FLOMEC®

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)		
Recommended Filtration:	200 mesh (75 μm)		

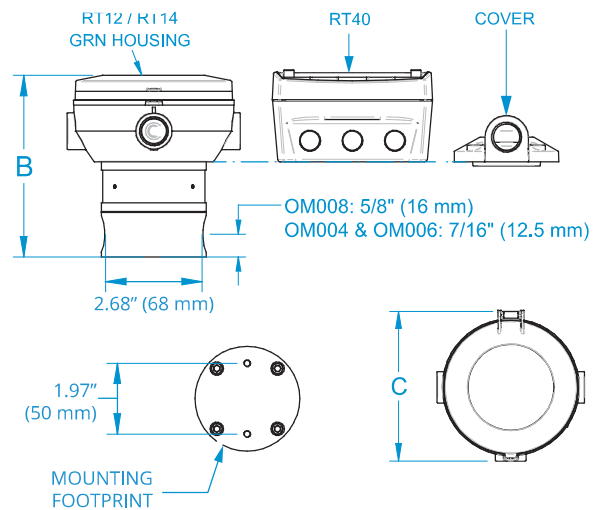|	OM004	OM006	OM008
Electrical:			
Output Pulse Resolution:	Pulses / gallon (Pulses / L) - Nominal		
Reed Switch	10600 (2800)	3975 (1050)	1345 (355)
Hall Effect	10600 (2800)	3975 (1050)	2690 (710)
QP - Quadrature Hall option	10600 (2800)	3975 (1050)	2690 (710)
HR - High Resolution Hall Effect	42400 (11200)	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

OPTION	B			C
	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)

RT12 / RT14 GRN HOUSING
RT40
COVER
B
OM008: 5/8" (16 mm)
OM004 & OM006: 7/16" (12.5 mm)
2.68" (68 mm)
1.97" (50 mm)
MOUNTING FOOTPRINT
C

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 Ⓔx   IEC   IECEx   CE   NEMA 4X   IP66/67

Wichita ∕ Sydney   **GREAT PLAINS INDUSTRIES** GPI®