



Flomec medium capacity flowmeters

Volumetric flow measurement of clean liquids used in automotive, aviation, mining, power, chemical, pharmaceutical, food, paint, petroleum industries.

For distribution of fuels, fuel oils, lubricants, alcohols, solvents, blending of bio and ethanol fuels, metering of chemicals, grease, adhesives, ink, insecticides and pumps or gravity fed non-conductive liquids.

Features / Benefits

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

Meter Selection

- **Aluminium** meters for petroleum products (oils and grease, fuels and fuel oils)
- **Stainless steel** meters for the chemical, cosmetic, food and pharmaceutical industries (water based liquids)
- **Blind pulse** meters available with reed switch and Hall Effect outputs. Optional Quadrature pulse and Integral 4-20mA outputs are available

Integral Instruments

Options include integral LCD totalisers, flow rate totalisers and batch controllers (4-20mA, scaled pulse, alarms and batch control)

- BT LCD 5-digit reset, 8-digit cumulative totaliser
- RT12 LCD 6-digit reset, cumulative totaliser and flow rate, analog and pulse outputs
- RT40 LCD 6-digit reset, cumulative totaliser and flow rate. Backlit Display
- EB LCD 6-digit 2 stage batcher and cumulative totalizer
- M/V* = Mechanical registers (see model numbering)

(Available for remote mounting and with I.S. approvals)

General Specification

Flowrates: 0.26 - 150 US gal/min. (1 - 580 litres/min.)*

Sizes: 1/2" - 2" NB (15-50 mm)

Materials: Aluminium, 316 Stainless steel or Rytan (PPS)

NMI Approved Meters

Meters 1" and above available with optional NMI pattern approval and quadrature pulse output

National Measurement Institute (NMI) Weights and Measures Approval – Australia

* See also **Small and Large Capacity** data sheets for other size meters.

Model Prefix:	OM015 (1/2")	OM025 (1")	OM040 (1.5")	OM050 (2")	OM050 (2")E
Nominal size (inches):	1/2" (15mm)	1" (25mm)	1.5" (40mm)	2" (50mm)	2" (50mm)
*Flow range - (GPM):	0.26 - 10.6	2.6 - 40	2.6 - 66	8 - 120	9-150
- (LPM):	1 - 40	10 - 150	15 - 250	30 - 450	35-580
	0.26 - 10.6	2.6 - 40	2.6 - 66	8 - 120	9-150
**Accuracy @ 3cp:	± 0.5% of reading (accuracy is ± 0.2% of reading with optional RT12 with non-linearity correction)				
Repeatability:	Typically ± 0.03% of reading				
Temperature range:	-4°F - +250°F (-20°C - +120°C), refer factory for lower temperature				
Maximum pressure:	PSI (bar) Threaded Meters				
Aluminium meters:	990 (68)	990 (68)	435 (30)	285 (20)	285 (20)
Intermediate press. AL	-	2000 (138)	-	-	-
316 stainless steel:	990 (68)	990 (68)	435 (30)	550 (38)	
Intermediate press. SS meter:	1450 (100)	1450 (100)	725 (50)	725 (50)	
*** High pressure models:	5800 (400)	5800 (400)	5800 (400)	4350 (300)	
Max. pressure Mechanical Meter	PSI (Threaded meters) bar				
Aluminium meters	580 (40)	580 (40)	435 (30)	285 (20)	285 (20)
316 stainless steel	580 (40)	580 (40)	435 (30)	285 (20)	-

Electrical - for pulse meters (see below for optional outputs)

Output pulse resolution:	Pulses / gallon (Pulses / litre) - nominal				
Reed switch:	318 (84)	102 (27)	53 (14)	25 (6.5)	18 (4.8)
Hall effect:	636 (168)	405 (107)	212 (56)	99 (26)	73 (19.2)
QP-Quadrature Hall option:	636 (168)	204 (54)	106 (28)	49 (13)	36 (9.6)
Reed switch output:	30Vdc x 200mA max. [maximum thermal shock 50° F (10° C) / minute]				
Hall effect output (NPN):	3 wire open collector, 5-24Vdc max., 20mA max.				
Optional outputs:	4-20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control				

Physical

Protection class:	IP66/67 (NEMA4X), optional Exd I / IIB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)
Overall dimensions:	Refer Below
Recommended filtration:	100 mesh (150 microns)

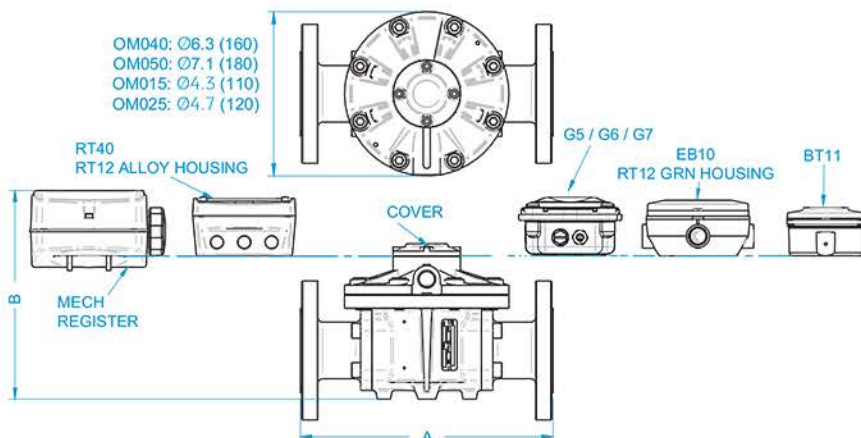
* Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max. recommended pressure drop is 100Kpa. (15 psi)

** Accuracy ± 1% of reading with M - Series mechanical registers and accuracy ± 0.5% of reading with V-series mechanical register.

*** QP and PF Options are not available with High Pressure Meters.

All dimensions are inches ± .079 (millimeters ±2mm)

MODULAR FITTING	A						CONFIGURATION	B							
	OM015	OM025A	OM025S	OM040	OM050	OM050E		OM015A	OM015S	OM025A/P	OM025S	OM040A	OM040S	OM050	OM050E
ANSI 150 DIN16 JIS 10K	7.4 (189)	7.8 (198)	9.3 (237)	9.9 (252)	10.9 (277)	10.9 (277)	EB10/RT12 GRN Housing	6.0 (154)	5.8 (148)	6.6 (168)	6.5 (165)	7.9 (203)	7.6 (194)	8.6 (218)	10.5 (268)
							BT11 Register	5.7 (145)	5.5 (139)	6.3 (160)	6.2 (157)	7.8 (198)	7.3 (186)	8.3 (210)	10.2 (260)
							RT40/RT12 Alloy Housing, G5 / G6 / G7	6.2 (157)	5.9 (151)	6.7 (171)	6.6 (168)	8.1 (206)	7.8 (197)	8.7 (221)	10.7 (271)
B.S.P N.P.T.	4.3 (110)	5.4 (137)	6.9 (176)	7.4 (188)	8.3 (212)	8.3 (212)	Cover	4.2 (106)	3.9 (100)	4.7 (123)	4.6 (117)	6.1 (155)	5.7 (146)	6.7 (170)	8.6 (220)
							Mech. Register	7.0 (178)	6.9 (176)	7.4 (188)	8.4 (214)	8.9 (227)	8.7 (222)	9.3 (237)	11.3 (286)



Service & Warranty:

For technical assistance, warranty replacement or repair contact your Flomec distributor or GPI:

In North or South America:
888-996-3837 / GPI.net

Outside North or South America:
+61 2 9540 4433 / flomec.com.au



MODEL CODING PULSE METERS

FLAMEC™ OM™ Oval Gear Pulse Meter				
*Includes MG oval gear meters				
Model	Size			
OM015™	1/2"	(15mm)		1~40 L/min 10.6 GPM
OM025™	1"	(25mm)		10~150 L/min~40 GPM
OM040™	1 1/2"	(40mm)		15~250 L/min~66 GPM
OM050™	2"	(50mm)		30~450 L/min ~120 GPM
OM050™	2" extended flow	(50mm)		35~580 L/min ~150 GPM
Body material				
A	Aluminium			
E	Extended flow Aluminium			
M	Intermediate pressure aluminium meter (138 Bar [2000psi] max.) OM025M only			
S	316L Stainless Steel			
N	Intermediate pressure 316L SS meters (004N~025N = 100 bar [1450psi], 040N~050N = 50 bar [725psi])			
H	High Pressure 316SS (004H~040H=400bar [5800psi], 050H=300bar [4350psi])			
P	PPS (OM025P only, max 80°C)			
Rotor material				
0	PPS - Teflon filled (Polyphenylene Sulfide) (not available for 150°C meters) N/A OM050E			
1	Keishi cut PPS rotors (for high viscosity liquids) (not available for 150°C meters) N/A OM050E			
4	Aluminium (aluminium meters only) (standard on OM050E)			
5	Stainless steel N/A OM050E			
5	Stainless steel rotors fitted to aluminum meters (select bearing type) N/A OM050E			
6	Keishi cut aluminium rotors (for high viscosity liquids)			
7	Keishi cut stainless steel rotors (for high viscosity liquids)			
Bearing type				
0	No Bearing (PPS rotors only)			
1	Carbon Ceramic (stainless steel rotors only)			
4	Hardened steel roller bearings (aluminum rotors only) (only suitable for lubricious fluids)			
O-ring material				
1	Viton (standard) -15°C minimum (-5°F)			
2	EPR (Ethylene Propylene Rubber) - for ketones only			
3	Teflon encapsulated viton			
4	Buna-N (Nitrile), -40°C minimum (-40°F)			
Temperature limits				
-	2	120°C (250°F) max. (reduced to 80°C when fitted with integral instruments)		
-	3	150°C (300°F) max. (Hall only, not avail. w/- HP meters) (SS terminal cover)		
-	5	*120°C (250°F) max. (includes integral cooling fin)		
-	8	80°C (176°F) max. (applies only to OM025P)		
Process connections				
0	No fittings (consult factory for bolt patterns)			
1	BSPP (G) female threaded			
2	NPT female threaded			
3	Tri-clamp hygienic ferrules (1/2" larger than meter size)			
4	ANSI-150 RF flanged			
5	ANSI-300 RF flanged			
6	PN16 DIN flanged			
7	JIS 10kg/cm2 flanged			
9	Customer nominated			
Cable entries				
0	3~6mm cable gland or no cable entry (M, H & P bodies)			
1	M20 x 1.5mm (M16 x 1.5mm for R0 and R4 options)			
2	1/2" NPT 1/2"NPT Adaptor used			
6	3 x 16mm drilled holes (for F instruments only)			
Integral options				
	Nil			
SS	Stainless steel terminal cover			
RS	Reed Switch only - to suit Intrinsically safe installations			
E1	Explosionproof Exd IIB T4/T6 (aluminum & stainless meters)			
E2	Explosionproof Exd I/II B T4/T6 (stainless meters only)			
E3	ANZEx certified Exd IIB T4/T6			
E4	ANZEx certified Exd I/II B T4/T6 (mines approval, SS meters only)			
QP	Quadrature pulse (2 NPN phased outputs)			
Q1	Explosionproof Exd (with quadrature pulse but n/a with HP meter)			
HR	High resolution Hall effect output (Hall Effect only)			
H1	Explosionproof ~ Exd with HR Hi-res. Hall option			
PF	Pulsating flow option (Hall effect output only)			
P1	Explosionproof ~ Exd with PF pulsating flow option			
B2	*BT11 totaliser with pulse output			
B3	*Intrinsically safe BT11 with pulse output			
R0	*RT12 rate totaliser with all outputs (Alloy housing)			
R0P	*RT12 rate totaliser (Alloy housing with facia protector)			
R2	*RT12 rate totaliser with all outputs (GRN housing)			
R3	*Intrinsically safe RT12 with all outputs (GRN housing)			
R4	*RT40 rate totaliser with backlit large digit LCD (Alloy housing)			
R4P	*RT40 rate totaliser (Alloy housing with facia protector)			
E0	*EB10 batch controller			
G5	GX500 display			
G6	GX500 display with 4-20mA transmitter			
G7	GA500 4-20mA transmitter			
E10	**ATEX/IECEx Exd E110 backlit rate/tot, pulse, 4-20mA (Al)			
E11	**ATEX/IECEx Exd E110 backlit rate/tot, pulse, 4-20mA (SS)			
E12	**ATEX/IECEx Exd E112 backlit rate/tot, pulse, 4-20mA, 16 pt lin. (Al)			
E13	**ATEX/IECEx Exd E112 backlit rate/tot, pulse, 4-20mA, 16 pt lin. (SS)			
E18	**ATEX/IECEx Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (Al)			
E19	**ATEX/IECEx Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (SS)			
F10	F110 backlit rate/tot, pulse out and 4-20mA			
F11	Intrin. safe F110 backlit rate/tot, pulse out and 4-20mA			
F12	F112 backlit rate/tot, pulse out, 4-20mA and 10 pt lin.			
F13	Intrin. safe F112 backlit rate/tot, pulse out, 4-20mA and 10 pt lin.			
F16	F116 backlit Differential/Sum indicator, pulse out and 4-20mA			
F18	F018 backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART			
F19	Intrin. Safe F018 backlit rate/tot, pulse, 4-20mA, 10 pt lin, HART			
SB	Specific build requirement			

IECEx & ATEX approved
IECEx & ATEX mines approved
ANZEx approved
ANZEx mines approved
not available with high press models
IECEx & ATEX approved
OM004:11200ppl, OM006:4200ppl
IECEx & ATEX approved
for injected combustion engines
IECEx & ATEX approved
with scaleable pulse output
IECEx & ATEX approved
scaled pulse, alarms, 4~20mA
scaled pulse, alarms, 4~20mA
scaled pulse, alarms, 4~20mA
IECEx & ATEX approved
scaleable pulse output, backlight
scaleable pulse output, backlight
2 stage DC batcher & totaliser

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* Temp code 5 required with integral LCD instruments when operating temperature falls between 80°C (180°F)~120°C (250°F)

** Not available for OM015H

Model No.	Example								
OM025	S	5	1	1	-	5	1	1	R2

MODEL CODING MECHANICAL METERS

FLOMEC™ OM^ Oval Gear Mechanical Meter				
^Includes MG oval gear meters				
Model	Size			
OM015^	1/2"	(15mm)	1~40 L/min	0.26~10.6 GPM
OM025^	1"	(25mm)	10~150 L/min	2.6~40 GPM
OM040^	1 1/2"	(40mm)	15~250 L/min	4~66 GPM
OM050^	2"	(50mm)	30~450 L/min	8~120 GPM
OM050^	2" extended flow	(50mm)	35~580 L/min	9~150 GPM
Body material				
A	Aluminium			
E	Extended flow Auminium			
S	316L Stainless Steel			
Rotor material				
0	PPS - Teflon Filled (Polyphenol Sulphide)			
1	Keishi cut PPS rotors (for high viscosity liquids)			
4	Aluminium (aluminium meters only) standard on OM050E			
5	Stainless steel			
6	Keishi cut aluminium rotors (for high viscosity liquids)			
7	Keishi cut stainless steel rotors (for high viscosity liquids)			
Bearing type				
0	No Bearing (PPS rotors only)			
1	Carbon Ceramic (stainless steel rotors only)			
4	Hardened steel roller bearings (aluminum rotors only) (only suitable for lubricious fluids)			
O-ring material				
1	Viton (standard) -15°C minimum (-5°F)			
2	EPR (Ethylene Propylene Rubber) - for ketones only			
3	Teflon encapsulated viton			
4	Buna-N (Nitrile), -40°C minimum (-40°F)			
Temperature limits				
-	8	80°C (176°F) max. (all meters with mechanical registers)		
Process connections				
0	No fittings (consult factory for bolt patterns)			
1	BSPP (G) female threaded			
2	NPT female threaded			
3	Tri-clamp hygienic ferrules (1/2" larger than meter size)			
4	ANSI-150 RF flanged			
5	ANSI-300 RF flanged			
6	PN16 DIN flanged			
7	JIS 10kg/cm2 flanged			
9	Customer nominated			
Cable entries				
0	No cable entry			
Totaliser capacities				
OM015~025	OM040~100	Mechanical Registers		
999.9 litres		M1	3 digit mechanical totaliser - litres	
9999.9 litres	99999 litres	M3	4 digit mechanical totaliser - litres	
9999.9 gal.	99999 gal.	M4	4 digit mechanical totaliser - U.S. gallons	
	OM050~100	Large digit Mechanical Registers		
	999999 litres	V1	5 digit mechanical reset register - litres	
Model No. Example				
OM050	A	4	4	1 - 8 1 0 M3