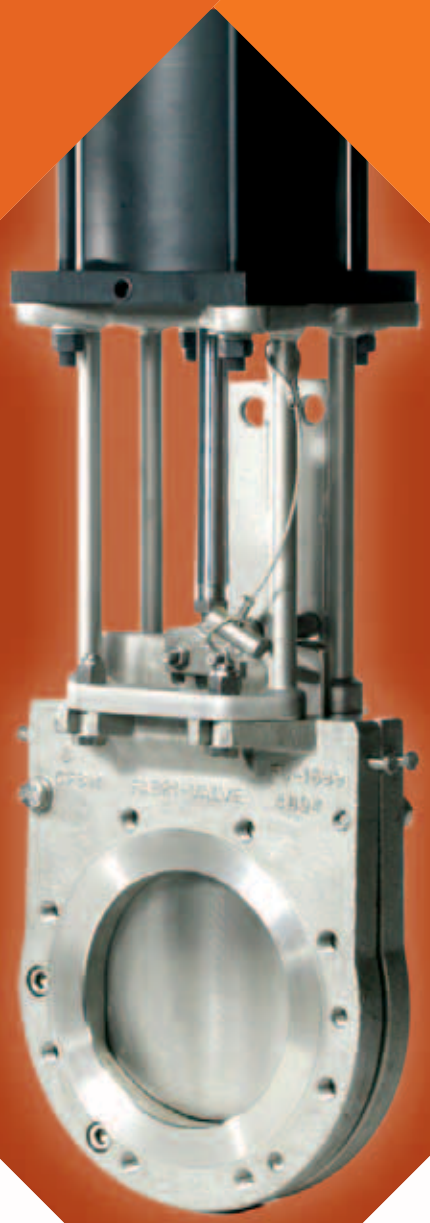
Fabri-Valve®

XS150 High Performance Knife Gate Valve



ITT

ENGINEERED FOR LIFE

XS150

XS150 High Performance Knife Gate Valve

The Fabri-Valve® XS150 High Performance Knife Gate valve features a robust perimeter seal that provides bi-directional bubble tight shutoff. The perimeter seal is double-locked in the valve body to securely retain the perimeter seal in the seal groove even during the most demanding applications. The perimeter seal has shoulders, which mechanically retain (lock) the seal in the seal groove. The tab on the perimeter seal acts as the body joint seal and eliminates the possibility of body joint leakage caused by pipe stresses. The tab also helps retain the perimeter seal in the seal groove (secondary lock). The seal groove is specially designed to prevent seal pull-out but also allows the seal to move and prevent over-compression.

Advantages

True Full-Port:

- Unrestricted straight-through flow design provides high capacity for gas, liquids, and fibrous slurries. The gate guides are not in the flow area; a True Full-Port Design.

Ease of Maintenance:

- Injectable packing allows easy packing adjustments to be made under line pressure without valve disassembly or removal of the valve from the pipeline.[1]
- One-piece perimeter & chest seal design allows for quick & easy maintenance.
- Fewer components.

One-Piece Perimeter & Chest Seal:

- Bi-directional, bubble tight, repeatable shut-off.
- Double-Locked Perimeter Seal.
  1. The perimeter seal has shoulders, which mechanically retain (lock) the seal in the seal groove even during the most demanding applications.
  2. The seal's tab feature acts as the body joint seal but also as a secondary lock preventing seal pullout.
- Shut-off performance is unaffected by differential pressure. Excellent bi-directional shut-off even at very low pressures.
- Chest seal wraps around the entire gate eliminating leakage paths.
- Chest Seal completely encloses injectable packing; therefore, contamination of the process fluid by "loose" packing is eliminated.
- Body protects the perimeter seal from the rigors of the direct process flow.
- Large cross-section provides longer service life.

[1] If the pipeline media is dangerous, lethal, harmful, active, scorching or under high pressure, special precautions must be taken before removing the packing bolts. Consult the XS150 Installation & Maintenance manual for instructions.

Design

- Self-supporting yoke (2" - 12")
- ANSI Class 150 Pressure-Temperature Rating[2, 3, 4]
- Standard MSS-SP81 Face-to-Face.[4]
- Standard valves are suitable for bi-directional dead-end service at the full pressure-temperature rating of the valve.
- Robust Full Face Flange.
- Reliable body joint eliminates the possibility of body joint leakage caused by pipe stresses.
- Options to mate with a variety of ANSI flanges, as well as with DIN flanges and custom bolt patterns.
- Gate Guides guarantee that the gate is properly positioned and supported during operation. The gate guides do not reduce the flow area.
- Open & Closed lock-out is standard
- Non-Rising stem design minimizes space required for installation.[5]
- Dual scraper blades clean gate during operation and protect the seals from abrasives.
- Universal Yoke allows easy conversion from handwheel to cylinder operated and vice versa.
- A taper is added to the body's internal diameter to eliminate the possibility of material collecting at the bottom of the port and preventing proper closure. The taper ensures automatic "clean-out" and "flushing"
- Minimized chest area and close tolerances prevents media packing.
- "Modified TFE" bearing surfaces in chest provide extra gate support.
- Dished handwheel keeps hands away from pinch points while operating.

Available in a Wide Choice of Materials for a Broad Range of Applications

- To meet specific application requirements, a variety of seal materials and body materials are offered. Contact Factory.

[2] Stainless = 275 psi cold working pressure; Carbon Steel = 285 psi cold working pressure
[3] The seal temperature ratings determine the practical temperature limitations.
[4] 2", 3", 4" XS150's have flat face flanges. 6" to 24" XS150's have raised face flanges.
[5] Valves with a bevel gear have a rising stem.

Specifications

Size Range
2" – 24" (DN50 - DN600)
Valve Body Pressure-Temperature Rating
2" – 24" ANSI Class 150 Pressure-Temperature Rating
Consult factory for higher-pressure designs.[2, 3, 4]

The table below is the maximum working pressure ratings of the valve body only. The seal ratings determine the practical limitations in actual service conditions.

Temperature °F (°C)	Body Rating – psi (bar)	
	Carbon Steel	316 SS
-20 to 100 (-29 to 38)	285 (19.7)	275 (19.0)
200 (93)	260 (17.9)	240 (16.5)
300 (149)	230 (15.8)	215 (14.8)
400 (204)	200 (13.8)	195 (13.4)

*Ratings correspond to ASME B16.34-1996

Temperature Rating
Viton® Seat -30°F (-34°C) to 350°F (177°C)
Aflas® Seat 30°F (-1°C) to 400°F (204°C)
EPDM Seat -50°F (-46°C) to 280°F (138°C)

Flange Drilling
ANSI 125/150 Drilling Standard.[4]
Contact factory for alternate flange drilling.

Testing

Every Fabri-Valve XS150 valve is fully tested prior to shipment. Testing includes a body shell test, a seat test and a cycling test to insure proper functioning of moving parts. Additional testing is also available. Please let us know your requirements.

Standard Shell test:
Hydro test at 1.5 times the 100°F (38°C) rating.
• Zero allowable leakage

Standard Resilient Seat test:
Hydro test at 15 psi (1 bar) and rated CWP.
• Zero allowable leakage

Shutoff Performance
Zero leakage. All sizes.

ANSI/FCI 70-2 establishes a series of six leakage classes for control valves and defines the test procedure. Class VI allows the least leakage. XS150's are bubble tight, which exceeds Class VI requirements.

Flow Coefficients

The Cv values below represent U.S. gallons per minute 60°F water through a 100% open valve at a pressure drop of 1 psi. The metric equivalent, Kv, is the flow of water at +16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm2. To convert Cv to Kv, multiply the Cv by 0.8569.

Valve Size	Cv
2	299
3	876
4	2,421
6	6,213
8	10,921
10	16,507
12	26,649
14	29,205
16	41,560
18	51,356
20	61,765
24	83,937

Available Options

- Hardened Gate Material
- Hard Chromed Gate
- Nickel-TFE Coated Gate
- Epoxy Coating
- V-Port
- Alternate Flange Drilling
- Bevel Gear
- Chainwheels
- Cylinder Actuators
- Electric Actuators
- Ratchet
- Extended Stems
- Rod Boots
- Limit Switches
- Positioner
- Solenoids
- Abrasion Resistant Wear Ring

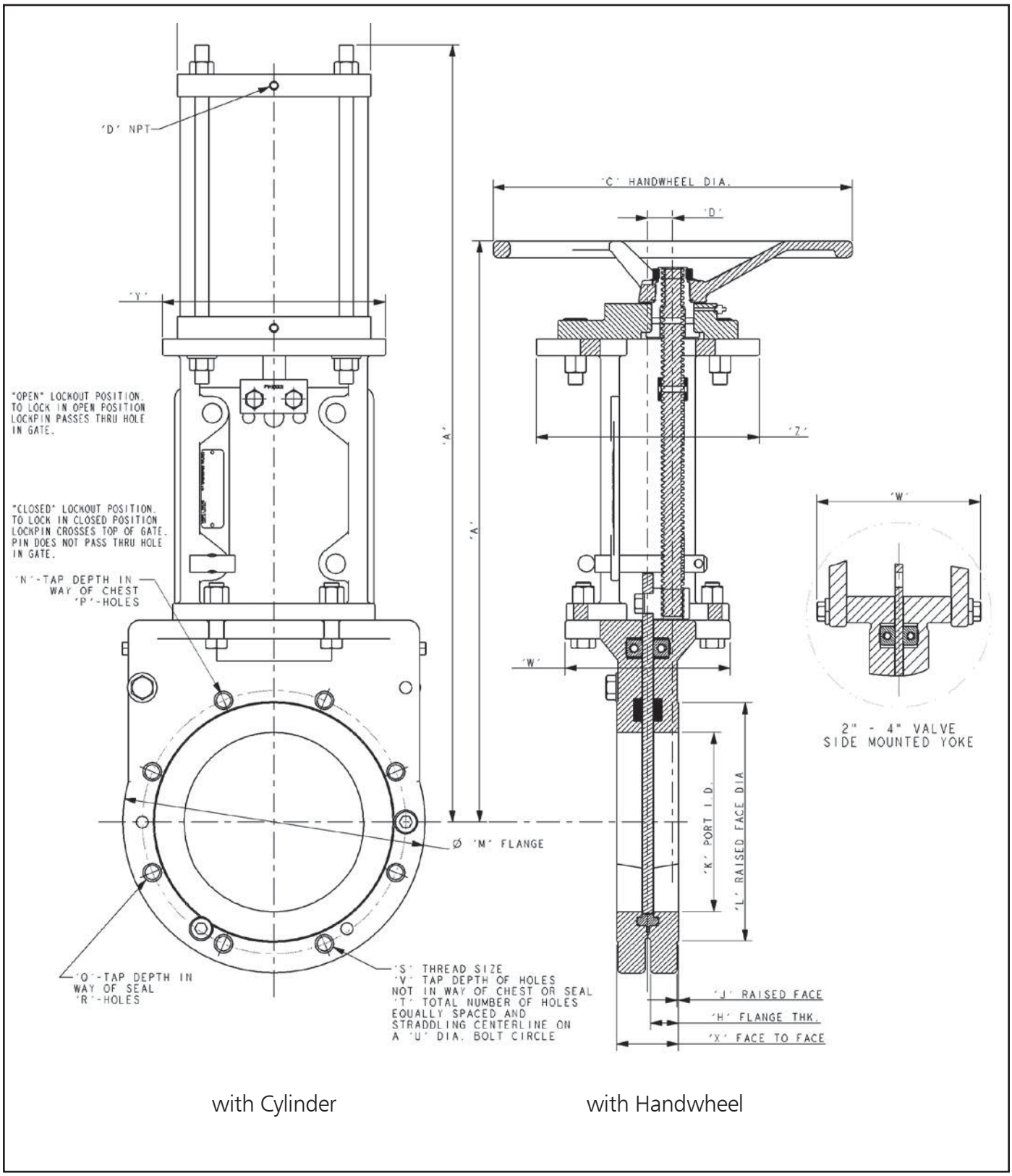
DIMENSIONS INCHES (mm) XS150 W/HANDWHEEL OR CYLINDER

VALVE SIZE		'A'						'C'						'D'						'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	'Z'
IN	DN	HW	4 CYL					HW	4 CYL					HW	4 CYL																					
2	50	13.69	16.81					10.00	4.50					0.38	38-18					0.81	N/A	2.00	N/A	6.00	0.44	2	N/A	N/A	.625-11NC	4	4.75	0.75	5.13	1.88	4.38	4.38
		(348)	(427)					(254)	(114)					(22)						(21)		(51)		(152)	(11)						(121)	(19)	(130)	(48)	(111)	(111)
		HW	5 CYL	6 CYL				HW	5 CYL	6 CYL				HW	5 CYL	6 CYL																				
3	80	15.56	19.75	20.00				10.00	5.50	6.50				0.38	38-18	38-18				0.88	N/A	3.00	N/A	7.50	0.44	2	N/A	N/A	.625-11NC	4	6.00	0.75	5.75	2	6.13	6.13
		(395)	(502)	(506)				(254)	(140)	(165)				(22)						(22)		(76)		(191)	(11)						(152)	(19)	(146)	(51)	(156)	(156)
		HW	5 CYL	6 CYL				HW	5 CYL	6 CYL				HW	5 CYL	6 CYL																				
4	100	17.31	22.50	22.75				10.00	5.50	6.50				0.38	38-18	38-18				0.88	N/A	4.00	N/A	9.00	0.5	2	N/A	N/A	.625-11NC	8	7.50	0.75	5.75	2	6.13	6.13
		(440)	(572)	(578)				(254)	(140)	(165)				(22)						(22)		(102)		(229)	(13)						(191)	(19)	(146)	(51)	(156)	(156)
		HW	5 CYL	6 CYL	8 CYL			HW	5 CYL	6 CYL	8 CYL			HW	5 CYL	6 CYL	8 CYL																			
6	150	21.88	28.00	28.25	28.63			18.00	5.50	6.50	9.00			1.05	38-18	38-18	38-18			0.94	0.06	6.00	8.50	11.00	0.45	2	N/A	N/A	.75-10NC	8	9.50	0.75	7.38	2.25	8.13	8.13
		(556)	(711)	(718)	(727)			(406)	(140)	(165)	(229)			(27)						(24)	(2)	(152)	(215)	(279)	(11)						(241)	(19)	(187)	(57)	(207)	(207)
		HW	6 CYL	8 CYL	10 CYL			HW	6 CYL	8 CYL	10 CYL			HW	6 CYL	8 CYL	10 CYL																			
8	200	25.94	34.31	34.88	35.69			16.00	6.50	9.00	11.00			1.11	38-18	38-18	50-14			1.19	0.06	8.00	10.63	13.50	0.63	2	N/A	N/A	.75-10NC	8	11.75	0.75	7.38	2.75	9.94	9.94
		(659)	(871)	(881)	(907)			(406)	(165)	(229)	(279)			(28)						(30)	(2)	(203)	(270)	(343)	(16)						(298)	(19)	(187)	(70)	(252)	(252)
		HW	8 CYL	10 CYL	14 CYL			HW	8 CYL	10 CYL	14 CYL			HW	8 CYL	10 CYL	14 CYL																			
10	250	29.50	40.31	41.31	43.06			16.00	9.00	11.00	14.75			1.16	38-18	50-14	75-14			1.19	0.06	10.00	12.75	16.00	0.56	4	N/A	N/A	.875-9NC	12	14.25	1.00	7.38	2.75	11.88	9.94
		(749)	(1024)	(1049)	(1094)			(406)	(229)	(279)	(375)			(29)						(30)	(2)	(254)	(324)	(406)	(14)						(362)	(25)	(187)	(70)	(302)	(252)
		HW	8 CYL	10 CYL	14 CYL	16 CYL		HW	8 CYL	10 CYL	14 CYL	16 CYL		HW	8 CYL	10 CYL	14 CYL	16 CYL																		
12	300	34.38	46.69	47.69	49.69	50.00		20.00	9.00	11.00	14.75	17.00		1.23	38-18	50-14	75-14	75-14		1.25	0.13	12.00	15.00	19.00	0.63	4	N/A	N/A	.875-9NC	12	17.00	1.00	7.50	3.00	11.69	9.94
		(873)	(1186)	(1211)	(1262)	(1270)		(508)	(229)	(279)	(375)	(432)		(31)						(32)	(3)	(305)	(381)	(483)	(16)						(432)	(25)	(191)	(76)	(297)	(252)
		HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL																	
14	350	39.31	52.00	53.00	53.00	53.88	54.19	20.00	9.00	11.00	12.75	14.75	17.00	1.80	38-18	50-14	50-14	75-14	.75-14	1.5	0.13	13.25	16.25	21.00	0.56	4	N/A	N/A	1.00-8NC	12	18.75	1.00	10.38	3.00	15.50	15.50
		(998)	(1321)	(1346)	(1346)	(1369)	(1376)	(508)	(229)	(279)	(324)	(375)	(432)	(041)						(38)	(3)	(337)	(413)	(533)	(14)						(476)	(25)	(264)	(76)	(394)	(394)
		HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL																	
16	400	43.01	50.50	59.50	59.50	60.38	60.69	20.00	9.00	11.00	12.75	14.75	17.00	1.88	38-18	50-14	50-14	75-14	.75-14	1.75	0.13	15.25	18.50	23.50	0.5	6	N/A	N/A	1.00-8NC	16	21.25	1.25	10.63	3.50	15.50	15.50
		(1113)	(1436)	(1511)	(1511)	(1534)	(1542)	(508)	(229)	(279)	(324)	(375)	(432)	(042)						(44)	(3)	(387)	(470)	(597)	(13)						(540)	(32)	(270)	(89)	(394)	(394)
		HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL	HW	8 CYL	10 CYL	12 CYL	14 CYL	16 CYL																	
18	450	47.97	63.94	64.94	64.94	65.81	66.12	30.00	9.00	11.00	12.75	14.75	17.00	2.00	38-18	50-14	50-14	75-14	.75-14	1.75	0.13	17.25	21.00	25.00	0.44	6	N/A	N/A	1.125-7NC	16	22.75	1.06	12.25	3.50	16.75	15.50
		(1218)	(1624)	(1649)	(1649)	(1672)	(1679)	(762)	(229)	(279)	(324)	(375)	(432)	(051)						(44)	(3)	(438)	(533)	(635)	(11)						(578)	(27)	(311)	(89)	(400)	(394)
		HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL	HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL	HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL																	
20	500	52.23	71.19	71.19	72.06	72.38	73.38	30.00	11.00	12.75	14.75	17.00	19.00	2.00	50-14	50-14	75-14	75-14	.75-14	2.25	0.19	19.25	23.00	27.50	0.75	8	0.75	2	1.125-7NC	20	25.00	1.25	13.50	4.50	17.25	17.14
		(1327)	(1808)	(1808)	(1830)	(1838)	(1864)	(762)	(279)	(324)	(375)	(432)	(483)	(051)						(57)	(5)	(488)	(584)	(699)	(13)		(19)				(635)	(32)	(343)	(114)	(438)	(435)
		HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL	HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL	HW	10 CYL	12 CYL	14 CYL	16 CYL	18 CYL																	
24	600	80.40	83.31	83.31	84.19	84.50	85.50	30.00	11.00	12.75	14.75	17.00	19.00	2.13	50-14	50-14	75-14	75-14	.75-14	2.25	0.19	23.25	27.25	32.00	0.75	8	0.75	4	1.25-7NC	20	29.50	1.25	16.00	4.50	21.75	17.14
		(1534)	(2116)	(2116)	(2138)	(2146)	(2172)	(762)	(279)	(324)	(375)	(432)	(483)	(054)						(57)	(5)	(591)	(692)	(813)	(13)		(19)				(749)	(32)	(406)	(114)	(552)	(435)

Refer to Sketch on page 5
Reference Dimensions in (parentheses)

Note: 2", 3", 4" XS150's have flat face flanges.
6" to 24" XS150's have raised face flanges.

XS150 with Handwheel or Cylinder



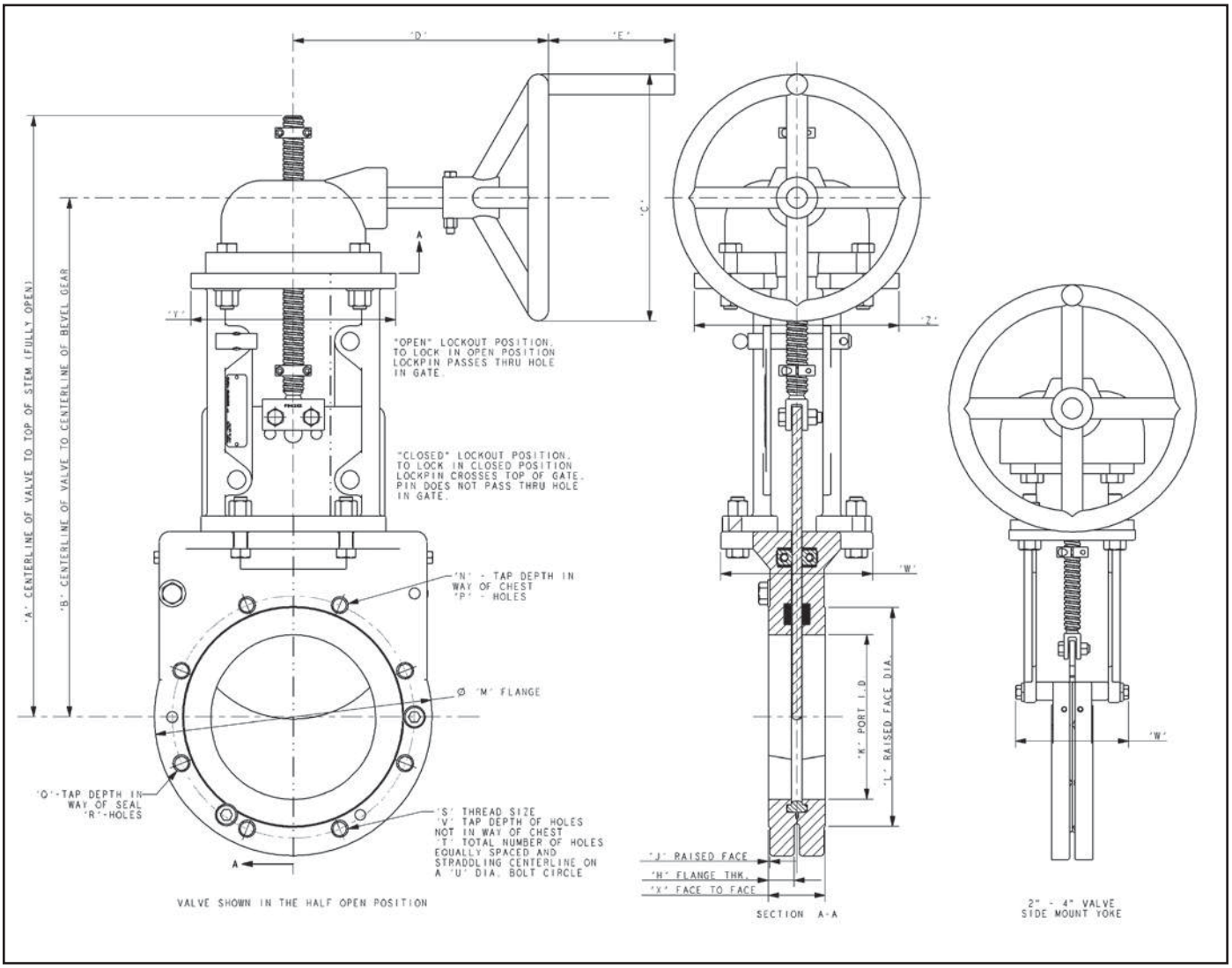
Refer to Table on page 4

Note: 2", 3", 4" XS150's have flat face flanges.
6" to 24" XS150's have raised face flanges.

Dimensions: XS150 with Bevel Gear

VALVE SIZE		DIMENSIONS INCHES (mm) FOR 2" - 12" XS-150 BEVEL GEAR																					
IN	DN	BEVEL GEAR MODEL	'A'	'B'	'C'	'D'	'E'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	'Z'
2	50	BG-3	18.31 (465)	16.31 (414)	12.00 (305)	12.38 (314)	6.50 (165)	0.81 (21)	N/A	2.00 (51)	N/A	6.00 (152)	0.44 (11)	2	N/A	N/A	.625-11NC	4	4.75 (121)	0.75 (19)	5.13 (130)	1.88 (48)	4.38 (111)	4.38 (111)
3	80	BG-3	21.19 (538)	18.19 (462)	12.00 (305)	12.38 (314)	6.50 (165)	0.88 (22)	N/A	3.00 (76)	N/A	7.50 (191)	0.44 (11)	2	N/A	N/A	.625-11NC	4	6 (152)	0.75 (19)	5.75 (146)	2 (51)	6.13 (156)	6.13 (156)
4	100	BG-3	24.31 (618)	19.94 (506)	12.00 (305)	12.38 (314)	6.50 (165)	0.88 (22)	N/A	4.00 (102)	N/A	9.00 (229)	0.5 (13)	2	N/A	N/A	.625-11NC	8	7.5 (191)	0.75 (19)	5.75 (146)	2 (51)	6.13 (156)	6.13 (156)
6	150	BG-3	27.44 (697)	21.19 (538)	12.00 (305)	12.38 (314)	6.50 (165)	0.94 (24)	0.06 (2)	6.00 (152)	8.5 (215)	11.00 (279)	0.45 (11)	2	N/A	N/A	.75-10NC	8	9.5 (241)	0.75 (19)	7.38 (187)	2.25 (57)	8.13 (207)	8.13 (207)
8	200	BG-3	33.50 (851)	25.25 (641)	12.00 (305)	12.38 (314)	6.50 (165)	1.19 (30)	0.06 (2)	8.00 (203)	10.63 (270)	13.50 (343)	0.63 (16)	2	N/A	N/A	.75-10NC	8	11.75 (298)	0.75 (19)	7.38 (187)	2.75 (70)	9.94 (252)	9.94 (252)
10	250	BG-3	39.13 (994)	28.81 (732)	12.00 (305)	12.38 (314)	6.50 (165)	1.19 (30)	0.06 (2)	10.00 (254)	12.75 (324)	16.00 (406)	0.56 (14)	4	N/A	N/A	.875-9NC	12	14.25 (362)	1 (25)	7.38 (187)	2.75 (70)	11.88 (302)	9.94 (252)
12	300	BG-3	45.50 (1156)	33.19 (843)	12.00 (305)	12.38 (314)	6.50 (165)	1.25 (32)	0.13 (3)	12.00 (305)	15 (381)	19.00 (483)	0.63 (16)	4	N/A	N/A	.875-9NC	12	17 (432)	1 (25)	7.5 (191)	3 (76)	11.69 (297)	9.94 (252)

Reference Dimensions in (parentheses)



Note: 2", 3", 4" XS150's have flat face flanges.
6" to 24" XS150's have raised face flanges.

Dimensions: XS150 with Bevel Gear

VALVE SIZE		150 CWP DIMENSIONS INCHES(mm) FOR 14" - 24" XS-150 BEVEL GEAR																					
IN	DN	BEVEL GEAR MODEL	'A'	'B'	'C'	'D'	'E'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	'Z'
14	356	BG-3	50.78 (1290)	37.19 (945)	12.00 (305)	13.59 (345)	7.00 (178)	1.50 (38)	0.13 (3)	13.25 (337)	16.25 (413)	21.00 (533)	0.56 (14)	4	N/A	N/A	1-8NC	12	18.75 (476)	1.00 (25)	10.38 (264)	3.00 (76)	15.50 (394)	15.50 (394)
16	406	BG-4	56.31 (1430)	42.63 (1083)	12.00 (305)	16.25 (413)	7.00 (178)	1.75 (44)	0.13 (3)	15.25 (387)	18.50 (470)	23.50 (597)	0.50 (13)	6	N/A	N/A	1-8NC	16	21.25 (540)	1.25 (32)	10.63 (270)	3.50 (89)	15.50 (394)	15.50 (394)
18	457	BG-4	61.75 (1568)	46.04 (1169)	18.00 (457)	16.36 (416)	7.00 (178)	1.75 (44)	0.13 (3)	17.25 (438)	21.00 (533)	25.00 (635)	0.44 (11)	6	N/A	N/A	1-1/8-7NC	16	22.75 (578)	1.06 (27)	12.25 (311)	3.50 (89)	15.75 (400)	15.50 (394)
20	508	BG-4	68.00 (1727)	50.29 (1277)	24.00 (610)	17.88 (454)	7.00 (178)	2.25 (57)	0.19 (5)	19.25 (489)	23.00 (584)	27.50 (699)	0.75 (19)	8	0.75 (19)	2	1-1/8-7NC	20	25.00 (635)	1.25 (32)	13.50 (343)	4.50 (114)	17.25 (438)	17.14 (435)
24	610	BG-34	80.13 (2035)	58.44 (1484)	12.00 (305)	18.00 (457)	7.00 (178)	2.25 (57)	0.19 (5)	23.25 (591)	27.25 (692)	32.00 (813)	0.75 (19)	8	0.75 (19)	4	1-1/4-7NC	20	29.50 (749)	1.25 (32)	16.00 (406)	4.50 (114)	21.75 (552)	17.14 (435)

VALVE SIZE		285 CWP DIMENSIONS INCHES(mm) FOR 14" - 24" XS-150 BEVEL GEAR																					
IN	DN	BEVEL GEAR MODEL	'A'	'B'	'C'	'D'	'E'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	'Z'
* 14	356	BG-3	50.78 (1290)	37.19 (945)	24.00 (610)	15.25 (387)	7.00 (178)	1.50 (38)	0.13 (3)	13.25 (337)	16.25 (413)	21.00 (533)	0.56 (14)	4	N/A	N/A	1-8NC	12	18.75 (476)	1.00 (25)	10.38 (264)	3.00 (76)	15.50 (394)	15.50 (394)
* 16	406	BG-4	56.31 (1430)	42.63 (1083)	24.00 (610)	17.88 (454)	7.00 (178)	1.75 (44)	0.13 (3)	15.25 (387)	18.50 (470)	23.50 (597)	0.50 (13)	6	N/A	N/A	1-8NC	16	21.25 (540)	1.25 (32)	10.63 (270)	3.50 (89)	15.50 (394)	15.50 (394)
18	457	BG-34	62.72 (1593)	48.00 (1219)	12.00 (305)	18.00 (457)	7.00 (178)	1.75 (44)	0.13 (3)	17.25 (438)	21.00 (533)	25.00 (635)	0.44 (11)	6	N/A	N/A	1-1/8-7NC	16	22.75 (578)	1.06 (27)	12.25 (311)	3.50 (89)	15.75 (400)	15.50 (394)
20	508	BG-44	68.00 (1727)	53.16 (1350)	12.00 (305)	20.88 (530)	7.00 (178)	2.25 (57)	0.19 (5)	19.25 (489)	23.00 (584)	27.50 (699)	0.75 (19)	8	0.75 (19)	2	1-1/8-7NC	20	25.00 (635)	1.25 (32)	13.50 (343)	4.50 (114)	17.25 (438)	17.14 (435)
24	610	BG-44GT	80.13 (2035)	61.31 (1557)	18.00 (457)	21.00 (533)	7.00 (178)	2.25 (57)	0.19 (5)	23.25 (591)	27.25 (692)	32.00 (813)	0.75 (19)	8	0.75 (19)	4	1-1/4-7NC	20	29.50 (749)	1.25 (32)	16.00 (406)	4.50 (114)	21.75 (552)	17.14 (435)

Reference Dimensions in (parentheses)

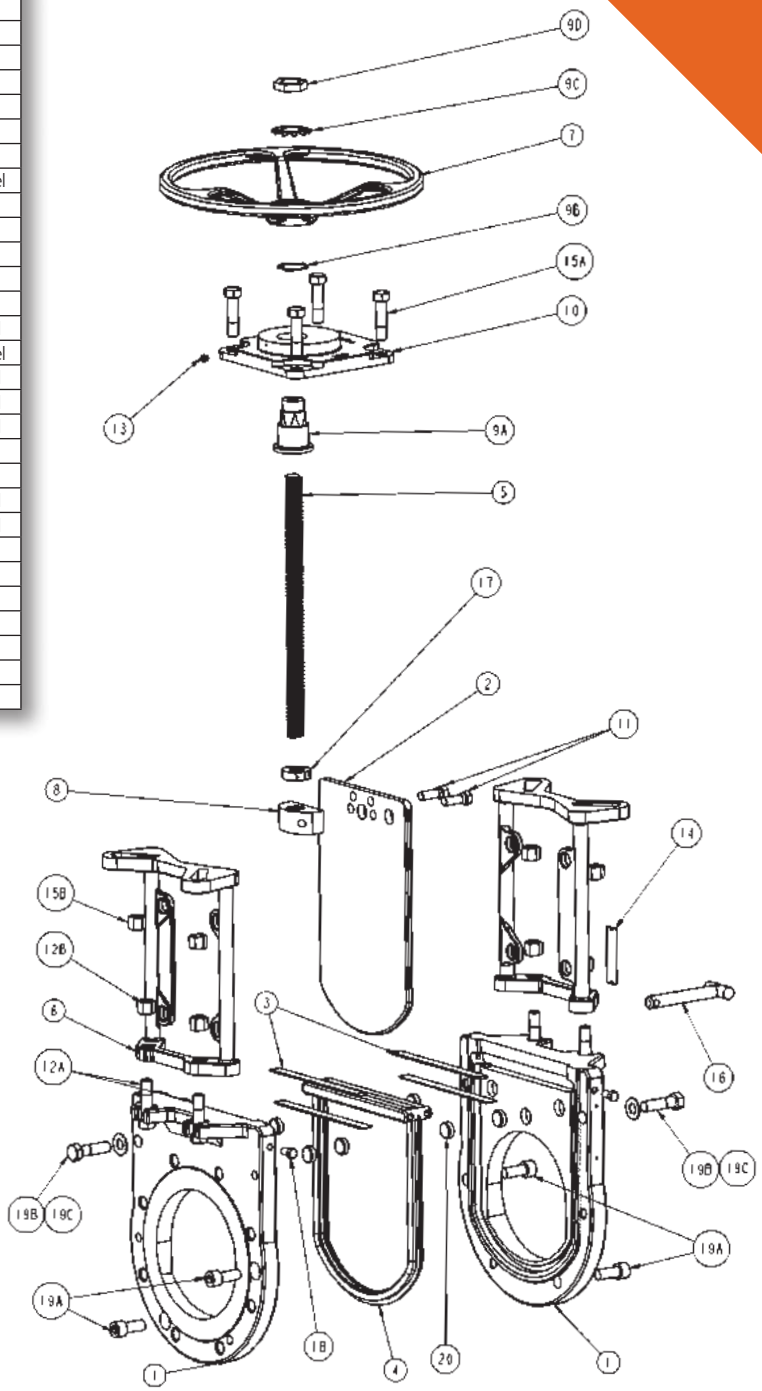
Refer to Sketch on page 6

* At higher differential pressures, a larger handwheel is offered to reduce the rim pull effort. Note "C" and "D" dimensions.

Note: 2", 3", 4" XS150's have flat face flanges.
6" to 24" XS150's have raised face flanges.

Parts List			
Item	Description	Material	
		S' Series	R' Series
1	Body half	As specified by customer	
2	Gate	As specified by customer	
* 3	Gate scrapers	Phenolic	
* 4	Gate seal/Injectable packing seal	EPDM, viton or aflas	
5	Stem	304SS	
6	Yoke half	304SS	Carbon steel
7	Handwheel	Cast iron	
8	Non-rising stemnut (NRS)	Acid resistent bronze	
9A	Drive nut	Bronze/SS	Bronze
9B	Wave spring	Stainless steel	
9C	Retaining washer	Stainless steel	
9D	Retainer nut	Stainless steel	Plated steel
10	Drive nut hub	304SS	Carbon steel
11	NRS stemnut fasteners	Stainless steel	Plated steel
12A	Yoke bolts	Stainless steel	Plated steel
12B	Yoke hex nuts	Stainless steel	Plated steel
13	Grease fitting	Plated steel	
14	Serial number tag	Stainless steel	
15A	Drive nut hub bolts	Stainless steel	Plated steel
15B	Drive nut hub hex nuts	Stainless steel	Plated steel
16	Lock out pin	17-4PH SS	
17	Travel stop	Stainless steel	
18	Injectable packing bolts	Stainless steel	
19A	Body half bolt (socket head)	Stainless steel	
19B	Body half bolt (cap head)	Stainless steel	
19C	Bold half flat washer	Stainless steel	
20	Gate guide (chest)	Glass filled TFE	

*Recommended spare parts.



ITT

ENGINEERED FOR LIFE

Engineered Valves, LLC
1110 Bankhead Ave
Amory, MS 38821
662.256.7185
www.engvalves.com