## FEATURES

- Excellent chemical resistance
- Rugged construction
- Individual calibration
- High viscosity capability
- Low pressure loss
- No flow conditioning required
- Compact meterassembly
- Hall, reed switch or Namur sensor
- Oval gear flow meter
- Minimum flow rate (30 cSt oil) 0.03 L/min
- Minimum flow rate (water-like substances) of 0.15 L/min
- Maximum flow rate of 4 L/min
- Quarter-inch BSP connection
- Made of stainless steel

# RS PRO Oval Gear Flow Meter, 0.01 L/min → 4 L/min

RS Stock No.: 447-4449


RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

This RS PRO compact oval gear flow meter measures viscous fluids such as oils and fuels, providing low pressure loss and excellent chemical resistance. Its rugged construction assures reliable operation and a long service life.

The meter fits on a quarter-inch British Standard Pipe (BSP) thread and its standard flow ranges from 0.03 L/min to 4 L/min on 30 cSt oil and 0.15 L/min to 4 L/min on water-like substances. It contains a pair of oval gears that are pushed around by the fluid. Magnets transmit their rotations via a Hall-effect sensor, giving around 1,100 pulses per litre passed.

## General Specifications

| | |
|---|---|
| **Device Type** | Oval Gear |
| **Media Monitored** | Liquid |
| **Minimum Flow Rate** | 0.01L/min |
| **Maximum Flow Rate** | 4L/min |
| **Maximum Pressure** | 50bar |
| **Material** | Stainless Steel |
| **Standard Accuracy** | 1.0% FSD water, 0.75% FSD oil |
| **Repeatability** | 0.1% |
| **For Use With** | Oil & water |
| **Applications** | Enginetest, Oilflow, High viscosityfluids, OEM equipment, Hazardous areas |

## Electrical Specifications

| | |
|---|---|
| **Supply Voltage** | 5VDC to 24VDC |
| **Output** | NPN pulse |

## Mechanical Specifications

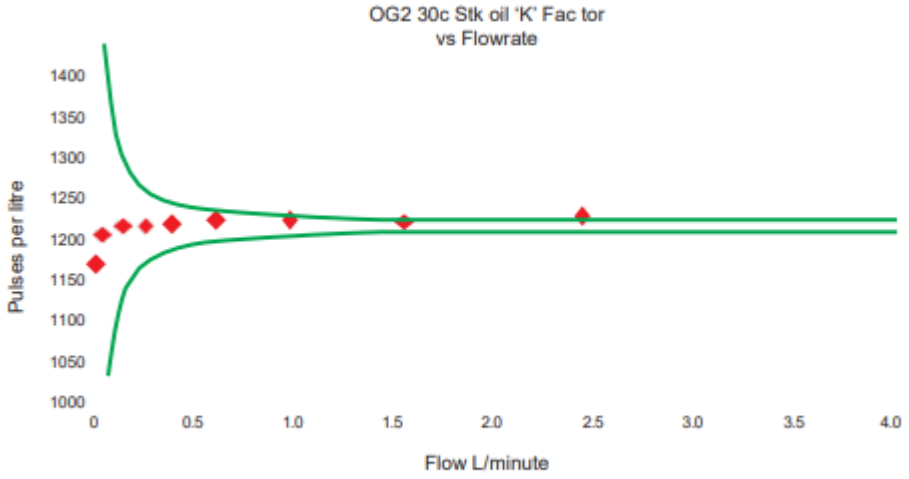
| | |
|---|---|
| **Connection Type** | 1/4 BSP |
| **Pipe Diameter Range** | 1/4 in |
| **Wetted Materials** | 316 Stainless steel (Body), Carbon filled PEEK (Gears), Viton (Seal), Ceramic (Magnet) |

## Operation Environment Specifications

| | |
|---|---|
| **Maximum Operating Temperature** | +80°C |

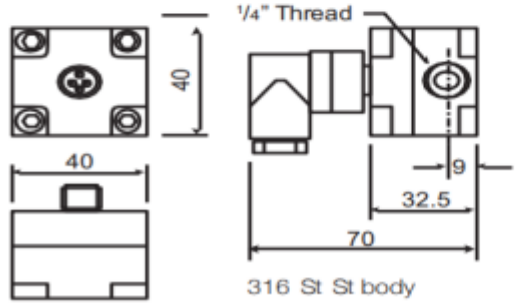
## Protection Category

| | |
|---|---|
| **IP Rating** | IP67/NEMA 4 protection |

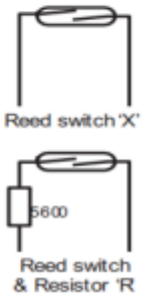

OG2 30c Stk oil 'K' Fac tor
vs Flowrate
Pulses per litre
1400
1350
1300
1250
1200
1150
1100
1050
1000
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Flow L/minute

## TECHNICAL SPECIFICATIONS

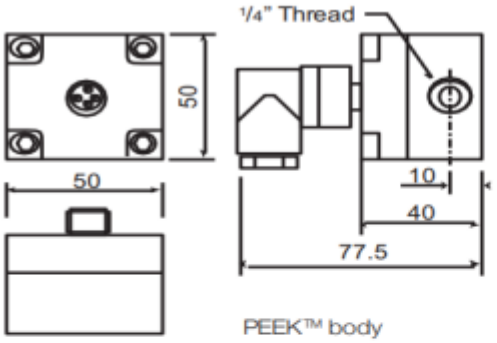
| Sample product codes ▪▪ | | Stainless standard OG2-SSS-SSQ-B |
|---|---|---|
| Flow range | –Water | 0.15 – 4.0 L/min |
| | – 30 cSt Oil | 0.03 – 4.0 L/min |
| Weted matls | – Body | 316 St St |
| | – Gears | Carbon filled PEEK™ |
| | –Seal | Viton™ |
| | –Magnet | Ceramic |
| Accuracy | –Water | ± 1.0% Reading |
| | – 30 cSt oil | ± 0.75% Reading |
| Repeatability | | ± 0.1% |
| Detector Type | | Hall effect |
| Terminations | | M12 instrument socket |
| Approx 'K' factor – Pulses/Litre | | 1100 |



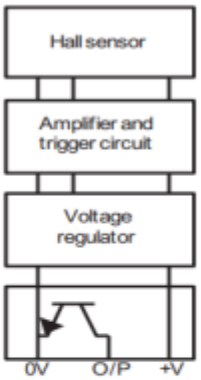
316 St St body



Reed switch & Resistor 'R



PEEK™ body



Sensor block diagram

| Weight(kg) | | |
|---|---|---|
| St St | 50 Bar | 0.36 |
| PEEKTM | 10 Bar | 0.184 |
| St St | 400 Bar | 3000 |

## Ordering codes

| Model |
|---|
| OG2 |
| Body material |
| S = 316 St St 50 bar std |
| P = PEEKTM 10 Bar max |
| H = Hastelloy C |
| Temprating |
| S = 80°C/ 158°F |
| T= 100°C / 212°F |
| U= 150°C /300°F |
| Pressure rating |
| S/5 = 50 Bar 750 PSI (St St) |
| 1 = 10 Bar 150 PSI (Al /PEEKTM) |
| 4 = 400 Bar 5880 PSI (St St) |
| 7 = 700 Bar 10150 PSI (St St |
| SealMaterial |
| S/V = Viton® |
| N = Nitrile |
| E = EPDM |
| P = PTFE (50 Bar max) |
| K = Kalrez |
| DetectorType |
| S/H = Hall effect |
| R = Reed switch &Resistor |
| N = Namur |
| X = Reed switch (Hazardous area) |
| Pipe Thread |
| Q = 1/4" (OG2std) |
| Connections |
| B = BSPF |
| N = NPTF |
| F = Flanged (specify) |

| Pin Number | Signification | Wire Cable Colour |
|---|---|---|
| 1 | V+ (+4.5-24Vcc) | Brown |
| 2 | Not Used | White |
| 3 | GND (0V) | Blue |
| 4 | Output | Black |


This product is necessary to wire a 10k pull-up resistor between pins 1 and 4 which is supplied with the product.