TECHNICAL PRODUCT
DATA SHEET

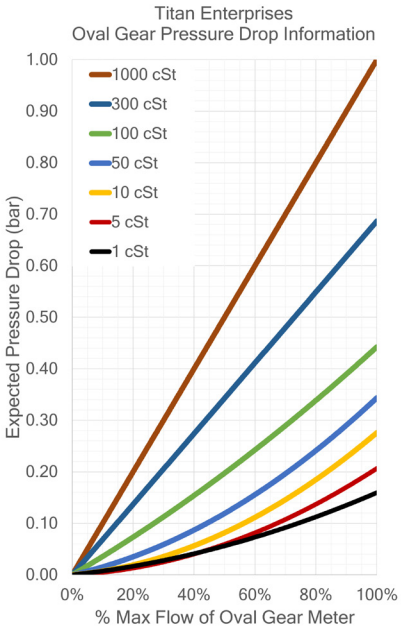
Metra-Clear Oval Gear Meter

These compact rugged acrylic-topped oval gear flowmeters are designed to give high performance with a low cost of ownership. The meters cover flow ranges from 0.01 to 100 L/min on 30 cSt oil and 0.1 to 100 L/min on water-like liquids. For OEMs, alternatives are available, including manifold mountings. The standard models have 316 St St, aluminium (except MC1 and MC2) or PEEK bodies with Viton™ 'O' ring seals.

For general specifications for these flow meters, refer to the corresponding Oval Gear data sheet for the required model, i.e. MC1 - OG1; MC2 - OG2, etc.

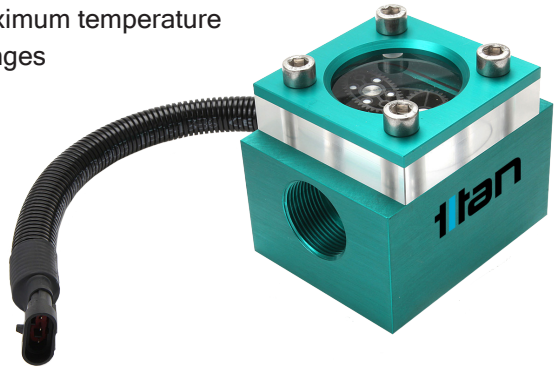
IDEAL FOR

- Engine test
- Oil flow
- High viscosity liquids
- OEM equipment
- Hazardous areas
- Batching



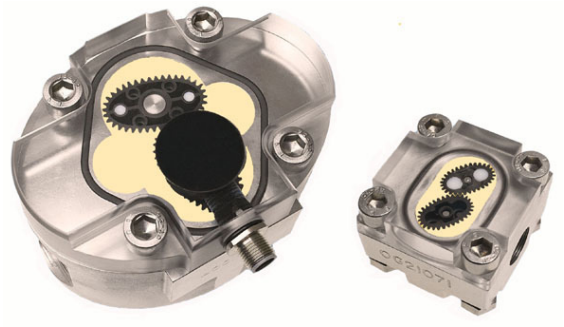
FEATURES

- Rugged construction
- High visibility
- Individual calibration
- High viscosity options
- Low pressure drop
- No flow conditioning required
- Compact meter assembly
- Hall, reed switch
- Accuracy 1.0% FSD water
  0.75% FSD oil (30 cSt)
- 0.1% repeatability
- IP65 protection
- 10 bar pressure
- Non-metallic option
- 60°C maximum temperature
- 5 flow ranges



TITAN ENTERPRISES LTD.
www.flowmeters.co.uk

Metra-Clear Oval Gear Meter



Ordering Codes

Model
The order code is preceded by the flow meter model eg MC3*
Body Material
S = 316 St St *Cap - Acrylic
A = Aluminium *Cap - Acrylic (excl. MC1/MC2)
P = PEEK (at 80°C max) *Cap - Acrylic
Temp Rating
S = 60°C / 140°F
Pressure Rating
1 = 10 bar 150 PSI
Seal Material
V = Viton™
N = Nitrile
E = EPDM
K = Kalrez®
Detector Type
H = Hall Effect
R = Reed Switch & Resistor
X = Reed Switch (hazardous area)
Process Fitting Size
Q = 1/4" (MC1 & 2)
H = 1/2" (MC3)
T = 3/4" (MC4)
U = 1" (MC5)
Proces Fitting Type
B = BSP F
N = NPT F

* Refer to specific Oval Gear data sheets for order codes relating to the required Metra-Clear model. Aluminium not available as standard for MC1 & MC2.

e.g. **MC3-SS1-VHH-B** is an OG3 stainless steel flowmeter rated at 60°C, 10 bar, Viton™ seal, Hall effect detector and a 1/2" BSP thread.

TECHNICAL SPECIFICATIONS

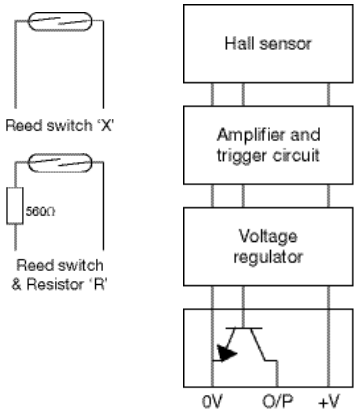
Model	Oil Flow L/Min			Water Flow L/Min			'K' factor
	Min	Max	Accuracy	Min	Max	Accuracy	Pulses/L
MC1	0.01	1.0	0.75% FSD	0.1	1.0	1.00% FSD	2050
MC2	0.03	4.0	0.75% FSD	0.15	4.0	1.00% FSD	1100
MC3	0.05	10	1%	0.5	10	0.50% FSD	440
MC4	0.25	50	0.50%	2.5	50	1.00%	115
MC5	0.50	100	0.50%	4.0	100	0.75%	78

At the heart of the meter are a pair of toothed oval gears one of which contains chemically resistant magnets.

Rotation is detected through the chamber wall by a Hall Effect detector or a reed switch, giving an accurate number of pulses per litre passed.

The output is an NPN pulse or a voltage free contact closure, either of which is readily interfaced with most electronic display or recording devices, such as the Pulsite® Solo.

This combination of materials and technology ensures a long life product with reliable, accurate operation throughout.



Sensor block diagram

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