

500 SERIES FLOWMETERS

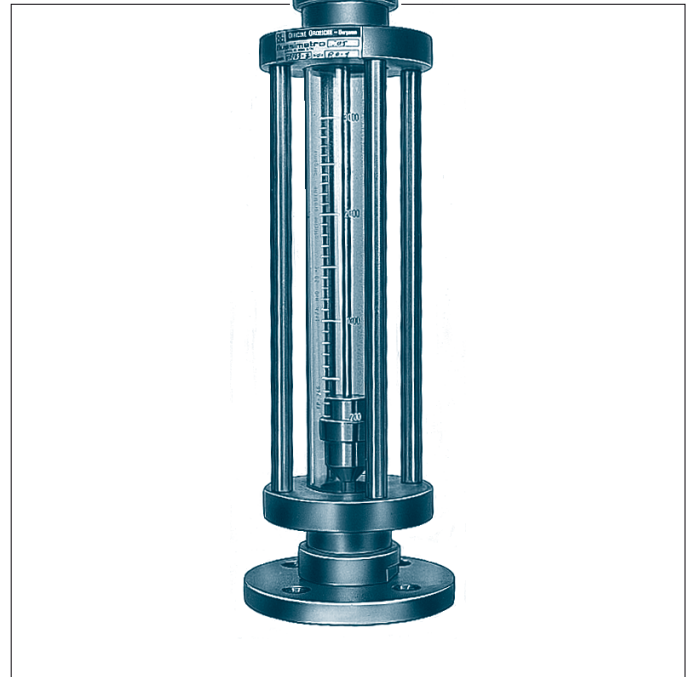
Variable area flowmeters with glass measuring tube for small and large flows, suitable for gases and liquids.

APPLICATIONS

Flowmeters can be used in the following industries: chemical and petrochemical, pulp and paper, food and sugar, pharmaceutical, glass, textile, mining, metallurgical and galvanizing industry. The instruments can also be used by manufacturers of water treatment plants, wine, thermal, hospital and anti-pollution plants.

TECHNICAL DATA

- Accuracy: $\pm 2\%$ of f.s. ($\pm 3\%$ with spherical float)
- Max. working temperature: 60°C. On request, versions can be made for use in temps. up to 200°C.
- Length of reading scale:
 - 230 mm. for all types up to mod. 505b
 - 340 mm. for types 500-Z1, 500-Z2, 500-Z3.
- Measuring range: 1÷10
- Guided float (only on metallic version):
 - for gases as from mod. 502 - b
 - for liquids as from mod. 503 - b.



The direct reading flowmeters of the 500 series have a rigid support (body) structure, not in contact with the fluid, consisting of 4 C/steel columns. The connections to the process can be threaded or flanged. All parts in contact with the fluid for measuring are made from various materials. The measuring tube is made of boron-silicate glass which is perfectly calibrated and therefore easily replaced by the user without needing to change the float. It is sealed with adjustable gaskets and glands. Not suitable for water hammer.

The following table shows, for each type of instrument, the standard flows of water at 20°C and of air at 20°C and 760 mm. Hg.

MODEL	METALLIC STRUCTURE		PLASTIC STRUCTURE
	Std. flows of H ₂ O (l/h)	Std. flows of air (Nm ³ /h) (1)	Std. flows of H ₂ O (l/h)
500-1	1	0,8* - 2,2*	1
500-2	3 - 12	2,5* - 6*	3
500-3	6	1,3* - 3,5*	-
500-4	4 - 16	3* - 10*	4
501-1	10 - 30	7* - 16*	10
501-2	40	22*	12
501-3	50 - 100	1,5 - 2 - 2,5 - 4	35 - 60 - 100
502	150	3 - 4	130
502-b	200 - 250	5 - 6	200 - 250
503	300 - 400 - 500 - 600 - 700	7 - 8 - 10 - 12	300 - 350 - 400 - 500 - 600
503-b	700 - 800 - 1000	15 - 20 - 25	900 - 1200 - 1400
504	1500 - 2000 - 2500 - 3000	30 - 35 - 40 - 50 - 60	1500 - 2000 - 2500 - 3000
505-b	4000 - 5000 - 6000	90	4000 - 5500
500-Z1	8000	100 - 120	8000
500-Z2	10000 - 13000 - 16000	150 - 200	10000 - 12000 - 15000
500-Z3	20000 - 25000 - 30000	300 - 400	18000 - 25000 - 28000

1) Flows marked with * are in NI/min.

STANDARD SIZES AND CONNECTIONS

MOD.	A (mm)	D (mm)	B (mm)	E (1)	C (2)					P (3) (mm) H ₂ O	1) Standard threading to UNI - ISO/228.1
					DN			ANSI			
500-1	428	400	54	1/2"	15	-	-	1/2"	-	50	2) Standard flange connection to UNI PN 10, ANSI 150 RF
500-2	428	400	54	1/2"	15	-	-	1/2"	-	50	
500-3	428	400	54	1/2"	15	-	-	1/2"	-	50	
500-4	428	400	54	1/2"	15	-	-	1/2"	-	50	3) Pressure drop at max. flow.
501-1	428	400	54	1/2"	15	-	-	1/2"	-	50	
501-2	428	400	54	1/2"	15	-	-	1/2"	-	50	
501-3	428	400	54	1/2"	15	-	-	1/2"	-	50	
502	428	400	54	1/2"	15	-	-	1/2"	-	50	
502-b	433	400	80	1"	15	20	25	3/4"	1"	100	
503	433	400	80	1"	15	20	25	3/4"	1"	150	
503-b	433	400	80	1"	20	25	-	3/4"	1"	300	
504	433	400	112	1 1/2"	25	40	-	1 1/4"	1 1/2"	500	
505-b	442	400	130	2"	32	50	-	1 1/2"	2"	550	
500-Z1	545	505	130	2"	32	50	-	1 1/2"	2"	600	
500-Z2	608	560	145	2 1/2"	50	65	-	2"	-	400	
500-Z3	608	560	167	3"	65	80	-	2 1/2"	-	500	

MATERIALS

CODE FOR:	Materials	Carbon steel	AISI 304	AISI 316	PVC	MOPLEN	PVDF
	Body	A	I	/	/	/	/
	Wet parts	A	I	J	P	M	PF
	Float	/	/	J (1)	P	M	PF
	Gaskets	Neoprene (N) Viton (V)					

1) From models 500-1 to 501-2 the float is in hard metal or black glass depending on the flow.

Flowmeters in the 500 series are usually supplied with structures and connections for a nominal pressure of 10 Bar for metallic versions up to mod. 504; 8 Bar for mod. 505-b, 500-Z1, 500-Z2; 6 Bar for mod. 500-Z3 and all plastic versions.

ACCESSORIES

- Min. / Max. flow alarms by inductive proximity transducers (and power supply of 220 V - 110 V - 24 V/50 Hz) with output on SPDT 5A, 220 VAC switches. Can be used on metal instruments but with the minimum structure of the 503 model (from 10 l/h to 30 m³/h of H₂O).
- Protection in transparent plastic material.

HOW TO ORDER

Example: 501-3 - A - I - J - N

501-3 model
 A body in carbon steel
 I wet parts in AISI 304
 J float in AISI 316
 N neoprene gaskets

Where there are fluids other than water, the following data is required: type of fluid, specific gravity, viscosity, temperature, and pressure under operating conditions.

