

Vogt

Pressure Seal Valves



Vogt reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this catalogue, are provided for your information only and should not be relied upon unless confirmed in writing.

For more information visit www.vogtvalves.com

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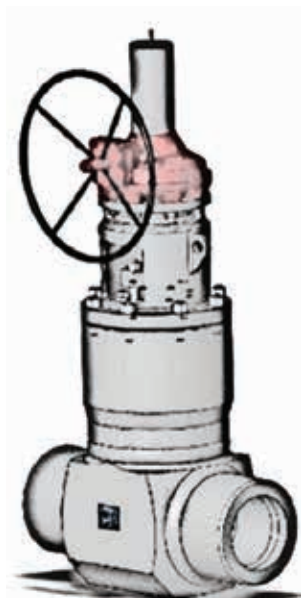
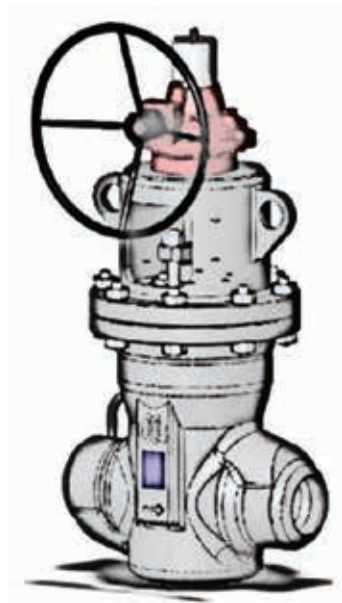
ISSUED 07/2018 revision 01

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Vogt Valves A History in the Making

In the late 1890s, Vogt pioneered the early development of ammonia absorption refrigeration systems that made artificial ice. This business, plus Vogt's fledgling boiler business, created an internal need for quality valves that initiated Vogt's early entry into the valve manufacturing business. The early reputation of Vogt's quality valves and rapidly growing petroleum processing industry created an outside demand that would firmly establish Vogt in the mass production of high-quality forged steel valves. For more than 100 years, Vogt's leadership has been evident in the production of forged steel gate, globe, angle and check valves in most popular materials, trims and bonnet configurations. Today, Vogt valves support a worldwide network of distributors with access to the world's largest capability for manufacturing of forged steel valves.



VOGT OFFERS FORGED STEEL PRESSURE SEAL VALVES

Class 900 to Class 4500 for the Oil & Gas, Power and Petrochemical Industries.

FORGED PRESSURE SEAL VALVES ARE PREFERRED FOR:

- Severe Service
- Higher reliability
- Stringent leakage rate
- Service to nominal pressure up to class 4500#

AVAILABLE CONFIGURATION:

- Flexible Wedge Gate
- Parallel Slide Gate
- T Pattern Globe
- Y Pattern Globe
- Swing Check
- Tilting Check
- Stop Check

MATERIALS:

Carbon steel: A105 – LF2

Stainless steel:

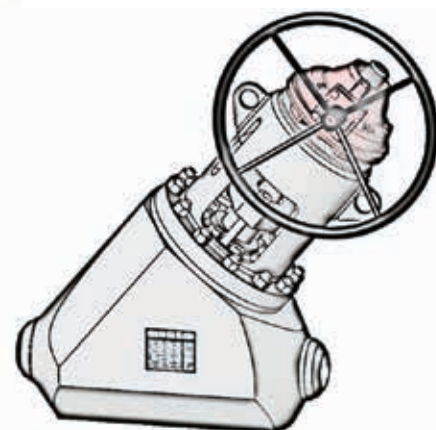
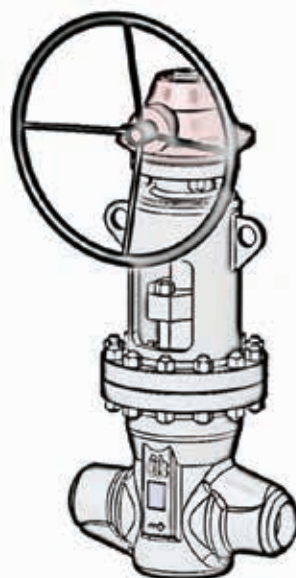
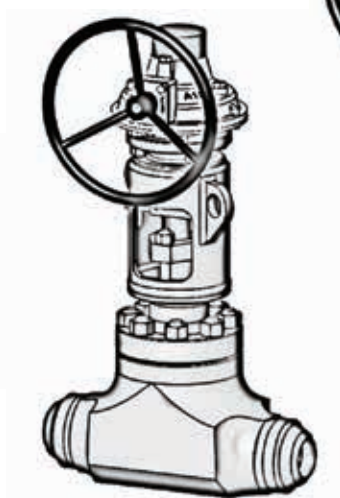
F304 – F316 – F321H – F347H

Low alloyed material: F1 – F5 – F11 – F22 – F9 – F91 – F92

Nickel based: 825 – 625 – Hastelloy® C276 – Hastelloy® C22

DESIGN AND MANUFACTURING STANDARDS

API 600	Steel Gate Valves Flanged and Butt-welding Ends, Bolted Bonnets
API 623	Steel Globe Valves-Flanged and Butt welding Ends, Bolted Bonnets
API 594	Check valves: Flanged, Lug, Wafer and Butt welding
ASME B16.5	Pipe flanges and flanged fittings ISO5210 [NPS ½ through NPS 24]
ASME B16.10	Face to face and end to end dimensions of valves
ASME B16.25	Butt-welding ends
ASME B16.34	Valves-flanged threaded and welding end



QUALITY ASSURANCE

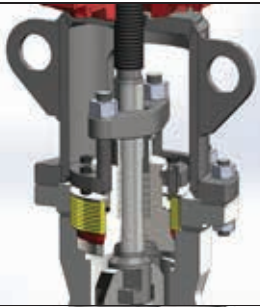
Our activities are organized in accordance to procedures qualified to ISO 9001:2015
TÜV süd

DESIGN AND MANUFACTURING STANDARDS

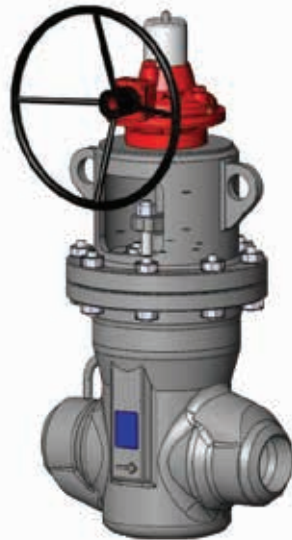
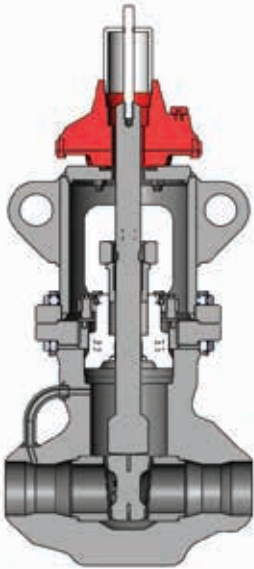
DESIGN AND MANUFACTURING STANDARDS	
API 624	Fugitive emissions testing
API 622	Type testing of process valve packing for fugitive emissions
API 6FA	Specification for fire test for valves
API 607	Fire Safe for quarter turn valves and valves equipped with non metallic seats
ISO 15848-1 & 2	Fugitive emissions testing for valve stem seal and body joint
NACE MR01.75 / ISO15156	Petroleum petrochemical and natural gas industries, materials for use in H ₂ S containing environments oil and gas production

	GATE						GLOBE						CHECK					
	WEDGE			PARALLEL SLIDE			T PATTERN			Y PATTERN			SWING			TILTING		
	#900	#1500	#2500	#900	#1500	#2500	#900	#1500	#2500	#900	#1500	#2500	#900	#1500	#2500	#900	#1500	#2500
1/2"																		
3/4"																		
1"																		
1 1/2"																		
2"																		
2 1/2"																		
3"																		
4"																		
6"																		
8"																		
10"																		
12"																		
14"																		
16"																		
18"																		
20"																		
24"																		

Larger size details available on request • Class 4500 details available on request

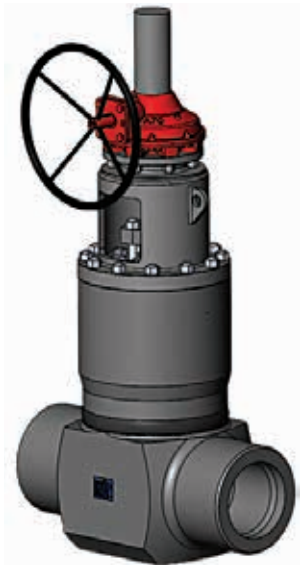
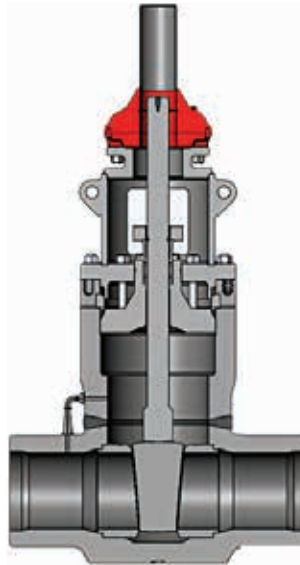
	GATE	GLOBE	CHECK
	TBP - Threaded Body - one forged piece with Pillars		TB - Threaded Body one forged piece
	TBY - Threaded Body - one forged piece with Yoke		
	SR1 - Segmented ring - one forged piece with Yoke		SR - Segmented ring one forged piece
	SR2 - Segmented ring - two forged piece with Yoke		

Weight figures are relevant to BW end valves. For dimensions and weights in larger sizes or flanged valves consult the factory.
Dimensions and weights are subject to change without notice.



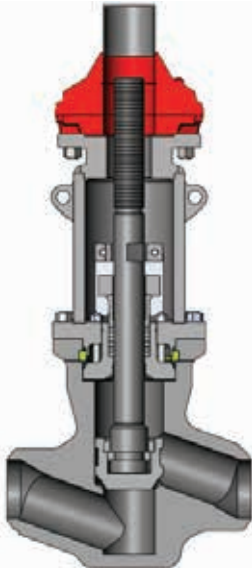
GATE one piece

- Sizes ½" through 6"
- Closed Die Forging
- B16.34 design
- Class 900
- Class 1500
- Class 2500
- Wedge
- Parallel slide



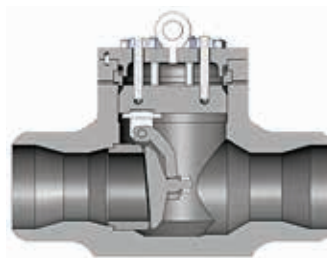
GATE two pieces welded

- Sizes 8" through 24"
- Open Die Forging
- B16.34 design
- Class 900
- Class 1500
- Class 2500
- Wedge
- Parallel slide



GLOBE

- Sizes ½" through 24"
- Closed Die Forging
- B16.34 design
- Class 900
- Class 1500
- Class 2500
- T-Pattern
- Y-Pattern
- Stop Check



CHECK

- Sizes ½" through 24"
- Closed Die Forging
- Open Die Forging
- B16.34 design
- Class 900
- Class 1500
- Class 2500
- Swing
- Tilting disc

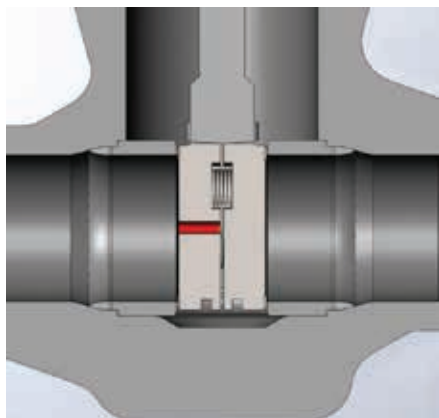
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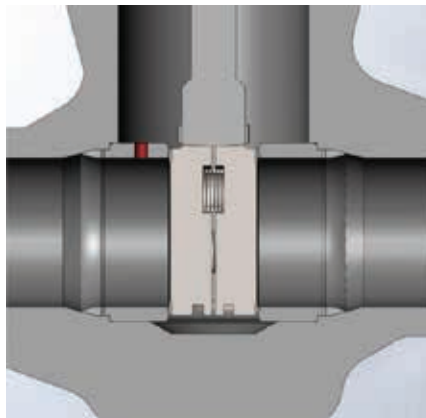
Overpressure Release

Equalizer pipe, relief valve or drilled seat available to avoid body cavity overpressure.

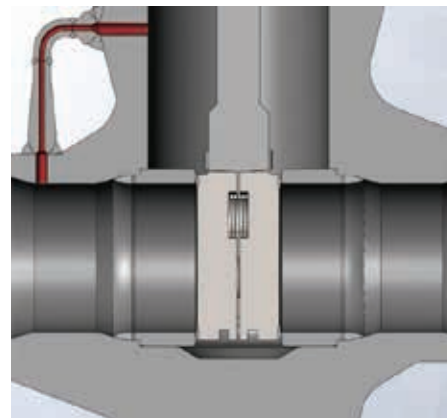
Body cavity can be pressure equalized upstream by means of:



HOLE IN THE DISC



HOLE IN THE SEAT

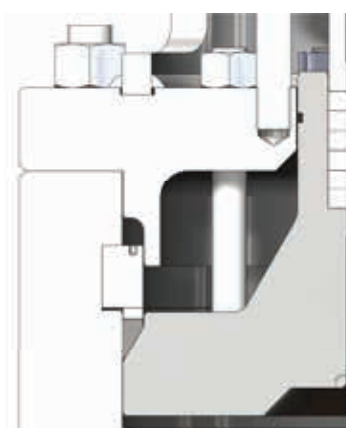


EQUALIZER PIPE

Overpressure relief configurations render the valve unidirectional.

Main Body Seal

Sealing material, composite or metallic, available in triangular shape as standard. Encapsulated rectangular shape available upon request.



PRESSURE SEAL

Bypass and Drain

Bypass and drain are available with on/off globe or gate valves. In case bypass is requested body cavity can still be pressure equalized or pressure relieved. With these configurations the valve will be bidirectional.



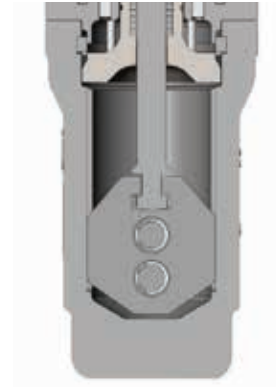
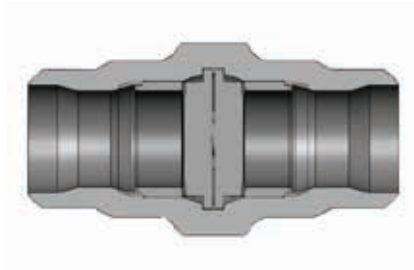
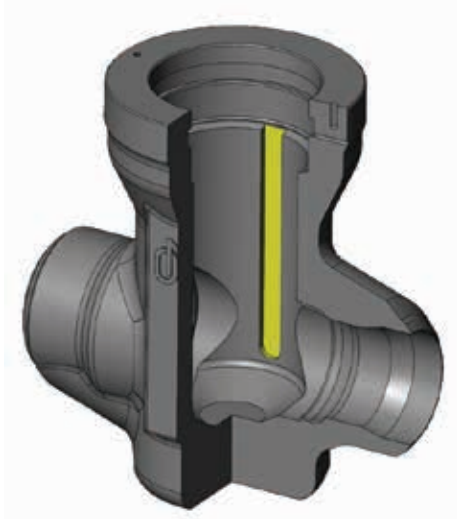
BYPASS WITH ONE
GLOBE VALVE +
PRESSURE RELIEF



BYPASS WITH
TWO GLOBE VALVES +
EQUALIZER PIPE

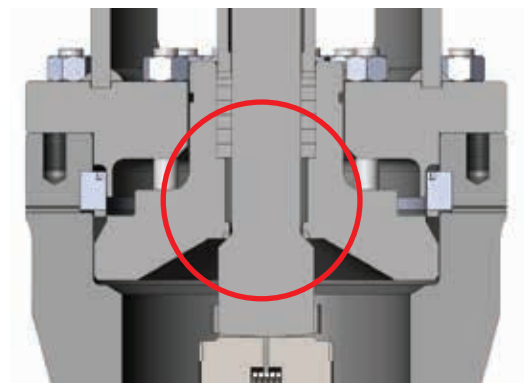
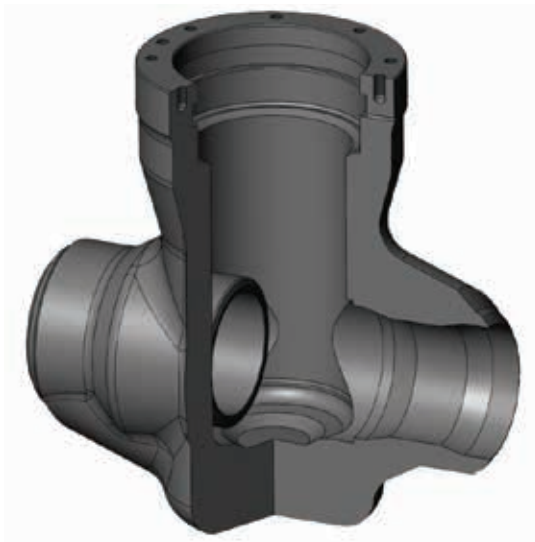
Body Guided Design

Gate standard design has female machined guides in the body
Stem guided design without body grooves available on request



Stem Guided Design

Stem guided by the bushing
Stem and bearing can be Chrome carbide coated



NOTE: Fully supported “pocket” design available





Choice of Operators

Manual, Electric, Hydraulic Actuator, Pneumatic linear Standard operator interfaces connections are designed to ISO5210



BEVEL GEARBOX



ELECTRIC ACTUATOR



HYDRAULIC ACTUATOR



PNEUMATIC LINEAR
ACTUATOR

In consideration of the high number of turns required to operate large size valves, Vogt suggests use of an actuator to minimize operating or stroke time.

Double start stem design available to decrease operating time.

Actuator flanges are standardized to ISO 5210 mounting interfaces, allowing interchangeability at any time.

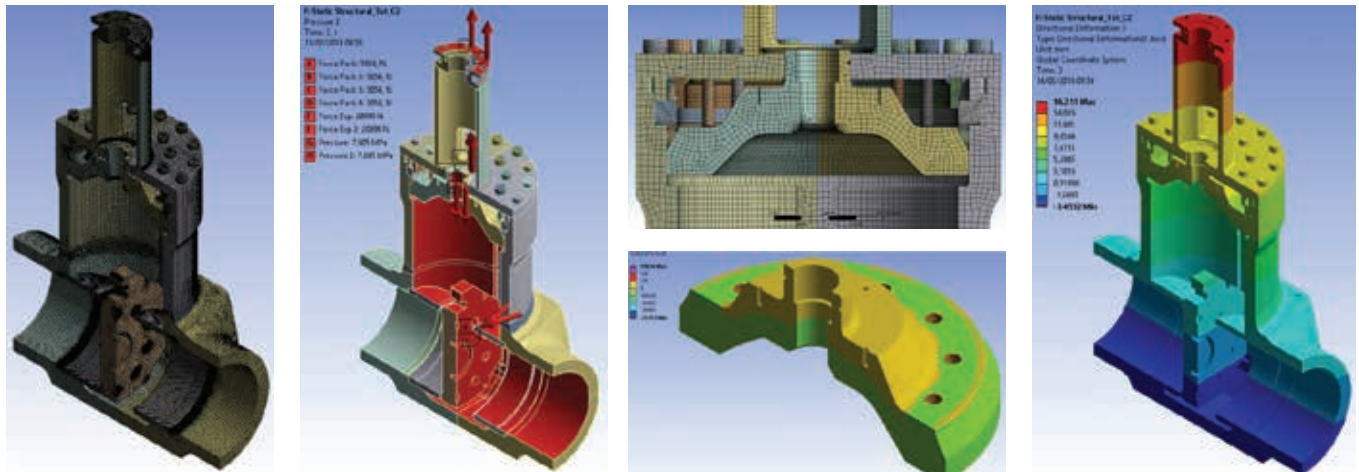
On wedge configuration gear and actuators can be supplied with high temp stem expansion compensator.

DESIGN VERIFICATION

Finite Element Analysis is performed on all designs to evaluate the product performance in simulated min./max. service conditions. Computational Fluid Dynamics calculations and 3D solid design analysis are executed in house.

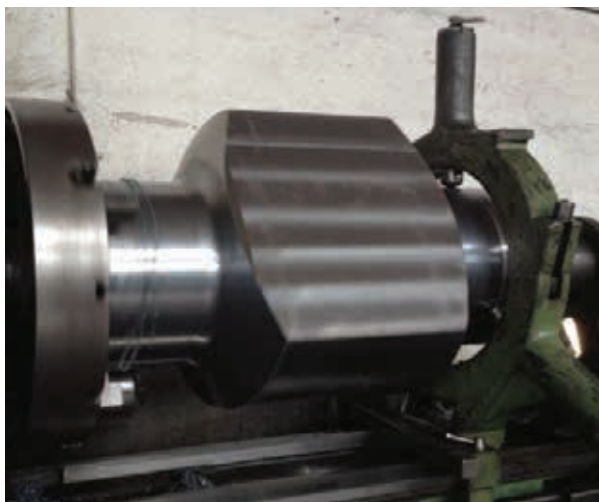
Design analysis is performed in addition to code to mitigate stress and or fatigue introduced by temperature/pressure, maximize flow, minimize erosion and optimize each component part.

DESIGNED BY ANALYSIS AND DESIGNED TO CODE



IN PROCESS QUALITY CONTROL

Forgings up to 50 tons are machined to final shape in any alloyed steel material; strict surveillance of machining tolerances ensure proper mating of parts during assembly. Two piece bodies are full penetration welded with post weld heat treatment and 100% radiographic inspection as standard. All other welding activities are inspected using UT or RX. All component parts are inspected in one of our laboratories, by our NDE technicians and/or our QA/QC level II/III inspectors to guarantee the highest level of reliability.

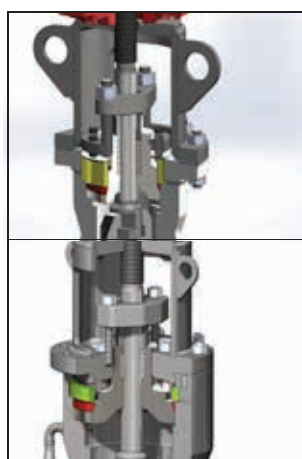






WEDGE GATE VALVES PARALLEL SLIDE GATE VALVES



GATE

	WEDGE			PARALLEL SLIDE		
	#900	#1500	#2500	#900	#1500	#2500
1/2"						
3/4"						
1"						
1 1/2"						
2"						
2 1/2"						
3"						
4"						
6"						
8"						
10"						
12"						
14"						
16"						
18"						
20"						
24"						



GATE	
	TBP - Threaded Body - one forged piece with Pillars
	TBY - Threaded Body - one forged piece with Yoke
	SR1 - Segmented ring - one forged piece with Yoke
	SR2 - Segmented ring - two forged piece with Yoke

WEDGE GATE VALVES PARALLEL SLIDE GATE VALVES

Body Bonnet Construction	Pressure Seal
Body Feature	Forged closed die or open die
Body Assembly	1 integral or 2 piece with full penetration weld
ASME Class	900, 1500, 2500, 4500 details available on request
Bore Construction	Full Bore According to ASME B16.34
Face to Face	According to ASME B16.10 Short Pattern
Valve Ends	Butt Weld according to ASME B16.25. Flanged valves details available on request
Gate Design	Wedge or parallel slide

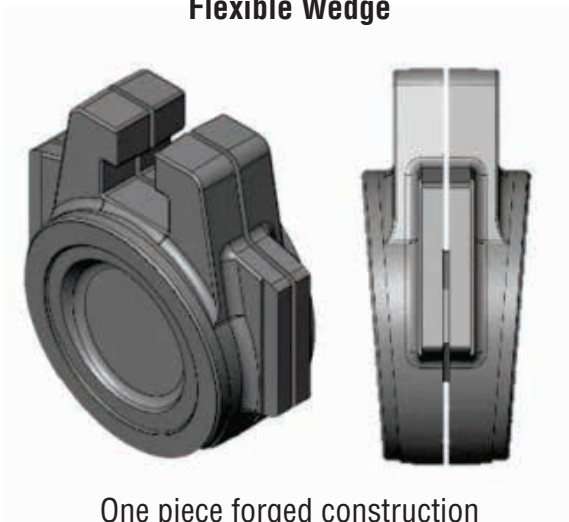
Gate valves are available in two different designs:

- Flexible Wedge (Rigid wedge on request)
- Parallel Slide (Spring energized)

Both gates are guided into the body by integral ribs or guides to avoid any rotation and keep aligned during the stroke.

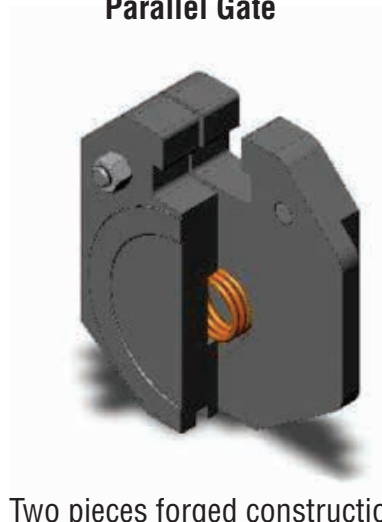
Seats are pressed up to 2" and seal welded above up to 24".

Flexible Wedge

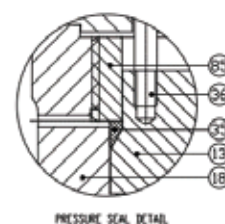
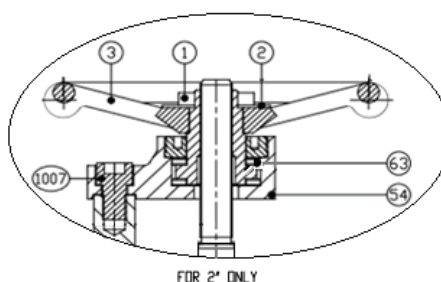
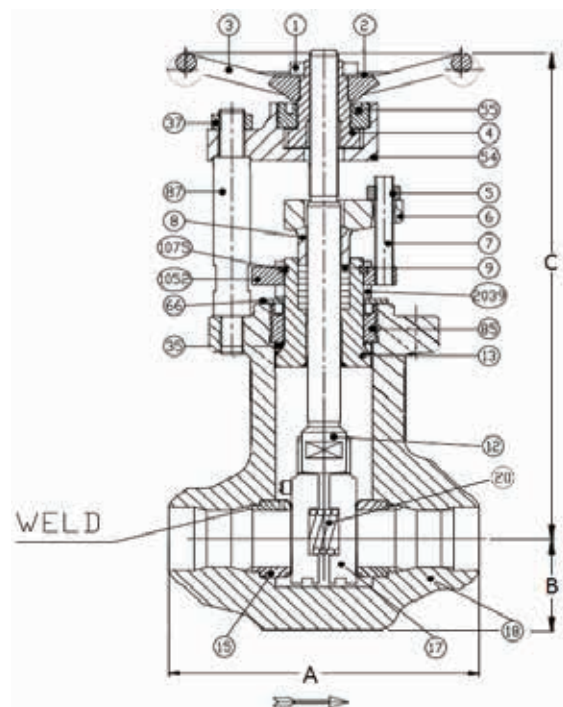


One piece forged construction

Parallel Gate



Two pieces forged construction



SEAL WELDED SEAT RING
BUTT WELDING ENDS ACCORDING TO ASME B16.25
DESIGN ACCORDING TO ASME B16.34
END TO END ACCORDING TO ASME B16.10 SHORT PATTERN

DESCRIPTION		MATERIAL SPECIFICATION			
		ASTM A105N	ASTM A182 F11	ASTM A182 F22	ASTM A182 F91
1	WHEEL NUT	CARBON STEEL			
2	NAMEPLATE	AISI 316			
4	YOKE NUT	AISI 416			
5	GLAND NUT	ASTM A194 2H	ASTM A194 Gr.7		
6	GLAND FLANGE	ASTM A105			
7	GLAND STUD	ASTM A193 B7	ASTM A193 B16		
8	GLAND	ASTM A479 410			
9	PACKING	GRAPHITE			
12	STEM	ASTM A479 410			ASTM A479 XM-19
13	BONNET	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
15	SEAT RING	TRIM 5			TRIM 16
17	WEDGE PARALLEL	TRIM 5			TRIM 16
18	BODY	ASTM A105N	ASTM A182 F11	ASTM A182 F22 Cl.3	ASTM A182 F91
20	SPRING DISC	ALLOY X-750			
35	GASKET	S.S. 316			
66	WASHER	ASTM A516 Gr.70			
3	HANDWHEEL	CARBON STEEL			
1007	PILLAR BOLTS	ASTM A193 B7			
37	PILLAR NUTS	ASTM A194 2H			
85	SCREWED RING	ASTM A479 410			ASTM A479 XM-19
54	YOKE FLANGE	ASTM A105N			
55	RING NUT YOKE	ASTM A479 410			
87	PILLARS	ASTM A105			
2039	BONNET BOLTS	ASTM A193 B8			
1052	COUPLING FLANGE	ASTM A105			
1075	SEGMENTED RING	ASTM A182 F6			

Weight figures are relevant to BW end valves. For dimensions and weights in larger sizes or flanged valves consult the factory.
Dimensions and weights are subject to change without notice.

CLASS 900

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
½"	140	5.51	40	1.57	248	10	8	19
¾"	140	5.51	45	1.77	273	11	13	29
1"	140	5.51	50	1.97	289	12	16	37
1 ½"	178	7.01	55	2.17	402	16	27	61
2"	216	8.50	60	2.36	351	14	27	61

CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
½"	150	5.91	43	1.69	268	11	9	22
¾"	178	7.01	60	2.36	295	12	15	34
1"	180	7.09	60	2.36	299	12	17	39
1 ½"	235	9.25	60	2.36	356	14	30	68
2"	216	8.50	70	2.76	357	15	30	68

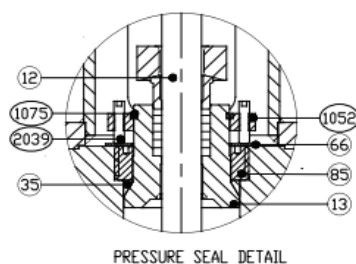
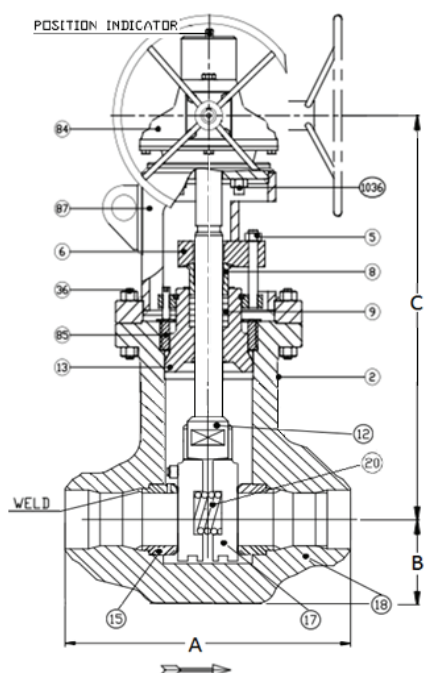
CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
½"	150	5.91	56	2.20	273	11	17	39
¾"	150	5.91	56	2.20	299	12	19	44
1"	210	8.27	60	2.36	309	13	27	61
1 ½"	235	9.25	70	2.76	356	14	29	66
2"	279	10.98	75	2.95	407	17	47	104

One single piece - closed die forging | Threaded body with pillars



Weight figures are relevant to BW end valves. For dimensions and weights in larger sizes or flanged valves consult the factory.
Dimensions and weights are subject to change without notice.



BUTT WELDING ENDS ACCORDING TO ASME B16.25
DESIGN ACCORDING TO ASME B16.34
SEAL WELDED SEATS
END TO END ACCORDING TO ASME B16.10 SHORT PATTERN

DESCRIPTION		MATERIAL SPECIFICATION			
		ASTM A105N	ASTM A182 F11	ASTM A182 F22	ASTM A182 F91
2	NAMEPLATE	AISI 316			
5	GLAND STUD & NUT	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
6	GLAND FLANGE	ASTM A105			
8	GLAND	ASTM A479 410			
9	PACKING	GRAPHITE			
12	STEM	ASTM A479 410			ASTM A479 XM-19
13	BONNET	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
15	SEAT RING	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
17	WEDGE PARALLEL	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
18	BODY	ASTM A105N	ASTM A182 F11	ASTM A182 F22 Cl.3	ASTM A182 F91
20	SPRING	ALLOY X-750			
35	GASKET	GRAPHITE + SS.316			
36	Â STUD BOLTS/NUT	ASTM A193 B7 /2H	ASTM A193 B16 / Gr.7		
66	WASHER	CARBON STEEL			
84	BEVEL GEAR	DUCTILE IRON			
85	SCREWED RING	ASTM A182 F6A CL.2			ASTM A182 FXM-19
87	YOKE	ASTM A105			
1036	STUDS FOR GEAR	ASTM A193 B7 / 2H			
1052	COUPLING FLANGE	ASTM A105			
1075	SEGMENTED RING	ASTM A182 F6			
2039	BONNET BOLTS	ASTM A193 B8			

CLASS 900

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
2 ½"	254	10	65	2.56	412	17	41	92
3"	305	12.01	85	3.35	464	19	79	174
4"	356	14.02	115	4.53	526	21.1	137	303

CLASS 1500

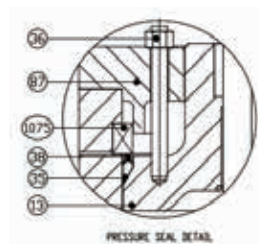
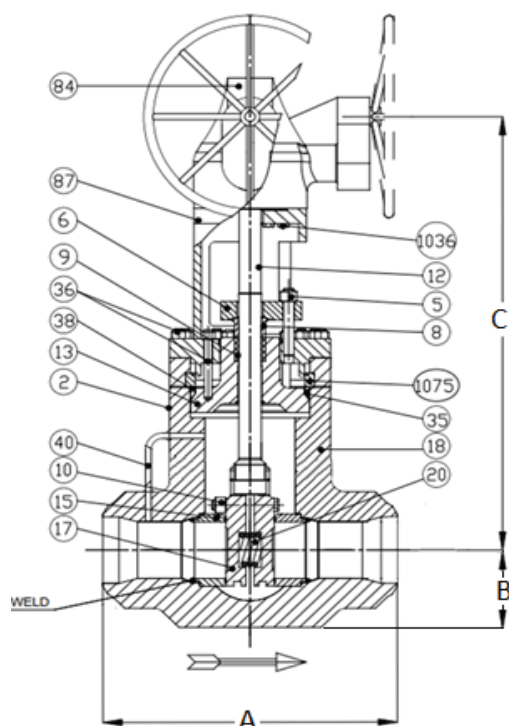
SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
2 ½"	254	10	65	2.56	382	16	38	85
3"	305	12.01	95	3.74	485	20	88	194
4"	406	15.98	120	4.72	567	22.7	159	352

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
2 ½"	330	12.99	75	2.95	407	17	49	110
3"	368	14.49	95	3.74	490	20	91	201
4"	457	17.99	120	4.72	608	24.4	198	436

One single piece - closed die forging | Threaded body with yoke





BUTT WELDING ENDS ACCORDING TO ASME B16.25
DESIGN ACCORDING TO ASME B16.34
SEAL WELDED SEATS
END TO END ACCORDING TO ASME B16.10 SHORT PATTERN

DESCRIPTION		MATERIAL SPECIFICATION			
		ASTM A105N	ASTM A182 F11	ASTM A182 F22	ASTM A182 F91
2	NAMEPLATE	AISI 316			
5	GLAND BOLT/NUT	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr. 7		
6	GLAND FLANGE	ASTM A105			
8	GLAND	ASTM A479 410			
9	PACKING	GRAPHITE			
10	DISC BOLT	ASTM A193 B8 / ASTM A194 Gr.8			
12	STEM	ASTM A479 410			ASTM A479 XM-19
13	BONNET	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
15	SEAT RING	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
17	WEDGE PARALLEL	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A182 F22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
18	BODY	ASTM A105N	ASTM A182 F11	ASTM A182 F22 Cl.3	ASTM A182 F91
20	SPRING	ALLOY X-750			
35	GASKET	GRAPHITE + SS.316			
36	STUDS	ASTM A193 B7	ASTM A193 B16		
37	STUD NUT	ASTM A194 2H	ASTM A194 Gr.7		
38	SPACER RING	ASTM A105			F316
40	EQUALIZER	ASTM A106 Gr.B	ASTM A335 P22		ASTM A335 P91
84	BEVEL GEAR	DUCTILE IRON			
87	YOKE	ASTM A105			
1036	STUD/NUT FOR GEAR	ASTM A193 B7 / ASTM A194 2H			
1075	SEGMENTED RING	ASTM A182 F6a CL.2			ASTM A182 FXM-19

CLASS 900

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
6"	508	20	145	5.71	718	29	264	583
8"	660	25.98	205	8.07	803	32	539	1189

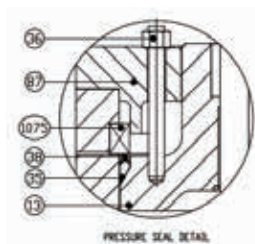
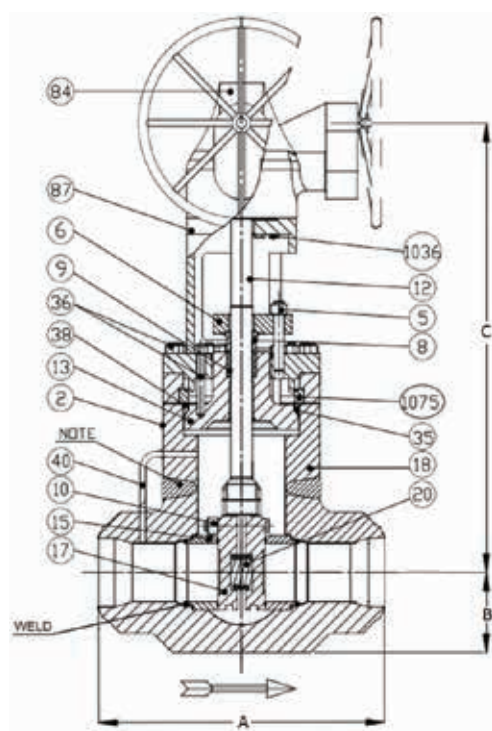
CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
6"	559	22.01	165	6.50	692	28	302	667
8"	771	27.99	200	7.87	834	33	621	1370

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
6"	610	24.02	145	5.71	814	33	508	1120
8"	-	-	-	-	-	-	-	-

One single piece - closed die forging | Segmented ring design



BUTT WELDING ENDS ACCORDING TO ASME B16.25

SEAL WELDED SEATS

DESIGN ACCORDING TO ASME B16.34

END TO END ACCORDING TO ASME B16.10 SHORT PATTERN

FULL PENETRATION WELD ACCORDING TO ASME SECT. IX

DESCRIPTION		MATERIAL SPECIFICATION			
		ASTM A105N	ASTM A182 F11	ASTM A182 F22	ASTM A182 F91
2	NAMEPLATE	AISI 316			
5	GLAND STUD/NUT	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
6	GLAND FLANGE	ASTM A105			
8	GLAND	ASTM A479 410			
9	PACKING	GRAPHITE			
10	DISC BOLT	ASTM A193 B8 / Gr.8			
12	STEM	ASTM A479 410			ASTM A479 XM-19
13	BONNET	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
15	SEAT RING	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
17	Â WEDGE PARALLEL	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A182 F22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
18	BODY	ASTM A105N	ASTM A182 F11	ASTM A182 F22 Cl.3	ASTM A182 F91
20	SPRING	ALLOY X-750			
35	GASKET	GRAPHITE + SS.316			
36	STUD / NUT	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
38	SPACER RING	ASTM A105			F316
40	EQUALIZER	ASTM A106 Gr.B	ASTM A335 P22		ASTM A335 P91
84	BEVEL GEAR	DUCTILE IRON			
87	YOKE	ASTM A105			
1036	STUD/NUT FOR GEAR	ASTM A193 B7 / 2H			
1075	SEGMENTED RING	ASTM A182 F6a CL.2			ASTM A182 FXM-19

Weight figures are relevant to BW end valves. For dimensions and weights in larger sizes or flanged valves consult the factory.
Dimensions and weights are subject to change without notice.

CLASS 900

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
8"	-	-	-	-	-	-	-	-
10"	787	30.98	195	7.68	874	35	803	1771
12"	914	35.98	225	8.86	1117	44	1430	3153
14"	991	39.02	250	9.84	1308	52	2002	4414
16"	1092	42.99	270	10.63	1465	58	3172	6994
18"	1219	47.99	300	11.81	1576	63	4128	9101
20"	1321	52.01	335	13.19	1818	72	6228	13731
24"	1549	60.98	400	15.75	2000	78.7	9133	20135

CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
8"	-	-	-	-	-	-	-	-
10"	864	34.02	210	8.27	1061	42	1017	2244
12"	991	39.02	230	9.06	1268	50	1743	3844
14"	1067	42.01	265	10.43	1414	56	2266	4996
16"	1194	47.01	295	11.61	1591	63	3338	7361
18"	1346	52.99	320	12.60	1687	67	4345	9579
20"	1473	57.99	365	14.37	2036	81	6556	14454
24"	1943	76.50	550	21.65	2202	86.69	10406	22942

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
8"	762	30	190	7.48	1081	43	1034	2280
10"	914	35.98	245	9.65	1283	51	1925	4244
12"	1041	40.98	278	10.94	1465	58	2750	6063
14"	1118	44.02	330	12.99	1586	63	3113	6864
16"	1245	49.02	368	14.49	1808	72	4290	9458
18"	1397	55	435	17.13	1909	76	5170	11398
20"	1473	57.99	485	19.09	2121	84	7150	15764
24"	1943	76.50	670	26.38	2283	89.9	12100	26676

Two pieces welded - open die forging | Segmented ring design

