FLOWMETER CATALOG 2018

FLOMEC®

Wichita · Sydney

GREAT PLAINS INDUSTRIES GPI®

Table of **CONTENTS**

NOTE: **Specifications may be subject to change without prior notice.**

PRODUCT CONFIGURATION

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

PRODUCT IDENTIFIER 1

QSE = Electro-Magnetic Flow Meter

SIZE 2

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 3

NPT = NPT (Male) (½" to 2" Only)
BSP = BSPP (Male) (ISO 228) (½" to 2" Only)
FAP = ANSI Flange - Polymer (3" & 4" Only)

ELECTRONIC CHOICE 4

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

COMMUNICATION CHOICE 5

Q1 = ***Integrates with Any Electronic Choice*** QSI Module: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), RS485 (Modbus RDU or BACnet® MS/TP)), Temperature Inputs, BTU Calculator. Energy Use Computation *Note: Energy Use Computation Requires Temperature Sensor Probes (Select Probes Below)*

Q2 = ***Integrates with Any Electronic Choice*** QSI Module: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), Data Logger, Temperature Inputs, BTU (Heat) Calculator. Energy Use Computation *Note: Energy Use Computation Requires Temperature Sensor Probes (Select Probes Below)*

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

XX = No Communication Suite

TEMPERATURE SENSOR PROBES 6

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) 7

A = 1/2" - 2" Meters
B = 3" Meter
C = 4" Meter

	1	2	3	4	5	6	7
>>>>	QSE	30	FAP	09	Q1	2	B

SPECIFICATIONS

Fitting Type:	NPT, BSP, ANSI Flanged	
	1/2" to 2" - NPT (Male), BSPP (Male) (ISO 228)	
	3" & 4" 150# ANSI Flanged - Polymer Flange	
Recommeded Plastic Flange Bolt Torque:	25 ft.-lbs. (33.9 N·m)	
Pipe Sizes:	1/2", 3/4", 1", 1-1/2", 2", 3", 4"	
Pressure Rating:	150 psi @ 73° F (10 bar @ 23° C)	
Velocity:	0.25 to 15 fps (0.08 to 4.6 m/s)	
Flow:	1/2" (05)	0.16 - 10 GPM (0.63 - 38 L/min)
	3/4" (07)	0.3 - 20 GPM (1.27 - 76 L/min)
	1" (10)	0.6 - 40 GPM (2.52 - 151 L/min)
	1-1/2" (15)	1.3 - 80 GPM (5.05 - 303 L/min)
	2" (20)	2.5 - 150 GPM (9.47 - 568 L/min)
	3" (30)	5 - 300 GPM (19 - 1136 L/min)
	4" (40)	10 - 600 GPM (38 - 2271 L/min)
Accuracy		
±0.5% of Reading between 0.25 fps and 15 fps (0.08 m/s and 4.6 m/s) (Reference Owner's Manual for complete accuracy and uncertainty specifications)		

Operating Temperature Range:		1/2"-2": 32° F to 210° F (0° C to 99° C)
		3"-4": 32° F to 180° F (0° C to 82° C)
Ambient Temperature Range:		0° F to 140° F (-18° C to 60° C)
Typical K-Factor:	1/2" (05)	4347 PPG (1158.5 Pulses/L)
	3/4" (07)	1937 PPG (511.8 Pulses/L)
	1" (10)	1089 PPG (287.7 Pulses/L)
	1-1/2" (15)	484.1 PPG (127.9 Pulses/L)
	2" (20)	400 PPG (105.7 Pulses/L)
	3" (30)	121 PPG (32.0 Pulses/L)
	4" (40)	68.1 PPG (18.0 Pulses/L)
Power Supply:	Externally Powered	
	Voltage Supply (Min): 12V (dc)	
	Voltage Supply (Max): 36V (dc)	
Consump-tion:	Max current consumption (QSE with QSB): 75mA	
	Max current consumption (QSE with QSI): 150mA	
Wetted Materials:	Body	Noryl™
	Electrodes	316L SS
	Seals	EPDM O-Rings
Output Frequency Range:	All Sizes	10 Hz Minimum - 1,000 Hz Maximum
Calibration Report:		N.I.S.T. - Standard

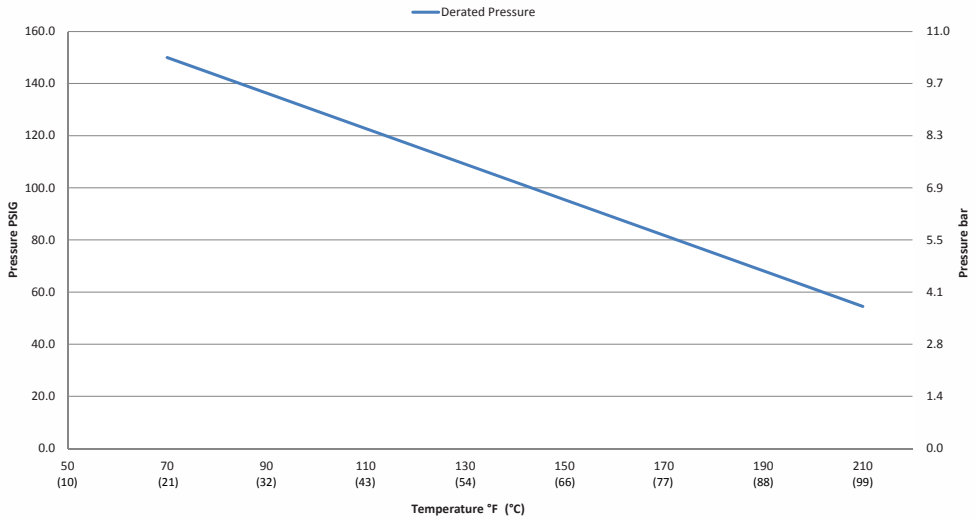
APPLICATIONS

- 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**

Derated Pressure Curve for QSE (Pressure vs Temperature)



SPECIFICATIONS

Tee Housing Material:	Schedule 80 PVC
Insert Wetted Materials:	**Body:** PPS (Ryton R-4)
	Sensor: PEI (Ultem 1000)
	O-Ring: EPDM
Temperature Rating:	
Operating:	32° F to 140° F (0° C to 60° C)
Storage:	-20° F to +160° F (-29° C to +71° C)
Flow Range:	0.1 to 15 fps (0.03 to 4.6 m/s)
Accuracy:	Typically ±2% of reading
Operating Pressure:	150 psi @ 73° F (10 bar @ 23° C) 100 psi @ 140° F (7 bar @ 60° C)
Transducer Excitation:	Supply Voltage: 7.5V (dc) min. to 36V (dc) max
	Quiescent Current: 200 µA (typical)
Output Frequency:	0 to 100 Hz
Output Pulse Width:	4 ms
Electrical Cable for Insert Electronics:	36 inches (914.4 mm) of 18 AWG, solid copper, "Direct Burial" (UL 493 & 83)

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 4.6 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

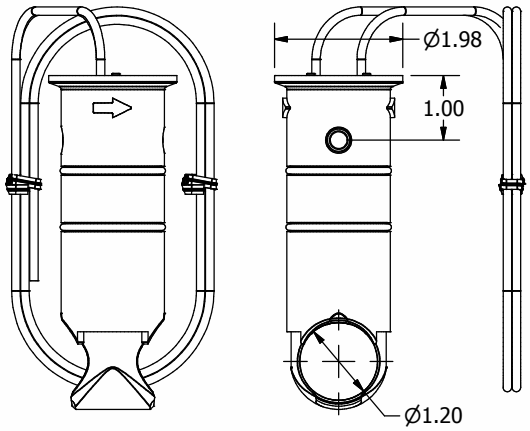
IP68 CE NSF

FLOW INSERT SELECTION CHART

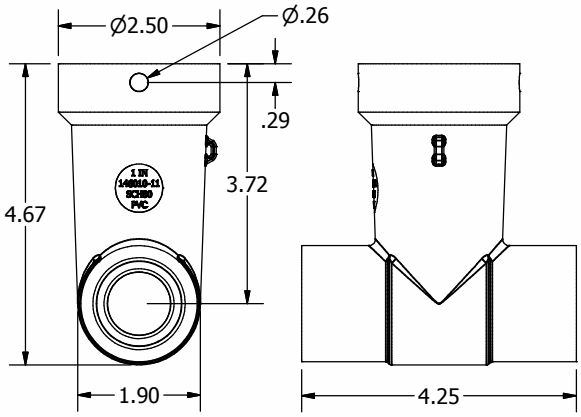
Flowmeter Model	Pipe Size	Operating Range (Min.)	Operating Range (Max.)	Maximum Water Pressure***	FLOMEC Tee K-Factor (Freq)*	Non-FLOMEC Tee K-Factor (Freq)*	Offset Value**	Meter Material	Adapter Material	Tee Material	Process Port
QS200-10	1 in.	0.22 GPM (0.83 L/min) 0.1 ft/sec	33 GPM (124.92 L/min) 15 ft/sec	150 psi @ 73°F (10 bar @ 23°C)	0.5386	N/A	0	Ryton	-	PVC	Slip
QS200-15	1.5 in.	0.55 GPM (2.08 L/min) 0.1 ft/sec	82 GPM (310.41 L/min) 15 ft/sec	150 psi @ 73°F (10 bar @ 23°C)	0.7926	0.7947	0	Ryton	-	PVC	Slip
QS200-20	2 in.	0.92 GPM (3.48 L/min) 0.1 ft/sec	138 GPM (522.39 L/min) 15 ft/sec	150 psi @ 73°F (10 bar @ 23°C)	1.3765	1.3583	0	Ryton	-	PVC	Slip
QS200-30	3 in.	2.06 GPM (7.80 L/min) 0.1 ft/sec	309 GPM (1169.70 L/min) 15 ft/sec	150 psi @ 73°F (10 bar @ 23°C)	3.8444	4.2505	0	Ryton	PVC	PVC	Slip
QS200-40	4 in.	3.58 GPM (13.55 L/min) 0.1 ft/sec	537 GPM (2032.78 L/min) 15 ft/sec	150 psi @ 73°F (10 bar @ 23°C)	7.1676	7.2229	0	Ryton	PVC	PVC	Slip
QS200	*Insert only*			150 psi @ 73°F (10 bar @ 23°C)	use pipe size to determine value	use pipe size to determine value	0	Ryton	PVC	N/A	N/A

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

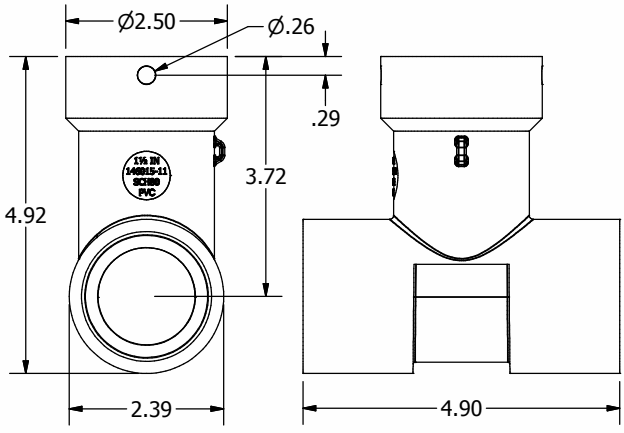
DIMENSIONS



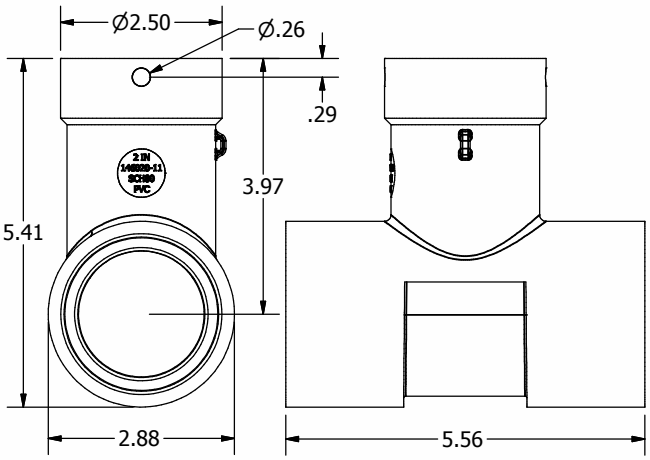
1-INCH Tee Housing



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 flow-meters 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

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

QM = QStar Ultrasonic Flowmeter

CLAMP-ON MOUNTING TYPE 2

F = Fixed
P = Portable

TRANSDUCER 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

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

SPECIFICATIONS

Model:	QSTAR PORTABLE	QSTAR FIXED
Operation:	Intuitive via 8 main keys (Soft Keys), plain text display	Intuitive via 8 main keys (Soft Keys), plain text display
Languages:	English, Spanish and French	English, Spanish and French
Units:	Metric / US	Metric / US
Outputs:	2x 4-20 mA, 1x Relay, 1x MicroUSB 1x Pulse	2x 4-20 mA, 1x Pulse, 1x MicroUSB 1x Relay, RS232 (opt.)
Inputs:	2x PT100	2x PT100
Integrated Data Logger:	2 GB	N/A
Data Logged:	Measurement and totalizers	N/A
Data Format:	Can be exported into standard office programs	N/A
Memory Cycle:	Adjustable, 1 second to 24 hours	N/A
Power Supply:	Integrated rechargeable battery and 100-240V (ac) adapter	85-264V (ac), 18-36V (dc) (opt.)
	Battery Duration: Approximately 5 hours	Power Consumption: 10 W
Protection Class:	IP40	IP65, Ex/ATEX
Housing:	Aluminium, PVC	PVC, wall-mounted
Dimensions:	10.4 x 7.5 x 2.7 in. (264 x 190 x 68 mm)	10.2 x 9.4 x 4.7 in. (259 x 239 x 119 mm)
Operating Temp:	-4° F to 140° F (-20° C to 60° C)	-4° F to 140° F (-20° C to 60° C)
Transducer Temp:	-40° F to 300° F (-40° C to 149° C)	-40° F to 300° F (-40° C to 149° C)
Weight:	3.3 lbs (1.5 kg)	2.9 lbs (1.3 kg)
Display:	QVGA (320x240), black and white, adjustable backlighting	QVGA (320x240), black and white, adjustable backlighting
Carrying Case:	20 x 16 x 16 in. (508 x 406 x 406 mm)	N/A

MEASUREMENT

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.

MEASUREMENT ACCURACY

Inner Diameter Ø	Range	Deviation
.39 - .98 in. (10 - 25 mm)	6.56-98.42 ft/s (2-30 m/s)	2.5% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.16 ft/s (0.05 m/s)
.98-1.97 in. (25 - 50 mm)	6.56-98.42 ft/s (2-30 m/s)	1.5% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.10 ft/s (0.03 m/s)
1.97-11.81 in. (50 - 300 mm)	6.56-98.42 ft/s (2-30 m/s)	1% of reading
	0-6.56 ft/s (0-2 m/s)	± 0.07 ft/s (0.02 m/s)
11.81-236.22 in. (300 - 6000 mm)	3.28-98.42 ft/s (1-30 m/s)	1% of reading
	0-3.28 ft/s (0-1 m/s)	± 0.03 ft/s (0.01 m/s)
Repeatability for majority of applications is <0.2%		

OM SERIES SMALL CAPACITY (OVAL GEAR METERS)

The **FLOMEC® OM Small Capacity Oval Gear Meters** have a large flow range and offer the ability to handle a wide range of fluid viscosities with exceptional levels of repeatability.

FEATURES / BENEFITS

- High accuracy and repeatability, direct volumetric reading
- Measures high and low viscosity liquids
- No requirement for flow conditioning (straight pipe runs)
- Stainless Steel rotors (Optional PPS rotor for OM008 meter only)
- Quadrature pulse output option and bi-directional flow
- Optional Exd I/IIB approval (ATEX, IECEx)
- Only two moving parts

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
OM = Oval Gear Meter

METER SIZE 2
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 3
A = Aluminum
S = 316 Stainless Steel
N = Intermediate Pressure 316L SS (1450 PSI / 100 bar)

ROTOR MATERIAL / BEARING TYPE 4
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 5
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 6
-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 7
1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded
B = Bottom entry manifold (SS body only)

CABLE ENTRIES 8
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 9
__ = 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 I/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) [IECEx & ATEX approved] (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]

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

	1	2	3	4	5	6	7	8	9
--->>>>	OM	006	A	51	2	-8	2	1	R5

SPECIFICATIONS

	OM004	OM006	OM008
Nominal Size:	1/8" (4 mm)	1/4" (6 mm)	3/8" (8 mm)
Flow* Range:	0.26-9.5 GPH (1.0-36 L/hr)	0.5-27 GPH (2-100 L/hr)	4-145 GPH (15-550 L/hr)
Accuracy+ @ 3cp:	± 1.0% of reading (accuracy is ± 0.2% of reading with optional RT14 with non-linearity correction)		
Repeatability:	Typically ± 0.03% of reading		
Temperature Range:	-40° F to +300° F (-40° C to +150° C)		
Pressure Rating (Threaded Meter):			
Aluminum	220 psi (15 bar)		
316 Stainless Steel	495 psi (34 bar)		
Intermediate Pressure Stainless Steel	1450 psi (100 bar)		
Recom-mended Filtration:	200 mesh (75 µm)		

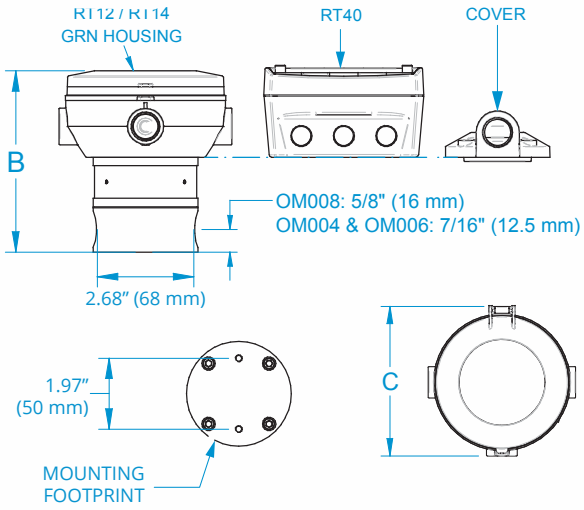
	OM004	OM006	OM008
Electrical:			
Output Pulse Resolution:	Pulses / gallon (Pulses / L) - Nominal		
Reed Switch	10600 (2800)	3975 (1050)	1345 (355)
Hall Effect	10600 (2800)	3975 (1050)	2690 (710)
QP - Quadrature Hall option	10600 (2800)	3975 (1050)	2690 (710)
HR - High Resolution Hall Effect	42400 (11200)	15900 (4200)	n/a
Reed Switch Output	30V (dc) x 200mA max. [maximum thermal shock 18° F (10° C) / minute]		
Hall Effect Output (NPN)	3 wire open collector, 5-24V (dc) max., 20mA max.		
Optional Outputs	4-20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control		

**Maximum flow is to be reduced 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).

DIMENSIONS

	B			C
OPTION	OM004	OM006	OM008	–
RT12 / RT14 GRN HOUSING	4.8" (122 mm)	4.8" (122 mm)	5.0" (129 mm)	4.9" (124 mm)
RT40	4.9" (125 mm)	4.9" (125 mm)	5.2" (132 mm)	3.8" (96 mm)
COVER	3.6" (92 mm)	3.6" (92 mm)	3.9" (99 mm)	2.8" (72 mm)

**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 IECEx CE NEMA 4X **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 CONFIGURATION

PRODUCT IDENTIFIER 1

OM = Oval Gear Meter

METER SIZE 2

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 3

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 4

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 5

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 6

-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 7

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 8

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 9

___ = 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 I/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)*#
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#
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]#

	1	2	3	4	5	6	7	8	9
--->>>>	OM	025	A	51	2	-5	2	1	R4

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

SPECIFICATIONS

	OM015	OM025	OM040	OM050
Nominal Size:	1/2" (13 mm)	1" (25 mm)	1 1/2" (38 mm)	2" (51 mm)
***Flow Range:**	0.26-10.6 GPM (1-40 L/min)	2.6-40 GPM (10-150 L/min)	4-66 GPM (15-250 L/ min)	8-118 GPM (30-450 L/ min) (SS) 8-130 GPM (30-500 L/ min) (PPS)
Accuracy @3cp:	± 0.5% of reading (accuracy is ± 0.2% of reading with optional RT14 with non-linearity correction)			
Repeatability:	Typically ± 0.03% of reading			
Temperature Range:	-40° F to +300° F (-40° C to +150° C) refer to factory for lower temperature			
Pressure Rating (Threaded Meter):				
Aluminum	990 psi (68 bar)	990 psi (68 bar)	435 psi (30 bar)	285 psi (20 bar)
Intermediate Pressure Aluminum		2000 psi (138 bar)		
316 Stainless Steel	990 psi (68 bar)	990 psi (68 bar)	435 psi (30 bar)	550 psi (38 bar)
Intermediate Pressure SS	1450 psi (100 bar)	1450 psi (100 bar)	725 psi (50 bar)	725 psi (50 bar)

	OM015	OM025	OM040	OM050
Pressure Rating (Mechanical Meter):				
Aluminum	580 psi (40 bar)	580 psi (40 bar)	435 psi (30 bar)	285 psi (20 bar)
316 Stainless Steel	580 psi (40 bar)	580 psi (40 bar)	435 psi (30 bar)	285 psi (20 bar)
Recom-mended Filtration	100 mesh (150 µm)			
Electrical:				
Output Pulse Resolution:	Pulses / gallon (Pulses / L) - Nominal			
Reed Switch	318 (84)	120 (27)	53 (14)	25 (6.5)
Hall Effect	636 (168)	405 (107)	212 (56)	99 (26)
QP - Quadrature Hall Option	636 (168)	204 (54)	106 (28)	49 (13)
Reed Switch Output	30V (dc) x 200mA max. [maximum thermal shock 18° F (10° C) / minute]			
Hall Effect Output (NPN)	3 wire open collector, 5-24V (dc) max., 20mA max.			
Optional Outputs	4-20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control			

**Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).*

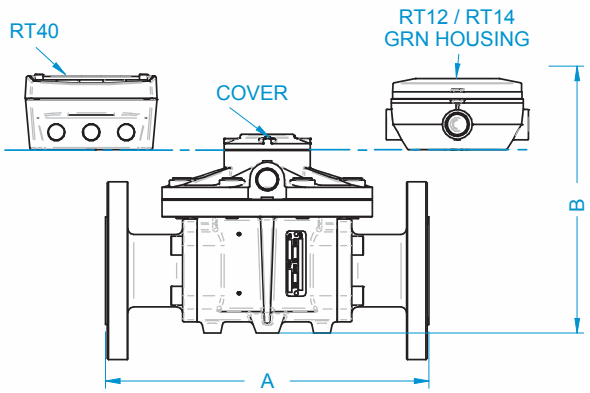
DIMENSIONS *All dimensions are ± .079 (±2 mm)*

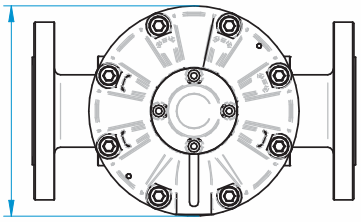
Modular Fitting	A					
	OM015	OM025A	OM025S/N	OM040	OM050	OM050E
A.N.S.I. 150 DIN16	7.4" (189 mm)	7.8" (198 mm)	9.3" (237 mm)	9.9" (252 mm)	10.9" (277 mm)	10.9" (277 mm)
B.S.P N.P.T.	4.3" (110 mm)	5.4" (137 mm)	6.9" (176 mm)	7.4" (188 mm)	8.3" (212 mm)	8.3" (212 mm)

Configuration	B							
	OM015A	OM015S/N	OM025A	OM025S/N	OM040A	OM040S/N	OM050	OM050E
RT12 / RT14 GRN Housing	6.0" (154 mm)	5.8" (148 mm)	6.6" (168 mm)	6.5" (165 mm)	7.9" (203 mm)	7.6" (194 mm)	8.6" (218 mm)	10.5" (268 mm)
RT40 Alloy Housing	6.2" (157 mm)	5.9" (151 mm)	6.7" (171 mm)	6.6" (168 mm)	8.1" (206 mm)	7.8" (197 mm)	8.7" (221 mm)	10.7" (271 mm)
Cover	4.2" (106 mm)	3.9" (100 mm)	4.7" (123 mm)	4.6" (117 mm)	6.1" (155 mm)	5.7" (146 mm)	6.7" (170 mm)	8.6" (220 mm)

APPLICATIONS

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





APPROVALS

ATEX IEC IECEx CE NEMA 4X **IP66/67**

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 I/IIB approval (ATEX, IECEx)
- No requirement for flow conditioning (straight pipe runs)
- Only two moving parts

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
OM = Oval Gear Meter

METER SIZE 2
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) (Only available with Aluminum Rotors)

BODY MATERIAL 3
A = Aluminum
E = Extended flow Aluminum version
S = 316L Stainless Steel (OM080 only)

ROTOR MATERIAL / BEARING TYPE 4
00 = PPS (not available for 300ºF (150ºC)) / No bearing
10 = Keishi cut PPS (for high viscosity liquids) (not available for 300ºF (150ºC)) / 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 5
1 = FKM (Viton™) -5º F minimum (-15º C)
3 = PTFE encapsulated FKM (Viton™) (included KALREZ shaft seals) 5º F minimum (-15º C)
4 = Buna-N (Nitrile), -40º F minimum (-40º C)

MAXIMUM TEMPERATURE LIMIT 6
-2 = 250º F (120º C) max.
-3 = 300º F (150º C) max. (OM080 only) (Hall Effect output only)
-5 = 250º F (120º C) max. (includes integral cooling fin)
-8 = 176º F (80º C) max. (meters with integral instruments)

PROCESS CONNECTIONS 7
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 8
1 = M20 x 1.5 mm
2 = 1/2 in. NPT

INTEGRAL OPTIONS 9
___ = 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 I/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 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 = 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)*#
R5G = RT14 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 Intrinisic 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]#

	1	2	3	4	5	6	7	8	9
--->>>>	OM	025	A	51	2	-5	2	1	R5

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

SPECIFICATIONS

	OM080	OM080E	OM100	OM100E
Nominal Size:	3" (80 mm)	3" (80 mm)	4"(100 mm)	4"(100 mm)
Nominal Flow* Range @ 3cP:	10-200 GPM	13-260 GPM	20-400 GPM	40-600 GPM
	35-750 L/min	50-1000 L/min	75-1500 L/min	150-2500 L/min
Accuracy:	±0.5% of reading (±0.2% of reading with optional RT14)			
Repeatability:	Typically ± 0.03% of reading			
Temperature Range:	-40˚F - +300˚F (-40˚C - +150˚C)			
Max. Pressure (Aluminum):	175 psi (12 bar)	175 psi (12 bar)	145 psi (10 bar)	145 psi (10 bar)
Max. Pressure (Stainless Steel):	175 psi (12 bar)	n/a	n/a	n/a
Protection Class:	IP66/67 (NEMA 4X) Optional EXd I/IIB T3...T6, integral ancillaries can be supplied I.S. (Intrinsically Safe)			
Recommended Filtration:	40 Mesh (400 µm)			

	OM080	OM080E	OM100	OM100E
Electrical:				
Output Pulse Resolution:	Pulses / gallon (Pulses / L) - Nominal			
Reed Switch:	10.0 (2.65)	5.68 (1.55)	4.15 (1.10)	2.1 (0.56)
Hall Effect:	40.5 (10.7)	22.7 (6.00)	16.6 (4.40)	8.5 (2.24)
QP Quadrature Hall Effect:	20.0 (5.33)	11.4 (3.00)	8.3 (2.20)	4.24 (1.12)
Read Switch Output:	30V (dc) x 200 mA max. (maximum thermal shock 18° F [10° C] / minute)			
Hall Effect Output:	3 wire open collector. 5-24V (dc) max., 20 mA max.			
Optional Outputs:	4-20 mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control			

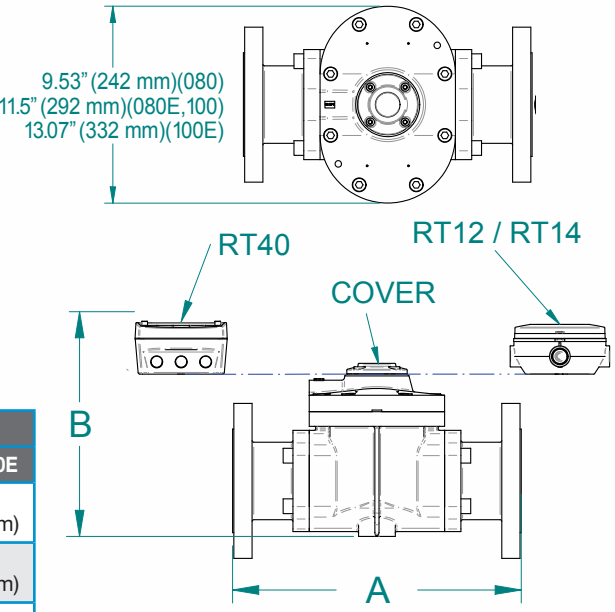
**Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).*

DIMENSIONS

All dimensions are ± .079" (±2 mm)

MODULAR FITTING	A			
	OM080	OM080E	OM0100	OM0100E
Flanged	13.9" (354 mm)	15.0" (382 mm)	15.3" (388 mm)	16.3" (414 mm)
Threaded	10.5" (266 mm)	11.6" (294 mm)	11.6" (294 mm)	12.6" (320 mm)

CONFIGURATION	B				
	OM080A	OM080S	OM080E	OM0100	OM0100E
RT12 / RT14 GRN HOUSING	10.2" (260 mm)	10.1" (257 mm)	10.9" (277 mm)	12.7" (322 mm)	15.7" (399 mm)
RT40	10.3" (264 mm)	10.2" (260 mm)	11.0" (281 mm)	12.8" (326 mm)	15.9" (403 mm)
COVER	8.4" (213 mm)	8.1" (206 mm)	9.0" (229 mm)	10.7" (274 mm)	13.9" (352 mm)



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

APPROVALS

ATEX IEC IECEx CE NEMA 4X **IP66/67**

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 I/IIB approval (ATEX, IECEx)
- High pressure rated up to 5580 psi (400 bar)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
OM = Oval Gear Meter

METER SIZE 2
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 3
H = High Pressure 316L SS
5580 psi (400 bar)

ROTOR MATERIAL / BEARING TYPE 4
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 5
1 = Viton™ 5º F min. (-15º C)
3 = Teflon encapsulated Viton™ 5º F min. (-15º C)
4 = Buna-N (Nitrile), -40º F minimum (-40º C)

MAXIMUM TEMPERATURE LIMIT 6
-2 = 250º F (120º C) max.
-3⁺ = 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 7
1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded
B = Bottom Entry Manifold (Intermediate Pressure Only)

CABLE ENTRIES 8
1 = M20 x 1.5 mm (M16 x 1.5 mm for R4 options)
6 = 3 x 16 mm drilled holes (for F instuments only)

INTEGRAL OPTIONS 9
___ = 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 [IECEx & ATEX approved]
E2 = Explosion proof Exd I/IIB T3...T6 [IECEx & ATEX mines approved]
HR = High resolution Hall Effect output (Hall Effect only) (not available on 008 size) [OM004:11200ppL, OM006:4200ppL]
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 (AI), 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]#

	1	2	3	4	5	6	7	8	9
--->>>>	OM	025	S	51	1	-8	1	1	R5

**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

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

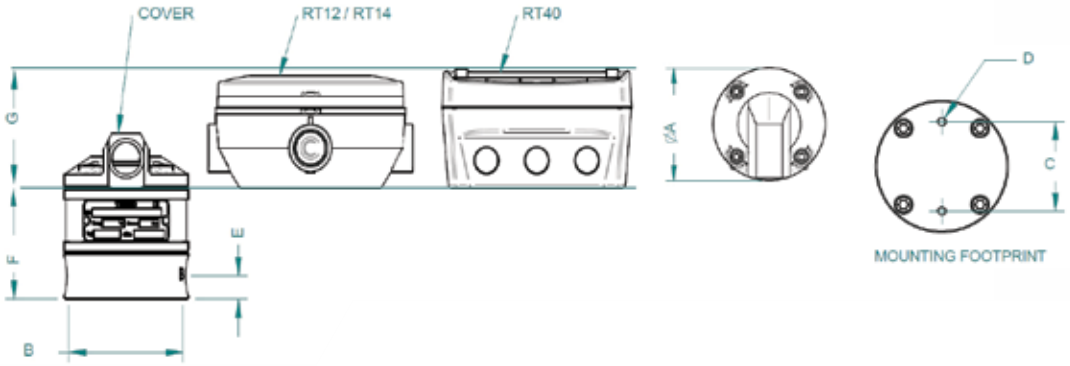
**Maximum flow reduces as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).*
+When used to meter rate, at very low flow rates, the rate can jump, due to resolution (not accuracy).

DIMENSIONS

All dimensions are ± .079" (±2 mm)

	OM004H	OM006H	OM008H
A	2.91" (74 mm)	2.91" (74 mm)	3.93" (100 mm)
B	2.67" (68 mm)	2.67" (68 mm)	3.74" (95 mm)
C	1.97" (50 mm)	1.97" (50 mm)	2.36" (60 mm)
D	M5 x 12	M5 x 12	M5 x 12
E	0.49" (12.5 mm)	0.49" (12.5 mm)	3/8" (8 mm)
F	2.36" (60 mm)	2.36" (60 mm)	3.38" (86 mm)

	RT12 / RT14	RT40	COVER
G	2.44" (62 mm)	2.56" (65 mm)	1.26" (32 mm)



APPLICATIONS

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

APPROVALS

CE NEMA 4X **IP66/67**

ATEX IEC IECEx

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/IIB approval (ATEX, IECEx)
- High Pressure rated up to 5580 psi (400 bar) (4350 psi [300 bar] on 2 " meter)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

OM = Oval Gear Meter

METER SIZE 2

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 = 1.5" (40 mm), 4-66 GPM (15-250 L/min)
050 = 2" (50 mm), 8-130 GPM (30-500 L/min) (PPS rotors)

BODY MATERIAL 3

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

ROTOR MATERIAL / BEARING TYPE 4

00 = PPS (Not available for 300ºF (150ºC) meters) / No bearing
10 = Keishi Cut PPS (for high viscosity liquids) (Not available for 300ºF (150ºC) meters) / No bearing
51 = Stainless Steel / Carbon Ceramic
71 = Keishi cut Stainless Steel (for high viscosity liquids) / Carbon Ceramic

O-RING MATERIAL 5

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

MAXIMUM TEMPERATURE LIMIT 6

-2 = 250º F (120º C) max.
-3+ = 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 7

1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded

CABLE ENTRIES 8

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

INTEGRAL OPTIONS 9

___ = 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 [IECEx & ATEX approved]
E2 = Explosion proof Exd I/IIB T3...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 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 = ATEX/IECEx EXd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (AI), 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 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#

	1	2	3	4	5	6	7	8	9
--->>>>	OM	025	H	00	1	-5	1	1	R5

**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

	OM015	OM025	OM040	OM050
Nominal Size:	1/2” (15 mm)	1” (25 mm)	1.5” (40 mm)	2” (50 mm)
Nominal Flow* Range @ 3cP:	0.26-10.6 GPM (1 - 40 L/min)	2.6-40 GPM (10-150 L/min)	4-66 GPM (15-250 L/min)	8-118 GPM (30-450 L/min) (SS Rotors) 8-130 GPM (30-500 L/min) (PPS Rotors)
Accuracy:	± 0.5% of reading (± 0.2% of reading with optional RT14)			
Repeatability:	Typically ± 0.03% of reading			
Max. Pressure - High Pressure meter Bar [psi] (threaded)	5800 psi (400 bar)			4350 psi (300 bar)
Protection Class:	IP66/67 (NEMA 4X) optional EX-d I/IIB T4/T6, Integral ancillaries can be supplied with I.S. (Intrinsically Safe)			
Recommended Filtration:	100 mesh (150 µm)			
Electrical:				
Output Pulse Resolution:	Pulses / gallon (Pulses / L) - Nominal			
Reed Switch:	318 (84)	102 (27)	53 (14)	25 (6.5)
Hall Effect:	636 (168)	405 (107)	212 (56)	99 (26)
High Resolution Hall Effect:	636 (168)	204 (54)	106 (28)	49 (13)
Reed Switch Output:	30V (dc) x 200mA Max (Maximum thermal shock 18°F [10°C] /min)			
Hall Effect Output:	3 wire open collector, 5 - 24V (dc) max, 20mA max.			

APPLICATIONS

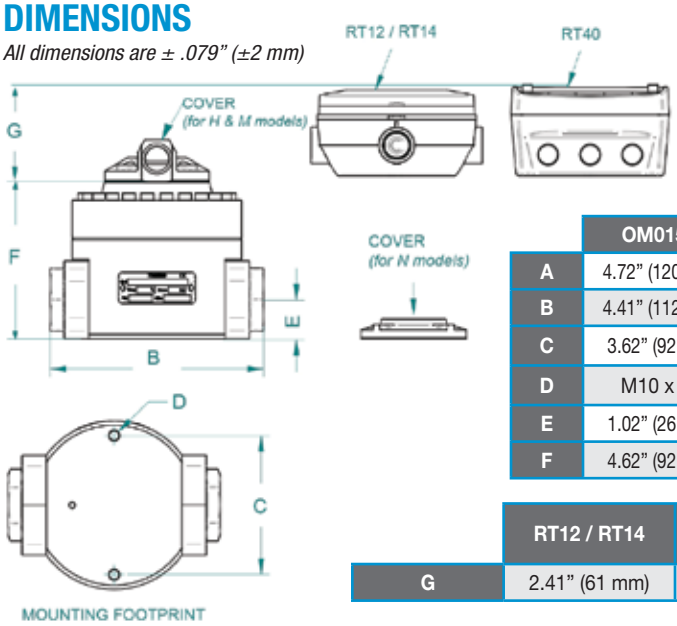
- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental

APPROVALS

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

DIMENSIONS

All dimensions are ± .079” (±2 mm)



	OM015H	OM025H	OM040H	OM050H
A	4.72” (120 mm)	4.72” (120 mm)	6.30” (160 mm)	7.09” (180 mm)
B	4.41” (112 mm)	6.03” (152 mm)	8.54” (217 mm)	9.29” (236 mm)
C	3.62” (92 mm)	3.90” (99 mm)	5.28” (134 mm)	consult distributor for mounting footprint
D	M10 x 13	M8 x 16	M10 x 16	
E	1.02” (26 mm)	1.08” (27.5 mm)	1.54” (39 mm)	2.01” (51 mm)
F	4.62” (92 mm)	4.41” (112 mm)	6.18” (157 mm)	6.77” (172 mm)

	RT12 / RT14	RT40	COVER (N Meters)	COVER (H & M Meters)
G	2.41” (61 mm)	2.48” (63 mm)	0.51” (13 mm)	1.26” (32 mm)

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 1

OM = Oval Gear Meter

METER SIZE 2

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), 8-130 GPM (30-500 L/min) (PPS rotors)
080 = 3" (80 mm), 10-200 GPM (35-750 L/min)
080E = 3" Extended flow (80 mm), 13-260 GPM (50-1000 L/min)
100 = 4" (100 mm), 20-400 GPM (75-1550 L/min)
100E = 4" Extended Flow (100 mm), 40-660 GPM (150-2500 L/min) (only available with Aluminum Rotors)

BODY MATERIAL 3

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

ROTOR MATERIAL / BEARING TYPE 4

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 5

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 6

-8 = 176º F (80º C) maximum

PROCESS CONNECTIONS 7

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 8

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

	1	2	3	4	5	6	7	8
--->>>>	OM	100	A	51	1	-8	10	M3

APPLICATIONS

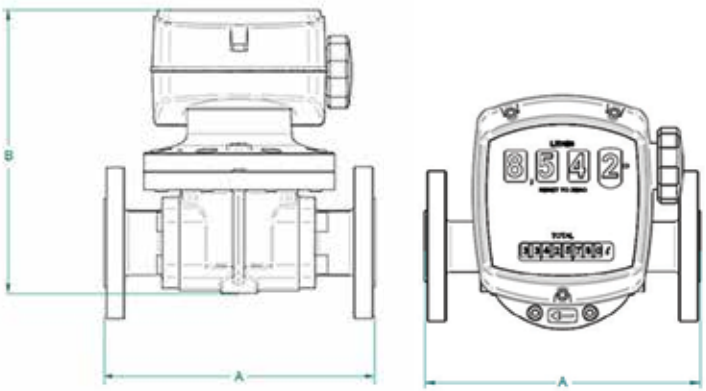
- Automotive
- Aviation
- Mining
- Power
- Chemical
- Pharmaceutical
- Food
- Paint
- Petroleum Industries
- Environmental Applications

SPECIFICATIONS

	OM015	OM025	OM040	OM050	OM080	OM80E	OM100	OM100E
Nominal Size:	1/2" (15 mm)	1" (25 mm)	1-1/2" (40 mm)	2" (50 mm)	3" (80 mm)	3" (80 mm)	4" (100 mm)	4" (100 mm)
Nominal Flow Range* @ 3cP:	0.26-10.6 GPM (1 - 40 L/min)	2.6-40 GPM (10-150 L/min)	4-66 GPM (15-250 L/min)	8-118 GPM (30-450 L/min) (SS rotors) 8-130 GPM (30-500 L/min) (PPS rotors)	10-200 GPM (35-750 L/min)	13-260 GPM (50-1000 L/min)	20-400 GPM (75-1500 L/min)	40-660 GPM (150-2500 L/min)
Accuracy:	±1% of reading for M registers			±1% of reading for M registers (±0.5% for V registers)				
Repeatability:	Typically ± 0.03% of reading							
Ambient Temp. Range	5° F - 176° F (-15° C - 80° C)							
Max. Pressure (threaded)	580 psi (40 bar)	580 psi (40 bar)	435 psi (30 bar)	285 psi (20 bar)	175 psi (12 bar)	175 psi (12 bar)	145 psi (10 bar)	145 psi (10 bar)
M Register	4 digit resettable & NEMA 4 (IP65)							
V Register	n/a				5 digit resettable & NEMA 3S (IP54)			
Recommended Filtration:	100 mesh (150 µm)				40 mesh (400 µm)			
Face-to-Face Dimension A - Threaded	4.33" (110 mm)	5.39" (137 mm) AL 6.93" (176 mm) SS	7.4" (188 mm)	8.35" (212 mm)	10.5" (266 mm)	11.6" (294 mm)	11.6" (294 mm)	12.6" (320 mm)
Face-to-Face Dimension A - Flanged	7.44" (189 mm)	7.8" (198 mm) AL 9.33" (237 mm) SS	9.92" (252 mm)	10.91" (277 mm)	13.93" (354 mm)	15.04" (382 mm)	15.28" (388 mm)	16.3" (414 mm)
Meter Base-to-Register Top - Dimension B	7.01" (178 mm)	7.4" (188 mm) AL 8.43" (214 mm) SS	8.94" (227 mm)	9.33" (237 mm)	10.63" (270 mm)	11.34" (288 mm)	13.11" (333 mm)	16.4" (416 mm)
Meter Cap Width	4.33" (110 mm)	4.72" (120 mm)	6.23" (160 mm)	7.09" (180 mm)	9.53" (242 mm)	11.5" (292 mm)	11.5" (292 mm)	13.1" (332 mm)

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

DIMENSIONS



APPROVALS

CE **NEMA** 3S / 4 **IP54/65**

OM SERIES CHEMICAL FLOW METER

The **FLOMEC® 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)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
OM = Oval Gear Meter

METER SIZE 2
025 = 1" (25 mm), 2.6 - 40 GPM (10-150 L/min)

BODY MATERIAL 3
P = PPS

ROTOR MATERIAL / BEARING TYPE 4
00 = PPS / No bearing
10 = Keishi cut PPS / No bearing

O-RING MATERIAL 5
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 6
-8 = 176º F (80º C) max.

PROCESS CONNECTIONS 7
1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded

CABLE ENTRIES 8
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 9
___ = Combination Reed Switch and Hall Effect Sensor
QP = Quadrature pulse (2 NPN phased outputs)
QPN = 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 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)*#
F18 = F018 backlit rate/tot, pulse, 4-20mA, 10 point linearization, HART#

	1	2	3	4	5	6	7	8	9
--->>>>	OM	025	P	10	1	-8	1	1	R5

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

	OM025
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)
QP Quadrature Pulse	204 (54)
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]

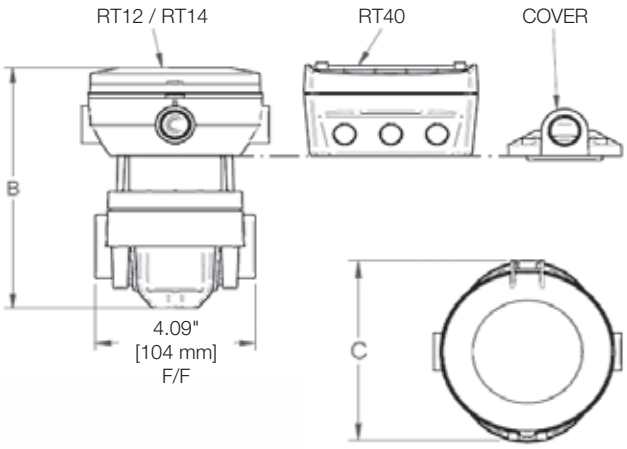
**Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Maximum recommended pressure drop is 14.5psi [1 Bar]*

APPROVALS

NEMA 4 **IP65** CE

DIMENSIONS

	B	C
RT12 / RT14	6.57" (167 mm)	4.88" (124 mm)
RT40	6.69" (170 mm)	3.78" (96 mm)
COVER	4.84" (123 mm)	2.91" (74 mm)



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.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

EGM004 = 1/8" (4 mm) 0.26 - 9.6 GPH (1-36 L/hr)
EGM006 = 1/4" (6 mm) 0.5 - 27 GPH (2-100 L/hr)
EGM008 = 3/8" (8 mm) 4 - 145 GPH (15-550 L/hr)
EGM015 = 1/2" (15 mm) 0.26 - 10.6 GPM (1-40 L/min)
EGM020 = 3/4" (20 mm) 0.5 - 21 GPM (3-80 L/min)

MATERIALS 2

A00 = Aluminum / PPS / No bearing (EGM008-020)
A51 = Aluminum / Stainless Steel / Carbon Ceramic (EGM004-015)
A52 = Aluminum / Stainless Steel / Bronze (EGM004-015)
S00 = 316 Stainless Steel / PPS / No bearing (EGM008-020)
S51 = 316 Stainless Steel / Stainless Steel / Carbon Ceramic (EGM004-015)

O-RING MATERIALS 3

1 = Viton (5°F min. [-15°C])
3 = Teflon encapsulated Viton (5°F min. [-15°C])
4 = Nitrile, (-40°F min. [-40°C])

TEMPERATURE 4

8 = 176°F (80°C) max

PROCESS CONNECTION 5

1 = BSPP (G) female threaded (ISO 228)
2 = NPT female threaded

INTEGRAL OPTIONS 6

0 = Hall effect output (no calibration) (2 m cable)
1 = Hall effect output with one point calibration and K-Factor (2 m cable)^*
2 = Fuel consumption (Pulsating flow, PT100 temp. sensor, one pt Cal & K-factor) (2 m cable)^*

	1	2	3	4	5	6
--->>>>	EGM008	A00	1	8	1	2

^Statement of conformance K-Factor printed on meter
*Calibration sheet can be ordered

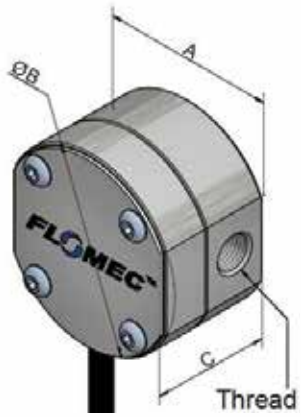
APPLICATIONS

- Aluminum meters with PPS rotors are suitable for petroleum products including: oils, greases, fuels and fuel oils.
- Aluminum meters with stainless steel rotors and bronze bearings are suitable for petroleum products including: fuels with high Benzene content, automotive brake fluid, and some solvents such as turpentine.
- Stainless steel meters are suitable for alcohols, water based liquids, some aggressive liquids, AdBlue (DEF, Urea) as well as fuel and oil applications in saline marine environments.

SPECIFICATIONS

	EGM004	EGM006	EGM008	EGM015	EGM020
Nominal Size:	1/8" [4 mm]	1/4" [6 mm]	3/8" [8 mm]	1/2" [15 mm]	3/4" [20 mm]
Nominal Flow Range* @ 3cP:	1 - 36 L/hr	2-100 L/hr	15-550 L/hr	1-40 L/min	3-80 L/min
	0.26-9.5 GPH	0.5-27 GPH	4-145 GPH	.26-10.6 GPM	0.8-21 GPM
Flow Range @ 1cP	2-24 L/hr	5-80 L/hr	18-440 L/hr	1.5-32 L/min	5-64 L/min
	0.25-6.34 GPH	1.32-21.13 GPH	4.76-116.24 GPH	0.39-8.45 GPM	1.32-16.91 GPM
Flow Range @ 7cP	0.5-36 L/hr	1-100 L/hr	15-550 L/hr	0.5-40 L/min	2-80 L/min
	0.13-9.51 GPH	0.26-26.42 GPH	3.96-145.29 GPH	0.13-10.57 GPM	0.53-21.13 GPM
Flow Range @ 200cP	0.4-36 L/hr	0.7-100 L/hr	6-550 L/hr	0.4-40 L/min	1.8-80 L/min
	0.10-9.51 GPH	0.18-26.42 GPH	1.58-145.29 GPH	0.10-10.56 GPM	0.47-21.13 GPM
Flow Range @ 500cP	0.25-27 L/hr	0.5-75 L/hr	2-550 L/hr	0.3-40 L/min	1.5-80 L/min
	0.06-7.13 GPH	0.13-19.81 GPH	0.25-145.29 GPH	0.08-10.56 GPM	0.39-26.42 GPM
Flow Range @ 1000cP	0.12-16 L/hr	0.3-45 L/hr	1.5-360 L/hr	0.2-25 L/min	1-50 L/min
	0.03-4.22 GPH	0.08-11.89 GPH	0.39-95.10 GPH	0.05-6.6 GPM	0.26-13.21 GPM
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)				
Max. Pressure (Al meters):	500 psi [34 bar]	500 psi [34 bar]	500 psi [34 bar]	290 psi [20 bar]	290 psi [20 bar]
Max. Pressure (SS meters):	800 psi [55 bar]	800 psi [55 bar]	500 psi [34 bar]	290 psi [20 bar]	290 psi [20 bar]
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.				
Pulse Output Resolution - Standard Pulse/USG [Pulse/L]	10600 [2800]	4012 [1060]	2725 [720]	644 [170]	398 [105]
Pulse Output Resolution - Fuel Cons. Option Pulse/USG [Pulse/L]	10600 [2800]	4012 [1060]	681 [180]	161 [42.5]	99.5 [26.3]
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).



DIMENSIONS

Model:	A	B	C
EGM004	1.81" [46 mm]	1.95" [49.5 mm]	1.38" [35 mm]
EGM006	2.28" [58 mm]	2.54" [64.5 mm]	1.54" [39 mm]
EGM008	2.28" [58 mm]	2.54" [64.5 mm]	1.93" [49 mm]
EGM015	2.84" [72 mm]	3.23" [82 mm]	2.60" [66 mm]
EGM020	2.84" [72 mm]	3.23" [82 mm]	3.03" [77 mm]

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*

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

D-40 = 1/2" (15 mm) 0.26 - 10.6 GPM (1-40 L/min)
D-150 = 1" (25 mm) 2.6 - 40 GPM (10-150 L/min)
D-250 = 1.5" (40 mm) 4 - 66 GPM (15-250 L/min)
D-450 = 2" (50 mm) 8 - 120 GPM (30-450 L/min)
D-750 = 3" (80 mm) 10 - 200 GPM (35-750 L/min)
D-1000 = 3" (80 mm) 13 - 260 GPM (50-1000 L/min)
D-1500 = 4" (100 mm) 20 - 400 GPM (75-1500 L/min)
D-2500 = 4" (100 mm) 40 - 660 GPM (150-2500 L/min)

PROCESS CONNECTIONS 2

B = BSPP (G) female threaded (ISO 228)
N = NPT female threaded
A = ANSI-150 RF flanged
D = DIN PN16 flanged

REGISTERS 3

L = Mechanical 4-digit - Litres (Al housing)
G = Mechanical 4-digit - USG (Al housing)
V = Mechanical 5-digit - Litres (Al housing) D-450 and above
E = Electronic backlit 6-digit with scaled pulse output (Al housing with face protector)
I = Intrinsically safe 8-digit with all outputs (GRN housing)

	1	2	3
--->>>>	D-250	B	L

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

	D-40	D-150	D-250	D-450	D-750	D-1000	D-1500	D-2500
Nominal Size:	1/2" [15 mm]	1" [25 mm]	1.5" [40 mm]	2" [50 mm]	3" [80 mm]	3" [80 mm]	4" [100 mm]	4" [100 mm]
Nominal Flow Range* @ 3cP:	0.26-10.6 GPM	2.6-40 GPM	4-66 GPM	8-120 GPM	10-200 GPM	13-260 GPM	20-400 GPM	40-660 GPM
	1 - 40 L/min	10-150 L/min	15-250 L/min	30-450 L/min	35-750 L/min	50-1000 L/min	75-1500 L/min	150-2500 L/min
Accuracy:	± 1% of reading for mechanical registers (± 1% for electronic display)							
Repeatability:	Typically ± 0.03% of reading							
Temperature Range:	5˚F - +176˚F (-15˚C - +80˚C)							
Max. Pressure psi [bar] (threaded):	580 [40]	580 [40]	435 [30]	285 [20]	175 [12]	175 [12]	145 [10]	145 [10]
Mechanical Register (L, G) (Protection Class):	4-digit resettable & NEMA 4 (IP65)							
Mechanical Register (V) (Protection Class):	N/A			5-digit resettable & NEMA 3S (IP54)				
Electronic Register (E) (Protection Class):	6-digit & NEMA 4 (IP65)							
I.S. Electronic Register (I) (Protection Class):	8-digit & NEMA 4x (IP66/67)							
Recommended Filtration:	100 mesh (150 µm)				40 mesh (400 µm)			
Face to face dimension - threaded:	4.33" (110 mm)	5.39" (137 mm)	7.40" (188 mm)	8.35" (212 mm)	10.47" (266 mm)	11.57" (294 mm)	11.57" (294 mm)	12.60" (320 mm)
Face to face dimension - flanged:	7.44" (189 mm)	7.80" (198 mm)	9.92" (252 mm)	10.91" (277 mm)	13.94" (354 mm)	15.04" (382 mm)	15.28" (388 mm)	16.30" (414 mm)
Meter base to register top dimension (L., G)	7.01" (178 mm)	7.40" (188 mm)	8.94" (227 mm)	9.33" (237 mm)	10.63" (270 mm)	11.34" (288 mm)	13.11" (333 mm)	16.38" (416 mm)
Meter base to register top dimension (V)	N/A			14.09" (358 mm)	15.51" (395 mm)	16.22" (412 mm)	17.99" (457 mm)	21.06" 535 mm
Meter base to register top dimension (E)	6.18" (157 mm)	6.73" (171 mm)	8.11" (206 mm)	8.70" (221 mm)	10.39" (264 mm)	11.06" (281 mm)	12.83" (326 mm)	15.87" (403 mm)
Meter base to register top dimension (I)	6.06" (154 mm)	6.61" (168 mm)	7.99" (203 mm)	8.58" (218 mm)	10.24" (260 mm)	10.91" (277 mm)	12.68" (322 mm)	15.71" (399 mm)
Meter cap width	4.33" (110 mm)	4.72" (120 mm)	6.30" (160 mm)	7.09" (180 mm)	9.53" (242 mm)	11.50" (292 mm)	11.50" (292 mm)	13.07" (332 mm)

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

APPROVALS

CE **NEMA** 3S / 4 / 4X **IP54/65/66/67**

Ø **Not Available in the U.S.A.**

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.

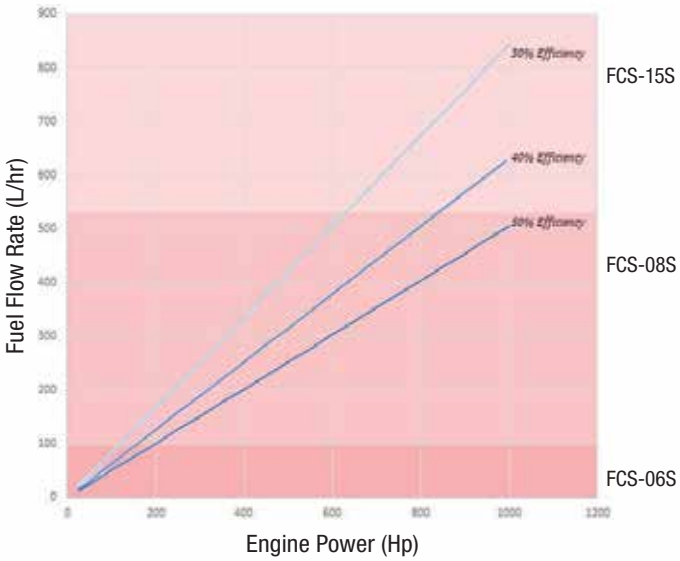
The graphs depicted here should be used as a guide when determining the size of kit is required.

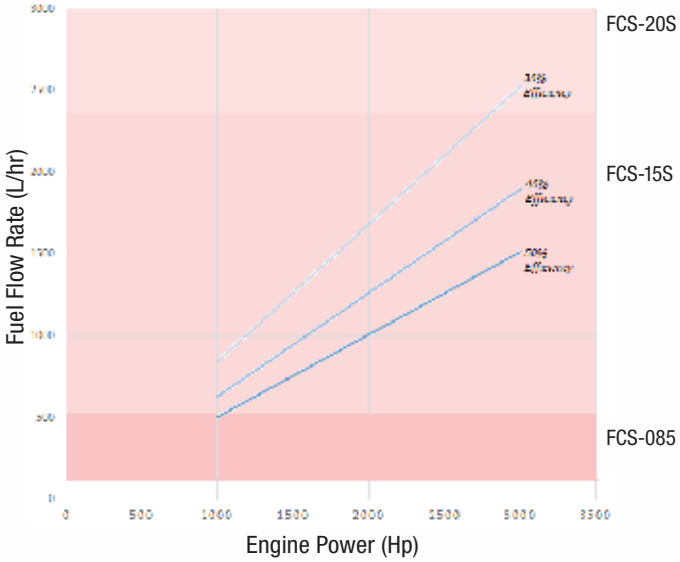
KIT INCLUDES:

- 2 x EGM-Series Electronic Flowmeter
- 1 x F127 Totalizer
- 2 x Meter Brackets
- 2 x Fuel Strainer plus Connector
- Cable Glands

FUEL CONSUMPTION SYSTEM - Marine

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 on combustion engines by correcting for temperature differences from the inlet to outlet of the engine. Pulsating flow electronics, eliminating error due to fuel injection pulsation, coupled with integral PT100 resistance thermometers in Flomec's renowned positive displacement meters gives an accurate and economic fuel consumption measurement solution for all engine sizes.





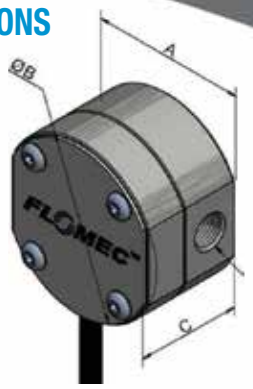
The Fuel Consumption System is designed for Diesel Fuel. Diesel fuel is not considered a flammable fluid in most of the world, but it is in the USA. **The Fuel Consumption System does not have FM Approval and should not be sold for use in the USA.**

KIT SELECTION (CONTINUED)

	Meter A Specification (Inlet) Size	Flow Range		Process Connections	Meter B Specification (Outlet) Size	Flow Range	
FCS-06S	1/4" (6 mm)	2-100 L/hr	0.5-27 GPH	NPT Female Thread	1/4" (6 mm)	2-100 L/hr	0.5-27 GPH
FCS-08S	3/8" (8 mm)	15-550 L/hr	4-145 GPH	NPT Female Thread	3/8" (8 mm)	15-550 L/hr	4-145 GPH
FCS-15S	1/2" (15 mm)	1-40 L/min	0.26-10.6 GPM	NPT Female Thread	1/2" (15 mm)	1-40 L/min	0.26-10.6 GPM
FCS-20S	3/4" (20 mm)	3-80 L/min	0.5-21 GPM	NPT Female Thread	3/4" (20 mm)	3-80 L/min	0.5-21 GPM

DIMENSIONS

EGM
Flow Meter

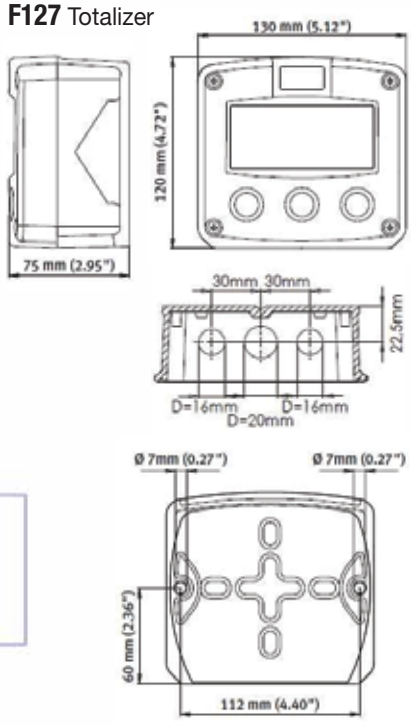


Model:	A	B	C
EGM006	2.28" (58 mm)	2.54" (64.5 mm)	1.54" (39 mm)
EGM008	2.28" (58 mm)	2.54" (64.5 mm)	1.93" (49 mm)
EGM015	2.84" (72 mm)	3.23" (82 mm)	2.60" (66 mm)
EGM020	2.84" (72 mm)	3.23" (82 mm)	3.03" (77 mm)

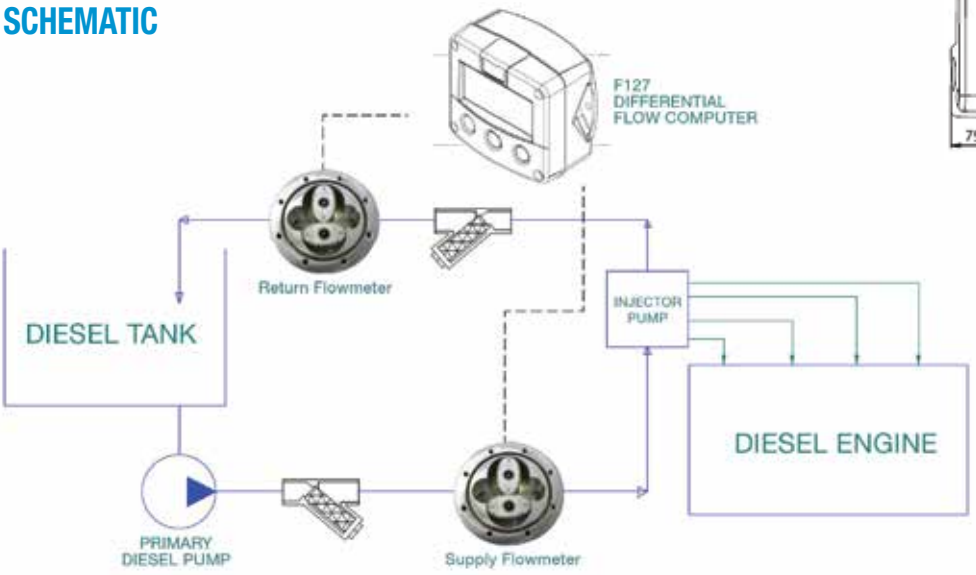
ACCESSORIES

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

F127 Totalizer



SCHEMATIC



Ø 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.

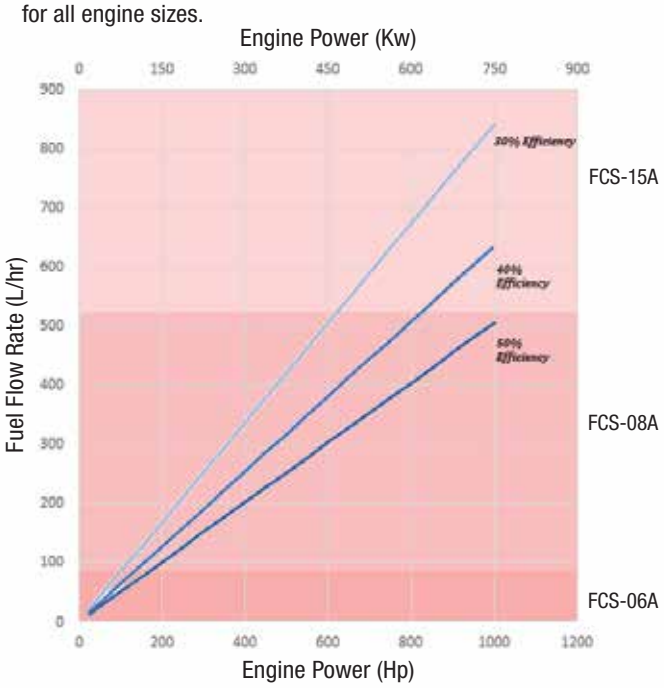
A typical diesel fuel loop system would on average have 3.5 times more fuel in its line than what the engine consumes at full load. With this in mind, selecting the right kit based on the engine's power output is important to ensure accuracy and the positive displacement meters' longevity. The graphs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

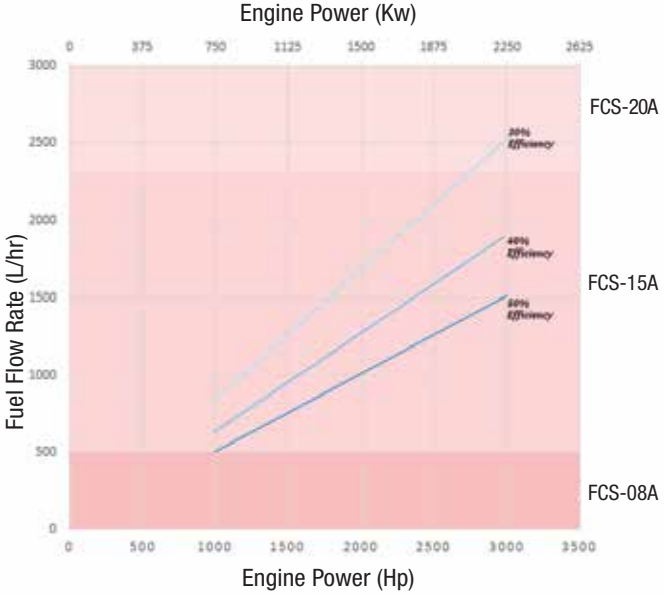
KIT INCLUDES:

- 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.





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.**

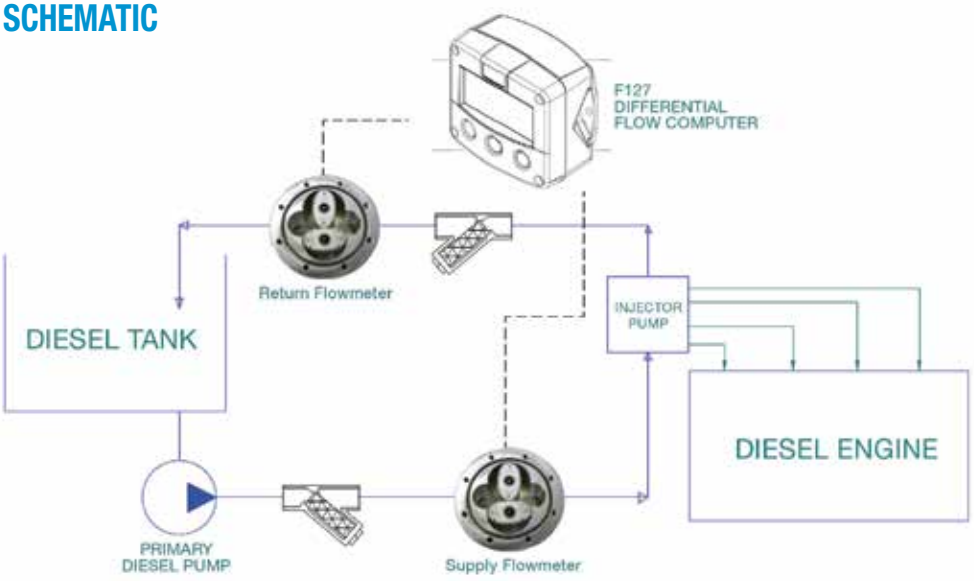
KIT SELECTION (CONTINUED)

	Meter A Specification (Inlet) Size Flow Range				Process Connections	Meter B Specification (Outlet) Size Flow Range			
FCS-06AB	1/4"	(6mm)	2-100 L/hr	0.5-27 GPH	BSPP (G) Female Thread	1/4"	(6mm)	2-100 L/hr	0.5-27 GPH
FCS-06AN	1/4"	(6mm)	2-100 L/hr	0.5-27 GPH	NPT Female Thread	1/4"	(6mm)	2-100 L/hr	0.5-27 GPH
FCS-08AB	3/8"	(8mm)	15-550 L/hr	4-145 GPH	BSPP (G) Female Thread	3/8"	(8mm)	15-550 L/hr	4-145 GPH
FCS-08AN	3/8"	(8mm)	15-550 L/hr	4-145 GPH	NPT Female Thread	3/8"	(8mm)	15-550 L/hr	4-145 GPH
FCS-15AB	1/2"	(15mm)	1-40 L/min	0.26-10.6 GPM	BSPP (G) Female Thread	1/2"	(15mm)	1-40 L/min	0.26-10.6 GPM
FCS-15AN	1/2"	(15mm)	1-40 L/min	0.26-10.6 GPM	NPT Female Thread	1/2"	(15mm)	1-40 L/min	0.26-10.6 GPM
FCS-20AB	3/4"	(20mm)	3-80 L/min	0.5-21 GPM	BSPP (G) Female Thread	3/4"	(20mm)	3-80 L/min	0.5-21 GPM
FCS-20AN	3/4"	(20mm)	3-80 L/min	0.5-21 GPM	NPT Female Thread	3/4"	(20mm)	3-80 L/min	0.5-21 GPM

ACCESSORIES

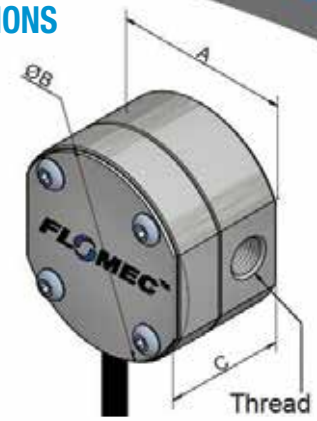
Part Number:	Item	Description
1522056	F-Series Wall Mount Kit	Stainless Steel wall mount kit for F127 totaliser, screws included
1522052	F-Series Pipe Mount Kit	Stainless Steel pipe mount kit for F127 totaliser, excludes worm clamps
1522063	Worm Clamp Kit, 1.0-1.57" (25-40 mm)	Includes 2pcs of stainless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

SCHEMATIC



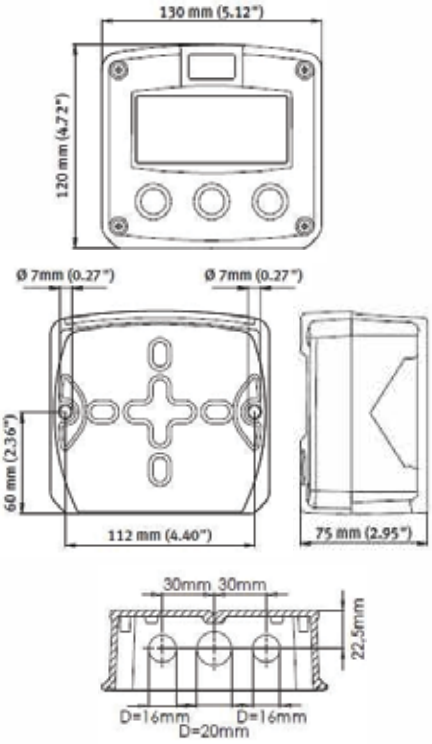
DIMENSIONS

EGM Flowmeter



Model:	A	B	C
EGM006	2.28" (58 mm)	2.54" (64.5 mm)	1.54" (39 mm)
EGM008	2.28" (58 mm)	2.54" (64.5 mm)	1.93" (49 mm)
EGM015	2.84" (72 mm)	3.23" (82 mm)	2.60" (66 mm)
EGM020	2.84" (72 mm)	3.23" (82 mm)	3.03" (77 mm)

F127 Totalizer



Ø **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

PRODUCT CONFIGURATION

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.) -5° F minimum (-15° C)
3 = Chem-Kit, comprises Teflon & Perfluorelastomer (Kalrez-Kemraz) O-rings -5° F minimum (-15° 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)

	1	2	3	4	5	6	7	8	9	10
--->>>>	AIM	006	S	1	1	2	3	1	3	HR

APPLICATIONS

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

SPECIFICATIONS

	AIM004	AIM006	AIM008
Nominal Size:	1/8" [4 mm]	1/4" [6 mm]	3/8" [8 mm]
Process Connections	3/8 in. NPT Elbows, 3x 90˚ orientation positions		
Flow Range*			
- L/hr	1 - 36	2 - 100	15 - 550
- GPH	0.26 - 9.5	0.5 - 27	4 - 145
Accuracy: @3cP	± 1%		
Repeatability:	0.25% reading		
Temperature Range:	5˚ to 149˚ F (-15˚ to 65˚ C)		
Max. Pressure (Static):	440 psi (30 bar)		
Max. Pressure (Operating):	DC Solenoid Coils; 100 psi (7 bar) AC Solenoid Coils; 295 psi (20 bar)		
Electrical Output Resolution - Nominal Pulses per Gallon (Pulses / L)			
Hall Effect	10600 (2800)	3975 (1050)	2650 (710)
High Resolution	42400 (11200)	15900 (4200)	n/a
Hall Effect Output (NPN)	3 wire open collector, 5 - 24V (dc) max, 20mA max		
Protection Class:	IP66/67 (NEMA 4x); EXd I/II T3...T6		

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

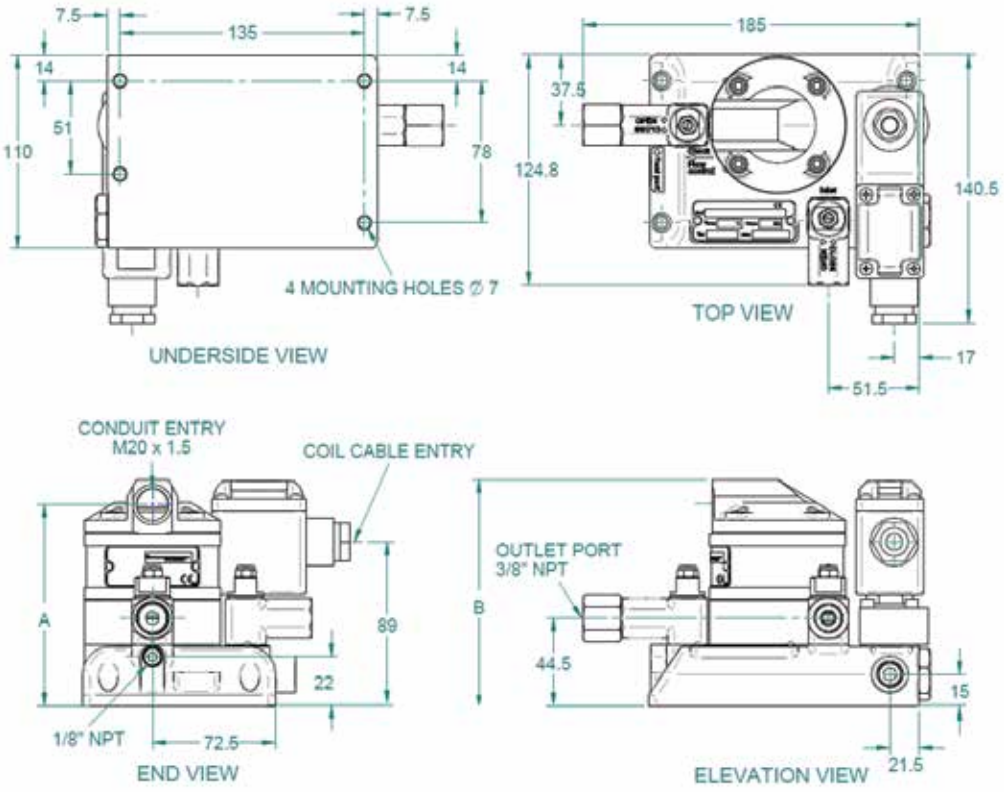
APPROVALS

ATEX IEC IECEx CE

NEMA 4 **IP65/67**

DIMENSIONS

	A	B
AIM004	4.25" (108 mm)	4.80" (122 mm)
AIM006	4.25" (108 mm)	4.80" (122 mm)
AIM008	4.53" (115 mm)	5.08" (129 mm)



PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1
ST006 = 1/4" (6 mm), 200 mesh (75 µm)
ST008 = 3/8" (8 mm), 200 mesh (75 µm)
ST015 = 1/2" (15 mm), 100 mesh (150 µm)
ST025 = 1" (25 mm), 100 mesh (150 µm)
ST040 = 1.5" (40 mm), 100 mesh (150 µm)
ST050 = 2" (50 mm), 100 mesh (150 µm)

BODY MATERIALS & MESH SIZING 2
S1 = 316 Stainless Steel body and screen element, Teflon seal

PROCESS CONNECTIONS 3
1 = BSP Female threaded
2 = NPT female threaded

	1	2	3
--->>>>	ST025	S1	1

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.

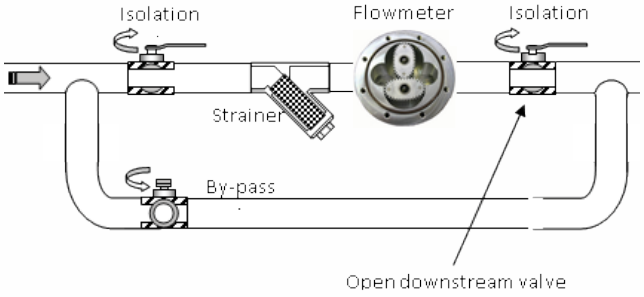
FEATURES / BENEFITS

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

SPECIFICATIONS

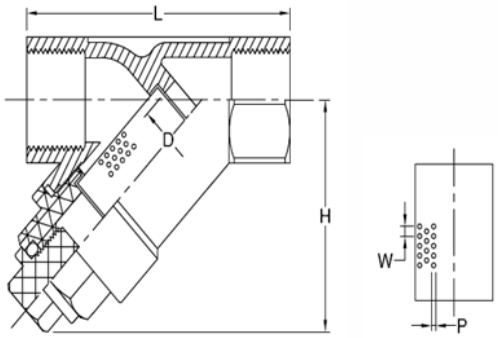
- End Connection: BSP or NPT threaded connection
- Working Pressure: 580 psi (40 bar)
- Temperature: -4ºF - 300ºF (-20ºC - 150ºC)
- Available Mesh Size: 100 - 200 mesh (150 - 75 µm)

TYPICAL INSTALLATION STRAINER WITH FLOWMETER



DIMENSIONS

Size	L	H	D	W	P
1/4" (6 mm)	2.56" (65.0 mm)	2.01" (51.0 mm)	0.39" (10 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)
3/8" (8 mm)	2.56" (65.0 mm)	2.01" (51.0 mm)	0.47" (12 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)
1/2" (15 mm)	2.56" (65.0 mm)	2.01" (51.0 mm)	0.59" (15 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)
1" (25 mm)	3.54" (90.0 mm)	2.83" (72.0 mm)	0.98" (25 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)
1.5" (40 mm)	4.72" (120.0 mm)	3.43" (87.0 mm)	1.57" (40 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)
2" (50 mm)	5.51" (140.0 mm)	4.06" (103.0 mm)	1.97" (50 mm)	0.08" (2.0 mm)	0.04" (1.0 mm)



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

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
♦♦Only Available for GNT, GIT and GBT

SENSOR CHOICE 5

X = No Sensor - Turbine Body Only

ELECTRONIC CHOICE (LOCAL) 6

Turbine Mounted
-X = No Electronics - Turbine Body Only

	1	2	3	4	5	6
--->>>>	G	I	T-	-075S	X	-X

SPECIFICATIONS

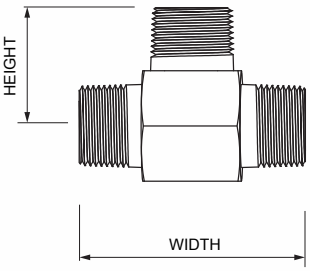
Design Type:	Turbine		
Fitting Type:	NPT (Male)		
	Taper (Male) ISO 7-1 BSPT		
	BSPP (Male) ISO 228-1 designation G		
Housing Material:	316 Stainless Steel		
Meter Sizes Available:			
For GNT, GBT & GIT	1/2” 3/4” 1” 1-1/2” 2”		
For GNT, GBT & GIT High Temp	1/2” 3/4” 1” 1-1/2” 2”		
For GNP, GBP & GIP	1/2” 3/4” 1” 1-1/2” 2”		
Flow Range:	1/2" (050)*	0.6 - 6.0 GPM	(2.2 - 22 L/min)
	1/2” (051)	0.8 - 6.0 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:	1/2” to 2” - 5,000 psi (340 bar) 3” - 2,500 psi (170 bar)		
Operating Temperature Range:			
For GBT, GIT, GNT Tungsten Carbide:	-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)		
For GBP, GIP, GNP	-100° F to + 185° F (-74° C to +85° 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)	

*GSCP-050 requires RF Pickup

Wetted Materials:	Housing:	316 Stainless Steel
	Sleeve Bearings:	GBT, GIT, GNT - Tungsten Carbide GBP, GIP, GNP - PTFE
	Thrust Bearing:	GBT, GIT, GNT - Tungsten Carbide GBP, GIP, GNP - 440C Stainless Steel
	Shaft:	GBT, GIT, GNT - Tungsten Carbide GBP, GIP, GNP - 316 Stainless Steel
	Rotor:	CD4MCu Stainless Steel
	Rotor Supports:	316 Stainless Steel
	Retaining Rings:	300 Series Stainless Steel
Recommended Strainer Size:		
	1/2 inch	40 mesh (420 µm)
	3/4 inch	40 mesh (420 µm)
	1 inch	40 mesh (420 µm)
	1-1/2 inch	18 mesh (1000 µm)
	2 inch	14 mesh (1410 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

Meter Size	Length “ (mm)	Height “ (mm)
1/2”	2.75 (70)	1.68 (43)
3/4”	3.25 (82)	1.75 (44)
1”	3.56 (90)	1.87 (47)
1-1/2”	4.59 (116)	2.12 (54)
2”	6.06 (154)	2.31 (59)



ACCESSORIES / ELECTRONICS

Part No.	Description
80001101	Weather proof enclosure - Zinc
80001105	Weather proof enclosure - SS
F Series (F018/F127/F130)	Remote Electronics

Part No.	Description
145506-01	Kit, Adapter, G Series-QSI1-Q09 Display
145506-02	Kit, Adapter, G Series-QSI2-Q09 Display
145506-03	Kit, Adapter, G Series-QSI3-Q09 Display
145506-04	Kit, Adapter, G Series-QSI1-No Display
145506-05	Kit, Adapter, G Series-QSI2-No Display
145506-06	Kit, Adapter, G Series-QSI3-No Display

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

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

	1	2	3	4	5	6
--->>>>	G	F	T-	-075S	X	-X

SPECIFICATIONS

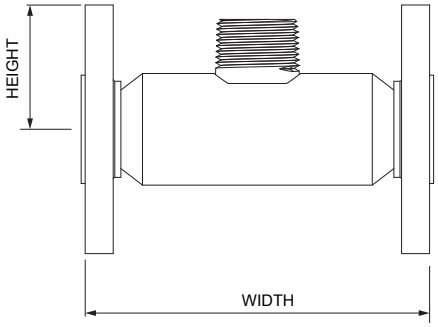
Design Type:	Turbine		
Fitting Type:	150# RF ANSI Flange		
Housing Material:	316 Stainless Steel		
Meter Sizes Available:			
For GFT	3/4” 1” 1-1/2” 2”		
For GFP:	3/4” 1” 1-1/2” 2”		
For High Temperature:	3/4” 1” 1-1/2” 2”		
Flow Range:	3/4” (075)	1.6 - 16 GPM	(6.0 - 60 L/min)
	3/4" (075E)	2.3 - 23 GPM	(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)	

Wetted Materials:	Housing:	316 Stainless Steel
	Sleeve Bearings:	GFT - Tungsten Carbide GFP - PTFE
	Thrust Bearing:	GFT - Tungsten Carbide GFP - 440C Stainless Steel
	Shaft:	GFT - Tungsten Carbide GFP - 316 Stainless Steel
	Rotor:	CD4MCu Stainless Steel
	Rotor Supports:	316 Stainless Steel
	Retaining Rings:	300 Series Stainless Steel
Recommended Strainer Size:		
	3/4 inch	40 mesh (420 µm)
	1 inch	40 mesh (420 µm)
	1-1/2 inch	18 mesh (1000 µm)
	2 inch	14 mesh (1410 µm)
Frequency Output:	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

Meter Size	Length in. (mm)	Height in. (mm)
3/4”	5.50 (140)	1.94 (49)
1”	5.50 (140)	2.12 (54)
1-1/2”	6.00 (152)	2.50 (63)
2”	6.50 (165)	3.00 (76)

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



ACCESSORIES / ELECTRONICS

Part No.	Description
80001101	Weather proof enclosure - Zinc
80001105	Weather proof enclosure - SS
F Series (F018/F127/F130)	Remote Electronics

Part No.	Description
145506-01	Kit, Adapter, G Series-QSI1-Q09 Display
145506-02	Kit, Adapter, G Series-QSI2-Q09 Display
145506-03	Kit, Adapter, G Series-QSI3-Q09 Display
145506-04	Kit, Adapter, G Series-QSI1-No Display
145506-05	Kit, Adapter, G Series-QSI2-No Display
145506-06	Kit, Adapter, G Series-QSI3-No Display

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
- Process Control
- Chemical Feed Lines
- Irrigation
- High Water Volume Mixing
- High Precision / High Pressure
- Thin Viscosity Fluids Under 100 Centipoise

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

G = G Series Precision Turbine Meter

FITTING TYPE 2

SC = Sanitary Clamp

SHAFT / SLEEVE BEARING / THRUST BEARING 3

P = Stainless Steel / PTFE / 440C Stainless Steel

TURBINE SIZE & FLOWRATE 4

-05175 = 1/2" Turbine, 3/4" Fitting, Low Flow
-05110 = 1/2" Turbine, 1" Fitting, Low Flow
-07515 = 3/4" Turbine, 1-1/2" Fitting, Standard
-075E15 = 3/4" Turbine, 1-1/2" Fitting, Ext-Range
-10015 = 1" Turbine, 1-1/2" Fitting, Standard
-15015 = 1-1/2" Turbine, 1-1/2" Fitting, Standard
-20020 = 2". Fitting, Standard

SENSOR CHOICE 5

X = No Sensor - Turbine Body Only

ELECTRONIC CHOICE (LOCAL) 6

Turbine Mounted
-X = No Electronics - Turbine Body Only

	1	2	3	4	5	6
--->>>>	G	SC	P	-05175	X	-X

SPECIFICATIONS

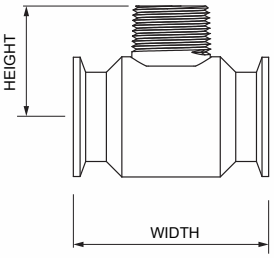
Design Type:	Turbine		
Fitting Type:	Sanitary Clamp		
Housing Material:		316 Stainless Steel	
Meter Sizes Available:			
		1/2" 3/4" 1" 1-1/2" 2"	
Meter ID:		1/2" --> 3/4" Fitting	
		1/2" --> 1" Fitting	
		3/4" --> 1-1/2" Fitting	
		1" --> 1-1/2" Fitting	
		1-1/2" --> 1-1/2" Fitting	
		2" --> 2" Fitting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

♦GSCP-050 requires RF Pickup

Wetted Materials:	Housing:	316 Stainless Steel
	Sleeve Bearings:	PFTE
	Thrust Bearings:	440C Stainless Steel
	Shaft:	316 Stainless Steel
	Rotor:	CD4MCu Stainless Steel
	Rotor Supports:	316 Stainless Steel
	Retaining Rings:	300 Series Stainless Steel
Recommended Strainer Size:	1/2"	40 mesh (420 µm)
	3/4"	40 mesh (420 µm)
	1"	40 mesh (420 µm)
	1-1/2"	18 mesh (1000 µm)
	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

Meter Size	Length " (mm)	Height " (mm)
1/2"	2.75 (70)	1.63 (41)
3/4"	3.25 (82)	1.84 (47)
1"	3.56 (90)	1.84 (47)
1-1/2"	4.59 (116)	2.11 (53)
2"	6.06 (154)	2.39 (61)



ACCESSORIES / ELECTRONICS

Part No.	Description
80001101	Weather proof enclosure - Zinc
80001105	Weather proof enclosure - SS
F Series (F018/F127/F130)	Remote Electronics

Part No.	Description
145506-01	Kit, Adapter, G Series-QSI1-Q09 Display
145506-02	Kit, Adapter, G Series-QSI2-Q09 Display
145506-03	Kit, Adapter, G Series-QSI3-Q09 Display
145506-04	Kit, Adapter, G Series-QSI1-No Display
145506-05	Kit, Adapter, G Series-QSI2-No Display
145506-06	Kit, Adapter, G Series-QSI3-No Display

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

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

G = G Series Precision Turbine Meter

FITTING TYPE 2

SC = Sanitary Clamp

SHAFT / SLEEVE BEARING / THRUST BEARING 3

PS = Stainless Steel / PEEK / PEEK

TURBINE SIZE & FLOWRATE 4

-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

	1	2	3	4
--->>>>	G	SC	PS	-150

APPROVALS

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	(125 - 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
Recom-mended 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.	

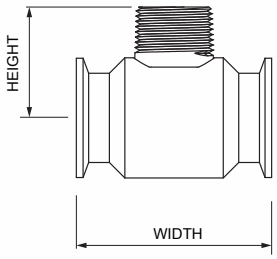
ACCESSORIES / ELECTRONICS

Part No.	Description
80001101	Weather proof enclosure - Zinc
80001105	Weather proof enclosure - SS
F Series (F018/F127/F130)	Remote Electronics
145506-01	Kit, Adapter, G Series-QSI1-Q09 Display
145506-02	Kit, Adapter, G Series-QSI2-Q09 Display
145506-03	Kit, Adapter, G Series-QSI3-Q09 Display
145506-04	Kit, Adapter, G Series-QSI1-No Display
145506-05	Kit, Adapter, G Series-QSI2-No Display
145506-06	Kit, Adapter, G Series-QSI3-No Display

DIMENSIONS

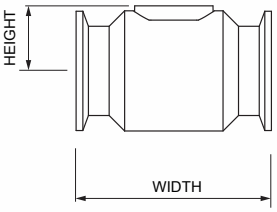
Meter Size	Length “ (mm)	Height “ (mm)
1”	3.56 (90)	1.84 (47)
1-1/2”	4.59 (116)	2.11 (53)
2”	6.06 (154)	2.39 (61)

GSCPS STANDARD



Meter Size	Length “ (mm)	Height “ (mm)
1”	3.56 (90)	1.03 (26)
1-1/2”	4.59 (116)	1.21 (31)
2”	6.06 (154)	1.45 (37)

GSCPS LOW PROFILE



G Series Precision **ACCESSORIES**

Magnetic Pickups

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								Magnetic Pickups work with...		
Description	**Part Number**	**Sensor Power**	**Temperature Range**	**Cable Type**	**Connector Required**	**Cable Length**	**Thread Size**	**Local**	**Remote**	**Battery Pwr Display**
Wire Lead Low Drag	81006001	None	-100° F to +250° F (-73° C to +121° C)	None	None	12 in. (305 mm)	5/8" - 18	X		Yes
Low Drag	81006000	None	-100° F to +250° F (-73° C to +121° C)	S	80001200	N/A	5/8" - 18		X	Yes
High Temp., Low Drag (10 ft. cable)	81007001	None	-450° F to +800° F (-268° C to +426° C)	None	None	10 ft. (244 mm)	5/8" - 18		X	Yes
*RF (required for GNP-050, GTP-050 & GSCP-050)	81005002	7-30V (dc)	-40° F to +248° F (-29° C to +120° C)	D	80001202	N/A	5/8" - 18		X	No
3/4 TO 3 INCH METER SIZES										
Wire Lead Standard	81003000	None	-100° F to +250° F (-73° C to +121° C)	None	None	12 in. (305 mm)	5/8" - 18	X		Yes
Standard	81001000	None	-100° F to +250° F (-73° C to +121° C)	S	80001200	N/A	5/8" - 18		X	Yes
Herm / High Temperature	81002000	None	-450° F to +258° F (-268° C to +125° C)	S	80001200	N/A	5/8" - 18		X	Yes
High Temperature, Standard	81007000	None	-450° F to +800° F (-268° C to +426° C)	None	None	3 ft. (910 mm)	5/8" - 18		X	Yes
▲*Digital (Di-Mag)	81004000	5-32V (dc)	-40° F to +248° F (-29° C to +120°C)	D	80001202	N/A	5/8" - 18		X	No

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

Pickup Enclosures

Model No.
N4SWP

Model No.
N4AWP

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

ENCLOSURES – PART NUMBERS	
Description	**Part Number**
N4AWP - Weatherproof magnetic pickup steel enclosure	80001101
N4SWP - Weatherproof magnetic pickup 316 S.S. enclosure	80001105

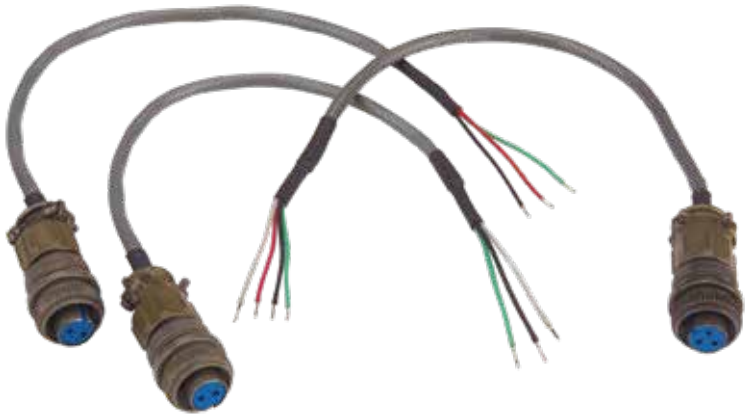
Connectors

Connectors are included with FLOMEC® cable assemblies. If you need replacement connectors, choose from the following:

CONNECTORS – PART NUMBERS

Description	Part Number
Standard mating connector (2 pin) used on Type S and T cable assemblies	80001200
Water resistant connector (2 pin) used on Type H cable assembly	80001201
Di-Mag connector (3 pin) used on Type D cable assembly	80001202

Cable Assemblies



FLOMEC® Cable Assemblies include the connector.

CABLE ASSEMBLY – PART NUMBERS

Type "S" Standard Cable (2 Conductor)		Type "H" Water Resistant (2 Conductor)	
Cable Length	**Part No.**	**Cable Length**	**Part No.**
8 in. (207 mm)	83001001	8 in. (207 mm)	83003001
5 ft. (1.52 m)	83001005	5 ft. (1.52 m)	83003005
10 ft. (3.04 m)	83001010	10 ft. (3.04 m)	83003010
15 ft. (4.57 m)	83001015	15 ft. (4.57 m)	83003015
20 ft. (6.09 m)	83001020	20 ft. (6.09 m)	83003020
25 ft. (7.62 m)	83001025	25 ft. (7.62 m)	83003025
30 ft. (9.35 m)	83001030	30 ft. (9.35 m)	83003030
40 ft. (12.19 m)	83001040	40 ft. (12.19 m)	83003040
50 ft. (15.24 m)	83001050	50 ft. (15.24 m)	83003050
75 ft. (22.86 m)	83001075	75 ft. (22.86 m)	83003075
100 ft. (30.48 m)	83001100		
125 ft. (38.1 m)	83001125		
Type "D" Di-Mag or RF (3 Conductor)		**Type "T" High Temperature (2 Conductor)**	
Cable Length	**Part No.**	**Cable Length**	**Part No.**
8 in. (207 mm)	83002001	8 in. (207 mm)	83004001
5 ft. (1.52 m)	83002005	5 ft. (1.52 m)	83004005
10 ft. (3.04 m)	83002010	10 ft. (3.04 m)	83004010
15 ft. (4.57 m)	83002015	15 ft. (4.57 m)	83004015
20 ft. (6.09 m)	83002020	20 ft. (6.09 m)	83004020
25 ft. (7.62 m)	83002025	25 ft. (7.62 m)	83004025
30 ft. (9.35 m)	83002030	30 ft. (9.35 m)	83004030
40 ft. (12.19 m)	83002040	40 ft. (12.19 m)	83004040
50 ft. (15.24 m)	83002050	50 ft. (15.24 m)	83004050
75 ft. (22.86 m)	83002075	75 ft. (22.86 m)	83004075

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

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

*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** = BSPP 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 (250° F [120° C] max.) / ± 0.5%
2 **1** = High Temp (450° F [232° C] max.) / ± 0.5%
3 **1** = ATEX/IECEx approved intrinsically safe 250° F [120° C] max.) / ± 0.5% (only available with R3 Integral Options)
5 **1** = Amplified (5-30V (dc) supply tracking pulse) 250° F [120° C] max.) / ± 0.5%

INTEGRAL OPTIONS 8

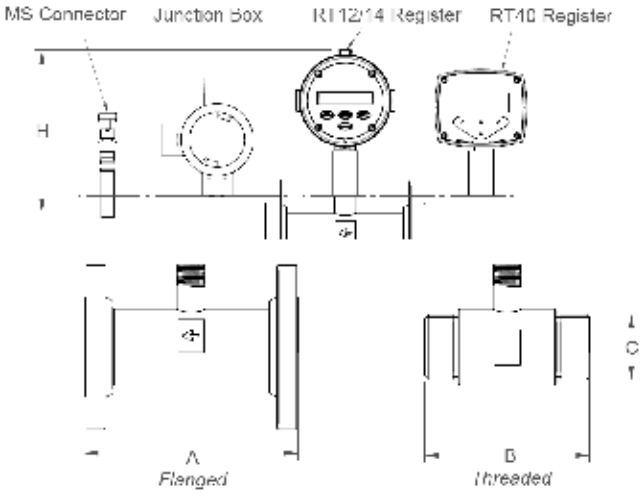
JB = Junction Box
R3 = RT12 Intrinsically Safe (IECEx and ATEX approved) Rate Totalizer with all outputs (GRN housing)
R4 = RT40 Backlit Rate Totalizer with scaled pulse (Alloy housing with facia protector)
R5 = RT14 Backlit Rate Totalizer with scaled pulse, alarms and 4-20mA (GRN housing)

	1	2	3	4	5	6	7	8
--->>>>	TP025	S	1T	1	-2	1	1	R5

DIMENSIONS

	A	B	C
TP010	-	2.52" (64 mm)	1/2" (15 mm) BSP or NPT
TP015	-	2.52" (64 mm)	3/4" (20 mm) BSP or NPT
TP020	-	3.27" (83 mm)	3/4" (20 mm) BSP or NPT
TP025	5.98" (152 mm)	3.50" (89 mm)	1" (25 mm) BSP or NPT
TP040	7.01" (178 mm)	4.52" (115 mm)	1 1/2" (40 mm) BSP or NPT
TP050	7.76" (197 mm)	5.23" (133 mm)	2" (50 mm) BSP or NPT
TP080	10" (254 mm)	-	-
TP100	14.01" (356 mm)	-	-

OPTION	H
MS Connector	4.64" (118 mm)
Junction Box	5.91" (150 mm)
RT12/RT14	8.27" (210 mm)
RT40	7.28" (185 mm)



Ø **Not Available in the U.S.A.**

APPLICATIONS

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

APPROVALS

ATEX IEC IECEx

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 1
G2 = Industrial Grade Flowmeter

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

TURBINE SIZE 3
05 = ½ inch
07 = ¾ inch
10 = 1 inch
15 = 1-½ inch
20 = 2 inch

FITTING TYPE 4
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 5
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 6
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 7
A = Use for Turbine Only or 09 Electronics choice (Sizes 05-10)
B = Use for Turbine Only or 09 Electronics choice (Sizes 15-20) Use for 19 Electronics choice (Sizes 05-10)
C = Use for 19 Electronics choice (Sizes 15-20)
D = Use for Turbine Only or 09 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) Use for 80 thru 93 Electronics choice, with ANSI Flange (Sizes 10)
F = Use for 80 thru 93 Electronics choice (Sizes 05-20)
G = Use for 80 thru 93 Electronics choice, with ANSI Flange (Sizes15-20)

	1	2	3	4	5	6	7
--->>>>	G2	S	15	N	09	GM	B

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" 3/4" 1" 1-1/2" 2"**		
Flow Range:	1/2" (05)	1 - 10 GPM	(3.8 - 38 L/min)
	1/2" (05) *PVDF ownly*	1.2 - 12 GPM	(4.5 - 45 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**
	1/2" (05)	± 2.0%	± 1.5%
	3/4" (07)	± 1.5%	± 1.0%
	1" (10)	± 1.5%	± 1.0%
	1-1/2" (15)	± 1.0%	± 0.75%
	2" (20)	± 1.0%	± 0.75%
Repeatability:	± 0.1% (PVDF is ± 0.3%)		
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)**		
ANSI Flange 316 Stainless Steel	Flange Rule		
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:	Housing:	PVDF (15% Carbon Fiber Filled)
	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.	

APPROVALS

CE ATEX

FM APPROVED FM APPROVED **IP65** IEC IECEx NEMA 4

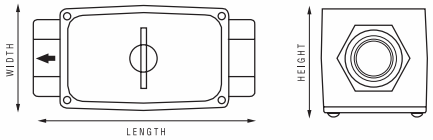
DIMENSIONS

NOTE: ***09 Display adds 0.67 in. (17 mm) to height.***

NPT/ISO

Meter Size	Length " (mm)	Height " (mm)	Width " (mm)
1/2"	4.2 (107)	1.8 (46)	2.0 (51)
3/4"	4.3 (109)	2.0 (51)	2.0 (51)
1"	4.5 (114)	2.2 (56)	2.0 (51)
1-1/2"	5.3 (135)	2.8 (71)	2.7 (68)

Meter Size	Length " (mm)	Height " (mm)	Width " (mm)
2"	6.3 (160)	3.2 (81)	3.3 (84)
PVDF 1/2"	7.3 (185)	3.2 (81)	2.1 (53)
PVDF 1"	8.1 (206)	3.3 (84)	2.8 (71)



ACCESSORIES / ELECTRONICS

Part No.	Description
113435-1	Conditioned Signal Module
125060-1	Pulse Access Module
125070-1	External Power Module
125100-1	4-20 mA Module
120077-01	FM Approved Sensor
120077-02	ATEX Approved Sensor
125260-01	90 Degree Display Adaptor Kit
113275-1	FM Approved Remote Kit

Part No.	Description
145505-01	Kit, Adapter, G2-QSI1-Q09 Display
145505-02	Kit, Adapter, G2-QSI2-Q09 Display
145505-03	Kit, Adapter, G2-QSI3-Q09 Display
145505-04	Kit, Adapter, G2-QSI1-No Display
145505-05	Kit, Adapter, G2-QSI2-No Display
145505-06	Kit, Adapter, G2-QSI3-No Display
145505-07	Kit, Adapter, G2-QSI1-Display Ready
145505-08	Kit, Adapter, G2-QSI2-Display Ready
145505-09	Kit, Adapter, G2-QSI3-Display Ready

FM Approved Remote Kit Assembly
(Part No. 113275-1)

FM Approved Remote Kit Assembly Installed

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.

Features and Benefits:

- ✓ Maintains FM Approval.
- ✓ Accommodates fluid temperatures from -40° F to +250° F (-40° C to +121° C) depending on meter.
- ✓ This kit can upgrade an existing FLOMEC® meter or can be purchased with a new meter.
- ✓ Battery powered from meter; no additional power required.

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

APPROVALS

FM APPROVED · FM C US APPROVED · CE · NEMA 4 · ATEX Ex · **IP65**

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

Conditioned Signal Output Module Installed

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.

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.

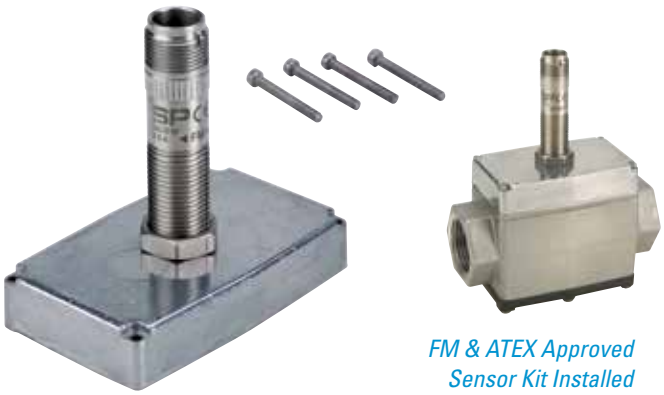
SPECIFICATIONS	
Connector:	Hubble PG7
Signal Type:	Open Collector (NPN)
Power:	External 9 to 35 V (dc), approximately 1 mA
Connection:	Three wire
Frequency:	0 to 750 Hz
Cable:	10 ft. (3 m) Belden #9363

APPROVALS

CE

FM and ATEX Approved Sensor Kit

FM: Part No. 120077-01
ATEX: Part No. 120077-02



FM & ATEX Approved Sensor Kit Installed

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

Signal Type:	Open Collector (NPN)
Power Source:	5.8 to 30 V (dc)
Supply Current:	≤ 15 mA
Frequency:	5 to 10k Hz
Cable:	None provided - 3 conductor required for use
Temperature:	Sensor is capable of operating in the range of -40° F to
(Non-Hazardous)	+248° F (-40° C to +120° C).
Temperature:	For Class I, II, III, Division 1: Group ABCDEFG and CSA:
(Hazardous)	Class 1, Div. 1 Group ABCD, the following temperature
	codes apply:
	T6 +185° F (+85° C) at +149° F (+65°C) Ambient Temperature
	T5 +212° F (+100° C) at +186° F (+85° C) Ambient Temperature

APPROVALS

ATEX Ex FM APPROVED CE

4-20 mA Module

(Part No. 125100-1)

4-20 mA Module Installed

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

Signal Type:	Analog
Power:	Loop Powered
Voltage:	7 to 30 V (dc)
Strain Relief:	Hubble PG7
Cable:	10 ft. (3 m), Belden #9363

CE

Pulse Access Module

(Part No. 125060-1)

Pulse Access Module Installed

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

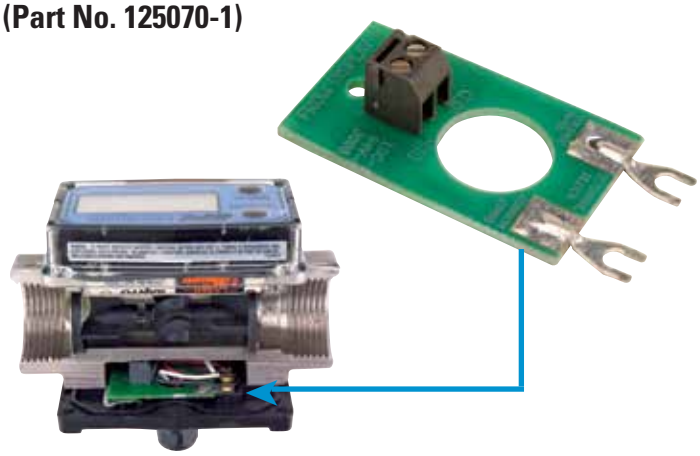
SPECIFICATIONS	
Signal Type:	Open Collector (NPN)
Voltage:	0 to 60 V (dc)
Frequency:	0 to 750 Hz
Strain Relief:	Hubble PG7
Cable:	10 ft. (3 m) Belden #9363

APPROVALS

CE

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

CE

G2 Series Industrial Meter **ACCESSORIES**

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.

Conduit Adapter Kit Installed

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.

Pulse Access Dust Cover Installed

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.

Kit Shown Installed on PVDF Meter

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
- Ag Chemicals
- Solvents / Glycol
- Chemical Feed Lines
- Fuel Products (Aluminum model)
- Water / Non-aggressive Chemicals (Nylon model)

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

A1 = Commercial Grade Electronic Digital Meter

ELECTRONIC CHOICE 2

09 = 2 Totals (1 Resettable, 1 Cumulative); Factory Calibration in gallons and litres, User Configuration and Rate of Flow
XX = No Computer

CALIBRATION 3

GM = GPM & L/min (Gallons Default)
LM = GPM & L/min (Litres Default)
XX = No Computer

TURBINE SIZE 4

A025 = Aluminum - Low Flow
A100 = Aluminum - 1 inch
A200 = Aluminum - 2 inch
N025 = Nylon - Low Flow
N100 = Nylon - 1 inch
X### = No Turbine*

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

FITTING TYPE 5

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

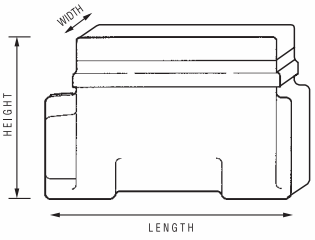
PACKAGING 6

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

	1	2	3	4	5	6
--->>>>	A1	09	GM	N100	N	A1

DIMENSIONS

Meter Size	Length " (mm)	Height " (mm)	Width " (mm)
A025	4.0 (102)	2.5 (63)	2.0 (51)
A100	4.0 (102)	2.5 (63)	2.0 (51)
A200	6.0 (152)	4.5 (114)	3.0 (76)
N025	4.0 (102)	2.5 (63)	2.0 (51)
N100	4.0 (102)	2.5 (63)	2.0 (51)



SPECIFICATIONS

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

*ISO 7 Designation is RC.

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

APPROVALS

CE ATEX

FM APPROVED FM C US APPROVED IP65 IEC IECEx NEMA 4

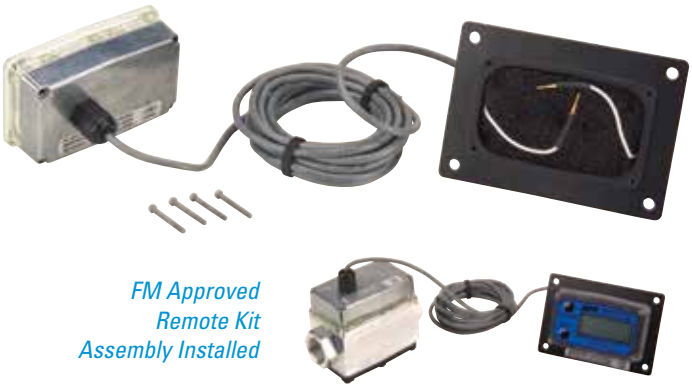
Pressure Rating (Aluminum):		300 psi (21 bar)	
Pressure Rating (Nylon):		150 psi (10.3 bar)	
Operating Temperature Range:		-40° F to 250° F (-40° C to 121° C)	
	with Display:	14° F to 140° F (-10° C to 60° C)	
Typical K-Factor:	A025	2,200 PPG (581 Pulses/L)	
	A100	730 PPG (193 Pulses/L)	
	A200	72 PPG (19 Pulses/L)	
	N025	2200 PPG (581 Pulses/L)	
	N100	730 PPG (193 Pulses/L)	
Frequency Range:	A025	11-110 Hz @ 0.3-3 GPM (1-11 L/min)	
	A100	36.5-608.3 Hz @ 3-50 GPM (11-190 L/min)	
	A200	36-360 Hz @ 30-300 GPM (114-1135 L/min)	
	N025	11-110 Hz @ 0.3-3 GPM (1-11 L/min)	
	N100	36.5-608.3 Hz @ 3-50 GPM (11-190 L/min)	
Recommended Strainer Size:		A025	55 mesh (275 µm)
		A100	28 mesh (700 µm)
		A200	28 mesh (700 µm)
		N025	55 mesh (275 µm)
		N100	28 mesh (700 µm)
Wetted Materials (Aluminum):	Housing:	Aluminum	
	Bearings:	Ceramic	
	Shaft:	Tungsten Carbide	
	Rotor:	Nylon	
	Rings:	316 Stainless Steel	
Wetted Materials (Nylon:	Housing:	Nylon	
	Bearings:	Ceramic	
	Shaft:	Tungsten Carbide	
	Rotor:	Nylon	
	Rings:	316 Stainless Steel	
Calibration Report:	Comes standard with A1 Series meters.		
	N.I.S.T. – Certification available.		

ACCESSORIES / ELECTRONICS

Part No.	Description
113275-1	FM Approved Remote Kit Assembly
113435-1	Conditioned Signal Output Module
125260-01	90° Display Adapter Kit
120077-01	FM Approved Sensor Kit

Part No.	Description
120077-02	ATEX Approved Sensor Kit
113524-01	Connector Kit for FM or ATEX Approved Sensor
113437-01	Conduit Adapter Kit
125080-1	Pulse Access Dust Cover

FM Approved Remote Kit Assembly
(Part No. 113275-1)



FM Approved Remote Kit Assembly Installed

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.

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

APPROVALS

FM APPROVED CE

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	
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

CE

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

Conditioned Signal Output Module Installed

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.

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.

Kit Shown Installed on PVDF Meter

TM SERIES®
water meters

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

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

TM = Water Meter, Schedule 80 PVC

TURBINE SIZE 2

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 3

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 4

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

	1	2	3	4
--->>>>	TM	300	-N	-P

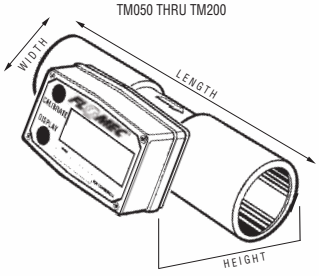
DIMENSIONS

Meter Size	Length	Height	Width
TM050	3.8" (96 mm)	2.6" (66 mm)	2.0" (51 mm)
TM050-N	5.8" (147 mm)	2.6" (66 mm)	2.0" (51 mm)
TM075	3.8" (96 mm)	2.7" (68 mm)	2.0" (51 mm)
TM075-N	5.8" (147 mm)	2.7" (68 mm)	2.0" (51 mm)
TM100	4.1" (104 mm)	3.1" (79 mm)	2.0" (51 mm)

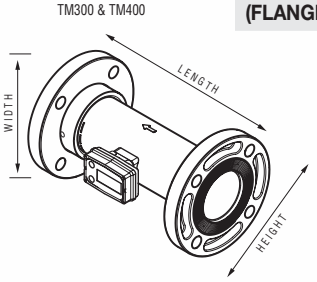
Meter Size	Length	Height	Width
TM100-N	6.1" (155 mm)	3.1" (79 mm)	2.0" (51 mm)
TM150	5.4" (137 mm)	3.7" (94 mm)	2.1" (53 mm)
TM150-N	7.4" (188 mm)	3.7" (94 mm)	2.1" (53 mm)
TM200	5.5" (140 mm)	4.2" (107 mm)	2.4" (61 mm)
TM200-N	7.5" (190 mm)	4.2" (107 mm)	2.4" (61 mm)

Meter Size	Length	Height	Width
TM300 (SPIGOT)	11.5" (292 mm)	5.34" (136 mm)	3.5" (89 mm)
TM400 (SPIGOT)	13.5" (343 mm)	6.34" (161 mm)	4.5" (114 mm)
TM300-N (NPT)	14.7" (373 mm)	5.78" (147 mm)	4.37" (111 mm)
TM400-N (NPT)	17.0" (432 mm)	6.76" (172 mm)	5.34" (136 mm)
TM300-F (FLANGE)	12.0" (305 mm)	7.5" (190 mm)	7.5" (190 mm)
TM400-F (FLANGE)	14.0" (356 mm)	9.0" (229 mm)	9.0" (229 mm)

TM050 THRU TM200



TM300 & TM400



**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	

*At the end of Extended Flow Range accuracy may decrease. Damage to the meter may occur if running at high Extended Range.

**PVC pressure rating will incrementally decrease above 73° F (23° C).

ACCESSORIES / ELECTRONICS

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

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

TM SERIES (WATER METERS) WITH DISPLAY AND PULSE OUTPUT

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
- 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

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

TM = Water Meter, Schedule 80 PVC

TURBINE SIZE 2

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

FITTING TYPE 3

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

	1	2	3
--->>>>	TM	150	-N-LP

APPLICATIONS

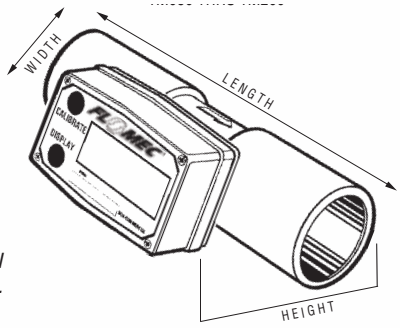
- OEM water treatment equipment / skids
- Sub-metering of facility water usage
- Waste water treatment equipment
- Irrigation
- Batching
- Plant process water
- Water based cooling systems
- Chemical feed systems
- Monitoring clean fluids
- Cooling towers
- Blending

DIMENSIONS

Meter Size	Length	Height	Width
TM050-LP	4.3" (109 mm)	2.5" (64 mm)	2.1" (53 mm)
TM050-N-LP	6.0" (152 mm)	2.7" (68 mm)	2.1" (53 mm)
TM075-LP	4.4" (112 mm)	2.7" (68 mm)	2.1" (53 mm)
TM075-N-LP	6.1" (155 mm)	2.9" (74 mm)	2.1" (53 mm)
TM100-LP	4.5" (114 mm)	2.9" (74 mm)	2.1" (53 mm)
TM100-N-LP	6.5 (165)	3.1 (79)	2.1" (53 mm)
TM150-LP	5.4" (137 mm)	3.6" (91 mm)	2.1" (53 mm)

Meter Size	Length	Height	Width
TM150-N-LP	7.6" (193 mm)	3.8" (97 mm)	2.3" (58 mm)
TM200-LP	5.5" (140 mm)	4.1" (104 mm)	2.4" (61 mm)
TM200-N-LP	7.9" (201 mm)	4.4" (112 mm)	3.5" (89 mm)

Length guidelines are estimates; actual length can vary up to ± 1/2".

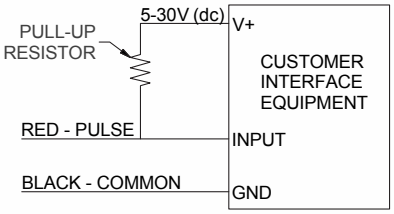


SPECIFICATIONS

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)

INTERNAL PULL-UP RESISTOR

- Use a minimum 820 ohms resistor if necessary



APPROVALS

CE

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

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

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 1

01 = Electronic Digital Flowmeter

HOUSING CHOICE 2

A = Aluminum
N = Nylon

FITTING TYPE 3

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

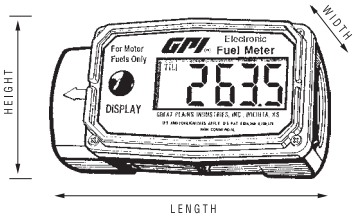
CALIBRATION 4

GM = Gallons
LM = Litres

	1	2	3	4
--->>>>	01	N	31	GM

DIMENSIONS

Meter Size	Length	Height	Width
01A	4.0” (102 mm)	2.5” (63 mm)	2.0” (51 mm)
01N	4.0” (102 mm)	2.5” (63 mm)	2.0” (51 mm)



SPECIFICATIONS

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

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

02 SERIES ELECTRONIC FLOWMETER WITH SCALED PULSE OUTPUT

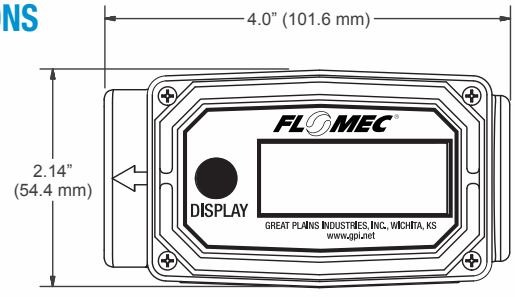
The **FLOMEC® 02 Series** is a lightweight, accurate and reliable turbine meter. Choose the 02 Series for thin viscosity fluid applications.

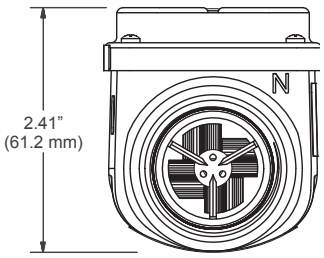
- Available in Aluminum or Nylon
- Virtually maintenance free
- Display powered by two AAA batteries
- Offers one pulse per unit (gallons and litres)

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.

DIMENSIONS





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

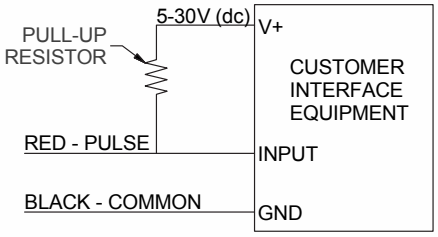
CALIBRATION 4

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

	1	2	3	4
--->>>>	02	N	31	GM

INTERNAL PULL-UP RESISTOR

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



APPLICATIONS

- Irrigation
- Building Automation (Chillers)
- Programmable Logic Controller (Batch Control)
- OEM (connect to flow switch - low cost meter
- Connect to flow switch
- Diesel & Fuel Oil
- Data Logger
- Wireless Communication
- Numerous water applications
- Batch Controller

SPECIFICATIONS

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

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:	Ceramicw
	Shaft:	Tungsten Carbide
	Rotor:	Nylon
	Rings:	316 Stainless Steel
	Signal Generator	Ferrite

APPROVALS

CE

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 a 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 vicous 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

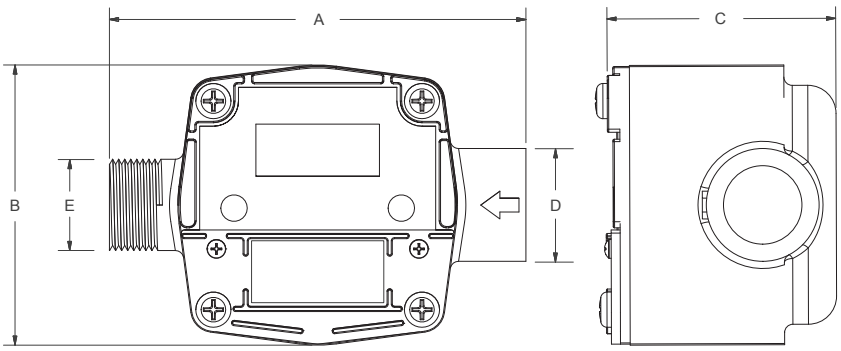
- Fertilizers
- Oil
- Pesticides
- Water

APPROVALS

CE

DIMENSIONS

	Inches (mm)
A. Width	6.00 (152.4)
B. Height	4.03 (109.2)
C. Depth	3.30 (88.3)
D. Inlet Port Outside Diameter	1.64 (41.7)
E. Outlet Port Thread Diamter	1.31 (33.3)



LM51DN ELECTRONIC FLOWMETER

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

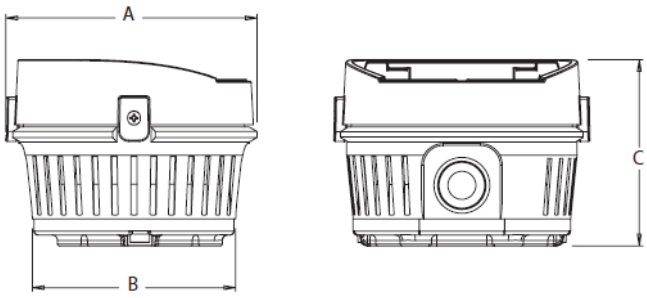
- 1500 psi rating
- NPT Threads
- Large 6-digit LCD display with two decimal-point precision
- Totalization in pints, quarts, US gallons or liters
- Unit of measure selectable from the front of register
- Resettable and non-resettable totalizer
- Display operation temperature range –4° to +140° F (–20° 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

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

DIMENSIONS

Dimension	Size
A	4.04" (102.6 mm)
B	3.27" (83 mm)
C	2.99" (75.8 mm)



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

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 CONFIGURATION

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 ⅜" 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 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)*#
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^

	1	2	3	4	5	6	7	8	9	10
--->>>>	DP	490	S	2	1	2	-2	1	6	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

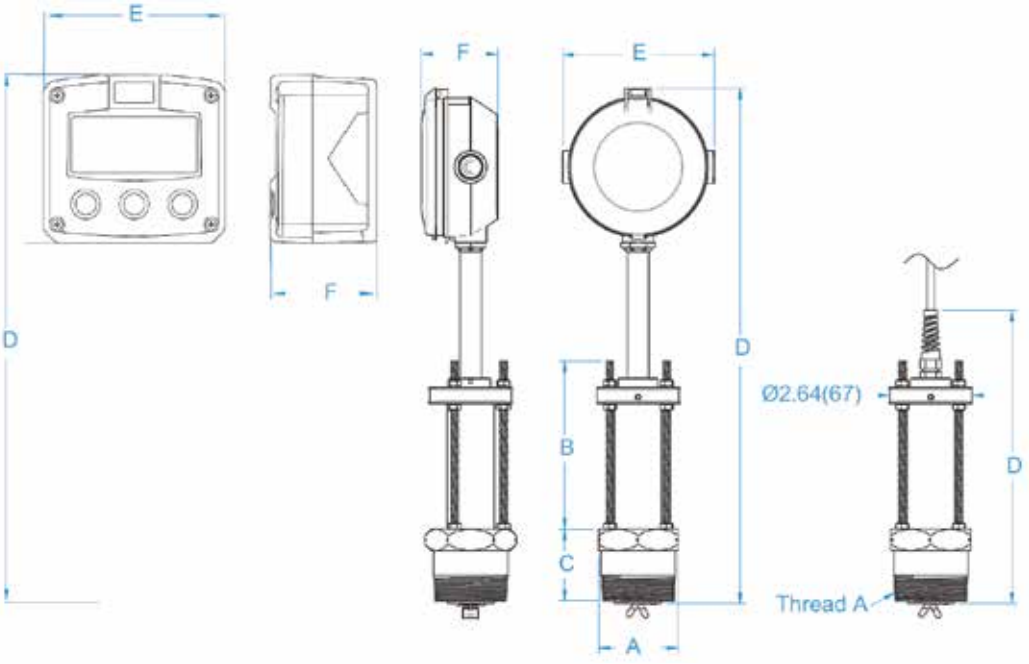
	DP490	DP525
Suits Pipe Sizes	1.5 - 35” (40-900 mm)	2 - 100” (50-2500 mm)
Pipe Connection	1.5” or 2” BSPT or NPT male thread	2” BSPT or NPT male thread
Flow Velocity Range	3 - 33 ft/sec (1 -10 m/s)	
Linearity % of Reading	Typically ± 1.5%	
Temperature Range:	-40˚F to 300˚F (-40˚C to 150˚C)	
Max. Pressure:	1160 psi (80 bar)	
Materials	316SS body and rotor shaft	
Protection Class:	IP68 (NEMA 6), optional I.S (Instrinsically Safe) Intergral options	
Pulse Outputs		
Hall Effect	3 wire open collector, 5-24v (dc), 20mA max. Nom 0 -240Hz	
Reed*	30v (dc), 200mA max. Nom 0 - 80Hz	
Voltage Pulse	Self Generated voltage, Nom 0 - 240Hz	
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*
***Optional Integral option is required*

Flying Cable Option	DP490	DP525
A- Thread	1.5” or 2” BSP or NPT	2” BSP or NPT
A - Dimension	2.36” (60 mm)	2.52” (64 mm)
B	7.8” (198 mm)	17.48” (444 mm)
C	1.5” (38 mm)	2.28” (58 mm)
D	9.33” (237 mm)	16.69” (424 mm)

Integral Option	DP490	DP525
A- Thread	1.5” or 2” BSP or NPT	2” BSP or NPT
A - Dimension	2.36” (60 mm)	2.52” (64 mm)
B	7.8” (198 mm)	17.48” (444 mm)
C	1.5” (38 mm)	2.28” (58 mm)
D - RT12/RT14	16.34” (415 mm)	35.43 in (900 mm)
D - RT40	14.96” (380 mm)	34.06” (865 mm)
D - F018/F115	16.26” (413 mm)	35.35” (898 mm)
E - RT12/RT14	0.47” (122 mm)	
E - RT40	4.45” (113 mm)	
E - F018/F115	5.12” (130 mm)	
F - RT12/RT14	2.40” (61 mm)	
F - RT40	2.48” (63 mm)	
F - F018/F115	2.95” (75 mm)	

DIMENSIONS



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

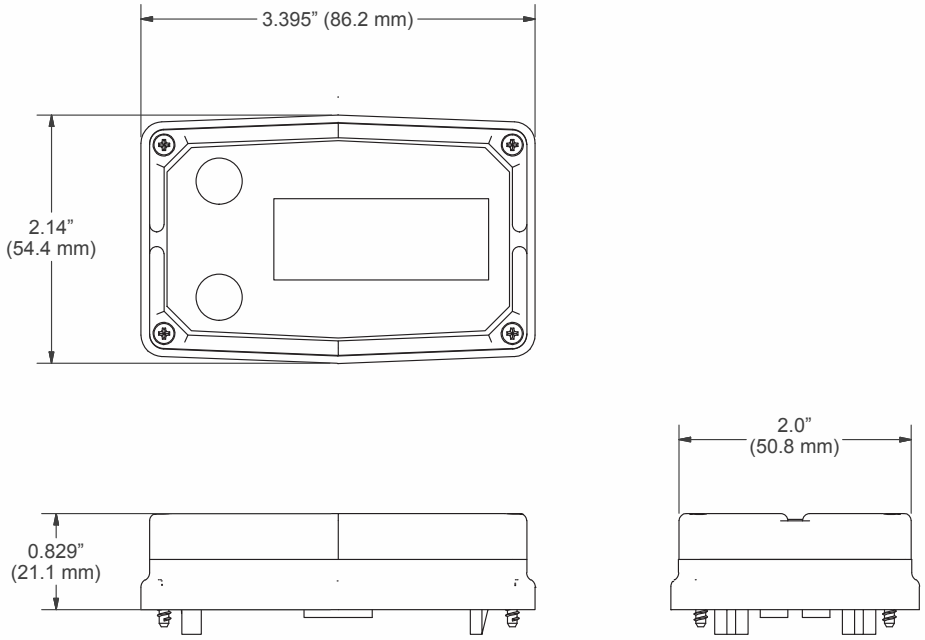
Standard Factory Configuration:	2 Totals (1 Resettable, 1 Cumulative); Factory Calibration in gallons and litres; User Calibration and Rate of Flow Indication
Display Electronics:	09 Electronics can be used on G, G2, TM, A1, and QSE Series Meters
Totalizing Registers:	0 to 3 available
K-Factor Limits:	Min: .01 pulses/unit; Max: 999,999 pulses/unit
Field Calibration:	Field calibrate by user. Standard Method: Correction Factor. Six adjustable digits. Can be reconfigured to K-factor entry.
Readout Totals:	LCD with floating decimal: Minimum Display = 0.01 units; Maximum Display = 999,999 x100 units (6 digits)
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)

FM APPROVED · FM C US APPROVED · CE · ATEX Ex · IEC · IECEx

DIMENSIONS



QSI ELECTRONICS INTERFACE BOARD

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.

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 / 09 ON EXISTING METER

DISPLAYS & COMMUNICATION

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

09 DISPLAY	Field-Configurable - 3 Totals (2 Resettable, 1 Cumulative), Rate of Flow Indication, and 2 Calibrations (Factory and User). *Will not display Energy Consumption.

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

QSI with 09 DISPLAY

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.

For Android Operating Systems

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

GET IT ON Google Play *Just search for "FLOMEC"*

QSI ADAPTERS & WALL MOUNT OPTIONS

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

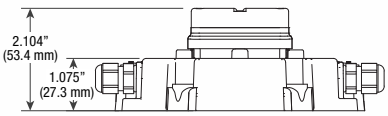
SPECIFICATIONS

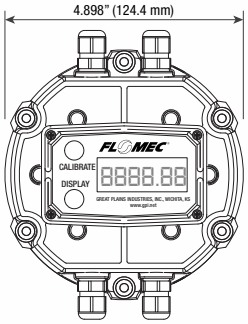
Material:	
Cover Plate	Polypropylene
Adapter	Polypropylene
Voltage:	
Min to Max	12 - 36V (dc)
Max Current	125mA (dc)
Temperature:	
Operating	32° to 180° F (0° to 82° C)
Output:	
Pulse Output	Current Sinking Open Collector Type rated to 30mA @ 36V (dc) max.
Pulse Output Units	Flow Totalization in any predefined or custom unit. BTU in one pulse per KBTU.
Pulse Scaling	Customized by user
Analog Output	4-20mA or 0-20mA
Communication:	
Bluetooth®	Programming interface; Supported on Android devices
RS485	Support for Modbus®, RTU and BACnet®/MS TP
Temperature Sensor Type:	
Two 3 wire platinum 100ohm RTDs (PT100)	
Data Logger Features:	
10,000 data points; minimum time between data point 2 min; provides 1 week of data, or can be customized	
Real Time Clock:	
Used to provide date and time stamp to data points in data log	
Coin Cell Battery:	
Battery Backup for internal clock	

FLOW SENSOR INPUT

Type	Min Input	Max Input	Frequncy
Pick-up Coil	5 mVpp	36V (dc)	0-1 kHz
Open Collector Pulse	2.0V (dc)	36V (dc)	0-3 kHhz

DIMENSIONS





APPROVALS

CE

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

ACCESSORIES

Part No.	Description
145504-01	KIT, ADAPTER, OM-QSI1-Q09 DISPLAY
145504-02	KIT, ADAPTER, OM-QSI2-Q09 DISPLAY
145504-03	KIT, ADAPTER, OM-QSI3-Q09 DISPLAY
145504-04	KIT, ADAPTER, OM-QSI1-NO DISPLAY
145504-05	KIT, ADAPTER, OM-QSI2-NO DISPLAY
145504-06	KIT, ADAPTER, OM-QSI3-NO DISPLAY
145504-07	KIT, ADAPTER, OM-QSI1-DISPLAY READY
145504-08	KIT, ADAPTER, OM-QSI2-DISPLAY READY
145504-09	KIT, ADAPTER, OM-QSI3-DISPLAY READY
145505-01	KIT, ADAPTER, G2-QSI1-Q09 DISPLAY
145505-02	KIT, ADAPTER, G2-QSI2-Q09 DISPLAY
145505-03	KIT, ADAPTER, G2-QSI3-Q09 DISPLAY
145505-04	KIT, ADAPTER, G2-QSI1-NO DISPLAY
145505-05	KIT, ADAPTER, G2-QSI2-NO DISPLAY
145505-06	KIT, ADAPTER, G2-QSI3-NO DISPLAY
145505-07	KIT, ADAPTER, G2-QSI1-DISPLAY READY
145505-08	KIT, ADAPTER, G2-QSI2-DISPLAY READY
145505-09	KIT, ADAPTER, G2-QSI3-DISPLAY READY
145506-01	KIT, ADAPTER, G SERIES-QSI1-Q09 DISPLAY
145506-02	KIT, ADAPTER, G SERIES-QSI2-Q09 DISPLAY
145506-03	KIT, ADAPTER, G SERIES-QSI3-Q09 DISPLAY
145506-04	KIT, ADAPTER, G SERIES-QSI1-NO DISPLAY
145506-05	KIT, ADAPTER, G SERIES-QSI2-NO DISPLAY
145506-06	KIT, ADAPTER, G SERIES-QSI3-NO DISPLAY
145507-01	KIT, ADAPTER, TM-QSI1-Q09 DISPLAY
145507-02	KIT, ADAPTER, TM-QSI2-Q09 DISPLAY
145507-03	KIT, ADAPTER, TM-QSI3-Q09 DISPLAY
145507-04	KIT, ADAPTER, TM-QSI1-NO DISPLAY
145507-05	KIT, ADAPTER, TM-QSI2-NO DISPLAY
145507-06	KIT, ADAPTER, TM-QSI3-NO DISPLAY
145507-07	KIT, ADAPTER, TM-QSI1-DISPLAY READY
145507-08	KIT, ADAPTER, TM-QSI2-DISPLAY READY
145507-09	KIT, ADAPTER, TM-QSI3-DISPLAY READY
145508-01	KIT, ADAPTER, REMOTE-QSI1-Q09 DISPLAY
145508-02	KIT, ADAPTER, REMOTE-QSI2-Q09 DISPLAY
145508-03	KIT, ADAPTER, REMOTE-QSI3-Q09 DISPLAY
145508-04	KIT, ADAPTER, REMOTE-QSI1-NO DISPLAY
145508-05	KIT, ADAPTER, REMOTE-QSI2- NO DISPLAY
145508-06	KIT, ADAPTER, REMOTE-QSI3- NO DISPLAY
145508-07	KIT, ADAPTER, REMOTE-QSI1- DISPLAY READY
145508-08	KIT, ADAPTER, REMOTE-QSI2- DISPLAY READY
145508-09	KIT, ADAPTER, REMOTE-QSI3- DISPLAY READY

RT14 FLOW RATE TOTALIZER

The RT14 is a fully programmable self-powered flow rate totaliser specifically designed for computing and displaying flow rates and 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

Scaled and unscaled pulse outputs allow transmission of accumulated flow data to remote control systems. Flow alarms are available to protect flow systems from flow rates that are 'high', 'low', or both, and an analogue 4-20mA signal offers flow rate monitoring and control by accurately transmitting flow rate readings from the flowmeter to your PLC or PID control system.

FEATURES / BENEFITS

- Battery, external DC, or loop powered
- Easy to read backlit LCD display
- Robust IP66/67-NEMA4X universal mount glass reinforced nylon enclosure with rubberized buttons and polycarbonate lens
- Large selection of engineering units for flow rate and total
- Ten point linearisation
- 4-20mA analogue output according to flow rate
- Flow alarm for high, low or high/low
- Scaled pulse output according to accumulated total
- Simple flow chart touch key programming
- Non volatile memory, long battery life
- Flowmeter and pipe mount kits available
- Broad operating temperature range

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.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

RT14 = Oval Gear Meter

ELECTRICAL ACCESS 2

1 = M20 x 1.5 mm female threaded conduit entry ports

2 = ½ inch NPT female threaded conduit entry ports

FLOW INPUT TYPE 3

D = Digital (pulse or frequency)

POWER SUPPLY 4

0 = Self-powered (battery) or regulated 12-30V (dc)

HOUSING TYPE 5

FM = Universal mount (field or panel) – GRN housing

MM = Integral meter mount – GRN housing*

* Only order MM when retro fitting an instrument to OM series pulse meters

ELECTRICAL OPTIONS 6

-I = Intrinsically safe IECEx/ATEX (EXia IIB T4)

	1	2	3	4	5	6
--->>>>	RT14	1	D	0	FM	-I

SPECIFICATIONS

LCD Display	8 digit alpha-numeric LCD display with 12 mm characters with backlight*
Instantaneous Flow Rate	8 digit to 3 decimal points
Engineering Units Displayed	Liter, mL, Gallon, Quart, Cubic Meter, Pounds, Kilograms or Nil
Input Types	Reed, NPN/PNP, mV sinewave (Turbine flowmeters), Weigand Sensors (voltage pulse)
Input Frequency	1.2 kHz (NPN/PNP), 2 kHz (Coil inputs), 120 kHz (Reed)
Input Scaling Range	0.0001 ~ 9999999.9999 with 4 floating points
Linearisation	10 point correction
Pulse Outputs	One selectable digital output for scaled pulse, unscaled pulse, high, low or high/low alarms
Analogue Output	12 bit 4-20mA (±0.05% FS at 25°C)
Operating Temperature	-22°F - +176°F (-30°C - +80°C)
Power Sources	AA 3.6V Lithium Thionyl Chloride Battery, external DC powered or loop powered (12 - 30V (dc))
Enclosures	High impact glass reinforced Nylon (PA6) with a Polycarbonate lens, Nitrile O-Ring seals and Polyurethane gaskets, providing an IP rating of IP66/67^
Mounting	Meter & stem mount, wall, pipe or panel mount^
Approvals	Intrinsically Safe - IECEx / ATEX (optional) Ex ia IIB T4 Gb (-30°C <Ta <+70°C)

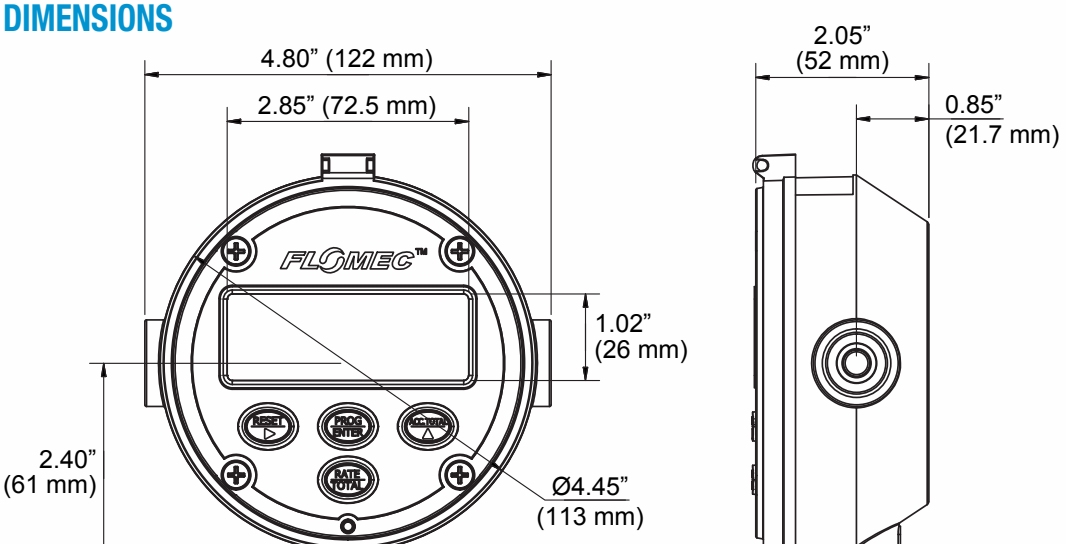
** Backlight possible when connected to external power*
^ Panel mount seal kit required to maintain IP66/67 rating when separating front and rear housing for mounting

ACCESSORIES

1522001	Wall Mount Kit
1522002	2" Pipe Mount Kit
1504003	Panel Mount Seal Kit

APPROVALS

DIMENSIONS



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. The instrument displays re-settable (batch) total, cumulative total and instantaneous flow rate in engineering units programmable by the user.

FEATURES / BENEFITS

- Economic and robust LCD display in a GRN housing
- Robust LCD display suitable for mine sites and service truck installations, in an aluminum housing
- Large backlit** LCD screen displaying 5-digit flow rate, 6-digit resettable total and 8-digit cumulative total
- Battery or externally powered; battery life span is 3 years, approximately**
- Robust IP66/67 (NEMA 4) GRN housing capable of being field or panel mounted
- 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 flowchart

**External power required for back light or pulse output features.
+Max. Output Frequency 20 Hz, K-factor must be divisible by 10.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

RT40 = Flow Rate Totalizer with backlit large digit LCD, scalable pulse output

ELECTRICAL ACCESS 2

1 = M16 x 1.5mm for Al housing female threaded conduit entry ports (sealed ports remain IP66/67 when not used)
6 = 3 x 6mm drilled holes for GRN housing (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

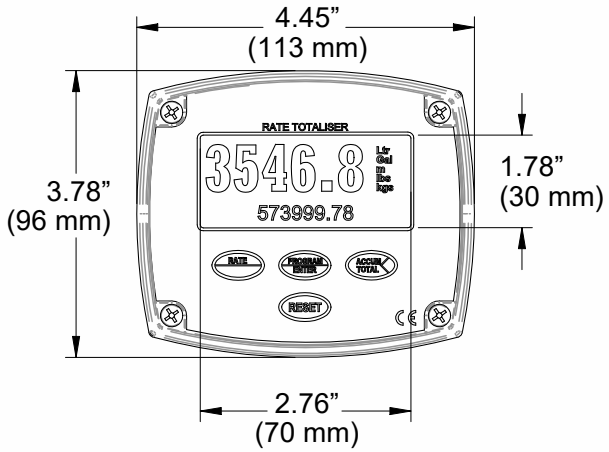
FM = Universal mount (field or panel) - GRN housing
FA = Universal mount (field or panel) - aluminum housing
MM = Integral meter mount - GRN housing*
MA = Integral meter mount - aluminum housing*
* Only order MA or MM when retro fitting an instrument to OM series pulse meters

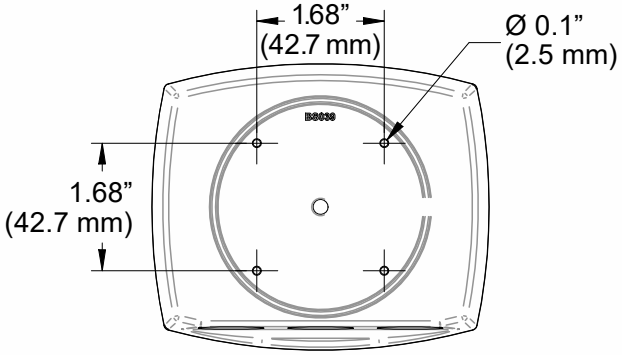
	1	2	3	4	5
--->>>>	RT40	1	D	0	FA

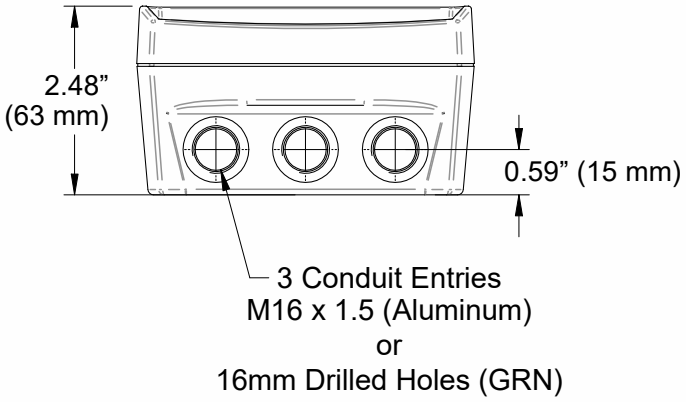
SPECIFICATIONS

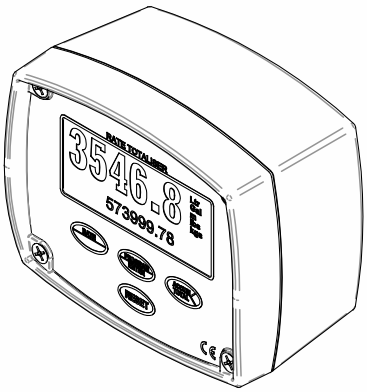
Display	Large backlit LCD 6-digit display with 8-digit secondary display line
Temperature Range	-4°F - +176°F (-20°C - +80°C)
Signal Input	Reed switch, Hall effect, Namur proximity detectors, voltage, current and coil (15mV P-P min)
Max. Input Frequency	Max. input frequency 5 kHz under external power. Maximum input frequency when not externally powered is 150 Hz
Signal Output	NPN transistor, scalable
Max. Output Frequency	20 Hz
Battery Power	3.6 V (dc), approximate 3 year life span
External Power	Regulated 8-24 V (dc) x 50 mA minimum
Protection Class & Body	IP65 (NEMA 4) Aluminium housing
	IP66/67 (NEMA 4) GRN housing
Mounting	Field, meter or panel mount
Engineering Units	Selectable Ltr, gal, m^3, kgs, lbs (total). /s, /min, /hr or /day (rate)
Cable Entries	3 x M16 x 1.5, Aluminum housing
	3 x 6mm drilled, GRN housing

DIMENSIONS


4.45”
(113 mm)
3.78”
(96 mm)
1.78”
(30 mm)
2.76”
(70 mm)
RATE TOTALISER
3546.8
573999.78
RATE
PROGRAM ENTER
ACCUM TOTAL
RESET


1.68”
(42.7 mm)
Ø 0.1”
(2.5 mm)
1.68”
(42.7 mm)


2.48”
(63 mm)
0.59” (15 mm)
3 Conduit Entries
M16 x 1.5 (Aluminum)
or
16mm Drilled Holes (GRN)


3546.8
573999.78

F SERIES (REMOTE PANEL MOUNT ELECTRONICS)

Top of the line specialty electronics by **FLOMEC® F Series Electronics** are designed with several different input and output options. Rugged and dependable, the F Series offers:

- Field-mountable
- Easy programming with a sensible menu-driven structure
- Large 0.67" (17 mm), 7 digit display
- Accepts several different input signals

FEATURES / BENEFITS

- Batching
- Net Use
- 4-20 mA Output
- HART Protocol
- High Low Alarms
- Linearization
- Two Stage Valve Control
- Temperature Compensation

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

FM APPROVED · ATEX · IECEx · CE · CSA C US

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 ouput (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)

	1	2	3	4	5	6	7	8	9	10	11	12
>>>>	F018	P	AP	CX	EX	HE	IX	OT	PD-PB	TX	XX	ZB

SPECIFICATIONS

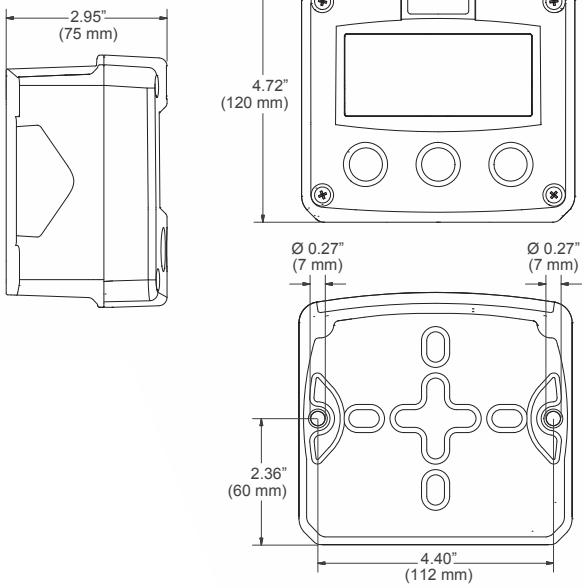
Display:	
Type	High intensity reflective numeric and alpha-numeric LCD, UV resistant
Dimensions	3.5 in. x 1.6 in. (90 mm x 40 mm)
Digits	Seven 0.67 in. (17 mm) and eleven 0.31 in. (8 mm) digits. Various symbols and measuring units.
Refresh rate	User definable: Fast, 1 s, 3 s, 15 s, 30 s, Off
Option ZB	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 mm^2 and 2.5 mm^2	
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:	
Dimensions:	5.12" x 4.72" x 2.95" (130 x 120 x 75 mm) W x H x D
Type HE	GRP panel mount enclosure IP65 / NEMA 4X. UV-resistant and flame retardant.
Weight	1.32 lbs (600g)
Environment:	
Electromagnetic compatibility:	Compliant ref: EN 61326 (1997), EN 61010-1 (1993)
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:	L, m^3, GAL, USGAL, kg, lb, bbl, no unit
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, m^3, Gallons, kg, Ton, lb, bl, cf, RND, ft^3, scf, Nm^3, Nl, 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

BENEFITS

- Save time with the easy-to-operate through glass keypad: no need to remove the front cover nor to arrange a work permit
- Easy installation with the spacious chamber and plug and play connectors
- Long life duration in extremely salty atmospheres (offshore) with heavy duty stainless steel Exd enclosure
- Key information at a glance as the display shows flow rate, total, measuring units and a flow rate indicating speedometer

FEATURES

- Selectable on-screen engineering units; volumetric or mass
- 7 digit flow rate / total and 11 digit accumulated total
- 16 point linearization of the flow curve - with interpolation
- Power options: Loop powered, battery and 8 - 30V (dc)
- Isolated, loop powered 4 - 20mA output according to linearized flow rate
- Scaled pulse output according to linearized accumulated total
- Ability to process all types of volumetric or mass flowmeter signals: Reed-switch, NAMUR, NPN/PNP pulse, Sine wave (coil), Active pulse signals. (0)4 - 20mA and 0 - 10V (dc) analog inputs are pending.
- HART communication

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.

PRODUCT CONFIGURATION

STANDARD CONFIGURATION 1

E018 = Flow Rate Monitor / Totalizer - Alarms - HART

FLOWMETER INPUT SIGNAL 2

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

ANALOG OUTPUT SIGNAL 3

AH = Galvanically isolated, Loop powered 4-20mA output

COMMUNICATION 4

CR = HART communication

ENCLOSURE TYPES 5

HAD = Diecast Aluminum Enclosure, Entry threads: 2" x 1/2" NPT / 1" x 3/4" NPT

HSD = Stainless Steel Enclosure, Entry threads: 2" x 1/2" NPT / 1" X 3/4" NPT

ADDITIONAL INPUTS 6

IB = Remote input to reset total or to lock the "Clear Total" button

OUPUTS 7

OT = Passive transistor output - standard configuration

POWER REQUIREMENTS 8

PD-PB = 9 - 27 V (dc) + sensor supply, Lithium battery power

HAZARDOUS AREA 9

XD = Explosion proof enclosure according ATEX & IECEx (CSA and FM Pending)

OTHER OPTIONS 10

ZB = Backlight is included as standard

1	2	3	4	5	6	7	8	9	10
>>>>	E112	P	AH	CX	HAA	IB	OT	PX-PB	XD	ZB

SPECIFICATIONS

Display:	
Type	High intensity transreflective numeric and alpha-numeric 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 II 2 G Ex IIC T6 Gb Ex II 2 D Ex IIIC T85°C Db
IECEx Certification	Ex d IIC T6 Gb Ex tb IIIC T85°C Db
FM / CSA c-us Certification	Explosion-proof for use in Class I, Division 1, Groups A, B, C, D DIP (Dust-Ignition-proof): Class II, Division 1, Groups E, F and G. Class III, hazardous (classified) locations
Ambient to:	-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 8 - 12 and 24V (dc)
Frequency:	Minimum oHz - 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 120Hz.
K-Factor	0.000010 - 9,999,999 with variable decimal position
Low-pass filter	Available for all pulse signals

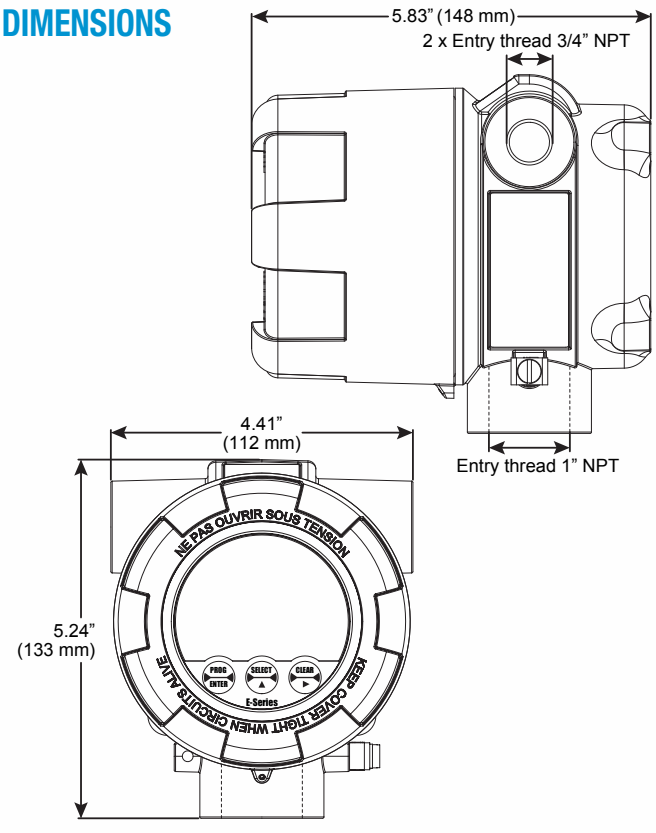
External Reset Total:	
Function:	• Terminal input to reset total remotely • If this terminal input is closed, the "clear total" function is disabled
Type:	Internally pulled-up switch contact - NPN
Duration:	Minimum pulse duration 100ms
Signal Output (Digital):	
Function:	Pulse output. Transmitting accumulated total
Frequency:	Maximum 500Hz. 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:	Galavanically 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, m^3, Gallons, kg, Ton, lb, bl, cf, RND, ft^3, scf, Nm^3, Nl, igal - no units
Time units:	/s - /min - /hr - /day

ACCESSORIES

Part No.	Description
FW-ABB04	1 X 3/4 inch NPT plug
FW-ABB05	1 X 1 inch NPT plug
1522068	E-Series Wall Mount Kit
1522051	E-Series Pipe Mount Kit

APPROVALS

DIMENSIONS



FLOMEC®

partnering with obvius

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

Qbvius 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

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 us with the Obvius ModHopper for wireless communication. Ask about the Obivous Commissioning Console, a free commissioning software.

▸ 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 Obivous Commissioning Console, a free commissioning software.

WIRELESS METERING

▸ 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

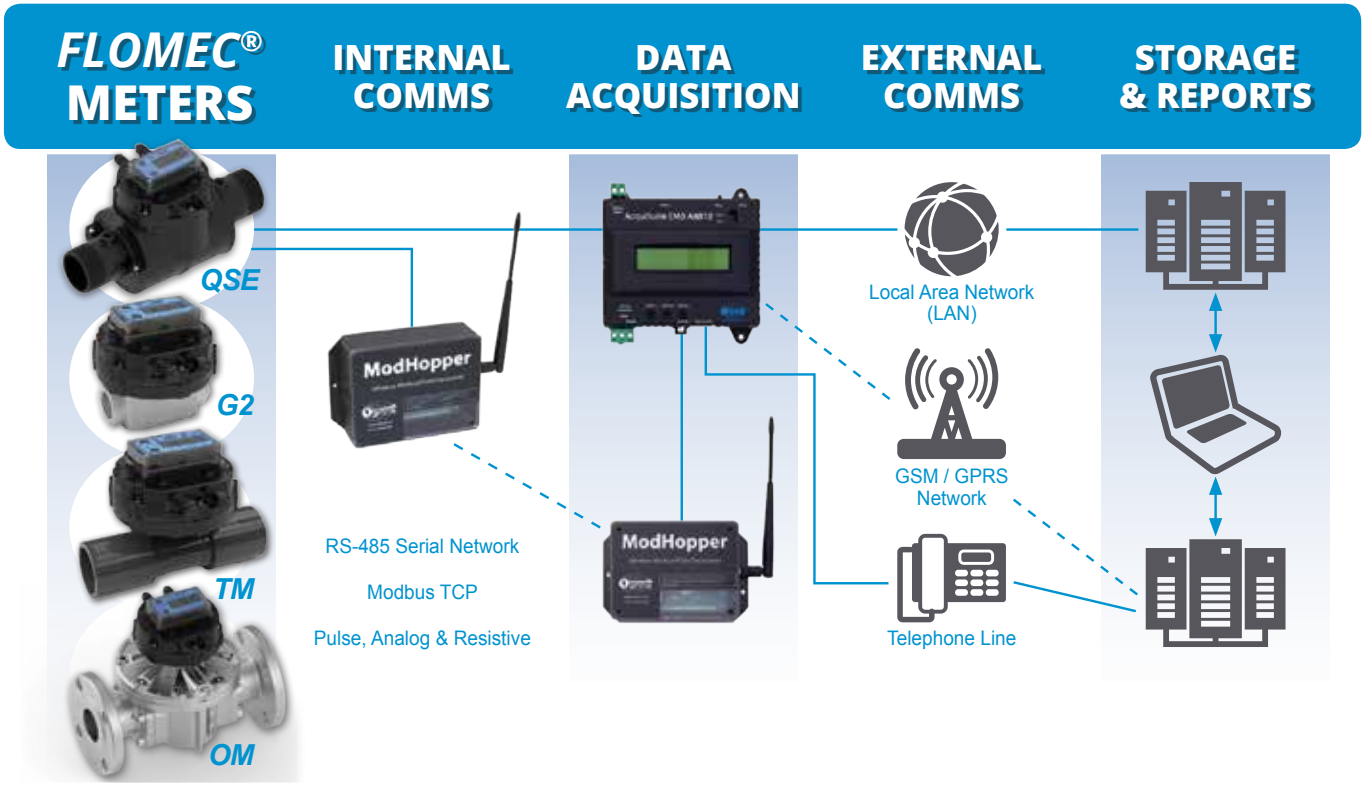
The ModHopper is compatible with virtually any PLC or Modbus RTU device, allowing customers the flexibility to use the ModHopper in existing Modbus applications. The ModHopper is a "smart" device, which requires no programming. If used with the Obvius AcquiSuite, users can take advantage of numerous 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

Part Number	Description
902010-01	Data Acquisition Server, Acquilit
902010-02	Module, Flex I/O, 8 User-Selectable Inputs, Modbus RS-485
902010-03	Pulse Module, Pulse, High Density, Modbus RS-485
902010-04	Power Supply, Wall Socket, 24 V (dc), 1 amp, Class 2 Transformer
902010-05	Power Supply, Din Rail, 24 V (dc), 1.7 amp
902010-06	Data Acquisition Server, Acquilite, Nema 4X, Modbus RS-485, Ethernet
902010-07	Data Acquisition Server, AcquiSuite, Nema 4X, Modbus/485, Enet, 23 Pulse Inputs
902010-08	Data Acquisition Server, Emb., AcquiSuite, MH, Nema 4X, Modbus/485
902010-09	Bundle, AcquiSuite, Modem, Power Supply, Nema 4X, 3G HSPA+
902010-10	Bundle, Emb., Acquilite, Power Supply, Nema 4X
902010-11	Bundle, Emb., Acquilite, Modem, Power Supply, Nema 4X , 3G HSPA+
902010-13	Modhopper, Wireless Transmitter, 256 Bit AES Encryption



REFERENCE MATERIALS

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

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

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.

Generic Material Name	Trade Name
Acetal	CELCON or DELRIN
Buna-N, NBR or Nitrile	CHEMIVIC or KRYNAC
EPDM	EPCAR
FKM or fluorocarbon	FLUOREL or VITON
Nylon or polyamide	ZYTEL
PBT polyester	VALOX
PEEK	VICTREX
Perfluoroelastomer	KALREZ
Perfluoroelastomer	CHEMRAZ
PET polyester	RYNITE
Polyester film	MYLAR
PPS	RYTON
PTFE	TEFLON
PVDF	KYNAR

Chemical **COMPATIBILITY GUIDE**

Chemical Compatibility Guide for GPI Flowmeters*

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

	Metals						Plastics									Journals, Shafts					O-Rings				
	Bronze	Aluminum	Brass	304 SS	316 SS	CD4MCu	PVC	PBT Polyester (Valox)	Nylon 6,6	Acetal (Delrin)	PPS (Ryton)	PVDF (Kynar)	Rulon 641	PEEK	Noryl™	Carbon - Graphite	Ceramic / Sapphire	Tungsten Carbide	Ferrite (MnZn)	Hastelloy-C	FKM/Fluorocarbon (Viton)	PTFE (Teflon)	EPDM	Buna-N (Nitrile)	Perfluoroelastomer (FFKM)
Acetic Acid	N	N	N	N	R	R	N	X	N	N	R	N	R	R	R	R	R	N	X	R	R	R	R	N	R
Acetone	R	R	R	R	R	R	N	N	R	R	N	N	R	R	N	R	R	R	R	R	N	R	R	N	R
Alcohols: Isobutyl	R	N	X	R	R	R	R	X	X	R	R	X	R	R	R	R	R	R	X	R	R	R	R	R	R
Alcohols: Isopropyl	R	N	X	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R
Alcohols: Methyl	R	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R
Ammonia, Anhydrous	N	R	N	R	R	R	R	X	X	N	R	R	R	R	R	X	R	R	X	R	N	R	R	R	R
Ammonia, Liquid	N	R	X	R	R	R	R	X	R	N	R	R	R	R	X	R	R	R	X	R	N	R	R	N	R
Ammonium Hydroxide	N	R	N	R	R	R	R	N	N	N	R	R	R	R	R	R	R	N	R	R	R	R	R	N	R
Antifreeze	R	R	X	X	R	X	R	X	X	N	R	X	X	R	R	X	R	R	R	X	R	X	R	R	R
Boric Acid	R	N	X	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R
Butyl Acetate	R	R	R	R	R	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	N	R
Calcium Chloride	R	N	X	N	R	R	N	X	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Calcium Hypochlorite	N	N	X	N	N	R	R	X	X	N	N	R	R	R	R	R	R	N	R	R	R	R	R	N	R
Carbon Tetrachloride (wet)	R	N	R	R	R	R	X	X	X	R	N	R	R	X	N	R	R	X	X	R	X	R	N	N	R
Carbonic Acid	R	N	N	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	N	R
Chlorine Water	R	N	N	N	N	R	R	X	N	N	N	R	R	N	N	R	X	R	R	R	R	R	N	N	R
Chlorine, Anhydrous Liquid	N	N	N	N	N	N	N	X	X	R	N	R	R	N	R	R	N	X	N	N	R	R	R	N	R
Clorox® Bleach (Sodium Hypochlorite)	X	N	X	R	R	R	R	R	N	N	N	R	R	R	R	X	R	N	X	R	R	R	R	N	R
Detergents	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R
Diesel Fuel	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R	R	R	R	N	R	R
Ethanol	R	N	R	R	R	R	N	X	R	R	R	X	R	R	R	R	R	R	X	R	R	R	R	N	R
Ethylene Dichloride	N	R	R	R	R	R	N	X	X	R	N	R	R	R	N	R	R	R	X	R	R	R	N	N	R
Ethylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Ferric Chloride	N	N	N	N	N	R	R	X	N	N	R	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Fuel Oils (#1 and #2)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	X	R	R	R	N	R	R
Gasoline, Unleaded	R	R	X	R	R	R	N	R	R	R	R	R	R	R	N	R	R	R	R	R	R	R	N	R	R
Heptane	R	R	R	R	R	R	N	X	X	R	R	R	R	R	R	R	R	R	X	R	R	R	N	R	R
Hydraulic Oil (Petro)	R	R	R	R	R	R	R	R	X	R	R	R	R	R	X	R	R	R	R	R	R	R	N	R	R
Hydraulic Oil (Synthetic)	R	R	R	R	R	R	R	R	X	X	R	R	R	R	X	R	R	R	R	R	R	R	R	N	R
Hydrochloric Acid 20%	N	N	X	N	N	R	R	R	N	N	N	R	R	N	R	R	N	N	R	R	R	R	N	X	R
Hydrochloric Acid 37%	N	N	X	N	N	R	R	X	N	N	N	R	R	R	R	R	N	N	R	R	R	R	R	R	R
Hydrochloric Acid 100%	N	N	N	N	N	R	N	N	N	N	N	R	R	R	R	R	R	N	R	R	R	R	N	N	R
Hydrofluoric Acid 20%	R	N	X	N	N	R	R	R	N	N	N	R	R	N	N	X	N	N	R	R	R	R	N	N	R
Hydrofluoric Acid 100%	R	N	X	N	R	R	N	N	N	N	N	R	R	N	N	R	N	N	R	R	R	R	N	N	R
Hydrogen Peroxide 10%	R	N	X	R	R	R	R	R	N	N	N	R	R	R	R	N	R	N	R	R	R	R	R	N	R
Hydrogen Peroxide 30%	R	N	X	R	R	R	R	X	N	N	N	R	R	R	R	N	X	N	R	R	R	R	R	N	R
Hydrogen Peroxide 100%	R	R	N	R	R	R	R	X	N	N	N	R	R	R	R	N	X	N	R	R	R	R	N	N	R
Isopropyl Acetate	R	N	X	N	R	R	N	X	X	N	N	N	R	R	X	R	R	R	X	R	N	R	R	N	R
Kerosene	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R	R	R	R	N	R	R
Ketones	R	R	X	R	R	R	N	X	X	N	N	N	R	R	N	R	R	R	X	R	N	R	R	N	R
Lacquer Thinners	R	R	R	R	R	R	N	X	X	N	N	X	R	X	N	R	X	R	X	R	N	R	N	N	R

Chemical Compatibility Guide for GPI Flowmeters*

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

	Metals						Plastics									Journals, Shafts					O-Rings				
	Bronze	Aluminum	Brass	304 SS	316 SS	CD4MCu	PVC	PBT Polyester (Valox)	Nylon 6,6	Acetal (Delrin)	PPS (Ryton)	PVDF (Kynar)	Rulon 641	PEEK	Noryl™	Carbon - Graphite	Ceramic / Sapphire	Tungsten Carbide	Ferrite (MnZn)	Hastelloy-C	FKM/Fluorocarbon (Viton)	PTFE (Teflon)	EPDM	Buna-N (Nitrile)	Perfluoroelastomer (FFKM)
Lacquers	R	R	X	R	R	R	N	X	X	N	N	N	R	R	N	R	R	R	X	R	N	R	N	N	R
Lye: NaOH Sodium Hydroxide	N	N	N	R	R	N	R	X	X	N	R	N	R	R	R	X	R	R	X	N	R	R	R	R	R
Magnesium Hydroxide	R	N	N	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Methanol (Methyl Alcohol)	R	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R
Methyl Ethyl Ketone	R	R	R	R	R	R	N	R	R	N	N	N	R	R	N	R	R	X	R	R	N	R	R	N	R
Motor Oil	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R
Nitrating Acid (> 15% H2S04)	X	N	X	N	N	R	N	X	X	N	N	X	R	N	X	X	R	N	X	R	R	R	R	N	R
Nitric Acid (5-10%)	R	N	N	R	R	R	R	X	R	N	R	R	R	R	R	R	N	N	X	R	R	R	R	N	R
Nitric Acid (50%)	R	N	N	R	R	R	R	X	N	N	N	R	R	N	R	R	N	N	N	R	R	R	N	N	R
Nitric Acid (Concentrated)	R	N	N	R	R	R	R	R	N	N	N	R	R	N	R	N	N	N	N	R	R	R	N	N	R
Oils: Hydraulic Oil (Petro)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	X	R	R	R	X	R	R	R	N	R	R
Oils: Mineral	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R
Oils: Transformer	X	R	X	R	R	X	R	R	X	R	R	R	R	R	X	R	R	R	X	X	R	R	N	R	R
Phosphoric Acid (< 40%)	R	N	N	N	N	R	R	X	N	N	N	R	R	R	R	R	R	N	N	R	R	R	R	N	R
Phosphoric Acid (> 40%)	R	N	N	N	N	R	R	X	N	N	N	R	R	R	R	R	R	N	X	R	R	R	R	N	R
Potassium Chloride	R	N	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Potassium Hydroxide (Caustic Potash)	N	N	N	R	R	R	R	N	R	R	R	R	R	R	R	N	N	N	R	R	R	R	R	R	R
Potassium Hypochlorite	N	N	X	N	N	R	R	X	X	X	N	R	R	X	X	X	N	N	X	R	X	R	R	R	R
Propane (Liquefied)	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	X	R	R	R	N	R	R
Propylene Glycol	R	R	X	R	R	R	N	R	R	R	R	X	R	R	X	X	R	R	R	R	R	R	R	R	R
Salt Brine (NaCl Saturated)	R	N	X	R	R	R	R	X	X	X	R	R	R	R	R	R	X	N	X	R	R	R	R	R	R
Sea Water	R	N	N	N	R	R	R	R	X	R	R	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Soap Solutions	R	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Sodium Bicarbonate	R	N	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Sodium Chloride	R	N	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R	R	R	R
Sodium Hydroxide (20%)	R	N	R	R	R	R	R	X	R	R	N	R	R	R	R	R	R	N	X	R	N	R	R	R	R
Sodium Hydroxide (50%)	N	N	N	R	R	N	R	X	R	R	N	R	R	R	R	X	R	N	X	N	N	R	R	R	R
Sodium Hydroxide (80%)	N	N	N	N	N	R	R	N	R	N	N	R	R	R	R		R	N	N	R	N	R	R	N	R
Sodium Hypochlorite (< 20%)	N	N	N	N	N	R	R	X	N	N	N	R	R	R	R	R	R	N	R	R	R	R	R	R	R
Sodium Hypochlorite (100%)	N	N	N	N	N	R	R	X	N	N	N	R	R	R	R	N	R	N	R	R	R	R	R	N	R
Sulfuric Acid (< 10%)	R	N	X	N	R	R	R	X	N	N	N	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Sulfuric Acid (75-100%)	R	N	X	N	N	R	N	X	N	X	N	R	R	N	R	N	R	N	N	R	R	R	R	N	R
Toluene (Toluol)	R	R	R	R	R	R	N	N	R	N	N	R	R	R	N	R	R	R	R	R	N	R	N	N	R
Trichloroethylene	R	N	X	R	R	R	N	X	R	N	N	R	R	R	N	R	X	R	R	R	R	R	N	N	R
Vinegar	R	N	N	R	R	R	R	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Water, Deionized	X	N	R	R	R	R	R	X	X	X	R	R	R	X	R	R	R	X	X	R	R	R	R	R	R
Water, Distilled	R	N	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Water, Salt	R	N	N	N	R	R	R	X	X	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Xylene	R	R	R	R	R	R	N	N	R	R	N	R	R	R	R	R	R	R	X	R	R	R	N	N	R

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.

PRODUCT SELECTION *Matrix*

TURBINE

		ECONOMY	TM	A1	G2	G	TP
SIZE	1/8"						
	1/4"						
	3/8"						
	1/2"		1-10 GPM (3.8-38 L/min)		1-12 GPM (3.8-45 L/min)	0.6-6 GPM (2.2-22 L/min)	0.5-5 GPM (1.8-18 L/min)
	3/4"		2-20 GPM (7.6-76 L/min)		2-20 GPM (7.6-76 L/min)	1.6-23 GPM (6-87 L/min)	1.8-36 GPM (6.7-130 L/min)
	1"	3-30 GPM (11-113 L/min)	5-50 GPM (19-190 L/min)	0.3-50 GPM (1-189 L/min)	5-50 GPM (19-190 L/min)	6.7-67 GPM (25-252 L/min)	7-70 GPM (27-270 L/min)
	1 1/2"	3-30 GPM (11-113 L/min)	10-100 GPM (38-380 L/min)	0.3-50 GPM (1-190 L/min)	10-100 GPM (38-380 L/min)	17.7-177 GPM (67-670 L/min)	15-150 GPM (57-570 L/min)
	2"		20-200 GPM (76-760 L/min)	30-300 GPM (114-1135 L/min)	20-200 GPM (76-760 L/min)	33-330 GPM (125-1250 L/min)	30-300 GPM (113-1130 L/min)
	3"		40-400 GPM (151-1514 L/min)			60-600 GPM (227-2271 L/min)	60-600 GPM (225-2250 L/min)
	4"		60-600 GPM (227-2271 L/min)				120-1200 GPM (450-4500 L/min)
	> 4"						
ACCURACY	0.50%						
	0.75%				1 1/2" & 2"		
	1.0%				3/4" & 1"		
	1.5%				1/2"		
	2.0%						
	2.5%						
	3.0%						
	5.0%						
PRESSURE RATING	Low (≤300psi)				Brass, Al & PVDF	Sanitary	
	Medium (300-2000psi)				Stainless Steel	ANSI Flange	Flanged
	High (2000-6000psi)				High Pre Stainless	Threaded	Threaded
	Ultra High (>6000psi)						
BODY MATERIAL	PVC						
	PPS						
	Nylon						
	PVDF						
	PBT Polyester						
	Brass						
	Stainless						
	Aluminum						
	Noryl						
OUTPUT	Display						
	4-20mA						
	Scaled Pulse		QSI	QSI	QSI	SC500 & QSI	
	Unscaled Pulse						
	Dual Pulse						
	Comm.		QSI	QSI	QSI	QSI	QSI
	Btu		QSI	QSI	QSI	QSI	QSI
APPLICATION	Fuel	Aluminum		Aluminum	Aluminum		
	Lubes						
	Water	Nylon		Nylon	SS, Brass & PVDF		
	Chemicals			Lite Chemicals	SS & PVDF		
	Additive Injection						

OVAL GEAR

PRODUCT SELECTION *Matrix*

LM	EGM	D-SERIES	OM	AIM		
	.26-9.5 GPM (1-36 L/min)		.26-9.5 GPM (1-36 L/min)	.26-9.5 GPM (1-36 L/min)	1/8"	SIZE
	.5-27 GPM (2-100 L/min)		.5-27 GPM (2-100 L/min)	.5-27 GPM (2-100 L/min)	1/4"	
	4-145 GPM (15-555 L/min)		4-145 GPM (15-555 L/min)	4-145 GPM (15-555 L/min)	3/8"	
.26-7.8 GPM (1-30 L/min)	.26-10.6 GPM (1-40 L/min)	.26-10.6 GPM (1-40 L/min)	.26-10.6 GPM (1-40 L/min)		1/2"	
	.79-21.1 GPM (3-80 L/min)				3/4"	
		2.6-40 GPM (10-150 L/min)	2.6-40 GPM (10-150 L/min)		1"	
		4-66 GPM (15-250 L/min)	4-66 GPM (15-250 L/min)		1 1/2"	
		9-150 GPM (30-580 L/min)	9-150 GPM (30-580 L/min)		2"	
		10-260 GPM (35-1000 L/min)	10-260 GPM (35-1000 L/min)		3"	
		20-660 GPM (75-2500 L/min)	20-660 GPM (75-2500 L/min)		4"	
					> 4"	
	1/2"-3/4" (15-20 mm)		1/2"-3/4" (15-20 mm) Elec. Disp.		0.50%	ACCURACY
					0.75%	
	1/8"-3/8" (4-8 mm)	1/2"-4" (15-100 mm) Elec. & Mech. Disp.	1/8"-3/8" (4-8 mm) Mech. Disp.		1.0%	
					1.5%	
					2.0%	
					2.5%	
					3.0%	
					5.0%	
	1/2"-3/4" (15-20 mm)	2"-4" (50-100 mm)	PPS, AL ≤ 3/8"(8 mm), AL 2"-4"(50-100 mm)		Low (≤300psi)	PRESSURE RATING
	1/8"-3/8" (4-8 mm)	1/2"-1 1/2"(15-40 mm	SS, AL 1/2"-1 1/2"(15-40 mm)		Medium (300-2000psi)	
			High Pressure SS		High (2000-6000psi)	
					Ultra High (>6000psi)	
					PVC	BODY MATERIAL
					PPS	
					Nylon	
					PVDF	
					PBT Polyester	
					Brass	
					Stainless	
					Aluminum	
					Noryl	
					Display	OUTPUT
					4-20mA	
					Scaled Pulse	
					Unscaled Pulse	
					Dual Pulse	
			QSI		Comm.	
			QSI		Btu	
			SS & Aluminum		Fuel	APPLICATION
			SS, PPS & Aluminum		Lubes	
	SS only		SS & PPS		Water	
	SS only		SS & PPS		Chemicals	
	SS only		SS only		Additive Injection	

PRODUCT SELECTION *Matrix*

		NUTATING DISC	IMPELLER	ULTRASONIC TRANSIT TIME	ELECTROMAGNETIC
		FM300	DP	QS600	QSE Mag
SIZE	1/8"				
	1/4"				
	3/8"				
	1/2"			0-18.4 GPM (0-70 L/min*)	0.16-10 GPM (0.63-38 L/min)
	3/4"			0-41.3 GPM (0-156 L/min*)	0.3-20 GPM (1.27-76 L/min)
	1"	2-20 GPM (7.6-76 L/min)		0-73.4 GPM (0-278 L/min*)	0.6-40 GPM (2.52-151 L/min)
	1 1/2"		6-182 GPM (21-684 L/min)	0-165 GPM (0-626 L/min*)	1.3-80 GPM (5.05-303 L/min)
	2"		10-324 GPM (37-1216 L/min)	0-294 GPM (0-1112 L/min*)	2.5-150 GPM (9.47-568 L/min)
	3"		22-730 GPM (82-2736 L/min)	0-661 GPM (0-2502 L/min*)	5-300 GPM (19-1136 L/min)
	4"		39-1296 GPM (146-4860 L/min)	0-1175 GPM (0-4448 L/min*)	10-600 GPM (38-2271 L/min)
	> 4"		up to 785k GPM (2,945k L/min)	0-734k GPM (0-334k L/min*)	
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				
OUTPUT	Display				
	4-20mA				
	Scaled Pulse				
	Unscaled Pulse				
	Dual Pulse				
	Comm.				QSI
	Btu				QSI
APPLICATION	Fuel				
	Lubes				
	Water				
	Chemicals				
	Additive Injection				

3-A	**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.
ATEX	European directive describing the equipment allowed in an environment with an explosive atmosphere.
Ex	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.
FM C US APPROVED	**Factory Mutual Approved** to Canadian and US standards
FM C APPROVED	**Factory Mutual Approved** to Canadian standards
FC	**Federal Communication Commission**
IEC IECEx	**International Electrotechnical Committee** logo; use of the logo by an organziation only shows an association with the IECEx, it does not infer any compliance with standards.
IPxx	**Ingress Protection Code**
NEMA	**National Electrial Manufacturers Association**
RoHS 2002/95/EC	**European Directive on Restriction of Hazardous Substances**

This guide is a generic explanation of the approval marks listed throughout the catalog. See individual product pages for what approvals apply to what products. Approvals vary by product line and may be dependent on meter application.

For additional approval details, please visit gpi.net/approvals.

CSA	**Canadian Standards Association**
CSA C US	**Canadian Standards Association** certified to Canadian and US standards
NSF Certified to NSF/ANSI 61-G & 372	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 US LISTED	**Underwriters Laboratories** listed to Canadian and US standards
C UL LISTED	**Underwriters Laboratories** listed to Canadian standards
WEEE	European directive on waste electrical and electronic equipment (WEEE)

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

Wichita • Sydney

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