TRUEMARK

VALVES

# About Us

From its beginning in 1983, Truemark has serviced a large number of diverse manufacturers, distributors and wholesalers worldwide. With more than 34 years sourcing experience, Truemark has profound knowledge in sourcing business and the import/export process, and well-established connections with some of the best quality foundries and machine shops in all of Asia.

## COOPERATIVE PARTNERS

AMETEK
FRANKLIN
NOV
PUFFER SWEIVEN
EMERSON LOCAL BUSINESS PARTNER
EMERSON
FLOMATIC VALVES
INTEGRATED EQUIPMENT
TITAN
TITAN FLOW CONTROL
"go with the flo"
UniqueFlo
Mueller Steam Specialty
APACHE
PRESSURE PRODUCTS
PRATT
WATTS
WATER TECHNOLOGIES
WILLIAMS
MAX SEAL
Valves & Controls
FLO TITE
valves & controls
WDI

# Quality Assurance

## ISO 9001, Manufactures Selection, Evaluation, and Control

At Truemark, we maintain an ISO 9001 quality management system with strong emphasis on the continual improvement of quality, engineering, manufacturing, and business related processes. The scope of this quality management system covers all processes directly and indirectly related to the design, manufacture, assembly, and test of our products. Products included in that scope are: stainless steel, carbon steel, special alloy, chrome, iron, and bronze valves.

The quality management system also makes provision for the control of purchased component products, which requires that these suppliers also maintain an ISO 9001 based quality system and the subsequent certification. It is the intent of the company to partner with its supply base in order to develop a strong and continuous relationship that is imperative to the quality, success, and future of the company. Procurement of outsourced processes and services that affect product conformity, such as, RT, MT, PT, and calibration of measurement and test equipment, are also controlled in the same manner.

The procurement process is controlled by specific guidelines and procedures established in the company's quality manual, supporting tiers of procedures, and work instructions. The level of control exerted is dependent on the type of product or service, and the impact on the quality of the final products and services provided to our customer. There are procedures detailing criteria to determine the capability of manufactures, which include the selection, evaluation, and re-evaluation of manufactures. Manufactures furnishing vital materials and products are audited on a regular basis to determine the adequacy of their quality system. The manufactures that meet the requirements are listed on the Approved Manufactures List (AML) with the manufactures performance being monitored and evaluated for quality and capacity capabilities. The corrective action process shall be used when a manufacture fails to meet quality system requirements, or when the conformance of products and/or services is deemed unacceptable. Removal from the AML may be necessary if the supplier fails to meet the system requirements, or in cases of repetitive non-conformance.

Truemark is committed to meet our customers' expectations in the manufacture of quality valves and associated services. We will work as a team in providing error free products and services on time with a commitment on continual improvement. That quality policy statement promotes the close relationships between the manufactures, supply chains, and customer expectations of Truemark's products and services.

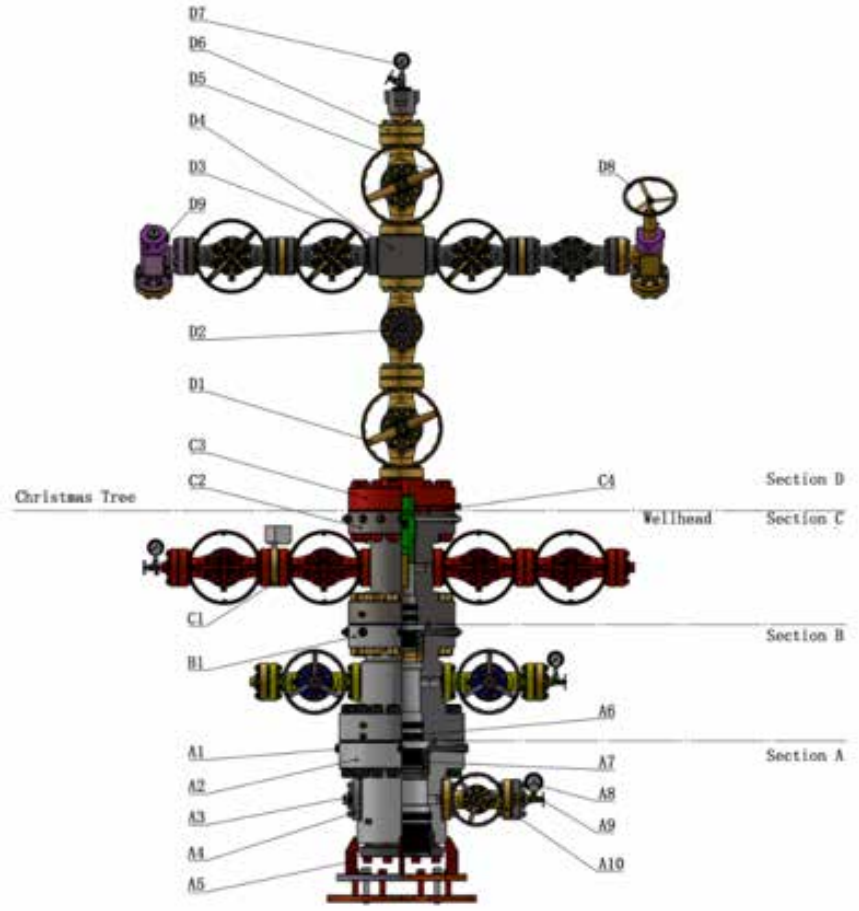
# API 6A

All TMK products are manufactured to API 6A Specifications as a basic minimum, in a plant that is API Q1 and ISO 9001 approved and Certified.

# Wellhead Equipment

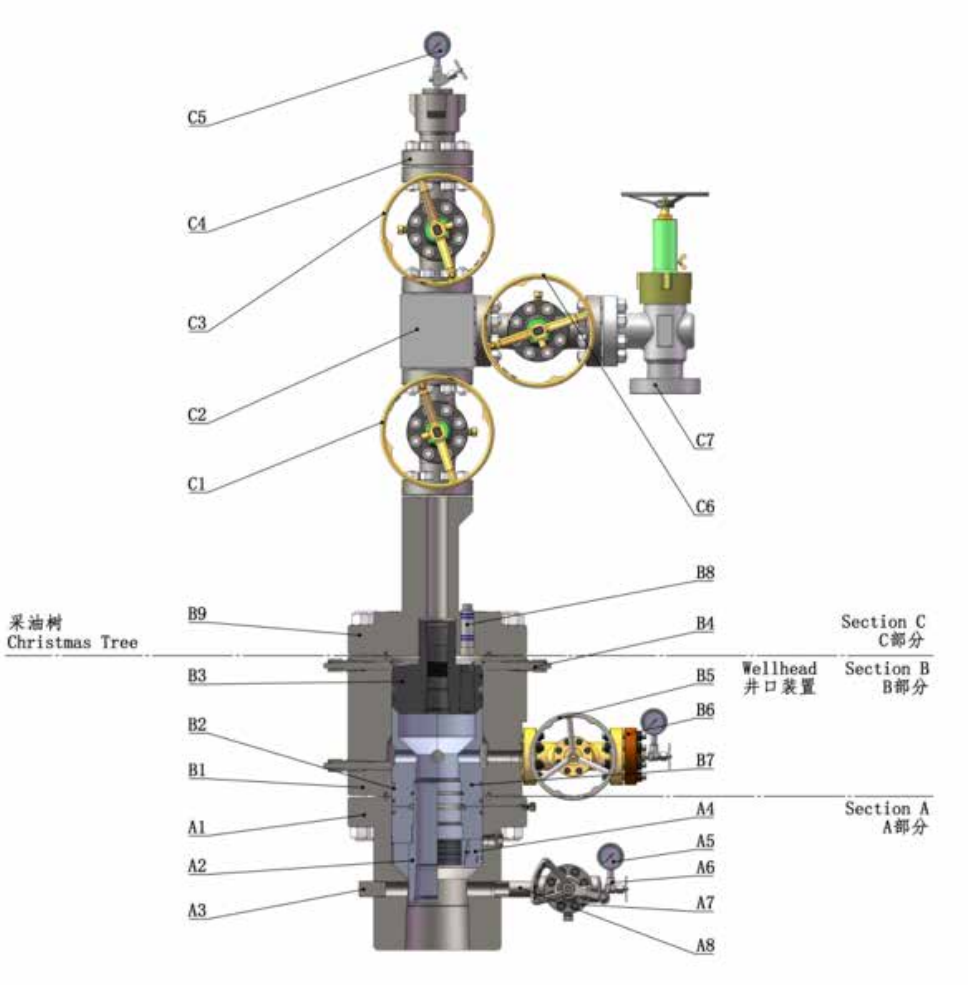
## WELLHEAD EQUIPMENT & CHRISTMAS TREE ASSY

### Common Customized Wellhead Equipment And Christmas Tree



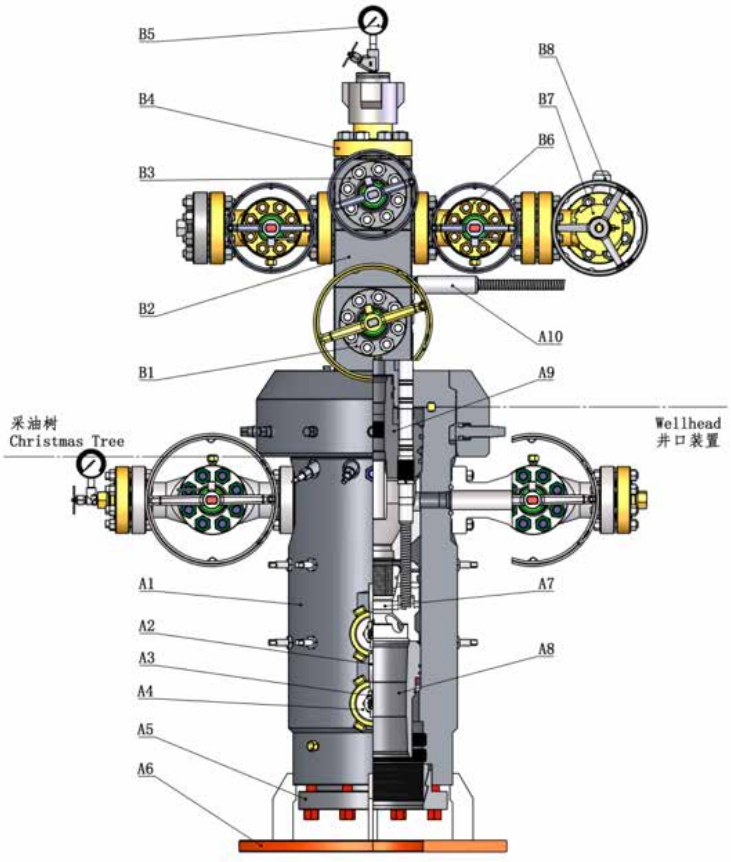

A1 Lock Screw
A2 Casing Head
A3 Bull Plug
A4 Companion Flange
A5 Base Plate
A6 Secondary Seal
A7 Casing Hanger
A8 Pressure Gauge
A9 Needle Valve
A10 Gate Valve
B1 Casing Spool
C1 Instrument Flange
C2 Tubing Head
C3 Tubing Head Adapter
C4 Tubing Hanger
D1 Lower Master Valve
D2 Upper Master Valve
D3 Wing Valve
D4 Cross
D5 Swab Valve
D6 Tree Cap Test Adapter
D7 Pressure Gauge
D8 Adjustable Choke
D9 Positive Choke

# ESP /MBS Unihead And Christmas Tree



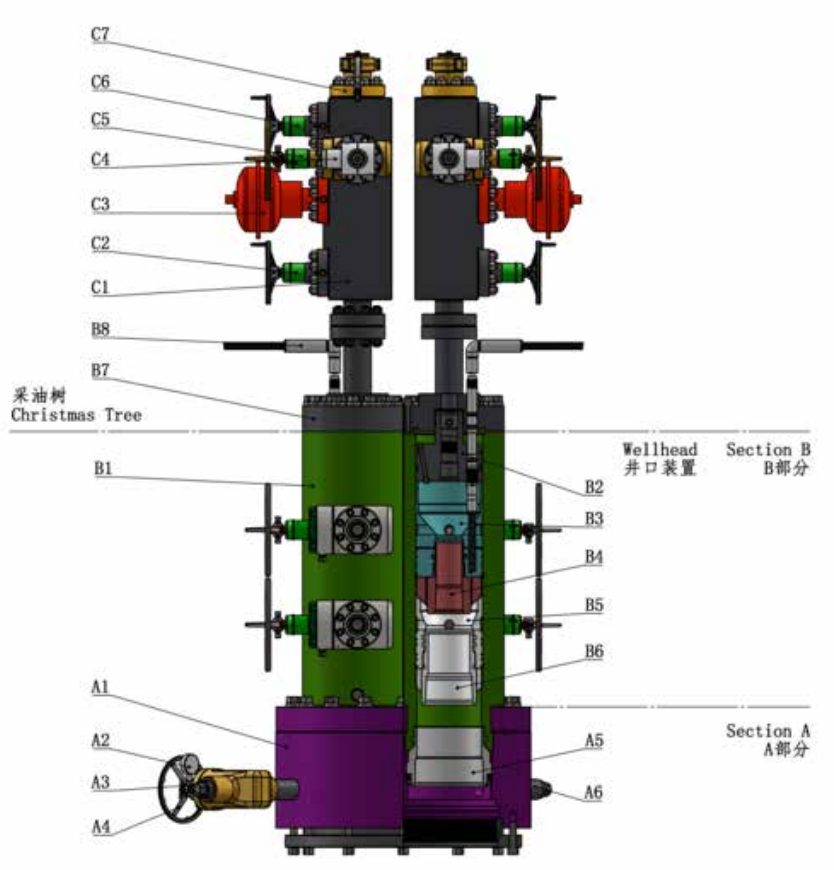

A1 Lock Screw
A2 Casing Head
A3 Bull Plug
A4 Companion Flange
A5 Base Plate
A6 Secondary Seal
A7 Casing Hanger
A8 Pressure Gauge
A9 Needle Valve
A10 Gate Valve
B1 Casing Spool
C1 Instrument Flange
C2 Tubing Head
C3 Tubing Head Adapter
C4 Tubing Hanger
D1 Lower Master Valve
D2 Upper Master Valve
D3 Wing Valve
D4 Cross
D5 Swab Valve
D6 Tree Cap Test Adapter
D7 Pressure Gauge
D8 Adjustable Choke
D9 Positive Choke

# Integrated Fast Installed Wellhead Equipment And Christmas Tree




A1 Lock Screw
A2 Casing Head
A3 Bull Plug
A4 Companion Flange
A5 Base Plate
A6 Secondary Seal
A7 Casing Hanger
A8 Pressure Gauge
A9 Needle Valve
A10 Gate Valve
B1 Casing Spool
C1 Instrument Flange
C2 Tubing Head
C3 Tubing Head Adapter
C4 Tubing Hanger
D1 Lower Master Valve
D2 Upper Master Valve
D3 Wing Valve
D4 Cross
D5 Swab Valve
D6 Tree Cap Test Adapter
D7 Pressure Gauge
D8 Adjustable Choke
D9 Positive Choke

# Conductor Sharing Wellhead Equipment And Christmas Tree

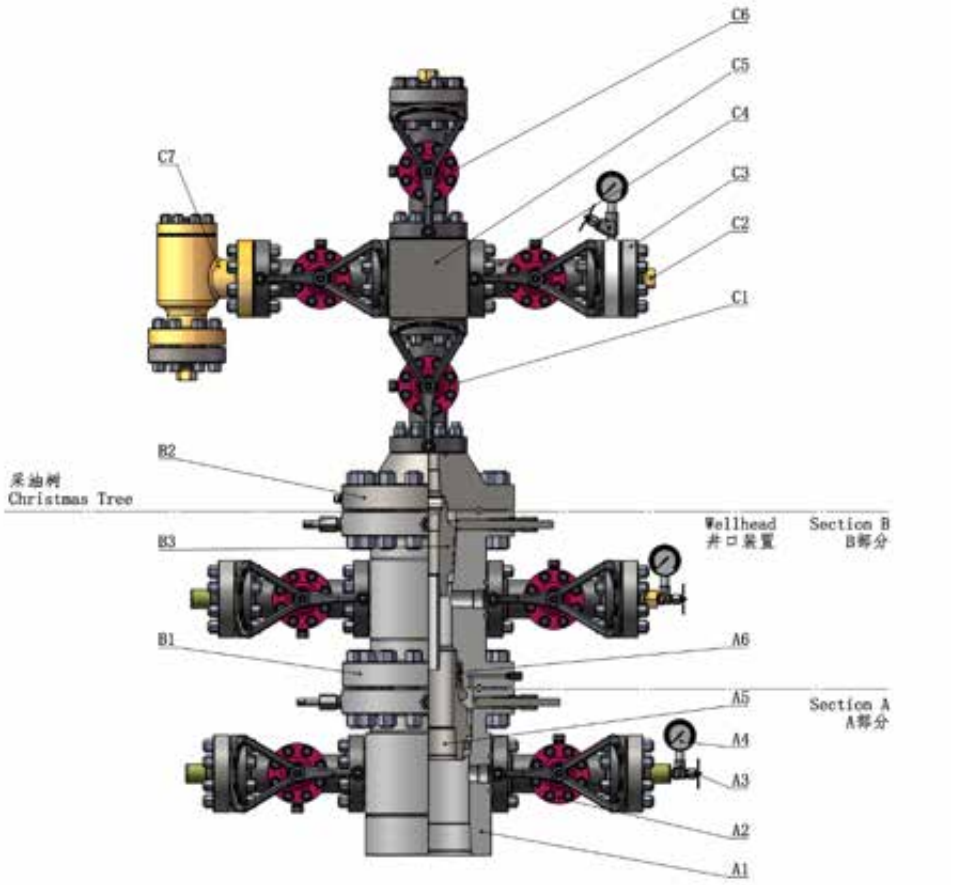



A1 Lock Screw
A2 Casing Head
A3 Bull Plug
A4 Companion Flange
A5 Base Plate
A6 Secondary Seal
A7 Casing Hanger
A8 Pressure Gauge
A9 Needle Valve
A10 Gate Valve
B1 Casing Spool
C1 Instrument Flange
C2 Tubing Head
C3 Tubing Head Adapter
C4 Tubing Hanger
D1 Lower Master Valve
D2 Upper Master Valve
D3 Wing Valve
D4 Cross
D5 Swab Valve
D6 Tree Cap Test Adapter
D7 Pressure Gauge
D8 Adjustable Choke
D9 Positive Choke

**Dimensions:**

**Working Pressure** 2000PSI~20000PSI
**Temperature Classification** -60°C ~ 121°C (K ~ U)
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Spec. Level** PSL1~ PSL4
**Performance Require** PR1 PR2

# Thermal Recovery Wellhead Equipment And Christmas Tree




| | | | |
|---|---|---|---|
| A1 Lock Screw | A7 Casing Hanger | C2 Tubing Head | D4 Cross |
| A2 Casing Head | A8 Pressure Gauge | C3 Tubing Head Adapter | D5 Swab Valve |
| A3 Bull Plug | A9 Needle Valve | C4 Tubing Hanger | D6 Tree Cap Test Adapter |
| A4 Companion Flange | A10 Gate Valve | D1 Lower Master Valve | D7 Pressure Gauge |
| A5 Base Plate | B1 Casing Spool | D2 Upper Master Valve | D8 Adjustable Choke |
| A6 Secondary Seal | C1 Instrument Flange | D3 Wing Valve | D9 Positive Choke |

**Dimensions:**

**Working Pressure** 2000PSI~20000PSI
**Temperature Classification** -60°C ~ 121°C (K ~ U)
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Spec. Level** PSL1~ PSL4
**Performance Require** PR1 PR2

# Gate Valve

### HS - Hydraulic Actuator Surface Safety Valve

### HI - Hydraulic Indication Gate Valve

### PF - Gate Valve

### FC - Gate Valve

### MH - High Temperature Gate Valve

### HY - Hydraulic Gate Valve

### BS - Ball Screw Gate Valve

### AS - Pneumatic Actuator Surface Safety Valve

### GR - Gear Gate Valve

### ME - Expanding Gate Valve

# Gate Valve

| | | |
|---|---|---|
| **Size** | | 1-13/16~7 1/16 |
| **Working Pressure** | | 2000 psi~20000 psi |
| **Material Class** | | -60°C ~ 121°C (K ~ U) |
| **Temperature Classification** | | AA BB CC DD EE FF HH |
| **Spec. Level** | | PSL1~ 4 |
| **Performance Require** | | PR1-2 |
| **Type** | **Type No.** | Application |
| **Safety Valve** | **HS** | Crude Oil, Natural Gas, & Mud Service |
| | **AS** | Crude Oil, Natural Gas, & Mud Service |
| **ME - Expanding Gate Valve** | **ME** | Crude Oil, Natural Gas, & Mud Service |
| **MH - High Temperature Gate Valve** | **MH** | Crude Oil, Natural Gas, & Mud Service |
| **FC - Gate Valve** | **FC** | Crude Oil, Natural Gas, & Mud Service |
| **PF - Gate Valve** | **PF** | Crude Oil, Natural Gas, & Mud Service |
| **HY - Hydraulic Gate Valve** | **HY** | Crude Oil, Natural Gas, & Mud Service |
| **HI - Hydraulic Indication Gate Valve** | **HI** | Crude Oil, Natural Gas, & Mud Service |
| **BS - Ball Screw Gate Valve** | **BS** | Crude Oil, Natural Gas, & Mud Service |
| **GR - Gear Gate Valve** | **GR** | Crude Oil, Natural Gas, & Mud Service |

# Check Valve

## DS - Swing Check Valve

**Size** 1 13/16"~5 1/8"
**Working Pressure** 2000PSI~15000PSI
**Working Medium** Oil, Natural Gas, Mud, Containing H2S, CO2 Gas
**Temperature Classification** -60°C ~ 121°C (K ~ U)
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Spec. Level** PSL1~ PSL4
**Performance Require** PR1 PR2

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## DR - Rise Check Valve

**Size** 1 13/16"~4 1/16
**Working Pressure** 2000PSI~15000PSI
**Working Medium** Oil, Natural Gas, mud, Containing H2S, CO2 Gas
**Temperature Classification** -60°C ~ 121°C (K ~ U)
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Spec. Level** PSL1~ PSL4
**Performance Require** PR1 PR2

# Choke Valve

## JO - Orifice Adjustable Chock Valve

**Classification** Orifice Adjustable Choke Valve
**Code No.** JOI
**Application** Mud, oil, natural gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 2000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** -60°C ~ 121°C (K ~ U)

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## JP - Positive Choke Valve

**Classification** Positive Choke Valve
**Code No.** JPI
**Application** Mud, oil, natural gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 2000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** -60°C ~ 121°C (K ~ U)

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## JA - Needle Adjustable Choke Valve

**Classification** Needle Adjustable Choke Valve
**Code No.** JAI
**Application** Mud, oil, natural gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 2000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** -60°C ~ 121°C (K ~ U)

# Plug Valve

## XZF - Flanged Plug Valve

**Classification** Flanged Plug Valve
**Code No.** XZFI
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 10000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**Spec. Level** PSL1~PSL4
**Performance Require** PR1~PR2
**End Connection** Union/Flange/Thread

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## XZL - Threaded Plug Valve

**Classification** Threaded Plug Valve
**Code No.** XZL
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 10000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**Spec. Level** PSL1~PSL4
**Performance Require** PR1~PR2
**End Connection** Union/Flange/Thread

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## XZU - Plug Valve

**Classification** Union Plug Valve
**Code No.** XZUI
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1 13/16"~4 1/16"
**Working Pressure** 10000~15000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**Spec. Level** PSL1~PSL4
**Performance Require** PR1~PR2
**End Connection** Union/Flange/Thread

# Ball Valve

## QFH - High Temperature Ball Valve

**Classification** High Temperature Ball Valve
**Code No.** QFH
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1in 1 1/2in 2in 3in
**Working Pressure** 2000/3000/5000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**End Connection** Thread

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## QFD - Fixed Ball Valve

**Classification** Fixed Ball Valve
**Code No.** AB-QFD
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1in 1 1/2in 2in 3in
**Working Pressure** 2000/3000/5000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**End Connection** Thread

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## QF - Floating Ball Valve

**Classification** Floating Ball Valve
**Code No.** AB-QF
**Application** Oil, natural gas, slurry, containing H2S, CO2 gas

**Dimensions**
**Bore Size** 1in 1 1/2in 2in 3in
**Working Pressure** 2000/3000/5000psi
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Temperature Classification** K, L, N, P, S, T, U, V, Y
**End Connection** Thread

# Shut Valve

### HP - High Pressure Shut Valve

**Nominal Bore** 1 13/16"~5 1/8"
**Working Pressure** 2000PSI~15000PSI
**Working Medium** Oil, Natural Gas, Mud, Containing H2S, CO2 Gas
**Temperature Classification** -60°C ~ 121°C (K ~ U)
**Material Class** AA, BB, CC, DD, EE, FF, HH
**Spec. Level** PSL1~ PSL4
**Performance Require** PR1 PR2

# Needle Valve

### JT – Angle Needle Valve
### JJ - Straight-through Needle Valve

Straight-through and angle needle valve rated 20000 psi and high pressure needle valve can be customized according to customer requirements
**Size** 1/4" 3/8" 1/2" 1"

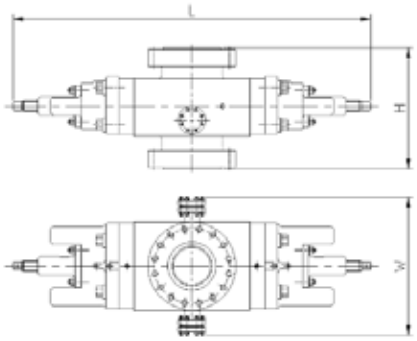
# Products - API 16A

## BOP

U Type Ram BOP

Singe u Ram BOP

**Single U Ram BOP Dimensions:**



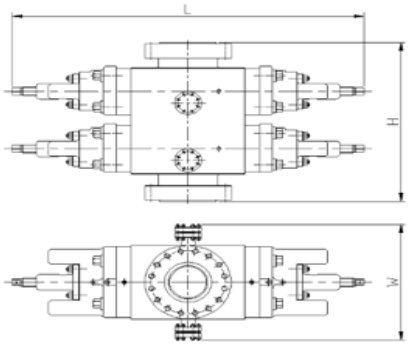

| Model | SIZE | Pressure Rating | Dimensions(mm) | | |
|---|---|---|---|---|---|
| | (in) | (psi) | L | W | H |
| FZ18-21 | 7-1/16(180mm) | 3000(20.7MPa) | 2100 | 760 | 615 |
| FZ18-35 | 7-1/16(180mm) | 5000(34.5MPa) | 2100 | 800 | 700 |
| FZ18-70 | 7-1/16(180mm) | 10000(69MPa) | 2100 | 850 | 780 |
| FZ18-105 | 7-1/16(180mm) | 15000(103.5MPa) | 2100 | 870 | 810 |
| FZ28-21 | 11(280mm) | 3000(20.7MPa) | 2800 | 1020 | 740 |
| FZ28-35 | 11(280mm) | 5000(34.5MPa) | 2800 | 1080 | 870 |
| FZ28-70 | 11(280mm) | 10000(69MPa) | 2800 | 1200 | 910 |
| FZ28-105 | 11(280mm) | 15000(103.5MPa) | 3200 | 1200 | 1140 |
| FZ35-21 | 13-5/8(346mm) | 3000(20.7MPa) | 3200 | 1200 | 800 |
| FZ35-35 | 13-5/8(346mm) | 5000(34.5MPa) | 3200 | 1300 | 860 |
| FZ35-70 | 13-5/8(346mm) | 10000(69MPa) | 3200 | 1350 | 1060 |
| FZ35-105 | 13-5/8(346mm) | 15000(103.5MPa) | 3500 | 1400 | 1365 |
| FZ53-21 | 20-3/4(527mm) | 3000(20.7MPa) | 4200 | 1450 | 1030 |
| FZ54-14 | 21-1/4(540mm) | 2000(13.8MPa) | 4200 | 1400 | 945 |

# Products - API 16A

## BOP

### Double U Ram

**Double U Ram BOP Dimensions:**



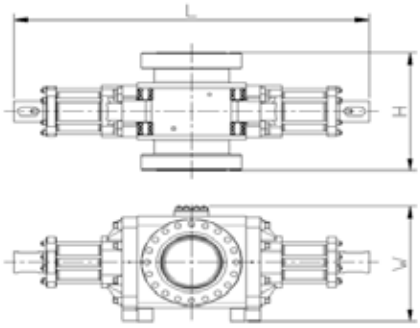

| Model | SIZE | Pressure Rating | Dimensions(mm) | | |
|---|---|---|---|---|---|
| | (in) | (psi) | L | W | H |
| 2FZ18-21 | 7-1/16(180mm) | 3000(20.7MPa) | 2100 | 760 | 1050 |
| 2FZ18-35 | 7-1/16(180mm) | 5000(34.5MPa) | 2100 | 800 | 1130 |
| 2FZ18-70 | 7-1/16(180mm) | 10000(69MPa) | 2100 | 850 | 1260 |
| 2FZ18-105 | 7-1/16(180mm) | 15000(103.5MPa) | 2100 | 870 | 1300 |
| 2FZ28-21 | 11(280mm) | 3000(20.7MPa) | 2800 | 1020 | 1260 |
| 2FZ28-35 | 11(280mm) | 5000(34.5MPa) | 2800 | 1080 | 1380 |
| 2FZ28-70 | 11(280mm) | 10000(69MPa) | 2800 | 1200 | 1420 |
| 2FZ28-105 | 11(280mm) | 15000(103.5MPa) | 3200 | 1200 | 1840 |
| 2FZ35-21 | 13-5/8(346mm) | 3000(20.7MPa) | 3200 | 1200 | 1360 |
| 2FZ35-35 | 13-5/8(346mm) | 5000(34.5MPa) | 3200 | 1300 | 1420 |
| 2FZ35-70 | 13-5/8(346mm) | 10000(69MPa) | 3200 | 1350 | 1720 |
| 2FZ35-105 | 13-5/8(346mm) | 15000(103.5MPa) | 3500 | 1400 | 2080 |
| 2FZ53-21 | 20-3/4(527mm) | 3000(20.7MPa) | 4200 | 1450 | 1680 |
| 2FZ54-14 | 21-1/4(540mm) | 2000(13.8MPa) | 4200 | 1400 | 1600 |

# Products - API 16A

## S Type Ram BOP

### Single S Ram BOP

**Single S Ram BOP Dimensions:**

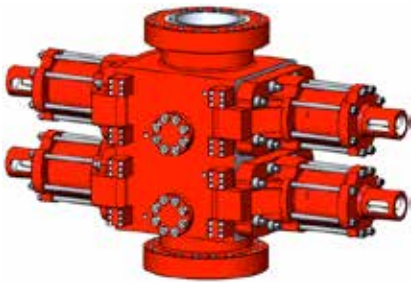



| Model | SIZE | Pressure Rating | Dimensions(mm) | | |
|---|---|---|---|---|---|
| | (in) | (psi) | L | W | H |
| FZ18-21 | 7-1/16(180mm) | 3000(20.7MPa) | 1420 | 650 | 620 |
| FZ18-35 | 7-1/16(180mm) | 5000(34.5MPa) | 1420 | 650 | 630 |
| FZ18-70 | 7-1/16(180mm) | 10000(69MPa) | 1800 | 715 | 830 |
| FZ23-21 | 9(230mm) | 3000(20.7MPa) | 1730 | 600 | 580 |
| FZ23-35 | 9(230mm) | 5000(34.5MPa) | 2030 | 865 | 820 |
| FZ28-21 | 11(280mm) | 3000(20.7MPa) | 2265 | 820 | 800 |
| FZ28-35 | 11(280mm) | 5000(34.5MPa) | 2265 | 840 | 950 |
| FZ28-70 | 11(280mm) | 10000(69MPa) | 2390 | 950 | 1050 |
| FZ35-21 | 13-5/8(346mm) | 3000(20.7MPa) | 2470 | 970 | 900 |
| FZ35-35 | 13-5/8(346mm) | 5000(34.5MPa) | 2470 | 970 | 950 |
| FZ35-70 | 13-5/8(346mm) | 10000(69MPa) | 3280 | 1490 | 1275 |
| FZ53-21 | 20-3/4(527mm) | 3000(20.7MPa) | 3400 | 1200 | 1070 |
| FZ54-14 | 21-1/4(540mm) | 2000(13.8MPa) | 3400 | 1200 | 915 |

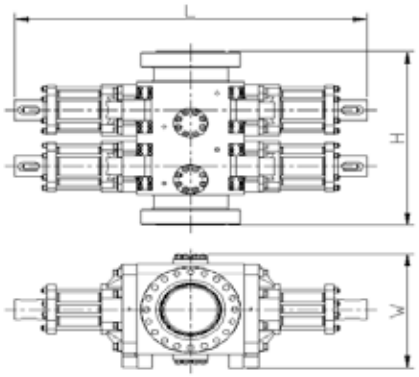
# Products - API 16A

## S Type Ram BOP

### Double S Ram BOP



**Double S Ram BOP Dimensions:**

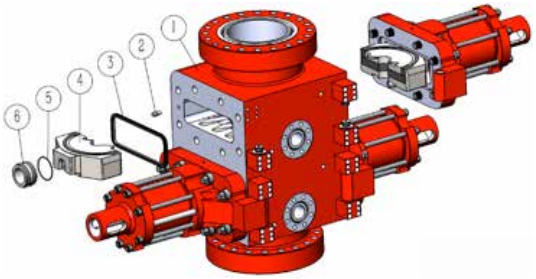


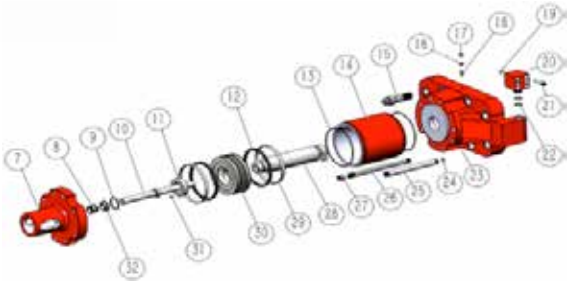

| Model | SIZE | Pressure Rating | Dimensions(mm) | | |
|---|---|---|---|---|---|
| | (in) | (psi) | L | W | H |
| 2FZ18-21 | 7-1/16(180mm) | 3000(20.7MPa) | 1420 | 650 | 880 |
| 2FZ18-35 | 7-1/16(180mm) | 5000(34.5MPa) | 1420 | 650 | 910 |
| 2FZ18-70 | 7-1/16(180mm) | 10000(69MPa) | 1800 | 715 | 1265 |
| 2FZ23-21 | 9(230mm) | 3000(20.7MPa) | 1730 | 600 | 900 |
| 2FZ23-35 | 9(230mm) | 5000(34.5MPa) | 2030 | 865 | 1230 |
| 2FZ28-21 | 11(280mm) | 3000(20.7MPa) | 2265 | 820 | 1230 |
| 2FZ28-35 | 11(280mm) | 5000(34.5MPa) | 2265 | 840 | 1240 |
| 2FZ28-70 | 11(280mm) | 10000(69MPa) | 2390 | 950 | 1600 |
| 2FZ35-21 | 13-5/8(346mm) | 3000(20.7MPa) | 2470 | 970 | 1400 |
| 2FZ35-35 | 13-5/8(346mm) | 5000(34.5MPa) | 2470 | 970 | 1430 |
| 2FZ35-70 | 13-5/8(346mm) | 10000(69MPa) | 3280 | 1490 | 1735 |
| 2FZ53-21 | 20-3/4(527mm) | 3000(20.7MPa) | 3400 | 1200 | 1655 |
| 2FZ54-14 | 21-1/4(540mm) | 2000(13.8MPa) | 3400 | 1200 | 1505 |

# Products - API 16A

## S Type Ram BOP

### Parts list of S Ram BOP:





| NO. | Name | Single | Double |
|---|---|---|---|
| 1 | Body | 1 | 1 |
| 2 | Pin | 2 | 4 |
| 3 | Seal, Door | 2 | 4 |
| 4 | Ram assembly | 1 | 2 |
| 5 | Ring, Retainer | 2 | 4 |
| 6 | Sealing Assembly, Ram Shaft | 2 | 4 |
| 7 | Cylinder Head | 2 | 4 |
| 8 | Sealing Assembly, Locking Shaft | 2 | 4 |
| 9 | Ring, Retainer | 2 | 4 |
| 10 | Locking Shaft | 2 | 4 |
| 11 | Locking Plate | 2 | 4 |
| 12 | Seal, Operating Piston | 4 | 8 |
| 13 | O Ring | 4 | 8 |
| 14 | Cylinder | 2 | 4 |
| 15 | Bolt, Door | 16 | 32 |

| NO. | Name | Single | Double |
|---|---|---|---|
| 16 | Screw, Plastic Packing | 2 | 4 |
| 17 | Pipe Plug, Plastic Packing | 2 | 4 |
| 18 | Check Valve, Plastic Packing | 2 | 4 |
| 19 | O Ring | 4 | 8 |
| 20 | Hinge Bracket | 4 | 8 |
| 21 | Hex-Screw | 16 | 32 |
| 22 | O Ring | 8 | 16 |
| 23 | Door | 2 | 4 |
| 24 | O Ring | 8 | 16 |
| 25 | Cylinder Manifold | 2 | 4 |
| 26 | Bolt, Cylinder | 16 | 32 |
| 27 | Nut | 16 | 32 |
| 28 | Ram Shaft | 2 | 4 |
| 29 | Wear Ring, Operating Piston | 4 | 8 |
| 30 | Operating Piston | 2 | 4 |
| 31 | Hexagon Socket Set Screws | 2 | 4 |
| 32 | Gasket | 2 | 4 |

# Products - API 16A

## Annular BOP

Bolted-Cover Spherical BOP

Spherical Sealing Element;
Pressure Rating≤35MPa; Top cover and shell are connected by a flange.

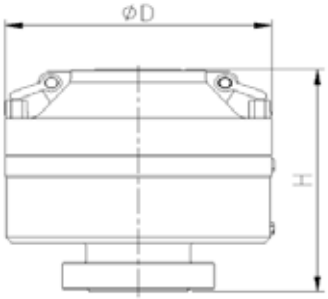
Wedge-Cover Spherical BOP

Spherical Sealing Element;
Pressure Rating=70MPa; Top cover and shell are connected by a wedge block.

Latched Head BOP

Cone-shaped Sealing Element;
Top cover and Shell connected by a claw chuck.

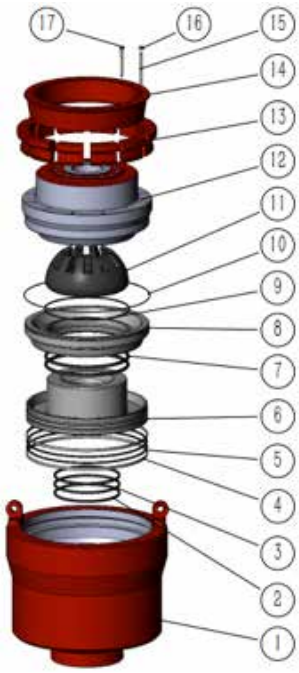
**Annular BOP Dimensions:**




| Model | SIZE | Pressure Rating | Dimensions(mm) | |
|---|---|---|---|---|
| | (in) | (psi) | D | H |
| FH18-21 | 7-1/16(180mm) | 3000(20.7MPa) | 1420 | 770 |
| FH18-35 | 7-1/16(180mm) | 5000(34.5MPa) | 750 | 800 |
| FH18-70 | 7-1/16(180mm) | 10000(69MPa) | 750 | 1100 |
| FH23-21 | 9(230mm) | 3000(20.7MPa) | 1100 | 840 |
| FH23-35 | 9(230mm) | 5000(34.5MPa) | 910 | 970 |
| FH28-21 | 11(280mm) | 3000(20.7MPa) | 1020 | 870 |
| FH28-35 | 11(280mm) | 5000(34.5MPa) | 1020 | 1100 |
| FH28-70 | 11(280mm) | 10000(69MPa) | 1150 | 1350 |
| FH35-21 | 13-5/8(346mm) | 3000(20.7MPa) | 1450 | 1110 |
| FH35-35 | 13-5/8(346mm) | 5000(34.5MPa) | 1280 | 1150 |
| FH35-70 | 13-5/8(346mm) | 10000(69MPa) | 1280 | 1500 |
| FHz53-21 | 20-3/4(527mm) | 3000(20.7MPa) | 1650 | 1360 |
| FHz54-14 | 21-1/4(540mm) | 2000(13.8MPa) | 1400 | 1400 |

# Products - API 16A

## Parts list of Wedge-Cover Spherical




| No. | NAME | Qty. |
|---|---|---|
| 1 | Body | 1 |
| 2 | Wear Ring, Body | 1 |
| 3 | Seal, Piston I.D. | 2 |
| 4 | Wear Ring, Piston | 2 |
| 5 | Seal, Piston O.D. | 2 |
| 6 | Piston | 1 |
| 7 | Seal, Adapter I.D. | 2 |
| 8 | Adapter Ring | 1 |
| 9 | Seal, Adapter Top | 1 |
| 10 | O Ring | 1 |
| 11 | Element | 1 |
| 12 | Shell | 1 |
| 13 | Locking Segment | 12 |
| 14 | Locking Ring | 1 |
| 15 | Bolt | 12 |
| 16 | Nut | 12 |
| 17 | Lifting Screw | 12 |

# Products - API 16C

## JGY Choke Manifold

**Dimensions**
**Pressure** 2000PSI - 20000PSI
**Temperature** A/B/K/P/U
**Size** 21/16"- 4 1/16"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4
**Remote Options** Manual / Hydraulic / Pneumatic

---

## YG - Kill Manifold

**Dimensions**
**Pressure** 2000PSI - 20000PSI
**Temperature** A/B/K/P/U
**Size** 21/16"- 4 1/16"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4

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## DMJG Surface Manifold

**Dimensions**
**Pressure** 2000PSI - 20000PSI
**Temperature** A/B/K/P/U
**Size** 21/16"- 4 1/16"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4

# Products - API 16C

## DGN - Multifunctional Manifold

**Dimensions**
**Pressure** 2000PSI - 20000PSI
**Temperature** A/B/K/P/U
**Size** 21/16"- 4 1/16"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4

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## GH - Cementing Manifold

**Dimensions**
**Pressure** 3000PS - 15000PSI
**Temperature** A/B/K/P/U
**Size** 2"~ 3"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4

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## Union Ascending Pipe

**Dimensions**
**Pressure** 6000PSI - 15000PSI
**Temperature** A/B/K/P/U
**Size** 2"- 4"
**Material** EE/FF/HH
**Spec. Level** PSL3~PSL4

# API 6D

## Ball Valves

Ball valve takes ball with circular hole as opening and closing element. The ball is driven by valve stem to rotate 90°around valve stem to perform opening and closing. The valve is used to cut off or switch on the medium within pipeline, and widely used in petroleum refining, long-distance transportation pipeline, chemical, paper making, pharmaceutical, water conservancy, electric power, municipal and steel, etc. Special consideration is made to strength, safety, resistance to harsh environment during design. It's suitable for various corrosive and non-corrosive mediums. Different materials may be selected for transportation of water, steam, oil, natural gas, nitric acid, acetic acid, oxidant and urea. Ball valve has compact structure and reliable sealing. Its sealing surface and spherical surface are closed normally which make it resistant to flush erosion by the medium, and easy to operate and repair.

### 2-PC Body Floating Ball Valve

**Design standard:** ASME B16.34/ API 608
**Length of structure:** ASME B16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2"~ 8",CLASS150~CLASS 600
**Main body material:** WCB, LCB, WCC, CF8, CF8M, CF3, C3M, A890 4A, A105, LF2, F304, F316, F304L, F316L etc.
**Valve seat material:** PTFE, RPTFE, NYLON, DEVLON, Derlin, PEEK, PPL or metal hard seal etc.
**Drive device:** handle, worm wheel, electric, pneumatic etc.

# API 6D

## 3 – PC Floating Ball Valve

**Design standard:** BS 5351
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/4"~ 2",CLASS 800~CLASS 1500
**Main body material:** A105, LF2, F304, F316, F304L, F316L etc.
**Valve seat material:** PTFE, RPTFE, NYLON, DEVLON, Derlin, PEEK, PPL etc
**Drive device:** handle, worm wheel, electric, pneumatic etc

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## 2 – PC Trunnion Ball Valve

**Design standard:** API 6D
**Length of structure:** API 6D. For product beyond the scope of the standard, it shall be manufactured by specifications in BTL standard or user's requirements.
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25/ ASME B31.8
**Wall thickness:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Inspection and test:** API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1-1/2"~60",CLASS150~CLASS 900
**Main body material:** WCB, LCB, WCC, CF8, CF8M, CF3, C3M, A890 4A, A105, LF2, F304, F316, F304L, F316L etc.
**Valve seat material:** PTFE, RPTFE, NYLON, DEVLON, Derlin, PEEK, PPL, HNBR, FKM or metal hard seal etc.
**Drive device:** handle, worm wheel, electric, pneumatic, pneumatic- hydraulic, electro-hydraulic, etc.

# API 6D

## 3 – PC Trunnion Ball Valve

**Design standard:** API 6D
**Length of structure:** API 6D. For product beyond the scope of the standard, it shall be manufactured by specifications in BTL standard or user's requirements.
**Flange connecting end:** AASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25/ ASME B31.8
**Wall thickness:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Inspection and test:** API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1-1/2"~60",CLASS150~CLASS 900
**Main body material:** WCB, LCB, WCC, CF8, CF8M, CF3, CF3M, A890 4A etc.
**Valve seat material:** PTFE, RPTFE, NYLON, DEVLON, Derlin, PEEK, PPL, HNBR, FKM or metal hard seal etc.
**Drive device:** handle, worm wheel, electric, pneumatic, pneumatic- hydraulic, electro-hydraulic, etc.

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## Full-Welded Ball Valve

**Design standard:** API 6D
**Length of structure:** API 6D. For product beyond the scope of the standard, it shall be manufactured by specifications in BTL standard or user's requirements.
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25/ ASME B31.8
**Wall thickness:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Inspection and test:** API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 4"~60",CLASS150 ~CLASS1500
**Main body material:** A105, LF2, F304, F316, F304L, F316L, F51etc.
**Valve seat material:** PTFE, RPTFE, NYLON, DEVLON, Derlin, PEEK, PPL, HNBR, FKM or metal hard seal etc.
**Drive device:** handle, worm wheel, electric, pneumatic, pneumatic- hydraulic, electro-hydraulic, etc.

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# API 6D

## Gate Valve

Opening and closing part of gate valve is flashboard. Its direction of motion is perpendicular to the direction of fluid. The valve is usually used to cut-off medium. The entire flow channel is a straight-through passage when the valve is fully-open, and the pressure loss of medium running is minimum. Gate valve is usually divided into several types by seal part mode, such as: wedge gate valve, plate gate valve, parallel 2-flashboard gate valve, wedge 2-flashboard gate valve. Gate valve is usually for working condition in which the valve is not opened or closed frequently, and supports flashboard fully open or fully closed. It's not suitable for adjustment or throttling. Different materials may be selected for transportation of water, steam, oil, natural gas, nitric acid, acetic acid, oxidant and urea.

### API 600 Gate Valve

**Design standard:** API 600
**Length of structure:** ASME B16.10
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 600/ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 56",CLASS 150~CLASS 2500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A etc.

# API 6D

## API 602 Gate Valve

**Design standard:** API 602/BS5352
**Length of structure:** Length of structure of socket welding / thread end of forged steel gate valve is manufactured by factory standard. The length of structure of flange/ butt welding end of forged steel gate valve is manufactured by ASME B16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 602/ASME B16.34
**Inspection and test:** API 602
**Pressure and temperature rating:** ASME B16.34
**Product scope:** ½"~ 3",CLASS150~CL2500
**Main body material:** A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316L etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

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## Expanding Gate Valve

**Design standard:** API 6D
**Length of structure:** API 6D.
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Inspection and test:** API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 36",CLASS 150~CLASS 900
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

# API 6D

## Slab Gate Valve

**Design standard:** AAPI 6D
**Length of structure:** API 6D
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Inspection and test:** API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 60",CLASS 150~CLASS 1500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

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## Globe Valve

Globe valve is a kind of valve with closing part making a linear motion along the center line of valve seat. As the opening and closing stroke of valve stem is relatively short, and with reliable cut off function, and the change of valve seat orifice and stroke of valve clack are proportional, the valve is really suitable for flow regulating. It may be used for cut off or regulating as well as throttling of fluid pipeline for city water, sewage, construction, food, electric power, medicine, metallurgy and textile.

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## BS 1873 Globe Valve

**Design standard:** BS 1873
**Length of structure:** ASMEB16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 24",CLASS 150~CLASS 2500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4Aetc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

# API 6D

### API 602 Globe Valve

**Design standard:** API 602 / BS5352
**The length of the structure:** length of structure of socket welding / thread end of forged steel gate valve is manufactured by factory standard. The length of structure of flange/ butt welding end of forged steel gate valve is manufactured by ASME B16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 602 / ASME B16.34
**Inspection and test:** API 602
**Pressure and temperature rating:** ASME B16.34
**Product scope:** ½"~ 4",CLASS 150~CLASS 4500
**Main body material:** A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316L etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc

---

### Check Valve

Check valve is also known as one-way valve or non-return valve. It's a kind of valve with opening and closing part opens and closes automatically driven by flow and force of medium to prevent backflow of medium. Check valve is automatic valve, and mainly applied on pipeline with medium flows in one direction. The medium is allowed to flow only in one direction to prevent accident. BTL mainly manufactures four types of check valve: swing check valve, lifting check valve, tilting disc check valve and wafer check valve.

# API 6D

## API 6D / BS 1868 Swing Check Valve

**Design standard:** BS 1868/API 6D
**Length of structure:** ASMEB16.10/API 6D
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25
**Wall thickness** : ASME B16.34
**Inspection and test:** API 598 /API 6D
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 48",CLASS 150~CLASS 2500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A etc.

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## API 602 Check Valve

**Design standard:** API 602/ BS 5352
**The length of the structure:** length of structure of socket welding / thread end of forged steel gate valve is manufactured by factory standard=ASME B16.10/ GB/T 12221. The length of structure of flange/ butt welding end of forged steel gate valve is manufactured by ASME B16.10/ GB/T 12221
**Flange connecting end:** ASME B16.5/GB/T 9113/HG/T 20592/ EN 1092.1
**Butt welding connecting end:** ASME B16.25/ GB/T 12224
**Wall thickness:** API 602/ASME B16.34/ GB/T 12224
**Inspection and test:** API 602/GB/T 13927
**Pressure and temperature rating:** ASME B16.34/ EN 12516 /GB/T 12224
**Product scope:** ½"~ 2" CLASS 150~CLASS 2500
**Main body material:** A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316L etc.

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## API 594 Check Valve

**Design standard:** API 594
**Length of structure:** API 594
**Pipe flange:** ASME B16.5
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2"~ 36",CLASS 150~CLASS 2500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A, A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316L etc.

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## Butterfly Valve

Butterfly valve is a kind of vale that takes a disc as closing part (butterfly board) which rotates around the valve axis to achieve opening and closing. The valve is mainly for cut-off and throttling on pipeline. Butterfly board is driven by the valve stem. A opening and closing is completed as it rotates 90°. The flow of medium may be controlled by changing of deflection angle of butterfly board. Commonly used butterfly valve includes wafer butterfly valve, lug butterfly valve and flange butterfly valve. Butterfly valve is suitable for pipeline that transports various corrosive, non - corrosive fluids in producer, coal gas, natural gas, liquefied petroleum gas, city gas, hot and cold air, chemical smelting and power environmental protection, building water supply and drainage and other engineering systems for regulating and cut-off of medium flow.

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## Offset Butterfly Valve

**Design standard:** API 609
**Length of structure:** API 609
**Flange connecting end:** ASME B16.5/ASME B16.47
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Fireproof test:** API 607
**Product scope:** 3"~ 80", CLASS 150~CLASS 1500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A etc.
**Drive device:** handle, worm wheel, electric, pneumatic etc.

## Y-Pattern Strainer

Strainer is one of the indispensable devices on medium transportation pipeline. It's usually installed on the input end of pressure reducing valve, pressure release valve, level control valve or other equipment. It's used to Strainer impurities in medium. It can Strainer rust, sand in sewage, small amount of solid particles in liquid and other impurities to protect normal operation of valve and equipment. Working principal: when fluid enters Strainer cartridge equipped with Strainer screen, the impurities are blocked, and clean filtrate is drained through Strainer outlet. For cleaning, just need to take the removable cartridge out and install it again after treatment.

**Design standard:** ASME B16.34
**Length of structure:** ASME B16.10
**Flange connecting end:** ASME B16.5
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 12",CLASS 150~CLASS 300 ,
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A,A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316L etc.

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## Basket Strainer

**Design standard:** ASME B16.34
**Length of structure:** ASME B16.10
**Flange connecting end:** ASME B16.5
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 2"~ 24",CLASS 150~CLASS 300
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M A890 4A, etc.

## Cryogenic Gate Valve

**Design standard:** API 600, API 602, BS 6364
**Length of structure:** ASME B16.10 or factory standard
**Flange connecting end:** ASME B16.5/ASME B16.47
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 600/ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2"~ 36",CLASS 150~CLASS 1500
**Main body material:** LCB, LCC, LC3, CF8, CF8M, CF3, CF3, LF2, F304, F316, F304L, F316Letc.

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## Cryogenic Globe Valve

**Design standard:** BS 1873, API 602, BS 6364
**Length of structure:** ASMEB16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2"~ 16",CLASS 150~CLASS 1500
**Main body material:** LCB, LCC, LC3, CF8, CF8M, CF3, CF3, LF2 F304, F316, F304L, F316L etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

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## Cryogenic Ball Valve

**Design standard:** API 6D, API 608, ASME B16.34
**Length of structure:** API 6D/ASME B16.10
**Flange connecting end :** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** ASME B16.34
**Inspection and test:** API 6D/API 598
**Pressure and temperature rating:** ASME B16.34
**Fireproof test:** API 607/API 6FA
**Product scope:** 1/2" ~ 12",CLASS 150~CLASS 2500
**Main body material:** LCB, LCC, LC3, CF8, CF8M, CF3, CF3M, LF2, F304, F316, F304L, F316L etc.
**Drive device:** handle, worm wheel, etc.

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## Bellow Valve

Bellows valve is a kind of valve that takes bellows as valve stem seal element. It is commonly used for application with strict valve stem sealing requirement, such as high vacuum application and nuclear industry. Replace stuffing box in common valve with bellows or use with stuffing box can make no leakage at valve stem part to prevent leakage of radioactive material or valuable material, or maintain a high vacuum. Bellows extends and retracts with lifting of valve stem. The maximum working pressure determined by compression strength and fatigue strength of bellows.

### Bellow Gate Valve

**Design standard:** API 600, API 602, API 603
**Length of structure:** ASME B16.10
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 600/ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2"~ 24",CLASS 150~CLASS 600
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A, A105, LF2, , F11, F22, F51, F91, F304, F316, F304L, F316L etc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.

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### Bellow Globe Valve

**Design standard:** BS 1873
**Length of structure:** ASME B16.10 or factory standard
**Flange connecting end:** ASME B16.5
**Butt welding connecting end:** ASME B16.25
**Wall thickness:** API 600/ASME B16.34
**Inspection and test:** API 598
**Pressure and temperature rating:** ASME B16.34
**Product scope:** 1/2" ~ 16" ,CLASS 150~CLASS 1500
**Main body material:** WCB, LCB, WCC, WC6, WC9, CF8, CF8M, CF3, CF3M, A890 4A, A105, LF2, F11, F22, F51, F91, F304, F316, F304L, F316Letc.
**Drive device:** handle, bevel gear, electric, pneumatic, etc.