"	12"	ELBOW A815-S32750 90-LR WELDED BE SCH10S	D71X
ELBOW	E9	LE90DP01	1/2"	1 1/2"	ELBOW A182-F53 DEG-90 FORGED SW CL3000	D71X
FLANGE	F	LF00DF04	2"	12"	FLANGE A182-F53 WN RF CL300 (ASME B16.5) SCH10S	D71X
FLANGE	F	LF00DF05	1/2"	1 1/2"	FLANGE A182-F53 SW RF CL300 (ASME B16.5) SCH40S	D71X
FLG BLIND	FB	LFB0DF01	1/2"	12"	FLANGE A182-F53 BLIND RF CL300 (ASME B16.5)	D71X
FLG BLIND	FB1	LFB1DH02	1/2"	12"	FLANGE A182-F53 BLIND RF CL600 (ASME B16.5)	D71X
FLG JACK	FJ	LFJ0DF04	4"	12"	FLANGE A182-F53 WN RF CL300 (ASME B16.5) W/JACK SCREW SCH10S	D71X
GASKET	G	LG00ZF03	1/2"	12"	GASKET S32750 SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE CL300 (ASME B16.5) W/IR & OR-UNS S32750	D71X
GATE VA	VGA	VGACD003	2"	8"	GATE VALVE A890-5A FLGD-RF DUPLEX SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 API 600	D71X
GATE VA	VGA	VGACD004	10"	12"	GATE VALVE A890-5A FLGD-RF DUPLEX SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL300 GEAR OPERATED API 600	D71X
GATE VA	VGA	VGACK002	1/2"	1 1/2"	GATE VALVE A182-F53 SW DUPLEX SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D71X
GATE VA	VGF	VGFCD002	1/2"	1 1/2"	GATE VALVE A182-F53 FLGD-RF DUPLEX SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL300 API 602 FOR EQUIP NOZZLE CONN.	D71X
GATE VA	VGX	VGXCK002	1/2"	1 1/2"	GATE VALVE A182-F53 SW x TE(NPT-F) DUPLEX SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	D71X
GLOBE VA	VLA	VLACD003	2"	6"	GLOBE VALVE A890-5A FLGD-RF DUPLEX SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 BS 1873	D71X
GLOBE VA	VLA	VLACD006	8"	8"	GLOBE VALVE A890-5A FLGD-RF DUPLEX SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL300 GEAR OPERATED BS 1873	D71X
GLOBE VA	VLA	VLACK003	1/2"	1 1/2"	GLOBE VALVE A182-F53 SW DUPLEX SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	D71X
NIPPLE TOE	NTO	LNTOEK00	1/2"	1 1/2"	NIPPLE A790-S32750 SMLS TOE(NPT-M) 75mm LONG SCH160	D71X
PIPE	P	LP00EQ00	6"	12"	PIPE A928-S32750 EFW BE 100% RT SCH10S	D71X
PIPE	P	LP00EQ01	2"	4"	PIPE A790-S32750 SMLS BE SCH10S	D71X
PIPE	P	LP00ES00	1/2"	1 1/2"	PIPE A790-S32750 SMLS PE SCH40S	D71X
PIPE	P	LP00ET00	1/2"	1 1/2"	PIPE A790-S32750 SMLS PE SCH80S	D71X
PLUG	PLG	LPLGDW01	1/2"	1 1/2"	PLUG A182-F53 ROUND HEAD FORGED TE(NPT-M)	D71X
RED CON	RC	LRC0CQ04	2"	4"	REDUCER A815-S32750 CON. SMLS BE SCH10S	D71X
RED CON	RC	LRC0CQ05	6"	12"	REDUCER A815-S32750 CON. WELDED BE SCH10S	D71X
RED ECC	RE	LRE0CQ04	2"	4"	REDUCER A815-S32750 ECC. SMLS BE SCH10S	D71X
RED ECC	RE	LRE0CQ05	6"	12"	REDUCER A815-S32750 ECC. WELDED BE SCH10S	D71X
SINGLE IBB VA	SFA	LSFADF01	1/2"	1/2"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SLA	LSLADF01	3/4"	3/4"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SLB	LSLBDF01	2"	2"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SLC	LSLCDF01	2"	2"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 2" FLGD-RF x 2" FLGD-RF SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SPA	LSPADF01	3/4"	3/4"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SPB	LSPBDF01	1"	1"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X
SINGLE IBB VA	SPC	LSPCDF01	2"	2"	NEEDLE VALVE A182-F53 DUPLEX SS TRIM BB OS&Y ANSI CL300 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	D71X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SOCKOLET	TSO	LTSODP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F53 SOCKET OUTLET FORGED SW CL3000	D71X
SPCL FLANGE	F1	LF10DH04	2"	12"	FLANGE A182-F53 WN RF CL600 (ASME B16.5) SCH10S	D71X
SPCL FLANGE	F1	LF10DH05	1/2"	1 1/2"	FLANGE A182-F53 SW RF CL600 (ASME B16.5) SCH40S	D71X
SPCL GASKET	G1	LG10ZH00	1/2"	12"	GASKET S32750 SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE CL600 (ASME B16.5) W/IR & OR-UNS S32750	D71X
SPE BLIND	FSB	LFSBEF00	1/2"	10"	FLANGE A240-S32750 FIGURE-8 BLANKS RF CL300 (ASME B16.48)	D71X
SPE BLIND	FSB	LFSBEF01	12"	12"	FLANGE A240-S32750 PADDLE SPACER AND BLANKS RF CL300 (ASME B16.48)	D71X
SWG CON PE	RCP	LRCPCT03	3/4"	1 1/2"	SWAGE A815-S32750 CON. SMLS PE SCH80S x SCH80S	D71X
SWG ECC PE	REP	LREPCT03	3/4"	1 1/2"	SWAGE A815-S32750 ECC. SMLS PE SCH80S x SCH80S	D71X
SWG CON B-P	RCB	LRCBCQ02	2"	4"	SWAGE A815-S32750 CON. SMLS BLE x PSE SCH10S	D71X
SWG CON PE	RCP	LRCPCS01	1/2"	1 1/2"	SWAGE A815-S32750 CON. SMLS PE SCH40S	D71X
SWG ECC B-P	REB	LREBCQ02	2"	4"	SWAGE A815-S32750 ECC. SMLS BLE x PSE SCH10S	D71X
SWG ECC PE	REP	LREPCS01	1/2"	1 1/2"	SWAGE A815-S32750 ECC. SMLS PE SCH40S	D71X
TEE	TE	LTE0CQ04	2"	4"	TEE A815-S32750 EQUAL SMLS BE SCH10S	D71X
TEE	TE	LTE0CQ05	6"	12"	TEE A815-S32750 EQUAL WELDED BE SCH10S	D71X
TEE	TE	LTE0DP01	1/2"	1 1/2"	TEE A182-F53 EQUAL FORGED SW CL3000	D71X
TEE RED	TR	LTR0CQ04	2"	4"	TEE A815-S32750 REDUCING SMLS BE SCH10S	D71X
TEE RED	TR	LTR0CQ05	6"	12"	TEE A815-S32750 REDUCING WELDED BE SCH10S	D71X
TEE RED	TR	LTR0DP01	1/2"	1 1/2"	TEE A182-F53 REDUCING FORGED SW CL3000	D71X
THREADOLET	TTO	LTTODP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F53 THREADED OUTLET FORGED TE(NPT-F) CL3000	D71X
WELDOLET	TWO	LTWODQ00	2"	6"	REINFORCED BRANCH OUTLET A182-F53 WELDED OUTLET FORGED BE SCH10S	D71X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFAF001	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F01
BALL VA	VBF	VBFAF002	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F01
BALL VA	VBF	VBFAF003	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F01
BALL VA	VB1	VBFAF010	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F01
BALL VA	VB1	VBFAF011	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F01
BALL VA	VB3	VBFAF015	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F01
BALL VA	VB3	VBFAF016	6"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F01
BALL VA	VB7	VBFAFS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=100MM)	F01
BALL VA	VB7	VBFAFT01	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	F01
BALL VA	VBF	VBFAK001	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	F01
BALL VA	VB3	VBFAK005	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) ***TUNGSTEN CARBIDE COATED BALL W/METAL SEATS***API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS5351 GRAPHITE SEAL/FLOATING	F01
BALL VA	VB1	VBFAK009	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	F01
BALL VA	VB7	VBFAKS01	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	F01
BALL VA	VB9	VBFAKX01	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 AED VITON SEAL/FLOATING	F01
BALL VA	VBR	VBRAF001	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F01
BALL VA	VBR	VBRAF002	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F01
BALL VA	VBR	VBRAF003	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F01
BALL VA	VB2	VBRAF009	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F01
BALL VA	VB2	VBRAF010	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F01
BALL VA	VB4	VBRAF013	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F01
BALL VA	VB4	VBRAF014	6"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F01
BALL VA	VB8	VBRAFS01	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=100MM)	F01
BALL VA	VB8	VBRAFT01	3"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	F01
BOLTS	B	LB00A000	1/2"	34"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	F01
CAP	C	LC00A200	26"	26"	CAP A234-WPB SMLS BE 28.6mm THK	F01
CAP	C	LC00A300	28"	28"	CAP A234-WPB SMLS BE 30.7mm THK	F01
CAP	C	LC00A301	30"	30"	CAP A234-WPB SMLS BE 32.8mm THK	F01
CAP	C	LC00A302	32"	32"	CAP A234-WPB SMLS BE 34.9mm THK	F01
CAP	C	LC00A303	34"	34"	CAP A234-WPB SMLS BE 37.0mm THK	F01
CAP	C	LC00AD00	3"	3"	CAP A234-WPB SMLS BE SCH40	F01
CAP	C	LC00AE00	10"	10"	CAP A234-WPB SMLS BE SCH60	F01
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	F01
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	F01
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	F01
CHECK VA	VCA	VCAAF001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 API 594	F01
CHECK VA	VCA	VCAAF002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 API 594	F01
CHECK VA	VCA	VCAAF007	26"	42"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES	F01
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	F01
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	F01
DOUBLE IBB VA	DFA	LDFAAH00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DLA	LDLAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DLB	LDLBAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DLC	LDLCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DLD	LDLDAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DLE	LDLEAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DPA	LDPAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DPB	LDPBAH00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
DOUBLE IBB VA	DPC	LDPCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F01
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	F01
ELBOW	E4	LE40A200	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE 28.6mm THK	F01
ELBOW	E4	LE40A300	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE 30.7mm THK	F01
ELBOW	E4	LE40A301	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE 32.8mm THK	F01
ELBOW	E4	LE40A302	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE 34.9mm THK	F01
ELBOW	E4	LE40A303	34"	34"	ELBOW A234-WPB DEG-45 WELDED BE 37.0mm THK	F01
ELBOW	E4	LE40AD00	3"	3"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	F01
ELBOW	E4	LE40AE00	10"	10"	ELBOW A234-WPB DEG-45 SMLS BE SCH60	F01
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	F01
ELBOW	E4	LE40AF06	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH80	F01
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	F01
ELBOW	E9	LE90A200	26"	26"	ELBOW A234-WPB 90-LR WELDED BE 28.6mm THK	F01
ELBOW	E9	LE90A300	28"	28"	ELBOW A234-WPB 90-LR WELDED BE 30.7mm THK	F01
ELBOW	E9	LE90A301	30"	30"	ELBOW A234-WPB 90-LR WELDED BE 32.8mm THK	F01
ELBOW	E9	LE90A302	32"	32"	ELBOW A234-WPB 90-LR WELDED BE 34.9mm THK	F01
ELBOW	E9	LE90A303	34"	34"	ELBOW A234-WPB 90-LR WELDED BE 37.0mm THK	F01
ELBOW	E9	LE90AD00	3"	3"	ELBOW A234-WPB 90-LR SMLS BE SCH40	F01
ELBOW	E9	LE90AE00	10"	10"	ELBOW A234-WPB 90-LR SMLS BE SCH60	F01
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	F01
ELBOW	E9	LE90AF06	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH80	F01
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	F01
FLANGE	F	LF00AH00	3"	3"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH40	F01
FLANGE	F	LF00AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	F01
FLANGE	F	LF00AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH80	F01
FLANGE	F	LF00AH14	10"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH60	F01
FLANGE	F	LF00AH15	26"	26"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 28.6mm THK	F01
FLANGE	F	LF00AH16	28"	28"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 30.7mm THK	F01
FLANGE	F	LF00AH17	30"	30"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 32.8mm THK	F01
FLANGE	F	LF00AH18	32"	32"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 34.9mm THK	F01
FLANGE	F	LF00AH19	34"	34"	FLANGE A105 WN RF CL600 (ASME B16.47-A) 37.0mm THK	F01
FLG BLIND	FB	LFB0AH00	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5)	F01
FLG BLIND	FB1	LFB0AK00	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5)	F01
FLG BLIND	FB1	LFB0AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5)	F01
FLG BLIND	FB	LFB1AH00	26"	34"	FLANGE A105 BLIND RF CL600 (ASME B16.47-A)	F01
FLG JACK	FJ	LFJ0AH00	3"	3"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	F01
FLG JACK	FJ	LFJ0AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG JACK	FJ	LFJ0AH07	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F01
FLG JACK	FJ	LFJ0AH14	10"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH60	F01
FLG JACK	FJ	LFJ0AH28	26"	26"	FLANGE A105 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 28.6mm THK	F01
FLG JACK	FJ	LFJ0AH29	28"	28"	FLANGE A105 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 30.7mm THK	F01
FLG JACK	FJ	LFJ0AH30	30"	30"	FLANGE A105 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 32.8mm THK	F01
FLG JACK	FJ	LFJ0AH31	32"	32"	FLANGE A105 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 34.9mm THK	F01
FLG JACK	FJ	LFJ0AH32	34"	34"	FLANGE A105 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 37.0mm THK	F01
FLG RED	RF	LRF0AH00	3"	3"	FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) SCH40	F01
FLG RED	RF	LRF0AH01	2"	2"	FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) SCH80	F01
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F01
GASKET	G	LG00ZH09	26"	36"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F01
GATE VA	VGA	VGAAF001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F01
GATE VA	VGA	VGAAF002	6"	6"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F01
GATE VA	VGA	VGAAF003	8"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F01
GATE VA	VGA	VGAAF004	26"	34"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F01
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F01
GATE VA	VGF	VGFAF001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602	F01
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F01
GLOBE VA	VLA	VLAAF001	2"	4"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F01
GLOBE VA	VLA	VLAAF004	6"	6"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F01
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F01
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F01
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	F01
PIPE	P	LP00A200	26"	26"	PIPE API 5L-B PSL1 SAW BE 100% RT 28.6mm THK	F01
PIPE	P	LP00A300	28"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT 30.7mm THK	F01
PIPE	P	LP00A301	30"	30"	PIPE API 5L-B PSL1 SAW BE 100% RT 32.8mm THK	F01
PIPE	P	LP00A302	32"	32"	PIPE API 5L-B PSL1 SAW BE 100% RT 34.9mm THK	F01
PIPE	P	LP00A303	34"	34"	PIPE API 5L-B PSL1 SAW BE 100% RT 37.0mm THK	F01
PIPE	P	LP00AD00	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40	F01
PIPE	P1	LP00AD17	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH40	F01
PIPE	P	LP00AE00	10"	10"	PIPE API 5L-B PSL1 SMLS BE SCH60	F01
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	F01
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	F01
PIPE	P	LP00AF12	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80	F01
PIPE	P1	LP00AF22	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	F01
PIPE	P1	LP00AF23	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH80	F01
PIPE	P2	LP10AD01	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40 PP COATED	F01
PIPE	P1	LP10AE00	10"	10"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH60	F01
PIPE	P2	LP10AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED	F01
PIPE	P3	LP20AD01	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40 (SUNLIGHT L-200 WRAPPED AT SITE)	F01
PIPE	P2	LP20AE00	10"	10"	PIPE API 5L-B PSL1 SMLS BE SCH60 PP COATED	F01
PIPE	P3	LP20AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P2	LP20AF06	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80 PP COATED	F01
PIPE	P3	LP30AE00	10"	10"	PIPE API 5L-B PSL1 SMLS BE SCH60 (SUNLIGHT L-200 WRAPPED AT SITE)	F01
PIPE	P3	LP30AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F01
PIPE	P3	LP30AF02	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F01
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	F01
PLUG VA	VPL	VPLAF001	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	F01
PLUG VA	VPL	VPLAF005	2"	4"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599	F01
PLUG VA	VPL	VPLAF006	6"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599	F01
RED CON	RC	LRC0A200	26"	26"	REDUCER A234-WPB CON. WELDED BE 28.6mm THK	F01
RED CON	RC	LRC0A300	28"	28"	REDUCER A234-WPB CON. WELDED BE 30.7mm THK	F01
RED CON	RC	LRC0A301	30"	30"	REDUCER A234-WPB CON. WELDED BE 32.8mm THK	F01
RED CON	RC	LRC0A302	32"	32"	REDUCER A234-WPB CON. WELDED BE 34.9mm THK	F01
RED CON	RC	LRC0A303	34"	34"	REDUCER A234-WPB CON. WELDED BE 37.0mm THK	F01
RED CON	RC	LRC0AD00	3"	3"	REDUCER A234-WPB CON. SMLS BE SCH40	F01
RED CON	RC	LRC0AE00	10"	10"	REDUCER A234-WPB CON. SMLS BE SCH60	F01
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	F01
RED CON	RC	LRC0AF06	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH80	F01
RED ECC	RE	LRE0A200	26"	26"	REDUCER A234-WPB ECC. WELDED BE 28.6mm THK	F01
RED ECC	RE	LRE0A300	28"	28"	REDUCER A234-WPB ECC. WELDED BE 30.7mm THK	F01
RED ECC	RE	LRE0A301	30"	30"	REDUCER A234-WPB ECC. WELDED BE 32.8mm THK	F01
RED ECC	RE	LRE0A302	32"	32"	REDUCER A234-WPB ECC. WELDED BE 34.9mm THK	F01
RED ECC	RE	LRE0A303	34"	34"	REDUCER A234-WPB ECC. WELDED BE 37.0mm THK	F01
RED ECC	RE	LRE0AD00	3"	3"	REDUCER A234-WPB ECC. SMLS BE SCH40	F01
RED ECC	RE	LRE0AE00	10"	10"	REDUCER A234-WPB ECC. SMLS BE SCH60	F01
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	F01
RED ECC	RE	LRE0AF06	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH80	F01
SINGLE IBB VA	SFA	LSFAAH00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SLA	LSLAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SLB	LSLBAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SLC	LSLCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SLD	LSLDAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SLE	LSLEAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SPA	LSPAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SPB	LSPBAH00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SINGLE IBB VA	SPC	LSPCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F01
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	F01
SPCL FLANGE	F1	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	F01
SPCL FLANGE	F1	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	F01
SPCL FLANGE	F1	LF10AK00	3"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	F01
SPCL FLANGE	F1	LF10AK01	10"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH60	F01
SPCL FLANGE	F1	LF10AK02	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 28.6mm THK	F01
SPCL FLANGE	F1	LF10AK03	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 30.7mm THK	F01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10AK04	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 32.8mm THK	F01
SPCL FLANGE	F1	LF10AK05	32"	32"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 34.9mm THK	F01
SPCL FLANGE	F1	LF10AK06	34"	34"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 37.0mm THK	F01
SPCL FLANGE	F9	LF90AK00	3/4"	1"	FLANGE A105 SW RF CL900 (ASME B16.5) SCH80	F01
SPCL FLG JACK	FJ1	LFJ0AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	F01
SPCL FLG JACK	FJ1	LFJ1AK00	3"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40	F01
SPCL FLG JACK	FJ1	LFJ1AK01	10"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F01
SPCL FLG JACK	FJ1	LFJ1AK02	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F01
SPCL GASKET	G1	LG00ZK00	26"	34"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F01
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F01
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F01
SPCL GASKET	G9	LG90ZK00	3/4"	1"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL900 (ASME B16.5) OR-3.2 mm THICK	F01
SPE BLIND	FSB	LFSBAH00	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48)	F01
SPE BLIND	FSB	LFSBAH01	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48)	F01
SPE BLIND	FSB	LFSBAH14	26"	34"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.47-A)	F01
SWG CON B-P	RCB	LRCBAD00	3"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	F01
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	F01
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	F01
SWG ECC B-P	REB	LREBAD00	3"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	F01
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	F01
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	F01
TEE	TE	LTE0A200	26"	26"	TEE A234-WPB EQUAL WELDED BE 28.6mm THK	F01
TEE	TE	LTE0A300	28"	28"	TEE A234-WPB EQUAL WELDED BE 30.7mm THK	F01
TEE	TE	LTE0A301	30"	30"	TEE A234-WPB EQUAL WELDED BE 32.8mm THK	F01
TEE	TE	LTE0A302	32"	32"	TEE A234-WPB EQUAL WELDED BE 34.9mm THK	F01
TEE	TE	LTE0A303	34"	34"	TEE A234-WPB EQUAL WELDED BE 37.0mm THK	F01
TEE	TE	LTE0AD00	3"	3"	TEE A234-WPB EQUAL SMLS BE SCH40	F01
TEE	TE	LTE0AE00	10"	10"	TEE A234-WPB EQUAL SMLS BE SCH60	F01
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	F01
TEE	TE	LTE0AF06	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH80	F01
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	F01
TEE RED	TR	LTR0A200	26"	26"	TEE A234-WPB REDUCING WELDED BE 28.6mm THK	F01
TEE RED	TR	LTR0A300	28"	28"	TEE A234-WPB REDUCING WELDED BE 30.7mm THK	F01
TEE RED	TR	LTR0A301	30"	30"	TEE A234-WPB REDUCING WELDED BE 32.8mm THK	F01
TEE RED	TR	LTR0A302	32"	32"	TEE A234-WPB REDUCING WELDED BE 34.9mm THK	F01
TEE RED	TR	LTR0A303	34"	34"	TEE A234-WPB REDUCING WELDED BE 37.0mm THK	F01
TEE RED	TR	LTR0AD00	3"	3"	TEE A234-WPB REDUCING SMLS BE SCH40	F01
TEE RED	TR	LTR0AE00	10"	10"	TEE A234-WPB REDUCING SMLS BE SCH60	F01
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	F01
TEE RED	TR	LTR0AF06	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH80	F01
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	F01
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	F01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAD00	3"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	F01
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	F01
BALL VA	VBF	VBFAF004	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VBF	VBFAF005	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VBF	VBFAF006	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB3	VBFAF022	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB3	VBFAF023	6"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VBF	VBFAK002	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	F03
BALL VA	VB3	VBFAK007	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) ***TUNGSTEN CARBIDE COATED BALL*** W/METAL SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE)BS 5351 GRAPHITE SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB9	VBFAKX02	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP F-SAFE BS 5351 AED VITON SEAL/FLOATING	F03
BALL VA	VBR	VBRAF004	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VBR	VBRAF005	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VBR	VBRAF006	26"	30"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB4	VBRAF017	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB4	VBRAF018	6"	24"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F03
BALL VA	VB8	VBRAFS04	2"	2"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS/EXT STEML=100MM	F03
BOLTS	B	LB00A000	1/2"	46"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	F03
CAP	C	LC00A201	26"	26"	***CAP A860 WPHY-60 SMLS BE 24.0mm THK***	F03
CAP	C	LC00A207	28"	28"	CAP A860 WPHY-60 SMLS BE 25.6mm THK	F03
CAP	C	LC00A208	30"	30"	CAP A860 WPHY-60 SMLS BE 27.2mm THK	F03
CAP	C	LC00A209	32"	32"	CAP A860 WPHY-60 SMLS BE 28.8mm THK	F03
CAP	C	LC00A331	34"	34"	CAP A860 WPHY-60 SMLS BE 30.4mm THK	F03
CAP	C	LC00A332	36"	36"	CAP A860 WPHY-60 SMLS BE 32.0mm THK	F03
CAP	C	LC00A333	38"	38"	CAP A860 WPHY-60 SMLS BE 33.6mm THK	F03
CAP	C	LC00A334	40"	40"	CAP A860 WPHY-60 SMLS BE 35.2mm THK	F03
CAP	C	LC00A335	42"	42"	CAP A860 WPHY-60 SMLS BE 36.8mm THK	F03
CAP	C	LC00A336	44"	44"	CAP A860 WPHY-60 SMLS BE 38.4mm THK	F03
CAP	C	LC00A433	46"	46"	CAP A860 WPHY-60 SMLS BE 40.0mm THK	F03
CAP	C	LC00AF00	3"	24"	CAP A234-WPB SMLS BE SCH80	F03
CAP	C	LC00AK00	2"	2"	CAP A234-WPB SMLS BE SCH160	F03
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	F03
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	F03
CHECK VA	VCA	VCAAF001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 API 594	F03
CHECK VA	VCA	VCAAF002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 API 594	F03
CHECK VA	VCA	VCAAF007	26"	42"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES	F03
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	F03
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	F03
DOUBLE IBB VA	DFA	LDFAAH00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DLA	LDLAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DLB	LDLBAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DLC	LDLCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DLD	LDLDAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DLE	LDLEAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DPA	LDPAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DPB	LDPBAH00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
DOUBLE IBB VA	DPC	LDPCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F03
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	F03
ELBOW	E4	LE40A207	26"	26"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 24.0mm THK	F03
ELBOW	E4	LE40A208	28"	28"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 25.6mm THK	F03
ELBOW	E4	LE40A209	30"	30"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 27.2mm THK	F03
ELBOW	E4	LE40A210	32"	32"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 28.8mm THK	F03
ELBOW	E4	LE40A331	34"	34"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 30.4mm THK	F03
ELBOW	E4	LE40A332	36"	36"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 32.0mm THK	F03
ELBOW	E4	LE40A333	38"	38"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 33.6mm THK	F03
ELBOW	E4	LE40A334	40"	40"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 35.2mm THK	F03
ELBOW	E4	LE40A335	42"	42"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 36.8mm THK	F03
ELBOW	E4	LE40A336	44"	44"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 38.4mm THK	F03
ELBOW	E4	LE40A435	46"	46"	ELBOW A860 WPHY-60 DEG-45 WELDED BE 40.0mm THK	F03
ELBOW	E4	LE40AF00	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	F03
ELBOW	E4	LE40AF06	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH80	F03
ELBOW	E4	LE40AK00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH160	F03
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	F03
ELBOW	E9	LE90A206	26"	26"	ELBOW A860 WPHY-60 90-LR WELDED BE 24.0mm THK	F03
ELBOW	E9	LE90A207	28"	28"	ELBOW A860 WPHY-60 90-LR WELDED BE 25.6mm THK	F03
ELBOW	E9	LE90A208	30"	30"	ELBOW A860 WPHY-60 90-LR WELDED BE 27.2mm THK	F03
ELBOW	E9	LE90A209	32"	32"	ELBOW A860 WPHY-60 90-LR WELDED BE 28.8mm THK	F03
ELBOW	E9	LE90A331	34"	34"	ELBOW A860 WPHY-60 90-LR WELDED BE 30.4mm THK	F03
ELBOW	E9	LE90A332	36"	36"	ELBOW A860 WPHY-60 90-LR WELDED BE 32.0mm THK	F03
ELBOW	E9	LE90A333	38"	38"	ELBOW A860 WPHY-60 90-LR WELDED BE 33.6mm THK	F03
ELBOW	E9	LE90A334	40"	40"	ELBOW A860 WPHY-60 90-LR WELDED BE 35.2mm THK	F03
ELBOW	E9	LE90A335	42"	42"	ELBOW A860 WPHY-60 90-LR WELDED BE 36.8mm THK	F03
ELBOW	E9	LE90A336	44"	44"	ELBOW A860 WPHY-60 90-LR WELDED BE 38.4mm THK	F03
ELBOW	E9	LE90A435	46"	46"	ELBOW A860 WPHY-60 90-LR WELDED BE 40.0mm THK	F03
ELBOW	E9	LE90AF00	3"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH80	F03
ELBOW	E9	LE90AF06	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH80	F03
ELBOW	E9	LE90AK00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH160	F03
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	F03
FLANGE	F	LF00AH01	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	F03
FLANGE	F	LF00AH03	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) SCH160	F03
FLANGE	F	LF00AH20	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH160	F03
FLANGE	F	LF00AH88	26"	26"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 24.0mm THK	F03
FLANGE	F	LF00AH89	28"	28"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 25.6mm THK	F03
FLANGE	F	LF00AH90	30"	30"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 27.2mm THK	F03
FLANGE	F	LF00AH91	32"	32"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 28.8mm THK	F03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AH92	34"	34"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 30.4mm THK	F03
FLANGE	F	LF00AH93	36"	36"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 32.0mm THK	F03
FLANGE	F	LF00AH94	38"	38"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 33.6mm THK	F03
FLANGE	F	LF00AH95	40"	40"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 35.2mm THK	F03
FLANGE	F	LF00AH96	42"	42"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 36.8mm THK	F03
FLANGE	F	LF00AH97	44"	44"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 38.4mm THK	F03
FLANGE	F	LF00AH98	46"	46"	FLANGE A694-F60 WN RF CL600 (ASME B16.47-A) 40.0mm THK	F03
FLG BLIND	FB	LFB0AH00	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5)	F03
FLG BLIND	FB1	LFB0AK00	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5)	F03
FLG BLIND	FB1	LFB0AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5)	F03
FLG JACK	FJ	LFJ0AH01	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F03
FLG JACK	FJ	LFJ0AH02	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH160	F03
FLG JACK	FJ	LFJ0AH22	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH160	F03
FLG RED	RF	LRF0AH01	3"	6"	***FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) SCH80 x SCH80***	F03
FLG RED	RF	LRF0AH02	2"	2"	FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) SCH160	F03
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F03
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F03
GATE VA	VGA	VGAAF001	2"	4"	GATE VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F03
GATE VA	VGA	VGAAF002	6"	6"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F03
GATE VA	VGA	VGAAF003	8"	24"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F03
GATE VA	VGA	VGAAF004	26"	34"	GATE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F03
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F03
GATE VA	VGF	VGFAF001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602	F03
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F03
GLOBE VA	VLA	VLAAF001	2"	4"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F03
GLOBE VA	VLA	VLAAF004	6"	8"	GLOBE VALVE A216-WCB FLGD-RF 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F03
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F03
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F03
NIPPLE TOE	NTO	LNTOAN02	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	F03
PIPE	P	LP00A201	26"	26"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 24.0mm THK	F03
PIPE	P	LP00A202	28"	28"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 25.6mm THK	F03
PIPE	P	LP00A203	30"	30"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 27.2mm THK	F03
PIPE	P	LP00A204	32"	32"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 28.8mm THK	F03
PIPE	P	LP00A304	34"	34"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 30.4mm THK	F03
PIPE	P	LP00A305	36"	36"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 32.0mm THK	F03
PIPE	P	LP00A306	38"	38"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 33.6mm THK	F03
PIPE	P	LP00A307	40"	40"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 35.2mm THK	F03
PIPE	P	LP00A308	42"	42"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 36.8mm THK	F03
PIPE	P	LP00A309	44"	44"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 38.4mm THK	F03
PIPE	P	LP00A400	46"	46"	PIPE API 5L-X60 PSL1 SAW BE 100% RT 40.0mm THK	F03
PIPE	P	LP00AF01	3"	16"	PIPE API 5L-B PSL1 SMLS BE SCH80	F03
PIPE	P	LP00AF12	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80	F03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P1	LP00AF22	3"	16"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	F03
PIPE	P1	LP00AF23	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH80	F03
PIPE	P	LP00AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160	F03
PIPE	P	LP00AK03	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH160	F03
PIPE	P1	LP00AK18	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH160	F03
PIPE	P2	LP10AF03	3"	16"	PIPE API 5L-X60 PSL1 SMLS BE SCH80 PP COATED	F03
PIPE	P2	LP10AF04	18"	24"	PIPE API 5L-X60 PSL1 SAW BE 100% RT SCH80 PP COATED	F03
PIPE	P2	LP10AK00	2"	2"	PIPE API 5L-X60 PSL1 SMLS BE SCH160 PP COATED	F03
PIPE	P3	LP20AF03	3"	16"	PIPE API 5L-X60 PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F03
PIPE	P3	LP20AF04	18"	24"	PIPE API 5L-X60 PSL1 SAW BE 100% RT SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F03
PIPE	P3	LP20AK00	2"	2"	PIPE API 5L-X60 PSL1 SMLS BE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	F03
PIPE	P3	LP30AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	F03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	F03
PLUG VA	VPL	VPLAF002	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	F03
PLUG VA	VPL	VPLAF005	2"	4"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599	F03
PLUG VA	VPL	VPLAF006	6"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599	F03
RED CON	RC	LRC0A207	26"	26"	REDUCER A860 WPHY-60 CON. WELDED BE 24.0mm THK	F03
RED CON	RC	LRC0A208	28"	28"	REDUCER A860 WPHY-60 CON. WELDED BE 25.6mm THK	F03
RED CON	RC	LRC0A209	30"	30"	REDUCER A860 WPHY-60 CON. WELDED BE 27.2mm THK	F03
RED CON	RC	LRC0A210	32"	32"	REDUCER A860 WPHY-60 CON. WELDED BE 28.8mm THK	F03
RED CON	RC	LRC0A331	34"	34"	REDUCER A860 WPHY-60 CON. WELDED BE 30.4mm THK	F03
RED CON	RC	LRC0A332	36"	36"	REDUCER A860 WPHY-60 CON. WELDED BE 32.0mm THK	F03
RED CON	RC	LRC0A333	38"	38"	REDUCER A860 WPHY-60 CON. WELDED BE 33.6mm THK	F03
RED CON	RC	LRC0A334	40"	40"	REDUCER A860 WPHY-60 CON. WELDED BE 35.2mm THK	F03
RED CON	RC	LRC0A335	42"	42"	REDUCER A860 WPHY-60 CON. WELDED BE 36.8mm THK	F03
RED CON	RC	LRC0A336	44"	44"	REDUCER A860 WPHY-60 CON. WELDED BE 38.4mm THK	F03
RED CON	RC	LRC0A435	46"	46"	REDUCER A860 WPHY-60 CON. WELDED BE 40.0mm THK	F03
RED CON	RC	LRC0AF00	3"	16"	REDUCER A234-WPB CON. SMLS BE SCH80	F03
RED CON	RC	LRC0AF06	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH80	F03
RED CON	RC	LRC0AK00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH160	F03
RED ECC	RE	LRE0A207	26"	26"	REDUCER A860 WPHY-60 ECC. WELDED BE 24.0mm THK	F03
RED ECC	RE	LRE0A208	28"	28"	REDUCER A860 WPHY-60 ECC. WELDED BE 25.6mm THK	F03
RED ECC	RE	LRE0A209	30"	30"	REDUCER A860 WPHY-60 ECC. WELDED BE 27.2mm THK	F03
RED ECC	RE	LRE0A210	32"	32"	REDUCER A860 WPHY-60 ECC. WELDED BE 28.8mm THK	F03
RED ECC	RE	LRE0A331	34"	34"	REDUCER A860 WPHY-60 ECC. WELDED BE 30.4mm THK	F03
RED ECC	RE	LRE0A332	36"	36"	REDUCER A860 WPHY-60 ECC. WELDED BE 32.0mm THK	F03
RED ECC	RE	LRE0A333	38"	38"	REDUCER A860 WPHY-60 ECC. WELDED BE 33.6mm THK	F03
RED ECC	RE	LRE0A334	40"	40"	REDUCER A860 WPHY-60 ECC. WELDED BE 35.2mm THK	F03
RED ECC	RE	LRE0A335	42"	42"	REDUCER A860 WPHY-60 ECC. WELDED BE 36.8mm THK	F03
RED ECC	RE	LRE0A336	44"	44"	REDUCER A860 WPHY-60 ECC. WELDED BE 38.4mm THK	F03
RED ECC	RE	LRE0A435	46"	46"	REDUCER A860 WPHY-60 ECC. WELDED BE 40.0mm THK	F03
RED ECC	RE	LRE0AF00	3"	16"	REDUCER A234-WPB ECC. SMLS BE SCH80	F03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AF06	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH80	F03
RED ECC	RE	LRE0AK00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH160	F03
SINGLE IBB VA	SFA	LSFAAH00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SLA	LSLAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SLB	LSLBAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SLC	LSLCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SLD	LSLDAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SLE	LSLEAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SPA	LSPAAH00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SPB	LSPBAH00	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SINGLE IBB VA	SPC	LSPCAH00	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F03
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	F03
SPCL FLANGE	F1	LF00AK00	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	F03
SPCL FLANGE	F1	LF00AK01	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH160	F03
SPCL FLANGE	F1	LF00AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH160	F03
SPCL FLANGE	F1	LF10AK70	26"	26"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 24.0mm THK	F03
SPCL FLANGE	F1	LF10AK71	28"	28"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 25.6mm THK	F03
SPCL FLANGE	F1	LF10AK72	30"	30"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 27.2mm THK	F03
SPCL FLANGE	F1	LF10AK73	32"	32"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 28.8mm THK	F03
SPCL FLANGE	F1	LF10AK74	34"	34"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 30.4mm THK	F03
SPCL FLANGE	F1	LF10AK75	36"	36"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 32.0mm THK	F03
SPCL FLANGE	F1	LF10AK76	38"	38"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 33.6mm THK	F03
SPCL FLANGE	F1	LF10AK77	40"	40"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 35.2mm THK	F03
SPCL FLANGE	F1	LF10AK78	42"	42"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 36.8mm THK	F03
SPCL FLANGE	F1	LF10AK79	44"	44"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 38.4mm THK	F03
SPCL FLANGE	F1	LF10AK80	46"	46"	FLANGE A694-F60 WN RTJ CL900 (ASME B16.47-A) 40.0mm THK	F03
SPCL FLG JACK	FJ1	LFJ0AK04	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160	F03
SPCL FLG JACK	FJ1	LFJ0AL06	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	F03
SPCL FLG JACK	FJ1	LFJ1AK02	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F03
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F03
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F03
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F03
SPE BLIND	FSB	LFSBAH00	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48)	F03
SPE BLIND	FSB	LFSBAH01	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48)	F03
SWG CON B-P	RCB	LRCBAF00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	F03
SWG CON B-P	RCB	LRCBAK00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH160	F03
SWG CON PE	RCP	LRCPAK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH160	F03
SWG ECC B-P	REB	LREBAF00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	F03
SWG ECC B-P	REB	LREBAK00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH160	F03
SWG ECC PE	REP	LREPAK00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH160	F03
TEE	TE	LTE0A207	26"	26"	TEE A860 WPHY-60 EQUAL WELDED BE 24.0mm THK	F03
TEE	TE	LTE0A208	28"	28"	TEE A860 WPHY-60 EQUAL WELDED BE 25.6mm THK	F03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0A209	30"	30"	TEE A860 WPHY-60 EQUAL WELDED BE 27.2mm THK	F03
TEE	TE	LTE0A210	32"	32"	TEE A860 WPHY-60 EQUAL WELDED BE 28.8mm THK	F03
TEE	TE	LTE0A331	34"	34"	TEE A860 WPHY-60 EQUAL WELDED BE 30.4mm THK	F03
TEE	TE	LTE0A332	36"	36"	TEE A860 WPHY-60 EQUAL WELDED BE 32.0mm THK	F03
TEE	TE	LTE0A333	38"	38"	TEE A860 WPHY-60 EQUAL WELDED BE 33.6mm THK	F03
TEE	TE	LTE0A334	40"	40"	TEE A860 WPHY-60 EQUAL WELDED BE 35.2mm THK	F03
TEE	TE	LTE0A335	42"	42"	TEE A860 WPHY-60 EQUAL WELDED BE 36.8mm THK	F03
TEE	TE	LTE0A336	44"	44"	TEE A860 WPHY-60 EQUAL WELDED BE 38.4mm THK	F03
TEE	TE	LTE0A435	46"	46"	TEE A860 WPHY-60 EQUAL WELDED BE 40.0mm THK	F03
TEE	TE	LTE0AF00	3"	16"	TEE A234-WPB EQUAL SMLS BE SCH80	F03
TEE	TE	LTE0AF06	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH80	F03
TEE	TE	LTE0AK00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH160	F03
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	F03
TEE RED	TR	LTR0A207	26"	26"	TEE A860 WPHY-60 REDUCING WELDED BE 24.0mm THK	F03
TEE RED	TR	LTR0A208	28"	28"	TEE A860 WPHY-60 REDUCING WELDED BE 25.6mm THK	F03
TEE RED	TR	LTR0A209	30"	30"	TEE A860 WPHY-60 REDUCING WELDED BE 27.2mm THK	F03
TEE RED	TR	LTR0A210	32"	32"	TEE A860 WPHY-60 REDUCING WELDED BE 28.8mm THK	F03
TEE RED	TR	LTR0A331	34"	34"	TEE A860 WPHY-60 REDUCING WELDED BE 30.4mm THK	F03
TEE RED	TR	LTR0A332	36"	36"	TEE A860 WPHY-60 REDUCING WELDED BE 32.0mm THK	F03
TEE RED	TR	LTR0A333	38"	38"	TEE A860 WPHY-60 REDUCING WELDED BE 33.6mm THK	F03
TEE RED	TR	LTR0A334	40"	40"	TEE A860 WPHY-60 REDUCING WELDED BE 35.2mm THK	F03
TEE RED	TR	LTR0A335	42"	42"	TEE A860 WPHY-60 REDUCING WELDED BE 36.8mm THK	F03
TEE RED	TR	LTR0A336	44"	44"	TEE A860 WPHY-60 REDUCING WELDED BE 38.4mm THK	F03
TEE RED	TR	LTR0A436	46"	46"	TEE A860 WPHY-60 REDUCING WELDED BE 40.0mm THK	F03
TEE RED	TR	LTR0AF00	3"	16"	TEE A234-WPB REDUCING SMLS BE SCH80	F03
TEE RED	TR	LTR0AF06	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH80	F03
TEE RED	TR	LTR0AK00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH160	F03
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	F03
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	F03
WELDOLET	TWO	LTWOAF00	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	F03
WELDOLET	TWO	LTWOAK00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160	F03
BALL VA	VBF	VBFAF007	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03N
BALL VA	VBF	VBFAF008	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03N
BALL VA	VB1	VBFAF024	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03N
BALL VA	VB1	VBFAF025	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03N
BALL VA	VBF	VBFAK003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F03N
BALL VA	VBR	VBRAF007	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03N
BALL VA	VBR	VBRAF008	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03N
BALL VA	VB2	VBRAF024	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03N
BALL VA	VB2	VBRAF025	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03N
BOLTS	B	LB00A001	1/2"	26"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	F03N
CAP	C	LC00A338	26"	26"	CAP A234-WPB SMLS BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00AF01	3"	24"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
CAP	C	LC00AK01	2"	2"	CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
CAP	C	LC00AQ01	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
CAP THD	CT	LCT0AQ01	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	F03N
CHECK VA	VCA	VCAAF003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F03N
CHECK VA	VCA	VCAAF004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F03N
CHECK VA	VCA	VCAAF009	26"	26"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 NACE API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	F03N
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	F03N
CPLG FULL	CF	LCF0AQ01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
DOUBLE IBB VA	DFA	LDFAAH01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DLA	LDLAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DLB	LDLBAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DLC	LDLCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DLD	LDLDAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DLE	LDLEAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DPA	LDPAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DPB	LDPBAH01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
DOUBLE IBB VA	DPC	LDPCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
ELBOLET	TEW	LTEWAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
ELBOW	E4	LE40A338	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
ELBOW	E4	LE40AF01	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
ELBOW	E4	LE40AF07	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
ELBOW	E4	LE40AK01	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
ELBOW	E4	LE40AQ01	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
ELBOW	E9	LE90A338	26"	26"	ELBOW A234-WPB 90-LR WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
ELBOW	E9	LE90AF01	3"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
ELBOW	E9	LE90AF07	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
ELBOW	E9	LE90AK01	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
ELBOW	E9	LE90AQ01	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
FLANGE	F	LF00AH04	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	F03N
FLANGE	F	LF00AH05	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	F03N
FLANGE	F	LF00AH32	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	F03N
FLANGE	F	LF00AH99	26"	26"	FLANGE A105 WN RF CL600 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
FLG BLIND	FB	LFB0AH01	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0003)	F03N
FLG BLIND	FB1	LFB0AK01	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0003)	F03N
FLG BLIND	FB1	LFB1AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0003)	F03N
FLG JACK	FJ	LFJ0AH03	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0003)	F03N
FLG JACK	FJ	LFJ0AH04	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	F03N
FLG JACK	FJ	LFJ0AH24	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	F03N
FLG RED	RF	LRF0AH03	3"	6"	FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	F03N
FLG RED	RF	LRF0AH04	2"	2"	FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	F03N
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F03N
GATE VA	VGA	VGAAF005	2"	6"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 NACE API 600 (RP-1718-999-6300-0004)	F03N
GATE VA	VGA	VGAAF006	8"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	F03N
GATE VA	VGA	VGAAF010	26"	26"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	F03N
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	F03N
GATE VA	VGF	VGFAF002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 NACE API 602 (RP-1718-999-6300-0004)	F03N
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	F03N
GLOBE VA	VLA	VLAAF002	2"	4"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 NACE BS 1873 (RP-1718-999-6300-0004)	F03N
GLOBE VA	VLA	VLAAF005	6"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	F03N
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352RP-1718-999-6300-004	F03N
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F03N
NEEDLE VA	VNE	VNEAK002	3/4"	1"	NEEDLE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602RP-1718-999-6300-004	F03N
NIPPLE TOE	NTO	LNTOAN01	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00A368	26"	26"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 30.6mm THK (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00AF02	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
PIPE	P1	LP00AF03	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00AF06	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00AF13	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH80 (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00AK01	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	F03N
PIPE	P	LP00AK04	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
PIPE	P2	LP10AF00	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED NACE(RP-1718-999-6300-0003)	F03N
PIPE	P1	LP10AF10	4"	16"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0003)	F03N
PIPE	P1	LP10AF11	18"	24"	PIPE API 5L-B PSL2 SAW BE PE COATED 100% RT SCH80 NACE (RP-1718-999-6300-0003)	F03N
PIPE	P1	LP10AK03	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH160 NACE (RP-1718-999-6300-0003)	F03N
PIPE	P2	LP20AF07	4"	16"	PIPE API 5L-B PSL2 SMLS BE SCH80 PP COATED NACE(RP-1718-999-6300-0003)	F03N
PIPE	P2	LP20AF08	18"	24"	PIPE API 5L-B PSL2 SAW BE SCH80 PP COATED NACE(RP-1718-999-6300-0003)	F03N
PIPE	P2	LP20AK03	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH160 PP COATED NACE(RP-1718-999-6300-0003)	F03N
PIPE	P3	LP30AF03	3"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	F03N
PIPE	P3	LP30AF04	4"	16"	PIPE API 5L-B PSL2 SMLS BE PE COATED SCH80 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	F03N
PIPE	P3	LP30AF05	18"	24"	PIPE API 5L-B PSL2 SAW BE PE COATED 100% RT SCH80 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	F03N
PIPE	P3	LP30AK03	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	F03N
PIPE	P3	LP30AK04	2"	2"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH160 NACE (RP-1718-999-6300-0003) SUNLIGHT L-200 WRAPPED AT SITE	F03N
PLUG	PLG	LPLGAW01	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	F03N
PLUG VA	VPL	VPLAF004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	F03N
PLUG VA	VPL	VPLAF007	2"	4"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F03N
PLUG VA	VPL	VPLAF008	6"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F03N
RED CON	RC	LRC0A338	26"	26"	REDUCER A234-WPB CON. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
RED CON	RC	LRC0AF01	3"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
RED CON	RC	LRC0AF07	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
RED CON	RC	LRC0AK01	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
RED ECC	RE	LRE0A338	26"	26"	REDUCER A234-WPB ECC. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
RED ECC	RE	LRE0AF01	3"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AF07	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
RED ECC	RE	LRE0AK01	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
SINGLE IBB VA	SFA	LSFAAH01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SLA	LSLAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SLB	LSLBAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SLC	LSLCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SLD	LSLDAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SLE	LSLEAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SPA	LSPAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SPB	LSPBAH01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SINGLE IBB VA	SPC	LSPCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03N
SOCKOLET	TSO	LTSOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
SPCL FLANGE	F1	LF00AK02	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	F03N
SPCL FLANGE	F1	LF00AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	F03N
SPCL FLANGE	F1	LF10AK19	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0003)	F03N
SPCL FLANGE	F1	LF10AK83	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
SPCL FLG JACK	FJ1	LFJ0AK06	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	F03N
SPCL FLG JACK	FJ1	LFJ0AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	F03N
SPCL FLG JACK	FJ1	LFJ1AK04	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0003)	F03N
SPCL GASKET	G1	LG00ZK00	26"	26"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F03N
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F03N
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F03N
SPE BLIND	FSB	LFSBAH02	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0003)	F03N
SPE BLIND	FSB	LFSBAH03	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0003)	F03N
SWG CON B-P	RCB	LRCBAF01	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	F03N
SWG CON B-P	RCB	LRCBAK01	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	F03N
SWG CON PE	RCP	LRCPAK01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	F03N
SWG CON P-T	RC2	LRC2AN01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0003)	F03N
SWG ECC B-P	REB	LREBAF01	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0003)	F03N
SWG ECC B-P	REB	LREBAK01	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	F03N
SWG ECC PE	REP	LREPAK01	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	F03N
TEE	TE	LTE0A338	26"	26"	TEE A234-WPB EQUAL WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
TEE	TE	LTE0AF01	3"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
TEE	TE	LTE0AF07	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
TEE	TE	LTE0AK01	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
TEE	TE	LTE0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
TEE RED	TR	LTR0A338	26"	26"	TEE A234-WPB REDUCING WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0003)	F03N
TEE RED	TR	LTR0AF01	3"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
TEE RED	TR	LTR0AF07	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
TEE RED	TR	LTR0AK01	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
TEE RED	TR	LTR0AQ01	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	F03N
THREADOLET	TTO	LTTOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	F03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAF01	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0003)	F03N
WELDOLET	TWO	LTWOAK01	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0003)	F03N
BALL VA	VBF	VBFAF007	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VBF	VBFAF008	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB1	VBFAF024	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03S
BALL VA	VB1	VBFAF025	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03S
BALL VA	VB3	VBFAF026	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB3	VBFAF027	6"	12"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VBF	VBFAK003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB3	VBFAK010	3/4"	3/4"	BALL VALVE A105 PE (NIPPLE LENGTH=100)***TUNGSTEN CARBIDE COATED BALL*** W/METAL SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE)BS 5351 GRAPHITE SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB9	VBFAKX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/XXS FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VBR	VBRAF007	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VBR	VBRAF008	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AFLAS SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB2	VBRAF024	2"	4"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03S
BALL VA	VB2	VBRAF025	6"	24"	BALL VALVE A216-WCB FLGD-RF A105 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F03S
BALL VA	VB4	VBRAF026	2"	4"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BALL VA	VB4	VBRAF027	6"	12"	BALL VALVE A216-WCB FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	F03S
BOLTS	B	LB00A001	1/2"	30"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	F03S
CAP	C	LC00A310	26"	26"	CAP A234-WPB SMLS BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
CAP	C	LC00A311	28"	28"	CAP A234-WPB SMLS BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
CAP	C	LC00A312	30"	30"	CAP A234-WPB SMLS BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
CAP	C	LC00AF02	3"	24"	CAP A234-WPB SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
CAP	C	LC00AK02	2"	2"	CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
CAP	C	LC00AQ02	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
CAP THD	CT	LCT0AQ02	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	F03S
CHECK VA	VCA	VCAAF003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F03S
CHECK VA	VCA	VCAAF004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F03S
CHECK VA	VCA	VCAAF009	26"	30"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL600 NACE API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	F03S
CHECK VA	VCH	VCHAF003	3"	3"	CHECK VALVE A216-WCB FLGD-RF 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL600 NACE API 6D (RP-1718-999-6300-0004)	F03S
CHECK VA	VCH	VCHAK003	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	F03S
CPLG FULL	CF	LCF0AQ02	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
DOUBLE IBB VA	DFA	LDFAAH01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DLA	LDLAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DLB	LDLBAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DLC	LDLCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DLD	LDLDAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DLE	LDLEAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DPA	LDPAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DPB	LDPBAH01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
DOUBLE IBB VA	DPC	LDPCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
ELBOLET	TEW	LTEWAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40A310	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40A311	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40A312	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40AF02	3"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40AF08	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40AK02	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
ELBOW	E4	LE40AQ02	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90A310	26"	26"	ELBOW A234-WPB 90-LR WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90A311	28"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90A312	30"	30"	ELBOW A234-WPB 90-LR WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90AF02	3"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90AF08	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90AK02	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
ELBOW	E9	LE90AQ02	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
ELBOW BEND	EB9	LEB9AG00	10"	10"	BEND API 5L-B PSL2 SMLS BE NACE 90 DEG, R=3D SCH100 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	F03S
FLANGE	F	LF00AH06	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	F03S
FLANGE	F	LF00AH07	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F03S
FLANGE	F	LF00AH34	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F03S
FLANGE	F	LF00AH35	26"	26"	FLANGE A105 WN RF CL600 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
FLANGE	F	LF00AH36	28"	28"	FLANGE A105 WN RF CL600 (ASME B16.47-A) NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
FLANGE	F	LF00AH37	30"	30"	FLANGE A105 WN RF CL600 (ASME B16.47-A) NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
FLG BLIND	FB	LFB0AH02	1/2"	24"	FLANGE A105 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F03S
FLG BLIND	FB1	LFB0AK02	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F03S
FLG BLIND	FB1	LFB0AL01	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F03S
FLG JACK	FJ	LFJ0AH05	3"	24"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0002)	F03S
FLG JACK	FJ	LFJ0AH06	1/2"	1 1/2"	FLANGE A105 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F03S
FLG JACK	FJ	LFJ0AH15	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F03S
FLG RED	RF	LRF0AH07	3"	3"	***FLANGE A105 WN-REDUCING RF CL600 (ASME B16.5) NACE SCH80 x SCH160 (RP-1718-999-6300-0002)***	F03S
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F03S
GASKET	G	LG00ZH09	26"	30"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F03S
GATE VA	VGA	VGAAF005	2"	6"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 NACE API 600 (RP-1718-999-6300-0004)	F03S
GATE VA	VGA	VGAAF006	8"	24"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	F03S
GATE VA	VGA	VGAAF010	26"	30"	GATE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	F03S
GATE VA	VGA	VGAAK002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	F03S
GATE VA	VGF	VGFAF002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 NACE API 602 (RP-1718-999-6300-0004)	F03S
GATE VA	VGX	VGXAK002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	F03S
GLOBE VA	VLA	VLAAF002	2"	4"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 NACE BS 1873 (RP-1718-999-6300-0004)	F03S
GLOBE VA	VLA	VLAAF005	6"	6"	GLOBE VALVE A216-WCB FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	F03S
GLOBE VA	VLA	VLAAK003	1/2"	1 1/2"	GLOBE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	F03S
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F03S
NEEDLE VA	VNE	VNEAK002	3/4"	1"	NEEDLE VALVE A105 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	F03S
NIPPLE TOE	NTO	LNTOAN06	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00A310	26"	26"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 30.6mm THK (RP-1718-999-6300-0002)	F03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00A311	28"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 32.7mm THK (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00A312	30"	30"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 34.8mm THK (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00AF04	3"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00AF14	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00AF15	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH80 (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00AK02	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F03S
PIPE	P	LP00AK10	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
PIPE	P5	LP50AG00	10"	10"	PIPE API 5L-B PSL2 SMLS BE NACE SCH100 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	F03S
PLUG	PLG	LPLGAW02	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	F03S
PLUG VA	VPL	VPLAF004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	F03S
PLUG VA	VPL	VPLAF007	2"	4"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F03S
PLUG VA	VPL	VPLAF008	6"	16"	PLUG VALVE A216-WCB FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F03S
RED CON	RC	LRC0A310	26"	26"	REDUCER A234-WPB CON. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
RED CON	RC	LRC0A311	28"	28"	REDUCER A234-WPB CON. WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
RED CON	RC	LRC0A312	30"	30"	REDUCER A234-WPB CON. WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
RED CON	RC	LRC0AF02	3"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
RED CON	RC	LRC0AF08	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
RED CON	RC	LRC0AK02	2"	2"	REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0A310	26"	26"	REDUCER A234-WPB ECC. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0A311	28"	28"	REDUCER A234-WPB ECC. WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0A312	30"	30"	REDUCER A234-WPB ECC. WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0AF02	3"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0AF08	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
RED ECC	RE	LRE0AK02	2"	2"	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
SINGLE IBB VA	SFA	LSFAAH01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SLA	LSLAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SLB	LSLBAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SLC	LSLCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SLD	LSLDAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SLE	LSLEAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SPA	LSPAAH01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SPB	LSPBAH01	1"	1"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SINGLE IBB VA	SPC	LSPCAH01	2"	2"	BALL VALVE A105 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F03S
SOCKOLET	TSO	LTSOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF00AK03	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF00AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF10AK21	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF10AK22	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF10AK23	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F1	LF10AK24	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
SPCL FLANGE	F9	LF90AH00	10"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) NACE SCH100 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	F03S
SPCL FLG JACK	FJ1	LFJ0AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ0AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F03S
SPCL FLG JACK	FJ1	LFJ1AK06	3"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0002)	F03S
SPCL FLG JACK	FJ9	LFJ9AH00	10"	10"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH100 NACE (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	F03S
SPCL GASKET	G1	LG00ZK00	26"	30"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F03S
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F03S
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F03S
SPE BLIND	FSB	LFSBAH04	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F03S
SPE BLIND	FSB	LFSBAH05	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F03S
SWG CON B-P	RCB	LRCBAF02	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	F03S
SWG CON B-P	RCB	LRCBAK02	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	F03S
SWG CON PE	RCP	LRCPAK02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F03S
SWG CON P-T	RC2	LRC2AN02	3/4"	3/4"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0002)	F03S
SWG ECC B-P	REB	LREBAF02	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	F03S
SWG ECC B-P	REB	LREBAK02	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	F03S
SWG ECC PE	REP	LREPAK02	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0A310	26"	26"	TEE A234-WPB EQUAL WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0A311	28"	28"	TEE A234-WPB EQUAL WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0A312	30"	30"	TEE A234-WPB EQUAL WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0AF02	3"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0AF08	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0AK02	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
TEE	TE	LTE0AQ02	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0A310	26"	26"	TEE A234-WPB REDUCING WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0A311	28"	28"	TEE A234-WPB REDUCING WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0A312	30"	30"	TEE A234-WPB REDUCING WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0AF02	3"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0AF08	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0AK02	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
TEE RED	TR	LTR0AQ02	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F03S
THREADOLET	TTO	LTTOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	F03S
WELDOLET	TWO	LTWOAF02	3"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002) FOR 101 UNIT,AM SERVICE	F03S
WELDOLET	TWO	LTWOAK02	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0002)	F03S
BOLTS	B	LB00A000	1/2"	46"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	F12
CAP	C	LC00A302	32"	32"	CAP A234-WPB SMLS BE 34.9mm THK	F12
CAP	C	LC00A303	34"	34"	CAP A234-WPB SMLS BE 37.0mm THK	F12
CAP	C	LC00A313	30"	30"	CAP A234-WPB SMLS BE 33.3mm THK	F12
CAP	C	LC00A314	36"	36"	CAP A234-WPB SMLS BE 39.0mm THK	F12
CAP	C	LC00A401	38"	38"	CAP A234-WPB SMLS BE 41.1mm THK	F12
CAP	C	LC00A402	40"	40"	CAP A234-WPB SMLS BE 43.2mm THK	F12
CAP	C	LC00A403	42"	42"	CAP A234-WPB SMLS BE 45.3mm THK	F12
CAP	C	LC00A404	44"	44"	CAP A234-WPB SMLS BE 47.4mm THK	F12
CAP	C	LC00A405	46"	46"	CAP A234-WPB SMLS BE 49.4mm THK	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00AD00	3"	3"	CAP A234-WPB SMLS BE SCH40	F12
CAP	C	LC00AE00	10"	10"	CAP A234-WPB SMLS BE SCH60	F12
CAP	C	LC00AF00	2"	2"	CAP A234-WPB SMLS BE SCH80	F12
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	F12
CAP	C	LC00AZ15	26"	26"	CAP A234-WPB SMLS BE 30.18mm THK	F12
CAP	C	LC00AZ16	28"	28"	CAP A234-WPB SMLS BE 31.75mm THK	F12
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	F12
CHECK VA	VCH	VCHAF001	2"	24"	CHECK VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL600 API 6D	F12
CHECK VA	VCH	VCHAF002	26"	46"	CHECK VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL600 API 6D ASME B16.47-A FLGD	F12
CHECK VA	VCH	VCHAK001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	F12
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	F12
DOUBLE IBB VA	DFA	LDFAAH02	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DLA	LDLAAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DLB	LDLBAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DLC	LDLCAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DLD	LDLDAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DLE	LDLEAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DPA	LDPAAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DPB	LDPBAH02	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
DOUBLE IBB VA	DPC	LDPCAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F12
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	F12
ELBOW	E4	LE40A302	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE 34.9mm THK	F12
ELBOW	E4	LE40A303	34"	34"	ELBOW A234-WPB DEG-45 WELDED BE 37.0mm THK	F12
ELBOW	E4	LE40A313	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE 33.3mm THK	F12
ELBOW	E4	LE40A314	36"	36"	ELBOW A234-WPB DEG-45 WELDED BE 39.0mm THK	F12
ELBOW	E4	LE40A401	38"	38"	ELBOW A234-WPB DEG-45 WELDED BE 41.1mm THK	F12
ELBOW	E4	LE40A402	40"	40"	ELBOW A234-WPB DEG-45 WELDED BE 43.2mm THK	F12
ELBOW	E4	LE40A403	42"	42"	ELBOW A234-WPB DEG-45 WELDED BE 45.3mm THK	F12
ELBOW	E4	LE40A404	44"	44"	ELBOW A234-WPB DEG-45 WELDED BE 47.4mm THK	F12
ELBOW	E4	LE40A405	46"	46"	ELBOW A234-WPB DEG-45 WELDED BE 49.4mm THK	F12
ELBOW	E4	LE40AD00	3"	3"	ELBOW A234-WPB DEG-45 SMLS BE SCH40	F12
ELBOW	E4	LE40AE00	10"	10"	ELBOW A234-WPB DEG-45 SMLS BE SCH60	F12
ELBOW	E4	LE40AF00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	F12
ELBOW	E4	LE40AF06	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH80	F12
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	F12
ELBOW	E4	LE40AZ15	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE 30.18mm THK	F12
ELBOW	E4	LE40AZ16	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE 31.75mm THK	F12
ELBOW	E9	LE90A302	32"	32"	ELBOW A234-WPB 90-LR WELDED BE 34.9mm THK	F12
ELBOW	E9	LE90A303	34"	34"	ELBOW A234-WPB 90-LR WELDED BE 37.0mm THK	F12
ELBOW	E9	LE90A313	30"	30"	ELBOW A234-WPB 90-LR WELDED BE 33.3mm THK	F12
ELBOW	E9	LE90A314	36"	36"	ELBOW A234-WPB 90-LR WELDED BE 39.0mm THK	F12
ELBOW	E9	LE90A401	38"	38"	ELBOW A234-WPB 90-LR WELDED BE 41.1mm THK	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90A402	40"	40"	ELBOW A234-WPB 90-LR WELDED BE 43.2mm THK	F12
ELBOW	E9	LE90A403	42"	42"	ELBOW A234-WPB 90-LR WELDED BE 45.3mm THK	F12
ELBOW	E9	LE90A404	44"	44"	ELBOW A234-WPB 90-LR WELDED BE 47.4mm THK	F12
ELBOW	E9	LE90A405	46"	46"	ELBOW A234-WPB 90-LR WELDED BE 49.4mm THK	F12
ELBOW	E9	LE90AD00	3"	3"	ELBOW A234-WPB 90-LR SMLS BE SCH40	F12
ELBOW	E9	LE90AE00	10"	10"	ELBOW A234-WPB 90-LR SMLS BE SCH60	F12
ELBOW	E9	LE90AF00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE SCH80	F12
ELBOW	E9	LE90AF06	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH80	F12
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	F12
ELBOW	E9	LE90AZ15	26"	26"	ELBOW A234-WPB 90-LR WELDED BE 30.18mm THK	F12
ELBOW	E9	LE90AZ16	28"	28"	ELBOW A234-WPB 90-LR WELDED BE 31.75mm THK	F12
FLANGE	F	LF00AH38	3"	3"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH40	F12
FLANGE	F	LF00AH39	10"	10"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH60	F12
FLANGE	F	LF00AH40	2"	2"	FLANGE A105 WN RTJ CL600 (ASME B16.5) SCH80	F12
FLANGE	F	LF00AH41	26"	26"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 30.18mm THK	F12
FLANGE	F	LF00AH42	28"	28"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 31.75mm THK	F12
FLANGE	F	LF00AH43	30"	30"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 33.3mm THK	F12
FLANGE	F	LF00AH44	32"	32"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 34.9mm THK	F12
FLANGE	F	LF00AH45	34"	34"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 37.0mm THK	F12
FLANGE	F	LF00AH46	36"	36"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 39.0mm THK	F12
FLANGE	F	LF00AH47	38"	38"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 41.1mm THK	F12
FLANGE	F	LF00AH48	40"	40"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 43.2mm THK	F12
FLANGE	F	LF00AH49	42"	42"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 45.3mm THK	F12
FLANGE	F	LF00AH50	44"	44"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 47.4mm THK	F12
FLANGE	F	LF00AH51	46"	46"	FLANGE A105 WN RTJ CL600 (ASME B16.47-A) 49.4mm THK	F12
FLANGE	F	LF00AH52	1/2"	1 1/2"	FLANGE A105 SW RTJ CL600 (ASME B16.5) SCH80	F12
FLG BLIND	FB	LFB0AH05	1/2"	24"	FLANGE A105 BLIND RTJ CL600 (ASME B16.5)	F12
FLG BLIND	FB	LFB0AH06	26"	46"	FLANGE A105 BLIND RTJ CL600 (ASME B16.47-A)	F12
FLG BLIND	FB1	LFB0AK00	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5)	F12
FLG BLIND	FB1	LFB0AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5)	F12
FLG BLIND	FB1	LFB1AK00	26"	46"	FLANGE A105 BLIND RTJ CL900 (ASME B16.47-A)	F12
FLG JACK	FJ	LFJ0AH16	3"	3"	FLANGE A105 WN RTJ CL600 (ASME B16.5) W/JACK SCREW SCH40	F12
FLG JACK	FJ	LFJ0AH17	10"	10"	FLANGE A105 WN RTJ CL600 (ASME B16.5) W/JACK SCREW SCH60	F12
FLG JACK	FJ	LFJ0AH18	2"	2"	FLANGE A105 WN RTJ CL600 (ASME B16.5) W/JACK SCREW SCH80	F12
FLG JACK	FJ	LFJ0AH19	1/2"	1 1/2"	FLANGE A105 SW RTJ CL600 (ASME B16.5) W/JACK SCREW SCH80	F12
GASKET	G	LG00ZH04	1/2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL600 (ASME B16.5) 90 HRB MAX	F12
GASKET	G	LG00ZH07	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL600 (ASME B16.47-A) 90 HRB MAX	F12
GATE VA	VGA	VGAAF007	2"	6"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F12
GATE VA	VGA	VGAAF008	8"	24"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F12
GATE VA	VGA	VGAAF009	26"	46"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F12
GATE VA	VGA	VGAAK001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F12
GATE VA	VGF	VGFAF010	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGX	VGXAK001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F12
GLOBE VA	VLA	VLAAF003	2"	4"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F12
GLOBE VA	VLA	VLAAF006	6"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F12
GLOBE VA	VLA	VLAAK001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F12
NEEDLE VA	VNE	VNEAK001	1"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	F12
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	F12
PIPE	P	LP00A302	32"	32"	PIPE API 5L-B PSL1 SAW BE 100% RT 34.9mm THK	F12
PIPE	P	LP00A303	34"	34"	PIPE API 5L-B PSL1 SAW BE 100% RT 37.0mm THK	F12
PIPE	P	LP00A340	30"	30"	PIPE API 5L-B PSL1 SAW BE 100% RT 33.3mm THK	F12
PIPE	P	LP00A341	36"	36"	PIPE API 5L-B PSL1 SAW BE 100% RT 39.0mm THK	F12
PIPE	P	LP00A431	38"	38"	PIPE API 5L-B PSL1 SAW BE 100% RT 41.1mm THK	F12
PIPE	P	LP00A432	40"	40"	PIPE API 5L-B PSL1 SAW BE 100% RT 43.2mm THK	F12
PIPE	P	LP00A433	42"	42"	PIPE API 5L-B PSL1 SAW BE 100% RT 45.3mm THK	F12
PIPE	P	LP00A434	44"	44"	PIPE API 5L-B PSL1 SAW BE 100% RT 47.4mm THK	F12
PIPE	P	LP00A435	46"	46"	PIPE API 5L-B PSL1 SAW BE 100% RT 49.4mm THK	F12
PIPE	P	LP00AD00	3"	3"	PIPE API 5L-B PSL1 SMLS BE SCH40	F12
PIPE	P	LP00AE00	10"	10"	PIPE API 5L-B PSL1 SMLS BE SCH60	F12
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	F12
PIPE	P	LP00AF01	2"	2"	PIPE API 5L-B PSL1 SMLS BE SCH80	F12
PIPE	P	LP00AF12	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80	F12
PIPE	P	LP00AZ25	26"	26"	PIPE API 5L-B PSL1 SAW BE 100% RT 30.18mm THK	F12
PIPE	P	LP00AZ26	28"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT 31.75mm THK	F12
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	F12
RED CON	RC	LRC0A302	32"	32"	REDUCER A234-WPB CON. WELDED BE 34.9mm THK	F12
RED CON	RC	LRC0A303	34"	34"	REDUCER A234-WPB CON. WELDED BE 37.0mm THK	F12
RED CON	RC	LRC0A313	30"	30"	REDUCER A234-WPB CON. WELDED BE 33.3mm THK	F12
RED CON	RC	LRC0A314	36"	36"	REDUCER A234-WPB CON. WELDED BE 39.0mm THK	F12
RED CON	RC	LRC0A401	38"	38"	REDUCER A234-WPB CON. WELDED BE 41.1mm THK	F12
RED CON	RC	LRC0A402	40"	40"	REDUCER A234-WPB CON. WELDED BE 43.2mm THK	F12
RED CON	RC	LRC0A403	42"	42"	REDUCER A234-WPB CON. WELDED BE 45.3mm THK	F12
RED CON	RC	LRC0A404	44"	44"	REDUCER A234-WPB CON. WELDED BE 47.4mm THK	F12
RED CON	RC	LRC0A405	46"	46"	REDUCER A234-WPB CON. WELDED BE 49.4mm THK	F12
RED CON	RC	LRC0AD00	3"	3"	REDUCER A234-WPB CON. SMLS BE SCH40	F12
RED CON	RC	LRC0AE00	10"	10"	REDUCER A234-WPB CON. SMLS BE SCH60	F12
RED CON	RC	LRC0AF00	2"	2"	REDUCER A234-WPB CON. SMLS BE SCH80	F12
RED CON	RC	LRC0AF06	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH80	F12
RED CON	RC	LRC0AZ15	26"	26"	REDUCER A234-WPB CON. WELDED BE 30.18mm THK	F12
RED CON	RC	LRC0AZ16	28"	28"	REDUCER A234-WPB CON. WELDED BE 31.75mm THK	F12
RED ECC	RE	LRE0A302	32"	32"	REDUCER A234-WPB ECC. WELDED BE 34.9mm THK	F12
RED ECC	RE	LRE0A303	34"	34"	REDUCER A234-WPB ECC. WELDED BE 37.0mm THK	F12
RED ECC	RE	LRE0A313	30"	30"	REDUCER A234-WPB ECC. WELDED BE 33.3mm THK	F12
RED ECC	RE	LRE0A314	36"	36"	REDUCER A234-WPB ECC. WELDED BE 39.0mm THK	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0A401	38"	38"	REDUCER A234-WPB ECC. WELDED BE 41.1mm THK	F12
RED ECC	RE	LRE0A402	40"	40"	REDUCER A234-WPB ECC. WELDED BE 43.2mm THK	F12
RED ECC	RE	LRE0A403	42"	42"	REDUCER A234-WPB ECC. WELDED BE 45.3mm THK	F12
RED ECC	RE	LRE0A404	44"	44"	REDUCER A234-WPB ECC. WELDED BE 47.4mm THK	F12
RED ECC	RE	LRE0A405	46"	46"	REDUCER A234-WPB ECC. WELDED BE 49.4mm THK	F12
RED ECC	RE	LRE0AD00	3"	3"	REDUCER A234-WPB ECC. SMLS BE SCH40	F12
RED ECC	RE	LRE0AE00	10"	10"	REDUCER A234-WPB ECC. SMLS BE SCH60	F12
RED ECC	RE	LRE0AF00	2"	2"	REDUCER A234-WPB ECC. SMLS BE SCH80	F12
RED ECC	RE	LRE0AF06	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH80	F12
RED ECC	RE	LRE0AZ15	26"	26"	REDUCER A234-WPB ECC. WELDED BE 30.18mm THK	F12
RED ECC	RE	LRE0AZ16	28"	28"	REDUCER A234-WPB ECC. WELDED BE 31.75mm THK	F12
SINGLE IBB VA	SFA	LSFAAH02	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1/2" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SLA	LSLAAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SLB	LSLBAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SLC	LSLCAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 2" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SLD	LSLDAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SLE	LSLEAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SPA	LSPAAH02	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SPB	LSPBAH02	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SINGLE IBB VA	SPC	LSPCAH02	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F12
SOCKOLET	TS1	LTS1AP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	F12
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	F12
SPCL FLANGE	F5	LF00AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) SCH80	F12
SPCL FLANGE	F1	LF00AK00	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	F12
SPCL FLANGE	F1	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	F12
SPCL FLANGE	F1	LF10AK00	3"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH40	F12
SPCL FLANGE	F1	LF10AK01	10"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH60	F12
SPCL FLANGE	F1	LF10AK05	32"	32"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 34.9mm THK	F12
SPCL FLANGE	F1	LF10AK06	34"	34"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 37.0mm THK	F12
SPCL FLANGE	F1	LF10AK25	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 30.18mm THK	F12
SPCL FLANGE	F1	LF10AK26	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 31.75mm THK	F12
SPCL FLANGE	F1	LF10AK27	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 33.3mm THK	F12
SPCL FLANGE	F1	LF10AK28	36"	36"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 39.0mm THK	F12
SPCL FLANGE	F1	LF10AK29	38"	38"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 41.1mm THK	F12
SPCL FLANGE	F1	LF10AK30	40"	40"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 43.2mm THK	F12
SPCL FLANGE	F1	LF10AK31	42"	42"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 45.3mm THK	F12
SPCL FLANGE	F1	LF10AK32	44"	44"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 47.4mm THK	F12
SPCL FLANGE	F1	LF10AK33	46"	46"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 49.4mm THK	F12
SPCL FLG JACK	FJ1	LFJ0AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	F12
SPCL FLG JACK	FJ1	LFJ1AK00	3"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40	F12
SPCL FLG JACK	FJ1	LFJ1AK01	10"	10"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F12
SPCL FLG JACK	FJ1	LFJ1AK02	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F12
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F12
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F12
SPE BLIND	FSB	LFSBAH06	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL600 (ASME B16.48)	F12
SPE BLIND	FSB	LFSBAH07	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL600 (ASME B16.48)	F12
SPE BLIND	FSB	LFSBAK03	2"	2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	F12
SWG CON B-P	RCB	LRCBAD00	3"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH40	F12
SWG CON B-P	RCB	LRCBAF00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	F12
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	F12
SWG ECC B-P	REB	LREBAD00	3"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH40	F12
SWG ECC B-P	REB	LREBAF00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	F12
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	F12
TEE	TE	LTE0A302	32"	32"	TEE A234-WPB EQUAL WELDED BE 34.9mm THK	F12
TEE	TE	LTE0A303	34"	34"	TEE A234-WPB EQUAL WELDED BE 37.0mm THK	F12
TEE	TE	LTE0A313	30"	30"	TEE A234-WPB EQUAL WELDED BE 33.3mm THK	F12
TEE	TE	LTE0A314	36"	36"	TEE A234-WPB EQUAL WELDED BE 39.0mm THK	F12
TEE	TE	LTE0A401	38"	38"	TEE A234-WPB EQUAL WELDED BE 41.1mm THK	F12
TEE	TE	LTE0A402	40"	40"	TEE A234-WPB EQUAL WELDED BE 43.2mm THK	F12
TEE	TE	LTE0A403	42"	42"	TEE A234-WPB EQUAL WELDED BE 45.3mm THK	F12
TEE	TE	LTE0A404	44"	44"	TEE A234-WPB EQUAL WELDED BE 47.4mm THK	F12
TEE	TE	LTE0A405	46"	46"	TEE A234-WPB EQUAL WELDED BE 49.4mm THK	F12
TEE	TE	LTE0AD00	3"	3"	TEE A234-WPB EQUAL SMLS BE SCH40	F12
TEE	TE	LTE0AE00	10"	10"	TEE A234-WPB EQUAL SMLS BE SCH60	F12
TEE	TE	LTE0AF00	2"	2"	TEE A234-WPB EQUAL SMLS BE SCH80	F12
TEE	TE	LTE0AF06	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH80	F12
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	F12
TEE	TE	LTE0AZ15	26"	26"	TEE A234-WPB EQUAL WELDED BE 30.18mm THK	F12
TEE	TE	LTE0AZ16	28"	28"	TEE A234-WPB EQUAL WELDED BE 31.75mm THK	F12
TEE RED	TR	LTR0A302	32"	32"	TEE A234-WPB REDUCING WELDED BE 34.9mm THK	F12
TEE RED	TR	LTR0A303	34"	34"	TEE A234-WPB REDUCING WELDED BE 37.0mm THK	F12
TEE RED	TR	LTR0A313	30"	30"	TEE A234-WPB REDUCING WELDED BE 33.3mm THK	F12
TEE RED	TR	LTR0A314	36"	36"	TEE A234-WPB REDUCING WELDED BE 39.0mm THK	F12
TEE RED	TR	LTR0A401	38"	38"	TEE A234-WPB REDUCING WELDED BE 41.1mm THK	F12
TEE RED	TR	LTR0A402	40"	40"	TEE A234-WPB REDUCING WELDED BE 43.2mm THK	F12
TEE RED	TR	LTR0A403	42"	42"	TEE A234-WPB REDUCING WELDED BE 45.3mm THK	F12
TEE RED	TR	LTR0A404	44"	44"	TEE A234-WPB REDUCING WELDED BE 47.4mm THK	F12
TEE RED	TR	LTR0A405	46"	46"	TEE A234-WPB REDUCING WELDED BE 49.4mm THK	F12
TEE RED	TR	LTR0AD00	3"	3"	TEE A234-WPB REDUCING SMLS BE SCH40	F12
TEE RED	TR	LTR0AE00	10"	10"	TEE A234-WPB REDUCING SMLS BE SCH60	F12
TEE RED	TR	LTR0AF00	2"	2"	TEE A234-WPB REDUCING SMLS BE SCH80	F12
TEE RED	TR	LTR0AF06	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH80	F12
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	F12

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AZ15	26"	26"	TEE A234-WPB REDUCING WELDED BE 30.18mm THK	F12
TEE RED	TR	LTR0AZ16	28"	28"	TEE A234-WPB REDUCING WELDED BE 31.75mm THK	F12
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	F12
WELDOLET	TW1	LTW1AF00	6"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	F12
WELDOLET	TWO	LTWOAD00	3"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH40	F12
WELDOLET	TWO	LTWOAF00	2"	2"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	F12
BALL VA	VBF	VBFBF001	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F21
BALL VA	VBF	VBFBF002	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F21
BALL VA	VBF	VBFBF003	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F21
BALL VA	VB3	VBFBF010	2"	4"	BALL VALVE A352-LCC FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F21
BALL VA	VB3	VBFBF011	6"	24"	BALL VALVE A352-LCC FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F21
BALL VA	VB7	VBFBFS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEML=100MM	F21
BALL VA	VB7	VBFBFT01	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEML=150MM	F21
BALL VA	VBF	VBFBK001	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	F21
BALL VA	VB3	VBFBK004	1/2"	1 1/2"	***BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) TUNGSTEN CARBIDE COATED BALL W/METAL SEATS API CL800 W/SCH80 FULL BORE, W-OPF-SAFE BS 5351 GRAPHITE SEAL/FLOATING***	F21
BALL VA	VB1	VBFBK005	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	F21
BALL VA	VB7	VBFBKS01	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	F21
BALL VA	VBR	VBRBF001	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F21
BALL VA	VBR	VBRBF002	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F21
BALL VA	VBR	VBRBF003	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F21
BALL VA	VB4	VBRBF010	2"	4"	BALL VALVE A352-LCC FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F21
BALL VA	VB4	VBRBF011	6"	24"	BALL VALVE A352-LCC FLGD-RF TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	F21
BALL VA	VB8	VBRBFS01	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEML=100MM	F21
BALL VA	VB8	VBRBFT01	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEML=150MM	F21
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	F21
CAP	C	LC00A205	26"	26"	CAP A420-WPL6 SMLS BE 28.6mm THK	F21
CAP	C	LC00A315	28"	28"	CAP A420-WPL6 SMLS BE 30.7mm THK	F21
CAP	C	LC00A316	30"	30"	CAP A420-WPL6 SMLS BE 32.8mm THK	F21
CAP	C	LC00A317	32"	32"	CAP A420-WPL6 SMLS BE 34.9mm THK	F21
CAP	C	LC00A318	34"	34"	CAP A420-WPL6 SMLS BE 37.0mm THK	F21
CAP	C	LC00A319	36"	36"	CAP A420-WPL6 SMLS BE 39.0mm THK	F21
CAP	C	LC00A406	38"	38"	CAP A420-WPL6 SMLS BE 41.1mm THK	F21
CAP	C	LC00A407	40"	40"	CAP A420-WPL6 SMLS BE 43.2mm THK	F21
CAP	C	LC00A408	42"	42"	CAP A420-WPL6 SMLS BE 45.3mm THK	F21
CAP	C	LC00A409	44"	44"	CAP A420-WPL6 SMLS BE 47.4mm THK	F21
CAP	C	LC00A410	46"	46"	CAP A420-WPL6 SMLS BE 49.4mm THK	F21
CAP	C	LC00AD03	3"	3"	CAP A420-WPL6 SMLS BE SCH40	F21
CAP	C	LC00AE02	10"	10"	CAP A420-WPL6 SMLS BE SCH60	F21
CAP	C	LC00AF03	2"	2"	CAP A420-WPL6 SMLS BE SCH80	F21
CAP	C	LC00AP01	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL3000	F21
CAP THD	CT	LCT0AP02	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL3000	F21
CHECK VA	VCA	VCABF001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 API 594	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CHECK VA	VCA	VCABF002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594	F21
CHECK VA	VCA	VCABF007	26"	42"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES	F21
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	F21
CPLG FULL	CF	LCF0AP01	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL3000	F21
DOUBLE IBB VA	DFA	LDFAAH03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DLA	LDLAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DLB	LDLBAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DLC	LDLCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DLD	LDLDAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DLE	LDLEAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DPA	LDPAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DPB	LDPBAH03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
DOUBLE IBB VA	DPC	LDPCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F21
ELBOLET	TEW	LTEWAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL3000	F21
ELBOW	E4	LE40A205	26"	26"	ELBOW A420-WPL6 DEG-45 WELDED BE 28.6mm THK	F21
ELBOW	E4	LE40A315	28"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE 30.7mm THK	F21
ELBOW	E4	LE40A316	30"	30"	ELBOW A420-WPL6 DEG-45 WELDED BE 32.8mm THK	F21
ELBOW	E4	LE40A317	32"	32"	ELBOW A420-WPL6 DEG-45 WELDED BE 34.9mm THK	F21
ELBOW	E4	LE40A318	34"	34"	ELBOW A420-WPL6 DEG-45 WELDED BE 37.0mm THK	F21
ELBOW	E4	LE40A319	36"	36"	ELBOW A420-WPL6 DEG-45 WELDED BE 39.0mm THK	F21
ELBOW	E4	LE40A406	38"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE 41.1mm THK	F21
ELBOW	E4	LE40A407	40"	40"	ELBOW A420-WPL6 DEG-45 WELDED BE 43.2mm THK	F21
ELBOW	E4	LE40A408	42"	42"	ELBOW A420-WPL6 DEG-45 WELDED BE 45.3mm THK	F21
ELBOW	E4	LE40A409	44"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE 47.4mm THK	F21
ELBOW	E4	LE40A410	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE 49.4mm THK	F21
ELBOW	E4	LE40AD03	3"	3"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH40	F21
ELBOW	E4	LE40AE02	10"	10"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH60	F21
ELBOW	E4	LE40AF03	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	F21
ELBOW	E4	LE40AF09	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH80	F21
ELBOW	E4	LE40AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL3000	F21
ELBOW	E9	LE90A205	26"	26"	ELBOW A420-WPL6 90-LR WELDED BE 28.6mm THK	F21
ELBOW	E9	LE90A315	28"	28"	ELBOW A420-WPL6 90-LR WELDED BE 30.7mm THK	F21
ELBOW	E9	LE90A316	30"	30"	ELBOW A420-WPL6 90-LR WELDED BE 32.8mm THK	F21
ELBOW	E9	LE90A317	32"	32"	ELBOW A420-WPL6 90-LR WELDED BE 34.9mm THK	F21
ELBOW	E9	LE90A318	34"	34"	ELBOW A420-WPL6 90-LR WELDED BE 37.0mm THK	F21
ELBOW	E9	LE90A319	36"	36"	ELBOW A420-WPL6 90-LR WELDED BE 39.0mm THK	F21
ELBOW	E9	LE90A406	38"	38"	ELBOW A420-WPL6 90-LR WELDED BE 41.1mm THK	F21
ELBOW	E9	LE90A407	40"	40"	ELBOW A420-WPL6 90-LR WELDED BE 43.2mm THK	F21
ELBOW	E9	LE90A408	42"	42"	ELBOW A420-WPL6 90-LR WELDED BE 45.3mm THK	F21
ELBOW	E9	LE90A409	44"	44"	ELBOW A420-WPL6 90-LR WELDED BE 47.4mm THK	F21
ELBOW	E9	LE90A410	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE 49.4mm THK	F21
ELBOW	E9	LE90AD03	3"	3"	ELBOW A420-WPL6 90-LR SMLS BE SCH40	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AE02	10"	10"	ELBOW A420-WPL6 90-LR SMLS BE SCH60	F21
ELBOW	E9	LE90AF03	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	F21
ELBOW	E9	LE90AF09	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH80	F21
ELBOW	E9	LE90AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL3000	F21
ELBOW	E9S	LE9SAP00	1/2"	1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED TE(NPT-F) CL3000	F21
FLANGE	F	LF00AH08	3"	3"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH40	F21
FLANGE	F	LF00AH09	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH80	F21
FLANGE	F	LF00AH10	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH80	F21
FLANGE	F	LF00AH53	10"	10"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH60	F21
FLANGE	F	LF00AH54	26"	26"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 28.6mm THK	F21
FLANGE	F	LF00AH55	28"	28"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 30.7mm THK	F21
FLANGE	F	LF00AH56	30"	30"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 32.8mm THK	F21
FLANGE	F	LF00AH57	32"	32"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 34.9mm THK	F21
FLANGE	F	LF00AH58	34"	34"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 37.0mm THK	F21
FLANGE	F	LF00AH59	36"	36"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 39.0mm THK	F21
FLANGE	F	LF00AH60	38"	38"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 41.1mm THK	F21
FLANGE	F	LF00AH61	40"	40"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 43.2mm THK	F21
FLANGE	F	LF00AH62	42"	42"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 45.3mm THK	F21
FLANGE	F	LF00AH63	44"	44"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 47.4mm THK	F21
FLANGE	F	LF00AH64	46"	46"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 49.4mm THK	F21
FLG BLIND	FB	LFB0AH03	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5)	F21
FLG BLIND	FB	LFB0AH07	26"	46"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.47-A)	F21
FLG BLIND	FB1	LFB0AK03	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5)	F21
FLG BLIND	FB1	LFB0AL02	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5)	F21
FLG BLIND	FB1	LFB1AK01	26"	46"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.47-A)	F21
FLG JACK	FJ	LFJ0AH08	3"	3"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40	F21
FLG JACK	FJ	LFJ0AH09	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F21
FLG JACK	FJ	LFJ0AH10	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F21
FLG JACK	FJ	LFJ0AH20	10"	10"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH60	F21
FLG RED	RF	LRF0AH06	2"	2"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL600 (ASME B16.5) SCH80	F21
FLG RED	RF	LRF0AH08	3"	3"	FLANGE A350-LF2 CL1 WN-REDUCING RF CL600 (ASME B16.5) SCH40 x SCH80	F21
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F21
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F21
GATE VA	VGA	VGABF001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F21
GATE VA	VGA	VGABF002	6"	6"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F21
GATE VA	VGA	VGABF003	8"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F21
GATE VA	VGA	VGABF004	26"	46"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F21
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F21
GATE VA	VGF	VGFBF001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602	F21
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F21
GLOBE VA	VLA	VLABF001	2"	4"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F21
GLOBE VA	VLA	VLABF006	6"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F21
INSUL GASKET	GK	LGK0ZH00	2"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F21
NEEDLE VA	VNE	VNEBK001	3/4"	3/4"	NEEDLE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC API CL800 API 602	F21
NIPPLE TOE	NTO	LNTOAK01	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG SCH160	F21
PIPE	P	LP00A215	26"	26"	PIPE A671-CC65 CL.22 EFW BE 100% RT 28.6mm THK W/S2 AT-46C	F21
PIPE	P	LP00A357	28"	28"	PIPE A671-CC65 CL.22 EFW BE 100% RT 30.7mm THK W/S2 AT-46C	F21
PIPE	P	LP00A358	30"	30"	PIPE A671-CC65 CL.22 EFW BE 100% RT 32.8mm THK W/S2 AT-46C	F21
PIPE	P	LP00A359	32"	32"	PIPE A671-CC65 CL.22 EFW BE 100% RT 34.9mm THK W/S2 AT-46C	F21
PIPE	P	LP00A360	34"	34"	PIPE A671-CC65 CL.22 EFW BE 100% RT 37.0mm THK W/S2 AT-46C	F21
PIPE	P	LP00A361	36"	36"	PIPE A671-CC65 CL.22 EFW BE 100% RT 39.0mm THK W/S2 AT-46C	F21
PIPE	P	LP00A450	46"	46"	PIPE A671-CC65 CL.22 EFW BE 100% RT 49.4mm THK W/S2 AT-46C	F21
PIPE	P	LP00A451	38"	38"	PIPE A671-CC65 CL.22 EFW BE 100% RT 41.1mm THK W/S2 AT-46C	F21
PIPE	P	LP00A452	40"	40"	PIPE A671-CC65 CL.22 EFW BE 100% RT 43.2mm THK W/S2 AT-46C	F21
PIPE	P	LP00A453	42"	42"	PIPE A671-CC65 CL.22 EFW BE 100% RT 45.3mm THK W/S2 AT-46C	F21
PIPE	P	LP00A454	44"	44"	PIPE A671-CC65 CL.22 EFW BE 100% RT 47.4mm THK W/S2 AT-46C	F21
PIPE	P	LP00AD08	3"	3"	PIPE A333-6 SMLS BE SCH40	F21
PIPE	P	LP00AE03	10"	10"	PIPE A333-6 SMLS BE SCH60	F21
PIPE	P	LP00AF08	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH80	F21
PIPE	P	LP00AF09	2"	2"	PIPE A333-6 SMLS BE SCH80	F21
PIPE	P	LP00AF29	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH80 W/S2 AT-46C	F21
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	F21
PLUG VA	VPL	VPLBF001	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	F21
PLUG VA	VPL	VPLBF004	2"	4"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599	F21
PLUG VA	VPL	VPLBF005	6"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599	F21
RED CON	RC	LRC0A205	26"	26"	REDUCER A420-WPL6 CON. WELDED BE 28.6mm THK	F21
RED CON	RC	LRC0A315	28"	28"	REDUCER A420-WPL6 CON. WELDED BE 30.7mm THK	F21
RED CON	RC	LRC0A316	30"	30"	REDUCER A420-WPL6 CON. WELDED BE 32.8mm THK	F21
RED CON	RC	LRC0A317	32"	32"	REDUCER A420-WPL6 CON. WELDED BE 34.9mm THK	F21
RED CON	RC	LRC0A318	34"	34"	REDUCER A420-WPL6 CON. WELDED BE 37.0mm THK	F21
RED CON	RC	LRC0A319	36"	36"	REDUCER A420-WPL6 CON. WELDED BE 39.0mm THK	F21
RED CON	RC	LRC0A406	38"	38"	REDUCER A420-WPL6 CON. WELDED BE 41.1mm THK	F21
RED CON	RC	LRC0A407	40"	40"	REDUCER A420-WPL6 CON. WELDED BE 43.2mm THK	F21
RED CON	RC	LRC0A408	42"	42"	REDUCER A420-WPL6 CON. WELDED BE 45.3mm THK	F21
RED CON	RC	LRC0A409	44"	44"	REDUCER A420-WPL6 CON. WELDED BE 47.4mm THK	F21
RED CON	RC	LRC0A410	46"	46"	REDUCER A420-WPL6 CON. WELDED BE 49.4mm THK	F21
RED CON	RC	LRC0AD03	3"	3"	REDUCER A420-WPL6 CON. SMLS BE SCH40	F21
RED CON	RC	LRC0AE02	10"	10"	REDUCER A420-WPL6 CON. SMLS BE SCH60	F21
RED CON	RC	LRC0AF03	2"	2"	REDUCER A420-WPL6 CON. SMLS BE SCH80	F21
RED CON	RC	LRC0AF09	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH80	F21
RED ECC	RE	LRE0A205	26"	26"	REDUCER A420-WPL6 ECC. WELDED BE 28.6mm THK	F21
RED ECC	RE	LRE0A315	28"	28"	REDUCER A420-WPL6 ECC. WELDED BE 30.7mm THK	F21
RED ECC	RE	LRE0A316	30"	30"	REDUCER A420-WPL6 ECC. WELDED BE 32.8mm THK	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0A317	32"	32"	REDUCER A420-WPL6 ECC. WELDED BE 34.9mm THK	F21
RED ECC	RE	LRE0A318	34"	34"	REDUCER A420-WPL6 ECC. WELDED BE 37.0mm THK	F21
RED ECC	RE	LRE0A319	36"	36"	REDUCER A420-WPL6 ECC. WELDED BE 39.0mm THK	F21
RED ECC	RE	LRE0A406	38"	38"	REDUCER A420-WPL6 ECC. WELDED BE 41.1mm THK	F21
RED ECC	RE	LRE0A407	40"	40"	REDUCER A420-WPL6 ECC. WELDED BE 43.2mm THK	F21
RED ECC	RE	LRE0A408	42"	42"	REDUCER A420-WPL6 ECC. WELDED BE 45.3mm THK	F21
RED ECC	RE	LRE0A409	44"	44"	REDUCER A420-WPL6 ECC. WELDED BE 47.4mm THK	F21
RED ECC	RE	LRE0A410	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE 49.4mm THK	F21
RED ECC	RE	LRE0AD03	3"	3"	REDUCER A420-WPL6 ECC. SMLS BE SCH40	F21
RED ECC	RE	LRE0AE02	10"	10"	REDUCER A420-WPL6 ECC. SMLS BE SCH60	F21
RED ECC	RE	LRE0AF03	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	F21
RED ECC	RE	LRE0AF09	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH80	F21
SINGLE IBB VA	SFA	LSFAAH03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SLA	LSLAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SLB	LSLBAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SLC	LSLCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SLD	LSLDAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SLE	LSLEAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SPA	LSPAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SPB	LSPBAH03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SINGLE IBB VA	SPC	LSPCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F21
SOCKOLET	TSO	LTSOAP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL3000	F21
SPCL FLANGE	F1	LF00AK04	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	F21
SPCL FLANGE	F1	LF00AL04	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH80	F21
SPCL FLANGE	F1	LF10AK34	3"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH40	F21
SPCL FLANGE	F1	LF10AK35	10"	10"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH60	F21
SPCL FLANGE	F1	LF10AK36	26"	26"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 28.6mm THK	F21
SPCL FLANGE	F1	LF10AK37	28"	28"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 30.7mm THK	F21
SPCL FLANGE	F1	LF10AK38	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 32.8mm THK	F21
SPCL FLANGE	F1	LF10AK39	32"	32"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 34.9mm THK	F21
SPCL FLANGE	F1	LF10AK40	34"	34"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 37.0mm THK	F21
SPCL FLANGE	F1	LF10AK41	36"	36"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 39.0mm THK	F21
SPCL FLANGE	F1	LF10AK42	38"	38"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 41.1mm THK	F21
SPCL FLANGE	F1	LF10AK43	40"	40"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 43.2mm THK	F21
SPCL FLANGE	F1	LF10AK44	42"	42"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 45.3mm THK	F21
SPCL FLANGE	F1	LF10AK45	44"	44"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 47.4mm THK	F21
SPCL FLANGE	F1	LF10AK46	46"	46"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 49.4mm THK	F21
SPCL FLG JACK	FJ1	LFJ0AL03	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	F21
SPCL FLG JACK	FJ1	LFJ1AK07	3"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40	F21
SPCL FLG JACK	FJ1	LFJ1AK08	10"	10"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F21
SPCL FLG JACK	FJ1	LFJ1AK09	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F21
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F21
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F21
SPE BLIND	FSB	LFSBAH10	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48) W/S5 AT-46C	F21
SPE BLIND	FSB	LFSBAH11	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48) W/S5 AT-46C	F21
SWG CON B-P	RCB	LRCBAD04	3"	3"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH40	F21
SWG CON B-P	RCB	LRCBAF03	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	F21
SWG CON PE	RCP	LRCPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH80	F21
SWG CON P-T	RC2	LRC2AK01	1/2"	1"	SWAGE A420-WPL6 CON. SMLS PLE x TSE(NPT-M) SCH160 x SCH80	F21
SWG ECC B-P	REB	LREBAD04	3"	3"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH40	F21
SWG ECC B-P	REB	LREBAF03	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	F21
SWG ECC PE	REP	LREPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH80	F21
TEE	TE	LTE0A205	26"	26"	TEE A420-WPL6 EQUAL WELDED BE 28.6mm THK	F21
TEE	TE	LTE0A315	28"	28"	TEE A420-WPL6 EQUAL WELDED BE 30.7mm THK	F21
TEE	TE	LTE0A316	30"	30"	TEE A420-WPL6 EQUAL WELDED BE 32.8mm THK	F21
TEE	TE	LTE0A317	32"	32"	TEE A420-WPL6 EQUAL WELDED BE 34.9mm THK	F21
TEE	TE	LTE0A318	34"	34"	TEE A420-WPL6 EQUAL WELDED BE 37.0mm THK	F21
TEE	TE	LTE0A319	36"	36"	TEE A420-WPL6 EQUAL WELDED BE 39.0mm THK	F21
TEE	TE	LTE0A406	38"	38"	TEE A420-WPL6 EQUAL WELDED BE 41.1mm THK	F21
TEE	TE	LTE0A407	40"	40"	TEE A420-WPL6 EQUAL WELDED BE 43.2mm THK	F21
TEE	TE	LTE0A408	42"	42"	TEE A420-WPL6 EQUAL WELDED BE 45.3mm THK	F21
TEE	TE	LTE0A409	44"	44"	TEE A420-WPL6 EQUAL WELDED BE 47.4mm THK	F21
TEE	TE	LTE0A410	46"	46"	TEE A420-WPL6 EQUAL WELDED BE 49.4mm THK	F21
TEE	TE	LTE0AD03	3"	3"	TEE A420-WPL6 EQUAL SMLS BE SCH40	F21
TEE	TE	LTE0AE02	10"	10"	TEE A420-WPL6 EQUAL SMLS BE SCH60	F21
TEE	TE	LTE0AF03	2"	2"	TEE A420-WPL6 EQUAL SMLS BE SCH80	F21
TEE	TE	LTE0AF09	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH80	F21
TEE	TE	LTE0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL3000	F21
TEE RED	TR	LTR0A205	26"	26"	TEE A420-WPL6 REDUCING WELDED BE 28.6mm THK	F21
TEE RED	TR	LTR0A315	28"	28"	TEE A420-WPL6 REDUCING WELDED BE 30.7mm THK	F21
TEE RED	TR	LTR0A316	30"	30"	TEE A420-WPL6 REDUCING WELDED BE 32.8mm THK	F21
TEE RED	TR	LTR0A317	32"	32"	TEE A420-WPL6 REDUCING WELDED BE 34.9mm THK	F21
TEE RED	TR	LTR0A318	34"	34"	TEE A420-WPL6 REDUCING WELDED BE 37.0mm THK	F21
TEE RED	TR	LTR0A319	36"	36"	TEE A420-WPL6 REDUCING WELDED BE 39.0mm THK	F21
TEE RED	TR	LTR0A406	38"	38"	TEE A420-WPL6 REDUCING WELDED BE 41.1mm THK	F21
TEE RED	TR	LTR0A407	40"	40"	TEE A420-WPL6 REDUCING WELDED BE 43.2mm THK	F21
TEE RED	TR	LTR0A408	42"	42"	TEE A420-WPL6 REDUCING WELDED BE 45.3mm THK	F21
TEE RED	TR	LTR0A409	44"	44"	TEE A420-WPL6 REDUCING WELDED BE 47.4mm THK	F21
TEE RED	TR	LTR0A410	46"	46"	TEE A420-WPL6 REDUCING WELDED BE 49.4mm THK	F21
TEE RED	TR	LTR0AD03	3"	3"	TEE A420-WPL6 REDUCING SMLS BE SCH40	F21
TEE RED	TR	LTR0AE02	10"	10"	TEE A420-WPL6 REDUCING SMLS BE SCH60	F21
TEE RED	TR	LTR0AF03	2"	2"	TEE A420-WPL6 REDUCING SMLS BE SCH80	F21
TEE RED	TR	LTR0AF09	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH80	F21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL3000	F21
THREADOLET	TTO	LTTOAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL3000	F21
WELDOLET	TWO	LTWOAD03	3"	3"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH40	F21
WELDOLET	TWO	LTWOAF03	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	F21
BALL VA	VBF	VBFBF004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F23
BALL VA	VBF	VBFBF005	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F23
BALL VA	VBF	VBFBF006	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	F23
BALL VA	VBF	VBFBK002	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	F23
BALL VA	VB1	VBFBK006	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OPF-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING	F23
BALL VA	VBR	VBRBF004	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F23
BALL VA	VBR	VBRBF005	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	F23
BALL VA	VBR	VBRBF006	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD/316L SS OVERLAY ON SEAL POCKETS	F23
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	F23
CAP	C	LC00A320	26"	26"	CAP A420-WPL6 SMLS BE 30.6mm THK	F23
CAP	C	LC00A321	28"	28"	CAP A420-WPL6 SMLS BE 32.7mm THK	F23
CAP	C	LC00A322	30"	30"	CAP A420-WPL6 SMLS BE 34.8mm THK	F23
CAP	C	LC00A323	32"	32"	CAP A420-WPL6 SMLS BE 36.8mm THK	F23
CAP	C	LC00A324	34"	34"	CAP A420-WPL6 SMLS BE 38.9mm THK	F23
CAP	C	LC00A410	44"	44"	CAP A420-WPL6 SMLS BE 49.4mm THK	F23
CAP	C	LC00A411	36"	36"	CAP A420-WPL6 SMLS BE 41.0mm THK	F23
CAP	C	LC00A412	38"	38"	CAP A420-WPL6 SMLS BE 43.1mm THK	F23
CAP	C	LC00A413	40"	40"	CAP A420-WPL6 SMLS BE 45.2mm THK	F23
CAP	C	LC00A434	42"	42"	CAP A420-WPL6 SMLS BE 47.3mm THK	F23
CAP	C	LC00A500	46"	46"	CAP A420-WPL6 SMLS BE 51.4mm THK	F23
CAP	C	LC00AF03	3"	24"	CAP A420-WPL6 SMLS BE SCH80	F23
CAP	C	LC00AK03	2"	2"	CAP A420-WPL6 SMLS BE SCH160	F23
CAP	C	LC00AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL6000	F23
CAP THD	CT	LCT0AQ03	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL6000	F23
CHECK VA	VCA	VCABF001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 API 594	F23
CHECK VA	VCA	VCABF002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594	F23
CHECK VA	VCA	VCABF007	26"	42"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES	F23
CHECK VA	VCH	VCHBK001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 BS 5352	F23
CPLG FULL	CF	LCF0AQ03	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL6000	F23
DOUBLE IBB VA	DFA	LDFAAH03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DLA	LDLAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DLB	LDLBAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DLC	LDLCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DLD	LDLDAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DLE	LDLEAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DPA	LDPAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DPB	LDPBAH03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23
DOUBLE IBB VA	DPC	LDPCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOLET	TEW	LTEWAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL6000	F23
ELBOW	E4	LE40A320	26"	26"	ELBOW A420-WPL6 DEG-45 WELDED BE 30.6mm THK	F23
ELBOW	E4	LE40A321	28"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE 32.7mm THK	F23
ELBOW	E4	LE40A322	30"	30"	ELBOW A420-WPL6 DEG-45 WELDED BE 34.8mm THK	F23
ELBOW	E4	LE40A323	32"	32"	ELBOW A420-WPL6 DEG-45 WELDED BE 36.8mm THK	F23
ELBOW	E4	LE40A324	34"	34"	ELBOW A420-WPL6 DEG-45 WELDED BE 38.9mm THK	F23
ELBOW	E4	LE40A410	44"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE 49.4mm THK	F23
ELBOW	E4	LE40A411	36"	36"	ELBOW A420-WPL6 DEG-45 WELDED BE 41.0mm THK	F23
ELBOW	E4	LE40A412	38"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE 43.1mm THK	F23
ELBOW	E4	LE40A413	40"	40"	ELBOW A420-WPL6 DEG-45 WELDED BE 45.2mm THK	F23
ELBOW	E4	LE40A414	42"	42"	ELBOW A420-WPL6 DEG-45 WELDED BE 47.3mm THK	F23
ELBOW	E4	LE40A500	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE 51.4mm THK	F23
ELBOW	E4	LE40AF03	3"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	F23
ELBOW	E4	LE40AF09	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH80	F23
ELBOW	E4	LE40AK03	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH160	F23
ELBOW	E4	LE40AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL6000	F23
ELBOW	E9	LE90A320	26"	26"	ELBOW A420-WPL6 90-LR WELDED BE 30.6mm THK	F23
ELBOW	E9	LE90A321	28"	28"	ELBOW A420-WPL6 90-LR WELDED BE 32.7mm THK	F23
ELBOW	E9	LE90A322	30"	30"	ELBOW A420-WPL6 90-LR WELDED BE 34.8mm THK	F23
ELBOW	E9	LE90A323	32"	32"	ELBOW A420-WPL6 90-LR WELDED BE 36.8mm THK	F23
ELBOW	E9	LE90A324	34"	34"	ELBOW A420-WPL6 90-LR WELDED BE 38.9mm THK	F23
ELBOW	E9	LE90A410	44"	44"	ELBOW A420-WPL6 90-LR WELDED BE 49.4mm THK	F23
ELBOW	E9	LE90A411	36"	36"	ELBOW A420-WPL6 90-LR WELDED BE 41.0mm THK	F23
ELBOW	E9	LE90A412	38"	38"	ELBOW A420-WPL6 90-LR WELDED BE 43.1mm THK	F23
ELBOW	E9	LE90A413	40"	40"	ELBOW A420-WPL6 90-LR WELDED BE 45.2mm THK	F23
ELBOW	E9	LE90A414	42"	42"	ELBOW A420-WPL6 90-LR WELDED BE 47.3mm THK	F23
ELBOW	E9	LE90A500	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE 51.4mm THK	F23
ELBOW	E9	LE90AF03	3"	16"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	F23
ELBOW	E9	LE90AF09	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH80	F23
ELBOW	E9	LE90AK03	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE SCH160	F23
ELBOW	E9	LE90AQ03	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL6000	F23
FLANGE	F	LF00AH09	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH80	F23
FLANGE	F	LF00AH11	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) SCH160	F23
FLANGE	F	LF00AH64	44"	44"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 49.4mm THK	F23
FLANGE	F	LF00AH65	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) SCH160	F23
FLANGE	F	LF00AH66	26"	26"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 30.6mm THK	F23
FLANGE	F	LF00AH67	28"	28"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 32.7mm THK	F23
FLANGE	F	LF00AH68	30"	30"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 34.8mm THK	F23
FLANGE	F	LF00AH69	32"	32"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 36.8mm THK	F23
FLANGE	F	LF00AH70	34"	34"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 38.9mm THK	F23
FLANGE	F	LF00AH71	36"	36"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 41.0mm THK	F23
FLANGE	F	LF00AH72	38"	38"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 43.1mm THK	F23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AH73	40"	40"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 45.2mm THK	F23
FLANGE	F	LF00AH74	42"	42"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 47.3mm THK	F23
FLANGE	F	LF00AH75	46"	46"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) 51.4mm THK	F23
FLG BLIND	FB	LFB0AH03	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5)	F23
FLG BLIND	FB	LFB0AH07	26"	46"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.47-A)	F23
FLG BLIND	FB1	LFB0AK03	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5)	F23
FLG BLIND	FB1	LFB0AL02	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5)	F23
FLG BLIND	FB1	LFB1AK01	26"	46"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.47-A)	F23
FLG JACK	FJ	LFJ0AH09	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80	F23
FLG JACK	FJ	LFJ0AH11	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH160	F23
FLG JACK	FJ	LFJ0AH23	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH160	F23
FLG RED	RF	LRF0AH06	3"	3"	***FLANGE A350-LF2 CL1 WN-REDUCING RF CL600 (ASME B16.5) SCH80 x SCH80***	F23
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F23
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F23
GATE VA	VGA	VGABF001	2"	4"	GATE VALVE A352-LCC FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F23
GATE VA	VGA	VGABF002	6"	6"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F23
GATE VA	VGA	VGABF003	8"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F23
GATE VA	VGA	VGABF004	26"	46"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F23
GATE VA	VGA	VGABK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F23
GATE VA	VGF	VGFBF001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602	F23
GATE VA	VGX	VGXBK001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F23
GLOBE VA	VLA	VLABF001	2"	4"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F23
GLOBE VA	VLA	VLABF006	6"	6"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F23
GLOBE VA	VLA	VLABK001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F23
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F23
NIPPLE TOE	NTO	LNTOAN03	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG XXS	F23
NIPPLE TOE	NTO	LNTOAN05	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS	F23
PIPE	P	LP00A352	26"	26"	PIPE A671-CC65 CL.22 EFW BE 100% RT 30.6mm THK W/S2 AT-46C	F23
PIPE	P	LP00A353	28"	28"	PIPE A671-CC65 CL.22 EFW BE 100% RT 32.7mm THK W/S2 AT-46C	F23
PIPE	P	LP00A354	30"	30"	PIPE A671-CC65 CL.22 EFW BE 100% RT 34.8mm THK W/S2 AT-46C	F23
PIPE	P	LP00A355	32"	32"	PIPE A671-CC65 CL.22 EFW BE 100% RT 36.8mm THK W/S2 AT-46C	F23
PIPE	P	LP00A356	34"	34"	PIPE A671-CC65 CL.22 EFW BE 100% RT 38.9mm THK W/S2 AT-46C	F23
PIPE	P	LP00A446	36"	36"	PIPE A671-CC65 CL.22 EFW BE 100% RT 41.0mm THK W/S2 AT-46C	F23
PIPE	P	LP00A447	38"	38"	PIPE A671-CC65 CL.22 EFW BE 100% RT 43.1mm THK W/S2 AT-46C	F23
PIPE	P	LP00A448	40"	40"	PIPE A671-CC65 CL.22 EFW BE 100% RT 45.2mm THK W/S2 AT-46C	F23
PIPE	P	LP00A449	42"	42"	PIPE A671-CC65 CL.22 EFW BE 100% RT 47.3mm THK W/S2 AT-46C	F23
PIPE	P	LP00A450	44"	44"	PIPE A671-CC65 CL.22 EFW BE 100% RT 49.4mm THK W/S2 AT-46C	F23
PIPE	P	LP00A519	46"	46"	PIPE A671-CC65 CL.22 EFW BE 100% RT 51.4mm THK W/S2 AT-46C	F23
PIPE	P	LP00AF09	3"	16"	PIPE A333-6 SMLS BE SCH80	F23
PIPE	P1	LP00AF27	3"	16"	PIPE A333-6 SMLS BE PE COATED SCH80	F23
PIPE	P	LP00AF29	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH80 W/S2 AT-46C	F23
PIPE	P	LP00AK07	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH160	F23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P1	LP00AK21	2"	2"	PIPE A333-6 SMLS BE PE COATED SCH160	F23
PIPE	P	LP00AK22	2"	2"	PIPE A333-6 SMLS BE SCH160	F23
PIPE	P2	LP10AF02	3"	16"	PIPE A333-6 SMLS BE SCH80 PP COATED	F23
PIPE	P1	LP10AF09	18"	24"	PIPE A671-CC65 CL.22 EFW BE PE COATED 100% RT SCH80 W/S2 AT-46C	F23
PIPE	P2	LP10AK01	2"	2"	PIPE A333-6 SMLS BE SCH160 PP COATED	F23
PIPE	P3	LP20AF02	3"	16"	PIPE A333-6 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	F23
PIPE	P2	LP20AF09	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH80 W/S2 AT-46C PP COATED	F23
PIPE	P3	LP20AK01	2"	2"	PIPE A333-6 SMLS BE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	F23
PIPE	P3	LP30AF07	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH80 W/S2 AT-46C (SUNLIGHT L-200 WRAPPED AT SITE)	F23
PIPE	P3	LP30AK02	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	F23
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	F23
PLUG VA	VPL	VPLBF002	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	F23
PLUG VA	VPL	VPLBF004	2"	4"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599	F23
PLUG VA	VPL	VPLBF005	6"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599	F23
RED CON	RC	LRC0A320	26"	26"	REDUCER A420-WPL6 CON. WELDED BE 30.6mm THK	F23
RED CON	RC	LRC0A321	28"	28"	REDUCER A420-WPL6 CON. WELDED BE 32.7mm THK	F23
RED CON	RC	LRC0A322	30"	30"	REDUCER A420-WPL6 CON. WELDED BE 34.8mm THK	F23
RED CON	RC	LRC0A323	32"	32"	REDUCER A420-WPL6 CON. WELDED BE 36.8mm THK	F23
RED CON	RC	LRC0A324	34"	34"	REDUCER A420-WPL6 CON. WELDED BE 38.9mm THK	F23
RED CON	RC	LRC0A410	44"	44"	REDUCER A420-WPL6 CON. WELDED BE 49.4mm THK	F23
RED CON	RC	LRC0A411	36"	36"	REDUCER A420-WPL6 CON. WELDED BE 41.0mm THK	F23
RED CON	RC	LRC0A412	38"	38"	REDUCER A420-WPL6 CON. WELDED BE 43.1mm THK	F23
RED CON	RC	LRC0A413	40"	40"	REDUCER A420-WPL6 CON. WELDED BE 45.2mm THK	F23
RED CON	RC	LRC0A414	42"	42"	REDUCER A420-WPL6 CON. WELDED BE 47.3mm THK	F23
RED CON	RC	LRC0A500	46"	46"	REDUCER A420-WPL6 CON. WELDED BE 51.4mm THK	F23
RED CON	RC	LRC0AF03	3"	16"	REDUCER A420-WPL6 CON. SMLS BE SCH80	F23
RED CON	RC	LRC0AF09	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH80	F23
RED CON	RC	LRC0AK03	2"	2"	REDUCER A420-WPL6 CON. SMLS BE SCH160	F23
RED ECC	RE	LRE0A320	26"	26"	REDUCER A420-WPL6 ECC. WELDED BE 30.6mm THK	F23
RED ECC	RE	LRE0A321	28"	28"	REDUCER A420-WPL6 ECC. WELDED BE 32.7mm THK	F23
RED ECC	RE	LRE0A322	30"	30"	REDUCER A420-WPL6 ECC. WELDED BE 34.8mm THK	F23
RED ECC	RE	LRE0A323	32"	32"	REDUCER A420-WPL6 ECC. WELDED BE 36.8mm THK	F23
RED ECC	RE	LRE0A324	34"	34"	REDUCER A420-WPL6 ECC. WELDED BE 38.9mm THK	F23
RED ECC	RE	LRE0A410	44"	44"	REDUCER A420-WPL6 ECC. WELDED BE 49.4mm THK	F23
RED ECC	RE	LRE0A411	36"	36"	REDUCER A420-WPL6 ECC. WELDED BE 41.0mm THK	F23
RED ECC	RE	LRE0A412	38"	38"	REDUCER A420-WPL6 ECC. WELDED BE 43.1mm THK	F23
RED ECC	RE	LRE0A413	40"	40"	REDUCER A420-WPL6 ECC. WELDED BE 45.2mm THK	F23
RED ECC	RE	LRE0A414	42"	42"	REDUCER A420-WPL6 ECC. WELDED BE 47.3mm THK	F23
RED ECC	RE	LRE0A500	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE 51.4mm THK	F23
RED ECC	RE	LRE0AF03	3"	16"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	F23
RED ECC	RE	LRE0AF09	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH80	F23
RED ECC	RE	LRE0AK03	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE SCH160	F23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SFA	LSFAAH03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SLA	LSLAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SLB	LSLBAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SLC	LSLCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SLD	LSLDAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SLE	LSLEAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SPA	LSPAAH03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SPB	LSPBAH03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SINGLE IBB VA	SPC	LSPCAH03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F23
SOCKOLET	TSO	LTSOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL6000	F23
SPCL FLANGE	F1	LF00AK04	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	F23
SPCL FLANGE	F1	LF10AK46	44"	44"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 49.4mm THK	F23
SPCL FLANGE	F1	LF10AK47	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH160	F23
SPCL FLANGE	F1	LF10AK48	26"	26"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 30.6mm THK	F23
SPCL FLANGE	F1	LF10AK49	28"	28"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 32.7mm THK	F23
SPCL FLANGE	F1	LF10AK50	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 34.8mm THK	F23
SPCL FLANGE	F1	LF10AK51	32"	32"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 36.8mm THK	F23
SPCL FLANGE	F1	LF10AK52	34"	34"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 38.9mm THK	F23
SPCL FLANGE	F1	LF10AK53	36"	36"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 41.0mm THK	F23
SPCL FLANGE	F1	LF10AK54	38"	38"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 43.1mm THK	F23
SPCL FLANGE	F1	LF10AK55	40"	40"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 45.2mm THK	F23
SPCL FLANGE	F1	LF10AK56	42"	42"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 47.3mm THK	F23
SPCL FLANGE	F1	LF10AK57	46"	46"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 51.4mm THK	F23
SPCL FLANGE	F1	LF10AL00	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH160	F23
SPCL FLG JACK	FJ1	LFJ1AK09	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F23
SPCL FLG JACK	FJ1	LFJ1AK10	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160	F23
SPCL FLG JACK	FJ1	LFJ1AL00	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	F23
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F23
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F23
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F23
SPE BLIND	FSB	LFSBAH10	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48) W/S5 AT-46C	F23
SPE BLIND	FSB	LFSBAH11	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48) W/S5 AT-46C	F23
SWG CON B-P	RCB	LRCBAF03	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	F23
SWG CON B-P	RCB	LRCBAK03	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH160	F23
SWG CON PE	RCP	LRCPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH160	F23
SWG ECC B-P	REB	LREBAF03	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	F23
SWG ECC B-P	REB	LREBAK03	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH160	F23
SWG ECC PE	REP	LREPAK04	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH160	F23
TEE	TE	LTE0A320	26"	26"	TEE A420-WPL6 EQUAL WELDED BE 30.6mm THK	F23
TEE	TE	LTE0A321	28"	28"	TEE A420-WPL6 EQUAL WELDED BE 32.7mm THK	F23
TEE	TE	LTE0A322	30"	30"	TEE A420-WPL6 EQUAL WELDED BE 34.8mm THK	F23
TEE	TE	LTE0A323	32"	32"	TEE A420-WPL6 EQUAL WELDED BE 36.8mm THK	F23

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0A324	34"	34"	TEE A420-WPL6 EQUAL WELDED BE 38.9mm THK	F23
TEE	TE	LTE0A410	44"	44"	TEE A420-WPL6 EQUAL WELDED BE 49.4mm THK	F23
TEE	TE	LTE0A411	36"	36"	TEE A420-WPL6 EQUAL WELDED BE 41.0mm THK	F23
TEE	TE	LTE0A412	38"	38"	TEE A420-WPL6 EQUAL WELDED BE 43.1mm THK	F23
TEE	TE	LTE0A413	40"	40"	TEE A420-WPL6 EQUAL WELDED BE 45.2mm THK	F23
TEE	TE	LTE0A414	42"	42"	TEE A420-WPL6 EQUAL WELDED BE 47.3mm THK	F23
TEE	TE	LTE0A500	46"	46"	TEE A420-WPL6 EQUAL WELDED BE 51.4mm THK	F23
TEE	TE	LTE0AF03	3"	16"	TEE A420-WPL6 EQUAL SMLS BE SCH80	F23
TEE	TE	LTE0AF09	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH80	F23
TEE	TE	LTE0AK03	2"	2"	TEE A420-WPL6 EQUAL SMLS BE SCH160	F23
TEE	TE	LTE0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL6000	F23
TEE RED	TR	LTR0A320	26"	26"	TEE A420-WPL6 REDUCING WELDED BE 30.6mm THK	F23
TEE RED	TR	LTR0A321	28"	28"	TEE A420-WPL6 REDUCING WELDED BE 32.7mm THK	F23
TEE RED	TR	LTR0A322	30"	30"	TEE A420-WPL6 REDUCING WELDED BE 34.8mm THK	F23
TEE RED	TR	LTR0A323	32"	32"	TEE A420-WPL6 REDUCING WELDED BE 36.8mm THK	F23
TEE RED	TR	LTR0A324	34"	34"	TEE A420-WPL6 REDUCING WELDED BE 38.9mm THK	F23
TEE RED	TR	LTR0A410	44"	44"	TEE A420-WPL6 REDUCING WELDED BE 49.4mm THK	F23
TEE RED	TR	LTR0A411	36"	36"	TEE A420-WPL6 REDUCING WELDED BE 41.0mm THK	F23
TEE RED	TR	LTR0A412	38"	38"	TEE A420-WPL6 REDUCING WELDED BE 43.1mm THK	F23
TEE RED	TR	LTR0A413	40"	40"	TEE A420-WPL6 REDUCING WELDED BE 45.2mm THK	F23
TEE RED	TR	LTR0A414	42"	42"	TEE A420-WPL6 REDUCING WELDED BE 47.3mm THK	F23
TEE RED	TR	LTR0A500	46"	46"	TEE A420-WPL6 REDUCING WELDED BE 51.4mm THK	F23
TEE RED	TR	LTR0AF03	3"	16"	TEE A420-WPL6 REDUCING SMLS BE SCH80	F23
TEE RED	TR	LTR0AF09	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH80	F23
TEE RED	TR	LTR0AK03	2"	2"	TEE A420-WPL6 REDUCING SMLS BE SCH160	F23
TEE RED	TR	LTR0AQ03	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL6000	F23
THREADOLET	TTO	LTTOAQ03	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL6000	F23
WELDOLET	TWO	LTWOAF03	3"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	F23
WELDOLET	TWO	LTWOAK03	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH160	F23
BALL VA	VBF	VBFBF007	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VBF	VBFBF008	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VBF	VBFBF009	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB1	VBFBF012	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PEEK SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB1	VBFBF013	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PEEK SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB7	VBFBFS07	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)/EXT STEM(L=100MM)	F23S
BALL VA	VB7	VBFBFT07	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)/EXT STEM(L=150MM)	F23S
BALL VA	VBF	VBFBK003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VBF	VBFBK007	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F23S
BALL VA	VB1	VBFBK008	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PEEK SEATS API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F23S
BALL VA	VB7	VBFBKS03	1/2"	1 1/2"	***BORE, W-OPF-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACERP-1718-999-6300-004/EXT STEM LENGTH=100/316L SS OVERLAY ON SEAL POCKETS***	F23S
BALL VA	VB7	VBFBKS07	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE(RP-1718-999-6300-0004)/EXT STEML=100MM	F23S
BALL VA	VB9	VBFBKX07	3/4"	3/4"	SEATS API CL800 W/XXS FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBR	VBRBF007	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VBR	VBRBF008	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VBR	VBRBF009	26"	30"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB2	VBRBF012	2"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PEEK SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB2	VBRBF013	6"	24"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/PEEK SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	F23S
BALL VA	VB8	VBRBFS07	2"	2"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)/EXT STEM(L=100MM)	F23S
BALL VA	VB8	VBRBFT07	3"	4"	BALL VALVE A352-LCC FLGD-RF LF2 ENP BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)/EXT STEM(L=150MM)	F23S
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	F23S
CAP	C	LC00A326	26"	26"	CAP A420-WPL6 SMLS BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A327	28"	28"	CAP A420-WPL6 SMLS BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A328	30"	30"	CAP A420-WPL6 SMLS BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A329	32"	32"	CAP A420-WPL6 SMLS BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A330	34"	34"	CAP A420-WPL6 SMLS BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A426	36"	36"	CAP A420-WPL6 SMLS BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A427	38"	38"	CAP A420-WPL6 SMLS BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A428	40"	40"	CAP A420-WPL6 SMLS BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A429	44"	44"	CAP A420-WPL6 SMLS BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A435	42"	42"	CAP A420-WPL6 SMLS BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00A514	46"	46"	CAP A420-WPL6 SMLS BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
CAP	C	LC00AF05	3"	24"	CAP A420-WPL6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
CAP	C	LC00AK05	2"	2"	CAP A420-WPL6 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
CAP	C	LC00AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
CAP THD	CT	LCT0AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	F23S
CHECK VA	VCA	VCABF003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F23S
CHECK VA	VCA	VCABF004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 NACE API 594 (RP-1718-999-6300-0004)	F23S
CHECK VA	VCA	VCABF011	26"	42"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL600 NACE API 594 WAFER FOR ASME B16.47-A RF FLANGES(RP-1718-999-6300-0004)	F23S
CHECK VA	VCH	VCHBK002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	F23S
CPLG FULL	CF	LCF0AQ05	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
DOUBLE IBB VA	DFA	LDFAAH04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DLA	LDLAAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DLB	LDLBAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DLC	LDLCAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DLD	LDLDAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DLE	LDLEAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DPA	LDPAAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DPB	LDPBAH04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
DOUBLE IBB VA	DPC	LDPCAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
ELBOLET	TEW	LTEWAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A326	26"	26"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A327	28"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A328	30"	30"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A329	32"	32"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40A330	34"	34"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A427	36"	36"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A428	38"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A429	40"	40"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A430	42"	42"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A431	44"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40A514	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40AF05	3"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40AF11	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40AK06	2"	2"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
ELBOW	E4	LE40AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A326	26"	26"	ELBOW A420-WPL6 90-LR WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A327	28"	28"	ELBOW A420-WPL6 90-LR WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A328	30"	30"	ELBOW A420-WPL6 90-LR WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A329	32"	32"	ELBOW A420-WPL6 90-LR WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A330	34"	34"	ELBOW A420-WPL6 90-LR WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A427	36"	36"	ELBOW A420-WPL6 90-LR WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A428	38"	38"	ELBOW A420-WPL6 90-LR WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A429	40"	40"	ELBOW A420-WPL6 90-LR WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A430	42"	42"	ELBOW A420-WPL6 90-LR WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A431	44"	44"	ELBOW A420-WPL6 90-LR WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90A514	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90AF05	3"	16"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90AF11	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90AK06	2"	2"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
ELBOW	E9	LE90AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
ELBOW	E9S	LE9SAQ00	1/2"	1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH12	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH76	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH77	26"	26"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH78	28"	28"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH79	30"	30"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH80	32"	32"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH81	34"	34"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH82	36"	36"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH83	38"	38"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH84	40"	40"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH85	42"	42"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH86	44"	44"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
FLANGE	F	LF00AH87	46"	46"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
FLG BLIND	FB	LFB0AH04	1/2"	24"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG BLIND	FB	LFB0AH08	26"	46"	FLANGE A350-LF2 CL1 BLIND RF CL600 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	F23S
FLG BLIND	FB1	LFB0AK07	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F23S
FLG BLIND	FB1	LFB0AK08	26"	46"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	F23S
FLG BLIND	FB1	LFB1AL01	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH12	3"	24"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH21	2"	2"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH25	26"	26"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 30.6mm THK NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH26	28"	28"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 32.7mm THK NACE (RP-1718-999-6300-0002)	F23S
FLG JACK	FJ	LFJ0AH27	30"	30"	FLANGE A350-LF2 CL1 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 34.8mm THK NACE (RP-1718-999-6300-0002)	F23S
FLG RED	RF	LRF0AH05	2"	2"	***FLANGE A350-LF2 CL1 WN-REDUCING RF CL600 (ASME B16.5) NACE SCH160 x SCH160 (RP-1718-999-6300-0002)***	F23S
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F23S
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F23S
GATE VA	VGA	VGABF005	2"	6"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 NACE API 600 (RP-1718-999-6300-0004)	F23S
GATE VA	VGA	VGABF006	8"	24"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	F23S
GATE VA	VGA	VGABF007	26"	46"	GATE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	F23S
GATE VA	VGA	VGABK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACE API 602 (RP-1718-999-6300-0004)	F23S
GATE VA	VGF	VGFBF002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	F23S
GATE VA	VGX	VGXBK002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLAIN SOLID WEDGE API CL800 NACEAPI 602 (RP-1718-999-6300-0004)	F23S
GLOBE VA	VLA	VLABF002	2"	4"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 NACE BS 1873 (RP-1718-999-6300-0004)	F23S
GLOBE VA	VLA	VLABF004	6"	8"	GLOBE VALVE A352-LCC FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	F23S
GLOBE VA	VLA	VLABK002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y PLUG TYPE DISC API CL800 NACE BS 5352 (RP-1718-999-6300-0004)	F23S
INSUL GASKET	GK	LGK0ZH00	3"	3"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F23S
NEEDLE VA	VNE	VNEBK002	3/4"	1"	NEEDLE VALVE A350-LF2 CL1 SW 316SS ***W/STELLITE SEATS & DISC*** BB OS&Y NEEDLE TYPE DISC API CL800 NACE API 602 (RP-1718-999-6300-0004)	F23S
NIPPLE TOE	NTO	LNTOAN04	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	F23S
NIPPLE TOE	NTT	LNTTAN02	1/2"	1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A362	26"	26"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 30.6mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A363	28"	28"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 32.7mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A364	30"	30"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 34.8mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A365	32"	32"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 36.8mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A366	34"	34"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 38.9mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A455	36"	36"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 41.0mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A456	38"	38"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 43.1mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A457	40"	40"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 45.2mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A458	42"	42"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 47.3mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A459	44"	44"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 49.4mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00A520	46"	46"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 51.4mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00AF11	3"	16"	PIPE A333-6 SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
PIPE	P	LP00AF30	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH80 W/S2 AT-46C(RP-1718-999-6300-0002)	F23S
PIPE	P	LP00AK09	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F23S
PIPE	P	LP00AK17	2"	2"	PIPE A333-6 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
PLUG	PLG	LPLGAW05	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PLUG VA	VPL	VPLBF003	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS API CL800 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	F23S
PLUG VA	VPL	VPLBF006	2"	4"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F23S
PLUG VA	VPL	VPLBF007	6"	16"	PLUG VALVE A352-LCC FLGD-RF 304SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	F23S
RED CON	RC	LRC0A326	26"	26"	REDUCER A420-WPL6 CON. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A327	28"	28"	REDUCER A420-WPL6 CON. WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A328	30"	30"	REDUCER A420-WPL6 CON. WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A329	32"	32"	REDUCER A420-WPL6 CON. WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A330	34"	34"	REDUCER A420-WPL6 CON. WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A427	36"	36"	REDUCER A420-WPL6 CON. WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A428	38"	38"	REDUCER A420-WPL6 CON. WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A429	40"	40"	REDUCER A420-WPL6 CON. WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A430	42"	42"	REDUCER A420-WPL6 CON. WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A431	44"	44"	REDUCER A420-WPL6 CON. WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0A514	46"	46"	REDUCER A420-WPL6 CON. WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0AF05	3"	16"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0AF11	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
RED CON	RC	LRC0AK06	2"	2"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A326	26"	26"	REDUCER A420-WPL6 ECC. WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A327	28"	28"	REDUCER A420-WPL6 ECC. WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A328	30"	30"	REDUCER A420-WPL6 ECC. WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A329	32"	32"	REDUCER A420-WPL6 ECC. WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A330	34"	34"	REDUCER A420-WPL6 ECC. WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A427	36"	36"	REDUCER A420-WPL6 ECC. WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A428	38"	38"	REDUCER A420-WPL6 ECC. WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A429	40"	40"	REDUCER A420-WPL6 ECC. WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A430	42"	42"	REDUCER A420-WPL6 ECC. WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A431	44"	44"	REDUCER A420-WPL6 ECC. WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0A514	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0AF05	3"	16"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0AF11	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
RED ECC	RE	LRE0AK06	2"	2"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
SINGLE IBB VA	SFA	LSFAAH04	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLA	LSLAAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLB	LSLBAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLC	LSLCAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLD	LSLDAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLE	LSLEAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SLF	LSLFAH00	3"	3"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3 FLGD-RF x 3" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SP1	LSP1AH00	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL600 NACE 3/4 FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SPA	LSPAAH04	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SPB	LSPBAH04	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S
SINGLE IBB VA	SPC	LSPCAH04	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PTFE SEATS ANSI CL600 NACE 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SOCKOLET	TSO	LTSOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF00AK72	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF00AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK58	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH80 (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK59	26"	26"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK60	28"	28"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK61	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK62	32"	32"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK63	34"	34"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK64	36"	36"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK65	38"	38"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK66	40"	40"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK67	42"	42"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK68	44"	44"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLANGE	F1	LF10AK69	46"	46"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
SPCL FLG JACK	FJ1	LFJ0AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F23S
SPCL FLG JACK	FJ1	LFJ1AK11	3"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80 NACE (RP-1718-999-6300-0002)	F23S
SPCL FLG JACK	FJ1	LFJ1AK12	2"	2"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	F23S
SPCL FLG JACK	FJ1	LFJ1AK13	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) W/JACK SCREW 34.8mm THK NACE (RP-1718-999-6300-0002)	F23S
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	F23S
SPCL GASKET	G1	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	F23S
SPCL GASKET	G1	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	F23S
SPE BLIND	FSB	LFSBAH12	1/2"	8"	FLANGE A516-70 FIGURE-8 BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	F23S
SPE BLIND	FSB	LFSBAH13	10"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	F23S
SPE BLIND	FSB	LFSBAH15	26"	30"	FLANGE A516-70 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.47-A) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	F23S
SWG CON B-P	RCB	LRCBAF05	3"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	F23S
SWG CON B-P	RCB	LRCBAK05	2"	2"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	F23S
SWG CON PE	RCP	LRCPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F23S
SWG CON P-T	RC2	LRC2AN03	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0002)	F23S
SWG ECC B-P	REB	LREBAF05	3"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH80 (RP-1718-999-6300-0002)	F23S
SWG ECC B-P	REB	LREBAK05	2"	2"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	F23S
SWG ECC PE	REP	LREPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A326	26"	26"	TEE A420-WPL6 EQUAL WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A327	28"	28"	TEE A420-WPL6 EQUAL WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A328	30"	30"	TEE A420-WPL6 EQUAL WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A329	32"	32"	TEE A420-WPL6 EQUAL WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A330	34"	34"	TEE A420-WPL6 EQUAL WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A427	36"	36"	TEE A420-WPL6 EQUAL WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A428	38"	38"	TEE A420-WPL6 EQUAL WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A429	40"	40"	TEE A420-WPL6 EQUAL WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A430	42"	42"	TEE A420-WPL6 EQUAL WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0A431	44"	44"	TEE A420-WPL6 EQUAL WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0A514	46"	46"	TEE A420-WPL6 EQUAL WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0AF05	3"	16"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0AF11	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0AK06	2"	2"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
TEE	TE	LTE0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A326	26"	26"	TEE A420-WPL6 REDUCING WELDED BE NACE 30.6mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A327	28"	28"	TEE A420-WPL6 REDUCING WELDED BE NACE 32.7mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A328	30"	30"	TEE A420-WPL6 REDUCING WELDED BE NACE 34.8mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A329	32"	32"	TEE A420-WPL6 REDUCING WELDED BE NACE 36.8mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A330	34"	34"	TEE A420-WPL6 REDUCING WELDED BE NACE 38.9mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A427	36"	36"	TEE A420-WPL6 REDUCING WELDED BE NACE 41.0mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A428	38"	38"	TEE A420-WPL6 REDUCING WELDED BE NACE 43.1mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A429	40"	40"	TEE A420-WPL6 REDUCING WELDED BE NACE 45.2mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A430	42"	42"	TEE A420-WPL6 REDUCING WELDED BE NACE 47.3mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A431	44"	44"	TEE A420-WPL6 REDUCING WELDED BE NACE 49.4mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0A514	46"	46"	TEE A420-WPL6 REDUCING WELDED BE NACE 51.4mm THK (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0AF05	3"	16"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0AF11	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0AK06	2"	2"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
TEE RED	TR	LTR0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	F23S
THREADOLET	TTO	LTTOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	F23S
WELDOLET	TWO	LTWOAF05	3"	8"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH80 (RP-1718-999-6300-0002)	F23S
WELDOLET	TWO	LTWOAK06	2"	2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0002)	F23S
BOLTS	B	LB00A003	1/2"	46"	STUD BOLT A193-B16 W/2 HEAVY HEX. NUTS(B18.2.2) A194-4	F42
CAP	C	LC00D200	26"	26"	CAP A234-WP11 CL1 SMLS BE 29.0mm THK	F42
CAP	C	LC00D300	28"	28"	CAP A234-WP11 CL1 SMLS BE 31.1mm THK	F42
CAP	C	LC00D301	30"	30"	CAP A234-WP11 CL1 SMLS BE 33.2mm THK	F42
CAP	C	LC00D302	32"	32"	CAP A234-WP11 CL1 SMLS BE 35.3mm THK	F42
CAP	C	LC00D303	34"	34"	CAP A234-WP11 CL1 SMLS BE 37.4mm THK	F42
CAP	C	LC00D304	36"	36"	CAP A234-WP11 CL1 SMLS BE 39.5mm THK	F42
CAP	C	LC00D400	38"	38"	CAP A234-WP11 CL1 SMLS BE 41.6mm THK	F42
CAP	C	LC00D401	40"	40"	CAP A234-WP11 CL1 SMLS BE 43.8mm THK	F42
CAP	C	LC00D402	42"	42"	CAP A234-WP11 CL1 SMLS BE 45.9mm THK	F42
CAP	C	LC00D403	44"	44"	CAP A234-WP11 CL1 SMLS BE 48.0mm THK	F42
CAP	C	LC00D500	46"	46"	CAP A234-WP11 CL1 SMLS BE 50.1mm THK	F42
CAP	C	LC00DD00	3"	3"	CAP A234-WP11 CL1 SMLS BE SCH40	F42
CAP	C	LC00DF00	2"	2"	CAP A234-WP11 CL1 SMLS BE SCH80	F42
CAP	C	LC00DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED SW CL3000	F42
CAP THD	CT	LCT0DP00	1/2"	1 1/2"	CAP A182-F11 CL2 FORGED TE(NPT-F) CL3000	F42
CHECK VA	VCH	VCHDF001	2"	24"	CHECK VALVE A217-WC6 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC PC SWING ANSI CL600 API 6D	F42
CHECK VA	VCH	VCHDK002	1/2"	1 1/2"	CHECK VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC WC PISTON TYPE DISC API CL800 BS 5352	F42
CPLG FULL	CF	LCF0DP00	1/2"	1 1/2"	COUPLING A182-F11 CL2 FULL(STRAIGHT) FORGED SW CL3000	F42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DFA	LDFADH00	1/2"	1/2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DLA	LDLADH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DLB	LDLBDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DLC	LDLCDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DLD	LDLDDH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DLE	LDLEDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DPA	LDPADH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DPB	LDPBDH00	1"	1"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
DOUBLE IBB VA	DPC	LDPCDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	F42
ELBOLET	TEW	LTEWDP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 ELBOW OUTLET FORGED SW CL3000	F42
ELBOW	E4	LE40D200	26"	26"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 29.0mm THK	F42
ELBOW	E4	LE40D300	28"	28"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 31.1mm THK	F42
ELBOW	E4	LE40D301	30"	30"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 33.2mm THK	F42
ELBOW	E4	LE40D302	32"	32"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 35.3mm THK	F42
ELBOW	E4	LE40D303	34"	34"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 37.4mm THK	F42
ELBOW	E4	LE40D304	36"	36"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 39.5mm THK	F42
ELBOW	E4	LE40D400	38"	38"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 41.6mm THK	F42
ELBOW	E4	LE40D401	40"	40"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 43.8mm THK	F42
ELBOW	E4	LE40D402	42"	42"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 45.9mm THK	F42
ELBOW	E4	LE40D403	44"	44"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 48.0mm THK	F42
ELBOW	E4	LE40D500	46"	46"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE 50.1mm THK	F42
ELBOW	E4	LE40DD00	3"	3"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH40	F42
ELBOW	E4	LE40DF00	2"	2"	ELBOW A234-WP11 CL1 DEG-45 SMLS BE SCH80	F42
ELBOW	E4	LE40DF01	18"	24"	ELBOW A234-WP11 CL1 DEG-45 WELDED BE SCH80	F42
ELBOW	E4	LE40DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-45 FORGED SW CL3000	F42
ELBOW	E9	LE90D200	26"	26"	ELBOW A234-WP11 CL1 90-LR WELDED BE 29.0mm THK	F42
ELBOW	E9	LE90D300	28"	28"	ELBOW A234-WP11 CL1 90-LR WELDED BE 31.1mm THK	F42
ELBOW	E9	LE90D301	30"	30"	ELBOW A234-WP11 CL1 90-LR WELDED BE 33.2mm THK	F42
ELBOW	E9	LE90D302	32"	32"	ELBOW A234-WP11 CL1 90-LR WELDED BE 35.3mm THK	F42
ELBOW	E9	LE90D303	34"	34"	ELBOW A234-WP11 CL1 90-LR WELDED BE 37.4mm THK	F42
ELBOW	E9	LE90D304	36"	36"	ELBOW A234-WP11 CL1 90-LR WELDED BE 39.5mm THK	F42
ELBOW	E9	LE90D400	38"	38"	ELBOW A234-WP11 CL1 90-LR WELDED BE 41.6mm THK	F42
ELBOW	E9	LE90D401	40"	40"	ELBOW A234-WP11 CL1 90-LR WELDED BE 43.8mm THK	F42
ELBOW	E9	LE90D402	42"	42"	ELBOW A234-WP11 CL1 90-LR WELDED BE 45.9mm THK	F42
ELBOW	E9	LE90D403	44"	44"	ELBOW A234-WP11 CL1 90-LR WELDED BE 48.0mm THK	F42
ELBOW	E9	LE90D500	46"	46"	ELBOW A234-WP11 CL1 90-LR WELDED BE 50.1mm THK	F42
ELBOW	E9	LE90DD00	3"	3"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH40	F42
ELBOW	E9	LE90DF00	2"	2"	ELBOW A234-WP11 CL1 90-LR SMLS BE SCH80	F42
ELBOW	E9	LE90DP00	1/2"	1 1/2"	ELBOW A182-F11 CL2 DEG-90 FORGED SW CL3000	F42
FLANGE	F	LF00DH00	3"	3"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.5) SCH40	F42
FLANGE	F	LF00DH01	2"	2"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.5) SCH80	F42
FLANGE	F	LF00DH02	26"	26"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 29.0mm THK	F42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00DH03	28"	28"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 31.1mm THK	F42
FLANGE	F	LF00DH04	30"	30"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 33.2mm THK	F42
FLANGE	F	LF00DH05	32"	32"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 35.3mm THK	F42
FLANGE	F	LF00DH06	34"	34"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 37.4mm THK	F42
FLANGE	F	LF00DH07	36"	36"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 39.5mm THK	F42
FLANGE	F	LF00DH08	38"	38"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 41.6mm THK	F42
FLANGE	F	LF00DH09	40"	40"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 43.8mm THK	F42
FLANGE	F	LF00DH10	42"	42"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 45.9mm THK	F42
FLANGE	F	LF00DH11	44"	44"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 48.0mm THK	F42
FLANGE	F	LF00DH12	46"	46"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.47-A) 50.1mm THK	F42
FLANGE	F	LF00DH13	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL600 (ASME B16.5) SCH80	F42
FLG BLIND	FB	LFB0DH00	1/2"	24"	FLANGE A182-F11CL2 BLIND RTJ CL600 (ASME B16.5)	F42
FLG BLIND	FB1	LFB1DK00	2"	24"	FLANGE A182-F11CL2 BLIND RTJ CL900 (ASME B16.5)	F42
FLG BLIND	FB1	LFB1DK01	26"	46"	FLANGE A182-F11CL2 BLIND RTJ CL900 (ASME B16.47-A)	F42
FLG BLIND	FB1	LFB1DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 BLIND RTJ CL1500 (ASME B16.5)	F42
FLG JACK	FJ	LFJ0DH00	3"	3"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.5) W/JACK SCREW SCH40	F42
FLG JACK	FJ	LFJ0DH01	2"	2"	FLANGE A182-F11CL2 WN RTJ CL600 (ASME B16.5) W/JACK SCREW SCH80	F42
FLG JACK	FJ	LFJ0DH02	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL600 (ASME B16.5) W/JACK SCREW SCH80	F42
GASKET	G	LG00ZH05	1/2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL600 (ASME B16.5) 130 HRB MAX	F42
GASKET	G	LG00ZH06	26"	46"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL600 (ASME B16.47-A) 130 HRB MAX	F42
GATE VA	VGA	VGADF001	2"	6"	GATE VALVE A217-WC6 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC PB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F42
GATE VA	VGA	VGADF002	8"	24"	GATE VALVE A217-WC6 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC PB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F42
GATE VA	VGA	VGADK002	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC WB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F42
GATE VA	VGF	VGFDF002	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC WB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602 FOR EQUIP NOZZLE CONN.	F42
GATE VA	VGX	VGXDK002	1/2"	1 1/2"	GATE VALVE A182-F11 CL2 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC WB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F42
GLOBE VA	VLA	VLADF001	2"	4"	GLOBE VALVE A217-WC6 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC PB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F42
GLOBE VA	VLA	VLADK002	1/2"	1 1/2"	GLOBE VALVE A182-F11 CL2 SW 13Cr W/STELLITE SEATS & DISC WB OS&Y PLUG TYPE DISC API CL800 BS 5352	F42
NIPPLE TOE	NTO	LNTODK00	1/2"	1 1/2"	NIPPLE A335-P11 SMLS TOE(NPT-M) 75mm LONG SCH160	F42
PIPE	P	LP00D200	26"	26"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 29.0mm THK	F42
PIPE	P	LP00D300	28"	28"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 31.1mm THK	F42
PIPE	P	LP00D301	30"	30"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 33.2mm THK	F42
PIPE	P	LP00D302	32"	32"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 35.3mm THK	F42
PIPE	P	LP00D303	34"	34"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 37.4mm THK	F42
PIPE	P	LP00D304	36"	36"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 39.5mm THK	F42
PIPE	P	LP00D400	38"	38"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 41.6mm THK	F42
PIPE	P	LP00D401	40"	40"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 43.8mm THK	F42
PIPE	P	LP00D402	42"	42"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 45.9mm THK	F42
PIPE	P	LP00D403	44"	44"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 48.0mm THK	F42
PIPE	P	LP00D500	46"	46"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT 50.1mm THK	F42
PIPE	P	LP00DD00	3"	3"	PIPE A335-P11 SMLS BE SCH40	F42
PIPE	P	LP00DF00	1/2"	1 1/2"	PIPE A335-P11 SMLS PE SCH80	F42
PIPE	P	LP00DF01	2"	2"	PIPE A335-P11 SMLS BE SCH80	F42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00DF02	18"	24"	PIPE A691-1.1/4Cr CL.22 EFW BE 100% RT SCH80	F42
PLUG	PLG	LPLGDW02	1/2"	1 1/2"	PLUG A182-F11 CL2 ROUND HEAD FORGED TE(NPT-M)	F42
RED CON	RC	LRC0D200	26"	26"	REDUCER A234-WP11 CL1 CON. WELDED BE 29.0mm THK	F42
RED CON	RC	LRC0D300	28"	28"	REDUCER A234-WP11 CL1 CON. WELDED BE 31.1mm THK	F42
RED CON	RC	LRC0D301	30"	30"	REDUCER A234-WP11 CL1 CON. WELDED BE 33.2mm THK	F42
RED CON	RC	LRC0D302	32"	32"	REDUCER A234-WP11 CL1 CON. WELDED BE 35.3mm THK	F42
RED CON	RC	LRC0D303	34"	34"	REDUCER A234-WP11 CL1 CON. WELDED BE 37.4mm THK	F42
RED CON	RC	LRC0D304	36"	36"	REDUCER A234-WP11 CL1 CON. WELDED BE 39.5mm THK	F42
RED CON	RC	LRC0D400	38"	38"	REDUCER A234-WP11 CL1 CON. WELDED BE 41.6mm THK	F42
RED CON	RC	LRC0D401	40"	40"	REDUCER A234-WP11 CL1 CON. WELDED BE 43.8mm THK	F42
RED CON	RC	LRC0D402	42"	42"	REDUCER A234-WP11 CL1 CON. WELDED BE 45.9mm THK	F42
RED CON	RC	LRC0D403	44"	44"	REDUCER A234-WP11 CL1 CON. WELDED BE 48.0mm THK	F42
RED CON	RC	LRC0D500	46"	46"	REDUCER A234-WP11 CL1 CON. WELDED BE 50.1mm THK	F42
RED CON	RC	LRC0DD00	3"	3"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH40	F42
RED CON	RC	LRC0DF00	2"	2"	REDUCER A234-WP11 CL1 CON. SMLS BE SCH80	F42
RED CON	RC	LRC0DF01	18"	24"	REDUCER A234-WP11 CL1 CON. WELDED BE SCH80	F42
RED ECC	RE	LRE0D200	26"	26"	REDUCER A234-WP11 CL1 ECC. WELDED BE 29.0mm THK	F42
RED ECC	RE	LRE0D300	28"	28"	REDUCER A234-WP11 CL1 ECC. WELDED BE 31.1mm THK	F42
RED ECC	RE	LRE0D301	30"	30"	REDUCER A234-WP11 CL1 ECC. WELDED BE 33.2mm THK	F42
RED ECC	RE	LRE0D302	32"	32"	REDUCER A234-WP11 CL1 ECC. WELDED BE 35.3mm THK	F42
RED ECC	RE	LRE0D303	34"	34"	REDUCER A234-WP11 CL1 ECC. WELDED BE 37.4mm THK	F42
RED ECC	RE	LRE0D304	36"	36"	REDUCER A234-WP11 CL1 ECC. WELDED BE 39.5mm THK	F42
RED ECC	RE	LRE0D400	38"	38"	REDUCER A234-WP11 CL1 ECC. WELDED BE 41.6mm THK	F42
RED ECC	RE	LRE0D401	40"	40"	REDUCER A234-WP11 CL1 ECC. WELDED BE 43.8mm THK	F42
RED ECC	RE	LRE0D402	42"	42"	REDUCER A234-WP11 CL1 ECC. WELDED BE 45.9mm THK	F42
RED ECC	RE	LRE0D403	44"	44"	REDUCER A234-WP11 CL1 ECC. WELDED BE 48.0mm THK	F42
RED ECC	RE	LRE0D500	46"	46"	REDUCER A234-WP11 CL1 ECC. WELDED BE 50.1mm THK	F42
RED ECC	RE	LRE0DD00	3"	3"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH40	F42
RED ECC	RE	LRE0DF00	2"	2"	REDUCER A234-WP11 CL1 ECC. SMLS BE SCH80	F42
RED ECC	RE	LRE0DF01	18"	24"	REDUCER A234-WP11 CL1 ECC. WELDED BE SCH80	F42
SINGLE IBB VA	SFA	LSFADH00	1/2"	1/2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1/2" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SLA	LSLADH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SLB	LSLBDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SLC	LSLCDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 2" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SLD	LSLDDH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 3/4" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SLE	LSLEDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 3/4" FLGD-RTJ SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SPA	LSPADH00	3/4"	3/4"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 3/4" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SPB	LSPBDH00	1"	1"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 1" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SINGLE IBB VA	SPC	LSPCDH00	2"	2"	NEEDLE VALVE A182-F11 CL2 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL600 2" FLGD-RTJ x 1/2" TE(NPT-F) SBB(1 NEEDLE & NEEDLE VENT)	F42
SOCKOLET	TS1	LTS1DP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000 (FITTING INLET TO BE BEVELED TO WELD ON CAP)	F42
SOCKOLET	TSO	LTSODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 SOCKET OUTLET FORGED SW CL3000	F42
SPCL FLANGE	F1	LF10DK00	3"	3"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH40	F42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10DK01	2"	2"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) SCH80	F42
SPCL FLANGE	F1	LF10DK02	26"	26"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 29.0mm THK	F42
SPCL FLANGE	F1	LF10DK03	28"	28"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 31.1mm THK	F42
SPCL FLANGE	F1	LF10DK04	30"	30"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 33.2mm THK	F42
SPCL FLANGE	F1	LF10DK05	32"	32"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 35.3mm THK	F42
SPCL FLANGE	F1	LF10DK06	34"	34"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 37.4mm THK	F42
SPCL FLANGE	F1	LF10DK07	36"	36"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 39.5mm THK	F42
SPCL FLANGE	F1	LF10DK08	38"	38"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 41.6mm THK	F42
SPCL FLANGE	F1	LF10DK09	40"	40"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 43.8mm THK	F42
SPCL FLANGE	F1	LF10DK10	42"	42"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 45.9mm THK	F42
SPCL FLANGE	F1	LF10DK11	44"	44"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 48.0mm THK	F42
SPCL FLANGE	F1	LF10DK12	46"	46"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.47-A) 50.1mm THK	F42
SPCL FLANGE	F1	LF10DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL1500 (ASME B16.5) SCH80	F42
SPCL FLG JACK	FJ1	LFJ1DK00	3"	3"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40	F42
SPCL FLG JACK	FJ1	LFJ1DK01	2"	2"	FLANGE A182-F11CL2 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	F42
SPCL FLG JACK	FJ1	LFJ1DL00	1/2"	1 1/2"	FLANGE A182-F11CL2 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	F42
SPCL GASKET	G1	LG10ZK00	26"	46"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 130 HRB MAX	F42
SPCL GASKET	G1	LG10ZK02	2"	24"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 130 HRB MAX	F42
SPCL GASKET	G1	LG10ZL00	1/2"	1 1/2"	GASKET 5Cr-1/2Mo RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 130 HRB MAX	F42
SPE BLIND	FSB	LFSBDH00	1/2"	8"	FLANGE A387-11CL2 FIGURE-8 BLANKS RTJ CL600 (ASME B16.48)	F42
SPE BLIND	FSB	LFSBDH01	10"	24"	FLANGE A387-11CL2 PADDLE SPACER AND BLANKS RTJ CL600 (ASME B16.48)	F42
SWG CON B-P	RCB	LRCBDD00	3"	3"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH40	F42
SWG CON B-P	RCB	LRCBDF00	2"	2"	SWAGE A234-WP11 CL1 CON. SMLS BLE x PSE SCH80	F42
SWG CON PE	RCP	LRCPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 CON. SMLS PE SCH80	F42
SWG ECC B-P	REB	LREBDD00	3"	3"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH40	F42
SWG ECC B-P	REB	LREBDF00	2"	2"	SWAGE A234-WP11 CL1 ECC. SMLS BLE x PSE SCH80	F42
SWG ECC PE	REP	LREPDF00	1/2"	1 1/2"	SWAGE A234-WP11 CL1 ECC. SMLS PE SCH80	F42
TEE	TE	LTE0D200	26"	26"	TEE A234-WP11 CL1 EQUAL WELDED BE 29.0mm THK	F42
TEE	TE	LTE0D300	28"	28"	TEE A234-WP11 CL1 EQUAL WELDED BE 31.1mm THK	F42
TEE	TE	LTE0D301	30"	30"	TEE A234-WP11 CL1 EQUAL WELDED BE 33.2mm THK	F42
TEE	TE	LTE0D302	32"	32"	TEE A234-WP11 CL1 EQUAL WELDED BE 35.3mm THK	F42
TEE	TE	LTE0D303	34"	34"	TEE A234-WP11 CL1 EQUAL WELDED BE 37.4mm THK	F42
TEE	TE	LTE0D304	36"	36"	TEE A234-WP11 CL1 EQUAL WELDED BE 39.5mm THK	F42
TEE	TE	LTE0D400	38"	38"	TEE A234-WP11 CL1 EQUAL WELDED BE 41.6mm THK	F42
TEE	TE	LTE0D401	40"	40"	TEE A234-WP11 CL1 EQUAL WELDED BE 43.8mm THK	F42
TEE	TE	LTE0D402	42"	42"	TEE A234-WP11 CL1 EQUAL WELDED BE 45.9mm THK	F42
TEE	TE	LTE0D403	44"	44"	TEE A234-WP11 CL1 EQUAL WELDED BE 48.0mm THK	F42
TEE	TE	LTE0D500	46"	46"	TEE A234-WP11 CL1 EQUAL WELDED BE 50.1mm THK	F42
TEE	TE	LTE0DD00	3"	3"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH40	F42
TEE	TE	LTE0DF00	2"	2"	TEE A234-WP11 CL1 EQUAL SMLS BE SCH80	F42
TEE	TE	LTE0DF01	18"	24"	TEE A234-WP11 CL1 EQUAL WELDED BE SCH80	F42
TEE	TE	LTE0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 EQUAL FORGED SW CL3000	F42

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0D200	26"	26"	TEE A234-WP11 CL1 REDUCING WELDED BE 29.0mm THK	F42
TEE RED	TR	LTR0D300	28"	28"	TEE A234-WP11 CL1 REDUCING WELDED BE 31.1mm THK	F42
TEE RED	TR	LTR0D301	30"	30"	TEE A234-WP11 CL1 REDUCING WELDED BE 33.2mm THK	F42
TEE RED	TR	LTR0D302	32"	32"	TEE A234-WP11 CL1 REDUCING WELDED BE 35.3mm THK	F42
TEE RED	TR	LTR0D303	34"	34"	TEE A234-WP11 CL1 REDUCING WELDED BE 37.4mm THK	F42
TEE RED	TR	LTR0D304	36"	36"	TEE A234-WP11 CL1 REDUCING WELDED BE 39.5mm THK	F42
TEE RED	TR	LTR0D400	38"	38"	TEE A234-WP11 CL1 REDUCING WELDED BE 41.6mm THK	F42
TEE RED	TR	LTR0D401	40"	40"	TEE A234-WP11 CL1 REDUCING WELDED BE 43.8mm THK	F42
TEE RED	TR	LTR0D402	42"	42"	TEE A234-WP11 CL1 REDUCING WELDED BE 45.9mm THK	F42
TEE RED	TR	LTR0D403	44"	44"	TEE A234-WP11 CL1 REDUCING WELDED BE 48.0mm THK	F42
TEE RED	TR	LTR0D500	46"	46"	TEE A234-WP11 CL1 REDUCING WELDED BE 50.1mm THK	F42
TEE RED	TR	LTR0DD00	3"	3"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH40	F42
TEE RED	TR	LTR0DF00	2"	2"	TEE A234-WP11 CL1 REDUCING SMLS BE SCH80	F42
TEE RED	TR	LTR0DF01	18"	24"	TEE A234-WP11 CL1 REDUCING WELDED BE SCH80	F42
TEE RED	TR	LTR0DP00	1/2"	1 1/2"	TEE A182-F11 CL2 REDUCING FORGED SW CL3000	F42
THREADOLET	TTO	LTTODP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F11 CL2 THREADED OUTLET FORGED TE(NPT-F) CL3000	F42
WELDOLET	TWO	LTWODD00	3"	3"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH40	F42
WELDOLET	TWO	LTWODF00	2"	2"	REINFORCED BRANCH OUTLET A182-F11 CL2 WELDED OUTLET FORGED BE SCH80	F42
BALL VA	VBF	VBFCF001	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VBF	VBFCF002	6"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VBF	VBFCF003	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VB1	VBFCF013	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F46
BALL VA	VB1	VBFCF014	6"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F46
BALL VA	VBF	VBFCK001	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/KELF SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VB1	VBFCK004	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	F46
BALL VA	VB9	VBFCKX01	3/4"	3/4"	API CL800 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VBR	VBRCF001	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VBR	VBRCF002	6"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VBR	VBRCF003	26"	30"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/KELF SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD/CRYOGENIC(RP-1718-999-1300-0028)	F46
BALL VA	VB2	VBRCF011	2"	4"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F46
BALL VA	VB2	VBRCF012	6"	24"	BALL VALVE A351-CF8M FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F46
BOLTS	B	LB00A004	1/2"	46"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	F46
CAP	C	LC00C202	26"	26"	CAP A403-WP304L SMLS BE 26.4mm THK	F46
CAP	C	LC00C203	28"	28"	CAP A403-WP304L SMLS BE 28.4mm THK	F46
CAP	C	LC00C307	30"	30"	CAP A403-WP304L SMLS BE 31.7mm THK	F46
CAP	C	LC00C308	32"	32"	CAP A403-WP304L SMLS BE 32.5mm THK	F46
CAP	C	LC00C309	34"	34"	CAP A403-WP304L SMLS BE 34.5mm THK	F46
CAP	C	LC00C310	36"	36"	CAP A403-WP304L SMLS BE 36.5mm THK	F46
CAP	C	LC00C311	38"	38"	CAP A403-WP304L SMLS BE 38.5mm THK	F46
CAP	C	LC00C404	40"	40"	CAP A403-WP304L SMLS BE 40.6mm THK	F46
CAP	C	LC00C405	42"	42"	CAP A403-WP304L SMLS BE 42.6mm THK	F46
CAP	C	LC00C406	44"	44"	CAP A403-WP304L SMLS BE 44.6mm THK	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00C407	46"	46"	CAP A403-WP304L SMLS BE 46.6mm THK	F46
CAP	C	LC00CE01	12"	24"	CAP A403-WP304L SMLS BE SCH60	F46
CAP	C	LC00CP00	1/2"	1 1/2"	CAP A182-F304L FORGED SW CL3000	F46
CAP	C	LC00CQ00	2"	2"	CAP A403-WP304L SMLS BE SCH10S	F46
CAP	C	LC00CS01	3"	6"	CAP A403-WP304L SMLS BE SCH40S	F46
CAP	C	LC00CT01	8"	10"	CAP A403-WP304L SMLS BE SCH80S	F46
CAP THD	CT	LCT0CP00	1/2"	1 1/2"	CAP A182-F304L FORGED TE(NPT-F) CL3000	F46
CHECK VA	VCA	VCACF001	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594 CRYOGENIC(RP-1718-999-1300-0028)	F46
CHECK VA	VCA	VCACF003	26"	42"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES CRYOGENIC(RP-1718-999-1300-0028)	F46
CHECK VA	VCH	VCHCK005	1/2"	1 1/2"	CHECK VALVE A182-F304L SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	F46
CPLG FULL	CF	LCF0CP00	1/2"	1 1/2"	COUPLING A182-F304L FULL(STRAIGHT) FORGED SW CL3000	F46
DOUBLE IBB VA	DF1	LDF1CH00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DFA	LDFACH03	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DL1	LDL1CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DL2	LDL2CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DL3	LDL3CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DL4	LDL4CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DL5	LDL5CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DLA	LDLACH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DLB	LDLBCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DLC	LDLCCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DLD	LDLDCH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DLE	LDLECH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DP1	LDP1CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DP2	LDP2CH00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DP3	LDP3CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
DOUBLE IBB VA	DPA	LDPACH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DPB	LDPBCH03	1"	1"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
DOUBLE IBB VA	DPC	LDPCCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
ELBOLET	TEW	LTEWCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L ELBOW OUTLET FORGED SW CL3000	F46
ELBOW	E4	LE40C202	26"	26"	ELBOW A403-WP304L DEG-45 WELDED BE 26.4mm THK	F46
ELBOW	E4	LE40C203	28"	28"	ELBOW A403-WP304L DEG-45 WELDED BE 28.4mm THK	F46
ELBOW	E4	LE40C306	30"	30"	ELBOW A403-WP304L DEG-45 WELDED BE 31.7mm THK	F46
ELBOW	E4	LE40C307	32"	32"	ELBOW A403-WP304L DEG-45 WELDED BE 32.5mm THK	F46
ELBOW	E4	LE40C308	34"	34"	ELBOW A403-WP304L DEG-45 WELDED BE 34.5mm THK	F46
ELBOW	E4	LE40C309	36"	36"	ELBOW A403-WP304L DEG-45 WELDED BE 36.5mm THK	F46
ELBOW	E4	LE40C310	38"	38"	ELBOW A403-WP304L DEG-45 WELDED BE 38.5mm THK	F46
ELBOW	E4	LE40C404	40"	40"	ELBOW A403-WP304L DEG-45 WELDED BE 40.6mm THK	F46
ELBOW	E4	LE40C405	42"	42"	ELBOW A403-WP304L DEG-45 WELDED BE 42.6mm THK	F46
ELBOW	E4	LE40C406	44"	44"	ELBOW A403-WP304L DEG-45 WELDED BE 44.6mm THK	F46
ELBOW	E4	LE40C407	46"	46"	ELBOW A403-WP304L DEG-45 WELDED BE 46.6mm THK	F46
ELBOW	E4	LE40CE01	12"	24"	ELBOW A403-WP304L DEG-45 WELDED BE SCH60	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-45 FORGED SW CL3000	F46
ELBOW	E4	LE40CQ00	2"	2"	ELBOW A403-WP304L DEG-45 SMLS BE SCH10S	F46
ELBOW	E4	LE40CS02	3"	6"	ELBOW A403-WP304L DEG-45 SMLS BE SCH40S	F46
ELBOW	E4	LE40CT03	8"	10"	ELBOW A403-WP304L DEG-45 WELDED BE SCH80S	F46
ELBOW	E9	LE90C202	26"	26"	ELBOW A403-WP304L 90-LR WELDED BE 26.4mm THK	F46
ELBOW	E9	LE90C203	28"	28"	ELBOW A403-WP304L 90-LR WELDED BE 28.4mm THK	F46
ELBOW	E9	LE90C306	30"	30"	ELBOW A403-WP304L 90-LR WELDED BE 31.7mm THK	F46
ELBOW	E9	LE90C307	32"	32"	ELBOW A403-WP304L 90-LR WELDED BE 32.5mm THK	F46
ELBOW	E9	LE90C308	34"	34"	ELBOW A403-WP304L 90-LR WELDED BE 34.5mm THK	F46
ELBOW	E9	LE90C309	36"	36"	ELBOW A403-WP304L 90-LR WELDED BE 36.5mm THK	F46
ELBOW	E9	LE90C310	38"	38"	ELBOW A403-WP304L 90-LR WELDED BE 38.5mm THK	F46
ELBOW	E9	LE90C404	40"	40"	ELBOW A403-WP304L 90-LR WELDED BE 40.6mm THK	F46
ELBOW	E9	LE90C405	42"	42"	ELBOW A403-WP304L 90-LR WELDED BE 42.6mm THK	F46
ELBOW	E9	LE90C406	44"	44"	ELBOW A403-WP304L 90-LR WELDED BE 44.6mm THK	F46
ELBOW	E9	LE90C407	46"	46"	ELBOW A403-WP304L 90-LR WELDED BE 46.6mm THK	F46
ELBOW	E9	LE90CE02	12"	24"	ELBOW A403-WP304L 90-LR WELDED BE SCH60	F46
ELBOW	E9	LE90CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-90 FORGED SW CL3000	F46
ELBOW	E9	LE90CQ00	2"	2"	ELBOW A403-WP304L 90-LR SMLS BE SCH10S	F46
ELBOW	E9	LE90CS02	3"	6"	ELBOW A403-WP304L 90-LR SMLS BE SCH40S	F46
ELBOW	E9	LE90CT02	8"	10"	ELBOW A403-WP304L 90-LR SMLS BE SCH80S	F46
FLANGE	F	LF00CH00	2"	2"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH10S	F46
FLANGE	F	LF00CH01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL600 (ASME B16.5) SCH80S	F46
FLANGE	F	LF00CH18	12"	24"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH60	F46
FLANGE	F	LF00CH19	3"	6"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH40S	F46
FLANGE	F	LF00CH20	26"	26"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 26.4mm THK	F46
FLANGE	F	LF00CH21	28"	28"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 28.4mm THK	F46
FLANGE	F	LF00CH22	30"	30"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 31.7mm THK	F46
FLANGE	F	LF00CH23	32"	32"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 32.5mm THK	F46
FLANGE	F	LF00CH24	34"	34"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 34.5mm THK	F46
FLANGE	F	LF00CH25	36"	36"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 36.5mm THK	F46
FLANGE	F	LF00CH26	38"	38"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 38.5mm THK	F46
FLANGE	F	LF00CH27	40"	40"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 40.6mm THK	F46
FLANGE	F	LF00CH28	42"	42"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 42.6mm THK	F46
FLANGE	F	LF00CH29	44"	44"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 44.6mm THK	F46
FLANGE	F	LF00CH30	46"	46"	FLANGE A182-F304L WN RF CL600 (ASME B16.47-A) 46.6mm THK	F46
FLANGE	F	LF00CH31	8"	10"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) SCH80S	F46
FLG BLIND	FB	LFB0CH00	1/2"	24"	FLANGE A182-F304L BLIND RF CL600 (ASME B16.5)	F46
FLG BLIND	FB	LFB0CH03	26"	46"	FLANGE A182-F304L BLIND RF CL600 (ASME B16.47-A)	F46
FLG BLIND	FB1	LFB0CK01	2"	24"	FLANGE A182-F304L BLIND RTJ CL900 (ASME B16.5)	F46
FLG BLIND	FB1	LFB0CL01	1/2"	1 1/2"	FLANGE A182-F304L BLIND RTJ CL1500 (ASME B16.5)	F46
FLG BLIND	FB1	LFB1CK01	26"	46"	FLANGE A182-F304L BLIND RTJ CL900 (ASME B16.47-A)	F46
FLG JACK	FJ	LFJ0CH00	2"	2"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH10S	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG JACK	FJ	LFJ0CH01	1/2"	1 1/2"	FLANGE A182-F304L SW RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F46
FLG JACK	FJ	LFJ0CH09	12"	24"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH60	F46
FLG JACK	FJ	LFJ0CH10	3"	6"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	F46
FLG JACK	FJ	LFJ0CH11	8"	10"	FLANGE A182-F304L WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F46
FLG RED	RF	LRF0CH02	3"	3"	FLANGE A182-F304L WN-REDUCING RF CL600 (ASME B16.5) SCH40S	F46
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F46
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F46
GATE VA	VGA	VGACF004	2"	6"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600 CRYOGENIC(RP-1718-999-1300-0028)	F46
GATE VA	VGA	VGACF005	8"	24"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 CRYOGENIC(RP-1718-999-1300-0028)	F46
GATE VA	VGA	VGACF006	26"	46"	GATE VALVE A351-CF8M FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD CRYOGENIC(RP-1718-999-1300-0028)	F46
GATE VA	VGA	VGACK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	F46
GATE VA	VGF	VGFCF004	1/2"	1 1/2"	GATE VALVE A182-F304L FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602 CRYOGENIC(RP-1718-999-1300-0028) FOR EQUIP NOZZLE CONN.	F46
GATE VA	VGX	VGXCK004	1/2"	1 1/2"	GATE VALVE A182-F304L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	F46
GLOBE VA	VLA	VLACF001	2"	4"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	F46
GLOBE VA	VLA	VLACF003	6"	6"	GLOBE VALVE A351-CF8M FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	F46
GLOBE VA	VLA	VLACK005	1/2"	1 1/2"	GLOBE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	F46
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F46
NEEDLE VA	VNE	VNECK004	3/4"	1"	NEEDLE VALVE A182-F304L SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602 CRYOGENIC(RP-1718-999-1300-0028)	F46
NIPPLE TOE	NTO	LNTOCK01	1/2"	1 1/2"	NIPPLE A312-TP304L SMLS TOE(NPT-M) 75mm LONG SCH160	F46
PIPE	P	LP00C202	26"	26"	PIPE A358-304L CL.1 EFW BE 100% RT 26.4mm THK	F46
PIPE	P	LP00C203	28"	28"	PIPE A358-304L CL.1 EFW BE 100% RT 28.4mm THK	F46
PIPE	P	LP00C307	30"	30"	PIPE A358-304L CL.1 EFW BE 100% RT 31.7mm THK	F46
PIPE	P	LP00C308	32"	32"	PIPE A358-304L CL.1 EFW BE 100% RT 32.5mm THK	F46
PIPE	P	LP00C309	34"	34"	PIPE A358-304L CL.1 EFW BE 100% RT 34.5mm THK	F46
PIPE	P	LP00C310	36"	36"	PIPE A358-304L CL.1 EFW BE 100% RT 36.5mm THK	F46
PIPE	P	LP00C311	38"	38"	PIPE A358-304L CL.1 EFW BE 100% RT 38.5mm THK	F46
PIPE	P	LP00C404	40"	40"	PIPE A358-304L CL.1 EFW BE 100% RT 40.6mm THK	F46
PIPE	P	LP00C405	42"	42"	PIPE A358-304L CL.1 EFW BE 100% RT 42.6mm THK	F46
PIPE	P	LP00C406	44"	44"	PIPE A358-304L CL.1 EFW BE 100% RT 44.6mm THK	F46
PIPE	P	LP00C407	46"	46"	PIPE A358-304L CL.1 EFW BE 100% RT 46.6mm THK	F46
PIPE	P	LP00CE02	12"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60	F46
PIPE	P	LP00CQ00	2"	2"	PIPE A312-TP304L SMLS BE SCH10S	F46
PIPE	P	LP00CS03	3"	6"	PIPE A312-TP304L SMLS BE SCH40S	F46
PIPE	P	LP00CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S	F46
PIPE	P	LP00CT04	8"	10"	PIPE A358-304L CL.1 EFW BE 100% RT SCH80S	F46
PIPE	P1	LP10CE00	12"	24"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH60	F46
PIPE	P1	LP10CQ00	2"	2"	PIPE A312-TP304L SMLS BE PE COATED SCH10S	F46
PIPE	P1	LP10CS00	3"	6"	PIPE A312-TP304L SMLS BE PE COATED SCH40S	F46
PIPE	P1	LP10CT00	8"	10"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH80S	F46
PIPE	P2	LP20CE00	12"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60 PP COATED	F46
PIPE	P2	LP20CQ00	2"	2"	PIPE A312-TP304L SMLS BE SCH10S PP COATED	F46
PIPE	P2	LP20CS00	3"	6"	PIPE A312-TP304L SMLS BE SCH40S PP COATED	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P2	LP20CT01	8"	10"	PIPE A358-304L CL.1 EFW BE 100% RT SCH80S PP COATED	F46
PIPE	P3	LP30CE00	12"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60 (SUNLIGHT L-200 WRAPPED AT SITE)	F46
PIPE	P3	LP30CQ00	2"	2"	PIPE A312-TP304L SMLS BE SCH10S (SUNLIGHT L-200 WRAPPED AT SITE)	F46
PIPE	P3	LP30CS00	3"	6"	PIPE A312-TP304L SMLS BE SCH40S (SUNLIGHT L-200 WRAPPED AT SITE)	F46
PIPE	P3	LP30CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	F46
PIPE	P3	LP30CT01	8"	10"	PIPE A358-304L CL.1 EFW BE 100% RT SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	F46
PLUG	PLG	LPLGCW00	1/2"	1 1/2"	PLUG A182-F304L ROUND HEAD FORGED TE(NPT-M)	F46
PLUG VA	VPL	VPLCF003	2"	4"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599 CRYOGENIC(RP-1718-999-1300-0028)	F46
PLUG VA	VPL	VPLCF004	6"	16"	PLUG VALVE A351-CF8M FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599 CRYOGENIC(RP-1718-999-1300-0028)	F46
PLUG VA	VPL	VPLCF007	1/2"	1 1/2"	PLUG VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353 CRYOGENIC(RP-1718-999-1300-0028)	F46
RED CON	RC	LRC0C202	26"	26"	REDUCER A403-WP304L CON. WELDED BE 26.4mm THK	F46
RED CON	RC	LRC0C203	28"	28"	REDUCER A403-WP304L CON. WELDED BE 28.4mm THK	F46
RED CON	RC	LRC0C306	30"	30"	REDUCER A403-WP304L CON. WELDED BE 31.7mm THK	F46
RED CON	RC	LRC0C307	32"	32"	REDUCER A403-WP304L CON. WELDED BE 32.5mm THK	F46
RED CON	RC	LRC0C308	34"	34"	REDUCER A403-WP304L CON. WELDED BE 34.5mm THK	F46
RED CON	RC	LRC0C309	36"	36"	REDUCER A403-WP304L CON. WELDED BE 36.5mm THK	F46
RED CON	RC	LRC0C310	38"	38"	REDUCER A403-WP304L CON. WELDED BE 38.5mm THK	F46
RED CON	RC	LRC0C404	40"	40"	REDUCER A403-WP304L CON. WELDED BE 40.6mm THK	F46
RED CON	RC	LRC0C405	42"	42"	REDUCER A403-WP304L CON. WELDED BE 42.6mm THK	F46
RED CON	RC	LRC0C406	44"	44"	REDUCER A403-WP304L CON. WELDED BE 44.6mm THK	F46
RED CON	RC	LRC0C407	46"	46"	REDUCER A403-WP304L CON. WELDED BE 46.6mm THK	F46
RED CON	RC	LRC0CE01	12"	24"	REDUCER A403-WP304L CON. WELDED BE SCH60	F46
RED CON	RC	LRC0CQ00	2"	2"	REDUCER A403-WP304L CON. SMLS BE SCH10S	F46
RED CON	RC	LRC0CS02	3"	6"	REDUCER A403-WP304L CON. SMLS BE SCH40S	F46
RED CON	RC	LRC0CT03	8"	10"	REDUCER A403-WP304L CON. WELDED BE SCH80S	F46
RED ECC	RE	LRE0C202	26"	26"	REDUCER A403-WP304L ECC. WELDED BE 26.4mm THK	F46
RED ECC	RE	LRE0C203	28"	28"	REDUCER A403-WP304L ECC. WELDED BE 28.4mm THK	F46
RED ECC	RE	LRE0C306	30"	30"	REDUCER A403-WP304L ECC. WELDED BE 31.7mm THK	F46
RED ECC	RE	LRE0C307	32"	32"	REDUCER A403-WP304L ECC. WELDED BE 32.5mm THK	F46
RED ECC	RE	LRE0C308	34"	34"	REDUCER A403-WP304L ECC. WELDED BE 34.5mm THK	F46
RED ECC	RE	LRE0C309	36"	36"	REDUCER A403-WP304L ECC. WELDED BE 36.5mm THK	F46
RED ECC	RE	LRE0C310	38"	38"	REDUCER A403-WP304L ECC. WELDED BE 38.5mm THK	F46
RED ECC	RE	LRE0C404	40"	40"	REDUCER A403-WP304L ECC. WELDED BE 40.6mm THK	F46
RED ECC	RE	LRE0C405	42"	42"	REDUCER A403-WP304L ECC. WELDED BE 42.6mm THK	F46
RED ECC	RE	LRE0C406	44"	44"	REDUCER A403-WP304L ECC. WELDED BE 44.6mm THK	F46
RED ECC	RE	LRE0C407	46"	46"	REDUCER A403-WP304L ECC. WELDED BE 46.6mm THK	F46
RED ECC	RE	LRE0CE01	12"	24"	REDUCER A403-WP304L ECC. WELDED BE SCH60	F46
RED ECC	RE	LRE0CQ00	2"	2"	REDUCER A403-WP304L ECC. SMLS BE SCH10S	F46
RED ECC	RE	LRE0CS02	3"	6"	REDUCER A403-WP304L ECC. SMLS BE SCH40S	F46
RED ECC	RE	LRE0CT03	8"	10"	REDUCER A403-WP304L ECC. WELDED BE SCH80S	F46
SINGLE IBB VA	SF1	LSF1CH00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SFA	LSFACH03	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SINGLE IBB VA	SL1	LSL1CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SL2	LSL2CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SL3	LSL3CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SL4	LSL4CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SL5	LSL5CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SLA	LSLACH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SLB	LSLBCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SLC	LSLCCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SLD	LSLDCH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SLE	LSLECH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SP1	LSP1CH00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SP2	LSP2CH00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SP3	LSP3CH00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F46
SINGLE IBB VA	SPA	LSPACH03	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SPB	LSPBCH03	1"	1"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SINGLE IBB VA	SPC	LSPCCH03	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	F46
SOCKOLET	TSO	LTSOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L SOCKET OUTLET FORGED SW CL3000	F46
SPCL FLANGE	F1	LF00CK05	3"	6"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH40S	F46
SPCL FLANGE	F1	LF00CK06	8"	10"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH80S	F46
SPCL FLANGE	F1	LF10CK11	12"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH60	F46
SPCL FLANGE	F1	LF10CK12	2"	2"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH10S	F46
SPCL FLANGE	F1	LF10CK13	26"	26"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 26.4mm THK	F46
SPCL FLANGE	F1	LF10CK14	28"	28"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 28.4mm THK	F46
SPCL FLANGE	F1	LF10CK15	30"	30"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 31.7mm THK	F46
SPCL FLANGE	F1	LF10CK16	32"	32"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 32.5mm THK	F46
SPCL FLANGE	F1	LF10CK17	34"	34"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 34.5mm THK	F46
SPCL FLANGE	F1	LF10CK18	36"	36"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 36.5mm THK	F46
SPCL FLANGE	F1	LF10CK19	38"	38"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 38.5mm THK	F46
SPCL FLANGE	F1	LF10CK20	40"	40"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 40.6mm THK	F46
SPCL FLANGE	F1	LF10CK21	42"	42"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 42.6mm THK	F46
SPCL FLANGE	F1	LF10CK22	44"	44"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 44.6mm THK	F46
SPCL FLANGE	F1	LF10CK23	46"	46"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.47-A) 46.6mm THK	F46
SPCL FLANGE	F1	LF10CL12	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) SCH80S	F46
SPCL FLG JACK	FJ1	LFJ0CK02	8"	10"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	F46
SPCL FLG JACK	FJ1	LFJ1CK06	12"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F46
SPCL FLG JACK	FJ1	LFJ1CK07	2"	2"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH10S	F46
SPCL FLG JACK	FJ1	LFJ1CK08	3"	6"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40S	F46
SPCL FLG JACK	FJ1	LFJ1CL11	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	F46
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	F46
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	F46
SPCL GASKET	G1	LG10ZK01	26"	46"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 135 HRB MAX	F46
SPE BLIND	FSB	LFSBCH02	1/2"	8"	FLANGE A240-304L FIGURE-8 BLANKS RF CL600 (ASME B16.48)	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPE BLIND	FSB	LFSBCH03	10"	24"	FLANGE A240-304L PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48)	F46
SWG CON B-P	RCB	LRCBCQ00	2"	2"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH10S	F46
SWG CON B-P	RCB	LRCBCS01	3"	4"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH40S	F46
SWG CON PE	RCP	LRCPCT00	1/2"	1 1/2"	SWAGE A403-WP304L CON. SMLS PE SCH80S	F46
SWG CON P-T	RC2	LRC2CT01	1/2"	1"	SWAGE A403-WP304L CON. SMLS PLE x TSE(NPT-M) SCH80S x SCH80S	F46
SWG ECC B-P	REB	LREBCQ00	2"	2"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH10S	F46
SWG ECC B-P	REB	LREBCS01	3"	4"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH40S	F46
SWG ECC PE	REP	LREPCT00	1/2"	1 1/2"	SWAGE A403-WP304L ECC. SMLS PE SCH80S	F46
TEE	TE	LTE0C202	26"	26"	TEE A403-WP304L EQUAL WELDED BE 26.4mm THK	F46
TEE	TE	LTE0C203	28"	28"	TEE A403-WP304L EQUAL WELDED BE 28.4mm THK	F46
TEE	TE	LTE0C306	30"	30"	TEE A403-WP304L EQUAL WELDED BE 31.7mm THK	F46
TEE	TE	LTE0C307	32"	32"	TEE A403-WP304L EQUAL WELDED BE 32.5mm THK	F46
TEE	TE	LTE0C308	34"	34"	TEE A403-WP304L EQUAL WELDED BE 34.5mm THK	F46
TEE	TE	LTE0C309	36"	36"	TEE A403-WP304L EQUAL WELDED BE 36.5mm THK	F46
TEE	TE	LTE0C310	38"	38"	TEE A403-WP304L EQUAL WELDED BE 38.5mm THK	F46
TEE	TE	LTE0C404	40"	40"	TEE A403-WP304L EQUAL WELDED BE 40.6mm THK	F46
TEE	TE	LTE0C405	42"	42"	TEE A403-WP304L EQUAL WELDED BE 42.6mm THK	F46
TEE	TE	LTE0C406	44"	44"	TEE A403-WP304L EQUAL WELDED BE 44.6mm THK	F46
TEE	TE	LTE0C407	46"	46"	TEE A403-WP304L EQUAL WELDED BE 46.6mm THK	F46
TEE	TE	LTE0CE01	12"	24"	TEE A403-WP304L EQUAL WELDED BE SCH60	F46
TEE	TE	LTE0CP00	1/2"	1 1/2"	TEE A182-F304L EQUAL FORGED SW CL3000	F46
TEE	TE	LTE0CQ00	2"	2"	TEE A403-WP304L EQUAL SMLS BE SCH10S	F46
TEE	TE	LTE0CS02	3"	6"	TEE A403-WP304L EQUAL SMLS BE SCH40S	F46
TEE	TE	LTE0CT02	8"	10"	TEE A403-WP304L EQUAL SMLS BE SCH80S	F46
TEE RED	TR	LTR0C202	26"	26"	TEE A403-WP304L REDUCING WELDED BE 26.4mm THK	F46
TEE RED	TR	LTR0C203	28"	28"	TEE A403-WP304L REDUCING WELDED BE 28.4mm THK	F46
TEE RED	TR	LTR0C306	30"	30"	TEE A403-WP304L REDUCING WELDED BE 31.7mm THK	F46
TEE RED	TR	LTR0C307	32"	32"	TEE A403-WP304L REDUCING WELDED BE 32.5mm THK	F46
TEE RED	TR	LTR0C308	34"	34"	TEE A403-WP304L REDUCING WELDED BE 34.5mm THK	F46
TEE RED	TR	LTR0C309	36"	36"	TEE A403-WP304L REDUCING WELDED BE 36.5mm THK	F46
TEE RED	TR	LTR0C310	38"	38"	TEE A403-WP304L REDUCING WELDED BE 38.5mm THK	F46
TEE RED	TR	LTR0C404	40"	40"	TEE A403-WP304L REDUCING WELDED BE 40.6mm THK	F46
TEE RED	TR	LTR0C405	42"	42"	TEE A403-WP304L REDUCING WELDED BE 42.6mm THK	F46
TEE RED	TR	LTR0C406	44"	44"	TEE A403-WP304L REDUCING WELDED BE 44.6mm THK	F46
TEE RED	TR	LTR0C407	46"	46"	TEE A403-WP304L REDUCING WELDED BE 46.6mm THK	F46
TEE RED	TR	LTR0CE01	12"	24"	TEE A403-WP304L REDUCING WELDED BE SCH60	F46
TEE RED	TR	LTR0CP00	1/2"	1 1/2"	TEE A182-F304L REDUCING FORGED SW CL3000	F46
TEE RED	TR	LTR0CQ00	2"	2"	TEE A403-WP304L REDUCING SMLS BE SCH10S	F46
TEE RED	TR	LTR0CS02	3"	6"	TEE A403-WP304L REDUCING SMLS BE SCH40S	F46
TEE RED	TR	LTR0CT03	8"	10"	TEE A403-WP304L REDUCING WELDED BE SCH80S	F46
THREADOLET	TTO	LTTOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L THREADED OUTLET FORGED TE(NPT-F) CL3000	F46
WELDOLET	TWO	LTWOCQ00	2"	2"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH10S	F46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOCS02	3"	6"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH40S	F46
WELDOLET	TWO	LTWOCT01	8"	8"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH80S	F46
BALL VA	VBF	VBFCF004	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F48
BALL VA	VBF	VBFCF005	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F48
BALL VA	VBF	VBFCF006	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F48
BALL VA	VB1	VBFCF015	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	F48
BALL VA	VB1	VBFCF016	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	F48
BALL VA	VB1	VBFCF017	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	F48
BALL VA	VB7	VBFCFS04	2"	2"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=100MM)	F48
BALL VA	VB7	VBFCFT04	3"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	F48
BALL VA	VBF	VBFCK002	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	F48
BALL VA	VB1	VBFCK005	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING	F48
BALL VA	VB7	VBFCKS02	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/EXT STEM(L=100MM)	F48
BALL VA	VBR	VBRCF004	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F48
BALL VA	VBR	VBRCF005	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	F48
BALL VA	VBR	VBRCF006	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	F48
BALL VA	VB2	VBRCF015	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	F48
BALL VA	VB2	VBRCF016	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	F48
BALL VA	VB2	VBRCF017	26"	30"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	F48
BALL VA	VB8	VBRCFS04	2"	2"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=100MM)	F48
BALL VA	VB8	VBRCFT04	3"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/EXT STEM(L=150MM)	F48
BOLTS	B	LB00A004	1/2"	46"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	F48
CAP	C	LC00C200	26"	26"	CAP A403-WP321 SMLS BE 26.9mm THK	F48
CAP	C	LC00C201	28"	28"	CAP A403-WP321 SMLS BE 28.5mm THK	F48
CAP	C	LC00C300	30"	30"	CAP A403-WP321 SMLS BE 31.7mm THK	F48
CAP	C	LC00C301	32"	32"	CAP A403-WP321 SMLS BE 33.3mm THK	F48
CAP	C	LC00C302	34"	34"	CAP A403-WP321 SMLS BE 34.9mm THK	F48
CAP	C	LC00C303	36"	36"	CAP A403-WP321 SMLS BE 36.5mm THK	F48
CAP	C	LC00C304	38"	38"	CAP A403-WP321 SMLS BE 38.9mm THK	F48
CAP	C	LC00C400	40"	44"	CAP A403-WP321 SMLS BE 46.0mm THK	F48
CAP	C	LC00C500	46"	46"	CAP A403-WP321 SMLS BE 52.3mm THK	F48
CAP	C	LC00CE00	12"	12"	CAP A403-WP321 SMLS BE SCH60	F48
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	F48
CAP	C	LC00CS00	2"	4"	CAP A403-WP321 SMLS BE SCH40S	F48
CAP	C	LC00CT00	6"	10"	CAP A403-WP321 SMLS BE SCH80S	F48
CAP	C	LC00CZ06	14"	14"	CAP A403-WP321 SMLS BE 14.27mm THK	F48
CAP	C	LC00CZ07	18"	18"	CAP A403-WP321 SMLS BE 19.05mm THK	F48
CAP	C	LC00CZ08	20"	20"	CAP A403-WP321 SMLS BE 20.62mm THK	F48
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	F48
CHECK VA	VCA	VCACF002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594	F48
CHECK VA	VCA	VCACF005	26"	42"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594 WAFER FOR ASME B16.47-A RF FLANGES	F48
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	F48
DOUBLE IBB VA	DFA	LDFACH01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DLA	LDLACH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DLB	LDLBCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DLC	LDLCCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DLD	LDLDCH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DLE	LDLECH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DPA	LDPACH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DPB	LDPBCH01	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
DOUBLE IBB VA	DPC	LDPCCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	F48
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	F48
ELBOW	E4	LE40C200	26"	26"	ELBOW A403-WP321 DEG-45 WELDED BE 26.9mm THK	F48
ELBOW	E4	LE40C201	28"	28"	ELBOW A403-WP321 DEG-45 WELDED BE 28.5mm THK	F48
ELBOW	E4	LE40C300	30"	30"	ELBOW A403-WP321 DEG-45 WELDED BE 31.7mm THK	F48
ELBOW	E4	LE40C301	32"	32"	ELBOW A403-WP321 DEG-45 WELDED BE 33.3mm THK	F48
ELBOW	E4	LE40C302	34"	34"	ELBOW A403-WP321 DEG-45 WELDED BE 34.9mm THK	F48
ELBOW	E4	LE40C303	36"	36"	ELBOW A403-WP321 DEG-45 WELDED BE 36.5mm THK	F48
ELBOW	E4	LE40C304	38"	38"	ELBOW A403-WP321 DEG-45 WELDED BE 38.9mm THK	F48
ELBOW	E4	LE40C400	40"	44"	ELBOW A403-WP321 DEG-45 WELDED BE 46.0mm THK	F48
ELBOW	E4	LE40C500	46"	46"	ELBOW A403-WP321 DEG-45 WELDED BE 52.3mm THK	F48
ELBOW	E4	LE40CE00	12"	12"	ELBOW A403-WP321 DEG-45 WELDED BE SCH60	F48
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	F48
ELBOW	E4	LE40CS00	2"	4"	ELBOW A403-WP321 DEG-45 SMLS BE SCH40S	F48
ELBOW	E4	LE40CT00	6"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH80S	F48
ELBOW	E4	LE40CT01	8"	10"	ELBOW A403-WP321 DEG-45 WELDED BE SCH80S	F48
ELBOW	E4	LE40CZ06	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE 14.27mm THK	F48
ELBOW	E4	LE40CZ07	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE 19.05mm THK	F48
ELBOW	E4	LE40CZ08	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 20.62mm THK	F48
ELBOW	E9	LE90C200	26"	26"	ELBOW A403-WP321 90-LR WELDED BE 26.9mm THK	F48
ELBOW	E9	LE90C201	28"	28"	ELBOW A403-WP321 90-LR WELDED BE 28.5mm THK	F48
ELBOW	E9	LE90C300	30"	30"	ELBOW A403-WP321 90-LR WELDED BE 31.7mm THK	F48
ELBOW	E9	LE90C301	32"	32"	ELBOW A403-WP321 90-LR WELDED BE 33.3mm THK	F48
ELBOW	E9	LE90C302	34"	34"	ELBOW A403-WP321 90-LR WELDED BE 34.9mm THK	F48
ELBOW	E9	LE90C303	36"	36"	ELBOW A403-WP321 90-LR WELDED BE 36.5mm THK	F48
ELBOW	E9	LE90C304	38"	38"	ELBOW A403-WP321 90-LR WELDED BE 38.9mm THK	F48
ELBOW	E9	LE90C400	40"	44"	ELBOW A403-WP321 90-LR WELDED BE 46.0mm THK	F48
ELBOW	E9	LE90C500	46"	46"	ELBOW A403-WP321 90-LR WELDED BE 52.3mm THK	F48
ELBOW	E9	LE90CE00	12"	12"	ELBOW A403-WP321 90-LR WELDED BE SCH60	F48
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	F48
ELBOW	E9	LE90CS00	2"	4"	ELBOW A403-WP321 90-LR SMLS BE SCH40S	F48
ELBOW	E9	LE90CT00	6"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH80S	F48
ELBOW	E9	LE90CT01	8"	10"	ELBOW A403-WP321 90-LR WELDED BE SCH80S	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90CZ06	14"	14"	ELBOW A403-WP321 90-LR WELDED BE 14.27mm THK	F48
ELBOW	E9	LE90CZ07	18"	18"	ELBOW A403-WP321 90-LR WELDED BE 19.05mm THK	F48
ELBOW	E9	LE90CZ08	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 20.62mm THK	F48
ELBOW	E9S	LE9SCP01	1/2"	1/2"	ELBOW A182-F321 DEG-90 FORGED TE(NPT-F) CL3000	F48
FLANGE	F	LF00CH02	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH40S	F48
FLANGE	F	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	F48
FLANGE	F	LF00CH04	12"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH60	F48
FLANGE	F	LF00CH05	6"	10"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH80S	F48
FLANGE	F	LF00CH06	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 14.27mm THK	F48
FLANGE	F	LF00CH07	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 19.05mm THK	F48
FLANGE	F	LF00CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 20.62mm THK	F48
FLANGE	F	LF00CH09	26"	26"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 26.9mm THK	F48
FLANGE	F	LF00CH10	28"	28"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 28.5mm THK	F48
FLANGE	F	LF00CH11	30"	30"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 31.7mm THK	F48
FLANGE	F	LF00CH12	32"	32"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 33.3mm THK	F48
FLANGE	F	LF00CH13	34"	34"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 34.9mm THK	F48
FLANGE	F	LF00CH14	36"	36"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 36.5mm THK	F48
FLANGE	F	LF00CH15	38"	38"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 38.9mm THK	F48
FLANGE	F	LF00CH16	40"	44"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 46.0mm THK	F48
FLANGE	F	LF00CH17	46"	46"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) 52.3mm THK	F48
FLG BLIND	FB	LFB0CH01	1/2"	24"	FLANGE A182-F321 BLIND RF CL600 (ASME B16.5)	F48
FLG BLIND	FB	LFB0CH02	26"	46"	FLANGE A182-F321 BLIND RF CL600 (ASME B16.47-A)	F48
FLG BLIND	FB1	LFB0CK00	2"	24"	FLANGE A182-F321 BLIND RTJ CL900 (ASME B16.5)	F48
FLG BLIND	FB1	LFB0CL00	1/2"	1 1/2"	FLANGE A182-F321 BLIND RTJ CL1500 (ASME B16.5)	F48
FLG BLIND	FB1	LFB1CK00	26"	46"	FLANGE A182-F321 BLIND RTJ CL900 (ASME B16.47-A)	F48
FLG JACK	FJ	LFJ0CH02	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	F48
FLG JACK	FJ	LFJ0CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F48
FLG JACK	FJ	LFJ0CH04	12"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH60	F48
FLG JACK	FJ	LFJ0CH05	6"	10"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F48
FLG JACK	FJ	LFJ0CH06	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 14.27mm THK	F48
FLG JACK	FJ	LFJ0CH07	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 19.05mm THK	F48
FLG JACK	FJ	LFJ0CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 20.62mm THK	F48
FLG JACK	FJ	LFJ0CH12	26"	26"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 26.9mm THK	F48
FLG JACK	FJ	LFJ0CH13	28"	28"	FLANGE A182-F321 WN RF CL600 (ASME B16.47-A) W/JACK SCREW 28.5mm THK	F48
FLG RED	RF	LRF0CH00	2"	4"	FLANGE A182-F321 WN-REDUCING RF CL600 (ASME B16.5) SCH40S	F48
FLG RED	RF	LRF0CH01	6"	6"	FLANGE A182-F321 WN-REDUCING RF CL600 (ASME B16.5) SCH80S	F48
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F48
GASKET	G	LG00ZH09	26"	46"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.47-A) OR-3.2 mm THICK	F48
GATE VA	VGA	VGACF001	2"	6"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F48
GATE VA	VGA	VGACF002	8"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F48
GATE VA	VGA	VGACF003	26"	46"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600 ASME B16.47-A FLGD	F48
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GATE VA	VGF	VGFCF001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602 FOR EQUIP NOZZLE CONN.	F48
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F48
GLOBE VA	VLA	VLACF002	2"	4"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F48
GLOBE VA	VLA	VLACF004	6"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F48
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F48
INSUL GASKET	GK	LGK0ZH00	1/2"	24"	GASKET NON-ASBESTOS NONMETALLIC FLAT TO ASME B16.21 FOR RF 3.0T CL600 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	F48
NEEDLE VA	VNE	VNECK001	3/4"	1"	NEEDLE VALVE A182-F321 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	F48
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	F48
PIPE	P	LP00C200	26"	26"	PIPE A358-321 CL.1 EFW BE 100% RT 26.9mm THK	F48
PIPE	P	LP00C201	28"	28"	PIPE A358-321 CL.1 EFW BE 100% RT 28.5mm THK	F48
PIPE	P	LP00C300	30"	30"	PIPE A358-321 CL.1 EFW BE 100% RT 31.7mm THK	F48
PIPE	P	LP00C301	32"	32"	PIPE A358-321 CL.1 EFW BE 100% RT 33.3mm THK	F48
PIPE	P	LP00C302	34"	34"	PIPE A358-321 CL.1 EFW BE 100% RT 34.9mm THK	F48
PIPE	P	LP00C303	36"	36"	PIPE A358-321 CL.1 EFW BE 100% RT 36.5mm THK	F48
PIPE	P	LP00C304	38"	38"	PIPE A358-321 CL.1 EFW BE 100% RT 38.9mm THK	F48
PIPE	P	LP00C400	40"	44"	PIPE A358-321 CL.1 EFW BE 100% RT 46.0mm THK	F48
PIPE	P	LP00C501	46"	46"	PIPE A358-321 CL.1 EFW BE 100% RT 52.3mm THK	F48
PIPE	P	LP00CE00	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT SCH60	F48
PIPE	P	LP00CS00	2"	4"	PIPE A312-TP321 SMLS BE SCH40S	F48
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	F48
PIPE	P	LP00CT02	6"	6"	PIPE A312-TP321 SMLS BE SCH80S	F48
PIPE	P	LP00CT03	8"	10"	PIPE A358-321 CL.1 EFW BE 100% RT SCH80S	F48
PIPE	P	LP00CZ06	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK	F48
PIPE	P	LP00CZ07	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 19.05mm THK	F48
PIPE	P	LP00CZ08	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK	F48
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	F48
PLUG VA	VPL	VPLCF002	1/2"	1 1/2"	PLUG VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS API CL800 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353	F48
PLUG VA	VPL	VPLCF005	2"	4"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 599	F48
PLUG VA	VPL	VPLCF006	6"	16"	PLUG VALVE A351-CF8C FLGD-RF 316SS PLUG W/PTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 599	F48
RED CON	RC	LRC0C200	26"	26"	REDUCER A403-WP321 CON. WELDED BE 26.9mm THK	F48
RED CON	RC	LRC0C201	28"	28"	REDUCER A403-WP321 CON. WELDED BE 28.5mm THK	F48
RED CON	RC	LRC0C300	30"	30"	REDUCER A403-WP321 CON. WELDED BE 31.7mm THK	F48
RED CON	RC	LRC0C301	32"	32"	REDUCER A403-WP321 CON. WELDED BE 33.3mm THK	F48
RED CON	RC	LRC0C302	34"	34"	REDUCER A403-WP321 CON. WELDED BE 34.9mm THK	F48
RED CON	RC	LRC0C303	36"	36"	REDUCER A403-WP321 CON. WELDED BE 36.5mm THK	F48
RED CON	RC	LRC0C304	38"	38"	REDUCER A403-WP321 CON. WELDED BE 38.9mm THK	F48
RED CON	RC	LRC0C400	40"	44"	REDUCER A403-WP321 CON. WELDED BE 46.0mm THK	F48
RED CON	RC	LRC0C500	46"	46"	REDUCER A403-WP321 CON. WELDED BE 52.3mm THK	F48
RED CON	RC	LRC0CE00	12"	12"	REDUCER A403-WP321 CON. WELDED BE SCH60	F48
RED CON	RC	LRC0CS00	2"	4"	REDUCER A403-WP321 CON. SMLS BE SCH40S	F48
RED CON	RC	LRC0CT00	6"	6"	REDUCER A403-WP321 CON. SMLS BE SCH80S	F48
RED CON	RC	LRC0CT01	8"	10"	REDUCER A403-WP321 CON. WELDED BE SCH80S	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0CZ06	14"	14"	REDUCER A403-WP321 CON. WELDED BE 14.27mm THK	F48
RED CON	RC	LRC0CZ07	18"	18"	REDUCER A403-WP321 CON. WELDED BE 19.05mm THK	F48
RED CON	RC	LRC0CZ08	20"	20"	REDUCER A403-WP321 CON. WELDED BE 20.62mm THK	F48
RED ECC	RE	LRE0C200	26"	26"	REDUCER A403-WP321 ECC. WELDED BE 26.9mm THK	F48
RED ECC	RE	LRE0C201	28"	28"	REDUCER A403-WP321 ECC. WELDED BE 28.5mm THK	F48
RED ECC	RE	LRE0C300	30"	30"	REDUCER A403-WP321 ECC. WELDED BE 31.7mm THK	F48
RED ECC	RE	LRE0C301	32"	32"	REDUCER A403-WP321 ECC. WELDED BE 33.3mm THK	F48
RED ECC	RE	LRE0C302	34"	34"	REDUCER A403-WP321 ECC. WELDED BE 34.9mm THK	F48
RED ECC	RE	LRE0C303	36"	36"	REDUCER A403-WP321 ECC. WELDED BE 36.5mm THK	F48
RED ECC	RE	LRE0C304	38"	38"	REDUCER A403-WP321 ECC. WELDED BE 38.9mm THK	F48
RED ECC	RE	LRE0C400	40"	44"	REDUCER A403-WP321 ECC. WELDED BE 46.0mm THK	F48
RED ECC	RE	LRE0C500	46"	46"	REDUCER A403-WP321 ECC. WELDED BE 52.3mm THK	F48
RED ECC	RE	LRE0CE00	12"	12"	REDUCER A403-WP321 ECC. WELDED BE SCH60	F48
RED ECC	RE	LRE0CS00	2"	4"	REDUCER A403-WP321 ECC. SMLS BE SCH40S	F48
RED ECC	RE	LRE0CT00	6"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH80S	F48
RED ECC	RE	LRE0CT01	8"	10"	REDUCER A403-WP321 ECC. WELDED BE SCH80S	F48
RED ECC	RE	LRE0CZ06	14"	14"	REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK	F48
RED ECC	RE	LRE0CZ07	18"	18"	REDUCER A403-WP321 ECC. WELDED BE 19.05mm THK	F48
RED ECC	RE	LRE0CZ08	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK	F48
SINGLE IBB VA	SFA	LSFACH01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SLA	LSLACH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SLB	LSLBCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SLC	LSLCCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SLD	LSLDCH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SLE	LSLECH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SPA	LSPACH01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SPB	LSPBCH01	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SINGLE IBB VA	SPC	LSPCCH01	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) AED VITON SEAL	F48
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	F48
SPCL FLANGE	F1	LF00CK00	6"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH80S	F48
SPCL FLANGE	F1	LF00CK01	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 14.27mm THK	F48
SPCL FLANGE	F1	LF00CK02	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 19.05mm THK	F48
SPCL FLANGE	F1	LF00CK03	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 20.62mm THK	F48
SPCL FLANGE	F1	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	F48
SPCL FLANGE	F1	LF10CK00	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH60	F48
SPCL FLANGE	F1	LF10CK01	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH40S	F48
SPCL FLANGE	F1	LF10CK02	26"	26"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 26.9mm THK	F48
SPCL FLANGE	F1	LF10CK03	28"	28"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 28.5mm THK	F48
SPCL FLANGE	F1	LF10CK04	30"	30"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 31.7mm THK	F48
SPCL FLANGE	F1	LF10CK05	32"	32"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 33.3mm THK	F48
SPCL FLANGE	F1	LF10CK06	34"	34"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 34.9mm THK	F48
SPCL FLANGE	F1	LF10CK07	36"	36"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 36.5mm THK	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10CK08	38"	38"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 38.9mm THK	F48
SPCL FLANGE	F1	LF10CK09	40"	44"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 46.0mm THK	F48
SPCL FLANGE	F1	LF10CK10	46"	46"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 52.3mm THK	F48
SPCL FLG JACK	FJ1	LFJ0CK00	6"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	F48
SPCL FLG JACK	FJ1	LFJ0CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	F48
SPCL FLG JACK	FJ1	LFJ1CK00	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F48
SPCL FLG JACK	FJ1	LFJ1CK01	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40S	F48
SPCL FLG JACK	FJ1	LFJ1CK02	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.27mm THK	F48
SPCL FLG JACK	FJ1	LFJ1CK03	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 19.05mm THK	F48
SPCL FLG JACK	FJ1	LFJ1CK04	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 20.62mm THK	F48
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	F48
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	F48
SPCL GASKET	G1	LG10ZK01	26"	46"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 135 HRB MAX	F48
SPE BLIND	FSB	LFSBCH00	1/2"	8"	FLANGE A240-321 FIGURE-8 BLANKS RF CL600 (ASME B16.48)	F48
SPE BLIND	FSB	LFSBCH01	10"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48)	F48
SPE BLIND	FSB	LFSBCH04	26"	28"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.47-A)	F48
SWG CON B-P	RCB	LRCBCS00	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH40S	F48
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	F48
SWG CON P-T	RC2	LRC2CT00	3/4"	1"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH80S	F48
SWG ECC B-P	REB	LREBCS00	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH40S	F48
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	F48
TEE	TE	LTE0C200	26"	26"	TEE A403-WP321 EQUAL WELDED BE 26.9mm THK	F48
TEE	TE	LTE0C201	28"	28"	TEE A403-WP321 EQUAL WELDED BE 28.5mm THK	F48
TEE	TE	LTE0C300	30"	30"	TEE A403-WP321 EQUAL WELDED BE 31.7mm THK	F48
TEE	TE	LTE0C301	32"	32"	TEE A403-WP321 EQUAL WELDED BE 33.3mm THK	F48
TEE	TE	LTE0C302	34"	34"	TEE A403-WP321 EQUAL WELDED BE 34.9mm THK	F48
TEE	TE	LTE0C303	36"	36"	TEE A403-WP321 EQUAL WELDED BE 36.5mm THK	F48
TEE	TE	LTE0C304	38"	38"	TEE A403-WP321 EQUAL WELDED BE 38.9mm THK	F48
TEE	TE	LTE0C400	40"	44"	TEE A403-WP321 EQUAL WELDED BE 46.0mm THK	F48
TEE	TE	LTE0C500	46"	46"	TEE A403-WP321 EQUAL WELDED BE 52.3mm THK	F48
TEE	TE	LTE0CE00	12"	12"	TEE A403-WP321 EQUAL WELDED BE SCH60	F48
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	F48
TEE	TE	LTE0CS00	2"	4"	TEE A403-WP321 EQUAL SMLS BE SCH40S	F48
TEE	TE	LTE0CT00	6"	6"	TEE A403-WP321 EQUAL SMLS BE SCH80S	F48
TEE	TE	LTE0CT01	8"	10"	TEE A403-WP321 EQUAL WELDED BE SCH80S	F48
TEE	TE	LTE0CZ06	14"	14"	TEE A403-WP321 EQUAL WELDED BE 14.27mm THK	F48
TEE	TE	LTE0CZ07	18"	18"	TEE A403-WP321 EQUAL WELDED BE 19.05mm THK	F48
TEE	TE	LTE0CZ08	20"	20"	TEE A403-WP321 EQUAL WELDED BE 20.62mm THK	F48
TEE RED	TR	LTR0C200	26"	26"	TEE A403-WP321 REDUCING WELDED BE 26.9mm THK	F48
TEE RED	TR	LTR0C201	28"	28"	TEE A403-WP321 REDUCING WELDED BE 28.5mm THK	F48
TEE RED	TR	LTR0C300	30"	30"	TEE A403-WP321 REDUCING WELDED BE 31.7mm THK	F48
TEE RED	TR	LTR0C301	32"	32"	TEE A403-WP321 REDUCING WELDED BE 33.3mm THK	F48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0C302	34"	34"	TEE A403-WP321 REDUCING WELDED BE 34.9mm THK	F48
TEE RED	TR	LTR0C303	36"	36"	TEE A403-WP321 REDUCING WELDED BE 36.5mm THK	F48
TEE RED	TR	LTR0C304	38"	38"	TEE A403-WP321 REDUCING WELDED BE 38.9mm THK	F48
TEE RED	TR	LTR0C400	40"	44"	TEE A403-WP321 REDUCING WELDED BE 46.0mm THK	F48
TEE RED	TR	LTR0C500	46"	46"	TEE A403-WP321 REDUCING WELDED BE 52.3mm THK	F48
TEE RED	TR	LTR0CE00	12"	12"	TEE A403-WP321 REDUCING WELDED BE SCH60	F48
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	F48
TEE RED	TR	LTR0CS00	2"	4"	TEE A403-WP321 REDUCING SMLS BE SCH40S	F48
TEE RED	TR	LTR0CT00	6"	6"	TEE A403-WP321 REDUCING SMLS BE SCH80S	F48
TEE RED	TR	LTR0CT01	8"	10"	TEE A403-WP321 REDUCING WELDED BE SCH80S	F48
TEE RED	TR	LTR0CZ06	14"	14"	TEE A403-WP321 REDUCING WELDED BE 14.27mm THK	F48
TEE RED	TR	LTR0CZ07	18"	18"	TEE A403-WP321 REDUCING WELDED BE 19.05mm THK	F48
TEE RED	TR	LTR0CZ08	20"	20"	TEE A403-WP321 REDUCING WELDED BE 20.62mm THK	F48
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	F48
WELDOLET	TWO	LTWOCS00	2"	4"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH40S	F48
WELDOLET	TWO	LTWOCT02	6"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH80S	F48
BALL VA	VBF	VBFCF007	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F48X
BALL VA	VBF	VBFCF008	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F48X
BALL VA	VBF	VBFCK003	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PTFE SEATS API CL800 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	F48X
BALL VA	VBR	VBRCF007	2"	4"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F48X
BALL VA	VBR	VBRCF008	6"	24"	BALL VALVE A351-CF8C FLGD-RF 316SS BALL W/RTFE SEATS ANSI CL600 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	F48X
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	F48X
CAP	C	LC00CE00	12"	12"	CAP A403-WP321 SMLS BE SCH60	F48X
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	F48X
CAP	C	LC00CS00	2"	4"	CAP A403-WP321 SMLS BE SCH40S	F48X
CAP	C	LC00CT00	6"	10"	CAP A403-WP321 SMLS BE SCH80S	F48X
CAP	C	LC00CZ06	14"	14"	CAP A403-WP321 SMLS BE 14.27mm THK	F48X
CAP	C	LC00CZ07	18"	18"	CAP A403-WP321 SMLS BE 19.05mm THK	F48X
CAP	C	LC00CZ08	20"	20"	CAP A403-WP321 SMLS BE 20.62mm THK	F48X
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	F48X
CHECK VA	VCA	VCACF002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL600 API 594	F48X
CHECK VA	VCH	VCHCK002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC API CL800 BS 5352	F48X
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	F48X
DOUBLE IBB VA	DFA	LDFACH02	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DLA	LDLACH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DLB	LDLBCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DLC	LDLCCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DLD	LDLDCH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DLE	LDLECH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DPA	LDPACH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DPB	LDPBCH02	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
DOUBLE IBB VA	DPC	LDPCCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	F48X
ELBOW	E4	LE40CE00	12"	12"	ELBOW A403-WP321 DEG-45 WELDED BE SCH60	F48X
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	F48X
ELBOW	E4	LE40CS00	2"	4"	ELBOW A403-WP321 DEG-45 SMLS BE SCH40S	F48X
ELBOW	E4	LE40CT00	6"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH80S	F48X
ELBOW	E4	LE40CT01	8"	10"	ELBOW A403-WP321 DEG-45 WELDED BE SCH80S	F48X
ELBOW	E4	LE40CZ06	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE 14.27mm THK	F48X
ELBOW	E4	LE40CZ07	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE 19.05mm THK	F48X
ELBOW	E4	LE40CZ08	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 20.62mm THK	F48X
ELBOW	E9	LE90CE00	12"	12"	ELBOW A403-WP321 90-LR WELDED BE SCH60	F48X
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	F48X
ELBOW	E9	LE90CS00	2"	4"	ELBOW A403-WP321 90-LR SMLS BE SCH40S	F48X
ELBOW	E9	LE90CT00	6"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH80S	F48X
ELBOW	E9	LE90CT01	8"	10"	ELBOW A403-WP321 90-LR WELDED BE SCH80S	F48X
ELBOW	E9	LE90CZ06	14"	14"	ELBOW A403-WP321 90-LR WELDED BE 14.27mm THK	F48X
ELBOW	E9	LE90CZ07	18"	18"	ELBOW A403-WP321 90-LR WELDED BE 19.05mm THK	F48X
ELBOW	E9	LE90CZ08	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 20.62mm THK	F48X
FLANGE	F	LF00CH02	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH40S	F48X
FLANGE	F	LF00CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) SCH80S	F48X
FLANGE	F	LF00CH04	12"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH60	F48X
FLANGE	F	LF00CH05	6"	10"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) SCH80S	F48X
FLANGE	F	LF00CH06	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 14.27mm THK	F48X
FLANGE	F	LF00CH07	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 19.05mm THK	F48X
FLANGE	F	LF00CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) 20.62mm THK	F48X
FLG BLIND	FB	LFB0CH01	1/2"	24"	FLANGE A182-F321 BLIND RF CL600 (ASME B16.5)	F48X
FLG BLIND	FB1	LFB0CK00	2"	24"	FLANGE A182-F321 BLIND RTJ CL900 (ASME B16.5)	F48X
FLG BLIND	FB1	LFB0CL00	1/2"	1 1/2"	FLANGE A182-F321 BLIND RTJ CL1500 (ASME B16.5)	F48X
FLG JACK	FJ	LFJ0CH02	2"	4"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH40S	F48X
FLG JACK	FJ	LFJ0CH03	1/2"	1 1/2"	FLANGE A182-F321 SW RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F48X
FLG JACK	FJ	LFJ0CH04	12"	12"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH60	F48X
FLG JACK	FJ	LFJ0CH05	6"	10"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80S	F48X
FLG JACK	FJ	LFJ0CH06	14"	14"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 14.27mm THK	F48X
FLG JACK	FJ	LFJ0CH07	18"	18"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 19.05mm THK	F48X
FLG JACK	FJ	LFJ0CH08	20"	20"	FLANGE A182-F321 WN RF CL600 (ASME B16.5) W/JACK SCREW 20.62mm THK	F48X
GASKET	G	LG00ZH08	1/2"	24"	GASKET 316SS SPW TO ASME B 16.20 FOR RF 4.5T FLEXIBLE GRAPHITE W/IR-316SS OR-LOW C.S CL600 (ASME B16.5) OR-3.2 mm THICK	F48X
GATE VA	VGA	VGACF001	2"	6"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 API 600	F48X
GATE VA	VGA	VGACF002	8"	24"	GATE VALVE A351-CF8C FLGD-RF 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL600 GEAR OPERATED API 600	F48X
GATE VA	VGA	VGACK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F48X
GATE VA	VGF	VGFCF001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RF 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL600 API 602 FOR EQUIP NOZZLE CONN.	F48X
GATE VA	VGX	VGXCK001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE API CL800 API 602	F48X
GLOBE VA	VLA	VLACF002	2"	4"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 BS 1873	F48X
GLOBE VA	VLA	VLACF004	6"	6"	GLOBE VALVE A351-CF8C FLGD-RF 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL600 GEAR OPERATED BS 1873	F48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GLOBE VA	VLA	VLACK002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC API CL800 BS 5352	F48X
NEEDLE VA	VNE	VNECK001	3/4"	1"	NEEDLE VALVE A182-F321 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC API CL800 API 602	F48X
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	F48X
PIPE	P	LP00CE00	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT SCH60	F48X
PIPE	P	LP00CS00	2"	4"	PIPE A312-TP321 SMLS BE SCH40S	F48X
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	F48X
PIPE	P	LP00CT02	6"	6"	PIPE A312-TP321 SMLS BE SCH80S	F48X
PIPE	P	LP00CT03	8"	10"	PIPE A358-321 CL.1 EFW BE 100% RT SCH80S	F48X
PIPE	P	LP00CZ06	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK	F48X
PIPE	P	LP00CZ07	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 19.05mm THK	F48X
PIPE	P	LP00CZ08	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK	F48X
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	F48X
RED CON	RC	LRC0CE00	12"	12"	REDUCER A403-WP321 CON. WELDED BE SCH60	F48X
RED CON	RC	LRC0CS00	2"	4"	REDUCER A403-WP321 CON. SMLS BE SCH40S	F48X
RED CON	RC	LRC0CT00	6"	6"	REDUCER A403-WP321 CON. SMLS BE SCH80S	F48X
RED CON	RC	LRC0CT01	8"	10"	REDUCER A403-WP321 CON. WELDED BE SCH80S	F48X
RED CON	RC	LRC0CZ06	14"	14"	REDUCER A403-WP321 CON. WELDED BE 14.27mm THK	F48X
RED CON	RC	LRC0CZ07	18"	18"	REDUCER A403-WP321 CON. WELDED BE 19.05mm THK	F48X
RED CON	RC	LRC0CZ08	20"	20"	REDUCER A403-WP321 CON. WELDED BE 20.62mm THK	F48X
RED ECC	RE	LRE0CE00	12"	12"	REDUCER A403-WP321 ECC. WELDED BE SCH60	F48X
RED ECC	RE	LRE0CS00	2"	4"	REDUCER A403-WP321 ECC. SMLS BE SCH40S	F48X
RED ECC	RE	LRE0CT00	6"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH80S	F48X
RED ECC	RE	LRE0CT01	8"	10"	REDUCER A403-WP321 ECC. WELDED BE SCH80S	F48X
RED ECC	RE	LRE0CZ06	14"	14"	REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK	F48X
RED ECC	RE	LRE0CZ07	18"	18"	REDUCER A403-WP321 ECC. WELDED BE 19.05mm THK	F48X
RED ECC	RE	LRE0CZ08	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK	F48X
SINGLE IBB VA	SFA	LSFACH02	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1/2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SLA	LSLACH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SLB	LSLBCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SLC	LSLCCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 2" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SLD	LSLDCH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SLE	LSLECH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 3/4" FLGD-RF SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SPA	LSPACH02	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 3/4" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SPB	LSPBCH02	1"	1"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 1" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SINGLE IBB VA	SPC	LSPCCH02	2"	2"	BALL VALVE A182-F321 316SS BALL W/PTFE SEATS ANSI CL600 2" FLGD-RF x 1/2" TE(NPT-F) SBB(1 BALL & NEEDLE VENT) ELASTOLION985 SEAL	F48X
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	F48X
SPCL FLANGE	F1	LF00CK00	6"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH80S	F48X
SPCL FLANGE	F1	LF00CK01	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 14.27mm THK	F48X
SPCL FLANGE	F1	LF00CK02	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 19.05mm THK	F48X
SPCL FLANGE	F1	LF00CK03	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 20.62mm THK	F48X
SPCL FLANGE	F1	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	F48X
SPCL FLANGE	F1	LF10CK00	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH60	F48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF10CK01	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH40S	F48X
SPCL FLG JACK	FJ1	LFJ0CK00	6"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	F48X
SPCL FLG JACK	FJ1	LFJ0CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	F48X
SPCL FLG JACK	FJ1	LFJ1CK00	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	F48X
SPCL FLG JACK	FJ1	LFJ1CK01	2"	4"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40S	F48X
SPCL FLG JACK	FJ1	LFJ1CK02	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.27mm THK	F48X
SPCL FLG JACK	FJ1	LFJ1CK03	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 19.05mm THK	F48X
SPCL FLG JACK	FJ1	LFJ1CK04	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 20.62mm THK	F48X
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	F48X
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	F48X
SPE BLIND	FSB	LFSBCH00	1/2"	8"	FLANGE A240-321 FIGURE-8 BLANKS RF CL600 (ASME B16.48)	F48X
SPE BLIND	FSB	LFSBCH01	10"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RF CL600 (ASME B16.48)	F48X
SWG CON B-P	RCB	LRCBCS00	2"	4"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH40S	F48X
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	F48X
SWG CON P-T	RC2	LRC2CK00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH160	F48X
SWG CON P-T	RC2	LRC2CT00	3/4"	1"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH80S	F48X
SWG ECC B-P	REB	LREBCS00	2"	4"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH40S	F48X
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	F48X
TEE	TE	LTE0CE00	12"	12"	TEE A403-WP321 EQUAL WELDED BE SCH60	F48X
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	F48X
TEE	TE	LTE0CS00	2"	4"	TEE A403-WP321 EQUAL SMLS BE SCH40S	F48X
TEE	TE	LTE0CT00	6"	6"	TEE A403-WP321 EQUAL SMLS BE SCH80S	F48X
TEE	TE	LTE0CT01	8"	10"	TEE A403-WP321 EQUAL WELDED BE SCH80S	F48X
TEE	TE	LTE0CZ06	14"	14"	TEE A403-WP321 EQUAL WELDED BE 14.27mm THK	F48X
TEE	TE	LTE0CZ07	18"	18"	TEE A403-WP321 EQUAL WELDED BE 19.05mm THK	F48X
TEE	TE	LTE0CZ08	20"	20"	TEE A403-WP321 EQUAL WELDED BE 20.62mm THK	F48X
TEE RED	TR	LTR0CE00	12"	12"	TEE A403-WP321 REDUCING WELDED BE SCH60	F48X
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	F48X
TEE RED	TR	LTR0CS00	2"	4"	TEE A403-WP321 REDUCING SMLS BE SCH40S	F48X
TEE RED	TR	LTR0CT00	6"	6"	TEE A403-WP321 REDUCING SMLS BE SCH80S	F48X
TEE RED	TR	LTR0CT01	8"	10"	TEE A403-WP321 REDUCING WELDED BE SCH80S	F48X
TEE RED	TR	LTR0CZ06	14"	14"	TEE A403-WP321 REDUCING WELDED BE 14.27mm THK	F48X
TEE RED	TR	LTR0CZ07	18"	18"	TEE A403-WP321 REDUCING WELDED BE 19.05mm THK	F48X
TEE RED	TR	LTR0CZ08	20"	20"	TEE A403-WP321 REDUCING WELDED BE 20.62mm THK	F48X
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	F48X
WELDOLET	TWO	LTWOCS00	2"	4"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH40S	F48X
WELDOLET	TWO	LTWOCT02	6"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH80S	F48X
BALL VA	VBF	VBFAG001	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VBF	VBFAG002	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VBF	VBFAG009	26"	42"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	G01
BALL VA	VB1	VBFAG014	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VB1	VBFAG015	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VB3	VBFAG019	2"	4"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	G01
BALL VA	VB3	VBFAG020	6"	24"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	G01
BALL VA	VBF	VBFAH001	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	G01
BALL VA	VB1	VBFAH011	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PEEK SEATS ANSI CL1500 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	G01
BALL VA	VB3	VBFAH012	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL1500 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 GRAPHITE SEAL/FLOATING	G01
BALL VA	VBR	VBRAG001	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VBR	VBRAG002	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VBR	VBRAG009	26"	42"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	G01
BALL VA	VB2	VBRAG012	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VB2	VBRAG013	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G01
BALL VA	VB4	VBRAG019	2"	4"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	G01
BALL VA	VB4	VBRAG020	6"	24"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION	G01
BOLTS	B	LB00A000	1/2"	42"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	G01
CAP	C	LC00A337	28"	28"	CAP A234-WPB SMLS BE 34.5mm THK FOR 106 UNIT	G01
CAP	C	LC00A414	26"	26"	CAP A234-WPB SMLS BE 41.6mm THK	G01
CAP	C	LC00A416	30"	30"	CAP A234-WPB SMLS BE 47.8mm THK	G01
CAP	C	LC00A501	32"	32"	CAP A234-WPB SMLS BE 50.9mm THK	G01
CAP	C	LC00A502	34"	34"	CAP A234-WPB SMLS BE 53.9mm THK	G01
CAP	C	LC00A503	36"	36"	CAP A234-WPB SMLS BE 57.0mm THK	G01
CAP	C	LC00A600	38"	38"	CAP A234-WPB SMLS BE 60.1mm THK	G01
CAP	C	LC00A601	40"	40"	CAP A234-WPB SMLS BE 63.2mm THK	G01
CAP	C	LC00AF00	2"	4"	CAP A234-WPB SMLS BE SCH80	G01
CAP	C	LC00AG00	8"	18"	CAP A234-WPB SMLS BE SCH100	G01
CAP	C	LC00AH00	6"	6"	CAP A234-WPB SMLS BE SCH120	G01
CAP	C	LC00AP00	1/2"	1 1/2"	CAP A105 FORGED SW CL3000	G01
CAP THD	CT	LCT0AP00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL3000	G01
CHECK VA	VCA	VCAAG001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G01
CHECK VA	VCA	VCAAG002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G01
CHECK VA	VCA	VCAAG007	26"	42"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 API 594 WAFER FOR ASME B16.47-A RTJ FLANGES	G01
CHECK VA	VCH	VCHAH001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 BS 5352	G01
CPLG FULL	CF	LCF0AP00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL3000	G01
DOUBLE IBB VA	DF1	LDF1AL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DFA	LDFAAL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DFG	LDFGAL00	1/2"	1/2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL1500 1/2 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DL1	LDL1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DL2	LDL2AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DL3	LDL3AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DL4	LDL4AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DL5	LDL5AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DLA	LDLAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DLB	LDLBAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DLC	LDLCAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DLD	LDLDAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DLE	LDLEAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DLG	LDLGAL00	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL1500 3/4 FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DLH	LDLHAK00	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL900 2 FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DLI	LDLIAK00	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL900 2 FLGD-RTJ x 2" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DLJ	LDLJAL00	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL1500 3/4 FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DLK	LDLKAK00	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL900 2 FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DP1	LDP1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DP2	LDP2AL00	1"	1"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DP3	LDP3AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DPA	LDPAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DPB	LDPBAL00	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DPC	LDPCAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G01
DOUBLE IBB VA	DPG	LDPGAL00	3/4"	3/4"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL1500 3/4 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DPH	LDPHAL00	1"	1"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL1500 1 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
DOUBLE IBB VA	DPI	LDPIAK00	2"	2"	NEEDLE VALVE A105 13Cr W/STELLITE SEATS & DISC BB OS&Y ANSI CL900 2 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G01
ELBOLET	TEW	LTEWAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL3000	G01
ELBOW	E4	LE40A337	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE 34.5mm THK FOR 106 UNIT	G01
ELBOW	E4	LE40A415	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE 41.6mm THK	G01
ELBOW	E4	LE40A417	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE 47.8mm THK	G01
ELBOW	E4	LE40A501	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE 50.9mm THK	G01
ELBOW	E4	LE40A502	34"	34"	ELBOW A234-WPB DEG-45 WELDED BE 53.9mm THK	G01
ELBOW	E4	LE40A503	36"	36"	ELBOW A234-WPB DEG-45 WELDED BE 57.0mm THK	G01
ELBOW	E4	LE40A600	38"	38"	ELBOW A234-WPB DEG-45 WELDED BE 60.1mm THK	G01
ELBOW	E4	LE40A601	40"	40"	ELBOW A234-WPB DEG-45 WELDED BE 63.2mm THK	G01
ELBOW	E4	LE40AF00	2"	4"	ELBOW A234-WPB DEG-45 SMLS BE SCH80	G01
ELBOW	E4	LE40AF06	20"	20"	ELBOW A234-WPB DEG-45 WELDED BE SCH80	G01
ELBOW	E4	LE40AG00	8"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH100	G01
ELBOW	E4	LE40AG01	18"	18"	ELBOW A234-WPB DEG-45 WELDED BE SCH100	G01
ELBOW	E4	LE40AH00	6"	6"	ELBOW A234-WPB DEG-45 SMLS BE SCH120	G01
ELBOW	E4	LE40AP00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL3000	G01
ELBOW	E9	LE90A337	28"	28"	ELBOW A234-WPB 90-LR WELDED BE 34.5mm THK FOR 106 UNIT	G01
ELBOW	E9	LE90A415	26"	26"	ELBOW A234-WPB 90-LR WELDED BE 41.6mm THK	G01
ELBOW	E9	LE90A417	30"	30"	ELBOW A234-WPB 90-LR WELDED BE 47.8mm THK	G01
ELBOW	E9	LE90A501	32"	32"	ELBOW A234-WPB 90-LR WELDED BE 50.9mm THK	G01
ELBOW	E9	LE90A502	34"	34"	ELBOW A234-WPB 90-LR WELDED BE 53.9mm THK	G01
ELBOW	E9	LE90A503	36"	36"	ELBOW A234-WPB 90-LR WELDED BE 57.0mm THK	G01
ELBOW	E9	LE90A600	38"	38"	ELBOW A234-WPB 90-LR WELDED BE 60.1mm THK	G01
ELBOW	E9	LE90A601	40"	40"	ELBOW A234-WPB 90-LR WELDED BE 63.2mm THK	G01
ELBOW	E9	LE90AF00	2"	4"	ELBOW A234-WPB 90-LR SMLS BE SCH80	G01
ELBOW	E9	LE90AF06	20"	20"	ELBOW A234-WPB 90-LR WELDED BE SCH80	G01
ELBOW	E9	LE90AG00	8"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH100	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AG01	18"	18"	ELBOW A234-WPB 90-LR WELDED BE SCH100	G01
ELBOW	E9	LE90AH00	6"	6"	ELBOW A234-WPB 90-LR SMLS BE SCH120	G01
ELBOW	E9	LE90AP00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL3000	G01
FLANGE	F	LF00AK05	8"	18"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH100	G01
FLANGE	F	LF00AK07	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 41.6mm THK	G01
FLANGE	F	LF00AK09	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 47.8mm THK	G01
FLANGE	F	LF00AK10	32"	32"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 50.9mm THK	G01
FLANGE	F	LF00AK11	34"	34"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 53.9mm THK	G01
FLANGE	F	LF00AK12	36"	36"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 57.0mm THK	G01
FLANGE	F	LF00AK13	38"	38"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 60.1mm THK	G01
FLANGE	F	LF00AK14	40"	40"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 63.2mm THK	G01
FLANGE	F	LF00AK94	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) 34.5mm THK FOR 106 UNIT	G01
FLG BLIND	FB1	LFB0AK00	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5)	G01
FLG BLIND	FB1	LFB0AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5)	G01
FLG BLIND	FB1	LFB1AK00	26"	42"	FLANGE A105 BLIND RTJ CL900 (ASME B16.47-A)	G01
FLG JACK	FJ	LFJ0AH01	2"	2"	FLANGE A105 WN RF CL600 (ASME B16.5) W/JACK SCREW SCH80	G01
FLG JACK	FJ	LFJ0AK01	8"	18"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH100	G01
FLG JACK	FJ	LFJ0AK02	6"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120	G01
FLG JACK	FJ	LFJ0AK03	2"	4"	FLANGE A105 SW RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	G01
FLG JACK	FJ	LFJ0AK30	42"	42"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) W/JACK SCREW 50.9mm THK FOR 106 UNIT	G01
FLG JACK	FJ	LFJ0AK31	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) W/JACK SCREW 34.5mm THK FOR 106 UNIT	G01
FLG RED	RF	LRF0AK04	3"	3"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) SCH80	G01
GATE VA	VGA	VGAAG001	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600	G01
GATE VA	VGA	VGAAG002	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600	G01
GATE VA	VGA	VGAAG011	26"	42"	GATE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600 ASME B16.47-A FLGD	G01
GATE VA	VGA	VGAAH001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G01
GATE VA	VGF	VGFAH001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G01
GATE VA	VGX	VGXAH001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G01
GLOBE VA	VLA	VLAAG001	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873	G01
GLOBE VA	VLA	VLAAG003	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873	G01
GLOBE VA	VLA	VLAAH001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	G01
INSUL GASKET	GK	LGK0ZK00	2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G01
INSUL GASKET	GK	LGK0ZL00	1/2"	1 1/2"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G01
NEEDLE VA	VNE	VNEAH001	3/4"	1"	NEEDLE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC ANSI CL1500 API 602	G01
NIPPLE TOE	NTO	LNTOAK00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	G01
PIPE	P	LP00A367	28"	28"	PIPE API 5L-B PSL1 SAW BE 100% RT 34.5mm THK FOR 106 UNIT	G01
PIPE	P	LP00A416	26"	26"	PIPE API 5L-B PSL1 SAW BE 100% RT 41.6mm THK	G01
PIPE	P	LP00A418	30"	30"	PIPE API 5L-B PSL1 SAW BE 100% RT 47.8mm THK	G01
PIPE	P	LP00A501	32"	32"	PIPE API 5L-B PSL1 SAW BE 100% RT 50.9mm THK	G01
PIPE	P	LP00A502	34"	34"	PIPE API 5L-B PSL1 SAW BE 100% RT 53.9mm THK	G01
PIPE	P	LP00A503	36"	36"	PIPE API 5L-B PSL1 SAW BE 100% RT 57.0mm THK	G01
PIPE	P	LP00A600	38"	38"	PIPE API 5L-B PSL1 SAW BE 100% RT 60.1mm THK	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00A601	40"	40"	PIPE API 5L-B PSL1 SAW BE 100% RT 63.2mm THK	G01
PIPE	P	LP00AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80	G01
PIPE	P	LP00AF01	2"	4"	PIPE API 5L-B PSL1 SMLS BE SCH80	G01
PIPE	P	LP00AF12	20"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80	G01
PIPE	P1	LP00AF22	2"	4"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80	G01
PIPE	P1	LP00AF23	20"	20"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH80	G01
PIPE	P	LP00AG00	8"	16"	PIPE API 5L-B PSL1 SMLS BE SCH100	G01
PIPE	P	LP00AG01	18"	18"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH100	G01
PIPE	P	LP00AH00	6"	6"	PIPE API 5L-B PSL1 SMLS BE SCH120	G01
PIPE	P1	LP00AH13	6"	6"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH120	G01
PIPE	P2	LP10AF01	2"	4"	PIPE API 5L-B PSL1 SMLS BE SCH80 PP COATED	G01
PIPE	P1	LP10AG00	8"	16"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH100	G01
PIPE	P1	LP10AG01	18"	18"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH100	G01
PIPE	P2	LP10AH00	6"	6"	PIPE API 5L-B PSL1 SMLS BE SCH120 PP COATED	G01
PIPE	P3	LP20AF01	2"	4"	PIPE API 5L-B PSL1 SMLS BE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PIPE	P2	LP20AF06	20"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80 PP COATED	G01
PIPE	P2	LP20AG00	8"	16"	PIPE API 5L-B PSL1 SMLS BE SCH100 PP COATED	G01
PIPE	P2	LP20AG01	18"	18"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH100 PP COATED	G01
PIPE	P3	LP20AH00	6"	6"	PIPE API 5L-B PSL1 SMLS BE SCH120 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PIPE	P3	LP30AF00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PIPE	P3	LP30AF02	20"	20"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH80 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PIPE	P3	LP30AG00	8"	16"	PIPE API 5L-B PSL1 SMLS BE SCH100 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PIPE	P3	LP30AG01	18"	18"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH100 (SUNLIGHT L-200 WRAPPED AT SITE)	G01
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	G01
PLUG VA	VPL	VPLAG001	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 MAX	G01
PLUG VA	VPL	VPLAG002	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599	G01
PLUG VA	VPL	VPLAH001	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	G01
RED CON	RC	LRC0A337	28"	28"	REDUCER A234-WPB CON. WELDED BE 34.5mm THK FOR 106 UNIT	G01
RED CON	RC	LRC0A415	26"	26"	REDUCER A234-WPB CON. WELDED BE 41.6mm THK	G01
RED CON	RC	LRC0A417	30"	30"	REDUCER A234-WPB CON. WELDED BE 47.8mm THK	G01
RED CON	RC	LRC0A501	32"	32"	REDUCER A234-WPB CON. WELDED BE 50.9mm THK	G01
RED CON	RC	LRC0A502	34"	34"	REDUCER A234-WPB CON. WELDED BE 53.9mm THK	G01
RED CON	RC	LRC0A503	36"	36"	REDUCER A234-WPB CON. WELDED BE 57.0mm THK	G01
RED CON	RC	LRC0A600	38"	38"	REDUCER A234-WPB CON. WELDED BE 60.1mm THK	G01
RED CON	RC	LRC0A601	40"	40"	REDUCER A234-WPB CON. WELDED BE 63.2mm THK	G01
RED CON	RC	LRC0AF00	2"	4"	REDUCER A234-WPB CON. SMLS BE SCH80	G01
RED CON	RC	LRC0AF06	20"	20"	REDUCER A234-WPB CON. WELDED BE SCH80	G01
RED CON	RC	LRC0AG00	8"	16"	REDUCER A234-WPB CON. SMLS BE SCH100	G01
RED CON	RC	LRC0AG05	18"	18"	REDUCER A234-WPB CON. WELDED BE SCH100	G01
RED CON	RC	LRC0AH00	6"	6"	REDUCER A234-WPB CON. SMLS BE SCH120	G01
RED ECC	RE	LRE0A337	28"	28"	REDUCER A234-WPB ECC. WELDED BE 34.5mm THK FOR 106 UNIT	G01
RED ECC	RE	LRE0A415	26"	26"	REDUCER A234-WPB ECC. WELDED BE 41.6mm THK	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0A417	30"	30"	REDUCER A234-WPB ECC. WELDED BE 47.8mm THK	G01
RED ECC	RE	LRE0A501	32"	32"	REDUCER A234-WPB ECC. WELDED BE 50.9mm THK	G01
RED ECC	RE	LRE0A502	34"	34"	REDUCER A234-WPB ECC. WELDED BE 53.9mm THK	G01
RED ECC	RE	LRE0A503	36"	36"	REDUCER A234-WPB ECC. WELDED BE 57.0mm THK	G01
RED ECC	RE	LRE0A600	38"	38"	REDUCER A234-WPB ECC. WELDED BE 60.1mm THK	G01
RED ECC	RE	LRE0A601	40"	40"	REDUCER A234-WPB ECC. WELDED BE 63.2mm THK	G01
RED ECC	RE	LRE0AF00	2"	4"	REDUCER A234-WPB ECC. SMLS BE SCH80	G01
RED ECC	RE	LRE0AF06	20"	20"	REDUCER A234-WPB ECC. WELDED BE SCH80	G01
RED ECC	RE	LRE0AG00	8"	16"	REDUCER A234-WPB ECC. SMLS BE SCH100	G01
RED ECC	RE	LRE0AG01	18"	18"	REDUCER A234-WPB ECC. WELDED BE SCH100	G01
RED ECC	RE	LRE0AH00	6"	6"	REDUCER A234-WPB ECC. SMLS BE SCH120	G01
SOCKOLET	TSO	LTSOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL3000	G01
SPCL FLANGE	F3	LF00AK00	2"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH80	G01
SPCL FLANGE	F3	LF00AK06	6"	6"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH120	G01
SPCL FLANGE	F3	LF00AL03	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH80	G01
SPCL FLANGE	F1	LF00AL05	6"	6"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH120	G01
SPCL FLANGE	F1	LF10AL01	2"	4"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH80	G01
SPCL FLANGE	F1	LF10AL02	8"	18"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH100	G01
SPCL FLG JACK	FJ1	LFJ0AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	G01
SPCL FLG JACK	FJ1	LFJ0AL04	6"	6"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120	G01
SPCL FLG JACK	FJ1	LFJ1AK02	20"	20"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	G01
SPCL FLG JACK	FJ1	LFJ1AL01	8"	18"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH100	G01
SPCL FLG JACK	FJ1	LFJ1AL26	20"	20"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80 FOR 106 UNIT	G01
SPCL GASKET	G1	LG00ZK00	26"	42"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G01
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G01
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G01
SPE BLIND	FSB	LFSBAK01	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48)	G01
SPE BLIND	FSB	LFSBAK03	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	G01
SPE BLIND	FSB	LFSBAK24	26"	42"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.47-A)	G01
SPE BLIND	FSB	LFSBAL01	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	G01
SWG CON B-P	RCB	LRCBAF00	2"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH80	G01
SWG CON PE	RCP	LRCPAF00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH80	G01
SWG ECC B-P	REB	LREBAF00	2"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH80	G01
SWG ECC PE	REP	LREPAF00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH80	G01
TEE	TE	LTE0A337	28"	28"	TEE A234-WPB EQUAL WELDED BE 34.5mm THK FOR 106 UNIT	G01
TEE	TE	LTE0A415	26"	26"	TEE A234-WPB EQUAL WELDED BE 41.6mm THK	G01
TEE	TE	LTE0A417	30"	30"	TEE A234-WPB EQUAL WELDED BE 47.8mm THK	G01
TEE	TE	LTE0A501	32"	32"	TEE A234-WPB EQUAL WELDED BE 50.9mm THK	G01
TEE	TE	LTE0A502	34"	34"	TEE A234-WPB EQUAL WELDED BE 53.9mm THK	G01
TEE	TE	LTE0A503	36"	36"	TEE A234-WPB EQUAL WELDED BE 57.0mm THK	G01
TEE	TE	LTE0A600	38"	38"	TEE A234-WPB EQUAL WELDED BE 60.1mm THK	G01
TEE	TE	LTE0A601	40"	40"	TEE A234-WPB EQUAL WELDED BE 63.2mm THK	G01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0AF00	2"	4"	TEE A234-WPB EQUAL SMLS BE SCH80	G01
TEE	TE	LTE0AF06	20"	20"	TEE A234-WPB EQUAL WELDED BE SCH80	G01
TEE	TE	LTE0AG00	8"	16"	TEE A234-WPB EQUAL SMLS BE SCH100	G01
TEE	TE	LTE0AG01	18"	18"	TEE A234-WPB EQUAL WELDED BE SCH100	G01
TEE	TE	LTE0AH00	6"	6"	TEE A234-WPB EQUAL SMLS BE SCH120	G01
TEE	TE	LTE0AP00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL3000	G01
TEE RED	TR	LTR0A337	28"	28"	TEE A234-WPB REDUCING WELDED BE 34.5mm THK FOR 106 UNIT	G01
TEE RED	TR	LTR0A415	26"	26"	TEE A234-WPB REDUCING WELDED BE 41.6mm THK	G01
TEE RED	TR	LTR0A417	30"	30"	TEE A234-WPB REDUCING WELDED BE 47.8mm THK	G01
TEE RED	TR	LTR0A501	32"	32"	TEE A234-WPB REDUCING WELDED BE 50.9mm THK	G01
TEE RED	TR	LTR0A502	34"	34"	TEE A234-WPB REDUCING WELDED BE 53.9mm THK	G01
TEE RED	TR	LTR0A503	36"	36"	TEE A234-WPB REDUCING WELDED BE 57.0mm THK	G01
TEE RED	TR	LTR0A600	38"	38"	TEE A234-WPB REDUCING WELDED BE 60.1mm THK	G01
TEE RED	TR	LTR0A601	40"	40"	TEE A234-WPB REDUCING WELDED BE 63.2mm THK	G01
TEE RED	TR	LTR0AF00	2"	4"	TEE A234-WPB REDUCING SMLS BE SCH80	G01
TEE RED	TR	LTR0AF06	20"	20"	TEE A234-WPB REDUCING WELDED BE SCH80	G01
TEE RED	TR	LTR0AG00	8"	16"	TEE A234-WPB REDUCING SMLS BE SCH100	G01
TEE RED	TR	LTR0AG01	18"	18"	TEE A234-WPB REDUCING WELDED BE SCH100	G01
TEE RED	TR	LTR0AH00	6"	6"	TEE A234-WPB REDUCING SMLS BE SCH120	G01
TEE RED	TR	LTR0AP00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL3000	G01
THREADOLET	TTO	LTTOAP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL3000	G01
WELDOLET	TWO	LTWOAF00	2"	4"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH80	G01
WELDOLET	TWO	LTWOAG04	8"	18"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH100	G01
WELDOLET	TWO	LTWOAH00	6"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH120	G01
BOLTS	B	LB00A000	42"	42"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	G01P3
CAP	C	LC00AF07	4"	4"	CAP A234-WPB SMLS BE SCH80 (RP-1718-999-1300-0080)	G01P3
CAP	C	LC00AZ24	42"	42"	CAP A860 WPHY-65 SMLS BE PE COATED 28.58mm THK (RP-1718-999-1300-0080)	G01P3
ELBOW	E4	LE40AZ24	42"	42"	ELBOW A860 WPHY-65 DEG-45 WELDED BE PE COATED 28.58mm THK (RP-1718-999-1300-0080)	G01P3
ELBOW	E9	LE90AF12	4"	4"	ELBOW A234-WPB 90-LR SMLS BE SCH80 (RP-1718-999-1300-0080)	G01P3
ELBOW	E9	LE90AZ24	42"	42"	ELBOW A860 WPHY-65 90-LR WELDED BE PE COATED 28.58mm THK (RP-1718-999-1300-0080)	G01P3
FLANGE	F	LF00AK16	42"	42"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) 28.58mm THK (RP-1718-999-1300-0079)	G01P3
FLG BLIND	FB	LFB0AH09	42"	42"	FLANGE A694-F65 BLIND RTJ CL600 (ASME B16.47-A) (RP-1718-999-1300-0079)	G01P3
PIPE	P	LP00AF31	4"	4"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH80 (RP-1718-999-1300-0078)	G01P3
PIPE	P	LP00AZ27	42"	42"	PIPE API 5L-X65 PSL1 SAW BE PE COATED 28.58mm THK (RP-1718-999-1300-0078)	G01P3
PLUG VA	VPL	VPLAG005	4"	4"	PLUG VALVE A216-WCB BE 304SS PLUG W/METAL SEATS ANSI CL900 REGULAR PORT G-OP (F-SAFE) API 599 LUBRICATED/EXT STEMH=3100/COATING FOR DIRECT BURIED UNDER GROUND	G01P3
SPCL GASKET	G1	LG00ZK00	42"	42"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G01P3
SPCL GASKET	G3	LG00ZK01	4"	4"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G01P3
SPE BLIND	FSB	LFSBAK14	42"	42"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.47-A) (RP-1718-999-1300-0078)	G01P3
TEE	TE	LTE0AF12	4"	4"	TEE A234-WPB EQUAL SMLS BE SCH80 (RP-1718-999-1300-0080)	G01P3
TEE	TE	LTE0AZ24	42"	42"	TEE A860 WPHY-65 EQUAL WELDED BE PE COATED 28.58mm THK (RP-1718-999-1300-0080)	G01P3
WELDOLET	TWO	LTWOAF09	42"	42"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE 28.58mm THK x SCH80 (RP-1718-999-1300-0079)	G01P3
BALL VA	VBF	VBFAG003	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFAG004	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VB1	VBFAG017	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VB1	VBFAG018	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VBF	VBFAH002	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VBR	VBRAG003	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VBR	VBRAG004	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VB2	VBRAG014	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BALL VA	VB2	VBRAG015	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	G03
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	G03
CAP	C	LC00AH00	4"	24"	CAP A234-WPB SMLS BE SCH120	G03
CAP	C	LC00AK00	2"	3"	CAP A234-WPB SMLS BE SCH160	G03
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	G03
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	G03
CHECK VA	VCA	VCAAG001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G03
CHECK VA	VCA	VCAAG002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G03
CHECK VA	VCH	VCHAH001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 BS 5352	G03
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	G03
DOUBLE IBB VA	DF1	LDF1AL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DFA	LDFAAL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DL1	LDL1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DL2	LDL2AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DL3	LDL3AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DL4	LDL4AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DL5	LDL5AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DLA	LDLAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DLB	LDLBAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DLC	LDLCAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DLD	LDLDAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DLE	LDLEAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DP1	LDP1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DP2	LDP2AL00	1"	1"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DP3	LDP3AK00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DPA	LDPAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DPB	LDPBAL00	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
DOUBLE IBB VA	DPC	LDPCAK00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G03
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	G03
ELBOW	E4	LE40AH00	4"	16"	ELBOW A234-WPB DEG-45 SMLS BE SCH120	G03
ELBOW	E4	LE40AH02	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE SCH120	G03
ELBOW	E4	LE40AK00	2"	3"	ELBOW A234-WPB DEG-45 SMLS BE SCH160	G03
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	G03
ELBOW	E9	LE90AH00	4"	16"	ELBOW A234-WPB 90-LR SMLS BE SCH120	G03
ELBOW	E9	LE90AH12	18"	24"	ELBOW A234-WPB 90-LR WELDED BE SCH120	G03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90AK00	2"	3"	ELBOW A234-WPB 90-LR SMLS BE SCH160	G03
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	G03
FLG BLIND	FB1	LFB0AK00	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5)	G03
FLG BLIND	FB1	LFB0AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5)	G03
FLG JACK	FJ	LFJ0AK02	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120	G03
FLG RED	RF	LRF0AK00	4"	6"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) SCH120	G03
FLG RED	RF	LRF0AK01	2"	3"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) SCH160	G03
GATE VA	VGA	VGAAG001	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600	G03
GATE VA	VGA	VGAAG002	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600	G03
GATE VA	VGA	VGAAH001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G03
GATE VA	VGF	VGFAH001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G03
GATE VA	VGX	VGXAH001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G03
GLOBE VA	VLA	VLAAG001	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873	G03
GLOBE VA	VLA	VLAAG003	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873	G03
GLOBE VA	VLA	VLAAH001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	G03
INSUL GASKET	GK	LGK0ZK00	2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G03
INSUL GASKET	GK	LGK0ZL00	1/2"	1 1/2"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G03
NIPPLE TOE	NTO	LNTOAN06	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	G03
PIPE	P	LP00AH00	4"	16"	PIPE API 5L-B PSL1 SMLS BE SCH120	G03
PIPE	P	LP00AH02	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH120	G03
PIPE	P1	LP00AH13	4"	16"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH120	G03
PIPE	P1	LP00AH14	18"	24"	PIPE API 5L-B PSL1 SAW BE PE COATED 100% RT SCH120	G03
PIPE	P	LP00AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160	G03
PIPE	P	LP00AK03	2"	3"	PIPE API 5L-B PSL1 SMLS BE SCH160	G03
PIPE	P1	LP00AK18	2"	3"	PIPE API 5L-B PSL1 SMLS BE PE COATED SCH160	G03
PIPE	P2	LP10AH00	4"	16"	PIPE API 5L-B PSL1 SMLS BE SCH120 PP COATED	G03
PIPE	P2	LP10AH01	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH120 PP COATED	G03
PIPE	P2	LP10AK02	2"	3"	PIPE API 5L-B PSL1 SMLS BE SCH160 PP COATED	G03
PIPE	P3	LP20AH00	4"	16"	PIPE API 5L-B PSL1 SMLS BE SCH120 (SUNLIGHT L-200 WRAPPED AT SITE)	G03
PIPE	P3	LP20AH01	18"	24"	PIPE API 5L-B PSL1 SAW BE 100% RT SCH120 (SUNLIGHT L-200 WRAPPED AT SITE)	G03
PIPE	P3	LP20AK02	2"	3"	PIPE API 5L-B PSL1 SMLS BE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE) ,	G03
PIPE	P3	LP30AK00	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE SCH160 (SUNLIGHT L-200 WRAPPED AT SITE)	G03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	G03
PLUG VA	VPL	VPLAG001	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 MAX	G03
PLUG VA	VPL	VPLAG002	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599	G03
PLUG VA	VPL	VPLAH002	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	G03
RED CON	RC	LRC0AH00	4"	16"	REDUCER A234-WPB CON. SMLS BE SCH120	G03
RED CON	RC	LRC0AH02	18"	24"	REDUCER A234-WPB CON. WELDED BE SCH120	G03
RED CON	RC	LRC0AK00	2"	3"	REDUCER A234-WPB CON. SMLS BE SCH160	G03
RED ECC	RE	LRE0AH00	4"	16"	REDUCER A234-WPB ECC. SMLS BE SCH120	G03
RED ECC	RE	LRE0AH02	18"	24"	REDUCER A234-WPB ECC. WELDED BE SCH120	G03
RED ECC	RE	LRE0AK00	2"	3"	REDUCER A234-WPB ECC. SMLS BE SCH160	G03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	G03
SPCL FLANGE	F3	LF00AK01	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH160	G03
SPCL FLANGE	F3	LF00AK06	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) SCH120	G03
SPCL FLANGE	F3	LF00AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH160	G03
SPCL FLANGE	F1	LF00AL05	4"	24"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH120	G03
SPCL FLANGE	F1	LF00AL06	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) SCH160	G03
SPCL FLG JACK	FJ1	LFJ0AK04	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160	G03
SPCL FLG JACK	FJ1	LFJ0AL04	4"	24"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120	G03
SPCL FLG JACK	FJ1	LFJ0AL05	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	G03
SPCL FLG JACK	FJ1	LFJ0AL06	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	G03
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G03
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G03
SPE BLIND	FSB	LFSBAK01	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48)	G03
SPE BLIND	FSB	LFSBAK03	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	G03
SPE BLIND	FSB	LFSBAL01	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	G03
SWG CON B-P	RCB	LRCBAH00	4"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH120	G03
SWG CON B-P	RCB	LRCBAK00	2"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE SCH160	G03
SWG CON PE	RCP	LRCPAK00	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE SCH160	G03
SWG ECC B-P	REB	LREBAH00	4"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH120	G03
SWG ECC B-P	REB	LREBAK00	2"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE SCH160	G03
SWG ECC PE	REP	LREPAK00	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE SCH160	G03
TEE	TE	LTE0AH00	4"	16"	TEE A234-WPB EQUAL SMLS BE SCH120	G03
TEE	TE	LTE0AH02	18"	24"	TEE A234-WPB EQUAL WELDED BE SCH120	G03
TEE	TE	LTE0AK00	2"	3"	TEE A234-WPB EQUAL SMLS BE SCH160	G03
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	G03
TEE RED	TR	LTR0AH00	4"	16"	TEE A234-WPB REDUCING SMLS BE SCH120	G03
TEE RED	TR	LTR0AH02	18"	24"	TEE A234-WPB REDUCING WELDED BE SCH120	G03
TEE RED	TR	LTR0AK00	2"	3"	TEE A234-WPB REDUCING SMLS BE SCH160	G03
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	G03
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	G03
WELDOLET	TWO	LTWOAH00	4"	8"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH120	G03
WELDOLET	TWO	LTWOAK00	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160	G03
BALL VA	VBF	VBFAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03N
BALL VA	VBF	VBFAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03N
BALL VA	VBF	VBFAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03N
BALL VA	VB3	VBFAG021	2"	4"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	G03N
BALL VA	VB3	VBFAG022	6"	24"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	G03N
BALL VA	VBF	VBFAH003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G03N
BALL VA	VBF	VBFAH014	1"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 GRAPHITE SEAL/FLOATING/NACE RP-1718-999-6300-0004	G03N
BALL VA	VBR	VBRAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03N
BALL VA	VBR	VBRAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03N
BALL VA	VBR	VBRAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VB4	VBRAG021	2"	4"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	G03N
BALL VA	VB4	VBRAG022	6"	24"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D GRAPHITE SEAL/TRUNNION/NACE (RP-1718-999-6300-0004)	G03N
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G03N
CAP	C	LC00A417	26"	26"	CAP A234-WPB SMLS BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A418	28"	28"	CAP A234-WPB SMLS BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A419	30"	30"	CAP A234-WPB SMLS BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A504	32"	32"	CAP A234-WPB SMLS BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A505	34"	34"	CAP A234-WPB SMLS BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A506	36"	36"	CAP A234-WPB SMLS BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A603	38"	38"	CAP A234-WPB SMLS BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A604	40"	40"	CAP A234-WPB SMLS BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A605	42"	42"	CAP A234-WPB SMLS BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A700	44"	44"	CAP A234-WPB SMLS BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00A701	46"	46"	CAP A234-WPB SMLS BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
CAP	C	LC00AH01	4"	24"	CAP A234-WPB SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
CAP	C	LC00AK01	2"	3"	CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
CAP	C	LC00AQ01	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
CAP THD	CT	LCT0AQ01	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	G03N
CHECK VA	VCA	VCAAG003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03N
CHECK VA	VCA	VCAAG004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03N
CHECK VA	VCA	VCAAG008	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR ASME B16.47-A RTJ FLANGES(RP-1718-999-6300-0004)	G03N
CHECK VA	VCH	VCHAH002	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03N
CPLG FULL	CF	LCF0AQ01	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
DOUBLE IBB VA	DFA	LDFAAL01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DFG	LDFGAL01	1/2"	1/2"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL1500 NACE 1/2 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DLA	LDLAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DLB	LDLBAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DLC	LDLCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DLD	LDLDAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DLE	LDLEAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DLG	LDLGAL01	3/4"	3/4"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL1500 NACE 3/4 FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DLH	LDLHAK01	2"	2"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL900 NACE 2 FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DLI	LDLIAK01	2"	2"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL900 NACE 2 FLGD-RTJ x 2" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DLJ	LDLJAL01	3/4"	3/4"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL1500 NACE 3/4 FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DLK	LDLKAK01	2"	2"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL900 NACE 2 FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DPA	LDPAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DPB	LDPBAL01	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DPC	LDPCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03N
DOUBLE IBB VA	DPG	LDPGAL01	3/4"	3/4"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL1500 NACE 3/4 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DPH	LDPHAL01	1"	1"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL1500 NACE 1 FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
DOUBLE IBB VA	DPI	LDPIAK01	2"	2"	NEEDLE VALVE A105 316SS TRIM BB OS&Y ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 NEEDLE & NEEDLE VENT)	G03N
ELBOLET	TEW	LTEWAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40A418	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A419	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A420	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A504	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A505	34"	34"	ELBOW A234-WPB DEG-45 WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A506	36"	36"	ELBOW A234-WPB DEG-45 WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A603	38"	38"	ELBOW A234-WPB DEG-45 WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A604	40"	40"	ELBOW A234-WPB DEG-45 WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A605	42"	42"	ELBOW A234-WPB DEG-45 WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A700	44"	44"	ELBOW A234-WPB DEG-45 WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40A701	46"	46"	ELBOW A234-WPB DEG-45 WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40AH01	4"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40AH03	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40AK01	2"	3"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
ELBOW	E4	LE40AQ01	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A418	26"	26"	ELBOW A234-WPB 90-LR WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A419	28"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A420	30"	30"	ELBOW A234-WPB 90-LR WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A504	32"	32"	ELBOW A234-WPB 90-LR WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A505	34"	34"	ELBOW A234-WPB 90-LR WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A506	36"	36"	ELBOW A234-WPB 90-LR WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A603	38"	38"	ELBOW A234-WPB 90-LR WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A604	40"	40"	ELBOW A234-WPB 90-LR WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A605	42"	42"	ELBOW A234-WPB 90-LR WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A700	44"	44"	ELBOW A234-WPB 90-LR WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90A701	46"	46"	ELBOW A234-WPB 90-LR WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90AH01	4"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90AH02	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90AK01	2"	3"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
ELBOW	E9	LE90AQ01	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK18	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK19	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK20	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK21	32"	32"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK22	34"	34"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK23	36"	36"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK24	38"	38"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK25	40"	40"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK26	42"	42"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK27	44"	44"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
FLANGE	F	LF00AK28	46"	46"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
FLG BLIND	FB1	LFB0AK01	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0003)	G03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG BLIND	FB	LFB0AK11	26"	46"	FLANGE A105 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0003)	G03N
FLG BLIND	FB1	LFB1AL00	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0003)	G03N
FLG JACK	FJ	LFJ0AK05	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	G03N
GATE VA	VGA	VGAAG003	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G03N
GATE VA	VGA	VGAAG004	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G03N
GATE VA	VGA	VGAAG005	26"	46"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	G03N
GATE VA	VGA	VGAAH002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03N
GATE VA	VGF	VGFAH002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G03N
GATE VA	VGX	VGXAH002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03N
GLOBE VA	VLA	VLAAG002	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G03N
GLOBE VA	VLA	VLAAG004	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G03N
GLOBE VA	VLA	VLAAH002	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03N
NEEDLE VA	VNE	VNEAH002	3/4"	1"	NEEDLE VALVE A105 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03N
NIPPLE TOE	NTO	LNTOAN01	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	G03N
NIPPLE TOE	NTT	LNTTAN00	1/2"	1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 150mm LONG XXS (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A419	26"	26"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 43.5mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A420	28"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 46.6mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A421	30"	30"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 49.7mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A504	32"	32"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 52.8mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A505	34"	34"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 55.9mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A506	36"	36"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 59.0mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A603	38"	38"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 62.1mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A604	40"	40"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 65.2mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A605	42"	42"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 68.2mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A700	44"	44"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 71.3mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00A701	46"	46"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 74.4mm THK (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00AH01	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00AH03	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH120 (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00AK01	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G03N
PIPE	P	LP00AK04	2"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
PLUG	PLG	LPLGAW01	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	G03N
PLUG VA	VPL	VPLAG003	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03N
PLUG VA	VPL	VPLAG004	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03N
PLUG VA	VPL	VPLAH003	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G03N
RED CON	RC	LRC0A418	26"	26"	REDUCER A234-WPB CON. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A419	28"	28"	REDUCER A234-WPB CON. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A420	30"	30"	REDUCER A234-WPB CON. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A504	32"	32"	REDUCER A234-WPB CON. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A505	34"	34"	REDUCER A234-WPB CON. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A506	36"	36"	REDUCER A234-WPB CON. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A603	38"	38"	REDUCER A234-WPB CON. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A604	40"	40"	REDUCER A234-WPB CON. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0A605	42"	42"	REDUCER A234-WPB CON. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A700	44"	44"	REDUCER A234-WPB CON. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0A701	46"	46"	REDUCER A234-WPB CON. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0AH01	4"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0AH03	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
RED CON	RC	LRC0AK01	2"	3"	REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A418	26"	26"	REDUCER A234-WPB ECC. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A419	28"	28"	REDUCER A234-WPB ECC. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A420	30"	30"	REDUCER A234-WPB ECC. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A504	32"	32"	REDUCER A234-WPB ECC. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A505	34"	34"	REDUCER A234-WPB ECC. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A506	36"	36"	REDUCER A234-WPB ECC. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A603	38"	38"	REDUCER A234-WPB ECC. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A604	40"	40"	REDUCER A234-WPB ECC. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A605	42"	42"	REDUCER A234-WPB ECC. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A700	44"	44"	REDUCER A234-WPB ECC. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0A701	46"	46"	REDUCER A234-WPB ECC. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0AH01	4"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0AH03	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
RED ECC	RE	LRE0AK01	2"	3"	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
SOCKOLET	TSO	LTSOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
SPCL FLANGE	F3	LF00AK02	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G03N
SPCL FLANGE	F3	LF00AK17	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	G03N
SPCL FLANGE	F3	LF00AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G03N
SPCL FLANGE	F1	LF10AL04	4"	24"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	G03N
SPCL FLANGE	F1	LF10AL05	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G03N
SPCL FLG JACK	FJ1	LFJ0AK06	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G03N
SPCL FLG JACK	FJ1	LFJ0AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G03N
SPCL FLG JACK	FJ1	LFJ1AL03	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G03N
SPCL FLG JACK	FJ1	LFJ1AL25	4"	24"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	G03N
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G03N
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G03N
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G03N
SPE BLIND	FSB	LFSBAK04	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0003)	G03N
SPE BLIND	FSB	LFSBAK05	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0003)	G03N
SPE BLIND	FSB	LFSBAL02	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-6300-0003)	G03N
SWG CON B-P	RCB	LRCBAH01	4"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	G03N
SWG CON B-P	RCB	LRCBAK01	2"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	G03N
SWG CON PE	RCP	LRCPAK01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G03N
SWG CON P-T	RC2	LRC2AN01	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0003)	G03N
SWG ECC B-P	REB	LREBAH01	4"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	G03N
SWG ECC B-P	REB	LREBAK01	2"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	G03N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG ECC PE	REP	LREPAK01	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A418	26"	26"	TEE A234-WPB EQUAL WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A419	28"	28"	TEE A234-WPB EQUAL WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A420	30"	30"	TEE A234-WPB EQUAL WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A504	32"	32"	TEE A234-WPB EQUAL WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A505	34"	34"	TEE A234-WPB EQUAL WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A506	36"	36"	TEE A234-WPB EQUAL WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A603	38"	38"	TEE A234-WPB EQUAL WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A604	40"	40"	TEE A234-WPB EQUAL WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A605	42"	42"	TEE A234-WPB EQUAL WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A700	44"	44"	TEE A234-WPB EQUAL WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0A701	46"	46"	TEE A234-WPB EQUAL WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0AH01	4"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0AH03	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0AK01	2"	3"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
TEE	TE	LTE0AQ01	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A418	26"	26"	TEE A234-WPB REDUCING WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A419	28"	28"	TEE A234-WPB REDUCING WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A420	30"	30"	TEE A234-WPB REDUCING WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A504	32"	32"	TEE A234-WPB REDUCING WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A505	34"	34"	TEE A234-WPB REDUCING WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A506	36"	36"	TEE A234-WPB REDUCING WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A603	38"	38"	TEE A234-WPB REDUCING WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A604	40"	40"	TEE A234-WPB REDUCING WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A605	42"	42"	TEE A234-WPB REDUCING WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A700	44"	44"	TEE A234-WPB REDUCING WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0A701	46"	46"	TEE A234-WPB REDUCING WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0AH01	4"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0AH03	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0AK01	2"	3"	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
TEE RED	TR	LTR0AQ01	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G03N
THREADOLET	TTO	LTTOAQ01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	G03N
WELDOLET	TWO	LTWOAH01	4"	20"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-6300-0003)	G03N
WELDOLET	TWO	LTWOAK01	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0003)	G03N
BALL VA	VBE	VBEAG001	2"	4"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/SERVICE CLASS E/NACE (RP-1718-999-6300-0004)	G03P2
BALL VA	VBE	VBEAG002	6"	24"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/SERVICE CLASS E/NACE (RP-1718-999-6300-0004)	G03P2
BALL VA	VBE	VBEAG003	26"	30"	BALL VALVE A216-WCB FLGD-RTJ TUNGSTEN CARBIDE COATED BALL W/METAL SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A/CLASS E/NACE (RP-1718-999-6300-0004)	G03P2
BALL VA	VBE	VBEAH001	1/2"	1 1/2"	W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/SERVICE CLASS E/NACE (RP-1718-999-6300-0004)	G03P2
BALL VA	VBF	VBFAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03P2
BALL VA	VBF	VBFAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03P2
BALL VA	VBF	VBFAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03P2
BALL VA	VBF	VBFAH003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G03P2

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBF	VBFAHX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/XXS FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE RP-1718-999-6300-0004	G03P2
BALL VA	VBR	VBRAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03P2
BALL VA	VBR	VBRAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03P2
BALL VA	VBR	VBRAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03P2
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G03P2
CAP	C	LC00A325	46"	46"	***CAP A860 WPHY-65 SMLS BE NACE 40mm THK (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AE03	8"	***8"***	***CAP A860 WPHY-65 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0081)***	G03P2
CAP	***C***	***LC00AE03***	***10"***	***10***	***CAP A860 WPHY-65 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0081)***	***G03P2***
CAP	C	LC00AF06	***4"***	4"	***CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AK07	2"	***3"***	***CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AM06	12"	12"	***CAP A860 WPHY-65 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AQ06	1/2"	1 1/2"	***CAP A105 FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
CAP	C	LC00AZ18	6"	6"	***CAP A860 WPHY-65 SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AZ19	30"	30"	***CAP A860 WPHY-65 SMLS BE NACE 27mm THK (RP-1718-999-1300-0081)***	G03P2
CAP	C	LC00AZ20	32"	32"	***CAP A860 WPHY-65 SMLS BE NACE 28.6mm THK (RP-1718-999-1300-0081)***	G03P2
CAP THD	CT	LCT0AQ06	1/2"	1 1/2"	***CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
CHECK VA	VCA	VCAAG003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03P2
CHECK VA	VCA	VCAAG004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03P2
CHECK VA	VCA	VCAAG008	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR ASME B16.47-A RTJ FLANGES(RP-1718-999-6300-0004)	G03P2
CHECK VA	VCH	VCHAH002	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03P2
CPLG FULL	CF	LCF0AQ06	1/2"	1 1/2"	***COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
DOUBLE IBB VA	DFA	LDFAAL01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLA	LDLAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLB	LDLBAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLC	LDLCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLD	LDLDAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLE	LDLEAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DLF	LDLFAK00	3"	3"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 3" FLGD-RTJ x 3" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DPA	LDPAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DPB	LDPBAL01	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
DOUBLE IBB VA	DPC	LDPCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03P2
ELBOLET	TEW	LTEWAQ06	1/2"	1 1/2"	***REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
ELBOW	E4	LE40A325	46"	46"	***ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 40mm THK (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AE03	8"	***8"***	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)***	G03P2
ELBOW	***E4***	***LE40AE03***	***10"***	***10"***	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)***	***G03P2***
ELBOW	E4	LE40AF10	***4"***	4"	***ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AK09	2"	***3"***	***ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AM06	12"	12"	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AQ06	1/2"	1 1/2"	***ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
ELBOW	E4	LE40AZ18	6"	6"	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AZ19	30"	30"	***ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 27mm THK (RP-1718-999-1300-0077)***	G03P2
ELBOW	E4	LE40AZ20	32"	32"	***ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 28.6mm THK (RP-1718-999-1300-0077)***	G03P2

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90A325	46"	46"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 40mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AE04	8"	8"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AE04	10"	10"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AF10	4"	4"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AK09	2"	3"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AM06	12"	12"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AQ06	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-1300-0076)	G03P2
ELBOW	E9	LE90AZ18	6"	6"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AZ19	30"	30"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 27mm THK (RP-1718-999-1300-0077)	G03P2
ELBOW	E9	LE90AZ20	32"	32"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 28.6mm THK (RP-1718-999-1300-0077)	G03P2
FLANGE	F	LF00AK29	4"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK31	12"	12"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 14.3mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK32	6"	6"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 8.7mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK33	30"	30"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) NACE 27mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK34	32"	32"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) NACE 28.6mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK35	46"	46"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) NACE 40mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK85	8"	8"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 11.1mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK85	10"	10"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 12.7mm THK (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AK95	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-1300-0076)	G03P2
FLANGE	F	LF00AL07	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-1300-0076)	G03P2
FLG BLIND	FB	LFB0AK04	2"	4"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G03P2
FLG BLIND	FB	LFB0AK09	6"	12"	FLANGE A694-F65 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G03P2
FLG BLIND	FB	LFB0AK10	30"	46"	FLANGE A694-F65 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-1300-0076)	G03P2
FLG BLIND	FB	LFB0AL03	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G03P2
FLG BLIND	FB1	LFB1AL02	6"	12"	FLANGE A694-F65 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G03P2
FLG JACK	FJ	LFJ0AK07	4"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE(RP-1718-999-1300-0076)	G03P2
FLG JACK	FJ	LFJ0AK18	8"	8"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 11.1mm THK NACE(RP-1718-999-1300-0076)	G03P2
FLG JACK	FJ	LFJ0AK18	10"	10"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 12.7mm THK NACE(RP-1718-999-1300-0076)	G03P2
FLG JACK	FJ	LFJ0AK19	12"	12"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.3mm THK NACE(RP-1718-999-1300-0076)	G03P2
FLG JACK	FJ	LFJ0AK20	6"	6"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 8.74mm THK NACE(RP-1718-999-6300-0076)	G03P2
FLG JACK	FJ	LFJ0AK32	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE(RP-1718-999-6300-0076)	G03P2
FLG JACK	FJ	LFJ0AK34	32"	32"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) W/JACK SCREW 28.6mm THK NACE(RP-1718-999-6300-0076)	G03P2
FLG JACK	FJ	LFJ0AL07	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE(RP-1718-999-6300-0076)	G03P2
FLG RED	RF	LRF0AK05	3"	3"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-1300-0076)	G03P2
GATE VA	VGA	VGAAG003	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G03P2
GATE VA	VGA	VGAAG004	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G03P2
GATE VA	VGA	VGAAG005	26"	46"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	G03P2
GATE VA	VGA	VGAAH002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03P2
GATE VA	VGF	VGFAH002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G03P2
GATE VA	VGX	VGXAH002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03P2
GLOBE VA	VLA	VLAAG002	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G03P2
GLOBE VA	VLA	VLAAG004	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G03P2

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
GLOBE VA	VLA	VLAAH002	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03P2
NEEDLE VA	VNE	VNEAH002	3/4"	1"	NEEDLE VALVE A105 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03P2
NIPPLE TOE	NTO	LNTOAN00	1/2"	1 1/2"	***NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG SCH160 (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00A333	46"	46"	***PIPE API 5L-X65 PSL2 SAW BE NACE 40mm THK (RP-1718-999-1300-0075)***	G03P2
PIPE	P	LP00AE04	8"	***8"***	***PIPE API 5L-X65 PSL2 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0074)***	G03P2
PIPE	***P***	***LP00AE04***	***10"***	***10"***	***PIPE API 5L-X65 PSL2 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0074)***	***G03P2***
PIPE	P	LP00AF21	***4"***	4"	***PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00AK13	1/2"	1 1/2"	***PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00AK23	2"	***3"***	***PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00AM07	12"	12"	***PIPE API 5L-X65 PSL2 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00AZ19	6"	6"	***PIPE API 5L-X65 PSL2 SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0074)***	G03P2
PIPE	P	LP00AZ20	30"	30"	***PIPE API 5L-X65 PSL2 SAW BE NACE 27mm THK (RP-1718-999-1300-0075)***	G03P2
PIPE	P	LP00AZ21	32"	32"	***PIPE API 5L-X65 PSL2 SAW BE NACE 28.6mm THK (RP-1718-999-1300-0075)***	G03P2
PLUG	PLG	LPLGAW07	1/2"	1 1/2"	***PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-1300-0076)***	G03P2
PLUG VA	VPL	VPLAG003	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03P2
PLUG VA	VPL	VPLAG004	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03P2
PLUG VA	VPL	VPLAH003	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G03P2
RED CON	RC	LRC0A325	46"	46"	REDUCER A860 WPHY-65 CON. WELDED BE NACE ***40mm THK (RP-1718-999-1300-0077)***	G03P2
RED CON	***RC***	***LRC0AE03***	***8"***	***8"***	***REDUCER A860 WPHY-65 CON. SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)***	***G03P2***
RED CON	RC	LRC0AE03	***10"***	***10"***	***REDUCER A860 WPHY-65 CON. SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)***	***G03P2***
RED CON	RC	LRC0AF10	***4"***	4"	***REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
RED CON	RC	LRC0AK09	2"	***3"***	REDUCER A234-WPB CON. SMLS BE NACE SCH160 ***(RP-1718-999-1300-0077)***	G03P2
RED CON	RC	LRC0AM06	12"	12"	***REDUCER A860 WPHY-65 CON. SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)***	G03P2
RED CON	RC	LRC0AZ18	6"	6"	***REDUCER A860 WPHY-65 CON. SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0077)***	G03P2
RED CON	RC	LRC0AZ19	30"	30"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 27mm THK (RP-1718-999-1300-0077)***	G03P2
RED CON	RC	LRC0AZ20	32"	32"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 28.6mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0A325	46"	46"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 40mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AE03	8"	***8"***	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	***RE***	***LRE0AE03***	***10"***	***10"***	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)***	***G03P2***
RED ECC	RE	LRE0AF10	***4"***	4"	***REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AK09	2"	***3"***	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 ***(RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AM06	12"	12"	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AZ18	6"	6"	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AZ19	30"	30"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 27mm THK (RP-1718-999-1300-0077)***	G03P2
RED ECC	RE	LRE0AZ20	32"	32"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 28.6mm THK (RP-1718-999-1300-0077)***	G03P2
SOCKOLET	TSO	LTSOAQ06	1/2"	1 1/2"	***REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
SPCL FLANGE	F1	LF10AL06	***4"***	4"	***FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH120 (RP-1718-999-1300-0076)***	G03P2
SPCL FLANGE	F1	LF10AL07	8"	***8"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 11.1mm THK (RP-1718-999-1300-0076)***	G03P2
SPCL FLANGE	***F1***	***LF10AL07***	***10"***	***10"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 12.7mm THK (RP-1718-999-1300-0076)***	***G03P2***
SPCL FLANGE	F1	LF10AL08	12"	12"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 14.3mm THK (RP-1718-999-1300-0076)***	G03P2
SPCL FLANGE	F1	LF10AL09	6"	6"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 8.7mm THK (RP-1718-999-1300-0076)***	G03P2
SPCL FLANGE	F1	LF10AL34	2"	***3"***	***FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-1300-0076)***	G03P2

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ1AL04	***4"***	4"	***FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120 NACE(RP-1718-999-1300-0076)***	G03P2
SPCL FLG JACK	FJ1	LFJ1AL14	8"	***8"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 11.1mm THK NACE(RP-1718-999-1300-0076)***	G03P2
SPCL FLG JACK	FJ1	LFJ1AL15	12"	12"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 14.3mm THK NACE(RP-1718-999-1300-0076)***	G03P2
SPCL FLG JACK	FJ1	LFJ1AL16	6"	6"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 8.74mm THK NACE(RP-1718-999-6300-0076)	G03P2
SPCL FLG JACK	FJ1	LFJ1AL27	2"	***3"***	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE(RP-1718-999-6300-0076)	G03P2
SPCL GASKET	G1	LG00ZK00	30"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G03P2
SPCL GASKET	G3	LG00ZK01	2"	12"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G03P2
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G03P2
SPE BLIND	FSB	LFSBAK11	2"	3"	***FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-1300-0075)***	G03P2
SPE BLIND	FSB	LFSBAK12	32"	32"	***FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-1300-0075)***	G03P2
SPE BLIND	FSB	LFSBAK13	4"	12"	***FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-1300-0075)***	G03P2
SPE BLIND	FSB	LFSBAL08	1/2"	1 1/2"	***FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-1300-0075)***	G03P2
SWG CON B-P	RCB	LRCBAF06	***4"***	4"	***SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-1300-0077)***	G03P2
SWG CON B-P	RCB	LRCBAK07	2"	***3"***	***SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
SWG CON PE	RCP	LRCPAK07	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G03P2
SWG ECC B-P	REB	LREBAF06	***4"***	4"	***SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-1300-0077)***	G03P2
SWG ECC B-P	REB	LREBAK07	2"	***3"***	***SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
SWG ECC PE	REP	LREPAK07	1/2"	1 1/2"	***SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-1300-0077)***	G03P2
TEE	TE	LTE0A325	46"	46"	TEE A860 WPHY-65 EQUAL WELDED BE NACE ***40mm*** THK (RP-1718-999-1300-0073)	G03P2
TEE	TE	LTE0AE03	8"	***8"***	***TEE A860 WPHY-65 EQUAL SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0073)***	G03P2
TEE	***TE***	***LTE0AE03***	***10"***	***10"***	***TEE A860 WPHY-65 EQUAL SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0073)***	***G03P2***
TEE	TE	LTE0AF10	***4"***	4"	***TEE A234-WPB EQUAL SMLS BE NACE SCH120 (RP-1718-999-1300-0073)***	G03P2
TEE	TE	LTE0AK09	2"	***3"***	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-1300-0073)	G03P2
TEE	TE	LTE0AM06	12"	12"	***TEE A860 WPHY-65 EQUAL SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0073)***	G03P2
TEE	TE	LTE0AQ06	1/2"	1 1/2"	***TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
TEE	TE	LTE0AZ18	6"	6"	TEE A860 WPHY-65 EQUAL SMLS BE NACE 8.74mm THK (RP-1718-999-1300-0073)	G03P2
TEE	TE	LTE0AZ19	30"	30"	TEE A860 WPHY-65 EQUAL WELDED BE NACE ***27***mm THK (RP-1718-999-1300-0073)	G03P2
TEE	TE	LTE0AZ20	32"	32"	TEE A860 WPHY-65 EQUAL WELDED BE NACE ***28.6***mm THK (RP-1718-999-1300-0073)	G03P2
TEE RED	TR	LTR0A325	46"	46"	***TEE A860 WPHY-65 REDUCING WELDED BE NACE 40mm THK (RP-1718-999-1300-0073)***	G03P2
TEE RED	TR	LTR0AE03	8"	***8"***	***TEE A860 WPHY-65 REDUCING SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0073)***	G03P2
TEE RED	***TR***	***LTR0AE03***	***10"***	***10"***	***TEE A860 WPHY-65 REDUCING SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0073)***	***G03P2***
TEE RED	TR	LTR0AF10	***4"***	4"	***TEE A234-WPB REDUCING SMLS BE NACE SCH120 (RP-1718-999-1300-0073)***	G03P2
TEE RED	TR	LTR0AK09	2"	***3"***	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-1300-0073)	G03P2
TEE RED	TR	LTR0AM06	12"	12"	***TEE A860 WPHY-65 REDUCING SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0073)***	G03P2
TEE RED	TR	LTR0AQ06	1/2"	1 1/2"	***TEE A105 REDUCING FORGED SW NACE CL6000 x SCH160 (RP-1718-999-1300-0076)***	G03P2
TEE RED	TR	LTR0AZ18	6"	6"	***TEE A860 WPHY-65 REDUCING SMLS BE NACE 8.7mm THK (RP-1718-999-1300-0073)***	G03P2
TEE RED	TR	LTR0AZ19	30"	30"	***TEE A860 WPHY-65 REDUCING WELDED BE NACE 27mm THK (RP-1718-999-1300-0073)***	G03P2
TEE RED	TR	LTR0AZ20	32"	32"	***TEE A860 WPHY-65 REDUCING WELDED BE NACE 28.6mm THK (RP-1718-999-1300-0073)***	G03P2
THREADOLET	TTO	LTTOAQ06	1/2"	1 1/2"	***REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-1300-0076)***	G03P2
WELDOLET	TWO	LTWOAE02	8"	***8"***	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 11.1mm THK (RP-1718-999-1300-0076)***	G03P2
WELDOLET	***TWO***	***LTWOAE02***	***10"***	***10"***	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 12.7mm THK (RP-1718-999-1300-0076)***	***G03P2***
WELDOLET	TWO	LTWOAF08	***4"***	4"	***REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-1300-0076)***	G03P2

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAK07	2"	***3"***	***REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-1300-0076)***	G03P2
WELDOLET	TWO	LTWOAM00	12"	12"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 14.3mm THK (RP-1718-999-1300-0076)***	G03P2
WELDOLET	TWO	LTWOAZ03	6"	6"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 8.7mm THK (RP-1718-999-1300-0076)***	G03P2
BALL VA	VBF	VBFAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBF	VBFAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBF	VBFAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBF	VBFAG023	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/NACE RP-1718-999-6300-0004	G03S
BALL VA	VBF	VBFAG024	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/NACE RP-1718-999-6300-0004	G03S
BALL VA	VBF	VBFAH003	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G03S
BALL VA	VBF	VBFAH013	1"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/PEEK SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING/NACE RP-1718-999-6300-0004	G03S
BALL VA	VBR	VBRAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBR	VBRAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBR	VBRAG007	26"	30"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G03S
BALL VA	VBR	VBRAG023	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/NACE RP-1718-999-6300-0004	G03S
BALL VA	VBR	VBRAG024	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/NACE RP-1718-999-6300-0004	G03S
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G03S
CAP	C	LC00A420	26"	26"	CAP A234-WPB SMLS BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A421	28"	28"	CAP A234-WPB SMLS BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A422	30"	30"	CAP A234-WPB SMLS BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A507	32"	32"	CAP A234-WPB SMLS BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A508	34"	34"	CAP A234-WPB SMLS BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A509	36"	36"	CAP A234-WPB SMLS BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A606	38"	38"	CAP A234-WPB SMLS BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A607	40"	40"	CAP A234-WPB SMLS BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A608	42"	42"	CAP A234-WPB SMLS BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A702	44"	44"	CAP A234-WPB SMLS BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00A703	46"	46"	CAP A234-WPB SMLS BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
CAP	C	LC00AH02	4"	24"	CAP A234-WPB SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
CAP	C	LC00AK02	2"	3"	CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
CAP	C	LC00AQ02	1/2"	1 1/2"	CAP A105 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
CAP THD	CT	LCT0AQ02	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	G03S
CHECK VA	VCA	VCAAG003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03S
CHECK VA	VCA	VCAAG004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G03S
CHECK VA	VCA	VCAAG008	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR ASME B16.47-A RTJ FLANGES(RP-1718-999-6300-0004)	G03S
CHECK VA	VCH	VCHAH002	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03S
CPLG FULL	CF	LCF0AQ02	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
DOUBLE IBB VA	DFA	LDFAAL01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DLA	LDLAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DLB	LDLBAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DLC	LDLCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DLD	LDLDAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DLE	LDLEAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DPA	LDPAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DPB	LDPBAL01	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
DOUBLE IBB VA	DPC	LDPCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G03S
ELBOLET	TEW	LTEWAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A421	26"	26"	ELBOW A234-WPB DEG-45 WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A422	28"	28"	ELBOW A234-WPB DEG-45 WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A423	30"	30"	ELBOW A234-WPB DEG-45 WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A507	32"	32"	ELBOW A234-WPB DEG-45 WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A508	34"	34"	ELBOW A234-WPB DEG-45 WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A509	36"	36"	ELBOW A234-WPB DEG-45 WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A606	38"	38"	ELBOW A234-WPB DEG-45 WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A607	40"	40"	ELBOW A234-WPB DEG-45 WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A608	42"	42"	ELBOW A234-WPB DEG-45 WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A702	44"	44"	ELBOW A234-WPB DEG-45 WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40A703	46"	46"	ELBOW A234-WPB DEG-45 WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40AH04	4"	16"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40AH05	18"	24"	ELBOW A234-WPB DEG-45 WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40AK02	2"	3"	ELBOW A234-WPB DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
ELBOW	E4	LE40AQ02	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A421	26"	26"	ELBOW A234-WPB 90-LR WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A422	28"	28"	ELBOW A234-WPB 90-LR WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A423	30"	30"	ELBOW A234-WPB 90-LR WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A507	32"	32"	ELBOW A234-WPB 90-LR WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A508	34"	34"	ELBOW A234-WPB 90-LR WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A509	36"	36"	ELBOW A234-WPB 90-LR WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A606	38"	38"	ELBOW A234-WPB 90-LR WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A607	40"	40"	ELBOW A234-WPB 90-LR WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A608	42"	42"	ELBOW A234-WPB 90-LR WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A702	44"	44"	ELBOW A234-WPB 90-LR WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90A703	46"	46"	ELBOW A234-WPB 90-LR WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90AH03	4"	16"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90AH04	18"	24"	ELBOW A234-WPB 90-LR WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90AK02	2"	3"	ELBOW A234-WPB 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
ELBOW	E9	LE90AQ02	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK36	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK37	26"	26"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK38	28"	28"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK39	30"	30"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK40	32"	32"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK41	34"	34"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK42	36"	36"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK43	38"	38"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00AK44	40"	40"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK45	42"	42"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK46	44"	44"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
FLANGE	F	LF00AK47	46"	46"	FLANGE A105 WN RTJ CL900 (ASME B16.47-A) NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
FLG BLIND	FB1	LFB0AK02	2"	24"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0002)	G03S
FLG BLIND	FB	LFB0AK05	26"	46"	FLANGE A105 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	G03S
FLG BLIND	FB1	LFB0AL01	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0002)	G03S
FLG BLIND	FB1	LFB1AL04	26"	46"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	G03S
FLG JACK	FJ	LFJ0AK09	4"	24"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0002)	G03S
FLG RED	RF	LRF0AK02	4"	6"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0002)	G03S
FLG RED	RF	LRF0AK03	2"	3"	FLANGE A105 WN-REDUCING RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G03S
GATE VA	VGA	VGAAG003	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G03S
GATE VA	VGA	VGAAG004	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G03S
GATE VA	VGA	VGAAG005	26"	46"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	G03S
GATE VA	VGA	VGAAH002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03S
GATE VA	VGF	VGFAH002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G03S
GATE VA	VGX	VGXAH002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03S
GLOBE VA	VLA	VLAAG002	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G03S
GLOBE VA	VLA	VLAAG004	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G03S
GLOBE VA	VLA	VLAAH002	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G03S
INSUL GASKET	GK	LGK0ZK00	2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G03S
INSUL GASKET	GK	LGK0ZL00	1/2"	1 1/2"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G03S
NEEDLE VA	VNE	VNEAH002	3/4"	1"	NEEDLE VALVE A105 SW 316SS TRIM BB OS&Y NEEDLE TYPE DISC ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G03S
NIPPLE TOE	NTO	LNTOAN06	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A421	30"	30"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 49.7mm THK (RP-1718-999-6300-0003)	G03S
PIPE	P	LP00A422	26"	26"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 43.5mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A423	28"	28"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 46.6mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A507	32"	32"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 52.8mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A508	34"	34"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 55.9mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A509	36"	36"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 59.0mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A606	38"	38"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 62.1mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A607	40"	40"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 65.2mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A608	42"	42"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 68.2mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A702	44"	44"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 71.3mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00A703	46"	46"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT 74.4mm THK (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00AH04	4"	16"	PIPE API 5L-B PSL2 SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00AH05	18"	24"	PIPE API 5L-B PSL2 SAW BE NACE 100% RT SCH120 (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00AK02	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G03S
PIPE	P	LP00AK10	2"	3"	PIPE API 5L-B PSL1 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
PLUG	PLG	LPLGAW02	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	G03S
PLUG VA	VPL	VPLAG003	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03S
PLUG VA	VPL	VPLAG004	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PLUG VA	VPL	VPLAH003	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G03S
RED CON	RC	LRC0A421	26"	26"	REDUCER A234-WPB CON. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A422	28"	28"	REDUCER A234-WPB CON. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A423	30"	30"	REDUCER A234-WPB CON. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A507	32"	32"	REDUCER A234-WPB CON. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A508	34"	34"	REDUCER A234-WPB CON. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A509	36"	36"	REDUCER A234-WPB CON. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A606	38"	38"	REDUCER A234-WPB CON. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A607	40"	40"	REDUCER A234-WPB CON. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A608	42"	42"	REDUCER A234-WPB CON. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A702	44"	44"	REDUCER A234-WPB CON. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0A703	46"	46"	REDUCER A234-WPB CON. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0AH04	4"	16"	REDUCER A234-WPB CON. SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0AH05	18"	24"	REDUCER A234-WPB CON. WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
RED CON	RC	LRC0AK02	2"	3"	REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A421	26"	26"	REDUCER A234-WPB ECC. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A422	28"	28"	REDUCER A234-WPB ECC. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A423	30"	30"	REDUCER A234-WPB ECC. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A507	32"	32"	REDUCER A234-WPB ECC. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A508	34"	34"	REDUCER A234-WPB ECC. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A509	36"	36"	REDUCER A234-WPB ECC. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A606	38"	38"	REDUCER A234-WPB ECC. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A607	40"	40"	REDUCER A234-WPB ECC. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A608	42"	42"	REDUCER A234-WPB ECC. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A702	44"	44"	REDUCER A234-WPB ECC. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0A703	46"	46"	REDUCER A234-WPB ECC. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0AH04	4"	16"	REDUCER A234-WPB ECC. SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0AH05	18"	24"	REDUCER A234-WPB ECC. WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
RED ECC	RE	LRE0AK02	2"	3"	REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
SOCKOLET	TSO	LTSOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
SPCL FLANGE	F1	LF00AK03	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G03S
SPCL FLANGE	F3	LF00AL02	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G03S
SPCL FLANGE	F1	LF10AL10	4"	16"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0002)	G03S
SPCL FLANGE	F1	LF10AL11	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G03S
SPCL FLG JACK	FJ1	LFJ0AK00	2"	3"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G03S
SPCL FLG JACK	FJ1	LFJ0AL01	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G03S
SPCL FLG JACK	FJ1	LFJ1AL06	4"	24"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0002)	G03S
SPCL FLG JACK	FJ1	LFJ1AL07	2"	3"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G03S
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G03S
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G03S
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G03S
SPE BLIND	FSB	LFSBAK08	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0002)	G03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPE BLIND	FSB	LFSBAK15	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0002)	G03S
SPE BLIND	FSB	LFSBAK22	30"	30"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	G03S
SPE BLIND	FSB	LFSBAL04	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-6300-0002)	G03S
SWG CON B-P	RCB	LRCBAH02	4"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0002)	G03S
SWG CON B-P	RCB	LRCBAK02	2"	3"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	G03S
SWG CON PE	RCP	LRCPAK02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G03S
SWG CON P-T	RC2	LRC2AN02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PLE x TSE(NPT-M) NACE XXS (RP-1718-999-6300-0002)	G03S
SWG ECC B-P	REB	LREBAH02	4"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0002)	G03S
SWG ECC B-P	REB	LREBAK02	2"	3"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	G03S
SWG ECC PE	REP	LREPAK02	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A421	26"	26"	TEE A234-WPB EQUAL WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A422	28"	28"	TEE A234-WPB EQUAL WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A423	30"	30"	TEE A234-WPB EQUAL WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A507	32"	32"	TEE A234-WPB EQUAL WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A508	34"	34"	TEE A234-WPB EQUAL WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A509	36"	36"	TEE A234-WPB EQUAL WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A606	38"	38"	TEE A234-WPB EQUAL WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A607	40"	40"	TEE A234-WPB EQUAL WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A608	42"	42"	TEE A234-WPB EQUAL WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A702	44"	44"	TEE A234-WPB EQUAL WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0A703	46"	46"	TEE A234-WPB EQUAL WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0AH04	4"	16"	TEE A234-WPB EQUAL SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0AH05	18"	24"	TEE A234-WPB EQUAL WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0AK02	2"	3"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
TEE	TE	LTE0AQ02	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A421	26"	26"	TEE A234-WPB REDUCING WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A423	30"	30"	TEE A234-WPB REDUCING WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A435	28"	28"	TEE A234-WPB REDUCING WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A507	32"	32"	TEE A234-WPB REDUCING WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A508	34"	34"	TEE A234-WPB REDUCING WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A509	36"	36"	TEE A234-WPB REDUCING WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A606	38"	38"	TEE A234-WPB REDUCING WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A607	40"	40"	TEE A234-WPB REDUCING WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A608	42"	42"	TEE A234-WPB REDUCING WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A702	44"	44"	TEE A234-WPB REDUCING WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0A703	46"	46"	TEE A234-WPB REDUCING WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0AH04	4"	16"	TEE A234-WPB REDUCING SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0AH05	18"	24"	TEE A234-WPB REDUCING WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0AK02	2"	3"	TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
TEE RED	TR	LTR0AQ02	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G03S
THREADOLET	TTO	LTTOAQ02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	G03S
WELDOLET	TWO	LTWOAH02	4"	20"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-6300-0002)	G03S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	TWO	LTWOAK02	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0002)	G03S
BALL VA	VBF	VBFAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G05P4
BALL VA	VBF	VBFAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G05P4
BALL VA	VBF	VBFAH010	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/XXS FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G05P4
BALL VA	VBF	VBFAHX03	3/4"	3/4"	BALL VALVE A105 PE(NIPPLE LENGTH=100) x TE(NPT-M,NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/XXS FULL BORE, W-OP F-SAFE BS 5351 ELASTOLION985 SEAL/FLOATING/NACE RP-1718-999-6300-0004	G05P4
BALL VA	VBR	VBRAG005	2"	4"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G05P4
BALL VA	VBR	VBRAG006	6"	24"	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G05P4
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G05P4
CAP	C	LC00A210	16"	16"	***CAP A860 WPHY-65 SMLS BE NACE 17.7mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00A518	46"	46"	***CAP A860 WPHY-65 SMLS BE NACE 42mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00AG01	8"	8"	***CAP A860 WPHY-65 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	***C***	***LC00AG01***	***10"***	***10"***	***CAP A860 WPHY-65 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0081)***	***G05P4***
CAP	***C***	***LC00AG01***	***12"***	***12"***	***CAP A860 WPHY-65 SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0081)***	***G05P4***
CAP	C	LC00AH03	6"	6"	***CAP A860 WPHY-65 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00AN00	2"	***2"***	***CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-1300-0081)***	G05P4
CAP	***C***	***LC00AN00***	***3"***	***4"***	***CAP A234-WPB SMLS BE NACE SCH160 (RP-1718-999-1300-0081)***	***G05P4***
CAP	C	LC00AR00	1/2"	1 1/2"	***CAP A105 FORGED SW NACE CL9000 (RP-1718-999-1300-0076)***	G05P4
CAP	C	LC00AZ19	18"	18"	***CAP A860 WPHY-65 SMLS BE NACE 19.2mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00AZ20	20"	20"	***CAP A860 WPHY-65 SMLS BE NACE 22.2mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00AZ22	24"	24"	***CAP A860 WPHY-65 SMLS BE NACE 25.4mm THK (RP-1718-999-1300-0081)***	G05P4
CAP	C	LC00AZ26	14"	14"	***CAP A860 WPHY-65 SMLS BE NACE 16.1mm THK (RP-1718-999-1300-0081)***	G05P4
CAP THD	CT	LCT0AR00	1/2"	1 1/2"	***CAP A105 FORGED TE(NPT-F) NACE CL9000 (RP-1718-999-1300-0076)***	G05P4
CHECK VA	VCA	VCAAG003	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G05P4
CHECK VA	VCA	VCAAG004	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G05P4
CHECK VA	VCA	VCAAG008	26"	46"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR ASME B16.47-A RTJ FLANGES(RP-1718-999-6300-0004)	G05P4
CHECK VA	VCH	VCHAH002	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G05P4
CPLG FULL	CF	LCF0AR00	1/2"	1 1/2"	***COUPLING A105 FULL(STRAIGHT) FORGED SW NACE CL9000 (RP-1718-999-1300-0076)***	G05P4
DOUBLE IBB VA	DFA	LDFAAL01	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLA	LDLAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLB	LDLBAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLC	LDLCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLD	LDLDAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLE	LDLEAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DLF	LDLFAK00	3"	3"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 3" FLGD-RTJ x 3" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DPA	LDPAAL01	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DPB	LDPBAL01	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
DOUBLE IBB VA	DPC	LDPCAK01	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G05P4
ELBOLET	TEW	LTEWAR00	1/2"	1 1/2"	***REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW NACE CL9000 (RP-1718-999-1300-0076)***	G05P4
ELBOW	E4	LE40A206	16"	16"	***ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0077)***	G05P4
ELBOW	E4	LE40A510	46"	46"	***ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 42mm THK (RP-1718-999-1300-0077)***	G05P4
ELBOW	E4	LE40AG02	8"	8"	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)***	G05P4
ELBOW	***E4***	***LE40AG02***	***10"***	***10"***	***ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)***	***G05P4***

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AG02	12"	12"	ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AH06	6"	6"	ELBOW A860 WPHY-65 DEG-45 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AN00	2"	2"	ELBOW A234-WPB DEG-45 SMLS BE NACE XXS (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AR00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW NACE CL9000 (RP-1718-999-1300-0076)	G05P4
ELBOW	E4	LE40AZ19	18"	18"	ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 19.2mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AZ20	20"	20"	ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AZ21	14"	14"	ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 16.1mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AZ22	24"	24"	ELBOW A860 WPHY-65 DEG-45 WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90A210	16"	16"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90A510	46"	46"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 42mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AG02	8"	8"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AG02	10	10	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AG02	12"	12"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AH05	6"	6"	ELBOW A860 WPHY-65 90-LR SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E4	LE40AN00	3"	4"	ELBOW A234-WPB DEG-45 SMLS BE NACE 160 (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AN00	2"	2"	ELBOW A234-WPB 90-LR SMLS BE NACE XXS (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AR00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW NACE CL9000 (RP-1718-999-1300-0076)	G05P4
ELBOW	E9	LE90AZ19	18"	18"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 19.2mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AZ20	20"	20"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AZ21	14"	14"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 16.1mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AZ22	24"	24"	ELBOW A860 WPHY-65 90-LR WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0077)	G05P4
ELBOW	E9	LE90AN00	3"	4"	ELBOW A234-WPB 90-LR SMLS BE NACE 160 (RP-1718-999-1300-0077)	G05P4
FLANGE	F	LF00AK50	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE XXS (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK86	8"	8"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 12.7mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK86	10"	10"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 14.3mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK86	12	12"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 15.9mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK87	6"	6"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 11.1mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK88	14"	14"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 16.1mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK89	18"	18"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 19.2mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK90	20"	20"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 22.2mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK91	24"	24"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 25.4mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK92	16"	16"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) NACE 17.7mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK93	46"	46"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.47-A) NACE 42mm THK (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AL08	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) NACE XXS (RP-1718-999-1300-0076)	G05P4
FLANGE	F	LF00AK50	3"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) NACE 160 (RP-1718-999-1300-0076)	G05P4
FLG BLIND	FB	LFB0AK04	2"	4"	FLANGE A105 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G05P4
FLG BLIND	FB	LFB0AK09	6"	24"	FLANGE A694-F65 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G05P4
FLG BLIND	FB	LFB0AK10	26"	46"	FLANGE A694-F65 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-1300-0076)	G05P4
FLG BLIND	FB	LFB0AL03	1/2"	1 1/2"	FLANGE A105 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G05P4
FLG BLIND	FB1	LFB1AL02	6"	24"	FLANGE A694-F65 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-1300-0076)	G05P4
FLG JACK	FJ	LFJ0AK11	2"	2"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW XXS NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK21	8"	8"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 12.7mm THK NACE(RP-1718-999-6300-0076)	G05P4

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLG JACK	FJ	LFJ0AK21	10	10	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.3mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK21	12	12"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 15.9mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK22	6"	6"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 11.1mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK23	14"	14"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 16.1mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK24	18"	18"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 19.2mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK25	20"	20"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 22.2mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK26	24"	24"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 25.4mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK27	16"	16"	FLANGE A694-F65 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 17.7mm THK NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AL08	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW XXS NACE(RP-1718-999-6300-0076)	G05P4
FLG JACK	FJ	LFJ0AK11	3"	4"	FLANGE A105 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 160 NACE(RP-1718-999-6300-0076)	G05P4
GATE VA	VGA	VGAAG003	2"	4"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G05P4
GATE VA	VGA	VGAAG004	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G05P4
GATE VA	VGA	VGAAG005	26"	46"	GATE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	G05P4
GATE VA	VGA	VGAAH002	1/2"	1 1/2"	GATE VALVE A105 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G05P4
GATE VA	VGF	VGFAH002	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G05P4
GATE VA	VGX	VGXAH002	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G05P4
GLOBE VA	VLA	VLAAG002	2"	3"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G05P4
GLOBE VA	VLA	VLAAG004	4"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G05P4
GLOBE VA	VLA	VLAAH002	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G05P4
NIPPLE TOE	NTO	LNTOAN00	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) NACE 75mm LONG SCH160 (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00A210	16"	16"	PIPE API 5L-X65 PSL2 SAW BE NACE 17.7mm THK (RP-1718-999-1300-0075)	G05P4
PIPE	P	LP00A514	46"	46"	PIPE API 5L-X65 PSL2 SAW BE NACE 42mm THK (RP-1718-999-1300-0075)	G05P4
PIPE	P	LP00AG05	8"	8"	PIPE API 5L-X65 PSL2 SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AG05	10	10	PIPE API 5L-X65 PSL2 SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AG05	12"	12"	PIPE API 5L-X65 PSL2 SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AH11	6"	6"	PIPE API 5L-X65 PSL2 SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AN02	1/2"	1 1/2"	PIPE API 5L-B PSL1 SMLS PE NACE XXS (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AN03	2"	2"	PIPE API 5L-B PSL1 SMLS BE NACE XXS (RP-1718-999-1300-0074)	G05P4
PIPE	P	LP00AZ20	18"	18"	PIPE API 5L-X65 PSL2 SAW BE NACE 19.2mm THK (RP-1718-999-1300-0075)	G05P4
PIPE	P	LP00AZ21	20"	20"	PIPE API 5L-X65 PSL2 SAW BE NACE 22.2mm THK (RP-1718-999-1300-0075)	G05P4
PIPE	P	LP00AZ22	14"	14"	PIPE API 5L-X65 PSL2 SAW BE NACE 16.1mm THK (RP-1718-999-1300-0075)	G05P4
PIPE	P	LP00AZ23	24"	24"	PIPE API 5L-X65 PSL2 SAW BE NACE 25.4mm THK (RP-1718-999-1300-0075)	G05P4
PLUG	PLG	LPLGAW07	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-1300-0076)	G05P4
PIPE	P	LP00AN03	3"	4"	PIPE API 5L-B PSL1 SMLS BE NACE 160 (RP-1718-999-1300-0074)	G05P4
PLUG VA	VPL	VPLAG003	2"	3"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G05P4
PLUG VA	VPL	VPLAG004	4"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G05P4
PLUG VA	VPL	VPLAH004	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/XXS REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G05P4
RED CON	RC	LRC0A206	16"	16"	REDUCER A860 WPHY-65 CON. WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0077)	G05P4
RED CON	RC	LRC0A510	46"	46"	REDUCER A860 WPHY-65 CON. WELDED BE NACE 42mm THK (RP-1718-999-1300-0077)	G05P4
RED CON	RC	LRC0AG02	8"	8"	REDUCER A860 WPHY-65 CON. SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)	G05P4
RED CON	RC	LRC0AG02	10	10	REDUCER A860 WPHY-65 CON. SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)	G05P4
RED CON	RC	LRC0AG02	12"	12"	REDUCER A860 WPHY-65 CON. SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0077)	G05P4

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0AH06	6"	6"	***REDUCER A860 WPHY-65 CON. SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)***	G05P4
RED CON	RC	LRC0AN00	2"	***2"***	***REDUCER A234-WPB CON. SMLS BE NACE SCHXXS (RP-1718-999-1300-0077)***	G05P4
RED CON	RC	LRC0AZ19	18"	18"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 19.2mm (RP-1718-999-1300-0077)***	G05P4
RED CON	RC	LRC0AZ20	20"	20"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0077)***	G05P4
RED CON	RC	LRC0AZ21	14"	14"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 16.1mm THK (RP-1718-999-1300-0077)***	G05P4
RED CON	RC	LRC0AZ22	24"	24"	***REDUCER A860 WPHY-65 CON. WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0A206	16"	16"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0A510	46"	46"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 42mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0AG02	8"	***8"***	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	***RE***	***LRE0AG02***	***10"***	***10"***	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0077)***	***G05P4***
RED ECC	***RE***	***LRE0AG02***	***12"***	***12"***	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0077)***	***G05P4***
RED ECC	RE	LRE0AH06	6"	6"	***REDUCER A860 WPHY-65 ECC. SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0077)***	G05P4
RED CON	***RC***	***LRC0AN00***	***3"***	***4"***	***REDUCER A234-WPB CON. SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	***G05P4***
RED ECC	RE	LRE0AN00	2"	***2"***	***REDUCER A234-WPB ECC. SMLS BE NACE SCHXXS (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0AZ19	18"	18"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 19.2mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0AZ20	20"	20"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0AZ21	14"	14"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 16.1mm THK (RP-1718-999-1300-0077)***	G05P4
RED ECC	RE	LRE0AZ22	24"	24"	***REDUCER A860 WPHY-65 ECC. WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0077)***	G05P4
SOCKOLET	TSO	LTSOAR00	1/2"	1 1/2"	***REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW NACE CL9000 (RP-1718-999-1300-0076)***	G05P4
RED ECC	***RE***	***LRE0AN00***	***3"***	***4"***	***REDUCER A234-WPB ECC. SMLS BE NACE SCH160 (RP-1718-999-1300-0077)***	***G05P4***
SPCL FLANGE	F1	LF10AL14	2"	***2"***	***FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE XXS (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL27	8"	***8"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 12.7mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	***F1***	***LF10AL27***	***10"***	***10"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 14.3mm THK (RP-1718-999-1300-0076)***	***G05P4***
SPCL FLANGE	***F1***	***LF10AL27***	***12"***	***12"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 15.9mm THK (RP-1718-999-1300-0076)***	***G05P4***
SPCL FLANGE	F1	LF10AL28	6"	6"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 11.1mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL29	14"	14"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 16.1mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL30	18"	18"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 19.2mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL31	20"	20"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 22.2mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL32	24"	24"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 25.4mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	F1	LF10AL33	16"	16"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) NACE 17.7mm THK (RP-1718-999-1300-0076)***	G05P4
SPCL FLANGE	***F1***	***LF10AL14***	***3"***	***4"***	***FLANGE A105 WN RTJ CL1500 (ASME B16.5) NACE 160 (RP-1718-999-1300-0076)***	***G05P4***
SPCL FLG JACK	FJ1	LFJ1AL09	2"	***2"***	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW XXS NACE(RP-1718-999-6300-0076)	G05P4
SPCL FLG JACK	FJ1	LFJ1AL17	8"	***8"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 12.7mm THK NACE(RP-1718-999-6300-0076)***	G05P4
SPCL FLG JACK	***FJ1***	***LFJ1AL17***	***10"***	***10"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 14.3mm THK NACE(RP-1718-999-6300-0076)***	***G05P4***
SPCL FLG JACK	***FJ1***	***LFJ1AL17***	***12"***	***12"***	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 15.9mm THK NACE(RP-1718-999-6300-0076)***	***G05P4***
SPCL FLG JACK	FJ1	LFJ1AL18	6"	6"	***FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 11.1mm THK NACE(RP-1718-999-6300-0076)***	G05P4
SPCL FLG JACK	FJ1	LFJ1AL19	14"	14"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW ***16.1***mm THK NACE(RP-1718-999-6300-0076)	G05P4
SPCL FLG JACK	FJ1	LFJ1AL20	18"	18"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW ***19.2***mm THK NACE(RP-1718-999-6300-0076)	G05P4
SPCL FLG JACK	FJ1	LFJ1AL21	20"	20"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW ***22.2***mm THK NACE(RP-1718-999-6300-0076)	G05P4
SPCL FLG JACK	FJ1	LFJ1AL22	24"	24"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW ***25.4***mm THK NACE(RP-1718-999-6300-0076)	G05P4
SPCL FLG JACK	FJ1	LFJ1AL23	16"	16"	FLANGE A694-F65 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW ***17.7***mm THK NACE(RP-1718-999-6300-0076)	G05P4
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G05P4

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ1AL09	3"	4"	FLANGE A105 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 160 NACE(RP-1718-999-6300-0076)	G05P4
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G05P4
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G05P4
SPE BLIND	FSB	LFSBAK11	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-1300-0075)	G05P4
SPE BLIND	FSB	LFSBAK13	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-1300-0075)	G05P4
SPE BLIND	FSB	LFSBAL08	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-1300-0075)	G05P4
SWG CON B-P	RCB	LRCBAN00	2"	2"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE XXS (RP-1718-999-1300-0077)	G05P4
SWG CON PE	RCP	LRCPAN02	1/2"	1 1/2"	SWAGE A234-WPB CON. SMLS PE NACE XXS (RP-1718-999-1300-0077)	G05P4
SWG CON B-P	RCB	LRCBAN00	3"	4"	SWAGE A234-WPB CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-1300-0077)	G05P4
SWG ECC B-P	REB	LREBAN00	2"	2"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE XXS (RP-1718-999-1300-0077)	G05P4
SWG ECC PE	REP	LREPAN02	1/2"	1 1/2"	SWAGE A234-WPB ECC. SMLS PE NACE XXS (RP-1718-999-1300-0077)	G05P4
TEE	TE	LTE0A206	16"	16"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0A510	46"	46"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 42mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AG02	8"	8"	TEE A860 WPHY-65 EQUAL SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AG02	10"	10"	TEE A860 WPHY-65 EQUAL SMLS BE NACE 14.3mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AG02	12"	12"	TEE A860 WPHY-65 EQUAL SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AH06	6"	6"	TEE A860 WPHY-65 EQUAL SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0073)	G05P4
SWG ECC B-P	REB	LREBAN00	3"	4"	SWAGE A234-WPB ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-1300-0077)	G05P4
TEE	TE	LTE0AN00	2"	2"	TEE A234-WPB EQUAL SMLS BE NACE XXS (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AR00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW NACE CL9000 (RP-1718-999-1300-0076)	G05P4
TEE	TE	LTE0AZ19	18"	18"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 19.2mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AZ20	20"	20"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AZ21	14"	14"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 16.1mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AZ22	24"	24"	TEE A860 WPHY-65 EQUAL WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0A206	16"	16"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 17.7mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0A510	46"	46"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 42mm THK(RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AG02	8"	8"	TEE A860 WPHY-65 REDUCING SMLS BE NACE 12.7mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AG02	10"	10"	TEE A860 WPHY-65 REDUCING SMLS BE NACE 14.2mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AG02	12"	12"	TEE A860 WPHY-65 REDUCING SMLS BE NACE 15.9mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AH06	6"	6"	TEE A860 WPHY-65 REDUCING SMLS BE NACE 11.1mm THK (RP-1718-999-1300-0073)	G05P4
TEE	TE	LTE0AN00	3"	4"	TEE A234-WPB EQUAL SMLS BE NACE SCH160 (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AN00	2"	2"	TEE A234-WPB REDUCING SMLS BE NACE XXS (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AR00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW NACE CL9000 x XXS (RP-1718-999-1300-0076)	G05P4
TEE RED	TR	LTR0AZ19	18"	18"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 19.2mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AZ20	20"	20"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 22.2mm THK (RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AZ21	14"	14"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 16.1mm THK(RP-1718-999-1300-0073)	G05P4
TEE RED	TR	LTR0AZ22	24"	24"	TEE A860 WPHY-65 REDUCING WELDED BE NACE 25.4mm THK (RP-1718-999-1300-0073)	G05P4
THREADOLET	TTO	LTTOAR00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) NACE CL9000 (RP-1718-999-1300-0076)	G05P4
WELDOLET	TW1	LTW1AN00	4"	4"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-1300-0076)/FITTING INLET TO BE BEVELED TO WELD ON CAP	G05P4
WELDOLET	TWO	LTWOA200	16"	16"	REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 17.7mm THKRP-1718-999-1300-0076	G05P4
WELDOLET	TWO	LTWOAG03	8"	8"	REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 12.7mm THK (RP-1718-999-1300-0076)	G05P4
WELDOLET	TWO	LTWOAG03	10	10	REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 14.3mm THK (RP-1718-999-1300-0076)	G05P4

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
WELDOLET	***TWO***	***LTWOAG03***	***12"***	***12"***	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 15.9mm THK (RP-1718-999-1300-0076)***	***G05P4***
WELDOLET	TWO	LTWOAH08	6"	6"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 11.1mm THK (RP-1718-999-1300-0076)***	G05P4
TEE RED	***TR***	***LTR0AN00***	***3"***	***4"***	***TEE A234-WPB REDUCING SMLS BE NACE SCH160 (RP-1718-999-1300-0073)***	***G05P4***
WELDOLET	***TWO***	***LTWOAN02***	***3"***	***4"***	***REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-1300-0076)***	***G05P4***
WELDOLET	TWO	LTWOAN02	2"	2"	***REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE NACE XXS (RP-1718-999-1300-0076)***	G05P4
WELDOLET	TWO	LTWOAZ00	14"	14"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 16.1mm THK (RP-1718-999-1300-0076)***	G05P4
WELDOLET	TWO	LTWOAZ01	18"	18"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 19.2mm THK (RP-1718-999-1300-0076)***	G05P4
WELDOLET	TWO	LTWOAZ02	20"	20"	***REINFORCED BRANCH OUTLET A694-F65 WELDED OUTLET FORGED BE NACE 22.2mm THK (RP-1718-999-1300-0076)***	G05P4
BALL VA	VBF	VBFBG001	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VBF	VBFBG002	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VBF	VBFBG003	26"	30"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	G21
BALL VA	VB1	VBFBG007	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VB1	VBFBG008	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VBF	VBFBH001	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	G21
BALL VA	VB1	VBFBH003	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/PEEK SEATS ANSI CL1500 W/SCH80 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	G21
BALL VA	VBR	VBRBG001	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VBR	VBRBG002	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	G21
BALL VA	VBR	VBRBG003	26"	46"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION/ASME B16.47-A FLGD	G21
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G21
CAP	C	LC00A423	26"	26"	CAP A420-WPL6 SMLS BE 41.6mm THK	G21
CAP	C	LC00A424	28"	28"	CAP A420-WPL6 SMLS BE 44.7mm THK	G21
CAP	C	LC00A425	30"	30"	CAP A420-WPL6 SMLS BE 47.8mm THK	G21
CAP	C	LC00A511	32"	32"	CAP A420-WPL6 SMLS BE 50.9mm THK	G21
CAP	C	LC00A512	34"	34"	CAP A420-WPL6 SMLS BE 53.9mm THK	G21
CAP	C	LC00A513	36"	36"	CAP A420-WPL6 SMLS BE 57.0mm THK	G21
CAP	C	LC00A609	38"	38"	CAP A420-WPL6 SMLS BE 60.1mm THK	G21
CAP	C	LC00A610	40"	40"	CAP A420-WPL6 SMLS BE 63.2mm THK	G21
CAP	C	LC00A611	42"	42"	CAP A420-WPL6 SMLS BE 66.3mm THK	G21
CAP	C	LC00A612	44"	44"	CAP A420-WPL6 SMLS BE 69.4mm THK	G21
CAP	C	LC00A704	46"	46"	CAP A420-WPL6 SMLS BE 72.4mm THK	G21
CAP	C	LC00AF03	2"	4"	CAP A420-WPL6 SMLS BE SCH80	G21
CAP	C	LC00AG02	8"	16"	CAP A420-WPL6 SMLS BE SCH100	G21
CAP	C	LC00AH04	6"	6"	CAP A420-WPL6 SMLS BE SCH120	G21
CAP	C	LC00AP01	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW CL3000	G21
CAP THD	CT	LCT0AP02	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) CL3000	G21
CHECK VA	VCA	VCABG001	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G21
CHECK VA	VCA	VCABG002	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594 (WAFER FOR RTJ FLANGES)	G21
CHECK VA	VCA	VCABG005	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594 WAFER FOR ASME B16.47-A RTJ FLANGES	G21
CHECK VA	VCH	VCHBH001	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 BS 5352	G21
CPLG FULL	CF	LCF0AP01	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW CL3000	G21
DOUBLE IBB VA	DF1	LDF1AL01	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DFA	LDFAAL02	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DL1	LDL1AL01	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DL2	LDL2AK01	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DL3	LDL3AK01	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DL4	LDL4AL01	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DL5	LDL5AK01	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DLA	LDLAAL02	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DLB	LDLBAK02	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DLC	LDLCAK02	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DLD	LDLDAL02	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DLE	LDLEAK02	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DP1	LDP1AL01	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DP2	LDP2AL01	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DP3	LDP3AK01	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/PEEK SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DPA	LDPAAL02	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DPB	LDPBAL02	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
DOUBLE IBB VA	DPC	LDPCAK02	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	G21
ELBOLET	TEW	LTEWAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW CL3000	G21
ELBOW	E4	LE40A424	26"	26"	ELBOW A420-WPL6 DEG-45 WELDED BE 41.6mm THK	G21
ELBOW	E4	LE40A425	28"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE 44.7mm THK	G21
ELBOW	E4	LE40A426	30"	30"	ELBOW A420-WPL6 DEG-45 WELDED BE 47.8mm THK	G21
ELBOW	E4	LE40A511	32"	32"	ELBOW A420-WPL6 DEG-45 WELDED BE 50.9mm THK	G21
ELBOW	E4	LE40A512	34"	34"	ELBOW A420-WPL6 DEG-45 WELDED BE 53.9mm THK	G21
ELBOW	E4	LE40A513	36"	36"	ELBOW A420-WPL6 DEG-45 WELDED BE 57.0mm THK	G21
ELBOW	E4	LE40A609	38"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE 60.1mm THK	G21
ELBOW	E4	LE40A610	40"	40"	ELBOW A420-WPL6 DEG-45 WELDED BE 63.2mm THK	G21
ELBOW	E4	LE40A611	42"	42"	ELBOW A420-WPL6 DEG-45 WELDED BE 66.3mm THK	G21
ELBOW	E4	LE40A612	44"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE 69.4mm THK	G21
ELBOW	E4	LE40A704	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE 72.4mm THK	G21
ELBOW	E4	LE40AF03	2"	4"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH80	G21
ELBOW	E4	LE40AG03	8"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH100	G21
ELBOW	E4	LE40AG04	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE SCH100	G21
ELBOW	E4	LE40AH07	6"	6"	ELBOW A420-WPL6 DEG-45 SMLS BE SCH120	G21
ELBOW	E4	LE40AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW CL3000	G21
ELBOW	E9	LE90A424	26"	26"	ELBOW A420-WPL6 90-LR WELDED BE 41.6mm THK	G21
ELBOW	E9	LE90A425	28"	28"	ELBOW A420-WPL6 90-LR WELDED BE 44.7mm THK	G21
ELBOW	E9	LE90A426	30"	30"	ELBOW A420-WPL6 90-LR WELDED BE 47.8mm THK	G21
ELBOW	E9	LE90A511	32"	32"	ELBOW A420-WPL6 90-LR WELDED BE 50.9mm THK	G21
ELBOW	E9	LE90A512	34"	34"	ELBOW A420-WPL6 90-LR WELDED BE 53.9mm THK	G21
ELBOW	E9	LE90A513	36"	36"	ELBOW A420-WPL6 90-LR WELDED BE 57.0mm THK	G21
ELBOW	E9	LE90A609	38"	38"	ELBOW A420-WPL6 90-LR WELDED BE 60.1mm THK	G21
ELBOW	E9	LE90A610	40"	40"	ELBOW A420-WPL6 90-LR WELDED BE 63.2mm THK	G21
ELBOW	E9	LE90A611	42"	42"	ELBOW A420-WPL6 90-LR WELDED BE 66.3mm THK	G21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90A612	44"	44"	ELBOW A420-WPL6 90-LR WELDED BE 69.4mm THK	G21
ELBOW	E9	LE90A704	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE 72.4mm THK	G21
ELBOW	E9	LE90AF03	2"	4"	ELBOW A420-WPL6 90-LR SMLS BE SCH80	G21
ELBOW	E9	LE90AG03	8"	16"	ELBOW A420-WPL6 90-LR SMLS BE SCH100	G21
ELBOW	E9	LE90AG04	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE SCH100	G21
ELBOW	E9	LE90AH06	6"	6"	ELBOW A420-WPL6 90-LR SMLS BE SCH120	G21
ELBOW	E9	LE90AP02	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW CL3000	G21
FLANGE	F	LF00AK57	8"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH100	G21
FLANGE	F	LF00AK58	6"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH120	G21
FLANGE	F	LF00AK59	26"	26"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 41.6mm THK	G21
FLANGE	F	LF00AK60	28"	28"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 44.7mm THK	G21
FLANGE	F	LF00AK61	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 47.8mm THK	G21
FLANGE	F	LF00AK62	32"	32"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 50.9mm THK	G21
FLANGE	F	LF00AK63	34"	34"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 53.9mm THK	G21
FLANGE	F	LF00AK64	36"	36"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 57.0mm THK	G21
FLANGE	F	LF00AK65	38"	38"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 60.1mm THK	G21
FLANGE	F	LF00AK66	40"	40"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 63.2mm THK	G21
FLANGE	F	LF00AK67	42"	42"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 66.3mm THK	G21
FLANGE	F	LF00AK68	44"	44"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 69.4mm THK	G21
FLANGE	F	LF00AK69	46"	46"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) 72.4mm THK	G21
FLG BLIND	FB1	LFB0AK03	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5)	G21
FLG BLIND	FB1	LFB0AL02	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5)	G21
FLG JACK	FJ	LFJ0AK12	8"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH100	G21
FLG JACK	FJ	LFJ0AK13	6"	6"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120	G21
FLG JACK	FJ	LFJ0AK14	2"	4"	FLANGE A350-LF2 CL1 SW RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	G21
GATE VA	VGA	VGABG001	2"	4"	GATE VALVE A352-LCC FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600	G21
GATE VA	VGA	VGABG002	6"	24"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600	G21
GATE VA	VGA	VGABG003	26"	46"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600 ASME B16.47-A FLGD	G21
GATE VA	VGA	VGABH001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G21
GATE VA	VGF	VGFBH001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602 FOR EQUIP NOZZLE CONN.	G21
GATE VA	VGX	VGXBH001	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G21
GLOBE VA	VLA	VLABG001	2"	3"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873	G21
GLOBE VA	VLA	VLABG003	4"	6"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873	G21
GLOBE VA	VLA	VLABH001	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	G21
NIPPLE TOE	NTO	LNTOAK01	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) 75mm LONG SCH160	G21
PIPE	P	LP00A460	26"	26"	PIPE A671-CC65 CL.22 EFW BE 100% RT 41.6mm THK W/S2 AT-46C	G21
PIPE	P	LP00A461	28"	28"	PIPE A671-CC65 CL.22 EFW BE 100% RT 44.7mm THK W/S2 AT-46C	G21
PIPE	P	LP00A462	30"	30"	PIPE A671-CC65 CL.22 EFW BE 100% RT 47.8mm THK W/S2 AT-46C	G21
PIPE	P	LP00A521	32"	32"	PIPE A671-CC65 CL.22 EFW BE 100% RT 50.9mm THK W/S2 AT-46C	G21
PIPE	P	LP00A522	34"	34"	PIPE A671-CC65 CL.22 EFW BE 100% RT 53.9mm THK W/S2 AT-46C	G21
PIPE	P	LP00A523	36"	36"	PIPE A671-CC65 CL.22 EFW BE 100% RT 57.0mm THK W/S2 AT-46C	G21
PIPE	P	LP00A609	38"	38"	PIPE A671-CC65 CL.22 EFW BE 100% RT 60.1mm THK W/S2 AT-46C	G21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00A610	40"	40"	PIPE A671-CC65 CL.22 EFW BE 100% RT 63.2mm THK W/S2 AT-46C	G21
PIPE	P	LP00A611	42"	42"	PIPE A671-CC65 CL.22 EFW BE 100% RT 66.3mm THK W/S2 AT-46C	G21
PIPE	P	LP00A612	44"	44"	PIPE A671-CC65 CL.22 EFW BE 100% RT 69.4mm THK W/S2 AT-46C	G21
PIPE	P	LP00A704	46"	46"	PIPE A671-CC65 CL.22 EFW BE 100% RT 72.4mm THK W/S2 AT-46C	G21
PIPE	P	LP00AF08	1/2"	1 1/2"	PIPE A333-6 SMLS PE SCH80	G21
PIPE	P	LP00AF09	2"	4"	PIPE A333-6 SMLS BE SCH80	G21
PIPE	P	LP00AG03	8"	16"	PIPE A333-6 SMLS BE SCH100	G21
PIPE	P	LP00AG06	18"	24"	PIPE A671-CC65 CL.22 EFW BE 100% RT SCH100 W/S2 AT-46C	G21
PIPE	P	LP00AH07	6"	6"	PIPE A333-6 SMLS BE SCH120	G21
PLUG	PLG	LPLGAW03	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M)	G21
PLUG VA	VPL	VPLBG001	2"	3"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599	G21
PLUG VA	VPL	VPLBG002	4"	16"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599	G21
PLUG VA	VPL	VPLBH001	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH80 REDUCING BORE, W-OP (F-SAFE) BS 5353	G21
RED CON	RC	LRC0A424	26"	26"	REDUCER A420-WPL6 CON. WELDED BE 41.6mm THK	G21
RED CON	RC	LRC0A425	28"	28"	REDUCER A420-WPL6 CON. WELDED BE 44.7mm THK	G21
RED CON	RC	LRC0A426	30"	30"	REDUCER A420-WPL6 CON. WELDED BE 47.8mm THK	G21
RED CON	RC	LRC0A511	32"	32"	REDUCER A420-WPL6 CON. WELDED BE 50.9mm THK	G21
RED CON	RC	LRC0A512	34"	34"	REDUCER A420-WPL6 CON. WELDED BE 53.9mm THK	G21
RED CON	RC	LRC0A513	36"	36"	REDUCER A420-WPL6 CON. WELDED BE 57.0mm THK	G21
RED CON	RC	LRC0A609	38"	38"	REDUCER A420-WPL6 CON. WELDED BE 60.1mm THK	G21
RED CON	RC	LRC0A610	40"	40"	REDUCER A420-WPL6 CON. WELDED BE 63.2mm THK	G21
RED CON	RC	LRC0A611	42"	42"	REDUCER A420-WPL6 CON. WELDED BE 66.3mm THK	G21
RED CON	RC	LRC0A612	44"	44"	REDUCER A420-WPL6 CON. WELDED BE 69.4mm THK	G21
RED CON	RC	LRC0A704	46"	46"	REDUCER A420-WPL6 CON. WELDED BE 72.4mm THK	G21
RED CON	RC	LRC0AF03	2"	4"	REDUCER A420-WPL6 CON. SMLS BE SCH80	G21
RED CON	RC	LRC0AG03	8"	16"	REDUCER A420-WPL6 CON. SMLS BE SCH100	G21
RED CON	RC	LRC0AG04	18"	24"	REDUCER A420-WPL6 CON. WELDED BE SCH100	G21
RED CON	RC	LRC0AH07	6"	6"	REDUCER A420-WPL6 CON. SMLS BE SCH120	G21
RED ECC	RE	LRE0A424	26"	26"	REDUCER A420-WPL6 ECC. WELDED BE 41.6mm THK	G21
RED ECC	RE	LRE0A425	28"	28"	REDUCER A420-WPL6 ECC. WELDED BE 44.7mm THK	G21
RED ECC	RE	LRE0A426	30"	30"	REDUCER A420-WPL6 ECC. WELDED BE 47.8mm THK	G21
RED ECC	RE	LRE0A511	32"	32"	REDUCER A420-WPL6 ECC. WELDED BE 50.9mm THK	G21
RED ECC	RE	LRE0A512	34"	34"	REDUCER A420-WPL6 ECC. WELDED BE 53.9mm THK	G21
RED ECC	RE	LRE0A513	36"	36"	REDUCER A420-WPL6 ECC. WELDED BE 57.0mm THK	G21
RED ECC	RE	LRE0A609	38"	38"	REDUCER A420-WPL6 ECC. WELDED BE 60.1mm THK	G21
RED ECC	RE	LRE0A610	40"	40"	REDUCER A420-WPL6 ECC. WELDED BE 63.2mm THK	G21
RED ECC	RE	LRE0A611	42"	42"	REDUCER A420-WPL6 ECC. WELDED BE 66.3mm THK	G21
RED ECC	RE	LRE0A612	44"	44"	REDUCER A420-WPL6 ECC. WELDED BE 69.4mm THK	G21
RED ECC	RE	LRE0A704	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE 72.4mm THK	G21
RED ECC	RE	LRE0AF03	2"	4"	REDUCER A420-WPL6 ECC. SMLS BE SCH80	G21
RED ECC	RE	LRE0AG03	8"	16"	REDUCER A420-WPL6 ECC. SMLS BE SCH100	G21
RED ECC	RE	LRE0AG04	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE SCH100	G21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AH07	6"	6"	REDUCER A420-WPL6 ECC. SMLS BE SCH120	G21
SOCKOLET	TSO	LTSOAP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW CL3000	G21
SPCL FLANGE	F3	LF00AK04	2"	4"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) SCH80	G21
SPCL FLANGE	F3	LF00AL04	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) SCH80	G21
SPCL FLANGE	F1	LF10AL20	2"	4"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) SCH80	G21
SPCL FLANGE	F1	LF10AL21	8"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) SCH100	G21
SPCL FLANGE	F1	LF10AL22	6"	6"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) SCH120	G21
SPCL FLG JACK	FJ1	LFJ0AL03	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	G21
SPCL FLG JACK	FJ1	LFJ1AK09	2"	4"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80	G21
SPCL FLG JACK	FJ1	LFJ1AL10	8"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH100	G21
SPCL FLG JACK	FJ1	LFJ1AL11	6"	6"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120	G21
SPCL FLG JACK	FJ1	LFJ1AL28	2"	4"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80	G21
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G21
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G21
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G21
SPE BLIND	FSB	LFSBAK16	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) W/S5 AT-46C	G21
SPE BLIND	FSB	LFSBAK21	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) W/S5 AT-46C	G21
SPE BLIND	FSB	LFSBAL09	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) W/S5 AT-46C	G21
SWG CON B-P	RCB	LRCBAF03	2"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE SCH80	G21
SWG CON PE	RCP	LRCPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE SCH80	G21
SWG ECC B-P	REB	LREBAF03	2"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE SCH80	G21
SWG ECC PE	REP	LREPAF02	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE SCH80	G21
TEE	TE	LTE0A424	26"	26"	TEE A420-WPL6 EQUAL WELDED BE 41.6mm THK	G21
TEE	TE	LTE0A425	28"	28"	TEE A420-WPL6 EQUAL WELDED BE 44.7mm THK	G21
TEE	TE	LTE0A426	30"	30"	TEE A420-WPL6 EQUAL WELDED BE 47.8mm THK	G21
TEE	TE	LTE0A511	32"	32"	TEE A420-WPL6 EQUAL WELDED BE 50.9mm THK	G21
TEE	TE	LTE0A512	34"	34"	TEE A420-WPL6 EQUAL WELDED BE 53.9mm THK	G21
TEE	TE	LTE0A513	36"	36"	TEE A420-WPL6 EQUAL WELDED BE 57.0mm THK	G21
TEE	TE	LTE0A609	38"	38"	TEE A420-WPL6 EQUAL WELDED BE 60.1mm THK	G21
TEE	TE	LTE0A610	40"	40"	TEE A420-WPL6 EQUAL WELDED BE 63.2mm THK	G21
TEE	TE	LTE0A611	42"	42"	TEE A420-WPL6 EQUAL WELDED BE 66.3mm THK	G21
TEE	TE	LTE0A612	44"	44"	TEE A420-WPL6 EQUAL WELDED BE 69.4mm THK	G21
TEE	TE	LTE0A704	46"	46"	TEE A420-WPL6 EQUAL WELDED BE 72.4mm THK	G21
TEE	TE	LTE0AF03	2"	4"	TEE A420-WPL6 EQUAL SMLS BE SCH80	G21
TEE	TE	LTE0AG03	8"	16"	TEE A420-WPL6 EQUAL SMLS BE SCH100	G21
TEE	TE	LTE0AG04	18"	24"	TEE A420-WPL6 EQUAL WELDED BE SCH100	G21
TEE	TE	LTE0AH07	6"	6"	TEE A420-WPL6 EQUAL SMLS BE SCH120	G21
TEE	TE	LTE0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW CL3000	G21
TEE RED	TR	LTR0A424	26"	26"	TEE A420-WPL6 REDUCING WELDED BE 41.6mm THK	G21
TEE RED	TR	LTR0A425	28"	28"	TEE A420-WPL6 REDUCING WELDED BE 44.7mm THK	G21
TEE RED	TR	LTR0A426	30"	30"	TEE A420-WPL6 REDUCING WELDED BE 47.8mm THK	G21
TEE RED	TR	LTR0A511	32"	32"	TEE A420-WPL6 REDUCING WELDED BE 50.9mm THK	G21

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0A512	34"	34"	TEE A420-WPL6 REDUCING WELDED BE 53.9mm THK	G21
TEE RED	TR	LTR0A513	36"	36"	TEE A420-WPL6 REDUCING WELDED BE 57.0mm THK	G21
TEE RED	TR	LTR0A609	38"	38"	TEE A420-WPL6 REDUCING WELDED BE 60.1mm THK	G21
TEE RED	TR	LTR0A610	40"	40"	TEE A420-WPL6 REDUCING WELDED BE 63.2mm THK	G21
TEE RED	TR	LTR0A611	42"	42"	TEE A420-WPL6 REDUCING WELDED BE 66.3mm THK	G21
TEE RED	TR	LTR0A612	44"	44"	TEE A420-WPL6 REDUCING WELDED BE 69.4mm THK	G21
TEE RED	TR	LTR0A704	46"	46"	TEE A420-WPL6 REDUCING WELDED BE 72.4mm THK	G21
TEE RED	TR	LTR0AF03	2"	4"	TEE A420-WPL6 REDUCING SMLS BE SCH80	G21
TEE RED	TR	LTR0AG03	8"	16"	TEE A420-WPL6 REDUCING SMLS BE SCH100	G21
TEE RED	TR	LTR0AG04	18"	24"	TEE A420-WPL6 REDUCING WELDED BE SCH100	G21
TEE RED	TR	LTR0AH07	6"	6"	TEE A420-WPL6 REDUCING SMLS BE SCH120	G21
TEE RED	TR	LTR0AP02	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW CL3000	G21
THREADOLET	TTO	LTTOAP02	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) CL3000	G21
WELDOLET	TWO	LTWOAF03	2"	4"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH80	G21
WELDOLET	TWO	LTWOAG02	8"	20"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH100	G21
WELDOLET	TWO	LTWOAH04	6"	6"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE SCH120	G21
BALL VA	VBF	VBFBG004	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23N
BALL VA	VBF	VBFBG005	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23N
BALL VA	VBF	VBFBH002	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G23N
BALL VA	VBR	VBRBG004	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23N
BALL VA	VBR	VBRBG005	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23N
BOLTS	B	LB00A001	1/2"	24"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G23N
CAP	C	LC00AH05	4"	24"	CAP A420-WPL6 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
CAP	C	LC00AK04	2"	3"	CAP A420-WPL6 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
CAP	C	LC00AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
CAP THD	CT	LCT0AQ04	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	G23N
CHECK VA	VCA	VCABG003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G23N
CHECK VA	VCA	VCABG004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G23N
CHECK VA	VCH	VCHBH002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G23N
CPLG FULL	CF	LCF0AQ04	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
DOUBLE IBB VA	DFA	LDFAAL03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DLA	LDLAAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DLB	LDLBAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DLC	LDLCAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DLD	LDLDAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DLE	LDLEAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DPA	LDPAAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DPB	LDPBAL03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
DOUBLE IBB VA	DPC	LDPCAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23N
ELBOLET	TEW	LTEWAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
ELBOW	E4	LE40AH08	4"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
ELBOW	E4	LE40AH09	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E4	LE40AK04	2"	3"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
ELBOW	E4	LE40AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
ELBOW	E9	LE90AH07	4"	16"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
ELBOW	E9	LE90AH08	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
ELBOW	E9	LE90AK04	2"	3"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
ELBOW	E9	LE90AQ04	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
FLANGE	F	LF00AK70	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	G23N
FLANGE	F	LF00AK71	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G23N
FLG BLIND	FB	LFB0AK06	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0003)	G23N
FLG BLIND	FB	LFB0AL04	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0003)	G23N
FLG JACK	FJ	LFJ0AK15	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	G23N
FLG JACK	FJ	LFJ0AK16	2"	3"	FLANGE A350-LF2 CL1 SW RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G23N
FLG JACK	FJ	LFJ0AL09	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G23N
GATE VA	VGA	VGABG004	2"	4"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G23N
GATE VA	VGA	VGABG005	6"	24"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G23N
GATE VA	VGA	VGABH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G23N
GATE VA	VGF	VGFBH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G23N
GATE VA	VGX	VGXBH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G23N
GLOBE VA	VLA	VLABG002	2"	3"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G23N
GLOBE VA	VLA	VLABG004	4"	6"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G23N
GLOBE VA	VLA	VLABH002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G23N
NIPPLE TOE	NTO	LNTOAN07	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0003)	G23N
PIPE	P	LP00AH08	4"	16"	PIPE A333-6 SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
PIPE	P	LP00AH15	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH120 W/S2 AT-46C(RP-1718-999-6300-0003)	G23N
PIPE	P	LP00AK08	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G23N
PIPE	P	LP00AK14	2"	3"	PIPE A333-6 SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
PLUG	PLG	LPLGAW04	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0003)	G23N
PLUG VA	VPL	VPLBG003	2"	3"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G23N
PLUG VA	VPL	VPLBG004	4"	16"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G23N
PLUG VA	VPL	VPLBH002	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G23N
RED CON	RC	LRC0AH08	4"	16"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
RED CON	RC	LRC0AH09	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
RED CON	RC	LRC0AK04	2"	3"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
RED ECC	RE	LRE0AH08	4"	16"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
RED ECC	RE	LRE0AH09	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
RED ECC	RE	LRE0AK04	2"	3"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
SOCKOLET	TSO	LTSOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
SPCL FLANGE	F3	LF00AL09	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G23N
SPCL FLANGE	F1	LF10AL23	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0003)	G23N
SPCL FLANGE	F1	LF10AL24	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0003)	G23N
SPCL FLG JACK	FJ1	LFJ0AK33	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G23N
SPCL FLG JACK	FJ1	LFJ1AL12	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0003)	G23N

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLG JACK	FJ1	LFJ1AL29	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0003)	G23N
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G23N
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G23N
SPE BLIND	FSB	LFSBAK17	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	G23N
SPE BLIND	FSB	LFSBAK18	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	G23N
SPE BLIND	FSB	LFSBAL10	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-6300-0003) W/S5 AT-46C	G23N
SWG CON B-P	RCB	LRCBAH03	4"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	G23N
SWG CON B-P	RCB	LRCBAK04	2"	3"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	G23N
SWG CON PE	RCP	LRCPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G23N
SWG ECC B-P	REB	LREBAH03	4"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0003)	G23N
SWG ECC B-P	REB	LREBAK04	2"	3"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0003)	G23N
SWG ECC PE	REP	LREPAK05	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0003)	G23N
TEE	TE	LTE0AH08	4"	16"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
TEE	TE	LTE0AH09	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
TEE	TE	LTE0AK04	2"	3"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
TEE	TE	LTE0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
TEE RED	TR	LTR0AH08	4"	16"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
TEE RED	TR	LTR0AH09	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
TEE RED	TR	LTR0AK04	2"	3"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
TEE RED	TR	LTR0AQ04	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0003)	G23N
THREADOLET	TTO	LTTOAQ04	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0003)	G23N
WELDOLET	TWO	LTWOAH05	4"	20"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-6300-0003)	G23N
WELDOLET	TWO	LTWOAK04	2"	3"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0003)	G23N
BALL VA	VBF	VBFBG004	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23S
BALL VA	VBF	VBFBG005	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23S
BALL VA	VBF	VBFBG006	26"	30"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G23S
BALL VA	VBF	VBFBH002	1/2"	1 1/2"	BALL VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING/NACE (RP-1718-999-6300-0004)	G23S
BALL VA	VBR	VBRBG004	2"	4"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23S
BALL VA	VBR	VBRBG005	6"	24"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/NACE(RP-1718-999-6300-0004)	G23S
BALL VA	VBR	VBRBG006	26"	30"	BALL VALVE A352-LCC FLGD-RTJ LF2 ENP BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD/NACE(RP-1718-999-6300-0004)	G23S
BOLTS	B	LB00A001	1/2"	46"	STUD BOLT A193-B7M W/2 HEAVY HEX. NUTS(B18.2.2) A194-2HM	G23S
CAP	C	LC00A430	26"	26"	CAP A420-WPL6 SMLS BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A431	28"	28"	CAP A420-WPL6 SMLS BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A432	30"	30"	CAP A420-WPL6 SMLS BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A515	32"	32"	CAP A420-WPL6 SMLS BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A516	34"	34"	CAP A420-WPL6 SMLS BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A517	36"	36"	CAP A420-WPL6 SMLS BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A613	38"	38"	CAP A420-WPL6 SMLS BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A614	40"	40"	CAP A420-WPL6 SMLS BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A615	42"	42"	CAP A420-WPL6 SMLS BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A705	44"	44"	CAP A420-WPL6 SMLS BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
CAP	C	LC00A706	46"	46"	CAP A420-WPL6 SMLS BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00AH06	4"	16"	CAP A420-WPL6 SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
CAP	C	LC00AK05	2"	3"	CAP A420-WPL6 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
CAP	C	LC00AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
CAP THD	CT	LCT0AQ05	1/2"	1 1/2"	CAP A350-LF2 CL1 FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	G23S
CHECK VA	VCA	VCABG003	2"	4"	CHECK VALVE A352-LCC WAFER 316SS W/STELLITE SEATS & DISC DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G23S
CHECK VA	VCA	VCABG004	6"	24"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR RTJ FLANGES(RP-1718-999-6300-0004)	G23S
CHECK VA	VCA	VCABG006	26"	46"	CHECK VALVE A352-LCC WAFER 316SS TRIM DUAL PLATE ANSI CL900 NACE API 594 WAFER FOR ASME B16.47-A RTJ FLANGES(RP-1718-999-6300-0004)	G23S
CHECK VA	VCH	VCHBH002	1/2"	1 1/2"	CHECK VALVE A350-LF2 CL1 SW 316SS W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G23S
CPLG FULL	CF	LCF0AQ05	1/2"	1 1/2"	COUPLING A350-LF2 CL1 FULL(STRAIGHT) FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
DOUBLE IBB VA	DFA	LDFAAL03	1/2"	1/2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DLA	LDLAAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DLB	LDLBAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DLC	LDLCAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DLD	LDLDAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DLE	LDLEAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DPA	LDPAAL03	3/4"	3/4"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DPB	LDPBAL03	1"	1"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL1500 NACE 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
DOUBLE IBB VA	DPC	LDPCAK03	2"	2"	BALL VALVE A350-LF2 CL1 316SS BALL W/NYLON SEATS ANSI CL900 NACE 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G23S
ELBOLET	TEW	LTEWAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 ELBOW OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A432	26"	26"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A433	28"	28"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A434	30"	30"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A515	32"	32"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A516	34"	34"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A517	36"	36"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A613	38"	38"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A614	40"	40"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A615	42"	42"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A705	44"	44"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40A706	46"	46"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40AH10	4"	16"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40AH11	18"	24"	ELBOW A420-WPL6 DEG-45 WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40AK06	2"	3"	ELBOW A420-WPL6 DEG-45 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
ELBOW	E4	LE40AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-45 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A432	26"	26"	ELBOW A420-WPL6 90-LR WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A433	28"	28"	ELBOW A420-WPL6 90-LR WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A434	30"	30"	ELBOW A420-WPL6 90-LR WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A515	32"	32"	ELBOW A420-WPL6 90-LR WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A516	34"	34"	ELBOW A420-WPL6 90-LR WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A517	36"	36"	ELBOW A420-WPL6 90-LR WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A613	38"	38"	ELBOW A420-WPL6 90-LR WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A614	40"	40"	ELBOW A420-WPL6 90-LR WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90A615	42"	42"	ELBOW A420-WPL6 90-LR WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A705	44"	44"	ELBOW A420-WPL6 90-LR WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90A706	46"	46"	ELBOW A420-WPL6 90-LR WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90AH09	4"	16"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90AH10	18"	24"	ELBOW A420-WPL6 90-LR WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90AK06	2"	3"	ELBOW A420-WPL6 90-LR SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
ELBOW	E9	LE90AQ05	1/2"	1 1/2"	ELBOW A350-LF2 CL1 DEG-90 FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK73	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK74	26"	26"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK75	28"	28"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK76	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK77	32"	32"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK78	34"	34"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK79	36"	36"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK80	38"	38"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK81	40"	40"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK82	42"	42"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK83	44"	44"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
FLANGE	F	LF00AK84	46"	46"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
FLG BLIND	FB1	LFB0AK07	2"	24"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.5) NACE (RP-1718-999-6300-0002)	G23S
FLG BLIND	FB1	LFB0AK08	26"	46"	FLANGE A350-LF2 CL1 BLIND RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	G23S
FLG BLIND	FB1	LFB1AL01	1/2"	1 1/2"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.5) NACE (RP-1718-999-6300-0002)	G23S
FLG BLIND	FB1	LFB1AL03	26"	46"	FLANGE A350-LF2 CL1 BLIND RTJ CL1500 (ASME B16.47-A) NACE (RP-1718-999-6300-0002)	G23S
FLG JACK	FJ	LFJ0AK28	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0002)	G23S
FLG JACK	FJ	LFJ0AK29	30"	30"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.47-A) W/JACK SCREW 49.7mm THK NACE (RP-1718-999-6300-0002)	G23S
GATE VA	VGA	VGABG004	2"	4"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 NACE API 600 (RP-1718-999-6300-0004)	G23S
GATE VA	VGA	VGABG005	6"	24"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 (RP-1718-999-6300-0004)	G23S
GATE VA	VGA	VGABG006	26"	46"	GATE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED NACE API 600 ASME B16.47-A FLGD (RP-1718-999-6300-0004)	G23S
GATE VA	VGA	VGABH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G23S
GATE VA	VGF	VGFBH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004) FOR EQUIP NOZZLE CONN.	G23S
GATE VA	VGX	VGXBH002	1/2"	1 1/2"	GATE VALVE A350-LF2 CL1 SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 NACE API 602 (RP-1718-999-6300-0004)	G23S
GLOBE VA	VLA	VLABG002	2"	3"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 NACE BS 1873 (RP-1718-999-6300-0004)	G23S
GLOBE VA	VLA	VLABG004	4"	6"	GLOBE VALVE A352-LCC FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED NACE BS 1873 (RP-1718-999-6300-0004)	G23S
GLOBE VA	VLA	VLABH002	1/2"	1 1/2"	GLOBE VALVE A350-LF2 CL1 SW 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 NACE BS 5352 (RP-1718-999-6300-0004)	G23S
NIPPLE TOE	NTO	LNTOAN04	1/2"	1 1/2"	NIPPLE A333-6 SMLS TOE(NPT-M) NACE 75mm LONG XXS (RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A463	26"	26"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 43.5mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A464	28"	28"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 46.6mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A465	30"	30"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 49.7mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A524	32"	32"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 52.8mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A525	34"	34"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 55.9mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A526	36"	36"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 59.0mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A613	38"	38"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 62.1mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P	LP00A614	40"	40"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 65.2mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A615	42"	42"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 68.2mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A705	44"	44"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 71.3mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00A706	46"	46"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT 74.4mm THK W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00AH10	4"	16"	PIPE A333-6 SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
PIPE	P	LP00AH16	18"	24"	PIPE A671-CC65 CL.22 EFW BE NACE 100% RT SCH120 W/S2 AT-46C(RP-1718-999-6300-0002)	G23S
PIPE	P	LP00AK09	1/2"	1 1/2"	PIPE A333-6 SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G23S
PIPE	P	LP00AK17	2"	3"	PIPE A333-6 SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
PLUG	PLG	LPLGAW05	1/2"	1 1/2"	PLUG A350-LF2 CL1 ROUND HEAD FORGED TE(NPT-M) NACE (RP-1718-999-6300-0002)	G23S
PLUG VA	VPL	VPLBG003	2"	3"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G23S
PLUG VA	VPL	VPLBG004	4"	16"	PLUG VALVE A352-LCC FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599 NACE (RP-1718-999-6300-0004)	G23S
PLUG VA	VPL	VPLBH002	1/2"	1 1/2"	PLUG VALVE A350-LF2 CL1 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353 NACE (RP-1718-999-6300-0004)	G23S
RED CON	RC	LRC0A432	26"	26"	REDUCER A420-WPL6 CON. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A433	28"	28"	REDUCER A420-WPL6 CON. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A434	30"	30"	REDUCER A420-WPL6 CON. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A515	32"	32"	REDUCER A420-WPL6 CON. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A516	34"	34"	REDUCER A420-WPL6 CON. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A517	36"	36"	REDUCER A420-WPL6 CON. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A613	38"	38"	REDUCER A420-WPL6 CON. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A614	40"	40"	REDUCER A420-WPL6 CON. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A615	42"	42"	REDUCER A420-WPL6 CON. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A705	44"	44"	REDUCER A420-WPL6 CON. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0A706	46"	46"	REDUCER A420-WPL6 CON. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0AH10	4"	16"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0AH11	18"	24"	REDUCER A420-WPL6 CON. WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
RED CON	RC	LRC0AK06	2"	3"	REDUCER A420-WPL6 CON. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A432	26"	26"	REDUCER A420-WPL6 ECC. WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A433	28"	28"	REDUCER A420-WPL6 ECC. WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A434	30"	30"	REDUCER A420-WPL6 ECC. WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A515	32"	32"	REDUCER A420-WPL6 ECC. WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A516	34"	34"	REDUCER A420-WPL6 ECC. WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A517	36"	36"	REDUCER A420-WPL6 ECC. WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A613	38"	38"	REDUCER A420-WPL6 ECC. WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A614	40"	40"	REDUCER A420-WPL6 ECC. WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A615	42"	42"	REDUCER A420-WPL6 ECC. WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A705	44"	44"	REDUCER A420-WPL6 ECC. WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0A706	46"	46"	REDUCER A420-WPL6 ECC. WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0AH10	4"	16"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0AH11	18"	24"	REDUCER A420-WPL6 ECC. WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
RED ECC	RE	LRE0AK06	2"	3"	REDUCER A420-WPL6 ECC. SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
SOCKOLET	TSO	LTSOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 SOCKET OUTLET FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
SPCL FLANGE	F1	LF00AK72	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F3	LF00AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G23S
SPCL FLANGE	F1	LF10AL25	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) NACE SCH120 (RP-1718-999-6300-0002)	G23S
SPCL FLANGE	F1	LF10AL26	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) NACE SCH160 (RP-1718-999-6300-0002)	G23S
SPCL FLG JACK	FJ1	LFJ0AL13	1/2"	1 1/2"	FLANGE A350-LF2 CL1 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G23S
SPCL FLG JACK	FJ1	LFJ1AK12	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G23S
SPCL FLG JACK	FJ1	LFJ1AL13	4"	24"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120 NACE (RP-1718-999-6300-0002)	G23S
SPCL FLG JACK	FJ1	LFJ1AL30	2"	3"	FLANGE A350-LF2 CL1 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160 NACE (RP-1718-999-6300-0002)	G23S
SPCL GASKET	G1	LG00ZK00	26"	46"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 90 HRB MAX	G23S
SPCL GASKET	G3	LG00ZK01	2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 90 HRB MAX	G23S
SPCL GASKET	G3	LG00ZL00	1/2"	1 1/2"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	G23S
SPE BLIND	FSB	LFSBAK19	2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	G23S
SPE BLIND	FSB	LFSBAK20	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	G23S
SPE BLIND	FSB	LFSBAK23	30"	30"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.47-A) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	G23S
SPE BLIND	FSB	LFSBAL11	1/2"	1 1/2"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48) NACE (RP-1718-999-6300-0002) W/S5 AT-46C	G23S
SWG CON B-P	RCB	LRCBAH04	4"	4"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0002)	G23S
SWG CON B-P	RCB	LRCBAK05	2"	3"	SWAGE A420-WPL6 CON. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	G23S
SWG CON PE	RCP	LRCPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 CON. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G23S
SWG ECC B-P	REB	LREBAH04	4"	4"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH120 (RP-1718-999-6300-0002)	G23S
SWG ECC B-P	REB	LREBAK05	2"	3"	SWAGE A420-WPL6 ECC. SMLS BLE x PSE NACE SCH160 (RP-1718-999-6300-0002)	G23S
SWG ECC PE	REP	LREPAK06	1/2"	1 1/2"	SWAGE A420-WPL6 ECC. SMLS PE NACE SCH160 (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A432	26"	26"	TEE A420-WPL6 EQUAL WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A433	28"	28"	TEE A420-WPL6 EQUAL WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A434	30"	30"	TEE A420-WPL6 EQUAL WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A515	32"	32"	TEE A420-WPL6 EQUAL WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A516	34"	34"	TEE A420-WPL6 EQUAL WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A517	36"	36"	TEE A420-WPL6 EQUAL WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A613	38"	38"	TEE A420-WPL6 EQUAL WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A614	40"	40"	TEE A420-WPL6 EQUAL WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A615	42"	42"	TEE A420-WPL6 EQUAL WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A705	44"	44"	TEE A420-WPL6 EQUAL WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0A706	46"	46"	TEE A420-WPL6 EQUAL WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0AH10	4"	16"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0AH11	18"	24"	TEE A420-WPL6 EQUAL WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0AK06	2"	3"	TEE A420-WPL6 EQUAL SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
TEE	TE	LTE0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 EQUAL FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A432	26"	26"	TEE A420-WPL6 REDUCING WELDED BE NACE 43.5mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A433	28"	28"	TEE A420-WPL6 REDUCING WELDED BE NACE 46.6mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A434	30"	30"	TEE A420-WPL6 REDUCING WELDED BE NACE 49.7mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A515	32"	32"	TEE A420-WPL6 REDUCING WELDED BE NACE 52.8mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A516	34"	34"	TEE A420-WPL6 REDUCING WELDED BE NACE 55.9mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A517	36"	36"	TEE A420-WPL6 REDUCING WELDED BE NACE 59.0mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A613	38"	38"	TEE A420-WPL6 REDUCING WELDED BE NACE 62.1mm THK (RP-1718-999-6300-0002)	G23S

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE RED	TR	LTR0A614	40"	40"	TEE A420-WPL6 REDUCING WELDED BE NACE 65.2mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A615	42"	42"	TEE A420-WPL6 REDUCING WELDED BE NACE 68.2mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A705	44"	44"	TEE A420-WPL6 REDUCING WELDED BE NACE 71.3mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0A706	46"	46"	TEE A420-WPL6 REDUCING WELDED BE NACE 74.4mm THK (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0AH10	4"	16"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0AH11	18"	24"	TEE A420-WPL6 REDUCING WELDED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0AK06	2"	3"	TEE A420-WPL6 REDUCING SMLS BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
TEE RED	TR	LTR0AQ05	1/2"	1 1/2"	TEE A350-LF2 CL1 REDUCING FORGED SW NACE CL6000 (RP-1718-999-6300-0002)	G23S
THREADOLET	TTO	LTTOAQ05	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A350-LF2 CL1 THREADED OUTLET FORGED TE(NPT-F) NACE CL6000 (RP-1718-999-6300-0002)	G23S
WELDOLET	TWO	LTWOAH07	4"	20"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH120 (RP-1718-999-6300-0002)	G23S
WELDOLET	TWO	LTWOAK06	2"	3"	REINFORCED BRANCH OUTLET A350-LF2 CL1 WELDED OUTLET FORGED BE NACE SCH160 (RP-1718-999-6300-0002)	G23S
BALL VA	VBF	VBFCG001	2"	4"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/KELF SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	G46
BALL VA	VBF	VBFCG002	6"	24"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/KELF SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	G46
BALL VA	VB1	VBFCG011	2"	4"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G46
BALL VA	VB1	VBFCG012	6"	24"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G46
BALL VA	VBF	VBFCH001	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/KELF SEATS ANSI CL1500 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENIC(RP-1718-999-1300-0028)	G46
BALL VA	VB1	VBFCH003	1/2"	1 1/2"	BALL VALVE A182-F304L PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	G46
BALL VA	VBF	VBFCHX01	3/4"	3/4"	ANSI CL1500 W/SCH160 FULL BORE, W-OP F-SAFE BS 5351 PTFE&ELGILOY SEAL/FLOATING/CRYOGENICRP-1718-999-1300-0028	G46
BALL VA	VBR	VBRCG001	2"	4"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/KELF SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	G46
BALL VA	VBR	VBRCG002	6"	24"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/KELF SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D RTFE&ELGILOY SEAL/TRUNNION/CRYOGENIC(RP-1718-999-1300-0028)	G46
BALL VA	VB2	VBRCG010	2"	4"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G46
BALL VA	VB2	VBRCG011	6"	24"	BALL VALVE A351-CF8M FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G46
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	G46
CAP	C	LC00CE01	20"	24"	CAP A403-WP304L SMLS BE SCH60	G46
CAP	C	LC00CG00	8"	18"	CAP A403-WP304L SMLS BE SCH100	G46
CAP	C	LC00CP00	1/2"	1 1/2"	CAP A182-F304L FORGED SW CL3000	G46
CAP	C	LC00CS01	2"	3"	CAP A403-WP304L SMLS BE SCH40S	G46
CAP	C	LC00CT01	4"	6"	CAP A403-WP304L SMLS BE SCH80S	G46
CAP THD	CT	LCT0CP00	1/2"	1 1/2"	CAP A182-F304L FORGED TE(NPT-F) CL3000	G46
CHECK VA	VCA	VCACG001	2"	24"	CHECK VALVE A351-CF8M WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594 WAFER FOR RTJ FLANGES/CRYOGENIC(RP-1718-999-1300-0028)	G46
CHECK VA	VCH	VCHCH001	1/2"	1 1/2"	CHECK VALVE A182-F304L SW 316SS TRIM BC PISTON TYPE DISC ANSI CL1500 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	G46
CPLG FULL	CF	LCF0CP00	1/2"	1 1/2"	COUPLING A182-F304L FULL(STRAIGHT) FORGED SW CL3000	G46
DOUBLE IBB VA	DF1	LDF1CL00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DFA	LDFACL00	1/2"	1/2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DL1	LDL1CL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DL2	LDL2CK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DL3	LDL3CK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DL4	LDL4CL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DL5	LDL5CK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DLA	LDLACL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DLB	LDLBCK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DLC	LDLCCK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DLD	LDLDCL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DLE	LDLECK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC	G46
DOUBLE IBB VA	DP1	LDP1CL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DP2	LDP2CL00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DP3	LDP3CK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G46
DOUBLE IBB VA	DPA	LDPACL00	3/4"	3/4"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DPB	LDPBCL00	1"	1"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
DOUBLE IBB VA	DPC	LDPCCK00	2"	2"	BALL VALVE A182-F304L 316SS BALL W/KELF SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) FOR CRYOGENIC SERVICE	G46
ELBOLET	TEW	LTEWCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L ELBOW OUTLET FORGED SW CL3000	G46
ELBOW	E4	LE40CE01	20"	24"	ELBOW A403-WP304L DEG-45 WELDED BE SCH60	G46
ELBOW	E4	LE40CG00	8"	18"	ELBOW A403-WP304L DEG-45 WELDED BE SCH100	G46
ELBOW	E4	LE40CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-45 FORGED SW CL3000	G46
ELBOW	E4	LE40CS02	2"	3"	ELBOW A403-WP304L DEG-45 SMLS BE SCH40S	G46
ELBOW	E4	LE40CT02	4"	6"	ELBOW A403-WP304L DEG-45 SMLS BE SCH80S	G46
ELBOW	E9	LE90CE02	20"	24"	ELBOW A403-WP304L 90-LR WELDED BE SCH60	G46
ELBOW	E9	LE90CG00	8"	18"	ELBOW A403-WP304L 90-LR WELDED BE SCH100	G46
ELBOW	E9	LE90CP00	1/2"	1 1/2"	ELBOW A182-F304L DEG-90 FORGED SW CL3000	G46
ELBOW	E9	LE90CS02	2"	3"	ELBOW A403-WP304L 90-LR SMLS BE SCH40S	G46
ELBOW	E9	LE90CT02	4"	6"	ELBOW A403-WP304L 90-LR SMLS BE SCH80S	G46
FLANGE	F	LF00CK04	8"	18"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH100	G46
FLG BLIND	FB1	LFB0CK01	2"	24"	FLANGE A182-F304L BLIND RTJ CL900 (ASME B16.5)	G46
FLG BLIND	FB1	LFB0CL01	1/2"	1 1/2"	FLANGE A182-F304L BLIND RTJ CL1500 (ASME B16.5)	G46
FLG JACK	FJ	LFJ0CK01	8"	18"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH100	G46
FLG RED	RF	LRF0CK01	3"	3"	***FLANGE A182-F304L WN-REDUCING RTJ CL900 (ASME B16.5) SCH40S x SCH40S***	G46
GATE VA	VGA	VGACG004	2"	4"	GATE VALVE A351-CF8M FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600 CRYOGENIC(RP-1718-999-1300-0028)	G46
GATE VA	VGA	VGACG005	6"	24"	GATE VALVE A351-CF8M FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600 CRYOGENIC(RP-1718-999-1300-0028)	G46
GATE VA	VGA	VGACH002	1/2"	1 1/2"	GATE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602 CRYOGENIC(RP-1718-999-1300-0028)	G46
GATE VA	VGF	VGFCH002	1/2"	1 1/2"	GATE VALVE A182-F304L FLGD-RTJ 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602 CRYOGENIC(RP-1718-999-1300-0028)	G46
GATE VA	VGX	VGXCH002	1/2"	1 1/2"	GATE VALVE A182-F304L SW x TE(NPT-F) 316SS TRIM BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602 CRYOGENIC(RP-1718-999-1300-0028)	G46
GLOBE VA	VLA	VLACG001	2"	3"	GLOBE VALVE A351-CF8M FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	G46
GLOBE VA	VLA	VLACG003	4"	6"	GLOBE VALVE A351-CF8M FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873 CRYOGENIC(RP-1718-999-1300-0028)	G46
GLOBE VA	VLA	VLACH001	1/2"	1 1/2"	GLOBE VALVE A182-F304L SW 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352 CRYOGENIC(RP-1718-999-1300-0028)	G46
INSUL GASKET	GK	LGK0ZK00	2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G46
INSUL GASKET	GK	LGK0ZL00	1/2"	1 1/2"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G46
NIPPLE TOE	NTO	LNTOCK01	1/2"	1 1/2"	NIPPLE A312-TP304L SMLS TOE(NPT-M) 75mm LONG SCH160	G46
PIPE	P	LP00CE02	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60	G46
PIPE	P	LP00CG00	8"	18"	PIPE A358-304L CL.1 EFW BE 100% RT SCH100	G46
PIPE	P	LP00CS03	2"	3"	PIPE A312-TP304L SMLS BE SCH40S	G46
PIPE	P	LP00CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S	G46
PIPE	P	LP00CT05	4"	6"	PIPE A312-TP304L SMLS BE SCH80S	G46
PIPE	P1	LP10CE00	20"	24"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH60	G46
PIPE	P1	LP10CG00	8"	18"	PIPE A358-304L CL.1 EFW BE PE COATED 100% RT SCH100	G46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P1	LP10CS00	2"	3"	PIPE A312-TP304L SMLS BE PE COATED SCH40S	G46
PIPE	P1	LP10CT03	4"	6"	PIPE A312-TP304L SMLS BE PE COATED SCH80S	G46
PIPE	P2	LP20CE00	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60 PP COATED	G46
PIPE	P2	LP20CG00	8"	18"	PIPE A358-304L CL.1 EFW BE 100% RT SCH100 PP COATED	G46
PIPE	P2	LP20CS00	2"	3"	PIPE A312-TP304L SMLS BE SCH40S PP COATED	G46
PIPE	P2	LP20CT04	4"	6"	PIPE A312-TP304L SMLS BE SCH80S PP COATED	G46
PIPE	P3	LP30CE00	20"	24"	PIPE A358-304L CL.1 EFW BE 100% RT SCH60 (SUNLIGHT L-200 WRAPPED AT SITE)	G46
PIPE	P3	LP30CG00	8"	18"	PIPE A358-304L CL.1 EFW BE 100% RT SCH100 (SUNLIGHT L-200 WRAPPED AT SITE)	G46
PIPE	P3	LP30CS00	2"	3"	PIPE A312-TP304L SMLS BE SCH40S (SUNLIGHT L-200 WRAPPED AT SITE)	G46
PIPE	P3	LP30CT00	1/2"	1 1/2"	PIPE A312-TP304L SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	G46
PIPE	P3	LP30CT03	4"	6"	PIPE A312-TP304L SMLS BE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	G46
PLUG	PLG	LPLGCW00	1/2"	1 1/2"	PLUG A182-F304L ROUND HEAD FORGED TE(NPT-M)	G46
RED CON	RC	LRC0CE01	20"	24"	REDUCER A403-WP304L CON. WELDED BE SCH60	G46
RED CON	RC	LRC0CG00	8"	18"	REDUCER A403-WP304L CON. WELDED BE SCH100	G46
RED CON	RC	LRC0CS02	2"	3"	REDUCER A403-WP304L CON. SMLS BE SCH40S	G46
RED CON	RC	LRC0CT02	4"	6"	REDUCER A403-WP304L CON. SMLS BE SCH80S	G46
RED ECC	RE	LRE0CE01	20"	24"	REDUCER A403-WP304L ECC. WELDED BE SCH60	G46
RED ECC	RE	LRE0CG00	8"	18"	REDUCER A403-WP304L ECC. WELDED BE SCH100	G46
RED ECC	RE	LRE0CS02	2"	3"	REDUCER A403-WP304L ECC. SMLS BE SCH40S	G46
RED ECC	RE	LRE0CT02	4"	6"	REDUCER A403-WP304L ECC. SMLS BE SCH80S	G46
SOCKOLET	TSO	LTSOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L SOCKET OUTLET FORGED SW CL3000	G46
SPCL FLANGE	F2	LF00CK05	2"	3"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH40S	G46
SPCL FLANGE	F1	LF00CK06	4"	6"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH80S	G46
SPCL FLANGE	F1	LF10CK11	20"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) SCH60	G46
SPCL FLANGE	F1	LF10CL00	8"	18"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) SCH100	G46
SPCL FLANGE	F1	LF10CL01	2"	3"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) SCH40S	G46
SPCL FLANGE	F1	LF10CL02	4"	6"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) SCH80S	G46
SPCL FLANGE	F3	LF10CL12	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) SCH80S	G46
SPCL FLANGE	F1	LF10CL13	20"	24"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) SCH60 FOR 105 UNIT	G46
SPCL FLG JACK	FJ1	LFJ0CK02	4"	6"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	G46
SPCL FLG JACK	FJ1	LFJ1CK06	20"	24"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH60	G46
SPCL FLG JACK	FJ1	LFJ1CK08	2"	3"	FLANGE A182-F304L WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH40S	G46
SPCL FLG JACK	FJ1	LFJ1CL00	8"	18"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH100	G46
SPCL FLG JACK	FJ1	LFJ1CL01	2"	3"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH40S	G46
SPCL FLG JACK	FJ1	LFJ1CL02	4"	6"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G46
SPCL FLG JACK	FJ1	LFJ1CL11	1/2"	1 1/2"	FLANGE A182-F304L SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G46
SPCL FLG JACK	FJ1	LFJ1CL12	20"	24"	FLANGE A182-F304L WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH60 FOR 105 UNIT	G46
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	G46
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	G46
SPE BLIND	FSB	LFSBCK00	2"	3"	FLANGE A240-304L FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	G46
SPE BLIND	FSB	LFSBCK04	4"	24"	FLANGE A240-304L PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48)	G46
SPE BLIND	FSB	LFSBCL00	1/2"	1 1/2"	FLANGE A240-304L FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	G46

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG CON B-P	RCB	LRCBCS01	2"	3"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH40S	G46
SWG CON B-P	RCB	LRCBCT00	4"	4"	SWAGE A403-WP304L CON. SMLS BLE x PSE SCH80S	G46
SWG CON PE	RCP	LRCPCT00	1/2"	1 1/2"	SWAGE A403-WP304L CON. SMLS PE SCH80S	G46
SWG ECC B-P	REB	LREBCS01	2"	3"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH40S	G46
SWG ECC B-P	REB	LREBCT00	4"	4"	SWAGE A403-WP304L ECC. SMLS BLE x PSE SCH80S	G46
SWG ECC PE	REP	LREPCT00	1/2"	1 1/2"	SWAGE A403-WP304L ECC. SMLS PE SCH80S	G46
TEE	TE	LTE0CE01	20"	24"	TEE A403-WP304L EQUAL WELDED BE SCH60	G46
TEE	TE	LTE0CG00	8"	18"	TEE A403-WP304L EQUAL WELDED BE SCH100	G46
TEE	TE	LTE0CP00	1/2"	1 1/2"	TEE A182-F304L EQUAL FORGED SW CL3000	G46
TEE	TE	LTE0CS02	2"	3"	TEE A403-WP304L EQUAL SMLS BE SCH40S	G46
TEE	TE	LTE0CT02	4"	6"	TEE A403-WP304L EQUAL SMLS BE SCH80S	G46
TEE RED	TR	LTR0CE01	20"	24"	TEE A403-WP304L REDUCING WELDED BE SCH60	G46
TEE RED	TR	LTR0CG00	8"	18"	TEE A403-WP304L REDUCING WELDED BE SCH100	G46
TEE RED	TR	LTR0CP00	1/2"	1 1/2"	TEE A182-F304L REDUCING FORGED SW CL3000	G46
TEE RED	TR	LTR0CS02	2"	3"	TEE A403-WP304L REDUCING SMLS BE SCH40S	G46
TEE RED	TR	LTR0CT02	4"	6"	TEE A403-WP304L REDUCING SMLS BE SCH80S	G46
THREADOLET	TTO	LTTOCP00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F304L THREADED OUTLET FORGED TE(NPT-F) CL3000	G46
WELDOLET	TWO	LTWOCE00	20"	20"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH60 FOR 105 UNIT	G46
WELDOLET	TWO	LTWOCG00	8"	18"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH100	G46
WELDOLET	TWO	LTWOCS02	2"	3"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH40S	G46
WELDOLET	TWO	LTWOCT01	4"	6"	REINFORCED BRANCH OUTLET A182-F304L WELDED OUTLET FORGED BE SCH80S	G46
BALL VA	VBF	VBFCG003	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48
BALL VA	VBF	VBFCG004	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48
BALL VA	VBF	VBFCG005	26"	30"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	G48
BALL VA	VB1	VBFCG006	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	G48
BALL VA	VB1	VBFCG007	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	G48
BALL VA	VB1	VBFCG008	26"	30"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	G48
BALL VA	VBF	VBFCH002	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	G48
BALL VA	VB1	VBFCH004	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/PEEK SEATS ANSI CL1500 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 PTFE&ELGILOY SEAL/FLOATING	G48
BALL VA	VBR	VBRCG003	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48
BALL VA	VBR	VBRCG004	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48
BALL VA	VBR	VBRCG005	26"	34"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION/ASME B16.47-A FLGD	G48
BALL VA	VB2	VBRCG006	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	G48
BALL VA	VB2	VBRCG007	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION	G48
BALL VA	VB2	VBRCG008	26"	34"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/PEEK SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D PTFE&ELGILOY SEAL/TRUNNION/ASME B16.47-A FLGD	G48
BOLTS	B	LB00A004	1/2"	34"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	G48
CAP	C	LC00C100	10"	10"	CAP A403-WP321 SMLS BE 18.2mm THK	G48
CAP	C	LC00C303	24"	24"	CAP A403-WP321 SMLS BE 36.5mm THK	G48
CAP	C	LC00C312	26"	26"	CAP A403-WP321 SMLS BE 39.1mm THK	G48
CAP	C	LC00C408	28"	28"	CAP A403-WP321 SMLS BE 42.1mm THK	G48
CAP	C	LC00C409	30"	30"	CAP A403-WP321 SMLS BE 45.1mm THK	G48
CAP	C	LC00C410	32"	32"	CAP A403-WP321 SMLS BE 48.1mm THK	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00C501	34"	34"	CAP A403-WP321 SMLS BE 51.1mm THK	G48
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	G48
CAP	C	LC00CT00	2"	6"	CAP A403-WP321 SMLS BE SCH80S	G48
CAP	C	LC00CZ06	8"	8"	CAP A403-WP321 SMLS BE 14.27mm THK	G48
CAP	C	LC00CZ08	12"	12"	CAP A403-WP321 SMLS BE 20.62mm THK	G48
CAP	C	LC00CZ09	14"	14"	CAP A403-WP321 SMLS BE 22.23mm THK	G48
CAP	C	LC00CZ10	16"	16"	CAP A403-WP321 SMLS BE 25.40mm THK	G48
CAP	C	LC00CZ11	18"	18"	CAP A403-WP321 SMLS BE 28.58mm THK	G48
CAP	C	LC00CZ12	20"	20"	CAP A403-WP321 SMLS BE 30.18mm THK	G48
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	G48
CHECK VA	VCA	VCACG002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594	G48
CHECK VA	VCA	VCACG003	26"	34"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594 WAFER FOR ASME B16.47-A RTJ FLANGES	G48
CHECK VA	VCH	VCHCH002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC ANSI CL1500 BS 5352	G48
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	G48
DOUBLE IBB VA	DFA	LDFACL01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DLA	LDLACL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DLB	LDLBCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DLC	LDLCCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DLD	LDLDCL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DLE	LDLECK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DPA	LDPACL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DPB	LDPBCL01	1"	1"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
DOUBLE IBB VA	DPC	LDPCCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	G48
ELBOW	E4	LE40C100	10"	10"	ELBOW A403-WP321 DEG-45 WELDED BE 18.2mm THK	G48
ELBOW	E4	LE40C303	24"	24"	ELBOW A403-WP321 DEG-45 WELDED BE 36.5mm THK	G48
ELBOW	E4	LE40C305	26"	26"	ELBOW A403-WP321 DEG-45 WELDED BE 39.1mm THK	G48
ELBOW	E4	LE40C401	28"	28"	ELBOW A403-WP321 DEG-45 WELDED BE 42.1mm THK	G48
ELBOW	E4	LE40C402	30"	30"	ELBOW A403-WP321 DEG-45 WELDED BE 45.1mm THK	G48
ELBOW	E4	LE40C403	32"	32"	ELBOW A403-WP321 DEG-45 WELDED BE 48.1mm THK	G48
ELBOW	E4	LE40C501	34"	34"	ELBOW A403-WP321 DEG-45 WELDED BE 51.1mm THK	G48
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	G48
ELBOW	E4	LE40CT00	2"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH80S	G48
ELBOW	E4	LE40CZ06	8"	8"	ELBOW A403-WP321 DEG-45 WELDED BE 14.27mm THK	G48
ELBOW	E4	LE40CZ08	12"	12"	ELBOW A403-WP321 DEG-45 WELDED BE 20.62mm THK	G48
ELBOW	E4	LE40CZ09	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE 22.23mm THK	G48
ELBOW	E4	LE40CZ10	16"	16"	ELBOW A403-WP321 DEG-45 WELDED BE 25.40mm THK	G48
ELBOW	E4	LE40CZ11	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE 28.58mm THK	G48
ELBOW	E4	LE40CZ12	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 30.18mm THK	G48
ELBOW	E9	LE90C100	10"	10"	ELBOW A403-WP321 90-LR WELDED BE 18.2mm THK	G48
ELBOW	E9	LE90C303	24"	24"	ELBOW A403-WP321 90-LR WELDED BE 36.5mm THK	G48
ELBOW	E9	LE90C305	26"	26"	ELBOW A403-WP321 90-LR WELDED BE 39.1mm THK	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW	E9	LE90C401	28"	28"	ELBOW A403-WP321 90-LR WELDED BE 42.1mm THK	G48
ELBOW	E9	LE90C402	30"	30"	ELBOW A403-WP321 90-LR WELDED BE 45.1mm THK	G48
ELBOW	E9	LE90C403	32"	32"	ELBOW A403-WP321 90-LR WELDED BE 48.1mm THK	G48
ELBOW	E9	LE90C501	34"	34"	ELBOW A403-WP321 90-LR WELDED BE 51.1mm THK	G48
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	G48
ELBOW	E9	LE90CT00	2"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH80S	G48
ELBOW	E9	LE90CZ06	8"	8"	ELBOW A403-WP321 90-LR WELDED BE 14.27mm THK	G48
ELBOW	E9	LE90CZ08	12"	12"	ELBOW A403-WP321 90-LR WELDED BE 20.62mm THK	G48
ELBOW	E9	LE90CZ09	14"	14"	ELBOW A403-WP321 90-LR WELDED BE 22.23mm THK	G48
ELBOW	E9	LE90CZ10	16"	16"	ELBOW A403-WP321 90-LR WELDED BE 25.40mm THK	G48
ELBOW	E9	LE90CZ11	18"	18"	ELBOW A403-WP321 90-LR WELDED BE 28.58mm THK	G48
ELBOW	E9	LE90CZ12	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 30.18mm THK	G48
FLANGE	F	LF00CK07	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 22.23mm THK	G48
FLANGE	F	LF00CK08	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 25.40mm THK	G48
FLANGE	F	LF00CK09	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 28.58mm THK	G48
FLANGE	F	LF00CK10	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 30.18mm THK	G48
FLANGE	F	LF00CK11	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 36.5mm THK	G48
FLANGE	F	LF00CK12	26"	26"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 39.1mm THK	G48
FLANGE	F	LF00CK13	28"	28"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 42.1mm THK	G48
FLANGE	F	LF00CK14	30"	30"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 45.1mm THK	G48
FLANGE	F	LF00CK15	32"	32"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 48.1mm THK	G48
FLANGE	F	LF00CK16	34"	34"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.47-A) 51.1mm THK	G48
FLANGE	F	LF00CK17	10"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 18.2mm THK	G48
FLG BLIND	FB1	LFB0CK00	2"	24"	FLANGE A182-F321 BLIND RTJ CL900 (ASME B16.5)	G48
FLG BLIND	FB1	LFB0CL00	1/2"	1 1/2"	FLANGE A182-F321 BLIND RTJ CL1500 (ASME B16.5)	G48
FLG JACK	FJ	LFJ0CK04	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 22.23mm THK	G48
FLG JACK	FJ	LFJ0CK05	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 25.40mm THK	G48
FLG JACK	FJ	LFJ0CK06	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 28.58mm THK	G48
FLG JACK	FJ	LFJ0CK07	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 30.18mm THK	G48
FLG JACK	FJ	LFJ0CK08	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 36.5mm THK	G48
FLG JACK	FJ	LFJ0CK09	10"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 18.2mm THK	G48
FLG RED	RF	LRF0CK00	2"	4"	***FLANGE A182-F321 WN-REDUCING RTJ CL900 (ASME B16.5) SCH80S x SCH80S***	G48
FLG RED	RF	LRF0CK02	6"	6"	FLANGE A182-F321 WN-REDUCING RTJ CL900 (ASME B16.5) 12.7mm THK	G48
GATE VA	VGA	VGACG001	2"	4"	GATE VALVE A351-CF8C FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600	G48
GATE VA	VGA	VGACG002	6"	24"	GATE VALVE A351-CF8C FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600	G48
GATE VA	VGA	VGACG003	26"	34"	GATE VALVE A351-CF8C FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600 ASME B16.47-A FLGD	G48
GATE VA	VGA	VGACH001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48
GATE VA	VGF	VGFCH001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48
GATE VA	VGX	VGXCH001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48
GLOBE VA	VLA	VLACG002	2"	3"	GLOBE VALVE A351-CF8C FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873	G48
GLOBE VA	VLA	VLACG004	4"	6"	GLOBE VALVE A351-CF8C FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873	G48
GLOBE VA	VLA	VLACH002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
INSUL GASKET	GK	LGK0ZK00	2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL900 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G48
INSUL GASKET	GK	LGK0ZL00	1/2"	1 1/2"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	G48
NEEDLE VA	VNE	VNECH001	3/4"	1"	NEEDLE VALVE A182-F321 SW 316SS W/STELLITE SEATS & DISC BB OS&Y NEEDLE TYPE DISC ANSI CL1500 API 602	G48
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	G48
PIPE	P	LP00C100	10"	10"	PIPE A358-321 CL.1 EFW BE 100% RT 18.2mm THK	G48
PIPE	P	LP00C303	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT 36.5mm THK	G48
PIPE	P	LP00C312	26"	26"	PIPE A358-321 CL.1 EFW BE 100% RT 39.1mm THK	G48
PIPE	P	LP00C408	28"	28"	PIPE A358-321 CL.1 EFW BE 100% RT 42.1mm THK	G48
PIPE	P	LP00C409	30"	30"	PIPE A358-321 CL.1 EFW BE 100% RT 45.1mm THK	G48
PIPE	P	LP00C410	32"	32"	PIPE A358-321 CL.1 EFW BE 100% RT 48.1mm THK	G48
PIPE	P	LP00C502	34"	34"	PIPE A358-321 CL.1 EFW BE 100% RT 51.1mm THK	G48
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	G48
PIPE	P	LP00CT02	2"	6"	PIPE A312-TP321 SMLS BE SCH80S	G48
PIPE	P	LP00CZ06	8"	8"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK	G48
PIPE	P	LP00CZ08	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK	G48
PIPE	P	LP00CZ16	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 22.23mm THK	G48
PIPE	P	LP00CZ17	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 25.40mm THK	G48
PIPE	P	LP00CZ18	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 28.58mm THK	G48
PIPE	P	LP00CZ19	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 30.18mm THK	G48
PIPE	P1	LP10C100	10"	10"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 18.2mm THK	G48
PIPE	P1	LP10C300	24"	24"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 36.5mm THK	G48
PIPE	P1	LP10CT02	2"	4"	PIPE A312-TP321 SMLS BE PE COATED SCH80S	G48
PIPE	P1	LP10CZ00	8"	8"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 14.27mm THK	G48
PIPE	P1	LP10CZ01	12"	12"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 20.62mm THK	G48
PIPE	P1	LP10CZ02	14"	14"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 22.23mm THK	G48
PIPE	P1	LP10CZ03	16"	16"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 25.40mm THK	G48
PIPE	P1	LP10CZ04	18"	18"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 28.58mm THK	G48
PIPE	P1	LP10CZ05	20"	20"	PIPE A358-321 CL.1 EFW BE PE COATED 100% RT 30.18mm THK	G48
PIPE	P1	LP10CZ06	6"	6"	PIPE A312-TP321 SMLS BE PE COATED 12.7mmTHK	G48
PIPE	P2	LP20C100	10"	10"	PIPE A358-321 CL.1 EFW BE 100% RT 18.2mm THK PP COATED	G48
PIPE	P2	LP20C300	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT 36.5mm THK PP COATED	G48
PIPE	P3	LP20CT00	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE) ,	G48
PIPE	P2	LP20CT03	2"	4"	PIPE A312-TP321 SMLS BE SCH80S PP COATED	G48
PIPE	P2	LP20CZ00	8"	8"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK PP COATED	G48
PIPE	P2	LP20CZ01	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK PP COATED	G48
PIPE	P2	LP20CZ02	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 22.23mm THK PP COATED	G48
PIPE	P2	LP20CZ03	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 25.40mm THK PP COATED	G48
PIPE	P2	LP20CZ04	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 28.58mm THK PP COATED	G48
PIPE	P2	LP20CZ05	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 30.18mm THK PP COATED	G48
PIPE	P2	LP20CZ06	6"	6"	PIPE A312-TP321 SMLS BE 12.7mm THK PP COATED	G48
PIPE	P3	LP30C100	10"	10"	PIPE A358-321 CL.1 EFW BE 100% RT 18.2mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30C300	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT 36.5mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P3	LP30CT02	2"	4"	PIPE A312-TP321 SMLS BE SCH80S (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ00	8"	8"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ01	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ02	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 22.23mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ03	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 25.40mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ04	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 28.58mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ05	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 30.18mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PIPE	P3	LP30CZ06	6"	6"	PIPE A312-TP321 SMLS BE 12.7mm THK (SUNLIGHT L-200 WRAPPED AT SITE)	G48
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	G48
PLUG VA	VPL	VPLCG001	2"	3"	PLUG VALVE A351-CF8C FLGD-RTJ 316SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 599	G48
PLUG VA	VPL	VPLCG002	4"	16"	PLUG VALVE A351-CF8C FLGD-RTJ 316SS PLUG W/PTFE SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 599	G48
PLUG VA	VPL	VPLCH001	1/2"	1 1/2"	PLUG VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH80S REDUCING BORE, W-OP (F-SAFE) BS 5353	G48
RED CON	RC	LRC0C100	10"	10"	REDUCER A403-WP321 CON. WELDED BE 18.2mm THK	G48
RED CON	RC	LRC0C303	24"	24"	REDUCER A403-WP321 CON. WELDED BE 36.5mm THK	G48
RED CON	RC	LRC0C305	26"	26"	REDUCER A403-WP321 CON. WELDED BE 39.1mm THK	G48
RED CON	RC	LRC0C401	28"	28"	REDUCER A403-WP321 CON. WELDED BE 42.1mm THK	G48
RED CON	RC	LRC0C402	30"	30"	REDUCER A403-WP321 CON. WELDED BE 45.1mm THK	G48
RED CON	RC	LRC0C403	32"	32"	REDUCER A403-WP321 CON. WELDED BE 48.1mm THK	G48
RED CON	RC	LRC0C501	34"	34"	REDUCER A403-WP321 CON. WELDED BE 51.1mm THK	G48
RED CON	RC	LRC0CT00	2"	6"	REDUCER A403-WP321 CON. SMLS BE SCH80S	G48
RED CON	RC	LRC0CZ06	8"	8"	REDUCER A403-WP321 CON. WELDED BE 14.27mm THK	G48
RED CON	RC	LRC0CZ08	12"	12"	REDUCER A403-WP321 CON. WELDED BE 20.62mm THK	G48
RED CON	RC	LRC0CZ09	14"	14"	REDUCER A403-WP321 CON. WELDED BE 22.23mm THK	G48
RED CON	RC	LRC0CZ10	16"	16"	REDUCER A403-WP321 CON. WELDED BE 25.40mm THK	G48
RED CON	RC	LRC0CZ11	18"	18"	REDUCER A403-WP321 CON. WELDED BE 28.58mm THK	G48
RED CON	RC	LRC0CZ12	20"	20"	REDUCER A403-WP321 CON. WELDED BE 30.18mm THK	G48
RED ECC	RE	LRE0C100	10"	10"	REDUCER A403-WP321 ECC. WELDED BE 18.2mm THK	G48
RED ECC	RE	LRE0C303	24"	24"	REDUCER A403-WP321 ECC. WELDED BE 36.5mm THK	G48
RED ECC	RE	LRE0C305	26"	26"	REDUCER A403-WP321 ECC. WELDED BE 39.1mm THK	G48
RED ECC	RE	LRE0C401	28"	28"	REDUCER A403-WP321 ECC. WELDED BE 42.1mm THK	G48
RED ECC	RE	LRE0C402	30"	30"	REDUCER A403-WP321 ECC. WELDED BE 45.1mm THK	G48
RED ECC	RE	LRE0C403	32"	32"	REDUCER A403-WP321 ECC. WELDED BE 48.1mm THK	G48
RED ECC	RE	LRE0C501	34"	34"	REDUCER A403-WP321 ECC. WELDED BE 51.1mm THK	G48
RED ECC	RE	LRE0CT00	2"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH80S	G48
RED ECC	RE	LRE0CZ06	8"	8"	REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK	G48
RED ECC	RE	LRE0CZ08	12"	12"	REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK	G48
RED ECC	RE	LRE0CZ09	14"	14"	REDUCER A403-WP321 ECC. WELDED BE 22.23mm THK	G48
RED ECC	RE	LRE0CZ10	16"	16"	REDUCER A403-WP321 ECC. WELDED BE 25.40mm THK	G48
RED ECC	RE	LRE0CZ11	18"	18"	REDUCER A403-WP321 ECC. WELDED BE 28.58mm THK	G48
RED ECC	RE	LRE0CZ12	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 30.18mm THK	G48
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	G48
SPCL FLANGE	F1	LF00CK00	2"	6"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH80S	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SPCL FLANGE	F1	LF00CK01	8"	8"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 14.27mm THK	G48
SPCL FLANGE	F1	LF00CK03	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 20.62mm THK	G48
SPCL FLANGE	F3	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	G48
SPCL FLANGE	F1	LF10CL03	2"	4"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) SCH 80S	G48
SPCL FLANGE	F1	LF10CL04	8"	8"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 14.27mm THK	G48
SPCL FLANGE	F1	LF10CL05	10"	10"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 18.2mm THK	G48
SPCL FLANGE	F1	LF10CL06	12"	12"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 20.62mm THK	G48
SPCL FLANGE	F1	LF10CL07	14"	14"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 22.23mm THK	G48
SPCL FLANGE	F1	LF10CL08	16"	16"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 25.40mm THK	G48
SPCL FLANGE	F1	LF10CL09	18"	18"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 28.58mm THK	G48
SPCL FLANGE	F1	LF10CL10	20"	20"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 30.18mm THK	G48
SPCL FLANGE	F1	LF10CL11	24"	24"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 36.5mm THK	G48
SPCL FLANGE	F1	LF10CL14	6"	6"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 12.7 mm THK	G48
SPCL FLG JACK	FJ1	LFJ0CK00	2"	6"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	G48
SPCL FLG JACK	FJ1	LFJ0CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G48
SPCL FLG JACK	FJ1	LFJ0CL02	2"	4"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G48
SPCL FLG JACK	FJ1	LFJ0CL03	6"	6"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 12.7mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CK02	8"	8"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.27mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CK04	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 20.62mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL03	8"	8"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 14.27mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL04	12"	12"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 20.62mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL05	14"	14"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 22.23mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL06	16"	16"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 25.40mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL07	18"	18"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 28.58mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL08	20"	20"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 30.18mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL09	24"	24"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 36.5mm THK	G48
SPCL FLG JACK	FJ1	LFJ1CL10	10"	10"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 18.2mm THK	G48
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	G48
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	G48
SPCL GASKET	G1	LG10ZK01	26"	34"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.47-A) 135 HRB MAX	G48
SPE BLIND	FSB	LFSBCK05	2"	3"	FLANGE A240-321 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	G48
SPE BLIND	FSB	LFSBCK06	4"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48)	G48
SPE BLIND	FSB	LFSBCL01	1/2"	1 1/2"	FLANGE A240-321 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	G48
SWG CON B-P	RCB	LRCBCT01	2"	3"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH80S	G48
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	G48
SWG CON P-T	RC2	LRC2CK00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH160	G48
SWG CON P-T	RC2	LRC2CT00	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PLE x TSE(NPT-M) SCH80S	G48
SWG ECC B-P	REB	LREBCT01	2"	3"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH80S	G48
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	G48
TEE	TE	LTE0C100	10"	10"	TEE A403-WP321 EQUAL WELDED BE 18.2mm THK	G48
TEE	TE	LTE0C303	24"	24"	TEE A403-WP321 EQUAL WELDED BE 36.5mm THK	G48
TEE	TE	LTE0C305	26"	26"	TEE A403-WP321 EQUAL WELDED BE 39.1mm THK	G48

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
TEE	TE	LTE0C401	28"	28"	TEE A403-WP321 EQUAL WELDED BE 42.1mm THK	G48
TEE	TE	LTE0C402	30"	30"	TEE A403-WP321 EQUAL WELDED BE 45.1mm THK	G48
TEE	TE	LTE0C403	32"	32"	TEE A403-WP321 EQUAL WELDED BE 48.1mm THK	G48
TEE	TE	LTE0C501	34"	34"	TEE A403-WP321 EQUAL WELDED BE 51.1mm THK	G48
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	G48
TEE	TE	LTE0CT00	2"	6"	TEE A403-WP321 EQUAL SMLS BE SCH80S	G48
TEE	TE	LTE0CZ06	8"	8"	TEE A403-WP321 EQUAL WELDED BE 14.27mm THK	G48
TEE	TE	LTE0CZ08	12"	12"	TEE A403-WP321 EQUAL WELDED BE 20.62mm THK	G48
TEE	TE	LTE0CZ09	14"	14"	TEE A403-WP321 EQUAL WELDED BE 22.23mm THK	G48
TEE	TE	LTE0CZ10	16"	16"	TEE A403-WP321 EQUAL WELDED BE 25.40mm THK	G48
TEE	TE	LTE0CZ11	18"	18"	TEE A403-WP321 EQUAL WELDED BE 28.58mm THK	G48
TEE	TE	LTE0CZ12	20"	20"	TEE A403-WP321 EQUAL WELDED BE 30.18mm THK	G48
TEE RED	TR	LTR0C100	10"	10"	TEE A403-WP321 REDUCING WELDED BE 18.2mm THK	G48
TEE RED	TR	LTR0C303	24"	24"	TEE A403-WP321 REDUCING WELDED BE 36.5mm THK	G48
TEE RED	TR	LTR0C305	26"	26"	TEE A403-WP321 REDUCING WELDED BE 39.1mm THK	G48
TEE RED	TR	LTR0C401	28"	28"	TEE A403-WP321 REDUCING WELDED BE 42.1mm THK	G48
TEE RED	TR	LTR0C402	30"	30"	TEE A403-WP321 REDUCING WELDED BE 45.1mm THK	G48
TEE RED	TR	LTR0C403	32"	32"	TEE A403-WP321 REDUCING WELDED BE 48.1mm THK	G48
TEE RED	TR	LTR0C501	34"	34"	TEE A403-WP321 REDUCING WELDED BE 51.1mm THK	G48
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	G48
TEE RED	TR	LTR0CT00	2"	6"	TEE A403-WP321 REDUCING SMLS BE SCH80S	G48
TEE RED	TR	LTR0CZ06	8"	8"	TEE A403-WP321 REDUCING WELDED BE 14.27mm THK	G48
TEE RED	TR	LTR0CZ08	12"	12"	TEE A403-WP321 REDUCING WELDED BE 20.62mm THK	G48
TEE RED	TR	LTR0CZ09	14"	14"	TEE A403-WP321 REDUCING WELDED BE 22.23mm THK	G48
TEE RED	TR	LTR0CZ10	16"	16"	TEE A403-WP321 REDUCING WELDED BE 25.40mm THK	G48
TEE RED	TR	LTR0CZ11	18"	18"	TEE A403-WP321 REDUCING WELDED BE 28.58mm THK	G48
TEE RED	TR	LTR0CZ12	20"	20"	TEE A403-WP321 REDUCING WELDED BE 30.18mm THK	G48
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	G48
WELDOLET	TWO	LTWOC100	10"	10"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 18.2mm THK	G48
WELDOLET	TWO	LTWOCT02	2"	6"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE SCH80S	G48
WELDOLET	TWO	LTWOCZ00	8"	8"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 14.27mm THK	G48
WELDOLET	TWO	LTWOCZ01	12"	12"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 20.62mm THK	G48
WELDOLET	TWO	LTWOCZ02	14"	14"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 22.23mm THK	G48
WELDOLET	TWO	LTWOCZ03	16"	16"	REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 25.40mm THK	G48
BALL VA	VBF	VBFCG003	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48X
BALL VA	VBF	VBFCG004	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 FULL BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48X
BALL VA	VBF	VBFCH002	1/2"	1 1/2"	BALL VALVE A182-F321 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH80S FULL BORE, W-OP (F-SAFE) BS 5351 ELASTOLION985 SEAL/FLOATING	G48X
BALL VA	VBR	VBRCG003	2"	4"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, W-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48X
BALL VA	VBR	VBRCG004	6"	24"	BALL VALVE A351-CF8C FLGD-RTJ 316SS BALL W/NYLON SEATS ANSI CL900 REDUCING BORE, G-OP (F-SAFE) API 6D ELASTOLION985 SEAL/TRUNNION	G48X
BOLTS	B	LB00A004	1/2"	24"	STUD BOLT A193-B8M CL2 W/2 HEAVY HEX. NUTS(B18.2.2) A194-8MA	G48X
CAP	C	LC00C100	10"	10"	CAP A403-WP321 SMLS BE 18.2mm THK	G48X
CAP	C	LC00C303	24"	24"	CAP A403-WP321 SMLS BE 36.5mm THK	G48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00CP01	1/2"	1 1/2"	CAP A182-F321 FORGED SW CL3000	G48X
CAP	C	LC00CT00	2"	6"	CAP A403-WP321 SMLS BE SCH80S	G48X
CAP	C	LC00CZ06	8"	8"	CAP A403-WP321 SMLS BE 14.27mm THK	G48X
CAP	C	LC00CZ08	12"	12"	CAP A403-WP321 SMLS BE 20.62mm THK	G48X
CAP	C	LC00CZ09	14"	14"	CAP A403-WP321 SMLS BE 22.23mm THK	G48X
CAP	C	LC00CZ10	16"	16"	CAP A403-WP321 SMLS BE 25.40mm THK	G48X
CAP	C	LC00CZ11	18"	18"	CAP A403-WP321 SMLS BE 28.58mm THK	G48X
CAP	C	LC00CZ12	20"	20"	CAP A403-WP321 SMLS BE 30.18mm THK	G48X
CAP THD	CT	LCT0CP01	1/2"	1 1/2"	CAP A182-F321 FORGED TE(NPT-F) CL3000	G48X
CHECK VA	VCA	VCACG002	2"	24"	CHECK VALVE A351-CF8C WAFER 316SS TRIM DUAL PLATE ANSI CL900 API 594	G48X
CHECK VA	VCH	VCHCH002	1/2"	1 1/2"	CHECK VALVE A182-F321 SW 316SS TRIM BC PISTON TYPE DISC ANSI CL1500 BS 5352	G48X
CPLG FULL	CF	LCF0CP01	1/2"	1 1/2"	COUPLING A182-F321 FULL(STRAIGHT) FORGED SW CL3000	G48X
DOUBLE IBB VA	DFA	LDFACL01	1/2"	1/2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DLA	LDLACL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DLB	LDLBCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DLC	LDLCCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DLD	LDLDCL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DLE	LDLECK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DPA	LDPACL01	3/4"	3/4"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DPB	LDPBCL01	1"	1"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
DOUBLE IBB VA	DPC	LDPCCK01	2"	2"	BALL VALVE A182-F321 316SS BALL W/NYLON SEATS ANSI CL900 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) ELASTOLION985 SEAL	G48X
ELBOLET	TEW	LTEWCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 ELBOW OUTLET FORGED SW CL3000	G48X
ELBOW	E4	LE40C100	10"	10"	ELBOW A403-WP321 DEG-45 WELDED BE 18.2mm THK	G48X
ELBOW	E4	LE40C303	24"	24"	ELBOW A403-WP321 DEG-45 WELDED BE 36.5mm THK	G48X
ELBOW	E4	LE40CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-45 FORGED SW CL3000	G48X
ELBOW	E4	LE40CT00	2"	6"	ELBOW A403-WP321 DEG-45 SMLS BE SCH80S	G48X
ELBOW	E4	LE40CZ06	8"	8"	ELBOW A403-WP321 DEG-45 WELDED BE 14.27mm THK	G48X
ELBOW	E4	LE40CZ08	12"	12"	ELBOW A403-WP321 DEG-45 WELDED BE 20.62mm THK	G48X
ELBOW	E4	LE40CZ09	14"	14"	ELBOW A403-WP321 DEG-45 WELDED BE 22.23mm THK	G48X
ELBOW	E4	LE40CZ10	16"	16"	ELBOW A403-WP321 DEG-45 WELDED BE 25.40mm THK	G48X
ELBOW	E4	LE40CZ11	18"	18"	ELBOW A403-WP321 DEG-45 WELDED BE 28.58mm THK	G48X
ELBOW	E4	LE40CZ12	20"	20"	ELBOW A403-WP321 DEG-45 WELDED BE 30.18mm THK	G48X
ELBOW	E9	LE90C100	10"	10"	ELBOW A403-WP321 90-LR WELDED BE 18.2mm THK	G48X
ELBOW	E9	LE90C303	24"	24"	ELBOW A403-WP321 90-LR WELDED BE 36.5mm THK	G48X
ELBOW	E9	LE90CP01	1/2"	1 1/2"	ELBOW A182-F321 DEG-90 FORGED SW CL3000	G48X
ELBOW	E9	LE90CT00	2"	6"	ELBOW A403-WP321 90-LR SMLS BE SCH80S	G48X
ELBOW	E9	LE90CZ06	8"	8"	ELBOW A403-WP321 90-LR WELDED BE 14.27mm THK	G48X
ELBOW	E9	LE90CZ08	12"	12"	ELBOW A403-WP321 90-LR WELDED BE 20.62mm THK	G48X
ELBOW	E9	LE90CZ09	14"	14"	ELBOW A403-WP321 90-LR WELDED BE 22.23mm THK	G48X
ELBOW	E9	LE90CZ10	16"	16"	ELBOW A403-WP321 90-LR WELDED BE 25.40mm THK	G48X
ELBOW	E9	LE90CZ11	18"	18"	ELBOW A403-WP321 90-LR WELDED BE 28.58mm THK	G48X
ELBOW	E9	LE90CZ12	20"	20"	ELBOW A403-WP321 90-LR WELDED BE 30.18mm THK	G48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
FLANGE	F	LF00CK07	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 22.23mm THK	G48X
FLANGE	F	LF00CK08	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 25.40mm THK	G48X
FLANGE	F	LF00CK09	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 28.58mm THK	G48X
FLANGE	F	LF00CK10	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 30.18mm THK	G48X
FLANGE	F	LF00CK11	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 36.5mm THK	G48X
FLANGE	F	LF00CK17	10"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 18.2mm THK	G48X
FLG BLIND	FB1	LFB0CK00	2"	24"	FLANGE A182-F321 BLIND RTJ CL900 (ASME B16.5)	G48X
FLG BLIND	FB1	LFB0CL00	1/2"	1 1/2"	FLANGE A182-F321 BLIND RTJ CL1500 (ASME B16.5)	G48X
FLG JACK	FJ	LFJ0CK04	14"	14"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 22.23mm THK	G48X
FLG JACK	FJ	LFJ0CK05	16"	16"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 25.40mm THK	G48X
FLG JACK	FJ	LFJ0CK06	18"	18"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 28.58mm THK	G48X
FLG JACK	FJ	LFJ0CK07	20"	20"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 30.18mm THK	G48X
FLG JACK	FJ	LFJ0CK08	24"	24"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 36.5mm THK	G48X
FLG JACK	FJ	LFJ0CK09	10"	10"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 18.2mm THK	G48X
GATE VA	VGA	VGACG001	2"	4"	GATE VALVE A351-CF8C FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 API 600	G48X
GATE VA	VGA	VGACG002	6"	24"	GATE VALVE A351-CF8C FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL900 GEAR OPERATED API 600	G48X
GATE VA	VGA	VGACH001	1/2"	1 1/2"	GATE VALVE A182-F321 SW 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48X
GATE VA	VGF	VGFCH001	1/2"	1 1/2"	GATE VALVE A182-F321 FLGD-RTJ 316SS W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48X
GATE VA	VGX	VGXCH001	1/2"	1 1/2"	GATE VALVE A182-F321 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	G48X
GLOBE VA	VLA	VLACG002	2"	3"	GLOBE VALVE A351-CF8C FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 BS 1873	G48X
GLOBE VA	VLA	VLACG004	4"	6"	GLOBE VALVE A351-CF8C FLGD-RTJ 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL900 GEAR OPERATED BS 1873	G48X
GLOBE VA	VLA	VLACH002	1/2"	1 1/2"	GLOBE VALVE A182-F321 SW 316SS TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	G48X
NIPPLE TOE	NTO	LNTOCK00	1/2"	1 1/2"	NIPPLE A312-TP321 SMLS TOE(NPT-M) 75mm LONG SCH160	G48X
PIPE	P	LP00C100	10"	10"	PIPE A358-321 CL.1 EFW BE 100% RT 18.2mm THK	G48X
PIPE	P	LP00C303	24"	24"	PIPE A358-321 CL.1 EFW BE 100% RT 36.5mm THK	G48X
PIPE	P	LP00CT01	1/2"	1 1/2"	PIPE A312-TP321 SMLS PE SCH80S	G48X
PIPE	P	LP00CT02	2"	6"	PIPE A312-TP321 SMLS BE SCH80S	G48X
PIPE	P	LP00CZ06	8"	8"	PIPE A358-321 CL.1 EFW BE 100% RT 14.27mm THK	G48X
PIPE	P	LP00CZ08	12"	12"	PIPE A358-321 CL.1 EFW BE 100% RT 20.62mm THK	G48X
PIPE	P	LP00CZ16	14"	14"	PIPE A358-321 CL.1 EFW BE 100% RT 22.23mm THK	G48X
PIPE	P	LP00CZ17	16"	16"	PIPE A358-321 CL.1 EFW BE 100% RT 25.40mm THK	G48X
PIPE	P	LP00CZ18	18"	18"	PIPE A358-321 CL.1 EFW BE 100% RT 28.58mm THK	G48X
PIPE	P	LP00CZ19	20"	20"	PIPE A358-321 CL.1 EFW BE 100% RT 30.18mm THK	G48X
PLUG	PLG	LPLGCW01	1/2"	1 1/2"	PLUG A182-F321 ROUND HEAD FORGED TE(NPT-M)	G48X
RED CON	RC	LRC0C100	10"	10"	REDUCER A403-WP321 CON. WELDED BE 18.2mm THK	G48X
RED CON	RC	LRC0C303	24"	24"	REDUCER A403-WP321 CON. WELDED BE 36.5mm THK	G48X
RED CON	RC	LRC0CT00	2"	6"	REDUCER A403-WP321 CON. SMLS BE SCH80S	G48X
RED CON	RC	LRC0CZ06	8"	8"	REDUCER A403-WP321 CON. WELDED BE 14.27mm THK	G48X
RED CON	RC	LRC0CZ08	12"	12"	REDUCER A403-WP321 CON. WELDED BE 20.62mm THK	G48X
RED CON	RC	LRC0CZ09	14"	14"	REDUCER A403-WP321 CON. WELDED BE 22.23mm THK	G48X
RED CON	RC	LRC0CZ10	16"	16"	REDUCER A403-WP321 CON. WELDED BE 25.40mm THK	G48X
RED CON	RC	LRC0CZ11	18"	18"	REDUCER A403-WP321 CON. WELDED BE 28.58mm THK	G48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED CON	RC	LRC0CZ12	20"	20"	REDUCER A403-WP321 CON. WELDED BE 30.18mm THK	G48X
RED ECC	RE	LRE0C100	10"	10"	REDUCER A403-WP321 ECC. WELDED BE 18.2mm THK	G48X
RED ECC	RE	LRE0C303	24"	24"	REDUCER A403-WP321 ECC. WELDED BE 36.5mm THK	G48X
RED ECC	RE	LRE0CT00	2"	6"	REDUCER A403-WP321 ECC. SMLS BE SCH80S	G48X
RED ECC	RE	LRE0CZ06	8"	8"	REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK	G48X
RED ECC	RE	LRE0CZ08	12"	12"	REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK	G48X
RED ECC	RE	LRE0CZ09	14"	14"	REDUCER A403-WP321 ECC. WELDED BE 22.23mm THK	G48X
RED ECC	RE	LRE0CZ10	16"	16"	REDUCER A403-WP321 ECC. WELDED BE 25.40mm THK	G48X
RED ECC	RE	LRE0CZ11	18"	18"	REDUCER A403-WP321 ECC. WELDED BE 28.58mm THK	G48X
RED ECC	RE	LRE0CZ12	20"	20"	REDUCER A403-WP321 ECC. WELDED BE 30.18mm THK	G48X
SOCKOLET	TSO	LTSOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 SOCKET OUTLET FORGED SW CL3000	G48X
SPCL FLANGE	F1	LF00CK00	2"	6"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) SCH80S	G48X
SPCL FLANGE	F1	LF00CK01	8"	8"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 14.27mm THK	G48X
SPCL FLANGE	F1	LF00CK03	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) 20.62mm THK	G48X
SPCL FLANGE	F3	LF00CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) SCH80S	G48X
SPCL FLANGE	F1	LF10CL03	2"	6"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) SCH 80S	G48X
SPCL FLANGE	F1	LF10CL04	8"	8"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 14.27mm THK	G48X
SPCL FLANGE	F1	LF10CL05	10"	10"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 18.2mm THK	G48X
SPCL FLANGE	F1	LF10CL06	12"	12"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 20.62mm THK	G48X
SPCL FLANGE	F1	LF10CL07	14"	14"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 22.23mm THK	G48X
SPCL FLANGE	F1	LF10CL08	16"	16"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 25.40mm THK	G48X
SPCL FLANGE	F1	LF10CL09	18"	18"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 28.58mm THK	G48X
SPCL FLANGE	F1	LF10CL10	20"	20"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 30.18mm THK	G48X
SPCL FLANGE	F1	LF10CL11	24"	24"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) 36.5mm THK	G48X
SPCL FLG JACK	FJ1	LFJ0CK00	2"	6"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW SCH80S	G48X
SPCL FLG JACK	FJ1	LFJ0CL00	1/2"	1 1/2"	FLANGE A182-F321 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G48X
SPCL FLG JACK	FJ1	LFJ0CL02	2"	6"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH80S	G48X
SPCL FLG JACK	FJ1	LFJ1CK02	8"	8"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 14.27mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CK04	12"	12"	FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW 20.62mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL03	8"	8"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 14.27mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL04	12"	12"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 20.62mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL05	14"	14"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 22.23mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL06	16"	16"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 25.40mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL07	18"	18"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 28.58mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL08	20"	20"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 30.18mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL09	24"	24"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 36.5mm THK	G48X
SPCL FLG JACK	FJ1	LFJ1CL10	10"	10"	FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW 18.2mm THK	G48X
SPCL GASKET	G1	LG00ZK02	2"	24"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL900 (ASME B16.5) 135 HRB MAX	G48X
SPCL GASKET	G1	LG00ZL02	1/2"	1 1/2"	GASKET 316L SS RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 135 HRB MAX	G48X
SPE BLIND	FSB	LFSBCK05	2"	3"	FLANGE A240-321 FIGURE-8 BLANKS RTJ CL900 (ASME B16.48)	G48X
SPE BLIND	FSB	LFSBCK06	4"	24"	FLANGE A240-321 PADDLE SPACER AND BLANKS RTJ CL900 (ASME B16.48)	G48X
SPE BLIND	FSB	LFSBCL01	1/2"	1 1/2"	FLANGE A240-321 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	G48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
SWG CON B-P	RCB	LRCBCT01	2"	3"	SWAGE A403-WP321 CON. SMLS BLE x PSE SCH80S	G48X
SWG CON PE	RCP	LRCPCT01	1/2"	1 1/2"	SWAGE A403-WP321 CON. SMLS PE SCH80S	G48X
SWG ECC B-P	REB	LREBCT01	2"	3"	SWAGE A403-WP321 ECC. SMLS BLE x PSE SCH80S	G48X
SWG ECC PE	REP	LREPCT01	1/2"	1 1/2"	SWAGE A403-WP321 ECC. SMLS PE SCH80S	G48X
TEE	TE	LTE0C100	10"	10"	TEE A403-WP321 EQUAL WELDED BE 18.2mm THK	G48X
TEE	TE	LTE0C303	24"	24"	TEE A403-WP321 EQUAL WELDED BE 36.5mm THK	G48X
TEE	TE	LTE0CP01	1/2"	1 1/2"	TEE A182-F321 EQUAL FORGED SW CL3000	G48X
TEE	TE	LTE0CT00	2"	6"	TEE A403-WP321 EQUAL SMLS BE SCH80S	G48X
TEE	TE	LTE0CZ06	8"	8"	TEE A403-WP321 EQUAL WELDED BE 14.27mm THK	G48X
TEE	TE	LTE0CZ08	12"	12"	TEE A403-WP321 EQUAL WELDED BE 20.62mm THK	G48X
TEE	TE	LTE0CZ09	14"	14"	TEE A403-WP321 EQUAL WELDED BE 22.23mm THK	G48X
TEE	TE	LTE0CZ10	16"	16"	TEE A403-WP321 EQUAL WELDED BE 25.40mm THK	G48X
TEE	TE	LTE0CZ11	18"	18"	TEE A403-WP321 EQUAL WELDED BE 28.58mm THK	G48X
TEE	TE	LTE0CZ12	20"	20"	TEE A403-WP321 EQUAL WELDED BE 30.18mm THK	G48X
TEE RED	TR	LTR0C100	10"	10"	TEE A403-WP321 REDUCING WELDED BE 18.2mm THK	G48X
TEE RED	TR	LTR0C303	24"	24"	TEE A403-WP321 REDUCING WELDED BE 36.5mm THK	G48X
TEE RED	TR	LTR0CP01	1/2"	1 1/2"	TEE A182-F321 REDUCING FORGED SW CL3000	G48X
TEE RED	TR	LTR0CT00	2"	6"	TEE A403-WP321 REDUCING SMLS BE SCH80S	G48X
TEE RED	TR	LTR0CZ06	8"	8"	TEE A403-WP321 REDUCING WELDED BE 14.27mm THK	G48X
TEE RED	TR	LTR0CZ08	12"	12"	TEE A403-WP321 REDUCING WELDED BE 20.62mm THK	G48X
TEE RED	TR	LTR0CZ09	14"	14"	TEE A403-WP321 REDUCING WELDED BE 22.23mm THK	G48X
TEE RED	TR	LTR0CZ10	16"	16"	TEE A403-WP321 REDUCING WELDED BE 25.40mm THK	G48X
TEE RED	TR	LTR0CZ11	18"	18"	TEE A403-WP321 REDUCING WELDED BE 28.58mm THK	G48X
TEE RED	TR	LTR0CZ12	20"	20"	TEE A403-WP321 REDUCING WELDED BE 30.18mm THK	G48X
THREADOLET	TTO	LTTOCP01	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A182-F321 THREADED OUTLET FORGED TE(NPT-F) CL3000	G48X
WELDOLET	TWO	LTWOC101	10"	10"	REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 18.2mm THK	G48X
WELDOLET	TWO	LTWOCT00	2"	6"	REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE SCH80S	G48X
WELDOLET	TWO	LTWOCZ04	8"	8"	REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 14.27mm THK	G48X
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	H01
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	H01
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	H01
CHECK VA	VCH	VCHAH001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 BS 5352	H01
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	H01
DOUBLE IBB VA	DF1	LDF1AL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DFA	LDFAAL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DL1	LDL1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DL4	LDL4AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DLA	LDLAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DLD	LDLDAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DP1	LDP1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DP2	LDP2AL00	1"	1"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
DOUBLE IBB VA	DPA	LDPAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DPB	LDPBAL00	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H01
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	H01
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	H01
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	H01
FLANGE	F	LF00AL00	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) SCH160	H01
FLG JACK	FJ	LFJ0AL06	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	H01
GATE VA	VGA	VGAAH001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H01
GATE VA	VGF	VGFAH001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H01
GATE VA	VGX	VGXAH001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H01
GLOBE VA	VLA	VLAAH001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	H01
NIPPLE TOE	NTO	LNTOAN02	1/2"	1 1/2"	NIPPLE API 5L-B PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	H01
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	H01
PLUG VA	VPL	VPLAH002	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/SCH160 REDUCING BORE, W-OP (F-SAFE) BS 5353	H01
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	H01
SPE BLIND	FSB	LFSBAL01	1/2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	H01
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	H01
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	H01
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	H01
WELDOLET	TWO	LTWOAH00	4"	4"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH120	H01
WELDOLET	TWO	LTWOAK00	2"	3"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160	H01
BOLTS	B	LB00A000	1/2"	24"	STUD BOLT A193-B7 W/2 HEAVY HEX. NUTS(B18.2.2) A194-2H	H03
CAP	C	LC00AJ00	10"	10"	CAP A860 WPHY-60 SMLS BE SCH140	H03
CAP	C	LC00AK06	2"	6"	CAP A860 WPHY-60 SMLS BE SCH160	H03
CAP	C	LC00AQ00	1/2"	1 1/2"	CAP A105 FORGED SW CL6000	H03
CAP THD	CT	LCT0AQ00	1/2"	1 1/2"	CAP A105 FORGED TE(NPT-F) CL6000	H03
CHECK VA	VCA	VCAAH001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC DUAL PLATE ANSI CL1500 API 594 (WAFER FOR RTJ FLANGES)	H03
CHECK VA	VCA	VCAAH002	6"	24"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL1500 API 594 (WAFER FOR RTJ FLANGES)	H03
CHECK VA	VCH	VCHAH001	1/2"	1 1/2"	CHECK VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL1500 BS 5352	H03
CPLG FULL	CF	LCF0AQ00	1/2"	1 1/2"	COUPLING A105 FULL(STRAIGHT) FORGED SW CL6000	H03
DOUBLE IBB VA	DF1	LDF1AL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DFA	LDFAAL00	1/2"	1/2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1/2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DL1	LDL1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DL2	LDL2AL00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DL3	LDL3AL00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DL4	LDL4AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DL5	LDL5AL00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DLA	LDLAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DLB	LDLBAL00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 2" FLGD-RTJ x 3/4" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DLC	LDLCAL00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 2" FLGD-RTJ x 2" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DLD	LDLDAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DLE	LDLEAL00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 2" FLGD-RTJ x CL1500 3/4" FLGD-RTJ DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DP1	LDP1AL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
DOUBLE IBB VA	DP2	LDP2AL00	1"	1"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DP3	LDP3AL00	2"	2"	BALL VALVE A105 316SS BALL W/PEEK SEATS ANSI CL1500 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DPA	LDPAAL00	3/4"	3/4"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 3/4" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DPB	LDPBAL00	1"	1"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 1" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
DOUBLE IBB VA	DPC	LDPCAL00	2"	2"	BALL VALVE A105 316SS BALL W/NYLON SEATS ANSI CL1500 2" FLGD-RTJ x 1/2" TE(NPT-F) DBB(2 BALL & NEEDLE VENT) AED VITON SEAL	H03
ELBOLET	TEW	LTEWAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 ELBOW OUTLET FORGED SW CL6000	H03
ELBOW	E4	LE40AJ00	10"	10"	ELBOW A860 WPHY-60 DEG-45 SMLS BE SCH140	H03
ELBOW	E4	LE40AJ01	20"	24"	ELBOW A860 WPHY-60 DEG-45 WELDED BE SCH140	H03
ELBOW	E4	LE40AK07	2"	6"	ELBOW A860 WPHY-60 DEG-45 SMLS BE SCH160	H03
ELBOW	E4	LE40AQ00	1/2"	1 1/2"	ELBOW A105 DEG-45 FORGED SW CL6000	H03
ELBOW	E9	LE90AJ00	10"	10"	ELBOW A860 WPHY-60 90-LR SMLS BE SCH140	H03
ELBOW	E9	LE90AJ01	20"	24"	ELBOW A860 WPHY-60 90-LR WELDED BE SCH140	H03
ELBOW	E9	LE90AK07	2"	6"	ELBOW A860 WPHY-60 90-LR SMLS BE SCH160	H03
ELBOW	E9	LE90AQ00	1/2"	1 1/2"	ELBOW A105 DEG-90 FORGED SW CL6000	H03
FLANGE	F	LF00AL15	10"	10"	FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) SCH140	H03
FLANGE	F	LF00AL16	2"	6"	FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) SCH160	H03
FLANGE	F	LF00AL17	1/2"	1 1/2"	FLANGE A105 SW RTJ CL1500 (ASME B16.5) XXS	H03
FLG BLIND	FB	LFB0AL05	1/2"	24"	FLANGE A694-F60 BLIND RTJ CL1500 (ASME B16.5)	H03
FLG JACK	FJ	LFJ0AL17	10"	10"	FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH140	H03
FLG JACK	FJ	LFJ0AL18	2"	6"	FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH160	H03
GASKET	G	LG00ZL00	1/2"	24"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL1500 (ASME B16.5) 90 HRB MAX	H03
GATE VA	VGA	VGAAH001	1/2"	1 1/2"	GATE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H03
GATE VA	VGA	VGAAH003	2"	3"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL1500 API 600	H03
GATE VA	VGA	VGAAH004	4"	4"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL1500 GEAR OPERATED API 600	H03
GATE VA	VGA	VGAAH005	6"	24"	GATE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y FLEXIBLE WEDGE ANSI CL1500 GEAR OPERATED API 600	H03
GATE VA	VGF	VGFAH001	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H03
GATE VA	VGX	VGXAH001	1/2"	1 1/2"	GATE VALVE A105 SW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL1500 API 602	H03
GLOBE VA	VLA	VLAAH001	1/2"	1 1/2"	GLOBE VALVE A105 SW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 5352	H03
GLOBE VA	VLA	VLAAH003	2"	2"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 BS 1873	H03
GLOBE VA	VLA	VLAAH006	3"	6"	GLOBE VALVE A216-WCB FLGD-RTJ 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL1500 GEAR OPERATED BS 1873	H03
INSUL GASKET	GK	LGK0ZL00	1/2"	24"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL1500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	H03
PIPE	P	LP00AJ01	20"	24"	PIPE API 5L-X60 PSL1 SAW BE 100% RT SCH140	H03
PIPE	P	LP00AJ02	10"	10"	PIPE API 5L-X60 PSL1 SMLS BE SCH140	H03
PIPE	P	LP00AK19	2"	6"	PIPE API 5L-X60 PSL1 SMLS BE SCH160	H03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	H03
PLUG VA	VPL	VPLAH005	2"	2"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL1500 REDUCING BORE, W-OP (F-SAFE) API 599	H03
PLUG VA	VPL	VPLAH006	3"	16"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL1500 REDUCING BORE, G-OP (F-SAFE) API 599	H03
RED CON	RC	LRC0AJ00	10"	10"	REDUCER A860 WPHY-60 CON. SMLS BE SCH140	H03
RED CON	RC	LRC0AJ01	20"	24"	REDUCER A860 WPHY-60 CON. WELDED BE SCH140	H03
RED CON	RC	LRC0AK07	2"	6"	REDUCER A860 WPHY-60 CON. SMLS BE SCH160	H03
RED ECC	RE	LRE0AJ00	10"	10"	REDUCER A860 WPHY-60 ECC. SMLS BE SCH140	H03
RED ECC	RE	LRE0AJ01	20"	24"	REDUCER A860 WPHY-60 ECC. WELDED BE SCH140	H03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC	RE	LRE0AK07	2"	6"	REDUCER A860 WPHY-60 ECC. SMLS BE SCH160	H03
SOCKOLET	TSO	LTSOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 SOCKET OUTLET FORGED SW CL6000	H03
SPE BLIND	FSB	LFSBAL01	1/2"	3"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL1500 (ASME B16.48)	H03
SPE BLIND	FSB	LFSBAL07	4"	24"	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL1500 (ASME B16.48)	H03
SWG CON B-P	RCB	LRCBAK06	2"	4"	SWAGE A860 WPHY-60 CON. SMLS BLE x PSE SCH160	H03
SWG ECC B-P	REB	LREBAK06	2"	4"	SWAGE A860 WPHY-60 ECC. SMLS BLE x PSE SCH160	H03
TEE	TE	LTE0AJ00	10"	10"	TEE A860 WPHY-60 EQUAL SMLS BE SCH140	H03
TEE	TE	LTE0AJ01	20"	24"	TEE A860 WPHY-60 EQUAL WELDED BE SCH140	H03
TEE	TE	LTE0AK07	2"	6"	TEE A860 WPHY-60 EQUAL SMLS BE SCH160	H03
TEE	TE	LTE0AQ00	1/2"	1 1/2"	TEE A105 EQUAL FORGED SW CL6000	H03
TEE RED	TR	LTR0AJ00	10"	10"	TEE A860 WPHY-60 REDUCING SMLS BE SCH140	H03
TEE RED	TR	LTR0AJ01	20"	24"	TEE A860 WPHY-60 REDUCING WELDED BE SCH140	H03
TEE RED	TR	LTR0AK07	2"	6"	TEE A860 WPHY-60 REDUCING SMLS BE SCH160	H03
TEE RED	TR	LTR0AQ00	1/2"	1 1/2"	TEE A105 REDUCING FORGED SW CL6000	H03
THREADOLET	TTO	LTTOAQ00	1/2"	1 1/2"	REINFORCED BRANCH OUTLET A105 THREADED OUTLET FORGED TE(NPT-F) CL6000	H03
WELDOLET	TWO	LTWOAJ01	10"	10"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH140	H03
WELDOLET	TWO	LTWOAK00	2"	6"	REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160	H03
CAP	C	LC00AK06	1/2"	6"	CAP A860 WPHY-60 MSS SP75 SMLS BE SCH160	J01
ELBOW	E4	LE40AK07	1/2"	6"	ELBOW A860 WPHY-60 MSS SP75 DEG-45 SMLS BE SCH160	J01
ELBOW	E9	LE90AK07	1/2"	6"	ELBOW A860 WPHY-60 MSS SP75 90-LR SMLS BE SCH160	J01
FLANGE	F	LF00AN17	1/2"	6"	FLANGE A694-F60 WN RTJ CL2500 (ASME B16.5) SCH160	J01
FLG BLIND	FB	LFB0AN05	1/2"	6"	FLANGE A694-F60 BLIND RTJ CL2500 (ASME B16.5)	J01
FLG JACK	FJ	LFJ0AN18	1/2"	6"	FLANGE A694-F60 WN RTJ CL2500 (ASME B16.5) W/JACK SCREW SCH160	J01
SPE BLIND	FSB	LFSBAN01	1/2"	6"	FLANGE A516-70 FIGURE-8 BLANKS RTJ CL2500 (ASME B16.48)	J01
GASKET	G	LG00ZN00	1/2"	6"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL2500 (ASME B16.5) 90 HRB MAX	J01
INSUL GASKET	GK	LGK0ZN00	1/2"	6"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL2500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	J01
NIPPLE TOE	NTO	LNTOAK08	1/2"	1 1/2"	NIPPLE API 5L-X60 PSL1 SMLS TOE(NPT-M) 75mm LONG SCH160	J01
PIPE	P	LP00AK19	1/2"	6"	PIPE API 5L-X60 PSL1 SMLS BE SCH160	J01
PIPE	P1	LP10AK04	1/2"	6"	PIPE API 5L-X60 PSL1 SMLS BE BE COATED SCH160	J01
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	J01
RED CON	RC	LRC0AK07	1/2"	6"	REDUCER A860 WPHY-60 MSS SP75 CON. SMLS BE SCH160	J01
RED ECC	RE	LRE0AK07	1/2"	6"	REDUCER A860 WPHY-60 MSS SP75 ECC. SMLS BE SCH160	J01
TEE	TE	LTE0AK07	1/2"	6"	TEE A860 WPHY-60 MSS SP75 EQUAL SMLS BE SCH160	J01
TEE	TR	LTR0AK07	1/2"	6"	TEE A860 WPHY-60 MSS SP75 REDUCING SMLS BE SCH160 x SCH160	J01
WELDOLET	TWO	LTWOAK08	3/4"	2"	REINFORCED BRANCH OUTLET A860 WPHY-60 MSS SP75 WELDED OUTLET FORGED BE SCH160	J01
BALL VA	VBF	VBFAJ108	1/2"	3"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	J01
BALL VA	VBF	VBFAJ118	4"	6"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, G-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	J01
BALL VA	VBR	VBRAJ113	2"	3"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/FLOATING	J01
BALL VA	VBR	VBRAJ103	4"	6"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCING BORE, W-OP (F-SAFE) API 6D AED VITON SEAL/TRUNNION	J01
CHECK VA	VCH	VCWAJ001	1/2"	6"	CHECK VALVE A216-WCB BW 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL2500 API 6D	J01
GATE VA	VGB	VGWAJ100	1/2"	6"	GATE VALVE A694-F60 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE CL2500 API 602	J01
GLOBE VA	***VLA***	VLWAJ100	1/2"	6"	GLOBE VALVE A694-F60 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL2500 BS 5352	J01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CAP	C	LC00AN01	1/2"	6"	CAP A860 WPHY-60 MSS SP75 SMLS BE XXS	J03
ELBOW	E4	LE40AN01	1/2"	6"	ELBOW A860 WPHY-60 MSS SP75 DEG-45 SMLS BE XXS	J03
ELBOW	E9	LE90AN01	1/2"	6"	ELBOW A860 WPHY-60 MSS SP75 90-LR SMLS BE XXS	J03
FLANGE	F	LF00AN18	1/2"	6"	FLANGE A694-F60 WN RTJ CL2500 (ASME B16.5) XXS	J03
FLG BLIND	FB	LFB0AN05	1/2"	6"	FLANGE A694-F60 BLIND RTJ CL2500 (ASME B16.5)	J03
FLG JACK	FJ	LFJ0AN19	1/2"	6"	FLANGE A694-F60 WN RTJ CL2500 (ASME B16.5) W/JACK SCREW XXS	J03
SPE BLIND	FSB	LFSBAN01	1/2"	6"	***FLANGE A516-70 FIGURE-8 BLANKS RTJ CL2500 (ASME B16.48)***	J03
GASKET	G	LG00ZN00	1/2"	6"	GASKET SOFT IRON(ARMCO) RING TYPE JOINT TO ASME B16.20 OCTAGONAL RING CL2500 (ASME B16.5) 90 HRB MAX	J03
INSUL GASKET	GK	LGK0ZN00	1/2"	6"	GASKET NON-ASBESTOS RING TYPE JOINT TO ASME B16.20 OVAL RING CL2500 (ASME B16.5) FOR INSULATION KIT W/SLEEVE & WASHER	J03
NIPPLE TOE	NTO	LNTOAN08	1/2"	1 1/2"	NIPPLE API 5L-X60 PSL1 SMLS TOE(NPT-M) 75mm LONG XXS	J03
PIPE	P	LP00AN05	1/2"	6"	PIPE API 5L-X60 PSL1 SMLS BE XXS	J03
PIPE	P1	LP10AN04	3"	4"	***PIPE API 5L-X60 PSL1 SMLS BE COATED XXS***	J03
PLUG	PLG	LPLGAW00	1/2"	1 1/2"	PLUG A105 ROUND HEAD FORGED TE(NPT-M)	J03
RED CON	RC	LRC0AN01	3/4"	6"	REDUCER A860 WPHY-60 MSS SP75 CON. SMLS BE XXS	J03
RED ECC	RE	LRE0AN01	3/4"	6"	REDUCER A860 WPHY-60 MSS SP75 ECC. SMLS BE XXS	J03
TEE	TE	LTE0AN01	3/4"	6"	TEE A860 WPHY-60 MSS SP75 EQUAL SMLS BE XXS	J03
TEE RED	TR	LTR0AN01	3/4"	6"	TEE A860 WPHY-60 MSS SP75 REDUCING SMLS BE XXS x XXS	J03
WELDOLET	TWO	LTWOAN08	2"	6"	REINFORCED BRANCH OUTLET A860 WPHY-60 MSS SP75 WELDED OUTLET FORGED BE XXS	J03
BALL VA	VBF	VBFAJ108	1/2"	6"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, W-OP (F-SAFE) API 6D AED VITON SEAL	J03
BALL VA	VBR	VBRAJ103	2"	6"	BALL VALVE A216-WCB BW A694-F60 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCING BORE, G-OP (F-SAFE) API 6D AED VITON SEAL	J03
CHECK VA	VCH	VCWAJ001	1/2"	6"	CHECK VALVE A216-WCB BW 13Cr W/STELLITE SEATS & DISC BC SWING ANSI CL2500 API 6D	J03
GATE VA	VGB	VGWAJ100	1/2"	6"	GATE VALVE A694-F60 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE CL2500 API 602	J03
GLOBE VA	***VLA***	VLWAJ100	1/2"	6"	GLOBE VALVE A694-F60 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL2500 BS 5352	J03
PIPE	***P***	***LP00CZ21***	***16"***	***16"***	***PIPE A358-316L CL.1 EFW BE 100% RT SCH30***	***D49***
ELBOW	***E9***	***LE90CZ14***	***16"***	***16"***	***ELBOW A403-WP316L 90-LR WELDED BE SCH30***	***D49***
ELBOW	***E4***	***LE40CZ14***	***16"***	***16"***	***ELBOW A403-WP316L DEG-45 WELDED BE SCH30***	***D49***
TEE		***LTE0CZ14***	***16-16***		***TEE A403-WP316L EQUAL WELDED BE SCH30***	***D49***
TEE		***LTR0CZ14***	***16-10***		***TEE A403-WP316L REDUCING WELDED BE SCH30x SCH40S***	***D49***
TEE		***LTR0CZ14***	***16-12***		***TEE A403-WP316L REDUCING WELDED BE SCH30x SCH40S***	***D49***
TEE		***LTR0CZ14***	***16-14***		***TEE A403-WP316L REDUCING WELDED BE SCH30x SCH20***	***D49***
RED CON		***LRC0CZ14***	***16-8***		***REDUCER A403-WP316L CON. WELDED BE SCH30 x SCH40S***	***D49***
RED ECC		***LRE0CZ14***	***16-8***		***REDUCER A403-WP316L ECC. WELDED BE SCH30 x SCH40S***	***D49***
RED CON		***LRC0CZ14***	***16-10***		***REDUCER A403-WP316L CON. WELDED BE SCH30 x SCH40S***	***D49***
RED ECC		***LRE0CZ14***	***16-10***		***REDUCER A403-WP316L ECC. WELDED BE SCH30 x SCH40S***	***D49***
RED CON		***LRC0CZ14***	***16-12***		***REDUCER A403-WP316L CON. WELDED BE SCH30 x SCH40S***	***D49***
RED ECC		***LRE0CZ14***	***16-12***		***REDUCER A403-WP316L ECC. WELDED BE SCH30 x SCH40S***	***D49***
RED CON		***LRC0CZ14***	***16-14***		***REDUCER A403-WP316L CON. WELDED BE SCH30 xSCH20***	***D49***
RED ECC		***LRE0CZ14***	***16-14***		***REDUCER A403-WP316L ECC. WELDED BE SCH30 xSCH20***	***D49***
CAP		***LC00CZ14***	***16***		***CAP A403-WP316L SMLS BE SCH30***	***D49***
PIPE	***P***	***LC00CZ18***	***6"***	***6"***	***PIPE A312-TP321 SMLS BE THK. 12.7mm***	***G48***
PIPE	***P1***	***LC10CZ18***	***6"***	***6"***	***PIPE A312-TP321 SMLS BE PE COATED THK. 12.7mm***	***G48***
PIPE	***P3***	***LC30CZ18***	***6"***	***6"***	***PIPE A312-TP321 SMLS BE THK. 12.7mm (SUNLIGHT L-200 WRAPPED AT SITE)***	***G48***

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
PIPE	P2	LC20CZ18	6"	6"	PIPE A312-TP321 SMLS BE THK. 12.7mm PP COATED	G48
ELBOW		LC00CZ18	6		ELBOW A403-WP321 90-LR SMLS BE THK. 12.7mm	G48
ELBOW		LC00CZ18	6		ELBOW A403-WP321 DEG-45 SMLS BE THK. 12.7mm	G48
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) THK. 12.7mm	G48
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) THK. 12.7mm	G48
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW THK. 12.7mm	G48
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW THK. 12.7mm	G48
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) THK. 12.7mm	G48
TEE		LC00CZ18	6-2		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE THK. 12.7mm x THK. 12.7mm	G48
TEE		LC00CZ18	6-3		TEE A403-WP321 REDUCING SMLS BE THK. 12.7mm x THK. 12.7mm	G48
TEE		LC00CZ18	6-4		TEE A403-WP321 REDUCING SMLS BE THK. 12.7mm x THK. 12.7mm	G48
TEE		LC00CZ18	6-6		TEE A403-WP321 EQUAL SMLS BE THK. 12.7mm	G48
TEE		LC00CZ18	8-6		TEE A403-WP321 REDUCING WELDED BE 14.27mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	10-6		TEE A403-WP321 REDUCING WELDED BE 18.2mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	12-6		TEE A403-WP321 REDUCING WELDED BE 20.62mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	14-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 22.23mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	16-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 25.40mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	18-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 28.58mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	20-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 30.18mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	24-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 36.5mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	26-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 39.1mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	34-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 51.1mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	28-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 42.1mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	30-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 45.1mm THK x THK. 12.7mm	G48
TEE		LC00CZ18	32-6		REINFORCED BRANCH OUTLET A182-F321 WELDED OUTLET FORGED BE 48.1mm THK x THK. 12.7mm	G48
RED CON		LC00CZ18	6-3		REDUCER A403-WP321 CON. SMLS BE THK. 12.7mm x THK. 12.7mm	G48
RED ECC		LC00CZ18	6-3		REDUCER A403-WP321 ECC. SMLS BE THK. 12.7mm x THK. 12.7mm	G48
RED CON		LC00CZ18	6-4		REDUCER A403-WP321 CON. SMLS BE THK. 12.7mm x THK. 12.7mm	G48
RED ECC		LC00CZ18	6-4		REDUCER A403-WP321 ECC. SMLS BE THK. 12.7mm x THK. 12.7mm	G48
RED CON		LC00CZ18	8-6		REDUCER A403-WP321 CON. WELDED BE 14.27mm THK x THK. 12.7mm	G48
RED ECC		LC00CZ18	8-6		REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK x THK. 12.7mm	G48
RED CON		LC00CZ18	10-6		REDUCER A403-WP321 CON. WELDED BE 18.2mm THK x THK. 12.7mm	G48
RED ECC		LC00CZ18	10-6		REDUCER A403-WP321 ECC. WELDED BE 18.2mm THK x THK. 12.7mm	G48
RED CON		LC00CZ18	12-6		REDUCER A403-WP321 CON. WELDED BE 20.62mm THK x THK. 12.7mm	G48
RED ECC		LC00CZ18	12-6		REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK x THK. 12.7mm	G48
RED CON		LC00CZ18	14-6		REDUCER A403-WP321 CON. WELDED BE 22.23mm THK x THK. 12.7mm	G48
RED ECC		LC00CZ18	14-6		REDUCER A403-WP321 ECC. WELDED BE 22.23mm THK x THK. 12.7mm	G48
CAP		LC00CZ18	6		CAP A403-WP321 SMLS BE THK. 12.7mm	G48
PIPE	P	LC00CZ18	6"	6"	PIPE A312-TP321 SMLS BE THK. 12.7mm	G48X
ELBOW		LC00CZ18	6		ELBOW A403-WP321 90-LR SMLS BE THK. 12.7mm	G48X
ELBOW		LC00CZ18	6		ELBOW A403-WP321 90-LR SMLS BE THK. 12.7mm	G48X
ELBOW		LC00CZ18	6		ELBOW A403-WP321 DEG-45 SMLS BE THK. 12.7mm	G48X

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
ELBOW		LC00CZ18	6		ELBOW A403-WP321 DEG-45 SMLS BE THK. 12.7mm	G48X
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) THK. 12.7mmMIN HARDNESS 150 HRB	G48X
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) THK. 12.7mmMIN HARDNESS 150 HRB	G48X
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) W/JACK SCREW THK. 12.7mmMIN HARDNESS 150 HRB	G48X
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW THK. 12.7mmMIN HARDNESS 150 HRB	G48X
FLAN		LC00CZ18	6		FLANGE A182-F321 WN RTJ CL900 (ASME B16.5) THK. 12.7mmMIN HARDNESS 150 HRB	G48X
TEE		LC00CZ18	6-2		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE THK. 12.7mm x THK. 12.7mm	G48X
TEE		LC00CZ18	6-3		TEE A403-WP321 REDUCING SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
TEE		LC00CZ18	6-4		TEE A403-WP321 REDUCING SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
TEE		LC00CZ18	6-6		TEE A403-WP321 EQUAL SMLS BE THK. 12.7mm	G48X
TEE		LC00CZ18	8-6		TEE A403-WP321 REDUCING WELDED BE 14.27mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	10-6		TEE A403-WP321 REDUCING WELDED BE 18.2mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	12-6		TEE A403-WP321 REDUCING WELDED BE 20.62mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	14-6		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 22.23mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	16-6		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 25.40mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	18-6		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 28.58mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	20-6		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 30.18mm THK x THK. 12.7mm	G48X
TEE		LC00CZ18	24-6		REINFORCED BRANCH OUTLET A403-WP321 WELDED OUTLET FORGED BE 36.5mm THK x THK. 12.7mm	G48X
RED CON		LC00CZ18	6-3		REDUCER A403-WP321 CON. SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
RED ECC		LC00CZ18	6-3		REDUCER A403-WP321 ECC. SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
RED CON		LC00CZ18	6-4		REDUCER A403-WP321 CON. SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
RED ECC		LC00CZ18	6-4		REDUCER A403-WP321 ECC. SMLS BE THK. 12.7mm x THK. 12.7mm	G48X
RED CON		LC00CZ18	8-6		REDUCER A403-WP321 CON. WELDED BE 14.27mm THK x THK. 12.7mm	G48X
RED ECC		LC00CZ18	8-6		REDUCER A403-WP321 ECC. WELDED BE 14.27mm THK x THK. 12.7mm	G48X
RED CON		LC00CZ18	10-6		REDUCER A403-WP321 CON. WELDED BE 18.2mm THK x THK. 12.7mm	G48X
RED ECC		LC00CZ18	10-6		REDUCER A403-WP321 ECC. WELDED BE 18.2mm THK x THK. 12.7mm	G48X
RED CON		LC00CZ18	12-6		REDUCER A403-WP321 CON. WELDED BE 20.62mm THK x THK. 12.7mm	G48X
RED ECC		LC00CZ18	12-6		REDUCER A403-WP321 ECC. WELDED BE 20.62mm THK x THK. 12.7mm	G48X
RED CON		LC00CZ18	14-6		REDUCER A403-WP321 CON. WELDED BE 22.23mm THK x THK. 12.7mm	G48X
RED ECC		LC00CZ18	14-6		REDUCER A403-WP321 ECC. WELDED BE 22.23mm THK x THK. 12.7mm	G48X
CAP		LC00CZ18	6		CAP A403-WP321 SMLS BE THK. 12.7mm	G48X
PIPE	P1	LP00AK24	1/2"	1 1/2"	PIPE API 5L-X60 PSL1 SMLS PE SCH160	H01
PIPE	P	LP00AH17	4"	4"	PIPE API 5L-X60 PSL1 SMLS BE SCH120	H01
ELBOW		LE90AH11	4		ELBOW A860 WPHY-60 90-LR SMLS BE SCH120	H01
ELBOW		LE40AH12	4		ELBOW A860 WPHY-60 DEG-45 SMLS BE SCH120	H01
FLAN		LRF0AL00	3-0.75		FLANGE A694-F60 WN-REDUCING RTJ CL1500 (ASME B16.5) SCH160 x SCH160	H01
FLAN		LF00AL14	4		FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) SCH120	H01
FLAN		LFJ0AL16	4		FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW SCH120	H01
TEE		LTR0AH12	4-2		TEE A860 WPHY-60 REDUCING SMLS BE SCH120 x SCH160	H01
TEE		LTR0AH12	4-3		TEE A860 WPHY-60 REDUCING SMLS BE SCH120 x SCH160	H01
TEE		LTE0AH12	4-4		TEE A860 WPHY-60 EQUAL SMLS BE SCH120	H01
RED CON		LRCPAK08	0.75-0.5		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC		LREPAK08	0.75-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED CON		LRCPAK08	1-0.5		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01
RED ECC		LREPAK08	1-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED CON		LRCPAK08	1-0.75		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01
RED ECC		LREPAK08	1-0.75		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED CON		LRCPAK08	1.5-0.5		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01
RED ECC		LREPAK08	1.5-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED CON		LRCPAK08	1.5-0.75		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01
RED ECC		LREPAK08	1.5-0.75		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED CON		LRCPAK08	1.5-1		SWAGE A860 WPHY-60 CON. SMLS PE SCH160 x SCH160	H01
RED ECC		LREPAK08	1.5-1		SWAGE A860 WPHY-60 ECC. SMLS PE SCH160 x SCH160	H01
RED ECC		LREBAH05	4-0.5		SWAGE A860 WPHY-60 ECC. SMLS BLE x PSE SCH120 x SCH160	H01
RED CON		LRCBAH05	4-0.5		SWAGE A860 WPHY-60 CON. SMLS BLE x PSE SCH120 x SCH160	H01
RED ECC		LREBAH05	4-0.75		SWAGE A860 WPHY-60 ECC. SMLS BLE x PSE SCH120 x SCH160	H01
RED CON		LRCBAH05	4-0.75		SWAGE A860 WPHY-60 CON. SMLS BLE x PSE SCH120 x SCH160	H01
RED ECC		LREBAH05	4-1		SWAGE A860 WPHY-60 ECC. SMLS BLE x PSE SCH120 x SCH160	H01
RED CON		LRCBAH05	4-1		SWAGE A860 WPHY-60 CON. SMLS BLE x PSE SCH120 x SCH160	H01
RED ECC		LREBAH05	4-1.5		SWAGE A860 WPHY-60 ECC. SMLS BLE x PSE SCH120 x SCH160	H01
RED CON		LRCBAH05	4-1.5		SWAGE A860 WPHY-60 CON. SMLS BLE x PSE SCH120 x SCH160	H01
RED CON		LRC0AH12	4-2		REDUCER A860 WPHY-60 CON. SMLS BE SCH120 x SCH160	H01
RED ECC		LRE0AH12	4-2		REDUCER A860 WPHY-60 ECC. SMLS BE SCH120 x SCH160	H01
RED CON		LRC0AH12	4-3		REDUCER A860 WPHY-60 CON. SMLS BE SCH120 x SCH160	H01
RED ECC		LRE0AH12	4-3		REDUCER A860 WPHY-60 ECC. SMLS BE SCH120 x SCH160	H01
CAP		LC00AH07	4		CAP A860 WPHY-60 SMLS BE SCH120	H01
PIPE	P1	LP00AN04	1/2"	1 1/2"	PIPE API 5L-X60 PSL1 SMLS PE XXS	H03
PIPE	P	LP00AK20	18"	18"	PIPE API 5L-X60 PSL1 SAW BE 100% RT SCH160	H03
ELBOW		LE90AK08	18		ELBOW A860 WPHY-60 90-LR WELDED BE SCH160	H03
ELBOW		LE40AK08	18		ELBOW A860 WPHY-60 DEG-45 WELDED BE SCH160	H03
FLAN		LFJ0AL15	0.5	1.5	FLANGE A105 SW RTJ CL1500 (ASME B16.5) W/JACK SCREW XXS	H03
FLAN		LF00AL18	8		FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) XXS	H03
FLAN		LFJ0AL19	8		FLANGE A694-F60 WN RTJ CL1500 (ASME B16.5) W/JACK SCREW XXS	H03
TEE		LTWOAN03	18-8		REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH160 x XXS	H03
TEE		LTR0AK08	18-10		TEE A860 WPHY-60 REDUCING WELDED BE SCH160 x SCH140	H03
TEE		LTR0AK08	18-12		TEE A860 WPHY-60 REDUCING WELDED BE SCH160 x SCH160	H03
TEE		LTR0AK08	18-14		TEE A860 WPHY-60 REDUCING WELDED BE SCH160 x SCH160	H03
TEE		LTR0AK08	18-16		TEE A860 WPHY-60 REDUCING WELDED BE SCH160 x SCH140	H03
TEE		LTE0AK08	18-18		TEE A860 WPHY-60 EQUAL WELDED BE SCH160	H03
TEE		LTWOAN03	20-8		REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH140 x XXS	H03
TEE		LTWOAN03	24-8		REINFORCED BRANCH OUTLET A105 WELDED OUTLET FORGED BE SCH140 x XXS	H03
RED CON		LRCPAN03	0.75-0.5		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03
RED ECC		LREPAN03	0.75-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRCPAN03	1-0.5		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
RED ECC		LREPAN03	1-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRCPAN03	1-0.75		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03
RED ECC		LREPAN03	1-0.75		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRCPAN03	1.5-0.5		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03
RED ECC		LREPAN03	1.5-0.5		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRCPAN03	1.5-0.75		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03
RED ECC		LREPAN03	1.5-0.75		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRCPAN03	1.5-1		SWAGE A860 WPHY-60 CON. SMLS PE XXS x XXS	H03
RED ECC		LREPAN03	1.5-1		SWAGE A860 WPHY-60 ECC. SMLS PE XXS x XXS	H03
RED CON		LRC0AK08	18-10		REDUCER A860 WPHY-60 CON. WELDED BE SCH160 x SCH140	H03
RED ECC		LRE0AK08	18-10		REDUCER A860 WPHY-60 ECC. WELDED BE SCH160 x SCH140	H03
RED CON		LRC0AK08	18-12		REDUCER A860 WPHY-60 CON. WELDED BE SCH160 x SCH160	H03
RED ECC		LRE0AK08	18-12		REDUCER A860 WPHY-60 ECC. WELDED BE SCH160 x SCH160	H03
RED CON		LRC0AK08	18-14		REDUCER A860 WPHY-60 CON. WELDED BE SCH160 x SCH160	H03
RED ECC		LRE0AK08	18-14		REDUCER A860 WPHY-60 ECC. WELDED BE SCH160 x SCH160	H03
RED CON		LRC0AK08	18-16		REDUCER A860 WPHY-60 CON. WELDED BE SCH160 x SCH140	H03
RED ECC		LRE0AK08	18-16		REDUCER A860 WPHY-60 ECC. WELDED BE SCH160 x SCH140	H03
PCOM		LFSBAN07	4	8	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL2500 (ASME B16.48)	J01
PCOM		LFSBAN07	4	8	FLANGE A516-70 PADDLE SPACER AND BLANKS RTJ CL2500 (ASME B16.48)	J03
PLUG VA	VPL	VPLAH008	1/2"	1 1/2"	PLUG VALVE A105 PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL1500 W/XXS REDUCING BORE, W-OP (F-SAFE)BS 5353	H03
GATE VA	VGX	VGWAJ001	1/2"	1 1/2"	GATE VALVE A105 BW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J01
GATE VA	VGX	VGWAJ001	1/2"	1 1/2"	GATE VALVE A105 BW x TE(NPT-F) 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J03
GATE VA	VGB	VGWAJ002	1/2"	1 1/2"	GATE VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J01
GATE VA	VGB	VGWAJ002	1/2"	1 1/2"	GATE VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J03
GATE VA	VGF	VGAAJ001	2"	3"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J01
GATE VA	VGF	VGAAJ001	2"	3"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J03
GATE VA	VGF	VGAAJ002	4"	4"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE GEAR OPERATED ANSI CL2500 API 600	J01
GATE VA	VGF	VGAAJ002	4"	4"	GATE VALVE A216-WCB FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE GEAR OPERATED ANSI CL2500 API 600	J03
GATE VA	VGF	VGAAJ003	6"	6"	GATE VALVE A216-WCB FLGD-RTJ 13Cr SEATS & DISC BB OS&Y FLEXIBLE WEDGE GEAR OPERATED ANSI CL2500 API 600	J01
GATE VA	VGF	VGAAJ003	6"	6"	GATE VALVE A216-WCB FLGD-RTJ 13Cr SEATS & DISC BB OS&Y FLEXIBLE WEDGE GEAR OPERATED ANSI CL2500 API 600	J03
GATE VA	VGF	VGAAJ004	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J01
GATE VA	VGF	VGAAJ004	1/2"	1 1/2"	GATE VALVE A105 FLGD-RTJ 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J03
GATE VA	VGB	VGWAJ003	1/2"	1 1/2"	GATE VALVE A105 BW-SCH160 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J01
GATE VA	VGB	VGWAJ004	2"	3"	GATE VALVE A216-WCB BW-SCH160 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J01
GATE VA	VGB	VGWAJ005	2"	3"	GATE VALVE A216-WCB BW-SCHXXS 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J03
GATE VA	VGB	VGWAJ006	4"	4"	GATE VALVE A216-WCB BW-SCH160 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J01
GATE VA	VGB	VGWAJ007	4"	4"	GATE VALVE A216-WCB BW-SCHXXS 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J03
GATE VA	VGB	VGWAJ008	6"	6"	GATE VALVE A216-WCB BW-SCH160 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J01
GATE VA	VGB	VGWAJ009	6"	6"	GATE VALVE A216-WCB BW-SCHXXS 13Cr W/STELLITE SEATS & DISC BB OS&Y FLEXIBLE WEDGE ANSI CL2500 API 600	J03
GATE VA	VGB	VGWAJ010	1/2"	1 1/2"	GATE VALVE A105 BW-SCHXXS 13Cr W/STELLITE SEATS & DISC BB OS&Y PLAIN SOLID WEDGE ANSI CL2500 API 602	J03
CHECK VA	VCA	VCAAJ001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC & TRIM DUAL PLATE ANSI CL2500 API 594	J01
CHECK VA	VCA	VCAAJ001	2"	4"	CHECK VALVE A216-WCB WAFER 13Cr W/STELLITE SEATS & DISC & TRIM DUAL PLATE ANSI CL2500 API 594	J03

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
CHECK VA	VCA	VCAAJ002	6"	6"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL2500 API 594	J01
CHECK VA	VCA	VCAAJ002	6"	6"	CHECK VALVE A216-WCB WAFER 13Cr TRIM DUAL PLATE ANSI CL2500 API 594	J03
CHECK VA	VCA	VCWAJ002	1/2"	1 1/2"	CHECK VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL2500 BS 5352	J01
CHECK VA	VCA	VCWAJ003	1/2"	1 1/2"	CHECK VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BC PISTON TYPE DISC ANSI CL2500 BS 5352	J03
PLUG VA	VPL	VPLCF001	1/2"	1 1/2"	PLUG VALVE A182 F304L PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL800 W/80S REDUCING BORE, W-OP (F-SAFE) BS 5353	B46
PLUG VA	VPL	VPLCF001	1/2"	1 1/2"	PLUG VALVE A182 F304L PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL800 W/80S REDUCING BORE, W-OP (F-SAFE) BS 5353	D46
PLUG VA	VPL	VPLCF001	1/2"	1 1/2"	PLUG VALVE A182 F304L PE (NIPPLE LENGTH=100) 304SS PLUG W/PTFE SEATS ANSI CL800 W/80S REDUCING BORE, W-OP (F-SAFE) BS 5353	F46
PLUG VA	VPL	VPLAJ001	1/2"	1 1/2"	PLUG VALVE A105 BW 304SS PLUG W/PTFE SEATS API CL2500 W/SCH160 REDUCING BORE, W-OP F-SAFE BS 5353	J01
PLUG VA	VPL	VPLAJ002	2"	2"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL2500 REDUCING BORE, W-OP (F-SAFE) API 599	J01
PLUG VA	VPL	VPLAJ002	2"	2"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL2500 REDUCING BORE, W-OP (F-SAFE) API 599	J03
PLUG VA	VPL	VPLAJ003	3"	6"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL2500 REDUCING BORE, G-OP (F-SAFE) API 599	J01
PLUG VA	VPL	VPLAJ003	3"	6"	PLUG VALVE A216-WCB FLGD-RTJ 304SS PLUG W/PTFE SEATS ANSI CL2500 REDUCING BORE, G-OP (F-SAFE) API 599	J03
PLUG VA	VPL	VPLAJ004	1/2"	1 1/2"	PLUG VALVE A105 BW 304SS PLUG W/PTFE SEATS API CL2500 W/XXS REDUCING BORE, W-OP F-SAFE BS 5353	J03
PLUG VA	VPL	VPLAJ005	2"	2"	PLUG VALVEA216-WCB BW 304SS PLUG W/PTFE SEATS API CL2500 W/SCH160 REDUCING BORE, W-OP F-SAFE API 599	J01
PLUG VA	VPL	VPLAJ006	3"	6"	PLUG VALVEA216-WCB BW 304SS PLUG W/PTFE SEATS API CL2500 W/SCH160 REDUCING BORE, G-OP F-SAFE API 599	J01
PLUG VA	VPL	VPLAJ007	2"	2"	PLUG VALVEA216-WCB BW 304SS PLUG W/PTFE SEATS API CL2500 W/SCHXXS REDUCING BORE, W-OP F-SAFE API 599	J03
PLUG VA	VPL	VPLAJ008	3"	6"	PLUG VALVEA216-WCB BW 304SS PLUG W/PTFE SEATS API CL2500 W/SCHXXS REDUCING BORE, G-OP F-SAFE API 599	J03
BALL VA	VBR	VBRAH002	4	24	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 REDUCING BORE, G-OP (F-SAFE) API 6D AEDVITON SEAL/TRUNNION	H01
BALL VA	VBF	VBFAH007	4	24	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 FULL BORE, G-OP (F-SAFE) API 6D AED VITONSEAL/TRUNNION	H01
BALL VA	VBF	VBFAH004	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/SCH160 FULL BORE, W-OP (F-SAFE)BS 5351 AED VITON SEAL/FLOATING	H01
BALL VA	VBF	VBFAH006	2	3	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 FULL BORE, W-OP (F-SAFE) API 6D AED VITONSEAL/TRUNNION	H01
BALL VA	VBR	VBRAH001	2	3	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 REDUCING BORE, W-OP (F-SAFE) API 6D AEDVITON SEAL/TRUNNION	H01
BALL VA	VBR	VBRAH004	4	24	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 REDUCING BORE, G-OP (F-SAFE) API 6D AEDVITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	H03
BALL VA	VBF	VBFAH009	4	24	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 FULL BORE, G-OP (F-SAFE) API 6D AED VITONSEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	H03
BALL VA	VBF	VBFAH005	1/2"	1 1/2"	BALL VALVE A105 PE (NIPPLE LENGTH=100) 316SS BALL W/NYLON SEATS ANSI CL1500 W/XXS FULL BORE, W-OP (F-SAFE) BS5351 AED VITON SEAL/FLOATING/316L SS OVERLAY ON SEAL POCKETS	H03
BALL VA	VBF	VBFAH008	2	3	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 FULL BORE, W-OP (F-SAFE) API 6D AED VITONSEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	H03
BALL VA	VBR	VBRAH003	2	3	BALL VALVE A216-WCB FLGD-RTJ A105 ENP BALL W/NYLON SEATS ANSI CL1500 REDUCING BORE, W-OP (F-SAFE) API 6D AEDVITON SEAL/TRUNNION/316L SS OVERLAY ON SEAL POCKETS	H03
BALL VA	VBF	VBFAJ001	1/2"	1 1/2"	BALL VALVE A105 BW 316SS ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	J01
BALL VA	VBF	VBFAJ002	2	3	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, W-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J01
BALL VA	VBF	VBFAJ003	4	6	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, G-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J01
BALL VA	VBF	VBFAJ004	1/2"	1 1/2"	BALL VALVE A105 BW 316SS BALL W/NYLON SEATS ANSI CL2500,SCH XXS, FULL BORE, W-OP (F-SAFE) BS 5351 AED VITON SEAL/FLOATING	J03
BALL VA	VBF	VBFAJ005	2	3	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
BALL VA	VBF	VBFAJ006	4	6	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 FULL BORE, G-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J03
BALL VA	VBR	VBRAJ002	2	3	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCE BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J01
BALL VA	VBR	VBRAJ003	4	6	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCE BORE, G-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J01
BALL VA	VBR	VBRAJ005	2	3	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCER BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
BALL VA	VBR	VBRAJ006	4	6	BALL VALVE A216 WCB RJ A105 ENP BALL W/NYLON SEATS ANSI CL2500 REDUCE BORE, G-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J03
BALL VA	VBF	VBFAJ007	2	3	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH 160 FULL BORE, W-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J01
BALL VA	VBF	VBFAJ008	4	6	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH 160 FULL BORE, G-OP (F-SAFE)API 6D AED VITON SEAL/TURNION	J01
BALL VA	VBF	VBFAJ009	2	3	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH XXS FULL BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
BALL VA	VBF	VBFAJ010	4	6	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH XXS FULL BORE, G-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
BALL VA	VBR	VBRAJ007	2	3	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH 160 REDUCE BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J01

ITEM	S. CODE	CODE	SIZE		DESCRIPTION	PIPE CLASS
			MIN.	MAX.		
BALL VA	VBR	VBRAJ008	4	6	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH 160 REDUCE BORE, G-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J01
BALL VA	VBR	VBRAJ009	2	3	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH XXS REDUCE BORE, W-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
BALL VA	VBR	VBRAJ010	4	6	BALL VALVE A216 WCB BW A105 ENP BALL W/NYLON SEATS ANSI CL2500/SCH XXS REDUCE BORE, G-OP (F-SAFE)API 6D AED VITONSEAL/TURNION	J03
GLOBE VA	VLA	VLWAJ001	1/2"	1 1/2"	GLOBE VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH 160, BS 5352	J01
GLOBE VA	VLA	VLAAJ001	2"	2"	GLOBE VALVE A216WCB,RTJ, 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500 BS 1873	J03
GLOBE VA	VLA	VLAAJ001	2"	2"	GLOBE VALVE A216WCB,RTJ, 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500 BS 1873	J01
GLOBE VA	VLA	VLAAJ002	3"	6"	GLOBE VALVE A216WCB,RTJ, 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500,GEAR OPERATED BS 1873	J01
GLOBE VA	VLA	VLAAJ002	3"	6"	GLOBE VALVE A216WCB,RTJ, 13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500,GEAR OPERATED BS 1873	J03
GLOBE VA	VLA	VLWAJ002	2"	2"	GLOBE VALVE A216WCB BW ,13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH 160, BS 1873	J01
GLOBE VA	VLA	VLWAJ003	2"	2"	GLOBE VALVE A216WCB BW ,13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH XXS, BS 1873	J03
GLOBE VA	VLA	VLWAJ004	3"	6"	GLOBE VALVE A216WCB BW ,13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH 160,GEAR OPERATED BS 1873	J01
GLOBE VA	VLA	VLWAJ005	3"	6"	GLOBE VALVE A216WCB BW ,13Cr TRIM BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH XXS,GEAR OPERATED BS 1873	J03
GLOBE VA	VLA	VLWAJ006	1/2"	1 1/2"	GLOBE VALVE A105 BW 13Cr W/STELLITE SEATS & DISC BB OS&Y PLUG TYPE DISC ANSI CL2500/SCH XXS, BS 5352	J03