



V23 Series Plug Valves

Pressure Rating up to 3000 psig (206 bar)

Catalog No. V23-2
June 2008

Features

- Quarter-turn operation
- Unique forward flow throttling
- Low torque operation
- Unidirectional flow



Materials of Construction

Component	Valve Body Materials	
	Stainless Steel	Brass
	Grade/ASTM Specification	
1. Body	SS316/ A479 or A276	Brass / B16
2. Plug	PTFE-coated SS316/ A479 or A276	PTFE-coated Brass / B16
3. O-ring	PTFE-coated FKM	
4. Handle	Nylon	
5. Pin	SS316/A276	
6. Snap ring	Stainless Steel	

- Wetted parts and lubricants listed in blue
- Lubricant is silicone-based

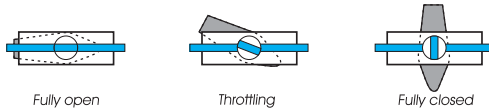
Technical Data

Series	Valve Material	Pressure Rating		Temperature Rating	Plug Orifice mm (in.)
		psig	bar		
V23A	SS316	3000	206	-10 to 400 °F (-23 to 204 °C)	4.4 (.17)
	Brass				
V23B	SS316	2000	137		7.2 (.28)
	Brass				

- Differential pressure is limited to maximum 150 psig (10.3bar) when reverse flow occurs.
- Throttling reverse flow may damage O-ring.

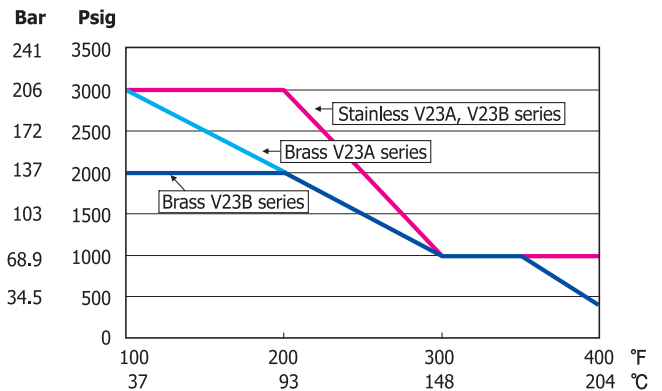
Operation

- D-pro plug valves provide positive shut-off, high flow capacity, and quick quarter-turn operation.
- D-pro plug valve provides flow throttling capability.

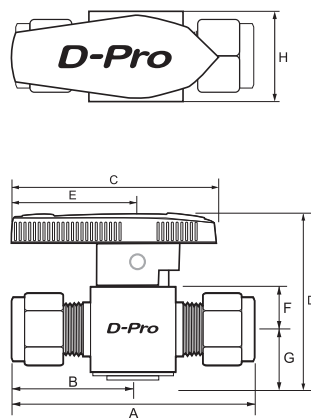


Pressure - Temperature Curves

with standard FKM O-ring



Ordering Information and Dimensions



Basic Ordering Number	End Connections		Dimensions mm (inches)								
	Inlet	Outlet	A	B	C	D	E	F	G	H	
V23A-	D-2T-	1/8 in. Dk-Lok	50.5 (1.99)	19.8 (0.78)	47.8 (1.88)	38.6 (1.52)	29.0 (1.14)	9.4 (0.37)	11.7 (0.46)	19.1 (0.75)	
	D-4T-	1/4 in. Dk-Lok	55.1 (2.17)								
	D-6T-	3/8 in. Dk-Lok	58.2 (2.29)								
	D-6M-	6mm Dk-Lok	55.1 (2.17)								
	M-2N-	1/8 in. Male NPT	38.9 (1.53)								
	M-4N-	1/4 in. Male NPT	48.3 (1.90)								
	MD-4N4T-	1/4 in. Male NPT	1/4 in. Dk-Lok								51.2 (2.03)
	MF-4N-	1/4 in. Male NPT	1/4 in. female NPT								50.8 (2.00)
	F-2N-	1/8 in. Female NPT	45.2 (1.78)								
	F-4N-	1/4 in. Female NPT	53.1 (2.09)								
	F-4R-	1/4 in. Female ISO tapered	56.1 (2.21)								
	V23B-	D-6T-	3/8 in. Dk-Lok								67.6 (2.66)
D-8T-		1/2 in. Dk-Lok	73.2 (2.88)								
D-8M-		8mm Dk-Lok	67.6 (2.66)								
D-10M-		10mm Dk-Lok	68.1 (2.68)								
D-12M-		12mm Dk-Lok	75.2 (2.96)								
M-8N-		1/2 in. Male NPT	67.1 (2.64)								
F-6N-		3/8 in. Female NPT	60.5 (2.38)								
F-8N-		1/2 in. Female NPT	73.2 (2.88)								
F-8R-	1/2 in. ISO Female Tapered	79.8 (3.14)									

All dimensions shown are for reference only and are subject to change. Dimensions with Dk-Lok nuts are in finger-tight position.

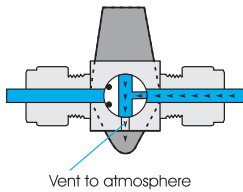
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Factory Test

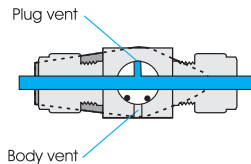
- Every V23 series plug valve is factory tested for shutoff at 600psig (41.3 bar).

Optional Downstream Vent

Vent to atmosphere when valve is closed



valve open



Optional vented plug and valve body provides system pressure release to atmosphere when valve is closed.

- This option reduces the maximum operation pressure to 150 psig (10.3 bar).
- To order, use designator - VH. See how to order.

Optional O-ring material

PTFE-coated FKM is standard. Choose optional O-ring material for fluid compatibility and system temperatures.

O-ring material	O-ring Designator	Temperature Range
Standard PTFE-coated FKM	EV	-20 to 400 °F (-28 to 204 °C)
PTFE-coated Buna-N	EB	-68 to 221 °F (-20 to 105 °C)
PTFE-coated EPDM	EE	-49 to 275 °F (-45 to 135 °C)

Flow Data

Basic Ordering Number	End Connections		Cv	Pressure Drop to Atmosphere, psi (bar)						
				Air Flow, std ft ³ /min (L/min)			Water Flow, US gal/min(L/min)			
	Inlet	Outlet		@70 °F (21 °C)						
				1 (0.068)	5 (0.34)	10 (0.68)	1 (0.068)	5 (0.34)	10 (0.68)	
V23A-	D-2T-	1/8 in. Dk-Lok	0.1	0.3 (8.4)	0.8 (22)	1.1 (31)	0.1 (0.37)	0.2 (0.75)	0.3 (1.1)	
	D-4T-	1/4 in. Dk-Lok	1.6	6.0 (169)	13 (368)	18 (509)	1.6 (6.0)	3.6 (13.6)	5.1 (19.3)	
	D-6T-	3/8 in. Dk-Lok	1.1	4.1 (116)	8.9 (252)	12.4 (351)	1.1 (4.1)	2.5 (9.4)	3.5 (13.2)	
	D-6M-	6mm Dk-Lok	1.6	6.0 (169)	13 (368)	18 (509)	1.6 (6.0)	3.6 (13.6)	5.1 (19.3)	
	M-2N-	1/8 in. Male NPT								
	M-4N-	1/4 in. Male NPT	1.0	3.7 (104)	8.1 (229)	11.3 (320)	1.0 (3.7)	2.2 (8.3)	3.2 (12.1)	
	MD-4N4T-	1/4 in. Male NPT	1/4 in. Dk-Lok	0.9	3.3 (93)	7.3 (206)	10.1 (286)	0.9 (3.4)	2.0 (7.5)	2.8 (10.8)
	MF-4N-	1/4 in. Male NPT	1/4 in. female NPT	1.0	3.7 (104)	8.1 (229)	11.3 (320)	1.0 (3.7)	2.2 (8.3)	3.2 (12.1)
	F-2N-	1/8 in. Female NPT		1.2	4.4 (124)	9.7 (274)	13.5 (382)	1.2 (4.5)	2.7 (10.2)	3.8 (14.3)
	F-4N-	1/4 in. Female NPT		0.9	3.3 (93)	7.3 (206)	10.1 (286)	0.9 (3.4)	2.0 (7.5)	2.8 (10.8)
F-4R-	1/4 in. Female ISO tapered									
V23B-	D-6T-	3/8 in. Dk-Lok	6.4	23.9 (676)	52.0 (1470)	72.3 (2040)	6.4 (24.2)	14.3 (54.1)	20.2 (76.4)	
	D-8T-	1/2 in. Dk-Lok	4.4	16.4 (464)	35.7 (1010)	49.7 (1400)	4.4 (16.6)	9.8 (37.0)	13.9 (52.6)	
	D-8M-	8mm Dk-Lok	6.4	23.9 (676)	52.0 (1470)	72.3 (2040)	6.4 (24.2)	14.3 (54.1)	20.2 (76.4)	
	D-10M-	10mm Dk-Lok								
	D-12M-	12mm Dk-Lok	4.8	17.9 (506)	39.0 (1100)	54.2 (1530)	4.8 (18.1)	10.7 (40.4)	15.2 (57.5)	
	M-8N-	1/2 in. Male NPT	2.4	9.0 (254)	19.5 (552)	27.1 (767)	2.4 (9.0)	5.4 (20.4)	7.6 (28.7)	
	F-6N-	3/8 in. Female NPT	4.3	16.0 (453)	34.9 (988)	48.6 (1370)	4.3 (16.2)	9.6 (36.3)	13.6 (51.4)	
	F-8N-	1/2 in. Female NPT	2.7	10.1 (286)	21.9 (620)	30.5 (863)	2.7 (10.2)	6.0 (22.7)	8.5 (32.1)	
	F-8R-	1/2 in. ISO Female Tapered								

How to Order

Select the desired valve basic ordering number, options and body material.

V23A-D-4T-
V23B-F-8N-

-EB

VH

-B

S

O-ring Material Designator	Downstream Vent Option	Body Material Designator
<ul style="list-style-type: none"> • Nil : PTFE-coated Viton • EB : PTFE-coated Buna-N • EE : PTFE-coated EPDM 	<ul style="list-style-type: none"> • Nil : no vent • VH : Vent 	<ul style="list-style-type: none"> • S : SS316 • B : Brass

We reserve the right to change the specifications stated in this catalog for our continuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.

Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.