**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)

**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 NMI pattern approval with quadrature pulse output.
Specifications

<table>
<thead>
<tr>
<th>Model prefix</th>
<th>OMD15 (1&quot;)</th>
<th>OMD25 (1&quot;)</th>
<th>OMD40 (1.5&quot;)</th>
<th>OMD50 (2&quot;)</th>
<th>OMD50 (2&quot;) E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal size (inch)</td>
<td>15mm (1&quot;)</td>
<td>25mm (1&quot;)</td>
<td>40mm (1.5&quot;)</td>
<td>50mm (2&quot;)</td>
<td>50mm (2&quot;)</td>
</tr>
<tr>
<td>Flow range - litres/min</td>
<td>1 - 40</td>
<td>10 - 160</td>
<td>15 - 250</td>
<td>30 - 450</td>
<td>35-580</td>
</tr>
<tr>
<td>US Gall/min</td>
<td>0.286 - 10.6</td>
<td>2.8 - 40</td>
<td>2.8 - 68</td>
<td>8 - 120</td>
<td>9-150</td>
</tr>
<tr>
<td>Accuracy @ 30°C</td>
<td>± 0.5% of reading (accuracy is ± 0.2% of reading with optional RT12 with non-linearity correction)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>Typically ± 0.5% of reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20°C to -120°C (-4°F to -250°F), refer factory for lower temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum pressure Pulse Meter (Threaded meters) bar (PSI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminium meters</td>
<td>58 (890)</td>
<td>68 (990)</td>
<td>30 (435)</td>
<td>20 (295)</td>
<td>20 (295)</td>
</tr>
<tr>
<td>316 stainless steel</td>
<td>68 (990)</td>
<td>68 (990)</td>
<td>30 (435)</td>
<td>20 (295)</td>
<td>20 (295)</td>
</tr>
<tr>
<td>Intermediate press. SS</td>
<td>100 (1450)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High pressure models</strong></td>
<td>400 (6000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High pressure Mechanical Meter</strong></td>
<td>400 (6000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminium meters</td>
<td>40 (580)</td>
<td>40 (580)</td>
<td>30 (435)</td>
<td>20 (295)</td>
<td>20 (295)</td>
</tr>
<tr>
<td>316 stainless steel</td>
<td>40 (580)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - for pulse meters (see below for optional outputs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output pulse resolution</td>
<td>pulses / litre (pulses / US gallon) - nominal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reed switch</td>
<td>94 (276)</td>
<td>27 (109)</td>
<td>14 (229)</td>
<td>6.5 (25)</td>
<td>4.8 (151)</td>
</tr>
<tr>
<td>Hall effect</td>
<td>109 (276)</td>
<td>107 (430)</td>
<td>96 (256)</td>
<td>39 (299)</td>
<td>19.2 (723)</td>
</tr>
<tr>
<td>Quadrature Hall option</td>
<td>188 (636)</td>
<td>54 (215)</td>
<td>28 (166)</td>
<td>13 (440)</td>
<td>0.8 (38)</td>
</tr>
<tr>
<td>Reed switch output</td>
<td>30 Vdc x 200mA max. (maximum thermal shock 10°C (50°F) / minute)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall effect output (NPN)</td>
<td>3 wire open collector, 5-30Vdc max, 20mA max.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optional outputs</td>
<td>4-20mA, scaled pulse, quadrature pulse, flow alarms or two stage bitouch control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP55/57 (NEMA) - for Pulse Meter, IP65 (NEMA) - for Mechanical Series, optional Exd IIB T4/T6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integral ancillaries can be supplied U.S. (Intrinsically safe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall dimensions</td>
<td>Refer Below</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reccessed Inflation</td>
<td>150 microns (100 mesh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Maximum flow is to be reduced as viscosity increases, see flow derating 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. 
*** GP & PP Options are not available with High Pressure Meters.

Over All Dimensions:

![Diagram](image)

ALL DIMENSIONS IN MILLIMETERS ±2mm

<table>
<thead>
<tr>
<th>Modular Fitting</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>Configurations</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.N.S.I. 150</td>
<td>189</td>
<td>196</td>
<td>227</td>
<td>282</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>282</td>
<td>277</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANSI 100</td>
<td>189</td>
<td>196</td>
<td>227</td>
<td>282</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>277</td>
<td>282</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J61.3K</td>
<td>225</td>
<td>236</td>
<td>268</td>
<td>323</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>318</td>
<td>323</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.S.</td>
<td>110</td>
<td>117</td>
<td>176</td>
<td>188</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.P.T</td>
<td>110</td>
<td>117</td>
<td>176</td>
<td>188</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td>212</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WWW.FLOMEC.COM.AU
Model Coding - Flomec Pulse Meters

**Model No. Example**

OM025 A 1 2 3 4 5 6 7 8 R 2

(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 fins are fitted with LCD instruments for operation between 80-120°C (180-250°F)

**Rotor material**

- 0: PPS - Tetron Filled (Polyethylene Sulfide) (Not Available for OM050E meter)
- 1: Abrasive cutting of PPS rotors (for high viscosity liquids) (Not Available for OM050E meter)
- 4: Carbon-Carburised (Stainless steel rotors only)
- 5: Abrasive cutting of carbon-carburised rotors (high viscosity liquids)
- 7: Abrasive cutting of stainless steel rotors (high viscosity liquids)

**Body material**

- A: Aluminum
- E: Extended flow aluminum version (OM050E size only)
- S: 316 stainless steel
- N: Intermediate press. 316 SS meter (OM150 = 25 bar [360psi], OM400 = 40 bar [580psi] max.)
- H: High pressure 316 SS (OM250 = 40 bar [580psi] max, OM500 = 300 bar [4350psi] max.)

**Cable entries**

- 0: 5-pin cable gland (high pressure meter only)
- 1: M20 x 1.5mm
- 2: 1/2"NPT

**Integral options**

- D0: Nil
- SS: Stainless Steel Terminal Cover
- R5: Fused Switch Only - to suit Intrinsically Safe Installations (ES)

**Process connections**

- 1: 0.75" female threaded
- 2: 1/2" female threaded
- 3: 3/8" female hydraulic fitting
- 4: ANSI 150 RF flanges
- 5: ANSI 300 RF flanges
- 6: PN16 DN flanges
- 7: JIS 10kgflm2 DN flanges
- 8: Customer nominated

**Not available with high press models**

- GP: Quadrature pulse (2 NPN/Fluxed Outputs)
- E1: Explosion proof - End HB T4/T6 (Aluminum & stainless steel meters)
- E2: Explosion proof - End HR T4/T6 (Stainless steel only)
- G1: End with Quadrature pulse
- F1: Fused flow option (Ratio Effect only output)
- R0: RTD 2-wire (No outputs)
- R1: 2-wire RTD (No outputs)
- R2: RTD 2-wire (No outputs)
- R3: Internal safety (1.0%)
- R4: RTD 2-wire (No outputs)

**Recommended strainers**

- ST015S1: 15mm (1/2") - 3BSS
- ST025S1: 25mm (1") - 3BSS
- ST040S1: 40mm (11/2") - 3BSS
- ST050S1: 50mm (2") - 3BSS

www.flomec.com.au
Model Coding - Flomec Oval Mechanical Meter

### Meter size

<table>
<thead>
<tr>
<th>Meter size</th>
<th>Body material</th>
<th>Rotor material</th>
<th>Bearings</th>
<th>O-ring material</th>
<th>Temperature limits</th>
<th>Process connections</th>
<th>Totaliser capacities</th>
<th>Integral options</th>
<th>Large digit mechanical registers</th>
<th>Specific build requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM015 1/2&quot; (15mm)</td>
<td>OM025 1&quot; (25mm)</td>
<td>OM040 1 1/2&quot; (40mm)</td>
<td>OM050 2&quot; (50mm)</td>
<td>OM050 2&quot; extended flow (50mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OM015 1/2&quot; (15mm)</td>
<td>OM025 1&quot; (25mm)</td>
<td>OM040 1 1/2&quot; (40mm)</td>
<td>OM050 2&quot; (50mm)</td>
<td>OM050 2&quot; extended flow (50mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OM015 1/2&quot; (15mm)</td>
<td>OM025 1&quot; (25mm)</td>
<td>OM040 1 1/2&quot; (40mm)</td>
<td>OM050 2&quot; (50mm)</td>
<td>OM050 2&quot; extended flow (50mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Body material
- A: Aluminum
- E: 316L Stainless Steel

#### Rotor material
- 0: PPS-Teflon filled (Polyphenylene Sulfide) (Not Available for OM050E meter)
- 1: Ketshi cutting of PPS rotors (for high viscosity liquids) (Not Available for OM050E meter)
- 4: Aluminum (aluminum meters only)
- 5: Stainless steel (Not Available for OM050E meter)
- 6: Aluminum - keishi cut for high viscosity liquids
- 7: Stainless steel - keishi cut for high viscosity liquids

#### Bearings
- 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: EPDM (Ethylene Propylene Rubber) - -40°C to +120°C (-40°F to 250°F)
- 3: Teflon encapsulated viton - application specific - -15°C (5°F) minimum
- 4: Buna-N (Nitrile) - -40°C to +100°C (-40°F to 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

#### Cable entries
- 0: no cable entry

#### Totaliser capacities
- OM015-025: 9999.9 litres, 99999 litres, 99999 gal., 999999 litres
- OM040-050E: 99999 litres, 999999 litres, 999999 gal.

#### Integral options
- M3: 4 digit mechanical totaliser - litres
- M4: 4 digit mechanical totaliser - U.S. gallons

#### Large digit mechanical registers
- V1: 5 digit mechanical reset register - litres
- V3: 5 digit register + 7888 ticket printer - litres
- V5: 5 digit register + preset batch register - litres
- V7: 5 digit register + preset + 7888 printer - litres
- SB: Specific build requirement

#### Model No. Example
- OM050 44121212 V1