



Durco® G4XZ SleeveLine® Low-Emission Plug Valve

Certified to ISO 15848-1-BH-C03 and API 641



Experience In Motion



Meeting stringent ISO and API fugitive emissions standards

Durco non-lubricated plug valves have helped operators for decades to improve process reliability and uptime in the most corrosive and difficult applications. Now Durco is leading the reduction of fugitive emissions.

Meeting volatile organic compound (VOC) fugitive emission limits is critical; the Durco G4XZ is a reliable, versatile sleeve-lined plug valve that ensures operators meet environmental regulations. It complies with stringent industry emissions standards, including ISO 15848-1-BH-C03 and API 641.

Engineered for the toughest applications

Key applications for the Durco G4XZ SleeveLine valve are found within the hydrofluoric acid (HF) alkylation industry and lethal, toxic and sub-zero fluid services. These include:

- Anhydrous HCl
- Blending
- Chlorine
- Crude desalting
- Ethylene oxide
- Gas plants
- Hydrofluoric acid
- Isobutane
- Isomerization
- Light ends
- Methylene diphenyl diisocyanate
- Phosgene
- Propylene oxide
- Sodium hydroxide
- Sulphur plants
- Toluene diisocyanate
- Vinyl chloride monomer

Best-in-class emissions control and safety

Fugitive emissions-compliant design

Operators can install the Durco G4XZ SleeveLine valve with confidence in applications with volatile air pollutants and hazardous fluids. It has undergone rigorous testing and is certified to stringent industry standards, including ISO 15848-1-BH-C03 (2,500 mechanical cycles) and API 641.

Mitigate emissions without live-loaded packing

Continuous loading of the packing as the plug is adjusted dramatically reduces fugitive emissions while maintaining sealing integrity in the closed position. The Durco G4XZ SleeveLine valve packing design meets API and ISO fugitive emissions requirements without live-loaded packing.

Fire-sealed for improved safety

The G4XZ SleeveLine valve is fire-sealed to improve plant and personnel safety. It complies with API 607 7th edition and ISO 10497 3rd edition fire-safe standards (for external leakage only).

For applications where a fire-sealed design is not required, the Durco G4X valve is available.



Viton® O-rings

Full-pressure containment stem seal. Also protects thrust collar from atmospheric corrosion. Other elastomers are available.

Fugitive emissions packing

Inconel®-reinforced graphite, compliant with API 622

Integral thrust collar/ alloy diaphragm

Self-sealing, dynamic bellows-like diaphragm moves with plug adjustment to eliminate potential leak path. Hastelloy® C276 (or optional materials) diaphragm welded to alloy thrust collar.

Tapered plug

Assures reduced turning torque and in-line seal. Adjustment is independent of stem seals. With ± 5 mm (3/16 in.) adjustment, plug cannot bottom out.

Packing adjuster

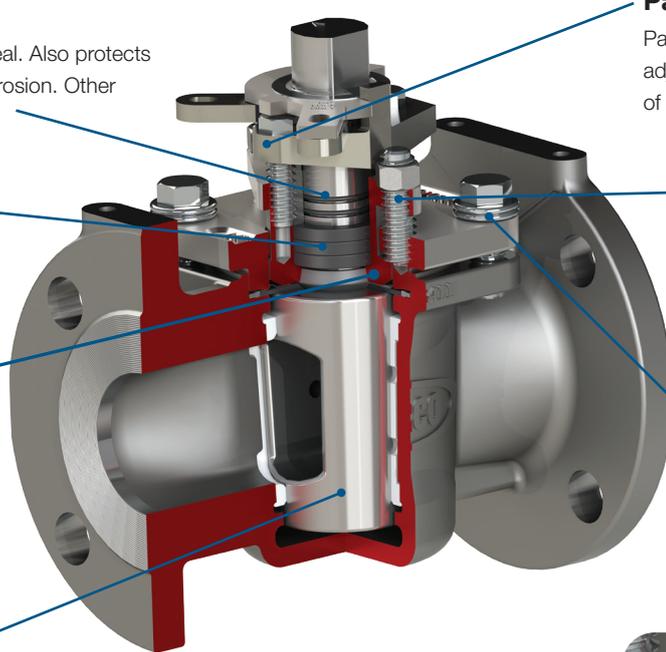
Packing adjustment independent of plug adjustment. Allows for discrete adjustment of stem seal.

In-line adjustment – plug adjuster

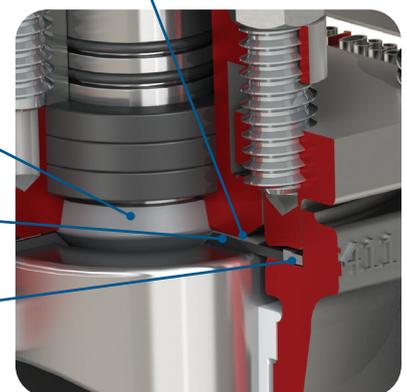
Provides separate and positive, in-line plug/seat adjustment for through line leakage, and re-energizes primary seal

Belleville washers

Prevent bonnet leakage during extreme temperature fluctuations



Diaphragm (metal)



Packing (flexible graphite)

Proven G4 fire-sealed design

Diaphragm

(fluoropolymer)

Spiral-wound gasket

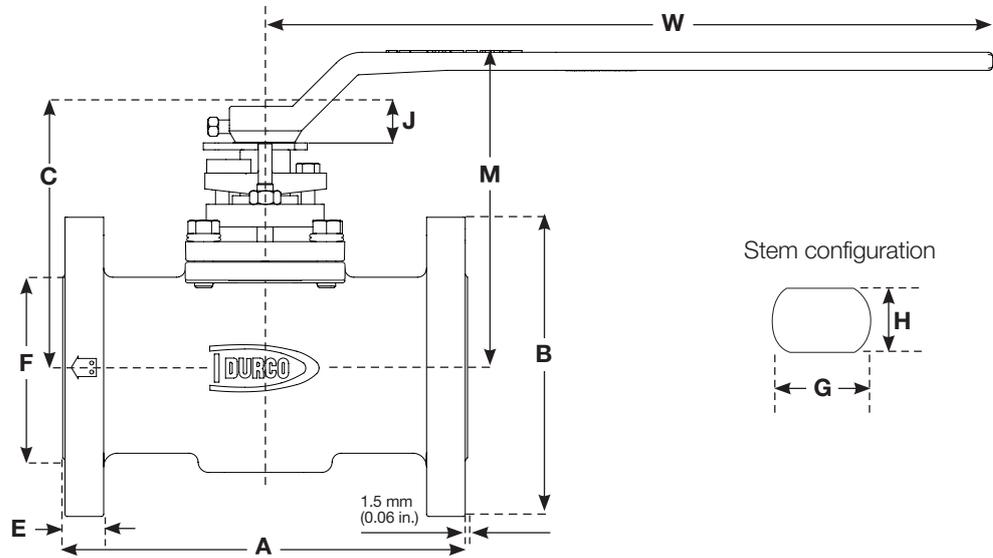
(316SS with graphite filler)

Specifications

Description	G4XZ	G4X
Sizes	NPS ½ to 20	
Pressure class	ASME Class 150 to 300	
Temperature rating	-45°C to 315°C (-50°F to 600°F*), depending on alloy and sealing configuration	
Body style	Flanged, buttweld, screwed end, socket end, specialized flange connection	
Body material	Monel®, carbon steel, stainless steel and corrosion-resistant alloys	
Seat/sleeve material	Fluoropolymers: TFE, TFM, TMHT	
Stem packing/seal	Graphite/graphite	PTFE/PTFE
Shut-off rating (soft seat)	API 598, zero leakage	
Fugitive emissions*	API 641; ISO 15848-1 2015	API 641
Fire-safe	API 607 7th edition; ISO 10497 3rd edition (external only)	N/A
Design and compliance	ASME B16.34, API 599, PED, CRN, UKCA	
Automation	Gear operators; Limitorque® LPS, Automax™ RG and Supernova, Logix™ positioners	

* Fugitive emission testing is limited in temperature range to 200°C (392°F) and certain materials.

Dimensions



Valve Size, DN	Drilling, mm						Dimensions, mm											Weight, kg				
	Class 150			Class 300			A		B		C	E		F	G	H	J	M	W	Valve		Wrench
	No.	Size	BC	No.	Size	BC	Class 150	Class 300	Class 150	Class 300		Class 150	Class 300							Class 150	Class 300	
25	4	16	79	4	19	89	127	165	108	124	119	11	17	51	19.99/19.86	16.66/16.54	18	145	178	5	8	0.5
40	4	16	98	4	22	114	165	191	127	156	129	14	21	73	19.99/19.86	16.66/16.54	19	155	229	7	12	0.5
50	4	19	121	8	19	127	178	216	152	165	133	16	22	92	27.31/27.18	22.23/22.1	21	172	305	10	13	1
80	4	19	152	8	22	168	203	283	191	210	183	19	29	127	27.31/27.18	22.23/22.1	25	222	508	19	33	2
100	8	19	190	8	22	200	229	305	229	254	214	24	32	157	42.85/42.6	36.09/35.97	35	271	759	31	38	4
150	8	22	241	12	22	270	267	403	279	318	275	25	37	216	47.63/47.37	36.09/35.97	41	N/A	N/A	88	119	N/A

Valve Size, NPS	Drilling, in.						Dimensions, in.											Weight, lb				
	Class 150			Class 300			A		B		C	E		F	G	H	J	M	W	Valve		Wrench
	No.	Size	BC	No.	Size	BC	Class 150	Class 300	Class 150	Class 300		Class 150	Class 300							Class 150	Class 300	
1	4	0.63	3.13	4	0.75	3.50	5.00	6.50	4.25	4.88	4.69	0.44	0.69	2.00	0.787/0.782	0.656/0.651	0.69	5.72	7.00	11	18	1
1½	4	0.63	3.88	4	0.88	4.50	6.50	7.50	5.00	6.13	5.09	0.56	0.81	2.88	0.787/0.782	0.656/0.651	0.75	6.12	9.00	16	27	1
2	4	0.75	4.75	8	0.75	5.00	7.00	8.50	6.00	6.50	5.25	0.62	0.88	3.63	1.075/1.070	0.875/0.870	0.81	6.76	12.00	22	28	3
3	4	0.75	6.00	8	0.88	6.63	8.00	11.13	7.50	8.25	7.22	0.75	1.13	5.00	1.075/1.070	0.875/0.870	1.00	8.73	20.00	42	73	4
4	8	0.75	7.50	8	0.88	7.88	9.00	12.00	9.00	10.00	8.41	0.94	1.25	6.19	1.687/1.677	1.421/1.416	1.38	10.66	29.88	68	83	9
6	8	0.88	9.50	12	0.88	10.63	10.50	15.88	11.00	12.50	10.81	1.00	1.44	8.50	1.875/1.865	1.421/1.416	1.63	N/A	N/A	194	263	N/A

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