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NOTE: Specifications may be subject to change without prior notice.
QSE MAG FLOWMETER

The QSE Mag Series is a dependable highly accurate electromagnetic flowmeter designed for flow and usage monitoring in commercial applications. The Noryl™ housing and flow tube offer a lightweight, easy-to-install Mag Meter that is resistant to heat (210°F [99°C]) and compatible with many water-based liquid solutions.

The QSE Mag Meter monitors flow rate and total flow in a wide variety of applications including: HVAC, Turf/Irrigation and other water reclamation applications.

FEATURES / BENEFITS

- Low investment and operating costs
- ± 0.5% Accuracy of Reading (from 0.25 fps to 15 fps [0.08 to 4.6 m/s])
- Wide turndown ratio of 60:1
- Non-intrusive, no moving parts to wear out, maintenance, repair costs low and tolerates high flows without damage
- The slightly modified bore permits unobstructed flow and minimizes flow disturbances and straight pipe requirements
- 7 line sizes (½” to 4”) ½”, ¾”, 1”, 1-½”, 2”, 3”, & 4”
- Housing ported with “Thermal Well Supports” for sensors (Energy Management)
- Compatible with GPI 09 Electronics Display or FLOMEC QSI I/O Board

COMMUNICATION CHOICE

Q1 = Integrates with Any Electronic Choice QSI Module: Blue Tooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), RS485 (MODbus RTU), Temperature Inputs, BTU Calculator. Energy Use Computation Note: Energy Use Computation Requires Temperature Sensor Probes (Select Probes Below)


Q3 = Integrates with Any Electronic Choice QSI Module: Blue Tooth®, Coil/Digital Pulse Input, Pulse Output (Scalable), Data Logger, 4-20mA.

XX = No Communication Suite

TEMPERATURE SENSOR PROBES

1 = Integrates with QSI Communications Choice for Energy Use Computation (2ea) 1” (25 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 1’’ through 2’’ Meters

2 = Integrates with QSI Communications Choice for Energy Use Computation (2ea) 2” (50 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 3’” and 4’’ Meters

X = No Temperature Probes

PACKAGING (Auto Select)

A = 1/2” - 2’’ Meters
B = 3’’ Meters
C = 4’’ Meters

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER

QSE = Electro-Magnetic Flow Meter

SIZE

05 = 1/2” (15 mm)
07 = 3/4” (20 mm)
10 = 1” (25 mm)
15 = 1-1/2” (40 mm)
20 = 2” (50 mm)
30 = 3” (80 mm) (Flange only)
40 = 4” (100 mm) (Flange only)

FITTING

NPT = NPT (Male) (½” to 2” Only)
BSP = BSPP (Male) (ISO 228) (½” to 2” Only)
FAP = ANSI Flange - Polymer (3” & 4” Only)
FAS = ANSI Flange - Steel (3” & 4” Only)
FDS = DIN Flange - Steel (3” & 4” Only)

ELECTRONIC CHOICE

09 = 2-Button Integral Display, Field Configurable (Cumulative, Batch & Rate) and Integral Pulse Transmitter (Open Collector Square Wave), Includes Four Strain Reliefs

QB = Integral Pulse Transmitter (Open Collector Square Wave), Includes Four Strain Reliefs

TEMPERATURE SENSOR PROBES

1 = Integrates with QSI Communications Choice for Energy Use Computation (2ea) 1” (25 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 1/2” through 2” Meters

2 = Integrates with QSI Communications Choice for Energy Use Computation (2ea) 2” (50 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 3” and 4” Meters

X = No Temperature Probes

PACKAGING (Auto Select)

A = 1/2” - 2’’ Meters
B = 3’’ Meters
C = 4’’ Meters
### Specifications

<table>
<thead>
<tr>
<th>Operating Temperature Range:</th>
<th>1/2&quot; - 2&quot;: 32°F to 210°F (0°C to 99°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Temperature Range:</td>
<td>3&quot; - 4&quot;: 32°F to 180°F (0°C to 82°C)</td>
</tr>
<tr>
<td>Typical K-Factor:</td>
<td>1/2&quot; (05) 4347 PPG (1158.5 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>3/4&quot; (07) 1937 PPG (511.8 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>1&quot; (10) 1089 PPG (287.7 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>1-1/2&quot; (15) 484.1 PPG (127.9 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>2&quot; (20) 400 PPG (105.7 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>3&quot; (30) 121 PPG (32.0 Pulses/L)</td>
</tr>
<tr>
<td></td>
<td>4&quot; (40) 68.1 PPG (18.0 Pulses/L)</td>
</tr>
</tbody>
</table>

#### PIPE SIZES:
- 3/4", 1", 1-1/2", 2", 3", 4"

#### PRESSURE RATING:
- 150 psi @ 73°F (10 bar @ 23°C)

#### FLOW:
- 0.16 to 10 GPM (0.63 - 38 L/min)
- 0.3 to 20 GPM (1.27 - 76 L/min)
- 0.6 to 40 GPM (2.52 - 151 L/min)
- 1.3 to 80 GPM (5.05 - 303 L/min)
- 2.5 to 150 GPM (9.47 - 568 L/min)
- 5 to 300 GPM (19 - 1136 L/min)
- 10 to 600 GPM (38 - 2271 L/min)

#### ACCURACY:
±0.5% of Reading between 0.25 fps and 15 fps (0.08 m/s and 4.57 m/s) (Reference Owner’s Manual for complete accuracy and uncertainty specifications)

### Applications

- Agriculture Irrigation
- Turf Irrigation Systems
- Micro Irrigation Systems
- HVAC
- EMS (Energy Management Systems)
- BAS (Building Automation Systems)
- Chilled water
- Domestic water (hot and cold)
- Energy sub-metering (BTU hot and cold)
- Process (blow down, make up, boiler feed, etc.)

### Approvals

- NEMA 6P (pending)
- IP67
- NSF
- CE
- UL

### Derated Pressure Curve for QSE (Pressure vs Temperature)
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Tee Housing Material:</th>
<th>Schedule 80 PVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert Wetted Materials:</td>
<td>Body: PPS (Ryton R-4)</td>
</tr>
<tr>
<td></td>
<td>Sensor: PEI (Ultem 1000)</td>
</tr>
<tr>
<td></td>
<td>O-Ring: EPDM</td>
</tr>
<tr>
<td>Temperature Rating:</td>
<td>Operating: 32°F to 140°F (0°C to 60°C)</td>
</tr>
<tr>
<td></td>
<td>Storage: -20°F to +160°F (-29°C to +71°C)</td>
</tr>
<tr>
<td></td>
<td>Flow Range: 0.1 to 15 fps (0.03 to 4.57 m/s)</td>
</tr>
<tr>
<td></td>
<td>Accuracy: Typically ±2% of reading</td>
</tr>
<tr>
<td></td>
<td>Operating Pressure: 150 psi @ 72°F (10 bar @ 23°C)</td>
</tr>
<tr>
<td></td>
<td>100 psi @ 140°F (7 bar @ 60°C)</td>
</tr>
<tr>
<td></td>
<td>Transducer Excitation: Supply Voltage: 7.5V (dc) min. to 36V (dc) max</td>
</tr>
<tr>
<td></td>
<td>Quiescent Current: 200 μA (typical)</td>
</tr>
<tr>
<td></td>
<td>Output Frequency: 0 to 100 Hz</td>
</tr>
<tr>
<td></td>
<td>Output Pulse Width: 4 ms</td>
</tr>
<tr>
<td></td>
<td>Electrical Cable for Insert Electronics: 36 inches (914.4 mm) of 18 AWG, solid copper, “Direct Burial” (UL 493 &amp; 83)</td>
</tr>
</tbody>
</table>

## QS200 INSERTION ULTRASONIC FLOWMETER

The QS200 Insertion Ultrasonic Flowmeter provides an accurate reading of liquid flow rate and accumulated flow. Designed to support commercial irrigation applications, the QS200 is available in five pipe sizes, 1 to 4 in.

The QS200 ultrasonic insert is available with a PVC tee or as an “insert retrofit” for replacement of existing paddlewheel flow sensors.

## FEATURES / BENEFITS

- Low-cost, effective and easy installation
- No moving mechanical parts (low-maintenance)
- Simple two-wire connector (for power and pulse)
- Compatible with irrigation controllers (common name brands)
- High accuracy: ± 2.0% of reading (compared to full scale accuracy)
- Provides extended leak detection down to 0.1 fps (0.03 m/s)
- LED light indicators: (green for power and amber for pulse)
- Patented design
- Ideal for clean water flow measurement
- External wiring: (direct burial wire)

## INSERT DESCRIPTION

Designed for above and below grade applications, such as irrigation, municipal and underground monitoring where the flow rates are between 0.1 to 15 fps (0.03 to 4.57 m/s) and temperatures are below 140°F (60°C). QS200 inserts are supplied with two single conductors, 18 AWG solid copper wire leads that are 36 inches (914.4 mm) in length with UL Style 116666 direct burial insulation.

## APPLICATIONS

- Agriculture Irrigation
- turf / Landscape Irrigation Systems
- Micro Irrigation Systems
- Groundwater Monitoring
- Sub-Metering Applications:
  - High Rise Tenant Buildings
  - Apartment Complex
  - Universities
  - Commercial Businesses
  - Processing Facilities

## APPROVALS

IP68

CE

NSF
FLOW INSERT SELECTION CHART

<table>
<thead>
<tr>
<th>Flowmeter Model</th>
<th>Pipe Size</th>
<th>Operating Range (Min.)</th>
<th>Operating Range (Max.)</th>
<th>Maximum Water Pressure</th>
<th>FLOMEC Tee K-Factor (Freq)</th>
<th>Non-FLOMEC Tee K-Factor (Freq)</th>
<th>Offset Value</th>
<th>Meter Material</th>
<th>Adapter Material</th>
<th>Tee Material</th>
<th>Process Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>QS200-10</td>
<td>1 in.</td>
<td>0.22 GPM (0.83 L/min)</td>
<td>33 GPM (124.92 L/min)</td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>0.5386</td>
<td>N/A</td>
<td>0</td>
<td>Ryton</td>
<td>-</td>
<td>PVC</td>
<td>Slip</td>
</tr>
<tr>
<td>QS200-15</td>
<td>1.5 in.</td>
<td>0.55 GPM (2.08 L/min)</td>
<td>82 GPM (310.41 L/min)</td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>0.7926</td>
<td>0.7947</td>
<td>0</td>
<td>Ryton</td>
<td>-</td>
<td>PVC</td>
<td>Slip</td>
</tr>
<tr>
<td>QS200-20</td>
<td>2 in.</td>
<td>0.92 GPM (3.48 L/min)</td>
<td>138 GPM (522.39 L/min)</td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>1.3765</td>
<td>1.3583</td>
<td>0</td>
<td>Ryton</td>
<td>-</td>
<td>PVC</td>
<td>Slip</td>
</tr>
<tr>
<td>QS200-30</td>
<td>3 in.</td>
<td>2.06 GPM (7.60 L/min)</td>
<td>309 GPM (1169.70 L/min)</td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>3.8444</td>
<td>4.2505</td>
<td>0</td>
<td>Ryton</td>
<td>PVC</td>
<td>PVC</td>
<td>Slip</td>
</tr>
<tr>
<td>QS200-40</td>
<td>4 in.</td>
<td>3.58 GPM (13.55 L/min)</td>
<td>537 GPM (2032.78 L/min)</td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>7.1676</td>
<td>7.2229</td>
<td>0</td>
<td>Ryton</td>
<td>PVC</td>
<td>PVC</td>
<td>Slip</td>
</tr>
<tr>
<td>QS200</td>
<td>Insert only</td>
<td></td>
<td></td>
<td>150 psi @ 73°F (10 bar @ 23°C)</td>
<td>use pipe size to determine value</td>
<td>use pipe size to determine value</td>
<td>0</td>
<td>Ryton</td>
<td>PVC</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*K and offset values are used to calculate the frequency of the pulses from the QS200 electronics.
The formula for frequency is \( \text{Freq} = \frac{\text{GPM}}{K} - \text{offset} \).

** Offsets listed in this table are expected to be calibrated at the factory and therefore no additional correction should be required.

*** Maximum water pressure for larger line sizes would be based on the material of the sensor, adapter, and pipe. Pressure is also derated due to temperature (1.20 psi / °F).

DIMENSIONS

1-INCH Tee Housing

1.5-INCH Tee Housing

2-INCH Tee Housing
ULTRASONIC FLOWMETER

QStar Ultrasonic Flowmeters (UFM) are available in two models: a portable for mobile sampling measurements and a fixed for measuring tasks over an extended period of time for continuous measurements in fixed installations.

Both units use the proven and highly precise ultrasonic transit time difference method. By employing the latest digital signal processors, these robust measurement flowmeters are extremely accurate and drift-free.

FEATURES / BENEFITS

- Quickstart guide makes installation fast and easy
- Setup can be completed in less than five minutes
- User-friendly menu is displayed on large, backlit LCD screen
- Parameters Calculator (Proprietary)
  - Available via USB drive, Smartphone web app and online
  - Calculates flow rate accurately based on pipe size and velocity
  - Includes Reynolds number calculation
- Three sets of Transducers cover ½” to 240” (13 mm to 6 m) pipe sizes
- Heat Resistant (up to 300° F [149° C]) Transducers Included
- Integrated BTU (Heat) Quantity Measurement Capabilities (Standard) - order temperature probes separately
- Heat measurement inputs
- Pre-programmed software

APPLICATIONS

Power Stations
- Circulating water/service water
- District heating networks
- Pump protection
- Condensate, feed water and light oil measurement

Water and Waste Water Management
- Sewage treatment plant
- Drinking water networks, verification of water meters
- Pump protection
- Distribution and consumption metering
- Leak detection

Building Services Engineering
- Hot and cold water
- Cooling systems and air-conditioning units
- Hydraulic compensation
- Pump control and setup
- Optimization of heating systems

Chemicals and Petrochemicals
- Crude and light oil
- Industrial and Waste Water
- Aggressive and toxic fluid
- Measurement of heat carriers, (thermal oils)

Food and Beverage Industry
- Hygienic, reliable measurement of fluid
- Dosage measurements
- Cleaning solutions
- Water
- Beverages

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER  1
QM = QStar Ultrasonic Flowmeter

CLAMP-ON MOUNTING TYPE  2
F = Fixed
P = Portable

TRANSUCER CHOICE AND PIPE SIZE  3

05 = 1/2 MHz for Pipe Sizes 8” to 240” (200 mm to 6 m)
10 = 1 MHz for Pipe Size 1.5” to 16” (40 mm to 400 mm)
20 = 2 MHz for Pipe Sizes 1/2” to 4” (13 mm to 100 mm)

1 2 3

--->>> QM + F + 05
## MEASUREMENT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model:</th>
<th>QSTAR PORTABLE</th>
<th>QSTAR FIXED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation:</td>
<td>Intuitive via 8 main keys (Soft Keys), plain text display</td>
<td>Intuitive via 8 main keys (Soft Keys), plain text display</td>
</tr>
<tr>
<td>Languages:</td>
<td>English, Spanish and French</td>
<td>English, Spanish and French</td>
</tr>
<tr>
<td>Units:</td>
<td>Metric / US</td>
<td>Metric / US</td>
</tr>
<tr>
<td>Outputs:</td>
<td>2x 4-20 mA, 1x Relay, 1x MicroUSB 1x Pulse</td>
<td>2x 4-20 mA, 1x Pulse, 1x MicroUSB 1x Relay, RS232 (opt.)</td>
</tr>
<tr>
<td>Integrated Data Logger:</td>
<td>2x PT100</td>
<td>N/A</td>
</tr>
<tr>
<td>Data Logged:</td>
<td>2 GB</td>
<td>N/A</td>
</tr>
<tr>
<td>Data Format:</td>
<td>Measurement and totalizers</td>
<td>N/A</td>
</tr>
<tr>
<td>Memory Cycle:</td>
<td>Adjustable, 1 second to 24 hours</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply:</td>
<td>Integrated rechargeable battery and 100-240V (ac) adapter</td>
<td>Battery Duration: Approximately 5 hours</td>
</tr>
<tr>
<td>Protection Class:</td>
<td>IP40</td>
<td>IP65, Ex/ATEX</td>
</tr>
<tr>
<td>Housing:</td>
<td>Aluminium, PVC</td>
<td>PVC, wall-mounted</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>10.4 x 7.5 x 2.7 in. (264 x 190 x 68 mm)</td>
<td>10.2 x 9.4 x 4.7 in. (259 x 239 x 119 mm)</td>
</tr>
<tr>
<td>Operating Temp:</td>
<td>-4° F to 140° F (-20° C to 60° C)</td>
<td>-4° F to 140° F (-20° C to 60° C)</td>
</tr>
<tr>
<td>Transducer Temp:</td>
<td>-40° F to 300° F (-40° C to 149° C)</td>
<td>-40° F to 300° F (-40° C to 149° C)</td>
</tr>
<tr>
<td>Weight:</td>
<td>3.3 lbs (1.5 kg)</td>
<td>2.9 lbs (1.3 kg)</td>
</tr>
<tr>
<td>Display:</td>
<td>QVGA (320x240), black and white, adjustable backlighting</td>
<td>QVGA (320x240), black and white, adjustable backlighting</td>
</tr>
<tr>
<td>Carrying Case:</td>
<td>20 x 16 x 16 in. (508 x 406 x 406 mm)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### MEASUREMENT ACCURACY

<table>
<thead>
<tr>
<th>Inner Diameter D</th>
<th>Range</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>.39 - .98 in.</td>
<td>6.56-98.42 ft/s (2-30 m/s)</td>
<td>± 2.5% of reading</td>
</tr>
<tr>
<td>(10 - 25 mm)</td>
<td>0-6.56 ft/s (0-2 m/s)</td>
<td>± 0.16 ft/s (0.05 m/s)</td>
</tr>
<tr>
<td>.98-1.97 in.</td>
<td>6.56-98.42 ft/s (2-30 m/s)</td>
<td>± 1.5% of reading</td>
</tr>
<tr>
<td>(25 - 50 mm)</td>
<td>0-6.56 ft/s (0-2 m/s)</td>
<td>± 0.10 ft/s (0.03 m/s)</td>
</tr>
<tr>
<td>1.97-11.81 in.</td>
<td>6.56-98.42 ft/s (2-30 m/s)</td>
<td>± 1% of reading</td>
</tr>
<tr>
<td>(50 - 300 mm)</td>
<td>0-6.56 ft/s (0-2 m/s)</td>
<td>± 0.07 ft/s (0.02 m/s)</td>
</tr>
<tr>
<td>11.81-236.22 in.</td>
<td>3.28-98.42 ft/s (1-30 m/s)</td>
<td>± 1% of reading</td>
</tr>
<tr>
<td>(300 - 6000 mm)</td>
<td>0-3.28 ft/s (0-1 m/s)</td>
<td>± 0.03 ft/s (0.01 m/s)</td>
</tr>
</tbody>
</table>

Repeatability for majority of applications is <0.2%

## MEASUREMENT ACCURACY

### PRINCIPLE

- Ultrasonic transit time difference with AFC technology

### VALUES MEAS

- Flow, flow speed, heat flow

### TOTALIZERS

- Heat quantity, volume

### MEAS. RANGE

- +/- 98 ft/s (± 30 m/s)

### SIGNAL DAMPING

- 0 - 100 sec (adjustable)

### DIAGNOSTIC FUNCTIONS

- Acoustic velocity, signal strength, SNR, signal quality, amplitude, energy
- Oscilloscope function allows graphical display and analysis of signals.
### PRODUCT CONFIGURATION

**PRODUCT IDENTIFIER**

| OM | Oval Gear Meter |

**METER SIZE**

| 004 | 1/8” (4 mm), 0.26-9.5 GPH (1.0-36 L/hr) |
| 006 | 1/4” (6 mm), 0.5-27 GPH (2-100 L/hr) |
| 008 | 3/8” (8 mm), 4-145 GPH (15-550 L/hr) |

**BODY MATERIAL**

| A | Aluminum |
| S | 316 Stainless Steel |
| N | Intermediate Pressure 316L SS (1450 PSI / 100 bar) |

**ROTOR MATERIAL / BEARING TYPE**

| 00 | PPS (Not available for 300º F (150º C) meters) / No bearing (Available for OM008 only) |
| 51 | Stainless Steel / Carbon Ceramic (Standard on OM004 & OM006, optional for OM008) |
| 71 | Keishi cut Stainless Steel (For high viscosity liquids) / Carbon Ceramic (Available for OM008 only) |

**O-RING MATERIAL**

| 1 | FKM (Viton™) -5º F minimum (-15º C) |
| 3 | PTFE encapsulated FKM (Viton™) 5º F minimum (-15º C) |
| 4 | Buna-N (Nitrile), -40º F minimum (-40º C) |

**MAXIMUM TEMPERATURE LIMIT**

| -2 | 250º F (120º C) max. |
| -3 | 300º F (150º C) max. (Hall Effect)(Includes Stainless Steel terminal cover) |
| -5 | 250º F (120º C) max. (includes integral cooling fin) |
| -8 | 176º F (80º C) max. (meters with integral instruments, OM008 with PPS rotors) |

**PROCESS CONNECTIONS**

| 1 | BSPP (G) female threaded (ISO 228) |
| 2 | NPT female threaded |
| B | Bottom entry manifold (SS body only) |

**CABLE ENTRIES**

| 1 | M20 x 1.5 mm (M16 x 1.5 mm for R4 options) |
| 2 | 1/2” NPT |
| 6 | 3 x 16mm drilled holes (for F instruments only) |

**INTEGRAL OPTIONS**

- __ = Combination Reed Switch and Hall Effect Sensor
- SS = Stainless Steel terminal cover
- RS = Reed Switch only - to suit Intrinsically safe installations
- E1 = Explosion proof Exd IIB T3...T6 (Aluminum & Stainless Steel meters) [IECEx & ATEX approved]
- E2 = Explosion proof Exd IIB T3...T6 (Stainless Steel meters only) [IECEx & ATEX mines approved]
- QP = Quadrature pulse (2 NPN phased outputs)
- Q1 = Explosion proof ~ Exd (with quadrature pulse) [IECEx & ATEX approved]
- HR = High Resolution Hall Effect output (004 – 006 only)
- H1 = Explosion proof ~ Exd with HR Hi-Res. Hall option (004-006 only)
- R3 = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEx & ATEX approved]# |
- R3G = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) (with gallons calibration)# |
- R4 = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia)*#
- R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*#
- R5 = RT14 backlit rate totalizer with all outputs (GRN Housing)*# |
- R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*# |
- E18 = E018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, aluminium body [IECEx & ATEX approved]# |
- E19 = E018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, stainless steel body [IECEx & ATEX approved]# |
- F18 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART# |
- F19 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, Intrinsically safe# [IECEx & ATEX approved] |
- F31 = Intrinsically safe F130 2 stage batch controller# [IECEx & ATEX approved] |

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*Temp code 5 required for integral instruments between 176ºF (80ºC) & 250ºF (120ºC) |
#Temp code 8 required for integral instruments below 176ºF (80ºC)
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Nominal Size:</th>
<th>OM004</th>
<th>OM006</th>
<th>OM008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow* Range:</td>
<td>0.26-9.5 GPH (1.0-36 L/hr)</td>
<td>0.5-27 GPH (2-100 L/hr)</td>
<td>4-145 GPH (15-550 L/hr)</td>
</tr>
<tr>
<td>Accuracy@ 3cp:</td>
<td>± 1.0% of reading (accuracy is ± 0.2% of reading with optional RT14 with non-linearity correction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability:</td>
<td>Typically ± 0.03% of reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature Range:</td>
<td>-40° F to +300° F (-40° C to +150° C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Rating (Threaded Meter):</td>
<td>220 psi (15 bar)</td>
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</tr>
<tr>
<td>316 Stainless Steel</td>
<td>495 psi (34 bar)</td>
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<tr>
<td>Intermediate Pressure Stainless Steel</td>
<td>1450 psi (100 bar)</td>
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<td></td>
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<tr>
<td>Recommended Filtration:</td>
<td>200 mesh (75 µm)</td>
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<td></td>
</tr>
<tr>
<td>Electrical:</td>
<td>OM004</td>
<td>OM006</td>
<td>OM008</td>
</tr>
<tr>
<td>Output Pulse Resolution:</td>
<td>Pulses / gallon (Pulses / L) - Nominal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reed Switch</td>
<td>10600 (2800)</td>
<td>3975 (1050)</td>
<td>1345 (355)</td>
</tr>
<tr>
<td>Hall Effect</td>
<td>10600 (2800)</td>
<td>3975 (1050)</td>
<td>2690 (710)</td>
</tr>
<tr>
<td>Hall Effect Output</td>
<td>10600 (2800)</td>
<td>3975 (1050)</td>
<td>2690 (710)</td>
</tr>
<tr>
<td>Reed Switch Output</td>
<td>30V (dc) x 200mA max. [maximum thermal shock 18° F (10° C) / minute]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall Effect Output (NPN)</td>
<td>3 wire open collector, 5-24V (dc) max., 20mA max.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optional Outputs</td>
<td>4-20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 1.5 psi (1 bar).

When used to meter rate, at very low flow rates the rate can jump, due to resolution (not accuracy).

**DIMENSIONS**

<table>
<thead>
<tr>
<th>OPTION</th>
<th>OM004</th>
<th>OM006</th>
<th>OM008</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT12 / RT14 GRN HOUSING</td>
<td>4.8&quot; (122 mm)</td>
<td>4.8&quot; (122 mm)</td>
<td>5.0&quot; (129 mm)</td>
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<tr>
<td>RT40</td>
<td>4.9&quot; (125 mm)</td>
<td>4.9&quot; (125 mm)</td>
<td>5.2&quot; (132 mm)</td>
</tr>
<tr>
<td>COVER</td>
<td>3.6&quot; (92 mm)</td>
<td>3.6&quot; (92 mm)</td>
<td>3.9&quot; (99 mm)</td>
</tr>
</tbody>
</table>

*All dimensions are ± .079" (±2mm)

**APPLICATIONS**

- Oils
- Fuel
- Diesel
- Truck Metering
- Chemical Additive Injection
- Batching
- Molasses
- Clean Fluids
- Bunker C Fuel Oil
- Oil-Based Paints
- Industrial Fluids
- Chemical Feed Lines

**APPROVALS**

ATEX
IEC
NEMA
IP66/67
OM SERIES MEDIUM CAPACITY (OVAL GEAR METERS)

The FLOMEC® OM Medium Capacity Meters are great for medium flow ranges and have the ability to handle a wide range of fluid viscosities.

FEATURES / BENEFITS

- High accuracy and repeatability, direct volumetric reading
- Measures high and low viscosity liquids
- Quadrature pulse output option and bi-directional flow
- Optional Exd I/IIB approval (ATEX, IECEx)
- No requirement for flow conditioning (straight pipe runs)
- Only two moving parts

PRODUCT IDENTIFIER

OM = Oval Gear Meter

METER SIZE

- 015 = 1/2" (15 mm), 0.26-10.6 GPM (1-40 L/min)
- 025 = 1" (25 mm), 2.6-40 GPM (10-150 L/min)
- 040 = 1-1/2" (40 mm), 4-66 GPM (15-250 L/min)
- 050 = 2" (50 mm), 8-118 GPM (30-450 L/min) with SS Rotors
- 050 = 2" (50 mm), 8-130 GPM (30-500 L/min) with PPS Rotors

BODY MATERIAL

A = Aluminum
M = Intermediate pressure aluminum meter (2000 psi [138 bar] max.) (OM025 only)
S = 316L Stainless Steel
N = Intermediate Pressure 316L SS (OM015-OM025N = 1450 psi [100 bar]) (OM040N-OM050N = 725 psi / 50 bar)

ROTOR MATERIAL / BEARING TYPE

00 = PPS (not available for 300º F [150º C] meters) / No bearing
10 = Keishi cut PPS (for high viscosity liquids) (not available for 300º F [150º C] meters) / No bearing
51 = Stainless Steel / Carbon Ceramic
71 = Keishi cut Stainless Steel (for high viscosity liquids) / Carbon Ceramic

O-RING MATERIAL

1 = FKM (Viton™) (standard for Alum.) 5º F minimum (-15º C)
3 = PTFE encapsulated FKM (Viton™)
4 = Buna-N (Nitrile), -40º F minimum (-40º C)

MAXIMUM TEMPERATURE LIMIT

-2 = 250º F (120º C) max.
-3 = 300º F (150º C) max. (Hall Effect) (Includes Stainless Steel terminal cover)
-5 = 250º F (120º C) max. (includes integral cooling fin)
-8 = 176º F (80º C) max. (meters with integral instruments)

PROCESS CONNECTIONS

0 = No fittings (Not available on 015 size)
1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded
3 = Sanitary Fittings (are 1/2” (13 mm) larger than meter size)
4 = ANSI-150 RF Flanged
5 = ANSI-300 RF Flanged
6 = PN16 DIN Flanged

CABLE ENTRIES

1 = M20 x 1.5 mm (M16 x 1.5 mm for R4 option)
2 = 1/2 in. NPT
6 = 3 x 16 mm drilled holes (for F instruments only)

INTEGRAL OPTIONS

_ = Combination Reed Switch and Hall Effect Sensor
SS = Stainless Steel terminal cover
RS = Reed Switch only - to suit Intrinsically safe installations
E1 = Explosion proof Exd IIB T3...T6 (Aluminum & Stainless meters) [IECEx & ATEX approved]
E2 = Explosion proof Exd IIB T3...T6 (stainless meters only) [IECEx & ATEX mines approved]
QP = Quadrature pulse (2 NPN phased outputs)
QPN = Quadrature pulse (2 NPN phased outputs) with Australian NZNMI approval for trade sale
Q1 = Explosion proof Exd (with quadrature pulse) [IECEx & ATEX approved]
Q1N = Explosion proof Exd (IECEx & ATEX) with Quadrature pulse with Australian NMI & NZ approval for trade sale (Not available on 015 size)
R3 = Intrinsically safe RT12 with all outputs (GRN housing) [IECEx & ATEX approved]*#
R3G = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEx & ATEX approved] (with gallons calibration)*#
R4 = RT40 rate totalizer with backlit large digit LCD (scalable pulse output, backlight)*#
R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*#
R5 = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*#
R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*#
E18 = E018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, aluminium body [IECEx & ATEX approved] (Not available with 015 size)#
E19 = E018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, stainless steel body [IECEx & ATEX approved] (Not available with 015 size)#
F18 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, Intrinsically safe [IECEx & ATEX approved]#
F19 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, Intrinsically safe [IECEx & ATEX approved]#
E18 = E018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, Intrinsically safe [IECEx & ATEX approved]#
F19 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART, Intrinsically safe [IECEx & ATEX approved]#
F31 = Intrinsically safe F130 2 stage batch controller [IECEx & ATEX approved]#

*Temp code 5 required for integral instruments between 176ºF (80ºC) & 250ºF (120ºC)
#Temp code 8 required for integral instruments below 176ºF (80ºC) by 20%
**DIMENSIONS**

All dimensions are ± .079 (±2 mm)

<table>
<thead>
<tr>
<th>Modular Fitting</th>
<th>A.N.S.I. / 150</th>
<th>OM015</th>
<th>OM025A</th>
<th>OM025S/N</th>
<th>OM040</th>
<th>OM050</th>
<th>OM050E</th>
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<tbody>
<tr>
<td>DIN16</td>
<td>7.4&quot; (189 mm)</td>
<td>7.8&quot;</td>
<td>9.3&quot;</td>
<td>9.9&quot;</td>
<td>10.9&quot;</td>
<td>10.9&quot;</td>
<td></td>
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<tr>
<td></td>
<td>(198 mm)</td>
<td></td>
<td>(237 mm)</td>
<td>(252 mm)</td>
<td>(277 mm)</td>
<td>(277 mm)</td>
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<tr>
<td>B.S.P NPT</td>
<td>4.3&quot; (110 mm)</td>
<td>5.4&quot;</td>
<td>6.9&quot;</td>
<td>7.4&quot;</td>
<td>8.3&quot;</td>
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<tr>
<td></td>
<td>(137 mm)</td>
<td></td>
<td>(176 mm)</td>
<td>(188 mm)</td>
<td>(212 mm)</td>
<td>(212 mm)</td>
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**Configuration**

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<tr>
<td></td>
<td>6.0&quot;</td>
<td>5.8&quot;</td>
<td>6.6&quot;</td>
<td>6.5&quot;</td>
<td>7.9&quot;</td>
<td>7.6&quot;</td>
<td>8.6&quot;</td>
<td>10.5&quot;</td>
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<tr>
<td></td>
<td>(154 mm)</td>
<td>(148 mm)</td>
<td>(168 mm)</td>
<td>(165 mm)</td>
<td>(203 mm)</td>
<td>(194 mm)</td>
<td>(218 mm)</td>
<td>(268 mm)</td>
</tr>
<tr>
<td>RT40 Alloy Housing</td>
<td>6.2&quot;</td>
<td>5.9&quot;</td>
<td>6.7&quot;</td>
<td>6.6&quot;</td>
<td>8.1&quot;</td>
<td>7.8&quot;</td>
<td>8.7&quot;</td>
<td>10.7&quot;</td>
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<tr>
<td></td>
<td>(157 mm)</td>
<td>(151 mm)</td>
<td>(171 mm)</td>
<td>(168 mm)</td>
<td>(206 mm)</td>
<td>(197 mm)</td>
<td>(221 mm)</td>
<td>(271 mm)</td>
</tr>
<tr>
<td>Cover</td>
<td>4.2&quot;</td>
<td>3.9&quot;</td>
<td>4.7&quot;</td>
<td>4.6&quot;</td>
<td>6.1&quot;</td>
<td>5.7&quot;</td>
<td>6.7&quot;</td>
<td>8.6&quot;</td>
</tr>
<tr>
<td></td>
<td>(106 mm)</td>
<td>(100 mm)</td>
<td>(123 mm)</td>
<td>(147 mm)</td>
<td>(155 mm)</td>
<td>(146 mm)</td>
<td>(170 mm)</td>
<td>(220 mm)</td>
</tr>
</tbody>
</table>

**Applications**

- Oils
- Fuel
- Diesel
- Truck Metering
- Bunker C Fuel
- Oil
- Chemical Additive Injection
- Batching

**Approvals**

- ATEX
- IECEx
- CE
- NEMA
- IP66/67
PRODUCT CONFIGURATION

OM SERIES LARGE CAPACITY (OVAL GEAR METERS)
The FLOMEC® OM Large Capacity Oval Gear Meters have fitting sizes of 3 inches and 4 inches, and handle volumetric flow measurement of clean liquids used in a wide range of applications.

FEATURES / BENEFITS
- High accuracy and repeatability, direct volumetric reading
- Measures high and low viscosity liquids
- Quadrature pulse output option and bi-directional flow
- Optional Exd IIIB approval (ATEX, IECEx)
- No requirement for flow conditioning (straight pipe runs)
- Only two moving parts

INTEGRAL OPTIONS
- Combination Reed Switch and Hall Effect Sensor
- Stainless Steel terminal cover
- Reed Switch only - to suit Intrinsically safe installations
- Explosion proof Exd IIB T3...T6 (aluminum & stainless meters) [IECEx & ATEX approved]
- Explosion proof Exd IIB T3...T6 (stainless meters only) [IECEx & ATEX mines approved]
- Quadrature pulse (2 NPN phased outputs)
- Quadrature pulse (2 NPN phased outputs) with Australian NMI & NZ approval for trade sale
- Explosion proof Exd (with quadrature pulse) [IECEx & ATEX approved]
- Explosion proof Exd (with quadrature pulse) with Australian NMI & NZ approval for trade sale
- Intrinsically safe RT12 with all outputs (GRN housing) [IECEx & ATEX approved]*
- Intrinsically safe RT12 with all outputs (GRN Housing) [IECEx & ATEX approved] (with gallons calibration)*
- Intrinsically safe RT12 with backlit large digit LCD [scalable pulse output, backlight]*
- Intrinsically safe RT12 with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*
- Intrinsically safe RT12 backlit rate totalizer with all outputs (GRN Housing)*
- Intrinsically safe RT12 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*
- F18 = F018 backlit rate/tot. pulse out, 4-20mA, 10 pt lin, HART#
- F19 = F018 Intrinsic Safe, backlit rate/tot. pulse out, 4-20mA, 10 pt lin, HART [IECEx & ATEX approved]#
- F31 = Intrinsically safe F130 2 stage batch controller [IECEx & ATEX approved]#

PRODUCT IDENTIFIER
OM = Oval Gear Meter

METER SIZE
080 = 3 inch (80mm), 10-200 GPM (35-750 L/min)
080E = 3 inch Extended Flow (80mm), 13-260 GPM (50-1000 L/min)
100 = 4 inch (100mm), 20-400 GPM (75-1500 L/min)
100E = 4 inch Extended Flow (100mm), 40-660 GPM (150-2500 L/min)

BODY MATERIAL
A = Aluminum
B = Extended flow Aluminum version
S = 316L Stainless Steel (OM080 only)

ROTOR MATERIAL / BEARING TYPE
00 = PPS (not available for 300°F (150°C)) / No bearing
10 = Keishi cut PPS (for high viscosity liquids) (not available for 300°F (150°C)) / No bearing
44 = Aluminum/Hardened Steel Roller (100E only)
51 = Stainless Steel / Carbon Ceramic (080 only)
71 = Keishi cut Stainless Steel rotors (for high viscosity liquids) / Carbon Ceramic (080 only)

O-RING MATERIAL
1 = FKM (Viton™) -5° F minimum (-15° C)
3 = PTFE encapsulated FKM (Viton™) (included KALREZ shaft seals)
5 = F minimum (-15° C)
4 = Buna-N (Nitrile) -40° F minimum (-40° C)

MAXIMUM TEMPERATURE LIMIT
-2 = 250°F (120° C) max.
-3 = 300°F (150° C) max. (OM080 only) (Hall Effect output only)
-5 = 250°F (120° C) max. (includes integral cooling fin)
-8 = 170°F (80° C) max. (metres with integral instruments)

PROCESS CONNECTIONS
0 = No fittings
1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded
4 = ANSI-150 RF Flanged
6 = PN16 DIN Flanged

CABLE ENTRIES
1 = M20 x 1.5 mm
2 = 1/2 in. NPT

INTEGRAL OPTIONS
Q = Combination Reed Switch and Hall Effect Sensor
SS = Stainless Steel terminal cover
RS = Reed Switch only - to suit Intrinsically safe installations
E1 = Explosion proof Exd IIIB T3...T6 (aluminum & stainless meters) [IECEx & ATEX approved]
E2 = Explosion proof Exd IIIB T3...T6 (stainless meters only) [IECEx & ATEX mines approved]
QP = Quadrature pulse (2 NPN phased outputs)
QPN = Quadrature pulse (2 NPN phased outputs) with Australian NMI & NZ approval for trade sale
Q1 = Explosion proof Exd (with quadrature pulse) [IECEx & ATEX approved]
Q1N = Explosion proof Exd (IECEx & ATEX) with Quadrature pulse with Australian NMI & NZ approval for trade sale
R3 = Intrinsically safe RT12 with all outputs (GRN housing) [IECEx & ATEX approved]*
R3G = Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEx & ATEX approved] (with gallons calibration)*
R4 = RT40 rate totalizer with backlit large digit LCD [scalable pulse output, backlight]*
R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*
R5 = RT14 backlit rate totalizer with all outputs (GRN Housing)*
R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*

*Temp code 5 required for integral instruments between 176°F (80°C) & 250°F (120°C)
#Temp code 8 required for integral instruments below 176°F (80°C)
**SPECIFICATIONS**

**Nominal Size:**
- OM080: 3" (80 mm)
- OM080E: 3" (80 mm)
- OM100: 4" (100 mm)
- OM100E: 4" (100 mm)

**Nominal Flow Range @ 3cP:**
- OM080: 10-200 GPM
- OM080E: 13-260 GPM
- OM100: 20-400 GPM
- OM100E: 40-600 GPM

**Filtration:**
- Stainless Steel: 35-750 L/min
- Aluminum: 50-1000 L/min

**Protection Class:**
- IP66/67 (NEMA 4X) Optional Exd I/IIB T3...T6, Intrinsically Safe

**Max. Pressure:**
- 10 bar

**Repeatability:**
Typically ± 0.03% of reading

**Accuracy:**
±0.5% of reading (±0.2% of reading with optional RT14)

**Threaded:**
- 10.5" (294 mm)
- 11.6" (294 mm)
- 12.6" (320 mm)

**Oval Gear Meter**
- High pressure 316L SS

**PRODUCT CONFIGURATION**
- OM080 OM080E OM100 OM100E

**APPLICATIONS**
- Oils
- Fuel
- Diesel
- Truck Metering
- Bunker C Fuel Oil
- Chemical Additive Injection
- Batching
- Molasses
- Clean Fluids
- Oil-Based Paints
- Industrial Fluids
- Chemical Feed Lines

**DIMENSIONS**
All dimensions are ±0.079" (±2 mm)

**MODULAR FITTING**

<table>
<thead>
<tr>
<th>A</th>
<th>OM080</th>
<th>OM080E</th>
<th>OM100</th>
<th>OM100E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flanged</td>
<td>13.9&quot;</td>
<td>15.0&quot;</td>
<td>15.3&quot;</td>
<td>16.3&quot;</td>
</tr>
<tr>
<td></td>
<td>(354 mm)</td>
<td>(382 mm)</td>
<td>(388 mm)</td>
<td>(414 mm)</td>
</tr>
<tr>
<td>Threaded</td>
<td>10.5&quot;</td>
<td>11.6&quot;</td>
<td>11.6&quot;</td>
<td>12.6&quot;</td>
</tr>
<tr>
<td></td>
<td>(266 mm)</td>
<td>(294 mm)</td>
<td>(294 mm)</td>
<td>(320 mm)</td>
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**CONFIGURATION**

<table>
<thead>
<tr>
<th>B</th>
<th>OM080A</th>
<th>OM080S</th>
<th>OM080E</th>
<th>OM100</th>
<th>OM100E</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT12 / RT14 GRN HOUSING</td>
<td>10.2&quot; (260 mm)</td>
<td>10.1&quot; (257 mm)</td>
<td>10.9&quot; (277 mm)</td>
<td>12.7&quot; (322 mm)</td>
<td>15.7&quot; (399 mm)</td>
</tr>
<tr>
<td>RT40</td>
<td>10.3&quot; (264 mm)</td>
<td>10.2&quot; (260 mm)</td>
<td>11.0&quot; (281 mm)</td>
<td>12.8&quot; (326 mm)</td>
<td>15.9&quot; (403 mm)</td>
</tr>
<tr>
<td>COVER</td>
<td>8.4&quot; (213 mm)</td>
<td>8.1&quot; (206 mm)</td>
<td>9.0&quot; (229 mm)</td>
<td>10.7&quot; (274 mm)</td>
<td>13.9&quot; (352 mm)</td>
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**Electrical:**

<table>
<thead>
<tr>
<th>Output Pulse Resolution:</th>
<th>Pulses / gallon (Pulses / L) - Nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM080 OM080E OM100 OM100E</td>
<td></td>
</tr>
<tr>
<td>Reed Switch:</td>
<td>10.0 (2.65) 5.68 (1.55) 4.15 (1.10) 2.1 (0.56)</td>
</tr>
<tr>
<td>Hall Switch:</td>
<td>18º F [10º C] / minute</td>
</tr>
<tr>
<td>Hall Effect:</td>
<td>20.0 (5.33) 11.4 (3.00) 8.3 (2.20) 4.24 (1.12)</td>
</tr>
</tbody>
</table>

**APPROVALS**

- ATEX
- IEC
- NEMA 4X
- IP66/67

*Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).*
OM SERIES SMALL CAPACITY HIGH PRESSURE METERS

FLOMEC® OM Series, Small Capacity, High Pressure Flow Meters provide volumetric measurement of low flow, clean liquids up to 5800 psi (400 bar). Suitable for applications including metering lubricants, chemicals, grease, additives, and other high viscosity fluids.

FEATURES / BENEFITS

- High accuracy and repeatability, direct volumetric reading
- No requirement for flow conditioning (straight pipe runs)
- Measures both high and low viscosity liquids
- Optional Exd IIB approval (ATEX, IECEx)
- High pressure rated up to 5580 psi (400 bar)

PRODUCT IDENTIFIER

OM = Oval Gear Meter

METER SIZE

004 = 1/8” (4 mm), 0.26-9.5 GPH (1-36 L/hr)
006 = 1/4” (6 mm), 0.5-27 GPH (2-100 L/hr)
008 = 1/4” (6 mm), 4-145 GPH (15-550 L/hr)

BODY MATERIAL

H = High Pressure 316L SS
5580 psi (400 bar)

ROTOR MATERIAL / BEARING TYPE

00 = PPS (Not available for 300° F (150° C) meters) / No bearing (Available for OM008 only)
51 = Stainless Steel / Carbon Ceramic (Standard on OM004 & OM006, optional for OM008)
71 = Keishi cut Stainless Steel (For high viscosity liquids) / Carbon Ceramic (Available for OM008 only)

O-RING MATERIAL

1 = Viton™ 5° F min. (-15° C)
3 = Teflon encapsulated Viton™ 5° F min. (-15° C)
4 = Buna-N (Nitrile), -40° F minimum (-40° C)

MAXIMUM TEMPERATURE LIMIT

-2 = 250° F (120° C) max.
-3 = 300° F (150° C) max. (Hall Only) (includes SS terminal cover)
-5 = 250° F (120° C) max. (includes integral cooling fin)
-8 = 176° F (80° C) max. (meters with integral instruments, OMM08 with PPS rotors)

PROCESS CONNECTIONS

1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded
B = Bottom Entry Manifold (Intermediate Pressure Only)

CABLE ENTRIES

1 = M20 x 1.5 mm (M16 x 1.5 mm for R4 options)
6 = 3 x 16 mm drilled holes (for F instruments only)

INTTEGRAL OPTIONS

___ = Combination Reed Switch and Hall Effect Sensor
SS = Stainless steel terminal cover
RS = Reed Switch only - to suit Intrinsically Safe installations
E1 = Explosion proof Exd IIIB T3...T6 [IECEx & ATEX approved]
E2 = Explosion proof Exd IIIB T3...T6 [IECEx & ATEX mines approved]
HR = High resolution Hall Effect output (Hall Effect only) (not available on 008 size) [O004:11200ppL, O006:4200ppL]
H1 = Explosion proof - Exd with HR Hi-Res. Hall option [IECEx & ATEX approved] (not available on 008 size)
R3 = Intrinsically Safe RT12 with all outputs (GRN housing) [IECEx & ATEX approved]**
R3G = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEx & ATEX approved] (with gallons calibration)#
R4 = RT40 backlit rate totalizer with all outputs (Alloy housing with facia protector) [scalable pulse output, backlight]**
R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)#
R5 = RT14 backlit rate totalizer with all outputs (GRN housing) [scaled pulse, alarms, 4-20mA, backlight]**
R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)#
E18 = E018 backlit rate/tot, pulse, 4-20 mA, lin, HART (Al), Incl. Line Bushing [IECEx & ATEX approved]#
E19 = E018 backlit rate/tot, pulse, 4-20 mA, lin, HART (SS), Incl. Line Bushing [IECEx & ATEX approved]#
F18 = F018 backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART* F19 = F018 Intrinsically Safe backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART [IECEx & ATEX approved]*
F31 = F130 Intrinsically Safe 2 stage batch controller [IECEx & ATEX approved]*

*Temp code 5 required for integral instruments between 176°F (80°C) & 250°F (120°C)
*Temp code 8 required for integral instruments below 176°F (80°C)
*Option will de-rate meter pressure ratings by 20%
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>OM004H</th>
<th>OM006H</th>
<th>OM008H</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal Size:</strong></td>
<td>1/8&quot; (4 mm)</td>
<td>1/4&quot; (6 mm)</td>
<td>1/4&quot; (6 mm)</td>
</tr>
<tr>
<td><strong>Nominal Flow</strong></td>
<td>0.26-9.6 GPH (1 - 36 L/hr)</td>
<td>2.6-27 GPH (2-100 L/hr)</td>
<td>4-145 GPH (15-550 L/hr)</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>± 1% of reading (± 0.2% of reading with optional RT14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Repeatability</strong></td>
<td>Typically ± 0.03% of reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max Pressure</strong></td>
<td>5800 psi (400 bar)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Protection Class</strong></td>
<td>IP66/67 (NEMA 4X), optional EXd I/IIB T3...T6, Integral</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recommended Filtration</strong></td>
<td>200 mesh (75 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output Pulse Resolution:</strong></td>
<td>Pulses / gallon (Pulses / L) - Nominal</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reed Switch:</strong></td>
<td>10,600 (2,800)</td>
<td>3,975 (1,050)</td>
<td>1,345 (355)</td>
</tr>
<tr>
<td><strong>Hall Effect:</strong></td>
<td>10,600 (2,800)</td>
<td>3,975 (1,050)</td>
<td>2,690 (710)</td>
</tr>
<tr>
<td><strong>High Resolution Hall Effect:</strong></td>
<td>42,400 (11,200)</td>
<td>15,900 (4,200)</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Quadrature Pulse (Not available with High Pressure):</strong></td>
<td>10,600 (2,800)</td>
<td>3,975 (1,050)</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Reed Switch Output:</strong></td>
<td>30V (dc) x 200mA Max (Maximum thermal shock 18°F/ min [10°C/ min])</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hall Effect Output:</strong></td>
<td>3 wire open collector, 5 - 24V (dc) max, 20mA max.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar). When used to meter rate, at very low flow rates, the rate can jump, due to resolution (not accuracy).*

**APPLICATIONS**

- Automotive
- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental

**APPROVALS**

- CE
- NEMA 4X
- IP66/67
- ATEX
- IECEx

**DIMENSIONS**

All dimensions are ± .079” (± 2 mm)

<table>
<thead>
<tr>
<th></th>
<th>OM004H</th>
<th>OM006H</th>
<th>OM008H</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.91&quot; (74 mm)</td>
<td>2.91&quot; (74 mm)</td>
<td>3.93&quot; (100 mm)</td>
</tr>
<tr>
<td>B</td>
<td>2.67&quot; (68 mm)</td>
<td>2.67&quot; (68 mm)</td>
<td>3.74&quot; (95 mm)</td>
</tr>
<tr>
<td>C</td>
<td>1.97&quot; (50 mm)</td>
<td>1.97&quot; (50 mm)</td>
<td>2.36&quot; (60 mm)</td>
</tr>
<tr>
<td>D</td>
<td>M5 x 12</td>
<td>M5 x 12</td>
<td>M5 x 12</td>
</tr>
<tr>
<td>E</td>
<td>0.49&quot; (12.5 mm)</td>
<td>0.49&quot; (12.5 mm)</td>
<td>3/8&quot; (8 mm)</td>
</tr>
<tr>
<td>F</td>
<td>2.36&quot; (60 mm)</td>
<td>2.36&quot; (60 mm)</td>
<td>3.38&quot; (86 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>OM004H</th>
<th>OM006H</th>
<th>OM008H</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT12 / RT14</td>
<td>2.44&quot; (62 mm)</td>
<td>2.56&quot; (65 mm)</td>
<td>1.26&quot; (32 mm)</td>
</tr>
<tr>
<td>RT40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
OM SERIES MEDIUM CAPACITY HIGH PRESSURE

FLOMEC® OM Medium Capacity High Pressure Flow Meters

provide volumetric measurement of clean liquids for high pressure. Suitable for applications including metering lubricants, chemicals, grease, additives, and other high viscosity fluids.

FEATURES / BENEFITS

- High accuracy and repeatability, direct volumetric reading
- No requirement for flow conditioning (straight pipe runs)
- Measures both high and low viscosity liquids
- Optional Exd I/IIIB approval (ATEX, IECEx)
- High Pressure rated up to 5580 psi (400 bar) (4350 psi [300 bar] on 2" meter)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER

OM = Oval Gear Meter

METER SIZE

<table>
<thead>
<tr>
<th>Size</th>
<th>Description</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>1/2&quot; (15 mm), 0.26-10.6 GPM (1-40 L/min)</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>1&quot; (25 mm), 2.6-40 GPM (10-150 L/min)</td>
<td></td>
</tr>
<tr>
<td>040</td>
<td>1.5&quot; (40 mm), 4.6-66 GPM (15-250 L/min)</td>
<td></td>
</tr>
<tr>
<td>050</td>
<td>2&quot; (50 mm), 8-130 GPM (30-500 L/min) (PPS rotors)</td>
<td></td>
</tr>
</tbody>
</table>

BODY MATERIAL

H = High Pressure 316L SS (5800 PSI / 400 bar)
(4350 PSI / 300 bar, 050 size)

ROTOR MATERIAL / BEARING TYPE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>PPS (Not available for 300ºF (150ºC) meters) / No bearing</td>
</tr>
<tr>
<td>10</td>
<td>Keishi Cut PPS (for high viscosity liquids) (Not available for 300ºF (150ºC) meters) / No bearing</td>
</tr>
<tr>
<td>51</td>
<td>Stainless Steel / Carbon Ceramic</td>
</tr>
<tr>
<td>71</td>
<td>Keishi cut Stainless Steel (for high viscosity liquids) / Carbon Ceramic</td>
</tr>
</tbody>
</table>

O-RING MATERIAL

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Viton™ 5º F minimum (-15º C)</td>
</tr>
<tr>
<td>3</td>
<td>Teflon encapsulated Viton™ 5º F minimum (-15º C)</td>
</tr>
<tr>
<td>4</td>
<td>Buna-N (Nitrile), -40º F minimum (-40º C)</td>
</tr>
</tbody>
</table>

MAXIMUM TEMPERATURE LIMIT

-2 = 250º F (120º C) max.
-3º = 300º F (150º C) max. (Hall Only) (includes SS terminal cover)
-5 = 250º F (120º C) max. (includes integral cooling fin)
-8 = 176º F (80º C) max. (meters with integral instruments, OM008 with PPS rotors)

PROCESS CONNECTIONS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BSPP (G) female threaded (ISO 228)</td>
</tr>
<tr>
<td>2</td>
<td>NPT female threaded</td>
</tr>
</tbody>
</table>

CABLE ENTRIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M20 x 1.5 mm (M16 x 1.5mm for R4 options)</td>
</tr>
<tr>
<td>2</td>
<td>1/2&quot; NPT</td>
</tr>
<tr>
<td>6</td>
<td>3 x 16 mm drilled holes (for F instruments only)</td>
</tr>
</tbody>
</table>

INTEGRAL OPTIONS

- Combination Reed Switch and Hall Effect Sensor
- SS = Stainless steel terminal cover
- RS = Reed Switch only - to suit Intrinsically Safe installations
- E1 = Explosion proof Exd IIB...T6 [IECEx & ATEX approved]
- E2 = Explosion proof Exd I/IIIB...T6 [IECEx & ATEX mines approved]
- R3 = Intrinsically Safe rate totalizer with all outputs (GRN housing) [IECEx & ATEX approved]*#
- R3G = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEx & ATEX approved] (with gallons calibration)*#
- R4 = RT40 rate totalizer with all outputs (Alloy housing with facia protector) [scalable pulse output, backlit]*# |
- R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*# |
- R5 = RT14 rate totalizer with backlit large digit LCD (Alloy housings with facia) (with gallons calibration)*# |
- E18 = ATEX/IECEx Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (Al), Incl. Line Bushing [IECEx & ATEX approved]*#
- E19 = ATEX/IECEx Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (SS), Incl. Line Bushing [IECEx & ATEX approved]*#
- F18 = F018 Intrinsically Safe backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART# |
- F19 = F018 Intrinsically Safe backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART# |
- F31 = F130 Intrinsically Safe 2 stage batch controller#

*Temp code 5 required for integral instruments between 176ºF (80ºC) & 250ºF (120ºC)
#Temp code 8 required for integral instruments below 176ºF (80ºC)
+Option will de-rate meter pressure ratings by 20%
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>OM015</th>
<th>OM025</th>
<th>OM040</th>
<th>OM050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Size:</td>
<td>1/2&quot; (15 mm)</td>
<td>1&quot; (25 mm)</td>
<td>1.5&quot; (40 mm)</td>
<td>2&quot; (50 mm)</td>
</tr>
<tr>
<td>Nominal Flow Range @ 3C:</td>
<td>0.26-10.6 GPM (1 - 40 L/min)</td>
<td>2.6-40 GPM (10-150 L/min)</td>
<td>4-66 GPM (15-250 L/min)</td>
<td>8-118 GPM (30-450 L/min) (SS Rotors)</td>
</tr>
<tr>
<td>Accuracy:</td>
<td>± 0.5% of reading (± 0.2% of reading with optional RT14)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability:</td>
<td>Typically ± 0.03% of reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Pressure - High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure meter Bar [psi] (threaded)</td>
<td>5800 psi (400 bar)</td>
<td>4350 psi (300 bar)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection Class:</td>
<td>IP66/67 (NEMA 4X) optional EX-d I/IIB T4/T6, Integral ancillaries can be supplied with I.S. (Intrinsically Safe)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended Filtration:</td>
<td>100 mesh (150 µm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reed Switch Output:</td>
<td>30V (dc) x 200mA Max (Maximum thermal shock 18°F [10°C] /min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall Effect Output:</td>
<td>3 wire open collector, 5 - 24V (dc) max, 20mA max.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**APPROVALS**

- ATEX
- IECEx
- CE

**APPLICATIONS**

- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental

---

**DIMENSIONS**

All dimensions are ± 0.079" (±2 mm)

---

**PRODUCT CONFIGURATION**

- **OM SERIES MECHANICAL FLOWMETER**
  - **PRODUCT IDENTIFIER**
    - OM
    - OM015H OM025H OM040H OM050H
  - **PART NUMBER**
    - OM100A 51 1 -8 10 M3
    - OM50-OM100E 999999 litre
    - OM050-OM100E 99999 gallon
    - OM015-OM040 9999.9 litre

---

**MECHANICAL REGISTERS**

- **V1** = 5 digit mechanical reset register - litre
- **M3** = 4 digit mechanical totalizer - litre
- **M4** = 4 digit mechanical totalizer - US gallons

---

**PROCESS CONNECTIONS**

- NPT female threaded (ISO 228)
- BSPP (G) female threaded
- ANSI-150 RF Flanged
- ANSI-300 RF Flanged
- PN16 DIN Flanged

---

**Rotor Material / Bearing Type**

- 00 = Keishi cut PPS / No Bearing
- 10 = Keishi cut Stainless Steel / Carbon Ceramic (OM015-OM080)
- 71 = Stainless Steel / Carbon Ceramic (OM015-OM080)
- 44 = Aluminum / hardened steel roller bearing (OM100E only)
- 10 = Keishi cut PPS / No Bearing
- 00 = PPS / No Bearing

---

**OVG MATERIAL / SEAL MATERIAL**

- 61 = Buna-N (Nitrile), -40º F minimum (-40º C)
- 3 = Viton™ 5º F minimum (-15º C)
- 51 = Teflon encapsulated Viton™ (includes KALREZ shaft seals on 080 - 100E sizes) 5º F minimum (-15º C)
- 4 = 316L Stainless Steel (OM015-OM080)
- 3 = Extended flow Aluminum (OM080E & OM100E) 5º F minimum (-15º C)
- 080E = 316L Stainless Steel (OM015-OM080)
- 015 = 4" (100 mm), 20-400 GPM (75-1550 L/min)
- 025 = 1" (25 mm), 2.6-40 GPM (10-150 L/min)
- 040 = 1 1/2" (40 mm), 4-66 GPM (15-250 L/min)
- 050 = 1" (25 mm), 2.6-40 GPM (10-150 L/min)
- 080 = 2" (50 mm), 8-130 GPM (30-500 L/min) (PPS Rotors)
- 100 = 2" (50 mm), 8-130 GPM (30-500 L/min) (SS Rotors)
- 150 = 3" (80 mm), 13-260 GPM (50-1000 L/min)
- 200 = 3" Extended flow (80 mm), 13-260 GPM (50-1000 L/min) (OM040H & OM050H)

---

**PRESSURE DROP**

- Pressure drop is 14.5 psi (1 bar).

---

**APPLICATIONS**

- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental

---

*Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).*
OM SERIES MECHANICAL FLOWMETER

Volumetric flow measurement of clean liquids. Suitable for applications for safe area metering of fuel oils, lubricants, and other non-flammable viscous chemicals.

FEATURES / BENEFITS

- High accuracy oval gear technology with low pressure drop can be used in gravity-fed applications
- No requirement for flow conditioning or straight pipe runs makes them ideal for compact installations with limited space
- Robust aluminum mechanical registers
- Optional air eliminator/strainers

PRODUCT CONFIGURATION

**PRODUCT IDENTIFIER**

OM = Oval Gear Meter

**METER SIZE**

<table>
<thead>
<tr>
<th>Size</th>
<th>Description</th>
<th>Flow Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>1/2” (15 mm), 0.26-10.6 GPM (1-40 L/min)</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>1” (25 mm), 2.6-40 GPM (10-150 L/min)</td>
<td></td>
</tr>
<tr>
<td>040</td>
<td>1 1/2” (40 mm), 4-66 GPM (15-250 L/min)</td>
<td></td>
</tr>
<tr>
<td>050</td>
<td>2” (50 mm), 8-130 GPM (30-500 L/min)</td>
<td></td>
</tr>
<tr>
<td>080</td>
<td>3” (80 mm), 10-200 GPM (40-750 L/min)</td>
<td></td>
</tr>
<tr>
<td>080E</td>
<td>3” Extended flow (80 mm), 13-260 GPM (50-1000 L/min)</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4” (100 mm), 20-400 GPM (75-1550 L/min)</td>
<td></td>
</tr>
<tr>
<td>100E</td>
<td>4” Extended Flow (100 mm), 40-660 GPM (150-2500 L/min)</td>
<td></td>
</tr>
</tbody>
</table>

**BODY MATERIAL**

- A = Aluminum
- E = Extended flow Aluminum (OM080E & OM100E)
- S = 316L Stainless Steel (OM015-OM080)

**ROTOR MATERIAL / BEARING TYPE**

- 00 = PPS / No Bearing
- 10 = Keishi cut PPS / No Bearing
- 44 = Aluminum / hardened steel roller bearing (OM100E only)
- 51 = Stainless Steel / Carbon Ceramic (OM015-OM080)
- 71 = Keishi cut, Stainless Steel / Carbon Ceramic (OM015-OM080) (for high viscosity liquids)

**O-RING MATERIAL**

- 1 = Viton™ 5º F minimum (-15º C)
- 3 = Teflon encapsulated Viton™ (includes KALREZ shaft seals on 080 - 100E sizes) 5º F minimum (-15º C)
- 4 = Buna-N (Nitrile), -40º F minimum (-40º C)

**MAXIMUM TEMPERATURE LIMIT**

-8 = 176º F (80º C) maximum

**PROCESS CONNECTIONS**

- 00 = No fittings (025-100E)
- 10 = BSPP (G) female threaded (ISO 228)
- 20 = NPT female threaded
- 40 = ANSI-150 RF Flanged
- 50 = ANSI-300 RF Flanged (015-050)
- 60 = PN16 DIN Flanged

**MECHANICAL REGISTERS**

- M3 = 4 digit mechanical totalizer - litre
  Totalizer capacity (OM015-OM040) 9999.9 litre
  (OM050-OM100E) 99999 litre
- M4 = 4 digit mechanical totalizer - US gallons
  Totalizer capacity (OM015-OM040) 9999.9 gallon
  (OM050-OM100E) 99999 gallon
- V1 = 5 digit mechanical reset register - litre
  Total capacity (OM50-OM100E) 999999 litre

**APPLICATIONS**

- Automotive
- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental Applications
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>OM015</th>
<th>OM025</th>
<th>OM040</th>
<th>OM050</th>
<th>OM080</th>
<th>OM80E</th>
<th>OM100</th>
<th>OM100E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Size:</td>
<td>1/2” (15 mm)</td>
<td>1” (25 mm)</td>
<td>1-1/2” (40 mm)</td>
<td>2” (50 mm)</td>
<td>3” (80 mm)</td>
<td>3” (80 mm)</td>
<td>4” (100 mm)</td>
</tr>
<tr>
<td>Nominal Flow Range* @ 3cP:</td>
<td>0.26-10.6 GPM (1 - 40 L/min)</td>
<td>2.6-40 GPM (10-150 L/min)</td>
<td>4-66 GPM (15-250 L/min)</td>
<td>8-118 GPM (30-450 L/min) (SS rotors)</td>
<td>10-200 GPM (35-750 L/min)</td>
<td>13-260 GPM (50-1000 L/min)</td>
<td>20-400 GPM (75-1500 L/min)</td>
</tr>
<tr>
<td>Accuracy:</td>
<td>±1% of reading for M registers</td>
<td>±1% of reading for M registers (±0.5% for V registers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Repeatability:</td>
<td>Typically ± 0.03% of reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ambient Temp. Range</td>
<td>5° F - 176° F (-15° C - 80° C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Max. Pressure</td>
<td>580 psi (40 bar)</td>
<td>580 psi (40 bar)</td>
<td>435 psi (30 bar)</td>
<td>285 psi (20 bar)</td>
<td>175 psi (12 bar)</td>
<td>175 psi (12 bar)</td>
<td>145 psi (10 bar)</td>
</tr>
<tr>
<td>M Register</td>
<td>4 digit resettable &amp; NEMA 4 (IP65)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V Register</td>
<td>n/a</td>
<td>5 digit resettable &amp; NEMA 3S (IP54)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Recommended Filtration:</td>
<td>100 mesh (150 μm)</td>
<td>40 mesh (400 μm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face-to-Face Dimension A - Threaded</td>
<td>4.33” (110 mm)</td>
<td>5.39” (137 mm) AL</td>
<td>7.4” (188 mm)</td>
<td>8.35” (212 mm)</td>
<td>10.5” (266 mm)</td>
<td>11.6” (294 mm)</td>
<td>11.6” (294 mm)</td>
</tr>
<tr>
<td>Face-to-Face Dimension A - Flanged</td>
<td>7.44” (189 mm)</td>
<td>7.8” (198 mm) AL</td>
<td>9.92” (252 mm)</td>
<td>10.91” (277 mm)</td>
<td>13.93” (354 mm)</td>
<td>15.04” (382 mm)</td>
<td>15.28” (388 mm)</td>
</tr>
<tr>
<td>Meter Base-Register Top - Dimension B</td>
<td>7.01” (178 mm)</td>
<td>7.4” (188 mm) AL</td>
<td>8.94” (227 mm)</td>
<td>9.33” (237 mm)</td>
<td>10.63” (270 mm)</td>
<td>11.34” (288 mm)</td>
<td>13.11” (333 mm)</td>
</tr>
<tr>
<td>Meter Cap Width</td>
<td>4.33” (110 mm)</td>
<td>4.72” (120 mm)</td>
<td>6.23” (160 mm)</td>
<td>7.09” (180 mm)</td>
<td>9.53” (242 mm)</td>
<td>11.5” (292 mm)</td>
<td>11.5” (292 mm)</td>
</tr>
</tbody>
</table>

*Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended Pressure drop is 14.5 psi (1 bar).**

**DIMENSIONS**

**APPROVALS**

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PRODUCT CONFIGURATION

OM SERIES CHEMICAL FLOW METER

The FLOME® Chemical Flow Meter provides precise volumetric flow measurement of a broad range of clean water based products and aggressive chemicals and is also suitable for most fuels, fuel oils and lubricating liquids. Applications include batching, dosing or packaging of various corrosive chemicals as a more economical alternative to a complete 316 stainless steel meter for liquids such as Diesel Exhaust Fluid (Adblue).

FEATURES / BENEFITS
- High accuracy & repeatability, direct reading flow meter
- No requirement for flow conditioning (straight pipe runs)
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Optional NMI Pattern Approval (Australia Only)

INTEGRAL OPTIONS

1️⃣ = Combination Reed Switch and Hall Effect Sensor
QP = Quadrature pulse (2 NPN phased outputs)
QPQ = Quadrature pulse (2 NPN phased outputs) with Australian NMI & NZ approval for trade sale
R4 = RT40 rate totalizer with backlit large digit LCD [scalable pulse output, backlight]*#
R4G = RT40 rate totalizer with backlit large digit LCD (Alloy housings with face) (with gallons calibration)*#
R5 = RT14 backlit rate totalizer with all outputs (GRN Housing)*#
R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)*#
F18 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART*

METER SELECTION

- PPS meters are used for non-aromatic/non-halogenated organic chemicals, water based liquids, Diesel Exhaust Fluid and petroleum products including oils and grease, fuels and fuel oils. It is unsuitable for strong acids and oxidizers.
- PPS meters with standard ceramic rotor pins are suitable for applications where stainless steel is not suited or permitted.
- Blind pulse meters are available with Reed Switch and Hall Effect outputs. Quadrature pulse and integral 4-20mA outputs are optional.
### Specifications

| **Nominal Size:** | 1" (25 mm) |
| **Nominal Flow Range** @ 3cP | 2.6 - 40 GPM (10-150 L/min) |
| **Accuracy:** | ±0.5% of reading (±0.2% of reading with optional RT14) |
| **Repeatability:** | Typically ± 0.03% of reading |
| **Temperature Range:** | -40°C - +80°C (-40°F - +180°F) |
| **Max. Pressure:** | 70 psi (5 bar) |

#### Electrical:
- **Output Pulse Resolution:** Pulses / gallon (Pulses / L) - Nominal
- **Reed Switch:** 102 (27)
- **Hall Effect:** 405 (107)
- **OP Quadrature Pulse**
- **Reed Switch Output:** 30V (dc) x 200mA max. (maximum thermal shock 18°F [10°C] / minute)
- **Hall Effect Output:** 3 wire open collector, 5-24V (dc) max., 20mA max.
- **Recommended Filtration:** 200 mesh [75 μm]

### Dimensions

<table>
<thead>
<tr>
<th><strong>B</strong></th>
<th><strong>C</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RT12 / RT14</strong></td>
<td>6.57&quot; (167 mm)</td>
</tr>
<tr>
<td><strong>RT40</strong></td>
<td>6.69&quot; (170 mm)</td>
</tr>
<tr>
<td><strong>COVER</strong></td>
<td>4.84&quot; (123 mm)</td>
</tr>
</tbody>
</table>

*Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Maximum recommended pressure drop is 14.5psi [1 Bar]*

---

### Approvals

- NEMA 4
- IP65
- CE
EGM-SERIES ELECTRONIC FLOWMETER

All EGM-Series pulse meters are designed for volumetric flow measurement of clean liquids across a broad range of applications in the automotive, aviation, mining, power, chemical, pharmaceutical, and petroleum industries. The EGM-Series will produce accurate and reliable measurements of almost all clean liquids, including but not limited to; alcohols, fuels and oils, water based salts and solutions, corrosion inhibitors, brake and transmission fluids, greases, emulsifiers, adhesives, insecticides, and some aggressive chemicals.

FEATURES / BENEFITS

• Oval Gear technology for high accuracy and repeatability
• Direct volumetric measurement of flow
• Accuracy of reading is not affected by temperature and viscosity changes
• Measures high and low viscosity liquids
• Only two moving parts
• "Fuel Consumption" option can tolerate flow pulsations and has a built-in temperature sensor to correct for the fuel density changes

GENERAL SPECIFICATIONS

• Flow rates: 0.26 GPH - 21.1 GPM (1 L/hr - 80 L/min)
• Sizes: 1/8" - 3/4" (4 mm - 20 mm)
• Temperature range: 5°F - +176°F (-15°C - +80°C)

CALIBRATION

EGM-Series flowmeters are available with factory calibrations or can be calibrated in the field as an economical option.

FUEL CONSUMPTION

EGM-Series flowmeters with the Fuel Consumption option (Integral Option 2) are equipped with an integral PT100 temperature sensor which allows for accurate measurement of fuel consumption on combustion engines by correcting for temperature differences from the inlet to outlet of the engine. It also includes the Pulsating Flow electronics that eliminate the effect of pulsations in the flow.
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Nominal Size:</th>
<th>EGM004</th>
<th>EGM006</th>
<th>EGM008</th>
<th>EGM015</th>
<th>EGM020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot; [4 mm]</td>
<td>1/4&quot; [6 mm]</td>
<td>3/8&quot; [8 mm]</td>
<td>1/2&quot; [15 mm]</td>
<td>3/4&quot; [20 mm]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Flow Range* @ 3cP:</th>
<th>0.26-9.5 GPH</th>
<th>0.5-27 GPH</th>
<th>4-145 GPH</th>
<th>28-10.6 GPM</th>
<th>0.8-21 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot; 1/4&quot; 3/8&quot; 1/2&quot; 3/4&quot;</td>
<td>500 psi [34 bar]</td>
<td>500 psi [34 bar]</td>
<td>500 psi [34 bar]</td>
<td>290 psi [20 bar]</td>
<td>290 psi [20 bar]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>0.5-36 L/hr</th>
<th>1-100 L/hr</th>
<th>15-550 L/hr</th>
<th>1-40 L/min</th>
<th>3-80 L/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25-8.34 GPH</td>
<td>3.96-145.29 GPH</td>
<td>1.3-10.57 GPM</td>
<td>0.53-21.13 GPM</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow Range @ 200cP</th>
<th>0.10-9.51 GPH</th>
<th>0.18-26.42 GPH</th>
<th>1.58-145.29 GPH</th>
<th>0.10-10.56 GPM</th>
<th>0.47-21.13 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4-36 L/hr</td>
<td>0.7-100 L/hr</td>
<td>6-550 L/hr</td>
<td>0.4-40 L/min</td>
<td>1.8-80 L/min</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Flow Range @ 1000cP</th>
<th>0.03-4.22 GPH</th>
<th>0.08-11.89 GPH</th>
<th>0.39-95.10 GPH</th>
<th>0.05-6.6 GPM</th>
<th>0.26-13.21 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12-12 L/hr</td>
<td>0.3-45 L/hr</td>
<td>1.5-360 L/hr</td>
<td>0.2-25 L/min</td>
<td>1-50 L/min</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow Range @ 5000cP</th>
<th>0.06-7.13 GPH</th>
<th>0.13-19.81 GPH</th>
<th>0.25-145.29 GPH</th>
<th>0.08-10.56 GPM</th>
<th>0.39-26.42 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25-27 L/hr</td>
<td>0.5-75 L/hr</td>
<td>2-550 L/hr</td>
<td>0.3-40 L/min</td>
<td>1.5-80 L/min</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow Range @ 27000cP</th>
<th>0.03-4.22 GPH</th>
<th>0.08-11.89 GPH</th>
<th>0.39-95.10 GPH</th>
<th>0.05-6.6 GPM</th>
<th>0.26-13.21 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12-12 L/hr</td>
<td>0.3-45 L/hr</td>
<td>1.5-360 L/hr</td>
<td>0.2-25 L/min</td>
<td>1-50 L/min</td>
<td></td>
</tr>
</tbody>
</table>

### DIMENSIONS

<table>
<thead>
<tr>
<th>Model:</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGM004</td>
<td>1.81&quot; [46 mm]</td>
<td>1.95&quot; [49.5 mm]</td>
<td>1.38&quot; [35 mm]</td>
</tr>
<tr>
<td>EGM006</td>
<td>2.28&quot; [58 mm]</td>
<td>2.54&quot; [64.5 mm]</td>
<td>1.54&quot; [39 mm]</td>
</tr>
<tr>
<td>EGM008</td>
<td>2.28&quot; [58 mm]</td>
<td>2.54&quot; [64.5 mm]</td>
<td>1.93&quot; [49 mm]</td>
</tr>
<tr>
<td>EGM015</td>
<td>2.84&quot; [72 mm]</td>
<td>3.23&quot; [82 mm]</td>
<td>2.60&quot; [66 mm]</td>
</tr>
<tr>
<td>EGM020</td>
<td>2.84&quot; [72 mm]</td>
<td>3.23&quot; [82 mm]</td>
<td>3.03&quot; [77 mm]</td>
</tr>
</tbody>
</table>

### Features / Benefits

**D-SERIES DIESEL FLOW METER**

- High accuracy oval gear technology with low pressure drop (can be used in gravity-fed applications)
- No requirement for flow conditioning or straight pipe run
- High accuracy (±1% of reading)
- ±0.5% of reading
- Repeatability: Typically ± 0.03% of reading
- Ambient Temperature Range: 5°F - +176°F (-15°C - +80°C)
- Fluid Temperature Range: 23°F - +176°F (-5°C - +80°C)
- Protection Class: IP65
- Recommended Filtration: 200 mesh [75 μm] 100 mesh [150 μm]
- Pulse Output Type: NPN Open Collector (Hall Effect Sensor)
- Voltage: 5 - 24 V (dc)
- Current Draw: 20mA max.
- Switching Current: 10mA max.
- RTD Specification (Integral Option 2): Platinum Resistance Thermometer 100 Ohms (PT100) Class F0.3

*Maximum flow reduces as viscosity increases, see flow de-rating guide.
Max recommended Pressure drop is 14.5 psi (1 bar).
When used to meter rate, at very low flow rates, the rate can jump, due to resolution (not accuracy).
D-SERIES DIESEL FLOW METER

FLOMEC® D-Series Diesel Flow Meters are designed for common transfer applications involving diesel fuel, including receipt verification, loading, un-loading, distribution and dispensing where custody transfer (weights and measures) is not required. The meters are compact and can be used in both pumped and gravity-fed systems.

FEATURES / BENEFITS

- High accuracy oval gear technology with low pressure drop (can be used in gravity-fed applications)
- No requirement for flow conditioning or straight pipe run makes them ideal for compact installations with limited space
- Robust aluminium mechanical register option: Litres or GPM - do not require power/batteries
- Electronic display option: battery or external power, intrinsically safe option
- Threaded (BSPP, NPT) or flanged (ANSI 150, DIN PN16) connections
- Optional air eliminator/strainers available for D-250 and larger

GENERAL SPECIFICATIONS

- Flow rates: 0.26 - 660 GPM (1 - 2500 L/min)
- Sizes: ½” - 4” (15 mm - 100 mm)
- Wetted materials*: Aluminium, stainless steel, hardened steel, PPS, Viton, Nitrile
- Compatible fluids: Diesel, Gasoline (Intrinsically Safe electronic display only), Kerosene, Light Oils
- Reed Switch: Only on electronic version, no pulse output

*Typical wetted materials - subject to change and may vary between models

APPLICATIONS

- Fleet Depots
- Mine Sites
- Construction Sites
- Farms
- Marine Facilities
- Portable Fueling Applications

The D-Series is designed for Diesel Fuel. Diesel fuel is not considered a flammable fluid in most of the world, but it is in the USA. The D-Series meter does not have FM Approval and should not be sold for use in the USA.
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Nominal Size:</th>
<th>D-40</th>
<th>D-150</th>
<th>D-250</th>
<th>D-450</th>
<th>D-750</th>
<th>D-1000</th>
<th>D-1500</th>
<th>D-2500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; [15 mm]</td>
<td>1&quot; [25 mm]</td>
<td>1.5&quot; [40 mm]</td>
<td>2&quot; [50 mm]</td>
<td>3&quot; [80 mm]</td>
<td>3&quot; [80 mm]</td>
<td>4&quot; [100 mm]</td>
<td>4&quot; [100 mm]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Flow Range* @ 3cP:</th>
<th>0.26-10.6 GPM</th>
<th>2.6-40 GPM</th>
<th>4-66 GPM</th>
<th>8-120 GPM</th>
<th>10-200 GPM</th>
<th>13-260 GPM</th>
<th>20-400 GPM</th>
<th>40-660 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 40 L/min</td>
<td>10-150 L/min</td>
<td>15-250 L/min</td>
<td>30-450 L/min</td>
<td>35-750 L/min</td>
<td>50-1000 L/min</td>
<td>75-1500 L/min</td>
<td>150-2500 L/min</td>
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</table>

<table>
<thead>
<tr>
<th>Accuracy:</th>
<th>± 1% of reading for mechanical registers (± 1% for electronic display)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Repeatability:</th>
<th>Typically ± 0.03% of reading</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Temperature Range:</th>
<th>5°F - +176°F (-15°C - +80°C)</th>
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<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter cap width</td>
<td>4.33&quot; (110 mm)</td>
<td>4.72&quot; (120 mm)</td>
<td>6.30&quot; (160 mm)</td>
<td>7.09&quot; (180 mm)</td>
<td>9.53&quot; (242 mm)</td>
<td>11.50&quot; (292 mm)</td>
<td>11.50&quot; (292 mm)</td>
<td>13.07&quot; (332 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing Material:</th>
<th>D-40 D-150 D-250 D-450 D-750 D-1000 D-1500 D-2500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Flow</td>
<td>1/2&quot; [15 mm]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Register (L, G) (Protection Class):</th>
<th>4-digit resettable &amp; NEMA 4 (IP65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Register (V) (Protection Class):</td>
<td>N/A 5-digit resettable &amp; NEMA 3S (IP54)</td>
</tr>
<tr>
<td>Electronic Register (E) (Protection Class):</td>
<td>6-digit &amp; NEMA 4 (IP65)</td>
</tr>
<tr>
<td>I.S. Electronic Register (I) (Protection Class):</td>
<td>8-digit &amp; NEMA 4x (IP66/67)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filtered Flow:</th>
<th>100 mesh (150 μm)</th>
<th>40 mesh (400 μm)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Face to face dimension - threaded:</th>
<th>4.33&quot; (110 mm)</th>
<th>5.39&quot; (137 mm)</th>
<th>7.40&quot; (188 mm)</th>
<th>8.35&quot; (212 mm)</th>
<th>10.47&quot; (266 mm)</th>
<th>11.57&quot; (294 mm)</th>
<th>11.57&quot; (294 mm)</th>
<th>12.60&quot; (320 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face to face dimension - flanged:</td>
<td>7.44&quot; (189 mm)</td>
<td>7.80&quot; (198 mm)</td>
<td>9.92&quot; (252 mm)</td>
<td>10.91&quot; (277 mm)</td>
<td>13.94&quot; (354 mm)</td>
<td>15.04&quot; (382 mm)</td>
<td>15.28&quot; (388 mm)</td>
<td>16.30&quot; (414 mm)</td>
</tr>
<tr>
<td>Meter base to register top dimension (L., G)</td>
<td>7.01&quot; (178 mm)</td>
<td>7.40&quot; (188 mm)</td>
<td>8.94&quot; (227 mm)</td>
<td>9.33&quot; (237 mm)</td>
<td>10.63&quot; (270 mm)</td>
<td>11.34&quot; (298 mm)</td>
<td>13.11&quot; (333 mm)</td>
<td>16.38&quot; (416 mm)</td>
</tr>
<tr>
<td>Meter base to register top dimension (V)</td>
<td>N/A</td>
<td>14.09&quot; (358 mm)</td>
<td>15.51&quot; (395 mm)</td>
<td>16.22&quot; (412 mm)</td>
<td>17.99&quot; (457 mm)</td>
<td>21.06&quot; (535 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter base to register top dimension (E)</td>
<td>6.18&quot; (157 mm)</td>
<td>6.73&quot; (171 mm)</td>
<td>8.11&quot; (206 mm)</td>
<td>8.70&quot; (221 mm)</td>
<td>10.39&quot; (264 mm)</td>
<td>11.06&quot; (281 mm)</td>
<td>12.83&quot; (326 mm)</td>
<td>15.87&quot; (403 mm)</td>
</tr>
<tr>
<td>Meter base to register top dimension (I)</td>
<td>6.06&quot; (154 mm)</td>
<td>6.61&quot; (168 mm)</td>
<td>7.99&quot; (203 mm)</td>
<td>8.58&quot; (218 mm)</td>
<td>10.24&quot; (260 mm)</td>
<td>10.91&quot; (277 mm)</td>
<td>12.68&quot; (322 mm)</td>
<td>15.71&quot; (399 mm)</td>
</tr>
</tbody>
</table>

*Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended Pressure drop is 14.5 psi (1 bar).
The Fuel Consumption System is designed for Diesel Fuel. Diesel fuel is not considered a flammable fluid in most of the world, but it is in the USA. The Fuel Consumption System does not have FM Approval and should not be sold for use in the USA.

**GENERAL SPECIFICATIONS**

**EGM Flowmeter**
- Flow Rates: 0.50 GPH - 21.1 GPM (2 L/hr - 80 L/min)
- Sizes: 1/4" - 3/4" (6 mm - 20 mm)
- Engine Power: 7.5HP - 5000HP (Please consult distributor for larger engines)
- Temperature Range: -40°F - +176°F (-40°C - +80°C)
- Body Material: Stainless Steel 316
- Rotor Material: PPS (Stainless Steel 316 for EGM006 meters)
- Cable Length: 2 meters (can extend using cable connector)

**F127 Totalizer**
- Casing: Robust IP66/IP67 field enclosure
- Display: 7-digit resettable total, 11-digit accumulated total with backlight
- Required Power Supply: 8 – 24V (dc) (back up power supply built in to save settings in case of power failure)
- Temperature Limit: -40°F - +176°F (-40°C - +80°C)
- Output Options: 4-20mA and pulse output available

**KIT SELECTION**

Although each Fuel Consumption Kit consists of the same items, the size of the meter and the process connections change depending on the rate of flow, which is a direct correlation to the size of the engine. A typical diesel fuel loop system would on average have 3.5 times more fuel in its line than what the engine consumes at full load. With this in mind, selecting the right kit based on the engine's power output is important to ensure accuracy and the positive displacement meters' longevity.

The graphs depicted here should be used as a guide when determining the size of kit is required.

**KIT INCLUDES:**
- 2 x EGM-Series Electronic Flowmeter
- 1 x F127 Totalizer
- 2 x Meter Brackets
- 2 x Fuel Strainer plus Connector
- Cable Glands
KIT SELECTION (CONTINUED)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1522056</td>
<td>F-Series Wall Mount Kit</td>
<td>Stainless Steel wall mount kit for F127 totalizer, screws included</td>
</tr>
<tr>
<td>1522052</td>
<td>F-Series Pipe Mount Kit</td>
<td>Stainless Steel wall pipe kit for F127 totalizer, excludes worm clamps</td>
</tr>
<tr>
<td>1522063</td>
<td>Worm Clamp Kit</td>
<td>Includes 2pcs of stainless steel worm clamps to suit #1522052 and pipe. OD from 1.0-1.57&quot; (25-40 mm)</td>
</tr>
<tr>
<td>1522055</td>
<td>Worm Clamp Kit</td>
<td>Includes 2pcs of stainless steel worm clamps to suit #1522052 and pipe. OD from 1.81-2.76&quot; (46-70 mm)</td>
</tr>
<tr>
<td>1519011</td>
<td>M16 Cable Gland</td>
<td>Includes cable gland, locking nut and  o-ring</td>
</tr>
<tr>
<td>1519012</td>
<td>M20 Cable Gland</td>
<td>Includes cable gland, locking nut and  o-ring</td>
</tr>
<tr>
<td>1519010</td>
<td>Cable Connector</td>
<td>7-Pin IP67 Polyamide connector kit</td>
</tr>
</tbody>
</table>

DIMENSIONS

EGM Flow Meter

<table>
<thead>
<tr>
<th>Model:</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGM006</td>
<td>2.28&quot;</td>
<td>2.54&quot;</td>
<td>1.54&quot;</td>
</tr>
<tr>
<td>EGM008</td>
<td>2.28&quot;</td>
<td>2.54&quot;</td>
<td>1.93&quot;</td>
</tr>
<tr>
<td>EGM015</td>
<td>2.84&quot;</td>
<td>3.23&quot;</td>
<td>2.60&quot;</td>
</tr>
<tr>
<td>EGM020</td>
<td>2.84&quot;</td>
<td>3.23&quot;</td>
<td>3.03&quot;</td>
</tr>
</tbody>
</table>

F127 Totalizer

Not Available in the U.S.A.
GENERAL SPECIFICATIONS

EGM Flowmeter
- Flowrates: 0.26 GPH - 21.1 GPM (2 L/hr - 80 L/min)
- Sizes: 1/4" - 3/4" (6 mm - 20 mm)
- Engine Power: 7.5HP - 5000HP (Please consult distributor for larger engines)
- Temperature Range: -40°F - 176°F (-40°C - +80°C)
- Body Material: Aluminum
- Rotor Material: PPS (Stainless Steel 316 for EGM006 meters)
- Cable Length: 2 metres (can extend using cable connector)

F127 Totalizer
- Casing: Robust IP66/IP67 Field Enclosure
- Display: 7 digit resettable total, 11 digit accumulated total with backlight
- Required Power Supply: 8 – 24V (dc) (back up power supply built in to save settings in case of power failure)
- Temperature Limit: -40°F - 176°F (-40°C - +80°C)
- Output Options: 4-20mA and Pulse output available

KIT SELECTION
Although each Fuel Consumption Kit consists of the same items, the size of the meter and the process connections change depending on the rate of flow, which is a direct correlation to the size of the engine.

A typical diesel fuel loop system would on average have 3.5 times more fuel in its line than what the engine consumes at full load. With this in mind, selecting the right kit based on the engine’s power output is important to ensure accuracy and the positive displacement meters’ longevity. The graphs depicted here should be used as a guide when determining the size of kit is required.

KIT INCLUDES:
- 2 x EGM-Series Electronic Flowmeter
- 1 x F127 Totaliser
- 2 x Meter Brackets
- 1 x Fuel Strainer plus Connector
- Cable Glands

FUEL CONSUMPTION KIT - Land and Gen-Sets
FLOMEC® Fuel Consumption System (FCS) is a complete fuel monitoring system that comprises 2x EGM positive displacement meters coupled with an F127 flow instrument for accurate measurement of fuel consumption rates and total fuel consumption. The FCS can accurately measure fuel consumption of combustion engines by correcting for temperature differences from the inlet to outlet of the engine. The EGM positive displacement meter provides accurate and economic fuel consumption measurement solutions for all engine sizes.
**ACCESSORIES**

<table>
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<td>F-Series Pipe Mount Kit</td>
<td>Stainless Steel pipe mount kit for F127 totaliser, excludes worm clamps</td>
</tr>
<tr>
<td>1522063</td>
<td>Worm Clamp Kit, 1.0-1.57* (25-40 mm)</td>
<td>Includes 2pcs of stainless steel worm clamps to suit #1522052 and pipe. OD from 1.0-1.57* (25-40 mm)</td>
</tr>
<tr>
<td>1522055</td>
<td>Worm Clamp Kit, 1.81-2.76* (46-70 mm)</td>
<td>Includes 2pcs of stainless steel worm clamps to suit #1522052 and pipe. OD from 1.81-2.76* (46-70 mm)</td>
</tr>
<tr>
<td>1519011</td>
<td>M16 Cable Gland</td>
<td>Includes cable gland, locking nut and o-ring</td>
</tr>
<tr>
<td>1519012</td>
<td>M20 Cable Gland</td>
<td>Includes cable gland, locking nut and o-ring</td>
</tr>
<tr>
<td>1519010</td>
<td>Cable Connector</td>
<td>7-Pin IP67 Polyamide Connector kit</td>
</tr>
</tbody>
</table>

**SCHEMATIC**

**DIMENSIONS**

**EGM Flowmeter**

**F127 Totalizer**

Not Available in the U.S.A.
**AIM BLOCK (ADDITIVE INJECTION MANIFOLD)**

FLOMEC® AIM Block is a compact all stainless steel manifold assembly complete with isolating, flow regulating & check valves, a fine mesh strainer, solenoid valve & a precision oval gear flowmeter. AIM injects small amounts of modifying additives & performance enhancing agents into fuels, & base products. These include lubricants, dyes, colorings, denaturants, detergents, odorizing, anti-freeze, anti-corrosion, anti-static, anti-detonating, anti-icing, anti-foaming and emulsifiers. AIM block will work well with any controller or TAS system, serving as a composite slave assembly for accurate blending of fuel additives to fuels at loading facilities, stationary & mobile transfer units within the petroleum industry worldwide.

**FEATURES / BENEFITS**

- Compact stainless steel design with stainless gears
- All valve assemblies and the meter are detachable
- Modular process connections (directional)
- High accuracy & repeatability (±1%)
- Simple to install, easy to service in situ
- ATEX/IECEx approved Explosion proof

**APPLICATIONS**

- Lubricants
- Dyes
- Colorings
- Denaturants
- Detergents
- Odorizing
- Anti-corrosion
- Anti-static
- Anti-detonating
- Anti-icing
- Anti-foaming
- Emulsifiers

---

**PRODUCT IDENTIFIER** 1

AIM = Additive Injection Manifold

**STAINLESS STEEL METER SIZE** 2

004 = 1/8 in. (4 mm), 0.26-9.5 GPH (1-36 L/hr)
006 = 1/4 in. (6 mm), 0.5-27 GPH (2-100 L/hr)
008 = 3/8 in. (8 mm), 4-145 GPH (15-550 L/hr)

**MANIFOLD METER AND VALVE MATERIAL** 3

S = 316 Stainless Steel

**SEAL MATERIAL** 4

1 = FKM (Viton™) (standard for Alum.) -5º F minimum (-15º C)
3 = Chem-Kit, comprises Teflon & Perfluorelastomer (Kalrez-Kemraz) O-rings -5º F minimum (-15º C)

**METER PROTECTION APPROVAL** 5

1 = IECEx / ATEX approved

**CABLE ENTRIES** 6

1 = M20 x 1.5 mm
2 = 1/2 in. NPT

**SOLENOID VALVE VOLTAGE** 7

1 = 24V (dc) x 9W coil (maximum operating pressure 100 psi [7 bar])
2 = 110-115V (ac) / 60 hz x 8W coil (maximum operating pressure 295 psi [20 bar])
3 = 220-230V (ac) / 50 hz x 8W coil (maximum operating pressure 295 psi [20 bar])

**SOLENOID VALVE PROTECTION APPROVAL** 8

1 = IECEx / ATEX approved coil

**SOLENOID VALVE ORIFICE** 9

3 = 3 mm (V (dc) coil = 100 psi [7 bar], V (ac) coil = 145 psi [10 bar] max. differential pressure)
5 = 5 mm (V (dc) coil = 50 psi [3.5 bar], V (ac) coil = 123 psi [8.5 bar] max. differential pressure)

**INTEGRAL OPTIONS** 10

0 = Hall Effect output
HR = High resolution Hall Effect output (Not available for AIM008)

---

<table>
<thead>
<tr>
<th>PRODUCT IDENTIFIER</th>
<th>STAINLESS STEEL METER SIZE</th>
<th>MANIFOLD METER AND VALVE MATERIAL</th>
<th>SEAL MATERIAL</th>
<th>METER PROTECTION APPROVAL</th>
<th>CABLE ENTRIES</th>
<th>SOLENOID VALVE VOLTAGE</th>
<th>SOLENOID VALVE PROTECTION APPROVAL</th>
<th>SOLENOID VALVE ORIFICE</th>
<th>INTEGRAL OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM</td>
<td>004 006 008</td>
<td>S</td>
<td>1 3</td>
<td>1</td>
<td>1 2</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td>1</td>
<td>3</td>
<td>0 HR</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- Lubricants
- Dyes
- Colorings
- Denaturants
- Detergents
- Odorizing
- Anti-corrosion
- Anti-static
- Anti-detonating
- Anti-icing
- Anti-foaming
- Emulsifiers
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>AIM004</th>
<th>AIM006</th>
<th>AIM008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Size:</td>
<td>1/8” [4 mm]</td>
<td>1/4” [6 mm]</td>
</tr>
<tr>
<td>Process Connections</td>
<td>3/8 in. NPT Elbows, 3x 90˚ orientation positions</td>
<td></td>
</tr>
<tr>
<td>Flow Range*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- L/hr</td>
<td>1 - 36</td>
<td>2 - 100</td>
</tr>
<tr>
<td>- GPH</td>
<td>0.26 - 9.5</td>
<td>0.5 - 27</td>
</tr>
<tr>
<td>Accuracy: @3cP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature Range:</td>
<td>5˚ to 149˚ F (-15˚ to 65˚ C)</td>
<td></td>
</tr>
<tr>
<td>Max. Pressure (Static):</td>
<td>440 psi (30 bar)</td>
<td></td>
</tr>
<tr>
<td>Max. Pressure (Operating):</td>
<td>DC Solenoid Coils; 100 psi (7 bar)</td>
<td>AC Solenoid Coils; 295 psi (20 bar)</td>
</tr>
<tr>
<td>Electrical Output Resolution - Nominal Pulses per Gallon (Pulses / L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall Effect</td>
<td>10600 (2800)</td>
<td>3975 (1050)</td>
</tr>
<tr>
<td>High Resolution</td>
<td>42400 (11200)</td>
<td>15900 (4200)</td>
</tr>
<tr>
<td>Hall Effect Output (NPN)</td>
<td>3 wire open collector, 5 - 24V (dc) max, 20mA max</td>
<td></td>
</tr>
<tr>
<td>Protection Class:</td>
<td>IP66/67 (NEMA 4x); Exd I/II T3...T6</td>
<td></td>
</tr>
</tbody>
</table>

*Maximum flow is to be reduced as viscosity increases, see flow de-rating guide.

### DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM004</td>
<td>4.25&quot; (108 mm)</td>
<td>4.80&quot; (122 mm)</td>
</tr>
<tr>
<td>AIM006</td>
<td>4.25&quot; (108 mm)</td>
<td>4.80&quot; (122 mm)</td>
</tr>
<tr>
<td>AIM008</td>
<td>4.53&quot; (115 mm)</td>
<td>5.08&quot; (129 mm)</td>
</tr>
</tbody>
</table>

### APPROVALS

- ATEX
- IEC
- CE

NEMA IP65/67

---

**Y-STRAINER**

FLOMEC® “Y” Type Strainers take their configuration from their name. They are most commonly used in pressurized lines but can also be used in suction or vacuum conditions. They are intended for applications where small amounts of solid particulates are expected, and where clean-out will be infrequent. If solids will flush easily from the screen, and fluid can be exhausted to atmosphere, a blow-down valve on the drain port will allow clean-out without removal of the screen, and without interrupting the process flow.

**FEATURES / BENEFITS**

- Robust investment cast design
- Screwed bonnet
- Easy to install
- Double screen

**SPECIFICATIONS**

- End Connection: BSP or NPT threaded connection
- Working Pressure: 580 psi (40 bar)
- Temperature: -4oF - 300oF (-20oC - 150oC)
- Available Mesh Size: 100 - 200 mesh (150 - 75 μm)

**PRODUCT CONFIGURATION**

---

**PRODUCT IDENTIFIER**

<table>
<thead>
<tr>
<th>PRODUCT IDENTIFIER</th>
<th>END CONNECTION</th>
<th>MESH SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST006 = 1/4&quot; (6 mm), 200 mesh (75 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST008 = 3/8&quot; (8 mm), 200 mesh (75 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST015 = 1/2&quot; (15 mm), 100 mesh (150 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST025 = 1&quot; (25 mm), 100 mesh (150 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST040 = 1.5&quot; (40 mm), 100 mesh (150 μm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST050 = 2&quot; (50 mm), 100 mesh (150 μm)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BODY MATERIALS & MESH SIZING**

<table>
<thead>
<tr>
<th>BODY MATERIALS &amp; MESH SIZING</th>
<th>MESH SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 = 316 Stainless Steel body and screen element, Teflon seal</td>
<td></td>
</tr>
</tbody>
</table>

**PROCESS CONNECTIONS**

<table>
<thead>
<tr>
<th>PROCESS CONNECTIONS</th>
<th>BSP Female threaded</th>
<th>NPT female threaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**TYPICAL INSTALLATION STRAINER WITH FLOWMETER**
**Y-STRAINER**

FLOMEC® "Y" Type Strainers take their name from their configuration. They are most commonly used in pressurized lines but can also be used in suction or vacuum conditions. They are intended for applications where small amounts of solid particulates are expected, and where clean-out will be infrequent. If solids will flush easily from the screen, and fluid can be exhausted to atmosphere, a blow-down valve on the drain port will allow clean-out without removal of the screen, and without interrupting the process flow.

**FEATURES / BENEFITS**

- Robust investment cast design
- Screwed bonnet
- Easy to install
- Double screen

**SPECIFICATIONS**

- End Connection: BSP or NPT threaded connection
- Working Pressure: 580 psi (40 bar)
- Temperature: -4°F - 300°F (-20°C - 150°C)
- Available Mesh Size: 100 - 200 mesh (150 - 75 μm)

**PRODUCT CONFIGURATION**

**PRODUCT IDENTIFIER**

<table>
<thead>
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**BODY MATERIALS & MESH SIZING**

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<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = BSP Female threaded</td>
<td></td>
</tr>
<tr>
<td>2 = NPT female threaded</td>
<td></td>
</tr>
</tbody>
</table>

**TYPICAL INSTALLATION STRAINER WITH FLOWMETER**
## DIMENSIONS

<table>
<thead>
<tr>
<th>Size</th>
<th>L</th>
<th>H</th>
<th>D</th>
<th>W</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;  (6 mm)</td>
<td>2.56&quot; (65.0 mm)</td>
<td>2.01&quot; (51.0 mm)</td>
<td>0.39&quot; (10 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
<tr>
<td>3/8&quot;  (8 mm)</td>
<td>2.56&quot; (65.0 mm)</td>
<td>2.01&quot; (51.0 mm)</td>
<td>0.47&quot; (12 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
<tr>
<td>1/2&quot;  (15 mm)</td>
<td>2.56&quot; (65.0 mm)</td>
<td>2.01&quot; (51.0 mm)</td>
<td>0.59&quot; (15 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
<tr>
<td>1&quot;    (25 mm)</td>
<td>3.54&quot; (90.0 mm)</td>
<td>2.83&quot; (72.0 mm)</td>
<td>0.98&quot; (25 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
<tr>
<td>1.5&quot;  (40 mm)</td>
<td>4.72&quot; (120.0 mm)</td>
<td>3.43&quot; (87.0 mm)</td>
<td>1.57&quot; (40 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
<tr>
<td>2&quot;    (50 mm)</td>
<td>5.51&quot; (140.0 mm)</td>
<td>4.06&quot; (103.0 mm)</td>
<td>1.97&quot; (50 mm)</td>
<td>0.08&quot; (2.0 mm)</td>
<td>0.04&quot; (1.0 mm)</td>
</tr>
</tbody>
</table>
G SERIES THREADED
(PRECISION TURBINE METERS)

The G Series High Precision Meter is the most accurate of all the FLOMEC® Turbine Meters:

FEATURES / BENEFITS

- Meter includes a traditional design
- Available in a variety of sizes
- BSPP, ISO and NPT fitting options
- High Temperature model available

APPLICATIONS

- Fuel
- Batch
- Food & Beverage
- Petro Chemicals
- Pharmaceuticals
- Thin Viscosity Fluids Under 100 Centipoise
- Process Control
- Chemical Feed Lines
- Irrigation
- High Water Volume Mixing
- High Precision / High Pressure

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
G = G Series Precision Turbine Meter

FITTING TYPE 2
N = NPT (Male)
I = ISO 7-1 BSPT Taper (Male)
B = BSPP (Male)

SHAFT / SLEEVE BEARING / THRUST BEARING 3
T- = Tungsten Carbide / Tungsten Carbide / Tungsten Carbide
P- = Stainless Steel / PTFE / Stainless Steel
(No High Temp available)

TURBINE SIZE & FLOWRATE 4

-050S = 1/2" Low Flow - Turbine Body Only*
-051S = 1/2" Standard
-051H** = 1/2" High Temp - Turbine Body Only*
-075S = 3/4" Standard
-075H** = 3/4" High Temp - Turbine Body Only*
-075E = 3/4" Ext-Range
-75EH** = 3/4" Ext-Range High Temp - Turbine Body Only*
-100S = 1" Standard
-100H** = 1" High Temp - Turbine Body Only*
-150S = 1-1/2" Standard
-150H** = 1-1/2" High Temp - Turbine Body Only*
-200S = 2" Standard
-200H** = 2" High Temp - Turbine Body Only*

*Call GPI for Sensor & Electronics
**Only Available for GNP, GIP and GBP

SENSOR CHOICE 5
X = No Sensor - Turbine Body Only

ELECTRONIC CHOICE (LOCAL) 6

Turbine Mounted
-X = No Electronics - Turbine Body Only
SPECIFICATIONS

**Design Type:** Turbine

**Fitting Type:**
- NPT (Male)
  - Taper (Male) ISO 7-1 BSPT
- BSPP (Male) ISO 228-1 designation G

**Housing Material:** 316 Stainless Steel

**Flow Range:**
- 1/2" (050)*: 0.6 - 6.0 GPM (2.2 - 22 L/min)
- 3/4" (075): 1.6 - 16 GPM (6.0 - 60 L/min)
- 1" (100): 6.7 - 67 GPM (25 - 252 L/min)
- 1-1/2" (150): 17.7 - 177 GPM (67 - 670 L/min)
- 2" (200): 33 - 330 GPM (125 - 1250 L/min)

**Accuracy (Linearity):** ± 0.5%

**Repeatability:** ± 0.1%

**Pressure Rating:**
- 1/2" to 2" - 5,000 psi (340 bar)
- 3" - 2,500 psi (170 bar)

**Temperature Range:**
- For GBT, GIT, GNT: -100° F to +225° F (-74° C to +107° C)
- For GBT, GIT, GNT High Temperature: -450° F to +800° F (-268° C to +426° C)

**Wetted Materials:**
- **Housing:** 316 Stainless Steel
- **Sleeve Bearing:** GBT, GIT, GNT - Tungsten Carbide
- **Thrust Bearing:** GBT, GIT, GNT - Tungsten Carbide
- **Shaft:** GBT, GIT, GNT - Tungsten Carbide
- **Rotor:** CD4MCu Stainless Steel
- **Rotor Supports:** 316 Stainless Steel
- **Retaining Rings:** 300 Series Stainless Steel

**Recommended Strainer Size:**
- 1/2 inch: 4 mesh (76 μm)
- 3/4 inch: 4 mesh (76 μm)
- 1 inch: 4 mesh (76 μm)
- 1-1/2 inch: 4 mesh (76 μm)
- 2 inch: 4 mesh (76 μm)

**Frequency Output:**
- 1/2" (050): 125 - 1000 Hz
- 1/2" (051): 125 - 1000 Hz
- 3/4" (075): 100 - 1000 Hz
- 1" (100): 100 - 1000 Hz
- 1-1/2" (150): 100 - 1000 Hz
- 2" (200): 100 - 1000 Hz

**Calibration Report:** Comes standard with G Series meters.

**N.I.S.T. – Certification available.**

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length &quot; (mm)</th>
<th>Height &quot; (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>2.75 (70)</td>
<td>1.68 (43)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>3.25 (82)</td>
<td>1.75 (44)</td>
</tr>
<tr>
<td>1&quot;</td>
<td>3.56 (90)</td>
<td>1.87 (47)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>4.59 (116)</td>
<td>2.12 (54)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>6.06 (154)</td>
<td>2.31 (59)</td>
</tr>
</tbody>
</table>

ACCESSORIES / ELECTRONICS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80001101</td>
<td>Weather proof enclosure - Zinc</td>
</tr>
<tr>
<td>80001105</td>
<td>Weather proof enclosure - SS</td>
</tr>
<tr>
<td>F Series (F018/F127/F130)</td>
<td>Remote Electronics</td>
</tr>
</tbody>
</table>

**SENSOR CHOICE**

**TURBINE SIZE & FLOWRATE**

**SHAFT / SLEEVE BEARING / THRUST BEARING**

**FITTING TYPE**

**PRODUCT IDENTIFIER**

- = No Electronics - Turbine Body Only
- X= Turbine Mounted
- = No Sensor - Turbine Body Only
- X= Turbine Mounted
- P= Stainless Steel / PTFE / Stainless Steel
- T= Tungsten Carbide / Tungsten Carbide / Tungsten Carbide
- F= Flanged
- G= G Series Precision Turbine Meter

**APPLICATIONS**

- Thin Viscosity Fluids Under 100 Centipoise
- Pharmaceuticals
- High Precision / High Pressure
- Petro Chemicals
- High Water Volume Mixing
- Food & Beverage
- Irrigation
- Batching
- Chemical Feed Lines
- Fuel
- Process Control

**FEATURES / BENEFITS**

- High Temperature model available
- Available in a variety of sizes
- Meter includes a traditional design

**GSCP-050** requires RF Pickup
G SERIES ANSI FLANGE FITTING
(PRECISION TURBINE METERS)

The G Series High Precision Meter is the most accurate of all the FLOMEC® Turbine Meters:

FEATURES / BENEFITS

- Meter includes a traditional design
- Available in a variety of sizes
- High Temperature model available

APPLICATIONS

- Fuel
- Batch ing
- Food & Beverage
- Petro Chemicals
- Pharmaceuticals
- Thin Viscosity Fluids Under 100 Centipoise
- Process Control
- Chemical Feed Lines
- Irrigation
- High Water Volume Mixing
- High Precision / High Pressure

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER  1
G = G Series Precision Turbine Meter

FITTING TYPE  2
F = Flanged

SHAFT / SLEEVE BEARING / THRUST BEARING  3
T- = Tungsten Carbide / Tungsten Carbide / Tungsten Carbide
P- = Stainless Steel / PTFE / Stainless Steel
(No High Temp available)

TURBINE SIZE & FLOWRATE  4

-075S = 3/4” Standard
-075H** = 3/4” High Temp - Turbine Body Only*
-075E = 3/4” Ext-Range
-75EH** = 3/4” Ext-Range High Temp - Turbine Body Only*
-100S = 1” Standard
-100H** = 1” High Temp - Turbine Body Only*
-150S = 1-1/2” Standard
-150H** = 1-1/2” High Temp - Turbine Body Only*
-200S = 2” Standard
-200H** = 2” High Temp - Turbine Body Only*

*Call GPI for Sensor & Electronics
**Only Available for GFT

SENSOR CHOICE  5
X = No Sensor - Turbine Body Only

ELECTRONIC CHOICE (LOCAL)  6
Turbine Mounted
-X = No Electronics - Turbine Body Only

--->>>> G  F  T-  -075S  X  -X
SPECFICATIONS

Design Type:  Turbine
Fitting Type: 150# RF ANSI Flange
Housing Material: 316 Stainless Steel

Meter Sizes Available:
For GFT  3/4"    1"    1-1/2"    2"
For GFP:  3/4"    1"    1-1/2"    2"
For High Temperature:  3/4"    1"    1-1/2"    2"

Flow Range:
3/4" (075)  1.6 - 16 GPM  (6.0 - 60 L/min)
3/4" (075E)  2.3 - 23 GPM  (8.7 - 87 L/min)
1" (100)  6.7 - 67 GPM  (25 - 252 L/min)
1-1/2"(150)  17.7 - 177 GPM  (67 - 670 L/min)
2" (200)  33 - 330 GPM  (125 - 1250 L/min)

accuracy (Linearity):  ± 0.5%
Repeatability:  ± 0.1%
Pressure Rating:  Flange Rule

Operating Temperature Range:
For Tungsten Carbide:  -450°F to 800°F (-268°C to 426°C)
For SS/PTFE:  -100°F to 225°F (-74°C to 107°C)

Typical K-Factor:
3/4" (075)  3,750 PPG (991 Pulses/L)
3/4" (075E)  2,608 PPG (689 Pulses/L)
1" (100)  896 PPG (237 Pulses/L)
1-1/2"(150)  340 PPG (90 Pulses/L)
2" (200)  181 PPG (48 Pulses/L)

DIMENSIONS

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length in. (mm)</th>
<th>Height in. (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>5.50 (140)</td>
<td>1.94 (49)</td>
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<tr>
<td>1&quot;</td>
<td>5.50 (140)</td>
<td>2.12 (54)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>6.00 (152)</td>
<td>2.50 (63)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>6.50 (165)</td>
<td>3.00 (76)</td>
</tr>
</tbody>
</table>

* Height on flange meters, measures from center line to top of flange.

ACCESSORIES / ELECTRONICS

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<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>145506-01</td>
<td>Kit, Adapter, G Series-QS11-QS09 Display</td>
</tr>
<tr>
<td>145506-02</td>
<td>Kit, Adapter, G Series-QS12-QS09 Display</td>
</tr>
<tr>
<td>145506-03</td>
<td>Kit, Adapter, G Series-QS13-QS09 Display</td>
</tr>
<tr>
<td>145506-04</td>
<td>Kit, Adapter, G Series-QS11-No Display</td>
</tr>
<tr>
<td>145506-05</td>
<td>Kit, Adapter, G Series-QS12-No Display</td>
</tr>
<tr>
<td>145506-06</td>
<td>Kit, Adapter, G Series-QS13-No Display</td>
</tr>
</tbody>
</table>
G SERIES SANITARY CLAMP
(PRECISION TURBINE METERS)

The G Series High Precision Meter is the most accurate of all the FLOMEC® Turbine Meters:

FEATURES / BENEFITS
- Meter includes a traditional design
- Available in a variety of sizes

APPLICATIONS
- Fuel
- Batching
- Food & Beverage
- Petro Chemicals
- Pharmaceuticals
- Thin Viscosity Fluids Under 100 Centipoise
SPECIFICATIONS

Design Type: Turbine
Fitting Type: Sanitary Clamp
Housing Material: 316 Stainless Steel
Meter Sizes Available:
- 1/2" -> 3/4"
- 1" -> 1-1/2"
- 2"

Meter ID:
- 1/2" --> 3/4" Fitting
- 1" --> 1-1/2" Fitting
- 1-1/2" --> 1-1/2" Fitting
- 2" --> 2" Fitting

Flow Range:
- 1/2" (051) 0.8 - 6 GPM (3.0 - 22 L/min)
- 3/4" (075) 1.6 - 16 GPM (6.0 - 60 L/min)
- 3/4" (075E) 2.3 - 23 GPM (8.7 - 87 L/min)
- 1" (100) 6.7 - 67 GPM (25 - 252 L/min)
- 1-1/2" (150) 17.7 - 177 GPM (67 - 670 L/min)
- 2" (200) 33 - 330 GPM (125 - 1250 L/min)

Accuracy (Linearity): ± 0.5%
Repeatability: ± 0.1%
Pressure Rating: Limited by fitting size, clamp size and temperature.
Operating Temperature Range: -100° F to 225° F (-74° C to 107° C)

Typical K-Factor:
- 1/2" (050) 10,000 PPG (2642 Pulses/L)
- 1/2" (051) 10,000 PPG (2642 Pulses/L)
- 3/4" (075) 3,750 PPG (991 Pulses/L)
- 3/4" (075E) 2,608 PPG (689 Pulses/L)
- 1" (100) 896 PPG (237 Pulses/L)
- 1-1/2" (150) 340 PPG (90 Pulses/L)
- 2" (200) 181 PPG (48 Pulses/L)

Recommended Strainer Size:
- 1/2" 40 mesh (420 μm)
- 3/4" 40 mesh (420 μm)
- 1" 18 mesh (1000 μm)
- 1-1/2" 14 mesh (1410 μm)

Frequency Output:
- 1/2" (050) 100 - 1000 Hz
- 1/2" (051) 125 - 1000 Hz
- 3/4" (075) 100 - 1000 Hz
- 3/4" (075E) 100 - 1000 Hz
- 1" (100) 100 - 1000 Hz
- 1-1/2" (150) 100 - 1000 Hz
- 2" (200) 100 - 1000 Hz

Calibration Report:
- Comes standard with G Series meters.
- N.I.S.T. – Certification available.

DIMENSIONS

<table>
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<tr>
<th>Meter Size</th>
<th>Length (mm)</th>
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<td>F Series</td>
<td>Remote Electronics</td>
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<td>145506-01</td>
<td>Kit, Adapter, G Series-QSI1-Q09 Display</td>
</tr>
<tr>
<td>145506-02</td>
<td>Kit, Adapter, G Series-QSI2-Q09 Display</td>
</tr>
<tr>
<td>145506-03</td>
<td>Kit, Adapter, G Series-QSI3-Q09 Display</td>
</tr>
<tr>
<td>145506-04</td>
<td>Kit, Adapter, G Series-QSI1-No Display</td>
</tr>
<tr>
<td>145506-05</td>
<td>Kit, Adapter, G Series-QSI2-No Display</td>
</tr>
<tr>
<td>145506-06</td>
<td>Kit, Adapter, G Series-QSI3-No Display</td>
</tr>
</tbody>
</table>
G SERIES SANITARY CLAMP HIGH TEMPERATURE (SIP) (PRECISION TURBINE METERS)

The G Series High Precision Meter is the most accurate of all the FLOMEC® Turbine Meters:

FEATURES / BENEFITS

• Meter includes a traditional design
• Available in a variety of sizes
• Low Profile option available

APPLICATIONS

• Fuel
• Batchling
• Food & Beverage
• Petro Chemicals
• Pharmaceuticals
• Thin Viscosity Fluids Under 100 Centipoise
• Process Control
• Chemical Feed Lines
• Irrigation
• High Water Volume Mixing
• High Precision / High Pressure

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER

G = G Series Precision Turbine Meter

FITTING TYPE

SC = Sanitary Clamp

SHAFT / SLEEVE BEARING / THRUST BEARING

PS = Stainless Steel / PEEK / PEEK

TURBINE SIZE & FLOWRATE

-100 = 1” Turbine, 1-1/2” Clamp
-100L = 1” Turbine, 1-1/2” Clamp, Low Profile Adapter
-150 = 1-1/2” Turbine, 1-1/2” Clamp
-150L = 1-1/2” Turbine, 1-1/2” Clamp, Low Profile Adapter
-200 = 2” Turbine, 2” Clamp
-200L = 2” Turbine, 2” Clamp, Low Profile Adapter

CIP

SIP

GSCPS Meters carry a Sanitary Rating.

Flowmeters for milk and milk products, Number 28-04.

This meter meets the strict 3-A Sanitary Standards using the new “Third Party Verification” (TPV) program. Our methods of design, construction and traceability of components have been reviewed and approved.

The internals of this meter are machined or polished to meet 3-A self-draining and cleaning requirements (Ra 32). The GSCPS Meter meets Clean in Place (CIP), Steam in Place (SIP) and Clean Out of Place (COP) requirements.
SPECIFICATIONS

Design Type: Turbine
Fitting Type: Sanitary Clamp
Housing Material: 316 Stainless Steel

Meter Sizes Available:
For GSCPS: 1"  1-1/2"  2"

Meter ID:
1" --> 1-1/2" Fitting
1-1/2" --> 1-1/2" Fitting
2" --> 2" Fitting

Flow Range:
1" (100) 6.7 - 67 GPM (25 - 252 L/min)
1-1/2" (150) 17.7 - 177 GPM (67 - 670 L/min)
2" (200) 33 - 330 GPM (123 - 1250 L/min)

Accuracy (Linearity): ± 0.5%
Repeatability: ± 0.1%
Pressure Rating: Limited by fitting size, clamp size and temperature.

Operating Temperature Range:
For GSCPS: -100°F to 225°F (-74°C to 107°C)
For SIP (up to 1 hour): 285°F (140°C)

Typical K-Factor:
1" (100) 896 PPG (237 Pulses/L)
1-1/2" (150) 340 PPG (90 Pulses/L)
2" (200) 181 PPG (48 Pulses/L)

Wetted Materials:
Housing: 316 Stainless Steel
Bushings & Bearings: PEEK
Shaft: 316 Stainless Steel
Rotor: CD4MCu Stainless Steel
Rotor Supports: 316 Stainless Steel
Retaining Rings: 300 Series Stainless Steel

Recommened Strainer Size:
1" 40 mesh (420 μm)
1-1/2" 18 mesh (1000 μm)
2" 14 mesh (1410 μm)

Frequency Output:
1" (100) 100 - 1000 Hz
1-1/2" (150) 100 - 1000 Hz
2" (200) 100 - 1000 Hz

Calibration Report:
Comes standard with G Series meters.
N.I.S.T. – Certification available.

DIMENSIONS

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length * (mm)</th>
<th>Height ** (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>3.56 (90)</td>
<td>1.84 (47)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
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<td>Remote Electronics</td>
</tr>
<tr>
<td>145506-01</td>
<td>Kit, Adapter, G Series-QS11-Q09 Display</td>
</tr>
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<td>145506-02</td>
<td>Kit, Adapter, G Series-QS12-Q09 Display</td>
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<td>145506-03</td>
<td>Kit, Adapter, G Series-QS13-Q09 Display</td>
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<td>145506-04</td>
<td>Kit, Adapter, G Series-QS11-No Display</td>
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</tr>
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<td>Kit, Adapter, G Series-QS13-No Display</td>
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</table>

GSCPS STANDARD

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<th>Height ** (mm)</th>
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<tr>
<td>1&quot;</td>
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<td>1.03 (26)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>4.59 (116)</td>
<td>1.21 (31)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>6.06 (154)</td>
<td>1.45 (37)</td>
</tr>
</tbody>
</table>

GSCPS LOW PROFILE
When choosing a magnetic pickup, the turbine meter and electronics are generally already known. Electronics can be either Local or Remote. Remote electronics include FLOMEC® Remote Displays or output to customer supplied equipment. Follow these 3 steps when choosing a magnetic pickup then see the Specification Table for further details.

1. Select your size: 1/2 inch or 3/4 to 3 inch
2. Choose: Local or Remote/Output
   - Local uses a wire lead pickup.
   - Remote/Output requires a connector.
3. What’s your signal type:
   - Sine Wave or Square Wave
   - Sine Wave - has no sensor power, can be used with battery powered displays.
   - Square Wave - sensor power is required.

### 1/2 INCH METER SIZES

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Sensor Power</th>
<th>Temperature Range</th>
<th>Cable Type</th>
<th>Connector Required</th>
<th>Cable Length</th>
<th>Thread Size</th>
<th>Local</th>
<th>Remote</th>
<th>Battery Pwr Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Lead Low Drag</td>
<td>810060001</td>
<td>None</td>
<td>-100°F to +250°F (-73°C to +121°C)</td>
<td>None</td>
<td>None</td>
<td>12 in. (305 mm)</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Low Drag</td>
<td>810060000</td>
<td>None</td>
<td>-100°F to +250°F (-73°C to +121°C)</td>
<td>S</td>
<td>80001200</td>
<td>N/A</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>High Temp., Low Drag (10 ft. cable)</td>
<td>81007001</td>
<td>None</td>
<td>-450°F to +800°F (-268°C to +426°C)</td>
<td>None</td>
<td>None</td>
<td>10 ft. (244 mm)</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>*RF (required for GNP-050, GTP-050 &amp; GSCP-050)</td>
<td>81005002</td>
<td>7-30V (dc)</td>
<td>-40°F to +248°F (-29°C to +120°C)</td>
<td>D</td>
<td>80001202</td>
<td>N/A</td>
<td>5/8” - 18</td>
<td>X</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### 3/4 TO 3 INCH METER SIZES

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Sensor Power</th>
<th>Temperature Range</th>
<th>Cable Type</th>
<th>Connector Required</th>
<th>Cable Length</th>
<th>Thread Size</th>
<th>Local</th>
<th>Remote</th>
<th>Battery Pwr Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Lead Standard</td>
<td>810030000</td>
<td>None</td>
<td>-100°F to +250°F (-73°C to +121°C)</td>
<td>None</td>
<td>None</td>
<td>12 in. (305 mm)</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>810010000</td>
<td>None</td>
<td>-100°F to +250°F (-73°C to +121°C)</td>
<td>S</td>
<td>80001200</td>
<td>N/A</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Herm / High Temperature</td>
<td>810020000</td>
<td>None</td>
<td>-450°F to +258°F (-268°C to +125°C)</td>
<td>S</td>
<td>80001200</td>
<td>N/A</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>High Temperature, Standard</td>
<td>810070000</td>
<td>None</td>
<td>-40°F to +248°F (-29°C to +120°C)</td>
<td>None</td>
<td>None</td>
<td>3 ft. (910 mm)</td>
<td>5/8” - 18</td>
<td>X</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td><strong>Digital (Di-Mag)</strong></td>
<td>810040000</td>
<td>5-32V (dc)</td>
<td>-40°F to +248°F (-29°C to +120°C)</td>
<td>D</td>
<td>80001202</td>
<td>N/A</td>
<td>5/8” - 18</td>
<td>X</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

▲ Pulls up to 10 V (dc) (Max)  * Externally powered pickups for pulse output only.

---

**Pickup Enclosures**

Pickup Enclosures are optional on G Serie Meters. Choose from four pickup enclosures. Models N4A and N4S are weather-proof enclosures.

### ENCLOSURES – PART NUMBERS

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>N4AWP - Weatherproof magnetic pickup steel enclosure</td>
<td>80001101</td>
</tr>
<tr>
<td>N4SWP - Weatherproof magnetic pickup 316 S.S. enclosure</td>
<td>80001105</td>
</tr>
</tbody>
</table>
Connectors are included with FLOMEC® cable assemblies. If you need replacement connectors, choose from the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard mating connector (2 pin) used on Type S and T cable assemblies</td>
<td>80001200</td>
</tr>
<tr>
<td>Water resistant connector (2 pin) used on Type H cable assembly</td>
<td>80001201</td>
</tr>
<tr>
<td>Di-Mag connector (3 pin) used on Type D cable assembly</td>
<td>80001202</td>
</tr>
</tbody>
</table>

Cable Assemblies

FLOMEC® Cable Assemblies include the connector.

<table>
<thead>
<tr>
<th>Type “S” Standard Cable (2 Conductor)</th>
<th>Type “H” Water Resistant (2 Conductor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Length</td>
<td>Part No.</td>
</tr>
<tr>
<td>8 in. (207 mm)</td>
<td>83001001</td>
</tr>
<tr>
<td>5 ft. (1.52 m)</td>
<td>83001005</td>
</tr>
<tr>
<td>10 ft. (3.04 m)</td>
<td>83001010</td>
</tr>
<tr>
<td>15 ft. (4.57 m)</td>
<td>83001015</td>
</tr>
<tr>
<td>20 ft. (6.09 m)</td>
<td>83001020</td>
</tr>
<tr>
<td>25 ft. (7.62 m)</td>
<td>83001025</td>
</tr>
<tr>
<td>30 ft. (9.35 m)</td>
<td>83001030</td>
</tr>
<tr>
<td>40 ft. (12.19 m)</td>
<td>83001040</td>
</tr>
<tr>
<td>50 ft. (15.24 m)</td>
<td>83001050</td>
</tr>
<tr>
<td>75 ft. (22.86 m)</td>
<td>83001075</td>
</tr>
<tr>
<td>100 ft. (30.48 m)</td>
<td>83001100</td>
</tr>
<tr>
<td>125 ft. (38.1 m)</td>
<td>83001125</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type “D” Di-Mag or RF (3 Conductor)</th>
<th>Type “T” High Temperature (2 Conductor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Length</td>
<td>Part No.</td>
</tr>
<tr>
<td>8 in. (207 mm)</td>
<td>83002001</td>
</tr>
<tr>
<td>5 ft. (1.52 m)</td>
<td>83002005</td>
</tr>
<tr>
<td>10 ft. (3.04 m)</td>
<td>83002010</td>
</tr>
<tr>
<td>15 ft. (4.57 m)</td>
<td>83002015</td>
</tr>
<tr>
<td>20 ft. (6.09 m)</td>
<td>83002020</td>
</tr>
<tr>
<td>25 ft. (7.62 m)</td>
<td>83002025</td>
</tr>
<tr>
<td>30 ft. (9.35 m)</td>
<td>83002030</td>
</tr>
<tr>
<td>40 ft. (12.19 m)</td>
<td>83002040</td>
</tr>
<tr>
<td>50 ft. (15.24 m)</td>
<td>83002050</td>
</tr>
<tr>
<td>75 ft. (22.86 m)</td>
<td>83002075</td>
</tr>
</tbody>
</table>

For display and electronic choices, see Electronics Choice Section beginning on page 65.
TP SERIES TURBINE FLOWMETERS

FLOMEC® TP Series Flowmeters measure flows of low viscosity liquids from 0.5 - 1200 gallons/min (1.8 - 4500 litres/min) in a range of sizes from ½” to 4” (15 – 100 mm). Installation orientation is horizontally or vertically, and they are available with hazardous area ATEX & IECEx, and Intrinsically Safe (IS) certifications.

FEATURES & BENEFITS

- High accuracy and repeatability, direct reading flowmeter
- Wide flow range
- Rugged and compact design
- IS hazardous area versions available
- Integral 4-20mA option

GENERAL SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>1/2&quot; - 4” (15-100 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suits Pipe Sizes</td>
<td>NPT, BSP, ANSI #150, ANSI #300, PN16 DIN*</td>
</tr>
<tr>
<td>Pipe Connections</td>
<td>NPT, BSP, ANSI #150, ANSI #300, PN16 DIN*</td>
</tr>
<tr>
<td>Accuracy (@ cP)</td>
<td>± 0.5% of reading</td>
</tr>
<tr>
<td>Viscosity Range</td>
<td>0.5 - 10cP</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-40o to +450o F (-40o to +232o C)**</td>
</tr>
<tr>
<td>Wetted Materials</td>
<td>316SS Bearing support &amp; body, 431SS rotor, Tungsten Carbide bearing</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>3625 psi (250 bar)</td>
</tr>
<tr>
<td>Protection Class</td>
<td>IP66/67 (NEMA4X), optional I.S. (Intrinsically Safe) Integral options</td>
</tr>
</tbody>
</table>

*Flanges only available on meters 1” and larger. Threaded meters available for ½” – 2” only.
**With high temperature pickup option.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
TP010 = 1/2” (15 mm) 0.5-5 GPM (1.8-18 L/min)
TP015 = 3/4” (20 mm) 1.8-18 GPM (6.7-67 L/min)
TP020 = 3/4” (20 mm) 3.6-36 GPM (13-130 L/min)
TP025 = 1” (25 mm) 7-70 GPM (27-270 L/min)
TP040 = 1.5” (40 mm) 15-150 GPM (57-570 L/min)
TP050 = 2” (50 mm) 30-300 GPM (113-1130 L/min)
TP080 = 3” (80 mm) 60-600 GPM (225-2250 L/min)
TP100 = 4” (100 mm) 120-1200 GPM (450-4500 L/min)

BODY MATERIAL 2
S = 316 Stainless Steel - 3500 psi (250 bar) max.

PROCESS CONNECTIONS / NO. OF PICK-OFFS 3 4
1T 1 = BSP male threaded / One
2T 1 = NPT male threaded / One
4C 1 = ANSI-150 RF flanges (Carbon Steel) / One
4S 1 = ANSI-150 RF flanges (316SS) / One
5C 1 = ANSI-300 RF flanges (Carbon Steel) / One
5S 1 = ANSI-300 RF flanges (316SS) / One
7C 1 = PN16 DIN flanges (Carbon Steel) / One
7S 1 = PN16 DIN flanges (316SS) / One

PICK-OFF STYLE 5
-1 = Military Style Connector
-2 = Flying Leads (required for integral options)

PICK-OFF TYPE / LINEARITY 6 7
1 1 = Standard (250o F [120o C] max.) / ± 0.5%
2 1 = High Temp (450o F [232o C] max.) / ± 0.5%
3 1 = ATEX/IECEx approved intrinsically safe 250o F [120o C] max.) / ± 0.5% (only available with R3 Integral Options)
5 1 = Amplified (5-30V (dc) supply tracking pulse) 250o F [120o C] max.) / ± 0.5%

INTEGRAL OPTIONS 8
JB = Junction Box
R3 = RT12 Intrinsically Safe (IECEx and ATEX approved) Rate Totalizer with all outputs (GRN housing)
R4 = RT40 Backlit Rate Totalizer with scaled pulse (Alloy housing with facia protector)
R5 = RT14 Backlit Rate Totalizer with scaled pulse, alarms and 4-20mA (GRN housing)

--- TP025 S 1T 1 -2 1 1 R5
DIMENSIONS

<table>
<thead>
<tr>
<th>OPTION</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Connector</td>
<td>4.64” (118 mm)</td>
</tr>
<tr>
<td>Junction Box</td>
<td>5.91” (150 mm)</td>
</tr>
<tr>
<td>RT12/RT14</td>
<td>8.27” (210 mm)</td>
</tr>
<tr>
<td>RT40</td>
<td>7.28” (185 mm)</td>
</tr>
</tbody>
</table>

APPLICATIONS

- Fuel
- Alcohol
- Solvents
- Insecticides
- Water
- Light Hydraulic Oils

APPROVALS

- ATEX
- IEC
- IECEx

Ø Not Available in the U.S.A.
FLOMEC.net

G2 SERIES (PRECISION TURBINE METERS)
A full line of FLOMEC® G2 Series Precision Turbine Meters are available in a variety of housing materials. Rugged and dependable, the G2 Series offers:

- Stainless Steel for most chemicals and fuel products
- Aluminum for petroleum based products
- Brass for most water applications
- PVDF for aggressive chemicals

FEATURES / BENEFITS
- Meter is designed for thin fluids < 100 cp
- Modular design allows for use with Output Modules, Sensors and Remote Transmitters
- 2 Totals (Batch = Resettable, Cumulative = Non-resettable); Rate of Flow, Factory calibrated in gallons and litres. Field calibratable. Includes non-volatile totals.
- High accuracy meter
- Internal parts are simple to replace for easy maintenance
- Lithium battery life: 5 years

APPLICATIONS
- Batching
- Blending
- Water
- Industrial Fluids
- Plating Solutions
- Ammonium
- Food & Beverage Processing
- Fuel Products
- Monitoring Clean Fluids
- Plant Process Water
- Chemical Feed Lines
- Harsh Chemicals (Sulfuric Acid & Bleach)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER
G2 = Industrial Grade Flowmeter

TURBINE MATERIAL
S = Stainless Steel
A = Aluminum
P = PVDF (1/2” & 1” only)
H = High Pressure Stainless Steel
B = Brass

TURBINE SIZE
05 = ½ inch
07 = ¾ inch
10 = 1 inch
15 = 1-½ inch
20 = 2 inch

FITTING TYPE
I = ISO (Female) BSPT (ISO 7 Designation is RC)
N = NPT (Female)
F = 150# ANSI Flange - available on S10, S15 and S20 only
T = Tri-Clover® fitting - available on S05-S20 only
X = Electronics only - for metal meters
Z = Electronics only - for plastic meters

ELECTRONIC CHOICE
- Turbine with Local Display
  09 = 2-Button Computer, Field Configurable (Cumulative, Batch & Rate)
  19 = Vertical Mount 2-Button Computer, Field Configurable (Cumulative, Batch & Rate)
- Turbine, Local Transmitter, with No Display
  80 = Unscaled Pulsed Transmitter (Open Collector)
  81 = QSI Version 1 (Scaled Pulse, RS485 [MODbus or BACnet], BTU Calculator, Bluetooth)
  82 = QSI Version 2 (Scaled Pulse, Data Logger, BTU Calculator, Bluetooth)
  83 = QSI Version 3 (Scaled Pulse, Data Logger, 4-20mA, Bluetooth)
- Turbine, Local Transmitter, with 09 Display
  90 = Unscaled Pulsed Transmitter (Open Collector)
  91 = QSI Version 1 (Scaled Pulse, RS485 [MODbus or BACnet], BTU Calculator, Bluetooth)
  92 = QSI Version 2 (Scaled Pulse, Data Logger, BTU Calculator, Bluetooth)
  93 = QSI Version 3 (Scaled Pulse, Data Logger, 4-20mA, Bluetooth)
- No Electronics – Turbine Only
  XX = No Electronics - Turbine Only

CALIBRATION
GM = GPM & L/min (Gallons Default)
LM = GPM & L/min (Litres Default)
XX = No Calibration (Use with Electronic Choices 41, 71, 72 or Turbine Only)

PACKAGING
A = Use for Turbine Only or 09 Electronics choice (Sizes 05-10)
B = Use for Turbine Only or 09 Electronics choice (Sizes 15-20)
C = Use for 19 Electronics choice (Sizes 05-10)
D = Use for 19 Electronics choice, with ANSI Flange (Sizes 10) Use for 19 Electronics choice with ANSI Flange (Sizes 10)
E = Use for Turbine Only or 09 Electronics choice, with ANSI Flange (Sizes 15-20) Use for 19 Electronics choice with ANSI Flange (Sizes 15-20)
F = Use for 19 Electronics choice, with ANSI Flange (Sizes 05-20)
G = Use for 19 Electronics choice, with ANSI Flange (Sizes 15-20)
**SPECIFICATIONS**

**Fitting Type:**
- NPT or ISO (Female) BSPT* (*ISO 7 designation is RC)
- 150# ANSI (Stainless Steel only)
- Tri-Clover® (Stainless Steel only) - Clamp size is one size bigger than meter size

**Housing Material:**
- 316 Stainless Steel, Aluminum, Brass, PVDF

**Meter Sizes Available:**
- 1/2" (05)
- 3/4" (07)
- 1" (10)
- 1-1/2" (15)
- 2" (20)

**Flow Range:**
- 1/2" (05): 1 - 10 GPM (3.8 - 38 L/min)
- 3/4" (07): 2 - 20 GPM (7.6 - 76 L/min)
- 1" (10): 5 - 50 GPM (19 - 190 L/min)
- 1-1/2" (15): 10 - 100 GPM (38 - 380 L/min)
- 2" (20): 20 - 200 GPM (76 - 760 L/min)

**Accuracy (% of Reading):**
- Turbine Only
- Turbine w/Computer

**Pressure Rating:**
- 316 Stainless Steel: 1,500 psi (102 bar)
- Aluminum: 300 psi (21 bar)
- Brass: 300 psi (21 bar)

**High Pressure 316 Stainless Steel:**
- 3000 psi (207 bar) (CE Approval ONLY)

**Sanitary Flange 316 Stainless Steel:**
- Limited by fitting size, clamp size & temperature

**PVDF:**
- 100 psi (6.9 bar)

**Operating Temperature Range:**
- -40°F to 250°F (-40°C to 121°C)
- (PVDF) -20°F to 180°F (-28°C to 82°C)

**with Display:**
- 14°F to 140°F (-10°C to 60°C)

**Typical K-Factor:**
- 1/2" (05): 2,500 PPG (660 Pulses/L)
- 3/4" (07): 1,100 PPG (291 Pulses/L)
- 1" (10): 565 PPG (149 Pulses/L)
- 1-1/2" (15): 215 PPG (57 Pulses/L)
- 2" (20): 100 PPG (26 Pulses/L)

**Wetted Materials:**
- Housing: 316 Stainless Steel, Aluminum or Brass
- Bearings: 96% Alumina Ceramic
- Shaft: Tungsten Carbide
- Rotor: PVDF
- Rings: 316 Stainless Steel

**Wetted Materials PVDF:**
- Bearings & Shaft: 98% Alumina Ceramic
- Rotor: PVDF
- Rings: Fluorocarbon (Optional PTFE)

**Frequency Range:**
- 1/2" (05): 42-420 Hz @ 1-10 GPM (3.8-38 L/min) / 48-480 Hz @ 1.2-12 GPM (4.5-45 L/min) (PVDF)
- 3/4" (07): 37-370 Hz @ 2-20 GPM (7.6-76 L/min)
- 1" (10): 47-470 Hz @ 5-50 GPM (19-190 L/min) / 45-450 Hz @ 5-50 GPM (19-190 L/min) (PVDF)
- 1-1/2" (15): 36-360 Hz @ 10-100 GPM (38-380 L/min)
- 2" (20): 33-330 Hz @ 20-200 GPM (76-760 L/min)

**Calibration Report:**
- Comes standard with G2 Series meters.
- N.I.S.T. – Certification available.

**PARTS LIST**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>113435-1</td>
<td>Conditioned Signal Module</td>
</tr>
<tr>
<td>125060-1</td>
<td>Pulse Access Module</td>
</tr>
<tr>
<td>125070-1</td>
<td>External Power Module</td>
</tr>
<tr>
<td>125100-1</td>
<td>4-20 mA Module</td>
</tr>
<tr>
<td>120077-01</td>
<td>FM Approved Sensor</td>
</tr>
<tr>
<td>120077-02</td>
<td>ATEX Approved Sensor</td>
</tr>
<tr>
<td>125260-01</td>
<td>90 Degree Display Adaptor Kit</td>
</tr>
<tr>
<td>113275-1</td>
<td>FM Approved Remote Kit</td>
</tr>
</tbody>
</table>

**DISTRIBUTORS**

[Contact Information]

**NOTES**

- 09 Display adds 0.67 in. (17 mm) to height.

**DIMENSIONS**

**NPT/ISO**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length (mm)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>4.2 (107)</td>
<td>1.8 (48)</td>
<td>2.0 (51)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>4.3 (109)</td>
<td>2.0 (51)</td>
<td>2.0 (51)</td>
</tr>
<tr>
<td>1&quot;</td>
<td>4.5 (114)</td>
<td>2.2 (56)</td>
<td>2.0 (51)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>5.3 (135)</td>
<td>2.8 (71)</td>
<td>2.7 (68)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>6.3 (160)</td>
<td>3.2 (81)</td>
<td>3.3 (84)</td>
</tr>
<tr>
<td>PVDF 1/2&quot;</td>
<td>7.3 (185)</td>
<td>3.2 (81)</td>
<td>2.1 (53)</td>
</tr>
<tr>
<td>PVDF 2&quot;</td>
<td>8.1 (206)</td>
<td>3.3 (84)</td>
<td>2.8 (71)</td>
</tr>
</tbody>
</table>

**ACCESSORIES / ELECTRONICS**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>145505-01</td>
<td>Kit, Adapter, G2-QS11-Q09 Display</td>
</tr>
<tr>
<td>145505-02</td>
<td>Kit, Adapter, G2-QSI2-Q09 Display</td>
</tr>
<tr>
<td>145505-03</td>
<td>Kit, Adapter, G2-QSI3-Q09 Display</td>
</tr>
<tr>
<td>145505-04</td>
<td>Kit, Adapter, G2-QSI1-No Display</td>
</tr>
<tr>
<td>145505-05</td>
<td>Kit, Adapter, G2-QSI2-No Display</td>
</tr>
<tr>
<td>145505-06</td>
<td>Kit, Adapter, G2-QSI3-No Display</td>
</tr>
<tr>
<td>145505-07</td>
<td>Kit, Adapter, G2-QSI1-Display Ready</td>
</tr>
<tr>
<td>145505-08</td>
<td>Kit, Adapter, G2-QSI2-Display Ready</td>
</tr>
<tr>
<td>145505-09</td>
<td>Kit, Adapter, G2-QSI3-Display Ready</td>
</tr>
</tbody>
</table>
FM Approved Remote Kit Assembly
(Part No. 113275-1)

The Factory Mutual (FM) Approved Remote Kit Assembly modifies FLOMEC® Electronic Digital Meters for applications in specialized situations including remote indication and high or low fluid temperature metering applications. This kit provides the versatility of panel mounting of the LCD readout up to 100 ft. (30 m) from the turbine.

This kit consists of a sensor module, a dust cover assembly and 10 ft. (3 m) of cable. Requires a complete meter with display.

Conditioned Signal Output Module
(Part No. 113435-1)

This module provides an unscaled, amplified, digital signal capable of transmission up to 5,000 ft. (1.5 km). There is no need for additional signal conditioning or amplification devices to achieve the desired digital signal. Use on G2 “Turbine Only” model.

The module is factory assembled for Open Collector signal output and operates from an external 9 to 35 volt power source. By changing terminal connections and adding a battery kit, the module provides a self-powered 6-volt Square Wave signal.
**FM and ATEX Approved Sensor Kit**

**FM: Part No. 120077-01**

**ATEX: Part No. 120077-02**

The Factory Mutual (FM and ATEX) Approved Sensor is designed for use with any G2 Turbine Meter when rotor pulse data is required and the meter is located within a hazardous location. The output signal is compatible with existing FLOMEC® remote electronics. Use on G2 “Turbine Only” model.

This kit includes pickup, screws, coverplate and jam nut. Connection Kit sold separately. (Part# 113524-01)

**Features and Benefits:**
- Mounts to any G2 meter housing via the coverplate
- Ideal for indoor or outdoor applications
- Factory Mutual (Intrinsic Safe) Class 1, Div. 1, Groups ABCDEFG
- ATEX II1 G Ex ia IIC, FM08ATEX0066x

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Type</td>
<td>Open Collector (NPN)</td>
</tr>
<tr>
<td>Power Source</td>
<td>5.8 to 30 V (dc)</td>
</tr>
<tr>
<td>Supply Current</td>
<td>≤ 15 mA</td>
</tr>
<tr>
<td>Frequency</td>
<td>5 to 10k Hz</td>
</tr>
<tr>
<td>Temperature (Non-Hazardous)</td>
<td>+248°F (-40°C to +120°C)</td>
</tr>
<tr>
<td>Temperature (Hazardous)</td>
<td>For Class I, II, III, Division 1: Group ABCDEFG and CSA:</td>
</tr>
<tr>
<td></td>
<td>Class 1, Div. 1 Group ABCD, the following temperature codes apply:</td>
</tr>
<tr>
<td></td>
<td>T6 +185°F (+85°C) at +149°F (+65°C) Ambient Temperature</td>
</tr>
<tr>
<td></td>
<td>T5 +212°F (+100°C) at +186°F (+85°C) Ambient Temperature</td>
</tr>
</tbody>
</table>

**APPROVALS**

- ATEX
- FM
- CE

---

**4-20 mA Module**

**(Part No. 125100-1)**

Combine the 4-20 mA Module with an Industrial Grade Turbine and Display Electronics to provide an industry standard analog signal for connection to a wide variety of chart recorders, display equipment and process control equipment.

This module outputs an analog signal which is directly proportional to the frequency of the digital output. With some simple adjustments, you can scale the module to represent whatever range is desired (minimum range of 75Hz). Kit comes with circuit, assembly, enclosure and screws.

**Features and Benefits:**
- Communicates with most analog process control devices
- Operating temperature range of +14°F to +140°F (-10°C to +60°C)
- Module installs on all turbine sizes
- Provides external power to display electronics

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Type</td>
<td>Analog</td>
</tr>
<tr>
<td>Power</td>
<td>Loop Powered</td>
</tr>
<tr>
<td>Voltage</td>
<td>7 to 30 V (dc)</td>
</tr>
<tr>
<td>Strain Relief</td>
<td>Hubble PG7</td>
</tr>
<tr>
<td>Cable</td>
<td>10 ft. (3 m), Belden #9383</td>
</tr>
</tbody>
</table>
G2 Series Industrial Meter MODULES

**Pulse Access Module**  
(Part No. 125060-1)

The Pulse Access Module provides an unscaled, digital signal from your FLOMEC® meter by accessing circuitry from the on-board display readout.

This kit comes complete, ready to install, with a circuit assembly, coverplate assembly and 10 ft. (3 m) of cable. The Pulse Access Module requires both a FLOMEC Turbine and an 09 Display Electronics which are sold separately.

**Features and Benefits:**

- Provides a digital Open Collector signal
- Operating temperature range of +14° F to +140° F (-10° C to +60° C)
- Can transmit signal up to 5,000 ft. (1.5 km)
- Communicates with most digital process control devices and its easy to install

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Signal Type</th>
<th>Open Collector (NPN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0 to 60 V (dc)</td>
</tr>
<tr>
<td>Frequency</td>
<td>0 to 750 Hz</td>
</tr>
<tr>
<td>Strain Relief</td>
<td>Hubble PG7</td>
</tr>
<tr>
<td>Cable</td>
<td>10 ft. (3 m) Belden #9363</td>
</tr>
</tbody>
</table>

**APPROVALS**


**External Power Module**  
(Part No. 125070-1)

Combine the External Power Module and the Pulse Access Module to provide external power capabilities to a FLOMEC® Electronic Digital Meter.

The module is designed to provide regulated power to the Display Electronics. The batteries then become a backup or auxiliary power source.

If desired, a pulse output may be accessed. The unscaled, digital signal is capable of transmission up to 5,000 ft. (1.5 km).

**Features and Benefits:**

- Internal batteries become a backup or auxiliary power source
- Operating temperature range of +14° F to +140° F (-10° C to +60° C)
- Input power is 7 to 30 volt external power

**SPECIFICATIONS**

| Voltage             | 7 to 30 V (dc) @ 1 mA |

**APPROVALS**


Conduit Adapter Kit
(Part No. 113437-01)
The Conduit Adapter allows you to enclose wiring from the magnetic pickup. The kit includes a turbine meter cover with a 1 inch male NPT conduit fitting and screws for plastic or metal installation.

90° Display Adapter Kit
(Part No. 125260-01)
90° Display Adapter Kit allows for horizontal readout of vertical meters. Includes adapter, O-ring, screws and foam spacers required for installation.
Can be ordered with a meter. Specify -19 option with meter order.

Pulse Access Dust Cover
(Part No. 125080-1)
Used with the Remote Kit, this part replaces the dust cover that houses the electronic display. This module provides a digital, open collector (NPN) output signal. Use this combination to communicate to a PLC or other piece of electronic equipment.
**A1 SERIES (COMMERCIAL GRADE METERS)**

FLOMEC® A1 Series Meters are designed as self-contained, battery powered units. Select the A1 Series when you need an accurate, basic meter.

- Available in Aluminum or Nylon
- Aluminum model is available in three sizes
- Use the Aluminum model for petroleum products
- Nylon meter for use in water or non-aggressive chemical applications

**FEATURES / BENEFITS**

- Unique package combines Turbine and LCD into a self-contained, compact, economical meter.
- Local Display Computer features: 2 Totals (1 Resettable, 1 Cumulative); Rate of Flow and User Configuration.
- Output capabilities available to communicate with process control equipment.
- Lightweight, compact design allows for easy installation.
- Lithium battery life: 5 years
- Factory calibration in gallons and litres (can also be field calibrated to other fluids).

**APPLICATIONS**

- Fuel Transfer
- Plant Process Water
- Batching / Blending
- Fuel Products (Aluminum model)
- Water / Non-aggressive Chemicals (Nylon model)

**PRODUCT CONFIGURATION**

<table>
<thead>
<tr>
<th>PRODUCT IDENTIFIER</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 = Commercial Grade Electronic Digital Meter</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTRONIC CHOICE</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>09 = 2 Totals (1 Resettable, 1 Cumulative); Factory Calibration in gallons and litres, User Configuration and Rate of Flow</td>
<td></td>
</tr>
<tr>
<td>XX = No Computer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CALIBRATION</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM = GPM &amp; L/min (Gallons Default)</td>
<td></td>
</tr>
<tr>
<td>LM = GPM &amp; L/min (Litres Default)</td>
<td></td>
</tr>
<tr>
<td>XX = No Computer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TURBINE SIZE</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A025 = Aluminum - Low Flow</td>
<td></td>
</tr>
<tr>
<td>A100 = Aluminum - 1 inch</td>
<td></td>
</tr>
<tr>
<td>A200 = Aluminum - 2 inch</td>
<td></td>
</tr>
<tr>
<td>N025 = Nylon - Low Flow</td>
<td></td>
</tr>
<tr>
<td>N100 = Nylon - 1 inch</td>
<td></td>
</tr>
<tr>
<td>X### = No Turbine*</td>
<td></td>
</tr>
</tbody>
</table>

*When ordering Display Only, the ### should be the turbine size.

**FITTING TYPE**

| N = NPT (Female) |
| I = ISO (Female) BSPT |
| B = BSPP Female - available on A025 and A100 turbines only |
| X = No Turbine |

**PACKAGING**

| A1 = Standard Low Flow - 1 inch |
| A2 = Standard - 2 inch |
| B1 = Low Flow - 1 inch Turbine Only |
| B2 = 2 inch Turbine Only |
| B3 = Computer Only |

---

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length * (mm)</th>
<th>Height * (mm)</th>
<th>Width * (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A025</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>3.0 (76)</td>
</tr>
<tr>
<td>A100</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>3.0 (76)</td>
</tr>
<tr>
<td>A200</td>
<td>6.0 (152)</td>
<td>4.5 (114)</td>
<td>3.0 (76)</td>
</tr>
<tr>
<td>N025</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>3.0 (76)</td>
</tr>
<tr>
<td>N100</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>3.0 (76)</td>
</tr>
</tbody>
</table>
# SPECIFICATIONS

<table>
<thead>
<tr>
<th>Meter Sizes Available:</th>
<th>A025 (Low Flow), A100 (1 inch), A200 (2 inch), N025 (Low Flow), N100 (1 inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Type:</td>
<td>A025 Paddlewheel</td>
</tr>
<tr>
<td></td>
<td>A100 Turbine</td>
</tr>
<tr>
<td></td>
<td>A200 Turbine</td>
</tr>
<tr>
<td></td>
<td>N025 Paddlewheel</td>
</tr>
<tr>
<td></td>
<td>N100 Turbine</td>
</tr>
<tr>
<td>Fitting Size /</td>
<td>A025 1 inch / NPT, ISO* or BSPP (Female)</td>
</tr>
<tr>
<td>Fitting Type:</td>
<td>A100 1 inch / NPT, ISO* or BSPP (Female)</td>
</tr>
<tr>
<td></td>
<td>A200 2 inch / NPT, ISO* or BSPP (Female)</td>
</tr>
<tr>
<td></td>
<td>N025 1 inch / NPT, ISO* (Female)</td>
</tr>
<tr>
<td></td>
<td>N100 1 inch / NPT, ISO* (Female)</td>
</tr>
<tr>
<td>Flow Range:</td>
<td>A025 0.3 - 3 GPM 1 - 11 L/min</td>
</tr>
<tr>
<td></td>
<td>A100 3 - 50 GPM 11 - 190 L/min</td>
</tr>
<tr>
<td></td>
<td>A200 30 - 300 GPM 114 - 1,135 L/min</td>
</tr>
<tr>
<td></td>
<td>N025 0.3 - 3 GPM 1 - 11 L/min</td>
</tr>
<tr>
<td></td>
<td>N100 3 - 50 GPM 11 - 190 L/min</td>
</tr>
<tr>
<td>Accuracy (% of Reading):</td>
<td>A025 &amp; N025: **Application Dependent **A100, A200 &amp; N100: ± 1.5%</td>
</tr>
<tr>
<td>Repeatability:</td>
<td>A025 ± 1.0%</td>
</tr>
<tr>
<td></td>
<td>A100 ± 0.2%</td>
</tr>
<tr>
<td></td>
<td>A200 ± 0.2%</td>
</tr>
<tr>
<td></td>
<td>N025 ± 1.0%</td>
</tr>
<tr>
<td></td>
<td>N100 ± 0.2%</td>
</tr>
</tbody>
</table>

*ISO 7 Designation is RC.

**Accuracy can vary up to ± 5% depending on installation and fluid type. Field calibration is recommended for best accuracy.

## ACCESSORIES / ELECTRONICS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>113275-1</td>
<td>FM Approved Remote Kit Assembly</td>
<td>120077-02</td>
<td>ATEX Approved Sensor Kit</td>
</tr>
<tr>
<td>113435-1</td>
<td>Conditioned Signal Output Module</td>
<td>113437-01</td>
<td>Conduit Adapter Kit</td>
</tr>
<tr>
<td>125260-01</td>
<td>90° Display Adapter Kit</td>
<td>125080-1</td>
<td>Pulse Access Dust Cover</td>
</tr>
<tr>
<td>120077-01</td>
<td>FM Approved Sensor Kit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FM Approved Remote Kit Assembly
(Part No. 113275-1)

The Factory Mutual (FM) Approved Remote Kit Assembly modifies FLOMEC® Electronic Digital Meters for applications in specialized situations including remote indication and high or low fluid temperature metering applications. This kit provides the versatility of panel mounting of the LCD readout up to 100 ft. (30 m) from the turbine.

This kit consists of a sensor module, a dust cover assembly and 10 ft. (3 m) of cable; it also requires a 09 Display.

Features and Benefits:
✓ Maintains FM Approval.
✓ Accommodates fluid temperatures from -40°F to +250°F (-40°C to +121°C).
✓ This kit can upgrade an existing FLOMEC® meter or can be purchased with a new meter.
✓ Use this module with GPI Industrial or Commercial Grade Electronic Digital Meters.

Features and Benefits:
✓ Provides two digital signals: Open Collector or 6-volt Square Wave and can communicate with most process control devices.
✓ Operating temperature range of -40°F to +212°F (-40°C to +100°C).
✓ Can be externally powered or battery powered.

Specifications
- Magnetic Pickup: 1.3 k Ohm, 90 mH
- Signal Type: Sine Wave
- Voltage: Peak to Peak 10 mV to 500 mV
- Frequency: 11 to 750 Hz
- Cable: 10 ft. (3 m), 2-conductor shielded, Belden #9501

Conditioned Signal Output Module
(Part No. 113435-1)

This module provides an unscaled, amplified, digital signal capable of transmission up to 5,000 ft. (1.5 km). There is no need for additional signal conditioning or amplification devices to achieve the desired digital signal. Use on G2 “Turbine Only” model.

The module is factory assembled for Open Collector signal output and operates from an external 9 to 35 volt power source. By changing terminal connections and adding a battery kit, the module provides a self-powered 6-volt Square Wave signal.

Specifications
- Connector: Hubble PG7
- Signal Type: Open Collector (NPN)
- Power: External 9 to 35 V (dc), approximately 1 mA
- Connection: Three wire
- Frequency: 0 to 750 Hz
- Cable: 10 ft. (3 m) Belden #9363

Approvals
- FM
- CE
90° Display Adapter Kit
(Part No. 125260-01)

90° Display Adapter Kit allows for horizontal readout of vertical meters. Includes adapter, O-ring, screws and foam spacers required for installation.

Can be ordered with a meter. Specify -19 option with meter order.
TM SERIES (WATER METERS)

FLOMEC® TM Series Water Meters are accurate, economical and designed to last. Choose TM Water Meters for water processing and irrigation applications:

- Meets Schedule 80 PVC specifications
- Standard low-profile display
- Seven sizes with three fitting types available
- Flow rates from 1 to 600 gallons per minute (3.8 to 2271 L/min)

FEATURES / BENEFITS

- Easy to install
- Displays in gallons, litres and cubic feet
- Indicates Batch, Cumulative Totals and Rate of Flow
- Available in Spigot, NPT, BSPP (1”, 1-½” and 2” only), 150# ANSI Flange (3” and 4” only) and DIN Flange (3” and 4” only) fittings
- Non-volatile totals means amounts are retained when batteries are replaced or power is lost
- Lithium battery life: 5 years

DIMENSIONS

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM050</td>
<td>3.8” (96 mm)</td>
<td>2.6” (66 mm)</td>
<td>2.0” (51 mm)</td>
</tr>
<tr>
<td>TM050-N</td>
<td>5.8” (147 mm)</td>
<td>2.6” (66 mm)</td>
<td>2.0” (51 mm)</td>
</tr>
<tr>
<td>TM075</td>
<td>3.8” (96 mm)</td>
<td>2.7” (68 mm)</td>
<td>2.0” (51 mm)</td>
</tr>
<tr>
<td>TM075-N</td>
<td>5.8” (147 mm)</td>
<td>2.7” (68 mm)</td>
<td>2.0” (51 mm)</td>
</tr>
<tr>
<td>TM100</td>
<td>4.1” (104 mm)</td>
<td>3.1” (79 mm)</td>
<td>2.0” (51 mm)</td>
</tr>
</tbody>
</table>

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER

| TM = Water Meter, Schedule 80 PVC |

TURBINE SIZE

| 050 = ½” (15 mm) |
| 075 = ¾” (20 mm) |
| 100 = 1” (25 mm) |
| 150 = 1-½” (40 mm) |
| 200 = 2” (50 mm) |
| 300 = 3” (80 mm) |
| 400 = 4” (100 mm) |

FITTING TYPE

| Blank = Spigot (Pipe) End |
| -N = NPT Female |
| -B = BSPP Female (1”, 1-½” and 2” meters only) |
| -F = 150# ANSI Flange (3” and 4” meters only) |
| -D = DIN Flange (3” and 4” meters only) |

ELECTRONIC CHOICE

| Blank = Local Display (Standard) |
| -P = Pulse Output |

| >>>>> TM 300 -N -P |

**DIMENSIONS**

*Length guidelines are estimates; actual length can vary up to ± 1/2” (13 mm)

**Computer display adds 1.1 in. (28 mm) to height*
SPECIFICATIONS

Fitting Type: Schedule 80 Spigot (Pipe End)
  NPT (Female)
  BSPP (Female)
  (1 inch, 1-1/2 inch, & 2 inch meters only)
  150# ANSI Flange or DIN 100 Flange
  (3" and 4" meters only)

Meter Sizes Available:
  1/2"  3/4"   1"   1-1/2"  2"   3"   4"

Flow Range:
  1/2" (050)  1 - 10 GPM  (3.8 - 38 L/min)
  3/4" (070)  2 - 20 GPM  (7.6 - 76 L/min)
  1" (100)    5 - 50 GPM  (19 - 190 L/min)
  1-1/2" (150) 10 - 100 GPM  (38 - 380 L/min)
  2" (200)    20 - 200 GPM  (76 - 760 L/min)
  3" (300)    40 - 400 GPM  (151 - 1514 L/min)
  4" (400)    60 - 600 GPM  (227 - 2271 L/min)

Accuracy (% of Reading): ± 3.0%

Pressure Rating (1/2" - 2"):
  225 psi (15.3 bar) @ 73° F (23° C)

BSP
  150 psi (10.3 bar) @ 73° F (23° C)

Pressure Rating (3" - 4"):
  225 psi (15.3 bar) @ 73° F (23° C)

DIN
  135 psi (9.1 bar) @ 73° F (23° C)

For CE Applications
  135 psi (9.1 bar) @ 73° F (23° C)

Operating Temperature Range:
  +32° F to +140° F (0° C to +60° C)**

Typical K-Factor:
  1/2" (050)  2,500 PPG (660 Pulses/L)
  3/4" (070)  1,100 PPG (291 Pulses/L)
  1" (100)    565 PPG (149 Pulses/L)
  1-1/2" (150) 215 PPG (57 Pulses/L)
  2" (200)    100 PPG (26 Pulses/L)
  3" (300)    43 PPG (11 Pulses/L)
  4" (400)    17 PPG (4.5 Pulses/L)

Wetted Materials (1/2" - 2"):
  Housing: PVC
  Bearings: Ceramic
  Shaft: Tungsten Carbide
  Rotor: PVDF
  Rings: 316 Stainless Steel

Wetted Materials (3" - 4"):
  Housing: PVC
  Bearings: PEEK
  Shaft & Thrust Washers: Stainless Steel
  Rotor & Nose Cone: Acetal
  Signal Generator: Ferrite

Calibration Report:
  Comes standard with P (Pulse out) TM models
  N.I.S.T. – Certification available

ACCESSORIES / ELECTRONICS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>113275-1</td>
<td>FM Approved Remote Kit Assembly (will not make meter FM Approved)</td>
</tr>
<tr>
<td>125260-01</td>
<td>90° Display Adapter Kit</td>
</tr>
<tr>
<td>125080-01</td>
<td>Pulse Access Dust Cover (must be used in conjunction with FM Approved Remote Kit Assembly)</td>
</tr>
<tr>
<td>145507-01</td>
<td>Kit, Adapter, TM-QSI1-Q09 Display</td>
</tr>
<tr>
<td>145507-02</td>
<td>Kit, Adapter, TM-QSI2-Q09 Display</td>
</tr>
<tr>
<td>145507-03</td>
<td>Kit, Adapter, TM-QSI3-Q09 Display</td>
</tr>
<tr>
<td>145507-04</td>
<td>Kit, Adapter, TM-QSI1-No Display</td>
</tr>
<tr>
<td>145507-05</td>
<td>Kit, Adapter, TM-QSI2-No Display</td>
</tr>
<tr>
<td>145507-06</td>
<td>Kit, Adapter, TM-QSI3-No Display</td>
</tr>
<tr>
<td>145507-07</td>
<td>Kit, Adapter, TM-QSI1-Display Ready</td>
</tr>
<tr>
<td>145507-08</td>
<td>Kit, Adapter, TM-QSI2-Display Ready</td>
</tr>
<tr>
<td>145507-09</td>
<td>Kit, Adapter, TM-QSI3-Display Ready</td>
</tr>
</tbody>
</table>

APPLICATIONS

- OEM water treatment equipment / skids
- Sub-metering of facility water usage
- Waste water treatment equipment
- Irrigation
- Batching
- Plant process water
- Water based cooling systems
- Chemical feed systems
- Monitoring clean fluids
- Cooling towers
- Blending

APPROVALS

*NSF approval for 3" and 4" sizes only
TM SERIES (WATER METERS)
WITH DISPLAY AND PULSE OUTPUT

FLOMEX® TM Series Water Meters are accurate, economical and designed to last. Choose TM Water Meters for water processing and irrigation applications:

- Meets Schedule 80 PVC specifications
- Standard low-profile display
- Five sizes with two fitting types available
- Flowrates from 1 to 200 gallons per minute (3.8 to 760 L/min)

FEATURES / BENEFITS

- Includes pulse output cable for interfacing with customer equipment
- Displays in gallons and litres
- Indicates Batch, Cumulative Totals and Rate of Flow
- Non-volatile totals means amounts are retained when batteries are replaced or power is lost
- Lithium battery life: 5 years

APPLICATIONS

- OEM water treatment equipment / skids
- Sub-metering of facility water usage
- Waste water treatment equipment
- Irrigation
- Batching
- Plant process water
- Water based cooling systems
- Chemical feed systems
- Monitoring clean fluids
- Cooling towers
- Blending

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER

\[ \text{TM} = \text{Water Meter, Schedule 80 PVC} \]

TURBINE SIZE

- 050 = ½" (15 mm)
- 075 = ¾" (20 mm)
- 100 = 1" (25 mm)
- 150 = 1-½" (40 mm)
- 200 = 2" (50 mm)

FITTING TYPE

- LP = Spigot (Pipe) End
- N-LP = NPT Female

PRODUCT IDENTIFIER

\[ \text{1} \ 2 \ 3 \]

FLOMEX® TM SERIES

APPLICATIONS

DIMENSIONS

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM050-LP</td>
<td>4.3&quot; (109 mm)</td>
<td>2.5&quot; (64 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM050-N-LP</td>
<td>6.0&quot; (152 mm)</td>
<td>2.7&quot; (68 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM075-LP</td>
<td>4.4&quot; (112 mm)</td>
<td>2.7&quot; (68 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM075-N-LP</td>
<td>6.1&quot; (155 mm)</td>
<td>2.9&quot; (74 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM100-LP</td>
<td>4.5&quot; (114 mm)</td>
<td>2.9&quot; (74 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM100-N-LP</td>
<td>6.5 (165)</td>
<td>3.1 (79)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
<tr>
<td>TM150-LP</td>
<td>5.4&quot; (137 mm)</td>
<td>3.6&quot; (91 mm)</td>
<td>2.1&quot; (53 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM150-N-LP</td>
<td>7.6&quot; (193 mm)</td>
<td>3.8&quot; (97 mm)</td>
<td>2.3&quot; (58 mm)</td>
</tr>
<tr>
<td>TM200-LP</td>
<td>5.5&quot; (140 mm)</td>
<td>4.1&quot; (104 mm)</td>
<td>2.4&quot; (61 mm)</td>
</tr>
<tr>
<td>TM200-N-LP</td>
<td>7.9&quot; (201 mm)</td>
<td>4.4&quot; (112 mm)</td>
<td>3.5&quot; (89 mm)</td>
</tr>
</tbody>
</table>

*Length guidelines are estimates; actual length can vary up to ± 1/2".*
SERVICES & WARRANTY:
For technical assistance, warranty replacement, or repair, contact your FLOMEC® or GPI® distributor:
- In North or South America: 888-996-3837 / FLOMEC.net
- Outside North or South America: +61 2 9540 4433 / FLOMEC.net

SPECIFICATIONS

**Fitting Type**: Schedule 80 Spigot (Pipe) End
- NPT (Female)

**Meter Sizes Available**:
- 1/2”  3/4”  1”  1-1/2”  2”

**Flow Range**:
- 1/2” (050) 1-10 GPM (3.8-38 L/min)
- 3/4” (070) 2-20 GPM (7.6-76 L/min)
- 1” (100) 5-50 GPM (19-190 L/min)
- 1-1/2” (150) 10-100 GPM (38-380 L/min)
- 2” (200) 20-200 GPM (76-760 L/min)

**Accuracy (% of Reading)**: ± 3.0%

**Pressure Rating**: 225 psi (15.3) @ 73° F (23° C)

**Operating Temperature Range**: 32° F to 140° F (0° C to 60° C)

**Pulse Out Description**: NPN Open Collector (Current Sinking)

**Pulse Amplitude**: 5 to 30 V (dc)

**Scaling**: Unscaled

**Shielded Cable**: 5 ft. (1.5 m) (26 AWG)

**Typical K-Factor**:
- 1/2” (050) 2,500 PPG (660 Pulses/L)
- 3/4” (070) 1,100 PPG (291 Pulses/L)
- 1” (100) 565 PPG (149 Pulses/L)
- 1-1/2” (150) 215 PPG (57 Pulses/L)
- 2” (200) 100 PPG (26 Pulses/L)

**Wetted Materials**:
- Housing: PVC
- Bearings: Ceramic
- Shaft: Tungsten Carbide
- Rotor: PVDF
- Rings: 316 Stainless Steel

**Calibration Report**: Comes standard
- N.I.S.T. – Certification available

ACCESSORIES / ELECTRONICS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>113520-1</td>
<td>Battery Replacement Kit</td>
</tr>
<tr>
<td>116000-1</td>
<td>Calibration Container, Large (5 gallon)</td>
</tr>
<tr>
<td>125508-03</td>
<td>½ inch, Turbine Assy Kit</td>
</tr>
<tr>
<td>125508-04</td>
<td>½ inch NPT, PVC Turbine Assy Kit</td>
</tr>
<tr>
<td>125510-03</td>
<td>¾ inch, Turbine Assy Kit</td>
</tr>
<tr>
<td>125510-04</td>
<td>¾ inch NPT, PVC Turbine Assy Kit</td>
</tr>
<tr>
<td>125512-03</td>
<td>1 inch, Turbine Assy Kit</td>
</tr>
<tr>
<td>125512-04</td>
<td>1 inch NPT, PVC Turbine Assy Kit</td>
</tr>
<tr>
<td>125514-03</td>
<td>1 ½ inch, Turbine Assy Kit</td>
</tr>
<tr>
<td>125514-04</td>
<td>1 ½ inch NPT, PVC Turbine Assy Kit</td>
</tr>
<tr>
<td>125516-03</td>
<td>2 inch, Turbine Assy Kit</td>
</tr>
<tr>
<td>125516-04</td>
<td>2 inch NPT, PVC Turbine Assy Kit</td>
</tr>
<tr>
<td>901002-52</td>
<td>Seal</td>
</tr>
</tbody>
</table>

**Computer Kits**:
- 125509-04 ½ inch, Computer Assy Kit w/Pulse
- 125511-04 ¾ inch, Computer Assy Kit w/Pulse
- 125513-04 1 inch, Computer Assy Kit w/Pulse
- 125515-04 1 ½ inch, Computer Assy Kit w/Pulse
- 125517-04 2 inch, Computer Assy Kit w/Pulse
- 113275-1 FM Approved Remote Kit Assembly (will not make meter FM Approved)
- 125206-01 90° Display Adapter Kit

INTERNAL PULL-UP RESISTOR
- Use a minimum 820 ohms resistor if necessary

![Internal Pull-Up Resistor Diagram]

APPROVALS

- CE

- APPROVALS

- APPROVED
**01 SERIES ECONOMY ELECTRONIC FLOWMETER**

**GPI® 01 Series Meters** are great for monitoring and indication. A good economical choice when high accuracy is not a concern.

- Available in Aluminum or Nylon
- Choice of gallon or litre measurement
- Powered by two easily replaceable AAA batteries
- Batteries Included

**FEATURES / BENEFITS**

- Complete meter, including turbine assembly, microprocessor and LCD readout.
- Works well on any pump or gravity feed system with at least 3-30 GPM (10-113 L/min) flow range.
- Aluminum model is lightweight, accurate and reliable with a rugged aluminum housing.
- Nylon model is a simple, small and sturdy Electronic Digital Water meter, with rugged nylon housing.
- Two Totals - Cumulative Total and Batch Total (resettable).

**APPLICATIONS**

- Water
- Fuel
- Light Chemicals

---

**PRODUCT CONFIGURATION**

**PRODUCT IDENTIFIER**

01 = Electronic Digital Flowmeter

**HOUSING CHOICE**

A = Aluminum
N = Nylon

**FITTING TYPE**

12 = 1 inch ISO (Female)
31 = 1 inch NPT (Female)
52 = 1 inch BSPP (Female) (Aluminum model only)

**CALIBRATION**

GM = Gallons
LM = Litres

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Length (mm)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01A</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>2.0 (51)</td>
</tr>
<tr>
<td>01N</td>
<td>4.0 (102)</td>
<td>2.5 (63)</td>
<td>2.0 (51)</td>
</tr>
</tbody>
</table>

---

GPI® 01 Series Meters...
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Design Type:</th>
<th>Turbine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fitting Size / Fitting Type:</strong></td>
<td>1&quot; ISO (Female)</td>
</tr>
<tr>
<td></td>
<td>1&quot; NPT (Female)</td>
</tr>
<tr>
<td></td>
<td>1&quot; BSPP (Female) (Aluminum only)</td>
</tr>
<tr>
<td><strong>Flowrate:</strong></td>
<td>3 - 30 GPM (11 - 113 L/min)</td>
</tr>
<tr>
<td><strong>Accuracy (% of Reading):</strong></td>
<td>± 5.0%</td>
</tr>
<tr>
<td><strong>Repeatability:</strong></td>
<td>± 0.5%</td>
</tr>
<tr>
<td><strong>Pressure Rating:</strong></td>
<td>Nylon - 150 psi (10.3 bar)</td>
</tr>
<tr>
<td></td>
<td>Aluminum - 300 psi (21 bar)</td>
</tr>
<tr>
<td><strong>Operating Temperature Range:</strong></td>
<td>14° F to 130° F (-10° C to 54° C)</td>
</tr>
</tbody>
</table>

#### Wetted Materials (Aluminum):
- **Housing:** Aluminum
- **Bearings:** Ceramic
- **Shaft:** Tungsten Carbide
- **Rotor:** Nylon
- **Rings:** 316 Stainless Steel
- **Signal Generator:** Ferrite

#### Wetted Materials (Nylon):
- **Housing:** Nylon
- **Bearings:** Ceramic
- **Shaft:** Tungsten Carbide
- **Rotor:** Nylon
- **Rings:** 316 Stainless Steel
- **Signal Generator:** Ferrite
02 SERIES ELECTRONIC FLOWMETER
WITH SCALED PULSE OUTPUT

The FLOMEC® 02 Series is a lightweight, accurate and reliable turbine meter. Choose the 02 Series for thin viscosity fluid applications.

- Available in Aluminum or Nylon
- Virtually maintenance free
- Display powered by two AAA batteries
- Offers one pulse per unit (gallons and litres)

FEATURES / BENEFITS

- Complete meter, including turbine assembly, microprocessor and LCD readout.
- Two Totals: Batch (Resettable to measure flow during a single use) and Cumulative (Non-resettable, to provide continuous measurement).
- Remote monitor option to connect to an external system (NPN Open Collector Pulse)
- Lightweight, compact design allows for easy installation.
- Display powered by two AAA alkaline batteries that are easy to replace, with the meter installed.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
02 = Electronic Digital Flowmeter

HOUSING CHOICE 2
A = Aluminum
N = Nylon

FITTING TYPE 3
12 = 1" BSPT (Female)
31 = 1" NPT (Female)
52 = 1" BSPP (Female)
X = No Turbine

CALIBRATION 4
GM = Gallons / Minute
LM = Litres / Minute
XX = No Computer

APPLICATIONS

- Irrigation
- Building Automation (Chillers)
- Programmable Logic Controller (Batch Control)
- OEM (connect to flow switch - low cost meter)
- Connect to flow switch

INTERNAL PULL-UP RESISTOR

Some interface devices may not have an internal pull-up resistor. Use a minimum 820 ohms resistor if necessary.
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Fitting Size / Fitting Type:</th>
<th>1” BSPT (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1” NPT (Female)</td>
</tr>
<tr>
<td></td>
<td>1” BSPP (Female)</td>
</tr>
<tr>
<td>Flowrate:</td>
<td>3 - 30 GPM</td>
</tr>
<tr>
<td></td>
<td>11 - 113 L/min</td>
</tr>
<tr>
<td>Accuracy (% of Reading):</td>
<td>± 5.0%</td>
</tr>
<tr>
<td>Pressure Rating:</td>
<td>150 psi (10.3 bar)</td>
</tr>
<tr>
<td>Operating Temperature Range:</td>
<td>+14° F to +130° F (-10° C to +55° C)</td>
</tr>
<tr>
<td>Pulse Out Description:</td>
<td>Open Collector (a.k.a. NPN or Current Sinking)</td>
</tr>
<tr>
<td>Pulse Duration:</td>
<td>250 ms</td>
</tr>
<tr>
<td>Pulse Amplitude:</td>
<td>5 to 30 V (dc)</td>
</tr>
<tr>
<td>Scaling:</td>
<td>One pulse per Gallon or Litre</td>
</tr>
<tr>
<td>Cable Length:</td>
<td>5 ft. (1.5 m)</td>
</tr>
</tbody>
</table>

### Wetted Materials (Aluminum):
- Housing: Aluminum
- Bearings: Ceramic
- Shaft: Tungsten Carbide
- Rotor: Nylon
- Rings: 316 Stainless Steel
- Signal Generator: Ferrite

### Wetted Materials (Nylon):
- Housing: Nylon
- Bearings: Ceramic
- Shaft: Tungsten Carbide
- Rotor: Nylon
- Rings: 316 Stainless Steel
- Signal Generator: Ferrite

### APPROVALS

[CE icon]
**FM-300H/R CHEMICAL METER**

The most accurate and versatile agricultural chemical meter on the market. Factory calibrated for thin and medium to thick fluids, even oils. This Nutating disc meter comes with an electronic display. Keeps both batch and cumulative totals.

- Flow range is 2 to 20 GPM (7 to 75 L/min)
- Typical accuracy with Factory Calibration is ± 2%, Field Calibration is ± 0.5%
- Durable PBT Polyester construction
- Choice of gallon or litre measurement

**FEATURES / BENEFITS**

- Simple, small and sturdy Electronic Digital Disc Meter with rugged PBT housing
- Mount on the end of a hose or a pipe, in-line
- Complete meter, including disc assembly, micro-processor and LCD readout
- Factory calibrated for thin and medium fluids - field calibrate for more viscous fluids

**SPECIFICATIONS**

- **Design Type:** Nutating Disc with Electronic Display
- **Fitting Size:** 1”
- **Fitting Type:** Inlet: NPT (Female) Output: NPT (Male)
- **Flowrate:** 2 - 20 GPM (7 - 75 L/min)
- **Accuracy (% of Reading):** ± 2.0%
- **Pressure Rating:** 50 psi (3.4 bar)
- **Operating Temperature Range:** 15° F to 130° F (-9° C to 54° C)

**Wetted Materials:**
- Housing: PBT Polyester
- Fluid Chamber: PBT Polyester
- Signal Generator Kit: PBT Polyester / Ferrite
- Seals: Fluorocarbon
- Clip: 316 Stainless Steel

**Shipping Weight (approx.)**

- 3 lbs. (1.4 kg)

**Display Options**

- Local Display includes: Rate of Flow, Batch and Cumulative Totals. Factory and Field Calibration.

**APPLICATIONS**

- Fertilizers
- Oil
- Pesticides
- Water

**APPROVALS**

- CE

**DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
<th>Inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Width</td>
<td>6.00 (152.4)</td>
</tr>
<tr>
<td>B. Height</td>
<td>4.03 (109.2)</td>
</tr>
<tr>
<td>C. Depth</td>
<td>3.30 (88.3)</td>
</tr>
<tr>
<td>D. Inlet Port Outside Diameter</td>
<td>1.64 (41.7)</td>
</tr>
<tr>
<td>E. Outlet Port Thread Diameter</td>
<td>1.31 (33.3)</td>
</tr>
</tbody>
</table>
The FLOMEC® LM51DN economy positive displacement meter has a modular design, and is low cost, lightweight and rugged, making it the best choice for overhead reel systems. Perfect for metering engine oils or transmission fluids with a maximum viscosity of 1,000cp.

The electronic register module contains a microprocessor board powered by a lithium battery. It can be programmed to measure in pints, quarts, liters, or US gallons. The meter calibration factor is determined during factory test. The meter can be recalibrated in the field for fluids or different viscosity if required. A 6-digit liquid crystal display, accurate to the second decimal place, shows the exact amount of fluid dispensed. The entire register module is protected from the wear and tear of normal shop use by a rugged, glass filled, shock resistant, nylon housing.

**FEATURES / BENEFITS**

- 1500 psi rating
- NPT Threads
- Large 6-digit LCD display with two decimal-point precision
- Totalization in pints, quarts, US gallons or liters
- Unit of measure selectable from the front of register
- Resettable and non-resettable totalizer
- Display operation temperature range –4°F to +140°F (-20°C to +60°C)
- Low battery indicator
- Long life field replaceable top load battery
- Accuracy of ± 0.5%
- Calibration factor programmable from front of register
- Calibration factor saved in non-volatile memory

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model Number:</th>
<th>LM51DN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet &amp; Outlet Connections:</td>
<td>1/2&quot; NPTF</td>
</tr>
<tr>
<td>Min.-Max. Flowrate:</td>
<td>0.25 - 8 GPM 1 - 30 L/min</td>
</tr>
<tr>
<td>Accuracy (% of Reading):</td>
<td>± 0.5%</td>
</tr>
<tr>
<td>Pressure Rating (Min-Max.):</td>
<td>5 - 1500 psi (0.35 - 103 bar)</td>
</tr>
<tr>
<td>Operating Temperature Range:</td>
<td>-4°F to +140°F (-20°C to +60°C)</td>
</tr>
<tr>
<td>Weight:</td>
<td>2.0 lb (0.9 kg)</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- Motor Oils (SAE 5-50)
- Windshield Wiper Fluid
- Brake Fluid
- Engine Coolant Solutions
- Gear Oils (SAE 80-240)
- Antifreeze (Ethylene Glycol)
- Automatic Transmission Fluid

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.04&quot; (102.6 mm)</td>
</tr>
<tr>
<td>B</td>
<td>3.27&quot; (83 mm)</td>
</tr>
<tr>
<td>C</td>
<td>2.99&quot; (75.8 mm)</td>
</tr>
</tbody>
</table>

**APPROVALS**

- CE
DP SERIES INSERTION IMPELLER METERS

FLOMEC® Insertion Meters are cost effective stainless steel meters for measuring the flow of water, fuels and other low viscosity liquids in pipe sizes 1.5” – 100” (10 – 2500 mm). Insertion Meters are a flexible, economic method to measure large flow rates with small pressure drops and low installation costs, with most applications battery powered with a FLOMEC totalizer. Applications include HVAC, hot and cold water, fire systems, water distribution (management and treatment), boiler feed water, waste water and hydrant flow testing.

FEATURES / BENEFITS

- IP68 (NEMA6) submersible 316SS construction (cable connection only)
- Intrinsically safe option available
- DP525 version suitable for “hot tap” installations
- Quadrature pulse option available for bi-directional flow measurement

PRODUCT IDENTIFIER

1  
DP = Insertion Meter

METER SIZE

2  
490 = 1.5 to 36” (40-900 mm)
525 = 2 to 100” (50-2500 mm) suitable for “hot-tap” installations (valve not included)

BODY MATERIAL

3  
S = 316 Stainless Steel

ROTOR/SHAFT MATERIALS

4  
2 = PVDF/316 stainless steel (260ºF [120ºC])
3 = PEEK/tungsten carbide (300ºF [150ºC])

O-RING MATERIAL

5  
1 = Viton™ 5ºF to + 300ºF (-15ºC - + 150ºC)
4 = Buna-N (Nitrile), -40ºF to + 260ºF (-40ºC to + 125ºC)

MAXIMUM TEMPERATURE LIMIT

6  
2 = 260º F (125º C) max. (available with electrical connections 5 & 6)
3 = 300º F (150º C) max. (only available with rotor/shaft type 3, electrical connection type 5, & Viton O-Ring)
5 = 212º F (100º C) max. (standard temperature rating)
8 = 176º F (80º C) max. (for non-magnetic pick-up type 4)

PROCESS CONNECTIONS

7  
1 = 1-1/2” BSPT male thread (Not available on DP525)
2 = 1-1/2” NPT male thread (Not available on DP525)
3 = 2” BSPT male thread
4 = 2” NPT male thread

PICK-UP TYPE

8  
1 = NPN open collector & voltage pulse (standard)
2 = NPN open collector only
3 = Reed switch only (may be used with an I.S. barrier or instrument in hazardous areas)
9 = Quadrature pulse output (requires F15 option for bi-directional flow capability)

ELECTRICAL CONNECTIONS

9  
C = Flying cable (5 ft [1.5 m] on DP490, 3 ft [1 m] on DP525)
2 = Flying cable – 33 ft (10 m)
5 = Terminal box on stem kit – IP67
6 = Stem kit ¾” NPT x M16 thread (required for integral instruments)

INTEGRAL OPTIONS

10  
___ =
R3 = Intrinsically Safe RT12 with all outputs (GRN housing) [IECEX & ATEX approved]
R3G = RT12 Intrinsically Safe rate totalizer with all outputs (GRN Housing) [IECEX & ATEX approved] (with gallons calibration)*#
R4 = RT40 backlit rate totalizer (Alloy housing with facia protector) [scalable pulse output, backlight]
R4G = RT40 rate totalizer with backlight large digit LCD (Alloy housings with facia) (with gallons calibration)*#
R5 = RT14 backlit rate totalizer with all outputs (GRN housing) [scaled pulse, alarms, 4-20mA, backlight]
R5G = RT14 backlit rate totalizer with all outputs (GRN Housing) (with gallons calibration)* #
F15 = F115 backlit bi-direction flow, rate/tot, pulse out, 4-20mA
F18 = F018 backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART^ 
F19 = F018 Intrinsically Safe backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART^ 

--->>>  DP  490  S  2  1  2  -2  1  R5G

* Temp code 5 required when operating temperature is between 176º F (80º C) & 250º F (120º C)
# Temp code 8 required for all integral instruments
^Must use pick-up type 3
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>DP490</th>
<th>DP525</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suits Pipe Sizes</td>
<td>1.5&quot; - 35&quot; (40-900 mm)</td>
<td>2&quot; - 100&quot; (50-2500 mm)</td>
</tr>
<tr>
<td>Pipe Connection</td>
<td>1.5&quot; or 2&quot; BSPT or NPT male thread</td>
<td>2&quot; BSPT or NPT male thread</td>
</tr>
<tr>
<td>Flow Velocity Range</td>
<td>3 - 33 ft/sec (1 -10 m/s)</td>
<td></td>
</tr>
<tr>
<td>Linearity</td>
<td>Typically ± 1.5%</td>
<td></td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-40°F to 300°F (-40°C to 150°C)</td>
<td></td>
</tr>
<tr>
<td>Max. Pressure</td>
<td>1160 psi (80 bar)</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td>316SS body and rotor shaft</td>
<td></td>
</tr>
<tr>
<td>Protection Class</td>
<td>IP68 (NEMA 6), optional I.S (Intrinsically Safe)</td>
<td>Integral options</td>
</tr>
</tbody>
</table>

**Pulse Outputs**

- Hall Effect: 3 wire open collector, 5-24v (dc), 20mA max. Nom 0 - 240Hz
- Voltage Pulse: Self Generated voltage, Nom 0 - 80Hz
- Non-Magnetic Sensor: 3 wire open collector, 5 - 24V (dc), 20mA max. Nom 0 - 240Hz
- Optional Outputs: 4-20mA, scaled pulse, quadrature pulse

**Reed Switch resolution is 1/3 of the NPN Hall Effect or Voltage Pulse outputs**

**Integral options**

<table>
<thead>
<tr>
<th></th>
<th>DP490</th>
<th>DP525</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Thread</td>
<td>1.5&quot; or 2&quot; BSP or NPT</td>
<td>2&quot; BSP or NPT</td>
</tr>
<tr>
<td>B</td>
<td>7.8&quot; (198 mm)</td>
<td>17.48&quot; (444 mm)</td>
</tr>
<tr>
<td>C</td>
<td>1.5&quot; (38 mm)</td>
<td>2.28&quot; (58 mm)</td>
</tr>
<tr>
<td>D</td>
<td>9.33&quot; (237 mm)</td>
<td>16.69&quot; (424 mm)</td>
</tr>
</tbody>
</table>

**Applications**

- HVAC
- Hot and Cold Water
- Fire Systems
- Water Distribution (Management and Treatment)
- Boiler Feed Water
- Waste Water
- Hydrant Flow Testing
09 DISPLAY
An excellent choice for most FLOMEC® meters. Commonly used features are preprogrammed in the Display. End-users can enable additional features by using a password available from the factory or on the GPI website. The 09 configuration provides a high degree of customization, matching customers’ exact needs.

USER CONFIGURATION
Using a password-protected configuration process you can enable additional features. GPI Customer Service can provide the password and instructions to unlock and reset configuration settings. This information is also available on the GPI website.

User configuration features include:
- Totalizers/Modes Enabled (Cumulative Total, Batch 2 Total, Flowrate Mode)
- Flowrate Timebase (Units per Minutes, Hours and Days)
- Factory Calibration Curve Units Enabled (Gallons, Imperial Gallons, Litres, Quarts, Ounces, Cubic Feet, Cubic Centimeters, Cubic Meters or Barrels (42 gal.)
- Dispense/Display or K-Factor Entry Calibration
- For use with G2, TM, A1 and QSE meters

FEATURES / BENEFITS
- 2 Totals (Batch - Resettable, Cumulative - Not Resettable)
- Flowrate display updates every 5 seconds, readout is in units/minute
- Factory Calibration in gallons and litres is standard
- Can be field calibrated to adjust to various fluid thickness
- Correction calibration lets end user calibrate by ± percent off
- Small, compact and totally self contained with an internal power supply
- Non-volatile totals means amounts are retained when batteries are replaced or power is lost
- Lithium battery life: 5 years

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Standard Factory Configuration:</th>
<th>2 Totals (1 Resettable, 1 Cumulative); Factory Calibration in gallons and litres; User Calibration and Rate of Flow Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Electronics:</td>
<td>09 Electronics can be used on G, G2, TM, A1, and QSE Series Meters</td>
</tr>
<tr>
<td>Totalizing Registers:</td>
<td>0 to 3 available</td>
</tr>
<tr>
<td>K-Factor Limits:</td>
<td>Min: .01 pulses/unit; Max: 999,999 pulses/unit</td>
</tr>
<tr>
<td>Readout Totals:</td>
<td>LCD with floating decimal: Minimum Display = 0.01 units; Maximum Display = 999,999 x100 units (6 digits)</td>
</tr>
</tbody>
</table>
| Input Pulse Rate:              | Minimum (Pulse-in Input) = DC (0 Hz)  
                                        Minimum (Coil Input) = Approximately 10 Hz  
                                        Maximum = Approximately 1,000 Hz          |
| Turbine Display:               |                                                                                                                  |
| Internal Power Supply:         | 2 Lithium batteries at 3 volts each                                                                                  |
| Lithium Battery Life:          | 5 Years                                                                                                           |
| Optional Power Supply:         | 7 to 30 V (dc)                                                                                                     |
| Oval Gear Display:             |                                                                                                                  |
| Internal Power Supply:         | 9-volt battery                                                                                                    |
| Optional Power Supply:         | 10 to 18 V (dc)                                                                                                   |
| Temperatures:                  |                                                                                                                  |
| Operating Temperature:         | 0° F to +140° F (-18° C to +60° C)                                                                                 |
| Storage Temperature:           | -40° F to +158° F (-40° C to +70° C)                                                                               |

APPROVALS
(A1 & G2 models only)
DIMENSIONS

3.395" (86.2 mm)

2.14"
(54.4 mm)

0.829"
(21.1 mm)

2.0"
(50.8 mm)

The FLOMEC® QSI I/O Board is a Multi-Functional Economical Unit designed to enhance product functionality and provide fully-featured communication protocols and process output signals for FLOMEC meters, as well as other flowmeter brands.

The fully-featured I/O board ships with a customized operating system to allow for downloadable upgrades and new feature developments.

FEATURES / BENEFITS
- Communication options available: Modbus®, RTU, and BACnet® MS/TP
- Built-in Bluetooth® Wireless Technology
- External Programming FLOMEC® App available for Mobile Devices
- Receive in-field firmware updates
- Standard process outputs: Pulse out and 4-20mA

PROCESS VARIABLES
- Calculates flow and totals from pick-up coil or digital input pulses
- Measures temperature from PT100 RTDs
- BTU (Heat) meter calculates energy from flow and temperature inputs
- Data logger - stores all measured and calculated variables on internal flash memory
- Access Data Logger information through FLOMEC app

Programming is easy and can be done using the FLOMEC app via the Bluetooth interface.

QSI ELECTRONICS INTERFACE BOARD
QSI / 09 ON EXISTING METER
09 COMPUTER
QSI I/O BOARD AND COVERPLATE
G2 SERIES ADAPTER
EXISTING G2 METER
QSI ELECTRONICS INTERFACE BOARD

FEATURES / BENEFITS

- Communication options available: Modbus®, RTU and BACnet® MS/TP
- Built-in Bluetooth® Wireless Technology
- External Programming FLOMEC® App available for Mobile Devices
- Receive in-field firmware updates
- Standard process outputs: Pulse out and 4-20mA

PROCESS VARIABLES

- Calculates flow and totals from pick-up coil or digital input pulses
- Measures temperature from PT100 RTDs
- BTU (Heat) meter calculates energy from flow and temperature inputs
- Data logger - stores all measured and calculated variables on internal flash memory
- Access Data Logger information through FLOMEC app

QSI ELECTRONICS INTERFACE

The FLOMEC® QSI I/O Board is a Multi-Functional Economical Unit designed to enhance product functionality and provide fully-featured communication protocols and process output signals for FLOMEC meters, as well as other flowmeter brands.

The fully-featured I/O board ships with a customized operating system to allow for downloadable upgrades and new feature developments.

Programming is easy and can be done using the FLOMEC app via the Bluetooth interface.

QSI / 09 ON EXISTING METER

- 09 COMPUTER
- QSI I/O BOARD AND COVERPLATE
- G2 SERIES ADAPTER
- EXISTING G2 METER
DISPAYS & COMMUNICATION

The standard QSI configuration does not come with a display, however, an optional display choice is available.

<table>
<thead>
<tr>
<th>DISPLAY</th>
<th>Field-Configurable - 3 Totals (2 Resettable, 1 Cumulative), Rate of Flow Indication, and 2 Calibrations (Factory and User). *Will not display Energy Consumption.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow or Energy), RS485 (MODbus®, RTU or BACnet® MS/TP), Temperature Inputs, BTU (Heat) Calculator Note: Temperature Inputs require Temp Sensor Probes - see below</td>
</tr>
<tr>
<td>Q2</td>
<td>Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow or Energy), Data Logger, Temperature Inputs, BTU (Heat) Calculator Note: Temperature Inputs require Temp Sensor Probes - see below</td>
</tr>
<tr>
<td>Q3</td>
<td>Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow), Data Logger, 4-20mA</td>
</tr>
</tbody>
</table>

*Energy Consumption can be displayed on the FLOMEC App, or transmitted out via RS485 or pulse out.

Three QSI versions are available - all three integrate with the 09 display.

Q1: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow or Energy), RS485 (MODbus®, RTU or BACnet® MS/TP), Temperature Inputs, BTU (Heat) Calculator Note: Temperature Inputs require Temp Sensor Probes - see below

Q2: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow or Energy), Data Logger, Temperature Inputs, BTU (Heat) Calculator Note: Temperature Inputs require Temp Sensor Probes - see below

Q3: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable Flow), Data Logger, 4-20mA

Order (Two) 1” (25 mm) long Temperature sensor probes w/10’ (3 m) cable for 1/2” thru 2” meters; (Two) 2” (50 mm) long Temperature sensor probes w/10’ (3 m) cable for 3” & 4” meters.

The FLOMEC® APP
with BLUETOOTH® WIRELESS TECHNOLOGY

*NEWLY UPDATED FOR EASE OF USE

Completely control the meter configuration from your mobile device. A Special Programming Interface for the QSI is FLOMEC’s new application for Android devices. It’s free and available for download from the Google Play store, just search for “FLOMEC”.

- Monitor all measured and calibrated data points
- Single page screens for easy set-up
- Allows GPI to develop new firmware and deploy to customers
- Makes in-field firmware updates a snap. Downloadable to the QSI using the built-in Bluetooth wireless connection

Just search for “FLOMEC”
The QSI Board and Housing can be retrofitted in the field for use with most FLOMEC® meters. NEMA 4X adapters and a wall mount option are available, to provide a compatible connection with the QSE Mag Meter, FLOMEC Turbine Series Meters (G, G2, TM or A1 Series) and FLOMEC OM Series Positive Displacement Meters.

The QSI Board and Housing are also compatible with many non-FLOMEC products. Any flow meter that has a pick-up coil or a digital pulse operating from 0 to 1000 pulses per second can be connected.

**QSE Mag Meter**

Standard - Pulse Out (No Display)

Optional:

- With FLOMEC 09 Digital Display
- With any QSI
- With any QSI and 09 Digital Display

**FLOMEC Turbine Meters**

Any version of the QSI Board and 09 Electronics Display (optional) can be added to the following turbine meter products:

- G2 Series Industrial Grade meters
- TM Series Water meters
- G Series Precision meters

The G Series Adapter Kit comes with two adapter plates, o-ring and hardware; all other turbine meters come with one adapter plate, seal and hardware.

**OM Positive Displacement Meters**

Any version of the QSI Board and 09 Electronics Display (optional) can be added to OM Meters.

- Adapter Kit contains one adapter plate, o-ring and hardware
- Can use either the reed switch or hall effect sensor output from OM meter to QSI

**Remote Wall Mount Panel Option**

The QSI Board and Housing (and optional 09 Display) can be remotely mounted to a wall. It will accept the following input signals:

- Coil, Sine wave down to 5 mVpp
- Open Collector Pulse up to 36 V (dc) max
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Material:</th>
<th>Cover Plate</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapter</td>
<td>Polypropylene</td>
<td></td>
</tr>
<tr>
<td><strong>Voltage:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min to Max</td>
<td>12 - 36V (dc)</td>
<td></td>
</tr>
<tr>
<td>Max Current</td>
<td>125mA (dc)</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating</td>
<td>32°F to 180°F (0°C to 82°C)</td>
<td></td>
</tr>
<tr>
<td>Output:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulse Output</td>
<td>Current Sinking Open Collector Type rated to 30mA @ 36V (dc) max.</td>
<td></td>
</tr>
<tr>
<td>Pulse Output Units</td>
<td>Flow Totalization in any predefined or custom unit. BTU in one pulse per KBTU.</td>
<td></td>
</tr>
<tr>
<td>Pulse Scaling</td>
<td>Customized by user</td>
<td></td>
</tr>
<tr>
<td>Analog Output</td>
<td>4-20mA or 0-20mA</td>
<td></td>
</tr>
<tr>
<td><strong>Communication:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bluetooth® Programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS485</td>
<td>Support for Modbus®, RTU and BACnet®/MS TP</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature Sensor Type:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two 3 wire platinum 1000ohm RTDs (PT100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Data Logger Features:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 data points; minimum time between data point 2 min; provides 1 week of data, or can be customized</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Real Time Clock:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used to provide date and time stamp to data points in data log</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coin Cell Battery:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Backup for internal clock</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FLOW SENSOR INPUT**

<table>
<thead>
<tr>
<th>Type</th>
<th>Min Input</th>
<th>Max Input</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick-up Coil</td>
<td>5 mVpp</td>
<td>36V (dc)</td>
<td>0-1 kHz</td>
</tr>
<tr>
<td>Open Collector Pulse</td>
<td>2.0V (dc)</td>
<td>36V (dc)</td>
<td>0-3 kHz</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
<th>4.898” (124.4 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.35” (59.7 mm)</td>
</tr>
<tr>
<td></td>
<td>1.073” (27.3 mm)</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>145504-01</td>
<td>KIT, ADAPTER, OM-QSI1-009 DISPLAY</td>
</tr>
<tr>
<td>145504-02</td>
<td>KIT, ADAPTER, OM-QSI2-009 DISPLAY</td>
</tr>
<tr>
<td>145504-03</td>
<td>KIT, ADAPTER, OM-QSI3-009 DISPLAY</td>
</tr>
<tr>
<td>145504-04</td>
<td>KIT, ADAPTER, OM-QSI1-NO DISPLAY</td>
</tr>
<tr>
<td>145504-05</td>
<td>KIT, ADAPTER, OM-QSI2-NO DISPLAY</td>
</tr>
<tr>
<td>145504-06</td>
<td>KIT, ADAPTER, OM-QSI3-NO DISPLAY</td>
</tr>
<tr>
<td>145504-07</td>
<td>KIT, ADAPTER, OM-QSI1-DISPLAY READY</td>
</tr>
<tr>
<td>145504-08</td>
<td>KIT, ADAPTER, OM-QSI2-DISPLAY READY</td>
</tr>
<tr>
<td>145504-09</td>
<td>KIT, ADAPTER, OM-QSI3-DISPLAY READY</td>
</tr>
<tr>
<td>145505-01</td>
<td>KIT, ADAPTER, G SERIES-QSI1-009 DISPLAY</td>
</tr>
<tr>
<td>145505-02</td>
<td>KIT, ADAPTER, G SERIES-QSI2-009 DISPLAY</td>
</tr>
<tr>
<td>145505-03</td>
<td>KIT, ADAPTER, G SERIES-QSI3-009 DISPLAY</td>
</tr>
<tr>
<td>145505-04</td>
<td>KIT, ADAPTER, G SERIES-QSI1-NO DISPLAY</td>
</tr>
<tr>
<td>145505-05</td>
<td>KIT, ADAPTER, G SERIES-QSI2-NO DISPLAY</td>
</tr>
<tr>
<td>145505-06</td>
<td>KIT, ADAPTER, G SERIES-QSI3-NO DISPLAY</td>
</tr>
<tr>
<td>145505-07</td>
<td>KIT, ADAPTER, G SERIES-QSI1-DISPLAY READY</td>
</tr>
<tr>
<td>145505-08</td>
<td>KIT, ADAPTER, G SERIES-QSI2-DISPLAY READY</td>
</tr>
<tr>
<td>145505-09</td>
<td>KIT, ADAPTER, G SERIES-QSI3-DISPLAY READY</td>
</tr>
<tr>
<td>145506-01</td>
<td>KIT, ADAPTER, G SERIES-QSI1-009 DISPLAY</td>
</tr>
<tr>
<td>145506-02</td>
<td>KIT, ADAPTER, G SERIES-QSI2-009 DISPLAY</td>
</tr>
<tr>
<td>145506-03</td>
<td>KIT, ADAPTER, G SERIES-QSI3-009 DISPLAY</td>
</tr>
<tr>
<td>145506-04</td>
<td>KIT, ADAPTER, G SERIES-QSI1-NO DISPLAY</td>
</tr>
<tr>
<td>145506-05</td>
<td>KIT, ADAPTER, G SERIES-QSI2-NO DISPLAY</td>
</tr>
<tr>
<td>145506-06</td>
<td>KIT, ADAPTER, G SERIES-QSI3-NO DISPLAY</td>
</tr>
<tr>
<td>145507-01</td>
<td>KIT, ADAPTER, TM-QSI1-009 DISPLAY</td>
</tr>
<tr>
<td>145507-02</td>
<td>KIT, ADAPTER, TM-QSI2-009 DISPLAY</td>
</tr>
<tr>
<td>145507-03</td>
<td>KIT, ADAPTER, TM-QSI3-009 DISPLAY</td>
</tr>
<tr>
<td>145507-04</td>
<td>KIT, ADAPTER, TM-QSI1-NO DISPLAY</td>
</tr>
<tr>
<td>145507-05</td>
<td>KIT, ADAPTER, TM-QSI2-NO DISPLAY</td>
</tr>
<tr>
<td>145507-06</td>
<td>KIT, ADAPTER, TM-QSI3-NO DISPLAY</td>
</tr>
<tr>
<td>145507-07</td>
<td>KIT, ADAPTER, TM-QSI1-DISPLAY READY</td>
</tr>
<tr>
<td>145507-08</td>
<td>KIT, ADAPTER, TM-QSI2-DISPLAY READY</td>
</tr>
<tr>
<td>145507-09</td>
<td>KIT, ADAPTER, TM-QSI3-DISPLAY READY</td>
</tr>
<tr>
<td>145508-01</td>
<td>KIT, ADAPTER, REMOTE-QSI1-009 DISPLAY</td>
</tr>
<tr>
<td>145508-02</td>
<td>KIT, ADAPTER, REMOTE-QSI2-009 DISPLAY</td>
</tr>
<tr>
<td>145508-03</td>
<td>KIT, ADAPTER, REMOTE-QSI3-009 DISPLAY</td>
</tr>
<tr>
<td>145508-04</td>
<td>KIT, ADAPTER, REMOTE-QSI1-NO DISPLAY</td>
</tr>
<tr>
<td>145508-05</td>
<td>KIT, ADAPTER, REMOTE-QSI2- NO DISPLAY</td>
</tr>
<tr>
<td>145508-06</td>
<td>KIT, ADAPTER, REMOTE-QSI3- NO DISPLAY</td>
</tr>
<tr>
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<td>KIT, ADAPTER, REMOTE-QSI1- DISPLAY READY</td>
</tr>
<tr>
<td>145508-08</td>
<td>KIT, ADAPTER, REMOTE-QSI2- DISPLAY READY</td>
</tr>
<tr>
<td>145508-09</td>
<td>KIT, ADAPTER, REMOTE-QSI3- DISPLAY READY</td>
</tr>
</tbody>
</table>

**Units:**

- **Temperature:** degree Fahrenheit or degree Celsius
- **Totalization:** Gallon, Litre, Imperial Gallon, Quart, Barrel, Cubic Centimetre, Cubic Metre, Ounces, Cubic Feet
- **Rate:** units/second, units/minute, units/hour, units/day
- **Energy Units:** Btu, kBtu, Mbtu, Wh, kWh, MWh, Joules, kJ, Ton
- **Energy Rate:** All energy total units/day, units/hr, units/min or units/s
RT14 FLOW RATE TOTALIZER
The RT14 is a fully programmable self-powered flow rate totaliser specifically designed for computing & displaying flow rates & totals from flow meters with pulse, sine wave or frequency outputs. The instrument displays resettable (batch) total, accumulated total and instantaneous flow rates in engineering units as programmed by the user. Flow meter inputs: suitable use with most pulse/ frequency output meters such as reed switch, coil, voltage pulse (Wiegand), NPN and PNP.

CONTROL OUTPUTS
An unscaled pulse output serves as an input signal amplifier ideally suited for coil type inputs from turbine or paddle wheel meters. The output can be transmitted over and can be configured for NPN/PNP with wiring connection.

FEATURES / BENEFITS
• Self or external powered, 8 digit LCD total, accumulated total and rate
• Robust IP66/67-NEMA4X universal mount glass reinforced nylon enclosure with rubberized buttons and polycarbonate lens
• GRN field and panel mountable housing
• Scaled pulse, 4-20mA (Loop Powered) output, multi-point linearization of flow input or frequency inputs
• Flow alarm for high, low or high/low
• PIN protected programming
• Simple flow chart touch key programming
• Non volatile memory, long battery life
• Flowmeter and pipe mount kits available
• Reverse polarity protection

PROGRAMMING
Simple PIN protected flow chart programming with English prompts guide you through the programming routine greatly reducing the need to refer to the instruction manual.
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LCD Display</strong></td>
<td>8 digit alpha-numeric LCD display with 12 mm characters with backlight*</td>
</tr>
<tr>
<td><strong>Instantaneous Flow Rate</strong></td>
<td>8 digit to 3 decimal points</td>
</tr>
<tr>
<td><strong>Engineering Units Displayed</strong></td>
<td>Liters, Gallons, Cubic Meters, Pounds, Kilograms or Nil</td>
</tr>
<tr>
<td><strong>Input Types</strong></td>
<td>Reed, NPN/PNP, Variable Reluctance (Turbine flowmeters), Weigand</td>
</tr>
<tr>
<td><strong>Input Frequency</strong></td>
<td>1.2 kHz (NPN/PNP), 2 kHz (Coil inputs), 120 kHz (Reed)</td>
</tr>
<tr>
<td><strong>Input Scaling Range</strong></td>
<td>0.0001 ~ 9999999.9999 with 4 floating points</td>
</tr>
<tr>
<td><strong>Linearisation</strong></td>
<td>10 point correction</td>
</tr>
<tr>
<td><strong>Pulse Outputs</strong></td>
<td>One selectable digital output for scaled pulse, unscaled pulse, high, low or high/low alarms</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-22°F - +176°F (-30°C - +80°C)</td>
</tr>
<tr>
<td><strong>Power Sources</strong></td>
<td>AA 3.6V Lithium Thionyl Chloride Battery, external voltage option (12 - 30V (dc))</td>
</tr>
<tr>
<td><strong>Enclosures</strong></td>
<td>High impact glass reinforced Nylon (PA6) with a Polycarbonate lens, Nitrile O-Ring seals and Polyurethane gaskets, providing an IP rating of IP66/67^</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Meter &amp; stem mount, wall, pipe or panel mount^</td>
</tr>
</tbody>
</table>

* Backlight possible when connected to external power  
^ Panel mount seal kit required to maintain IP66/67 rating when separating front and rear housing for mounting

## ACCESSORIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1522001</td>
<td>Wall Mount Kit</td>
</tr>
<tr>
<td>1522002</td>
<td>2” Pipe Mount Kit</td>
</tr>
<tr>
<td>1504003</td>
<td>Panel Mount Seal Kit</td>
</tr>
</tbody>
</table>

## APPROVALS

- CE

## DIMENSIONS

![Dimensions Diagram](image-url)
RT40 FLOW RATE TOTALIZER

The FLOMEC® RT40 Flow Rate Totalizer LCD display is specifically designed for displaying flow rates and totals from flow meters with pulse, sine wave or frequency outputs. A robust aluminum housing and acrylic front cover makes it suitable for heavy duty use in mine sites and mobile applications. The instrument displays re-settable (batch) total, cumulative total and instantaneous flow rate in engineering units programmable by the user.

**FEATURES / BENEFITS**

- Large backlit** LCD screen displaying 5-digit flow rate, 6-digit re-settable total and 8-digit cumulative total
- Battery or externally powered; battery life span is 3 years, approximately**
- Robust IP65 (NEMA 4) Aluminum housing capable of being field or panel mounted
- Scaled pulse output**
- Universal inputs
- Reverse polarity protection
- Flowmeter and pipe mount kits available
- PIN protected programming with simple programming flow-chart

**External power required for back light or pulse output features.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Display</th>
<th>Large backlit LCD 6-digit display with 8-digit secondary display line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>-4°F - +176°F (-20°C - +80°C)</td>
</tr>
<tr>
<td>Signal Input</td>
<td>Reed switch, Hall effect, Namur proximity detectors, voltage, current and coil (15mV P-P min)</td>
</tr>
<tr>
<td>Max. Input Frequency</td>
<td>Max. input frequency 5 kHz under external power. Maximum input frequency when not externally powered is 150 Hz</td>
</tr>
<tr>
<td>Signal Output</td>
<td>NPN transistor, scalable</td>
</tr>
<tr>
<td>Max. Output Frequency</td>
<td>20 Hz</td>
</tr>
<tr>
<td>Battery Power</td>
<td>3.6 V (dc), approximate 3 year life span</td>
</tr>
<tr>
<td>External Power</td>
<td>Regulated 8-24 V (dc) x 50 mA minimum</td>
</tr>
<tr>
<td>Protection Class &amp; Body</td>
<td>IP65 (NEMA 4) Aluminum body</td>
</tr>
<tr>
<td>Mounting</td>
<td>Field, meter or panel mount</td>
</tr>
<tr>
<td>Engineering Units</td>
<td>Selectable Ltr, gal, m³, kgs, lbs (total). /s, /min, /hr or /day (rate)</td>
</tr>
<tr>
<td>Cable Entries</td>
<td>3 x M16 x 1.5</td>
</tr>
</tbody>
</table>

**PRODUCT CONFIGURATION**

**PRODUCT IDENTIFIER**  1

- RT40 = Flow Rate Totalizer with backlit large digit LCD, scalable pulse output and aluminum IP66 housing

**ELECTRICAL ACCESS**  2

1 = M16 x 1.5mm for Al housing female threaded conduit entry ports (sealed ports remain IP66/67 when not used)

**FLOW INPUT TYPE**  3

- D = Digital (pulse or frequency)

**POWER SUPPLY** 4

- 0 = Self-powered (battery) or regulated 8-24 V (dc)

**HOUSING TYPE** 5

- FA = Universal mount (field or panel) - aluminum housing
- MA = Integral meter mount - aluminum housing*
  * Only order MA when retro fitting an instrument to OM series pulse meters

**MECHANICAL OPTIONS** 6

- P = Facia protector - for aluminum housing only (3 mm clear polycarbonate protection plate)

---

**PRODUCT IDENTIFIER**

- 1 2 3 4 5 6
- RT40 D 0 FA P
DIMENSIONS

- 4.45" (113 mm)
- 3.78" (96 mm)
- 2.76" (70 mm)
- 1.78" (42.7 mm)
- 1.68" (42.7 mm)
- Ø 0.1" (2.5 mm)
- 0.59" (15 mm)
- 2.48" (63 mm)

3 Conduit Entries
M16 x 1.5

UNLESS OTHERWISE SPECIFIED
FEATURES / BENEFITS

- Batching
- Net Use
- 4-20 mA Output
- HART Protocol
- High Low Alarms
- Linearization
- Two Stage Valve Control
- Temperature Compensation
- Field-mountable
- Easy programming with a sensible menu-driven structure
- Large 0.67" (17 mm), 7 digit display
- Accepts several different input signals

APPLICATIONS

- The F-Series is your first and safest choice for fieldmount indicators. Especially in harsh weather conditions like rain, snow, salty atmospheres and temperatures between -40°F up to +176°F (-40°C up to 80°C) for safe and hazardous area applications.
- Applications where net flow calculation at base conditions is desired without the influence of thermal product expansion.
- Liquid flow measurement with mechanical flowmeters where a precise calculation over the full measurement range is required. Also continuous flow rate monitoring is required.
- For batching small up to very large quantities. Single or repeating batches.
- Fuel consumption calculation for diesel engines on board of ships or trains. Sum function: where flows are split-up in two pipe-lines and total flow has to be calculated.

APPROVALS

IECEx

PRODUCT CONFIGURATION

STANDARD CONFIGURATION

1

F018 = Flow Rate Monitor / Totalizer - Linearization & Alarms
F115 = Flow Rate Monitor / Totalizer - Bi-Directional - Quadrature
F127 = Differential / Sum Flow Computer - Net Use - Temp Correction
F130 = Batch Controller - Two Stage

FLOWMETER INPUT SIGNAL

2

P = Pulse input: Coil, NPN, PNP, Namur, Reed-switch

ANALOG OUTPUT SIGNAL

3

AP = Passive 4-20mA output, loop powered unit (F115 & F127)
AH = Galvanically isolated, loop powered 4-20 mA output (F018)
AX = No analog output (F130)

COMMUNICATION

4

CR = HART Communication (F018)
CX = NO communications (F115, F127 & F130)

FLOW EQUATIONS

5

EL = Corrected Liquid Volume (F127)
EX = No flow equations (F115 & F130)
= None on F018

ENCLOSURE

6

HE = Cable Enter: 2-16 mm & 1-20 mm

ADDITIONAL INPUTS

7

IR = Remote control input to start, pause or stop (F130)
IX = No additional inputs (F018, F115 & F127)
= None for F018

OUTPUTS

8

OT = Two passive transistor outputs - standard configuration (F018 only has 1 not 2)

POWER SUPPLY

9

PD-PB = 8 - 24 V (ac/dc) + sensor supply - with XI: 16 - 30 V (dc) & Lithium battery powered (F018*, F115 & F127)
PD-PC = 8 - 24 V (ac/dc) + sensor supply - with XI: 16 - 30 V (dc) & Lithium battery powered - Intrinsically Safe (F018* & F130)
*F018 does not have the 8 - 24 V (ac/dc)

TEMPERATURE INPUT SIGNAL

10

TP = PT100 input (F127)
TX = No temperature input signal (F115 & F130)
= None on F018

HAZARDOUS AREA

11

XI = Intrinsically Safe, according to ATEX & IECEx (F018 & F127)
XX = Safe area only (F018, F115, & F130)

OTHER OPTIONS

12

ZB = Backlight (F018, F115 & F127)
ZX = No options (F130)

>>> F018 P AP CX EX HE IX OT PD-PB TX XX ZB
SPECIFICATIONS

Display:
Type: High intensity reflective numeric and alpha-numeric LCD, UV resistant

Dimensions: 3.5 in. x 1.6 in. (90 mm x 40 mm)

Digits: Seven 0.67 in. (17 mm) and eleven 0.31 in. (8 mm) digits. Various symbols and measuring units.

Refresh rate: User definable: Fast, 1 s, 3 s, 15 s, 30 s, Off

Option ZB: Transflective LCD with green LED backlight. Good readings in full sunlight and darkness.

Operating Temperature: -40°F to +176°F (-40°C to +80°C)

Power Requirements:
8 - 24 V (ac/dc) ± 10%. Power consumption maximum 10 Watt.
16 - 30V (dc). Power consumption maximum 1 Watt.

Sensor Excitation:
1.2 / 3.2 / 8.2 / 12 / 24V (dc) - maximum 400mA @ 24V (dc)

Terminal Connections:
Removable plug-in terminal strip. Wire maximum 1.5 mm² and 2.5 mm²

Data Protection:
Type: EEPROM backup of all settings. Backup of running totals every minute. Data retention at least 10 years.
Pass-code: Configuration settings can be pass-code protected.

Enclosure:
Type HE: GRP panel mount enclosure IP65 / NEMA 4X. UV-resistant and flame retardant.
Weight: 1.32 lbs (600g)


Signal Input (Flowmeter):
Coil / sine wave (minimum 20mVpp or 80mVpp - sensitivity selectable), NPN / PNP, open collector, reed switch, Namur, active pulse signals 8 - 12 and 24V (dc)
Frequency: Minimum oHz - maximum 7kHz for total and flow rate internal low-pass filter. E.g. reed switch with low-pass filter: maximum frequency 120Hz
K-Factor: 0.000010 - 9,999,999 with variable decimal position
Low-pass filter: Available for all pulse signals

ACCESSORIES
1522056 F-Series Wall Mount Kit
1522052 F-Series Pipe Mount Kit
1519011 M16 Cable Gland Kit
1519012 M20 Cable Gland Kit

Signal Output (Analog):
Function: Transmitting differential / sum flow rate
Accuracy: 10 bit. Error < 0.05%. Analog output signal can be scaled to any desired range.
Update time: Ten times per second
Type AP: Passive 4-20mA output - not isolated. Unit will be loop powered.
Type AH: Galvanically isolated, loop powered 4-20mA output

Signal Output (Pulse):
Function: Pulse output according to differential or sum accumulated total and indication negative pulse output.
Frequency: Maximum 64 Hz. Pulse length user definable between 7.8 ms up to 2 seconds
Type OT: Two passive transistor outputs (NPN) - not isolated. Maximum 50V (dc) - 300mA per output

Communication option:
Function: Reading display information, reading / writing all configuration settings
Protocol: HART

Total - 7 digits, 0 - 1 - 2 or 3 decimals:
Units / Decimals: According to selection for total
Note: Total can be reset to zero

Accumulated Total - 11 digits:
Units / Decimals: According to selection for total
Note: Can not be reset to zero

Flow rate - 7 digits, 0 - 1 - 2 or 3 decimals:
Units: mL, m³, Gallons, kg, Ton, lb, bl, cf, RND, ft³, scf, Nm³, Ni, igal - no units
Time units: /s - /min - /hr - /day
Alarm values - 7 digits:
Units / Decimals: According to selection for total
Time units: According to selection for total
Type of alarm: Low and high flow rate alarm. Includes alarm delay time and configurable alarm outputs.

Line temperature - 6 digits, 1 decimal:
Units: °C, °F or K

DIMENSIONS
E SERIES EXPLOSION PROOF TOTALIZER & FLOW RATE INDICATOR

APPLICATIONS

The E018 by FLOMEC® offers you an enclosure designed to be used in rough and tough applications, beyond being just explosion proof. Its sturdy design and ease of use are unequaled by any other explosion proof indicator in the market. The E018 is always your first and safest choice in explosion proof applications.
**SPECIFICATIONS**

**Display:**
- **Type:** High intensity transreflective numeric and alphanumeric LCD, UV resistant, with bright backlight. Intensity can be adjusted via keypad.
- **Digits:** Seven 0.47" (12 mm) and eleven 0.28" (7 mm) digits. Various symbols and measuring units.
- **Refresh rate:** User definable: 8 times/s to 30 s.
- **Speedometer:** To indicate the actual flow rate the bargraph runs from 0 to 100% in 20 blocks, each block is 5%.

**Operating Temperature (Operational):**
- -40°F to +158°F (-40°C to +70°C)

**Power Requirements:**
- 9 - 27V (dc). Power consumption maximum 4.2 Watt. Long life Lithium battery - lifetime depends upon settings and configuration - up to approximately 2 years

**Hazardous Area - Explosion Proof:**
- **ATEX Certification:** Ex d IIC T6 Gb
- **IECEx Certification:** Ex tb IIC T6 Gb
- **FM / CSA c-us Certification:** Explosion-proof for use in Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F and G, Class III, hazardous (classified) locations
- **Ambient:** -40°F to +158°F (-40°C to +70°C)

**Hazardous Area - Directives:**
- **EMC:** Compliant ref. EN61326-1 and FCC 47 CFR part 15
- **Low voltage:** Compliant ref. EN61010-1

**Signal Input (Flowmeter):**
- **Coil / sine wave (COIL-HI: 20mVpp or COIL-LO: 80mVpp - sensitivity selectable), NPN / PNP, open collector, reed switch, Namur, active pulse signals**
- **Frequency:** Minimum 0 Hz - maximum 7 kHz for total and flow rate. Maximum frequency depends on signal type and internal low-pass filter. E.g. reed switch with low-pass filter. Maximum frequency 120 Hz.
- **K-Factor:** 0.000010 - 9,999,999 with variable decimal position
- **Low-pass filter:** Available for all pulse signals

**Signal Output (Digital):**
- **Function:** Pulse output. Transmitting accumulated total
- **Frequency:** Maximum 500 Hz. Pulse length user definable between 1 ms up to 10 seconds
- **Type OT:** One passive transistor output (NPN) - not isolated. 300mA - 50V @ 77°F (25°C)

**Signal Output (Analog):**
- **Function:** Transmitting linearized flow rate
- **Accuracy:** 12 bit. Error < 0.1%. Analog output signal can be scaled to any desired range.
- **Type AH:** Galvanically isolated, loop powered 4-20mA output

**Accumulated Total - 11 digits:**
- **Units / Decimals:** According to selection for total
- **Note:** Can not be reset to zero

**Flow rate - 7 digits, 0 - 1 - 2 or 3 decimals:**
- **Units:** mL, L, m³, Gallons, kg, Ton, lb, bl, cf, RND, ft³, scf,
  Nm³, Nl, igal - no units
- **Time units:** /s /min /hr /day

**DIMENSIONS**

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW-ABB04</td>
<td>1 X 3/4 inch NPT plug</td>
</tr>
<tr>
<td>FW-ABB05</td>
<td>1 X 1 inch NPT plug</td>
</tr>
<tr>
<td>1522068</td>
<td>E-Series Wall Mount Kit</td>
</tr>
<tr>
<td>1522051</td>
<td>E-Series Pipe Mount Kit</td>
</tr>
</tbody>
</table>

**APPROVALS**
FLOMEC® has partnered with Obvius, a leading energy solutions provider, to offer the optimum solutions for data collection and connectivity.

Obvius manufactures data acquisition and wireless connectivity products specifically for energy management.

**Solutions offered include:**
- Data Acquisition
- Wireless Communication
- Meters & Sensors
- Custom Packaged Solutions
- Integration & Software Partners

networks. Use with the Obvius AcquiSuite and take advantage of plug-and-play communication or use with the Obvius ModHopper for wireless communication. Ask about the Obvious Commissioning Console, a free commissioning software.

**DATA ACQUISITION SERVERS**

- **AcquiSuite EMB A8810**
  Obvius' AcquiSuite is an intelligent, flexible data acquisition server allowing users to collect energy data from meters and environmental sensors. Designed to connect to IP-based applications such as enterprise energy management, demand response and smart grid programs, the AcquiSuite server lets you connect thousands of energy points, benchmark energy usage and reduce energy costs.

- **AcquiLite EMB A7810**
  Obvius' AcquiLite is an intelligent, flexible data acquisition server allowing users to collect energy data from pulse output meters. Designed to connect to IP-based applications such as enterprise energy management, demand response and smart grid programs.

**COMPATIBILITY**
The AcquiSuite and AcquiLite are compatible with nearly any front-end software platform allowing customers to use a variety of reporting tools; whether it's a local server or an enterprise wide reporting suite.

**DATA ACQUISITION MODULES**

- **Flex I/O Module A8332-8F2D**
  Our Flex I/O is a cost-effective way to collect data from meters or sensors and bring that information into a Modbus network or energy monitoring system. As a stand-alone or bundled package, the Obvius Flex I/O can be incorporated with data acquisition and wireless metering devices to provide a cost-effective energy monitoring solution.

**COMPATIBILITY**
The Flex I/O is compatible with virtually any PLC or Modbus Master, allowing customers the flexibility to use it in existing Modbus networks. Use with the Obvius AcquiSuite and take advantage of plug-and-play communication or use with the Obvius ModHopper for wireless communication. Ask about the Obvious Commissioning Console, a free commissioning software.

**WIRELESS METERING**

- **HD Pulse Module A8911-23**
  The HD Pulse Module is a cost-effective, simple way to collect data from multiple pulse meters and bring that information into a Modbus network or energy monitoring system. As a stand alone device or bundled package, the Obvius HD Pulse Module can be incorporated with meter enclosures, data acquisition and wireless metering to provide a cost-effective energy monitoring solution.

**COMPATIBILITY**
The HD Pulse Module is compatible with virtually any PLC or Modbus Master, allowing customers the flexibility to use the HD Pulse in existing Modbus networks. Use with the Obvius AcquiSuite and take advantage of plug-and-play communication or use with the Obvius ModHopper for wireless communication. Ask about the Obvious Commissioning Console, a free commissioning software.

- **ModHopper R9120-5**
  The ModHopper is a breakthrough mesh technology design that makes connecting Modbus and pulse devices simple and cost effective. Our “smart” ModHopper transceivers eliminate the need for costly wiring runs allowing users to capture meter data in the most challenging retrofit and campus environments. Collect meter points in existing buildings with minimum down-time or disruption of day-to-day operations.

**COMPATIBILITY**
The ModHopper is compatible with virtually any PLC or Modbus RTU device, allowing customers the flexibility to use the ModHopper in existing Modbus applications. The ModHopper is a “smart” device, which requires no programming. If used with the Obvius AcquiSuite, users can take advantage of numerous diagnostic tools, including a graphical display of the wireless mesh network.
### APPLICATIONS
- Measurement and Verification (M&V)
- Reduce Energy Costs
- Access Energy Information from Local or Remote Sites
- Benchmark Building Energy Usage
- View “Real Time” Performance Data
- Track Energy Use & Peak Demand for Demand Response Programs
- Monitor Performance of Critical Systems (lighting, HVAC, PDUs, inverters, etc.)
- Alarm Notification for Data Points Above or Below Target Levels (including SNMP Traps)
- Monitor Renewable Energy Performance and Production
- Push or Pull Meter Data to Energy Dashboards, Kiosks and Software Applications
- LEED / Energy Star Certification
- Create load profiles for energy purchases
- Utility submetering (electricity, gas, water, etc.)
- Converting analog, resistive and pulse inputs to Modbus
- Relay outputs for demand control
- Metering in existing buildings (retrofit)
- Metering on campus environments
- Government advanced metering projects (256Bit AES, FIPS-197 certified, J/F-12 8306)
- Renewable Energy – PV projects (inverters, string monitoring)

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>902010-01</td>
<td>Data Acquisition Server, Acquilit</td>
</tr>
<tr>
<td>902010-02</td>
<td>Module, Flex I/O, 8 User-Selectable Inputs, Modbus RS-485</td>
</tr>
<tr>
<td>902010-03</td>
<td>Pulse Module, Pulse, High Density, Modbus RS-485</td>
</tr>
<tr>
<td>902010-04</td>
<td>Power Supply, Wall Socket, 24 V (dc), 1 amp, Class 2 Transformer</td>
</tr>
<tr>
<td>902010-05</td>
<td>Power Supply, Din Rail, 24 V (dc), 1.7 amp</td>
</tr>
<tr>
<td>902010-06</td>
<td>Data Acquisition Server, AcquiSuite, Nema 4X, Modbus RS-485, Ethernet</td>
</tr>
<tr>
<td>902010-07</td>
<td>Data Acquisition Server, AcquiSuite, Nema 4X, Modbus/485, Enet, 23 Pulse Inputs</td>
</tr>
<tr>
<td>902010-09</td>
<td>Bundle, AcquiSuite, Modem, Power Supply, Nema 4X, 3G HSPA+</td>
</tr>
<tr>
<td>902010-10</td>
<td>Bundle, Emb., Acquilit, Power Supply, Nema 4X</td>
</tr>
<tr>
<td>902010-11</td>
<td>Bundle, Emb., Acquilit, Modem, Power Supply, Nema 4X, 3G HSPA+</td>
</tr>
<tr>
<td>902010-13</td>
<td>Modhopper, Wireless Transmitter, 256 Bit AES Encryption</td>
</tr>
</tbody>
</table>

---

**FLOMEC® METERS**

**INTERNAL COMMS**
- QSE
- G2
- OM

**DATA ACQUISITION**
- ModHopper
  - RS-485 Serial Network
  - Modbus TCP
  - Pulse, Analog & Resistive

**EXTERNAL COMMS**
- Local Area Network (LAN)
- GSM / GPRS Network
- Telephone Line

**STORAGE & REPORTS**

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This section includes general reference materials including the Chemical Compatibility Guide and the charts below. Also included is the Meter Application Guide and Product Selection Matrix to help select the best GPI Meter for your application. Feel free to contact GPI for assistance when determining the correct Meter and Electronics.

### Chart of Approximate Viscosities of Common Liquids

<table>
<thead>
<tr>
<th>Liquid</th>
<th>Viscosity in Centipoise @ 70°F (21°C)</th>
<th>S S U Approximate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Oil – Crude</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>16</td>
<td>80</td>
</tr>
<tr>
<td>Oil – Auto SAE 10</td>
<td>65</td>
<td>310</td>
</tr>
<tr>
<td>Oil – Corn</td>
<td>72</td>
<td>350</td>
</tr>
<tr>
<td>Oil – Auto SAE 20</td>
<td>125</td>
<td>585</td>
</tr>
<tr>
<td>Oil – Auto SAE 30</td>
<td>200</td>
<td>980</td>
</tr>
<tr>
<td>Varnish – Spar</td>
<td>420</td>
<td>2,050</td>
</tr>
<tr>
<td>Oil – Auto SAE 60</td>
<td>1,000</td>
<td>4,600</td>
</tr>
<tr>
<td>Honey</td>
<td>3,000</td>
<td>14,500</td>
</tr>
<tr>
<td>Ink</td>
<td>45,000</td>
<td></td>
</tr>
<tr>
<td>Vaseline Petroleum Jelly</td>
<td>64,000</td>
<td></td>
</tr>
<tr>
<td>Corn Syrup</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

### Component Materials

GPI offers Component Materials to assist with chemical compatibility. In some cases, trade names may be more common than the generic name. The cross reference chart here provides the generic material name and the corresponding trade name.

<table>
<thead>
<tr>
<th>Generic Material Name</th>
<th>Trade Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetal</td>
<td>CELCON or DELRIN</td>
</tr>
<tr>
<td>Buna-N, NBR or Nitrile</td>
<td>CHEMIVIC or KRYNAC</td>
</tr>
<tr>
<td>EPDM</td>
<td>EPCAR</td>
</tr>
<tr>
<td>FKM or fluorocarbon</td>
<td>FLUOREL or VITON</td>
</tr>
<tr>
<td>Nylon or polyamide</td>
<td>ZYTEL</td>
</tr>
<tr>
<td>PBT polyester</td>
<td>VALOX</td>
</tr>
<tr>
<td>PEEK</td>
<td>VICTREX</td>
</tr>
<tr>
<td>Perfluoroelastomer</td>
<td>KALREZ</td>
</tr>
<tr>
<td>Perfluoroelastomer</td>
<td>CHEMRAZ</td>
</tr>
<tr>
<td>PET polyester</td>
<td>RYNITE</td>
</tr>
<tr>
<td>Polyester film</td>
<td>MYLAR</td>
</tr>
<tr>
<td>PPS</td>
<td>RYTONT</td>
</tr>
<tr>
<td>PTFE</td>
<td>TEFLOM</td>
</tr>
<tr>
<td>PVDF</td>
<td>KYNAR</td>
</tr>
</tbody>
</table>
### Chemical Compatibility Guide for GPI Flowmeters

**R** = Recommended  
**N** = Not Recommended  
**X** = Unknown or Not Applicable

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Metals</th>
<th>Plastics</th>
<th>Journals, Shafts</th>
<th>O-Rings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>N</td>
</tr>
<tr>
<td>Acetone</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td>Acetone</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Alcohol Isobutyl</td>
<td>R</td>
<td>N</td>
<td>X</td>
<td>R</td>
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<td>Alcohol Isopropyl</td>
<td>N</td>
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<td>Alcohol Methyl</td>
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<td>R</td>
<td>R</td>
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<tr>
<td>Ammonia, Anhydrous</td>
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<td>N</td>
<td>R</td>
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<td>Ammonia, Liquid</td>
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<td>R</td>
<td>R</td>
<td>X</td>
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<tr>
<td>Ammonium Hydroxide</td>
<td>N</td>
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<td>R</td>
<td>X</td>
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<tr>
<td>Antifreeze</td>
<td>R</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Boric Acid</td>
<td>R</td>
<td>N</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Butyl Acetate</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>X</td>
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<tr>
<td>Calcium Chloride</td>
<td>R</td>
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</tr>
<tr>
<td>Calcium Hypochlorite</td>
<td>N</td>
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<td>N</td>
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<tr>
<td>Carbon Tetrachloride (wet)</td>
<td>R</td>
<td>N</td>
<td>R</td>
<td>X</td>
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<tr>
<td>Carbolic Acid</td>
<td>R</td>
<td>N</td>
<td>X</td>
<td>N</td>
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<tr>
<td>Chlorine Water</td>
<td>R</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Chlorine, Anhydrous Liquid</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>X</td>
</tr>
<tr>
<td>Clorox® Bleach (Sodium Hypochlorite)</td>
<td>X</td>
<td>N</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Detergents</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>X</td>
</tr>
<tr>
<td>Diesel Fuel</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>X</td>
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<td>Lacquer Thinners</td>
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### Chemical Compatibility Guide for GPI Flowmeters

**R** = Recommended  
**N** = Not Recommended  
**X** = Unknown or Not Applicable

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<th>Chemical</th>
<th>Metals</th>
<th>Plastics</th>
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<td>R R R R R R</td>
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<td>R R R R R R</td>
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<td>R N N R R R</td>
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<td>X X X N N</td>
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<tr>
<td>Propane (Liquefied)</td>
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<td>Salt Brine (NaCl Saturated)</td>
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<td>R R R R R R</td>
<td>R R R R R R</td>
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<tr>
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<td>N N N N N N</td>
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<td>Sulfuric Acid (&lt; 10%)</td>
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<tr>
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<td>R N X R R R</td>
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<td>R N X R R R</td>
<td>R N X R R R</td>
<td>R N X R R R</td>
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*GPI has done its best to ensure that the wetted parts of our meters are compatible as stated, but we cannot guarantee the part's compatibility with different fluid types. It is the user's responsibility to make sure that the process flow conditions, including, but not limited to concentration and/or temperature of the fluid being metered are compatible with the wetted parts of the meter.*
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<tr>
<th>SIZE</th>
<th>ECONOMY</th>
<th>TM</th>
<th>A1</th>
<th>G2</th>
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<td>1-10 GPM (3.8-38 L/min)</td>
<td>1-12 GPM (3.8-45 L/min)</td>
<td>0.6-6 GPM (2.2-22 L/min)</td>
<td>0.5-5 GPM (1.8-18 L/min)</td>
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<td>1.6-23 GPM (6.8-87 L/min)</td>
<td>1.8-36 GPM (6.7-130 L/min)</td>
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<td>0.3-50 GPM (1.18-189 L/min)</td>
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<td>0.3-50 GPM (1.18-189 L/min)</td>
<td>10-100 GPM (38-380 L/min)</td>
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<td>15-150 GPM (57-570 L/min)</td>
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<td>40-400 GPM (151-1514 L/min)</td>
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<th>Lubes</th>
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<th>Chemicals</th>
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<td>Aluminum</td>
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## OVAL GEAR

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<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
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<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
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<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
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<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1 1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>2&quot;</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>3&quot;</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>4&quot;</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>&gt; 4&quot;</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Low (&lt;300psi)</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Medium (300-2000psi)</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>High (2000-6000psi)</td>
</tr>
<tr>
<td></td>
<td>.5-27 GPM (2-100 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Ultra High (&gt;6000psi)</td>
</tr>
<tr>
<td><strong>QSI</strong></td>
<td>2.6-40 GPM (10-150 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>PVC</td>
</tr>
<tr>
<td></td>
<td>2.6-40 GPM (10-150 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>PPS</td>
</tr>
<tr>
<td></td>
<td>4-66 GPM (15-250 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Nylon</td>
</tr>
<tr>
<td></td>
<td>4-66 GPM (15-250 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>PVDF</td>
</tr>
<tr>
<td></td>
<td>9-150 GPM (30-580 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>PBT Polyester</td>
</tr>
<tr>
<td></td>
<td>9-150 GPM (30-580 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Brass</td>
</tr>
<tr>
<td></td>
<td>10-260 GPM (35-1000 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Stainless</td>
</tr>
<tr>
<td></td>
<td>10-260 GPM (35-1000 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Aluminum</td>
</tr>
<tr>
<td></td>
<td>20-660 GPM (75-2500 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Noryl</td>
</tr>
<tr>
<td></td>
<td>20-660 GPM (75-2500 L/min)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>4-20mA</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Scaled Pulse</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Unscaled Pulse</td>
</tr>
<tr>
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<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Dual Pulse</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Comm.</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Btu</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Fuel</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Lubes</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Water</td>
</tr>
<tr>
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<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Chemicals</td>
</tr>
<tr>
<td></td>
<td>High Pressure SS</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>1/2&quot;-3/4&quot; (15-20 mm)</td>
<td>Additive Injection</td>
</tr>
<tr>
<td>SIZE</td>
<td>NUTATING DISC</td>
<td>IMPELLER</td>
<td>ULTRASONIC TRANSIT TIME</td>
<td>ELECTROMAGNETIC</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>----------</td>
<td>------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>1/8&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1/4&quot;</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3/8&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td></td>
<td>0-18.4 GPM (0-70 L/min*)</td>
<td>0.16-10 GPM (0.63-38 L/min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td></td>
<td>0-41.3 GPM (0-156 L/min*)</td>
<td>0.3-20 GPM (1.27-76 L/min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td>2-20 GPM (7.6-76 L/min)</td>
<td>0-73.4 GPM (0-278 L/min*)</td>
<td>0.6-40 GPM (2.52-151 L/min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>6-182 GPM (21-684 L/min)</td>
<td>0-165 GPM (0-626 L/min*)</td>
<td>1.3-80 GPM (5.05-303 L/min)</td>
<td></td>
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</tr>
<tr>
<td>2&quot;</td>
<td>10-324 GPM (37-1216 L/min)</td>
<td>0-294 GPM (0-1112 L/min*)</td>
<td>2.5-150 GPM (9.47-568 L/min)</td>
<td></td>
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</tr>
<tr>
<td>3&quot;</td>
<td>22-730 GPM (82-2736 L/min)</td>
<td>0-661 GPM (0-2502 L/min*)</td>
<td>5-300 GPM (19-1136 L/min)</td>
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</tr>
<tr>
<td>4&quot;</td>
<td>39-1296 GPM (146-4960 L/min)</td>
<td>0-1175 GPM (0-4448 L/min*)</td>
<td>10-600 GPM (38-2271 L/min)</td>
<td></td>
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</tr>
<tr>
<td>&gt; 4&quot;</td>
<td>up to 785k GPM (2,945k L/min)</td>
<td>0-734k GPM (0-2780k L/min*)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACCURACY**
- 0.50%
- 0.75%
- 1.0%
- 1.5%
- 2.0%
- 2.5%
- 3.0%
- 5.0%

**PRESSURE RATING**
- Low (≤300psi)
- Medium (300-2000psi)
- High (2000-6000psi)
- Ultra High (>6000psi)

**BODY MATERIAL**
- PVC
- PPS
- Nylon
- PVDF
- PBT Polyester
- Brass
- Stainless
- Aluminum
- Noryl
- Display
- 4-20mA
- Scaled Pulse
- Unscaled Pulse
- Dual Pulse
- Comm.
- Btu
- Fuel
- Lubes
- Water
- Chemicals
- Additive Injection

**OUTPUT**
- QSI
- QSI
**3-A Sanitary Standards, Inc.** is an independent, not-for-profit corporation dedicated to advancing hygienic equipment design for the food, beverage, and pharmaceutical industries.

European directive describing the equipment allowed in an environment with an explosive atmosphere.

European Explosive Atmosphere Symbol

**CE**

Conformity European. Product has been reviewed to one or more of 21 European directives

**FM Approved**

Factory Mutual Approved to US Standards.

Factory Mutual Approved to Canadian and US standards

Factory Mutual Approved to Canadian standards

Federal Communication Commission

International Electrotechnical Committee logo; use of the logo by an organization only shows an association with the IECEx, it does not infer any compliance with standards.

**IPxx**

Ingress Protection Code

**NEMA**

National Electrical Manufacturers Association

**RoHS**

European Directive on Restriction of Hazardous Substances

**SA®**

Canadian Standards Association

**UR®**

Canadian Standards Association certified to Canadian and US standards

Manufacturers, regulators and consumers look to **NSF International** for the development of public health standards and certification programs that help protect the world's food, water, consumer products and environment.

**UL LISTED**

Underwriters Laboratories listed to US standards

**c-UL LISTED**

Underwriters Laboratories listed to Canadian and US standards

**c-UL LISTED**

Underwriters Laboratories listed to Canadian standards

European directive on waste electrical and electronic equipment (WEEE)

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**California Proposition 65 Compliance Statement**

Consistent with our core values, Great Plains Industries, Inc. ensures our FLOMEC® branded products are both safe and of high quality for our customers. We are dedicated to working with our customers and suppliers to meet consumer product safety requirements applicable to our products, including California Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986.

The family of FLOMEC products offer rugged, reliable flow meters and instrumentation that are utilized in a wide variety of industrial/commercial process industries. No substance on the CA Prop 65 list are intentionally added to our products. Furthermore, all FLOMEC products and instrumentation comply with the latest requirements of CA Prop 65 (current and after August 30, 2018).
BETTER performance

HIGHER quality

LOWER cost