

WOLTMANMETER WS-MFD MODEL 233

APPLICATION

- Cold water up to 30 °C (safe up to 50 °C)
- Horizontal Installation
- Operating pressure up to 16 bar
- Flange to DIN 2501 and DIN 2533
- Overall lengths to DIN 19625 and DIN ISO 4064
- Encapsulated counter of glass/copper, protection class IP 68 (waterproof up to 5 m)
- Available with FLYPPER® electronic counter module for flow rate monitoring, data acquisition and remote data reading – protection class IP 68 waterproof

FEATURES

- EEC approval for metrological classes A/B
- Completely dry-running - no gears in the wet chamber
- Removable measuring insert
- Integrated measurement outputs as standard
- Up to two different digital outputs and one analogue output simultaneously
- Sensors can be retrofitted on site for remote digital reading and analogue flow rate measurement without affecting calibration
- Outstanding long-term accuracy even under extreme loads
- Complete head unit with counter and sensors can be rotated by 350° for easier reading
- Suitable for integration in FLYPPER system

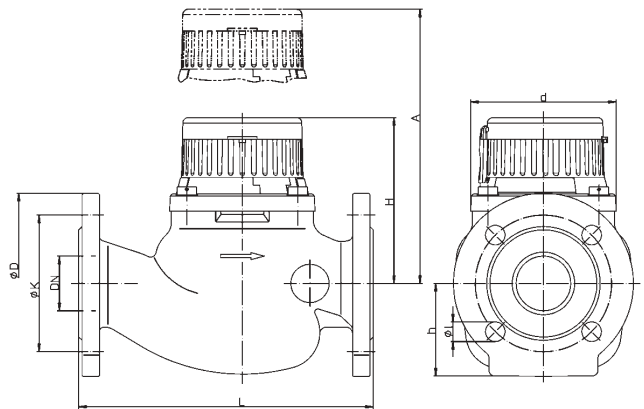
SPECIAL VERSIONS

- Higher temperature
- High-pressure version up to 40 bar
- Special flange holes
- Suitability for other media
- Adaptation to different pulse values

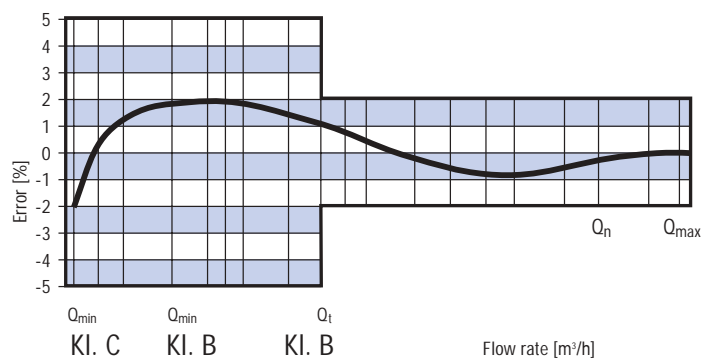
The WS meter can be supplied as an option with the FLYPPER electronic counter module in protection class IP 68 (waterproof up to 5 m)



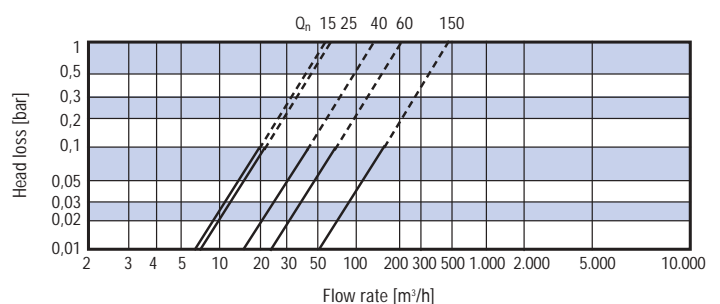
Order reference WS-EZM



TYPICAL ERROR GRAPH WS-MFD



HEAD LOSS DIAGRAM WS-MFD



TECHNICAL DATA

Model			233				
Type			WS-MFD TYRBOT				
Nominal diameter	DN	mm	50	65	80	100	150
Meter size to DIN ISO 4064	Q _n	m ³ /h	15	25	40	60	150
Permissible continuous load		m ³ /h	25	25	55	90	200
Maximum flow rate (short-term)		m ³ /h	50	50	110	180	350
Transition flow rate (flow limit)	Q _t	m ³ /h	1.5	2	2.5	3	10
Minimum flow rate	Q _{min}	m ³ /h	0.2	0.2	0.25	0.3	0.8
Starting flow rate		l/h	60	60	90	90	150
Flow rate at 0.1 bar head loss		m ³ /h	19	21	42	70	160
Dial indication range	min.	l	1				10
	max.	m ³	1,000,000				10,000,000
Flange dimensions							
Outer ø	D	mm	165	185	200	220	285
Hole circle ø	K	mm	125	145	160	180	240
Bolt hole ø		mm	18				23
Number of bolts	Quantity		4		*4 / 8	8	
Height	H	mm	135	135	180	190	351
	h	mm	85	97	102	113	141
Height for removing insert	A	mm	240	240	330	340	620
Overall length DIN 19625	L	mm	270	300	300	360	*430 / 500
DIN ISO 4064	L	mm	300	300	350	350	500
Head flange diameter	d	mm	173	173	239	239	310
Weight		kg	14.5	17.7	24	28	79.5
Pulse output (reed) model 570		l/pulse	100				1000
			1000				10000
Pulse output (reed) model 570			2.5 · 5 · 10				25 · 50
* Special version		l/pulse	25 · 50				100 · 250 · 500
			250 · 500				2500 · 5000
Transmitter model 573		l/pulse	1.0				10.0

* available by separate order. Meter has an EEC approval ≥ 100 l/pulse.
Subject to minor technical changes in the course of further development.

ORDER REFERENCES

Model	Nominal diameter	Type designation	Version	Overall length	Article number
233	50 mm	WS-MFD / TYRBOT	Cl. B-H	270 mm	233 000 00
233	65 mm	WS-MFD / TYRBOT	Cl. B-H / 4 holes	300 mm	233 000 23
233	80 mm	WS-MFD / TYRBOT	Cl. B-H / PN 16	300 mm	233 000 41
233	80 mm	WS-MFD / TYRBOT	Cl. B H / PN 10, 4 holes	300 mm	233 000 42
233	100 mm	WS-MFD / TYRBOT	Cl. B-H / PN 16	360 mm	233 000 61
233	150 mm	WS-MFD / TYRBOT	Cl. B-H / PN 16	500 mm	233 000 80

* tested to the metrological class indicated!

NOTE

The types listed in the order references are standard meters. All versions can of course be supplied as per technical data.

Explanation of type designations

W: Woltman meter

S: vertical impeller axis

MFD: with multifunctional counter