

Vogt

Pressure Seal Valves



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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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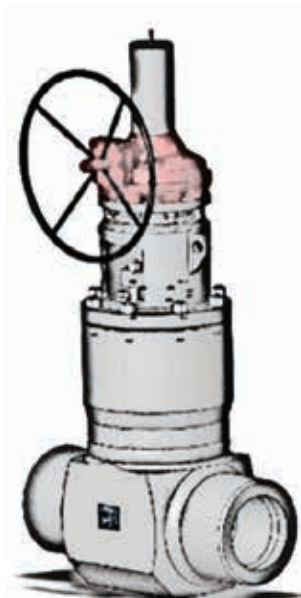
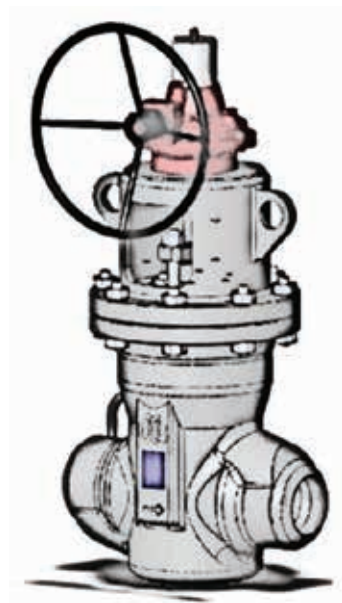
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Vogt Valves

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:

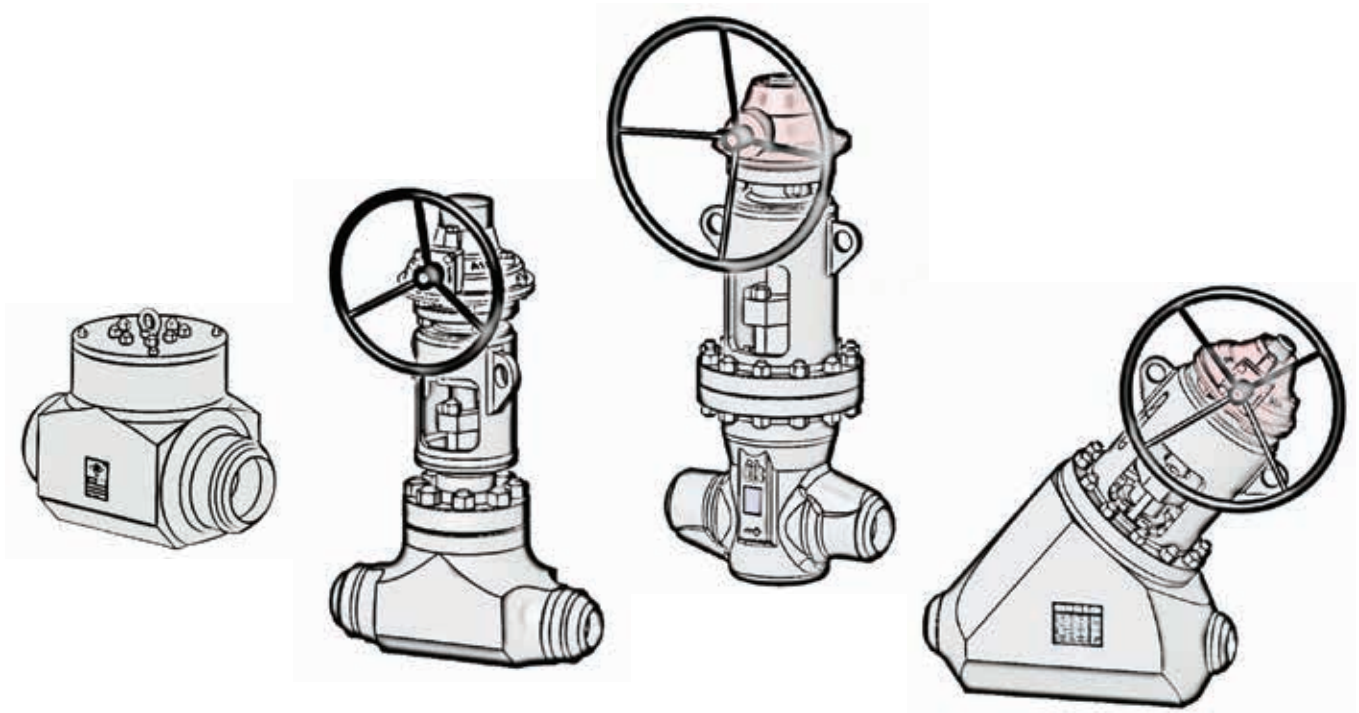
F304 – F316 – F321H – F347H

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



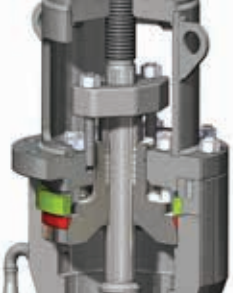
QUALITY ASSURANCE

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

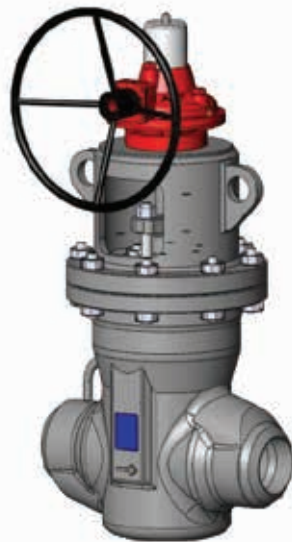
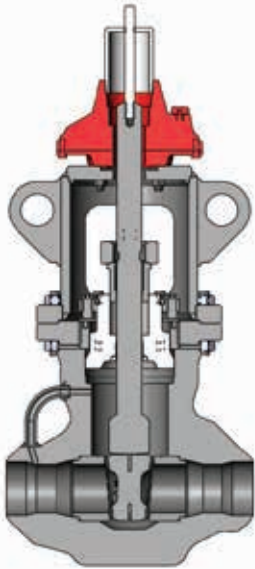
DESIGN AND MANUFACTURING STANDARDS	
API 624	Fugitive emissions testing
API 622	Type testing of process valve packing for fugitive emissions
API 6FA	Specification for fire test for valves
API 607	Fire Safe for quarter turn valves and valves equipped with non metallic seats
ISO 15848-1 & 2	Fugitive emissions 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

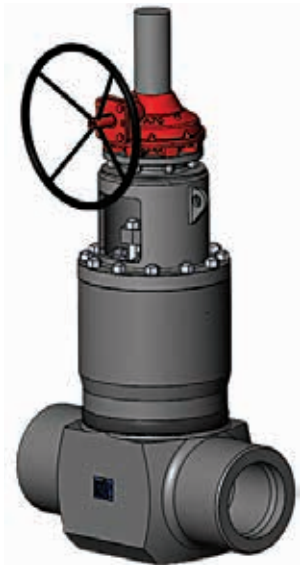
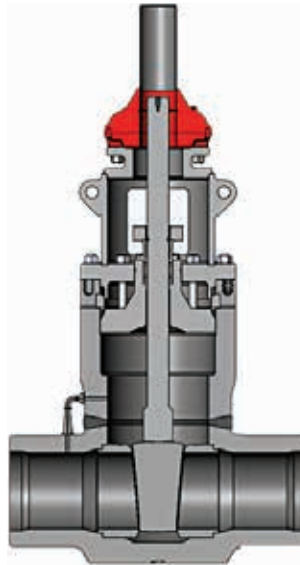
	GATE	GLOBE	CHECK
	TBP - Threaded Body - one forged piece with Pillars		TB - Threaded Body one forged piece
	TBY - Threaded Body - one forged piece with Yoke		
	SR1 - Segmented ring - one forged piece with Yoke		SR - Segmented ring one forged piece
	SR2 - Segmented ring - two forged piece with Yoke		

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.



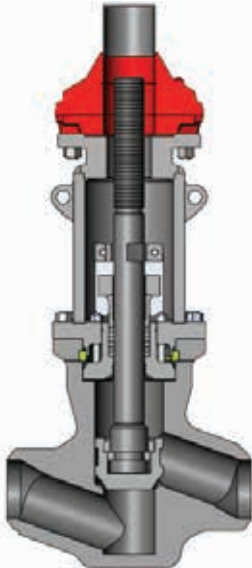
GATE one piece

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



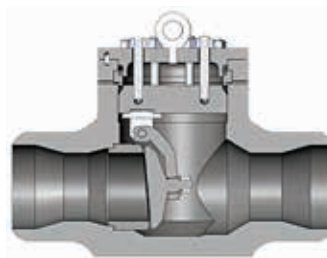
GATE two pieces welded

- 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



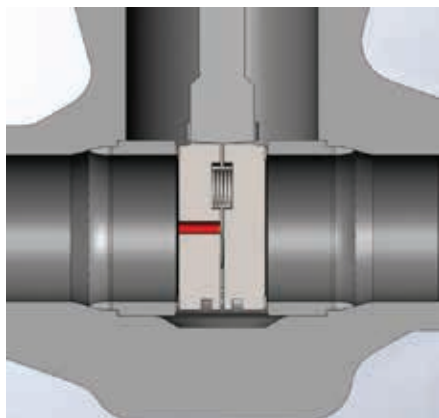
CHECK

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

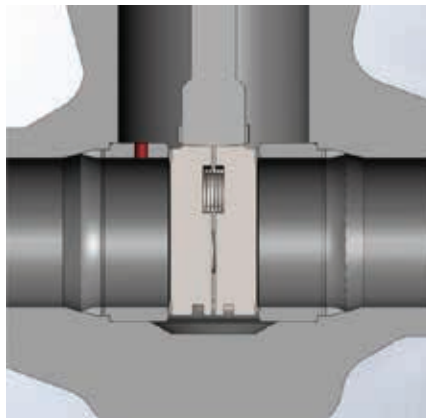
Overpressure Release

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

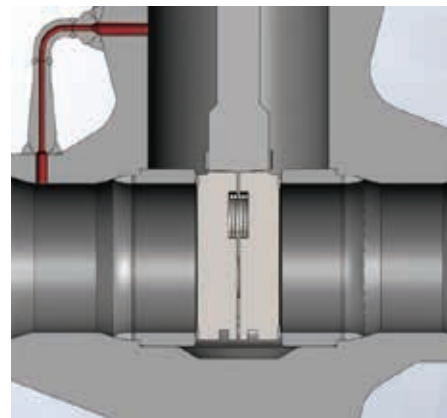
Body cavity can be pressure equalized upstream by means of:



HOLE IN THE DISC



HOLE IN THE SEAT

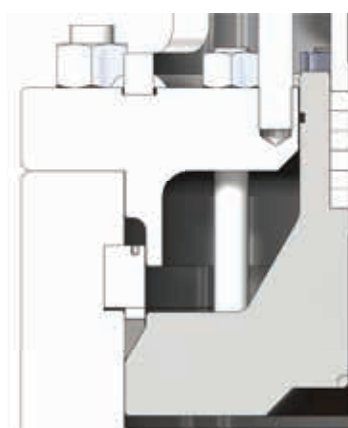


EQUALIZER PIPE

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.



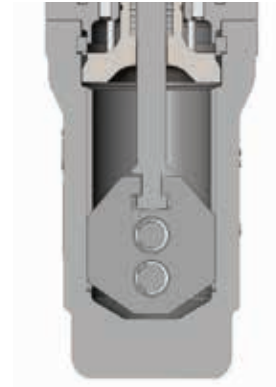
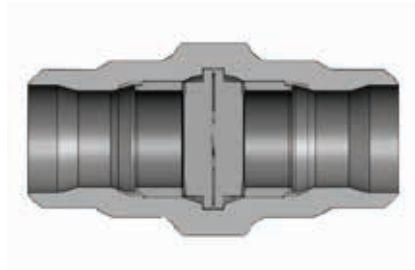
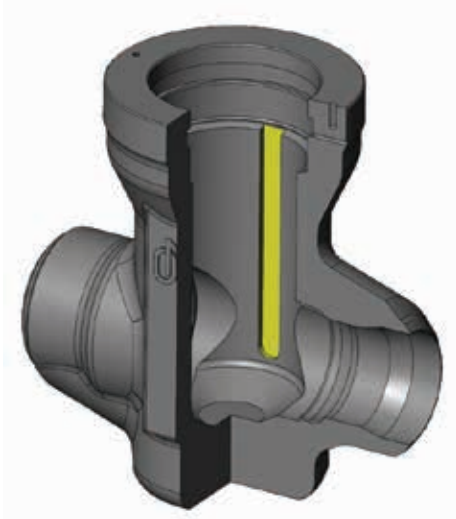
BYPASS WITH ONE
GLOBE VALVE +
PRESSURE RELIEF



BYPASS WITH
TWO GLOBE VALVES +
EQUALIZER PIPE

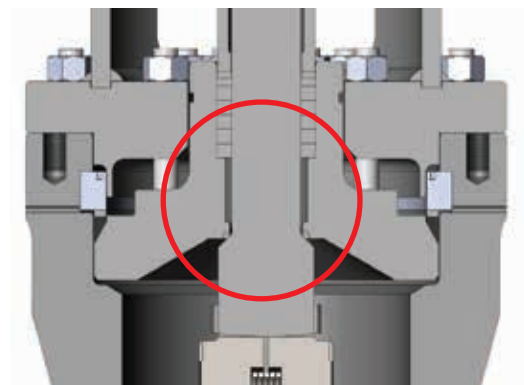
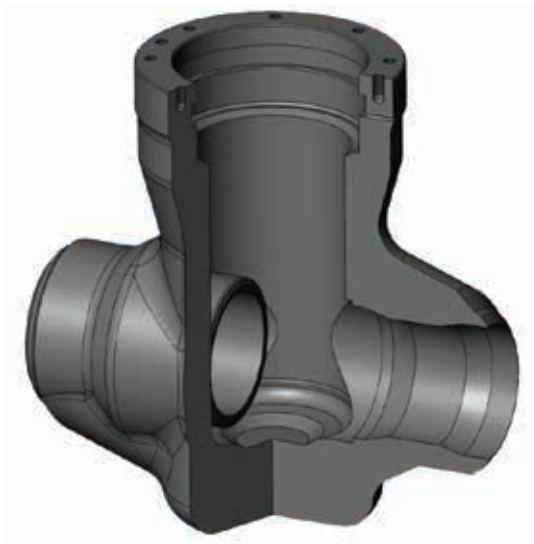
Body Guided Design

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.

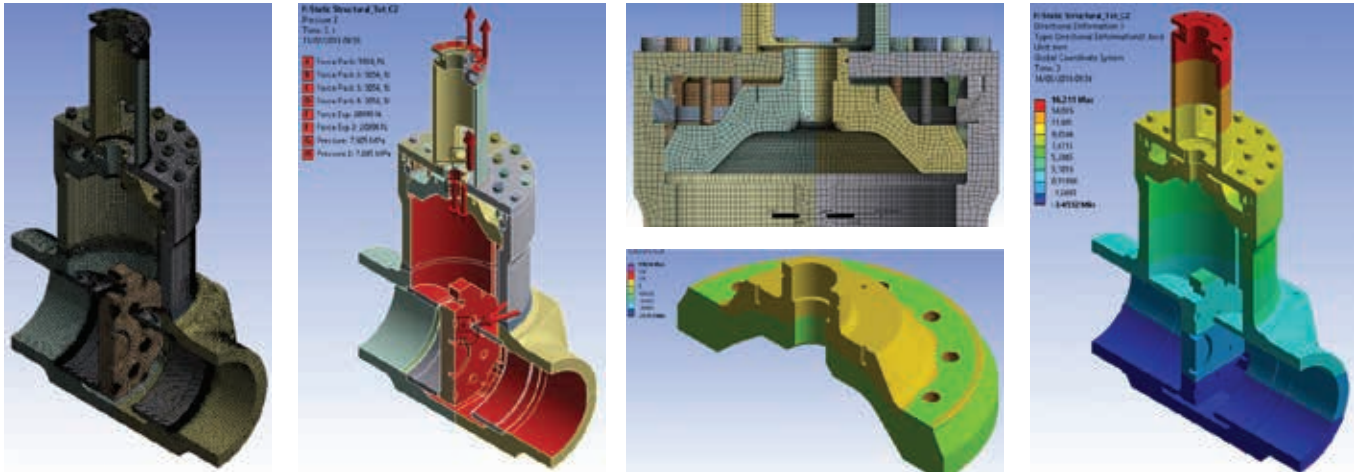
On wedge configuration gear and actuators can be supplied with high temp stem expansion compensator.

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.

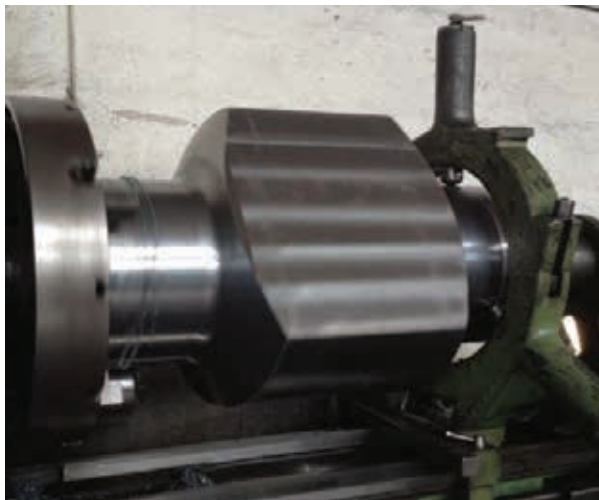
Design analysis is performed in addition to code to mitigate stress and or fatigue introduced by temperature/pressure, maximize flow, minimize erosion and optimize each component part.

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.

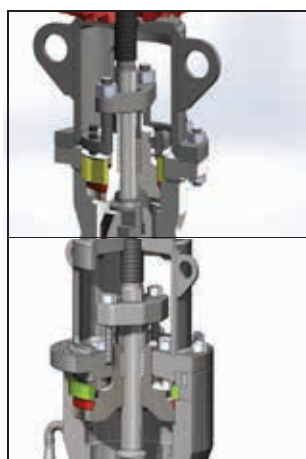


GLOBE T VALVES GLOBE Y VALVES - STOP CHECK



GLOBE

	T-PATTERN			Y-PATTERN		
	#900	#1500	#2500	#900	#1500	#2500
½"						
¾"						
1"						
1 ½"						
2"						
2 ½"						
3"						
4"						
6"						
8"						
10"						
12"						
14"						
16"						
18"						
20"						
24"						

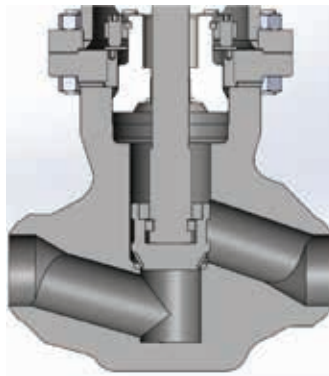


GLOBE
TBP - Threaded Body - one forged piece with Pillars
TBy - Threaded Body - one forged piece with Yoke
SR1 - Segmented ring - one forged piece with Yoke
SR2 - Segmented ring - two forged piece with Yoke

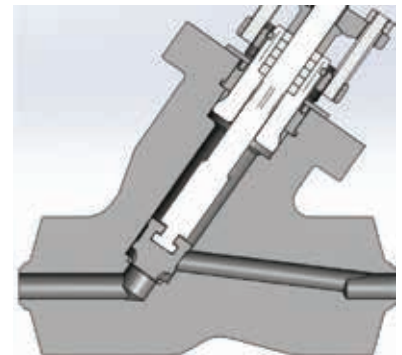
GLOBE T VALVES GLOBE Y VALVES - STOP CHECK

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
Disc Design	Plug Parabolic & Stop Check

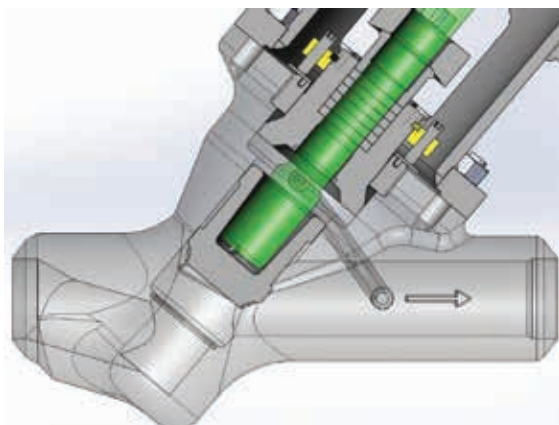
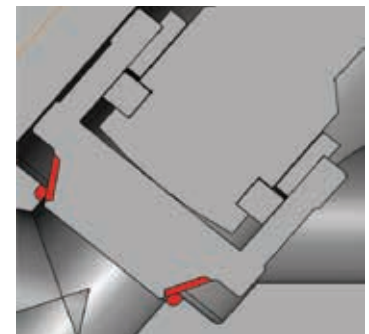
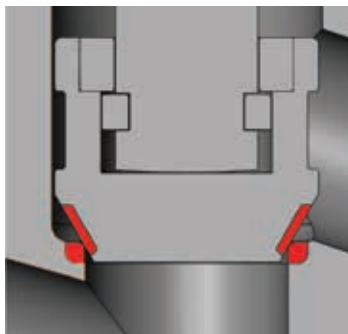
Vertical stem Globe "T" have the stem orientation 90 degrees from the flow line.



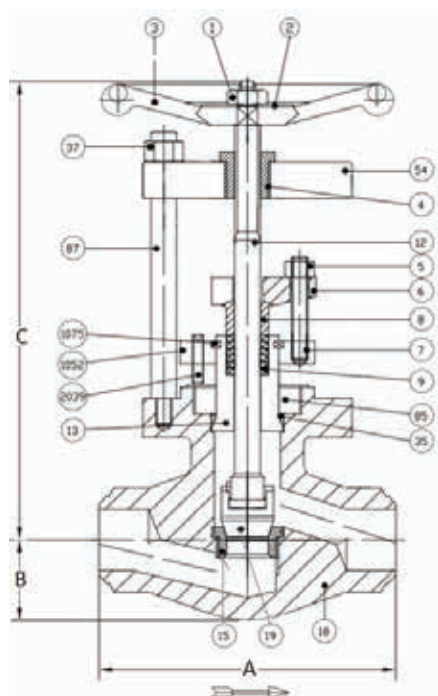
"Y" Pattern Globe have 40-50 degrees inclined stem from the flow line to increase the CV



Stellite hard-faced both on seat and disc allows to keep valve reliable without damages for many life cycles.



The stop check design has a connecting pipe from body cavity to downstream side. The differential pressure that occurs stabilizes the disc position avoiding chattering and vibrations up and down along the stem axis.



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			
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	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 B22+STELLITE Gr.6	ASTM A182 F91+STELLITE Gr.6
19	DISC PLUG	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
35	GASKET	S.S. 316			
37	PILLAR NUT	ASTM A194 2H			
3	HANDWHEEL	CARBON STEEL			
54	YOKE FLANGE	ASTM A105			AISI 316
85	SCREWED RING	ASTM A479 410			ASTM A479 XM-19
87	PILLAR	ASTM A105			
4	BUSHING	AISI 416			
1052	COUPLING FLANGE	ASTM A105			
2039	BONNET BOLTS	ASTM A193 B8			
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"	110	4.33	43	1.69	250	9.84	10	23
¾"	180	7.09	60	2.36	290	11.42	16	36
1"	155	6.10	60	2.36	310	12.20	18	40
1 ½"	235	9.25	70	2.76	340	13.39	27	60
2"	368	14.49	90	3.54	400	15.75	32	71

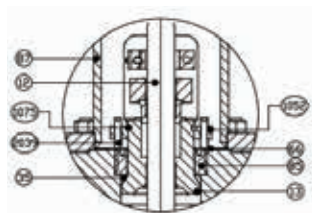
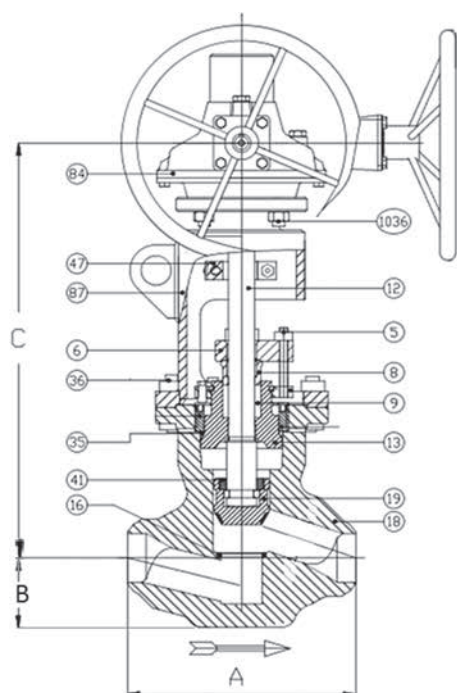
CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
½"	110	4.33	43	1.69	250	9.84	10	23
¾"	180	7.09	60	2.36	290	11.42	16	36
1"	155	6.10	60	2.36	310	12.20	18	40
1 ½"	235	9.25	70	2.76	340	13.39	27	60
2"	216	8.50	70	2.76	360	14.17	35	78

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
½"	150	5.91	56	2.20	280	11.02	16	36
¾"	150	5.91	56	2.20	290	11.42	17	38
1"	170	6.69	70	2.76	340	13.39	25	56
1 ½"	235	9.25	70	2.76	345	13.58	27	60
2"	279	10.98	75	2.95	450	17.72	87	192

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



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
2	NAMEPLATE	AISI 316			
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
16	INTEGRAL SEAT	STELLITE Gr.6			
19	DISC PLUG	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
35	GASKET	GRAPHITE + SS.316			
36	BODY BOLTS	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
41	SCREWED DISC RING	ASTM A479 410			
47	INDICATOR	ASTM A105			AISI 316
85	SCREWED RING	ASTM A182 F6a CL.2			ASTM A182 FXM-19
66	WASHER	ASTM A516 Gr.70			
84	GEAR	DUCTILE IRON			
87	YOKE	ASTM A105			
1036	GEAR BOLTS	ASTM A193 B7 / ASTM A194 2H			
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
2 ½"	254	10	100	3.94	480	18.90	50	111
3"	305	12.01	125	4.92	580	22.83	85	188
4"	356	14.02	150	5.91	600	23.62	120	265

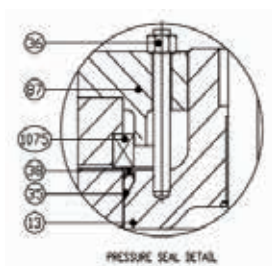
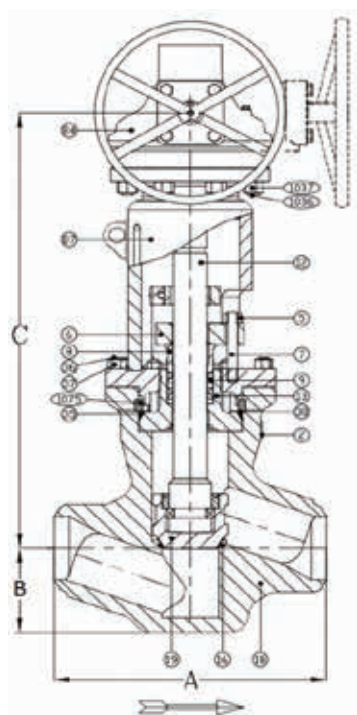
CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
2 ½"	254	10	100	3.94	480	18.90	50	111
3"	305	12.01	95	3.74	565	22.24	92	203
4"	406	15.98	140	5.51	745	29.33	125	276

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
2 ½"	330	12.99	95	3.74	470	18.5	98	217
3"	368	14.49	105	4.13	590	23.23	170	375
4"	457	17.99	120	4.72	795	31.3	140	309

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



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
2	NAMEPLATE	AISI 316			
5	GLAND NUT	ASTM A194 2H	ASTM A194 Gr.7		
6	GLAND FLANGE	ASTM A105			
7	GLAND STUD	ASTM A193 B7	ASTM A194 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
16	INTEGRAL SEAT	STELLITE Gr.6			
19	DISC PLUG	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
35	GASKET	GRAPHITE + SS.316			
36	BODY BOLTS	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
47	INDICATOR	ASTM A105			F316
37	STUD NUTS	ASTM A194 2H	ASTM A193 B16 / Gr.7		
38	SPACER RING	ASTM A105			F316
84	GEAR	DUCTILE IRON			
87	YOKE	ASTM A105			
1036	GEAR BOLTS	ASTM A193 B7			
1037	GEAR STUD NUTS	ASTM A194 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
6"	508	20	190	7.48	700	27.56	250	552
8"	660	25.98	240	9.45	1060	41.73	430	948

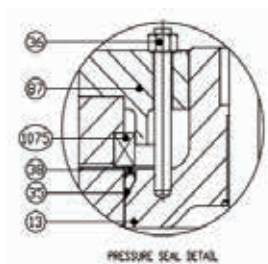
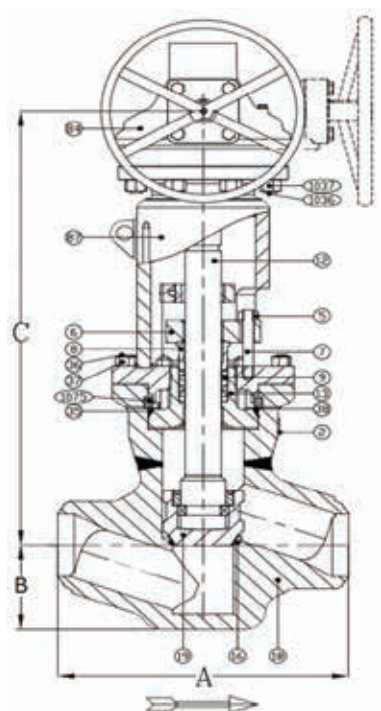
CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
6"	559	22.01	190	7.48	895	35.24	275	607
8"	771	27.99	230	9.06	1190	46.85	510	1125

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
6"	610	24.02	190	7.48	950	37.40	310	684
8"	-	-	-	-	-	-	-	-

One single piece - closed die forging | Segmented ring design



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
2	NAMEPLATE	AISI 316			
5	GLAND NUT	ASTM A194 2H	ASTM A194 Gr.7		
6	GLAND FLANGE	ASTM A105			
7	GLAND STUND	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
16	INTEGRAL SEAT	STELLITE Gr.6			
19	DISC PLUG	ASTM A105N+STELLITE Gr.6	ASTM A182 F11+STELLITE Gr.6	ASTM A739 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
35	GASKET	GRAPHITE + SS.316			
36	BODY BOLTS	ASTM A193 B7 / 2H	ASTM A193 B16 / Gr.7		
47	INDICATOR	ASTM A105			AISI 316
37	STUD NUTS	ASTM A194 2H	ASTM A194 Gr.7		
38	SPACER RING	ASTM A105			F316
84	GEAR	DUCTILE IRON			
87	YOKE	ASTM A105			
1036	GEAR BOLTS	ASTM A193 B7			
1037	GEAR STUD NUTS	ASTM A194 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	290	11.42	1125	44.29	690	1522
12"	914	35.98	340	13.39	1350	53.15	910	2007
14"	991	39.02	395	15.55	1560	61.42	1080	2381
16"	1092	42.99	435	17.13	1680	66.14	1175	2591
18"	1219	47.99	505	19.88	1950	76.77	1396	3078
20"	1321	52.01	540	21.26	2100	82.68	1620	3572
24"	1549	60.98	610	24.02	2280	89.76	1968	4339

CLASS 1500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
8"	-	-	-	-	-	-	-	-
10"	864	34.02	285	11.22	1200	47.24	863	1902
12"	991	39.02	330	12.99	1410	55.51	1138	2508
14"	1067	42.01	400	15.75	1500	59.06	1350	2977
16"	1194	47.01	450	17.72	1690	66.54	1469	3239
18"	1397	55.00	495	19.49	1900	74.80	1815	4001
20"	1473	57.99	565	22.24	2080	81.89	2106	4643
24"	1676	65.98	650	25.59	2360	92.91	2558	5641

CLASS 2500

SIZE	A		B		C		W	
	mm	Inch	mm	Inch	mm	Inch	Kg	Lbs
8"	762	30.00	230	9.06	1200	47.24	630	1389
10"	914	35.98	290	11.42	1230	48.43	1078	2377
12"	1041	40.98	335	13.19	1380	54.33	1422	3135
14"	1095	43.11	410	16.14	1540	60.63	1701	3751
16"	1245	49.02	460	18.11	1670	65.75	1836	4048
18"	1397	55.00	510	20.08	1930	75.98	2359	5202
20"	1473	57.99	580	22.83	2068	81.42	2738	6036
24"	1676	65.98	670	26.38	2246	88.43	3326	7333

Two pieces welded - open die forging | Segmented ring design

