

Needle Valves



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Valves and Fittings

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For Example: **SS-BN-MN 2-FN 2-3-11c-A**

Material	Series	Inlet or Outlet	Size	Orifice	Stem	Type
SS: SS 316	BN: BN Series	FN: Female Npt	2: 1/8"	3: 3mm	11a	A: Angle
S9: SS 904L	BNH: BNH Series	MN: Male Npt	3: 3/16" or 3mm	4: 4mm	11b	3W: 3-way
S4: SS 304	FN: FN Series	FR: Female BSPT	4: 1/4"	5: 5.1mm	11c	
S2: SS 321	FNH: FNH Series	MR: Male BSPT	5: 5/16"	6: 6.4mm		
M4: Monle 400	UBN: UBN Series	FT: Fractional Tube	6: 3/8" or 6mm	7: 7.5mm		
I6: Inconle 625	UBNH: UBNH Series	MT: Metric Tube	8: 1/2" or 8mm	9: 9.1mm		
HC: Hastelly C 276	RPN: RPH Series	BW: Butt Weld	10: 5/8" or 10mm	12: 12.2mm		
B: Brass		SW: Socket Weld	12: 3/4" or 12mm	15: 15mm		
CS: Cabon Steel			16: 1" or 16mm			

Integral Bonnet Needle Valves

BN Series: Maximum working pressure 3000 psig

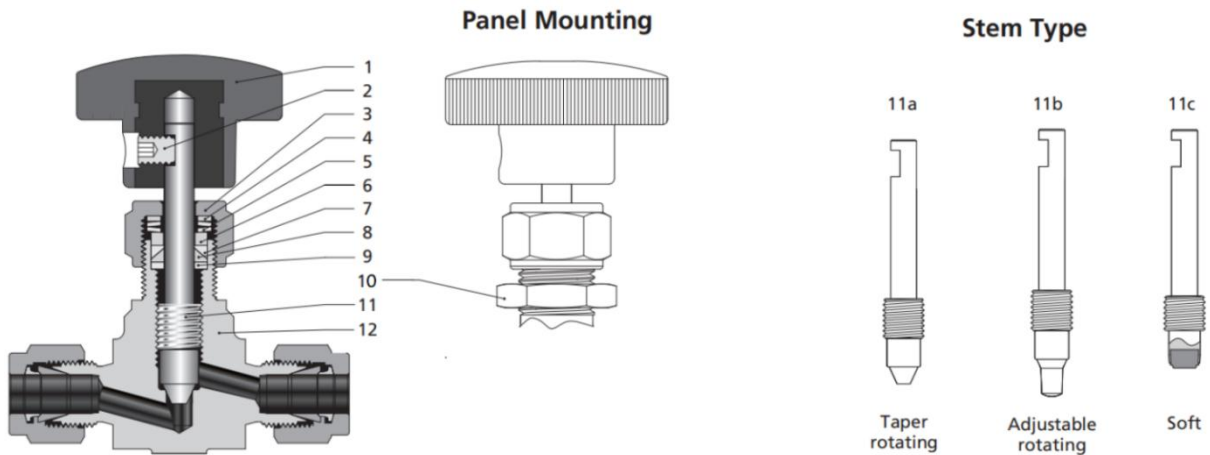
BNH Series: Maximum working pressure 5000 psig

Features

- ⦿ One-piece forged body.
- ⦿ Easy external adjustments by packing nut.
- ⦿ Compact design.
- ⦿ Handle color options are available.
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure.
- ⦿ Maximum working pressure:
 - BN Series—Stainless steel: 3000 psig (207 bar)
 - BNH Series—Stainless steel: 5000 psig (345 bar)
- ⦿ Working temperature:
 - PTFE: -65°F to 450°F (-54°C to 232°C)
 - PEEK: -65°F to 500°F (-54°C to 260°C)



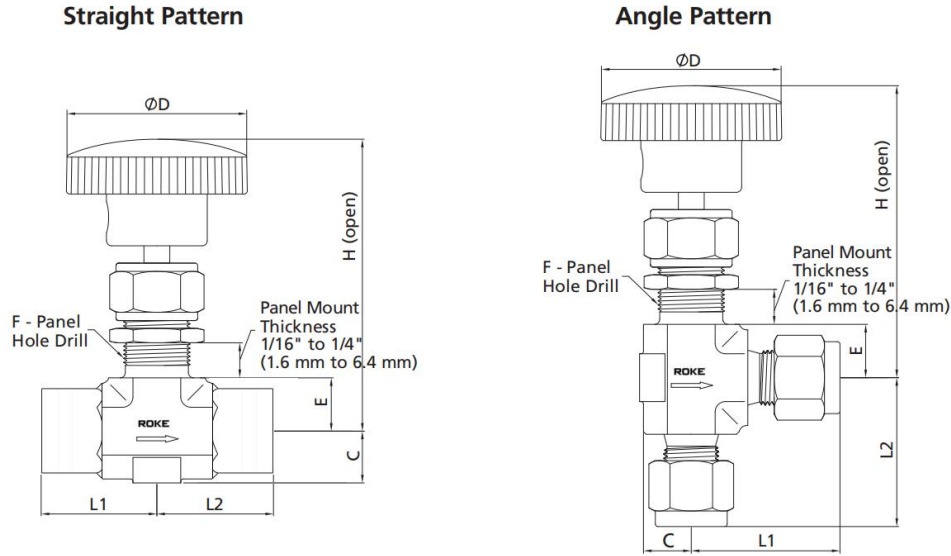
Standard Materials of Construction



Item	Component	Valve Body Material		
		316 SS	Brass	Steel
1	Handle	Anodized aluminum or stainless steel or black knob		
2	Set Screw	Stainless steel		
3	Packing Bolt	304 SS/A276	Brass C36000/B16	Alloy 400/B164
4	Washer	316 SS/A276		
5	Packing Spring	S17700/A693		
6	Washer	316 SS/A276		
7	Upper Packing	PTFE/PEEK		
8	Lower Packing			
9	Packing Washer	316 SS/A276		
10	Panel Nut	17-4PH		
11a	Stem	Chrome-plated 316 SS/A276		
11b	Stem	PCTFE/D1430	PEEK	
11c	Stem	Chrome-plated 316 SS/A276		
12	Body	316 SS/A182	Brass C37700/B283	Alloy

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Dimensions



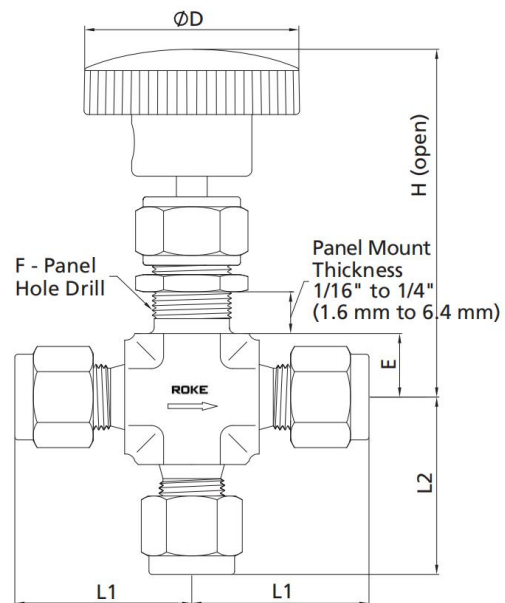
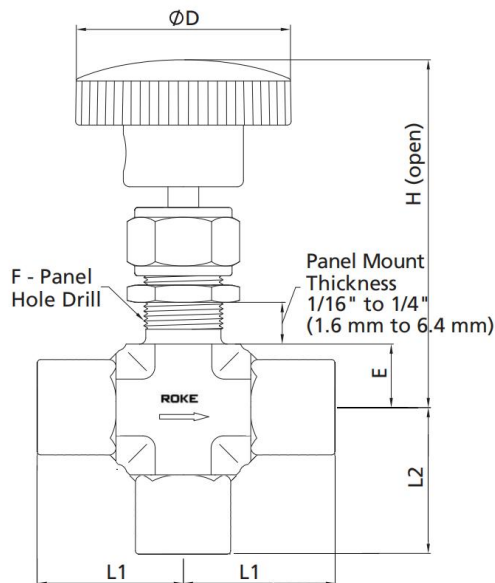
Dimensions of BN Series

Basic Ordering Number	Connection Type and Size		Orifice in.(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-BN-FN2-3	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	0.97 (24.6)	0.97 (24.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.38 (35.0)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FN6-5	3/8 Female NPT	3/8 Female NPT	0.2 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FN8-6	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.75 (19.1)	1.88 (47.8)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-FN12-7	3/4 Female NPT	3/4 Female NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MN2-3	1/8 Male NPT	1/8 Male NPT	0.08 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MN6-5	3/8 Male NPT	3/8 Male NPT	0.2 (5.1)	0.56	1.12 (28.4)	1.12 (28.4)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MN8-6	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MN12-7	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-FT2-2	1/8" Tube	1/8" Tube	0.12 (3.0)	0.20	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FT6-5	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FT12-7	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MT3-2	3 mm	3 mm	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT6-4	6 mm	6 mm	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT8-4	8 mm	8 mm	0.16 (4.0)	0.35	1.17 (29.6)	1.17 (29.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT10-5	10 mm	10 mm	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT14-6	14 mm	14 mm	0.25 (6.4)	0.70	1.56 (39.7)	1.56 (39.7)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT18-7	18 mm	18 mm	0.29 (7.5)	0.95	1.75 (44.5)	1.75 (44.5)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MT20-7	20 mm	20 mm	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)

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Dimensions of BNH Series

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-BNH-FN2-3	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FN6-5	3/8 Female NPT	3/8 Female NPT	0.2 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FN8-6	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-FN12-7	3/4 Female NPT	3/4 Female NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MN2-3	1/8 Male NPT	1/8 Male NPT	0.08 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MN6-5	3/8 Male NPT	3/8 Male NPT	0.2 (5.1)	0.56	1.12 (28.4)	1.12 (28.4)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MN8-6	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MN12-7	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-FT2-2	1/8" Tube	1/8" Tube	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FT6-5	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FT12-7	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MT3-2	3 mm	3 mm	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT6-4	6 mm	6 mm	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT8-4	8 mm	8 mm	0.16 (4.0)	0.35	1.17 (29.6)	1.17 (29.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT10-5	10 mm	10 mm	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT14-6	14 mm	14 mm	0.25 (6.4)	0.70	1.56 (39.7)	1.56 (39.7)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT18-7	18 mm	18 mm	0.29 (7.5)	0.95	1.75 (44.5)	1.75 (44.5)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MT20-7	20 mm	20 mm	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)



4 Needle Valves

Dimensions of BN 3-Way Series

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-BN-FN2-3-3W	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	2.50 (63.5)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FN4-4-3W	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	2.97 (75.5)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FN6-5-3W	3/8 Female NPT	3/8 Female NPT	0.2 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	2.97 (75.5)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FN8-6-3W	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.75 (19.1)	3.91 (93.3)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-FN12-7-3W	3/4 Female NPT	3/4 Female NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.91 (93.3)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MN2-3-3W	1/8 Male NPT	1/8 Male NPT	0.08 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	2.50 (63.5)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MN4-4-3W	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	2.50 (63.5)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MN6-5-3W	3/8 Male NPT	3/8 Male NPT	0.2 (5.1)	0.56	1.12 (28.4)	1.12 (28.4)	0.50 (12.7)	2.97 (75.5)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MN8-6-3W	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.50 (12.7)	2.97 (75.5)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MN12-7-3W	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.91 (93.3)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-FT2-2-3W	1/8" Tube	1/8" Tube	0.12 (3.0)	0.20	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FT4-4-3W	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-FT6-5-3W	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FT8-6-3W	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-FT12-9-3W	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MT3-2-3W	3 mm	3 mm	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT6-4-3W	6 mm	6 mm	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT8-4-3W	8 mm	8 mm	0.16 (4.0)	0.35	1.17 (29.6)	1.17 (29.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BN-MT10-5-3W	10 mm	10 mm	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT12-6-3W	12 mm	12 mm	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT14-6-3W	14 mm	14 mm	0.25 (6.4)	0.70	1.56 (39.7)	1.56 (39.7)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BN-MT18-7-3W	18 mm	18 mm	0.29 (7.5)	0.95	1.75 (44.5)	1.75 (44.5)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BN-MT20-7-3W	20 mm	20 mm	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)

Dimensions of BNH 3-Way Series

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-BNH-FN2-3-3W	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FN4-4-3W	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FN6-5-3W	3/8 Female NPT	3/8 Female NPT	0.2 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FN8-6-3W	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-FN12-7-3W	3/4 Female NPT	3/4 Female NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MN2-3-3W	1/8 Male NPT	1/8 Male NPT	0.08 (3.0)	0.20	0.81 (21.6)	0.81 (21.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MN4-4-3W	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MN6-5-3W	3/8 Male NPT	3/8 Male NPT	0.2 (5.1)	0.56	1.12 (28.4)	1.12 (28.4)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MN8-6-3W	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MN12-7-3W	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.63 (41.3)	1.63 (41.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)

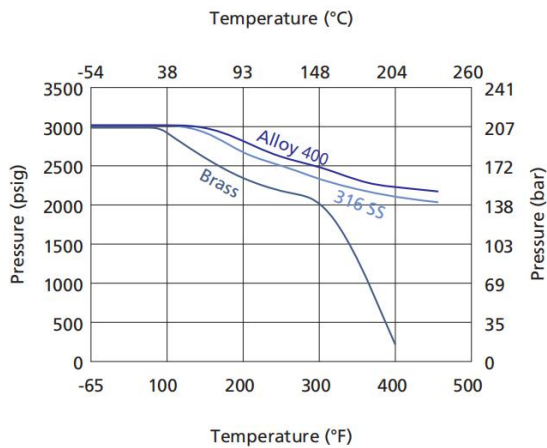
5 Needle Valves

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-BNH-FT2-2-3W	1/8" Tube	1/8" Tube	0.12 (3.0)	0.20	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FT4-4-3W	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-FT6-5-3W	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FT8-6-3W	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-FT12-9-3W	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MT3-2-3W	3 mm	3 mm	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT6-4-3W	6 mm	6 mm	0.16 (4.0)	0.35	1.12 (28.4)	1.12 (28.4)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT8-4-3W	8 mm	8 mm	0.16 (4.0)	0.35	1.17 (29.6)	1.17 (29.6)	0.39 (10.0)	1.38 (35.0)	0.44 (11.2)	0.53 (13.5)	2.50 (63.5)
-BNH-MT10-5-3W	10 mm	10 mm	0.20 (5.1)	0.56	1.29 (32.8)	1.29 (32.8)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT12-6-3W	12 mm	12 mm	0.25 (6.4)	0.70	1.40 (35.6)	1.40 (35.6)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT14-6-3W	14 mm	14 mm	0.25 (6.4)	0.70	1.56 (39.7)	1.56 (39.7)	0.50 (12.7)	1.88 (47.8)	0.50 (12.7)	0.78 (19.8)	2.97 (75.5)
-BNH-MT18-7-3W	18 mm	18 mm	0.29 (7.5)	0.95	1.75 (44.5)	1.75 (44.5)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)
-BNH-MT20-7-3W	20 mm	20 mm	0.29 (7.5)	0.95	1.90 (48.3)	1.90 (48.3)	0.75 (19.1)	3.00 (76.2)	0.75 (19.1)	1.03 (26.2)	3.91 (93.3)

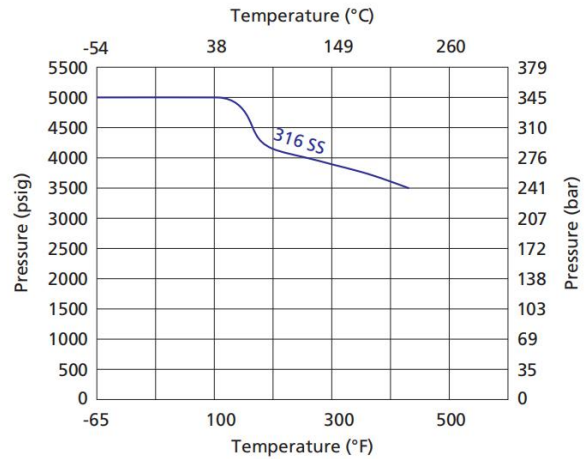
1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact the authorized representative or ROKE employees.

Pressure vs. Temperature

BN Series

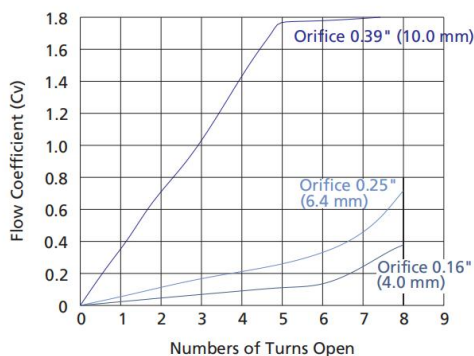


BNG Series



Flow Data at 100°F (38°C)

Regulating Stem



Integral Forged Needle Valves

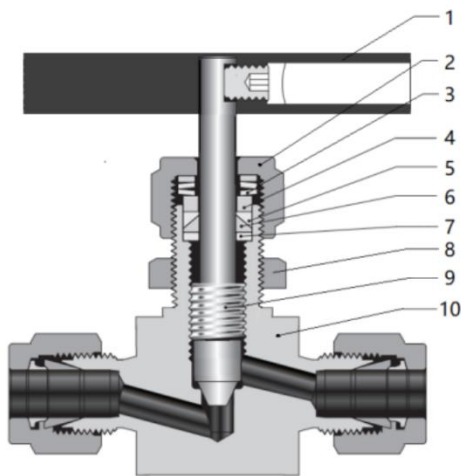
FN Series: Maximum working pressure 6000 psig

Features

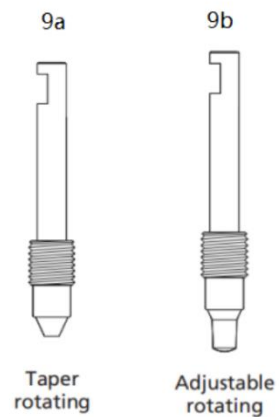
- ⦿ One-piece forged body.
- ⦿ Panel mounting available as an option.
- ⦿ Steady and durable fastening of the handle by double lock-pins.
- ⦿ Handle color options are available.
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure.
- ⦿ Maximum working pressure:
 - NF Series—Stainless steel: 6000 psig (414 bar)
 - Alloy C-276: 6000 psig (414 bar)
 - Alloy 400: 5000 psig (345 bar)
 - Titanium: 3500 psig (241 bar)
 - Brass: 3000 psig (207 bar)
- ⦿ Working temperature:
 - PTFE: -65°F to 450°F (-54°C to 232°C)
 - PEEK: -65°F to 500°F (-54°C to 260°C)
 - Graphite: -65°F to 820°F (-54°C to 454°C)



Standard Materials of Construction

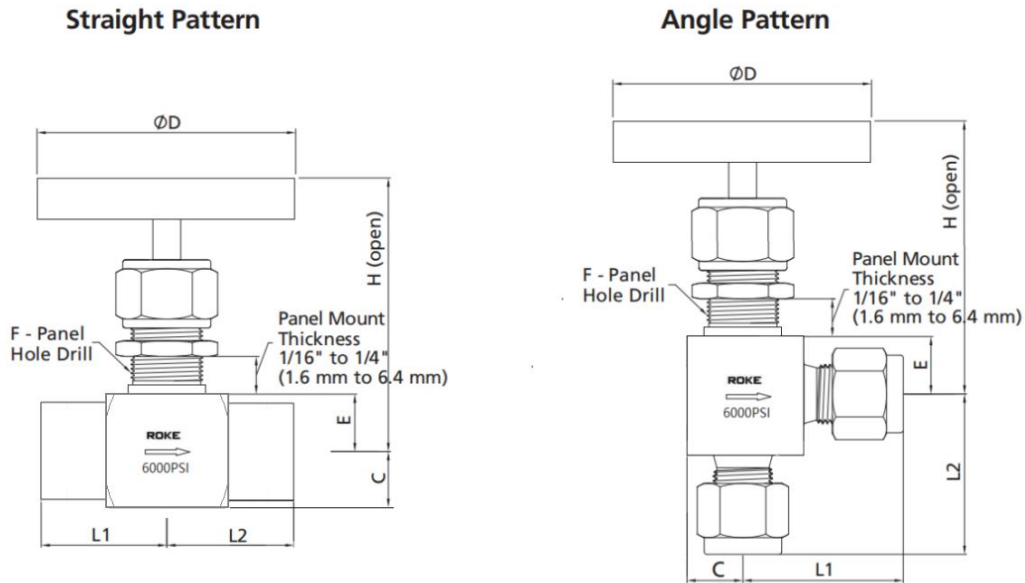


Stem Type



Item	Component	Valve Body Material		
		316 SS	Brass	Steel
1	Handle	Anodized aluminum or stainless steel or black knob		
2	Packing Nut	304 SS/A276	Brass C36000/B16	Alloy 400/B164
3	Packing Spring	S17700/A693		
4	Washer	316 SS/A276		
5	Upper Packing	PTFE/PEEK		
6	Lower Packing			
7	Packing Washer	316 SS/A276		
8	Panel Nut	17-4PH		
9	Stem	Chrome-plated 316 SS/A276		
10	Body	316 SS/A182	Brass C37700/B283	Alloy

Dimensions



Dimensions of FN Series

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-FN-FN2-3	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.47 (12.0)	2.05 (52.0)	0.47 (12.0)	0.63 (16.0)	3.35 (85.0)
-FN-FN6-5	3/8 Female NPT	3/8 Female NPT	0.20 (5.1)	0.56	1.14 (29.0)	1.14 (29.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-FN8-6	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.26 (32.0)	1.26 (32.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.71 (18.0)	3.78 (96.0)
			0.29 (7.5)	0.95	1.26 (32.0)	1.26 (32.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-FN12-9	3/4 Female NPT	3/4 Female NPT	0.36 (9.1)	1.60	1.30 (33.0)	1.30 (33.0)	0.71 (18.0)	2.36 (60.0)	0.71 (18.0)	0.79 (20.0)	3.94 (100)
-FN-FN16-12	1 Female NPT	1 Female NPT	0.48 (12.2)	2.65	1.42 (36.0)	1.42 (36.0)	0.87 (22.0)	2.76 (70.0)	0.87 (22.0)	0.94 (24.0)	4.17 (106)
-FN-MN2-3	1/8 Male NPT	1/8 Male NPT	0.12 (3.0)	0.20	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-MN6-5	3/8 Male NPT	3/8 Male NPT	0.20 (5.1)	0.56	1.14 (29.0)	1.14 (29.0)	0.47 (12.0)	2.05 (52.0)	0.47 (12.0)	0.63 (16.0)	3.35 (85.0)
-FN-MN8-6	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.30 (33.0)	1.30 (33.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-MN12-7	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.42 (36.0)	1.42 (36.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-MN16-9	1 Male NPT	1 Male NPT	0.36 (9.1)	1.60	1.61 (41.0)	1.61 (41.0)	0.71 (18.0)	2.36 (60.0)	0.71 (18.0)	0.79 (20.0)	3.94 (100)
-FN-SW2-3	1/8 Soket Weld	1/8 Soket Weld	0.12 (3.0)	0.20	0.94 (23.8)	0.94 (23.8)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-SW4-4	1/4 Soket Weld	1/4 Soket Weld	0.16 (4.0)	0.35	0.98 (25.0)	0.98 (25.0)	0.47 (12.0)	2.05 (52.0)	0.47 (12.0)	0.63 (16.0)	3.35 (85.0)
-FN-SW6-5	3/8 Soket Weld	3/8 Soket Weld	0.20 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-SW8-6	1/2 Soket Weld	1/2 Soket Weld	0.25 (6.4)	0.70	1.14 (29.0)	1.14 (29.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.71 (18.0)	3.78 (96.0)
			0.29 (7.5)	0.95	1.14 (29.0)	1.14 (29.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-SW12-9	3/4 Soket Weld	3/4 Soket Weld	0.36 (9.1)	1.60	1.14 (29.0)	1.14 (29.0)	0.71 (18.0)	2.36 (60.0)	0.71 (18.0)	0.79 (20.0)	3.94 (100)
-FN-SW16-12	1 Soket Weld	1 Soket Weld	0.48 (12.2)	2.65	1.30 (33.0)	1.30 (33.0)	0.87 (22.0)	2.76 (70.0)	0.87 (22.0)	0.94 (24.0)	4.17 (106)

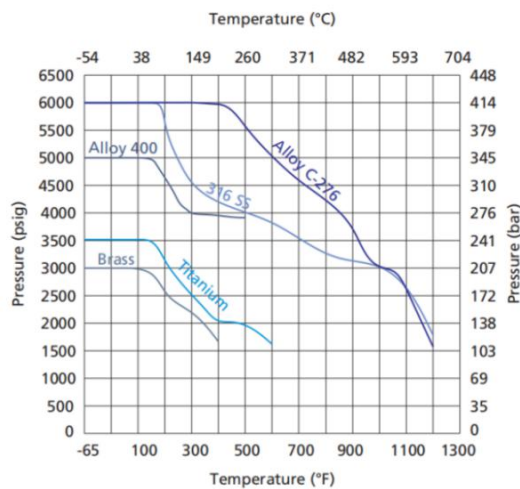
8 Needle Valves

Dimensions of FN Series

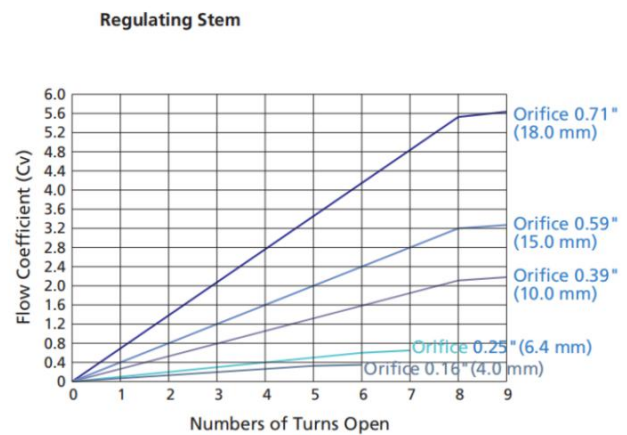
Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-FN-FT2-2	1/8" Tube	1/8" Tube	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.14 (29.0)	1.14 (29.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-FT6-5	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.30 (33.0)	1.30 (33.0)	0.47 (12.0)	2.05 (52.0)	0.47 (12.0)	0.63 (16.0)	3.35 (85.0)
-FN-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.42 (36.0)	1.42 (36.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-FT12-9	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.89 (48.0)	1.89 (48.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-FT16-12	1" Tube	1" Tube	0.36 (9.1)	1.60	2.05 (52.0)	2.05 (52.0)	0.71 (18.0)	2.36 (60.0)	0.71 (18.0)	0.79 (20.0)	3.94 (100)
-FN-MT3-2	3 mm	3 mm	0.08 (2.0)	0.09	0.98 (25.0)	0.98 (25.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-MT6-4	6 mm	6 mm	0.16 (4.0)	0.35	1.14 (29.0)	1.14 (29.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-MT8-4	8 mm	8 mm	0.16 (4.0)	0.35	1.14 (29.0)	1.14 (29.0)	0.39 (10.0)	1.77 (45.0)	0.39 (10.0)	0.63 (16.0)	3.23 (82.0)
-FN-MT10-5	10 mm	10 mm	0.20 (5.1)	0.56	1.30 (33.0)	1.30 (33.0)	0.47 (12.0)	2.05 (52.0)	0.47 (12.0)	0.63 (16.0)	3.35 (85.0)
-FN-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.42 (36.0)	1.42 (36.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-MT14-6	14 mm	14 mm	0.25 (6.4)	0.70	1.57 (40.0)	1.57 (40.0)	0.51 (13.0)	2.17 (55.0)	0.51 (13.0)	0.71 (18.0)	3.62 (92.0)
-FN-MT18-7	18 mm	18 mm	0.29 (7.5)	0.95	1.81 (46.0)	1.81 (46.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-MT20-7	20 mm	20 mm	0.29 (7.5)	0.95	1.89 (48.0)	1.89 (48.0)	0.63 (16.0)	2.17 (55.0)	0.63 (16.0)	0.79 (20.0)	3.78 (96.0)
-FN-MT25-9	25 mm	25 mm	0.36 (9.1)	1.60	2.05 (52.0)	2.05 (52.0)	0.71 (18.0)	2.36 (60.0)	0.71 (18.0)	0.79 (20.0)	3.94 (100)

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact the authorized representative or ROKE employees.

Pressure vs. Temperature



Flow Data at 100°F (38°C)



Forged Needle Valves

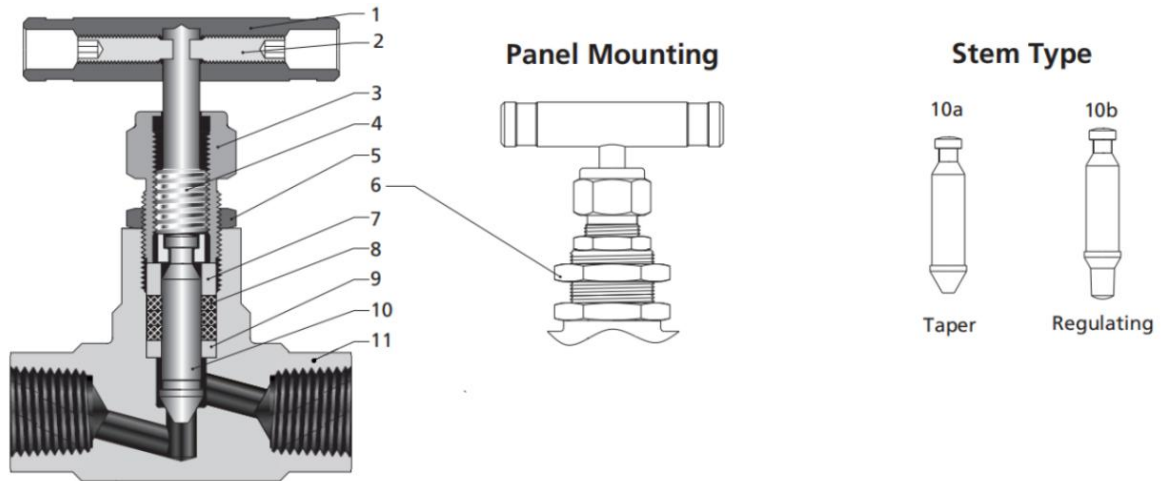
FNH Series: Maximum working pressure 10000 psig

Features

- ⦿ One-piece forged body.
- ⦿ Two-stem design: thread hardened upper stem and smooth surface hardened lower stem.
- ⦿ Linearly instead of helical movement of the nonrotating lower stem, avoiding galling damage to the seat and tip, as well as reducing the total friction area between the packing and the lower stem.
- ⦿ Panel mounting available as an option.
- ⦿ Steady and durable fastening of the handle by double lock-pins.
- ⦿ Handle color options are available.
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure.
- ⦿ Maximum working pressure:
NFH Series—Stainless steel: 10000 psig (689 bar)
- ⦿ Working temperature:
PTFE: -65°F to 450°F (-54°C to 232°C)
PEEK: -65°F to 500°F (-54°C to 260°C)
Graphite: -65°F to 820°F (-54°C to 454°C)



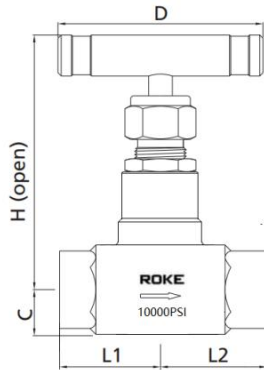
Standard Materials of Construction



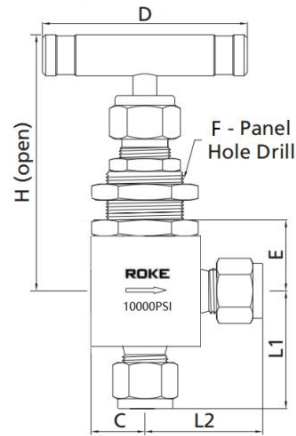
Item	Component	Valve Body Material		
		316 SS	F91	F92
1	Handle	Anodized aluminum or stainless steel or black knob		
2	Set Screw	Stainless steel		
3	Packing Bolt	304 SS/A276		
4	Upper Stem	316 SS/A276	F91/A182	F92/A182
5	Lock Nut	316 SS/B783		
6	Panel Nut	17-4PH		
7	Gland	316 SS/A276	F91/A182	F92/A182
8	Packing	PTFE or PEEK or graphite		
9	Packing Washer	316 SS/A276	F91/A182	F92/A182
10a 10b	Lower Stem	Chrome-plated 316 SS/A276	Chrome-plated F91/A182	Chrome-plated F92/A182
11	Body	316 SS/A182	F91/A182	F92/A182

Dimensions

Straight Pattern



Angle Pattern



Dimensions of FNH Series

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-FNH-FN2-3	1/8 Female NPT	1/8 Female NPT	0.12 (3.0)	0.20	1.00 (25.4)	1.008 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-FN6-5	3/8 Female NPT	3/8 Female NPT	0.20 (5.1)	0.56	1.14 (29.0)	1.14 (29.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-FN8-6	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.70	1.26 (32.0)	1.26 (32.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-FN8-7			0.29 (7.5)	0.95	1.26 (32.0)	1.26 (32.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-FN12-9	3/4 Female NPT	3/4 Female NPT	0.36 (9.1)	1.60	1.58 (40.0)	1.58 (40.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-FN16-12	1 Female NPT	1 Female NPT	0.48 (12.2)	2.65	1.97 (50.0)	1.97 (50.0)	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)
-FNH-MN2-3	1/8 Male NPT	1/8 Male NPT	0.12 (3.0)	0.20	1.00 (25.4)	1.008 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	1.06 (27.0)	1.06 (27.0)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-MN6-5	3/8 Male NPT	3/8 Male NPT	0.20 (5.1)	0.56	1.14 (29.0)	1.14 (29.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-MN8-6	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-MN12-7	3/4 Male NPT	3/4 Male NPT	0.29 (7.5)	0.95	1.58 (40.0)	1.58 (40.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-MN16-9	1 Male NPT	1 Male NPT	0.36 (9.1)	1.60	1.97 (50.0)	1.97 (50.0)	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)
-FNH-SW2-3	1/8 Soket Weld	1/8 Soket Weld	0.12 (3.0)	0.20	0.94 (23.8)	0.94 (23.8)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-SW4-4	1/4 Soket Weld	1/4 Soket Weld	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-SW6-5	3/8 Soket Weld	3/8 Soket Weld	0.20 (5.1)	0.56	1.06 (27.0)	1.06 (27.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-SW8-6	1/2 Soket Weld	1/2 Soket Weld	0.25 (6.4)	0.70	1.14 (29.0)	1.14 (29.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-SW12-9	3/4 Soket Weld	3/4 Soket Weld	0.36 (9.1)	1.60	1.26 (32.0)	1.26 (32.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-SW16-12	1 Soket Weld	1 Soket Weld	0.48 (12.2)	2.65	1.58 (40.0)	1.58 (40.0)	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)

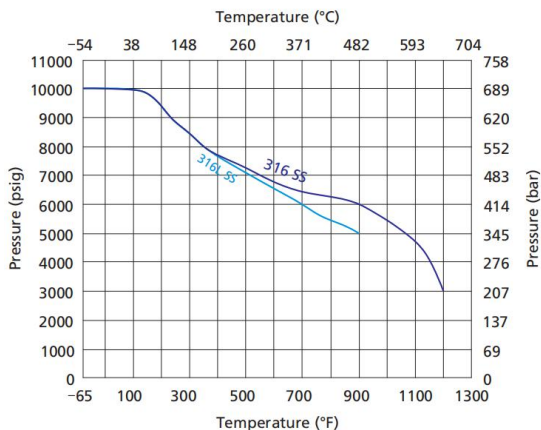
Dimensions of FNH Series

Basic Ordering Number	Connection Type and Size		Orifice in.(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-FNH-FT2-2	1/8" Tube	1/8" Tube	0.08 (2.0)	0.09	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-FT6-6	3/8" Tube	3/8" Tube	0.20 (5.1)	0.56	1.44 (36.5)	1.30 (33.0)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-FT12-10	3/4" Tube	3/4" Tube	0.29 (7.5)	0.95	1.97 (50.0)	1.97 (50.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-FT16-15	1" Tube	1" Tube	0.36 (9.1)	1.60	2.35 (59.7)	2.35 (59.7)	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)
-FNH-MT3-2	3 mm	3 mm	0.08 (2.0)	0.09	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-MT6-4	6 mm	6 mm	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-MT8-4	8 mm	8 mm	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-FNH-MT10-5	10 mm	10 mm	0.20 (5.1)	0.56	1.50 (38.1)	1.50 (38.1)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-MT14-6	14 mm	14 mm	0.25 (6.4)	0.70	1.50 (38.1)	1.50 (38.1)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-FNH-MT18-7	18 mm	18 mm	0.29 (7.5)	0.95	1.97 (50.0)	1.97 (50.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-MT20-7	20 mm	20 mm	0.29 (7.5)	0.95	1.97 (50.0)	1.97 (50.0)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-FNH-MT25-9	25 mm	25 mm	0.36 (9.1)	1.60	2.35 (59.7)	2.35 (59.7)	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)

- Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
- Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
- For dimensions not shown above, please contact the authorized representative or ROKE employees.

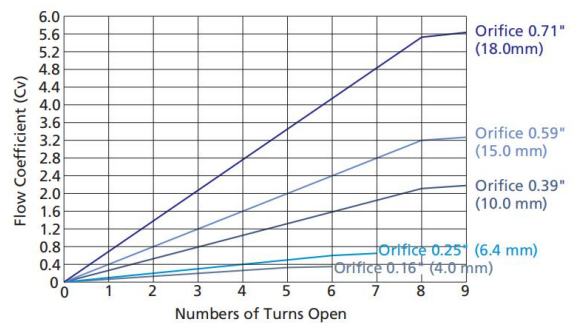
Pressure vs. Temperature

FNH Series



Flow Data at 100°F (38°C)

Regulating Stem



Union Bonnet Needle Valves

UN Series: Maximum working pressure 6000 psig

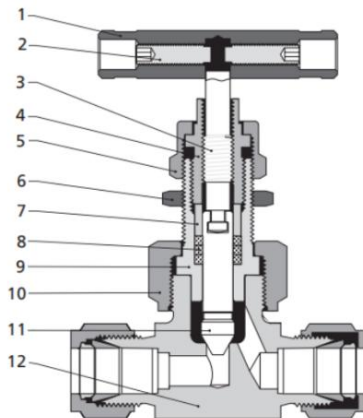
UNH Series: Maximum working pressure 10000 psig

Features

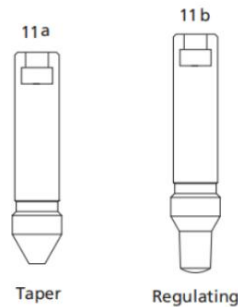
- ⦿ One-piece forged body.
- ⦿ Two-stem design: thread hardened upper stem and smooth surface hardened lower stem.
- ⦿ Accidental valve disassembly disabled by union bonnet construction.
- ⦿ Upper stem thread lubricant isolated from system media. Linearly instead of helical movement of the nonrotating lower stem, avoiding galling damage to the seat and tip, as well as reducing the total friction area between the packing and the lower stem.
- ⦿ Safety back seating seal in fully open position.
- ⦿ Panel mounting available as an option.
- ⦿ Steady and durable fastening of the handle by double lock-pins.
- ⦿ Handle color options are available.
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure.
- ⦿ Maximum working pressure:
 - UN Series—Stainless steel: 6000 psig (414 bar)
 - UNH Series—Stainless steel: 10000 psig (689 bar)
- ⦿ Working temperature:
 - PTFE: -65°F to 450°F (-54°C to 232°C)
 - PEEK: -65°F to 500°F (-54°C to 260°C)
 - Graphite: -65°F to 1200°F (-54°C to 649°C)



Standard Materials of Construction

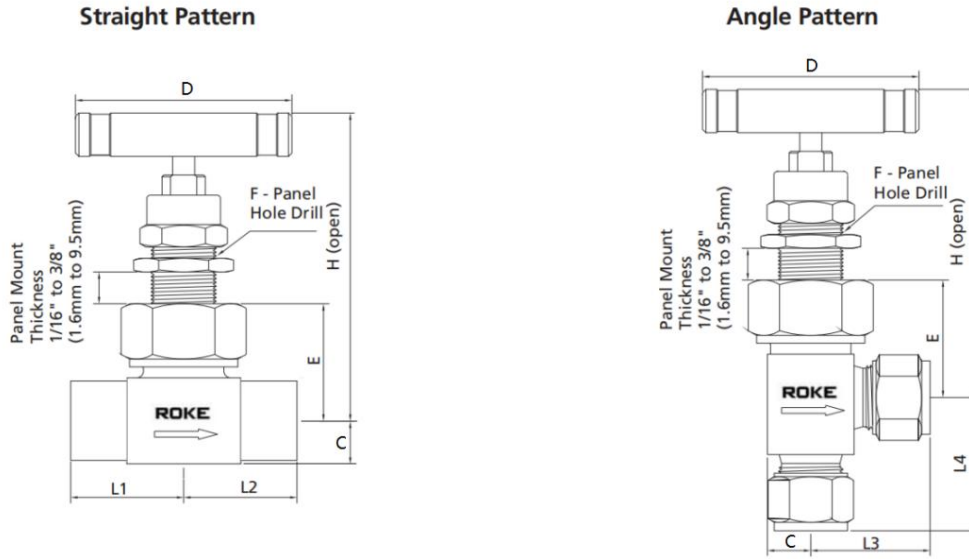


Stem Type



Item	Component	Valve Body Material			
		316 SS	Alloy 400	Titanium	Alloy C-276
1	Handle	Anodized aluminium or stainless steel or black knob			
2	Set Screw	Stainless steel			
3	Upper Stem	316 SS/A276			
4	Packing Bolt	321 SS/A276			
5	Lock Nut	316 SS/A276			
6	Panel Nut	316 SS/B783			
7	Gland	316 SS/A276	Alloy R-405/B164	Titanium Gr 4/B348	Alloy C-276/B574
8	Packing	PTFE or PEEK or graphite			
9	Bonnet	316 SS/A479	Alloy R-405/B164	Titanium Gr 4/B348	Alloy C-276/B574
10	Union Nut	316 SS/A276			
11a 11b	Lower Stem	316 SS/A276	Alloy R-405/B164	Titanium Gr 4/B348	Alloy C-276/B574
12	Body	316 SS/A182	Alloy 400/B164,	Titanium Gr 4/B348	Alloy C-276/B564

Dimensions of UN Series



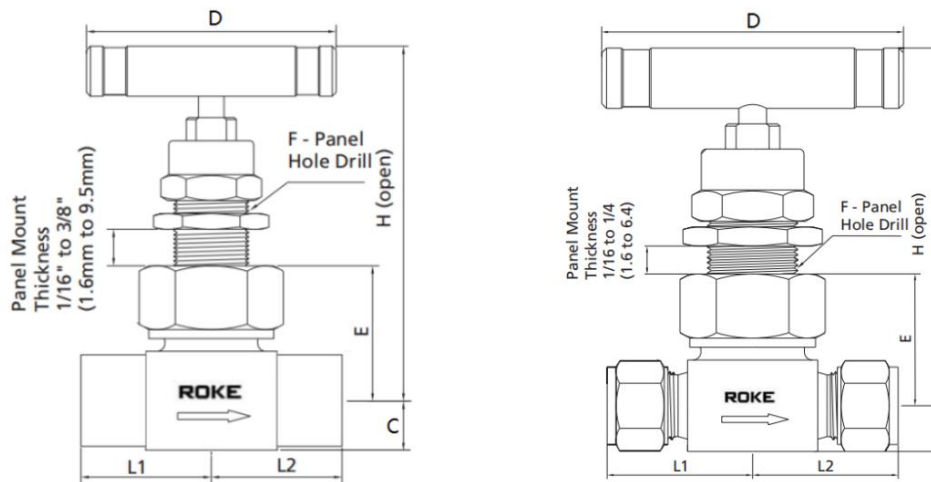
Dimensions of UN Series

Basic Ordering Number	Connection Type and Size		Orifice In.(mm)	Cv	Dimension, in.(mm)								
	Inlet	Outlet			L1	L2	L3	L4	C	D	E	F	H
-UN-FN2-4	1/8 Female NPT	1/8 Female NPT	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.89 (22.6)	1.00 (25.4)	0.39 (10.0)	1.77 (45.0)	1.09 (27.7)	0.59 (15.0)	3.04 (77.2)
-UN-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.03 (26.2)	1.03 (26.2)	0.89 (22.6)	1.00 (25.4)	0.39 (10.0)	1.77 (45.0)	1.09 (27.7)	0.59 (15.0)	3.04 (77.2)
-UN-FN6-6	3/8 Female NPT	3/8 Female NPT	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-FN8-10	1/2 Female NPT	1/2 Female NPT	0.39 (10.0)	1.80	1.56 (39.6)	1.56 (39.6)	1.31 (33.3)	1.56 (39.6)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-FN12-10	3/4 Female NPT	3/4 Female NPT	0.39 (10.0)	1.80	1.63 (41.3)	1.63 (41.3)	-	-	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-FN16-10	1 Female NPT	1 Female NPT	0.39 (10.0)	1.80	1.81 (46.0)	1.81 (46.0)	-	-	1.00 (25.4)	3.50 (88.9)	2.13 (54.0)	1.03 (26.2)	5.10 (129)
-UN-MN2-4	1/8 Male NPT	1/8 Male NPT	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.89 (22.6)	1.00 (25.4)	0.39 (10.0)	1.77 (45.0)	1.09 (27.7)	0.59 (15.0)	3.04 (77.2)
-UN-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	1.03 (26.2)	1.03 (26.2)	0.89 (22.6)	1.00 (25.4)	0.39 (10.0)	1.77 (45.0)	1.09 (27.7)	0.59 (15.0)	3.04 (77.2)
-UN-MN6-6	3/8 Male NPT	3/8 Male NPT	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-MN8-10	1/2 Male NPT	1/2 Male NPT	0.39 (10.0)	1.80	1.56 (39.6)	1.56 (39.6)	1.31 (33.3)	1.56 (39.6)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-MN12-10	3/4 Male NPT	3/4 Male NPT	0.39 (10.0)	1.80	1.63 (41.3)	1.63 (41.3)	-	-	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-MN16-10	1 Male NPT	1 Male NPT	0.39 (10.0)	1.80	1.81 (46.0)	1.81 (46.0)	-	-	1.00 (25.4)	3.50 (88.9)	2.13 (54.0)	1.03 (26.2)	5.10 (129)
-UN-SWT4-4	1/4 Soket Weld	1/4 Soket Weld	0.16 (4.0)	0.35	0.91 (23.1)	0.91 (23.1)	0.88 (22.4)	1.19 (30.2)	0.39 (10.0)	1.77 (45.0)	1.09 (27.7)	0.59 (15.0)	3.04 (77.2)
-UN-SWT6-6	3/8 Soket Weld	3/8 Soket Weld	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-SWT8-6	1/2 Soket Weld	1/2 Soket Weld	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-SWT12-10	3/4 Soket Weld	3/4 Soket Weld	0.39 (10.0)	1.80	1.56 (39.7)	1.56 (39.7)	1.31 (33.3)	1.69 (42.9)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-SWT16-15	1 Soket Weld	1 Soket Weld	0.39 (10.0)	1.80	1.63 (41.3)	1.63 (41.3)	-	-	1.00 (25.4)	3.50 (88.9)	2.13 (54.0)	1.03 (26.2)	5.10 (129)
-UN-SWM12-6	12 mm SW	12 mm SW	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-SWM14-6	14 mm SW	14 mm SW	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-SWM16-10	16 mm SW	16 mm SW	0.39 (10.0)	1.80	1.56 (39.7)	1.56 (39.7)	1.31 (33.3)	1.69 (42.9)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-SWM20-10	20 mm SW	20 mm SW	0.39 (10.0)	1.80	1.56 (39.7)	1.56 (39.7)	1.31 (33.3)	1.69 (42.9)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-SWM25-10	25 mm SW	25 mm SW	0.39 (10.0)	1.80	1.63 (41.3)	1.63 (41.3)	-	-	1.00 (25.4)	3.50 (88.9)	2.13 (54.0)	1.03 (26.2)	5.10 (129)

Dimensions of UN Series

Basic Ordering Number	Connection Type and Size		Orifice In.(mm)	Cv	Dimension, in.(mm)								
	Inlet	Outlet			L1	L2	L3	L4	C	D	E	F	H
-UN-BWM14-6	14 mm BW	14 mm BW	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	1.00 (25.4)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UN-BWM16-10	16 mm BW	16 mm BW	0.25 (6.4)	0.80	1.56 (39.7)	1.56 (39.7)	1.31 (33.3)	1.69 (42.9)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-BWM20-10	20 mm BW	20 mm BW	0.39 (10.0)	1.80	1.56 (39.7)	1.56 (39.7)	1.31 (33.3)	1.69 (42.9)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UN-BWM25-10	25 mm BW	25 mm BW	0.39 (10.0)	1.80	1.63 (41.3)	1.63 (41.3)	-	-	1.00 (25.4)	3.50 (88.9)	2.13 (54.0)	1.03 (26.2)	5.10 (129)
-UN-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.22 (30.9)	1.22 (30.9)	1.16 (29.5)	1.48 (37.6)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-UN-FT6-6	3/8" Tube	3/8" Tube	0.16 (4.0)	0.35	1.41 (35.9)	1.41 (35.9)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.52 (38.6)	1.52 (38.6)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-FT12-10	3/4" Tube	3/4" Tube	0.39 (10.0)	2.20	1.97 (50.0)	1.97 (50.0)	1.68 (42.7)	2.08 (51.8)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-UN-FT16-15	1" Tube	1" Tube	0.59 (15.0)	3.30	2.04 (51.8)	2.04 (51.8)	-	-	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)
-UN-MT6-4	6 mm	6 mm	0.16 (4.0)	0.35	1.22 (30.9)	1.22 (30.9)	1.16 (29.5)	1.48 (37.6)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-UN-MT8-4	8 mm	8 mm	0.16 (4.0)	0.35	1.22 (30.9)	1.22 (30.9)	1.16 (29.5)	1.48 (37.6)	0.53 (13.5)	2.17 (55.0)	0.71 (18.0)	0.77 (19.6)	2.85 (72.5)
-UN-MT10-6	10 mm	10 mm	0.16 (4.0)	0.35	1.41 (35.9)	1.41 (35.9)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.52 (38.6)	1.52 (38.6)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-MT14-6	14 mm	14 mm	0.25 (6.4)	0.70	1.41 (35.9)	1.41 (35.9)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-MT18-10	18 mm	18 mm	0.39 (10.0)	2.20	1.52 (38.6)	1.52 (38.6)	1.59 (32.8)	1.66 (42.2)	0.62 (15.8)	2.50 (63.5)	0.87 (22.0)	0.96 (24.4)	3.38 (85.8)
-UN-MT20-10	20 mm	20 mm	0.39 (10.0)	2.20	1.97 (50.0)	1.97 (50.0)	1.68 (42.7)	2.08 (51.8)	0.80 (20.2)	3.50 (88.9)	1.10 (28.3)	1.08 (27.5)	3.78 (96.0)
-UN-MT25-15	25 mm	25 mm	0.59 (15.0)	3.30	2.04 (51.8)	2.04 (51.8)	-	-	1.30 (33.0)	5.00 (127)	1.61 (41.0)	1.45 (36.8)	6.50 (165)

UNH Series



Dimensions of UNH Series

Basic Ordering Number	Connection Type and Size		Orifice in.(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-UNH-FN2-4	1/8 Female NPT	1/8 Female NPT	0.16 (4.0)	0.35	1.00 (25.4)	1.00 (25.4)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-FN4-4	1/4 Female NPT	1/4 Female NPT	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-FN6-6	3/8 Female NPT	3/8 Female NPT	0.25 (6.4)	0.80	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-FN8-10	1/2 Female NPT	1/2 Female NPT	0.25 (6.4)	0.80	1.56 (39.6)	1.56 (39.6)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.13 (105)

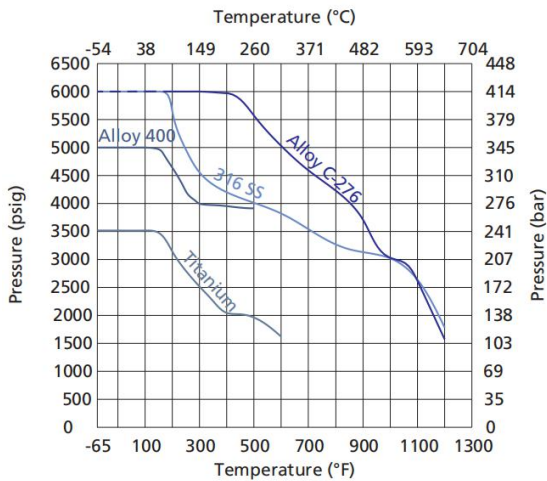
15 Needle Valves

Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)						
	Inlet	Outlet			L1	L2	C	D	E	F	H
-UNH-MN4-4	1/4 Male NPT	1/4 Male NPT	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-MN6-6	3/8 Male NPT	3/8 Male NPT	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-MN8-10	1/2 Male NPT	1/2 Male NPT	0.25 (6.4)	0.80	1.56 (39.6)	1.56 (39.6)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.13 (105)
-UNH-SWT4-4	1/4 Soket Weld	1/4 Soket Weld	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.70 (94.0)
-UNH-SWT6-6	3/8 Soket Weld	3/8 Soket Weld	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-SWT8-6	1/2 Soket Weld	1/2 Soket Weld	0.25 (6.4)	0.80	1.56 (39.7)	1.56 (39.7)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UNH-SWM12-6	12 mm SW	12 mm SW	0.25 (6.4)	0.80	1.56 (39.7)	1.56 (39.7)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UNH-SWM14-6	14 mm SW	14 mm SW	0.25 (6.4)	0.80	1.56 (39.7)	1.56 (39.7)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.85 (123)
-UNH-FT4-4	1/4" Tube	1/4" Tube	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-FT6-6	3/8" Tube	3/8" Tube	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UNH-FT8-6	1/2" Tube	1/2" Tube	0.25 (6.4)	0.70	1.97 (50.0)	1.97 (50.0)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.25 (108)
-UN-MT10-6	10 mm	10 mm	0.16 (4.0)	0.35	1.13 (28.6)	1.13 (28.6)	0.50 (12.7)	2.50 (63.5)	1.34 (34.0)	0.78 (19.8)	3.31 (84.0)
-UN-MT12-6	12 mm	12 mm	0.25 (6.4)	0.70	1.97 (50.0)	1.97 (50.0)	0.78 (19.8)	3.50 (88.9)	1.91 (48.5)	1.03 (26.2)	4.25 (108)

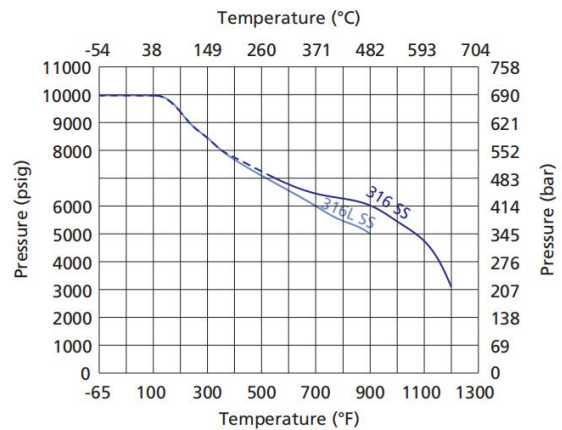
1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact the authorized representative or ROKE employees.

Pressure vs. Temperature

UN Series

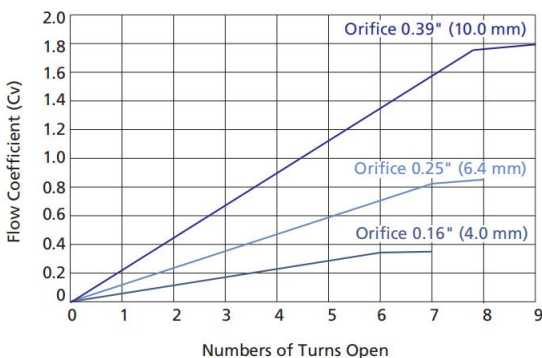


UNF Series



Flow Data at 100°F (37°C)

Regulating Stem



Rising Plug Valves

RP Series

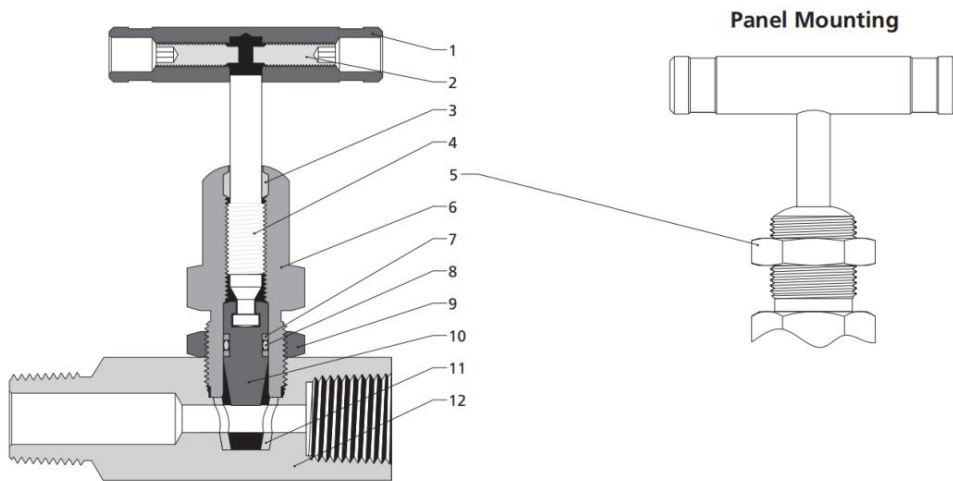
RPG Series (With gauge port)

Features

- ⦿ Nonrotating stem for longer seat life.
- ⦿ Roddable, straight through flow path for maximum flow with minimum pressure drop.
- ⦿ Stem thread lubricant isolated from system media.
- ⦿ Replaceable seat and stem tip design.
- ⦿ Stem thread protected from outside contamination by PTFE ring in the gland.
- ⦿ Panel mounting available as an option.
- ⦿ Handle color options are available.
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure.
- ⦿ Maximum working pressure:Stainless steel: 6000 psig (414 bar)
- ⦿ Working temperature:
 - Acetal: -20°F to 250°F (-28°C to 121°C)
 - PEEK: -20°F to 400°F (-28°C to 204°C)
 - PFA: -20°F to 400°F (-28°C to 204°C)



Standard Materials of Construction

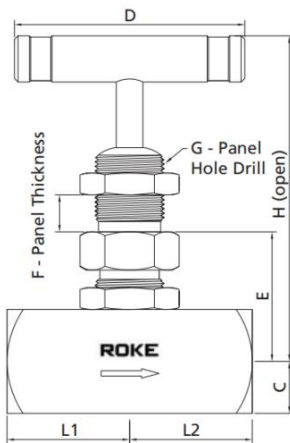


Item	Component	Valve Body Material			
		316 SS	304 SS	321 SS	Alloy R-405
1	Handle	Anodized aluminum or stainless steel or black knob			
2	Set Screw	stainless steel			
3	Wiper Ring	PTFE/D1710			
4	Upper Stem	316 SS/A276	304 SS/A276	321 SS/A276	Alloy R-405/B164
5	Panel Nut	17-4PH			
6	Bonnet	316 SS/A479	304 SS/A479	321 SS/A479	Alloy R-405/B164
7	Backup Ring	PTFE/D1710			
8	O-ring	Fluorocarbon FKM	Buna-N		Ethylene propylene
9	Lock Nut	17-4PH			
10	Stem Tip	316 SS/A276	304 SS/A276	321 SS/A276	Alloy R-405/B164
11	Seat	Acetal or PEEK or PFA			
12	Body	316 SS/A479	304 SS/A479	321 SS/A479	Alloy R-405/B164

Dimensions

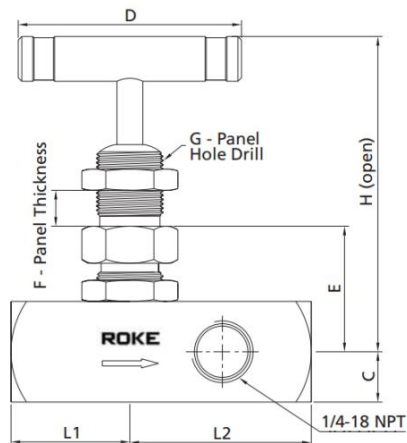
Standard Pattern

RP Series



Gauge Port Pattern

RPG Series

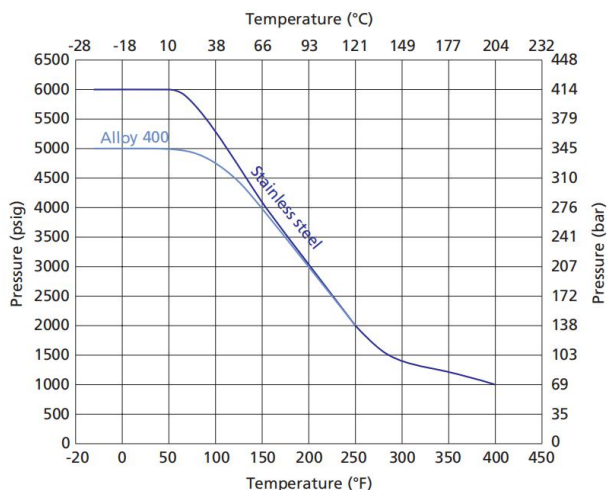


Dimensions of RP/RPG Series

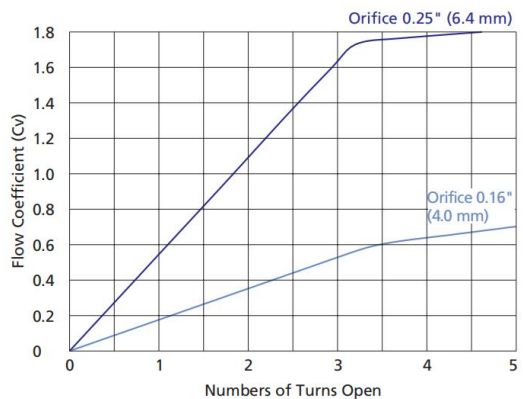
Basic Ordering Number	Connection Type and Size		Orifice in(mm)	Cv	Dimension, in.(mm)							
	Inlet	Outlet			L1	L2	C	D	E	F	H	
-RP-FN4-4	1/4" Female NPT	1/4" Female NPT	0.16 (4.0)	0.63	1.12 (28.4)	1.13 (28.6)	0.44 (11.1)	2.17 (55.0)	1.08 (27.5)	0.25 (6.4)	0.65 (16.0)	3.77 (95.8)
-RP-MN4-FN4-4	1/4" Male NPT	1/4" Female NPT	0.16 (4.0)	0.63	1.12 (28.4)	1.13 (28.6)	0.44 (11.1)	2.17 (55.0)	1.08 (27.5)	0.25 (6.4)	0.65 (16.0)	3.77 (95.8)
-RP-MN8-FN4-4	1/2" Male NPT	1/4" Female NPT	0.16 (4.0)	0.63	1.89 (48.0)	1.13 (28.6)	0.44 (11.1)	2.17 (55.0)	1.08 (27.5)	0.25 (6.4)	0.65 (16.0)	3.77 (95.8)
-RP-FN8-6	1/2" Female NPT	1/2" Female NPT	0.25 (6.4)	1.80	1.33 (33.8)	1.33 (33.8)	0.56 (14.3)	2.50 (63.5)	1.40 (35.5)	0.38 (9.7)	0.77 (19.6)	3.83 (97.3)
-RP-MN8-FN8-6	1/2" Male NPT	1/2" Female NPT	0.25 (6.4)	1.80	2.16 (55.0)	1.33 (33.8)	0.56 (14.3)	2.50 (63.5)	1.40 (35.5)	0.38 (9.7)	0.77 (19.6)	3.83 (97.3)
-RP-MN12-FN8-6	3/4" Male NPT	1/2" Female NPT	0.25 (6.4)	1.80	2.16 (55.0)	1.33 (33.8)	0.56 (14.3)	2.50 (63.5)	1.40 (35.5)	0.38 (9.7)	0.77 (19.6)	3.83 (97.3)
-RPG-FN4-4	1/4" Female NPT	1/4" Female NPT	0.16 (4.0)	0.63	1.12 (28.4)	1.75 (44.4)	0.50 (12.7)	2.17 (55.0)	1.08 (27.5)	0.25 (6.4)	0.65 (16.0)	3.77 (95.8)
-RPG-MN8-FN4-4	1/2" Male NPT	1/4" Female NPT	0.16 (4.0)	0.63	1.89 (48.0)	1.75 (44.4)	0.50 (12.7)	2.17 (55.0)	1.08 (27.5)	0.25 (6.4)	0.65 (16.0)	3.77 (95.8)
-RPG-FN8-6	1/2" Female NPT	1/2" Female NPT	0.25 (6.4)	1.80	1.33 (33.8)	2.25 (57.2)	0.56 (14.3)	2.50 (63.5)	1.40 (35.5)	0.38 (9.7)	0.77 (19.6)	3.83 (97.3)
-RPG-MN12-FN8-6	3/4" Male NPT	1/2" Female NPT	0.25 (6.4)	1.80	2.16 (55.0)	2.25 (57.2)	0.56 (14.3)	2.50 (63.5)	1.40 (35.5)	0.38 (9.7)	0.77 (19.6)	3.83 (97.3)

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact the authorized representative or ROKE employees.

Pressure vs. Temperature



Flow Data at 100°F (38°C)



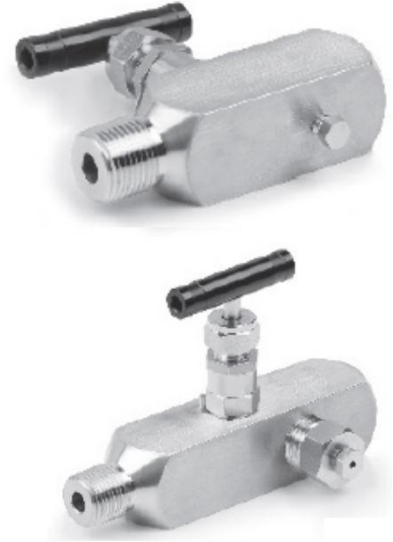
Gauge Valves

GVB Series

GVP Series

Features

- Non-rotating lower stem, ball tip and plug tip designs
- Variety of materials for seat and packing
- Safety back seating seals in fully open position
- Bonnet locking pin fitted as standard
- Low torque operating T bar handle
- Option for different colored handles
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure
- Maximum working pressure: 6000 psig (414 bar)
- GV-B series Working temperature:
 - PTFE packing: -65 F to 450 F (-54 C to 232 C)
 - Graphite packing: -65 F to 1200 F (-54 C to 649 C)
- GV-P series working temperature:
 - Acetal seat: -20 F to 250 F (-28 C to 121 C)
 - PEEK seat: -20 F to 400 F (-28 C to 204 C)

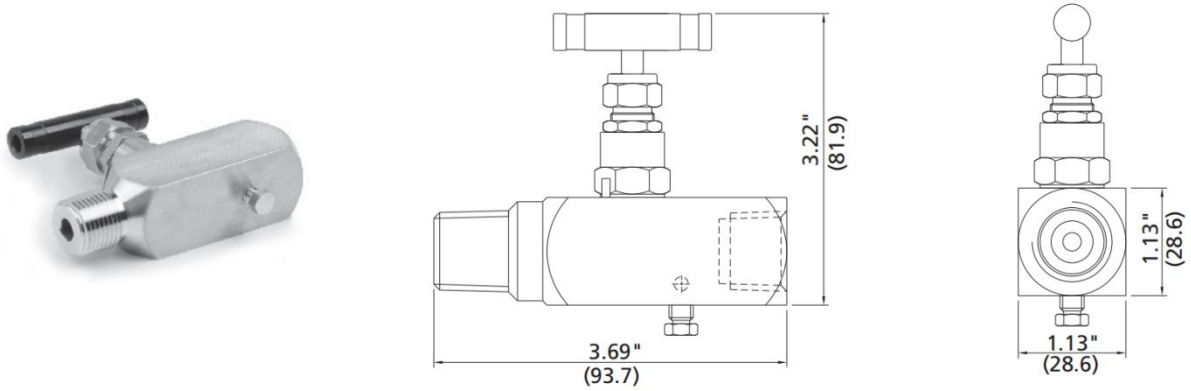


Standard Materials of Construction

	Item	Part	Valve Body Material	
			SS 316	Alloy 400
<p>Ball Tip Design Valves (GVB)</p> <p>Plug Tip Design Valves (GVP)</p>	1	Handle	Anodized aluminum	
	2	Set Screw	Stainless steel	
	3	Packing Bolt	SS 304	
	4	Upper Stem	SS 316	
	5	Lock Nut	17-4PH	
	6	Bonnet	SS 316	Alloy 400
	7	Gland	SS316	
	8	Packing	PTFE or graphite	
	9	Lock Pin	Stainless steel	
	10	Lower Stem	SS 316	Alloy 400
	11	Body	SS 316	Alloy 400
12	Seat	Acetal or PEEK or PFA		

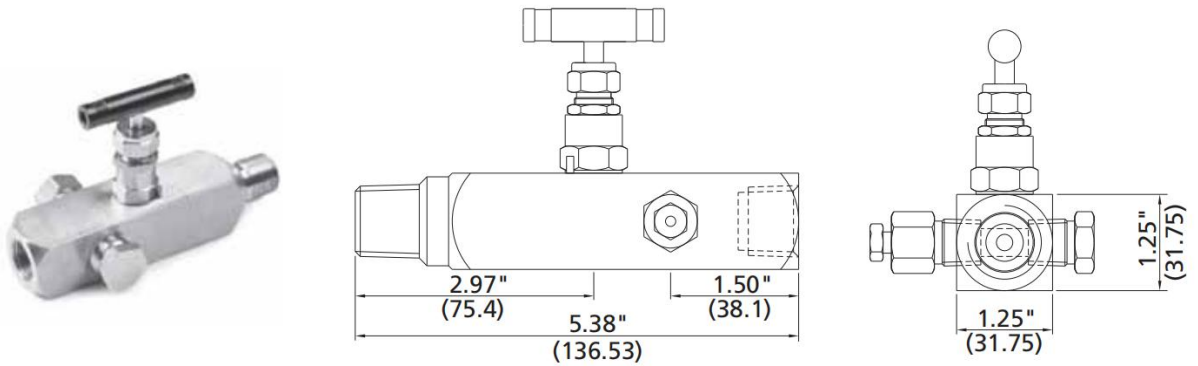
Miniature Type

Basic Ordering NO.	Inlet/ Process	Outlet/ Instrument	Vent	Orifice in(mm)	Cv	
-GVB-MN8-FN8-M	1/2 Male NPT	1/2 Female NPT	Vent Stem	0.25 (6.4)	0.9	
-GVP-MN8-FN8-M				0.25 (6.4)	1.8	



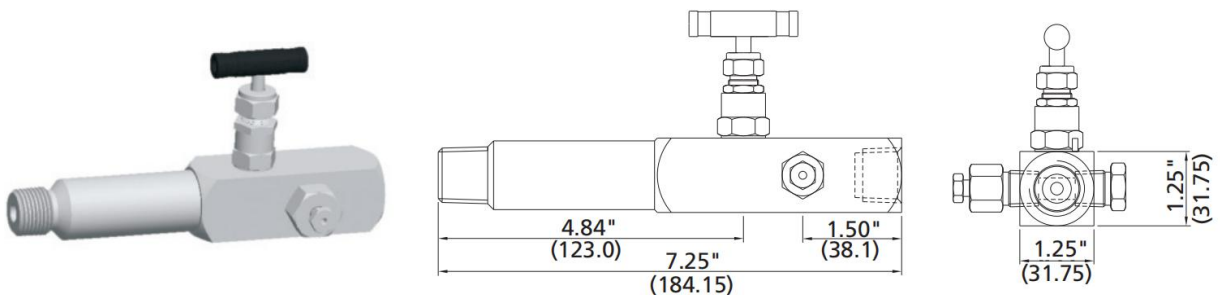
Standard Type

Basic Ordering NO.	Inlet/ Process	Outlet/ Instrument	Test/Vent /Plug	Orifice in(mm)	Cv	
-GVB-MN8-FN8	1/2 Male NPT	1/2 Female NPT	1/2 Female	0.25 (6.4)	1.0	
-GVP-MN8-FN8			NPT	0.25 (6.4)	1.8	
-GVB-MN12-FN12	3/4 Male NPT	3/4 Female NPT	1/2 Female	0.25 (6.4)	1.0	
-GVP-MN12-FN12			NPT	0.25 (6.4)	1.8	



Lagging Extension Body Type

Basic Ordering NO.	Inlet/ Process	Outlet/ Instrument	Vent	Orifice in(mm)	Cv	
-GVB-MN8-FN8-L	1/2 Male NPT	1/2 Female NPT	Vent Stem	0.25 (6.4)	1.2	
-GVP-MN8-FN8-L				0.25 (6.4)	1.8	



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