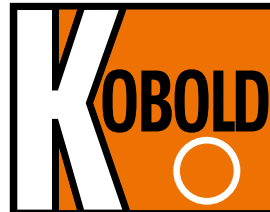




## Variable Area Flowmeter Glass Cone



measuring  
•  
monitoring  
•  
analysing

UMR/UXR/URA



- Measuring range:  
Water: 1 - 10 l/h ... 13 - 130 l/h  
Air: 0.01 - 0.1 ... 0.25 - 2.5 Nm<sup>3</sup>/h
- Accuracy class: 4 acc. to VDI/VDE
- $p_{max}$ : 16 bar;  $t_{max}$ : 100 °C (65 °C for PVC float)
- Connection: 1/4" NPT female or G 1/4 male
- Material: stainless steel or POM-C



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**Description**

The flow meters and switches for low flows model UMR and UXR for liquids and air operate on the suspended float principle: that is, the installation position is vertical and the direction of flow is from bottom to top.

The instruments have been designed as simple and for economical measuring systems. The float for UMR is a ball, whereby the indication point is the middle of the ball. The float for UXR is a bomb form float, whereby the indication point is the top of the float. The instruments are available with or without needle valve as well.

The models UMR and URA are similar with one difference: model URA is a footed structure used mainly in schools and laboratories where they are fitted on top of desks.

**Technical Details**

Installation position: vertical, flow from bottom  
 Accuracy class: 4 acc. to VDI/VDE 3513  
 Max. pressure: 16 bar  
 Process temperature: 0 ... +100 °C  
 0 ... +70 °C with contact  
 0 ... +65 °C (PVC float)  
 Ambient temperature: 0 ... +100 °C  
 0 ... +70 °C with contact  
 Protective category: IP 65  
 Connections: ¼" NPT, G ¼ (female backward)  
 Option:  
 Ø6, Ø10, Ø13 hose coupling  
 Weight: approx. 0.45kg

**Materials**

Fitting: stainless steel (1.4401, 1.4301) or POM-C  
 Measuring tube: borosilicate glass  
 Float stop: PTFE  
 Float: stainless steel (1.4401, 1.4301), PVC, PTFE  
 Gasket: FPM, EPDM, NBR  
 Valve: stainless steel (1.4401, 1.4301)

**Limit Switches (option)**

The flow meters can be fitted with limit switches as an option. These limit switches are cylinder type proximity switches. The electrical connection is via 2m cable.

The following type is available: Monostable (preferably used as Min. or Max. contact).

**Material Combinations**

Code	Housing	Connection	Valve	Float	Gaskets	Tube
0	POM-C	POM-C (for I2) nickel plated brass (for H2, H3, H4)	1.4301	aluminium PVC PP 1.4301 1.4404	FPM NBR EPDM Silicone	borosilicate glass
3	1.4301	1.4301	1.4301	1.4301	FPM	
5	1.4404	1.4404	1.4404	1.4404	FPM	
9*	POM-C 1.4301 1.4404	POM-C (for I2) nickel plated brass (for H2, H3, H4) 1.4301 1.4404	1.4301 1.4404	aluminium PVC PP 1.4301 1.4404	FPM NBR EPDM silicone	

\* on request of the customer



**Order Details Liquids** (Example: UMR-0 S 10H 0 I2 0)

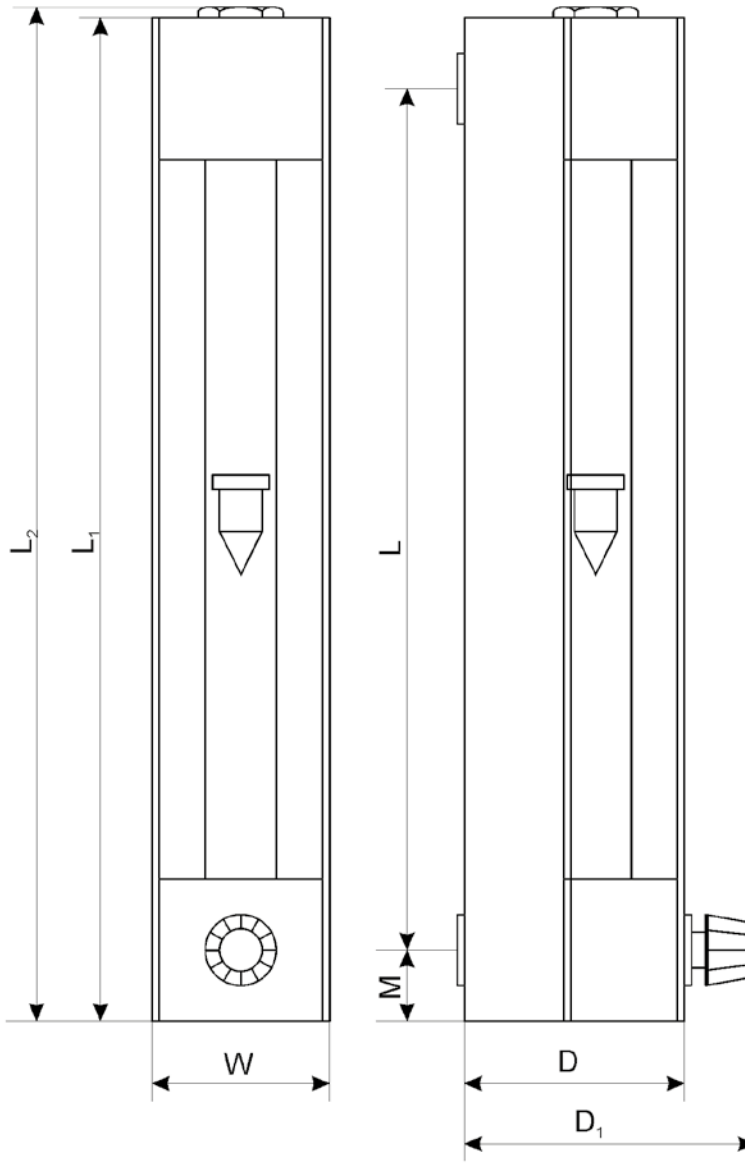
Model	Length	Measuring ranges water [l/h]	Needle valve	Connection	Switch	Others
UMR-0 UMR-3 UMR-5 UMR-9	S = 90 mm* L = 127 mm	10H = 1 ... 10	0 = without 1 = with valve	I2 = G ¼ N2 = ¼" NPT H2 = Ø6 hose coupling H3 = Ø10 hose coupling	0 = none	Y = special options, please specify in writing
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
UXR-0 UXR-3 UXR-5 UXR-9	S = 190 mm L = 250 mm	10H = 1 ... 10				
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
		18H = 6.3 ... 63				
		20H = 10 ... 100				
URA-0 URA-3 URA-5 URA-9	S = 190 mm L = 250 mm	10H = 1 ... 10				
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
		18H = 6.3 ... 63				
		20H = 10 ... 100				

**Order Details Gases** (Example: UMR-0 S 10L 0 I2 0)

Model	Length	Measuring ranges air [Nm³/h]	Needle valve	Connection	Switch	Others
UMR-0 UMR-3 UMR-5 UMR-9	S = 90 mm* L = 127 mm	10L = 0.01 ... 0.1	0 = without 1 = with valve	I2 = G ¼ N2 = ¼" NPT H2 = Ø6 hose coupling H3 = Ø10 hose coupling	0 = none	Y = special options, please specify in writing
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
		22L = 0.16 ... 1.6				
23L = 0.2 ... 2.0						
UXR-0 UXR-3 UXR-5 UXR-9	S = 190 mm L = 250 mm	10L = 0.01 ... 0.1				
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
URA-0 URA-3 URA-5 URA-9	S = 190 mm L = 250 mm	10L = 0.01 ... 0.1				
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
22L = 0.16 ... 1.6						
24L = 0.25 ... 2.5						

\* just made of stainless steel

Dimensions [mm]



Model	L	L <sub>1</sub>	L <sub>2</sub>	M	W	D	D <sub>1</sub>
UMR-xS	90	114.5	119	11	30	40	75 - 83
UMR-xL	127	151.5	156	11	30	40	75 - 83
UXR-xS	190	218.0	222.5	14	40	43	78 - 86
UXR-xL	250	278.0	282.5	14	40	43	78 - 86
URA-xS	190	218.0	222.5	14	40	43	78 - 86
URA-xL	250	278.0	282.5	14	40	43	78 - 86