

GENERAL

MATHESON FLOWMETERS COMBINE CONSTRUCTION AND PERFORMANCE FEATURES ESSENTIAL TO ACCURATE LOW FLOW MEASUREMENT. THIS INFORMATION IS INTENDED AS A GUIDE TO EFFICIENT USE; CAREFUL COMPLIANCE SHOULD RESULT IN LONG AND USEFUL SERVICE.

INSTALLATION

1. Immediately after unpacking, inspect unit for any damage incurred during shipment. Follow instructions on "Damage or Shortage" slip in packing container.
2. If a unit is supplied with an integral valve then ensure that the valve is open.

MOUNTING

1. The meter must be mounted in a vertical position with the inlet (lowest end of the scale reading) at the bottom. Attitude of more than 5° from the vertical will affect the accuracy of the meter. Panel mounted meters should be installed in position prior to connection to process piping. General good piping practice should be observed to prevent trapped fluid up or down stream of the meters. Connectors/adapters on the meter are supplied with wrench flats which must be held firmly when threading mating connections. Teflon tape should be used on pipe thread connections. NOTE: Care must be taken to avoid the shredding of Teflon tape which can foul meter operation.
2. See figure #1 for recommended piping configurations. It is recommended that a bypass and piping union be installed so that the meter can be removed easily for servicing. The piping should be supported to prevent unnecessary strain on the meter.
3. Leak test final joints prior to operation. Leaks are often the cause of misleading flow indication.

OPERATION

1. **START-UP CAUTION.** Avoid sudden pressure surges. The impact of the float at the top of the tube can damage the meter if it is exposed directly to full line pressure. Avoid shock by closing the valve before start-up. Introduce pressure by slowly opening the valve.
2. **FLOW READING.** Float reading edge instructions are permanently screen on the meter window with the scale. Units of flow are indicated directly above the float reading edge instructions on the meter window.

DISASSEMBLY

- A. Remove the meter from the piping system at the piping unions.
- B. To remove the tube from the meter.
 1. Remove the vinyl blow-out back plate.
 2. Remove the valve on the inlet
 3. Remove the eight (8) screws holding the end fittings to the frame.
 4. Slide the end fittings and tube out of the frame along the center line of the tube. **DO NOT** tilt the tube when removing it from the end fittings as that might break the glass.
 5. Remove the float from the tube being careful not to drop the float or tube. If the float or tube becomes damaged, it will affect both accuracy and sensitivity.
- C. Inspect all O-rings for damage and/or lubrication. Replace if necessary.

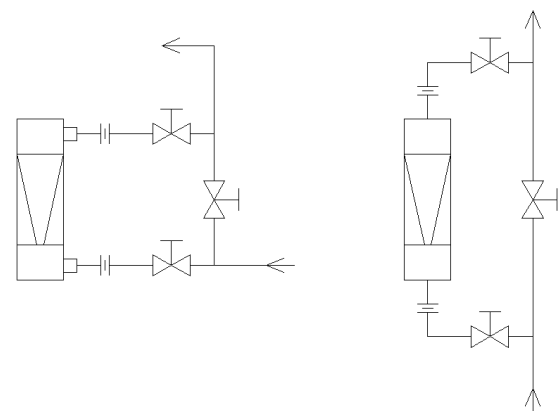
REASSEMBLY

- A. Insert the window/scale in the frame
- B. Insert the cone spring in the inlet (small end) of the tube.
- C. Slide the tube (small end) onto the inlet end fitting, using care not to tilt the tube as it might break the glass.
- D. Place the float into the tube.
- E. Place the flat spring in the outlet end of the tube.
- F. Slide the tube onto the outlet end fitting, using care not to tilt the tube as it might break the glass.
- G. Slide the tube with end fittings into the frame, using care when inserting the tube and end fittings into the frame.
- H. Use the eight (8) screws, to attach the end fittings to the frame. If the meter is to be used in a vibration environment, sealant is recommended on the screws.
- I. Install the valve.
- J. Attach the vinyl blow-out back plate.
- K. Check the meter for leaks.

CLEANING PROCEDURE (Please notify the factory if cleaning for oxygen service is required)

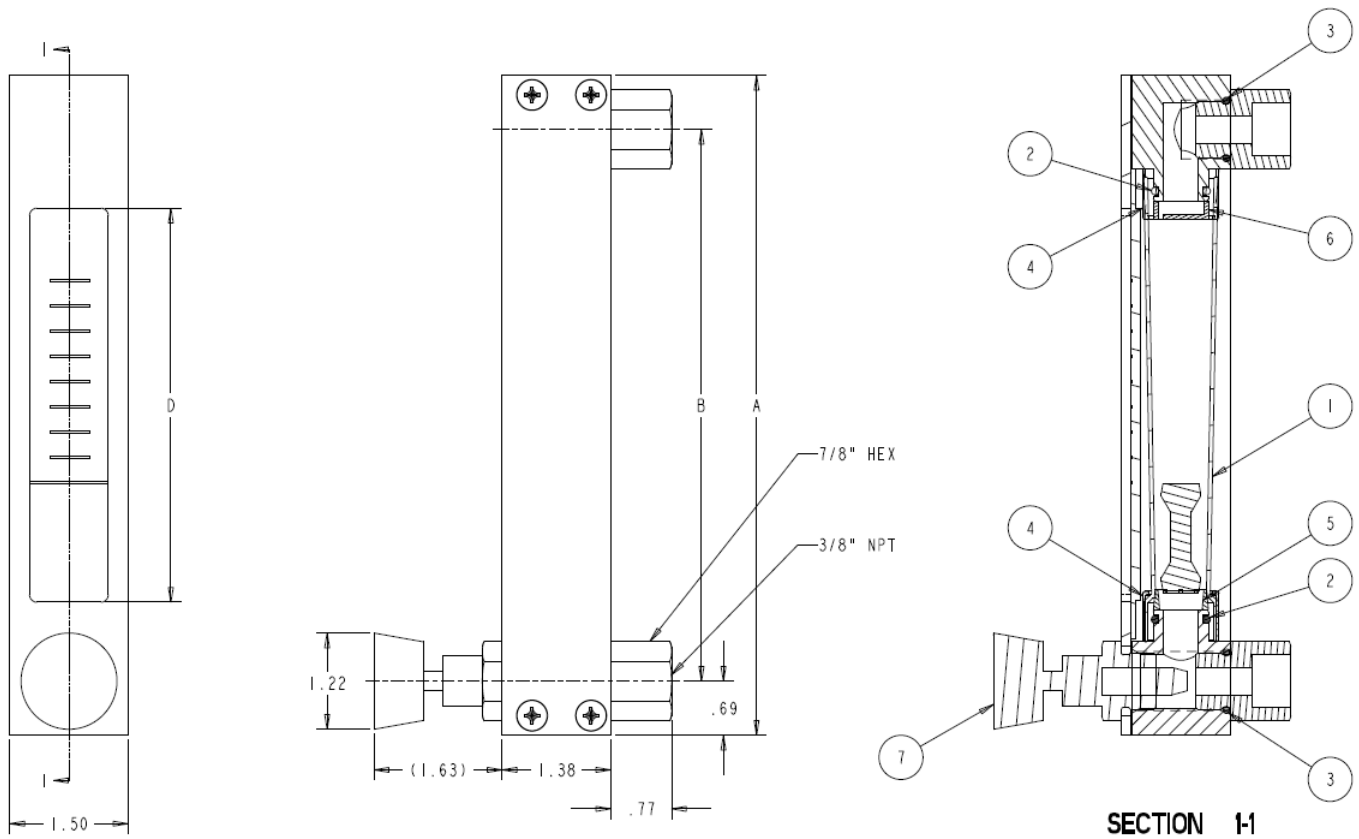
- A. Flush the inside of the tube with solvent (without wax or inhibitors, i.e. glycols). Isopropyl alcohol 90% is recommended. All parts should be ultrasonically cleaned if possible
- B. Blow dry and clean the inside of the tube with a lint free cloth
- C. Clean the float in the same manner.
- D. If the window needs cleaning then the use of a mild detergent is recommended.

FIGURE #1



HORIZONTAL PIPING

VERTICAL PIPING



Model	A	B	D
FM-1100	8.38"	7"	5"
FM-1127	10.38"	9"	7"

#	Qty	Part Number	Description
1	1	SEQ TBE0400GB	Tube, FM-1100, 70MM
	1	SEQ TBE0066GB	Tube, FM-1127, 127 MM
2	2	SEQ RNS0113BU	O-Ring, Tube, Buna
	2	SEQ RNS0113VA	O-Ring, Tube, Viton
3	2	SEQ RNS0908BU	O-Ring, Adapter, Buna
	2	SEQ RNS0908VA	O-Ring, Adapter, Viton
4	2	SEQ CLO0006PV	End Cushion
5	1	SEQ STO0006SA	Float Stop - In
6	1	SEQ STO0007SA	Float Stop - Out
7	1	SEQ VLV0301BO	Valve, Brass/Buna
	1	SEQ VLV0301SA	Valve, SS/Viton