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

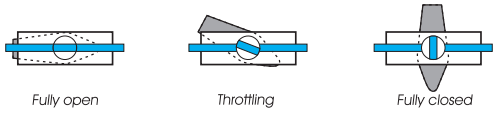
Technical Data

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

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

Operation

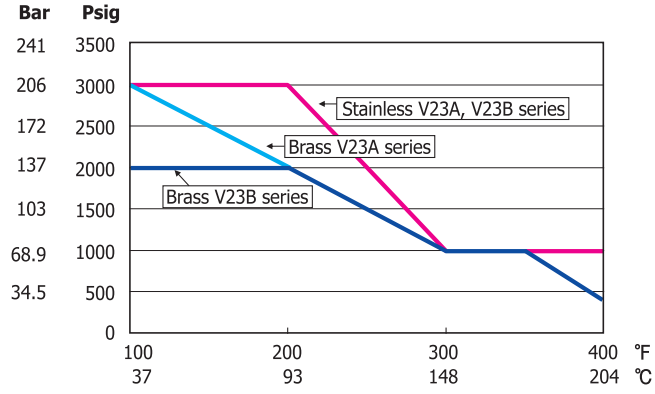
- D-pro plug valves provide positive shut-off, high flow capacity, and quick quarter-turn operation.
- D-pro plug valve provides flow throttling capability.



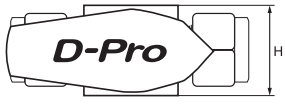
Fully open | Throttling | Fully closed

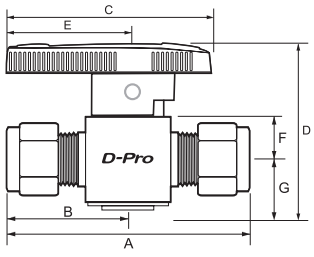
Pressure - Temperature Curves

with standard FKM O-ring



Ordering Information and Dimensions





Basic Ordering Number		End Connections Inlet	End Connections Outlet	Dimensions mm (inches) 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)	29.0 (1.14)	63.2 (2.49)	54.1 (2.13)	38.1 (1.50)	14.2 (0.56)	16.8 (0.66)	28.4 (1.12)
	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.

Quality System Approvals | Dk-Lok Tube Fitting Certification Listing | D-Pro Valve Certification Listing

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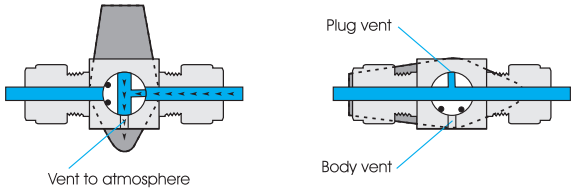
Factory Test

- 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 Inlet	End Connections Outlet	Cv	Pressure Drop to Atmosphere, psi (bar) Air Flow, std ft³/min (L/min) @70 °F (21 °C) 1 (0.068)	5 (0.34)	10 (0.68)	Water Flow, US gal/min(L/min) @70 °F (21 °C) 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		1.0	3.7 (104)	8.1 (229)	11.3 (320)	1.0 (3.7)	2.2 (8.3)	3.2 (12.1)
	M-4N-	1/4 in. Male NPT								
	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- **-EB** **-** **VH** **-** **-B** **S**
V23B-F-8N-

O-ring Material Designator	Downstream Vent Option	Body Material Designator
• Nil : PTFE-coated Viton • EB : PTFE-coated Buna-N • EE : PTFE-coated EPDM	• Nil : no vent • VH : Vent	• 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.

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