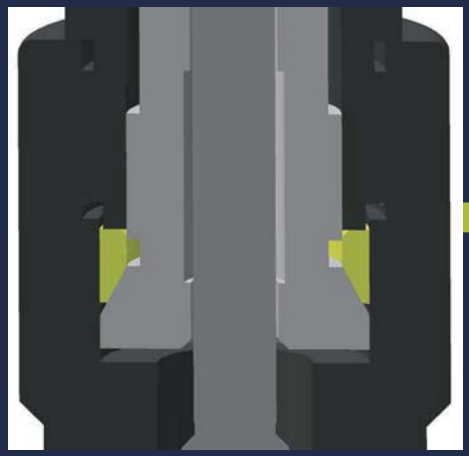
Note:
The content of this catalogue is for general information and reference only. We reserve the right to modify or improve the designs or specifications of the products mentioned in this manual at any time without prior notice. For specific performance data and proper material selection, please consult your DIE ERSTE sales representative.

Design features for emission control

Gate Valve | Globe Valve | Check Valve | “Y” strainer

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.



Gasket

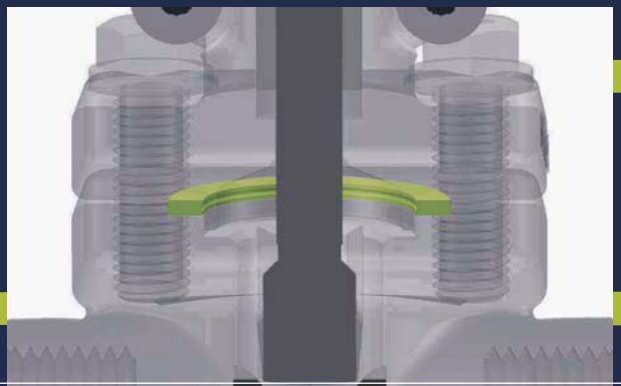
The asbestos-free gaskets used in bolted bonnet designs are of the 'spiral-wound' type in stainless steel 316 or carbon steel and flexible graphite. Reinforced graphite gaskets are used for CLASS 150 valves; stainless steel with flexible graphite wounded gaskets are used for CLASS 300 valves. For CLASS 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.

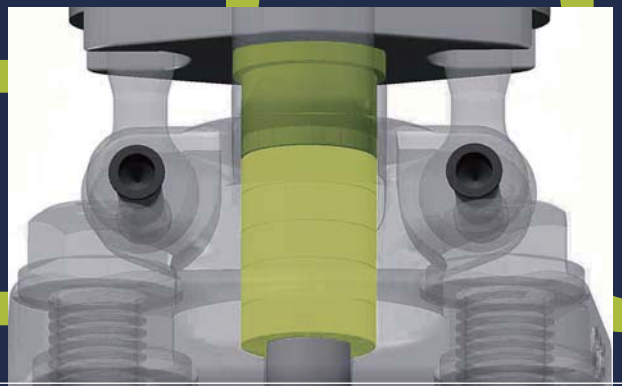
Stem Packing and the connection

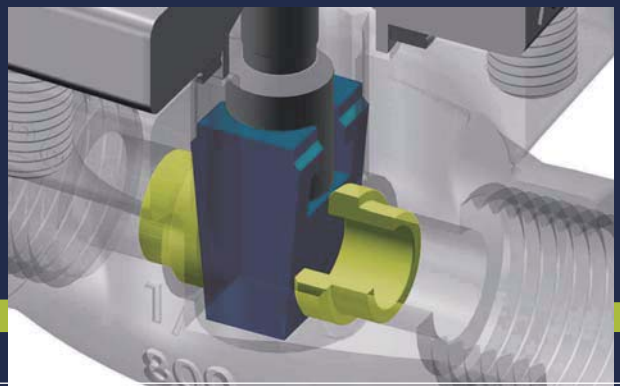
The packing method and material used for the fugitive emission control from the connection between bonnet and body is significant. With the molded braided flexible graphite, DIE ERSTE offer PTFE or other fluoropolymer as packing materials on request. The surface of the stem and stuffing box chamber walls,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

Seat & Wedge

The integral hard-surfaced seats accommodate the widest range of pressure and temperature service conditions. These metal-to-metal saeting 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 100℉ 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.

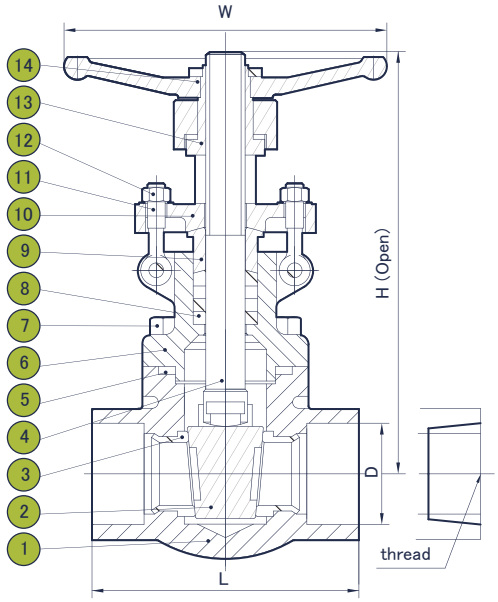
Apart from the common gate valves, DIE ERSTE also makes forged cryogenic gate valves and extended-body gate valves with materials that meet requirements of NACE standard MR-01-75 for sour service, underground application, and a wide range of pressure-temperature service conditions.

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

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℉
(136.2 bar@38℃)



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(11/4)	40(11/2)	50(2)	
	Full port	mm(in)	-	-	10(3/8)	15(1/2)	20(3/4)	25(1)	32(11/4)	40(11/2)	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

Gate Valve