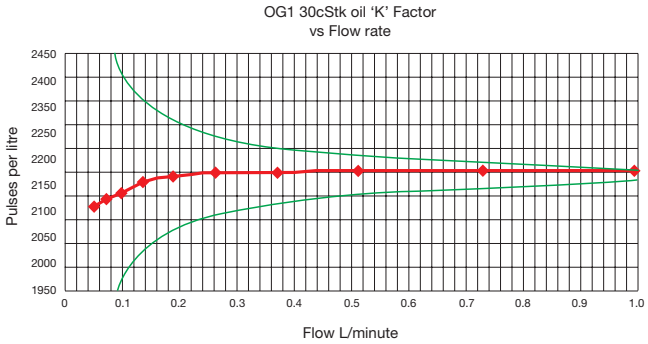
# OVAL GEAR FLOWMETERS 1 l/min Serie OG1

This compact rugged oval gear flowmeter is designed to give high performance with a low cost of ownership. The meters cover flow ranges from 0.01 to 1.0 L/min on 30 cSt oil and 0.1 to 1.0 L/min on water like liquids. It can have totally non-metallic wetted components, PEEK™, ceramic and an elastomer which makes this the ideal choice for the metering of aggressive chemicals. For OEM use alternatives, including manifold mountings, are available. The standard models have 316 St St or PEEK™ bodies with Viton™ 'O' ring seals.

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 approximately 2050 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.

## IDEAL FOR

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




## 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
- Accuracy 1.0% FSD water
  0.75% FSD oil (30 cSt)
- ±0.5% reading *
- 0.1% repeatability
- IP67/NEMA 4 protection
- Models to 700 Bar
- Non-metallic option

** When used with our metra-smart instrument*

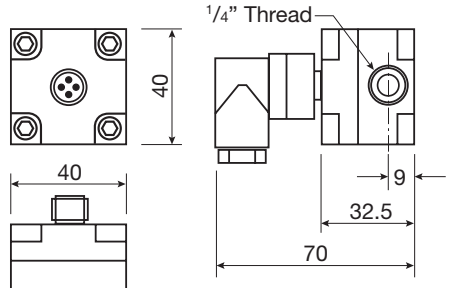
## Ordering codes

| Model |
|---|
| **OG1** |
| **Body material** |
| **S = 316 St St 50 bar std** |
| P = PEEK™ 10 Bar max |
| H = Hastelloy C |
| **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)** |
| 1 = 10 Bar 150 PSI (Al / PEEK™) |
| 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) |
| **Pipe Thread** |
| **Q = 1/4" (OG1 std)** |
| **Connections** |
| **B = BSP F** |
| N = NPT F |
| F = Flanged (specify) |

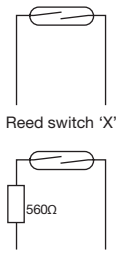
e.g. **OG1-SS5-VHQ-B** is a stainless steel meter rated at 80°C, 50 Bar, Viton™ seal, Hall effect detector and a 1/4" BSP thread.

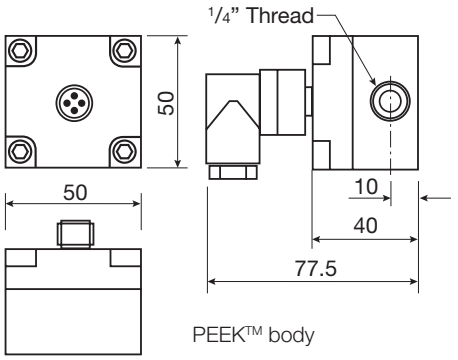
## TECHNICAL SPECIFICATIONS

| Sample product codes ➡ | | Stainless standard OG1-SS5-VHQ-B | PEEK™ OG1-PS1-VHQ-B |
|---|---|---|---|
| Flow range | – Water<br>– 30 cSt Oil | 0.1 - 1.0 L/min<br>0.01 - 1.0 L/min | 0.1 - 1.0 L/min<br>0.01 - 1.0 L/min |
| Wetted matls | – Body<br>– Gears<br>– Seal<br>– Magnet | 316 St St<br>Carbon filled PEEK™<br>Viton™<br>Ceramic | PEEK™<br>Carbon filled PEEK™<br>Viton™<br>Ceramic |
| Accuracy | – Water<br>– 30 cSt oil | ± 1.0% Reading<br>± 0.75% Reading | ± 1.0% Reading<br>± 0.75% Reading |
| Repeatability | | ± 0.1% | ± 0.1% |
| Detector Type | | Hall effect | Hall effect |
| Terminations | | M12 instrument socket | M12 instrument socket |
| Approx 'K' factor – Pulses/Litre | | 2050 | 2050 |

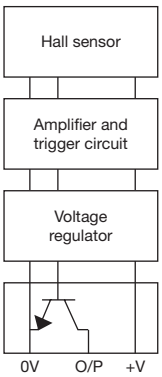


316 St St body



PEEK™ body



Sensor block
diagram

| Weight (kg) | | |
|---|---|---|
| St St | 50 Bar | 0.360 |
| PEEK™ | 10 Bar | 0.184 |
| St St | 400 Bar | 3.000 |