

VN6 Series Bar-Stock Needle Valves

Working Pressure: 6000 psig (413 bar) @ 100° F (37° C)

Features

Integral Bonnet Body

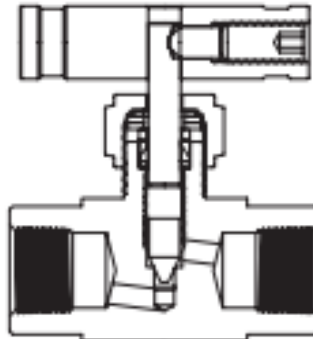
- One-Piece construction out of cold drawn bar.
- Compact design.
- High pressure application.

Live-Loaded Disc Springs

- Maintains load on packing for sealing and compensates for thermal cycling.
- Reduces the need for packing adjustment.

Chevron Packing

- 2-Piece packing on stem improves sealing integrity.



Flow Patterns

- 2-Way Straight Pattern.
- 2-Way Angle Pattern.

Packing Nut

Allows external packing adjustment.

Choices of Stem Tips

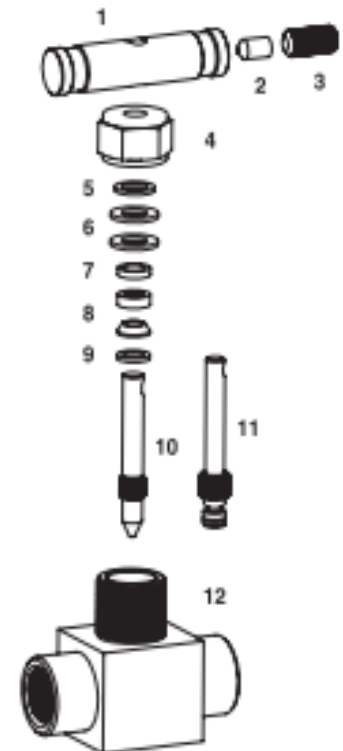
- Standard Vee Stem.
- Soft-Seat Stem.

Roll Stem Threads and Hard-Chrome plating
Ensure extended cycle life.

Materials of Construction

Components		Valve Body Material
		Stainless Steel
		Material Grade / ASTM Standard
1	Bar Handle	SS316 / A276
2	Handle Pin	Stainless Steel
3	Set Screw	Stainless Steel
4	Packing Nut	SS316 / A276
5	Gland	SS316 / A276
6	Disc Spring (2)(3)	SK5ML/JIS G3311 N6A Series: 2 Springs N6B Series: 3 Springs
7	Upper Gland	SS316 / A276
8	Chevron Packing (2)	PTFE / D1710
9	Lower Gland	SS316 / A276
10	Vee Stem	Hard Chrome-plated SS316/A276
11	Soft-Seat Stem	
11	Non-rotating Stem Tip	PCTFE/D1430
12	Body	SS316 / A276

- Wetted parts listed in bold letters
- Wetted parts are lubricated with Fluorocarbon-based.



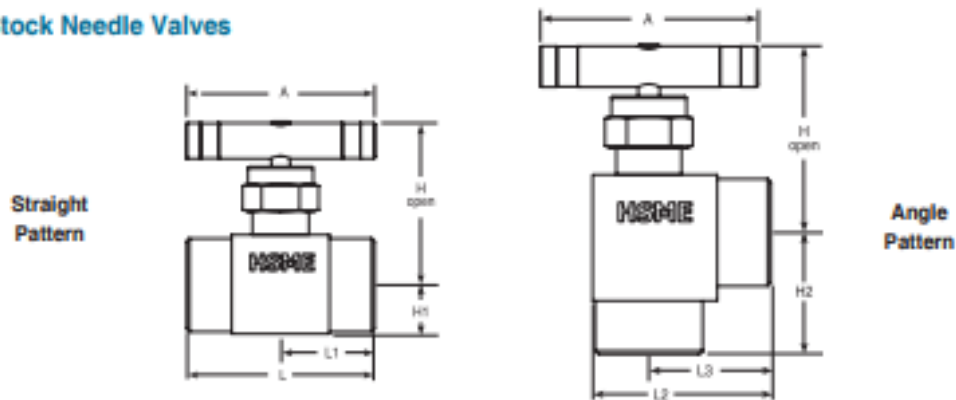
Pressure-Temperature Ratings

Ratings are based on valve with standard "PTFE" packing and Vee stem.

- Valves with PCTFE Stem Tip reduce the maximum temperature rating to 200 °F (93 °C).

Material		SS316
ASME Material Group		TABLE 2-2.2
ASME CLASS Rating		2500
Temperature		Working Pressure,
°F	°C	psig (bar)
-65 to 100	-53 to 37	6000 (413)
200	93	5160 (355)
300	148	4660 (321)
350	176	4470 (307)
400	204	4280 (294)
450	232	4130 (284)

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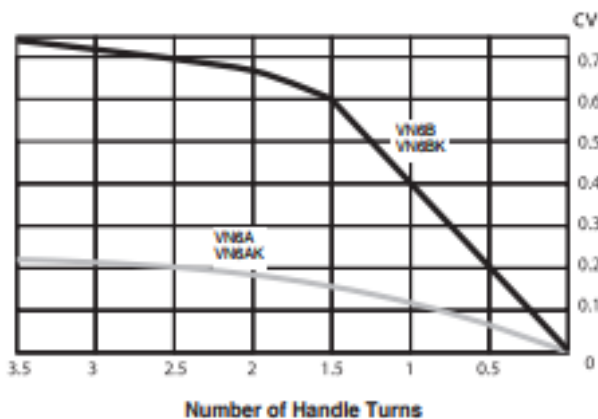


Ordering Information and Dimensions

Complete Ordering Number		End Connections		CV	Orifice mm (in.)	Dimensions mm (in.)							
		Inlet	Outlet			L	L1	L2	L3	H	H1	H2	A
VN6A-	A4T-SS	1/4 in. OD M Tube Fitting		0.21	3.2 (.125)	62.5 (2.46)	31.2 (1.23)	39.9 (1.57)	28.7 (1.13)	42.2 (1.66)	10.7 (0.42)	29.5 (1.16)	44.4 (1.75)
	F4N-SS	1/4 in. Female NPT				47.8 (1.88)	23.9 (1.25)	36.6 (1.44)	25.4 (1.00)			25.4 (1.00)	
	F4R-SS	1/4 in. ISO Female Tapered				•	•	•	•			•	
	M4N-SS	1/4 in. Male NPT				49.3 (1.94)	24.6 (0.97)	•	•			•	
	MF4N-SS	1/4 in. Male NPT to Female NPT				48.5 (1.91)	23.9 (0.94)	36.6 (1.44)	25.4 (1.00)			26.2 (1.03)	
	MA4N4T-SS	1/4 in. Male NPT to 1/4 in. OD M Tube Fitting				•	•	39.9 (1.57)	28.7 (1.13)			25.4 (1.00)	
VN6B-	A6T-SS	3/8 in. OD M Tube Fitting		0.73	6.4 (.250)	78.2 (3.08)	39.1 (1.54)	•	•	58.7 (2.31)	16.8 (0.66)	•	63.5 (2.50)
	A8T-SS	1/2 in. OD M Tube Fitting				83.8 (3.30)	41.9 (1.65)	•	•			•	
	F6N-SS	3/8 in. Female NPT				63.5 (2.50)	31.8 (1.25)	52.3 (2.06)	35.8 (1.41)			35.8 (1.41)	
	F8N-SS	1.2 in. Female NPT				•		•	•			•	
	F8R-SS	1/2 in. ISO Female Tapered				•		•	•			•	
	MF6N-SS	3/8 in. Male NPT to Female NPT				64.8 (2.55)	52.3 (2.06)	35.8 (1.41)	31.0 (1.22)			35.8 (1.41)	
	MF8N-SS	1/2 in. Male NPT to Female NPT				63.5 (2.50)	•	•	•			•	
	MF12N8N-SS	3/4 in. Male NPT to 1/2 in. Female NPT				•	•	•	•			•	

Number of Handle Turns - Cv

@ 100 °F (37 °C) VN6A, VN6B Series



Ordering Information

Select an applicable valve pattern, options from the designator table below.

Step 1. Select the desired valve complete ordering number: VN6A-A4T-SS

Step 1	Step 2	Step 3	Step 4
VN6A-A4T-SS	VN6AK-A4T-SS	•	•
	•	VN6A-A4T-A-SS	VN6A-A4T-A-SG-SS

Designator Table

Step 2. Stem
• Nil: Standard Vee Stem
• K: PCTFE Soft-Seat Stem
Step 3. Flow Pattern
• Nil: Straight Pattern
• A: Angle Pattern
Step 4. Sour Gas Service
• SG-