



OM SERIES SMALL CAPACITY (OVAL GEAR FLOWMETERS)

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/IB approval (ATEX, IECEx)
- Only two moving parts

PRODUCT CONFIGURATION

1 PRODUCT IDENTIFIER:

OM = Oval Gear Meter

2 METER SIZE:

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

3 BODY MATERIAL:

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

4 ROTOR MATERIAL / BEARING TYPE:

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

5 O-RING MATERIAL:

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

6 MAXIMUM TEMPERATURE LIMIT:

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

7 PROCESS CONNECTIONS:

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

8 CABLE ENTRIES:

1 = M20 x 1.5 mm (M16 x 1.5 mm for R4 options)
2 = 1/2 inch NPT
6 = 3 x 16 mm drilled holes (for R7/F15/F18/F19/F31)

9 INTEGRAL OPTIONS:

___ = Combination Reed Switch and Hall Effect Sensor
SS = Stainless Steel terminal cover
RS = Reed Switch only - to suit Intrinsically safe installations
E1 = Explosion proof Exd IIB T3...T6 (Aluminum & Stainless Steel meters) [IECEx & ATEX approved]
E2 = Explosion proof Exd I/IB T3...T6 (Stainless Steel meters only) [IECEx & ATEX mines approved]
FP = cFMus Approved, USA and Canada, Flameproof Class 1 Zone 1
QP = Quadrature pulse (2 NPN phased outputs) Recommended remote display: F115... (part # 1431135)
Q1 = Combination of the E1 & QP Integral Options
HR = High Resolution Hall Effect output (004 – 006 only)
H1 = Combination of the E1 & HR Integral Options
R4 = RT40 backlit rate totaliser in Aluminum housing, requires Cable Entry option 1*#
R5 = RT14 backlit rate totalizer with all outputs (GRN Housing)*#
R6 = RT14 IECEx/ATEX Intrinsically Safe rate totaliser with 4-20mA and pulse outputs, in GRN housing*#
R7 = RT40 backlit rate totaliser in GRN housing*#^
B11 = EB11 dual stage batch controller in GRN housing*#
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]#
F15 = F115 bi-directional flow rate/totaliser, 4-20mA and pulse outputs, in a GRN housing*#^
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]

10 DISPLAY CALIBRATION:

___ = Displays in Litres (DEFAULT)
G = Displays in US Gallons

1 2 3 4 5 6 7 8 9 10
 --->>>> OM 006 A 51 1 -8 2 2 R5 G

*Temp code 5 required for integral instruments between 176°F (80°C) & 250°F (120°C)
 #Temp code 8 required for integral instruments below 176°F (80°C)
 ^Requires Cable Entry option 6

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)	7950 (2100)	1345 (355)
Hall Effect	21200 (5600)	7950 (2100)	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		

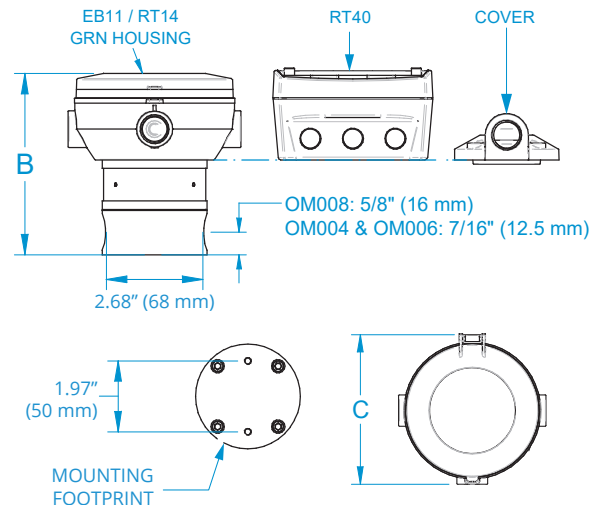
*Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max recommended pressure drop is 14.5 psi (1 bar).

*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	—
EB11 / 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



NEMA
4X

IP66/67



Class 1, Zone 1, AEx db 11B T4 Gb Ta=-40°C to +120°C
Ex db 11B T4 Gb Ta=-40°C to +120°C

STAINLESS STEEL MODELS ONLY

ATEX 1 M2
Ex db 1Mb

OR

ATEX 11 2 G
Ex db 11B T6...T3 Gb



Ex db 1 Mb
Ex db 11B T6.....T3 Gb

Refer to Specific Conditions for Process and Ambient Temperature

GREAT PLAINS INDUSTRIES



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