



VD3 Series Diaphragm Valves

No.VD3-2
May 2016

VD3 Series Pressure Rating up to 241bar (3,500 psig)



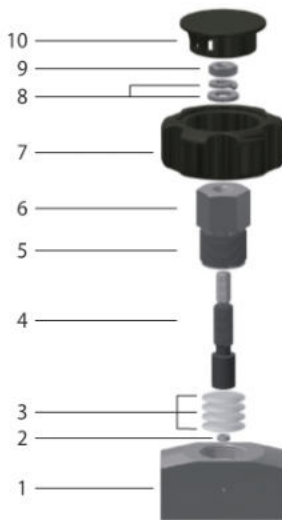
Features

- It is featured that the diaphragm valve serves economical, high performance and high cycle life time.
- The diaphragm valve is used for shut-off, isolation in gas control systems, and analyzer sampling systems.
- The valve ensures positive and consistent shut-off with manual and offers a metal to metal seal to atmosphere for leak integrity with thin plate diaphragm.

Technical Data

Body Material	Seat Material	Temperature Rating °F (°C)	Pressure Rating @ -40 ~ 160 °F (-40 ~ 70°C)	Control Volume
SS316L/A276	PCTFE	-40 ~ 150 (-40 ~ 66)	0 ~ 3,500 psig (241 barg)	1 cc
BRASS/B16	PCTFE	-40 ~ 150 (-40 ~ 66)	0 ~ 3,500 psig (241 barg)	1 cc

Material of Construction



Components	Valve Body Materials	
	Stainless Steel	Brass
	Material Grade/ASTM Specification	
1. BODY	SS316L / A276	Brass / B16
2. SEAT	PCTFE	
3. DIAPHRAGM	UNS R30003 (Elgiloy)	
4. STEM	SS316L / A276	
5. BONNET	SS316L / A276	
6. KNOB NUT	Stainless Steel	
7. KNOB	ABS	
8. WASHERS	Stainless Steel	
9. LOCK NUT	Stainless Steel	
10. KNOB CAP	ABS	

Factory Test

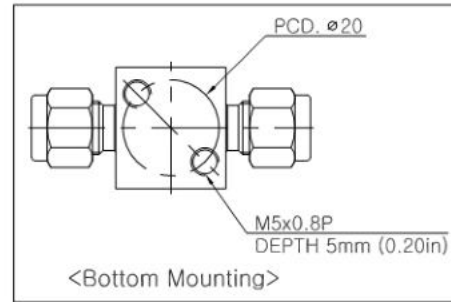
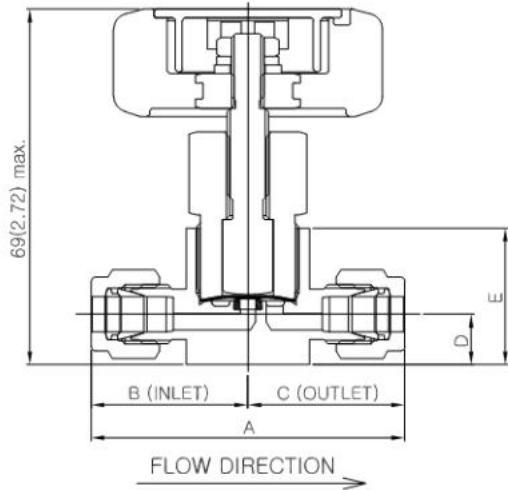
Every valve is factory tested with nitrogen gas @1,000 psig (68.9 barg) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat. Hydraulic shell test is optionally performed at 1.5 times the working pressure to a requirement of no detectable leakage with a liquid leak detector.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01. Special cleaning and packaging in accordance with DK-Lok DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request for valves with PCTFE and PTFE seats.



Dimensions and Port Layout



Basic Ordering Number	End Connections		Orifice mm (in.)	Cv	Dimensions, mm (in.)					
	Inlet (B)	Outlet (C)			A	B	C	D	E	
VD3-	D-4T-	1/4 in. DK-Lok		2.8 (0.11)	0.17	58.6 (2.31)	29.3 (1.15)	29.3 (1.15)	9.4 (0.37)	25.4 (1.00)
	M-4N-	1/4 in. Male NPT				48.4 (1.91)	24.2 (0.95)	24.2 (0.95)		
	F-4N-	1/4 in. Female NPT				50.8 (2.00)	25.4 (1.00)	25.4 (1.00)		
	DF-4T4N-	1/4 in. DK-Lok	1/4 in. Female NPT			54.7 (2.15)	29.3 (1.15)	25.4 (1.00)		
	FD-4N4T-	1/4 in. Female NPT	1/4 in. DK-Lok				25.4 (1.00)	29.3 (1.15)		
	DM-4T4N-	1/4 in. DK-Lok	1/4 in. Male NPT			53.5 (2.11)	29.3 (1.15)	24.2 (0.95)		
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok				24.2 (0.95)	29.3 (1.15)		
	MF-4N4N-	1/4 in. Male NPT	1/4 in. Female NPT			49.6 (1.95)	24.2 (0.95)	25.4 (1.00)		
	FM-4N4N-	1/4 in. Female NPT	1/4 in. Male NPT				25.4 (1.00)	24.2 (0.95)		

How to Order

Select applicable valve basic ordering number, options and body material designator listed below.

VD3-F-4N	- A	- PK	- NI	- S - B
Handle Type	Seat Materials	Plating of Body	Body Material	
Nil : Handwheel A : Indicating Arrow L : Lever	Nil : Standard PCTFE PK : PEEK	Nil : Not Applicable NI : Nickel-plated	S : 316L stainless steel B : Brass	

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-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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