

Needle Valve

NV7 Series



- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ One-piece forged body, nonrotating-Stem
- ❖ Straight and angle patterns
- ❖ Stainless steel, brass, and alloy 400 materials

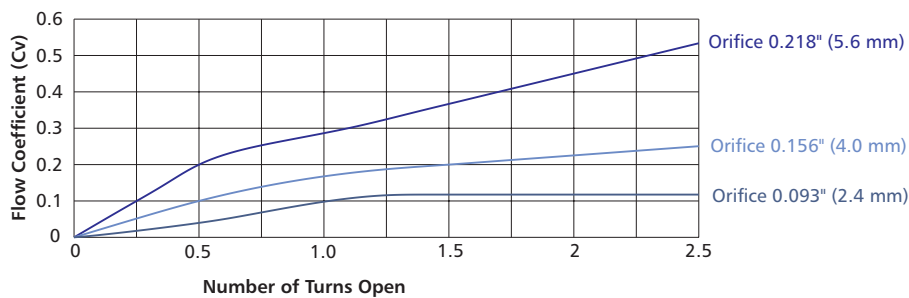
Features

- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ One-piece forged body, nonrotating-Stem design
- ❖ Handle prevents contaminants from entering functional parts
- ❖ Replaceable stem tip facilitates maintenance
- ❖ Straight and angle patterns
- ❖ Stainless steel, brass, and alloy 400 materials

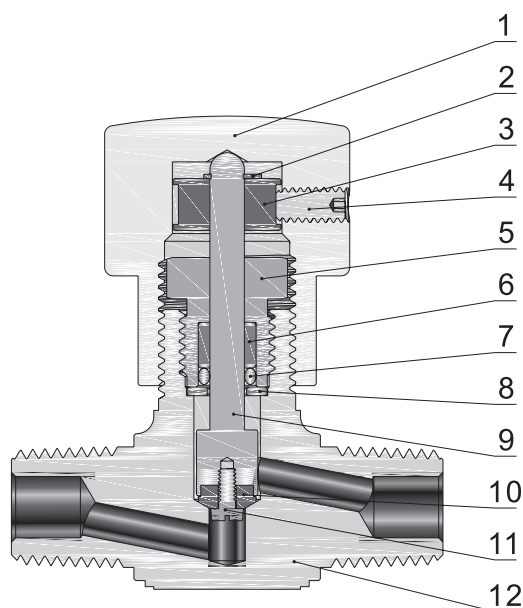
Pressure vs. Temperature

ASME Class	1500				N/A	
Material Group	2.2		3.4		N/A	
Material Name	316 S.S.		Alloy 400		Alloy C-276	
Stem Tip Material	PCTFE	PEEK	PCTFE	PEEK	PCTFE	PEEK
Temperature, °F (°C)	Working Pressure, psig (bar)					
-20 (-28) to 100 (37)	3000 (206)	3000 (206)	3000 (206)	3000 (206)	2000 (206)	3000 (206)
150 (93)	2790 (192)	2790 (192)	2675 (184)	2675 (184)	2820 (194)	2820 (194)
200 (121)	2580 (177)	2580 (177)	2350 (161)	2350 (161)	2640 (181)	2640 (181)
250 (148)	—	2455 (169)	—	2200 (151)	—	2555 (176)
300 (204)	—	2330 (160)	—	2050 (141)	—	2470 (170)
350 (232)	—	2235 (153)	—	1220 (84.0)	—	2430 (167)
400 (260)	—	2140 (147)	—	390 (26.8)	—	2390 (164)
450 (315)	—	2065 (142)	—	—	—	2380 (163)

Flow Data at 100°F (38°C)

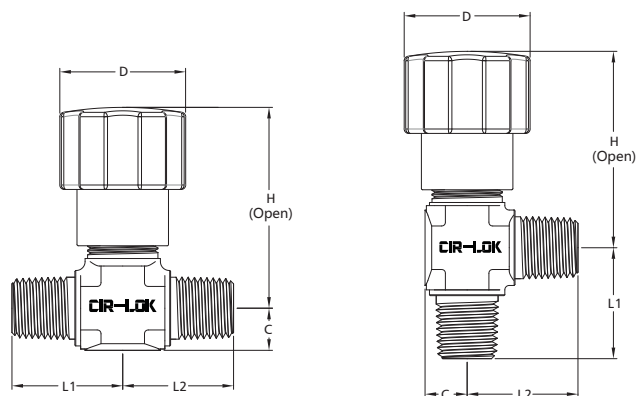


Standard Materials of Construction



Item	Component	Material Grade/ASTM Specification			
		316 S.S.	304 S.S.	Brass	Alloy 400
1	Handle	Anodized aluminum			
2	Pin	Stainless steel			
3	Spool	Aluminum			
4	Set Screw	Nickel cadmium-plated steel			
5	Packing Bolt	316 S.S./A479	304 S.S./A479	Brass 360/B16	Alloy R-405/B164
6	Backup Ring	PTFE/D1710			
7	O-ring	Fluorocarbon FKM			
8	Washer	316 S.S./A479			Alloy R-405/B164
9	Stem	316 S.S./A479			Alloy R-405/B164
10	Stem Tip	PCTFE or PEEK			
11	Screw	316 S.S./A479			Alloy R-405/B164
12	Body	316 S.S./A182	316 S.S./A182	Brass 377/B283	Alloy 400/B564

Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)				
				L1	L2	C	D	H
NV7-NPT2-02-	1/8 Male NPT	0.09 (2.4)	0.12	0.75 (19.0)	0.75 (19.0)	0.31 (7.9)	1.06 (26.9)	1.86 (47.2)
NV7-NPT2-F2-02-	1/8 Male NPT to 1/8" CIR-LOK			0.75 (19.0)	1.1 (27.9)			
NV7-F2-02-	1/8" CIR-LOK			1.1 (27.9)	1.1 (27.9)			
NV7-M3-02-	3 mm CIR-LOK							
NV7-FNPT2-04-	1/8 Female NPT	0.156 (4.0)	0.27	0.81 (20.6)	0.81 (20.6)	0.39 (9.9)	1.06 (26.9)	1.86 (47.2)
NV7-NPT2-04-	1/8 Male NPT			0.86 (21.8)	0.86 (21.8)			
NV7-NPT4-04-	1/4 Male NPT			25.0 (0.98)	25.0 (0.98)			
NV7-NPT4-F4-04-	1/4 Male NPT to 1/4" CIR-LOK			25.0 (0.98)	1.13 (28.7)			
NV7-F4-04-	1/4" CIR-LOK			1.13 (28.7)				
NV7-M6-04-	6 mm CIR-LOK							
NV7-M8-04-	8 mm CIR-LOK							
NV7-FNPT4-06-	1/4 Female NPT	0.218 (5.6)	0.53	1.06 (26.9)	1.06 (26.9)	0.5 (12.7)	1.12 (28.4)	2.02 (51.3)
NV7-FNPT6-06-	3/8 Female NPT			1.12 (28.6)	1.12 (28.6)			
NV7-NPT6-06-	3/8 Male NPT			1.29 (32.8)	1.29 (32.8)			
NV7-F6-06-	3/8" CIR-LOK			1.4 (35.6)	1.4 (35.6)			
NV7-F8-06-	1/2" CIR-LOK			1.3 (33.0)	1.3 (33.0)			
NV7-M10-06-	10 mm CIR-LOK			1.4 (35.6)	1.4 (35.6)			
NV7-M12-06-	12 mm CIR-LOK			1.50 (38.1)	1.50 (38.1)			
NV7-MS20-06-	M20 x 1.5 Male ISO							
NV7-MS22-06-	M22 x 1.5 Male ISO							

How to Order

NV7 — **NPT8** — **F6** — **06P** — **Z** — **LA** — **316**

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Tip Material	O-Ring Material	Handle	Flow Pattern	Body Material
NV7	FNPT Female NPT	2 1/8in.	Same as inlet type and inlet size		02 0.093 in. (2.4 mm)	PCTFE	Fluorocarbon FKM	Black Round	Straight	316 316 S.S. 316L 316L S.S. 304 304 S.S. 304L 304L S.S. A400 Alloy 400 A20 Alloy 20 BR Brass
	NPT Male NPT	4 1/4in.								
	FBT Female BSPT	6 3/8in. or 6 mm								
	MBT Male BSPT	8 1/2in. or 8 mm	If outlet and inlet are the same, eliminate the outlet designator	04 0.157 in. (4.0 mm)	P PEEK	B Buna N	R Red Round	A Angle		
	FMS Female ISO								10 10 mm	
	MS Male ISO								12 3/4in. or 12 mm	
	FBP Female BSPP									
	MBP Male BSPP									
	F Fractional Tube Fitting									
	M Metric Tube Fitting									
					E Ethylene Propylene	G Green Round				
					N Neoprene	L Blue Round				
					Z Kalrez					