

Needle Valve

NV11 Series



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- ❖ Maximum working pressure up to 10000 psig (689 bar)
- ❖ Working temperature from -65°F to 1200°F (-53°C to 648°C)
- ❖ Straight and angle patterns
- ❖ One-piece forged
- ❖ Upper stem and lower stem design, Stem threads above packing protected from system media
- ❖ Panel mounting available

Features

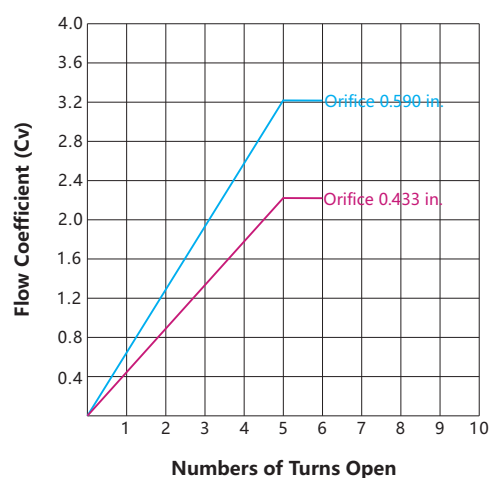
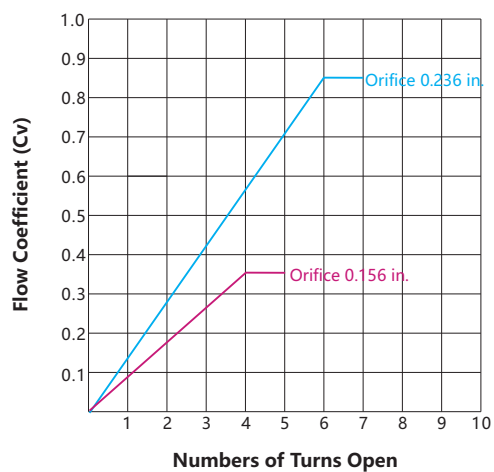
- ❖ Stem Designs:
 - Blunt
 - Regulating
- ❖ Orifice Sizes:
 - 0.156 in. (4.0 mm)
 - 0.236 in. (6.0 mm)
 - 0.433 in. (11.0mm)
 - 0.590 in. (15.0mm)
- ❖ Flow Coefficients (Cv): From 0.35 to 3.27
- ❖ Flow Patterns: Straight/Angle

Pressure-Temperature Ratings

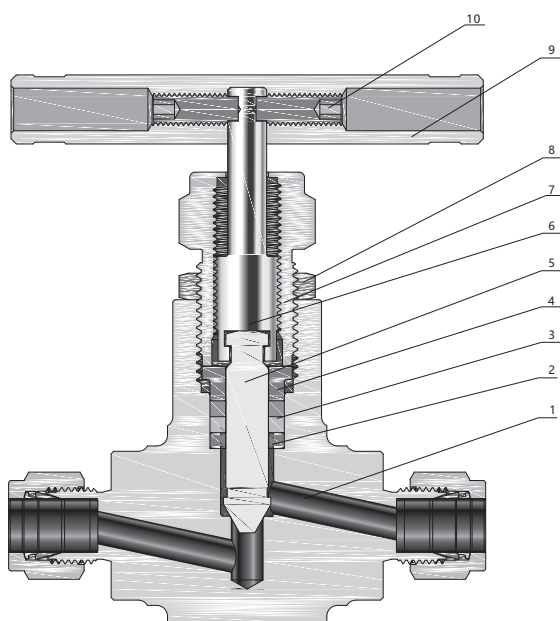
- ❖ Ratings are based on manual valves with optional Grafoil packing ; Ratings are limited to :
 - 250°F (121°C) max with UHMWPE stem packing
 - 450°F (232°C) max with PTFE stem tip or stem packing
 - 600°F (315°C) max with PEEK stem packing

ASME Class	N/A
Material Group	N/A
Material Name	316 S.S.
Temperature,°F (°C)	Working Pressure psig(bar)
-65 (-53) to 100 (37)	10000 (689)
200 (93)	9290 (640)
250 (121)	8840 (609)
300 (148)	8390 (578)
350 (176)	8045 (554)
400 (204)	7705 (530)
450 (232)	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)

Flow Data at 100°F (37°C)



Standard Materials of Construction



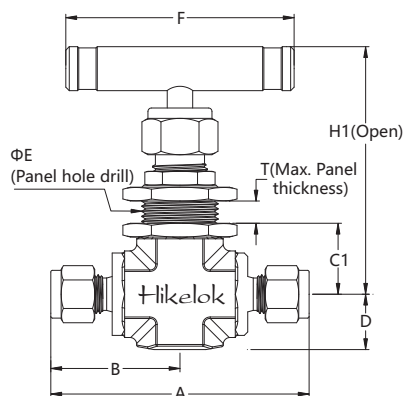
Component		Material Grade/ASTM Specification		
1	Body	316 S.S./A182	<i>Alloy 400/B564</i>	<i>Alloy C-276/B564</i>
2	Gland	316 S.S./A479	<i>Alloy 400/B164</i>	<i>Alloy C-276/B574</i>
3	Packing	PTFE/D1710		
4	Gland	316 S.S./A276		
5	Lower Stem	316 S.S./A479	<i>Alloy 400/B164</i>	<i>Alloy C-276/B574</i>
6	Upper Stem	316 S.S./A479		
7	Lock Nut	630 S.S./B783		
8	Packing Nut	316 S.S./ A276 or A479		
9	Handle	6061/B211		
10	Screw	Galvnized Alloy Steel/A193		

❖ Wetted components listed in *italics*

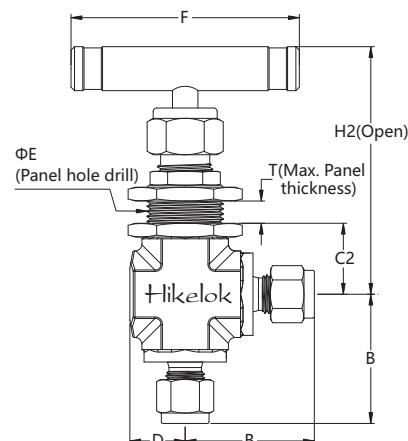
❖ Testing

Every NV11 series needle valves is factory tested with nitrogen at 1000 psig (68.9 bar) and water at 10,000 psig (689 bar). Seats have a maximum allowable leak rate of 0.1 std cm³/min. Shell testing is performed to a requirement of no detectable leakage with a liquid leak detector.

Dimensions



Straight Pattern



Angle Pattern

Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)									
				A	B	C1	C2	D	E	F	T	H1	H2
NV11-FNPT2-04	1/8 Female NPT	0.156 (4.0)	0.35	2.36 (60.0)	1.18 (30)								
NV11-FNPT4-04	1/4 Female NPT												
NV11-F2-04	1/8" Hikelok			2.89 (73.5)	1.45 (36.8)								
NV11-F4-04	1/4" Hikelok			2.94 (74.7)	1.47 (37.4)								
NV11-M6-04	6 mm Hikelok			2.94 (74.8)	1.47 (37.4)	0.80 (20.5)	0.80 (20.5)	0.63 (16.0)	0.91 (23.0)	2.60 (66.0)	0.25 (6.4)	2.78 (70.5)	2.78 (70.5)
NV11-M8-04	8 mm Hikelok			2.95 (75.0)	1.48 (37.5)								
NV11-FSW4-04	1/4" Fractional Tube Socket Weld												
NV11-FSW6-04	3/8" Fractional Tube Socket Weld			2.36 (60.0)	1.18 (30)								
NV11-MSW6-04	6 mm Metric Tube Socket Weld												
NV11-MSW8-04	8 mm Metric Tube Socket Weld												
NV11-FNPT6-06	3/8 Female NPT	0.236 (6.0)	0.85	2.95 (75.0)	1.48 (37.5)								
NV11-FNPT8-06	1/2 Female NPT												
NV11-F6-06	3/8" Hikelok			3.54 (89.8)	1.77 (44.9)								
NV11-F8-06	1/2" Hikelok			3.76 (95.4)	1.88 (47.7)								
NV11-M10-06	10 mm Hikelok			3.55 (90.2)	1.78 (45.1)	1.10 (28.0)	0.87 (22.0)	0.73 (18.5)	1.09 (27.8)	3.50 (88.9)	0.37 (9.5)	3.70 (93.9)	3.46 (87.9)
NV11-M12-06	12 mm Hikelok			3.75 (95.2)	1.87 (47.6)								
NV11-FSW8-06	1/2" Fractional Tube Socket Weld												
NV11-FSW12-06	3/4" Fractional Tube Socket Weld			2.95 (75.0)	1.48 (37.5)								
NV11-MSW10-06	10 mm Metric Tube Socket Weld												
NV11-MSW12-06	12 mm Metric Tube Socket Weld												
NV11-FNPT8-11	1/2 Female NPT	0.433 (11.0)	2.18	3.35 (85.0)	1.67 (42.5)								
NV11-FNPT12-11	3/4 Male NPT												
NV11-F12-11	3/4" Hikelok			4.14 (105.2)	2.07 (52.6)								
NV11-MBW14-11	14mm Metric Tube Butt Weld												
NV11-MBW16-11	16mm Metric Tube Butt Weld					1.43 (36.3)	1.04 (26.3)	1.02 (25.9)	1.36 (34.5)	4.13 (105)	0.394 (10.0)	4.56 (115.7)	4.16 (105.7)
NV11-FSW8-11	1/2" Fractional Tube Socket Weld			3.35 (85.0)	1.67 (42.5)								
NV11-FSW12-11	3/4" Fractional Tube Socket Weld												
NV11-MSW14-11	14 mm Metric Tube Socket Weld												
NV11-MSW16-11	16 mm Metric Tube Socket Weld												
NV11-MBW18-15	18mm Metric Tube Butt Weld												
NV11-MBW20-15	20mm Metric Tube Butt Weld	0.590 (15.0)	3.27										
NV11-MBW25-15	25mm Metric Tube Butt Weld												
NV11-FSW16-15	1" Fractional Tube Socket Weld			3.86 (98.0)	1.93 (49.0)	1.75 (44.5)	1.30 (33.0)	1.18 (30.0)	1.56 (39.5)	5.00 (127.0)	0.315 (8.0)	5.49 (139.5)	5.04 (128.0)
NV11-MSW20-15	20mm Metric Tube Socket Weld												
NV11-MSW25-15	25mm Metric Tube Socket Weld												

How to Order

NV11 — F4 — F6 — 06R — GY — R1 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Tip Type	Packing Material	Panel Mounting	Handle	Flow pattern	Body Material
NV11	FNPT Female NPT	4 1/4 in.	Same as inlet type and inlet size	04	0.157 in. (4.0 mm)	Blunt	PTFE	No	Black Aluminum Bar	Straight	316 316 S.S.
	NPT Male NPT	6 3/8 in. or 6 mm		06	0.236 in. (6.0 mm)	R Regulating	G Graphite	Y Yes	Red Aluminum Bar	A1 Angle	316L 316L S.S.
	FBT Female BSPT	8 1/2 in. or 8 mm	If outlet and inlet are the same, eliminate the outlet designator	11	0.433 in. (11 mm)	S Stellite	P PEEK		Green Aluminum Bar		304 304 S.S.
	MBT Male BSPT	10 10 mm		15	0.591 in. (15 mm)	P Peek	PE UHMWPE		Blue Aluminum Bar		304L 304L S.S.
	FMS Female ISO 261					K Pctfe					321 321 S.S.
	MS Male ISO 261										347 347 S.S.
	FBP Female BSPP	12 3/4 in. or 12 mm									
	MBP Male BSPP	14 14 mm or M14 x 1.5									
	F Fractional Tube Fitting	16 1 in. or 16 mm									
	M Metric Tube Fitting	18 18 mm									
	UGF Nut + Gasket + Fractional Bulge Nipple	20 1 1/4 in. or 20 mm or M20 x 1.5									
	UGM Nut + Gasket + Metric Bulge Nipple										
	FSW Fractional Tube Socket Weld	22 22 mm or M22 x 1.5									
	MSW Metric Tube Socket Weld										
	FBW Fractional Tube Butt Weld										
	MBW Metric Tube Butt Weld										
	PSW Pipe Socket Weld										
	PBW Pipe Butt Weld										