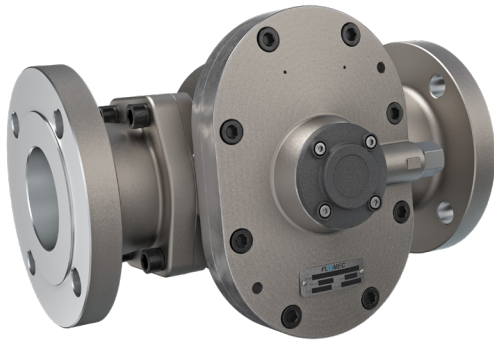




The **FLOMEC® Large Capacity OM-Series Oval Gear Flow Meters** are well suited to precise measurement of fuels, oils, solvents, alcohols, mildly aggressive chemicals, and various other clean industrial liquids.

Flow rates from 35 L/min to 2500 L/min, combined with low pressure drop and various hazardous area certifications make the large capacity OM Series flow meters well suited to almost any liquid transfer or application whether pumped or gravity-fed.

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

1 PRODUCT IDENTIFIER

OM = Oval Gear Flow Meter

2 METER SIZE

080 = 80 mm (3 in.), 35-750 L/min (10-200 GPM)

080E = 80 mm (3 in. Extended Flow), 50-1000 L/min (13-260 GPM)

100 = 100 mm (4 in.), 75-1500 L/min (20-400 GPM)

100E = 100 mm (4 in. Extended Flow), 150-2500 L/min (40-660 GPM) (Only available with Aluminum Rotors)

3 BODY MATERIAL

A = Aluminum

E = Extended flow Aluminum version

S = 316L Stainless Steel (OM080 only)

4 ROTOR MATERIAL/BEARING TYPE

00 = PPS [not available for 150°C (300°F)] / No bearing

10 = Keishi cut PPS (for high viscosity liquids) [not available for 150°C (300°F)] / 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)

5 O-RING MATERIAL

1 = FKM (Viton™) -15°C minimum (5°F)

3 = PTFE encapsulated FKM (Viton™) -15°C minimum (5°F)

4 = Buna-N (Nitrile) -40°C minimum (-40°F)

6 MAXIMUM TEMPERATURE LIMIT

-2 = 120°C (250°F) max.

-3 = 150°C (300°F) max. (OM080 only) (Hall Effect output only)

-5 = 120°C (250°F) max. (includes integral cooling fin)

-8 = 80°C (176°F) max. (meters with integral instruments)

7 PROCESS CONNECTIONS

0 = No fittings

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

2 = NPT female threaded

4 = ANSI-150 RF Flanged

6 = PN16 DIN Flanged

8 CABLE ENTRIES

1 = M20 x 1.5 mm

2 = ½ inch NPT

6 = 3x16 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 (AI & SS flow meters) [IECEx & ATEX approved]

E2 = Explosion proof Exd I/IIB T3-T6 (SS flow meters only) [IECEx & ATEX mines approved]

A0 = 4-20mA analogue output#

A1 = 4-20mA analogue output with IECEx/ATEX approval Ex db IIB T6...T3 Gb#

A2 = 4-20mA analogue output with IECEx/ATEX approval Ex db I Mb (SS meters only)#

FP = cFmus Approved, USA and Canada, Flameproof Class 1 Zone 1

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

R4 = RT40 rate/tot with backlit large digit LCD [scalable pulse output, backlight]*#

R5 = RT14 backlit rate/tot with all outputs (GRN Housing)*#

R6 = RT14 IECEx/ATEX Intrinsically Safe rate/tot with 4-20mA and pulse outputs, in GRN housing*#

R7 = RT40 backlit rate/tot in GRN housing*#^

B11 = EB11 dual stage batch controller in GRN housing*#

F15 = F115 bi-directional flow rate/tot., 4-20mA and pulse outputs, in a GRN housing*#^

F18 = F018 backlit rate/tot., pulse out, 4-20mA, 10 pt linearization, HART*#^

F19 = F018 Intrinsically Safe, backlit rate/tot., pulse, 4-20mA, 10 pt linearization, 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 080 A 51 1 -3 2 2 R5

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

#Temp code 8 required for integral instruments below 80°C (176°F)

^Requires Cable Entry option 6



OM SERIES

LARGE CAPACITY

SPECIFICATIONS

Technology:	Oval Gear			
Accuracy (% of Reading):	± 0.5% (accuracy is ± 0.2% with optional RT14 with non-linearity correction)			
Housing Material:	OM080	OM080E	OM100	OM100E
Line Sizes:	80 mm (3 in.)	80 mm (3 in.)	100 mm (4 in.)	100 mm (4 in.)
Flow Range:	35-750 L/min (10-200 GPM)	50-1000 L/min (13-260 GPM)	75-1500 L/min (20-400 GPM)	150-2500 L/min (40-600 GPM)
Repeatability:	Typically ± 0.03% of reading			
Max Pressure Aluminum:	12 bar (175 PSI)	12 bar (175 PSI)	10 bar (145 PSI)	10 bar (145 PSI)
Max Pressure Stainless Steel:	12 bar (175 PSI)	n/a	n/a	n/a
Operating Temperature:	-40°C to +150°C (-40°F to +300°F)			
Recommended Filtration:	400 µm (40 mesh)			
Pulse Outputs				
Output Pulse Resolution:	Pulses / L (Pulses / gallon) - Nominal			
Reed Switch:	2.65 (10)	1.55 (5.68)	1.1 (4.15)	0.56 (2.1)
Hall Effect:	10.7 (40.5)	6 (22.7)	4.4 (16.6)	2.24 (8.5)
QP - Quadrature Hall option:	5.33 (20)	3 (11.4)	2.2 (8.3)	1.12 (4.24)
Reed Switch Output:	30V (dc) x 200mA max. [max. thermal shock 10°C (18°F) / 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).

APPROVALS / WARRANTY



APPLICATIONS (Typical application but not limited to)

- Diesel fuel
- Petrol (gasoline) w/ or w/o ethanol content
- Biofuels
- Kerosene
- Glycols / Anti-Freeze
- Diesel Exhaust Fluid (DEF / Adblue®)
- Lubricating oils and greases
- Edible oils
- Solvents
- Resins and adhesives

DIMENSIONS REFERENCE FLANGE

	Dimension "A"	Dimension "B"	Dimension "C"
OM080S	27.2 cm (10.7 in.)	18.5 cm (7.3 in.)	17.8 cm (7 in.)
OM080S RT14	27.2 cm (10.7 in.)	18.5 cm (7.3 in.)	22.1 cm (8.7 in.)
OM080S RT40	27.2 cm (10.7 in.)	18.5 cm (7.3 in.)	23.9 cm (9.4 in.)
OM080A	35.3 cm (13.9 in.)	24.1 cm (9.5 in.)	23.9 cm (9.4 in.)
OM080A RT14	35.3 cm (13.9 in.)	24.1 cm (9.5 in.)	28 cm (11 in.)
OM080A RT40	35.3 cm (13.9 in.)	24.1 cm (9.5 in.)	29.5 cm (11.6 in.)
OM100	38.9 cm (15.3 in.)	29.2 cm (11.5 in.)	27.2 cm (10.7 in.)
OM100 RT14	38.9 cm (15.3 in.)	29.2 cm (11.5 in.)	32 cm (12.6 in.)
OM100 RT40	38.9 cm (15.3 in.)	29.2 cm (11.5 in.)	32.5 cm (12.8 in.)

