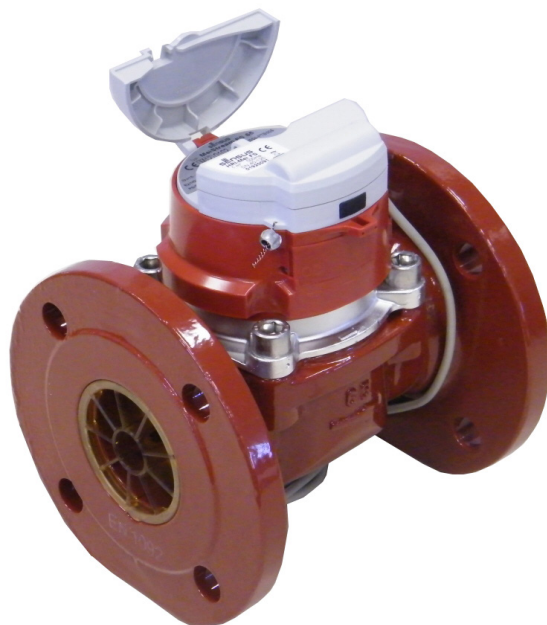


MeiStream FS

Flow sensor for
heat and cooling meters
DN 50...100, 90 °C / PN 16



Special features

The MeiStream flow sensor combines the high reliability and measurement accuracy of the Woltman WP meter with the advantages of the Woltman WS meter in the lower measuring range. This combination creates an excellent new flow sensor with a MID approval according to MI004 or EN 1434 in the accuracy class 2.

Volume pulses are generated by the interface HRI-Mei FS. This interface transfers volume pulses with programmable pulse values to the heating or cooling calculator. Possible reverse flows are compensated.

Centerpiece of the MeiStream Flow Sensor is a newly designed impeller with spherical hub that floats freely. Once the minimum flow rate is reached the impeller is lifted from the radial bearing and moves axially in a friction-free position without further loading the bearing pins. This floating is maintained up to a high levels of flow ensuring consistency. The design of the impeller is the result of several years of research, development and testing. As a result of this work an impeller has been developed that works optimally over the entire flow rate range and provides excellent metrological performance, secure profit and increased service life.

Unlike the Woltman-WS flow sensor the MeiStream Flow Sensor can also be installed in the vertical position. This essential feature is achieved by the three-dimensional hydrodynamic balance of the impeller. This permits quick and easy installation even in narrow locations. For compatibility with existing measuring points the MeiStream flow sensor is available in the short (WP) and long (WS) lengths.

Application

- Flow sensor for heat and cooling meters for commercial and light industrial use
- For measurement of hot process water up to 90 °C
- For measurement of cooling water starting from 5 °C
- For high permanent flow rates such as generated by pumps, as well as for the measurement of low flow rates in off-peak periods
- Installation in horizontal and vertical pipes

Approval mark and conformity marking

Heat application

Cooling application

DE-12-MI004-PTB006

22.76

13.02

Performance data

Nominal diameter		DN	50	65	80	100
	Max. Peak Flow	m ³ /h	50	60	120	140
q _s	Overload Flowrate	m ³ /h	50	50	120	120
q _p	Continuous Flow	m ³ /h	25	25	60	60
q _i	Minimum Flow	m ³ /h	0.5	0.5	1.2	1.2
q _p / q _i	Ratio horizontal		1/50	1/50	1/50	1/50
q _p / q _i	Ratio vertical		1/25	1/25	1/25	1/25
q _c	Starting value	m ³ /h	0.08	0.08	0.15	0.15
Δp	Head loss at q _p	bar	0.08	0.02	0.08	0.04
Kvs	Flow rate at 1 bar pressure loss	m ³ /h	88	177	212	300
T	Approved temperature range heat	°C	15 ... 90			
T	Approved temperature range cooling	°C	5 ... 50			

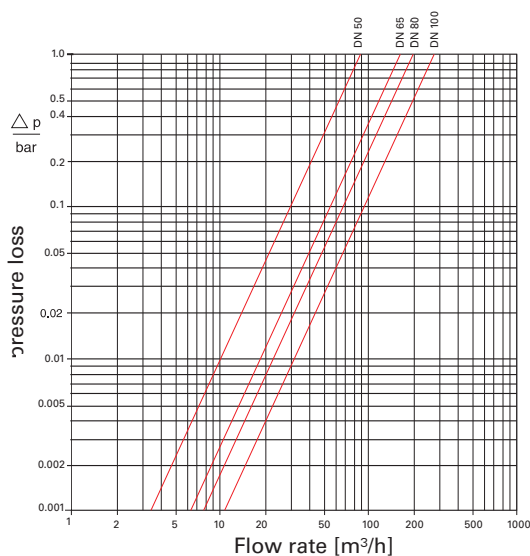
The values Q_s, Q_p and Q_i correspond to EN 1434

Dial

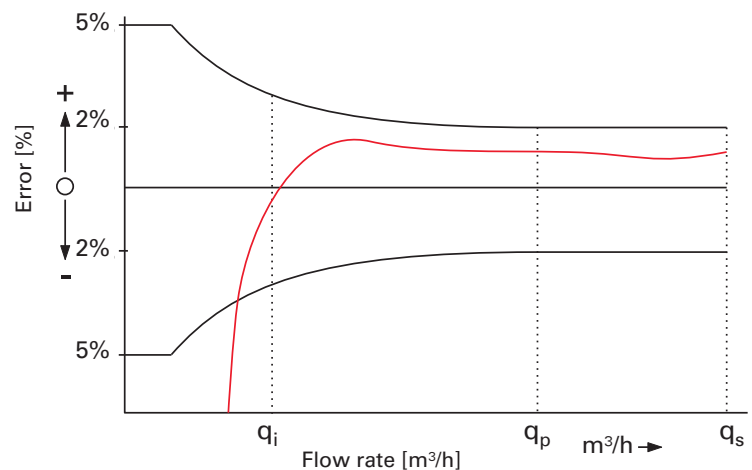


Nominal diameter DN	Smallest reading m ³	Max. reading m ³
50 ... 100	0,0005	999.999,999

Typical head loss curve





Typical error curve



Upstream straight pipe

- No straight pipe at inlet or outlet required (U0D0 acc. EN 14154)
- No abrupt restrictions directly downstream of the meter

Installation

Pipe	horizontal vertical	
Meter head	upwards sideways	

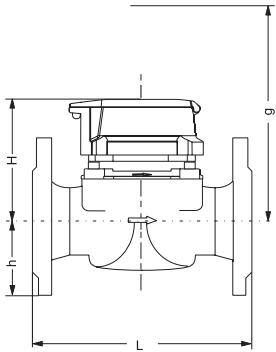
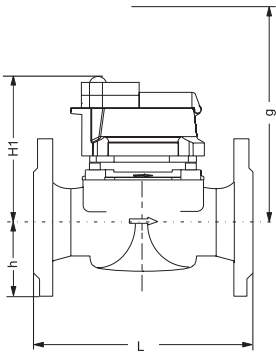
Materials

Body	Cast iron
Measuring element	Plastic
Rotor	Plastic
We also use the following materials	Brass Stainless steel



Dimensions and weights

Nominal diameter				DN	50	50	65	65	80	80	100	100
Dimensions	Overall length	L	mm		200	270	200	300	225	300	250	360
	Height	H	mm		120	120	120	120	150	150	150	150
	Height with HRI-Mei FS	H1			150	150	150	150	180	180	180	180
		h	mm		73	73	85	85	95	95	105	105
	Dismantling height	g	mm		200	200	200	200	270	270	270	270
Weight				kg	7.8	9.6	10.1	12.0	14.2	16.3	18.2	20.2

Dimension drawings



Pulse values

Pulser		Pulse value DN 50 ... 100
HRI-Mei FS		0.01; 0.025; 0.1; 0.25 m ³
OD AM OD 04		0.001 m ³ 0.01 m ³

Technical data HRI-Mei FS

Pulse value: 10, 25, 100 or 250 l/pulse alternative Switch type: OC acc. EN 1434-2 (open Drain) Maximum voltage: 28 Volt Maximum power: 20 mA Pulse length: ≥100 ms Pulse pause: ≥100 ms On position: ≥0,3 V at 0,1 mA Off position: ≥6 MΩ	Cable length: 3 m Connection: white = plus, grey = minus Protection class: IP 68 Power supply: Lithium battery (not replaceable) Battery life: typ. 6 years operation + 1 year storage Ambient temperature: -5 + 70 °C Humidity: 100%
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