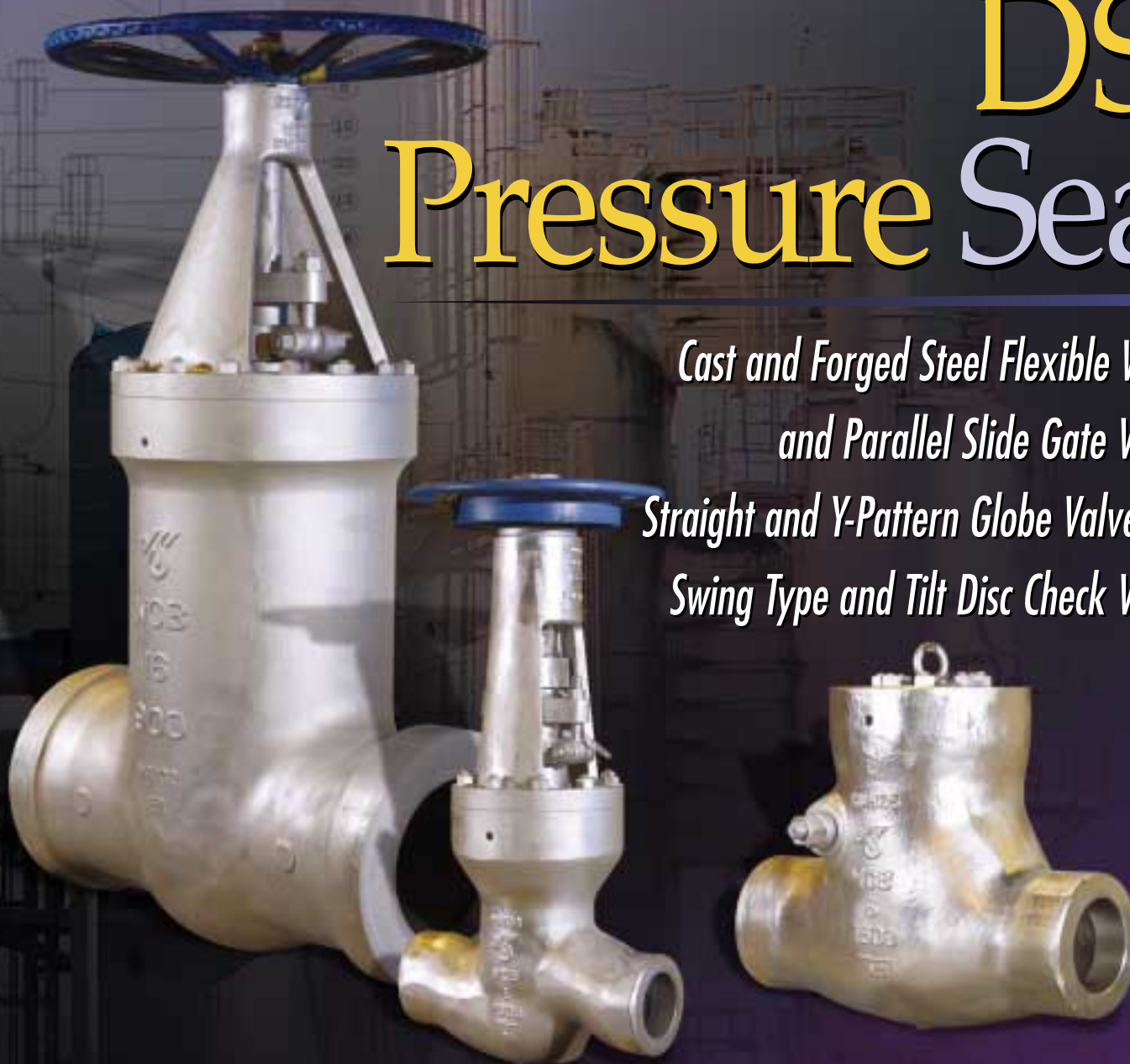




DSI[®] Pressure Seal

*Cast and Forged Steel Flexible Wedge
and Parallel Slide Gate Valves,
Straight and Y-Pattern Globe Valves and
Swing Type and Tilt Disc Check Valves.*



ZY-TECH GLOBAL INDUSTRIES



DSI® Pressure Seal valves are designed for high pressure, high temperature applications such as Steam-Generation Stations, Industrial/Chemical Processing Plants, Thermal Power Generating Plants and other processing facilities throughout the world.

Pressure Seal valves are engineered and



manufactured in strict conformance to ASME, ANSI, ASTM, API and other applicable standards. The DSI® Pressure Seal product line offers flex-wedge and parallel slide gate valves, straight and Y-pattern globe valves, and swing and tilt-disc check valves. These valves are available in cast or forged steel construction with Butt weld and Raised Face end connections.

Standard features of the DSI® Pressure Seal product line are listed in this catalog. Contact your DSI representative or visit our website at zy-tech.com to learn more about Zy-Tech Global Industries and other DSI® quality products.

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Standard Design Features of DSI® Pressure Seal Valves

DSI® Pressure Seal valves are intended for high pressure, high temperature applications in all types of fluid except where severe coking is a factor. The design and material selections provide excellent service in steam-generation stations, industrial chemical plants and thermal power plants.

Most Pressure Seal valves are offered in Cast Steel and Forged Steel body designs. These options make the DSI® Pressure Seal product line an excellent choice for users with various application requirements.

Our Pressure Seal valves provide the most efficient flow passage and sealing features possible, resulting in significant weight savings, easy installation and in-line maintenance.

General Design Specifications

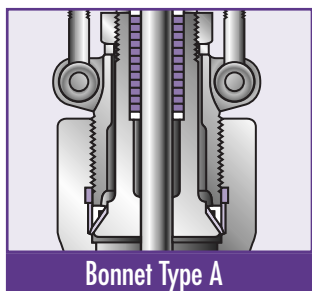
DSI® Pressure Seal Valves are manufactured in strict accordance with the following standards:

- ANSI B16.34
- ANSI B16.10
- ANSI B16.25
- API 598

Standard Construction Features

Body

Flow areas are specifically designed for minimum turbulence and pressure drop.



Bonnet Type A

Gate

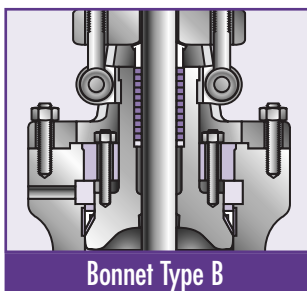
Class 600, 900, 1500 & 2500
Size 4" and smaller

Globe

Class 600, 900 & 1500
Size 4" and smaller

Class 2500

Size 3" and smaller



Bonnet Type B

Gate

Class 600, 900, 1500 & 2500
Size 6" and larger

Globe

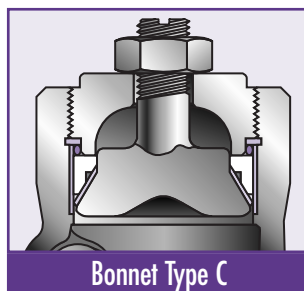
Class 600, 900 & 1500
Size 6" and larger

Class 2500

Size 4" and larger

Bonnet

Ample stuffing box area, Stellite® stem guide surface and back seat shoulder for accurate guiding of the stem and back seat.



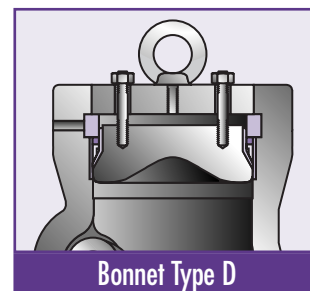
Bonnet Type C

Swing Check

Class 600, 900 & 1500
Size 4" and smaller

Class 2500

Size 3" and smaller



Bonnet Type D

Swing Check

Class 600, 900 & 1500
Size 6" and larger

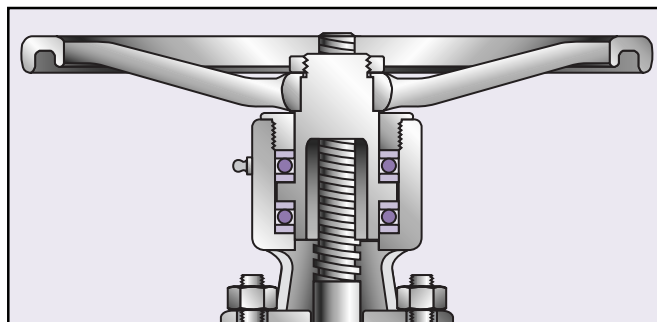
Class 2500

Size 4" and larger

Ball Bearing-type Yoke Sleeve

Large, high-pressure valves can require a tremendous amount of torque to open and close. By utilizing ball bearings in the yoke sleeve the operating torques of these difficult-to-operate valves are reduced by as much as 50 percent.

Hammer blow wheels are furnished on sizes 6" and larger globe valves.



Yoke Sleeve Ball Bearing-type Equipped Valves

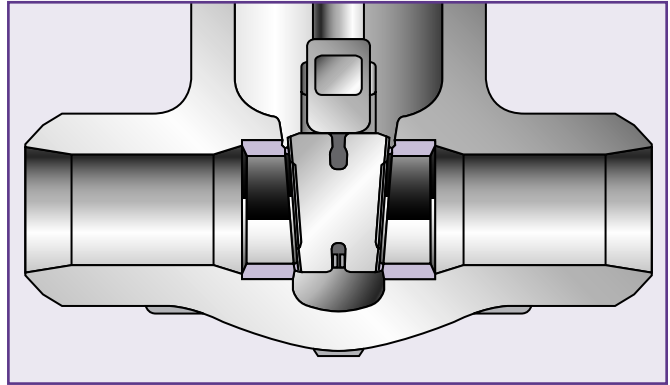
Class	Gate	Globe
600	Size 6" and larger	Size 6" and larger
900	Size 2", 2 1/2" and 6" and larger	Size 6" and larger
1500	Size 2" and larger	Size 6" and larger
2500	Size 2" and larger	Size 3" and larger

Standard Construction Features (continued)

Flexible Wedge Sealing Design (Gate Valves)

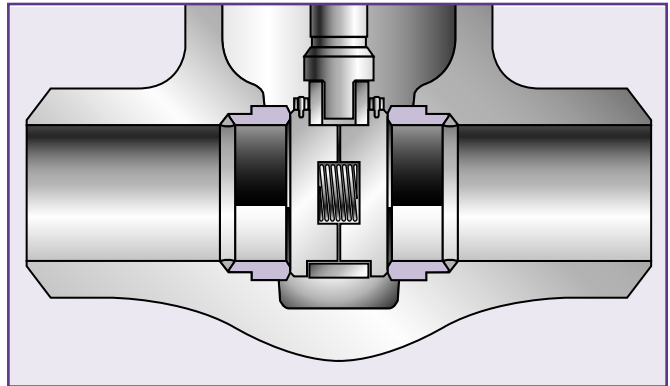
The flexible wedge is a one-piece, fully guided cast wedge with a central hub to allow the seating faces to move relative to each other, thus compensating for distortion of the body seats due to thermal expansion or piping loads. Seat ring and wedge seating face are set at a 9° angle from vertical to minimize sliding contact of the wedge and seat ring during opening and closing.

Wedging actions help effect a tight seal in low differential pressure services. Flexible wedge construction resists wedge sticking or binding in services where the valve may be closed when cold and opened when hot. Seating surfaces are hardfaced with Stellite®6 to provide high cycle capability in very high differential pressure services.



Parallel Slide Design (Gate Valves)

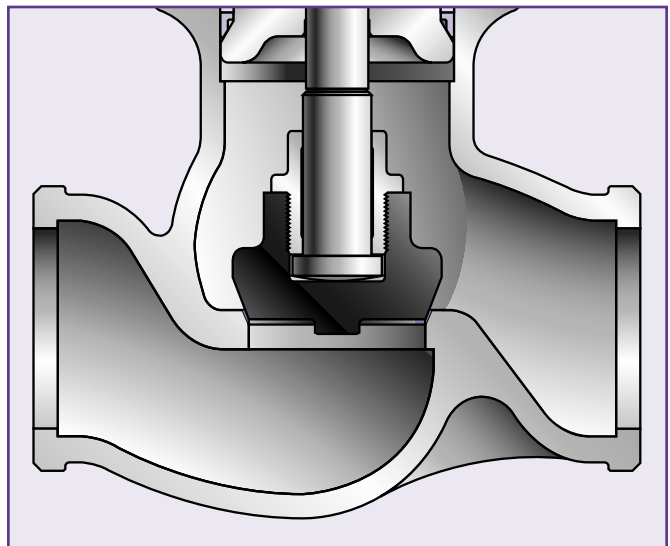
The gate is a split design using two discs spring loaded and held together by a gate holder with an Inconel 750 spring to provide initial energizing when closed. The gate relies for seat tightness on the primary fluid pressure acting on the downstream half. There is no wedging action or extra loading on the seats resulting in considerably lower operating torque. When the valve is in the open position the gate is completely clear of the seats. During closing there is a bevel on the bottom of the gate to guide it in between the seats and recompress the spring. Seating surfaces are hardfaced with Stellite®6 to provide high cycle capability in very high differential pressure services.



Straight and Y-Pattern Seating Design (Globe Valves)

All DSI® globe valves utilize the same seating design which consist of guided disc which seals fully with the seat to provide an effective tight seal. Seating surfaces are hardfaced with Stellite®6 to increase the cycle life.

All DSI® globe valves are unidirectional. A non-return stop check feature is available on request.



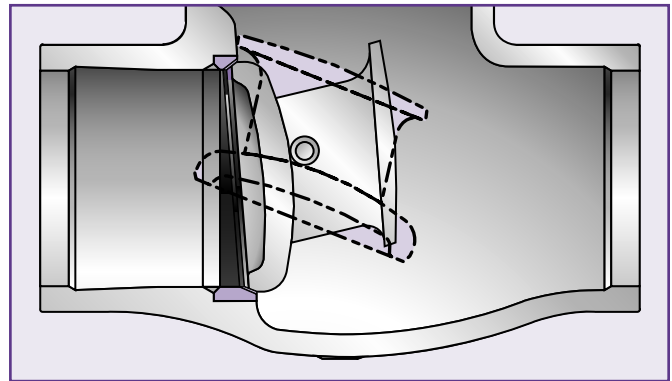
Standard Construction Features (continued)

Swing Check and Tilt Disc (Check Valves)

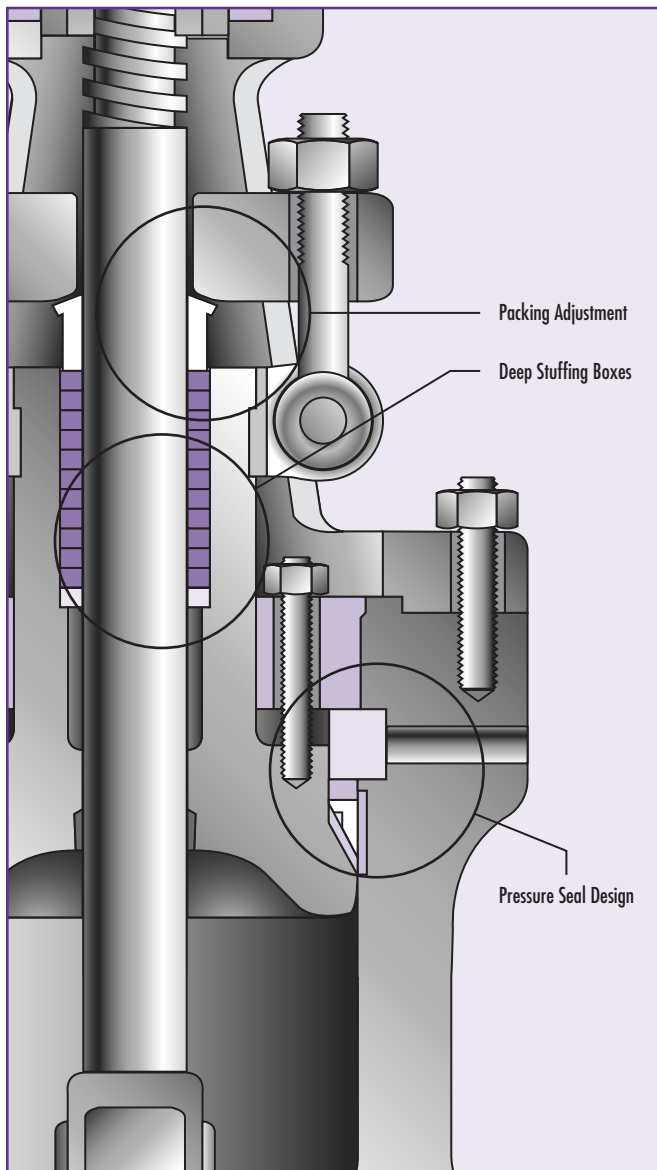
Pressure Seal check valves are designed for reliability in high velocity service applications to prevent backflow. The check valves are designed to operate in either vertical or horizontal pipe runs. Seating surfaces are hardfaced with Stellite®6 to provide high cycle capability.

The swing check design offers better flow characteristics than a tilting disc design with higher flow area. The tilting disc is a non-slam design which minimizes the potential for water hammer.

Pressure Seal tilting check valves feature a fitted disc that's guided to ensure an effective tight seal and to minimize vibration.



Tilt Disc Check Valve



Special Features of All Pressure Seal Gate and Globe Valves

Packing Adjustment

All gate and globe valves are provided with a two-piece packing gland to minimize the possibility of scoring the stem if the gland is tightened unevenly. Eyebolts remain fastened to the bonnet. The eyebolts swing out of the way to simplify packing replacement, and are oriented so they can be adjusted from one side of the valve.

Deep Stuffing Boxes

Deep stuffing boxes are standard on gate and globe valves. The design provides extra packing for a more reliable stem seal, or sufficient depth for packing with an optional lantern ring in the middle. When equipped with a lantern ring, a tapped and plugged hole is provided; when specified, it can be fitted with an injection fitting.

Pressure Seal Design

The segmental thrust ring absorbs all the thrust applied by internal pressure. A hardened Stainless Steel protective ring prevents deformation of the top surface of the soft steel, 304 Stainless or 316 Stainless with a high density graphite gasket. The gasket can be removed freely without damaging the sealing surface of the body.

CE CE marking available upon request.
DSI® products may be used in applications requiring up to category III product.

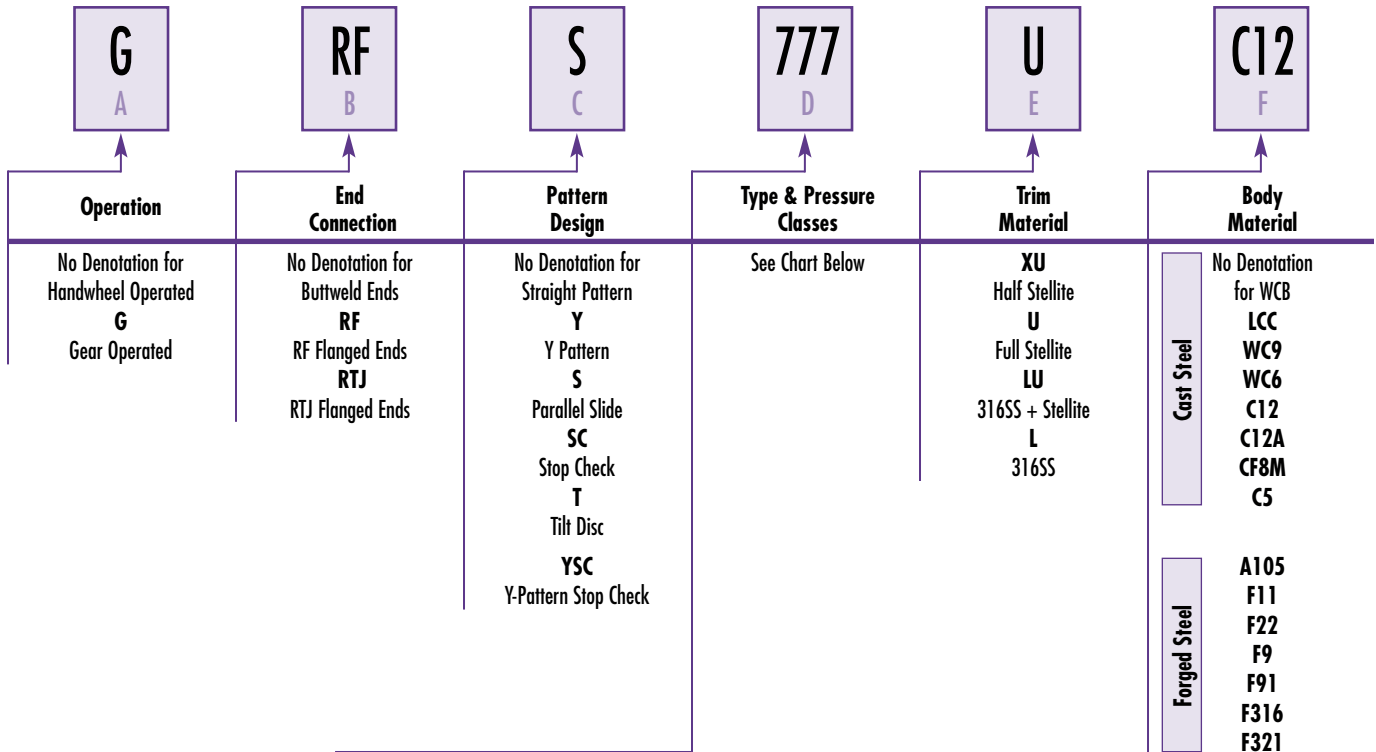
Specifying DSI® Pressure Seal Valve Figure Numbers **CAST & FORGED STEEL**

(Flexible Taper Wedge and Parallel Slide Gate Valves, Straight and Y-Pattern Globe Valves, Swing Style and Tilt Disc Check Valves)

It's easy to specify DSI® Pressure Seal Valves. Just follow the example and use the figure number chart below to specify the valve you need.

Example:

Gear Operated, RF Flanged, Class 1500# Parallel Slide Gate Valve with full Stellite trim and C12A body.



Valve Type	Class	Fig No. for "D"
Gates	600	776
	900	773
	1500	777
	2500	787
Globes	600	7161
	900	7173
	1500	7179
	2500	7185
Checks	600	7165
	900	7177
	1500	7189
	2500	7199

Pipe Bore Schedule for DSI® Pressure Seal Valves

CAST & FORGED STEEL

Pipe Size (in)	Pipe Sched. No.	Valve Pressure Class				Nom. Pipe O.D.	Valve O.D.	Pipe I.D.	Weld Lip Bore	Pipe Wall Thick.
		600	900	1500	2500					
2 1/2"	40	X	X	X	X	2.875	27/8	2.469	2.479	0.203
	80	X	X	X	X			2.323	2.351	0.276
	160		X	X	X			2.125	2.178	0.375
	XXS			X	X			1.771	1.868	0.552
3"	40	X	X	X	X	3.500	3 19/32	3.068	3.081	0.216
	80	X	X	X	X			2.900	2.934	0.300
	160		X	X	X			2.624	2.692	0.438
	XXS			X	X			2.300	2.409	0.600
4"	40	X	X	X	X	4.500	4 5/8	4.026	4.044	0.237
	80	X	X	X	X			3.826	3.869	0.337
	120	X	X	X	X			3.624	3.692	0.438
	160		X	X	X			3.438	3.530	0.531
6"	40	X	X	X	X	6.625	6 25/32	6.065	6.094	0.280
	80	X	X	X	X			5.761	5.828	0.432
	120	X	X	X	X			5.501	5.600	0.562
	160	X	X	X	X			5.187	5.326	0.719
8"	40	X	X	X	X	8.625	8 25/32	7.981	8.020	0.322
	60	X	X	X	X			7.813	7.873	0.406
	80	X	X	X	X			7.625	7.709	0.500
	100	X	X	X	X			7.437	7.544	0.594
	120	X	X	X	X			7.187	7.326	0.719
	140		X	X	X			7.001	7.163	0.812
	XXS			X	X			6.875	7.053	0.875
	160			X	X			6.813	6.998	0.906
10"	40	X	X	X	X	10.750	10 15/16	10.020	10.070	0.365
	60	X	X	X	X			9.750	9.834	0.500
	80	X	X	X	X			9.564	9.670	0.594
	100	X	X	X	X			9.312	9.451	0.719
	120	X	X	X	X			9.062	9.232	0.844
	140		X	X	X			8.750	8.959	1.000
	160			X	X			8.500	8.740	1.125
12"	STD	X	X	X	X	12.750	12 31/32	12.000	12.053	0.375
	40	X	X	X	X			11.938	11.999	0.406
	XS	X	X	X	X			11.750	11.834	0.500
	60	X	X	X	X			11.626	11.725	0.562
	80	X	X	X	X			11.374	11.505	0.688
	100	X	X	X	X			11.062	11.232	0.844
	120	X	X	X	X			10.750	10.959	1.000
	140		X	X	X			10.500	10.740	1.125
160		X	X	X	10.126	10.413	1.312			

The ends of the valve bodies do not contain enough extra material to match the wall thickness of all pipe schedules. The 'X' indicates the schedules which can be supplied for each size and pressure class of valve bodies.

Pipe Size (in)	Pipe Sched. No.	Valve Pressure Class				Nom. Pipe O.D.	Valve O.D.	Pipe I.D.	Weld Lip Bore	Pipe Wall Thick.
		600	900	1500	2500					
14"	STD	X	X	X	X	14.000	14 1/4	13.250	13.303	0.375
	40	X	X	X	X			13.124	13.192	0.438
	XS	X	X	X	X			13.000	13.084	0.500
	60	X	X	X	X			12.812	12.920	0.594
	80	X	X	X	X			12.500	12.646	0.750
	100	X	X	X	X			12.124	12.318	0.938
	120	X	X	X	X			11.812	12.044	1.094
16"	140		X	X	X			11.500	11.771	1.250
	160			X	X			11.188	11.498	1.406
	STD	X	X	X	X	16.000	16 1/4	15.250	15.303	0.375
	40	X	X	X	X			15.000	15.084	0.500
	60	X	X	X	X			14.688	14.811	0.656
	80	X	X	X	X			14.312	14.482	0.844
100	X	X	X	X	13.938			14.155	1.031	
120	X	X	X	X	13.562			13.826	1.219	
18"	140			X	X			13.124	13.442	1.438
	160			X	X			12.812	13.170	1.594
	STD	X	X	X	X	18.000	18 9/32	17.250	17.303	0.375
	XS	X	X	X	X			17.000	17.084	0.500
	40	X	X	X	X			16.876	16.975	0.562
	60	X	X	X	X			16.500	16.646	0.750
	80	X	X	X	X			16.124	16.318	0.938
	100	X	X	X	X			15.688	15.936	1.156
120	X	X	X	X	15.250			15.553	1.375	
140		X	X	X	14.876			15.225	1.562	
20"	160			X	X			14.438	14.842	1.781
	STD	X	X	X	X	20.000	20 5/16	19.250	19.303	0.375
	XS	X	X	X	X			19.000	19.084	0.500
	40	X	X	X	X			18.812	18.920	0.594
	60	X	X	X	X			18.376	18.538	0.812
	80	X	X	X	X			17.938	18.155	1.031
	100		X	X	X			17.438	17.717	1.281
120		X	X	X	17.000			17.334	1.500	
24"	140			X	X			16.500	16.896	1.750
	160			X	X			16.062	16.513	1.969
	STD	X	X	X	X	24.000	24 3/8	23.250	23.303	0.375
	XS	X	X	X	X			23.000	23.084	0.500
	30	X	X	X	X			22.876	22.975	0.562
	40	X	X	X	X			22.624	22.755	0.688
	60	X	X	X	X			22.062	22.263	0.969
	80	X	X	X	X			21.562	21.826	1.219
	100	X	X	X	X			20.938	21.280	1.531
	120	X	X	X	X			20.376	20.788	1.812
140		X	X	X	19.876			20.350	2.062	
160			X	X	19.312			19.857	2.344	

Testing, Modifications and Accessories for DSI® Pressure Seal Valves

Zy-Tech Global Industries offers In-House NDE Testing, a variety of Product Modifications and Accessories, saving our customers time and resources by eliminating the need for multiple purchase orders and transportation costs.

A single warranty then applies to each modified product, with each product inspected for quality and conformance to our customer's specifications and industry standards.

Available Modifications for DSI® Cast Steel Valves

- Gear Operator Mounting
- Trim Changes
- Actuation
- Cryogenic Gas Columns
- Hand Wheel Extensions
- Drilled & Tapped Body/Bonnet Connections
- By-Pass
- Pressure Equalizing
- Acid Shields
- Oxygen & Chlorine Cleaning & Packaging
- Weld End Bore Changes

- Customer Specified Coatings
- Outside Lever and Weight for Check Valves
- Slam Retarders for Check Valves
- Chain Wheel Operator

NDE Testing Available (In-House)

- Dye Penetrant Test
- Magnetic Particle Test
- Radiography
- PMI (Positive Material Identification)
- API/ANSI Performance Testing

DSI® Pressure Seal Valves Standard Product Range with Zy-Gear Bevel Gear Chart

DSI® offers a broad range of standard commodity valves in weld end connections. The chart for Zy-Gears is based on torque ratings for each valve at maximum differential pressure.

Valve Type	Pressure Class	Size Range	Bonnet	Disc	Zy-Gear
Gate	600	2"-24"	Pressure Seal Bonnet	Flex	2"-6" 107B 8"-16" 207B 18"-24" 307B
	900	2"-24"	Pressure Seal Bonnet	Flex	2"-6" 107B 8"-12" 207B 14"-16" 307B
	1500	2"-12"	Pressure Seal Bonnet	Flex	2"-4" 107B 6"-8" 207B 10"-12" 307B
	2500	2"-8"	Pressure Seal Bonnet	Flex	2"-4" 107B 6" 207B 8" 307B
Globe	600	2"-10"	Pressure Seal Bonnet	Plug	2"-6" 107B 8" 207B 10" 307B
	900	2"-8"	Pressure Seal Bonnet	Plug	2"-4" 107B 6" 207B 8" 307B
	1500	2"-8"	Pressure Seal Bonnet	Plug	2"-4" 107B 6"-8" 307B
	2500	2"-4"	Pressure Seal Bonnet	Plug	2" 107B 3" 207B 4" 307B



Industry inter-changeable pre-drilled mounting pattern per MSS SP101.

DSI® Pressure Seal Pressure Temperature Ratings

Pressure temperature ratings are based on ANSI B16.34 (1996 edition).

The temperatures shown are that of the pressure-containing shell, which is considered to be the same temperature as that of the fluid flowing within it.

Special consideration should be given to such items as trim, bonnet gasket material, and packing to assure that the rating is merited in all respects.

Maximum Allowable Non-Shock Pressure (PSIG)

Service Temperature		Class 600								Class 900							
°F	°C	WCB (a)	WC6 (c,d)	WC9 (c,d)	LCC (b)	C12 (d)	C12a	F91	CF8M (e)	WCB (a)	WC6 (c,d)	WC9 (c,d)	LCC (b)	C12 (d)	C12a	F91	CF8M (e)
-20 to 100	-29 to 38	1480	1500	1500	1500	1500	1500	1500	1440	2220	2250	2250	2250	2250	2250	2250	2160
200	93	1350	1500	1500	1500	1500	1500	1500	1240	2025	2250	2250	2250	2250	2250	2250	1860
300	149	1315	1445	1455	1455	1455	1455	1455	1120	1970	2165	2185	2185	2185	2185	2185	1680
400	204	1270	1385	1410	1410	1410	1410	1410	1025	1900	2080	2115	2115	2115	2115	2115	1540
500	260	1200	1330	1330	1330	1330	1330	1330	955	1795	1995	1995	1995	1995	1995	1995	1435
600	316	1095	1210	1210	1210	1210	1210	1210	900	1640	1815	1815	1815	1815	1815	1815	1355
650	343	1075	1175	1175	1175	1175	1175	1175	890	1610	1765	1765	1765	1765	1765	1765	1330
700	371	1065	1135	1135	1135	1135	1135	1135	870	1600	1705	1705	1705	1705	1705	1705	1305
750	399	1010	1065	1065	1010	1065	1065	1065	855	1510	1595	1595	1510	1595	1595	1595	1280
800	427	825	1015	1015	825	1015	1015	1015	845	1235	1525	1525	1235	1525	1525	1525	1265
850	454	535	975	975	535	975	975	975	835	805	1460	1460	805	1460	1460	1460	1255
900	482	345	900	900	345	900	900	900	830	515	1350	1350	515	1350	1350	1350	1245
950	510	205	640	755	205	755	775	775	775	310	955	1130	310	1130	1160	1160	1160
1000	538	105	430	520	105	505	725	725	700	155	650	780	155	760	1090	1090	1050
1050	566	–	290	350	–	345	720	720	685	–	430	525	–	515	1080	1080	1030
1100	593	–	190	220	–	225	605	605	310	–	290	330	–	340	905	905	915
1150	621	–	125	135	–	150	445	445	475	–	185	205	–	225	670	670	710
1200	649	–	75	80	–	105	290	290	370	–	115	125	–	155	430	430	555

Service Temperature		Class 1500								Class 2500							
°F	°C	WCB (a)	WC6 (c,d)	WC9 (c,d)	LCC (b)	C12 (d)	C12a	F91	CF8M (e)	WCB (a)	WC6 (c,d)	WC9 (c,d)	LCC (b)	C12 (d)	C12a	F91	CF8M (e)
-20 to 100	-29 to 38	3705	3750	3750	3750	3750	3750	3750	3600	6170	6250	6250	6250	6250	6250	6250	6000
200	93	3375	3750	3750	3750	3750	3750	3750	3095	5625	6250	6250	6250	6250	6250	6250	5160
300	149	3280	3610	3640	3640	3640	3640	3640	2795	5470	6015	6070	6070	6070	6070	6070	4660
400	204	3170	3465	3530	3530	3530	3530	3530	2570	5280	5775	5880	5880	5880	5880	5880	4280
500	260	2995	3325	3325	3325	3325	3325	3325	2390	4990	5540	5540	5540	5540	5540	5540	3980
600	316	2735	3025	3025	3025	3025	3025	3025	2255	4560	5040	5040	5040	5040	5040	5040	3760
650	343	2685	2940	2940	2940	2940	2940	2940	2220	4475	4905	4905	4905	4905	4905	4905	3700
700	371	2665	2840	2840	2840	2840	2840	2840	2170	4440	4730	4730	4730	4730	4730	4730	3620
750	399	2520	2660	2660	2520	2660	2660	2660	2135	4200	4430	4430	4200	4430	4430	4430	3560
800	427	2060	2540	2540	2060	2540	2540	2540	2110	3430	4230	4230	3430	4230	4230	4230	3520
850	454	1340	2435	2435	1340	2435	2435	2435	2090	2230	4060	4060	2230	4060	4060	4060	3480
900	482	860	2245	2245	860	2245	2245	2245	2075	1430	3745	3745	1430	3745	3745	3745	3460
950	510	515	1595	1885	515	1885	1930	1930	1930	860	2655	3145	860	3145	3220	3220	3220
1000	538	260	1080	1305	260	1270	1820	1820	1750	430	1800	2170	430	2115	3030	3030	2915
1050	566	–	720	875	–	855	1800	1800	1720	–	1200	1455	–	1430	3000	3000	2865
1100	593	–	480	550	–	565	1510	1510	1525	–	800	915	–	945	2515	2515	2545
1150	621	–	310	345	–	375	1115	1115	1185	–	515	570	–	630	1855	1855	1970
1200	649	–	190	205	–	255	720	720	925	–	315	345	–	430	1200	1200	1545

Notes:

- (a) Permissible, but not recommended for prolonged exposure above about 800°F. Upon prolonged exposure to temperatures above about 800°F, the carbide phase of Carbon Steel may be converted to Graphite.
- (b) Not to be used over 650°F.

- (c) Not to be used over 1100°F.
- (d) Use normalized and tempered material only.
- (e) At temperatures over 1000°F, use only when the Carbon content is 0.04% or higher.

Pressure Seal Gate Valves **CAST STEEL • Flexible Taper Wedge Design**

(Class 600-776U, 900-773U, 1500-777U, 2500-787U)



Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
3	Wedge	A216 WCB+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF	A351 CF8M+HF
4	Stem	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
5	Handwheel	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB
6	Body Seat Ring	C/S 1020+HF	A182 F11+HF	A182 F22+HF	A182 F5a+HF	A182 F9+HF	A240 316+HF
7	Backseat	A216 WCB +13Cr	A217 WC6+13Cr	A217 WC9+13Cr	A217 C5+13Cr	A217 C12+13Cr	A351 CF8M
8	Gasket	Soft Steel	304 SS	304 SS	304 SS	304 SS	316 SS
9	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
10	Gland Flange	A283 D	A283 D	A283 D	A283 D	A283 D	A351 CF8
11	Gland Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
12	Gland Nut	A307 B	A307 B	A307 B	A307 B	A307 B	A194 8
13	Hinge Clamp Bolt	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7
14	Packing Gland	C/S 1020+Cr	A479 410	A479 410	A479 410	A479 410	A479 316
15**	Bonnet Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
16*	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
17	Yoke Cap	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Zn
18	Yoke Sleeve	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2
19	Handle Nut	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Zn
20	Set Screw	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020
21	Grease Nipple	Steel	Steel	Steel	Steel	Steel	Steel
22	Bearing	Steel	Steel	Steel	Steel	Steel	Steel
23	Yoke	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8
24*	Yoke Bolt	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B8
25*	Yoke Nut	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
27*	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
28	Retainer	C/S 1045+Cr	A240 304	A240 304	A240 304	A240 304	A240 316
29	Adapter Ring	C/S 1045+Cr	A240 304	A240 304	A240 304	A240 304	A240 316
31**	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
32**	Washer	A479 410	A479 410	A479 410	A479 410	A479 410	A240 304
33	Hinge Clamp	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8

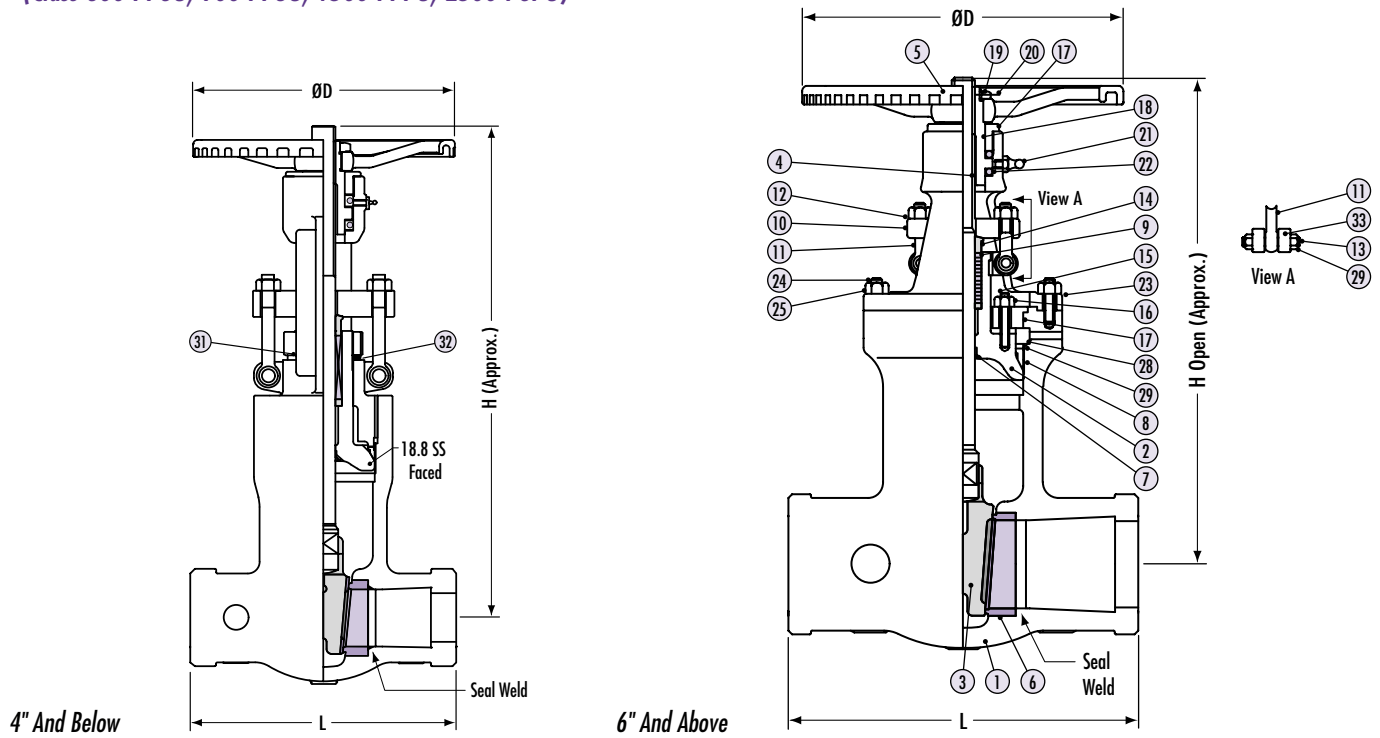
*6" and above. **4" and below.

Note: HF reflects hardfaced with Stellite® 6.

For other materials, contact your salesperson.

Technical Data CAST STEEL • Gate Valves • Flexible Taper Wedge Design

(Class 600-776U, 900-773U, 1500-777U, 2500-787U)



Dimensional Data (in.), Weights (lbs.) and Flow Coefficients (Cv)

Class 600	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
Wt. (lbs)	100	140	150	250	460	695	1166	1710	2668	3527	4178	5194	9400
L	7.00	8.50	10.00	12.00	18.00	23.00	28.00	32.00	35.00	39.00	43.00	47.00	55.00
D	7.87	9.84	9.84	13.98	17.72	19.69	24.80	27.95	31.50	35.43	35.43	43.00	43.00
H	19.96	20.87	23.15	27.95	35.67	45.71	53.11	60.31	66.02	78.74	85.94	102.28	112.95
Cv	307	492	709	1297	3107	6634	8493	12801	15357	20172	26273	32141	45707

Class 900

Wt. (lbs)	121	183	209	287	617	1014	1808	2535	3307	4630	6020	8125	11973
L	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	48.00	52.00	61.00
D	12.40	13.98	13.98	13.98	19.69	24.80	27.95	31.50	35.43	35.43	43.00	43.00	51.02
H	23.07	25.98	24.72	29.13	38.07	46.38	56.89	65.28	69.68	72.44	91.26	101.46	107.00
Cv	268	399	649	1214	2854	5026	7844	11465	13913	18172	23938	29554	42557

Class 1500

Wt. (lbs)	108	165	247	265	816	1345	2866	4409	6393	7694	10209	12613	18169
L	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	53.00	58.00	68.00
D	12.40	13.98	13.98	15.75	24.80	27.98	31.50	35.43	43.00	43.00	43.00	51.02	51.02
H	23.07	25.78	28.03	33.70	41.77	44.82	62.44	69.21	69.92	74.88	88.46	103.30	115.00
Cv	268	399	596	1062	2489	4378	6840	9970	11966	15669	20627	25880	37148

Class 2500

Wt. (lbs)	120	185	298	474	1210	2180	3520	5060	6885	8505	11000	—	—
L	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	44.00	49.00	55.00	62.00	66.00
D	13.98	13.98	13.98	17.72	24.80	27.95	27.95	31.50	35.43	43.00	51.02	51.02	59.00
H	26.53	25.59	27.26	31.69	39.56	52.79	61.18	66.49	71.73	90.47	98.31	107.00	114.00
Cv	173	278	399	668	1648	2954	4696	6889	8368	10955	14481	17587	25483

Pressure Seal Gate Valves **CAST STEEL • Parallel Slide Design**

(Class 600-S777U, 900-S773U, 1500-S777U, 2500-S787U)



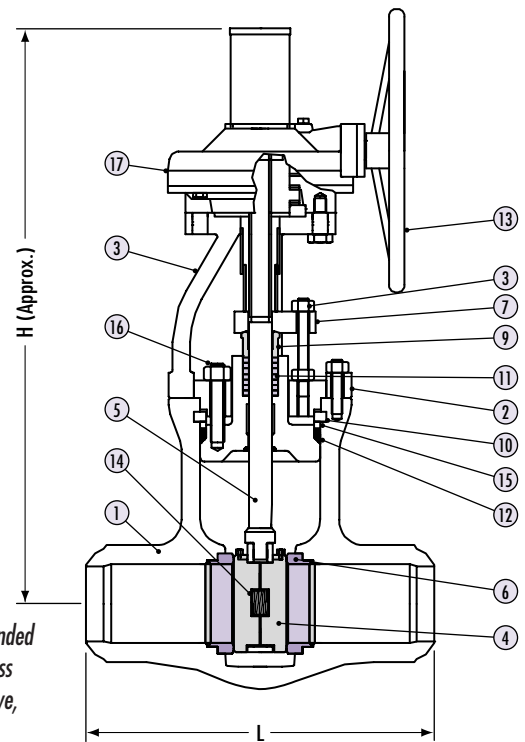
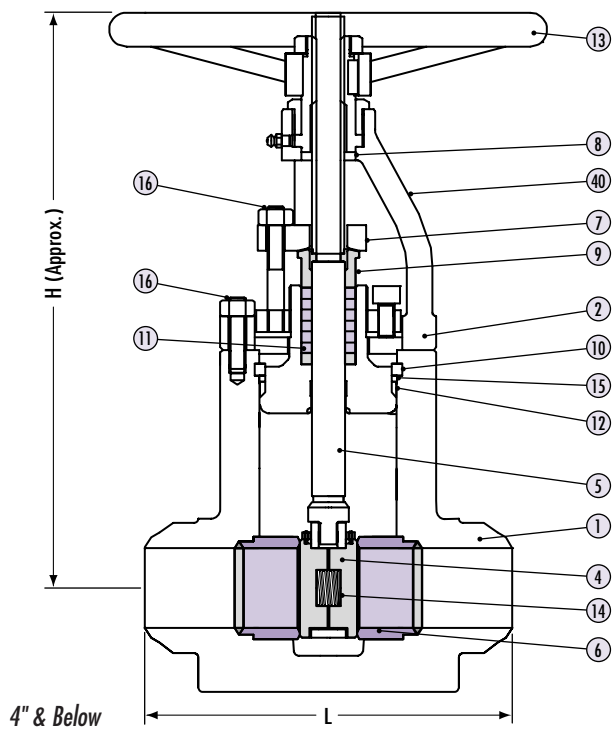
Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	WCB	WC6	WC9	C12A	C12	CF8M	CF8C
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C12A	A217 C12	A182 CF8M	A182 CF8C
2	Bonnet	A105+HF	A182 F11	A182 F22	A182 F91	A182 F9	A182 F316	A182 F321
3	Yoke	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A182 CF8M	A182 CF8M
4	Disc (parallel slide)	A105+HF	F11+HF	F22+HF	F91+HF	F9+HF	F316+HF	F321+HF
5	Stem	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 FXM19	A182 FXM19
6	Seat Ring	A105+HF	F11+HF	F22+HF	F91+HF	F9+HF	F316+HF	F321+HF
7	Gland Flange	A105	A105	A105	A105	A105	F316	F316
8	Yoke Sleeve	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.
9	Gland	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	F316	F316
10	Half Ring	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410
11	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
12	Seal Ring	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps
13	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
14	Spring	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750
15	Space Seal Ring	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410
16	Bolts/Nuts	A193B7/2H	A193B7/2H	B16/GR.4	B16/GR.4	B16/GR.4	B8/GR. 8	B8/GR. 8
17	Bevel Gear	Steel Body	Steel Body	Steel Body	Steel Body	Steel Body	Steel Body	Steel Body

Note: HF reflects hardfaced with Stellite® 6.
For other materials, contact your salesperson.

Technical Data CAST STEEL • Gate Valves • Parallel Slide Design

(Class 600-S-776U, 900-S-773U, 1500-S-777U, 2500-S-787U)



Gear Operator recommended for sizes 6" & above, Class 900 and sizes 4" & above, Class 1500 & 2500.

Dimensional Data (in.) & Weights (lbs.)

Class 600	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. cast)	212	331	639	1102	1720	2690	3483	4520	5401
BW (end-to-end)	10.00	12.00	18.00	23.00	28.00	32.00	35.00	39.00	43.00
H (center to top open position, approx.)	25.79	30.71	41.34	52.75	59.84	67.32	70.87	78.94	81.89

Class 900	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. cast)	176	276	529	915	1444	2238	2899	3670	4475
BW (end-to-end)	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	45.00
H (center to top open position, approx.)	25.79	30.71	41.34	52.75	59.84	67.32	70.87	78.94	81.89

Class 1500	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. cast)	176	298	705	1312	2183	3164	3935	5104	6570
BW (end-to-end)	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	53.00
H (center to top open position, approx.)	25.79	30.91	45.47	54.33	61.42	69.29	70.87	75.60	88.58

Class 2500	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. cast)	243	851	827	1653	2701	3538	4255	6063	8554
BW (end-to-end)	14.50	18.00	24.00	30.00	36.00	41.00	44.00	49.00	55.00
H (center to top open position, approx.)	28.35	34.06	44.88	50.59	61.22	64.57	68.90	81.89	84.65

Pressure Seal Gate Valves **FORGED STEEL • Parallel Slide Design**

(Class 600-S777U, 900-S773U, 1500-S777U, 2500-S787U)



Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	A105	F11	F22	F91	F9	316	321
1	Body	A105	A182 F11	A182 F22	A182 F91	A182 F9	A182 F316	A182 F321
2	Bonnet	A105+HF	A182 F11	A182 F22	A182 F91	A182 F9	A182 F316	A182 F321
3	Yoke	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	CF8M	CF8M
4	Disc (parallel slide)	A105+HF	F11+HF	F22+HF	F91+HF	F9+HF	F316+HF	F321+HF
5	Stem	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 FXM19	A182 FXM19
6	Seat Ring	A105+HF	F11+HF	F22+HF	F91+HF	F9+HF	F316+HF	F321+HF
7	Gland Flange	A105	A105	A105	A105	A105	F316	F316
8	Yoke Sleeve	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.	Aluminum Brz.
9	Gland	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	F316	F316
10	Half Ring	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410
11	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
12	Seal Ring	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps	Graphite w/SS Caps
13	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
14	Spring	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750	Inconel X 750
15	Space Seal Ring	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410	AISI 410
16	Bolts/Nuts	A193B7/2H	A193B7/2H	B16/GR.4	B16/GR.4	B16/GR.4	B8/GR. 8	B8/GR. 8
17	Bevel Gear	Cast Iron Body	Cast Iron Body	Cast Iron Body	Cast Iron Body	Cast Iron Body	Cast Iron Body	Cast Iron Body

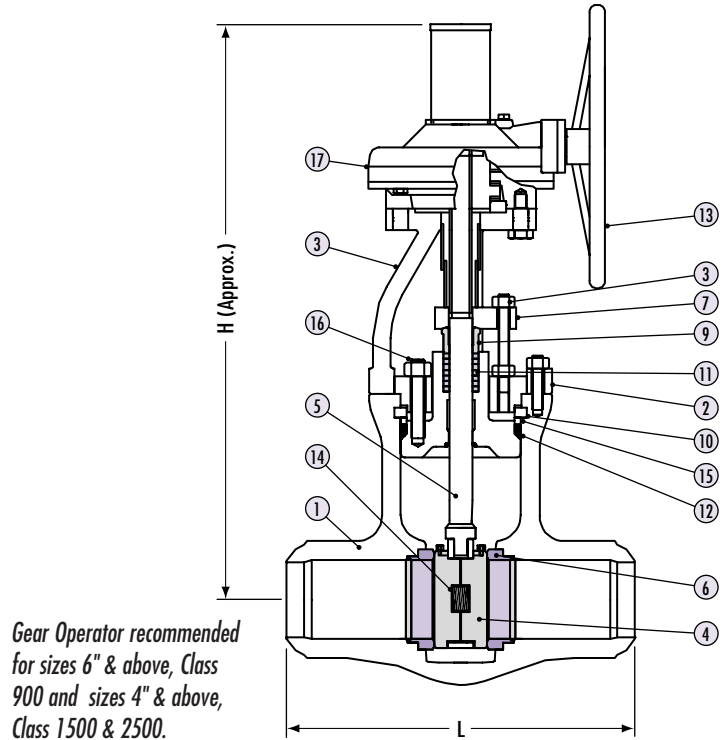
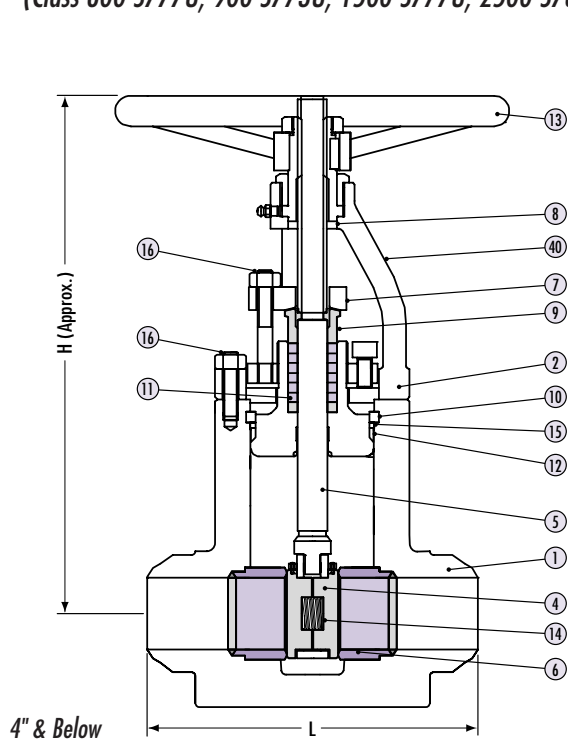
Note: HF reflects hardfaced with Stellite® 6.

Please contact your salesperson for two-piece welded design which is available for sizes 4" and above.

For other materials, contact your salesperson.

Technical Data FORGED STEEL • Gate Valves • Parallel Slide Design

(Class 600-S777U, 900-S773U, 1500-S777U, 2500-S787U)



Dimensional Data (in.) & Weights (lbs.)

Class 600	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. forged)	212	331	639	1102	1720	2690	3483	4520	5401
BW (end-to-end)	10.00	12.00	18.00	23.00	28.00	32.00	35.00	39.00	43.00
H (center to top open position, approx.)	25.79	30.71	41.34	52.75	59.84	67.32	70.87	78.94	81.89

Class 900	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. forged)	212	331	639	1102	1720	2690	3483	4520	5401
BW (end-to-end)	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	45.00
H (center to top open position, approx.)	25.79	30.71	41.34	52.75	59.84	67.32	70.87	78.94	81.89

Class 1500	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. forged)	209	353	860	1565	2601	3792	4718	6129	7892
BW (end-to-end)	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	53.00
H (center to top open position, approx.)	25.79	30.91	45.47	54.33	61.42	69.29	70.87	75.60	88.58

Class 2500	3	4	6	8	10	12	14	16	18
Wt. (lbs) (approx. forged)	287	463	992	1984	3241	4255	5115	7275	10251
BW (end-to-end)	14.50	18.00	24.00	30.00	36.00	41.00	44.00	49.00	55.00
H (center to top open position, approx.)	28.35	34.06	44.88	50.59	61.22	64.57	68.90	81.89	84.65

Pressure Seal Globe Valves

CAST STEEL • Straight Pattern Design

(Class 600-7161U, 900-7173U, 1500-7179U, 2500-7185U)



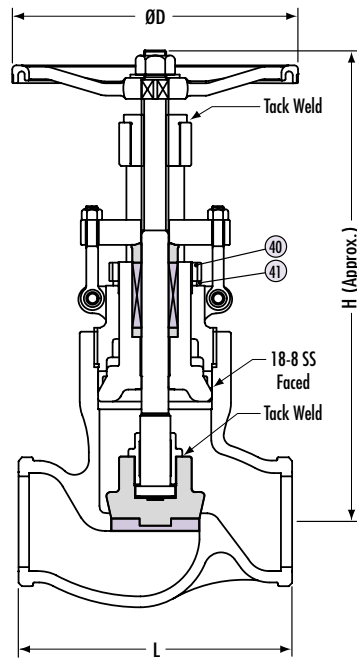
Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
3	Disc	A216 WCB+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF	A351 CF8M+HF
4	Stem	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
5	Handwheel	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB
6	Body Seat Ring	A216 WCB+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF	A351 CF8M+HF
7	Backseat	A216 WCB+13Cr	A217 WC6+13Cr	A217 WC9+13Cr	A217 C5+13Cr	A217 C12+13Cr	A351 CF8M
8	Gasket	Soft Steel	304 SS	304 SS	304 SS	304 SS	316 SS
9	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
10	Gland Flange	A283 D	A283 D	A283 D	A283 D	A283 D	A351 CF8
11	Gland Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
12	Gland Nut	A307 B	A307 B	A307 B	A307 B	A307 B	A194 8
14	Packing Gland	C/S 1020+Cr	A479 410	A479 410	A479 410	A479 410	A479 316
15	Bonnet Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
16	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
17	Yoke Cap	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Cr
18	Yoke Sleeve	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2
19	Lock Nut	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
20	Disc Thrust Pad	A479 410	A479 410	A479 410	A479 410	A479 410	A479 410
21	Yoke	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8
22*	Yoke Bolt	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B8
23*	Yoke Bolt Nut	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
25*	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
26	Retainer	C/S 1045+Cr	A240 304	A240 304	A240 304	A240 304	A240 316
27	Adapter Ring	C/S 1045+Cr	C/S 1045	A240 304	A240 304	A240 304	A240 316
30	Handle Nut	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Zn
34	Grease Nipple	Steel	Steel	Steel	Steel	Steel	Steel
35	Stopper	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8
36	Stopper Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
38	Set Screw	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020
39	Bearing	Steel	Steel	Steel	Steel	Steel	Steel
40**	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
41**	Washer	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
42	Hinge Clamp	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8
44	Gland Clamp Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
45	Gland Clamp Nut	A307 B	A307 B	A307 B	A307 B	A307 B	A194 8

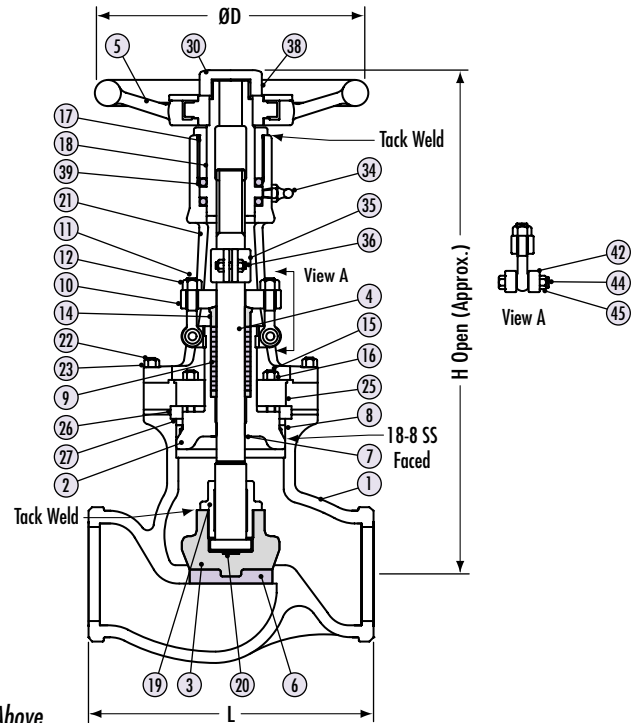
*6" and above. **4" and below. Note: HF reflects hardfaced with Stellite®6. For other materials, contact your salesperson.

Technical Data CAST STEEL • Globe Valves • Straight Pattern Design

(Class 600-7161U, 900-7173U, 1500-7179U, 2500-7185U)



4" & Below



6" & Above

Dimensional Data (in.), Weights (lbs.) and Flow Coefficients (C_v)

Class 600	2	2 1/2	3	4	6	8	10	12
Wt. (lbs)	95	195	200	300	600	1200	1600	2350
L	7.00	8.50	10.00	12.00	18.00	23.00	28.00	32.00
D	8.82	12.40	12.40	13.98	19.69	22.05	24.80	27.95
H	15.98	18.35	21.93	22.60	33.15	41.18	41.97	52.13
C _v	47	109	109	199	477	849	1303	1964

Class 900

Wt. (lbs)	95	195	232	440	700	1200	1600	2350
L	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00
D	12.40	12.40	12.40	13.98	17.71	27.95	27.95	31.50
H	22.64	24.02	23.03	26.73	35.47	35.90	42.60	47.71
C _v	41	100	100	186	438	771	1203	1759

Class 1500

Wt. (lbs)	190	210	231	400	1000	3100	5025	6200
L	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00
D	12.40	13.98	13.98	15.75	19.69	24.80	31.50	35.43
H	22.64	24.02	25.91	30.12	39.17	48.50	56.30	62.80
C _v	41	91	91	163	382	672	1049	1529

Class 2500

Wt. (lbs)	155	242	250	475	1900	4410	5500	7250
L	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00
D	13.98	15.75	15.75	17.71	24.80	27.95	35.43	43.00
H	22.24	34.25	34.25	35.98	44.17	53.35	61.93	69.06
C _v	26	61	61	102	253	453	720	1057

Pressure Seal Globe Valves **CAST STEEL • Y-Pattern Design**

(Class 600-Y-7161U, 900-Y-7173U, 1500-Y-7179U, 2500-Y-7185U)



Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216-WCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
2	Bonnet	A216-WCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
3	Disc	A216-WCB+HF	A217-WC6+HF	A217-WC9+HF	A217-C5+HF	A217-C12+HF	A351-CF8M+HF
4	Stem	A479-410	A479-410	A479-410	A479-410	A479-410	A479-316
5	Handwheel*	A395	A395	A395	A395	A395	A395
6	Body Seat, Integral	A216-WCB+HF	A217-WC6+HF	A217-WC9+HF	A217-C5+HF	A217-C12+HF	A351-CF8M+HF
7	Back Seat, Integral	A216-WCB+13Cr	A217-WC6+13Cr	A217-WC9+13Cr	A217-C5+13Cr	A217-C12+13Cr	A351-CF8M+13Cr
8	Gasket	Soft Steel	304S.S	304S.S	304S.S	304S.S	316S.S
9	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
10	Gland Flange	A283-D	A283-D	A283-D	A283-D	A283-D	A351-CF8
11	Bolt	A307-B	A307-B	A307-B	A307-B	A307-B	A193-B8
12	Nut	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	A194-8
13	Hinge Pin	A576-1020	A576-1020	A576-1020	A576-1020	A576-1020	A479-304
14	Packing Gland	A576-1020+Cr	A479-410	A479-410	A479-410	A479-410	A479-316
15	Bonnet Bolt	A193-B7	A193-B16	A193-B16	A193-B16	A193-B16	A193-B8
16	Bonnet Nut	A194-2H	A194-4	A194-4	A194-4	A194-4	A194-8
17	Yoke Bush	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2
18	Handle Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	A194-8
21	Yoke	A216-WCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
22	Stuffing Ring	A479-410	A479-410	A479-410	A479-410	A479-410	A479-316
23	Yoke Bolt	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7	A193-B8
24	Yoke Nut	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	A194-8

*Class 900, 1500 Size 2": A197

HF reflects hardfaced with Stellite® 6.

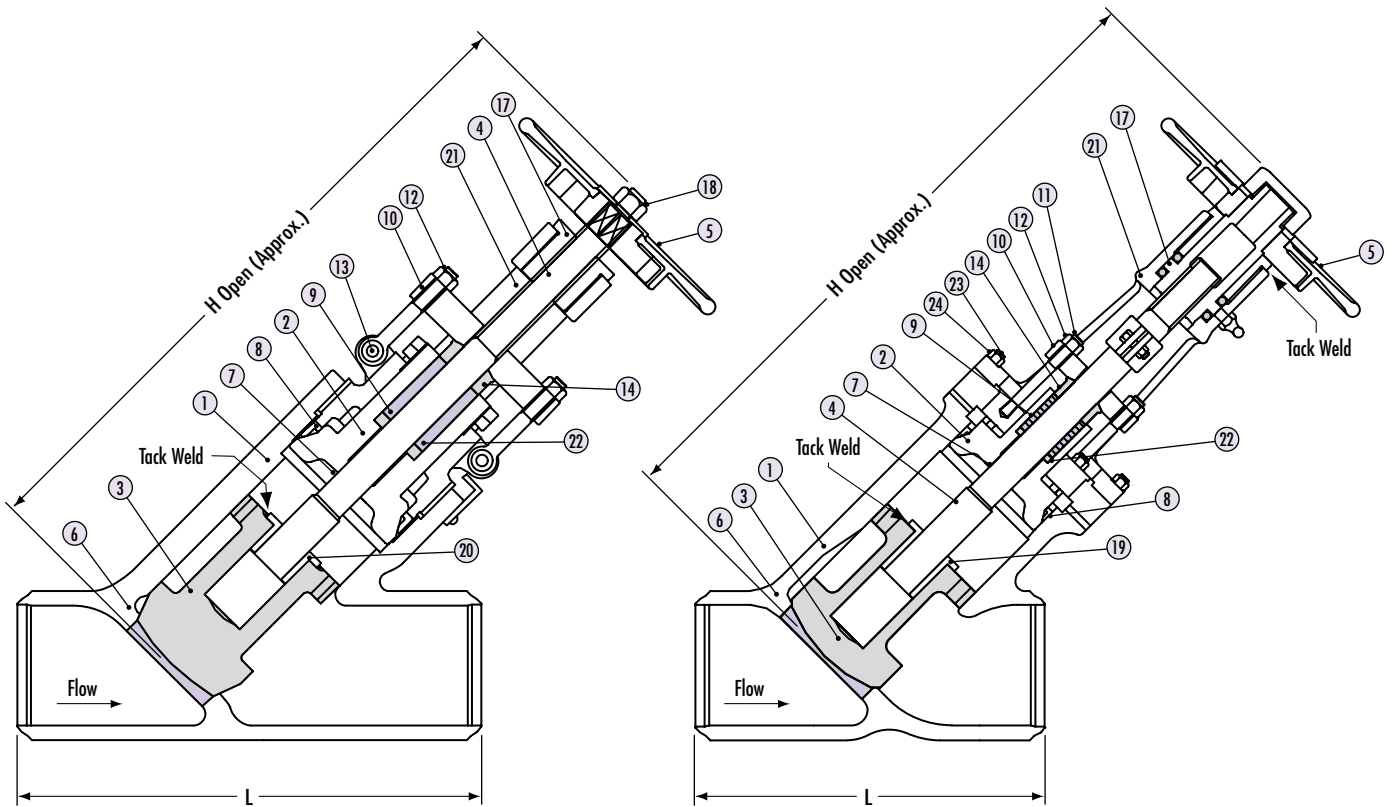
Forged Steel available.

These valves also available in Stop Check Pattern.

For other materials, contact your salesperson.

Technical Data CAST STEEL • Globe Valves • Y-Pattern Design

(Class 600-Y-7161U, 900-Y-7173U, 1500-Y-7179U, 2500-Y-7185U)



Dimensional Data (in.)

Class 900	2	3	4	6	8	10	12
L	14.50	15.00	18.00	24.00	29.00	33.00	38.00
H	22.83	23.03	27.17	35.83	40.16	46.46	51.18
Class 1500							
L	14.50	18.50	21.50	27.75	32.75	39.00	44.50
H	22.84	22.83	30.12	37.80	48.03	58.27	68.90
Class 2500							
L	17.75	22.75	26.50	36.00	40.25	50.00	56.00
H	23.23	35.43	34.25	44.88	52.17	70.28	77.56

Pressure Seal Check Valves **CAST STEEL • Swing Check Design**

(Class 600-7165U, 900-7177U, 1500-7189U, 2500-7199U)



Parts And Materials • Class 600, 900, 1500 & 2500

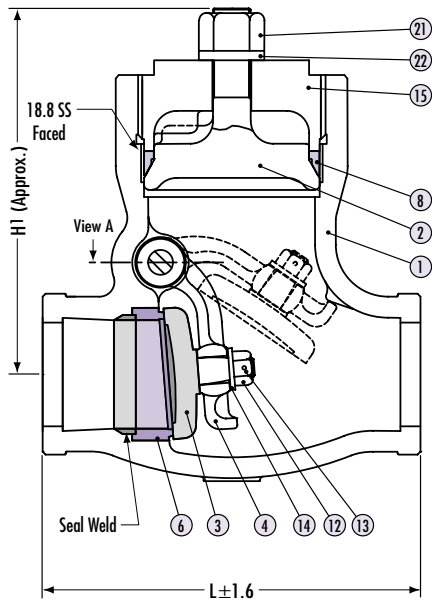
Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
3	Disc	A216 WCB+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF	A351 CF8M+HF
4	Arm	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
5	Rod Pin	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
6	Body Seat Ring	C/S 1020+HF	A182 F11+HF	A182 F22+HF	A182 F5a+HF	A182 F9+HF	A240 316+HF
7	Plug Bolt	A479 410	A479 304	A479 304	A479 304	A479 304	A479 316
8	Gasket	Soft Steel	304 SS	304 SS	304 SS	304 SS	316 SS
9	Plug Gasket	Soft Steel	304 SS	304 SS	304 SS	304 SS	316 SS
10	Bonnet Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
11	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
12	Disc Nut	A194 8	A194 8	A194 8	A194 8	A194 8	A194 8M
13	Split pin	A580 304	A580 304	A580 304	A580 304	A580 304	A580 316
14	Washer	A240 304	A240 304	A240 304	A240 304	A240 304	A240 316
15	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
16	Retainer	C/S 1045+HF	A240 304	A240 304	A240 304	A240 304	A240 316
17	Adapter Ring	C/S 1045+HF	A240 304	A240 304	A240 304	A240 304	A240 316
18	Sealing Bolt	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
19	Sealing Nut	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
20	Eye Bolt	A105	A105	A105	A105	A105	A105
21	Nut	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
22	Washer	A283 D	A283 D	A283 D	A283 D	A283 D	A350 CF8

Note: HF reflects hardfaced with Stellite® 6.

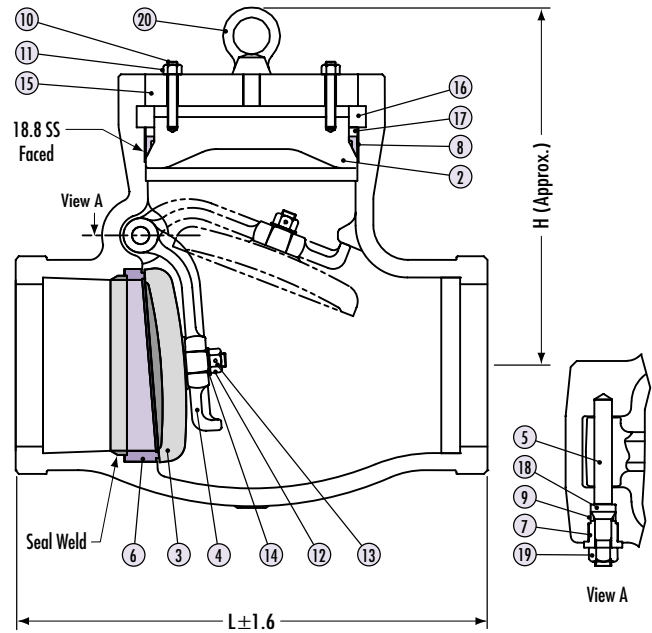
For other materials, contact your salesperson.

Technical Data CAST STEEL • Check Valves • Swing Check Design

(Class 600-7165U, 900-7177U, 1500-7189U, 2500-7199U)



4" & Below



6" & Above

Dimensional Data (in.), Weights (lbs.) and Flow Coefficients (Cv)

Class 600	2	3	4	6	8	10	12	14	16	18	20	24
Wt. (lbs)	80	100	125	287	573	815	1081	1455	1874	2425	3285	4498
L	7.00	10.00	12.00	18.00	23.00	28.00	32.00	35.00	39.00	43.00	47.00	55.00
H	7.52	9.76	12.13	14.37	16.14	18.31	20.08	22.09	24.33	26.50	38.74	30.91
Cv	123	284	519	1243	2213	3397	5120	8384	8344	10508	13745	18751

Class 900

Wt. (lbs)	90	198	243	540	937	1521	2249	2690	2976	4079	5292	6395
L	8.50	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	48.00	52.00	61.00
H	9.57	9.53	14.57	15.75	21.06	21.06	24.02	26.97	29.69	32.64	35.35	38.31
Cv	107	260	486	1142	2010	3138	4586	5565	7269	9575	11821	17023

Class 1500

Wt. (lbs)	90	154	254	551	1036	1632	2425	3110	3528	4630	5733	7718
L	8.50	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	60.50	65.50	76.50
H	9.57	11.81	14.29	15.91	16.10	22.64	26.85	29.61	31.57	34.53	36.89	40.63
Cv	107	238	425	996	1751	2736	3988	4794	6268	8251	10344	14859

Class 2500

Wt. (lbs)	110	187	364	1015	1985	2866	3969	5402	7056	8930	—	—
L	11.00	14.50	18.00	24.00	30.00	36.00	41.00	44.00	48.00	53.00	57.00	66.00
H	10.24	13.78	15.94	17.91	22.44	24.88	32.09	30.55	33.70	36.14	38.82	43.22
Cv	69	160	267	660	1182	1878	2756	3347	4382	5793	7035	10193

Pressure Seal Check Valves **CAST STEEL • Tilt Disc Design**

(Class 600-T-7165, 900-T-7177, 1500-T-7189, 2500-T-7199)



Parts And Materials • Class 600, 900, 1500 & 2500

Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M
3	Disc	A216 WCB+HF	A217 WC6+HF	A217 WC9+HF	A217 C5+HF	A217 C12+HF	A351 CF8M+HF
4	Hinge Pin	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
5	Body Seat Ring	C/S 1020+HF	A182 F11+HF	A182 F22+HF	A182 F5a+HF	A182 F9+HF	A240 316+HF
6	Cover	A105	A182 F11	A182 F22	A182 F5a	A182 F9	A240 316
7	Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
8	Cover Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
9	Bonnet Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
10	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
11	Bushing	304 SS	304 SS	304 SS	304 SS	304 SS	316 SS
12	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
13	Retainer	C/S 1045+Zn	A240 304	A240 304	A240 304	A240 304	A240 316
14	Adapter Ring	C/S 1045+Zn	A240 304	A240 304	A240 304	A240 304	A240 316
15	Cover Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
16	Cover Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
17	Eye Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A307 B
18	Hinge Pin Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
19	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
20	Bonnet Clamp	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8
21	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8M

Note: HF reflects hardfaced with Stellite® 6.

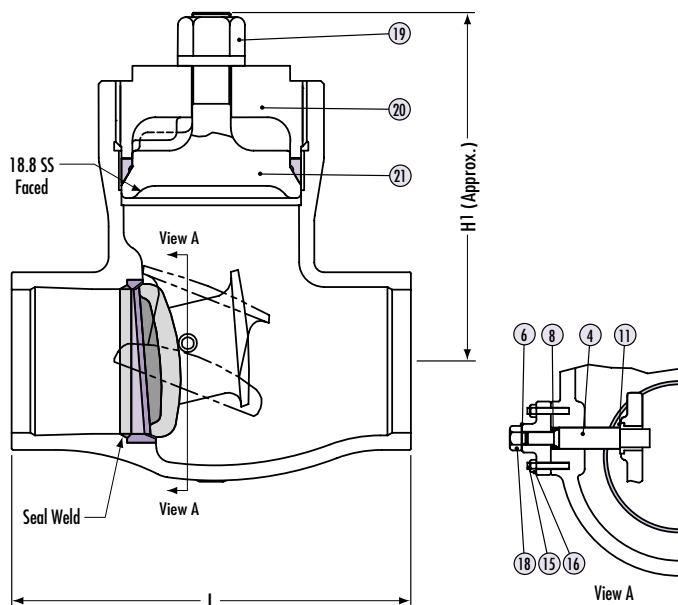
For other materials, contact your salesperson.

Zy-Tech Return Goods Policy

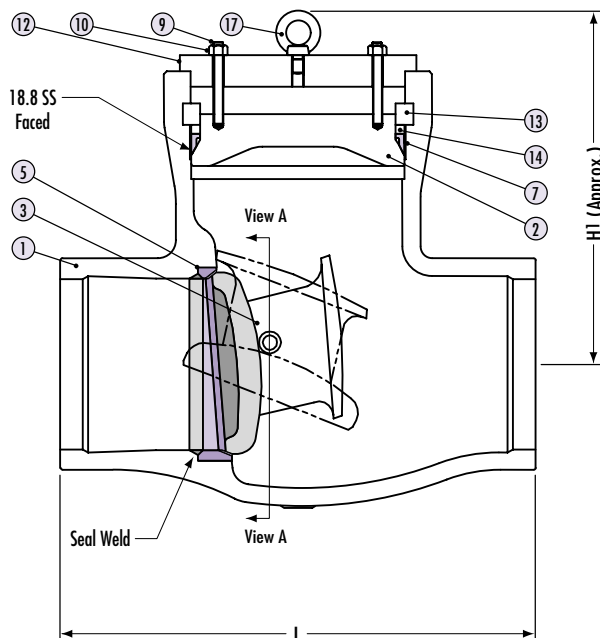
- Material returned to Zy-Tech Global Industries must be accompanied with an authorized Return Goods Authorization (RGA).
- Material received with proper authorization is subject to Inspection & Final Disposition by Zy-Tech Global Industries Quality Department.
- Special items, buyouts, and modified products are **non-returnable**.
- Returns are **not accepted** after sixty (60) days of shipment.
- Standard Restocking Charge for returned materials is **15% with a \$125.00 minimum**.
- Freight for material being returned to Zy-Tech Global Industries to be **prepaid**.
- If clean up or re-certification is required, charges **will be deducted** from the applicable credit.
- Cancellation of orders prior to shipment and/or stock transferred to a branch may incur a minimum **10% Cancellation Charge**.

Technical Data CAST STEEL • Check Valves • Tilt Disc Design

(Class 600-T-7165, 900-T-7177, 1500-T-7189, 2500-T-7199)



4" & Below



6" & Above

Dimensional Data (in.) and Weights (lbs.)

Class 600	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
Wt. (lbs)	75	90	110	223	364	686	1124	1477	1808	2469	3131	3990	6521
L	7.00	8.50	10.00	12.00	18.00	23.00	28.00	32.00	35.00	39.00	43.00	47.00	55.00
H	7.52	7.87	8.27	9.41	10.59	12.05	13.62	16.10	17.72	20.08	21.73	23.22	25.39

Class 900

Wt. (lbs)	126	150	172	243	400	925	1367	1962	2400	2675	3800	4900	6000
L	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	48.00	52.00	61.00
H	5.60	8.02	9.02	9.84	11.65	13.07	15.12	18.11	19.49	21.81	22.83	24.41	27.36

Class 1500

Wt. (lbs)	132	185	212	362	600	1030	1632	2425	3110	3528	4630	5733	7718
L	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	60.50	65.50	76.50
H	7.60	8.07	9.02	9.84	10.24	11.73	15.91	19.06	20.16	22.20	23.31	24.41	28.82

Class 2500

Wt. (lbs)	110	187	364	1015	1985	2866	3969	5402	7056	8930	—		
L	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	44.00	48.00	53.00		
H	7.28	7.87	9.41	9.88	11.81	14.57	16.61	21.26	22.83	20.47	24.80		

Our Quality Commitment...

Zy-Tech Global Industries, Inc. is dedicated to continually improving their state-of-the-art engineering and manufacturing capabilities to improve the overall quality of their products and customer service. Zy-Tech's entire global network of flow control experts consist of highly trained technicians, engineers, and superior testing laboratories to ensure that all products supplied to our customers are 100%

in accordance with industry standards as well as our own Quality Management System.



ZY-TECH GLOBAL INDUSTRIES

Note: This catalog is for reference only. All information is subject to change without notice.



Contact your local Zy-Tech representative for more information about other DSI® Brand flow control products, or visit our website at www.zy-tech.com

Warranty

For a period of (18) months from date of purchase or for a period of (12) months from date of installation of any of the goods described herein, whichever period comes first expires, ZY-TECH GLOBAL INDUSTRIES (Seller) warrants such goods shall remain free from failure due to defects in workmanship and material incorporated therein by or for ZY-TECH GLOBAL INDUSTRIES (Seller) provided such failure shall not have been caused or contributed to, by improper usage, service or application, improper installation, maintenance, repairs, alterations, or modifications effected by or for the user negligence or obligations hereunder, and provided written notification of such failure shall be immediately given to ZY-TECH GLOBAL INDUSTRIES at the following address: ZY-TECH GLOBAL INDUSTRIES, 10600 Corporate Drive, Stafford, TX 77477.

ZY-TECH GLOBAL INDUSTRIES agrees to repair, or at its sole option, to replace the goods sold at its sole expense. Apart from the warranty and undertakings of above set forth, ZY-TECH GLOBAL INDUSTRIES assumes no obligation or liability for losses, expense, or damages, direct or consequential, suffered or incurred as a result of any failure of, or defect in, the goods described herein, including but not limited to, such costs, expenses or damages as may result from the necessity to remove, replace, restore or transport the goods from any location or service in which they may be used, regardless of the cause of such failure or defect.

This warranty is the only warranty made by ZY-TECH GLOBAL INDUSTRIES in connection herewith. There are not other warranties, express or implied, of any kind given with respect to the goods, their merchantability, fitness for any particular purpose or usage, or otherwise, nor is any person authorized to extend on behalf of ZY-TECH GLOBAL INDUSTRIES any form of warranty other than that above set forth.

The goods described herein are not sold or distributed by ZY-TECH GLOBAL INDUSTRIES for personal, family or household purposes, nor are they normally suited for use as such.

Your Local Representative



ZY-TECH GLOBAL INDUSTRIES

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