VB16 Series Integral Bonnet Needle Valves

Pressure Rating up to 6000 psig
Specification sheet # VB16-2

Jan. 2004

Features

Two-piece chevron-style PTFE stem packing design with compensating disc springs

- reduces packing friction wear
- reduces valve operating torque
- reduces load to seal

Packing is supported by lower and upper Glands as well as compensating disc springs

- reduces need for packing adjustment

Temperature and Pressure Ratings

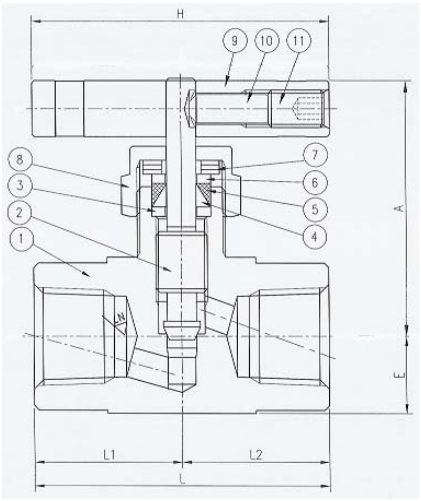
Ratings are based on valves with PFA chevron packing.

Valve Series	Stem	Temperature Rating C (F)	Pressure Rating At 37 C (100 F)
VB16A VB16B	Vee Metal Seat	-53 to 232 (-65 to 450)	413 bar (6000 psi)
	PCTFE Soft Seat	-53 to 93 (-65 to 200)	

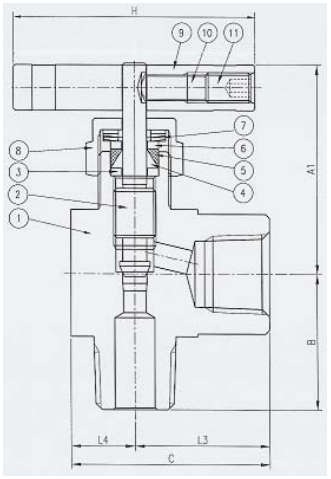
Material of Construction

No.	Component	Material
1	Body	S316L
2	Stem	S316L
3	Lower Gland	S316L
4	Lower Packing	PTFE
5	Upper Packing	PTFE
6	Upper Gland	S316L
7	Packing Springs	17-7PH
8	Gland Nut	S316L
9	Bar Handle	S316
10	Locking Pin	S316
11	Set Screw	S316

Inline pattern



Angle pattern

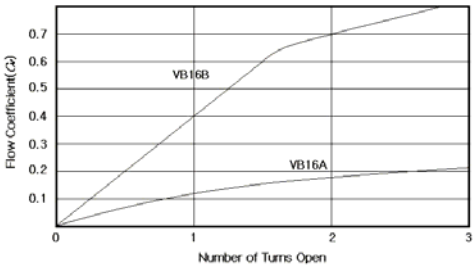


Ordering Information and Table of Dimensions

Unit: mm (in.)

Valve Ordering Number		End Connection Inlet	End Connection Outlet	Dimensions, mm (inch) A	A1	E	B	L	L1	L2	C	L3	D	H
VB16A- Cv 0.21 Orifice: 3.2mm (0.125 in.)	F-4N	1/4" Female NPT		41.7 (1.64)	42.2 (1.66)	11.2 (0.44)	25.4 (1.00)	47.8 (1.88)	23.9 (0.94)		36.6 (1.44)	25.4 (1.00)	10.7 (0.42)	44.4 (1.75)
	M-4N	1/4" Male NPT					-	49.3 (1.94)	24.6 (0.97)					
	F-4R	1/4" Female ISO 7/1						47.8 (1.88)	23.9 (0.94)					
	MF-4N	1/4" Male NPT	1/4" Female NPT		42.2 (1.66)	11.2 (0.44)	26.2 (1.03)	48.5 (1.91)	24.6 (0.97)	23.9 (0.94)	36.6 (1.44)	25.4 (1.00)		
	D-4T	1/4" Dk-Lok					29.5 (1.16)	62.5 (2.46)	31.2 (1.23)		39.9 (1.57)	28.7 (1.13)		
	MD-4N4T	1/4" Male NPT	1/4" Dk-Lok				25.4 (1.00)	-	-	-			-	
VB16B- Cv 0.73 Orifice: 6.4mm (0.250 in.)	F-6N	3/8" Female NPT		58.7 (2.31)	-	-	-	71.4 (2.81)	31.8 (1.25)		-	35.8 (1.41)	16.8 (0.66)	64.0 (2.52)
	F-8N	1/2" Female NPT			58.7 (2.31)	16.8 (0.66)	35.8 (1.41)				52.3 (2.06)			
	F-8R	1/2" Female ISO 7/1			-	-	-				-	31.8 (1.25)		
	MF-6N	3/8" Male NPT	3/8" Female NPT		58.7 (2.31)	16.8 (0.66)	31.0 b (1.22)				52.3 (2.06)	35.8 (1.41)		
	MF-8N	1/2" Male NPT	1/2" Female NPT				35.8 (1.41)	64.8 (2.55)	33.0 (1.30)	31.8 (1.25)		35.6 (1.40)		
	MF-12N8N	3/4" Male NPT	1/2" Female NPT		-	-		63.5 (2.50)	31.8 (1.25)		-	-		
	D-6T	3/8" Dk-Lok						78.2 (3.08)	39.1 (1.54)					
	D-8T	1/2" Dk-Lok						83.8 (3.30)	41.9 (1.65)					

Flow Coefficient at Turns Open



Flow Data

Cv are measured at the valve. Therefore restrictions in end connections may reduce flow.

Factory Test

Every valve is tested with the nitrogen @68 bar (1000 psig) for leakage at the seat to a maximum allowance leak rate of 0.1 scc/min. The stem packing is tested for no detectable leakage.

Dk Tech Corporation
www.dklok.com
www.dklokusa.com