

**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/IB 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.

## 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)

## 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

With LCD  
Register



With 4 digit  
Mechanical  
Register

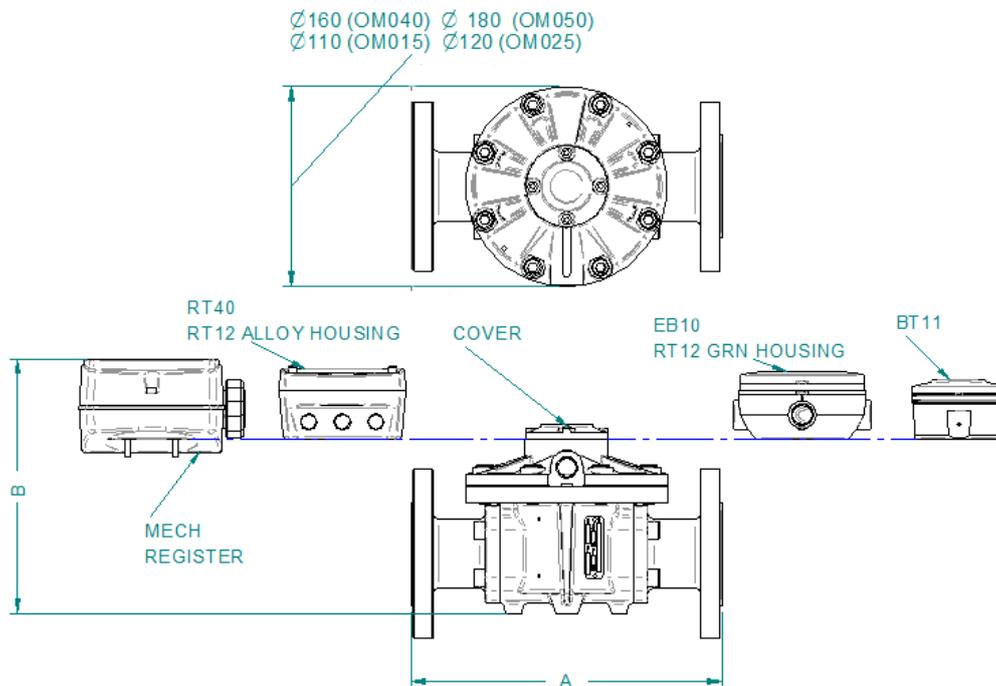


## Specifications

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 - US gal/min	1 ~ 40 0.26 ~ 10.6	10 ~ 150 2.6 ~ 40	15 ~ 250 2.6 ~ 66	30 ~ 450 8 ~ 120	35-580 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

Modular Fitting	A						Configuration	B							
	OM015	OM025A	OM025S	OM040	OM050	OM050E		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	188	165	203	194	218	268
DIN 16	189	198	237	252	277	277	BT11 REGISTER	145	139	160	157	195	188	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 ); -15°C (+5°F) minimum
2	Ethylene Propylene Rubber (EPR); -40~+120°C (-40~+250°F)
3	Teflon encapsulated viton - application specific; -15°C (+5°F) minimum
4	Buna-N ( Nitrile ); -40~+100°C (-40~+212°F)

### Temperature limits

- 2	120°C ( 250°F ) - see note 1
- 3	*150 °C (300°F) max. - (Hall Effect output only), for O-Ring Code 1 or 3
- 5	*120 °C (250°F) 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/cm <sup>2</sup> 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)
QP	Quadrature pulse ( 2 NPN Phased outputs)
E1	Explosion proof ~ Exd IIB T4/T6 (Aluminium & stainless meters)
E2	Explosion proof ~ Exd IIB T4/T6 (stainless meters only)
Q1	Exd with Quadrature pulse
PF	Pulsating flow option (hall effect output only)
P1	Exd with PF pulsating flow option.
B2	BT11 dual totaliser with pulse output
B3	Intrinsically safe BT11 ( I.S. )
R0	RT12 Flow Rate Totaliser with all outputs (Alloy Housing)
R2	RT12 Flow Rate Totaliser with all outputs (GRN Housing)
R3	Intrinsically safe RT12 ( I.S. ) (GRN Housing)
R4	RT40 large LCD flow rate totaliser (Alloy Housing)
E0	EB10 batch controller
FI	Loop powered 4 ~ 20mA analog output; *80 °C (180°F) max.
A1	Exd with Loop powered 4 ~ 20mA analog output; *80 °C (180°F) 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) 120°C (250°F) rating for the pulse meter, 80°C (180°F) 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 80~120°C (180~250°F)



## 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

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

### Body material

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

### Rotor material

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

### Bearing type

<b>0</b>	No Bearing (PPS rotors only)
<b>1</b>	Carbon-Ceramic (stainless steel rotors only)
<b>4</b>	Hardened steel roller bearings ( aluminum rotors only )

### O-ring material

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

### Temperature limits

<b>8</b>	*80°C (180°F) max.
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### Process connections

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

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

### Cable entries

<b>0</b>	no cable entry
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### Totaliser capacities

#### OM015-025 OM040-050E

9999.9 litres	99999 litres	<b>M3</b>	4 digit mechanical totaliser - litres
9999.9 gal.	99999 gal.	<b>M4</b>	4 digit mechanical totaliser - U.S. gallons

### Integral options

#### OM050-050E

### Large digit mechanical registers

999999 litres	<b>V1</b>	5 digit mechanical reset register - litres
999999 litres	<b>V3</b>	5 digit register + 7888 ticket printer - litres
999999 litres	<b>V5</b>	5 digit register + preset batch register - litres
999999 litres	<b>V7</b>	5 digit register + preset + 7888 printer - litres
	<b>SB</b>	Specific build requirement

### Model No. Example

<b>OM050</b>	<b>A</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>-</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>V1</b>
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