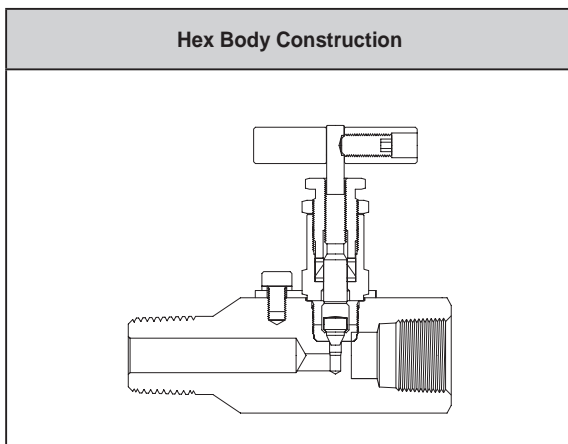


VNH10 Series Bonnet Needle Valves

Working Pressure: 10 000 psig (689 bar) @100° F (37° C)



Pressure-Temperature Ratings

Body Material		SS316		Steel
Packing Material		Grafoil	PTFE	PTFE
Temperature		Working Pressure, psig (bar)		
°F	°C			
- 65 to -20	-53 to -28	10000 (689)	10000 (689)	-
-20 to 100	-28 to 37	10000 (689)	10000 (689)	10000 (689)
200	93	9290 (640)	9290 (640)	9290 (640)
300	148	8390 (578)	8390 (578)	8390 (578)
350	176	8045 (554)	8045 (554)	8045 (554)
400	204	7705 (530)	7705 (530)	-
450	232	7435(512)	7435 (512)	-
500	260	7165 (493)	-	-
600	315	6770 (466)	-	-
700	371	6480 (446)	-	-
800	426	6230 (429)	-	-
900	482	5905 (406)	-	-
1000	537	5450 (375)	-	-
1100	593	4835 (333)	-	-
1200	648	3085 (212)	-	-

Grafoil Packing

Grafoil is a high temperature packing material that requires a load to seal.

Grafoil is rated to the maximum of 973 °F (523 °C) for air service. In steam, it is rated to the maximum temperature of 1200 °F (648 °C).

Grafoil packing is not for use with pneumatic actuating valves.

Features

Stem Back Seating Design

- Provides positive back stop and back sealing in valve full open position.
- Prevents stem blowout.
- In valve in full open position, prevents a leakage through the bonnet if packing fails.

Packing Below Stem Threads

Isolates stem threads from system fluid and lubricant washout.

Two-Piece Chevron PTFE Packing

Provides maximum sealing over stem.

Roll Stem Threads and Hard-Chrome Plated

- Enhances cycle life.
- Low torque actuation.

Non-Rotating Vee Stem

- Ensures repetitive leak-tight shutoff.
- Protects the valve seat from damage.

Body Construction

Construction out of robust cold-drawn Hex / Square bar.

T- bar handle

Allows low-torque valve actuation.

Packing Bolt

Permits external packing adjustment maintaining the valve in-line.

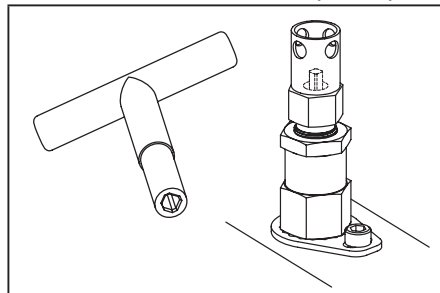
Sturdy Locking Plate

Holds the bonnet valve to the body at the factory-fastened level.

Anti-Tamper Bonnet Valve and Key

With the removal key design, for the valve to be functional, the operator must obtain the separate key. For additional security, valve is designed to enable padlocking in open or closed position to the 6mm (0.236 in.) holes drilled on the bonnet valve.

Therefore the **lockable anti-tamper bonnet valve** prevents unauthorized actuation for the valve. Alternatively the key can be chained to the valve.



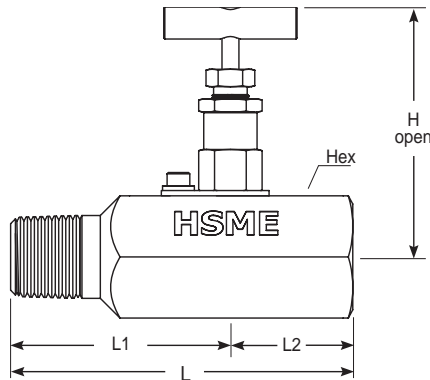
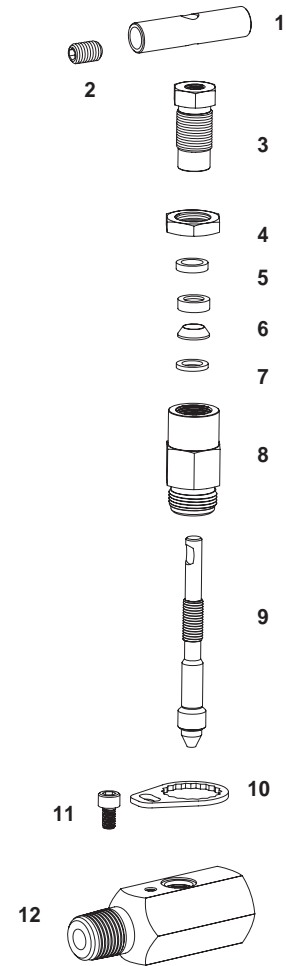
To order, add "AK" to the valve ordering number.

VNH10 Series Bonnet Needle Valves

Components		Valve Body Material	
		Stainless Steel	Steel
		Material Grade / ASTM Standard	
1	Bar Handle	SS316 / A276	
2	Set Screw	Phosphated Steel	
3	Packing Bolt	SS316 / A276	White Zinc plated Steel S45C/ JIS G4051
4	Locking Nut	SS316/A276	
5	Upper Gland		
6	Packing	Standard Chevron PTFE / D1710 Optional Grafoil®	
7	Lower Gland	SS316/A276	
8	Bonnet	SS316/A276	White Zinc plated Steel S45C/ JIS G4051
9	Vee Stem	Hard Chrome-plate SS316/A276	SS316/A276
	Non-Rotating Stem Tip		
10	Locking Plate	Stainless Steel	
11	Locking Bolt		
12	Hex Body	SS316 / A276	White Zinc plated Steel Gr.60-90/A675 Steel S45C/ JIS G4051

- Wetted components and lubricants are listed in **BOLD** letters.
- **Lubricant:** Fluorocarbon-based.

Materials of Construction



Ordering Information and Dimensions

Basic Ordering Number		End Connections		Orifice mm (in.)	CV	Dimensions mm (in.)					
		Inlet	Outlet			L	L1	L2	Hex	A	H
VNH10A-	A4T-	1/4 in. OD M Tube Fitting		3.2 (.126)	0.21	83.0 (3.27)	41.5 (1.63)	41.5 (1.63)	31.75 (1.25)	45.0 (1.77)	67.2 (2.65)
	A6T-	3/8 in. OD M Tube Fitting				86.2 (3.39)	43.1 (1.70)	43.1 (1.70)			
	A8T-	1/2 in. OD M Tube Fitting				92.0 (3.62)	46.0 (1.81)	46.0 (1.81)			
	F4N-	1/4 in. Female NPT				62.0 (2.44)	31.0 (1.22)	31.0 (1.22)			
	F6N-	3/8 in. Female NPT				70.0 (2.76)	35.0 (1.38)	35.0 (1.38)			
	F8N-	1/2 in. Female NPT				76.2 (3.00)	38.1 (1.50)	35.0 (1.38)			
	MF8N- MF12N8N-	1/2 in. Male to 1/2 in. Female NPT 3/4 in. Male to 1/2 in. Female NPT				88.9 (3.50)	44.45 (1.75)	44.45 (1.75)			
VNH10B-	F12N-	3/4 in. Female NPT		5.0 (.196)	0.6	93.9 (3.70)	46.95 (1.85)	46.95 (1.85)	41.0 (1.62)	50.0 (1.97)	83.9 (3.30)
VNH10C-	F16N-	1 in. Female NPT							46.0 (1.81)		92.9 (3.66)