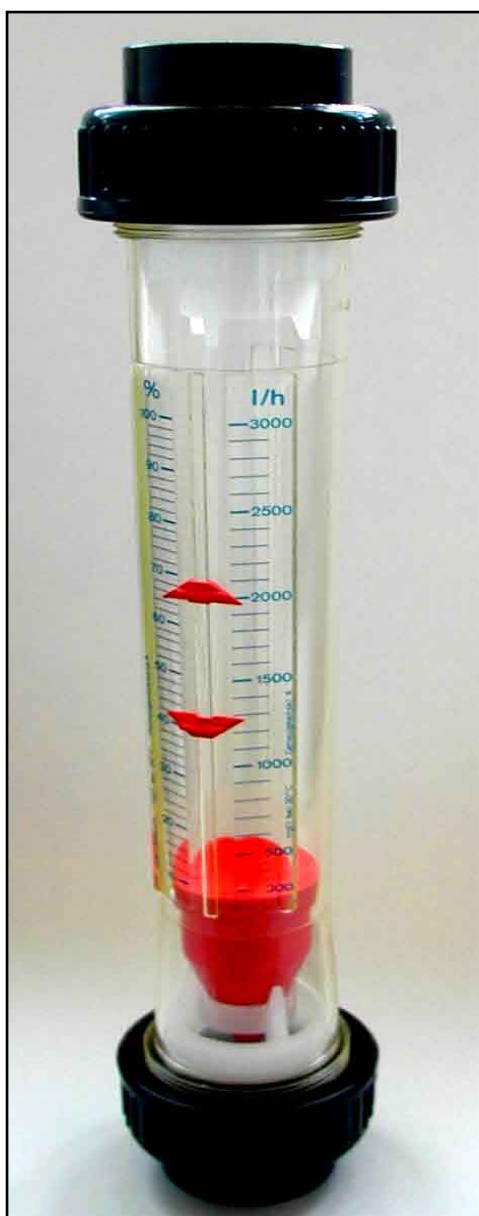


# Flowmeter M23



# M23

## Description:

The M23 plastic flowmeter is based on the well known “suspended float” principle, and is used for measuring and monitoring flow in closed pipes. The medium flows upward through the flowmeter and raises the float. The flow rate can be read off against the scale on the flowmeter body. The indication point corresponds to the largest diameter of the float.

The standard M23 plastic flowmeter is fitted with a scale for water, and two limit indicators.

## Features & Benefits:

- Unbreakable and corrosion resistant
- May be inserted and removed radially
- Available with special scales for almost all liquids and gases
- Guide rail for accessories
- Limit switches and flow transmitters for remote indication
- Measuring tube labeled with nominal diameter, measuring range and material
- PVDF plastic floats and inserts are standard
- Available in measuring ranges from 15 – 60.000 l/h

## Materials

Tubes	Max Temp. at 1bar	Float	Inserts	O-Ring
PA	60 ° C	PVDF (Standard)	PVDF	EPDM
PVC*	40° C	V2a		FPM (Viton)
PSU	100 ° C	*PVC (for 8000-60000)		
PVDF	140 ° C			

\*PVC tubes in test phase available in near future

## Connection possibilities

Socket fusions	Butt fusions	Internal thread plastic	Internal thread metal
PVC solvent sockets (Standard)	PP fusion sockets	PVC	Stainless steel V4A
PP fusion sockets	PVDF fusion sockets	PP	Malleable iron
PVDF fusion sockets	PE fusion sockets	PVDF	

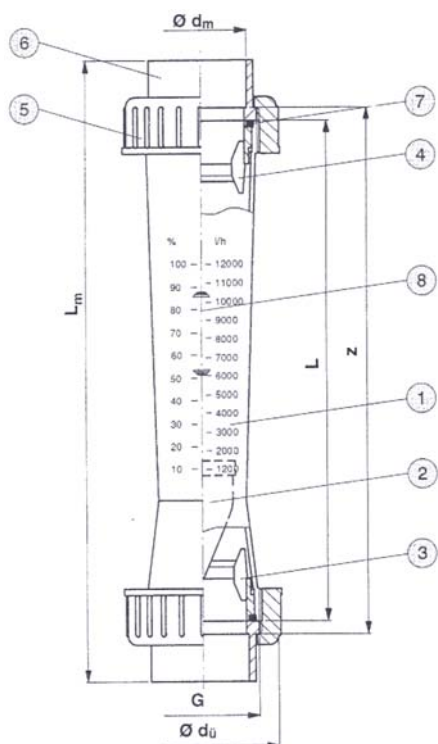


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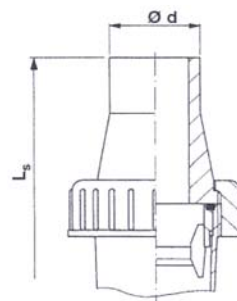
35 Green St. PO Box 653 Malden, MA 02148 T: (781)321-5409 F: (781)388-4781 [www.asahi-america.com](http://www.asahi-america.com)

# Flowmeter M23

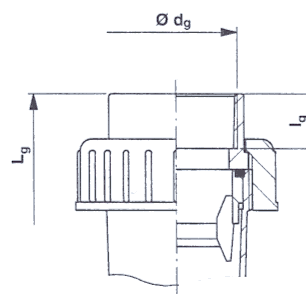
Fittings with solvent cement/fusion sockets



Fittings with butt fusion sockets



Fittings with internal female thread



## Single parts

Pos.	Description	Qty	Material
1	Measuring tube	1	PA, PVC, PSU, PVD
2	Suspended float	1	PVDF, V2A
3	Lower insert	1	PVDF
4	Upper insert	1	PVDF

Pos.	Description	Qty.	Material
5	Union	2	PVC, PP, PVDF
6	Inserts (fusion, Butt fusion)	2	PVC, PP, PVDF
7	O-Ring	2	EPDM, FPM
8	Limit indicator	2	PS

## Dimensions and weights

Dimensions in mm																				Weight in kg	
Range l/h H <sub>2</sub> O	DN	d <sub>ii</sub>	G	L	Solvent cement socket			Fusion socket			Butt fusion socket PP			Butt fusion socket PVDF			Threaded socket			PVC PA PSU	PVDF
					d <sub>m</sub>	z	L <sub>m</sub>	d <sub>m</sub>	z	L <sub>m</sub>	d	L <sub>s</sub>	S SDR 11	d	L <sub>s</sub>	S SDR 33	d <sub>g</sub>	L <sub>g</sub>	l <sub>g</sub>		
15-150 50-500 100-1000	25	60	11/2"	335	32	341	385	31.5	345	381	32	455	3	32	443	2.4	1"	385	22	0.41	0.52
200-2000 300-3000	40	83	21/4"	335	50	341	403	50	345	391	50	467	4.6	50	459	3	1 1/2"	403	23	1.02	1.22
600-6000 1200-12000	50	103	23/4"	335	63	341	417	63	345	399	63	473	5.8	63	461	3	2"	418	24	1.38	1.68
2000-20000 3000-30000 8000-60000	65	122	31/2"	335	75	341	429	75	345	407	75	753	6.9	75	453	3.6	-	-	-	2.15	2.9

We reserve the right to make technical changes to improve the product.



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# Flowmeter M23

## Pressure losses

Measuring range l/h	15-150	50-500	100-1000	200-2000	300-3000	600-6000	1200-12000	2000-20000	3000-30000	8000-60000*
Pressure loss (mm WS)	185.3	185.3	185.3	251.6	251.6	254.8	251.6	254.8	251.6	335.7

Max operating pressure : PN 10 at 20<sup>0</sup>C

## Measuring accuracy

Accuracy class 4 with VDE/DIN 3513 sheet 2										
Flow %	10	20	30	40	50	60	70	80	90	100
Total difference from measuring value	13.00%	8.00%	6.333%	5.500%	5.00%	4.667%	4.429%	4.250%	4.111%	4.00%
Total difference from end value	1.3%	1.6%	1.9%	2.2%	2.5%	2.85	3.1%	3.4%	3.7%	4.0%

## Order no.

DN	TUBE	PA			PSU			PVDF	
	Measuring range l/h	Float V2A	Float PVDF	Float PVDF Mag. bi	DN	Measuring range l/h	Float V2A	Float PVDF	Float PVDF Mag. bi
		Model code	Model code	Model code			Model code	Model code	Model code
25	15-150	17.000.834	17.000.831	17.000.832	17.000.825	17.000.826	17.000.823	17.002.188	17.002.101
25	50-500	17.000.817	17.000.818	17.000.815	17.000.809	17.000.810	17.000.807	17.002.189	17.002.103
25	100-100	17.000.801	17.000.802	17.000.799	17.000.793	17.000.794	17.000.791	17.002.190	17.002.105
40	200-2000	17.000.785	17.000.786	17.000.783	17.000.777	17.000.778	17.000.775	17.002.191	17.002.107
40	300-3000	17.000.769	17.000.770	17.000.767	17.000.761	17.000.762	17.000.759	17.000.192	17.002.109
50	600-6000	17.000.753	17.000.754	17.000.751	17.000.745	17.000.746	17.000.743	17.000.193	17.002.111
50	1200-12000	17.000.737	17.000.738	17.000.735	17.000.729	17.000.730	17.000.727	17.002.194	17.002.113
65	2000-20000	17.000.721	17.000.722	17.000.719	17.000.713	17.000.714	17.000.711	17.002.195	17.002.115
65	3000-30000	17.000.705	17.000.706	17.000.703	17.000.697	17.000.698	17.000.695	17.002.196	17.002.117
65	8000-60000		17.000.688*			17.000.690*			

DN	Messrohr	PVC		
	Measuring range l/h	Float V2A	DN	Measuring range l/h
		Model code		
25	15-150			
25	50-500			
25	100-100			
40	200-2000			
40	300-3000			
50	600-6000			
50	1200-12000			
65	2000-20000			
65	3000-30000			
65	8000-60000			

### Assembly note for special scales

When attaching special scales please be sure that the marking on the scale ♦ corresponds with the marking on the tube.

### Accessories:

Limit switch **Z 32** two-way

Limit switch **Z 31** one-way

Flow transmitter **Z 50** 4-20 mA Outlet

For further info. See data sheets Z32, Z31 and Z50

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# Flowmeter M23

## Special scales

Flow range	AIR 0 bar		AIR 1 bar		AIR 2 bar		AIR 3 bar	
H2O l/h	Model code	N m3/h	Model code	N m3/h	Model code	N m3/h	Model code	N m3/h
15-150	00.000.690	0.8-5	00.000.691	1.2-7	00.000.692	1.4-9	00.000.693	1.6-10
50-500	00.000.707	2-18	00.000.709	3-25	00.000.710	4-30	00.000.711	5-35
100-1000	00.000.725	4-34	00.000.730	6-50	00.000.731	8-60	00.000.732	8-70
200-2000	00.000.748	10-70	00.000.750	12-90	00.000.751	14-120	00.000.752	15-130
300-3000	00.000.766	10-90	00.000.767	15-130	00.000.768	20-160	00.000.769	20-190
600-6000	00.000.784	22-190	00.000.785	30-260	00.000.786	40-380	00.000.787	40-400
1200-12000	00.000.802	45-370	00.000.803	60-520	00.000.804	80-660	00.000.805	100-760
2000-20000	00.000.816	60-580	00.000.817	90-800	00.000.818	100-1060	00.000.819	120-1200
3000-30000	00.000.832	100-860	00.000.833	140-1200	00.000.834	200-1500	00.000.835	200-1700

Range	AIR 4 bar		AIR 5 bar		AIR 6 bar		AIR 7 bar	
H2O l/h	Model code	N m3/h	Model code	N m3/h	Model code	N m3/h.	Model code	N m3/h
15-150	00.000.694	2-12	00.000.695	2-13	00.000.696	2-14	00.000.697	2.5-14
50-500	00.000.712	5-40	00.000.713	6-43	00.000.714	6-45	00.000.715	7-50
100-1000	00.000.733	10-74	00.000.734	10-84	00.000.735	10-90	00.000.736	12-96
200-2000	00.000.753	20-150	00.000.754	20-160	00.000.755	20-170	00.000.756	20-190
300-3000	00.000.770	25-210	00.000.771	25-230	00.000.772	30-250	00.000.773	30-260
600-6000	00.000.788	50-450	00.000.789	50-480	00.000.790	75-500	00.000.791	70-550
1200-12000	00.000.806	100-840	00.000.807	100-900	00.000.808	100-1000	00.000.809	120-1000
2000-20000	00.000.820	150-1300	00.000.821	150-1500	00.000.822	150-1500	00.000.823	200-1700
3000-30000	00.000.836	250-1900	00.000.837	250-2100	00.000.838	300-2200	00.000.839	300-2400

Range	AIR 8 bar		HCl 30-33 % (PSU)		NaOH 30 %		NaOH 50 %	
H2O l/h	Model code	N m3/h	Model code	l/h	Model code	l/h	Model code	l/h
15-150	00.000.698	2.5-15	00.000.846	20-130	00.000.847	3-46	00.000.848	0.5-7
50-500	00.000.716	6-52	00.000.855	60-460	00.000.856	10-270	00.000.857	2.5-70
100-1000	00.000.737	12-100	00.000.869	120-900	00.000.867	40-600	00.000.866	6-220
200-2000	00.000.757	20-200	00.000.937	200-1900	00.000.877	100-1400	00.000.875	20-600
300-3000	00.000.774	30-280	00.000.885	300-2700	00.000.884	200-2000	00.000.883	50-1200
600-6000	00.000.792	75-550	00.000.890	800-5600	00.000.892	400-4600	00.000.891	200-3400
1200-12000	00.000.810	140-1100	00.000.896	1200-10000	00.000.898	800-8400	00.000.897	300-5600
2000-20000	00.000.824	200-1800	00.000.904	2000-18000	00.000.905	1400-15000	00.000.906	500-11000
3000-30000	00.000.840	300-2500	00.000.908	3000-25000	00.000.909	2000-20000	00.000.910	1000-14000

Special scales on request		
Necessary data		
Medium		
Specific weight	g / cm3	
Viscosity	cP over mPas	
Operating temperature	°C	
Requested flow range	l/h	

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 35 Green St.  
 PO Box 653  
 Malden, MA 02148  
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### Installation and assembly references:

- Install flowmeters vertically and tension free into the piping system
- Anticipate the In- and Outlet distance  
Inlet approx. 10 x DN  
Outlet approx. 5 x DN

### Operating information

- Avoid pressure blows as these may lead to damages of the device
- Use caution when Installing. The measuring tube should not come into contact with solvents.
- Before use all connections should be examined for sufficient strain.
- Please do not exchange the unions on our PVDF tubes. The construction length of the tube does not correspond with the measuring index.

We reserve the right to make technical changes to improve the product.