

DSI® CAST STEEL CARBON AND STAINLESS STEEL GATE, GLOBE AND CHECK VALVES

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MANUFACTURER OF QUALITY VALVE PRODUCTS AROUND THE GLOBE

At Forum Energy Technologies we are committed to improving our clients’ operational and financial performance by supplying the most comprehensive range of valve products in the industry through our family of trusted valve brands.



For years, DSI Cast Steel Valves have been satisfying the needs of Petroleum Refineries, Chemical Processing Plants, Power Generating Plants, and other processing facilities throughout the world.

Our Cast Steel Valves are designed, engineered and manufactured in strict conformance to API, ASTM, ASME, ANSI and other recognized standards. DSI Cast Steel Valves are not only characterized by outstanding performance, reliability and quality, they’re also known for their standard features normally optional in other brands.

All flanged DSI Cast Steel Valves come standard with 125-250 RA flange finishes. DSI utilizes flexible graphite packing, a variety of gasket materials and exacting assembly and testing procedures to ensure compliance with the World’s emissions control standards.

Visit our website to find out more about Forum Energy Technologies and other DSI quality products.



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STANDARD FEATURES

Low Fugitive Emission Service

DSI standard Cast Steel Gate, Globe and Check Valves are designed and manufactured to ensure leakage of less than 100 ppm (parts per million) of volatile organic compounds (VOC) as tested pursuant to generally accepted good engineering practices for verifying fugitive emissions.

Extensive base line laboratory testing (static and cycle testing) has been performed establishing critical design parameters necessary to achieve low emission sealing in the DSI stem packing seal area for Gate and Globe Valves and in the bonnet gasket sealing area (cover gasket for Check Valves). In-house testing procedure has been developed and is periodically performed to ensure that standard product design and manufacturing criteria consistently result in the DSI Gate, Globe and Check Valve meeting less than 100 ppm VOC leakage prior to shipment.

Critical Design and Manufacturing Controls Applied to Produce Low Emission Service Valves in DSI Standard Products

- Stem Straightness and Roundness
- Stem Surface Finish To Maximum 32 Ra
- Stuffing Box Surface Finish To Maximum 125 Ra
- Stuffing Box and Gland Cylindricity
- Self Centering Gland Design
- Gland Packing: Graphite Rings Tested in Accordance with API 622 with Leakage Results Less Than 100 ppm
- Bonnet Gaskets:
Class 150 Gate: Corrugated SS and Graphite Gasket
Class 150 Globe & Check: 316 SS Spiral Wound Grafoil®
Class 300 Valves: 316 SS Spiral Wound Grafoil
Class 600 & Higher: Ring Type Joint

Flex Wedge Design

As casting technology has improved, the wedge design has changed from solid to flex wedge. Flex wedge has a circumferential groove around its perimeter which allows the seating surfaces of the wedge to move independently and adapt to minor changes, pipeline loads and thermal expansion of the piping system on the valve seats. Flex wedge design minimizes the possibility of wedge locking compared to the solid wedge design, at high temperature applications due to quick cool down.

Packing System

DSI Cast Steel Gate and Globe valves use graphite rings in a predetermined arrangement to ensure a low emissions seal. Graphite packing achieves its maximum ability to isolate the atmosphere when it is contained within a chamber that is precise in finish and dimension. DSI Gate and Globe valves are manufactured with stem finishes better than 32 Ra and stuffing box wall finishes for 125 Ra. In addition, stem straightness and taper are closely controlled.

TESTING, MODIFICATIONS, ACCESSORIES & PRODUCT RANGE

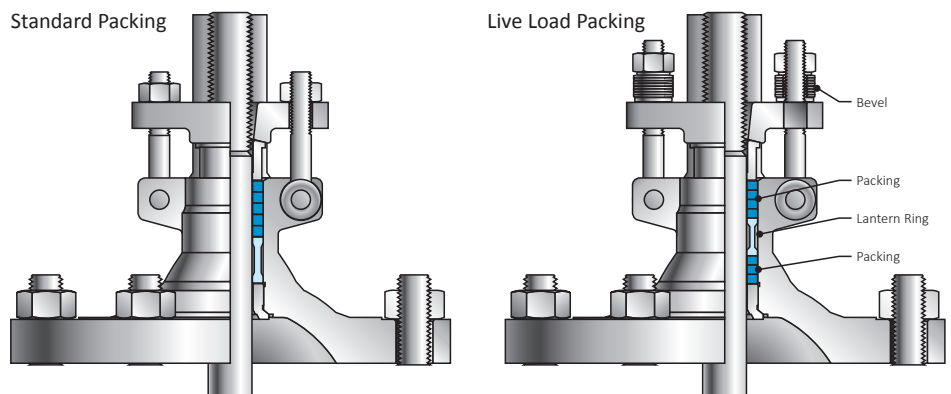
Low Emission Design Options

Live Load Packing

In services requiring frequent cycling or with high pressure/temperature variations, live loading extends the service life between maintenance periods by requiring less frequent packing gland adjustments. Belleville springs are employed to provide constant packing gland stress.

Lantern Ring and Double Packing Set

Lantern ring with leak-off fitting connection and double packing stack is optionally available for critical services.



Note: All information is subject to change without notice.

TESTING, MODIFICATIONS, ACCESSORIES & PRODUCT RANGE CONT.

DSI offers NDE Testing, a variety of product modifications and accessories, saving our customers time and resources by eliminating the need for multiple purchase orders, time 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

- Packing and Gasket Changes
- End Connection Modifications
- Gear Operator Mounting
- Trim Changes
- Actuation
- Cryogenic Gas Columns
- Hand Wheel Extensions
- Teflon® Disc Inserts
- Drilled & Tapped Body/Bonnet Connections
- By-Pass
- Pressure Equalizing
- Acid Shields

- Oxygen & Chlorine Cleaning & Packaging
- Weld End Bore Changes
- Customer Specified Coatings
- Outside Lever & Weight for Check Valves
- Slam Retarders for Check Valves
- Chain Wheel Operator
- Block and Bleed
- API Performance Testing

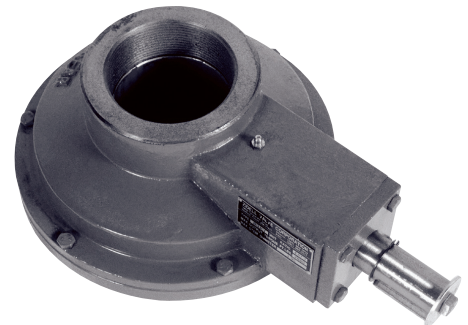
NDE Testing Available

- Dye Penetrant Test
- Magnetic Particle Test
- Radiography
- PMI (Positive Material Identification)

DSI Cast Steel Valves Standard Product Range with Zy-Gear Bevel Gear Chart

DSI offers a broad range of standard commodity Cast Steel Valves in flanged and 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	150	2"- 48"	Bolted OS&Y	Flex	2"- 12" - 107B
					14"- 24" - 207B
					30" & 36" - 307B
	300	2"- 30"	Bolted OS&Y	Flex	2"- 10" - 107B
					12"- 20" - 207B
					24" & 30" - 307B
	600	2"- 24"	Bolted OS&Y	Flex	2"- 6" - 107B
					8"- 12" - 207B
					14"- 24" - 307B
	900	2"- 24"	Bolted OS&Y	Flex	2"- 6" - 107B
					8"- 10" - 207B
					12"- 16" - 307B
	1500	2"- 12"	Bolted OS&Y	Flex	2"- 4" - 107B
					6"- 8" - 207B
					10"- 12" - 307B
Globe	150	2"- 14"	Bolted OS&Y	Plug	2"- 6"- BG107; 8"- 14"- BG207
	300	2"- 12"	Bolted OS&Y	Plug	2"- 4"- BG107; 6"- 10"- BG207; 12"- BG307
	600	2"- 10"	Bolted OS&Y	Plug	2"- 3"- BG107; 4"- 8"- BG207; 10"- BG307
Swing Check	150	2"- 24"	Bolted	Swing	N/A
	300	2"- 24"	Bolted	Swing	N/A
	600	2"- 16"	Bolted	Swing	N/A



Industry interchangeable pre-drilled mounting pattern per MSS SP101.

Note: DSI Cast Steel Globe and Check Valves are available in Classes 900 and 1500. Contact your DSI salesperson for more information.

Note: All information is subject to change without notice.

CONFORMANCE & DESIGN SPECIFICATIONS

NACE MR0175/MR0103 Compliant

Over recent years the demand for valves resistant to sulfide stress cracking in facilities handling H₂S bearing hydrocarbons has increased dramatically. Varying concentrations of H₂S, pressure, temperature and the medium itself, whether it be fluid, gas or multi-phase, plus other factors all have a bearing on the appropriate metallic material selection.

DSI offers three basic valves which have been proven reliable and which fully comply with the NACE MR0175/MR0103 specification. The typical material configurations of the NACE compliant DSI carbon and low temperature carbon steel gate valves are shown below.

NACE designated valve pressure containing parts are in accordance with the prequalified materials identified in NACE MR0175/MR0103. It is the user's responsibility to ensure that all material will be satisfactory in the intended environment.

NACE Compliant Material Specifications for Gate Valves

Valve Parts	UF-N Carbon Steel	LUF-N Carbon Steel	LUF-N-LCC Low Temp CS	Notes
Body, Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A352 LCC	Maximum Hardness 22Rc/235HB
Disc + Disc Faces	ASTM A216 WCB/HF**	ASTM A216 WCB/316	ASTM A352 LCC/316	Heat affected zone and base material hardnesses are controlled to 22Rc/235HB maximum
Stem	ASTM A182 F6A	ASTM A182 F316	ASTM A182 F316	From forging, no welding, maximum hardness 22Rc/235HB
Backseat Gland	ASTM A276 410	ASTM A276 316	ASTM A276 316	From solid bar, no welding, maximum hardness 22Rc/235HB
Seat + Seat Faces	ASTM A105/HF	ASTM A105/HF	ASTM A352 LF2/HF	Base material and heat affected zone hardnesses are controlled to 22Rc/235HB maximum
Bonnet Bolts	ASTM A193 B7M	ASTM A193 B7M	ASTM A320 L7M	Materials are suitable for direct exposure to H ₂ S
Bonnet Nuts	ASTM A194 2HM	ASTM A194 2HM	ASTM A194 7M	Same as above

Note: Other trims available in NACE.

Welding

Welding and weld repair operations are conducted in accordance with applicable ASTM material specifications and NACE MR0175/MR0103 using procedures and personnel qualified to ASME Section IX.

Material Test Reports

Material test reports for DSI cast steel valves are available upon request. Material test reports meet the requirements of EN10204-1991 3.1b/EN100204-2004 3.1

General Design Specifications

DSI cast steel valves are manufactured in strict accordance with the following standards:

American Standard	British Standard	Item Description
API 600	BS1414 (Gate Valve)	Shell wall thickness and general valve design specifications
API 623	BS1873 (Globe Valve)	
API 594	BS1868 (Check Valve)	
ASME B16.34	BS1560	Pressure temperature ratings
ASME B16.10	BS2080	Face-to-face dimensions, End-to-end dimensions
ASME B16.5*	BS1560	End flange dimensions, Gasket contact facing
ASME B16.25	BS1414 (Gate Valve) BS1873 (Globe Valve) BS1868 (Check Valve)	Welding end dimensions
ASME B31.1 ASME B31.3		ASME Code for pressure piping, B31.1 power piping ASME Code for pressure piping, B31.3 process piping

*Valves 26" and larger according to ASME B16.47 Series A (MSS SP-44) and Series B (API 605). **HF denotes Stellite® 6 or equivalent.

Note: All information is subject to change without notice.

FIGURE NUMBERS, PRESSURE CLASSES AND TRIM MATERIALS

Specifying DSI API 600 Cast Carbon Steel Valve Figure Numbers

Carbon Steel Example: 10" GR66-LUF-N-LCC This number represents a 10" Class 600 Gate Valve with RTJ Flanged Ends operated by a Bevel Gear Operator, API Trim No. 12 with Flex Wedge, meeting NACE MR0175/MR0103 Requirements, and utilizing ASTM A352 LCC Body Material, and Grafoil Packing and Gaskets.

10"	G	R	66	-	LUF*	-	N	-	LCC
Size	Operation	End Connection	Pressure Classes	Trim Material	Special Design	Special Body Material	Packing & Gasket Material		
	G Gear Operated B Bare Stem	No Denotation for Raised Face R RTJ Flanged Ends FF Flat Faced Ends	See Chart Below, Left	See Chart Below, Right for API Trim Number F* designates Flex Wedge for Gates	N NACE MR0175/ MR0103	No Symbol Required for ASTM A216 WCB LCC ASTM A352 LCC C5 ASTM A217 C5 C12 ASTM A217 C12 WC6 ASTM A217 WC6	No Denotation for Grafoil Packing & Gaskets T PTFE Packing & Gaskets		

Pressure Classes

Valve Type	Class	Flanged End	Welding End
Gate	150	37	37 ¹ / ₂
	300	23	23 ¹ / ₂
	600	66	66 ¹ / ₂
	900	73	73 ¹ / ₂
	1500	77	77 ¹ / ₂
	2500	87	87 ¹ / ₂
Globe	150	133	133 ¹ / ₂
	300	141	141 ¹ / ₂
	600	161	161 ¹ / ₂
	900	173	173 ¹ / ₂
	1500	179	179 ¹ / ₂
	2500	185	185 ¹ / ₂
Swing Check	150	137	137 ¹ / ₂
	300	149	149 ¹ / ₂
	600	165	165 ¹ / ₂
	900	177	177 ¹ / ₂
	1500	189	189 ¹ / ₂
	2500	199	199 ¹ / ₂

API Trim Materials

Symbol	API Trim Number	Seating** Disc/Seat	Stem/Backseat
U	5	HF/HF	13Cr
XU	8	13Cr/HF	13Cr
AU	11	Monel®/HF	Monel®
LU	12	316/HF	316
L	10	316/316	316
LUU	16	HF/HF	316
A	9	Monel®/Monel®	Monel®

**HF denotes Stellite 6 or equivalent.



DSI Cast Steel Valves meet all essential safety requirements of the Pressures Equipment Directive 2014/68/EU and may be freely marketed in the European Economic Area. DSI products may be used in applications requiring up to category II product.

Note: All information is subject to change without notice.

FIGURE NUMBERS, PRESSURE CLASSES AND TRIM MATERIALS

Specifying DSI API 600/603 Cast Stainless Steel Valve Figure Numbers

Stainless Steel Example: 16" G66R-16-16HFS-H This number represents a 16" Class 600 Gate Valve with RTJ Flanged Ends, operated by a Bevel Gear Operator, API Trim No. 12, API 600 Design, utilizing CF8M Stainless Steel Body Material, and Grafoil Packing and Gaskets.

16"	G	66	R	-	16	-	16	HFS	-	H	
Size	Operation	Pressure Classes	End Connection		Body Material		Trim Material	Hardfaced** Option		Special	Size
16"	No Denotation for Manual Operation G Gear Operated	See Chart Below, Left	No Denotation for Raised Face Flanged End R RTJ Flanged Ends FF Flat Faced Ends		04 A351 CF8		04 304 SS	HFS Half HF Trim		No Denotation for Grafoil Packing & Gaskets T PTFE Packing & Gaskets EB Cryogenic Stem Extension	No Denotation for API 603 Design H API 600 Design
					04L A351 CF3		04L 304 LSS	U Full HF Trim			
					16 A351 CF8M		16 316 SS				
					16L A351 CF3M		16L 316L SS				
					17 A351 CG8M		17 317 SS				
					17L A351 CG3M		17L 317L SS				
					47 A351 CF8C		21 321 SS				
					A20 A351 CN7M		47 347 SS				
							A20 Alloy 20				

Pressure Classes

Valve Type	Class	Flanged End	Welding End
Gate	150	37	37 ¹ / ₂
	300	23	23 ¹ / ₂
	600	66	66 ¹ / ₂
	900	73	73 ¹ / ₂
	1500	77	77 ¹ / ₂
	2500	87	87 ¹ / ₂
Globe	150	133	133 ¹ / ₂
	300	141	141 ¹ / ₂
	600	161	161 ¹ / ₂
	900	173	173 ¹ / ₂
	1500	179	179 ¹ / ₂
	2500	185	185 ¹ / ₂
Swing Check	150	137	137 ¹ / ₂
	300	149	149 ¹ / ₂
	600	165	165 ¹ / ₂
	900	177	177 ¹ / ₂
	1500	189	189 ¹ / ₂
	2500	199	199 ¹ / ₂

API Trim Materials

Symbol	API Trim Number	Seating** Disc/Seat	Stem/Backseat
04	2	304/304	304
16	10	316/316	316
16 HFS	12	316/HF	316
A20	13	Alloy 20/Alloy 20	Alloy 20
A20 HFS	14	Alloy 20/HF	Alloy 20
04 U	15	HF/HF	304
16 U	16	HF/HF	316
47 U	17	HF/HF	347
A20 U	18	HF/HF	Alloy 20

**HF denotes Stellite 6 or equivalent.

Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

Class 150, 300, 600, 900 & 1500



Parts & Materials

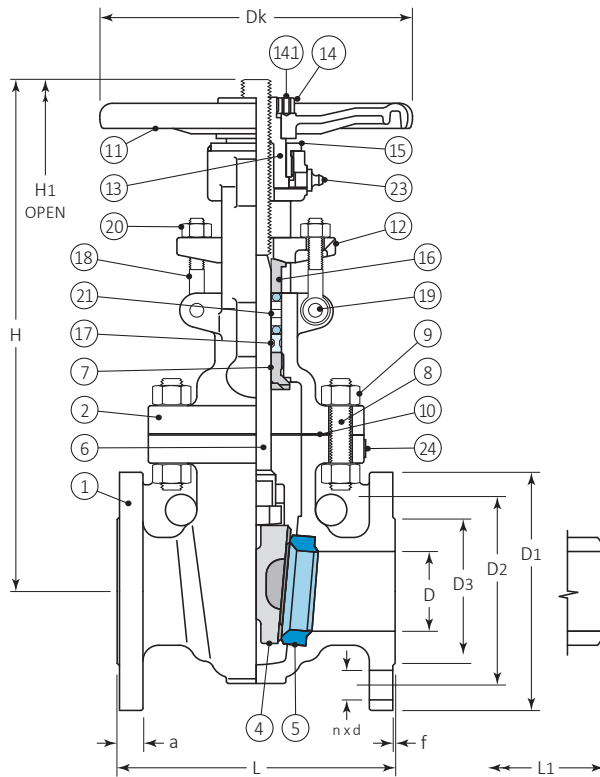
Item	Part Name	WCB (XU)	LCC (LU-N)	C5 (U)	C12 (U)	WC6 (U)	CF8M
1	Body	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
2	Bonnet	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
4	Flex Wedge	A216 WCB /13Cr	A352 LCC /316 SS	A217 C5 /HF	A217 CA15 /HF	A217 CA15 /HF	A351 CF8M
5	Seat Rings*	A105 /HF**	A350 LF2 /HF	A182 F5 /HF	A182 F9 /HF	A182 F11 /HF	A240 316 /HF
6	Stem	AISI 410	AISI 316	A479 410	A479 410	A479 410	A276 316
7	Backseat	AISI 410	AISI 316	A479 410	A479 410	A479 410	A276 316
8	Bonnet Studs	A193 B7	A320 L7M	A193 B16	A193 B16	A193 B16	A193 B8 Class 2
9	Bonnet Nut	A193 2H	A194 7M	A194 4	A194 4	A194 4	A194 8M
10	Gasket Class 150	316 SS /Graphite GHE					Graphite Jacketed
	Gasket Class 300	Spiral Wound Metal Graphite					
	Gasket Class 600 & Above	Ring Type Joint					
11	Handwheel	Carbon Steel /Ductile Iron					
12	Gland Flange	A216 WCB /A105 or A283D					AISI 304
13	Yoke Sleeve/ Stem Nut	A439 D2					
14	Handwheel Nut	Steel					AISI 304
14.1	Set Screw	Steel					
15	Yoke Cap/ Sleeve Gland	Steel					
16	Gland	A276 410	A276 316	A479 410	A479 410	A479 410	A276 316
17	Spacer	A276 410	A276 316	A479 410	A479 410	A479 410	A276 316
18	Eyebolts	A193 B7	A193 B7M	A193 B7	A193 B7	A193 B7	A193 B8
19	Eyebolt Pins	A36	A36	Steel	Steel	Steel	AISI 304
20	Eyebolt Nuts	A194 2H	A194 2HM	A194 2H	A194 2H	A193 2H	A194 8
21	Packing	Graphite Stack					
22	Yoke	A216 WCB					A351 CF8
23	Grease Fitting	Steel					
24	Nameplate	AISI 304					
25	Bearing	Commercial					
26	Yoke Studs	A193 B7					A193 B8
27	Yoke Nuts	A194 2H					A194 8

*Welded Seat Rings. **HF denotes Stellite 6 or equivalent. "()" indicates standard trim as listed on page 6. Contact your DSI salesperson for more information.

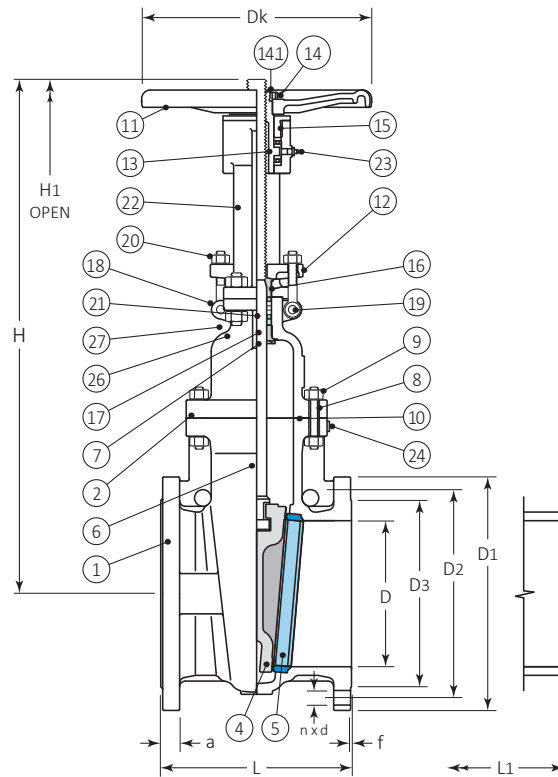
Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

37-37½ • Class 150



WCB, LCC: NPS 2"-8"
Chrome Alloy: NPS 2"-12"



WCB, LCC: NPS 10" & Larger
Chrome Alloy: NPS 14" & Larger

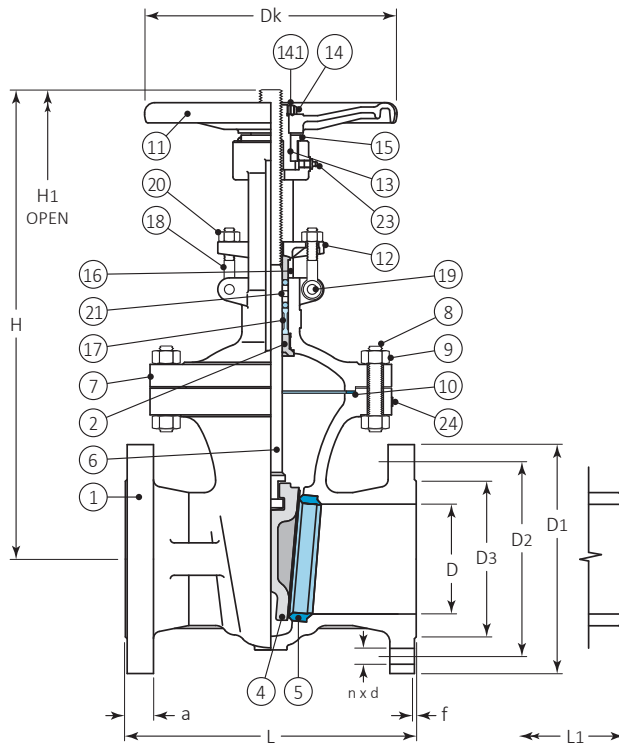
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L ₁	H	H ₁ (Open)	Dk	Wt. Lbs.	C _v
	D	D ₁	Bolt Hole			D ₃	a	f							
			D ₂	n	d										
2	2.00	6.00	4.75	4	0.75	3.62	0.63	0.06	7.00	8.50	11.97	14.45	7.87	48.4	298.7
2½	2.50	7.00	5.50	4	0.75	4.12	0.69	0.06	7.50	9.50	14.57	17.52	7.87	57.2	466.7
3	3.00	7.50	6.00	4	0.75	5.00	0.75	0.06	8.00	11.12	14.33	17.72	9.84	77.0	694.1
4	4.00	9.00	7.50	8	0.75	6.19	0.94	0.06	9.00	12.00	17.01	21.42	11.81	114.4	1234.0
6	6.00	11.00	9.50	8	0.87	8.50	1.00	0.06	10.50	15.88	23.27	29.76	11.81	198.0	2873.9
8	8.00	13.50	11.75	8	0.87	10.62	1.13	0.06	11.50	16.50	29.29	37.88	13.78	288.2	5109.1
10	10.00	16.00	14.25	12	1.00	12.75	1.22	0.06	13.00	18.00	35.27	45.98	15.75	440.0	8622.6
12	12.00	19.00	17.00	12	1.00	15.00	1.25	0.06	14.00	19.75	41.93	54.84	17.70	678.7	12416.5
14	13.25	21.00	18.75	12	1.13	16.25	1.38	0.06	15.00	22.50	46.61	61.02	19.70	895.4	17651.7
16	15.25	23.50	21.25	16	1.13	18.50	1.44	0.06	16.00	24.00	53.86	70.79	23.60	1245.2	23055.3
18	17.25	25.00	22.75	16	1.25	21.00	1.56	0.06	17.00	26.00	60.47	79.21	23.60	1595.0	30603.6
20	19.25	27.50	25.00	20	1.25	23.00	1.69	0.06	18.00	28.00	66.29	86.85	26.80	2059.2	37782.2
24	23.25	32.00	29.50	20	1.38	27.25	1.88	0.06	20.00	32.00	78.62	103.15	29.50	3020.6	57349.4
30(A)	29.00	38.75	36.00	28	1.38	33.75	2.95	0.06	24.00	36.00	93.43	—	—	4391.2	95044.0
30(B)	29.00	34.94	33.31	44	0.87	32.00	1.77	0.06	24.00	36.00	—	—	—	4083.2	95044.0
36(A)	34.50	46.00	42.75	32	1.61	40.25	3.58	0.06	28.00	40.00	111.61	—	—	6956.4	146313.1
36(B)	34.50	41.62	39.75	44	0.98	38.25	2.09	0.06	28.00	40.00	—	—	—	6410.8	146313.1

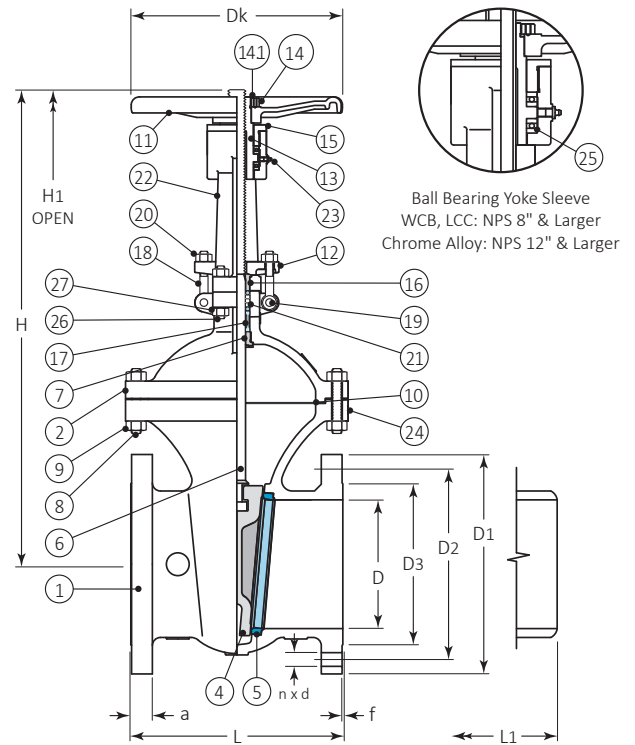
Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

23-23½ • Class 300



WCB, LCC: NPS 2"-10"
Chrome Alloy: NPS 2"-10"



WCB, LCC: NPS 12" & Larger
Chrome Alloy: NPS 12" & Larger

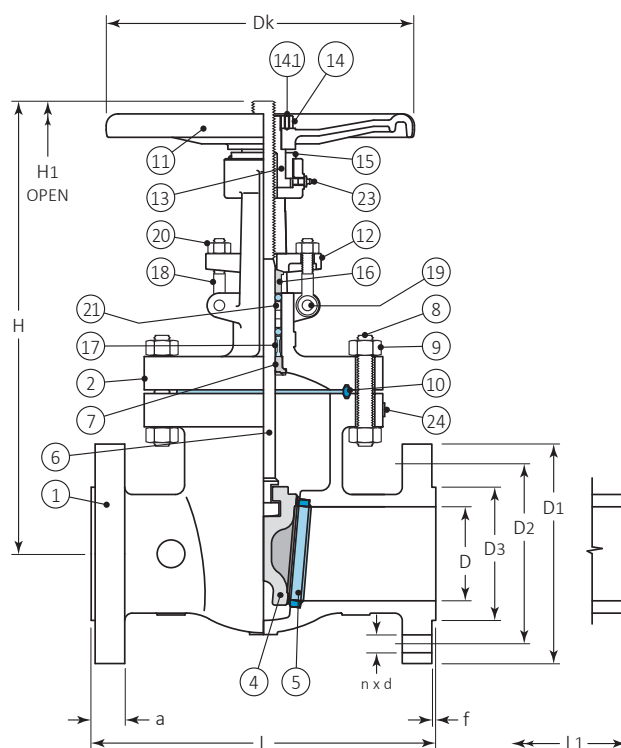
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f							
			D2	n	d										
2	2.00	6.50	5.00	8	0.75	3.62	0.88	0.06	8.50	8.50	11.97	14.45	7.87	66.0	289.8
2½	2.50	7.50	5.88	8	0.87	4.13	1.00	0.06	9.50	9.50	16.89	20.08	7.90	83.6	452.8
3	3.00	8.25	6.62	8	0.87	5.00	1.12	0.06	11.12	11.12	14.33	17.76	9.84	114.4	672.1
4	4.00	10.00	7.88	8	0.87	6.18	1.26	0.06	12.00	12.00	17.01	21.42	11.81	176.0	1194.8
6	6.00	12.50	10.62	12	0.87	8.50	1.44	0.06	15.88	15.88	23.50	30.00	13.80	321.2	2776.4
8	8.00	15.00	13.00	12	1.00	10.63	1.62	0.06	16.50	16.50	31.18	39.76	15.70	484.0	4935.8
10	10.00	17.50	15.25	16	1.13	12.75	1.89	0.06	18.00	18.00	37.56	48.50	17.70	739.2	7982.9
12	12.00	20.50	17.75	16	1.25	15.00	2.00	0.06	19.75	19.75	44.41	57.60	19.70	1073.6	11929.4
14	13.25	23.00	20.25	20	1.25	16.25	2.13	0.06	30.00	30.00	50.39	65.00	23.60	1614.8	15646.6
16	15.25	25.50	22.50	20	1.38	18.50	2.25	0.06	33.00	33.00	55.51	72.40	26.80	2237.4	21207.8
18	17.00	28.00	24.75	24	1.38	21.00	2.40	0.06	36.00	36.00	61.00	80.70	29.50	2807.2	26841.1
20	19.00	30.50	27.00	24	1.38	23.00	2.52	0.06	39.00	39.00	68.27	89.70	33.90	3537.6	34490.3
24	23.00	36.00	32.00	24	1.61	27.25	2.75	0.06	45.00	45.00	79.69	106.89	35.43	5535.2	51874.4
30(A)	29.00	43.00	39.25	28	1.89	33.75	3.62	0.06	55.00	55.00	101.50	—	—	9535.0	85010.0
30(B)	29.00	39.00	36.25	36	1.50	33.25	3.70	0.06	55.00	55.00	—	—	—	9006.0	85010.0
36(A)	34.50	50.00	46.00	32	2.12	40.25	4.13	0.06	68.00	68.00	115.75	—	—	13029.0	—
36(B)	34.50	46.10	42.88	32	1.73	39.75	4.09	0.06	68.00	68.00	—	—	—	12346.0	—

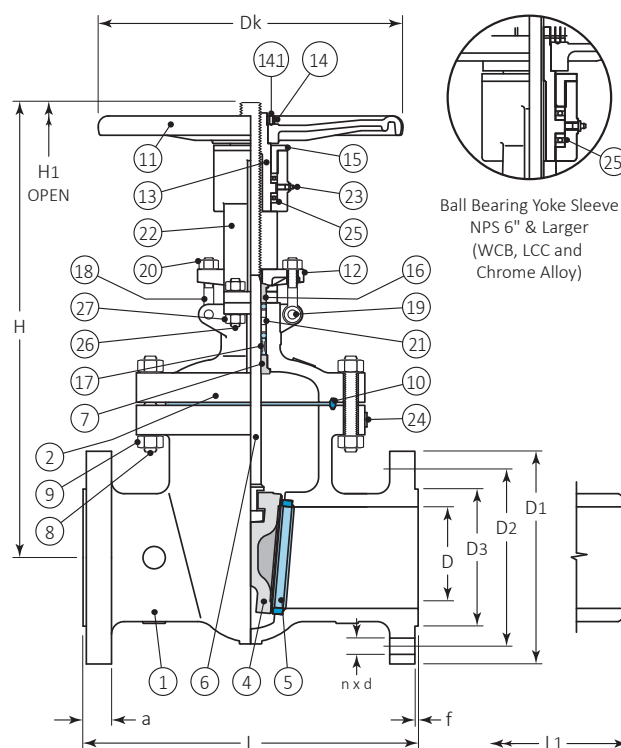
Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

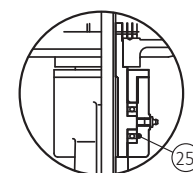
66-66½ • Class 600



WCB, LCC: NPS 2"-6"
Chrome Alloy: NPS 2"-8"



WCB, LCC: NPS 8" & Larger
Chrome Alloy: NPS 10" & Larger



Ball Bearing Yoke Sleeve
NPS 6" & Larger
(WCB, LCC and
Chrome Alloy)

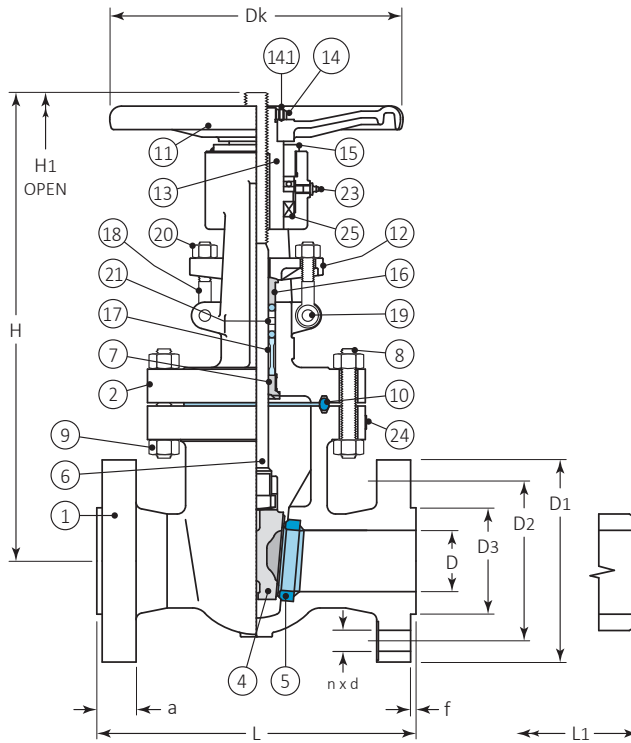
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange						a	f	L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole		D2	D3									
			n	d											
2	2.00	6.50	8	0.75	5.00	3.62	1.02	0.25	11.50	11.50	15.75	18.19	9.80	92.4	260.7
2½	2.50	7.50	8	0.87	5.88	4.13	1.14	0.25	13.00	13.00	17.32	20.00	9.80	119.0	407.4
3	3.00	8.25	8	0.87	6.62	5.00	1.26	0.25	14.00	14.00	18.54	22.01	11.80	156.2	586.6
4	4.00	10.75	8	0.98	8.50	6.18	1.54	0.25	17.00	17.00	22.52	27.13	13.80	301.4	1068.6
6	6.00	14.00	12	1.10	11.50	8.50	1.89	0.25	22.00	22.00	29.57	37.17	19.70	609.4	2404.4
8	7.87	16.50	12	1.26	13.75	10.63	2.20	0.25	26.00	26.00	35.04	43.94	23.60	979.0	4385.6
10	9.75	20.00	16	1.38	17.00	12.75	2.52	0.25	31.00	31.00	39.92	50.59	26.80	1500.4	7244.4
12	11.73	22.00	20	1.38	19.25	15.00	2.64	0.25	33.00	33.00	45.83	58.46	26.80	1973.4	10753.0
14	12.87	23.75	20	1.50	20.75	16.25	2.76	0.25	35.00	35.00	54.02	66.42	29.90	2647.2	15116.0
16	14.75	27.00	20	1.61	23.75	18.50	3.03	0.25	39.00	39.00	59.45	76.81	31.50	3636.6	20436.3
18	16.50	29.25	20	1.73	25.75	21.00	3.25	0.25	43.00	43.00	67.32	94.00	33.90	5361.4	26841.1
20	18.25	32.00	24	1.73	28.50	23.00	3.50	0.25	47.00	47.00	71.18	—	—	7062.0	34490.3
24	22.00	37.00	24	2.00	33.00	27.25	4.02	0.25	55.00	55.00	81.10	—	—	10278.4	51874.4

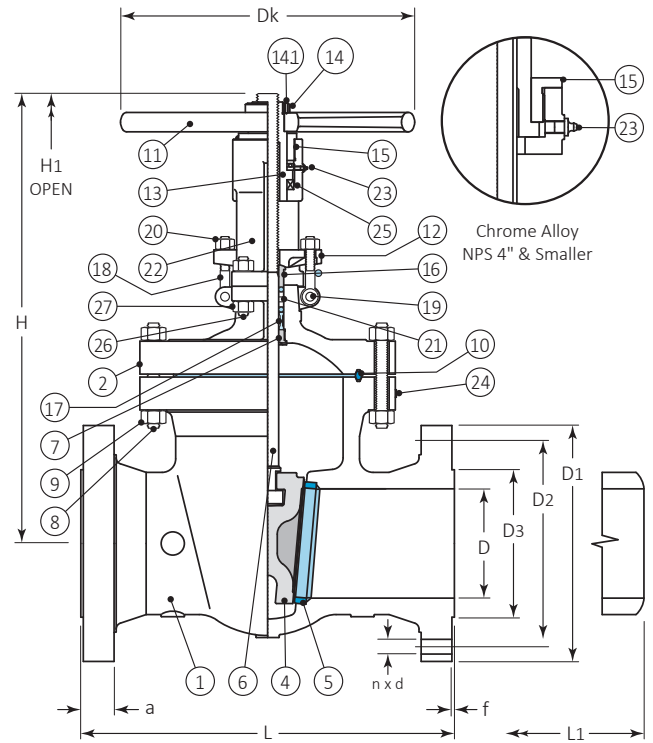
Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

73-73½ • Class 900



WCB, LCC: NPS 3"-4"
Chrome Alloy: NPS 3"-8"



WCB, LCC: NPS 6" & Larger
Chrome Alloy: NPS 10" & Larger

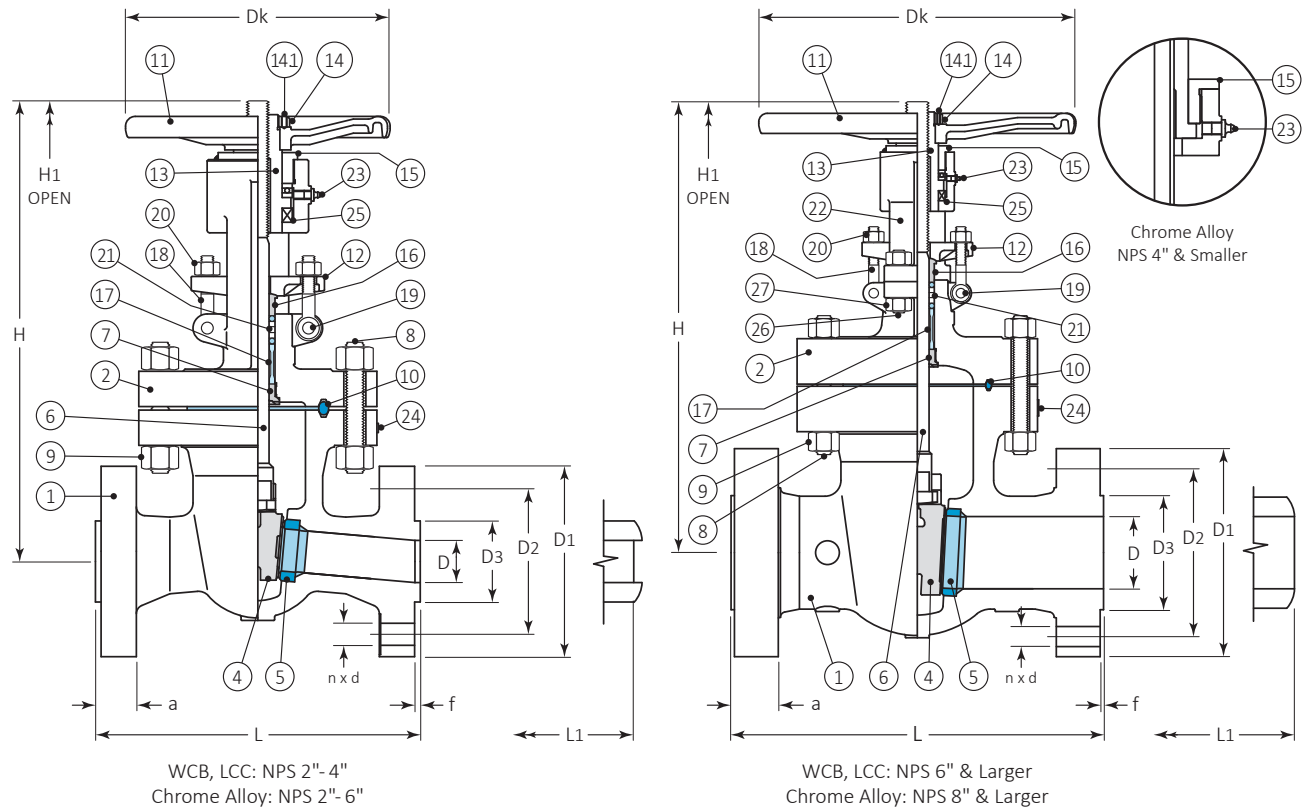
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	D	D1	End Flange			D3	a	f	L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
			Bolt Hole	D2	n x d										
3	2.87	9.50	8	7.50	8	5.00	1.54	0.25	15.00	15.00	22.05	26.46	14.00	279.4	560.5
4	3.86	11.50	8	9.25	8	6.18	1.77	0.25	18.00	18.00	24.80	30.79	15.70	468.6	1018.9
6	5.75	15.00	12	12.50	12	8.50	2.20	0.25	24.00	24.00	30.79	42.36	22.00	924.0	2346.5
8	7.50	18.50	12	15.50	12	10.63	2.52	0.25	29.00	29.00	35.71	50.43	27.90	1430.0	4274.6
10	9.37	21.50	16	18.50	16	12.75	2.75	0.25	33.00	33.00	41.93	62.24	27.90	2604.8	6852.5
12	11.14	24.00	20	21.00	20	15.00	3.12	0.25	38.00	38.00	45.79	70.71	39.40	3260.4	10138.0

Note: All information is subject to change without notice.

DSI CAST STEEL GATE VALVES

77-77½ • Class 1500



Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f							
			D2	n	d										
2	1.88	8.50	6.50	8	0.98	3.62	1.54	0.25	14.50	14.50	20.55	23.82	11.80	224.4	249.1
2½	2.25	9.62	7.50	8	1.00	4.12	1.62	0.25	16.50	16.50	—	26.42	11.80	286.0	396.0
3	2.76	10.50	8.00	8	1.26	5.00	1.89	0.25	18.50	18.50	23.32	33.86	17.70	407.0	537.7
4	3.62	12.25	9.50	8	1.38	6.18	2.13	0.25	21.50	21.50	26.42	31.73	19.70	651.2	975.5
6	5.39	15.50	12.50	12	1.50	8.50	3.27	0.25	27.75	27.75	33.62	41.97	24.80	1337.6	2242.2
8	7.00	19.00	15.50	12	1.73	10.63	3.62	0.25	32.75	32.75	40.24	55.98	27.90	3216.4	4075.6
10	8.78	23.00	19.00	12	2.00	12.75	4.25	0.25	39.00	39.00	50.20	66.26	31.50	4402.2	6518.1
12	10.39	26.50	22.50	16	2.13	15.00	4.88	0.25	44.50	44.50	53.15	78.62	78.60	9229.0	9617.8

Note: All information is subject to change without notice.

DSI CAST STEEL GLOBE VALVES

Class 150, 300, 600, 900 & 1500



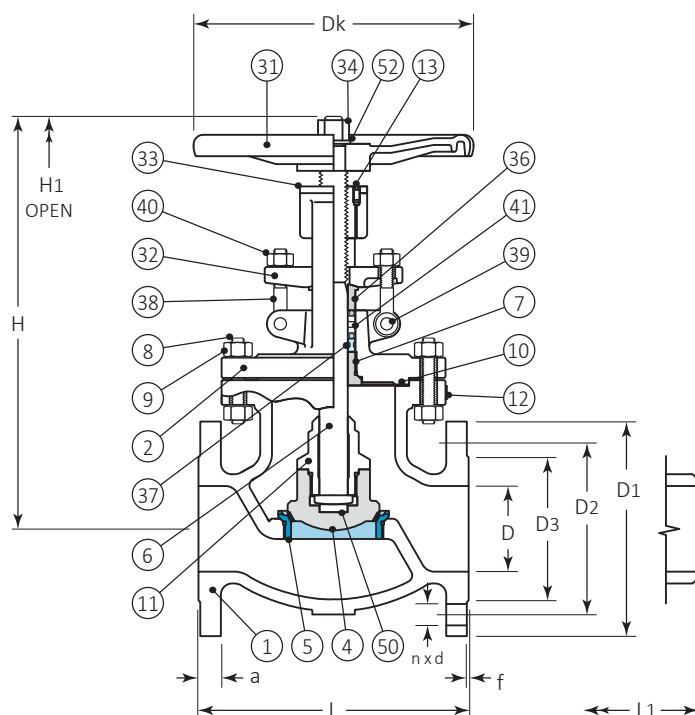
Parts & Materials

Item	Part Name	WCB (XU)	LCC (LU-N)	C5 (U)	C12 (U)	WC6 (U)	CF8M
1	Body	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
2	Bonnet	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
4	Disc Half	A105 /13Cr	A350 LF2 /316	A217 CA15 /HF	A217 CA15 /HF	A217 CA15 /HF	A351 CF8M
5	Seat Ring	A105 /HF*	A350 LF2 / HF	A182 F5 / HF	A182 F9 / HF	A182 F11 / HF	A351 CF8M
6	Stem	AISI 410	AISI 316	A479 410	A479 410	A479 410	A276 316
7	Backseat	AISI 410	AISI 316	A479 410	A479 410	A479 410	A276 316
8	Bonnet Studs	A193 B7	A320 L7M	A193 B16	A193 B16	A193 B16	A193 B8 (Class 2)
9	Bonnet Nuts	A193 2H	A194 7M	A194 4	A194 4	A194 4	A194 8M
10	Gasket Class 150	Spiral Wound Graphite					
	Gasket Class 300						
	Gasket Class 600 & Above	Ring Type Joint					
11	Disc Gland	AISI 410	AISI 316	A217 CA15	A217 CA15	A217 CA15	A351 CF8M
12	Nameplate	AISI 304	AISI 304	A240 T304	A240 T304	A240 T304	A240 T304
13	Set Screw	Steel					
31	Handwheel	Carbon Steel /Ductile Iron					
32	Gland Flange	A216 WCB /A105 or A283D					AISI 304
33	Yoke Sleeve	A439 D2					
34	Handwheel Nut	Steel					AISI 304
36	Gland	A276 410	A276 316	A479 410	A479 410	A479 410	A276 316
37	Spacer	A276 410	A276 316	A479 410	A479 410	A479 410	A276 316
38	Eyebolts	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B8
39	Eyebolt Pins	Steel					AISI 304
40	Eyebolt Nuts	A194 2H		A194 4			A194 8
41	Packing	Graphite Stack					
43	Bearing	Commercial	Commercial	—	—	—	—
44	Grease Fitting	Steel	Steel	—	—	—	—
45	Turning Stopper	Steel	Steel	—	—	—	—
46	Stopper Nut	Steel	Steel	—	—	—	—
47	Taper Pin	Steel	Steel	—	—	—	—
50	Thrust Plate	A681 D3	AISI 410	A479 410	A479 410	A479 410	A276 316
52	Washer	Steel	Steel	Steel	Steel	Steel	AISI 304
53	Cap Bolt	Steel	Steel	—	—	—	—
55	Impact Cap	Steel	Steel	—	—	—	—
56	Impact Bush	A216 WCB					

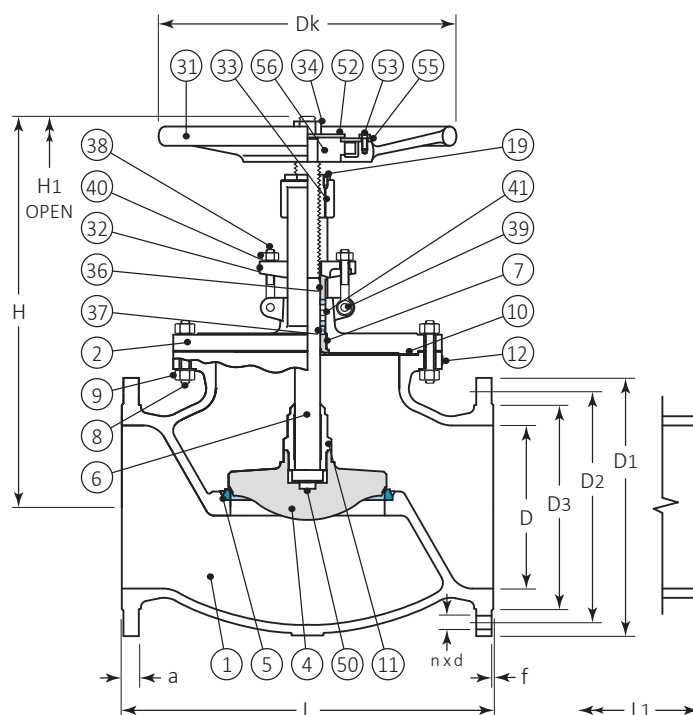
*HF denotes Stellite 6 or equivalent. “()” indicates standard trim as listed on page 6. Contact your DSI salesperson for more information.

DSI CAST STEEL GLOBE VALVES

133-133½ • Class 150



WCB, LCC: NPS 2"-10"
Chrome Alloy: NPS 2"-6"



WCB, LCC: NPS 12"
Chrome Alloy: NPS 8"-12"

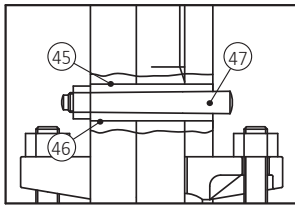
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f							
			D2	n	d										
2	2.00	6.00	4.75	4	0.75	3.62	0.63	0.06	8.00	8.00	12.57	15.31	7.90	51	46.9
2½	2.50	7.00	5.50	4	0.75	4.13	0.71	0.06	8.50	8.50	15.16	15.94	9.80	84	72.2
3	3.00	7.50	6.00	4	0.75	5.00	0.75	0.06	9.50	9.50	13.27	17.05	13.98	139	105.5
4	4.00	9.00	7.50	8	0.75	6.18	0.94	0.06	11.50	11.50	17.20	19.84	15.75	243	166.0
6	6.00	11.00	9.50	8	0.87	8.50	1.00	0.06	16.00	16.00	19.68	23.03	15.75	370	400.0
8	8.00	13.50	11.75	8	0.87	10.63	1.12	0.06	19.50	19.50	21.18	24.21	17.70	615	810.0
10	10.00	16.00	14.25	12	0.98	12.75	1.19	0.06	24.50	24.50	24.65	28.35	23.60	617	1310.5
12	12.00	19.00	17.00	12	0.98	15.00	1.25	0.06	27.50	27.50	28.58	32.68	22.05	833	1900.6

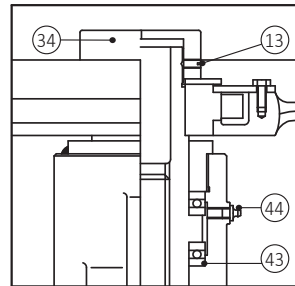
Note: All information is subject to change without notice.

DSI CAST STEEL GLOBE VALVES

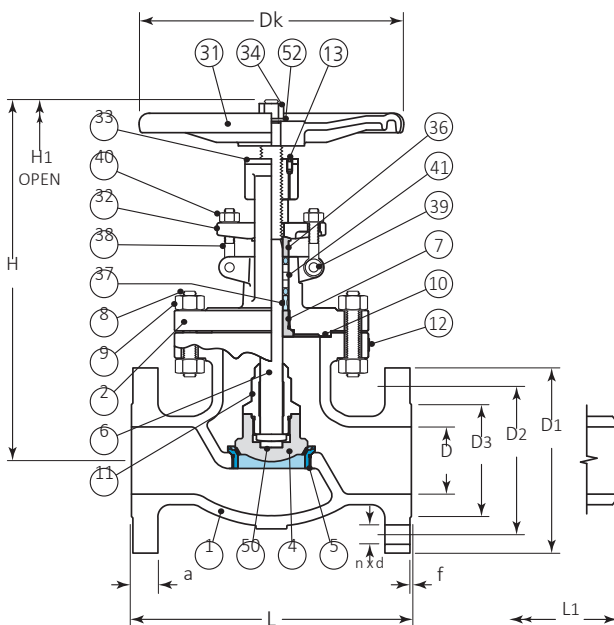
141-141½ • Class 300



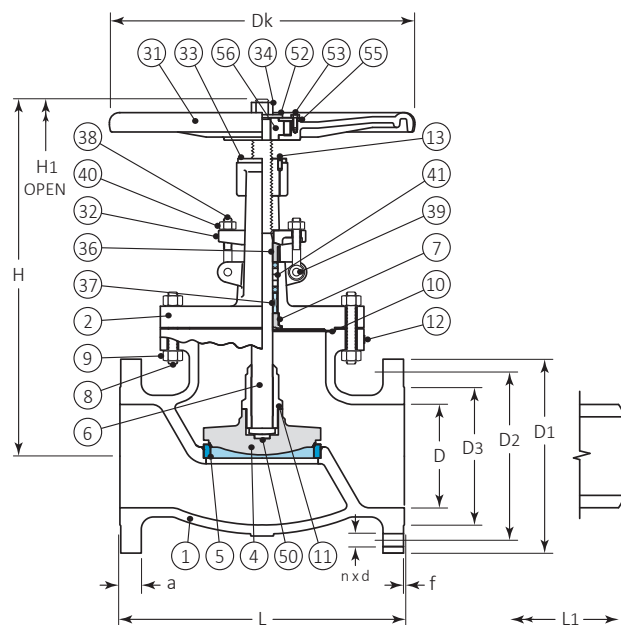
Stopper Detail
WCB, LCC: NPS 10"-12"
Chrome Alloy: NPS 8"-12"



Ball Bearing Yoke Sleeve Detail
WCB, LCC: NPS 10"-12"
Chrome Alloy: NPS 8"-12"



WCB, LCC: NPS 2"-6"
Chrome Alloy: NPS 2"-3"



WCB, LCC: NPS 8" & Larger
Chrome Alloy: NPS 4" & Larger

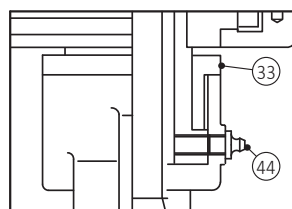
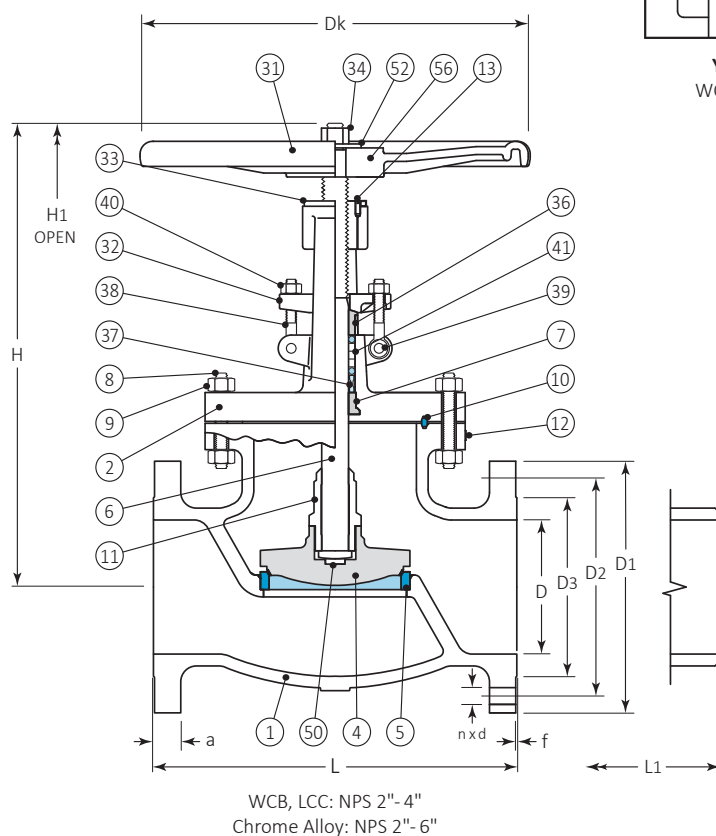
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f							
			D2	n	d										
2	2.00	6.50	5.00	8	0.75	3.62	0.91	0.06	10.50	10.50	13.85	15.28	9.80	66.0	46.5
21/2	2.50	7.50	5.87	8	0.87	4.13	1.02	0.06	11.50	11.50	—	16.73	11.80	83.6	84.5
3	3.00	8.25	6.63	8	0.87	5.00	1.14	0.06	12.50	12.50	16.10	18.27	11.80	110.0	104.7
4	4.00	10.00	7.87	8	0.87	6.18	1.26	0.06	14.00	14.00	18.78	22.24	14.00	167.2	165.0
6	6.00	12.52	10.63	12	0.87	8.50	1.46	0.06	17.50	17.50	22.75	24.30	17.70	324.0	436.7
8	8.00	15.00	13.00	12	0.98	10.63	1.65	0.06	22.00	22.00	26.85	29.40	23.60	602.8	692.9
10	10.00	17.50	15.25	16	1.12	12.75	1.88	0.06	24.50	24.50	34.57	35.94	23.60	981.2	1120.6
12	12.00	20.50	17.75	16	1.26	15.00	2.01	0.06	28.00	28.00	37.91	44.25	27.90	1320.0	1882.4

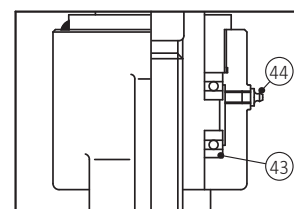
Note: All information is subject to change without notice.

DSI CAST STEEL GLOBE VALVES

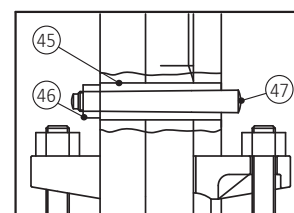
161-161½ • Class 600



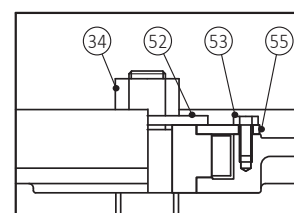
Yoke Sleeve Detail
WCB, LCC: NPS 6" Only



**Yoke Sleeve Detail
with Ball Bearing**
WCB, LCC: NPS 8" Only
Chrome Alloy: NPS 8" Only



Stopper Detail
WCB, LCC: NPS 6" & Larger
Chrome Alloy: NPS 8" & Larger



Hammer Blow Handwheel Detail
WCB, LCC: NPS 6" & Larger
Chrome Alloy: NPS 3" & Larger

Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	H1 (Open)	Dk	Wt. Lbs.	Cv
	D	D1	Bolt Hole		D2	D3	a	f							
			n	d											
2	2.00	6.50	8	0.75	5.00	3.62	1.00	0.25	11.50	11.50	16.33	16.89	14.00	92.40	46.2
2½	2.50	7.50	8	0.87	5.88	4.13	1.14	0.25	13.00	13.00	18.30	20.87	14.00	132.44	73.2
3	3.00	8.25	8	0.87	6.62	5.00	1.25	0.25	14.00	14.00	20.27	22.05	13.80	171.60	103.9
4	4.00	10.75	8	0.98	8.50	6.18	1.50	0.25	17.00	17.00	23.97	25.98	17.70	300.74	189.7
6	6.00	14.00	12	1.10	11.50	8.50	1.88	0.25	22.00	22.00	31.00	32.99	22.05	684.20	394.5
8	7.88	16.50	12	1.25	13.75	10.62	2.19	0.25	26.00	26.00	35.25	50.43	24.80	951.50	795.8

Contact your DSI salesperson for Class 900 and 1500 Dimensional Data.

Note: All information is subject to change without notice.

DSI CAST STEEL SWING CHECK VALVES

Class 150, 300, 600, 900 & 1500



Class 150



Class 300



Class 600, 900 & 1500

Parts & Materials

Item	Part Name	WCB (XU)	LCC (LU-N)	C5 (U)	C12 (U)	WC6 (U)	CF8M
1	Body	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
2	Cover	A216 WCB	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
3	Disc	A216 WCB / 13Cr	A352 LCC / LF2 316SS Overlay	A217 CA15 / HF	A217 CA15 / HF	A217 CA15 / HF	A351 CF8M
4	Arm	A216 WCB	A352 LCC	A217 CA15	A217 CA15	A217 CA15	A217 CA15
5	Seat Ring	A105 / HF*	A350 LF2 / HF	A182 F5 / HF	A182 F9 / HF	A182 F11 / HF	A240 316 / HF
6	Hinge Pin	A276 410	A276 316	A479 410	A479 410	A479 410	A276 316
8	Disc Nut	Steel	Steel	AISI 304	AISI 304	AISI 304	AISI 304
10	Gasket Class 150	Spiral Wound Graphite					
	Gasket Class 300						
	Gasket Class 600 & Above	Ring Type Joint					
11	Bonnet Studs	A193 B7	A320 L7M	A193 B16	A193 B16	A193 B16	A193 B8 Class 2
12	Bonnet Nuts	A194 2H	A194 7M	A194 4	A194 4	A194 4	A194 8M
14	Split Pin	Steel	AISI 304	AISI 304	AISI 304	AISI 304	AISI 304
17	Nameplate	AISI 304	AISI 304	A240 T304	A240 T304	A240 T304	A240 T304
18	Disc Washer	Steel	Steel	—	—	—	—
19	Link	A216 WCB	A352 LCC	A217 CA15	A217 CA15	A217 CA15	A217 CA15
20	Link Washer	Steel	Steel	—	—	—	—
21	Spring Washer	Steel	Steel	AISI 304	AISI 304	AISI 304	AISI 304
22	Link Bolt	Steel	Steel	A193 B8	A193 B8	A193 B8	A193 B8
23	Eye Bolt	Steel	Steel	A105	A105	A105	A105
24	Plug Gasket	Spiral Wound Graphite					
25	Plug	A105	A350 LF2	A276 304	A276 304	A276 304	A276 304
28	Side Cover	Steel	A352 LCC	A217 C5	A217 C12	A217 WC6	A351 CF8M
29	Cover Bolt	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B8
31	Cover Gasket	Spiral Wound Graphite					

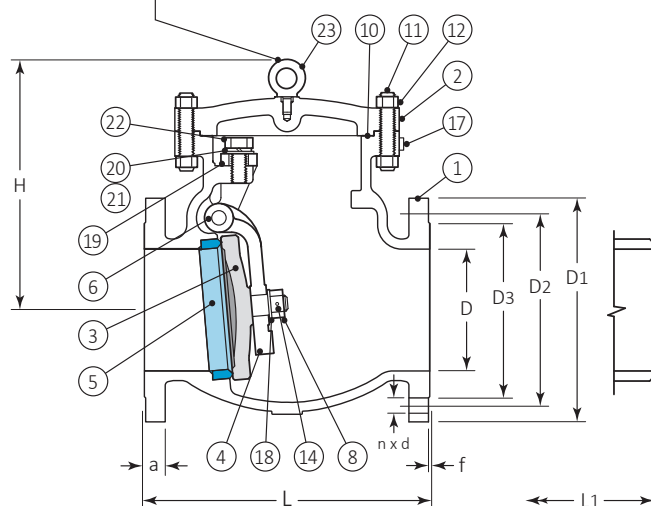
*HF denotes Stellite 6 or equivalent. “()” indicates standard trim as listed on page 6. Contact your DSI salesperson for more information.

Note: All information is subject to change without notice.

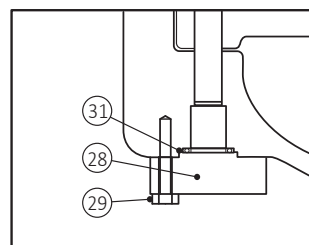
DSI CAST STEEL SWING CHECK VALVES

137-137 ½ • Class 150

WCB, LCC: NPS 6" & Larger
Chrome Alloy: NPS 4" & Larger

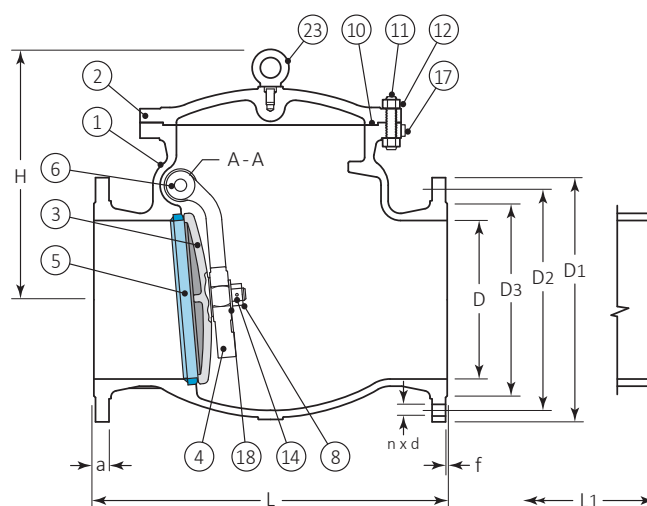


WCB, LCC: NPS 2" - 14"
Chrome Alloy: NPS 2" - 12"



Side Cover Detail

Chrome Alloy: NPS 20" & Larger



WCB, LCC: NPS 16" & Larger
Chrome Alloy: NPS 14" & Larger

Dimensional Data (in.) & Flow Coefficient (Cv)

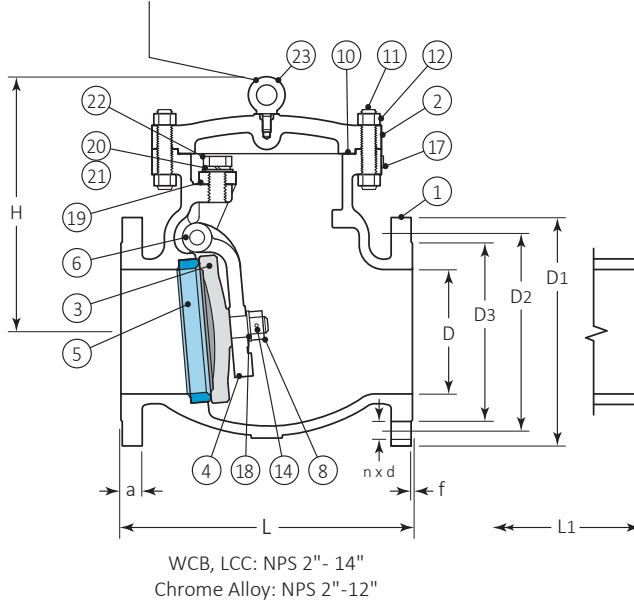
Size (in.)	End Flange								L	L1	H	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f					
			D2	n	d								
2	2.00	6.00	4.75	4	0.75	3.62	0.63	0.06	8.00	8.00	6.14	44.0	218.1
2½	2.50	7.00	5.50	4	0.75	4.12	0.69	0.06	8.50	8.50	6.42	50.6	—
3	3.00	7.50	6.00	4	0.75	5.00	0.75	0.06	9.50	9.50	7.30	77.0	499.2
4	4.00	9.00	7.50	8	0.75	6.18	0.94	0.06	11.50	11.50	8.66	110.0	903.2
6	6.00	11.00	9.50	8	0.87	8.50	1.02	0.06	14.00	14.00	12.40	189.2	2032.1
8	8.00	13.50	11.75	8	0.87	10.63	1.14	0.06	19.50	19.50	14.30	343.2	3679.0
10	10.00	16.00	14.25	12	0.98	12.75	1.22	0.06	24.50	24.50	17.50	528.0	5857.9
12	12.00	19.00	17.00	12	0.98	15.00	1.26	0.06	27.50	27.50	20.20	792.0	8435.4
14	13.25	21.00	18.75	12	1.10	16.25	1.38	0.06	31.00	31.00	22.70	1060.0	11708.8
16	15.25	23.50	21.25	16	1.10	18.50	1.46	0.06	34.00	34.00	24.72	1454.2	15293.2
18	17.25	25.00	22.75	16	1.26	21.00	1.57	0.06	38.50	38.50	30.75	1830.2	19754.5
20	19.25	27.50	25.00	20	1.26	23.00	1.69	0.06	38.50	38.50	29.65	2160.4	24912.9
24	23.25	32.00	29.50	20	1.38	27.25	1.89	0.06	51.00	51.00	38.50	5073.0	36680.8

Note: All information is subject to change without notice.

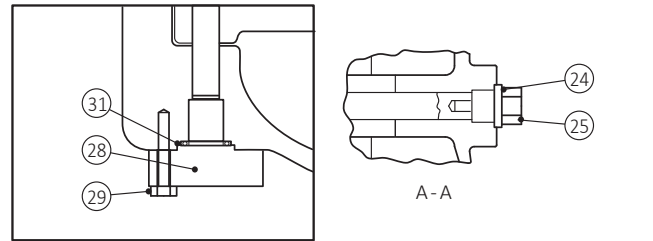
DSI CAST STEEL SWING CHECK VALVES

149-149½ • Class 300

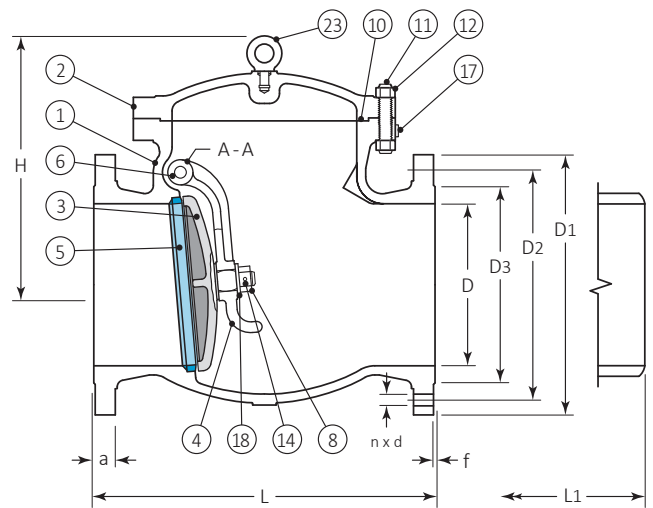
WCB, LCC: NPS 3" & Larger
Chrome Alloy: NPS 4" & Larger



WCB, LCC: NPS 2" - 14"
Chrome Alloy: NPS 2" - 12"



Side Cover Detail
Chrome Alloy: NPS 18" & Larger



WCB, LCC: NPS 16" & Larger
Chrome Alloy: NPS 14" & Larger

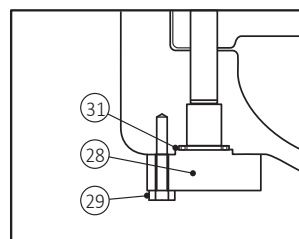
Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f					
			D2	n	d								
2	2.00	6.50	5.00	8	0.75	3.62	0.88	0.06	10.50	10.50	7.10	61.6	211.2
2½	2.50	7.50	5.88	8	0.88	4.12	1.00	0.06	11.50	11.50	8.09	66.0	330.0
3	3.00	8.25	6.62	8	0.88	5.00	1.12	0.06	12.50	12.50	9.00	114.4	482.8
4	4.00	10.00	7.88	8	0.88	6.19	1.25	0.06	14.00	14.00	10.70	160.6	858.4
6	6.00	12.50	10.62	12	0.88	8.50	1.44	0.06	17.50	17.50	13.10	303.6	1963.2
8	8.00	15.00	13.00	12	1.00	10.62	1.62	0.06	21.00	21.00	15.70	440.6	3549.8
10	10.00	17.50	15.25	16	1.12	12.75	1.88	0.06	24.50	24.50	17.12	787.6	5546.6
12	12.00	20.50	17.75	16	1.25	15.00	2.00	0.06	28.00	28.00	20.10	1144.0	8128.5
14	13.25	23.00	20.25	20	1.25	16.25	2.12	0.06	33.00	33.00	23.50	1515.8	11063.8
16	15.25	25.50	22.50	20	1.38	18.50	2.25	0.06	34.00	34.00	25.39	1775.4	14715.9
18	17.00	28.00	24.75	24	1.38	21.00	2.38	0.06	38.50	38.50	29.88	3051.4	18624.8
20	19.00	30.50	27.00	24	1.38	23.00	2.50	0.06	40.00	40.00	33.62	2761.0	23431.5
24	23.00	36.00	32.00	24	1.62	27.25	2.75	0.06	53.00	53.00	37.01	4184.0	33741.4

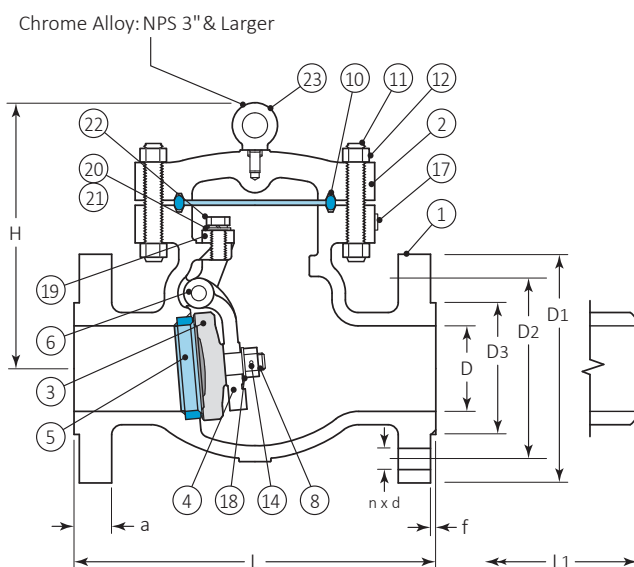
Note: All information is subject to change without notice.

DSI CAST STEEL SWING CHECK VALVES

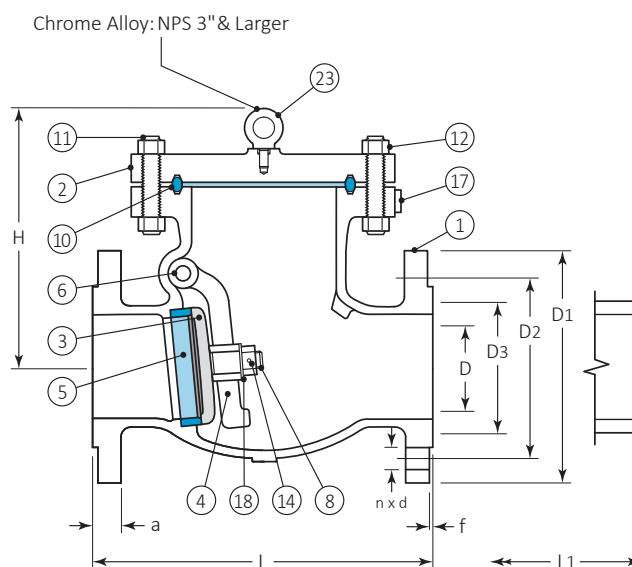
165-165½ • Class 600



Side Cover Detail
Chrome Alloy: NPS 16" Only



WCB, LCC: NPS 2" - 14"



WCB, LCC: NPS 16" Only
Chrome Alloy: NPS 2" & Larger

Dimensional Data (in.) & Flow Coefficient (Cv)

Size (in.)	End Flange								L	L1	H	Wt. Lbs.	Cv
	D	D1	Bolt Hole			D3	a	f					
			D2	n	d								
2	2.00	6.50	5.00	8	0.75	3.62	1.30	0.28	11.50	11.50	9.25	77.0	204.9
2½	2.50	7.50	5.88	8	0.87	4.12	1.37	0.25	13.00	13.00	10.24	94.80	325.0
3	3.00	8.25	6.62	8	0.87	5.00	1.54	0.28	14.00	14.00	10.83	136.4	468.0
4	4.00	10.75	8.50	8	0.98	6.18	1.81	0.28	17.00	17.00	12.60	281.6	844.8
6	6.00	14.00	11.50	12	1.10	8.50	2.17	0.28	22.00	22.00	15.67	558.8	1900.9
8	7.87	16.50	13.75	12	1.26	10.63	2.48	0.28	26.00	26.00	18.50	1047.2	3433.4
10	9.75	20.00	17.00	16	1.38	12.75	2.80	0.28	31.00	31.00	21.81	1630.0	5364.7
12	11.75	22.00	19.25	20	1.38	15.00	2.91	0.28	33.00	33.00	24.21	2081.0	7852.9
14	12.87	23.75	20.75	20	1.50	16.25	3.03	0.28	35.00	35.00	27.01	2730.2	10688.6
16	14.75	27.00	23.75	20	1.61	18.50	3.31	0.28	39.00	39.00	30.12	3841.3	14199.3

Contact your DSI salesperson for Class 900 and 1500 Dimensional Data.

Note: All information is subject to change without notice.

PRESSURE TEMPERATURE RATINGS

DSI Cast Steel Valves • Class 150 & 300

Pressure temperature ratings are based on ASME B16.34 (2020 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 150						Class 300						
°F	°C	WCB (a)	LCC (b)	WC6 (c,d)	C5 (d)	C12 (d)	CF8M (f)	WCB (a)	LCC (b)	WC6 (c,d)	C5 (d)	C12 (d)	CF8M (f)	
-20 to 100	-29 to 38	285	290	290	290	290	275	740	750	750	750	750	720	
200	93	260	260	260	260	260	235	680	750	750	750	750	620	
300	149	230	230	230	230	230	215	655	730	720	730	730	560	
400	204	200	200	200	200	200	195	635	705	695	705	705	515	
500	260	170	170	170	170	170	170	605	665	665	665	665	480	
600	316	140	140	140	140	140	140	570	605	605	605	605	450	
650	343	125	125	125	125	125	125	550	590	590	590	590	440	
700	371	110	—	110	110	110	110	530	—	570	570	570	435	
750	399	95	—	95	95	95	95	505	—	530	530	530	425	
800	427	80	—	80	80	80	80	410	—	510	510	510	420	
850	454	65	—	65	65	65	65	320	—	485	485	485	420	
900	482	50	—	50	50	50	50	230	—	450	375	450	415	
950	510	35	—	35	35	35	35	135	—	320	275	375	385	
1000	538	20	—	20	20	20	20	85	—	215	200	255	365	
1050	566	—	—	20 (e)	20 (e)	20 (e)	20 (e)	—	—	145	145	170	360	
1100	593	—	—	20 (e)	20 (e)	20 (e)	20 (e)	—	—	95	100	115	305	
1150	621	—	—	—	20 (e)	20 (e)	20 (e)	—	—	—	60	75	235	
1200	649	—	—	—	15 (e)	20 (e)	20 (e)	—	—	—	35	50	185	
Hydrostatic Shell Test Pressure		450						425	1125					1100
Valve Closure	Liquid	315	320				305	815	825				795	
Test Pressure	Air	80						80						

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) For welding end valves only. Flanged end ratings terminate at 1000°F.
- (f) At temperatures over 1000°F, use only when the Carbon content is 0.04% or higher.

For years Industry professionals have specified DSI valve products for their most demanding projects, and consistently DSI delivers the highest performance fluid control products available anywhere.

PRESSURE TEMPERATURE RATINGS

DSI Cast Steel Valves • Class 600, 900 & 1500

Pressure temperature ratings are based on ASME B16.34 (2020 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	Class 1500
°F	°C	WCB (a)	LCC (b)	WC6 (c,d)	C5 (d)	C12 (d)	CF8M (f)	WCB (a)	WCB (a)
-20 to 100	-29 to 38	1480	1500	1500	1500	1500	1440	2220	3705
200	93	1360	1500	1500	1500	1500	1240	2035	3395
300	149	1310	1455	1445	1455	1455	1120	1965	3270
400	204	1265	1405	1385	1410	1410	1025	1900	3170
500	260	1205	1330	1330	1330	1330	955	1810	3015
600	316	1135	1210	1210	1210	1210	900	1705	2840
650	343	1100	1175	1175	1175	1175	885	1650	2745
700	371	1060	—	1135	1135	1135	870	1590	2665
750	399	1015	—	1065	1065	1065	855	1520	2535
800	427	825	—	1015	1015	1015	845	1235	2055
850	454	640	—	975	975	975	835	955	1595
900	482	460	—	900	745	900	830	690	1150
950	510	275	—	640	550	755	775	410	685
1000	538	170	—	430	400	505	725	255	430
1050	566	—	—	290	290	345	720	—	—
1100	593	—	—	190	200	225	610	—	—
1150	621	—	—	—	125	150	475	—	—
1200	649	—	—	—	70	105	370	—	—
Hydrostatic Shell Test Pressure		2225	2250				2175	3350	5575
Valve Closure	Liquid	1630	1650				1585	2445	4080
Test Pressure	Air	80					80	80	80

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) For welding end valves only. Flanged end ratings terminate at 1000°F.
- (f) At temperatures over 1000°F, use only when the Carbon content is 0.04% or higher.

OUR CORE VALUES

No One Gets Hurt

The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

Integrity

In everything we do, in every interaction, both internally and externally, we strive to operate with the utmost integrity and mutual respect.

Customer Focused

Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

Good Place To Work

We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.

Forum Energy Technologies



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