

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

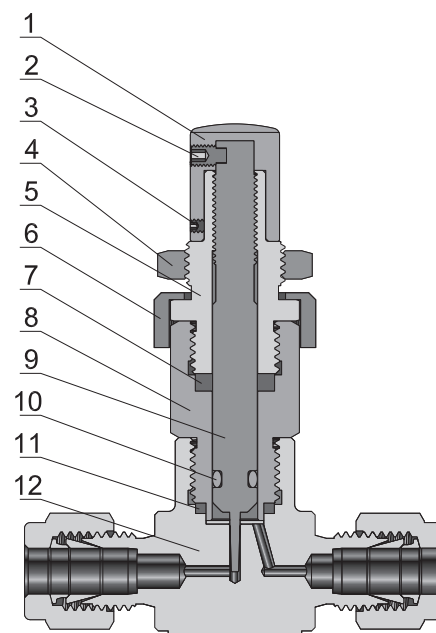
- ❖ Maximum working pressure: 1000 psig (68.9 bar)
- ❖ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ❖ Orifice sizes: 0.056" (1.42 mm)
- ❖ Stem taper: 3°
- ❖ Shutoff service: not available
- ❖ Panel mountable
- ❖ Flow pattern: straight, angle, cross and double patterns
- ❖ Handle type: vernier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

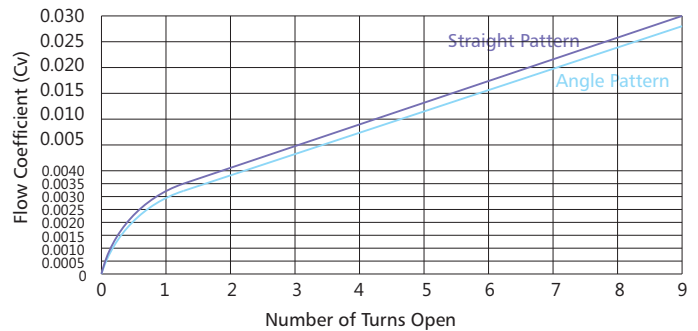
| Component | | Material Grade/ASTM Specification | |
|-----------|-----------------|-----------------------------------|---------------------------------------|
| | | 316 S.S. | Brass |
| 1 | Handle | 300 SS/A276 | Silver-mist chrome-plated C36000/B16 |
| 2 | Handle Screw | Black oxide alloy steel/ANSI 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 |



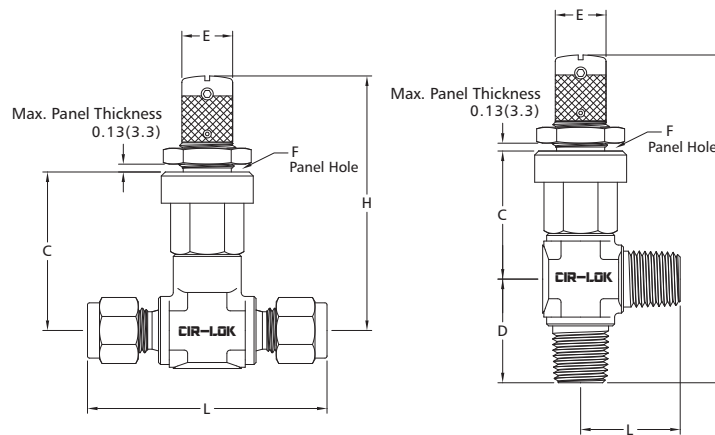
Flow Data at 70°F (20°C)

| Pressure Drop to Atmosphere psig (bar) | Air Flow std ft ³ /min ³ (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



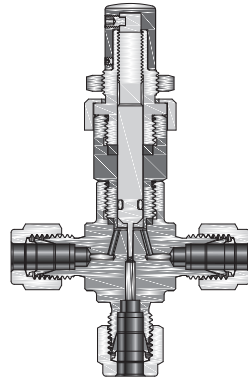
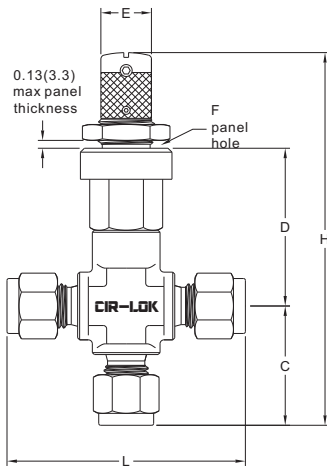
Dimensions



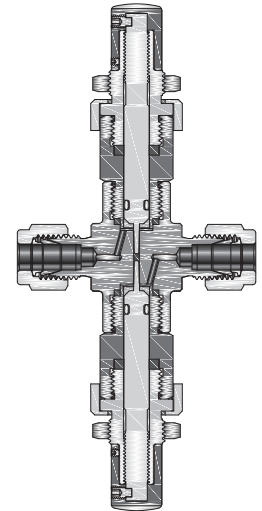
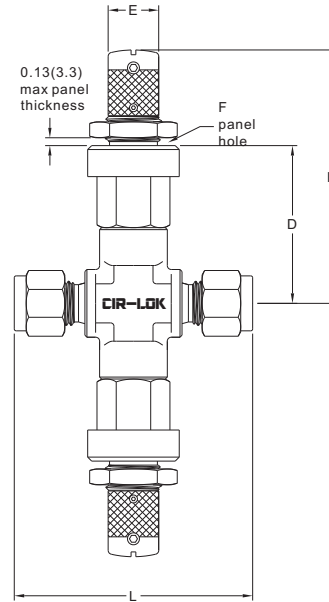
| Basic Ordering Number | Connection Type and Size | Dimension, in. (mm) | | | | | |
|-------------------------|--------------------------|---------------------|-------------|-------------|-------------|-------------|-------------|
| | | H | L | C | D | E | F |
| Straight Pattern | | | | | | | |
| MV2-F2- | 1/8" CIR-LOK | 2.78 (70.6) | 2.02 (51.3) | 1.56 (39.6) | — | 0.50 (12.7) | 0.58 (14.7) |
| MV2-F4- | 1/4" CIR-LOK | | 2.20 (55.9) | | | | |
| MV2-M3- | 3 mm CIR-LOK | | 2.02 (51.3) | | | | |
| MV2-M6- | 6 mm CIR-LOK | | 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) | | | | |
| Angle Pattern | | | | | | | |
| MV2-F2- | 1/8" CIR-LOK | 3.30 (83.8) | 1.01 (25.7) | 1.07 (27.2) | 1.01 (25.7) | 0.50 (12.7) | 0.58 (14.7) |
| MV2-F4- | 1/4" CIR-LOK | 3.39 (86.1) | 1.10 (27.9) | | 1.10 (27.9) | | |
| MV2-M3- | 3 mm CIR-LOK | 3.30 (83.8) | 1.01 (25.7) | | 1.01 (25.7) | | |
| MV2-M6- | 6 mm CIR-LOK | 3.39 (86.1) | 1.10 (27.9) | | 1.10 (27.9) | | |
| MV2-NPT2- | 1/8 Male NPT | 3.04 (77.2) | 0.75 (19.1) | | 0.75 (19.1) | | |
| MV2-NPT4- | 1/4 Male NPT | 3.27 (83.1) | 0.98 (24.9) | | 1.02 (25.9) | | |
| MV2-FNPT2- | 1/8 Female NPT | 3.04 (77.2) | 1.01 (25.7) | | 0.75 (19.1) | | |

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.

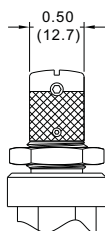
Inlet valve handle can be set and locked at desired maximum flow, outlet valve handle can be used for fine flow control up to the preset maximum of the inlet valve.

| Basic Ordering Number | Connection Type and Size | Cv | Dimension, in. (mm) | | | | | |
|-----------------------|--------------------------|-------|---------------------|-------------|-------------|-------------|-------------|-------------|
| | | | H | L | C | D | E | F |
| Cross Pattern | | | | | | | | |
| 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 | | | | | | | |
| Double Pattern | | | | | | | | |
| 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 | FNPT Female NPT | 1 1/16 in. | Same as inlet type and inlet size | | Fluorocarbon FKM B Buna N E Ethylene propylene N Neoprene Z Kalrez | Knurled,round | Straight | 316 316 S.S. | |
| | NPT Male NPT | 2 1/8 in. | | | | | If outlet and inlet are the same, eliminate the outlet designator | V Vernier | A Angle |
| | FBT Female BSPT | 3 3 mm | | | | D Double | | | 304 304 |
| | MBT Male BSPT | 4 1/4 in. | C Cross | 304L 304L | | | | | |
| | FMS Female ISO 261 | 6 3/8 in. or 6 mm | | BR Brass | | | | | |
| | MS Male ISO 261 | 8 1/2 in. or 8 mm | | | | | | | |
| | FBP Female BSPP | 10 10 mm | | | | | | | |
| | MBP Male BSPP | | | | | | | | |
| | F Fractional Tube Fitting | | | | | | | | |
| | M Metric Tube Fitting | | | | | | | | |
| GFS Male GFS Fitting | | | | | | | | | |