

MeiStream

Bulk meter for cold potable water DN 40 ... 300

Main characteristics

- Meter with MID pattern approval acc. to annex MI001
- Exchangeable metrological unit with MID pattern approval acc. to annex MI001
- Unique measuring range; $Q_3/Q_1 \geq 100$
- High overload capability
- No straight inlet length necessary (U0D0 acc. to OIML R49:2013 and ISO 4064-1:2017)
- Installation position horizontal and vertical
- Meter body in short (WP) and long (WS) overall length acc. to DIN 19625 and ISO 4064-1:2017 available
- Meter can be submerged; protection class IP68
- Used materials are temperature resistant up to 70 °C
- Register prepared for HRI-Mei pick-up
- Use of optical pulsers type OD is still possible

Available options

- Encoder register with different data protocols (M-Bus, Sensus, IEC 1107)
- BMF version free of copper alloy for aggressive water (DN 40 ... 150)
- Register with 7 digits without multiplier (DN 150 ... 300)
- Version for high pressure up to PN 40 (DN 50 ... 150)
- Version for use in hazardous area
- HRI-Mei factory mounted
- 1/4" pressure monitoring port



Applications

- Measurement for billing of cold potable water up to 50 °C
- Measurement of high flowrates e.g. in pumped pipes
- Measurement of low flow e. g. in light load periods
- For leakage detection

Environmental conditions

- According to ISO 4064-1:2017
- Environmental class O acc. to OIML R49-1:2013
- Environmental temperature: 5 °C ... 70 °C
- Mechanical environmental conditions: class M2

Metrological data acc. to manufacturers values

Size			DN 40	DN 50	DN 65	DN 80	DN 100
Q_s	Max. Peak Flow	m ³ /h	60	90	120	200	300
Q_3'	Continuous Flow	m ³ /h	40	50	70	120	230
Q_{2h}	Transitional Flowrate horizontal	m ³ /h	0.32	0.4	0.63	0.51	0.81
Q_{1h}'	Minimum Flow horizontal	m ³ /h	0.2	0.15	0.2	0.2	0.3
Q_{2v}	Transitional Flowrate vertical	m ³ /h	0.4	0.51	0.81	0.8	1.28
Q_{1v}'	Minimum Flow vertical	m ³ /h	0.25	0.28	0.4	0.5	0.5
	Starting Flow	m ³ /h	0.05	0.05	0.07	0.1	0.11

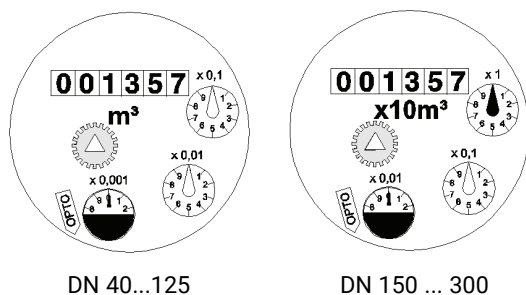
Size			DN 125	DN 150	DN 200	DN 250	DN 300
Q_s	Max. Peak Flow	m ³ /h	350	600	1200	1600	2000
Q_3'	Continuous Flow	m ³ /h	250	450	800	1250	1400
Q_{2h}	Transitional Flowrate horizontal	m ³ /h	1.02	1.6	4.0	6.3	16.0
Q_{1h}'	Minimum Flow horizontal	m ³ /h	0.5	0.8	2.0	3.5	9.0
Q_{2v}	Transitional Flowrate vertical	m ³ /h	1.6	3.2	4.0	10.1	25.4
Q_{1v}'	Minimum Flow vertical	m ³ /h	1	1.6	2.5	6.3	15.9
	Starting Flow	m ³ /h	0.15	0.3	1.5	3	8

Metrological data acc. to 2014/32/EU (MID)

Size			DN 40	DN 50	DN 65	DN 80	DN 100
Q_4	Overload Flowrate acc. to MID	m ³ /h	31.25	50	78.75	125	200
Q_3	Permanent Flowrate acc. to MID	m ³ /h	25	40	63	100	160
Q_{2h}	Transitional Flowrate horizontal acc. to MID	m ³ /h	0.32	0.4	0.63	0.51	0.81
Q_{1h}	Minimum Flowrate horizontal acc. to MID	m ³ /h	0.2	0.25	0.39	0.32	0.51
Q_{2v}	Transitional Flowrate vertical acc. to MID	m ³ /h	0.635	0.64	1.0	1.28	1.6
Q_{1v}	Minimum Flowrate vertical acc. to MID	m ³ /h	0.4	0.4	0.63	0.8	1.0
$Q_3/Q_1 h$	Max. Ratio horizontal		125	160	160	315	315
$Q_3/Q_1 v$	Max. Ratio vertical		63	100	100	125	160
Q_3/Q_1	Standard Marking		63	100	100	100	100
Δp	Headloss at Q_3 acc. to ISO 4064-1:2017	bar	0.1	0.16	0.32	0.16	0.34

Size			DN 125	DN 150	DN 200	DN 250	DN 300
Q_4	Overload Flowrate acc. to MID	m ³ /h	200	500	787.5	787.5	1250
Q_3	Permanent Flowrate acc. to MID	m ³ /h	160	400	630	630	1000
Q_{2h}	Transitional Flowrate horizontal acc. to MID	m ³ /h	1.02	1.6	4.03	8.06	25.4
Q_{1h}	Minimum Flowrate horizontal acc. to MID	m ³ /h	0.64	1	2.52	5.04	15.9
Q_{2v}	Transitional Flowrate vertical acc. to MID	m ³ /h	2.05	3.2	4.03	10.1	25.4
Q_{1v}	Minimum Flowrate vertical acc. to MID	m ³ /h	1.28	2	2.52	6.3	15.9
$Q_3/Q_1 h$	Max. Ratio horizontal		250	400	250	125	63
$Q_3/Q_1 v$	Max. Ratio vertical		125	200	250	100	63
Q_3/Q_1	Standard Marking		100	100	100	100	63
Δp	Headloss at Q_3 acc. to ISO 4064-1:2017	bar	0.19	0.27	0.11	0.07	0.08

Dial



DN 40...125

DN 150 ... 300

Pulse values

Pulse type	Pulse Value DN 40 ... 125	Pulse Value DN 150 ... 300
HRI-Mei	0.01; 0.05; 0.1 or 1 m³	0.1; 0.5; 1 or 10 m³
OD 01	0.001 m³	0.01 m³
OD 03	0.01 m³	0.1 m³

Reading

Nominal diameter	Smallest reading	Maximum reading
DN 40 ... 125	0.0005 m³	999,999.999 m³
DN 150 ... 300	0.005 m³	9,999,999.99 m³

Approval mark

Meter cpl. and exchangeable metrological module

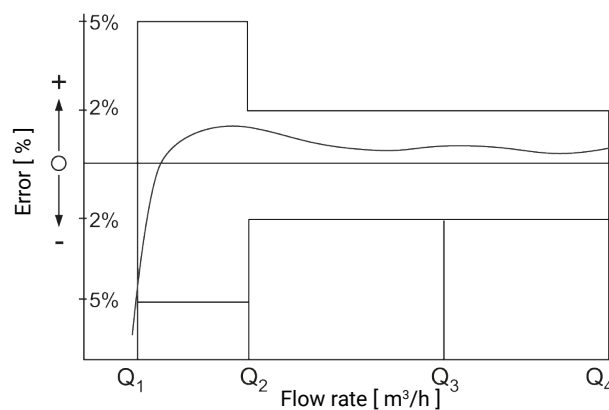
Marking CE M-XX* 0102

DN 40 ... 150: DE-09-MI001-PTB 010

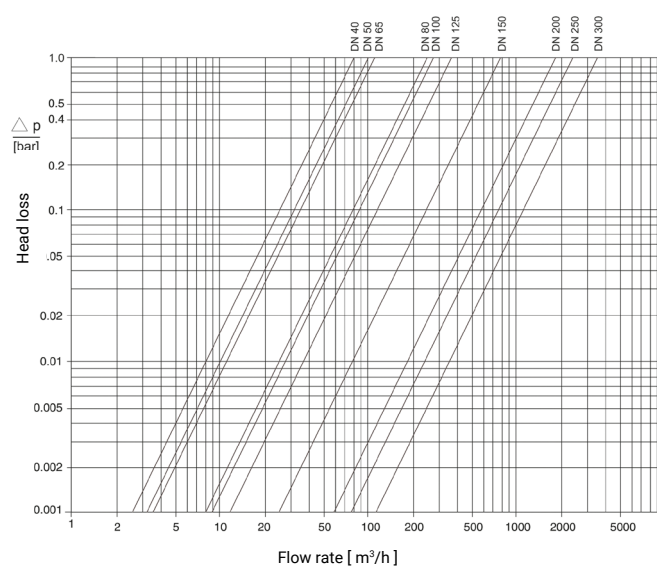
DN 200 ... 300: DE-15-MI001-PTB 014

* year of production

Typical Error Curve



Typical Headloss Curve



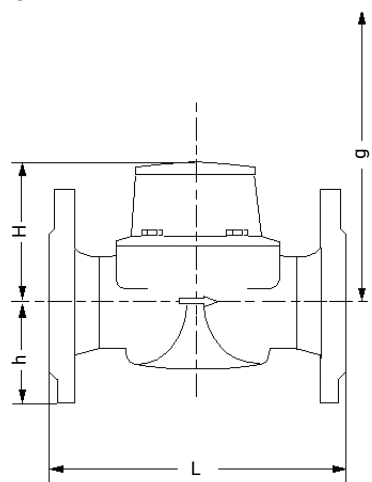
Installation

Pipe	horizontal vertical	
Meter head	upwards sideways	

Installation requirements

- Unrestricted straight pipe upstream 0 x DN
- No abrupt restrictions directly downstream of the meter

Dimension picture



Dimensions

Nominal Diameter	DN		40	50	50	50	65	65	80	80	80	80
Overall length	L	mm	220	200	270	300	200	300	200	225	300	350
Height ¹	H	mm	120	120	120	120	120	120	150	150	150	150
Height to pipe axis	h	mm	69	73	73	73	85	85	95	95	95	95
Dismantling height	g	mm	200	200	200	200	200	200	270	270	270	270
Nominal Diameter	DN		100	100	100	125	150	150	200	250	300	
Overall length	L	mm	250	350	360	250	300	500	350	450	500	
Height	H	mm	150	150	150	160	177	177	214	238	264	
Height to pipe axis	h	mm	105	105	105	118	135	135	162	194	226	
Dismantling height	g	mm	270	270	270	280	356	356	449	474	499	

Weight PN16

Nominal Diameter	DN		40	50	50	50	65	65	80	80	80	80
Overall length	L	mm	220	200	270	300	200	300	200	225	300	350
Meter		kg	8.0	8.5	9.6	9.9	10.1	12.0	12.4	14.2	16.3	17.7
Metrological module		kg	1.5	1.5	1.5	1.5	1.5	1.5	3.2	3.2	3.2	3.2
Body		kg	6.5	7.0	8.1	8.4	8.6	10.5	9.2	11.0	13.1	14.5
Nominal Diameter	DN		100	100	100	125	150	150	200	250	300	
Overall length	L	mm	250	350	360	250	300	500	350	450	500	
Meter		kg	17.0	20.0	20.2	20.7	35.9	44.2	56.9	79.4	103.8	
Metrological module		kg	3.2	3.2	3.2	3.2	5.9	5.9	9.6	9.6	9.6	
Body		kg	13.8	16.8	17.0	17.5	30.0	38.3	47.3	69.8	94.2	

Weight PN40

Nominal Diameter	DN		50	50	65	80	80	100	100	150	150
Overall length	L	mm	200	270	300	225	300	250	360	300	500
Meter		kg	9.7	10.7	13.1	17	18.6	20.4	22.9	44.6	52.9
Metrological module		kg	1.7	1.7	1.7	4	4	4	4	9.3	9.3
Body		kg	8	9	11.4	14.6	14.6	16.4	18.9	35.3	43.6

Order example

MeiStream, DN 50, T50, PN16	Type
	Size
	Max. medium temperature
	Nominal pressure
Drilling EN 1092 PN16	Drilling pattern
Length 270 mm	Body length
mechanical register / m ³	Register type / unit
with MID conformity	Approval standard

Materials

Body	Cast iron (PN16) Ductile iron (PN40)
Metrological module	Engineering polymer
Rotor	Engineering polymer
We also use the following materials	Brass Stainless steel



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