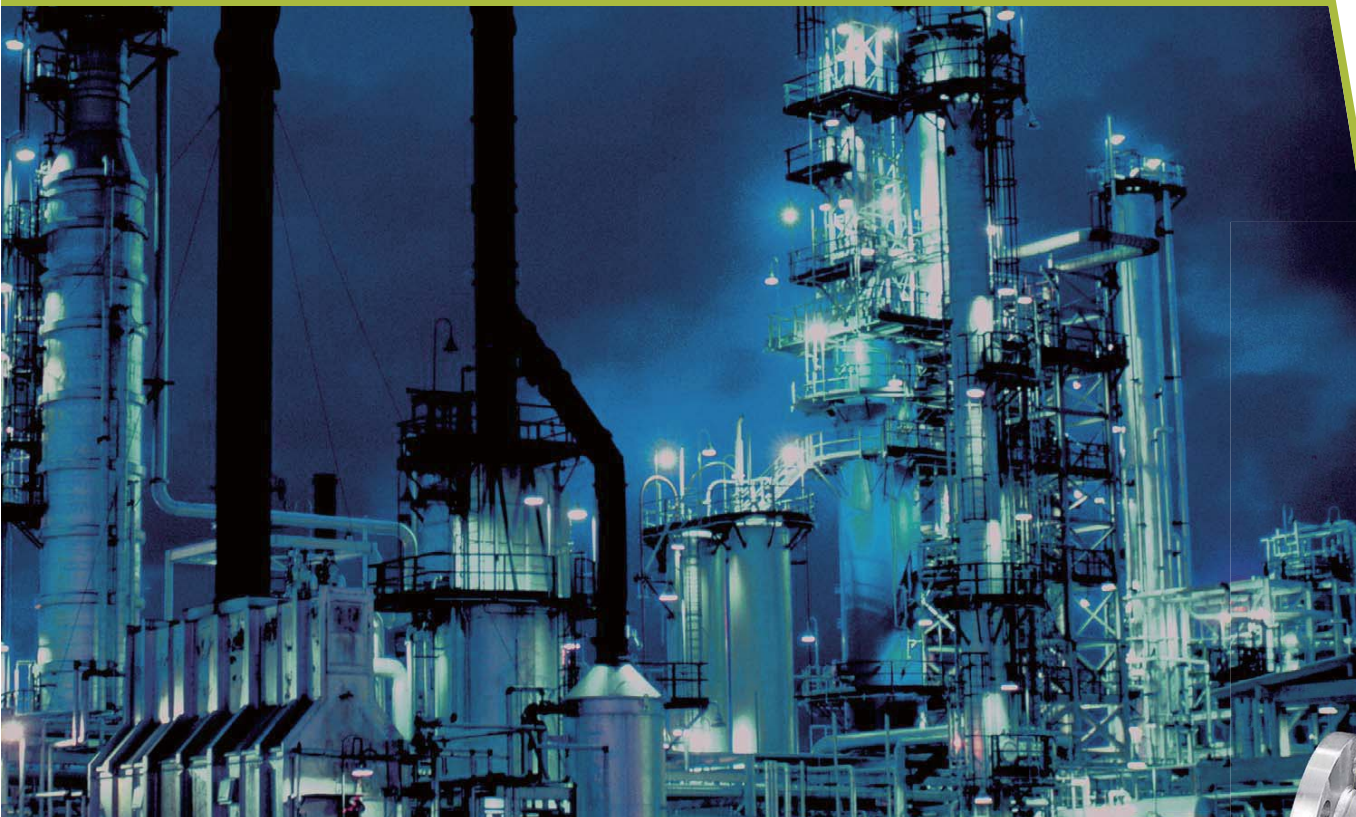


API 602

FORGED STEEL GATE,
GLOBE & CHECK VALVES



about die erste.....

DIE ERSTE Industry Co., Ltd., headquartered in Taiwan, has been specializing in marketing and distribution of industry valves, instrumentation valves and valve automation accessories since 1982. **DIE ERSTE** has outstanding production and export businesses in over 30 countries, offering a wide product range including Ball, Gate, Globe, Check, Butterfly and Needle Valves, Valve Actuators, Pipes and Fittings for piping applications in the Oil & Gas, Chemical Processing, Water Resource, Semiconductor and General Industries, and providing the OEM/ODM service of Investment Casting.

DIE ERSTE now operates 2 offices in Taiwan & Shanghai, China, integrating resources from its joint venture companies including an engineering consultant company in Ontario, Canada, a valve actuator factory in Taiwan and an investment foundry in Guang-Dong, China. Leveraging the knowledge and strength from our technical sales force, engineering and service teams, combined with the quality products and resources of the manufacturers, our products comply with international specifications such as ISO, DIN, ANSI, ASME, JIS, AWWA, API, 3A and BS standards. Hence we are fully capable to help you meet your objectives.

By satisfying each of our clients' unique needs, **DIE ERSTE** is making a bold statement to the industry. With more than 24 years of experience, a selection of over 5000 items, and with comprehensive technical support, **DIE ERSTE** offers One-Stop Shopping for a range of quality and economical products. Combined with reliable and tailored consultation, superior technical support and attentive customer service, **DIE ERSTE** services consistently achieves results that exceed our clients' expectations. Our track record, personal service and commitment to long-term business relationships has earned us total trust from our clients.

DIE ERSTE is equipped to be the leading player in the VALVE industry for the next 20 years as we are today. To prosper in today's marketplace, your business will often need to change and adapt, and we change with you to ensure you achieve your targets.

TOGETHER, WE CAN ACHIEVE.

- 2 Forged Steel Gate Valve Section
- 12 Forged Steel Globe Valve Section
- 24 Forged Steel Check Valve Section
- 35 Forged Steel "Y" Type Strainer Section
- 37 Emission Control Testing
- Technical Data : 38 PRESSURE TEMPERATURE RATING
- 43 END CONNECTION
- 45 FLOW COEFFICIENT
- 46 CORROSION DATA
- 47 How to Order

Design features for emission control



Gate Valve



Globe Valve



Check Valve



"Y" strainer

Gasket

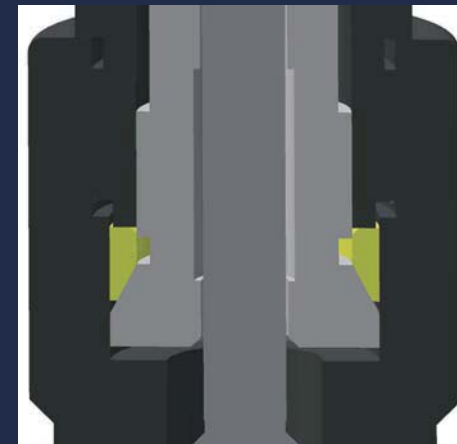
The asbestos-free gaskets used in bolted bonnet designs are of the 'spiral-wound' type in stainless steel 316 or carbon steel and flexible graphite. Reinforced graphite gaskets are used for CLASS 150 valves; stainless steel with flexible graphite wounded gaskets are used for CLASS 300 valves. For CLASS 600 valves, stainless steel with flexible graphite wounded gaskets are used as the standard while the ring joint gaskets are optional upon request. The ring joint gaskets are used for CLASS 900 valves; the pressure seal design is used for CLASS 1500 to 2500 valves.

Stem Packing and the connection

The packing method and material used for the fugitive emission control from the connection between bonnet and body is significant. With the molded braided flexible graphite, DIE ERSTE offer PTFE or other fluoropolymer as packing materials on request. The surface of the stem and stuffing box chamber walls, which are in contact with the packing, have been perfectly mechanical-finished to achieve leak-proof properties with the lowest cost mechanically possible.

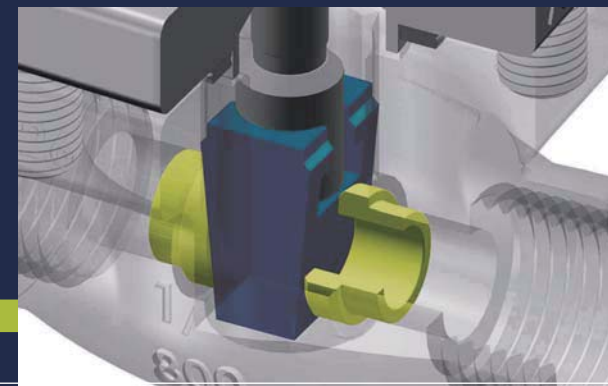
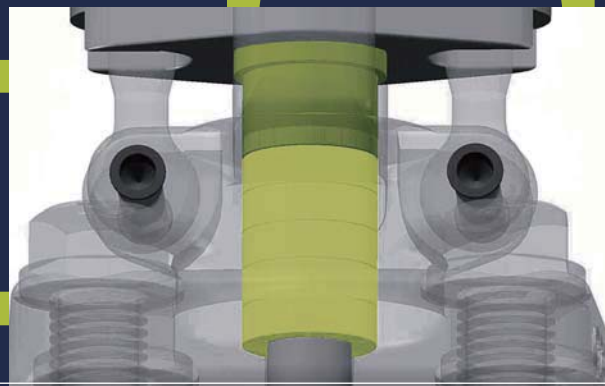
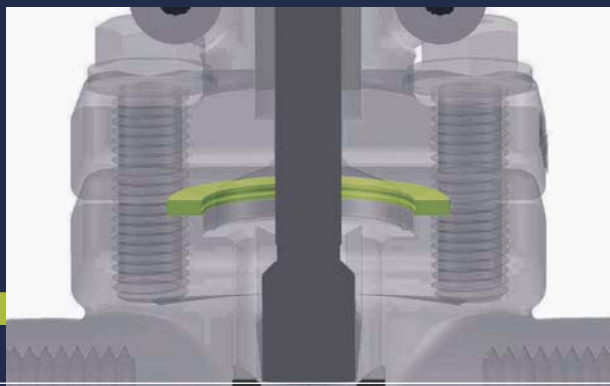
Pressure Seal

The Pressure Seal design is used in high-pressure work conditions to reduce the bolt load required to ensure tightness. Utilizing a solid metal angled ring, this design seals perfectly against hard-faced surface on the body. The higher the internal pressure, the greater the sealing force. DIE ERSTE pressure-assisted closure and sealing help to keep the seal leak-tight while permitting the joint itself to be a lot smaller since no heavy bolting or flanges are required as they would have to be in a conventional design.



Seat & Wedge

The integral hard-surfaced seats accommodate the widest range of pressure and temperature service conditions. These metal-to-metal seating surfaces provide positive shutoff and long seat life. The wedging action also provides tight seat sealing, even at low differential pressure, to ensure seat-leakage test is performed at 110% of the 100F rating.





Forged steel gate valve section



Gate valves are linear-motion manual valves that use a typically flat closure element perpendicular to the process flow, which slides into the flow stream to provide shutoff.

DIE ERSTE's comprehensive range of API 602 gate valves is available with a variety of bonnet and end types, body and trim materials. Designed for use in high temperature steam and water, this multipurpose gate valve can be used in a wide variety of applications including petroleum refining and production plants, offshore oil and gas fields.

Apart from the common gate valves, DIE ERSTE also makes forged cryogenic gate valves and extended-body gate valves with materials that meet requirements of NACE standard MR-01-75 for sour service, underground application, and a wide range of pressure-temperature service conditions.

2

| | | |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Forged Steel Gate Valves, Threaded & Socket-welding End, CLASS 800 (PN 130) (3) | Forged Steel Gate Valves, Flanged End, CLASS 900/1500 (PN 150/260) (6) | Forged Steel Pressure Seal Gate Valves, Flanged End, CLASS 900/1500 (PN 150/260) (9) |
| Forged Steel Gate Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260) (4) | Forged Steel Pressure Seal Gate Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260) (7) | Forged Steel Pressure Seal Gate Valves, Flanged End, CLASS 2500 (PN 420) (10) |
| Forged Steel Gate Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110) (5) | Forged Steel Pressure Seal Gate Valves, Threaded & Socket-welding End, CLASS 2500 (PN 420) (8) | Forged Steel Pressure Seal Gate Valves, Butt-welding End, CLASS 900/1500 (PN 150/260) (11) |

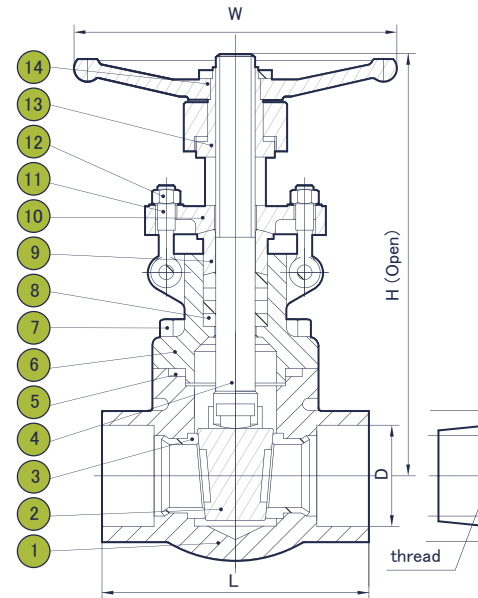
Forged Steel Gate Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

Forged steel
gate valve

Features

- API 602 / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Solid wedge
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

Class 800 (PN 130)
Full Port/Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)



3

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Wedge | 13Cr | A 182-F304 | A 182-F316+STL |
| 3 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304+STL | A 182-F316 |
| 5 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 6 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 7 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 8 | Stem Packing | Reinforced Graphite | | |
| 9 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 11 | Gland Eyebolt | A 193-B7 | | A193-B8 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | Handwheel | A 197 | | |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | Standard Port | mm(in) | 8 (1/4) | 10 (3/8) | 15 (1/2) | 20 (3/4) | 25 (1) | 32 (1 1/4) | 40 (1 1/2) | 50 (2) | |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|--------|
| | Full port | mm(in) | - | - | 10 (3/8) | 15 (1/2) | 20 (3/4) | 25 (1) | 32 (1 1/4) | 40 (1 1/2) | 50 (2) |
| D | mm(in) | 7(0.28) | 7(0.28) | 10(0.39) | 12.7(0.5) | 18(0.71) | 23(0.91) | 28.5(1.12) | 36(1.41) | 43(1.69) | |
| L | mm(in) | 79(3.11) | 79(3.11) | 79(3.11) | 92(3.62) | 111(4.37) | 120(4.72) | 120(4.72) | 140(5.51) | 170(6.69) | |
| H (Open) | mm(in) | 166(6.54) | 166(6.54) | 166(6.54) | 169(6.65) | 193(7.64) | 230(9.06) | 246(9.69) | 283(11.14) | 332(13.07) | |
| W | mm(in) | 100(3.94) | 100(3.94) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | |
| Weight | B.B | kg | 2.5 | 2.4 | 2.3 | 2.5 | 4.5 | 5.9 | 7.2 | 11.2 | 18.8 |
| | W.B | kg | - | - | 2.4 | 2.7 | 4.6 | 6.1 | 7.4 | 11.4 | 19.1 |

Selection
 Connection:
 Threaded End/Socket-welding End
 Thread Type:
 NPT/BSPT/DIN
 OS&Y Type:
 Bolted Bonnet/Welded Bonnet
 Material of the Body/Bonnet:
 A105/F316/F316L/F304/F304L/F11/F22

Forged Steel Gate Valves, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

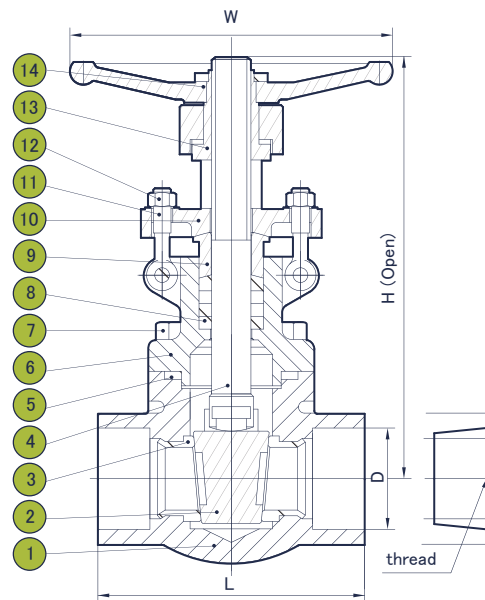


4

DIE ERSTE reserves the right to change product design and specifications without notice.
Copyright © 2008 by DIE ERSTE INDUSTRY CO., LTD.

Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22



| Nominal diameter | mm(in) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|-----------|------------|------------|------------|
| D | mm(in) | 10(0.39) | 12.7(0.5) | 18(0.7) | 23(0.91) | 28.5(1.12) | 36(1.41) | 43(1.69) |
| L | mm(in) | 111(4.37) | 111(4.37) | 111(4.37) | 120(4.72) | 120(4.72) | 140(5.51) | 170(5.51) |
| H (Open) | mm(in) | 170(6.69) | 193(7.60) | 230(9.06) | 246(9.69) | 283(11.14) | 325(12.79) | 334(13.15) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | 200(7.87) |
| Weight | B.B | kg | 4.7 | 4.7 | 6.8 | 9 | 12.4 | 17.5 |
| | W.B | kg | 4.8 | 4.8 | 6.9 | 9.2 | 12.6 | 17.9 |

Features

- API 602 / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Solid wedge
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 6 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 7 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 8 | Stem Packing | Reinforced Graphite | | |
| 9 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 11 | Gland Eyebolt | A 193-B7 | | A193-B8 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | Handwheel | A 197 | | |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Gate Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

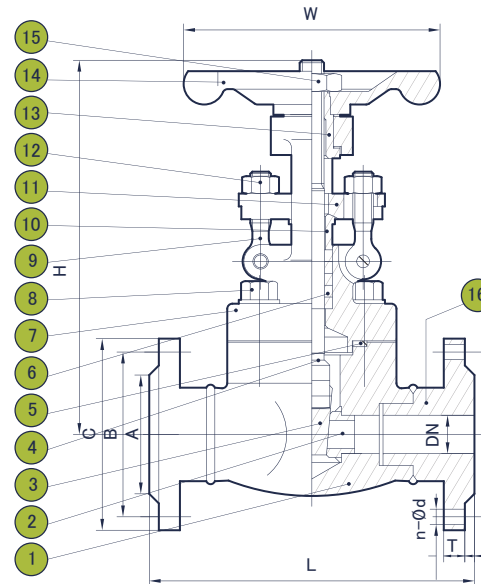
Forged steel
gate valve

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- API 602 / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Solid wedge
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 2 | Body | A 105 | A 182-F304 | A 182-F316 |
| 3 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 5 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 6 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 7 | Stem Packing | Reinforced Graphite | | |
| 8 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 9 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Flange | A 216 -WCB | A 105 | A 182-F304 |
| 12 | Gland Nut | A 194-2H | | A 194-B8 |
| 13 | Stem Nut | A 108-1020 | | A 267-410 |
| 14 | Handwheel | A 197 | | |
| 15 | H.W. Luck Nut | A 194-2H | | A 193-B8 |
| 16 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



- Class 150 (PN 20)**
Standard Port
ASME CLASS 150: 285 psi@100°F
(19.7 bar@38°C)
- Class 300 (PN 50)**
Standard Port
ASME CLASS 300: 740 psi@100°F
(51.0 bar@38°C)
- Class 600 (PN 110)**
Standard Port
ASME CLASS 600: 1480 psi@100°F
(102.1 bar@38°C)



Gate Valve

5

Selection

Connection:
Raised Face/Ring-Type Joint
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) | |
|------------------|-----------|--------|-----------|-----------|-----------|-----------|------------|------------|-----------|
| D | | mm(in) | 10(0.39) | 12.7(0.5) | 18(0.71) | 23(0.91) | 28.5(1.12) | 36(1.41) | |
| | L | CL150 | mm(in) | 108(4.25) | 117(4.61) | 127(5) | 140(5.51) | 165(6.50) | 178(7.01) |
| | | CL300 | mm(in) | 140(5.51) | 152(5.98) | 165(6.50) | 178(7.01) | 190(7.48) | 216(8.50) |
| H | CL600 | mm(in) | 165(6.50) | 190(7.48) | 216(8.50) | 229(9.02) | 241(9.49) | 292(11.50) | |
| | CL150 | mm(in) | 180(7.09) | 182(7.17) | 216(8.50) | 240(9.45) | 246(9.69) | 283(11.14) | |
| W | CL300-600 | mm(in) | 166(6.54) | 169(6.65) | 193(7.60) | 230(9.06) | 246(9.69) | 283(11.14) | |
| | | mm(in) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | |
| Weight | CL150 | kg | 4.5 | 5.1 | 8.2 | 11 | 12.5 | 20.3 | |
| | CL300 | kg | 4.8 | 6.2 | 9.3 | 14 | 15.5 | 23.4 | |
| | CL600 | kg | 5.9 | 7.4 | 10.4 | 16.2 | 17.5 | 28.3 | |

* Note that the raised-face (RF) flanged end connection is adopted while the pressure rating is under CLASS 600. Please ask your DIE ERSE sales for different requirements.

Forged Steel Gate Valves, Flanged End, CLASS 900/1500 (PN 150/260)

Class 900 (PN 150)
Full Port/Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)



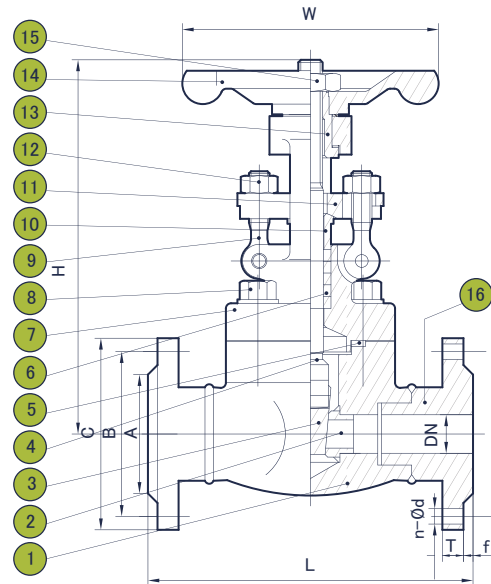
Gate Valve

6

DIE ERSTE reserves the right to change product design and specifications without notice. Copyright © 2008 by DIE ERSTE INDUSTRY CO., LTD.

Selection

Connection:
Raised Face/Ring-Type Joint
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22



| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|--------|------------|-----------|------------|------------|------------|------------|
| D | mm(in) | 12.7(0.50) | 18(0.71) | 23(0.91) | 28.5(1.12) | 36(1.42) | 43(1.69) |
| L | mm(in) | 216(8.50) | 229(9.02) | 254(10.00) | 279(10.98) | 305(12.01) | 368(14.49) |
| H (Open) | mm(in) | 193(7.60) | 230(9.06) | 246(9.69) | 283(11.14) | 325(12.80) | 334(13.15) |
| W | mm(in) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | 200(7.87) |
| Weight | kg | 8.9 | 10.7 | 15.21 | 23.23 | 26.15 | 43.85 |

* Note that the raised-face (RF) flanged end connection is adopted in this table. Please ask your DIE ERSE sales for different requirements.

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- API 602 / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Solid wedge
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 6 | Stem Packing | Reinforced Graphite | | |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 9 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Flange | A 216 -WCB | A 105 | A 182-F304 |
| 12 | Gland Nut | A 194-2H | | A 194-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | Handwheel | A 197 | | |
| 15 | H.W. Luck Nut | A 194-2H | | A 193-B8 |
| 16 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Pressure Seal Gate Valves, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

Forged steel
gate valve

Features

- The higher the internal pressure, the greater the sealing forces
- API 602 / ASME B16.34
- Outside screw & yoke (OS&Y)
- Solid wedge
- Heavy two-piece gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

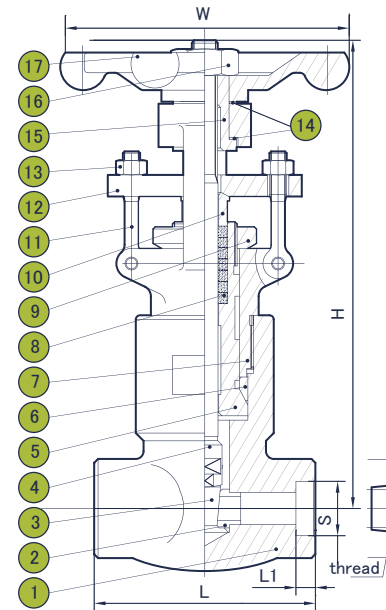


Gate Valve

7

| Construction Materials | | | | |
|------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Sealing Seat | A 276-410 | A 182-F304 | A 182-F316 |
| 6 | Sealing Ring | SS304 | | SS316 |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 13 | Gland Nut | A 194-2H | | A 193- B8 |
| 14 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 15 | Stem Nut | A 276-410 | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Handwheel | A 197 | | |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|------------|------------|------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 36(1.42) | 46(1.81) |
| L | mm(in) | 140(5.51) | 140(5.51) | 140(5.51) | 178(7.01) | 178(7.01) | 216(8.50) |
| H (Open) | mm(in) | 321(12.64) | 321(12.64) | 321(12.64) | 380(14.96) | 414(16.30) | 502(19.76) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 10.8 | 10.5 | 19.6 | 20.5 | 21.7 | 43 |

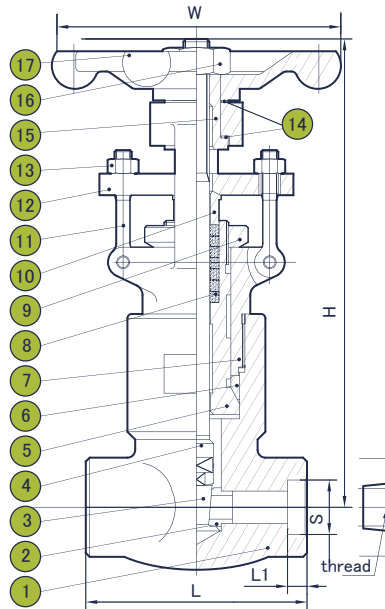
Forged Steel Pressure Seal Gate Valves, Threaded & Socket-welding End, CLASS 2500 (PN 420)

Class 2500 (PN 420)
Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22



| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|------------|------------|------------|
| D | mm(in) | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L | mm(in) | 186(7.32) | 186(7.32) | 186(7.32) | 232(9.13) | 232(9.13) | 279(10.98) |
| H (Open) | mm(in) | 321(12.64) | 321(12.64) | 321(12.64) | 283(11.14) | 325(12.80) | 334(13.15) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(1.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 12.3 | 11.6 | 10.9 | 26 | 28.5 | 60 |

Features

- The higher the internal pressure, the greater the sealing forces
- API / ASME B16.34
- Outside screw & yoke (OS&Y)
- Solid wedge
- Heavy two-piece gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 6 | Sealing Ring | SS304 | | SS316 |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Flange | A 216-WCB | A 182-F304 | A 182-F316 |
| 13 | Gland Nut | A 194-2H | | A 193- B8 |
| 14 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 15 | Stem Nut | A 276-410 | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Handwheel | A 197 | | |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Pressure Seal Gate Valves, Flanged End, CLASS 900/1500 (PN 150/260)

Forged steel
gate valve

Features

- The higher the internal pressure, the greater the sealing forces
- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- API / ASME B16.34
- Outside screw & yoke (OS&Y)
- Solid wedge
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

Class 900 (PN 150)
Full Port/Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

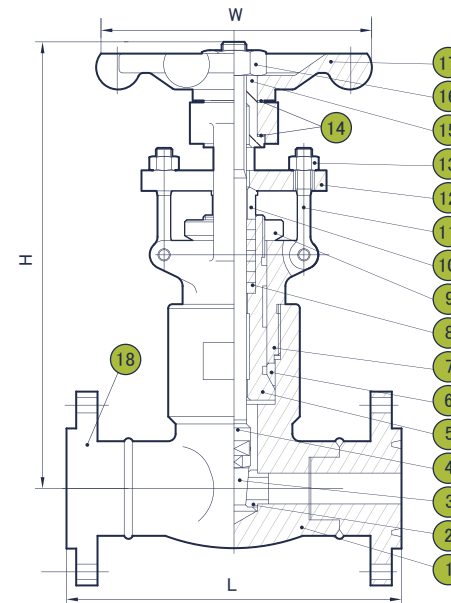


Gate Valve

9

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 6 | Sealing Ring | SS304 | | SS316 |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 13 | Gland Nut | A 194-2H | | A 193-B8 |
| 14 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 15 | Stem Nut | A 276-410 | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Handwheel | A 197 | | |
| 18 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|------------|------------|--------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.42) | 36(1.42) | 46(1.81) |
| L | mm(in) | 216(8.50) | 229(9.02) | 254(10.00) | 279(12.01) | 305(12.01) | 317.2(12.49) |
| H (Open) | mm(in) | 321(12.64) | 321(12.64) | 321(12.64) | 380(16.30) | 414(16.30) | 502(19.76) |
| W | mm(in) | 160(6.30) | 180(7.09) | 200(7.87) | 200(9.84) | 250(9.84) | 280(11.02) |
| Weight | kg | 17 | 17 | 21.5 | 24.5 | 28.7 | 46 |

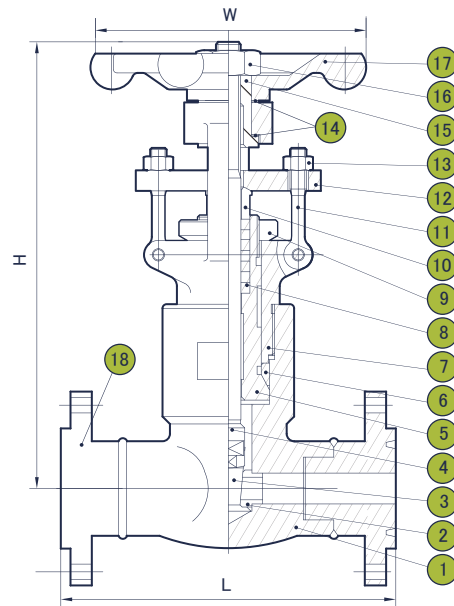
Forged Steel Pressure Seal Gate Valves, Flanged End, CLASS 2500 (PN 420)

Class 2500 (PN 420)
Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)



10

DIE ERSTE reserves the right to change product design and specifications without notice.
Copyright © 2008 by DIE ERSTE INDUSTRI CO., LTD.



Selection

Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|--------------|--------------|--------------|
| D | mm(in) | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L | mm(in) | 264(10.39) | 273(10.75) | 308(12.13) | 352.2(13.89) | 387.2(15.24) | 454.2(17.88) |
| H (Open) | mm(in) | 321(12.64) | 321(12.64) | 321(12.64) | 375(14.76) | 406(15.98) | 496(19.53) |
| W | mm(in) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | 250(9.84) | 280(11.02) |
| Weight | kg | 21.5 | 24.8 | 30.5 | 48.2 | 58.2 | 130 |

Features

- The higher the internal pressure, the greater the sealing forces
- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- API / ASME B16.34
- Outside screw & yoke (OS&Y)
- Solid wedge
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 6 | Sealing Ring | SS304 | | SS316 |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 13 | Gland Nut | A 194-2H | | A 193-B8 |
| 14 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 15 | Stem Nut | A 276-410 | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Handwheel | A 197 | | |
| 18 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Pressure Seal Gate Valves, Butt-welding End, CLASS 900/1500 (PN 150/260)

Forged steel
gate valve

Features

- The higher the internal pressure, the greater the sealing forces for the pressure seal design
- API / ASME B16.34
- Outside screw & yoke (OS&Y)
- Solid wedge
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the gate position

Class 900 (PN 150)
Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)
Standard Port t
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

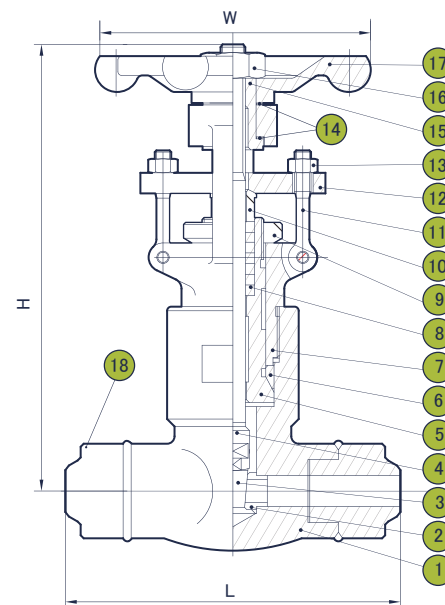


Gate Valve

11

| Component and Common Materials | | | | |
|--------------------------------|------------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Seat Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Wedge | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 5 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 6 | Sealing Ring | SS304 | | SS316 |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 13 | Gland Nut | A 194-2H | | A 193-B8 |
| 14 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 15 | Stem Nut | A 276-410 | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Handwheel | A 197 | | |
| 18 | Butt-welding End | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|------------|-----------|-----------|
| D | mm(in) | 7(0.28) | 7(0.28) | 10(0.39) | 12.7(0.50) | 18(0.71) | 23(0.91) |
| L | mm(in) | 79(3.11) | 79(3.11) | 79(3.11) | 92(6.32) | 111(4.37) | 120(4.72) |
| H (Open) | mm(in) | 166(6.54) | 166(6.54) | 166(6.54) | 169(6.65) | 193(7.60) | 230(9.06) |
| W | mm(in) | 100(3.94) | 100(3.94) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) |
| Weight | B.B | kg | 2.5 | 2.4 | 2.3 | 2.5 | 4.5 |
| | W.B | kg | - | - | 2.4 | 2.7 | 4.6 |



Forged steel globe valve section



Globe valves are linear-motion manual valves characterized by a body with a longer face-to-face that accommodates flow passages. They are sufficiently long enough to ensure smooth flow through the valve without any sharp turns. They are used for both on-off and throttling applications.

For years industry professionals have requested DIE ERSTE forged globe valves for their most demanding projects, and DE consistently delivers the highest performance fluid control products. These globe valves come in various models to meet different service requirements combining safety characteristics against leakages to easy substitution of the most delicate components. The inclined bonnet globe stop valves reinforce DIE ERSTE's reputation for its ultimate flow passage streamlining. The inclined bonnet construction minimizes flow directional changes and wear caused by excessive turbulence.

Apart from standard common globe valves, DIE ERSTE also offers forged cryogenic globe valves, extended-body globe valves with materials that meet requirements of NACE standard MR-01-75 for sour service, underground application, and a wide range of pressure-temperature service conditions.

12

| | | | |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Forged Steel Globe Valves, Threaded & Socket-welding End, CLASS 800 (PN 130) (13) | Forged Steel Globe Valves, Flanged End, CLASS 900/1500 (PN 150/260) (16) | Forged Steel Pressure Seal Globe Valves, Flanged End, CLASS 900/1500 (PN 150/260) (19) | Forged Steel Y-Pattern Globe Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260) (22) |
| Forged Steel Globe Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260) (14) | Forged Steel Pressure Seal Globe Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260) (17) | Forged Steel Pressure Seal Globe Valves, Flanged End, CLASS 2500 (PN 420) (20) | Forged Steel Y-Pattern Pressure Seal Globe Valves, Threaded & Socket-welding End, CLASS 1500/2500 (PN 260/420) (23) |
| Forged Steel Globe Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110) (15) | Forged Steel Pressure Seal Globe Valves, Threaded & Socket-welding End, CLASS 2500 (PN 420) (18) | Forged Steel Y-Pattern Globe Valves, Threaded & Socket-welding End, CLASS 800 (PN 130) (21) | |

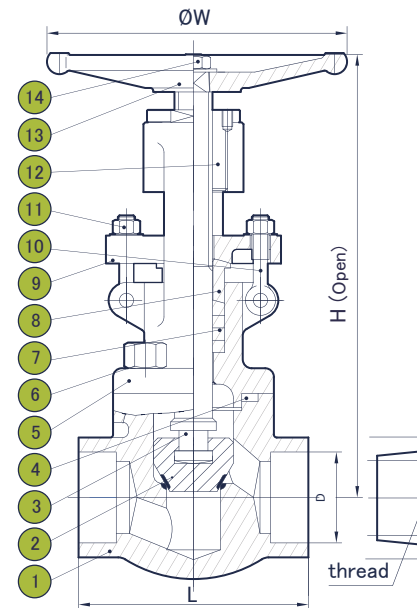
Forged Steel Globe Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

Forged steel
globe valve

Class 800 (PN 130)
Full Port/Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)

Features

- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of the disc



Globe Valve

13

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 5 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 6 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 7 | Stem Packing | Reinforced Graphite | | |
| 8 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Nut | A 194-2H | | A 193-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | HandWheel | A 197 | | |
| 14 | H.W.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | Standard Port | mm(in) | 8(1/4) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) | |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| | Full port | mm(in) | - | - | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
| D | mm | 8(0.31) | 10(0.39) | 10(0.39) | 13(0.51) | 18(0.71) | 23(0.91) | 28.5(1.12) | 33(1.30) | 43(1.69) | |
| L | mm | 79(3.11) | 79(3.11) | 79(3.11) | 92(3.62) | 111(4.37) | 120(4.72) | 152(5.98) | 172(6.77) | 220(8.66) | |
| H (Open) | mm | 166(6.54) | 166(6.54) | 166(6.54) | 175(6.89) | 206(8.11) | 228(8.98) | 262(10.31) | 300(11.81) | 340(13.39) | |
| W | mm | 100(3.94) | 100(3.94) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 240(9.45) | |
| Weight | B.B | kg | 2.6 | 2.5 | 2.4 | 2.6 | 4.5 | 5.9 | 8.3 | 12.4 | 20 |
| | W.B | kg | - | - | 2.5 | 2.7 | 4.7 | 6.1 | 8.5 | 12.6 | 20.4 |

Selection
 Connection:
 Threaded End/Socket-welding End
 Thread Type:
 NPT/BSPT/DIN
 OS&Y Type:
 Bolted Bonnet/Welded Bonnet
 Material of the Body/Bonnet:
 A105/F316/F316L/F304/F304L/F11/F22

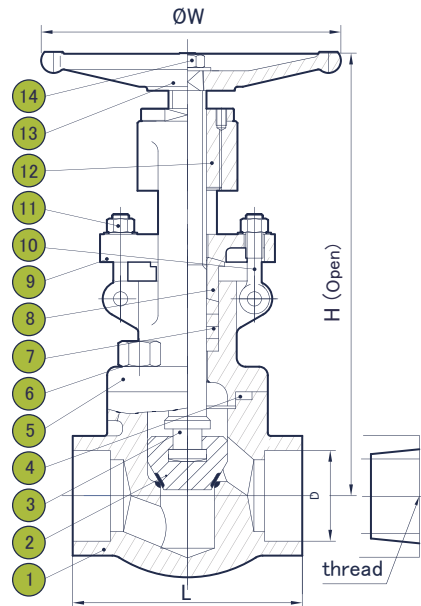
Forged Steel Globe Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 800: 3705 psi@100°F
(255.5 bar@38°C)



Globe Valve

14



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 8(1/4) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) | |
|------------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------|
| D | mm(in) | 7(0.28) | 10(0.39) | 13(0.51) | 18(0.71) | 23(0.91) | 29(1.14) | 33(1.30) | 43(1.69) | |
| L | mm(in) | 111(4.37) | 111(4.37) | 111(4.37) | 111(4.37) | 120(4.72) | 152(5.98) | 172(6.77) | 220(8.66) | |
| H (Open) | mm(in) | 166(6.54) | 166(6.54) | 170(6.69) | 193(7.60) | 230(9.06) | 246(9.69) | 283(11.14) | 325(12.80) | |
| W | mm(in) | 125(4.92) | 125(4.92) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.09) | |
| Weight | B.B | kg | 4.9 | 4.7 | 4.7 | 4.7 | 6.3 | 8.8 | 12.4 | 17.5 |
| | W.B | kg | 4.5 | 4.8 | 4.1 | 4.1 | 6.7 | 9.0 | 12.1 | 17 |

Features

- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of the disc

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 6 | Bonnet Blot | A 193-B7 | | A 193-B8 |
| 7 | Stem Packing | Reinforced Graphite | | |
| 8 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Nut | A 194-2H | | A 193-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | HandWheel | A 197 | | |
| 14 | H.W.Lock Nut | A 194-2H | | A 193-B8 |

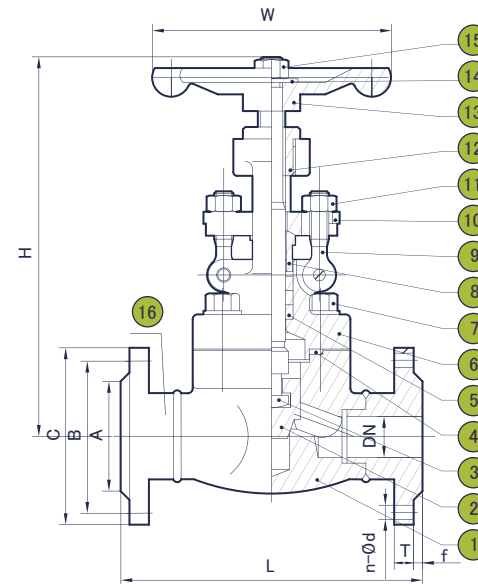
* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Globe Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

Forged steel
globe valve

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with 304 SS/graphite or 316 SS/graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact but sturdy designs for high pressure-temperature service
- Replacement of hand-wheel without affecting the position of disc



- Class 150 (PN 20)**
Standard Port
ASME CLASS 150: 285 psi@100°F
(19.7 bar@38°C)
- Class 300 (PN 50)**
Standard Port
ASME CLASS 300: 740 psi@100°F
(51.0 bar@38°C)
- Class 600 (PN 110)**
Standard Port
ASME CLASS 600: 1480 psi@100°F
(102.1 bar@38°C)



Globe Valve

15

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 5 | Stem Packing | Reinforced Graphite | | |
| 6 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 7 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 8 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 11 | Gland Nut | A 194-2H | | A 194-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | HandWheel | A 197 | | |
| 14 | Name Plate | Aluminum | | |
| 15 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 16 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Selection

Connection:
Raised Face/Ring-Type Joint
OS&Y Type
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|-----------|--------|-----------|------------|------------|-----------|------------|------------|
| L | D | mm(in) | 10(0.39) | 12.7(0.50) | 17.5(0.69) | 23(0.91) | 28(1.10) | 33(1.30) |
| | CL150 | mm(in) | 108(4.25) | 117(4.61) | 127(5.00) | 140(5.51) | 165(6.50) | 203(7.99) |
| | CL300 | mm(in) | 152(5.98) | 178(7.01) | 203(7.99) | 216(8.50) | 229(9.02) | 267(10.51) |
| H | CL600 | mm(in) | 165(6.50) | 190(7.48) | 216(8.50) | 229(9.02) | 241(9.49) | 292(11.50) |
| | CL150 | mm(in) | 190(7.48) | 195(7.68) | 230(9.06) | 245(9.65) | 262(10.31) | 300(11.81) |
| Weight | CL300-600 | mm(in) | 166(6.54) | 175(6.89) | 206(8.11) | 228(8.89) | 262(10.31) | 300(11.81) |
| | W | mm(in) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) |
| Weight | CL150 | kg | 4 | 5.1 | 7.6 | 11 | 12.5 | 20.3 |
| | CL300 | kg | 4.8 | 6.2 | 9.3 | 14 | 15.5 | 23.4 |
| | CL600 | kg | 5.9 | 7.4 | 10.4 | 16.2 | 17.5 | 28.3 |

* Note that the raised-face (RF) flanged end connection is adopted while the pressure rating is under CLASS 600. Please ask your DIE ERSE sales for different requirements.

Forged Steel Globe Valves, Flanged End, CLASS 900/1500 (PN 150/260)

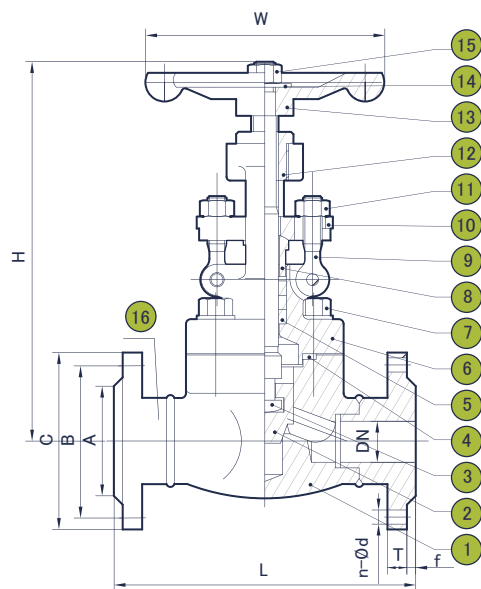
Class 900 (PN 150)
Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)
Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)



Globe Valve

16



Selection

Connection:
Raised Face/Ring-Type Joint
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|------------|------------|------------|------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 29(1.14) | 33(1.30) | 43(1.69) |
| L | mm(in) | 216(8.50) | 229(90.2) | 254(10.00) | 279(10.98) | 305(12.01) | 368(14.19) |
| H (Open) | mm(in) | 170(6.69) | 193(7.60) | 230(9.06) | 246(9.69) | 283(11.14) | 325(12.80) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 7.4 | 12.5 | 16 | 17.2 | 23 | 29.8 |

* Note that the raised-face (RF) flanged end connection is adopted in this table. Please ask your DIE ERSE sales for different requirements.

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of disc

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Stem Packing | Reinforced Graphite | | |
| 6 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 7 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 8 | Gland | A 276-410 | A 182-F304L | A 182-F316L |
| 9 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 11 | Gland Nut | A 194-2H | | A 193-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | HandWheel | A 197 | | |
| 14 | Name Plate | Aluminum | | |
| 15 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 16 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Pressure Seal Globe Valves, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

Features

- The higher the internal pressure, the greater the sealing forces.
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of disc

Class 1500 (PN 260)

Standard Port

ASME CLASS 1500: 3705 psi@100°F

(255.5 bar@38°C)

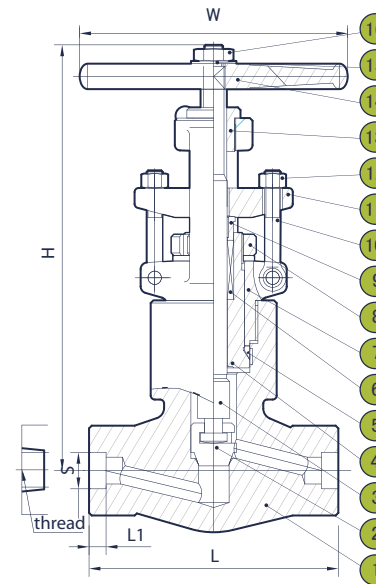


Globe Valve

17

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 5 | Sealing Ring | SS304 | | SS316 |
| 6 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | P.S. Lock Nut | A 276-410 | | |
| 9 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | HandWheel | A 197 | | |
| 15 | Name Plate | Aluminium | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection

Connection:
Threaded End/Socket-welding End

Thread Type:
NPT/BSPT/DIN

Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|------------|------------|------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 36(1.42) | 46(1.81) |
| L | mm(in) | 140(5.51) | 140(5.51) | 140(5.51) | 178(7.01) | 178(7.01) | 216(8.50) |
| H (Open) | mm(in) | 207(8.15) | 207(8.15) | 240(9.45) | 258(10.16) | 290(11.42) | 337(13.27) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 11.2 | 10.5 | 10.1 | 21 | 19.6 | 40.4 |

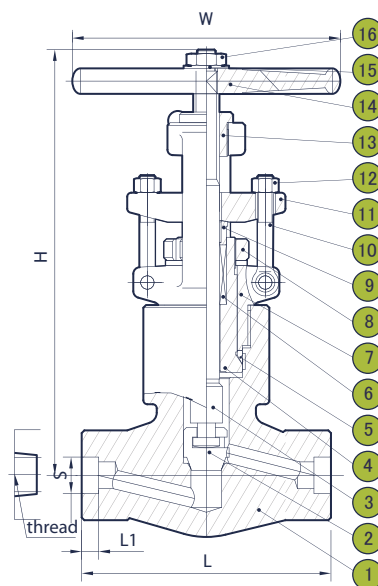
Forged Steel Pressure Seal Globe Valves, Threaded & Socket-welding End, CLASS 2500 (PN 420)

Class 2500 (PN 420)
Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)



Globe Valve

18



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|------------|------------|------------|
| D | mm(in) | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L | mm(in) | 186(7.32) | 186(7.32) | 186(7.32) | 228(8.98) | 228(8.98) | 279(10.98) |
| H (Open) | mm(in) | 333(13.11) | 333(13.11) | 333(13.11) | 410(16.14) | 420(16.54) | 524(20.63) |
| W | mm(in) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 12.3 | 11.6 | 11 | 28 | 26.7 | 43.8 |

Features

- The higher the internal pressure, the greater the sealing forces
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Loose disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of disc

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 5 | Sealing Ring | SS304 | | SS316 |
| 6 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | P.S. Lock Nut | A 276-410 | | |
| 9 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Flange | A 216-WCB | A 182-F304 | A 182-F316 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 180-1020 | | A 276-410 |
| 14 | HandWheel | A 197 | | |
| 15 | Name Plate | Aluminium | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Pressure Seal Globe Valves, Flanged End, CLASS 900/1500 (PN 150/260)

Forged steel
globe valve

Features

- The higher the internal pressure, the greater the sealing forces
- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Outside screw & yoke (OS&Y)
- Loose disc
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of disc

Class 900 (PN 150)
Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)
Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

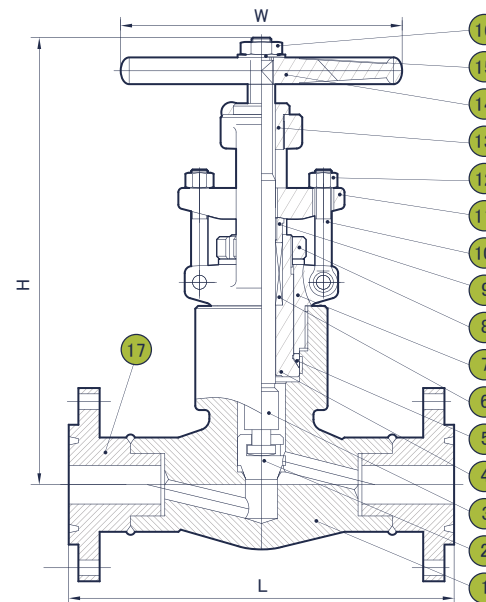


Globe Valve

19

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 5 | Sealing Ring | SS304 | | SS316 |
| 6 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | P.S. Lock Nut | A 276-410 | | |
| 9 | Gland | A276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Flange | A 216-WCB | A 182-F304 | A 182-F316 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | Hand Wheel | A 197 | | |
| 15 | Name Plate | Aluminium | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
Connection: Raised Face/Ring-Type Joint
Material of the Body/Bonnet: A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|------------|------------|------------|--------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 36(1.42) | 46(1.81) |
| L | mm(in) | 216(8.50) | 229(9.02) | 254(10.00) | 279(10.98) | 305(12.0) | 317.2(12.49) |
| H (Open) | mm(in) | 207(8.15) | 207(8.15) | 240(9.45) | 258(10.16) | 290(11.42) | 337(13.27) |
| W | mm(in) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | 250(9.84) | 280(11.02) |
| Weight | kg | 15.5 | 16.9 | 18.9 | 28.9 | 34.3 | 52.8 |

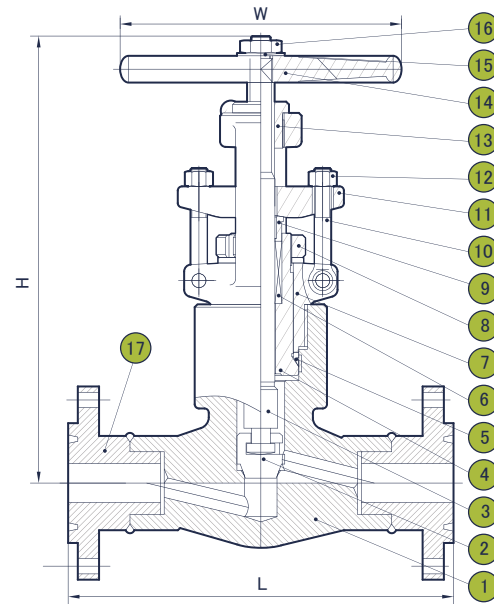
Forged Steel Pressure Seal Globe Valves, Flanged End, CLASS 2500 (PN 420)

Class 2500 (PN 420)
Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)



20

DIE ERSTE reserves the right to change product design and specifications without notice.
Copyright © 2008 by DIE ERSTE INDUSTRY CO., LTD.



Selection

Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|--------------|--------------|--------------|
| D | mm(in) | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L(RTJ) | mm(in) | 264(10.39) | 273(10.75) | 308(12.13) | 352.2(13.87) | 387.2(15.24) | 454.2(17.88) |
| H (Open) | mm(in) | 333(13.11) | 333(13.11) | 333(13.11) | 410(16.14) | 420(16.54) | 524(20.63) |
| W(RTJ) | mm(in) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) | 250(9.84) | 280(11.02) |
| Weight(RTJ) | kg | 18 | 21 | 23 | 36 | 45 | 82 |

Features

- The higher the internal pressure, the greater the sealing forces
- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Outside screw & yoke (OS&Y)
- Loose disc
- Compact and sturdy designs for high pressure-temperature service
- Replacement of handwheel without affecting the position of disc

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 5 | Sealing Ring | SS304 | | SS316 |
| 6 | Stem Packing | SS304 & Graphite | | SS316 & Graphite |
| 7 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 8 | P.S. Lock Nut | A 276-410 | | |
| 9 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 10 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 11 | Gland Flange | A 216 -WCB | A 105 | A 182-F304 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Stem Nut | A 108-1020 | | A 276-410 |
| 14 | Hand Wheel | A 197 | | |
| 15 | Name Plate | Aluminium | | |
| 16 | H.W.Lock Nut | A 194-2H | | A 193-B8 |
| 17 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Y-Pattern Globe Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

Forged steel
globe valve

Features

- Meets API 602 required wall thickness / ASME B16.34
- Loose hard-faced disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Integral hard-faced seat
- Compact and sturdy designs for high pressure-temperature service

Class 800 (PN 130)
Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)

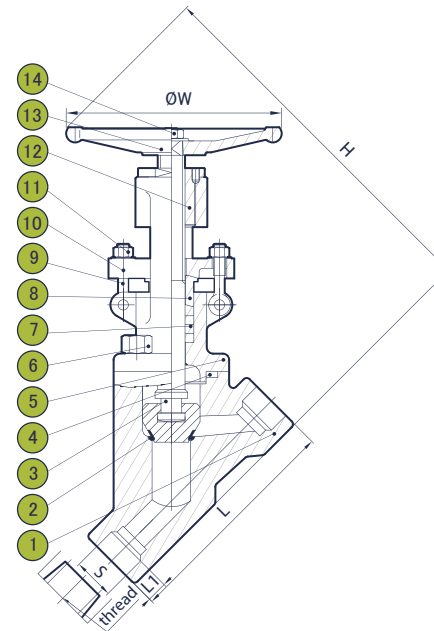


Globe Valve

21

| Component and Common Materials | | | | |
|--------------------------------|----------------|---------------------|----------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | 316 & Graphite | |
| 5 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 6 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 7 | Stem Packing | Reinforced Graphite | | |
| 8 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland Flange | A 276-WCB | A 105 | A 182-F304 |
| 11 | Gland Nut | A 194-2H | | A 193-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | Handwheel | A 197 | | |
| 14 | H. W. Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
 Connection:
 Threaded End/Socket-welding End
 Thread Type:
 NPT/BSPT/DIN
 OS&Y Type:
 Bolted Bonnet/Welded Bonnet
 Material of the Body/Bonnet:
 A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|------------|------------|------------|------------|
| D | mm(in) | 7(0.28) | 11(0.43) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) |
| L | mm(in) | 98(3.86) | 98(3.86) | 98(3.86) | 120(4.72) | 140(5.51) | 140(5.51) | 170(6.69) |
| H (Open) | mm(in) | 240(9.45) | 240(9.45) | 240(9.45) | 290(11.42) | 302(11.89) | 368(14.49) | 370(14.57) |
| W | mm(in) | 100(3.94) | 100(3.94) | 100(3.94) | 125(4.92) | 160(6.30) | 160(6.30) | 180(6.30) |
| Weight | kg | 4.6 | 4.6 | 4.6 | 7.6 | 9.8 | 13.7 | 14 |

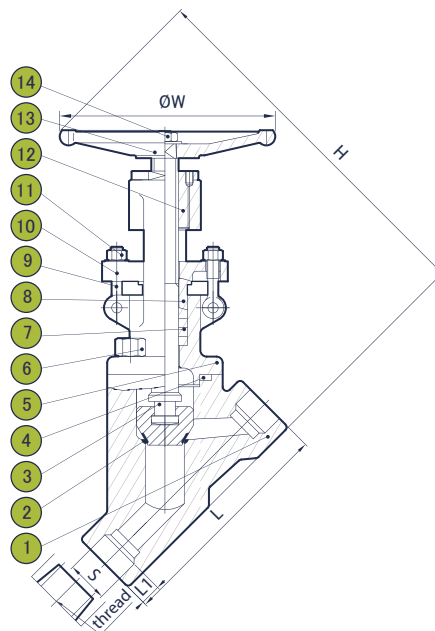
Forged Steel Y-Pattern Globe Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

Class 1500 (PN 260)
Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)



Globe Valve

22



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
OS&Y Type:
Bolted Bonnet/Welded Bonnet
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|-----------|------------|------------|------------|
| D | mm(in) | 7(0.28) | 11(0.43) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) |
| L | mm(in) | 98(3.86) | 98(3.86) | 120(4.72) | 140(5.51) | 140(5.51) | 170(6.69) | 190(7.48) |
| H (Open) | mm(in) | 170(6.69) | 170(6.69) | 195(7.68) | 235(9.25) | 278(10.94) | 278(10.94) | 310(12.20) |
| W | mm(in) | 125(4.92) | 125(4.92) | 125(4.92) | 160(6.30) | 160(6.30) | 180(7.09) | 200(7.87) |
| Weight | kg | 4.5 | 4.5 | 6.1 | 7.6 | 9.8 | 14.5 | 20.8 |

Features

- Meets API 602 required wall thickness / ASME B16.34
- Loose hard-faced disc
- Outside screw & yoke
- Two-piece self-aligning gland
- Integral hard-faced seat
- Compact but sturdy designs for high pressure-temperature service

| Component and Common Materials | | | | |
|--------------------------------|---------------|---------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 6 | Bonnet Bolt | A 193-B7 | | A 193-B8 |
| 7 | Stem Packing | Reinforced Graphite | | |
| 8 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 10 | Gland Flange | A 216-WCB | A 105 | A 182-F304 |
| 11 | Gland Nut | A 194-2H | | A 193-B8 |
| 12 | Stem Nut | A 108-1020 | | A 276-410 |
| 13 | HandWheel | A 197 | | |
| 14 | H.W.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Y-Pattern Pressure Seal Globe Valves, Threaded & Socket-welding End, CLASS 1500/2500 (PN 260/420)

Features

- The higher the internal pressure, the greater the sealing forces
- Meets API 602 required wall thickness / ASME B16.34
- Loose hard-faced disc
- Outside screw & yoke (OS&Y)
- Two-piece self-aligning gland
- Integral hard-faced seat
- Compact and sturdy designs for high pressure-temperature service

Class 1500 (PN 260)
Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)

Class 2500 (PN 420)
Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)

Forged steel
globe valve

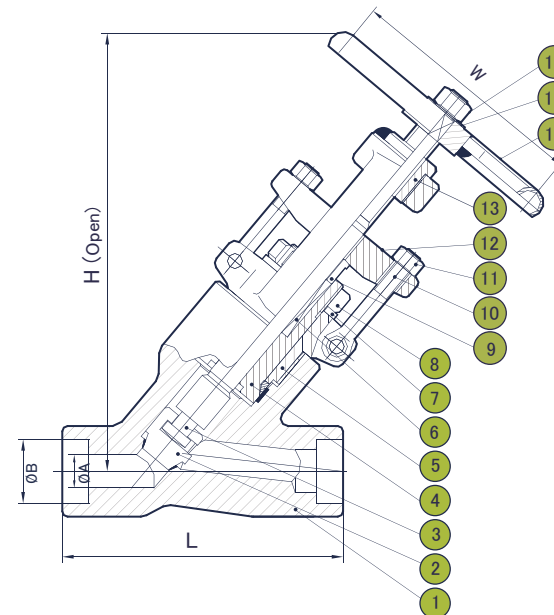


Globe Valve

23

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc Ring | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Stem | A 276-410 | A 182-F304 | A 182-F316 |
| 4 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 5 | Bonnet | A 105 | A 182-F304 | A 182-F316 |
| 7 | Stem Packing | SS304 & Graphite | SS316 & Graphite | |
| 8 | Sleeve Washer | A 276-410 | A 182-F304 | A 182-F316 |
| 9 | P.S.Lock Nut | AISI 1035 | | |
| 10 | Gland | A 276-410 | A 182-F304 | A 182-F316 |
| 11 | Gland Eyebolt | A 193-B7 | | A 193-B8 |
| 12 | Gland Nut | A 194-2H | | A 193-B8 |
| 13 | Gland Flange | A 216-WCB | A 105 | A 183-F304 |
| 14 | Stem Nut | A 108-1020 | | A 276-410 |
| 15 | Handwheel | A 197 | | |
| 16 | Name Plate | Aluminum | | |
| 17 | H.W.Lock Nut | A 194-2H | | A 183-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.



Selection
Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|------------|------------|------------|------------|------------|------------|------------|
| D | mm(in) | 9(0.35) | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L | mm(in) | 186(7.32) | 186(7.32) | 186(7.32) | 186(7.32) | 232(9.13) | 232(9.13) | 310(12.20) |
| H (Open) | mm(in) | 333(13.11) | 333(13.11) | 333(13.11) | 333(13.11) | 406(15.98) | 406(15.98) | 524(20.63) |
| W | mm(in) | 200(7.87) | 200(7.87) | 200(7.87) | 200(7.87) | 280(11.02) | 280(11.02) | 300(11.81) |
| Weight | kg | 12.3 | 12.3 | 11.6 | 10.8 | 28 | 26.4 | 43.8 |



Forged steel check valve section



Check valves, also known as nonreturn valves, are automatic valves which open with forward flow and close against reverse flow. Check valves are unique in that they do not require an outside power supply or a signal to operate, and therefore they can be used in lines to feed a secondary system in which the pressure can rise above that of the primary system, and shutoff with speed or gradualness, depending on the specific design of the valve.

DIE ERSTE's forged check valves are grouped according to the way closure members move on the seat, i.e. lift type, swing type and piston type. The lift type check valve uses a free-moving closure element placed above the valve seat while the swing type uses a hinged closure element that is similar to a common door arrangement. Both of them are recommended to install in horizontal piping lines for the common specified pressure classes. Spring loaded piston check valves are DIE ERSTE's preference for reciprocating compressor service where a history of noisy check valve operations have been experienced. As an option, a spring can be added to the lift type check valve as a piston type if specified on the order form.

24

Forged Steel Lift/Piston Type Check Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

25

Forged Steel Lift/Piston Type Check Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

26

Forged Steel Lift/Piston Type Check Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

27

Forged Steel Lift/Piston Type Check Valves, Flanged End, CLASS 900/1500 (PN 150/260)

28

Forged Steel Lift/Piston Type Pressure Seal Check Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

29

Forged Steel Lift/Piston Type Pressure Seal Check Valves, Threaded & Socket-welding End, CLASS 2500 (PN 420)

30

Forged Steel Swing Type Check Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

31

Forged Steel Swing Type Check Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

32

Forged Steel Swing Type Check Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

33

Forged Steel Swing Type Check Valves, Flanged End, CLASS 900/1500 (PN 150/260)

34

Forged Steel Lift/Piston Type Check Valves, Threaded & Socket-welding End, CLASS 800 (PN 130)

Class 800 (PN 130)
Full Port/Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)

Features

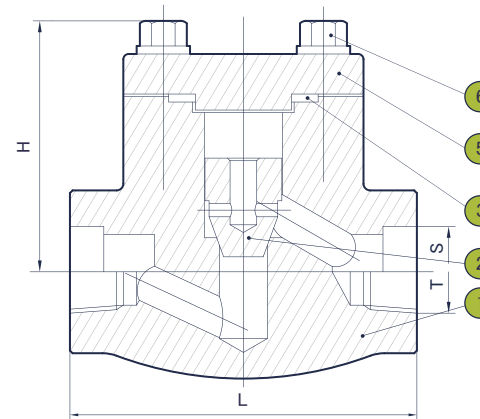
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv values
- Compact and sturdy designs for high pressure-temperature service

Forged steel
check valve



Check Valve

25



Selection

Connection:
Threaded End/Socket-welding End

Thread Type:
NPT/BSPT/DIN

Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

A spring can be added to the lift type
check valve as a piston type one.

Component and Common Materials

| NO. | PARTS NAME | MATERIALS | | |
|-----|------------|------------------|----------------|------------------|
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | Standard Port | mm(in) | 8(1/4) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|---------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| | Full port | mm(in) | - | - | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) |
| D | mm(in) | 7(0.28) | 7(0.28) | 11(0.43) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | mm(in) | 79(3.11) | 79(3.11) | 79(3.11) | 92(3.62) | 111(3.98) | 120(4.72) | 152(5.98) | 172(6.77) | 220(8.66) |
| H | mm(in) | 62(2.44) | 62(2.44) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(4.72) | 147(5.79) |
| Weight | kg | 1.5 | 1.4 | 1.2 | 1.4 | 2.3 | 3.9 | 5.6 | 8.9 | 12.5 |

Forged Steel Lift/Piston Type Check Valves, Threaded & Socket-welding End, CLASS 1500 (PN 260)

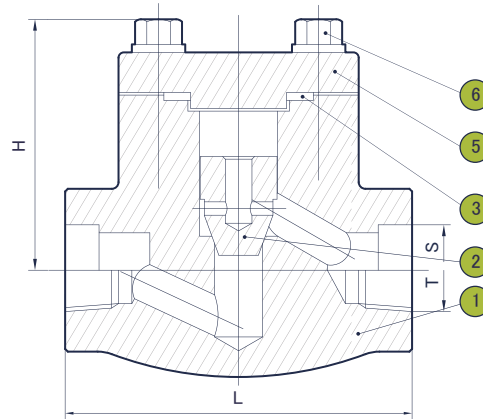
Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 800: 3705 psi@100°F
(255.5 bar@38°C)

Features

- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv Values
- Compact and sturdy designs for high pressure-temperature service



26



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22
A spring can be added to the lift type
check valve as a piston type one.

| Nominal diameter | Standard Port | mm(in) | 8(1/4) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|---------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| | Full port | mm(in) | - | - | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) |
| D | mm(in) | 7(0.28) | 7(0.28) | 11(0.43) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | mm(in) | 79(3.11) | 79(3.11) | 79(3.11) | 92(3.62) | 111(4.37) | 120(4.72) | 152(5.98) | 172(6.77) | 220(8.66) |
| H | mm(in) | 62(2.44) | 62(2.44) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(4.72) | 147(5.79) |
| Weight | kg | 1.5 | 1.4 | 1.2 | 1.4 | 2.3 | 3.9 | 5.6 | 8.9 | 12.5 |

| Component and Common Materials | | | | |
|--------------------------------|------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Lift/Piston Type Check Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv Values
- Compact and sturdy designs for high pressure-temperature service

Class 150 (PN 20)
Full Port/Standard Port
ASME CLASS 150: 285 psi@100°F
(19.7 bar@38°C)

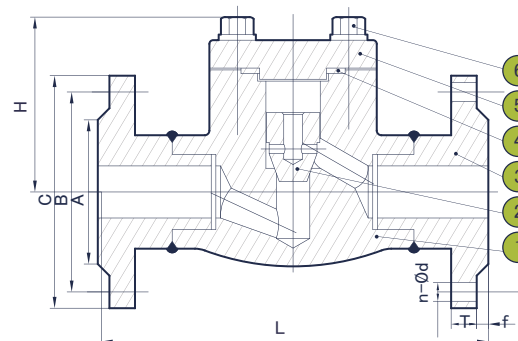
Class 300 (PN 50)
Full Port/Standard Port
ASME CLASS 300: 740 psi@100°F
(51.0 bar@38°C)

Class 600 (PN 110)
Full Port/Standard Port
ASME CLASS 600: 1480 psi@100°F
(102.1 bar@38°C)

Forged steel
check valve



27



Selection

Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22
A spring can be added to the lift type check valve as a piston type one.

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|-------|--------|-----------|-----------|-----------|-----------|-----------|------------|
| D | | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | CL150 | mm(in) | 108(4.25) | 117(4.61) | 127(5.00) | 140(5.51) | 165(6.50) | 203(7.99) |
| | CL300 | mm(in) | 152(5.98) | 178(7.01) | 203(7.99) | 216(8.50) | 229(9.02) | 267(10.51) |
| | CL600 | mm(in) | 165(6.50) | 190(7.48) | 216(8.50) | 229(9.02) | 241(9.49) | 292(11.50) |
| H | | mm(in) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(4.72) |
| Weight | CL150 | kg | 2.8 | 3.5 | 4.5 | 8.4 | 9 | 12.6 |
| | CL300 | kg | 2.7 | 3.7 | 4.7 | 8.8 | 9.6 | 13.7 |
| | CL600 | kg | 3 | 4 | 5.9 | 9.5 | 10 | 15.6 |

* Note that the raised-face (RF) flanged end connection is adopted while the pressure rating is under CLASS 600. Please ask your DIE ERSE sales for different requirements.

Forged Steel Lift/Piston Type Check Valves, Flanged End, **CLASS 900/1500 (PN 150/260)**

Class 900 (PN 150)

Full Port/Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

Class 1500 (PN 260)

Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)



Check Valve

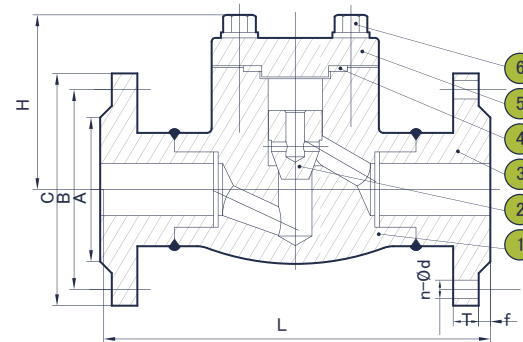
28

DIE ERSTE reserves the right to change product design and specifications without notice.
Copyright © 2008 by DIE ERSTE INDUSTRY CO., LTD.

Selection

Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

A spring can be added to the lift type check valve as a piston type one.



| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|--------|-----------|-----------|------------|------------|------------|------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | mm(in) | 216(8.50) | 229(9.02) | 254(10.00) | 279(10.94) | 305(12.01) | 368(14.49) |
| H | mm(in) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(7.42) |
| Weight | kg | 3.21 | 4.7 | 7.31 | 9.7 | 14.35 | 22.48 |

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv Values
- Compact and sturdy designs for high pressure-temperature service

Component and Common Materials

| NO. | PARTS NAME | MATERIALS | | |
|-----|---------------|------------------|------------|------------------|
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304 | A 182-F316 |
| 3 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Lift/Piston Type Pressure Seal Check Valves, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

Features

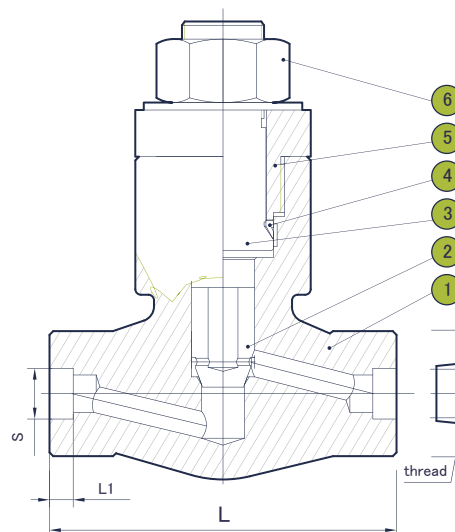
- The higher the internal pressure, the greater the sealing forces
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv Values
- Compact and sturdy designs for high pressure-temperature service

Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100F
(255.5 bar@38°C)

Forged steel
check valve



29



Selection
Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Screens:
Single/Double
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Component and Common Materials | | | | |
|--------------------------------|---------------|-----------|------------|------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | A 105 | A 182-F304 | A 182-F316 |
| 3 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 4 | Sealing Ring | SS304 | | SS316 |
| 5 | Retaining Nut | A 105 | A 182-F304 | A 182-F316 |
| 6 | P.S.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | Standard port | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|---------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Full port | mm(in) | 10(3/8) | 15(1/2) | 25(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) |
| D | | mm(in) | 15(0.59) | 15(0.59) | 15(0.59) | 15(0.59) | 15(0.59) | 15(6.59) |
| L | | mm(in) | 140(5.51) | 140(5.51) | 140(5.51) | 178(7.01) | 216(8.50) | 216(8.50) |
| H | | mm(in) | 117(4.61) | 117(4.61) | 105(4.13) | 152(5.98) | 195(7.68) | 195(7.68) |
| Weight | | kg | 6.8 | 7 | 7.5 | 18.5 | 20.3 | 22 |

Forged Steel Lift/Piston Type Pressure Seal Check Valves, Threaded & Socket-welding End, **CLASS 2500 (PN 420)**

Class 2500 (PN 420)
Full Port/Standard Port
ASME CLASS 2500: 6250 psi@100°F
(431.0 bar@38°C)

Features

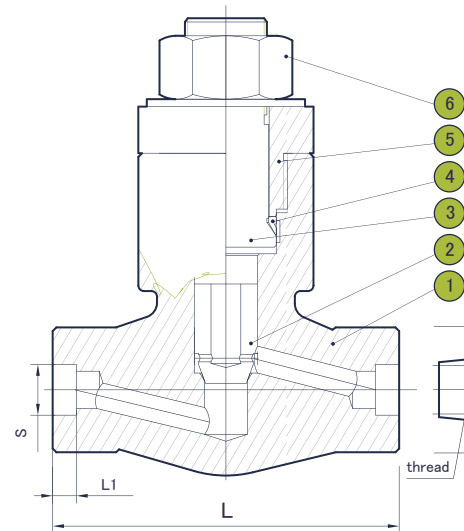
- The higher the internal pressure, the greater the sealing forces
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Valves with low Cv Values
- Compact and sturdy designs for high pressure-temperature service

Forged steel
check valve
section



30

DIE ERSTE reserves the right to change product design and specifications without notice.
Copyright © 2008 by DIE ERSTE INDUSTRY CO., LTD.



Selection

Connection:
Threaded End/Socketweld End

Thread Type:
NPT/BSPT/DIN

Material of the Body/Bonnet:
A105/F316/F316L/F304/F304/F11/F22

A spring can be added to the lift type check valve as a piston type one.

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|-----------|-----------|------------|
| D | mm | 11(0.43) | 14(0.55) | 19(0.75) | 25(0.98) | 28(1.10) | 35(1.38) |
| L | mm | 186(7.32) | 186(7.32) | 186(7.32) | 232(9.13) | 232(9.13) | 279(10.87) |
| H | mm | 117(4.61) | 117(4.61) | 117(4.61) | 152(5.98) | 152(5.98) | 195(7.68) |
| Weight | kg | 10.5 | 11 | 11.8 | 23 | 26.4 | 39 |

| Component and Common Materials | | | | |
|--------------------------------|---------------|-----------|------------|------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304 | A 182-F316 |
| 3 | Sealing Seat | A 105 | A 182-F304 | A 182-F316 |
| 4 | Sealing Ring | SS 304 | | SS 316 |
| 5 | Retaining Nut | A 105 | A 182-F304 | A 182-F316 |
| 6 | P.S.Lock Nut | A 194-2H | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Swing Type Check Valves, Threaded & Socket-welding End, **CLASS 800 (PN 130)**

Features

- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Compact and sturdy designs for high pressure-temperature service

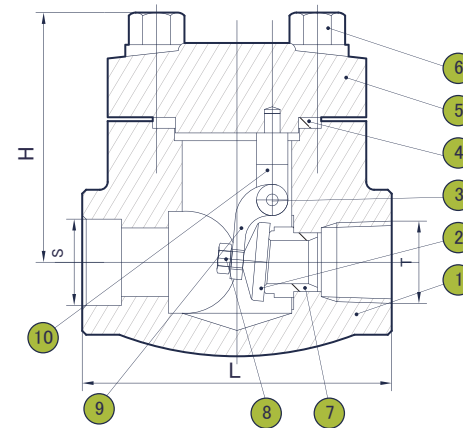
Class 800 (PN 130)
Full Port/Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)

Forged steel
check valve



Check Valve

31



| Component and Common Materials | | | | |
|--------------------------------|----------------|------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Pin | A 276-304 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |
| 7 | Seat | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 8 | Disc Nut | A 193-B7 | | A 193-B8 |
| 9 | Swing Arm | A 105 | A 182-F304 | A 182-F316 |
| 10 | Swing Arm Hold | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Selection
Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | Standard port | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) | |
|------------------|---------------|--------|----------|----------|-----------|-----------|------------|-----------|-----------|
| | Full port | mm(in) | 10(3/8) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
| D | | mm(in) | 10(0.39) | 13(0.51) | 18(0.71) | 23(0.91) | 28.5(1.12) | 36(1.42) | 42(1.65) |
| L | | mm(in) | 79(2.83) | 92(3.62) | 111(4.37) | 120(4.72) | 120(4.72) | 140(5.51) | 170(6.69) |
| H | | mm(in) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 1102(4.02) | 120(4.70) | 140(5.51) |
| Weight | | kg | 1.1 | 1.2 | 2.0 | 3.5 | 4.5 | 7.5 | 10 |

Forged Steel Swing Type Check Valves, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

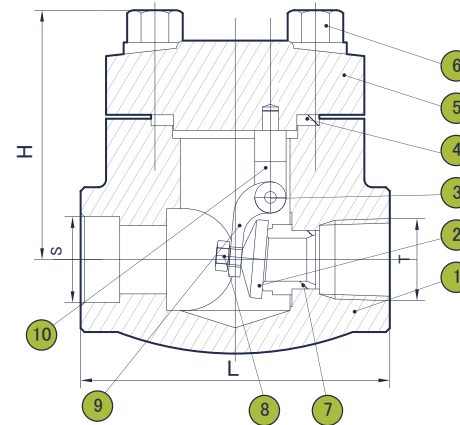
Class 1500 (PN 260)
Full Port/Standard Port
ASME CLASS 800: 3705 psi@100°F
(255.5 bar@38°C)

Features

- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Compact and sturdy designs for high pressure-temperature service



32



Selection

Connection:
Threaded End/Socket-welding End

Thread Type:
NPT/BSPT/DIN

Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|------------|-----------|-----------|
| D | mm(in) | 12.7(0.5) | 18(0.71) | 23(0.91) | 28.5(1.12) | 36(1.42) | 43(1.69) |
| L | mm(in) | 92(3.62) | 111(4.37) | 120(4.72) | 120(4.72) | 140(5.51) | 170(6.69) |
| H | mm(in) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(4.72) | 140(5.51) |
| Weight | kg | 1.1 | 1.9 | 3.4 | 4.5 | 7.3 | 10 |

Component and Common Materials

| NO. | PARTS NAME | MATERIALS | | |
|-----|----------------|------------------|----------------|------------------|
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Pin | A 276-304 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Blot | A 193-B7 | | A 193-B8 |
| 7 | Seat | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 8 | Disc Nut | A 193-B7 | | A 193-B8 |
| 9 | Swing Arm | A 105 | A 182-F304 | A 182-F316 |
| 10 | Swing Arm Hold | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged Steel Swing Type Check Valves, Flanged End, CLASS 150/300/600 (PN 20/50/110)

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Compact and sturdy designs for high pressure-temperature service

Class 150 (PN 20)
Full Port/Standard Port
ASME CLASS 150: 285 psi@100°F
(19.7 bar@38°C)

Class 300 (PN 50)
Full Port/Standard Port
ASME CLASS 300: 740 psi@100°F
(51.0 bar@38°C)

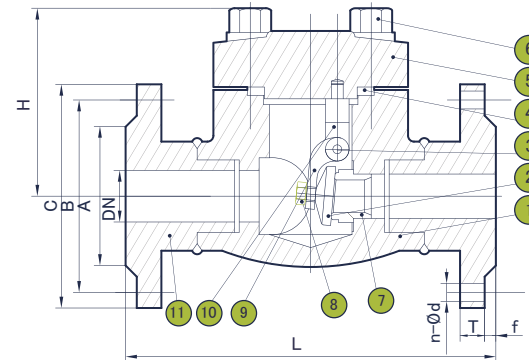
Class 600 (PN 110)
Full Port/Standard Port
ASME CLASS 600: 1480 psi@100°F
(102.1 bar@38°C)

Forged steel
check valve



Check Valve

33



| Component and Common Materials | | | | |
|--------------------------------|----------------|------------------|------------------|----------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Pin | A 276-304 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |
| 7 | Seat | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 8 | Disc Nut | A 193-B7 | | A 193-B8 |
| 9 | Swing Arm | A 105 | A 182-F304 | A 182-F316 |
| 10 | Swing Arm Hold | A 105 | A 182-F304 | A 182-F316 |
| 11 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Selection
Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|-------|--------|-----------|-----------|-----------|-----------|-----------|------------|
| D | | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | CL150 | mm(in) | 108(4.25) | 117(4.61) | 127(5.00) | 140(5.51) | 165(6.50) | 203(7.99) |
| | CL300 | mm(in) | 152(5.98) | 178(7.01) | 216(8.50) | 229(9.02) | 241(9.49) | 267(10.51) |
| | CL600 | mm(in) | 165(6.50) | 190(7.48) | 216(8.50) | 229(9.02) | 241(9.49) | 292(11.50) |
| H | | mm(in) | 62(2.44) | 63(2.48) | 78(3.05) | 82(3.23) | 102(4.02) | 120(4.72) |
| Weight | CL150 | kg | 2.8 | 3.5 | 4.5 | 8.4 | 9 | 12.6 |
| | CL300 | kg | 2.7 | 3.7 | 5.3 | 9.6 | 10.2 | 13.7 |
| | CL600 | kg | 3 | 4 | 5.9 | 9.5 | 10 | 15.6 |

Forged Steel Swing Type Check Valves, Flanged End, **CLASS 900/1500 (PN 150/260)**

Class 900 (PN 150)

Full Port/Standard Port
ASME CLASS 900: 2220 psi@100°F
(153.1 bar@38°C)

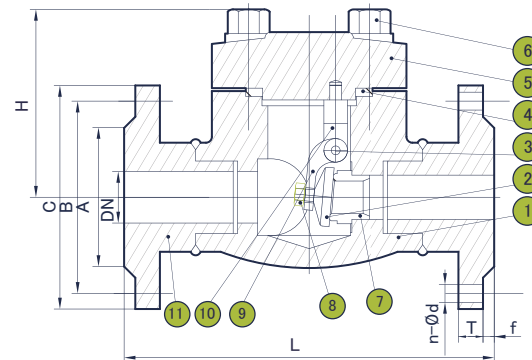
Class 1500 (PN 260)

Full Port/Standard Port
ASME CLASS 1500: 3705 psi@100°F
(255.5 bar@38°C)



Check Valve

34



Selection

Connection:
Raised Face/Ring-Type Joint
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(11/4) | 40(11/2) | 50(2) |
|------------------|--------|-----------|-----------|------------|------------|------------|------------|
| D | mm(in) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 33(1.30) | 42(1.65) |
| L | mm(in) | 216(8.50) | 229(9.02) | 254(10.00) | 279(10.98) | 305(12.01) | 368(14.49) |
| H | mm(in) | 62(2.44) | 63(2.48) | 78(3.07) | 82(3.23) | 102(4.02) | 120(4.72) |
| Weight | kg | 2.91 | 4.3 | 6.81 | 8.6 | 12.75 | 19.98 |

Features

- Flanges conform to ASME Standard B16.5 and end-to-end dimensions conform to ASME Standard B16.10
- Meets API 602 required wall thickness / ASME B16.34
- Spiral wound gasket with SS304 / graphite or SS316 / graphite
- Horizontal type
- Compact and sturdy designs for high pressure-temperature service

| Component and Common Materials | | | | |
|--------------------------------|----------------|------------------|----------------|------------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Disc | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 3 | Pin | A 276-304 | A 182-F304 | A 182-F316 |
| 4 | Gasket | SS304 & Graphite | | SS316 & Graphite |
| 5 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |
| 7 | Seat | 13Cr | A 182-F304+STL | A 182-F316+STL |
| 8 | Disc Nut | A 193-B7 | | A 193-B8 |
| 9 | Swing Arm | A 105 | A 182-F304 | A 182-F316 |
| 10 | Swing Arm Hold | A 105 | A 182-F304 | A 182-F316 |
| 11 | Welded Flange | A 105 | A 182-F304 | A 182-F316 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Forged steel “Y” type strainer section



Forged Steel “Y” Type Strainer Threaded & Socket-welding End, CLASS 800 (PN 130)

Class 800 (PN 130)
Standard Port
ASME CLASS 800: 1975 psi@100°F
(136.2 bar@38°C)

Features

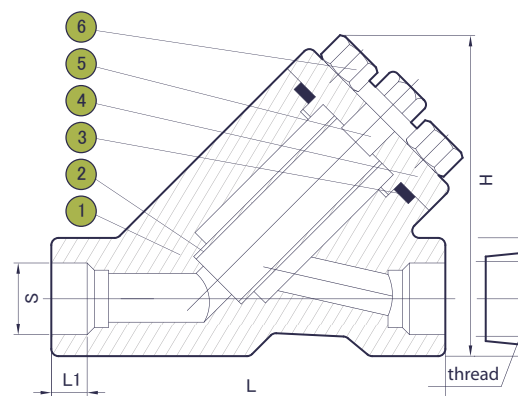
- Meets API 602 required wall thickness / ASME B16.34
- Screen is stainless steel
- Removable drain plug for easy cleaning
- Compact and sturdy designs for high pressure-temperature service

Forged steel
“Y” Type
Strainer



“Y” strainer

35



Selection

Connection:
Threaded End/Socket-welding End
Thread Type:
NPT/BSPT/DIN
Screens:
Single/Double
Material of the Body/Bonnet:
A105/F316/F316L/F304/F304L/F11/F22

Component and Common Materials

| NO. | PARTS NAME | MATERIALS | | |
|-----|---------------|------------------|------------------|------------|
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Screen | Stainless Steel | | |
| 3 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 4 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 5 | Blow-off Plug | A 276-410 | | |
| 6 | Cap Bolt | A 193-B7 | A 193-B8 | |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|----------|----------|-----------|-----------|-----------|-----------|
| D | mm(in) | 11(0.43) | 13(0.51) | 18(0.71) | 23(0.91) | 28(1.10) | 40(1.57) |
| L | mm(in) | 98(3.86) | 98(3.86) | 120(4.72) | 140(5.51) | 140(5.51) | 170(6.69) |
| H | mm(in) | 86(3.39) | 86(3.39) | 105(4.13) | 118(4.65) | 120(4.72) | 150(5.91) |
| Weight | kg | 4.2 | 9 | 8.9 | 10 | 18.6 | 20 |

Forged Steel "Y" Type Strainer, Threaded & Socket-welding End, **CLASS 1500 (PN 260)**

Class 1500 (PN 260)
 Full Port/Standard Port
 ASME CLASS 1500: 3705 psi@100°F
 (255.5 bar@38°C)

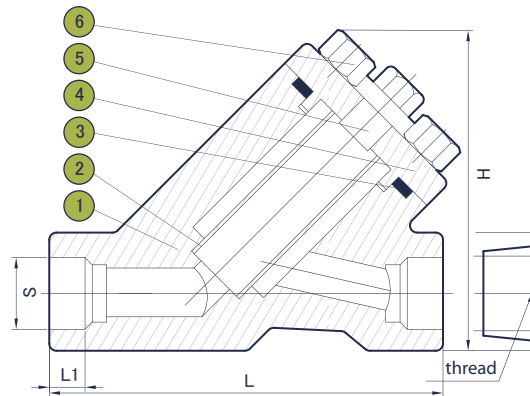
Features

- Meets API 602 required wall thickness / ASME B16.34
- Screen is stainless steel
- Removable drain plug for easy cleaning
- Compact and sturdy designs for high pressure-temperature service



"Y" strainer

36



Selection

Connection:
 Threaded End/Socket-welding End
 Thread Type:
 NPT/BSPT/DIN
 Screens:
 Single/Double
 Material of the Body/Bonnet:
 A105/F316/F316L/F304/F304L/F11/F22

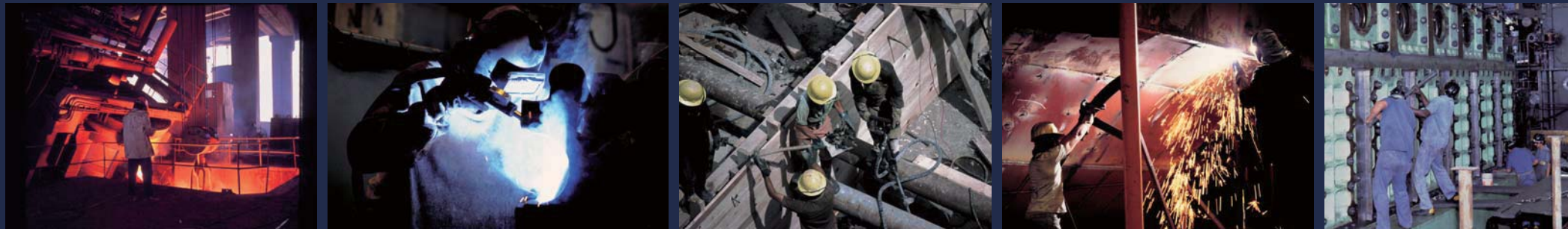
| Nominal diameter | mm(in) | 15(1/2) | 20(3/4) | 25(1) | 32(1 1/4) | 40(1 1/2) | 50(2) |
|------------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| D | mm(in) | 12(0.47) | 15(0.59) | 20(0.79) | 28(1.10) | 32(1.26) | 40(1.57) |
| L | mm(in) | 111(4.37) | 111(4.37) | 140(5.51) | 140(5.51) | 155(6.10) | 170(6.69) |
| H | mm(in) | 70(2.76) | 100(3.94) | 110(4.33) | 120(4.72) | 120(4.72) | 150(5.91) |
| Weight | kg | 4.2 | 9 | 8.9 | 10 | 18.6 | 20 |

| Component and Common Materials | | | | |
|--------------------------------|---------------|------------------|------------------|------------|
| NO. | PARTS NAME | MATERIALS | | |
| 1 | Body | A 105 | A 182-F304 | A 182-F316 |
| 2 | Screen | Stainless Steel | | |
| 3 | Gasket | SS304 & Graphite | SS316 & Graphite | |
| 4 | Cap | A 105 | A 182-F304 | A 182-F316 |
| 5 | Blow-off Plug | A 276-410 | | |
| 6 | Cap Bolt | A 193-B7 | | A 193-B8 |

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

Emission Control Testing

DIE ERSTE is ISO9001 approved and since 2002 has PED approval (CE Marking), and has been involved in extensive testing which lead to major improvements in the standard design and requirements by the main relevant specifications. All valves from DIE ERSTE are tested 100% fully to API598, and then supplied with 3.1B certifications.



Try (pound per square inch gauge)

TEST CONDITIONS

Test temperature: 20°C (68°F)

Valve Type: API 602 Class 150/300/600/900/1500/2500 gate valve

Sizes: 1/2 – 2" (15–50 mm)

Packing: Graphite

Gasket: Spiral wound SS 316 and graphite

Trim: Wedge: 13 CR

Seat: Stellite

Test Result: Valves zero leakage

| CLASS | ITEM | TEST PRESSURE |
|-------|-----------------------------------------|---------------|
| 150 | High-pressure closure and backseat test | 22.0 (315) |
| | Hydrostatic shell test | 30.0 (450) |
| 300 | High-pressure closure and backseat test | 56.5 (815) |
| | Hydrostatic shell test | 77.0 (1125) |
| 600 | High-pressure closure and backseat test | 112.5 (1630) |
| | Hydrostatic shell test | 154.0 (2225) |
| 900 | High-pressure closure and backseat test | 168.5 (2445) |
| | Hydrostatic shell test | 230.0 (3350) |
| 1500 | High-pressure closure and backseat test | 281.0 (4080) |
| | Hydrostatic shell test | 383.0 (5575) |
| 2500 | High-pressure closure and backseat test | 468.5 (6790) |
| | Hydrostatic shell test | 639 (9275) |



Pressure Temperature Rating

| A105 LF2 (psi) | | | | | | | | |
|----------------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 285 | 740 | 1480 | 1975 | 2220 | 3705 | 6170 | 11110 |
| 100 | 285 | 740 | 1480 | 1975 | 2220 | 3705 | 6170 | 11110 |
| 200 | 260 | 675 | 1350 | 1800 | 2025 | 3375 | 5625 | 10120 |
| 300 | 230 | 655 | 1315 | 1750 | 1970 | 3280 | 5470 | 9845 |
| 400 | 200 | 635 | 1270 | 1690 | 1900 | 3170 | 5280 | 9505 |
| 500 | 170 | 600 | 1200 | 1595 | 1795 | 2995 | 4990 | 8980 |
| 600 | 140 | 550 | 1095 | 1460 | 1640 | 2735 | 4560 | 8210 |
| 650 | 125 | 535 | 1075 | 1430 | 1610 | 2685 | 4475 | 8055 |
| 700 | 110 | 535 | 1065 | 1420 | 1600 | 2665 | 4440 | 7990 |
| 750 | 95 | 505 | 1010 | 1345 | 1510 | 2520 | 4200 | 7560 |
| 800 | 80 | 410 | 825 | 1100 | 1235 | 2060 | 3430 | 6170 |

| F11 (psi) | | | | | | | | |
|-----------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 100 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 200 | 260 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 300 | 230 | 720 | 1455 | 1930 | 2165 | 3610 | 6070 | 10830 |
| 400 | 200 | 695 | 1385 | 1850 | 2080 | 3465 | 5880 | 10400 |
| 500 | 170 | 665 | 1330 | 1775 | 1995 | 3325 | 5540 | 9965 |
| 600 | 140 | 605 | 1210 | 1615 | 1815 | 3025 | 5040 | 9070 |
| 650 | 125 | 590 | 1175 | 1570 | 1765 | 2940 | 4905 | 8825 |
| 700 | 110 | 570 | 1135 | 1515 | 1705 | 2840 | 4730 | 8515 |
| 750 | 95 | 530 | 1065 | 1420 | 1595 | 2660 | 4430 | 7970 |
| 800 | 80 | 510 | 1015 | 1355 | 1525 | 2540 | 4230 | 7610 |
| 850 | 65 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7305 |
| 900 | 50 | 450 | 900 | 1200 | 1350 | 2245 | 3745 | 6740 |
| 950 | 35 | 320 | 640 | 850 | 955 | 1595 | 3145 | 4785 |
| 1000 | 20 | 215 | 430 | 575 | 650 | 1080 | 2170 | 3240 |
| 1050 | 20 | 145 | 290 | 385 | 430 | 720 | 1455 | 2160 |
| 1100 | 20 | 95 | 190 | 255 | 290 | 480 | 915 | 1440 |
| 1150 | 20 | 60 | 125 | 165 | 185 | 310 | 570 | 925 |
| 1200 | 15 | 40 | 75 | 100 | 115 | 190 | 345 | 565 |

Notes for pressure temperature tables:

1. Class 150 flanged end ratings end at 10000°F (5380°C)
2. A105, LF2 can be used up to 8000°F (4270°F)
3. LF2 is suitable for use down to -500°F (-460°C)
4. F11, F22 can be used up to 11000°F (5930°C)
5. F5, F9, F91 can be used up to 12000°F (6500°F)
6. F304, F316, F321, F347 can be used down to -3200°F (-1980°C)
7. Over 10000°F (5380°C) F304, F316, F321, F347 with 0.04% min. carbon



| F22 (psi) | | | | | | | | |
|-----------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 100 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 200 | 260 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 300 | 230 | 730 | 1455 | 1940 | 2185 | 3640 | 6070 | 10925 |
| 400 | 200 | 705 | 1410 | 1880 | 2115 | 3530 | 5880 | 10585 |
| 500 | 170 | 665 | 1330 | 1775 | 1995 | 3325 | 5540 | 9965 |
| 600 | 140 | 605 | 1210 | 1615 | 1815 | 3025 | 5040 | 9070 |
| 650 | 125 | 590 | 1175 | 1570 | 1765 | 2940 | 4905 | 8825 |
| 700 | 110 | 570 | 1135 | 1515 | 1705 | 2840 | 4730 | 8515 |
| 750 | 95 | 530 | 1065 | 1420 | 1595 | 2660 | 4430 | 7970 |
| 800 | 80 | 510 | 1015 | 1355 | 1525 | 2540 | 4230 | 7610 |
| 850 | 65 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7305 |
| 900 | 50 | 450 | 900 | 1200 | 1350 | 2245 | 3745 | 6740 |
| 950 | 35 | 375 | 755 | 1005 | 1130 | 1885 | 3145 | 5665 |
| 1000 | 20 | 260 | 520 | 695 | 780 | 1305 | 2170 | 3910 |
| 1050 | 20 | 175 | 350 | 465 | 525 | 875 | 1455 | 2625 |
| 1100 | 20 | 110 | 220 | 295 | 330 | 550 | 915 | 1645 |
| 1150 | 20 | 70 | 135 | 180 | 205 | 345 | 570 | 1030 |
| 1200 | 20 | 40 | 80 | 110 | 125 | 205 | 345 | 615 |

| F5 (psi) | | | | | | | | |
|----------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 11250 | 6250 |
| 100 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 11250 | 6250 |
| 200 | 260 | 745 | 1490 | 1985 | 2235 | 3725 | 11170 | 6205 |
| 300 | 230 | 715 | 1430 | 1910 | 2150 | 3580 | 10740 | 5965 |
| 400 | 200 | 705 | 1410 | 1880 | 2115 | 3530 | 10585 | 5880 |
| 500 | 170 | 665 | 1330 | 1775 | 1995 | 3325 | 9965 | 5540 |
| 600 | 140 | 605 | 1210 | 1615 | 1815 | 3025 | 9070 | 5040 |
| 650 | 125 | 590 | 1175 | 1570 | 1765 | 2940 | 8825 | 4905 |
| 700 | 110 | 570 | 1135 | 1515 | 1705 | 2840 | 8515 | 4730 |
| 750 | 95 | 530 | 1055 | 1410 | 1585 | 2640 | 7920 | 4400 |
| 800 | 80 | 510 | 1015 | 1355 | 1525 | 2540 | 7610 | 4230 |
| 850 | 65 | 485 | 965 | 1290 | 1450 | 2415 | 7250 | 4030 |
| 900 | 50 | 370 | 740 | 985 | 1110 | 1850 | 5555 | 3085 |
| 950 | 35 | 275 | 550 | 735 | 825 | 1370 | 4115 | 2285 |
| 1000 | 20 | 200 | 400 | 530 | 595 | 995 | 2985 | 1655 |
| 1050 | 20 | 145 | 290 | 385 | 430 | 720 | 2160 | 1200 |
| 1100 | 20 | 100 | 200 | 265 | 300 | 495 | 1490 | 830 |
| 1150 | 20 | 60 | 125 | 165 | 185 | 310 | 925 | 515 |
| 1200 | 20 | 35 | 70 | 95 | 105 | 170 | 515 | 285 |



Pressure Temperature Rating

| F9 (psi) | | | | | | | | |
|----------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 90 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 100 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 200 | 260 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 300 | 230 | 730 | 1455 | 1940 | 2185 | 3640 | 6070 | 10925 |
| 400 | 200 | 705 | 1410 | 1880 | 2115 | 3530 | 5880 | 10585 |
| 500 | 170 | 665 | 1330 | 1775 | 1995 | 3325 | 5540 | 9965 |
| 600 | 140 | 605 | 1210 | 1615 | 1815 | 3025 | 5040 | 9070 |
| 650 | 125 | 590 | 1175 | 1570 | 1765 | 2940 | 4905 | 8825 |
| 700 | 110 | 570 | 1135 | 1515 | 1705 | 2840 | 4730 | 8515 |
| 750 | 95 | 530 | 1065 | 1420 | 1595 | 2660 | 4430 | 7970 |
| 800 | 80 | 510 | 1015 | 1355 | 1525 | 2540 | 4230 | 7610 |
| 850 | 65 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7305 |
| 900 | 50 | 450 | 900 | 1200 | 1350 | 2245 | 3745 | 6740 |
| 950 | 35 | 375 | 755 | 1005 | 1130 | 1885 | 3145 | 5655 |
| 1000 | 20 | 255 | 505 | 675 | 760 | 1270 | 2115 | 3805 |
| 1050 | 20 | 170 | 345 | 460 | 515 | 855 | 1430 | 2570 |
| 1100 | 20 | 115 | 225 | 300 | 340 | 565 | 945 | 1695 |
| 1150 | 20 | 75 | 150 | 200 | 225 | 375 | 630 | 1130 |
| 1200 | 20 | 50 | 105 | 140 | 155 | 255 | 430 | 770 |

| F304 (psi) | | | | | | | | |
|------------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 100 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 200 | 230 | 600 | 1200 | 1600 | 1800 | 3000 | 5000 | 9000 |
| 300 | 205 | 540 | 1080 | 1440 | 1620 | 2700 | 4500 | 8100 |
| 400 | 190 | 495 | 995 | 1325 | 1490 | 2485 | 4140 | 7450 |
| 500 | 170 | 465 | 930 | 1240 | 1395 | 2330 | 3880 | 6985 |
| 600 | 140 | 435 | 875 | 1165 | 1310 | 2185 | 3640 | 6550 |
| 650 | 125 | 430 | 860 | 1145 | 1290 | 2150 | 3580 | 6445 |
| 700 | 110 | 425 | 850 | 1135 | 1275 | 2125 | 3540 | 6370 |
| 750 | 95 | 415 | 830 | 1105 | 1245 | 2075 | 3460 | 6230 |
| 800 | 80 | 405 | 805 | 1075 | 1210 | 2015 | 3360 | 6050 |
| 850 | 65 | 395 | 790 | 1055 | 1190 | 1980 | 3300 | 5940 |
| 900 | 50 | 390 | 780 | 1035 | 1165 | 1945 | 3240 | 5830 |
| 950 | 35 | 380 | 765 | 1020 | 1145 | 1910 | 3180 | 5725 |
| 1000 | 20 | 320 | 640 | 855 | 965 | 1605 | 2675 | 4815 |
| 1050 | 20 | 310 | 615 | 820 | 925 | 1545 | 2570 | 4630 |
| 1100 | 20 | 255 | 515 | 685 | 770 | 1285 | 2145 | 3855 |
| 1150 | 20 | 60 | 400 | 530 | 595 | 995 | 1655 | 2985 |
| 1200 | 20 | 40 | 310 | 415 | 465 | 770 | 1285 | 2315 |
| 1250 | 20 | 20 | 225 | 20 | 340 | 565 | 945 | 1695 |
| 1300 | 20 | 20 | 170 | 20 | 255 | 430 | 715 | 1285 |
| 1350 | 20 | 20 | 125 | 20 | 185 | 310 | 515 | 925 |
| 1400 | 20 | 20 | 95 | 20 | 145 | 240 | 400 | 720 |
| 1450 | 15 | 15 | 70 | 15 | 105 | 170 | 285 | 515 |
| 1500 | 10 | 10 | 55 | 10 | 80 | 135 | 230 | 410 |

Notes for pressure temperature tables:

1. Class 150 flanged end ratings end at 10000°F (5380°C)
2. A105, LF2 can be used up to 8000°F (4270°F)
3. LF2 is suitable for use down to -500°F (-460°C)
4. F11, F22 can be used up to 11000°F (5930°C)
5. F5, F9, F91 can be used up to 12000°F (6500°F)
6. F304, F316, F321, F347 can be used down to -3200°F (-1980°C)
7. Over 10000°F (5380°C) F304, F316, F321, F347 with 0.04% min. carbon



| F316 (psi) | | | | | | | | |
|------------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 75 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 100 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 200 | 235 | 620 | 1240 | 1655 | 1860 | 3095 | 5160 | 9290 |
| 300 | 215 | 560 | 1120 | 1495 | 1680 | 2795 | 4660 | 8390 |
| 400 | 195 | 515 | 1025 | 1370 | 1540 | 2570 | 4280 | 7705 |
| 500 | 170 | 480 | 955 | 1275 | 1435 | 2390 | 3980 | 7165 |
| 600 | 140 | 450 | 900 | 1205 | 1355 | 2255 | 3760 | 6770 |
| 650 | 125 | 445 | 890 | 1185 | 1330 | 2220 | 3700 | 6660 |
| 700 | 110 | 430 | 870 | 1160 | 1305 | 2170 | 3620 | 6515 |
| 750 | 95 | 425 | 855 | 1140 | 1280 | 2135 | 3560 | 6410 |
| 800 | 80 | 420 | 845 | 1125 | 1265 | 2110 | 3520 | 6335 |
| 850 | 65 | 420 | 835 | 1115 | 1255 | 2090 | 3480 | 6265 |
| 900 | 50 | 415 | 830 | 1105 | 1245 | 2075 | 3460 | 6230 |
| 950 | 35 | 385 | 775 | 1030 | 1160 | 1930 | 3220 | 5795 |
| 1000 | 20 | 350 | 700 | 935 | 1050 | 1750 | 2915 | 5245 |
| 1050 | 20 | 345 | 685 | 915 | 1030 | 1720 | 2865 | 5155 |
| 1100 | 20 | 305 | 610 | 815 | 915 | 1525 | 2545 | 4575 |
| 1150 | 20 | 235 | 475 | 630 | 710 | 1185 | 1970 | 3550 |
| 1200 | 20 | 185 | 370 | 495 | 555 | 925 | 1545 | 2775 |
| 1250 | 20 | 145 | 295 | 20 | 440 | 735 | 1230 | 2210 |
| 1300 | 20 | 115 | 235 | 20 | 350 | 585 | 970 | 1750 |
| 1350 | 20 | 95 | 190 | 20 | 290 | 480 | 800 | 1440 |
| 1400 | 20 | 75 | 150 | 20 | 225 | 380 | 630 | 1130 |
| 1450 | 20 | 60 | 115 | 15 | 175 | 290 | 485 | 875 |
| 1500 | 20 | 40 | 85 | 10 | 125 | 205 | 345 | 620 |

| F321 (psi) | | | | | | | | |
|------------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 100 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 200 | 245 | 645 | 1290 | 1720 | 1935 | 3230 | 5380 | 9685 |
| 300 | 230 | 595 | 1190 | 1585 | 1785 | 2975 | 4960 | 8930 |
| 400 | 200 | 550 | 1105 | 1470 | 1655 | 2760 | 4600 | 8280 |
| 500 | 170 | 515 | 1030 | 1375 | 1545 | 2570 | 4285 | 7715 |
| 600 | 140 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7310 |
| 650 | 125 | 480 | 955 | 1275 | 1435 | 2390 | 3980 | 7165 |
| 700 | 110 | 465 | 930 | 1240 | 1395 | 2330 | 3880 | 6985 |
| 750 | 95 | 460 | 915 | 1220 | 1375 | 2290 | 3820 | 6875 |
| 800 | 80 | 450 | 900 | 1205 | 1355 | 2255 | 3760 | 6770 |
| 850 | 65 | 445 | 895 | 1190 | 1340 | 2230 | 3720 | 6695 |
| 900 | 50 | 440 | 885 | 1180 | 1325 | 2210 | 3680 | 6625 |
| 950 | 35 | 385 | 775 | 1030 | 1160 | 1930 | 3220 | 5795 |
| 1000 | 20 | 355 | 715 | 950 | 1070 | 1785 | 2970 | 5350 |
| 1050 | 20 | 315 | 625 | 835 | 940 | 1565 | 2605 | 4690 |
| 1100 | 20 | 270 | 545 | 725 | 815 | 1360 | 2265 | 4075 |
| 1150 | 20 | 235 | 475 | 630 | 710 | 1185 | 1970 | 3550 |
| 1200 | 20 | 185 | 370 | 495 | 555 | 925 | 1545 | 2775 |
| 1250 | 20 | 140 | 280 | 20 | 420 | 705 | 1170 | 2110 |
| 1300 | 20 | 110 | 220 | 20 | 330 | 550 | 915 | 1645 |
| 1350 | 20 | 85 | 170 | 20 | 255 | 430 | 715 | 1285 |
| 1400 | 20 | 65 | 130 | 20 | 195 | 325 | 545 | 975 |
| 1450 | 20 | 50 | 105 | 15 | 155 | 255 | 430 | 770 |
| 1500 | 20 | 40 | 75 | 10 | 115 | 190 | 315 | 565 |



Pressure Temperature Rating

| F347 (psi) | | | | | | | | |
|------------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 100 | 275 | 720 | 1440 | 1920 | 2160 | 3600 | 6000 | 10800 |
| 200 | 255 | 660 | 1320 | 1760 | 1980 | 3300 | 5500 | 9900 |
| 300 | 230 | 615 | 1230 | 1640 | 1845 | 3070 | 5120 | 9215 |
| 400 | 200 | 575 | 1145 | 1530 | 1720 | 2870 | 4780 | 8605 |
| 500 | 170 | 540 | 1080 | 1440 | 1620 | 2700 | 4500 | 8100 |
| 600 | 140 | 515 | 1025 | 1370 | 1540 | 2570 | 4280 | 7705 |
| 650 | 125 | 505 | 1010 | 1345 | 1510 | 2520 | 4200 | 7560 |
| 700 | 110 | 495 | 990 | 1320 | 1485 | 2470 | 4120 | 7415 |
| 750 | 95 | 490 | 985 | 1310 | 1475 | 2460 | 4100 | 7380 |
| 800 | 80 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7310 |
| 850 | 65 | 485 | 970 | 1295 | 1455 | 2425 | 4040 | 7270 |
| 900 | 50 | 450 | 900 | 1200 | 1350 | 2245 | 3745 | 6740 |
| 950 | 35 | 385 | 775 | 1030 | 1160 | 1930 | 3220 | 5795 |
| 1000 | 20 | 365 | 725 | 970 | 1090 | 1820 | 3030 | 5450 |
| 1050 | 20 | 360 | 720 | 960 | 1080 | 1800 | 3000 | 5400 |
| 1100 | 20 | 325 | 645 | 860 | 965 | 1610 | 2685 | 4835 |
| 1150 | 20 | 275 | 550 | 735 | 825 | 1370 | 2285 | 4115 |
| 1200 | 20 | 170 | 345 | 460 | 515 | 855 | 1430 | 2570 |
| 1250 | 20 | 125 | 245 | 20 | 370 | 615 | 1030 | 1850 |
| 1300 | 20 | 95 | 185 | 20 | 280 | 465 | 770 | 1390 |
| 1350 | 20 | 70 | 135 | 20 | 205 | 345 | 570 | 1030 |
| 1400 | 20 | 55 | 110 | 20 | 165 | 275 | 455 | 825 |
| 1450 | 20 | 40 | 80 | 15 | 125 | 205 | 345 | 615 |
| 1500 | 15 | 35 | 70 | 10 | 105 | 170 | 285 | 515 |

| F91 (psi) | | | | | | | | |
|-----------|------|------|------|------|------|-------|-------|-------|
| °F | 150# | 300# | 600# | 800# | 900# | 1500# | 2500# | 4500# |
| -20 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 250 | 11250 |
| 100 | 290 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 200 | 260 | 750 | 1500 | 2000 | 2250 | 3750 | 6250 | 11250 |
| 300 | 230 | 730 | 1455 | 1940 | 2185 | 3640 | 6070 | 10925 |
| 400 | 200 | 705 | 1410 | 1880 | 2115 | 3530 | 5880 | 10585 |
| 500 | 170 | 665 | 1330 | 1775 | 1995 | 3325 | 5540 | 9965 |
| 600 | 140 | 605 | 1210 | 1615 | 1815 | 3025 | 5040 | 9070 |
| 650 | 125 | 590 | 1175 | 1570 | 1765 | 2940 | 4905 | 8825 |
| 700 | 110 | 570 | 1135 | 1515 | 1705 | 2840 | 4730 | 8515 |
| 750 | 95 | 530 | 1065 | 1420 | 1595 | 2660 | 4430 | 7970 |
| 800 | 80 | 510 | 1015 | 1355 | 1525 | 2540 | 4230 | 7610 |
| 850 | 65 | 485 | 975 | 1300 | 1460 | 2435 | 4060 | 7305 |
| 900 | 50 | 450 | 900 | 1200 | 1350 | 2245 | 3745 | 6740 |
| 950 | 35 | 385 | 775 | 1030 | 1160 | 1930 | 3220 | 5795 |
| 1000 | 20 | 365 | 725 | 970 | 1090 | 1820 | 3030 | 5450 |
| 1050 | 20 | 360 | 720 | 960 | 1080 | 1800 | 3000 | 5400 |
| 1100 | 20 | 300 | 605 | 805 | 905 | 1510 | 2515 | 4525 |
| 1150 | 20 | 225 | 445 | 595 | 670 | 1115 | 1855 | 3345 |
| 1200 | 20 | 145 | 290 | 385 | 430 | 720 | 1200 | 2160 |

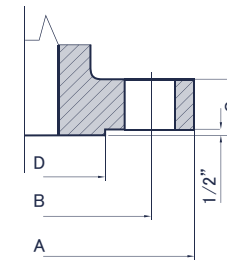
Notes for pressure temperature tables:

1. Class 150 flanged end ratings end at 10000°F (5380°C)
2. A105, LF2 can be used up to 8000°F (4270°F)
3. LF2 is suitable for use down to -500°F (-460°C)
4. F11, F22 can be used up to 11000°F (5930°C)
5. F5, F9, F91 can be used up to 12000°F (6500°F)
6. F304, F316, F321, F347 can be used down to -3200°F (-1980°C)
7. Over 10000°F (5380°C) F304, F316, F321, F347 with 0.04% min. carbon

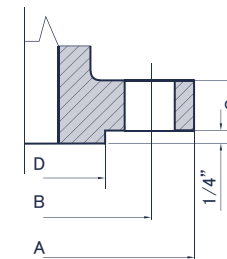
End Connection

Flanges – ASME B16.5

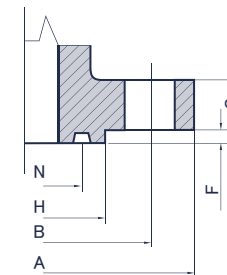
| CLASS | Size | A | | C | | D | | B | | Bolt Holes | | Ring Joint Facing | | | | Ring N. | | | |
|-------|-------|------|-----|------|------|------|------|------|-------|------------|------|-------------------|------|-------|-------|---------|-------|-----|-----|
| | | | | | | | | N | Size | H | M | F | | | | | | | |
| 150 | 1/2 | 3.50 | 89 | 0.44 | 11.5 | 1.38 | 34.9 | 2.38 | 60.3 | 4 | 0.62 | 16 | - | - | - | - | - | - | |
| | 3/4 | 3.88 | 98 | 0.50 | 13.0 | 1.69 | 42.9 | 2.75 | 69.8 | 4 | 0.62 | 16 | - | - | - | - | - | - | |
| | 1 | 4.25 | 108 | 0.56 | 14.5 | 2.00 | 50.8 | 3.12 | 79.4 | 4 | 0.62 | 16 | 2.50 | 63.5 | 1.875 | 47.62 | 0.250 | 6.3 | R15 |
| | 1.1/4 | 4.62 | 117 | 0.62 | 16.0 | 2.50 | 63.5 | 3.50 | 88.9 | 4 | 0.62 | 16 | 2.88 | 73.0 | 2.250 | 57.15 | 0.250 | 6.3 | R17 |
| | 1.1/2 | 5.00 | 127 | 0.69 | 17.5 | 2.88 | 73.0 | 3.88 | 98.4 | 4 | 0.62 | 16 | 3.25 | 82.5 | 2.562 | 65.07 | 0.250 | 6.3 | R19 |
| | 2 | 6.00 | 152 | 0.75 | 19.5 | 3.62 | 92.1 | 4.75 | 120.6 | 4 | 0.75 | 20 | 4.00 | 102.0 | 3.250 | 82.55 | 0.250 | 6.3 | R22 |
| 300 | 1/2 | 3.75 | 95 | 0.56 | 14.5 | 1.38 | 34.9 | 2.62 | 66.7 | 4 | 0.62 | 16 | 2.00 | 51.0 | 1.344 | 34.14 | 0.219 | 5.6 | R11 |
| | 3/4 | 4.62 | 117 | 0.62 | 16.0 | 1.69 | 42.9 | 3.25 | 82.5 | 4 | 0.75 | 20 | 2.50 | 63.5 | 1.688 | 42.88 | 0.250 | 6.3 | R13 |
| | 1 | 4.88 | 124 | 0.69 | 17.5 | 2.00 | 50.8 | 3.50 | 88.9 | 4 | 0.75 | 20 | 2.75 | 70.0 | 2.000 | 50.80 | 0.250 | 6.3 | R16 |
| | 1.1/4 | 5.25 | 133 | 0.75 | 19.5 | 2.50 | 63.5 | 3.88 | 98.4 | 4 | 0.75 | 20 | 3.12 | 79.5 | 2.375 | 60.32 | 0.250 | 6.3 | R18 |
| | 1.1/2 | 6.12 | 156 | 0.81 | 21.0 | 2.88 | 73.0 | 4.50 | 114.3 | 4 | 0.88 | 23 | 3.56 | 90.5 | 2.688 | 68.28 | 0.250 | 6.3 | R20 |
| | 2 | 6.50 | 165 | 0.88 | 22.5 | 3.62 | 92.1 | 5.00 | 127.0 | 8 | 0.75 | 20 | 4.25 | 108.0 | 3.250 | 82.55 | 0.312 | 7.9 | R23 |
| 600 | 1/2 | 3.75 | 95 | 0.56 | 14.5 | 1.38 | 34.9 | 2.62 | 66.7 | 4 | 0.62 | 16 | 2.00 | 51.0 | 1.344 | 34.14 | 0.219 | 5.6 | R11 |
| | 3/4 | 4.62 | 117 | 0.62 | 16.0 | 1.69 | 42.9 | 3.25 | 82.5 | 4 | 0.75 | 20 | 2.50 | 63.5 | 1.688 | 42.88 | 0.250 | 6.3 | R13 |
| | 1 | 4.88 | 124 | 0.69 | 17.5 | 2.00 | 50.8 | 3.50 | 88.9 | 4 | 0.75 | 20 | 2.75 | 70.0 | 2.000 | 50.80 | 0.250 | 6.3 | R16 |
| | 1.1/4 | 5.25 | 133 | 0.75 | 19.5 | 2.50 | 63.5 | 3.88 | 98.4 | 4 | 0.75 | 20 | 3.12 | 79.5 | 2.375 | 60.32 | 0.250 | 6.3 | R18 |
| | 1.1/2 | 6.12 | 156 | 0.81 | 21.0 | 2.88 | 73.0 | 4.50 | 114.3 | 4 | 0.88 | 23 | 3.56 | 90.5 | 2.688 | 68.28 | 0.250 | 6.3 | R20 |
| | 2 | 6.50 | 165 | 0.88 | 22.5 | 3.62 | 92.1 | 5.00 | 127.0 | 8 | 0.75 | 20 | 4.25 | 108.0 | 3.250 | 82.55 | 0.312 | 7.9 | R23 |
| 1500 | 1/2 | 4.75 | 121 | 0.88 | 22.5 | 1.38 | 34.9 | 3.25 | 82.5 | 4 | 0.88 | 23 | 2.38 | 60.5 | 1.562 | 39.67 | 0.250 | 5.6 | R12 |
| | 3/4 | 5.12 | 130 | 1.00 | 25.5 | 1.69 | 42.9 | 3.50 | 88.9 | 4 | 0.88 | 23 | 2.62 | 66.5 | 1.750 | 44.45 | 0.250 | 6.3 | R14 |
| | 1 | 5.88 | 149 | 1.12 | 29.0 | 2.00 | 50.8 | 4.00 | 101.6 | 4 | 1.00 | 26 | 2.81 | 71.5 | 2.000 | 50.80 | 0.250 | 6.3 | R16 |
| | 1.1/4 | 6.25 | 159 | 1.12 | 29.0 | 2.50 | 63.5 | 4.38 | 111.1 | 4 | 1.00 | 26 | 3.19 | 81.0 | 2.375 | 60.32 | 0.250 | 6.3 | R18 |
| | 1.1/2 | 7.00 | 178 | 1.25 | 32.0 | 2.88 | 73.0 | 4.88 | 123.8 | 4 | 1.12 | 29 | 3.62 | 92.0 | 2.688 | 68.28 | 0.250 | 6.3 | R20 |
| | 2 | 8.50 | 216 | 1.50 | 38.5 | 3.62 | 92.1 | 6.50 | 165.1 | 8 | 1.00 | 26 | 4.88 | 124.0 | 3.750 | 95.25 | 0.312 | 7.9 | R24 |
| 2500 | 1/2 | 5.23 | 133 | 1.20 | 30.5 | 1.38 | 34.9 | 3.50 | 88.9 | 4 | 0.88 | 23 | 2.55 | 65.0 | 1.688 | 42.88 | 0.250 | 6.3 | R13 |
| | 3/4 | 5.51 | 140 | 1.25 | 32.0 | 1.69 | 42.9 | 3.74 | 95.2 | 4 | 0.88 | 23 | 2.87 | 73.0 | 2.000 | 50.80 | 0.250 | 6.3 | R16 |
| | 1 | 6.25 | 159 | 1.37 | 35.0 | 2.00 | 50.8 | 4.24 | 107.9 | 4 | 1.00 | 26 | 3.24 | 82.5 | 3.374 | 60.32 | 0.250 | 6.3 | R18 |
| | 1.1/4 | 7.24 | 184 | 1.51 | 38.5 | 2.50 | 63.5 | 5.12 | 130.2 | 4 | 1.12 | 29 | 3.99 | 101.5 | 2.844 | 72.24 | 0.312 | 7.9 | R21 |
| | 1.1/2 | 7.99 | 203 | 1.75 | 44.5 | 2.88 | 73.0 | 5.74 | 146 | 4 | 1.25 | 32 | 4.50 | 114.5 | 3.250 | 82.55 | 0.312 | 7.9 | R23 |
| | 2 | 9.25 | 235 | 2.00 | 51.0 | 3.62 | 92.1 | 6.74 | 171.4 | 8 | 1.12 | 29 | 5.25 | 133.5 | 4.000 | 101.60 | 0.312 | 7.9 | R26 |



FLANGES ANSI – B16.5



RAISED FACE 600 & 1500 lb



RING JOINT FACING

End Connection

Butt-weld – ASME B16.25

| Size | Schedule 40 | | Schedule 80 | | Schedule 160 | | Schedule XXS | |
|--------|------------------|-----------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| | ØA | T | ØA | T | ØA | T | ØA | T |
| | mm (In) | mm (In) | mm (In) | mm (In) | mm (In) | mm (In) | mm (In) | mm (In) |
| 1/2" | 21.3 (0.840) | 2.77 (0.190) | 21.3 (0.840) | 3.73 (0.147) | 21.3 (0.840) | 4.78 (0.188) | 21.3 (0.840) | 7.47 (0.294) |
| | 26.7 (1.050) | 2.87 (0.113) | 26.7 (1.050) | 3.91 (0.154) | 26.7 (1.050) | 5.56 (0.219) | 26.7 (1.050) | 7.82 (0.308) |
| 3/4" | 33.4 (1.315) | 3.38 (0.133) | 33.4 (1.315) | 4.55 (0.179) | 33.4 (1.315) | 6.35 (0.250) | 33.4 (1.315) | 9.09 (0.358) |
| | 42.2 (1.660) | 3.55 (0.140) | 42.2 (1.660) | 4.85 (0.191) | 42.2 (1.660) | 6.35 (0.250) | 42.2 (1.660) | 9.70 (0.382) |
| 1 1/4" | 48.3 (1.900) | 3.68 (0.145) | 48.3 (1.900) | 5.08 (0.200) | 48.3 (1.900) | 7.14 (0.281) | 48.3 (1.900) | 10.15 (0.400) |
| | 60.3 (2.375) | 3.91 (0.154) | 60.3 (2.375) | 5.54 (0.218) | 60.3 (2.375) | 8.74 (0.344) | 60.3 (2.375) | 11.07 (0.436) |
| 2" | 73.0 (2.875) | 5.15 (0.203) | 73.0 (2.875) | 7.01 (0.276) | 73.0 (2.875) | 9.53 (0.375) | 73.0 (2.875) | 14.02 (0.552) |
| | 88.9 (3.500) | 5.48 (0.216) | 88.9 (3.500) | 7.62 (0.300) | 88.9 (3.500) | 11.13 (0.438) | 88.9 (3.500) | 15.24 (0.600) |
| 3" | 114.3 (4.500) | 6.02 (0.237) | 114.3 (4.500) | 8.56 (0.337) | 114.3 (4.500) | 13.49 (0.531) | 114.3 (4.500) | 17.12 (0.674) |
| | | | | | | | | |

Fig. a ≤ 2"

Fig. b > 2"

B = A - 2T

Socket-weld – ASME B16.11

| Size | ØD | | L (min) | | L (Calabri) | |
|--------|-------|-------|---------|-------|-------------|------|
| | Inch | mm | ØA | T | ØA | T |
| 1/4" | 0.555 | 14.10 | 0.38 | 9.53 | 0.44 | 11.1 |
| 3/8" | 0.690 | 17.53 | 0.38 | 9.53 | 0.44 | 11.1 |
| 1/2" | 0.855 | 21.72 | 0.38 | 9.35 | 0.5 | 12.7 |
| 3/4" | 1.065 | 27.05 | 0.5 | 12.7 | 0.57 | 14.5 |
| 1" | 1.330 | 33.78 | 0.5 | 12.7 | 0.63 | 16.0 |
| 1 1/4" | 1.675 | 42.54 | 0.5 | 12.7 | 0.69 | 17.5 |
| 1 1/2" | 1.915 | 48.64 | 0.5 | 12.7 | 0.75 | 19.0 |
| 2" | 2.406 | 61.11 | 0.62 | 15.88 | 0.86 | 22.0 |

Socket wall thickness conforms to ASME B16.34

Fig.a

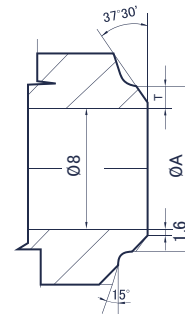
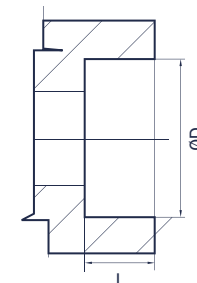
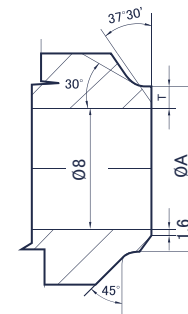


Fig.b



Flow Coefficient C_v

| Valve Size | GATE | | GLOBE | | | CHECK | |
|------------|--------------|-----------|--------------|-----------|-----------|--------------|-----------|
| | Regular Port | Full Port | Regular Port | Full Port | Y-Pattern | Regular Port | Full Port |
| 1/4" | - | 2.5 | - | 1.1 | 2.9 | - | 0.9 |
| 3/8" | - | 4.3 | - | 1.4 | 3.8 | - | 1.1 |
| 1/2" | 5.5 | 11.6 | 1.5 | 3.6 | 4.5 | 1 | 2.1 |
| 3/4" | 12 | 26.6 | 3.8 | 6.6 | 10.1 | 2.8 | 5.8 |
| 1" | 27 | 54.6 | 6.8 | 10.9 | 16.0 | 6 | 7 |
| 1 1/4" | 55 | 79.8 | 11 | 14 | 23.1 | 9.5 | 9.2 |
| 1 1/2" | 80 | 87 | 14.3 | 24.3 | 47.1 | 11 | 15.4 |
| 2" | 105.0 | 108 | 25 | 39.7 | 80.2 | 18 | 32 |

Flow Rate

$$Q = C_v \sqrt{\frac{\Delta p}{S}}$$

Pressure Drop

$$\Delta p = S \left(\frac{Q}{C_v} \right)^2$$

For liquids other than water

Δp = Pressure drop(p.s.i.)

Q = Liquid flow in gallons per minute(GPM)

S = Specific gravity at flowing temperature(60°F)

C_v = Valves flow coefficient

Conversion Table to Metric Std

| Flow Coefficient | C_v | K_v |
|------------------|-------|-------|
| C_v | 1 | 0.865 |
| K_v | 1.156 | 1 |

Corrosion Data

| CORROSIVE MEDIA | CORROSIVE MEDIA | | | | CORROSIVE MEDIA | | | | CORROSIVE MEDIA | | | | | | |
|---------------------------------|-----------------|---------------------|---------------------|---------|-----------------|--------------|---------------------|---------------------|-----------------|-------|--------------|---------------------|---------------------|---------|-------|
| | Carbon Steel | Stainless Steel 304 | Stainless Steel 316 | Inconel | Monel | Carbon Steel | Stainless Steel 304 | Stainless Steel 316 | Inconel | Monel | Carbon Steel | Stainless Steel 304 | Stainless Steel 316 | Inconel | Monel |
| Acetate Solvents, Crude | D | A | A | A | A | B | B | B | B | B | B | B | B | B | B |
| Acetate Solvents, Pure | C | A | A | A | A | A | A | A | C | C | A | A | A | A | A |
| Acetic Acid, 95% | D | B | A | A | A | A | A | A | B | A | A | A | A | A | A |
| Acetic Anhydride, Boiling | D | B | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Acetone | B | A | A | A | A | B | A | A | A | A | D | B | A | A | A |
| Alcohols | B | A | A | A | A | B | A | A | A | A | D | B | A | A | A |
| Ammonia, Anhydrous | B | A | A | A | A | D | D | D | D | D | D | D | D | D | D |
| Ammonium Hydroxide, Hot | B | A | A | A | A | D | B | D | C | B | A | A | A | A | A |
| Ammonium Nitrate | B | A | A | A | C | D | D | D | D | D | D | D | D | D | D |
| Aniline Hydrochloride | D | D | C | B | B | C | D | C | B | A | C | A | A | A | A |
| Antimony, Trichloride | D | D | C | B | B | D | C | B | B | B | D | C | B | B | B |
| Asphalt | B | A | A | A | A | B | A | A | A | A | D | B | A | A | A |
| Barium Chloride, 5% | C | A | A | A | A | C | D | B | A | A | D | B | A | A | A |
| Barium Hydroxide | C | A | A | A | A | D | D | D | B | A | D | B | A | A | A |
| Barium Nitrate | C | A | A | B | C | A | A | A | A | A | D | B | A | A | A |
| Benzene, Hot | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Benzoic Acid | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Blood | D | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Bromine, Dry Gas | D | A | A | B | A | D | D | D | B | A | D | B | A | A | A |
| Bromine, Moist Gas | D | A | D | D | C | D | D | D | D | C | B | A | A | B | C |
| Butenmik | D | A | A | A | A | D | D | D | D | D | D | D | D | D | D |
| Calcium Bisulfite | D | C | B | D | D | B | A | A | A | A | D | B | A | A | A |
| Calcium Chloride, Dilute | C | B | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Calcium Hydroxide, 20%, Boiling | D | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Calcium Hydrochloride, < 2% | C | C | B | B | C | A | A | A | A | A | D | B | A | A | A |
| Carbolic Acid, 90% | C | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Carbon Dioxide, Dry | C | A | A | A | A | D | B | B | B | B | D | D | B | B | D |
| Carbon Disulfide | B | A | A | A | A | D | B | B | B | B | D | D | B | B | D |
| Chloroacetic Acid | D | D | C | B | B | D | B | A | A | A | D | B | A | A | A |
| Chloric Acid | D | D | C | C | C | D | B | A | A | A | D | B | A | A | A |
| Chlorinated Water, Sat. | D | D | C | C | C | D | B | A | A | A | D | B | A | A | A |
| Chlorine, Dry Gas | B | B | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Chlorine, Moist Gas | D | D | C | D | C | D | B | A | A | A | D | B | A | A | A |
| Citric Acid, Dilute | D | C | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Citric Acid, Hot, Conc. | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Cresosol, Hot B | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Cupric Chloride, 5% | D | D | C | D | D | D | B | A | A | A | D | B | A | A | A |
| Ethyl Chloride | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Ethyene Glycol | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Ferric Nitrate, < 1% | D | C | B | B | C | D | B | A | A | A | D | B | A | A | A |
| Ferric Nitrate, 5% | D | B | A | C | D | D | B | A | A | A | D | B | A | A | A |
| Ferric Sulfate, 5% | D | B | A | B | C | D | B | A | A | A | D | B | A | A | A |
| Ferrous Sulfate, 10% | C | C | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Flourine, Dry Gas | C | C | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Flourine, Moist Gas | D | D | D | B | A | D | B | A | A | A | D | B | A | A | A |
| Freon, Wet | C | C | C | B | A | D | B | A | A | A | D | B | A | A | A |
| Fuel Oil, 140°F | A | A | A | A | B | D | C | B | B | B | D | C | B | B | B |
| Furfural | B | B | B | B | B | D | C | B | B | B | D | C | B | B | B |
| Gasoline Sour | B | A | A | C | C | D | B | A | A | A | D | B | A | A | A |
| Gasoline Refined | A | A | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Gelatine | D | B | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Glucose | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Glycerine | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Hydrofluoric Acid, Boiling | D | D | D | D | B | D | D | D | D | D | D | D | D | D | D |
| Hydrofluosilicic Acid | D | D | C | B | A | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Chloride, Dry | B | D | C | A | A | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Chloride, Moist | D | D | D | D | C | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Fluoride, Dry | C | D | C | B | A | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Peroxide, Boiling | D | C | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Sulfide, Dry | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Hydrogen Sulfide, Moist | C | D | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Iodine, Dry | D | D | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Kerosene | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Lactic Acid, 5% | D | B | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Lactic Acid, 10% | D | B | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Lactic Acid, Boiling, 5% | D | C | B | B | C | D | B | A | A | A | D | B | A | A | A |
| Lactic Acid, Boiling, 10% | D | D | B | B | C | D | B | A | A | A | D | B | A | A | A |
| Lead Acetate, Hot | D | A | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Magnesium Chloride, Hot, 5% | D | C | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Magnesium Hydroxide | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Magnesium Sulfate | B | A | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Magnesium Sulfate, Boiling | C | A | A | C | A | D | B | A | A | A | D | B | A | A | A |
| Mercury | B | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Mercuric Chloride, < 2% | D | D | D | D | D | D | B | A | A | A | D | B | A | A | A |
| Mercuric Cyanide | D | B | B | B | D | D | B | A | A | A | D | B | A | A | A |
| Methyl Chloride, Dry | D | B | B | B | A | D | B | A | A | A | D | B | A | A | A |
| Milk | D | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Molasses | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Naphtha | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Nickel Chloride | D | C | C | B | A | D | B | A | A | A | D | B | A | A | A |
| Nickel Sulfate, Boiling | D | C | B | B | A | D | B | A | A | A | D | B | A | A | A |
| Nitric Acid, 20% | D | A | A | B | D | D | B | A | A | A | D | B | A | A | A |
| Nitric Acid, Boiling, Conc. | D | D | D | D | D | D | B | A | A | A | D | B | A | A | A |
| Nitrous Acid | D | B | B | B | C | D | B | A | A | A | D | B | A | A | A |
| Nitrobenzene | D | B | A | C | B | D | B | A | A | A | D | B | A | A | A |
| Oil - Miner. | B | A | A | C | B | D | B | A | A | A | D | B | A | A | A |
| Oxalic Acid, Boiling, 10% | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Oxalic Acid, Boiling, 50% | D | D | C | B | B | D | B | A | A | A | D | B | A | A | A |
| Oxygen | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Picric Acid | C | A | A | D | D | D | B | A | A | A | D | B | A | A | A |
| Potassium Bromide | D | C | B | A | A | D | B | A | A | A | D | B | A | A | A |
| Potassium Carbonate | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Potassium Chlorate | B | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Potassium Chloride | D | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Potassium Chloride, Hot | D | C | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Potassium Cyanide | B | B | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Potassium Sulfate, Dil. | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Propane, Liquid & Gas | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Pyrogalllic Acid | B | A | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Rosin, Molten | D | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Salicylic Acid | D | B | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Silver Bromide | D | B | A | C | B | D | B | A | A | A | D | B | A | A | A |
| Silver Chloride | D | D | D | D | C | D | B | A | A | A | D | B | A | A | A |
| Silver Nitrate | D | A | A | A | C | D | B | A | A | A | D | B | A | A | A |
| Sodium Acetate | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Sodium Bisulfite | C | A | A | B | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Bromide, Dil. | D | B | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Cyanide | B | B | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Fluoride, 5% | D | B | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Sodium Hydroxide, 50% | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Sodium Hyposulfite | D | B | A | B | A | D | B | A | A | A | D | B | A | A | A |
| Sodium Nitrate | B | B | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Perborate | C | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Peroxide | C | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Phosphate, Tribasic | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Sodium Silicate | B | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Sodium Thiosulfate | D | B | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Stannous Chloride, Sat. | D | D | B | B | B | D | B | A | A | A | D | B | A | A | A |
| Steam, 212°F | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Steam, 600°F | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Sulfite Liquors | D | C | B | D | D | D | B | A | A | A | D | B | A | A | A |
| Sulfur Chloride | D | C | D | B | B | D | B | A | A | A | D | B | A | A | A |
| Sulfur Dioxide, Moist | D | B | A | D | D | D | B | A | A | A | D | B | A | A | A |
| Sulfuric Acid, Conc. | B | B | B | B | D | D | B | A | A | A | D | B | A | A | A |
| Sulfurous Acid, Sat. | D | B | B | D | D | D | B | A | A | A | D | B | A | A | A |
| Tannic Acid, 10% | D | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Tar, Hot | D | B | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Tartaric Acid, 120°F | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Toluene | A | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Trichlorethylene | B | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Turpentine | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Varnish, Hot | C | A | A | A | A | D | B | A | A | A | D | B | A | A | A |
| Vegetable Oils | B | A | A | A | B | D | B | A | A | A | D | B | A | A | A |
| Vinegar | D | A | A | A | A | D | B | A | A | | | | | | |

How to Order

| | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| VALVE TYPE | PORT | BODY MATERIAL | BODY / BONNET STYLE | TRIM | TYPE OF CONNECTION | PRESSURE RATING | SIZE OF CONNECTION |
| A | B | C | D | E | F | G | H |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | T | = | F | = | F | = | 0 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F | = | F | C | S | = | B | B |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | 1 | = | 0 | 1 | = | 0 | 1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | A | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | |
|----------|------------|
| A | Valve Type |
|----------|------------|

| | | | |
|------------------|-----------------------------------------------|--------------------------------------------------------------------|-------------------------|
| GT - Gate | GB - Globe YB - Y type Globe | PC - Piston Check (Spring-Loaded) LC - Lift Check | SC - Swing Check |
|------------------|-----------------------------------------------|--------------------------------------------------------------------|-------------------------|

| | | |
|----------|------|---------------------|
| B | Port | S - Standard |
|----------|------|---------------------|

F - Full

| | |
|----------|---------------|
| C | Body Material |
|----------|---------------|

| | | | | | | |
|--------------------|--------------------|-------------------|------------------|------------------|-------------------|------------------|
| F16 - F316 | F04 - F304 | FCS - A105 | F09 - F9 | F11 - F11 | LF3 - LF3 | LF1 - LF1 |
| F6L - F316L | F4L - F304L | F05 - F5 | F91 - F91 | F22 - F22 | 321 - F321 | LF2 - LF2 |

D Body / Bonnet Style

| | | | | |
|--------------------------------|--------------------------------|-----------------------------|---------------------------|---------------------|
| BB - Bolted Bonnet OS&Y | WB - Welded Bonnet OS&Y | EB - Extended Bonnet | PS - Pressure Seal | SC - Special |
|--------------------------------|--------------------------------|-----------------------------|---------------------------|---------------------|

E Trim

| CODE | DISC SURFACE ⁽¹⁾ | SEAT SURFACE ⁽¹⁾ | STEM | CODE | DISC SURFACE ⁽¹⁾ | SEAT SURFACE ⁽¹⁾ | STEM |
|-------------------------|-----------------------------|-----------------------------|------|-----------|-----------------------------|-----------------------------|----------|
| 01 | 13 Cr | 13 Cr | 410 | 8A | 13 Cr | Ni-Cr | 410 |
| 02⁽²⁾ | 304 | 304 | F304 | 09 | Monel | Monel | Monel |
| 03⁽²⁾ | 25Cr20Ni 310 | 310 | 310 | 10 | 316 | 316 | 316 |
| 04 | Hard 13 Cr | Hard 13 Cr | 410 | 11 | Monel | Stellite #6 | Monel |
| 05 | HF Stellite #6 | HF Stellite #6 | 410 | 12 | 316 | Stellite #6 | 316 |
| 06 | 13 Cr | Monel | 410 | 13 | Alloy 20 | Alloy 20 | Alloy 20 |
| 07 | 13 Cr | Hard 13 Cr | 410 | 14 | Alloy 20 | Stellite #6 | Alloy 20 |
| 08⁽²⁾ | 13 Cr | Stellite #6 | 410 | 5A | Ni-Cr | Ni-Cr | 410 |

GENERAL NOTE

- (1) Base material is same as body or solid trim material to be determined by Manufacturer.
- (2) Meet to NACE specification upon request.

Note * Hard 13Cr: 750 HB min.; 13Cr: 250 HB min.; HF: Co-Cr; HFA: Ni-Cr

| F | Type of Connection | P | DIN259 BSPP PF | N | NPT Threaded | B | Butt-welding (ASME B16.25) | A | Special |
|------------|----------------------------------|------------|--------------------|-------------------------|---------------------|---------------------------|------------------------------|----------|---------|
| F | Flanged B16.5 (B 16.47 Series A) | | | | | | | | |
| R | Ring Type Joint Flanges | T | BSPT Threaded | D | DIN2999 DIN | S | Socket-welding (ASME B16.11) | | |
| G | Pressure Rating | | | | | | | | |
| C02 | CLASS 150 (PN 20) | C6H | CLASS 600 (PN 110) | C9H | CLASS 900 (PN 150) | C25 | CLASS 2500 (PN420) | | |
| C3H | CLASS 300 (PN 50) | C8H | CLASS 800 (PN 130) | C15 | CLASS 1500 (PN 260) | | | | |
| H | Size of Connection | | | | | | | | |
| | 01 - 1/8" (DN6) | | | 04 - 1/2" (DN15) | | 1B - 1 1/4" (DN32) | | | |
| | 02 - 1/4" (DN8) | | | 06 - 3/4" (DN20) | | 1C - 1 1/2" (DN40) | | | |
| | 03 - 3/8" (DN10) | | | 1A - 1" (DN25) | | 2A - 2" (DN50) | | | |



Gate Valve



Globe Valve



Check Valve



"Y" strainer

Commitment to Quality

DIE ERSTE maintains a worldwide commitment to excellence in the design of its products, as well as the control of their manufacturing processes. All major **DIE ERSTE** facilities are registered to the internationally recognized ISO-9001:2015 standard for Quality Management Systems, and maintain certification to apply the CE mark in accordance with 2014/68/EU per the Pressure Equipment Directive. Satellite suppliers operate under the auspices of the primary locations, using the same procedures, documents and practices. Certified personnel, working in an independently certified system of controls, assure that all **DIE ERSTE** products will provide the long life and excellent service our customers have come to expect. Design expertise, available to all locations, allows **DIE ERSTE** to customize product to meet the most demanding and specialized needs. A long history of excellent field performance demonstrates the robustness of the **DIE ERSTE** line. With ISO registered facilities around the world, **DIE ERSTE** has demonstrated its commitment to Quality in products, in practices, and in performance.

©All Rights Reserved

NOTE: The material in this catalog is for general information. We reserve the right to modify or improve the designs or specifications of the products mentioned in this manual at any time without notice. For specific performance data and proper material selection, consult your **DIE ERSTE** sales.

For general information, please contact our head office, or visit our website at

www.die-erste.com
sales@die-erste.com



Taiwan
5F.-1, No.936, Sec. 4,
Wen-Sin Rd., Taichung
City 406, Taiwan
T +886(4)2231 0059
F +886(4)2236 0236

Shanghai
Room 1803, No. 678,
Gu-Bei Road,
Shanghai, China
T +86(21)6295 6805
F +86(21)6295 6809

DIE ERSTE INDUSTRY CO., LTD.
www.die-erste.com | sales@die-erste.com

