



Screw-Type Spindle Flowmeter

for viscous media

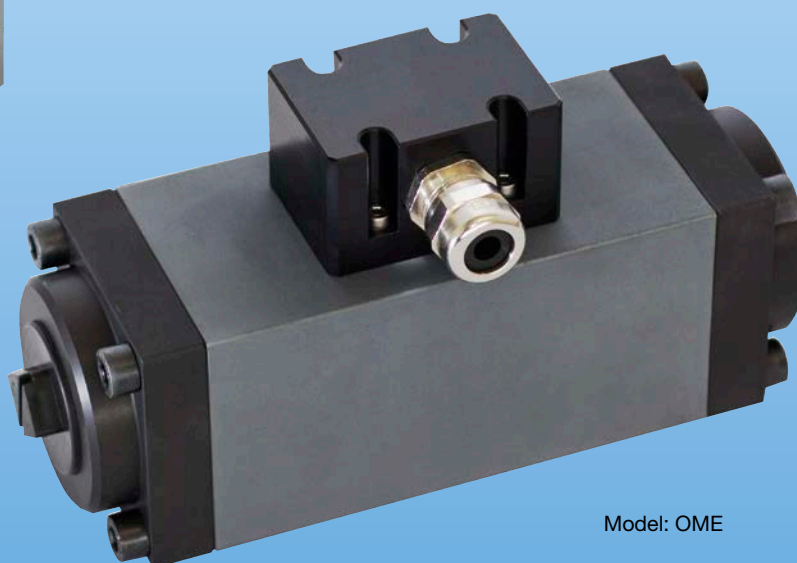


measuring
•
monitoring
•
analysing

OME



Model: ADI-1..



Model: OME

- Measuring ranges: 0.1 - 10 ... 3.5 - 350 l/min oil
- Measuring accuracy: $\pm 0.1\%$ of reading
- p_{\max} : 40 bar; t_{\max} : 125 °C
- Viscosity range: 1 ... 5000 mm²/s
- Connection: G 1/2 ... G 1 1/2 female, flange DN 15 ... DN 40
- Material: aluminium
- Output: pulses
- Economical
- Low-noise
- Pulsation-free principle of measurement



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Application

The Kobold screw-type volumetric flowmeter 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 sensors, are at the heart of the flowmeter. 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 double pulse generator can be used for direction sensing and doubling the pulses of pulse generator.

Technical Details

Max. pressure: 40 bar
 Operating temperature: -20 °C ... +125 °C
 Accuracy: ±0.1 % of reading
 Viscosity: 1 ... 10⁶ mm²/s

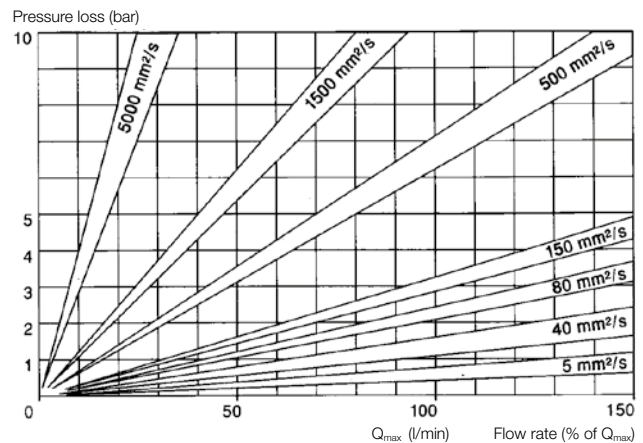
Materials (media-contacting)

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

Double pulse generator

Model BEG 60/BEG 61/BEG 62
 Push-Pull, 10-30 V_{DC}
 -20 ... +125 °C
 protection IP 65
 temperature sensor PT100,
 Class B, 3-wire

Pressure Loss Diagram



Order Details (Example: OME-15R15 /60)

Flow rate (Q _{min} ... Q _{nominal}) [l/min]	Connection ¹⁾ G	Impulse/l ²⁾	Frequency ²⁾ at Q _{nominal} [Hz]	Model	Double pulse generator
0.1 ... 10	G ½	1214	202	OME-15R15	/60 = BEG 60
0.3 ... 30	G ¼	321	161	OME-20R20	/61 = BEG 61
1 ... 100	G 1	78	130	OME-25R25	/62 = BEG 62
3.5 ... 350	G 1 ½	17.73	104	OME-40R40	/62 = BEG 62
0.1 ... 10	DIN flange DN 15	1214	202	OME-15F15	/60 = BEG 60
0.3 ... 30	DIN flange DN 20	321	161	OME-20F20	/61 = BEG 61
1 ... 100	DIN flange DN 25	78	130	OME-25F25	/62 = BEG 62
3.5 ... 350	DIN flange DN 40	17.73	104	OME-40F40	/62 = BEG 62

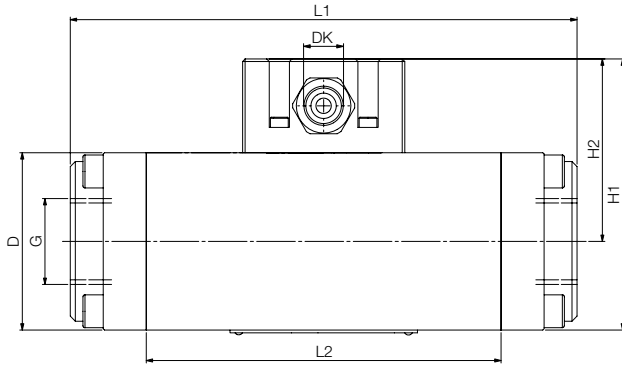
¹⁾ Other connections upon request

²⁾ Please refer to the accompanying test certificate for exact values.

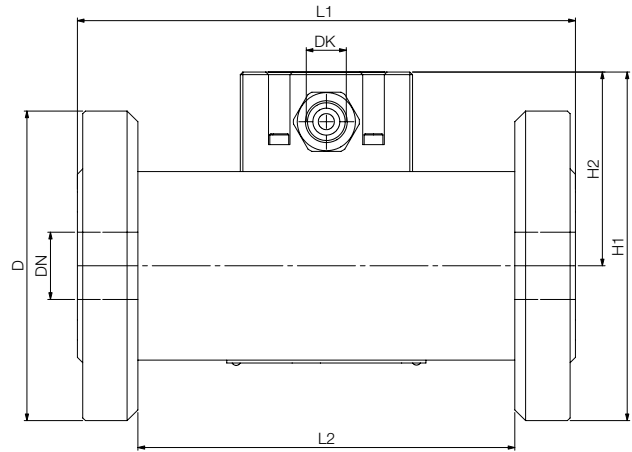
Upon request, flow rates may deviate by up to ±50 % depending on viscosity and accuracy.

Dimensions and Weights

OME with BSPP thread



OME with DIN flange



Model	D [mm]	L1 [mm]	L2 [mm]	H1 [mm]	H2 [mm]	Weight [kg]
OME-15	45x45	110	65	82	59,5	0,7
OME-20	55x55	145	95	92	64,5	1,2
OME-25	70x70	200	140	107	72,0	3,0
OME-40	110x110	310	225	147	92,0	9,0

Model	D [mm]	L1 [mm]	L2 [mm]	H1 [mm]	H2 [mm]	Weight [kg]
OME-15	95	105	65	107,0	59,5	2
OME-20	105	135	95	117,0	64,5	2
OME-25	115	185	140	129,5	72,0	4
OME-40	150	325	225	167,0	92,0	12