

**MANNESMANN
REXROTH**

Flow Meter
For Manifold Mounting

ENV 024-03 E

General Description

The flowmeter is used in connection with a proportional control valve and a suitable electronic control amplifier for infinite load-independent control of a volumetric flow.

Moreover it will transform a volumetric flow into a digital signal when combined with an electronic amplifier and indicator unit. The flow is directly indicated in l/min. A voltage proportional to the flow can be tapped at the additional output jacks of the amplifier for controlling a curve tracer.

The fluid pressure moves a piston against a measuring spring which uncovers an orifice. According to the product of the orifice section and spring tension there will be a flow proportional to the stroke of the piston.

The orifice section uncovered by the piston is designed in such a way that the linearity error is $\pm 1\%$. The piston stroke is measured friction-free by means of a pressure-tight, inductive displacement transducer.

The measuring range of this flowmeter is 1:100 related to the nominal flow. Temperature-related errors and hysteresis are very low. Four versions form size 16 to 40 with a max. nominal flow of 600 l/min. are available.

The flowmeter is produced for a block installation (installation dimensions according to DIN 24 342) or with housing for tube connection.

Bob Kimball - 4 pages

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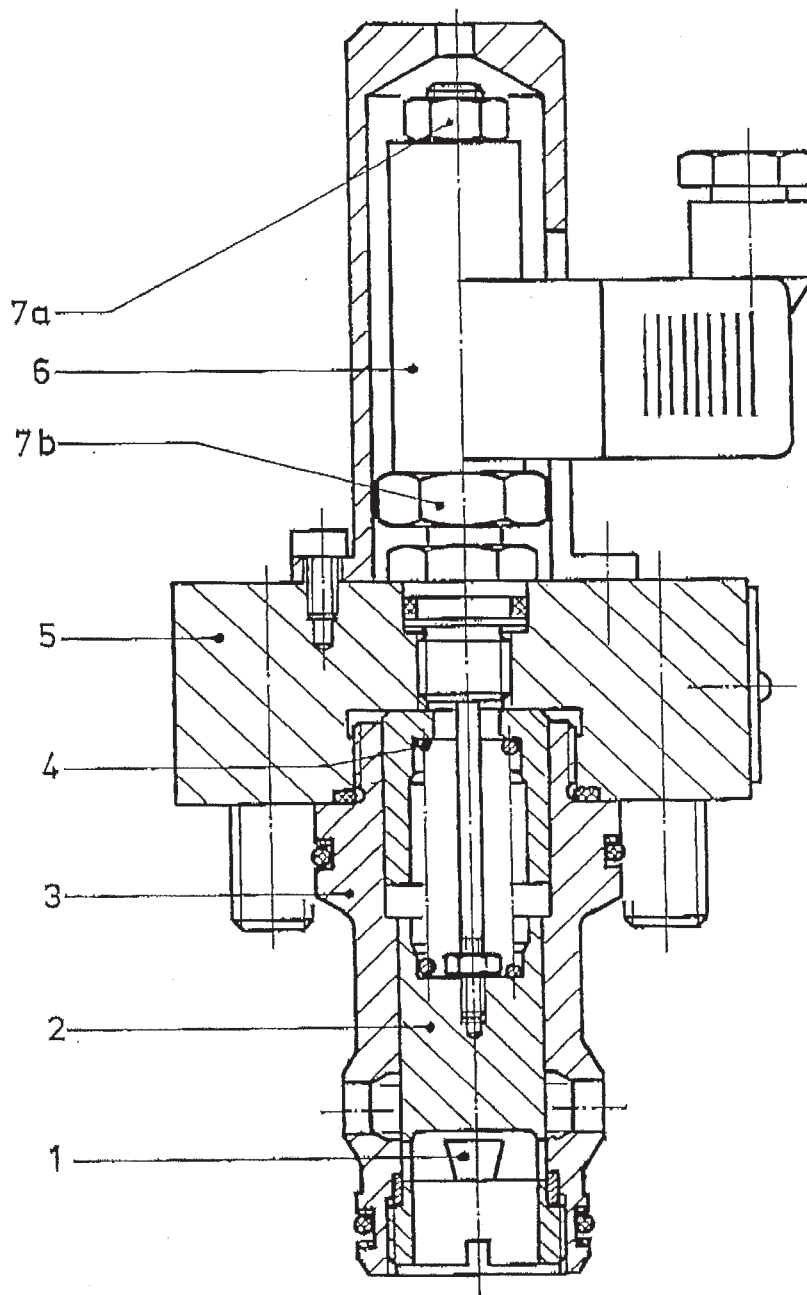
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Sectional Drawing



- 1 Orifice
- 2 Piston
- 3 Sleeve
- 4 Compression Spring

- 5 Cover
- 6 Inductive Displacement Transducer
- 7 Zero Point Setting

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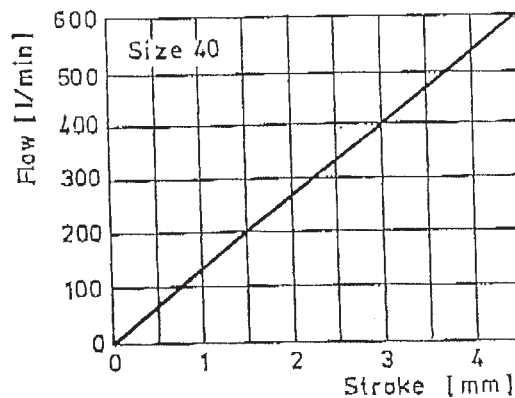
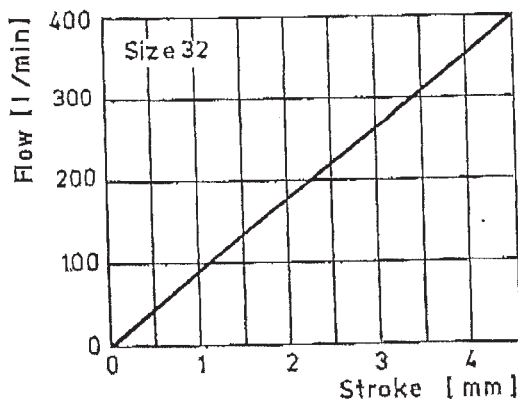
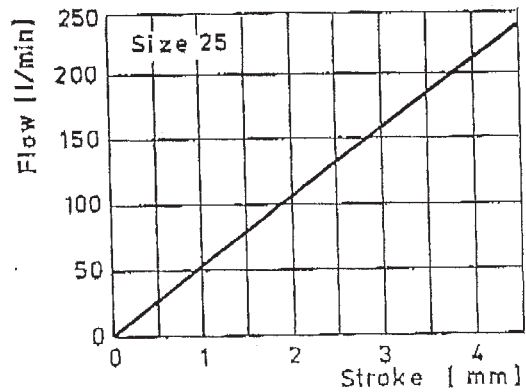
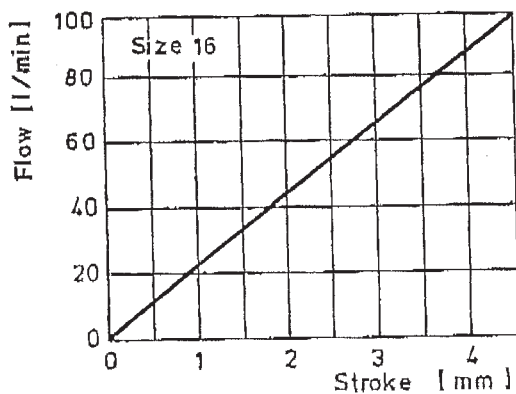
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MANNESMANN REXROTH		Flow Meter For Manifold Mounting		ENV 024 - 03 E	
Technical Data					
Size		16	25	32	40
Nominal Flow At 32 cSt Q		100 l/min	240 l/min	400 l/min	600 l/min
Operating Pressure p		5 bar ... 315 bar			
Fluid		Mineral Oil To DIN 51 524 And DIN 51 525			
Temperature Range θ		- 20°C ... + 70°C			
Viscosity Range ν		2,8 cSt ... 380 cSt			
Natural Frequency f		31 Hz	30 Hz	26 Hz	26 Hz
Weight		1,3 kg	2,8 kg	3,9 kg	5,2 kg

Performance Curves



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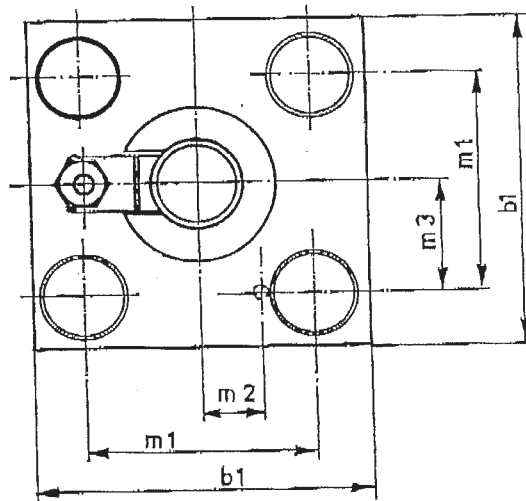
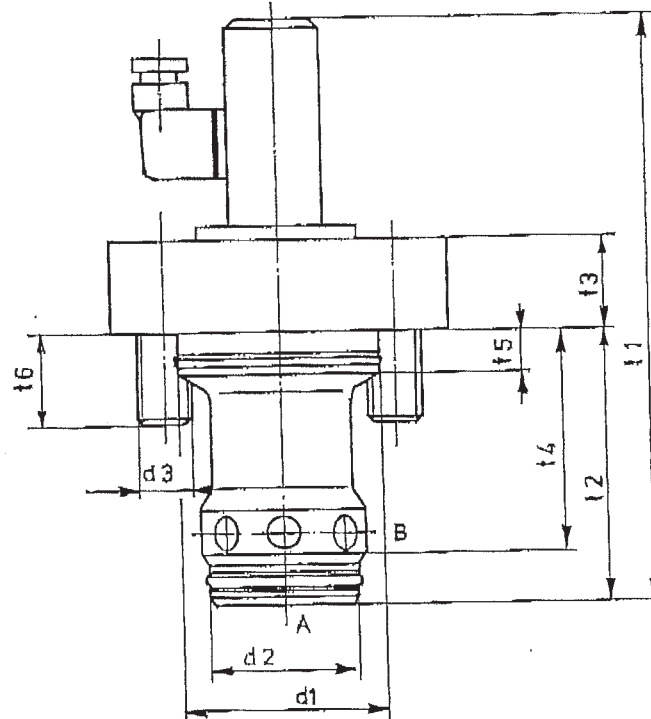
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Dimensions



A Operating Port Inlet
 B Operating Port Outlet

Dimensions are in mm

Size	b1	d1 _{g6}	d2 _{f7}	d3	m1 ^{±0,2}	m2 ^{±0,2}	m3 ^{±0,2}	t1	t2 _{-0,1}	t3	t4	t5	t6
16	65	32	25	M8	46	10,5	23	176	56	34	33	13	13
25	85	45	34	M12	58	16	29	192	72	34	58	13	18
32	102	60	45	M16	70	17	35	206	85	35	67	15	25
40	125	75	55	M20	85	23	42,5	231	105	40	85	15	35

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END OF SECTION