



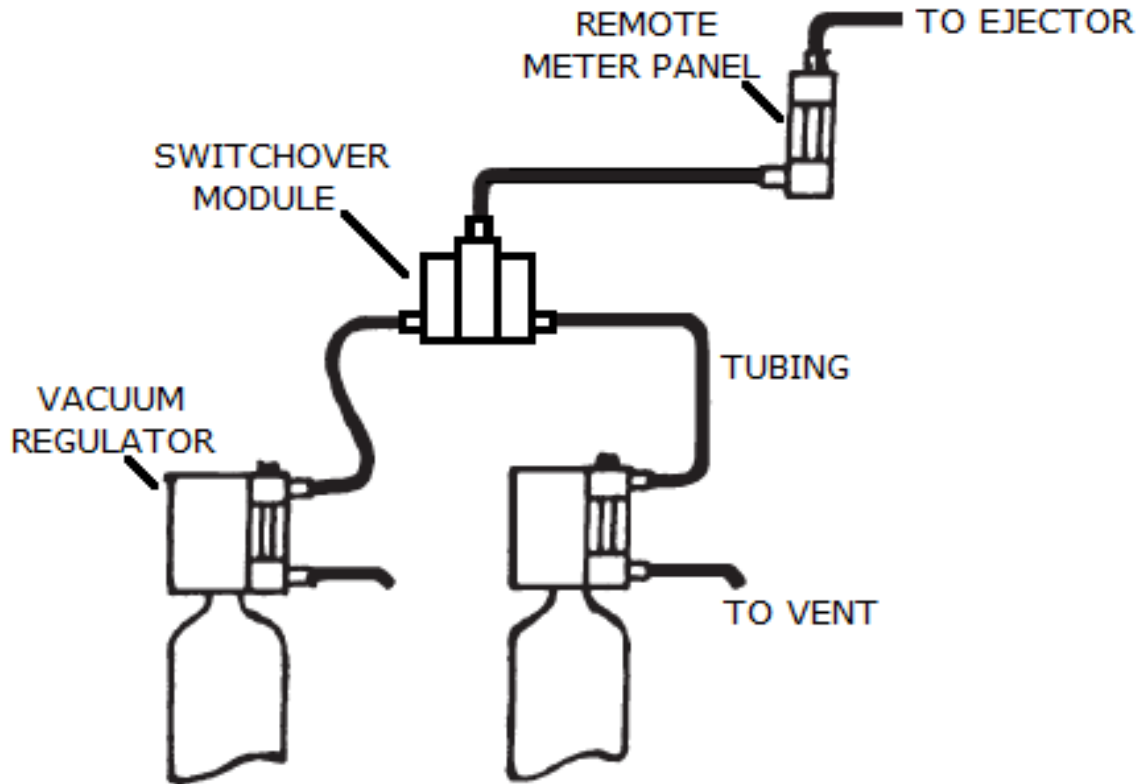
## **Model MPA-4 Remote Meter Panel**

### **Installation, Operation & Maintenance**

**General:** The Archer Instruments MPA-4 remote meter panels are designed to provide a visual indication of gas feed rate and to allow for smooth and precise feed rate adjustment.

#### **Installing the Model MPA-4:**

- 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 (chlorine 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 chlorine 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 chlorine 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-4:**

- 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.

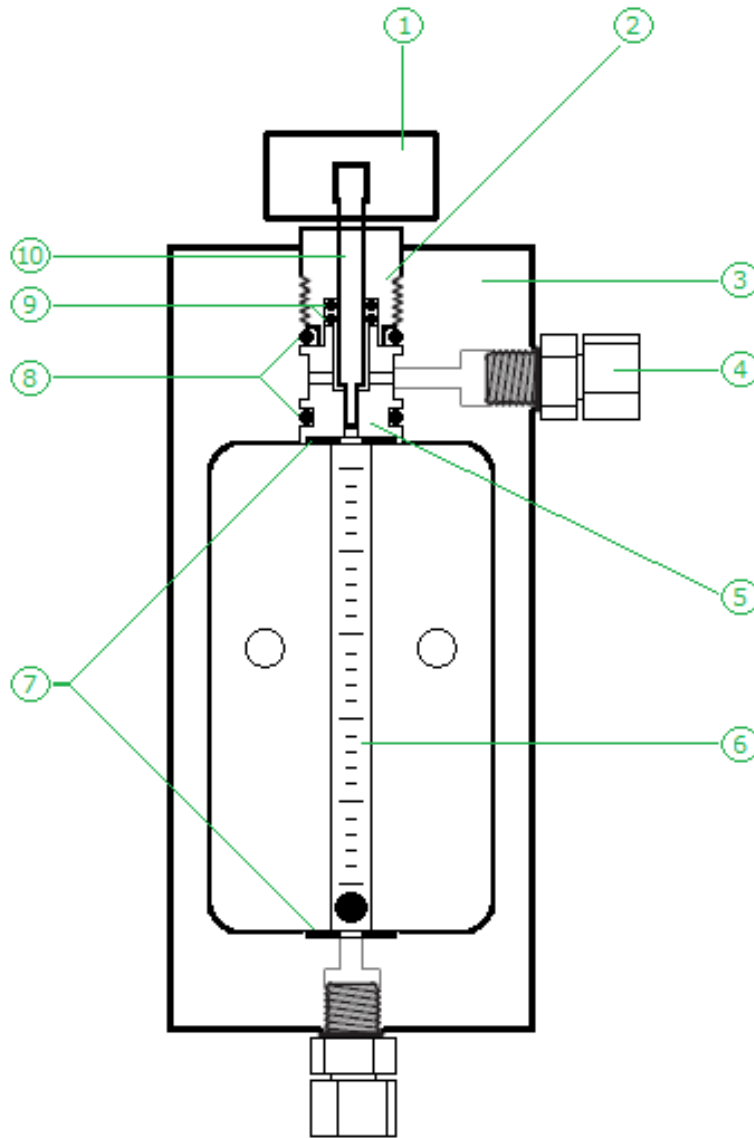
## **Maintaining the MPA-4:**

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) Unscrew the rate valve & knob from the RVA-349 valve bonnet until it can be gently pulled straight up and out.
- 2) Remove the RVA-349 rate valve bonnet by unscrewing it from the top meter block using a pair of pliers. Note: The RVA-349 contains two OA-VIT-008 o-rings, which should be removed and replaced.
- 5) Next remove the glass meter tube by pushing the tube up against the sleeve until enough space allows the tube to be removed.
- 6) Once the glass meter tube is out, remove the rate valve sleeve by pushing it down (from above) and out.
- 7) The RVA-351 rate valve sleeve (Teflon sleeve used on units 25 PPD & below only) may or may not need to be replaced. If the rate valve stem fits loosely into the seat, replace the sleeve. If it feels snug the seat can be reused.
- 8) Whenever routine maintenance is being performed, all parts should be thoroughly cleaned. It is recommended that all o-rings and gaskets be replaced.
- 9) When reassembling, new o-rings should be given a thin film of the Fluorolube grease.

*-Should you have any questions during maintenance of your MPA-4 remote meter panel, please contact your local service provider or Archer Instruments for support.*



Item#	Qty.	Part #	Description	Item#	Qty.	Part #	Description
1	1	RVA-402	Knob	6	1	MTA-108-XXX	Meter Tube 004 / 010 / 025 / 050 / 100 = PPD
2	1	RVA-349	Rate Valve Bonnet	7	2	MGA-X	Meter Gasket 1 / 2 / 3 10, 25, 100 PPD
3	1	MPA-448	Meter Body	8	2	OA-VIT-112	O-Ring
4	2	TCA-64	Tubing Connector	9	2	OA-VIT-008	O-Ring
5	1	RVA-351	Sleeve 25 PPD & below	10	1	RVA-418	Stem 25 PPD & below
or...		RVA-350	Sleeve 50 & 100 PPD	or...		RVA-665	Stem 50 & 100 PPD

**Notes:** Vacuum Tube Connector supplied for 3/8" tubing.  
Tap size is 1/4" NPT.



Date: Oct 2014  
Drawing Number: MPA-4