

Needle Valve

NV2 Series



- ❖ Maximum working pressure up to 10000 psig (689 bar)
- ❖ Working temperature from -65°F to 1200°F (-53°C to 648°C)
- ❖ One-piece heavy wall forged body
- ❖ Straight and angle patterns
- ❖ Upper stem and lower stem design

Features

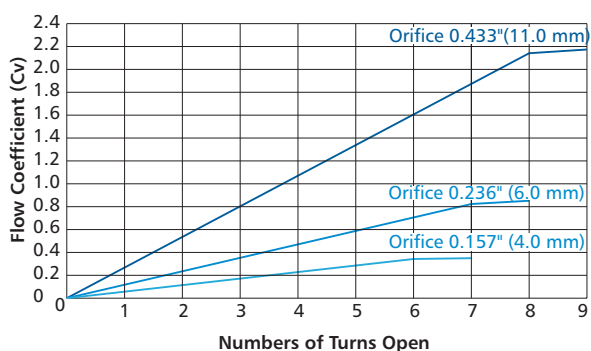
- ❖ Maximum working pressure up to 10000 psig (689 bar)
- ❖ One-piece heavy wall forged body
- ❖ Working temperature from -65°F to 1200°F (-53°C to 648°C)
- ❖ Straight and angle patterns
- ❖ Upper stem and lower stem design, Stem threads above packing protected from system media
- ❖ Safety back seating needle in fully open position
- ❖ Panel mounting available
- ❖ Optional handle colors available

Pressure vs. Temperature

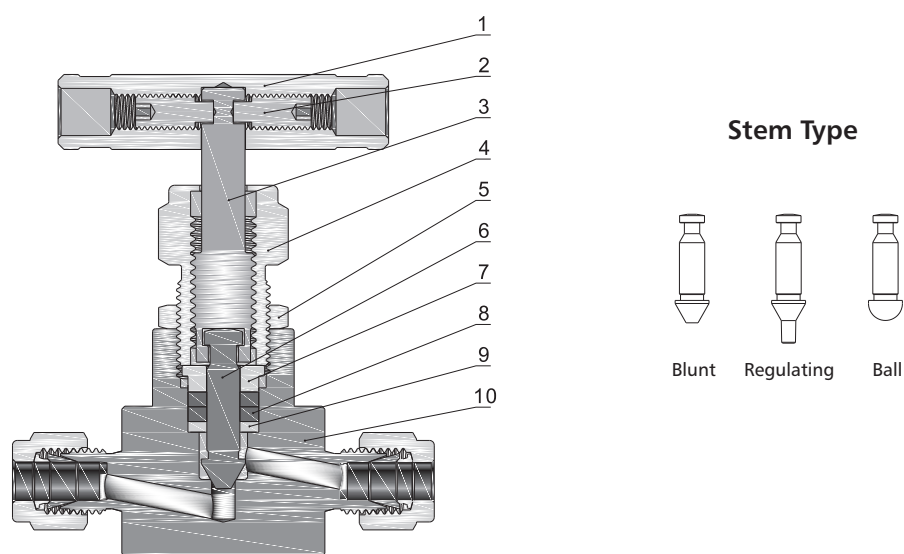
ASME Class	4500					N/A
Material Group	2. 2	2. 8	3. 4	3. 1	3. 5	N/A
Material Name	316 S.S.	F53 S.S.	Alloy 400	Alloy 20	Alloy 600	Alloy C-276
Temperature, F (°C)	Working Pressure, psig (bar)					
-65 (-53) to 100 (37)	10000 (689)	10000 (689)	10000 (689)	10000 (689)	10000 (689)	10000 (689)
200 (93)	9290 (640)	9607 (662)	7920 (546)	10000 (689)	10000 (689)	10000 (689)
250 (121)	8840 (609)	9509 (655)	7667 (528)	9711 (669)	9711 (669)	9711 (669)
300 (148)	8390 (578)	9411 (649)	7415 (511)	9408 (648)	9408 (648)	9408 (648)
350 (176)	8045 (554)	9313 (642)	7290 (502)	9323 (642)	9323 (642)	9323 (642)
400 (204)	7705 (530)	9215 (635)	7165 (494)	9239 (637)	9239 (637)	9239 (637)
450 (232)	7435 (512)	8927 (615)	7147 (492)	9144 (630)	9144 (630)	9144 (630)
500 (260)	7165 (493)	8640 (595)	7130 (491)	9060 (624)	9060 (624)	9060 (624)
600 (315)	6770 (466)	8350 (575)	7130 (491)	9070 (625)	9070 (625)	9070 (625)
650 (343)	6660 (458)	8245 (568)	—	8825 (608)	8825 (608)	8825 (608)
700 (371)	6480 (446)	8135 (561)	—	8515 (587)	8515 (587)	8515 (587)
750 (398)	6335 (436)	7970 (549)	—	7970 (549)	7970 (549)	7970 (549)
800 (426)	6230 (429)	—	—	7610 (524)	7610 (524)	7610 (524)
850 (454)	6085 (419)	—	—	—	7305 (503)	7305 (503)
900 (482)	5905 (406)	—	—	—	6740 (464)	6740 (464)
950 (510)	5795 (399)	—	—	—	4905 (338)	5795 (399)
1000 (537)	5450 (375)	—	—	—	3240 (223)	5450 (375)
1050 (565)	5400 (372)	—	—	—	2085 (143)	4835 (333)
1100 (593)	4835 (333)	—	—	—	1390 (95)	4115 (283)
1150 (621)	4115 (283)	—	—	—	1020 (70)	2775 (191)
1200 (648)	3085 (212)	—	—	—	925 (63)	1620 (111)

Flow Data at 100°F (37°C)

Regulating Stem



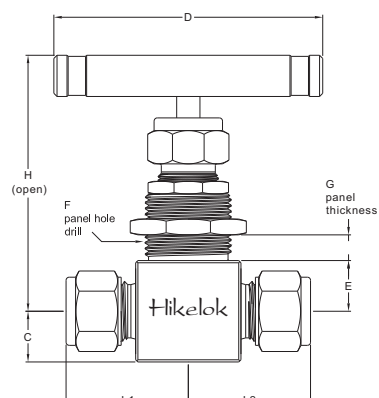
Standard Materials of Construction



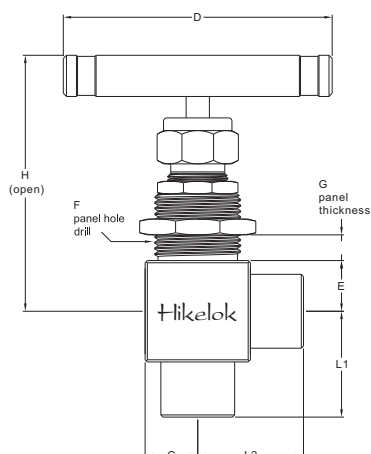
Component		Material Grade/ASTM Specification		
		316 S.S.	F91	F92
1	Handle	Anodized aluminum or stainless steel		
2	Screw	Nickel cadmium-plated steel		
3	Upper Stem	316 S.S. / A276		
4	Packing Bolt	316 S.S. / A276		
5	Nut	316 S.S./B783		
6	Lower Stem	Chrome-plated 316 S.S. / A276	Chrome-plated F91/A182	Chrome-plated F91/A182
7	Gland	316 S.S. / A276	F91/A182	F91/A182
8	Packing	PTFE or PEEK or graphite		
9	Packing Washer	316 S.S. / A276	F91/A182	F91/A182
10	Body	316 S.S. / A182	F91/A182	F91/A182
11	Seat	Weld stellite seat optional		

Dimensions

Straight Pattern



Angle Pattern



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)							
				L1	L2	C	D	E	F	G	H
NV2-FNPT2-04-	1/8 Female NPT	0.157 (4.0)	0.35								
NV2-FNPT4-04-	1/4 Female NPT			1.13 (28.6)	1.13 (28.6)						
NV2-FNPT4-NPT4-04-	1/4 Female to Male NPT										
NV2-NPT4-04-	1/4 Male NPT					0.53 (13.5)	2.17 (55)	0.53 (13.5)	0.25 (6.4)	0.96 (24.4)	2.85 (72.5)
NV2-F4-04-	1/4" Hikelok										
NV2-M6-04-	6 mm Hikelok			1.41 (35.8)	1.41 (35.8)						
NV2-M8-04-	8 mm Hikelok										
NV2-FSW4-04-	1/4" FSW	0.236 (6.0)	0.85	1.13 (28.6)	1.13 (28.6)						
NV2-FNPT4-06-	1/4 Female NPT			1.31 (33.4)	1.31 (33.4)						
NV2-FNPT6-06-	3/8 Female NPT										
NV2-FNPT8-06-	1/2 Female NPT										
NV2-F6-06-	3/8" Hikelok			1.41 (35.8)	1.41 (35.8)						
NV2-F8-06-	1/2" Hikelok			1.52 (38.6)	1.52 (38.6)						
NV2-M10-06-	10 mm Hikelok			1.42 (36.1)	1.42 (36.1)	0.625 (15.88)	2.50 (63.5)	0.625 (15.88)	0.38 (9.7)	1.09 (27.7)	3.5 (88.9)
NV2-M12-06-	12 mm Hikelok			1.52 (38.6)	1.52 (38.6)						
NV2-M14-06-	14 mm Hikelok			1.56 (39.7)	1.56 (39.7)						
NV2-FSW6-06-	3/8" FSW										
NV2-FSW8-06-	1/2" FSW			1.31 (33.4)	1.31 (33.4)						
NV2-MSW12-06-	12 mm MSW										
NV2-MSW14-06-	14 mm MSW										
NV2-FNPT8-11-	1/2 Female NPT	0.433 (11.0)	2.18	1.56 (39.6)	1.56 (39.6)						
NV2-FNPT12-11-	3/4 Female NPT			1.63 (41.3)	1.63 (41.3)						
NV2-F12-11-	3/4" Hikelok										
NV2-M14-11-	14 mm Hikelok			1.97 (50.0)	1.97 (50.0)	0.875 (22.2)	3.5 (88.9)	0.875 (22.2)	0.38 (9.7)	1.28 (32.5)	4.17 (106)
NV2-M16-11-	16 mm Hikelok										
NV2-M18-11-	18 mm Hikelok										
NV2-MSW14-11-	14 mm MSW										
NV2-MSW16-11-	16 mm MSW			1.56 (39.7)	1.56 (39.7)						

How to Order

NV2— MBW8 — FNPT8— S06S — GY — LA — 316

Series	Inlet Type	Inlet Size	Outlet Outlet Type Size	Seat Material	Orifice Size	Tip Material	Tip Type	Packing Material	Panel Mounting	Handle	Flow Pattern	Body Material
NV2	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size	Same as Body	04 0.157 in. (4.0 mm)	Same as Body	Blunt	PTFE	No	Black Aluminum Bar	Straight	316 316 S.S.
	NPT Male NPT	4 1/4 in.		S Stellite	06 0.236 in. (6.0 mm)	S Stellite	R Regulating	G Graphite	Y Yes	Red Aluminum Bar	A Angle	316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		11 0.433 in. (11 mm)		A Ball			Green Aluminum Bar		304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm			15 0.591 in. (15 mm)					Blue Aluminum Bar		304L 304L S.S.
	FMS Female ISO	10 10 mm			20 0.787 in. (20 mm)					304 Stainless Steel Bar		321 321 S.S.
	MS Male ISO	12 3/4 in. or 12 mm										F91 F91
	FBP Female BSPP	14 14 mm or M14 x 1.5										F91 F92
	MBP Male BSPP	16 1 in. or 16 mm										A400 Alloy 400
	F Fractional Tube Fitting	18 18 mm										A20 Alloy 20
	M Metric Tube Fitting	20 1 1/4 in. or 20 mm or M20 x 1.5										A600 Alloy 600
	UGF Nut + Gasket + Fractional Bulge Nipple	22 22 mm or M22 x 1.5										A825 Alloy 825
	UGM Nut + Gasket + Metric Bulge Nipple	24 M24 x 1.5										A276 Alloy C276
	FSW Fractional Tube Socket Weld	25 25 mm										DU7 Duplex 2507
	MSW Metric Tube Socket Weld	27 M27 x 2										BR Brass
	FBW Fractional Tube Butt Weld	28 28 mm										
	MBW Metric Tube Butt Weld											
	PSW Pipe Socket Weld											
	PBW Pipe Butt Weld											