



**The new Isogate® WS series wafer style slurry knife gate valve incorporates Linatex® elastomer technology to provide highly efficient operation in tough abrasive and corrosive applications**

**A cost effective valve designed for today's slurry applications**

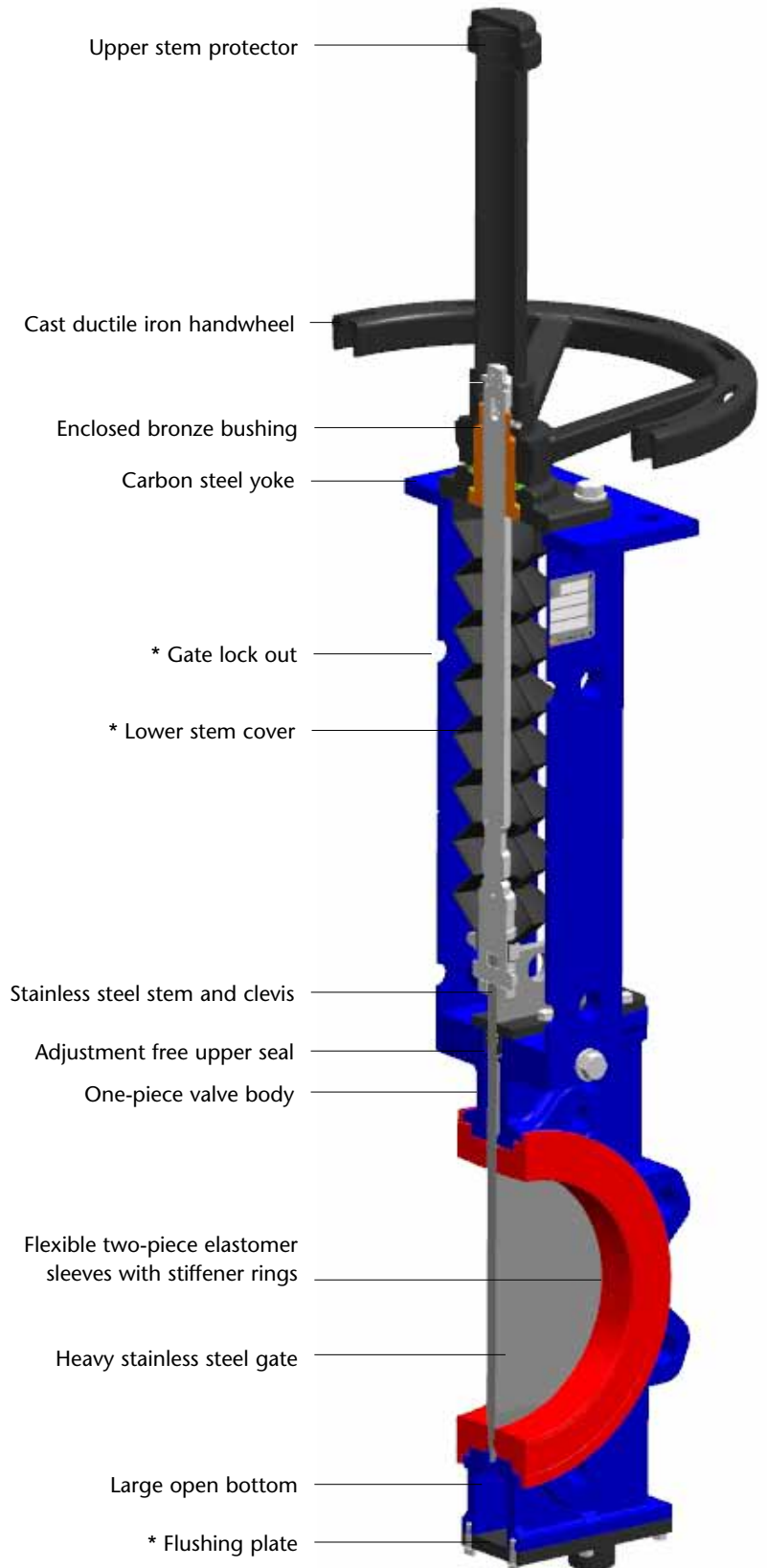
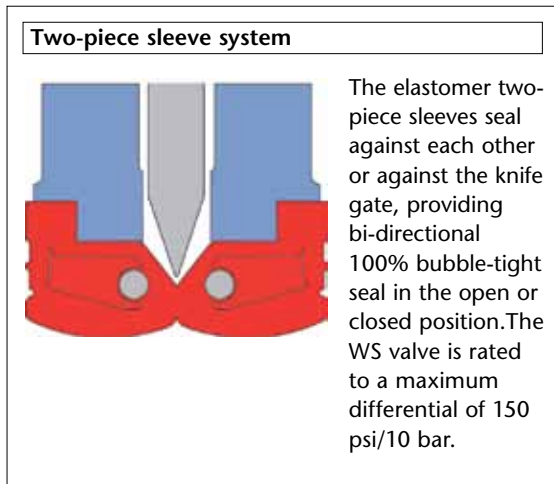
The new Isogate® WS series wafer style slurry knife gate valve incorporates Linatex® elastomer technology to provide reliable service in tough abrasive and corrosive slurry applications. The Isogate® WS series' unique design provides reliable service together with ease of maintenance and cost effectiveness in a light weight, compact package.

Using materials proven by Weir Minerals Linatex's experience in abrasion and corrosion resistance, the Isogate® WS series wafer style slurry knife gate valve combines a low maintenance design with a wide range of available materials, making the valve suitable for a variety of applications.

# A unique maintenance-minimizing design featuring sleeves that are easily replaced without valve disassembly, and an adjustment-free packingless upper seal.

## Design benefits

- Unibody design and rugged heavy duty construction ensures long valve life and greater reliability
- Flexible two-piece sleeve system allows valve to cycle in heavy slurries without sticking
- Sleeves are easily replaced without disassembling the valve
- Replaceable upper seal design is not only packingless, which eliminates the need for periodic adjustment, it is also a self-lubricating system and is rechargeable without valve disassembly (sizes 2" through 16")
- Full port design reduces pressure drop and turbulence
- Open bottom allows for the purging of large solids and solids in high concentration
- Bi-directional shutoff
- Wafer style saves pipeline space
- Sleeves are available in a variety of materials to handle abrasion and chemical applications
- Flushing plate option allows for periodic cleaning of the lower discharge vent and allows flushing as needed
- Enclosed bronze bushing with a protected grease chamber means less operating force after long dormant periods
- Upper stem protector and optional protective lower stem cover prevent external contamination



\* optional features

# The Isogate® WS slurry knife gate valve is suitable for a wide range of applications.

## Applications

- Mining
- Power utilities
- Pulp and paper
- General industrial
- General chemical
- Cement
- Sand and gravel
- Coal
- Phosphate
- Soda ash
- Alumina
- Mineral sands
- Kaolin

## Actuators

- Handwheel
- Bevel gear
- Air cylinder
- Hydraulic cylinder
- Other actuators available

## Size range

Available in sizes 2" through 24"

## Maximum working pressures

Sizes 2" through 16": 150 psi

Sizes 18" through 24": 90 psi

## Flanges

Drilled to match ANSI B16.5 class 150#

## Materials

**Body:** Cast ductile iron as standard

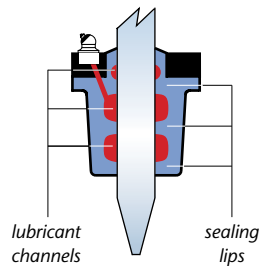
**Gate:** 316 stainless steel as standard. Other materials such as 17-4 PH stainless steel, Hastelloy™ C-276, alloy 2205, and AL6XN are also available

**Sleeves:** Natural rubber as standard. EPDM and other materials are also available

**Yoke:** Carbon steel fabrication

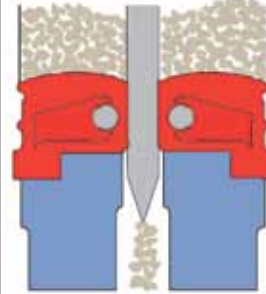
## Adjustment-free packingless upper seal\*

The WS series heavy duty knife gate valve features an adjustment-free packingless upper seal which eliminates the need to constantly tighten the packing to eliminate leakage. The upper seal design also features a set of lubrication channels that contain a gate lubricant. A thin layer of the lubricant is placed on the gate on each and every cycle. This provides for smoother gate actuation and increased sleeve life. Fittings are accessible to recharge upper seal while in service.



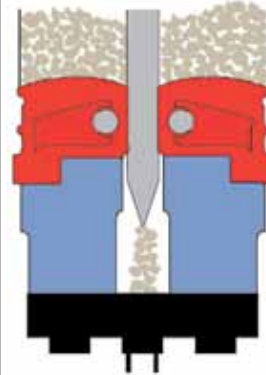
\* sizes 2" through 16"

## Body options



### Open bottom

Open bottom allows for the purging of large solids, and solids in higher concentration. The purging of solids stops when the gate is in the full open or closed position.



### Flushing plate

Flushing plate option adds flexibility to the standard open bottom.

This option also allows for periodic cleaning of the lower discharge vent and can allow flushing as needed.

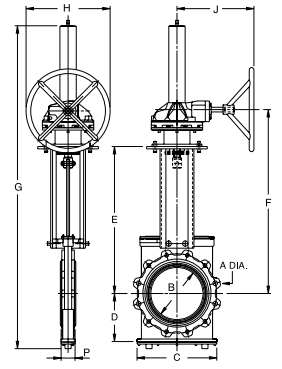
## Elastomer selection table

Sleeve Materials	General Service	Temperature Range		
		Continuous Min	Continuous Max	Intermittent Max
Natural rubber	General abrasive applications, FGD, water	-50°C/-60°F	+71°C/+160°F	+82°C/+180°F
EPDM	Pulp and paper, FGD	-50°C/-60°F	+135°C/+275°F	+148°C/+300°F



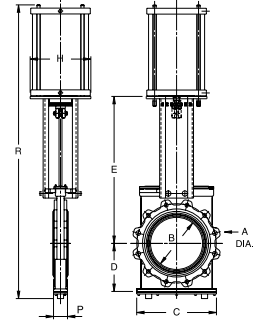
### Bevel gear valve dimensions

Sizes inches/mm	A inches/mm	B inches/mm	C inches/mm	D inches/mm	E inches/mm	F inches/mm	G inches/mm	H inches/mm	J inches/mm	P inches/mm
12/300	19/483	11.8/299	17/433	10.8/275	34/865	42/1066	71.7/1822	18/457	16.5/419	3.4/86
14/350	21/533	12.9/328	17.7/449	11.8/300	37.4/949	45.3/1150	76.8/1951	18/457	16.5/419	3.5/89
16/400	23.5/597	14.7/374	21.7/550	13.2/337	41.6/1056	49.5/1257	84.2/2138	18/457	16.5/419	4/102
18/450	25/640	17/435	23/590	14/355	44/1110	51/1285	87/2215	18/455	17/420	4.5/118
20/500	28/700	19/470	26/670	15/385	49/1240	56/1415	102/2595	18/455	17/420	5.5/138
24/600	32/815	23/575	30/760	18/445	58/1475	66/1670	113/2870	18/455	19/475	5.5/138



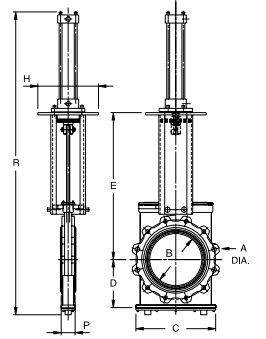
### Air cylinder valve dimensions

Sizes inches/mm	A inches/mm	B inches/mm	C inches/mm	D inches/mm	E inches/mm	H inches/mm	P inches/mm	R inches/mm
2/50	6/152	1.9/48	5.1/130	3.6/91.5	6.1/157.3	4.5/114.3	2/51	21.3/542
3/75	7.5/190	2.9/74	5.9/150	4.6/118	12.7/323	5.6/143	2.3/58	27.7/703
4/100	9/228	3.9/100	7.2/184	5.3/136	14.8/377	5.6/143	2.3/58	31.3/795
6/150	11/279	5.9/150	9.3/236	6.4/162	19/482	8.9/226	2.7/67	40.5/1028
8/200	13.5/343	8/203	11.4/290	7.9/202	24/609	8.9/226	3.2/80	48.5/1231
10/250	16/406	9.8/249	14.4/365	9.1/230	29.8/758	11/280	3.2/80	61.4/1560
12/300	19/483	11.8/299	17/433	10.8/275	34/865	13/330	3.4/86	67.9/1724
14/350	21/533	12.9/328	17.7/449	11.8/300	37.4/949	15/381	3.5/89	72.7/1848
16/400	23.5/597	14.7/374	21.7/550	13.2/337	41.6/1056	15/381	4/102	81.2/2061



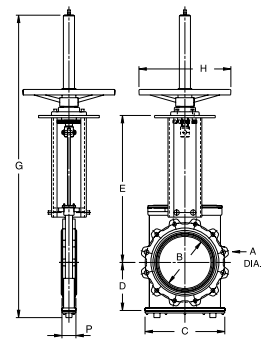
### Hydraulic cylinder valve dimensions

Sizes inches/mm	A inches/mm	B inches/mm	C inches/mm	D inches/mm	E inches/mm	H inches/mm	P inches/mm	R inches/mm
10/250	16/406	9.8/249	14.4/365	9.1/230	29.8/758	11/2780	3.2/80	60.3/1531
12/300	19/483	11.8/299	17/433	10.8/275	34/865	13/330	3.4/86	67.1/1704
14/350	21/533	12.9/328	17.7/449	11.8/300	37.4/949	15/381	3.5/89	74.8/1901
16/400	23.5/597	14.7/374	21.7/550	13.2/337	41.6/1056	15/381	4/102	81.7/2074
18/450	25/640	17/435	23/590	14/355	44/1110	19/480	4.5/118	85/2165
20/500	28/700	19/470	26/670	15/385	49/1240	24/600	5.5/138	93/2370
24/600	32/815	23/575	30/760	18/445	58/1475	24/600	5.5/138	113/2860



### Handwheel valve dimensions

Sizes inches/mm	A inches/mm	B inches/mm	C inches/mm	D inches/mm	E inches/mm	G inches/mm	H inches/mm	P inches/mm
2/50	6/152	1.9/48	5.1/130	3.6/91.5	6.1/157	22.5/573.7	7.8/200	2/51
3/75	7.5/190	2.9/74	5.9/150	4.6/118	12.7/323	26.4/671	10.6/270	2.3/58
4/100	9/228	3.9/100	7.2/184	5.3/136	14.8/377	29.3/745	10.6/270	2.3/58
6/150	11/279	5.9/150	9.3/236	6.4/162	19/482	36.6/930	10.6/270	2.7/67
8/200	13.5/343	8/203	11.4/290	7.9/202	24/609	47.4/1203	14.2/360	3.2/80
10/250	16/406	9.8/249	14.4/365	9.1/230	29.8/758	59.8/1520	15.4/390	3.2/80
12/300	19/483	11.8/299	17/433	10.8/275	34/865	64.8/1645	19.7/500	3.4/86
14/350	21/533	12.9/328	17.7/449	11.8/300	37.4/949	75.5/1918	23.6/600	3.5/89
16/400	23.5/597	14.7/374	21.7/550	13.2/337	41.6/1056	82.9/2105	23.6/600	4/102



Note 1: Dimensions provided are indicative only. Certified drawings are recommended prior to construction.

Note 2: Flanges drilled and tapped to match ANSI B16.5 class 150 mating flanges. Other flange options are available upon request.

Note 3: "P" face-to-face dimensions include load distribution ring.

## Weir Minerals North America

2701 S Stoughton Road, Madison WI 53716  
PO Box 7610, Madison WI 53707  
USA

Tel: 608 221 2261  
Fax: 608 221 5810  
www.weirminerals.com

Excellent  
Minerals  
Solutions

