



Screw-Type Spindle Flow Meter

for viscous media

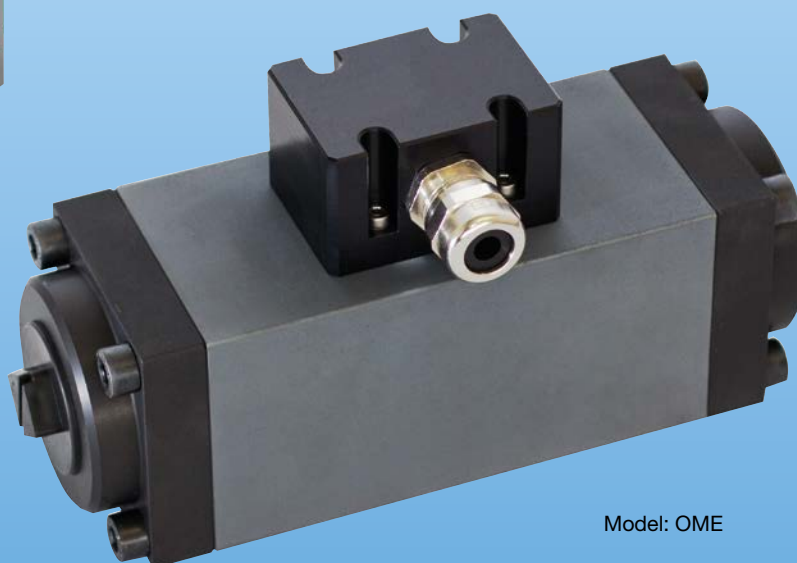


measuring
•
monitoring
•
analysing

OME



Model: ADI-1..



Model: OME

- Measuring ranges: 0.1 - 10 ... 3.5 - 350 l/min liquid
- Measuring accuracy: $\pm 0.1\%$ of measuring span
- p_{\max} : 40 bar; t_{\max} : 125 °C
- Viscosity range: 1 ... 1×10^6 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 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.

Technical Details

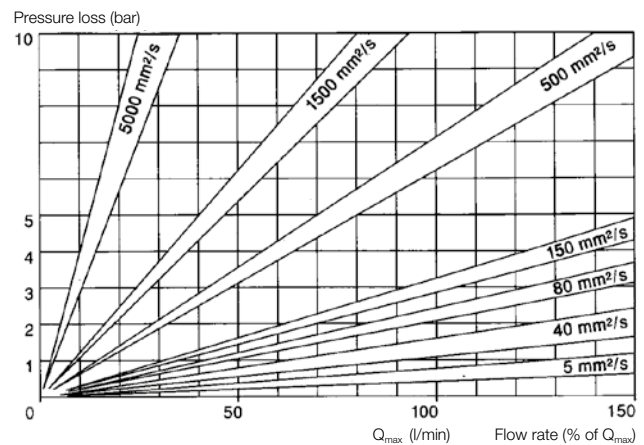
Materials (media-contacting)

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 [l/min]	Connection ¹⁾ G	p _{max} [bar]	Temperature [°C]	Impulse/l ²⁾	Frequency ²⁾ [Hz]	Model	Double pulse generator
0.1 ... 10	G½	40	-20...+125	1214	2.0...304	OME-15R15	/60 = BEG 60
0.3 ... 30	G¾	40	-20...+125	321	1.6...242	OME-20R20	/61 = BEG 61
1 ... 100	G1	40	-20...+125	78	1.3...145	OME-25R25	/62 = BEG 62
3.5...350	G 1½	40	-20...+125	17.73	1 ... 155	OME-40R40	/62 = BEG 62
0.1 ... 10	DIN flange DN 15	40	-20...+125	1214	2.0...304	OME-15F15	/60 = BEG 60
0.3 ... 30	DIN flange DN20	40	-20...+125	321	1.26...242	OME-20F20	/61 = BEG 61
1 ... 100	DIN flange DN25	40	-20...+125	78	1.3...195	OME-25F25	/62 = BEG 62
3.5...350	DIN flange DN40	40	-20...+125	17.73	1 ... 155	OME-40F40	/62 = BEG 62

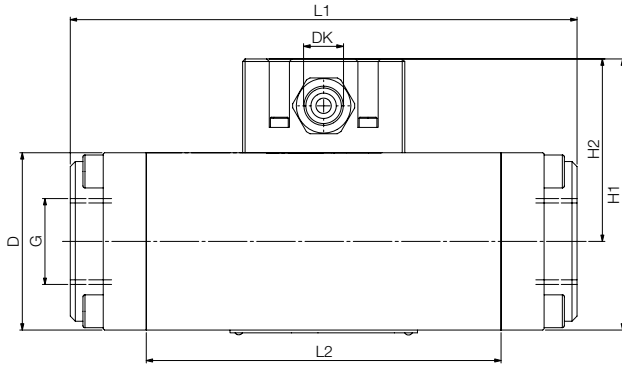
¹⁾ Other connections upon request

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

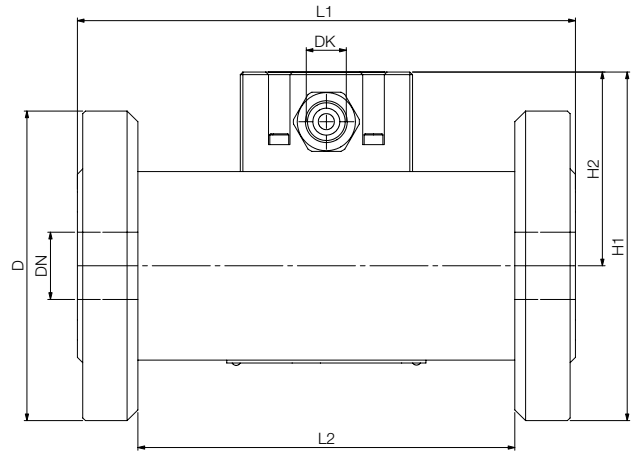
Upon request, flow rates may deviate by up to ±50 % depending on viscosity and accuracy.

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	1,2
OME-20	105	135	95	117,0	64,5	1,7
OME-25	115	185	140	129,5	72,0	3,0
OME-40	150	325	225	167,0	92,0	11,8