Model FM-1000 Series
Compact High Accuracy Flowmeter (65mm)

- Corrosion resistant options: all wetted parts of 316 stainless steel or Monel with Viton or Teflon seals
- Custom scales and flow curves available

Specifications
- Pressure Rating: 250 psig maximum operating pressure
- Temperature Rating: -20° to 250°F maximum operating temperature
- Accuracy: ±5% of full scale flow rate – consult factory for higher accuracies
- Repeatability: 0.25% of scale reading
- Range: 10 to 1, i.e., 100% to 10% of full scale
- Scale Readings: Direct reading air (special other scales available)
- Shipping Weight: 1 lb

Materials of Construction
- Wetted End Blocks, Fittings and Internal Parts: Brass, 316 stainless steel – standard; Anodized aluminum, Kynar, Monel – optional
- Seal Materials: Buna-N or Viton – standard; Teflon, EPR, or Kalrez – optional
- Side Plates: Painted or anodized aluminum
- Metering Tube: Borosilicate glass enclosed in Tube-Cube® holder
- Piping Connections: Brass, 316 stainless steel – standard; Aluminum, Monel – optional
- Float Materials: Black glass or 316 stainless steel – standard; sapphire, ceramic, Carboly or Tantalum – optional
- Scale: Ceramic ink on glass tube, length 65mm

Dimensions FM-1000 Flowmeter
See pages 369 for engineering drawing.

Don’t See It Here?
Matheson offers a complete line of variable area flowmeters. Our standard, more common configuration options are shown here. However, if you don’t see what you are looking for, contact us. We manufacture flowmeters for liquids as well as gases, and can use other end block materials, such as aluminum, Kynar and Monel, and other seal materials such as Teflon, EPR and Kalrez. In addition, we offer other connection fittings, including NPT, tube and hose, in a variety of sizes. Lastly, we have an enormous library of flow calibrations and correlation tables for dozens of other gases and a wide range of conditions.

So, if you don’t see it here, give us a call. We’ll build to suit your specific needs.
## Model FM-1000 Series

**Compact High Accuracy Flowmeter (65mm) (continued)**

### Flow Tube Capacities for FM-1000 Series Flowmeters, Direct Reading

<table>
<thead>
<tr>
<th>Float Material</th>
<th>Metric Scale</th>
<th>English Scale</th>
<th>Utility Valve</th>
<th>HA Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tube No.</td>
<td>Air (SLPM)*</td>
<td>Tube No.</td>
<td>Air (SCFH)*</td>
</tr>
<tr>
<td>Glass</td>
<td>J009</td>
<td>10-130ccm</td>
<td>J011</td>
<td>0.02-0.24</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>J010</td>
<td>20-300ccm</td>
<td>J012</td>
<td>0.05-0.65</td>
</tr>
<tr>
<td>Glass</td>
<td>J109</td>
<td>100-500ccm</td>
<td>J111</td>
<td>0.2-1.1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>J110</td>
<td>200-1000ccm</td>
<td>J112</td>
<td>0.4-2.2</td>
</tr>
<tr>
<td>Glass</td>
<td>J209</td>
<td>0.1-1</td>
<td>J211</td>
<td>0.2-2.8</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>J210</td>
<td>0.1-2.1</td>
<td>J212</td>
<td>0.2-5.6</td>
</tr>
<tr>
<td>Glass</td>
<td>J409</td>
<td>0.5-5</td>
<td>J411</td>
<td>1-11</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>J410</td>
<td>0.5-9.5</td>
<td>J412</td>
<td>2-20</td>
</tr>
<tr>
<td>Glass</td>
<td>J509</td>
<td>2-24</td>
<td>J512</td>
<td>5-35</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>J510</td>
<td>2-50</td>
<td>J513</td>
<td>10-100</td>
</tr>
<tr>
<td>Carboly</td>
<td>J511</td>
<td>5-70</td>
<td>J514</td>
<td>10-150</td>
</tr>
</tbody>
</table>

*All air flow rates are at 70°F and 14.7 psia
†At 10 psig inlet pressure

### Ordering Information

<table>
<thead>
<tr>
<th>Model Series</th>
<th>Number of Metering Tubes</th>
<th>End Blocks/Seal Material</th>
<th>Valve Types</th>
<th>Connections</th>
<th>Accessories</th>
<th>Connection Orientation</th>
<th>Flow Tube (Capacities)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Model Number Generator For FM-1000 Series Glass Tube Flowmeters

**MODEL SERIES**

J = Model FM-1000 Glass Tube Flowmeter with 65mm tube

**NUMBER OF METERING TUBES**

1 = Single Tube Unit

**END BLOCKS/SEAL MATERIAL**

3 = Chrome Plated Brass with Buna-N Seals
4 = 316 Stainless Steel with Viton Seal

**VALVE TYPES**

A = Utility Valve on Inlet
B = Utility Valve on Outlet
C = High Accuracy Valve on Inlet
D = High Accuracy Valve on Outlet
G = No Valve

**CONNECTIONS**

1 = 1/8” NPT Female (std)
2 = 1/4” NPT Female
4 = 1/4” Tube
6 = 1/4” Hose (3/16”-3/8” Hose Tapered)

**ACCESSORIES (ORDER SEPARATELY)**

0 = None
1 = Flush Panel Mounting Bezel – Clear
5 = Base Plate
7 = Flush Panel Mounting Bezel – Black

**CONNECTION ORIENTATION**

1 = Back In and Back Out

**FLOW TUBE (CAPACITIES)**

JXXX = See Capacity Table For FM-1000 Series Flowmeters

**ADDITIONAL OPTIONS**

• +/- 1% Accuracy, Full Scale, With Certification, Gases, Reference Scales
• +/- 5% Accuracy, Full Scale with Certification, Gases, Direct Read
• MMSP-0003-XX Clean for O2 Service

The FM-1000 Series are direct reading scale flowmeters for air. Inquire for other tube scales available.