Flomec medium capacity flowmeters provide precise volumetric flow measurement of clean liquids found in a broad range of industries including automotive, aviation, mining, power, chemical, pharmaceutical, food, paint & petroleum. Applications include the distribution of fuels, fuel oils, lubricants, alcohols, solvents, blending of bio & ethanol fuels, metering of chemicals, grease, adhesives, ink, insecticides & non-conductive liquids either pumped or gravity fed.

Features / Benefits

- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning *(straight pipe runs)*
- Various rotor material options
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Integral 4-20mA output option
- Optional Exd I/IIB approval (ATEX, IECEx)

Blind Pulse Meter

Meter selection

- ***Aluminium*** meters are used for petroleum product including oils and grease, fuels and fuel oils.
- ***Stainless steel*** meters are for the chemical, water based liquids or where aluminium is not suited or permitted.
- ***Blind pulse*** meters are available with reed switch & Hall Effect outputs. Quadrature pulse & Integral 4-20mA outputs are optional.

With LCD Register

Integral instruments

Flomec meter options include integral LCD totalisers, flow rate totalisers & batch controllers. These instruments provide monitoring & control outputs including 4~20mA, scaled pulse, alarms & batch control and are also available with robust mechanical registers:

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

(Instruments also available for remote mounting and with I.S. approvals)

With 4 digit Mechanical Register

General specification

Flow rates : 1 ~ 580 litres / min. (0.26~ 150 USgal/min.) *
Sizes : 15~50mm (1/2”~2” NB)
Materials : Aluminium, 316 Stainless steel or Ryton (PPS)

** see also small & large capacity data sheets for other size meters*

NMI Approved Meters

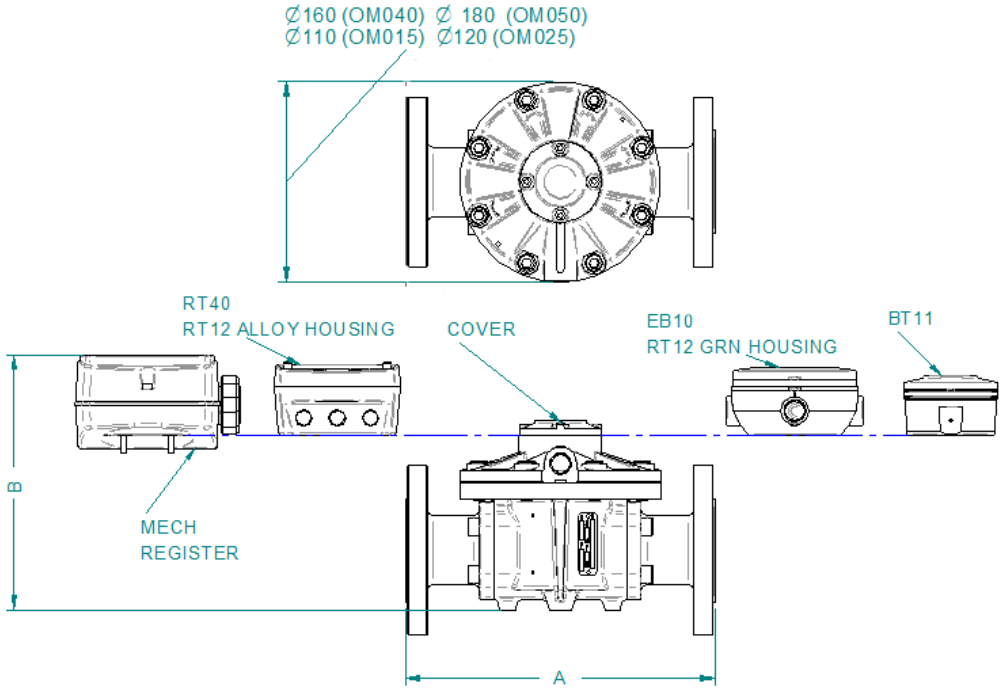
Many applications require the use of NMI approved meters.
Flomec Series Flowmeters 1” and above are available with optional

Specifications

Model prefix :	OM015 (1/2")	OM025 (1")	OM040 (1.5")	OM050 (2")	OM050 (2") E
Nominal size (inches)	15mm (1/2")	25mm (1")	40mm (1.5")	50mm (2")	50mm (2")
*Flow range - litres/min	1 ~ 40	10 ~ 150	15 ~ 250	30 ~ 450	35-580
- US gal/min	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	-20°C ~ +120°C (-4°F ~ +250°F), refer factory for lower temperature				
Maximum pressure Pulse Meter	(Threaded meters)bar (PSI)				
aluminium meters	68 (990)	68 (990)	30 (435)	20 (285)	20 (285)
Intermediate press. AL	-	138 (2000)		-	
316 stainless steel	68 (990)	68 (990)	30 (435)	38 (550)	-
Intermediate press. SS	100 (1450)	100 (1450)	50 (725)	50 (725)	-
***high pressure models	400 (5800)	400 (5800)	400 (5800)	300 (4350)	-
Maximum pressure Mechanical Meter	(Threaded meters)bar (PSI)				
aluminium meters	40 (580)	40 (580)	30 (435)	20 (285)	20 (285)
316 stainless steel	40 (580)	40 (580)	30 (435)	20 (285)	-
Electrical - for pulse meters (see below for optional outputs)					
Output pulse resolution	pulses / litre (pulses / US gallon) - nominal				
Reed switch	84 (318)	27 (102)	14 (53)	6.5 (25)	4.8 (18)
Hall effect	168 (636)	107 (405)	56 (212)	26 (99)	19.2 (73)
Quadrature Hall option	168 (636)	54 (204)	28 (106)	13 (49)	9.6 (36)
Reed switch output	30Vdc x 200mA max. (maximum thermal shock 10°C (50°F) / 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) - for Pulse Meter; IP65 (NEMA4) - for Mechanical Series; optional Exd I/ IIB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)				
Overall dimensions	Refer Below				
Recommended filtration	150 microns (100 mesh)				

* Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max. Reccomanded 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 & PF Options are not available with High Pressure Meters.

Over all Dimensions:



ALL DIMENSIONS IN MILLIMETERS ±2mm

	A	A	A	A	A	A		B	B	B	B	B	B	B	B
Modular Fitting	OM015	OM025A	OM025S	OM040	OM050	OM050E	Configuration	OM015-A	OM015-S	OM025-A	OM025-S	OM040-A	OM040-S	OM050	OM050E
A.N.S.I. 150	189	198	237	252	277	277	EB10/RT12 GRN HOUSING	154	148	168	165	203	194	218	268
DIN 16	189	198	237	252	277	277	BT11 REGISTER	145	139	160	157	195	186	210	260
JIS 10K	189	198	237	252	277	277	RT40/RT12 ALLOY HOUSING	157	151	171	168	206	197	221	271

Model Coding - Flomec Pulse Meters

Meter Size

OM015	15mm (1/2")	1-40 L/min	0.26-10.6 GPM
OM025	25mm (1")	10-150 L/min	2.6-40 GPM
OM040	40mm (1 1/2")	15-250 L/min	4-66 GPM
OM050	50mm (2")	30-450 L/min	8-120 GPM
OM050	50mm (2" extended flow)	35-580 L/min	9-150 GPM

Body material

A	Aluminum
E	Extended flow aluminium version (OM050E size only)
M	Intermediate pressure aluminium meter (Only OM025 =138 Bar [2000psi] max.)
S	316 stainless steel
N	Intermediate press. 316 SS meter (OM015N ~ 025N = 100bar [1450PSI], OM040N-050N = 50bar [725PSI] max.)
H	High pressure 316 SS (OM025H ~ 040H = 400bar [5800psi] max. OM050H = 300bar [4350PSI] max.)

Rotor material

0	PPS - Teflon Filled (Polyphenylene Sulfide) (Not Available for OM050E meter)
1	Keishi cutting of PPS rotors (for high viscosity liquids)(Not Available for OM050E meter)
4	Aluminum (aluminium meters only).
5	Stainless steel rotors. (Not Available for OM050E meter)
6	Keishi cutting of aluminium rotors (for high viscosity liquids)
7	Keishi cutting of 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)

O-ring material

1	Viton (standard); -15ºC (+5ºF) minimum
2	Ethylene Propylene Rubber (EPR); -40~+120ºC (-40~+250ºF)
3	Teflon encapsulated viton - application specific; -15ºC (+5ºF) minimum
4	Buna-N (Nitrile); -40~+100ºC (-40~+212ºF)

Temperature limits

-	2	120ºC (250ºF) - see note 1
-	3	*150 ºC (300ºF) max. - (Hall Effect output only), for O-Ring Code 1 or 3
-	5	*120 ºC (250ºF) max. (Includes integral cooling fin) see note 2

Process connections

1	BSP female threaded
2	NPT female threaded
3	* Tri-clamp hygienic ferrules
4	ANSI-150 RF flanges
5	ANSI-300 RF flanges
6	PN16 DIN flanges
7	JIS 10kg/cm2 flanges
9	Customer nominated

* triclamp ferrules are 1/2" larger than the meter size

Cable entries

with B2/B3 options	0	3~6mm cable gland (high pressure meter only)
	1	M20 x 1.5mm
	2	1/2" NPT

Integral options

	00	Nil
	SS	Stainless Steel Terminal Cover
	RS	Reed Switch Only -to suit Intrinsically Safe Installations (I.S)
Not available with high press models	QP	Quadrature pulse (2 NPN Phased outputs)
IECEX & ATEX approved	E1	Explosion proof ~ Exd IIB T4/T6 (Aluminium & stainless meters)
IECEX & ATEX mines approved	E2	Explosion proof ~ Exd I/IIB T4/T6 (stainless meters only)
IECEX & ATEX approved	Q1	Exd with Quadrature pulse
for injected combustion engines	PF	Pulsating flow option (hall effect output only)
IECEX & ATEX approved	P1	Exd with PF pulsating flow option.
with scaleable pulse output	B2	BT11 dual totaliser with pulse output
IECEX & ATEX approved	B3	Intrinsically safe BT11 (I.S.)
Scaled pulse, alarm, 4 ~ 20mA	R0	RT12 Flow Rate Totaliser with all outputs (Alloy Housing)
Scaled pulse, alarm, 4 ~ 20mA	R2	RT12 Flow Rate Totaliser with all outputs (GRN Housing)
IECEX & ATEX approved	R3	Intrinsically safe RT12 (I.S.) (GRN Housing)
Scaled pulse + Backlighting	R4	RT40 large LCD flow rate totaliser (Alloy Housing)
2 stage DC batcher and totaliser	E0	EB10 batch controller
Not available with high press models	FI	Loop powered 4 ~ 20mA analog output; *80 ºC (180ºF) max.
	A1	Exd with Loop powered 4 ~ 20mA analog output; *80 ºC (180ºF) max.
	SB	Specific build requirement

Model No. Example

OM025	A	4	4	1	-	5	1	1	R2

(** Meter close couple option with Strainer/Air-Eliminator, refer factory for part no. or strainer data sheet)

*(1) 120ºC (250ºF) rating for the pulse meter, 80ºC (180ºF) rating with BT, RT ,EB & FI options.
See temperature code 5 for higher temperature with BT, RT, & EB
*(2) Cooling fin is fitted with LCD instruments for operation between 80~120ºC (180~250ºF)

Recommended strainers (air eliminators available)

ST015S1	15mm (1/2") - 316SS
ST025S1	25mm (1") - 316SS
ST040S1	40mm (1 1/2") - 316SS
ST050S1	50mm (2") - 316SS

Model Coding - Flomec Oval Mechanical Meter

Meter size

OM 015	1/2"	(15mm)	1~40 L/min	0.26~10.6 GPM
OM 025	1"	(25mm)	10~150 L/min	2.6~40 GPM
OM 040	1 1/2"	(40mm)	15~250 L/min	4~66 GPM
OM 050	2"	(50mm)	30~450 L/min	8~120 GPM
OM 050	2" extended flow	(50mm)	35~580 L/min	9~150 GPM

Body material

A	Aluminum
E	Extended flow aluminum version (OM050E meter only)
S	316L Stainless Steel

Rotor material

0	PPS- Teflon Filled (Polyphenylene Sulfide) (Not Available for OMOM050E meter)
1	Keshi cutting of PPS rotors (for high viscosity liquids) (Not Available for OMOM050E meter)
4	Aluminum (aluminum meters only)
5	Stainless steel (Not Available for OM05E meter)
6	Aluminum - keishi cut for high viscosity liquids
7	Stainless steel - keishi cut 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)

O-ring material

1	Viton (standard), -15°C (5°F) minimum
2	EPR (Ethylene Propylene Rubber); -40°C~+120°C (-40°F~250°F)
3	Teflon encapsulated viton - application specific -15°C (5°F) minimum
4	Buna-N (Nitrile), -40°C~+100°C (-40°F~+212°F)

Temperature limits

- 8	*80°C (180°F) max.

Process connections

1	BSP (RP) female threaded
2	NPT female threaded
3	* Tri-clamp hygienic ferrules
4	ANSI-150 RF flanges
5	ANSI-300 RF flanges
6	PN16 DIN flanges
7	JIS 10kg/cm2 flanges
9	Customer nominated

** triclamp ferrules are 1/2" larger than the meter size*

Cable entries

0	no cable entry

Totaliser capacities

OM015~025	OM040~050E		Integral options
9999.9 litres	99999 litres	M3	4 digit mechanical totaliser - *litres*
9999.9 gal.	99999 gal.	M4	4 digit mechanical totaliser - *U.S. gallons*

OM050~050E		Large digit mechanical registers
999999 litres	V1	5 digit mechanical reset register - *litres*
999999 litres	V3	5 digit register + 7888 ticket printer - *litres*
999999 litres	V5	5 digit register + preset batch register - *litres*
999999 litres	V7	5 digit register + preset + 7888 printer - *litres*
	SB	Specific build requirement

Model No. Example

OM 050	A	4	4	1	-	8	1	0	V1