

# Oval Gear Meters For High Viscosity Liquids (>1000cSt)



## FEATURES

- Excellent chemical resistance
- Rugged, compact construction
- Individual calibration
- Low pressure drop
- No flow conditioning required
- 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



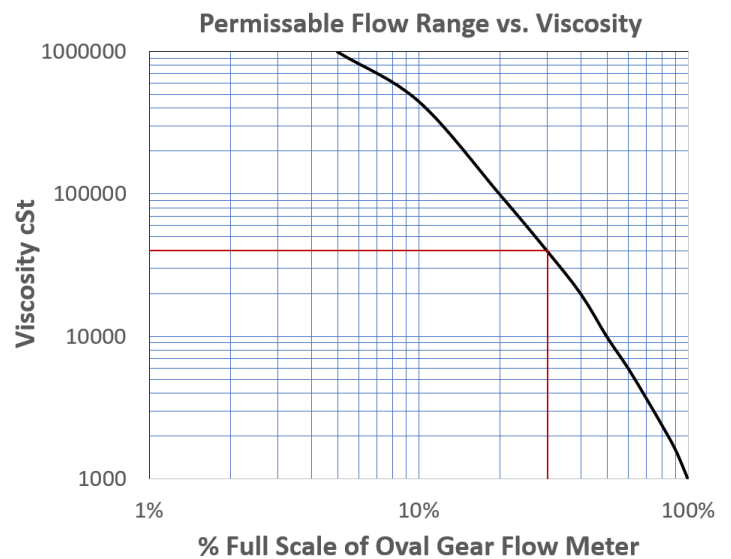
## IDEAL FOR

- Engine test
- Oil / grease flow
- High viscosity fluids
- Cosmetic liquids
- Food products, e.g. syrups, chocolate
- OEM equipment
- Hazardous areas

Titan Enterprises offer a standard range of Oval Gear meters designed for the flow measurement of liquids with viscosities up to 1000cSt. By nature, the performance of oval gear (OG) flowmeters improves at higher viscosities as the increasing fluid thickness reduces the leakage path across the gears. The High Viscosity oval gear options are specially designed with profiled gears to extend the liquid operational viscosities well above 1000cSt, facilitating additional flow of the liquid and preventing hydraulic lock.

The high viscosity oval gear options for OEM applications are available for standard OG1 to OG5 meter models, ideally suited for use with products such as greases and oils, syrups and cosmetic creams.

Due to the pressure drop increasing with viscosity, the maximum flow attainable on the OG meters is reduced in order to maintain the expected pressure drop upstream of the device. This flow range reduction is illustrated in the chart below.



# Oval Gear Meters For High Viscosity Liquids (>1000cSt)



## Ordering Codes

### Model

**OG4 (example)**

#### Body Material

S = 316 St St 50 bar std

#### 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)

7 = 700 bar 10150 PSI (St St)

#### Seal Material

V = Viton™

N = Nitrile

E = EPDM

P = PTFE (50 bar max)

K = Kalrez®

#### Detector Type

H = Hall effect

R = Reed switch & Resistor

N = Namur

X = Reed switch (hazardous area)

#### Process Fitting Size

T = 3/4" (OG4 std)

Q = 1/4" (OG1 & OG2 std)

N = 1/2" (OG3 std)

U = 1" (OG5 std)

#### Process Fitting Type

B = BSP F

N = NPT F

#### High Viscosity

HiVisc = High Viscosity

e.g. **OG4-SS4-VHT-B-HiVisc** is a high viscosity 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 3/4" BSP female fittings with a standard 6 point traceable water calibration.

\* 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.

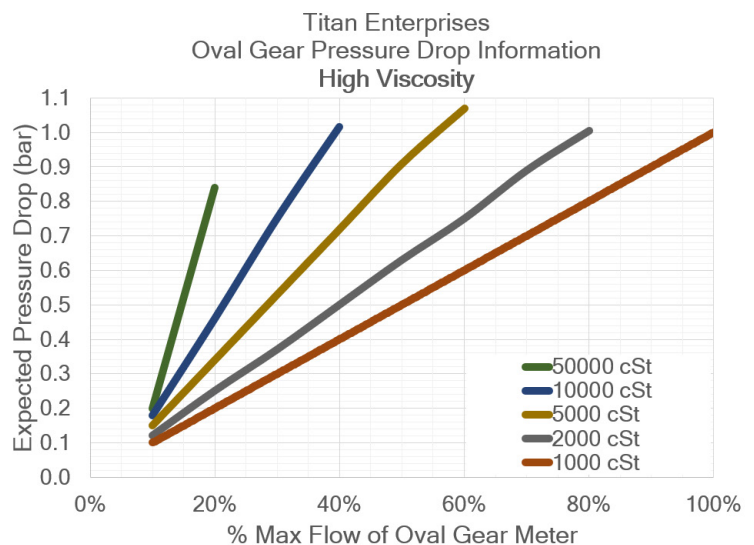
The High Viscosity options are available for the standard OG1, OG2, OG3, OG4 and OG5 flowmeter models only.



## TECHNICAL SPECIFICATIONS

Model	1000 cSt Oil Flow lpm			'K' factor
	Min lpm	Max lpm	Accuracy	Pulses/L
OG1	0.01	1.0	0.75% FSD	2050
OG2	0.03	4.0	0.75% FSD	1100
OG3	0.05	10	1.00%	440
OG4	0.25	50	0.50%	115
OG5	0.50	100	0.50%	78

Refer to % drop in flow range vs viscosity graph for higher viscosities



At the heart of the meter are a pair of precision oval gears, one of which contains chemically resistant PTFE-coated magnets.

Rotation is detected through the chamber wall by a Hall Effect detector, Namur sensor or a reed switch.

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