



No. VDB-1
DEC.2021

Low Pressure Manual Block Diaphragm Valves Standard Type

Features

- Maximum flow & Compact designed inner capacity.
- Minimal contributions of moisture, Oxygen and Hydrocarbon, Minimal particle generation.
- DK-LOK's own electropolished.
- DI water cleaned, assembled, tested & packaged in the certified clean room.
- Elgiloy diaphragm material with strong durability as well as corrosion resistance for long cycle life.
- PCTFE seat material with remarkable chemical & thermal resistance.

Specification

Size	1/4"
Cv Value	0.3
Max. Working Pressure	10 bar (145 psig)
Max. Working Temperature	PCTFE : -10° ~ 80°C / PFA, PI : -10° ~ 150°C
Internal Leakage Allowance – He Holding Time ≥ 15 sec	≤ 1x10 ⁻⁹ atm.cc/s
External Leakage Allowance – He Holding Time ≥ 1 min	≤ 1x10 ⁻⁹ atm.cc/s
Particle Inspection (EP Only) Pressure : 60~80psi N2 Gas Sample Volume : 1CFM 0.1 μm and Larger	No count

Product Grade

Level	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25 μm	Ry ≤ 3.0 μm / Ra 10μin	Ry ≤ 0.7 μm / Ra 5μin
	Cut off Length : 2.5mm	Cut off Length : 0.8mm	Cut off Length : 0.25mm
	Measuring Length : 12.5mm	Measuring Length : 4mm	Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish

Material of Construction

Description	Materials
Body	316L Stainless Steel
	316L Stainless Steel VAR
Seat	PCTFE, PFA, PI
Diaphragm	Ni-Co Alloy
Handle	Aluminum

- Wetted Components are listed in [blue](#)

Flow Path Patterns

1F25	1F23	5F12	3F12

Ordering Information and Dimensions

Model	Basic Ordering Number	End	Flow	Dimensions (mm)							
				ℓ	h	H	A	B	L	D	C
	U-VDB4-DF-	1/4" DCR Female	1F25	21.8	11	70	53.8	117.6	64	15	40
	U-VDB4-DF-	1/4" DCR Female	1F23	21.8	11	70	34.8	117.6	64	15	40

How to order

U

DK-LOK
UHP Product

-

VDB

Valve Type

-

4

Size

-

DF

End Connector
Type

-

1F25

Flow Path
patterns

-

SL

Material

-

B

Inner
Surface Level

-

X

User Option

Valve Type	Size	End Connector Type	Flow Path Patterns	Material	Surface Level	User Option
VDB	4 : 1/4"	DF : DCR Female	1F25	SL : 316L Stainless Steel	B : BA Grade	Blank : Standard
			1F23	DL : 316L Stainless Steel VAR	P : EP Grade	X : Customization No.
			5F12			
			3F12			

Note) DCR : DK-Metal Face Seal

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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