

MPV-10K Micro-Metering Precision Valve

Patent No. 4.698.998

Part #57168: MPV-10K with Fluorocarbon "Viton" (standard)

Part #54803: MPV-10K with Nitrile Buna-N O-ring

Part #54906: MPV-10K with Ethylene-propylene

Part #57161: MPV-10K with Silicone

Part #57122: MPV-10K with Neoprene

SPECIAL FEATURES:

- MPV-10K features all stainless steel construction for use with corrosive gases and on operating pressure from vacuum to 10,000 psi. It consists of one low torque, fine micro-metering valve with positive shut-off, adjustable stop and soft seat. The valve allows the operator a very fine fingertip pressure adjustment.
- Selecting the appropriate O-ring material may extend the wide range of gas applications.

OPERATION:

The pressure valve will begin to open when it is turned counter clockwise approximately 15 degrees. Full open position of the valves is achieved with a maximum of 3 1/2 turns from the closed position. The valve has a fine adjustment sensitivity of .0005 psi. Very low torque is required to turn the vernier... FINGERTIP ADJUSTMENT!!!!

SPECIFICATIONS:

- **Pressure Range:** 0-10,000 psi and vacuum
 - **Proof Pressure:** 15000 psi
 - **Orifice:** .032
 - **CV:** .007
 - **Mechanical Rotation:** 10 turns (nom.)
 - **Torque:** Fingertip adjust
 - **Volume:** 1/2 cubic inch (Nom.)
 - **Adjustable sensitivity:** .0005 psi
 - **Construction:** 303 stainless steel body, black anodized aluminum knob. All other parts 304 series stainless, O-rings fluorocarbon "Viton" STD, others available.
 - **Weight:** 3.0 lbs.
 - **O-ring repair kits:** Buna-N (part #58499); Ethylene-Propylene (part #58506); Silicone (part #58509); Neoprene (part #58515); Fluorocarbon "Viton" (standard) (part #55277).
- Note:** Various O-ring materials may be installed in MPV-10K by special order, but may not be rated for 10,000 psi



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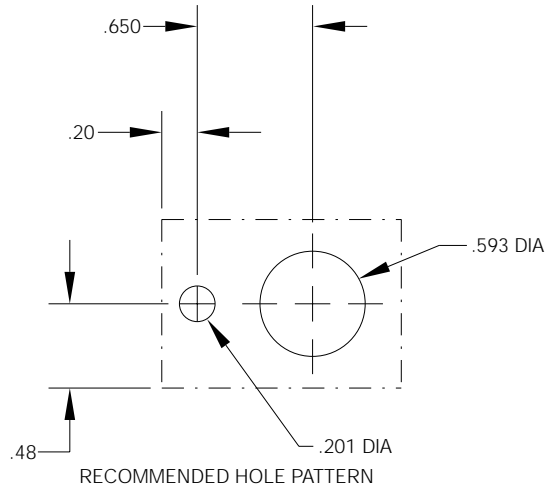
Patent No. 4.698.998

INSTALLATION:

The fine micro-metering valve is factory adjusted.

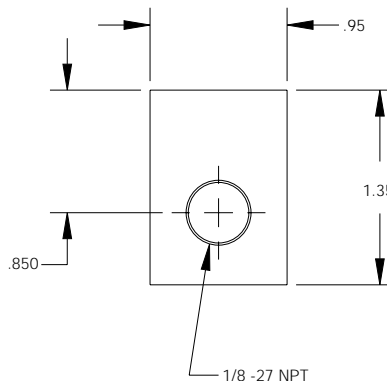
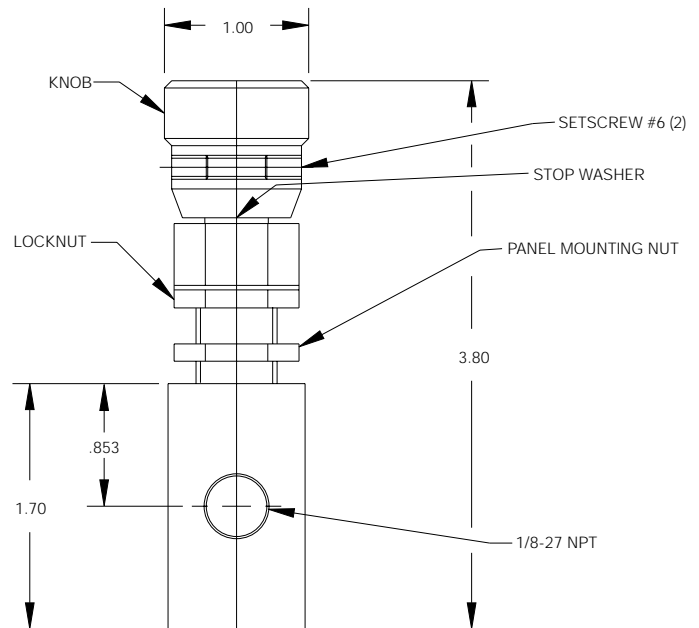
Panel or bracket mounting:

1. Turn the knob counter clockwise, remove knob and stop washer.
2. Loosen #4 set screw, remove locknut and panel mounting nut.
3. Install controller into recommended hole pattern with two 8-32 x 3/8" lg. screw.
4. Install panel mounting nut, locknut (all the way to the end), stop washer and knob. Two dimples on valve stem must line up with the two set screws in knob.



Adjusting the stop:

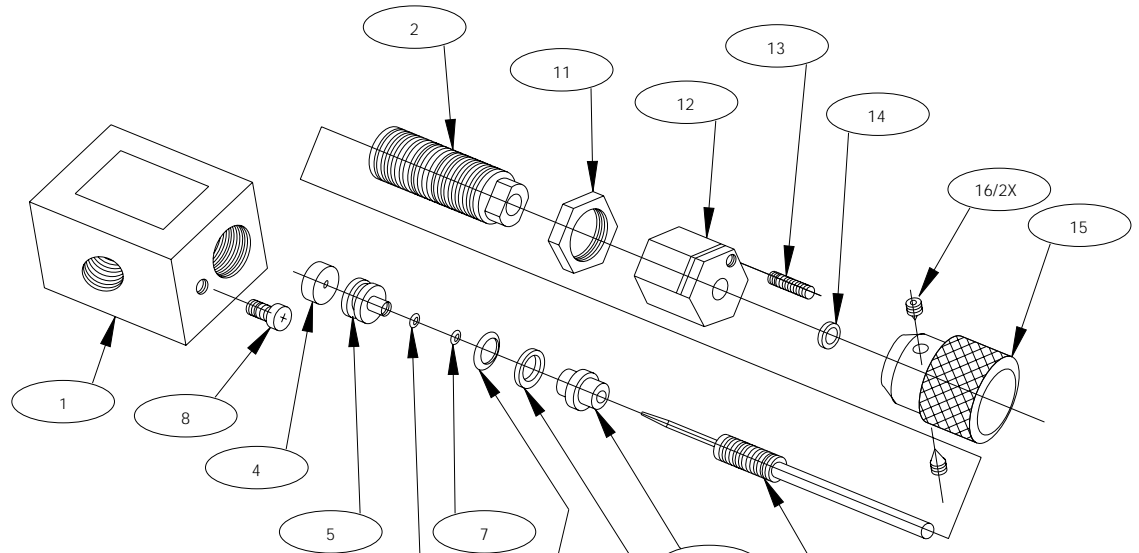
Apply pressure to the valve and turn knob clockwise until flow of pressure stops (make sure there is no leak on down stream side), then back up locknut all the way to the knob and lock it with #4 set screws.



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Bill of Material

Ref #	Part #	Description	Qty.
1	54193	Valve body	1
2	54540	Housing, Valve Needle	1
3	59551	Valve Needle	1
4	55896	Valve Seat	1
5	59045	Valve, Needle Seat	1
6	56059	Valve Needle	1
7	55570	Washer, Backing .04 thick, tetrafluoroethylene resin	1
8	60837	Screw, mach-pan HD, 10-32 NF x _ lg	1
9	60633	Retainer, Packing Backup , single turn tetrafluoroethylene	1
10	59387	Valve Seat, Stem	1
11	57482	Nut, Valve Needle Housing 9/16-18, width across flats: .75, thickness: .12	1
12	54401	Locknut	1
13	60202	Setscrew, hex	1
14	59245	Washer, Flat	1
15	58344	Knob	1
16	59322	Setscrew, 6-32NCx1/4 SST	2
17	55593	Grease, Fluorinated Krytox	1
18	55569	O-ring, AS568A Dash No 010, Fluorocarbon (Viton) 90 durometer color black w/white dot	1
19	55541	O-ring, AS568A Dash No 002, Ethylene Propylene, 70 durometer color black	1
20	55546	O-ring, AS568A Dash No 002, Silicone, 70 durometer color rust	1
21	55549	O-ring, AS568A Dash No 002, Neoprene, 70 durometer color black	1
22	55536	O-ring, AS568A Dash No 002, Buna-N (Nitrile), 70 durometer color black	1
23	55554	O-ring, AS568A Dash No 010, Buna-N (Nitrile), 70 durometer color black	1
24	55558	O-ring, AS568A Dash No 010, Ethylene Propylene, 70 durometer color black	1
25	55562	O-ring, AS568A Dash No 010, Silicone, 70 durometer color rust	1
26	55565	O-ring, AS568A Dash No 010, Neoprene, 70 durometer color black	1
27	55552	O-ring, AS568A Dash No 010, Fluorocarbon (Viton) 90 durometer color black w/white dot	1



NOTES:

1 LIGHTLY COAT O-RINGS AND THREADS ON VALVE NEEDLE WITH THE FOLLOWING LUBRICANT, PART NO. 55593.

- | | | | | | |
|----|----|----|----|----|---|
| 19 | OR | 18 | OR | 3 | 1 |
| 20 | OR | 23 | OR | OR | 6 |
| 21 | OR | 24 | OR | | |
| 22 | OR | 25 | OR | | |
| 27 | OR | 26 | OR | | |
- O-RING, .042 ID 1 O-RING, .239 ID