



Screw-Type Spindle Flow Meter

For Viscous Media's



measuring
•
monitoring
•
analysing



Model: ADI-K...



Model: OME

- Measuring ranges: 0.2-10 to 2-100 L/min liquid
- Measuring accuracy: $\pm 0.3\%$ of measured value
- p_{max} : 40 bar, t_{max} : 100 °C
- Viscosity range: 1 - 5000 mm²/s
- Connection: G 1/2 to G 1 female, flange DN 15 to DN 25
- Material: Aluminum
- Output: pulses
- Economical
- Low-noise
- Pulsation-free principle of measurement



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Model:
OME



Application

The Kobold screw-type volumetric flow meter has proven itself in many applications over a long period of time; it has now been extended with an economical alternative – the OME type series – for the economical measurement or batching of viscous media.

These measuring sensors have been designed for viscous, non-abrasive media of 1-5000 mm²/s; they have been introduced as a response to today's innovative metrology and its demands for greater accuracy and reliability.

The screw-type volumetric meter works with the principle of positive displacement. Two cycloidal spindles, whose rotation is sensed by one or two inductive proximity switches, are at the heart of the flow meter. A new technique has been patented to sense the spindles directly, thus providing a compact and economical volumetric meter. The axial flow of the forced measured medium causes the pair of spindles to rotate in a uniform, non-pulsating manner.

The spindles have been manufactured with extreme precision. They are supported at their ends by ball bearings. The pair of spindles form volumetrically defined measuring chambers, which are a measure of the delivered volumetric flow. These unit volumes are evaluated by downstream electronics. A second pulse generator is available as an option: it can be used for direction sensing and the pulse of the transmitter signal can be doubled with it.

Materials (media-contacting)

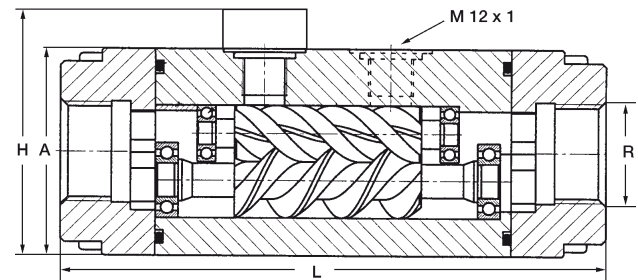
- Housing: Aluminium (material no. 3.0615)
- Spindles: Nitrated steel
- O-rings: FPM
- Bearings: Deep-grooved ball bearing
- Flange: Aluminium (material no. 3.0615)
- Filter: ≤ 300 µm

Pulse generator

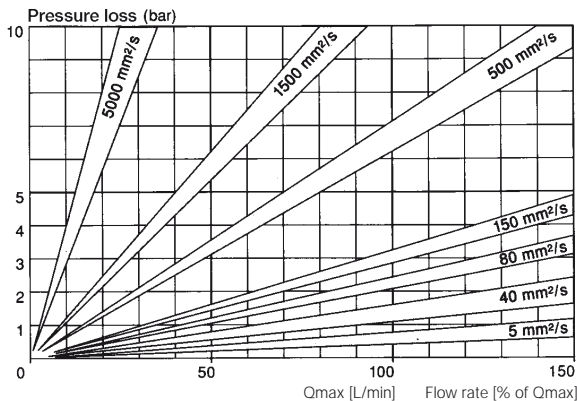
- Model BEG 56 (standard version):
 - PNP - transmitter -40...+125 °C
 - Auxiliary power 10 - 30 V_{DC}
 - 3 m cable, protection IP 65

- Model BEG 47 (proximity switch acc. to DIN 19234 Namur):
 - (EEx ia II T6), -25...100 °C
 - Auxiliary power 8.2 V_{DC}
 - 2 m cable, protection IP 68

Dimensions



Pressure loss diagram



Model	L mm	A mm	K* mm	H mm	D* mm
OME-15R15	110	45x45	-	61	-
OME-20R20	145	55x55	-	71	-
OME-25R25	200	70x70	-	86	-
OME-15F15	105	45x45	65	-	95
OME-20F20	135	55x55	75	-	105
OME-25F25	185	70x70	85	-	115

* K = Dimension of flange bore, D = External diameter of flange

Order Details (Example: OME-15R15/140)

Flow rate [L/min]	Connection ¹⁾ G	p _{max} [bar]	Temperature [°C]	Pulses/ L ²⁾	Frequency ²⁾ [Hz.]	Model	Pulse generator
0.2 - 10	G ½	40	-20...+100	1224	4.1 - 204	OME-15R15	/ 156=1 x BEG 56 (10-30 V _{DC} , PNP)
0.6 - 30	G ¾	40	-20...+100	319	3.2 - 159	OME-20R20	
2 - 100	G 1	40	-20...+100	78	2.6 - 130	OME-25R25	/ 256=2 x BEG 56 (10-30 V _{DC} , PNP)
0.2 - 10	DIN flange DN 15	16/40	-20...+100	1224	4.1 - 204	OME-15F15	/ 147=1 x BEG 47 (Namur 8.2 V _{DC})
0.6 - 30	DIN flange DN 20	16/40	-20...+100	319	3.2 - 159	OME-20F20	/ 247=2 x BEG 47 (Namur 8.2 V _{DC})
2 - 100	DIN flange DN 25	16/40	-20...+100	78	2.6 - 130	OME-25F25	

1) Other connections upon request
 2) Please refer to the accompanying test certificate for exact values.

Upon request, flow rates may deviate by up to ±50 % depending on viscosity and accuracy.

Digital indicators and transducers see end of brochure.