



MPA-10X / MPA-25X

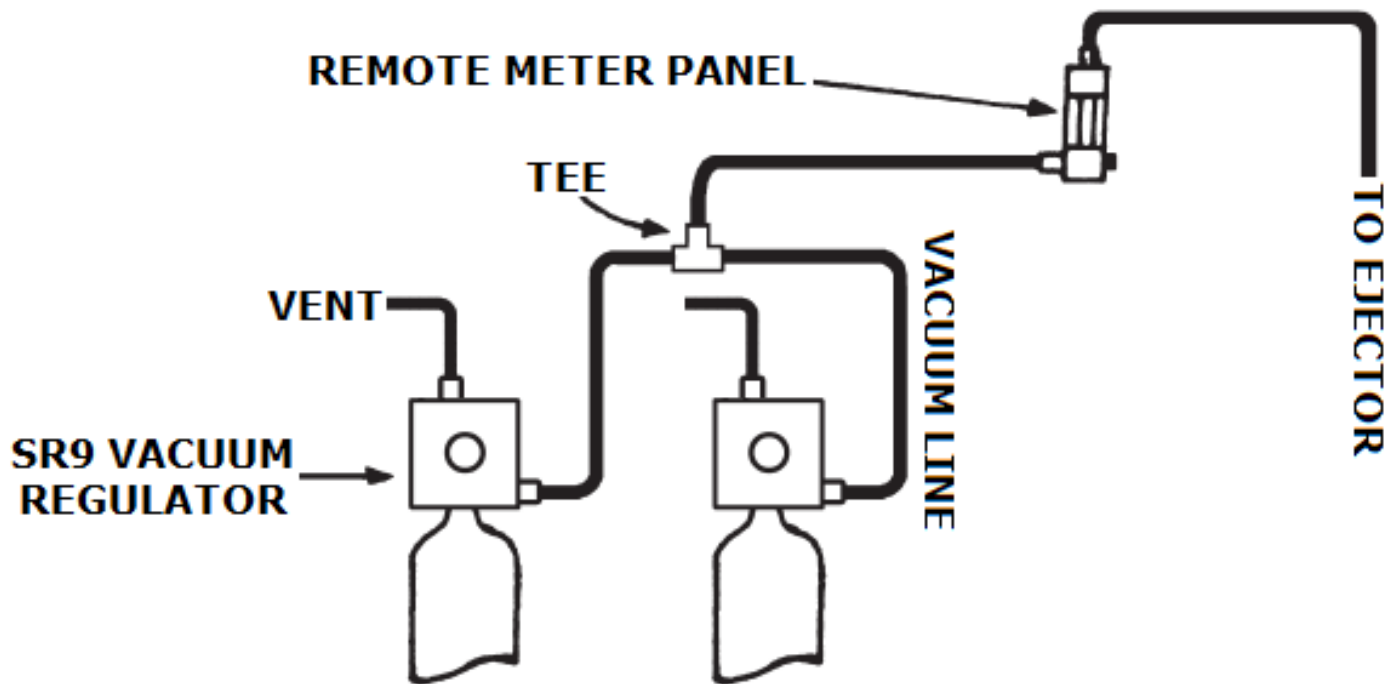
Remote Meter Panel

Installation, Operation & Maintenance

General: The Archer Instruments MPA series of remote meter panels are designed to provide a visual indication of gas feed rate and to allow for smooth and precise feed rate adjustment. This meter is suitable for use with Chlorine or Sulfur Dioxide gases.

Installing the Model MPA-10X / MPA-25X:

- 1) The remote meter panel is typically installed on a wall or panel using the two pre-drilled mounting holes found on the meter body. The remote meter panel is installed in the system between the vacuum source (ejector) and the gas source (Cl₂ or SO₂ cylinder / vacuum regulator). See the illustration on the next page.
- 2) Note that the gas flows up through the remote meter panel, and from the gas cylinder to the ejector. The top tubing connector is connected to the ejector (vacuum source) and the bottom tubing connector to the vacuum regulator (or tee fitting between the vacuum regulators).
- 3) Once the remote meter panel is mounted and the tubing connected, it can be used to perform a quick check on the system for vacuum leaks. By operating the ejector with the gas cylinder valve(s) shut, the ball in the remote meter panel should settle at the bottom and not move. If the ball continues to float above the bottom stop or if it bounces, a vacuum leak is indicated in the system.



Operating the MPA-10X / MPA-25X:

- 1) Once installed and connected, the remote meter panel is placed into operation by opening the cylinder valves and operating the ejector.
- 2) Turn the rate control knob until the desired feed rate is indicated.

NOTE: The rate control valve is not designed to be used as a shut-off valve. To shut off gas feed, shut off motive water to the ejector.

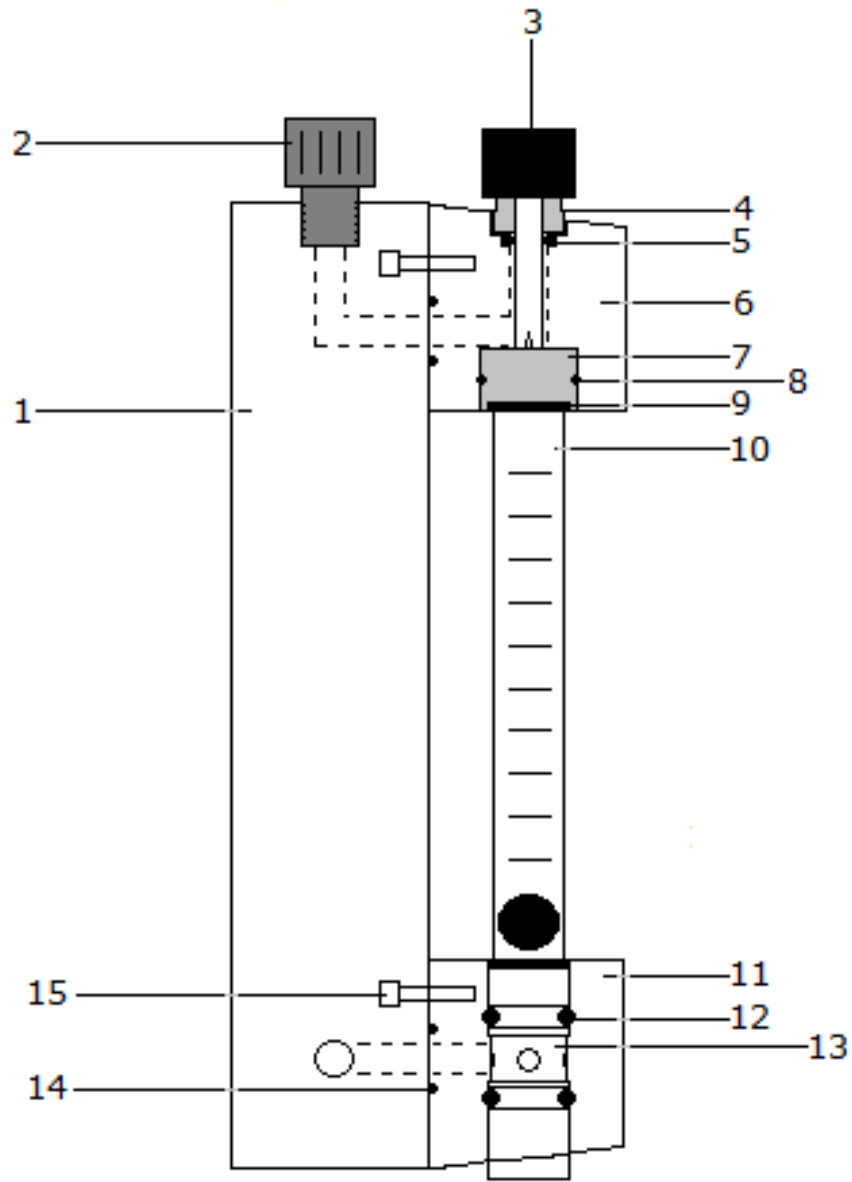
Maintaining the MPA-10X / MPA-25X:

Recommended Maintenance Frequency: Archer Instruments recommends routine maintenance every two years - or whenever the meter tube or rate valve stem become fouled with residue or other debris (whichever occurs sooner).

-Refer to the following parts diagram when performing maintenance on the remote meter panel.

- 1) To disassemble the remote meter panel, first shut the cylinder valves and evacuate the gas inside by disconnecting the vacuum line between the remote meter panel and the vacuum regulator(s). Then remove the remote meter from the system.
- 2) Next unscrew the RVA-518-100 / 250 rate valve & knob from the top of the remote meter panel until it can be gently pulled straight up and out.
- 3) Remove the VBA-100C rate valve bonnet by unscrewing it from the top meter block using a pair of pliers.
- 4) Beneath the bonnet is an OA-VIT-106 o-ring, which should be removed and replaced. This o-ring will not fall out by itself and should be removed with a small screwdriver or other small tool.
- 5) Next remove the glass meter tube by slowly unscrewing the MIA-140 inlet plug. This clamps the glass tube into place. So take care as you unscrew it not to let the glass meter tube fall out.
- 6) The MIA-140 inlet plug can then be removed fully by unscrewing it several turns and then pulling it down.
- 7) The RVA-830-100 / 250 rate valve seat may or may not need to be replaced. If the rate valve stem fits loosely into the seat, replace the seat. If it feels snug the seat can be left in place. If the rate valve seat does need to be replaced, it can be pushed down and out of the top meter block from above using a small screwdriver or other small tool.
- 8) Using a flathead screwdriver, remove the top and bottom meter blocks from the meter body.
- 9) Clean all parts carefully. Reassemble using new o-rings and meter gaskets. Apply a thin film of Fluorolube grease to each o-ring. Install new rate valve seat if necessary.

-Should you have any questions during maintenance of your remote meter panel, please contact your local service provider or Archer Instruments for support.



Item#	Qty.	Part #	Description	Item#	Qty.	Part #	Description
1	1	MPA-248	Meter Body	9	2	MGA-X 1 / 2 / 3 / 4	Meter Gasket 10, 25, 100, 250 PPD
2	2	TCA-XX 64 / 84	Tube Connector 100 PPD / 250 PPD	10	1	MTA-108-XXX	Meter Tube 004 / 010 / 025 / 050 / 100 / 250 = PPD
3	1	RVA-518-XXX 010 / 100 / 250	Rate Valve & Knob 10PPD / 100PPD / 250PPD	11	1	MBA-109	Bottom Meter Block
4	1	VBA-100C	Valve Bonnet	12	2	OA-VIT-112	O-Ring
5	1	OA-VIT-106	O-Ring	13	1	MIA-140	Meter Inlet Plug
6	1	MBA-110	Top Meter Block	14	2	OA-VIT-012	O-Ring
7	1	RVA-830-XXX 100 / 250	Rate Valve Seat 100PPD / 250PPD	15	4	BTA-126	#10-24 x 1" Screw
8	1	OA-VIT-016	O-Ring	Not Shown-1	1	PLA-108	¼" NPT Plug

Notes: Vacuum Tube Connector supplied as follows: 3/8" tubing for 100 PPD & below and ½" tubing for 250 PPD. Tap size is ¼" NPT.



Date: July 2014
Drawing Number: MPA