Oval Gear
Industrial Oval Gear Flow Meters

Industrial Oval Gear

LM OG-HFlow 3/4 in. and 1 in.
Pulse transmitter / Line meter "High Flow"

DESCRIPTION

The model LM OG-HFlow meter is designed to handle flow rates up to 30.37 gpm (115 l/m). The meter is designed specifically to dispense motor oils, gear oils, automatic transmission fluid, antifreeze (Ethylene Glycol), and engine coolant. Modular design, compact foot print, and rugged design make the LM OG-HFlow the best choice for automated dispensing systems.

The transmitter mounted on the meter can be wired to batch controllers, remote counters and other electronically operated instruments that can accept pulses from a reed switch, and have scaling capabilities. The Oval Gear Transmitter is contained in a plastic housing.

OPERATION

As fluid passes through the metering chamber by entering the inlet port, the internal gears rotate forcing the fluid to exit through the outlet port. Each rotation of the gear displaces a given volume of fluid. Controlled clearances between the gears and chamber wall insure minimum leakage. As the gears rotate, a magnet on each end of the gear causes the reed switch to open and close. Contact closures from the switch are transmitted to a remote batch controller or counter.

FEATURES

- 1 in. and 3/4 in. threads BSP
- Oval gear driven meter
- Does not require external power
- Rugged, corrosion resistant plastic enclosure
- Humidity and moisture resistant transmitter
- Protection class IP65
- Compatible with most flow controllers and counters with scaling capabilities
- Accuracy to ± 0.5%

ILR 700

ILR 750

ILR 740

APPLICATION

The flow element has a two-piece construction: an elliptical shape and two 100% independent flow sensing chambers. This construction prevents signal degradation and mixing, and does not require dampening hardware or software. The impact velocity sensing holes (high pressure) are located along the leading edge and the true static sensing holes (low pressure) are on the exterior probe side. This does not generate any vortices or vacuum effects that impinge on the static pressure measurement sensing area and has a drag coefficient of 0.32 or less. Each flow sensor is complete with instrument shut off valves with provisions to accept a transmitter or direct indicating meter. An identification tag is supplied with specific flow station measurement information as required.

Badger Meter

IOG-DS-03545-EN-01 (June 2021)

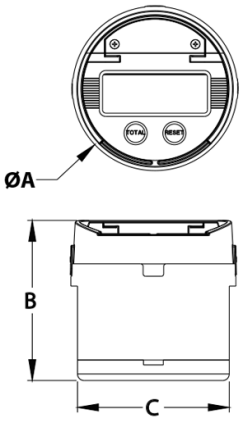
Product Data Sheet

TECHNICAL DATA

	3/4 in.	1 in.
Maximum flow *	15.85 gpm (60 l/min)	30.37 gpm (115 l/min)
Minimum flow *	0.52 gpm (2 l/min)	0.52 gpm (2 l/min)
Operating pressure (maximum)	2030.53 psi (140 bar)	2030.53 psi (140 bar)
Operating pressure (minimum)	5.076 psi (0.35 bar)	5.076 psi (0.35 bar)
Operating temperature (maximum)	176 °F (+80 °C)	176 °F (+80 °C)
Operating temperature (minimum)	-4 °F (-20 °C)	-4 °F (-20 °C)
Accuracy > 20cP	±0.5%	±0.5%
Weight	3.1 lbs (1.4 kg)	3.1 lbs (1.4 kg)
Inlet & outlet connections	3/4" BSPP	1" BSPP
Pulses per liter	61.5 (ILR740)	

*Tested with Mobil DTE-25 motor oil at ambient temperature. Min./Max. flow rates will vary with viscosity.

DIMENSIONS



Port size	A	B	C
3/4 in.	3.94 in. (100 mm)	3.84 in. (98 mm)	3.62 in. (92 mm)
1 in.	3.94 in. (100 mm)	3.84 in. (98 mm)	3.62 in. (92 mm)

Register model	Register features
ILR 700 standard register	• Flow rate or totalizer display selectable in the programming menu • Selectable unit of measure
ILR 750	• Scalable pulse output • Ability to set pulse output length • Analog 4 … 20mA output representing the flow rate of the meter • Minimum and maximum values can be set for analog output • 9-point linearisation
NOTE: The ILR 750 have the standard features of the ILR 700.	
ILR 740 transmitter	Transmitter (reed switch)

Control. Manage. Optimize.

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