TECHNICAL PRODUCT
DATA SHEET

High Pressure Oval Gear Meters



These compact rugged oval gear flowmeters are designed to give high performance with a low cost of ownership. These meters are capable of measuring simple water-like products as well as lubricating fluids. The standard inlet and outlet are BSP or NPT female threads for autoclave and flanges are available on special orders. For OEMs, alternatives are available, including manifold mountings. The standard models are 316 St St, and other materials are available if required. For hazardous areas either the Namur sensor or the reed switch (simple apparatus) may be used.

FEATURES

- Excellent chemical resistance
- Rugged construction
- Individual calibration
- High viscosity capability
- Low pressure loss
- No flow conditioning required
- Compact meter assembly
- Hall, reed switch or Namur sensor
- Good accuracy
- 0.1% repeatability
- IP65/NEMA 4 protection
- Up to 700 bar on selected models; up to 950 bar for special orders
- Non-metallic option

IDEAL FOR

- Engine test
- Oil flow
- High viscosity fluids
- OEM equipment
- Hazardous areas



Ready to specify this solution for your project or application? Request your quote now.

Standard Materials of Construction
Body and cap - 316 St St
'O' Ring seal - Viton™
Gears - PEEK
Magnets - Ceramic
Ceramic (PTFE encapsulated option)

TITAN ENTERPRISES LTD.
www.flowmeters.co.uk

High Pressure Oval Gear Meters

Ordering Codes

Model

The order code is preceded by the flow meter size eg OG4

Body Material

S = 316 St St

Temp Rating

S = 80°C / 158°F
T = 100°C / 212°F
U = 150°C / 300°F

Pressure Rating

5 = 50 bar 750 PSI (St St)
4 = 400 bar 5880 PSI (St St) (OG1-OG6)
7 = 700 bar 10150 PSI (St St) (OG1-OG4)
* Pressures to 950 bar also available. Contact Titan Enterprises directly for information

Seal Material

V = Viton™
N = Nitrile
E = EPDM
K = Kalrez®

Detector Type

H = Hall Effect
R = Reed Switch & Resistor
N = Namur
X = Reed Switch

Process Fitting Size

Q = 1/4”
H = 1/2”
T = 3/4”
U = 1”
P = 1 1/2”
D = 2”

Process Fitting Type

B = BSP F
N = NPT F
X = Special
e.g. Autoclave or other high pressure fittings

Special

HP = High Pressure Special (to 950 bar)

e.g. **OG4-SS4-VHT-B** is a standard flowmeter with an oil flow range of 0.25 to 50 L/min, 316 St St body, 400 bar pressure rating, Viton™ seal, Hall effect detector and ¾” BSP female fittings with a standard 6 point traceable water calibration.

TECHNICAL SPECIFICATIONS

Model	Oil Flow lpm			Water Flow lpm			‘K’ factor
	Min	Max	Accuracy	Min	Max	Accuracy	Pulses/L
OG1	0.01	1.0	0.75% FSD	0.1	1.0	1.00% FSD	2050
OG2	0.03	4.0	0.75% FSD	0.15	4.0	1.00% FSD	1100
OG3	0.05	10	1%	0.5	10	0.50% FSD	440
OG4	0.25	50	0.50%	2.5	50	1.00%	115
OG5	0.50	100	0.50%	4.0	100	0.75%	78
OG6	2.00	200	0.50%	10	200	1.00%	21

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, Namur sensor or a reed switch giving a number 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.

This combination of materials and technology ensures a long life product with reliable, accurate operation throughout. PEEK is a superb material for gear and bearing manufacture, it has excellent pressure and velocity characteristics coupled with very good thermal properties and chemical resistance. Stainless gears with roller bearings are an alternative.

For fluids with viscosities above 1000 cSt specially cut gears are required and the flow range is reduced for a given meter size.

Note: T and U temperature ratings of 100°C/212°F and 150°C/300°F respectively, will impact the standard accuracy at ambient temperature due to increased clearance on the gears.



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For reference only; for latest information contact your local distributor.