# MAG Flow Meter Product Line Overview

Note: The standard offering is the SS304 Flange Type with 150# ANSI Flanges and PTFE liner.

<table>
<thead>
<tr>
<th>MAG Flow Meter</th>
<th>Small size remote type</th>
<th>Small size integrated type</th>
<th>Large size remote type</th>
<th>SS304 Flange type</th>
<th>SS304 Sanitary type</th>
<th>SS304 Insertion type</th>
<th>Battery powered</th>
<th>Battery powered with GPRS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressure</strong></td>
<td>230 PSIG, 1.6 Mpa typical, others available</td>
<td>230 PSIG, 1.6 Mpa</td>
<td>230 PSIG, 1.6 Mpa</td>
<td>230 PSIG, 1.6 Mpa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>1/8” to 10 feet in diameter</td>
<td>1/2” to 4” Sanitary</td>
<td>6” and above</td>
<td>1/2” to 12” Flange sizes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Flange**: ANSI B16.6 150# Standard, others available
- **Power**: 24 VDC or 120 VAC
- **Outputs**: 4-20 mA / pulse (frequency)
- **Communication**: RS-485
- **Linings**: PTFE standard with the following options: Rubber, PFA, F46, or Polyurethane
- **Fluid**: For conductive liquids with conductivity greater than 5 µS/cm. For reference note tap water has conductivity between 5 - 50 µS/cm
- **Electrode**: 316L with the following optional electrode materials available: Hastelloy B or C, Titanium, Tantalum and Platinum-Iridium
- **Protection**: IP65 / IP67 / IP68
- **Temperature**: Ambient: -25 to 65 Deg C / Medium: PTFE lining 70 Deg C max
- **Ex-proof**: Yes

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**Standard SS304 Flange type stocked MAG meters**

MAG FLOW METER, 1/2”, 1”, 2”, 3”, 4”, 6”, 8” & 12” ANSI PIPE FLANGE SIZE RANGES MAG MASS FLOW METERS FEATURE ACCURACIES OF 0.5% OF READING. AMAZING SENSITIVITY FOR CONDUCTIVITY ONLY REQUIRING A MINIMUM OF 5 MICROSIEMENS/CM (COMPARED TO MORE THAN 20 MICROSIEMENS/CM REQUIRED FOR CONVENTIONAL MAG METERS)
Flow Inlet/Outlet Installation guidelines.

Install so that the meter is located so the outlet is at least 3 Pipe Diameters from any obstruction or elbow and the inlet is at least 5 Pipe Diameters and the meter is always submerged and there are no air bubbles.

Support

Install so that the meter is supported and not causing stress on the flanges.

Install so that the meter is located so that the outlet is at least 3 Pipe Diameters from any obstruction or elbow and the inlet is at least 5 Pipe Diameters and the meter is always submerged and there are no air bubbles.

Isolate meter from vibration as shown.
**VERY IMPORTANT**

Install the MAG meter and connect the inlet and outlet to a proper GROUND line. This is the Solution Ground, called SG, and is very important for a stable ZERO FLOW measurement.

Do not install a MAG meter at the INLET of a pump as this will introduce bubbles. Instead, put it on the OUTLET with at least 5 diameters upstream.

**MAIN INSTALLATION REQUIREMENTS:** Never let a MAG meter run with no liquid or do not run the meter downstream of a pump that can inject bubbles, or downstream of a valve that can create bubbles in the flow. The BEST installation is shown in the upper left graphic. Grounding is very important for stable Zero Flow measurements.
METER DIMENSIONS

<table>
<thead>
<tr>
<th>ANSI Size</th>
<th>DN Size</th>
<th>GPM @ 10 m/s</th>
<th>L (Pipe length)</th>
<th>C (flange thick)</th>
<th>Flange Bolt Dia</th>
<th>N (# Bolts)</th>
<th>Meter height</th>
<th>Flange OD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>15</td>
<td>30</td>
<td>7.074</td>
<td>200</td>
<td>0.551</td>
<td>14</td>
<td>2.375</td>
<td>60.325</td>
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<tr>
<td>5/8&quot;</td>
<td>20</td>
<td>50</td>
<td>7.074</td>
<td>200</td>
<td>0.630</td>
<td>16</td>
<td>2.750</td>
<td>69.85</td>
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<td>1&quot;</td>
<td>25</td>
<td>80</td>
<td>7.074</td>
<td>200</td>
<td>0.630</td>
<td>16</td>
<td>3.125</td>
<td>79.375</td>
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<tr>
<td>1 1/4&quot;</td>
<td>32</td>
<td>130</td>
<td>7.074</td>
<td>200</td>
<td>0.709</td>
<td>18</td>
<td>3.500</td>
<td>88.9</td>
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<tr>
<td>1 1/2&quot;</td>
<td>40</td>
<td>200</td>
<td>7.074</td>
<td>200</td>
<td>0.709</td>
<td>18</td>
<td>3.875</td>
<td>98.425</td>
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<tr>
<td>2&quot;</td>
<td>50</td>
<td>315</td>
<td>7.074</td>
<td>200</td>
<td>0.787</td>
<td>20</td>
<td>4.750</td>
<td>120.65</td>
</tr>
<tr>
<td>2 1/4&quot;</td>
<td>65</td>
<td>530</td>
<td>7.074</td>
<td>200</td>
<td>0.787</td>
<td>20</td>
<td>5.500</td>
<td>139.7</td>
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<tr>
<td>3&quot;</td>
<td>80</td>
<td>800</td>
<td>7.074</td>
<td>200</td>
<td>0.787</td>
<td>20</td>
<td>6.000</td>
<td>152.4</td>
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<tr>
<td>4&quot;</td>
<td>100</td>
<td>1300</td>
<td>9.043</td>
<td>250</td>
<td>0.866</td>
<td>22</td>
<td>7.500</td>
<td>190.5</td>
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<tr>
<td>5&quot;</td>
<td>125</td>
<td>1950</td>
<td>9.043</td>
<td>250</td>
<td>0.866</td>
<td>22</td>
<td>8.500</td>
<td>215.9</td>
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<tr>
<td>6&quot;</td>
<td>150</td>
<td>2800</td>
<td>11.811</td>
<td>300</td>
<td>0.945</td>
<td>24</td>
<td>9.500</td>
<td>241.3</td>
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<tr>
<td>8&quot;</td>
<td>200</td>
<td>5000</td>
<td>13.780</td>
<td>350</td>
<td>0.945</td>
<td>24</td>
<td>11.750</td>
<td>290.45</td>
</tr>
</tbody>
</table>

Standard SS304 Flange type stocked MAG meters R3 Page 4 of 7
Insertion MAG meters:

Insertion MAG Meter Dimensions

[17.2] 0.7
[584.2] 23.0
[145.3] 5.7
[240] 9.4

[28.8] 1.1
[86.1] 3.4
[86.4] 3.4
[177.8] 7.0

[123] \( \phi 4.8 \)

Please visit INSERTION MAG meter product listing.
Insertion MAG Meter Specifications. For pipe diameters 8” or above.

- Insertion 6” to 42” Diameter pipe
- Wetted Materials Teflon & 316 SS
- Flow Body Material 304 SS
- Flows from 100 kg/h to 200,000 kg/h relative to water
  - Accuracy: +/- 0.5% of reading in water.
  - Repeatability of +/- 0.05% of reading
- 1/2” to 4” 150# ANSI Flange Connections, up to 6” available custom.
  - LCD Display
- Temperature:
  - Gas: -58°F (-50°C) to 350°F (180°C)
  - Ambient: 14°F (-10°C) to 140°F (60°C)
- Power Requirement: Order either 24 VDC or 85-220 VAC, 15 Watts maximum;
- Output signals: Modbus RTU, 4–20 mA, and 0-10 KHz for flow rate indication
  - Digital communications: Modbus RTU
  - Proof Pressure 230 PSIG, 1.6 MPa.
- Display: Flow rate, Flow Rate 0-100%, and Total flow
- Wiring connection to enclosure size: M20 x 1.5
  - Factory Final QC Test Certificate
  - Integral Electronics installation
- Electronics Enclosure NEMA 4X / IP67
- Conductivity > 5 microSiemens/cm
For clean water, the sensor may be placed at 1/8 of the inside diameter of the pipe.

Measure the tube from the top of the cap to the end of the sensor to find tube length

Calculate \(1/8 \, D\): \(1/8 \, D = 0.125 \times \) Pipe ID

Add wall thickness(WT) to 1/8 D

Calculate distance A: \(A = TL - (1/8 \, D + WT)\)

Position the top edge of the tube so that its distance from the OD of the pipe is equal to “distance A” Then Tighten as shown to the left.