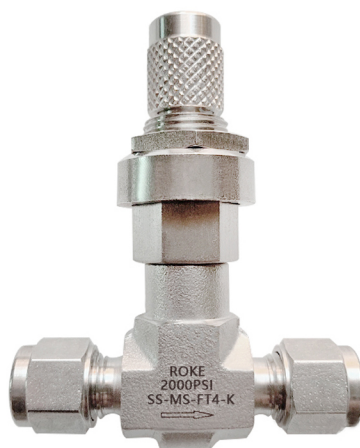


Metering Valves



ROKE
Valves ,Fittings and Tubing

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High Pressure Metering Valves

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Low Pressure Metering Valves

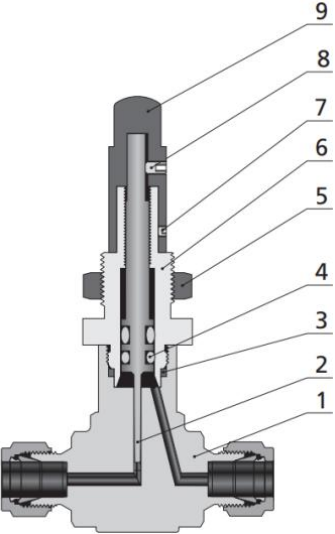
MS Series (Low Flow)

Features:

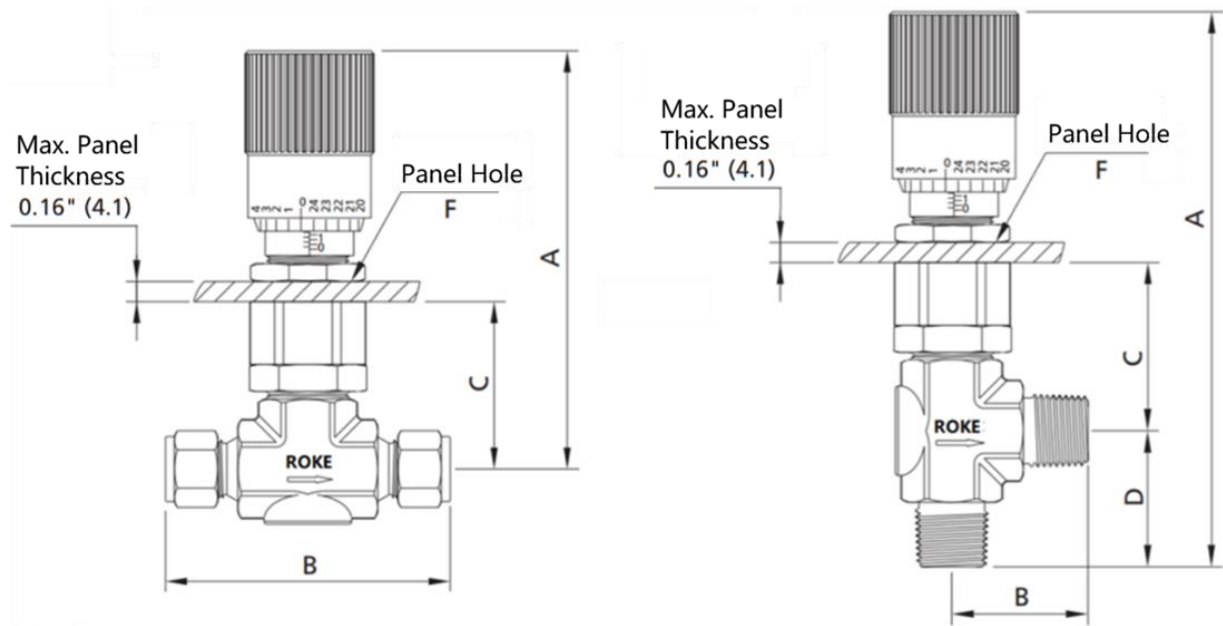
- ◉ Working pressure up to : 2000 psig (138 bar)
- ◉ Working temperature: -10 °F to 400 °F (-23 °C to 204 °C)
- ◉ Orifice size: 0.032" (0.81 mm)
- ◉ Max. flow coefficient (Cv): 0.004
- ◉ Stem taper: 1°
- ◉ Turns to open: 9 to 12
- ◉ Shutoff service: Not available
- ◉ Variety of materials available for valve body
- ◉ Variety of end connections
- ◉ Panel mountable
- ◉ Flow pattern: straight, angle, cross and double
- ◉ Handle type: knurled, vernier and slotted



Standard Materials of Construction

MS Series				
	NO.	Component	Material	
			316 SS	Brass
	1	Body	316 SS/A182	Silver-mist chrome-plated C37700/B283
	2	Stem	316 SS/A479	
	3	Body Seal	Fluorocarbon FKM	
	4	O-ring	Fluorocarbon FKM	
	5	Panel Nut	Stainless steel	Silver-mist chrome-plated C36000/B16
	6	Bonnet	316 SS/A479	Silver-mist chrome-plated C36000/B16
	7	Lock Screw	Stainless steel	
	8	Handle Screw	Stainless steel	
	9	Handle	Aluminium or Stainless steel	Silver-mist chrome-plated C36000/B16

Dimensions



Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Straight Pattern								
-MS-FN2	1/8 NPT Female	1/8 NPT Female	2.34 (59.4)	2.05 (52.0)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-FN4	1/4 NPT Female	1/4 NPT Female	2.34 (59.4)	2.36 (60.0)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-MN4	1/4 NPT Male	1/4 NPT Male	2.34 (59.4)	2.06 (52.3)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-FT1	OD 1/16	OD 1/16	2.34 (59.4)	1.58 (40.0)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-FT2	OD 1/8	OD 1/8	2.34 (59.4)	2.04 (51.8)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-FT4	OD 1/4	OD 1/4	2.34 (59.4)	2.04 (51.8)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-MT3	OD 3mm	OD 3mm	2.34 (59.4)	2.04 (51.8)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
-MS-MT6	OD 6mm	OD 6mm	2.34 (59.4)	2.04 (51.8)	0.92 (23.4)	/	0.38 (9.6)	0.45 (11.4)
Angle Pattern								
-MS-FN2-A	1/8 NPT Female	1/8 NPT Female	3.07 (78.0)	0.98 (24.9)	0.92 (23.4)	0.98 (24.9)	0.38 (9.6)	0.45 (11.4)
-MS-FN4-A	1/4 NPT Female	1/4 NPT Female	3.23 (82.0)	0.98 (24.9)	0.92 (23.4)	0.98 (24.9)	0.38 (9.6)	0.45 (11.4)
-MS-FT1-A	OD 1/16	OD 1/16	2.96 (75.2)	0.98 (24.9)	0.92 (23.4)	0.88 (22.4)	0.38 (9.6)	0.45 (11.4)
-MS-FT2-A	OD 1/8	OD 1/8	3.07 (78.0)	0.98 (24.9)	0.92 (23.4)	0.98 (24.9)	0.38 (9.6)	0.45 (11.4)
-MS-FT4-A	OD 1/4	OD 1/4	3.11 (79.0)	0.98 (24.9)	0.92 (23.4)	1.02 (25.9)	0.38 (9.6)	0.45 (11.4)
-MS-MT3-A	OD 3mm	OD 3mm	3.07 (78.0)	0.98 (24.9)	0.92 (23.4)	0.98 (24.9)	0.38 (9.6)	0.45 (11.4)
-MS-MT6-A	OD 6mm	OD 6mm	3.11 (79.0)	0.98 (24.9)	0.92 (23.4)	1.02 (25.9)	0.38 (9.6)	0.45 (11.4)

Low Pressure Metering Valves

MV Series (Medium Flow) & ML Series (High Flow)

Features:

- ⦿ Working pressure up to : 1000 psig (69 bar)
- ⦿ Working temperature: -10 °F to 400 °F (-23 °C to 204 °C)
- ⦿ Orifice size: MV Series: 0.056" (1.42 mm)
ML Series: 0.128" (3.25 mm)
- ⦿ Max. flow coefficient (Cv): MV Series: 0.03
ML Series: 0.15
- ⦿ Stem taper: MV Series: 3°
ML Series: 6.5°
- ⦿ Turns to open: MV Series: 8 to 10
ML Series: 10 to 11
- ⦿ Shutoff service: MV series: Not available
ML series: Available
- ⦿ Variety of materials available for valve body
- ⦿ Variety of end connections
- ⦿ Panel mountable
- ⦿ Flow pattern: straight, angle, cross and double
- ⦿ Handle type: MV series: knurled, vernier and slotted
ML series: knurled and round



Standard Materials of Construction

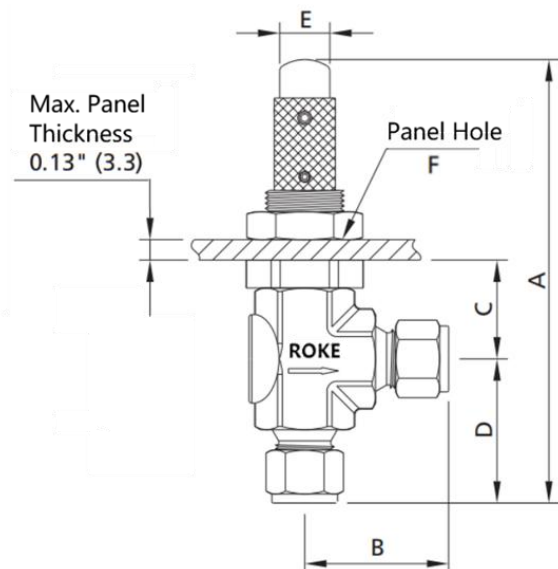
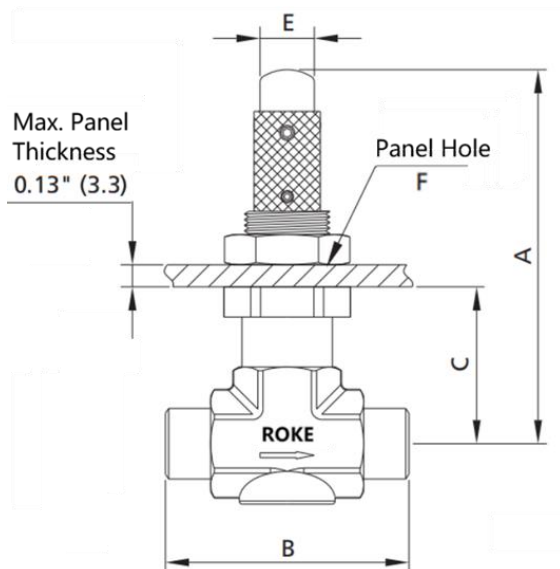
MV Series

	NO.	Component	Material	
			316 SS	Brass
	1	Body	316 SS/A182	Silver-mist chrome-plated C37700/B283
	2	Stem	316 SS/A479	
	3	Body Seal	Fluorocarbon FKM	
	4	O-ring	Fluorocarbon FKM	
	5	Body Extension	316 SS/A479	Silver-mist chrome-plated C36000/B16
	6	Stem Guide Ring	PTFE/D1710	
	7	Bonnet Sleeve	Stainless steel	Silver-mist chrome-plated C36000/B16
	8	Panel Nut	Stainless steel	Silver-mist chrome-plated C36000/B16
	9	Bonnet	316 SS/A479	Silver-mist chrome-plated C36000/B16
	10	Lock Screw	Stainless steel	
	11	Handle Screw	Stainless steel	
	12	Handle	Aluminium or Stainless steel	Silver-mist chrome-plated C36000/B16

ML Series

NO.	Component	Material	
		316 SS	Brass
1	Body	316 SS/A182	Silver-mist chrome-plated C37700/B283
2	Stem	316 SS/A479	
3	O-ring	Fluorocarbon FKM	
4	Stem Guide Ring	PTFE/D1710	
5	Bonnet Sleeve	Stainless steel	Silver-mist chrome-plated C36000/B16
6	Panel Nut	Stainless steel	Silver-mist chrome-plated C36000/B16
7	Bonnet	316 SS/A479	Silver-mist chrome-plated C36000/B16
8	Handle Screw	Stainless steel	
9	Handle	Aluminium or Stainless steel	Silver-mist chrome-plated C36000/B16

Dimensions



MV Series

Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Straight Pattern								
-MV-FN2	1/8 NPT Female	1/8 NPT Female	2.64 (67.1)	1.94 (49.3)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-MN2	1/8 NPT Male	1/8 NPT Male	2.64 (67.1)	1.60 (40.6)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-MN4	1/4 NPT Male	1/4 NPT Male	2.64 (67.1)	1.96 (49.8)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-FT2	OD 1/8	OD 1/8	2.64 (67.1)	2.02 (51.3)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-FT4	OD 1/4	OD 1/4	2.64 (67.1)	2.20 (55.9)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-MT3	OD 3mm	OD 3mm	2.64 (67.1)	2.02 (51.3)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)
-MV-MT6	OD 6mm	OD 6mm	2.64 (67.1)	2.20 (55.9)	1.52 (38.5)	/	0.50 (12.7)	0.58 (14.7)

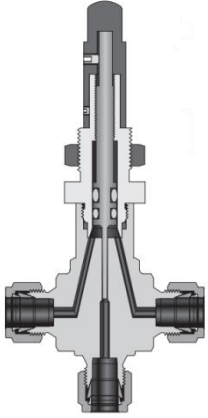
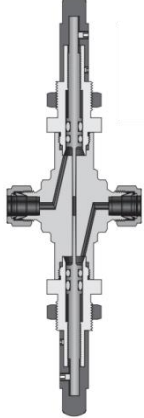
MV Series								
Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Angle Pattern								
-MV-FN2-A	1/8 NPT Female	1/8 NPT Female	3.61 (91.7)	0.97 (24.6)	1.52 (38.5)	0.97 (24.6)	0.50 (12.7)	0.58 (14.7)
-MV-MN2-A	1/8 NPT Male	1/8 NPT Male	3.44 (87.4)	0.80 (20.3)	1.52 (38.5)	0.80 (20.3)	0.50 (12.7)	0.58 (14.7)
-MV-MN4-A	1/4 NPT Male	1/4 NPT Male	3.62 (92.0)	0.98 (24.9)	1.52 (38.5)	0.98 (24.9)	0.50 (12.7)	0.58 (14.7)
-MV-FT2-A	OD 1/8	OD 1/8	3.65 (92.8)	1.01 (25.7)	1.52 (38.5)	1.01 (25.7)	0.50 (12.7)	0.58 (14.7)
-MV-FT4-A	OD 1/4	OD 1/4	3.74 (95.0)	1.10 (27.9)	1.52 (38.5)	1.10 (27.9)	0.50 (12.7)	0.58 (14.7)
-MV-MT3-A	OD 3mm	OD 3mm	3.65 (92.8)	1.01 (25.7)	1.52 (38.5)	1.01 (25.7)	0.50 (12.7)	0.58 (14.7)
-MV-MT6-A	OD 6mm	OD 6mm	3.74 (95.0)	1.10 (27.9)	1.52 (38.5)	1.10 (27.9)	0.50 (12.7)	0.58 (14.7)

ML Series								
Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Straight Pattern								
-ML-MN4	1/4 NPT Male	1/4 NPT Male	2.72 (69.1)	2.34 (59.4)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
-ML-FT4	OD 1/4	OD 1/4	2.72 (69.1)	2.34 (59.4)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
-ML-FT6	OD 3/8	OD 3/8	2.72 (69.1)	2.46 (62.5)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
-ML-MT6	OD 6mm	OD 6mm	2.72 (69.1)	2.34 (59.4)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
-ML-MT8	OD 8mm	OD 8mm	2.72 (69.1)	2.38 (60.5)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)
-ML-MT10	OD 10mm	OD 10mm	2.72 (69.1)	2.46 (62.5)	1.26 (32.0)	/	1.13 (28.7)	0.58 (14.7)

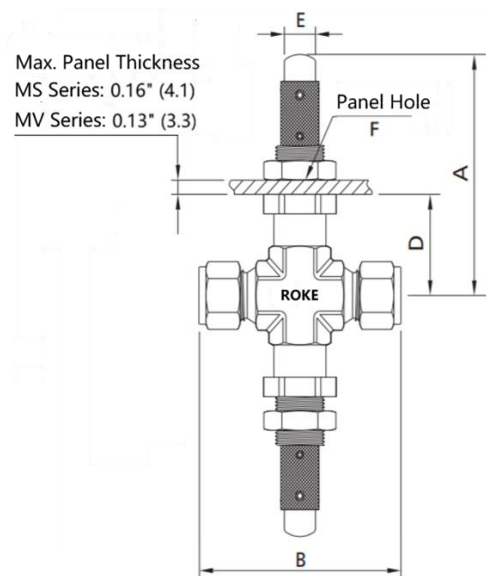
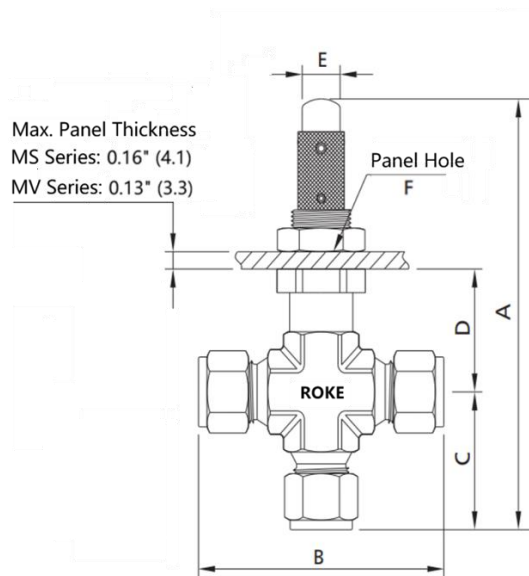
ML Series								
Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Angle Pattern								
-ML-FT4-A	OD 1/4	OD 1/4	3.89 (98.8)	1.17 (29.7)	1.26 (32.0)	1.17 (29.7)	1.13 (28.7)	0.58 (14.7)
-ML-MT6-A	OD 6mm	OD 6mm	3.89 (98.8)	1.17 (29.7)	1.26 (32.0)	1.17 (29.7)	1.13 (28.7)	0.58 (14.7)

Low Pressure Metering Valves

Optional Patterns

Cross Pattern	Double Pattern
	
1. Fluid flows between side ports around stem in any stem position. 2. Fluid flows through branch port can be metered in both directions	Inlet valve handle can be set and locked at desired maximum flow, outlet valve handle can be used for fine flow control up to the preset maximum of the inlet valve.

Dimensions



MS Series

Type	Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
				A	B	C	D	E	F
Cross Pattern	-MS-FT2-C	OD 1/8	OD 1/8	3.32 (84.3)	1.96 (49.8)	0.98 (24.9)	0.92 (23.4)	0.38 (9.6)	0.45 (11.4)
	-MS-MT3-C	OD 3mm	OD 3mm						
Double Pattern	-MS-FT2-D	OD 1/8	OD 1/8	2.41 (61.2)	1.90 (48.3)	/	0.99 (25.2)	0.38 (9.6)	0.45 (11.4)
	-MS-MT3-D	OD 3mm	OD 3mm						

MV Series

Type	Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
				A	B	C	D	E	F
Cross Pattern	-MV-FT4-C	OD 1/4	OD 1/4	3.74 (95.0)	2.20 (55.9)	1.10 (27.9)	1.52 (38.5)	0.50 (12.7)	0.58 (14.7)
	-MV-MT6-C	OD 6mm	OD 6mm						
Double Pattern	-MV-FT4-D	OD 1/4	OD 1/4	2.62 (67.1)	2.20 (55.9)	/	1.52 (38.5)	0.50 (12.7)	0.58 (14.7)
	-MV-MT6-D	OD 6mm	OD 6mm						

High Pressure Metering Valves

MH Series

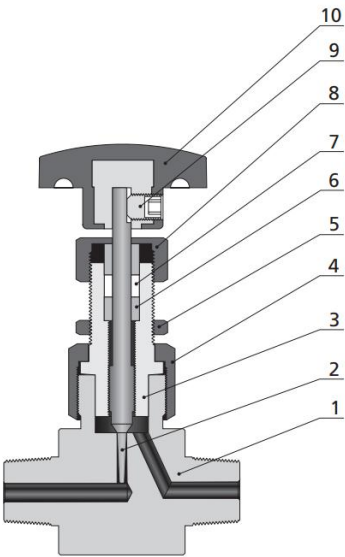
Features:

- ⊙ Working pressure up to : 5000 psig (345 bar)
- ⊙ Working temperature: -65 °F to 850 °F (-54 °C to 454 °C)
- ⊙ Orifice size: 0.062" (1.6 mm)
- ⊙ Max. flow coefficient (Cv): 0.04
- ⊙ Stem taper: 2°
- ⊙ Turns to open: 9 to 10
- ⊙ Shutoff service: Available
- ⊙ Variety of materials available for valve body
- ⊙ Variety of end connections
- ⊙ Panel mountable
- ⊙ Flow pattern: straight, angle
- ⊙ Handle type: knurled and slotted

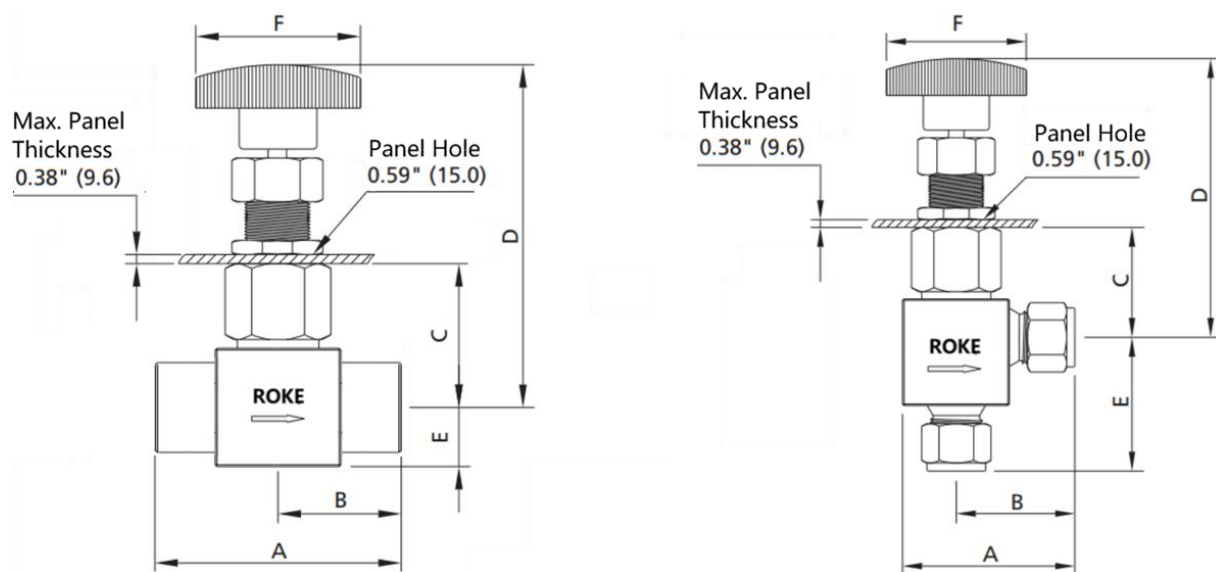


Standard Materials of Construction

MH Series

	NO.	Component	Material
	1	Body	316 SS/A479
	2	Stem	440C SS/A276
	3	Bonnet	316 SS/A479
	4	Bonnet Nut	316 SS/A276
	5	Panel Nut	Stainless steel
	6	Stem Guide Ring	316 SS/A276
	7	Packing	PTFE/D1710
	8	Packing Nut	Stainless steel
	9	Handle Screw	Stainless steel
	10	Handle	Nylon or Aluminium

Dimensions

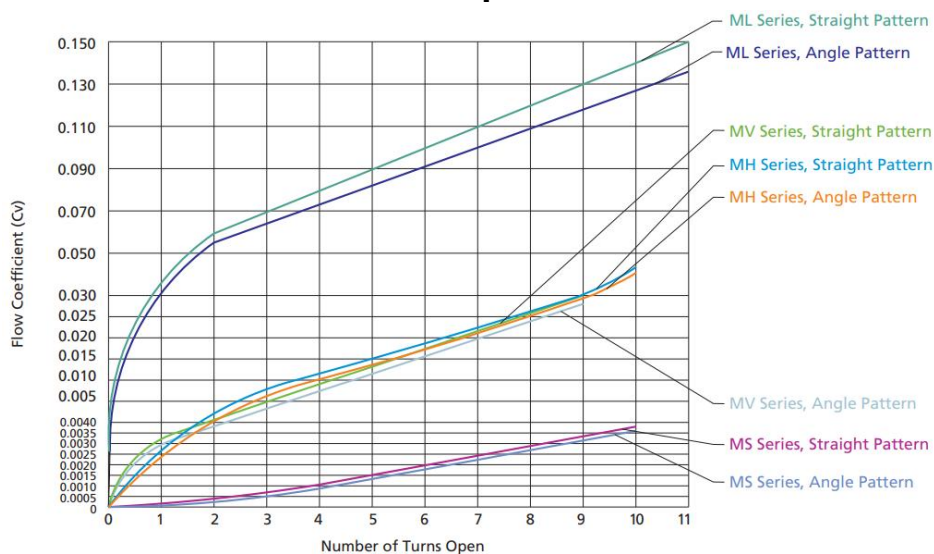


MH Series								
Basic Ordering Number	Inlet	Outlet	Dimensions, in.(mm)					
			A	B	C	D	E	F
Straight Pattern								
-MH-FN2	1/8 NPT Female	1/8 NPT Female	2.00 (50.8)	1.00 (25.4)	1.09 (27.7)	3.86 (98.0)	0.38 (9.6)	1.38 (35.1)
-MH-MN4	1/4 NPT Male	1/4 NPT Male	2.06 (52.3)	1.03 (26.2)	1.09 (27.7)	3.86 (98.0)	0.40 (10.1)	1.38 (35.1)
-MH-FT4	OD 1/4	OD 1/4	2.40 (61.0)	1.20 (30.5)	1.09 (27.7)	3.86 (98.0)	0.38 (9.6)	1.38 (35.1)
-MH-MT6	OD 6mm	OD 6mm	2.40 (61.0)	1.20 (30.5)	1.09 (27.7)	3.86 (98.0)	0.38 (9.6)	1.38 (35.1)
Angle Pattern								
-MH-FN2-A	1/8 NPT Female	1/8 NPT Female	1.28 (32.5)	0.91 (23.1)	1.09 (27.7)	3.86 (98.0)	1.00 (25.4)	1.38 (35.1)
-MH-MN4-A	1/4 NPT Male	1/4 NPT Male	1.28 (32.5)	0.91 (23.1)	1.09 (27.7)	3.86 (98.0)	1.00 (25.4)	1.38 (35.1)
-MH-FT4-A	OD 1/4	OD 1/4	1.54 (39.1)	1.16 (29.5)	1.09 (27.7)	3.86 (98.0)	1.48 (37.6)	1.38 (35.1)
-MH-MT6-A	OD 6mm	OD 6mm	1.54 (39.1)	1.16 (29.5)	1.09 (27.7)	3.86 (98.0)	1.48 (37.6)	1.38 (35.1)

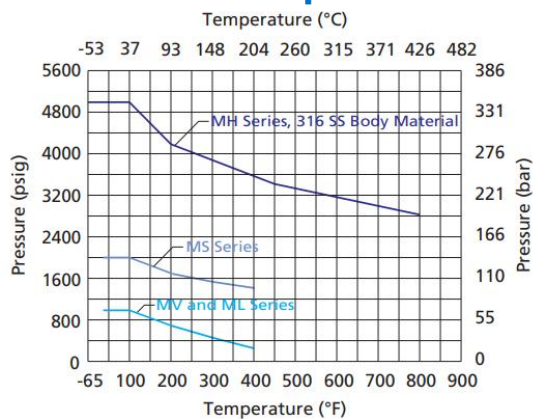
Flow Data in Full Open Position at 70°F (20°C)

Pressure Drop to Atmosphere bar (psig)	MS Series (CV: 0.004)		MV Series (CV: 0.03)		ML Series (CV: 0.15)		MH Series (CV: 0.04)	
	Air Flow std ft ³ /min (std L/min)	Water Flow gal/min (L/min)	Air Flow std ft ³ /min (std L/min)	Water Flow gal/min (L/min)	Air Flow std ft ³ /min (std L/min)	Water Flow gal/min (L/min)	Air Flow std ft ³ /min (std L/min)	Water Flow gal/min (L/min)
0.69 (10)	0.04 (1.1)	0.01 (0.03)	0.33 (9.3)	0.09 (0.34)	2.00 (56.6)	0.51 (1.90)	0.45 (12.7)	0.12 (0.45)
3.45(50)	0.10 (2.8)	0.02 (0.07)	0.90 (25.4)	0.21 (0.79)	6.40 (181)	1.20 (4.50)	1.20 (33.9)	0.28 (1.00)
6.90 (100)	0.20 (5.6)	0.04 (0.15)	1.50 (42.4)	0.30 (1.10)	11.40 (323)	1.70 (6.40)	2.10 (59.4)	0.40 (1.50)

Flow Coefficient at Turns to Open

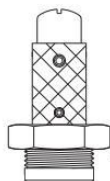


Pressure vs. Temperature



Optional Handles

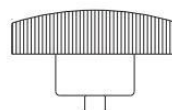
knurled Handle



Vernier Handle



Cicular Handle



Ordering Number Description

SS - MS - FT - 2 - FT - 2 - EP - K - B - A - 01																				
Body Material		Series	Inlet Type		Inlet Size		Outlet Type		Outlet Size		Seal Material		Handle Type		Handle Color		Flow Pattern		Cleaning and Packaging	
SS	316L	MS	FT	Fractional Tube Fitting	1	1/16	FT	Fractional Tube Fitting	1	1/16	Default	FKM	V	Vernier	Default	Black	Default	Straight Angle	01	RCP-01
B	Brass	MV			2	1/8			2	1/8	NB	K	Knurled	R	Red	A	Cross (MS & MV)			
SM	6Mo	ML	MT	Metric Tube Fitting	3	2mm	MT	Metric Tube Fitting	2	2mm	EP	EPDM	C	Circular	B	Blue	C	02	RCP-02	
D7	2507	MH									3/16	FF	FFKM	G	Green					
A20	Alloy 20		FN	NPT Female	3	3mm	FN	NPT Female	3	3mm	VM	VMQ		Y	Yellow	D	Double (MS & MV)			
A40	Alloy 400		MN	NPT Male		4	1/4	MN		NPT Male	4	1/4	PT	PTFE (MH)		O	Orange			
A60	Alloy 600		FR	Male FR Fitting	6	4MM	FR	Male FR Fitting	4	4MM	GR	Graphite (MH)								
625	Alloy 625					3/8				6			3/8							
825	Alloy 825					6MM				6MM										
276	C-276																			

Note: "Ordering Number Description" is a reference to understand the combination rules of ROKE product part number. Not all combinations are available.
If you have any questions, please contact ROKE Sales department or local distributor.

Cleaning and Packaging:

RFC-01: Standard cleaning and packaging for general industrial procedures.

RFC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement of ASTM G93 Level C.

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