



# Metering Valve

## MV2 Series

- ❖ Maximum working pressure up to 1000 psig (68.9 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ One-piece forged body
- ❖ Orifice size is 0.056" (1.42 mm)
- ❖ Straight, angle, cross and double patterns

## Features

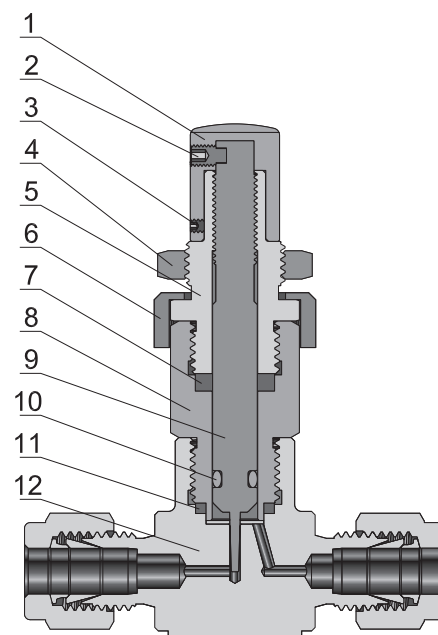
- ❖ Maximum working pressure: 1000 psig (68.9 bar)
- ❖ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ❖ Orifice sizes: 0.056" (1.42 mm)
- ❖ Stem taper: 3°
- ❖ Shutoff service: not available
- ❖ Panel mountable
- ❖ Flow pattern: straight, angle, cross and double patterns
- ❖ Handle type: vernier and slotted
- ❖ Variety of end connections

## Temperature Ranges for Different seal Materials

Seal Material	Temperature Range °F (°C)
Buna N	-10 to 300 (-23 to 148)
Ethylene Propylene	-10 to 300 (-23 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Kalrez	-0 to 300 (-17 to 148)
Neoprene	-10 to 250 (-23 to 121)

## Standard Materials of Construction

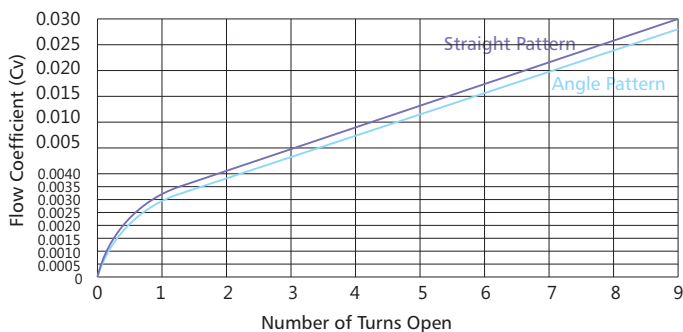
Component		Material Grade/ASTM Specification	
		316 S.S.	Brass
1	Handle	300 SS/A276	Silver-mist chrome-plated C36000/B16
2	Handle Screw	Black oxide alloy steel/ANSI 18.3	
3	Lock Screw	Black oxide alloy steel/ANSI 18.3	
4	Panel Nut	316 S.S./B783	Silver-mist chrome-plated C36000/B16
5	Bonnet	316 S.S./A479	Silver-mist chrome-plated C34500/B453
6	Bonnet Sleeve	Sintered 316 S.S.	
7	Stem Guide Ring	Glass-filled PTFE	
8	Body Extension	316 S.S./A479	Silver-mist chrome-plated C34500/B453
9	Stem	Hard chrome-plated 316 SS/A479	
10	O-ring	Fluorocarbon FKM	Buna N
11	Body Seal	Fluorocarbon FKM	Buna N
12	Body	316 S.S./A182	Silver-mist chrome-plated C37700/B283



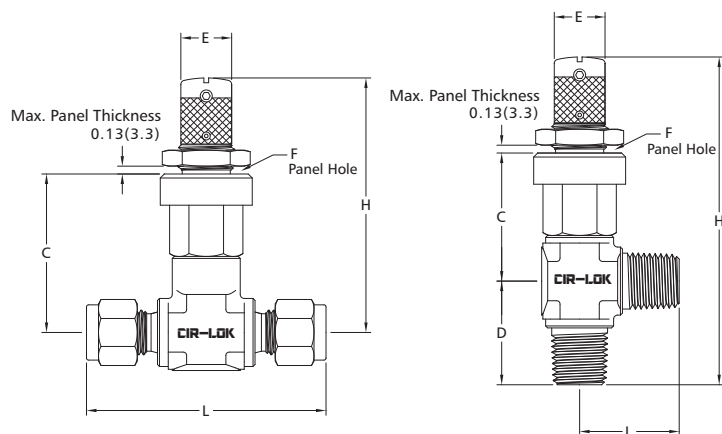
## Flow Data at 70°F (20°C)

Pressure Drop to Atmosphere psig (bar)	Air Flow std ft <sup>3</sup> /min (std L/min)	Water Flow U.S. gal/min (L/min)
10 (0.69)	0.33 (9.3)	0.09 (0.34)
50 (3.45)	0.90 (25.4)	0.21 (0.79)
100 (6.90)	1.50 (42.4)	0.30 (1.10)

## Flow Coefficient at Turns Open



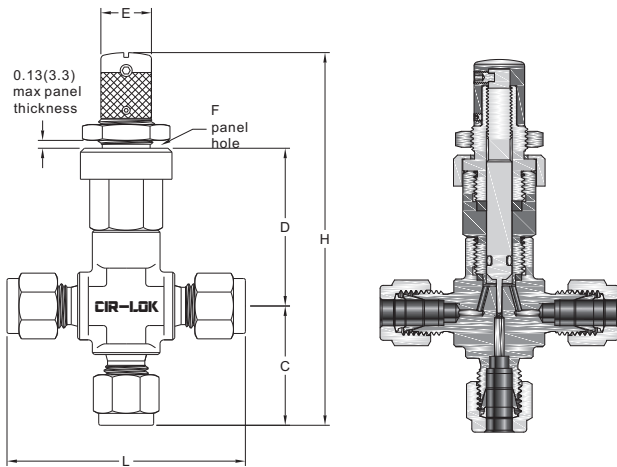
## Dimensions



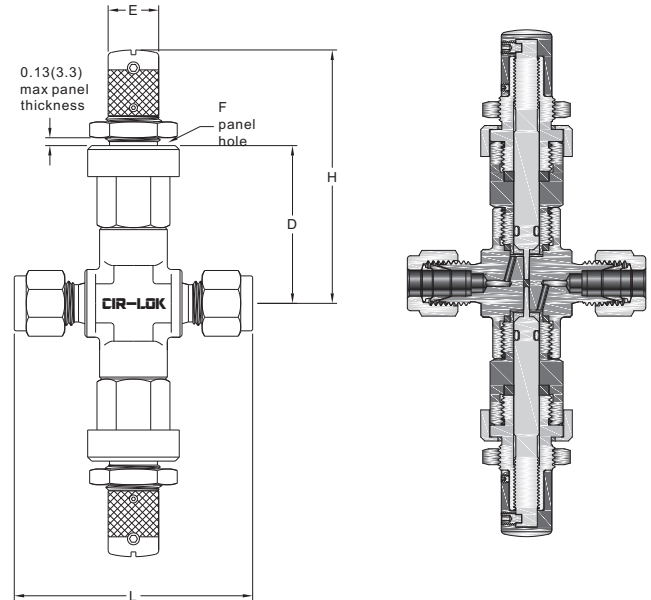
Basic Ordering Number	Connection Type and Size	Dimension, in. (mm)					
		H	L	C	D	E	F
<b>Straight Pattern</b>							
MV2-F2-	1/8" Hikelok	2.78 (70.6)	2.02 (51.3)	1.56 (39.6)	—	0.50 (12.7)	0.58 (14.7)
MV2-F4-	1/4" Hikelok		2.20 (55.9)				
MV2-M3-	3 mm Hikelok		2.02 (51.3)				
MV2-M6-	6 mm Hikelok		2.20 (55.9)				
MV2-NPT2-	1/8 Male NPT		1.50 (38.1)				
MV2-NPT4-	1/4 Male NPT		1.96 (49.8)				
MV2-FNPT2-	1/8 Female NPT		1.94 (49.3)				
<b>Angle Pattern</b>							
MV2-F2-	1/8" Hikelok	3.30 (83.8)	1.01 (25.7)	1.07 (27.2)	1.10 (27.9)	0.50 (12.7)	0.58 (14.7)
MV2-F4-	1/4" Hikelok	3.39 (86.1)	1.10 (27.9)				
MV2-M3-	3 mm Hikelok	3.30 (83.8)	1.01 (25.7)				
MV2-M6-	6 mm Hikelok	3.39 (86.1)	1.10 (27.9)				
MV2-NPT2-	1/8 Male NPT	3.04 (77.2)	0.75 (19.1)				
MV2-NPT4-	1/4 Male NPT	3.27 (83.1)	0.98 (24.9)				
MV2-FNPT2-	1/8 Female NPT	3.04 (77.2)	1.01 (25.7)				

## 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.

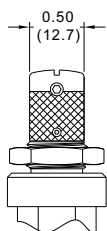
Inlet valve handle can be set and locked at desired maximum flow, outlet valve handle can be used for fine flow control up to the preset maximum of the inlet valve.

Basic Ordering Number	Connection Type and Size	Cv	Dimension, in. (mm)					
			H	L	C	D	E	F
<b>Cross Pattern</b>								
MV2-F4-	1/4" CIR-LOK	0.03	3.39 (86.1)	2.20 (55.9)	1.10 (27.9)	1.07 (27.2)	0.50 (12.7)	0.58 (14.7)
MV2-M6-	6 mm CIR-LOK							
<b>Double Pattern</b>								
MV2-F4-	1/4" CIR-LOK	0.026	2.78 (70.6)	2.20 (55.9)	—	1.56 (39.6)	0.50 (12.7)	0.58 (14.7)
MV2-M6-	6 mm CIR-LOK							

## Optional Handles

### Slotted Handle

- ❖ Flow setting adjustment is available with a screwdriver
- ❖ Ideal for installation where access to handle



### Vernier Handle

- ❖ Repeatable flow setting
- ❖ Adjustment accurate to 1/25 turn (1/1000 of an inch)



## How to Order

**MV2— NPT4 — M6 — EV — A — 316**

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	O-Ring Material	Handle Type	Flow Pattern	Material
MV2	<b>FNPT</b> Female NPT	<b>1</b> 1/16 in.	Same as inlet type and inlet size		Fluorocarbon FKM  <b>B</b> Buna N <b>E</b> Ethylene propylene  <b>N</b> Neoprene  <b>Z</b> Kalrez	Knurled,round	Straight	<b>316</b> 316 S.S.
	<b>NPT</b> Male NPT	<b>2</b> 1/8 in.					A Angle	<b>316L</b> 316L
	<b>FBT</b> Female BSPT	<b>3</b> 3 mm				V Vernier	<b>304</b> 304	
	<b>MBT</b> Male BSPT	<b>4</b> 1/4 in.	If outlet and inlet are the same, eliminate the outlet designator	C Cross		<b>304L</b> 304L		
	<b>FMS</b> Female ISO 261	<b>6</b> 3/8 in. or 6 mm				<b>BR</b> Brass		
	<b>MS</b> Male ISO 261	<b>8</b> 1/2 in. or 8 mm						
	<b>FBP</b> Female BSPP	<b>10</b> 10 mm						
	<b>MBP</b> Male BSPP							
	<b>F</b> Fractional Tube Fitting							
	<b>M</b> Metric Tube Fitting							
<b>GFS</b> Male GFS Fitting								