

### GENERAL

Matheson flowmeters combine construction and performance features essential to accurate 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. If damaged, follow instructions on "Damage or Shortage" form in packing container.
2. Before installation remove dust caps from connection fittings; if unit is supplied with a valve, be sure valve is open.

### MOUNTING:

1. The meter is mounted in a vertical position, the inlet or supply connection (lowest end of scale reading) at the bottom. General good piping practice should be observed to prevent trapped fluid up or downstream of the meter.
2. Hold the end fittings or connectors (supplied with wrench flats) close to the threads to avoid twisting the meter during installation.
3. See Figure #1 for recommended piping configuration. 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.
4. Leak test final joints prior to operation. Leaks are often a cause of misleading flow indication.

### OPERATION:

1. Avoid sudden pressure surges. The impact of the float at the top of the tube can damage the meter if exposed directly to full line pressure. Avoid line shock by closing valves prior to start-up. Introduce pressure into the meter by slowly opening the valves.
2. Float reading edge instructions are permanently screened on the meter window with the scale. Units of flow are indicated directly above float reading edge instructions on meter window.

### MAINTENANCE

#### 1. DISASSEMBLY

- A. Remove the meter from the piping system at the piping unions.
- B. To remove tube from the meter:
  1. Remove vinyl blow-out back plate.
  2. If the meter is equipped with a valve on the inlet, remove the valve.
  3. Remove the four (4) screws holding the inlet end fitting to the frame.
  4. Slide the inlet end fitting and the tube out of the frame along the center line of the tube. **DO NOT** tilt the tube when removing it from the end fittings.
  5. Remove the float from the tube using care not to drop the float or tube. If the float or tube become damaged, it will affect both accuracy and sensitivity.
- C. Inspect all 'O' rings for damage and/or lubrication. Replace if necessary.

#### 2. CLEAN TUBE AND FLOAT

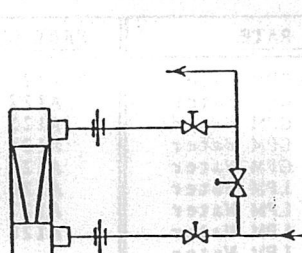
- A. Flush inside of tube with solvent, Isopropyl alcohol 90% is recommended. All parts should be ultrasonically cleaned if possible.
- B. Blow dry and with lint-free tissue, clean the inside of the tube.

- C. Clean the float in the same manner.
- D. If necessary to clean the window, the use of a mild detergent is recommended.

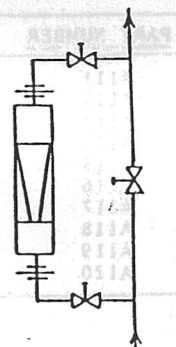
#### 3. REASSEMBLY

- A. Replace window/scale with the float reading instructions at the inlet end of the meter.
- B. Replace float and floatstops in the tube. The cone shaped spring is the inlet floatstop and the straight spring is the outlet floatstop.

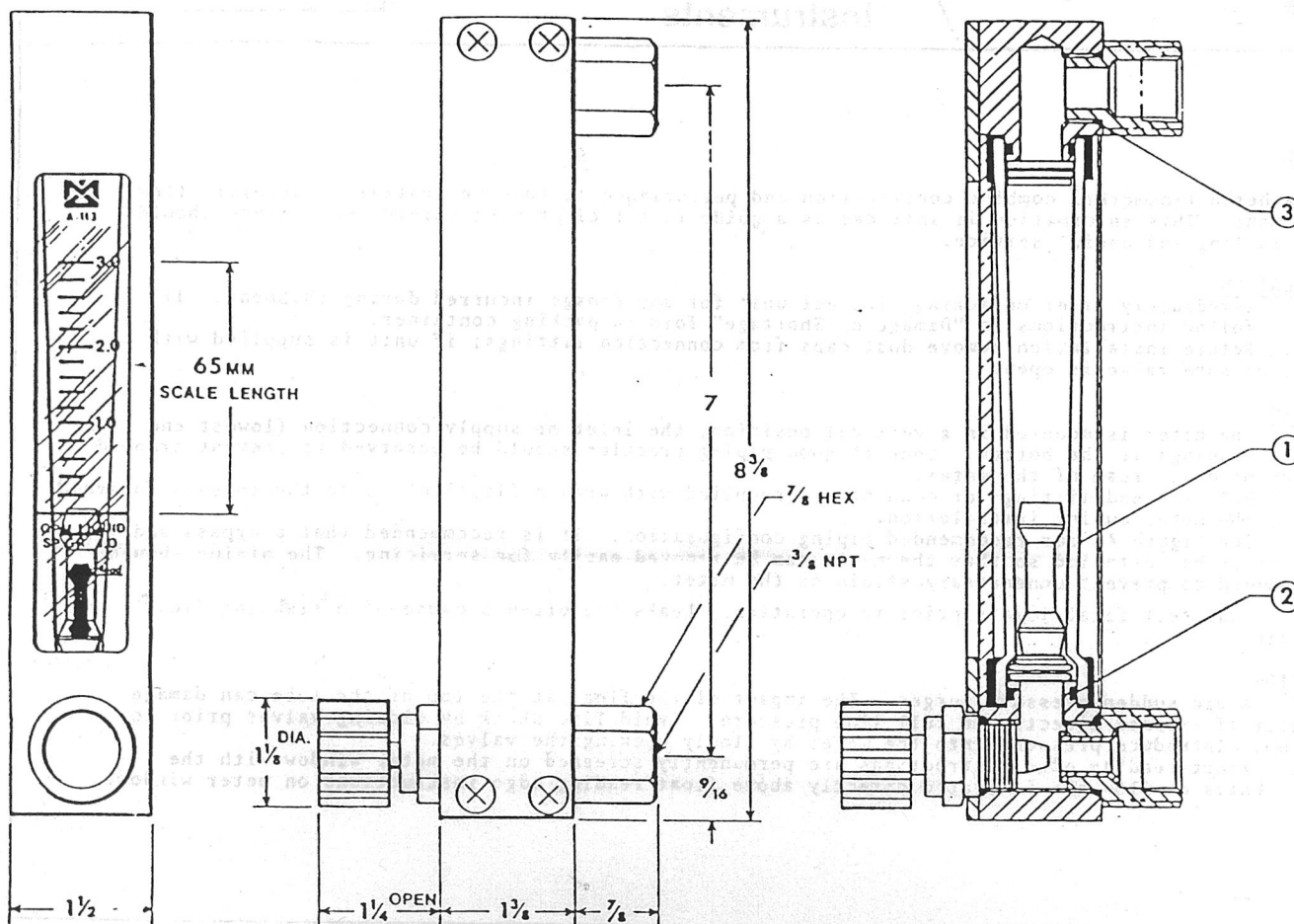
- C. Replace tube on inlet end fitting (inlet of tube is the smallest diameter) using care not to tilt the tube.
- D. Slide tube and inlet end fitting into frame using care when replacing tube onto outlet end fitting.
- E. Replace four (4) screws, to attach end fitting to the frame. If meter is to be used in a vibration environment, sealant is recommended on screws.
- F. Replace the valve if the meter is equipped with a valve on the inlet.
- G. Check meter for leaks.



HORIZONTAL  
PIPING



VERTICAL  
PIPING



SYMBOL	PART NUMBER	QTY.	DESCRIPTION
1	See Table #2	1	Tube Assembly Tube, Float Floatstops, end cushions Window with scale
2	A-RNS-113-	2	'O' ring seal, tube
3	A-RNS-908-	2	'O' ring seal, adapter
N.S.	A-RNS-106-	1	Valve stem 'O' ring
N.S.	A-RNS-908-	1	Valve bonnet 'O' ring

material codes BU = Buna N VA = Viton N.S. = Not Shown  
EB = IIR

PART NUMBER	FLOW RATE	PART NUMBER	FLOW RATE
A111	0.1-1.0 GPM Water	A121	0.5-4.0 SCFM Air
A112	0.2-2.0 GPM Water	A122	1-9 SCFM Air
A113	0.2-3.0 GPM Water	A123	1-12 SCFM Air
A114	0.5-4.0 GPM Water	A124	1-15 SCFM Air
A115	0.5-5.0 GPM Water	A125	10-120 SLPM Air
A116	0.5-3.5 LPM Water	A126	20-260 SLPM Air
A117	0.5-8.0 LPM Water	A127	20-340 SLPM Air
A118	1-10 LPM Water	A128	50-500 SLPM Air
A119	1-15 LPM Water		
A120	2-20 LPM Water		

TABLE #2