Water

Meistream with GWFcoder® MP

Bulk water meters

Your benefits

- Revolutionary Multiprotocol interface:
  Investment security due to the interoperability of the meter
- Transfer of the effective meter reading:
  No data loss and guaranteed security of the billing data
- No programming required when commissioning the meter in a readout system (Plug & Play):
  Easy and fast on-site installation
- Measurement of low flow rates:
  Increased cost effectiveness
- Removable measuring insert:
  Retrofittability and replaceability guaranteed
- One measuring insert for various bodies:
  Lower storage costs

Applications

- Measurement of high flow rates, e. g.
  - Downstream of pumps or at transfer points
  - Reservoir inflows and outflows
- Measurement of low flow rates during offpeak periods
- Automated mobile or fixed network readout of relevant billing data
- Wired or radio remote readout of hard to access metering installations, e.g. meter pits, reservoirs

Properties

- Universal installation position
- No straight flow section required before the meter
- Register can be turned through 355°
- Maximum operating pressure PN 16 bar
- Temperature up to 50 °C
- Rotor is hydrodynamically, radially and axially balanced
- Available in the standard installation lengths for WS and WP meters
- Powder coating provides optimum corrosion protection
- Non-ferrous metal design up to PN 16 bar
- SVGW certification
- CE Conformity according to the European Measuring Instrument Directive (MID)
- Flood-proof register (IP68) with Multiprotocol interface (MP), 5 m cable and provision for a HRI pulser
- M-Bus standard unit load: 2 unit loads (3 mA)

Options

- High-pressure series up to PN 40 bar
- High-resolution pulse generator HRI
  Documentation: HRI
- Radio module RCM®-H200 split
  Documentation: RCM®-H200

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Technical Data

Manufacturer information

Nominal diameter[1)]	**DN**	**mm**	**50**	**50**	**65**	**65**	**80**	**80**	**100**	**100**	**125**	**150**	**150**	**200**	**250**	**300**
Nominal pressure[2)]	**PN**	**bar**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**
Nominal flow rate	**Q_3**	**m^3/h**	**50**	**50**	**70**	**70**	**120**	**120**	**230**	**230**	**250**	**450**	**450**	**800**	**1250**	**1400**
Overload flow rate (few minutes)	Q_4	m^3/h	90	90	120	120	200	200	300	300	350	600	600	1200	1600	2000
Transitional flow rate ± 2 %	Q_2	m^3/h	0,4	0,4	0,63	0,63	0,51	0,51	0,81	0,81	1,02	1,6	1,6	4,03	6,3	16
Minimum flow rate ± 5 %	Q_1	m^3/h	0,15	0,15	0,2	0,2	0,2	0,2	0,3	0,3	0,5	0,8	0,8	2	3,5	9
Temperature		max.°C	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Dimensions and weights

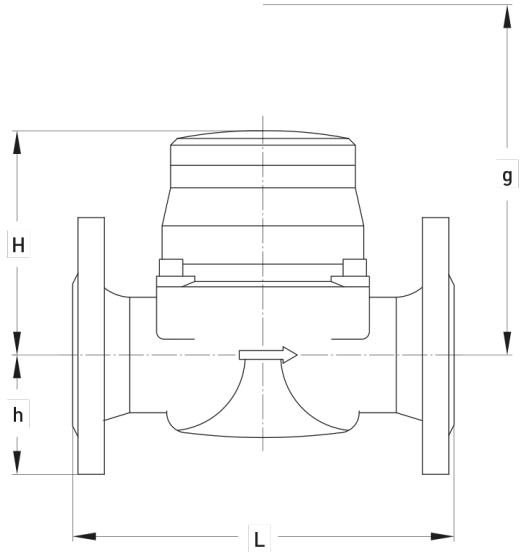
Overall length	**L**	**mm**	**200**	**270[3)]**	**200**	**300**	**225[4)]**	**300**	**250**	**360**	**250**	**300**	**500**	**350**	**450**	**500**
Height	H	mm	157	157	157	157	187	187	187	187	197	214	214	251	275	301
Height	h	mm	73	73	85	85	95	95	105	105	118	135	135	162	194	226
Dismantling height of measuring unit	g	mm	237	237	237	237	307	307	307	307	317	393	393	486	511	536
Meter weight		app. kg	7,8	9,6	10,1	12	14,2	16,3	18,2	20,2	20,7	35,9	35,9	56,9	79,4	103,8
Measuring unit weight		app. kg	1,5	1,5	1,5	1,5	3,2	3,2	3,2	3,2	3,2	5,9	5,9	9,6	9,6	9,6
Body weight		app. kg	6,3	8,1	8,6	10,5	11	13,1	15,0	17,0	17,5	30	30	47,3	69,8	94,2

1] Nominal diameter DN 40 upon request
2] High-pressure series PN 40 upon request
3] Also available with 300 mm body length
4] Also available with 200 mm body length

MID certification data

Nominal flow rate	**Q_3**	**m^3/h**	**40**	**40**	**63**	**63**	**100**	**100**	**160**	**160**	**160**	**400**	**400**	**630**	**630**	**1000**
Temperature		max.°C	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Horizontal measuring range			R160	R160	R160	R160	R315	R315	R315	R315	R250	R400	R400	R250	R125	R63
Vertical measuring range			R100	R100	R100	R100	R125	R125	R160	R160	R125	R200	R200	R250	R100	R63
Standard marking			R100	R100	R100	R100	R100	R100	R100	R100	R100	R100	R100	R100	R100	R63

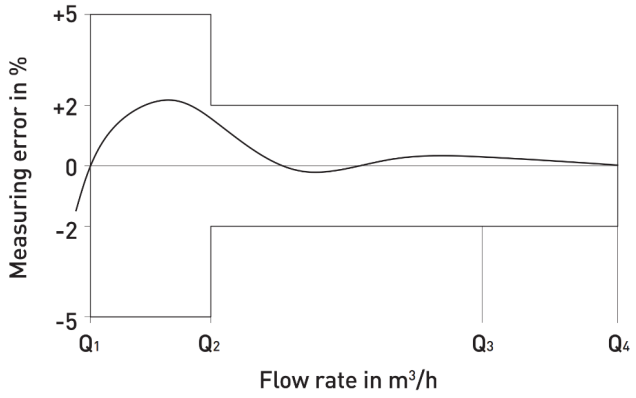
Dimension Diagram



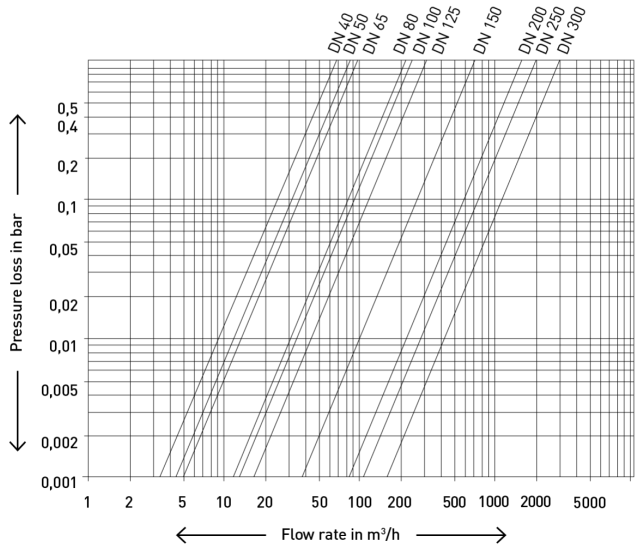
Materials

Body	Cast iron
Measuring unit	Plastic
Rotor	Plastic
Other materials	Brass / non-rusting steel

Measurement error curve



Typical Head Loss Curve



Installation

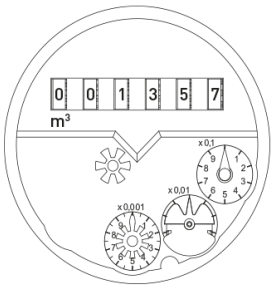
Pipeline:	horizontal	—
	vertical	|
	diagonal	/
Meter head:	upwards	↑
	sideways	←→

Commission

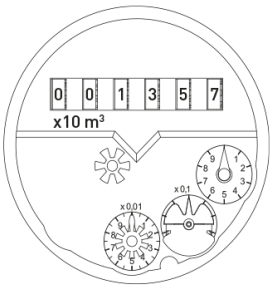
When commissioning the meter the measuring section must be filled slowly (bleed slowly).

Dial

DN 50 – DN 125



DN 150 – DN 300

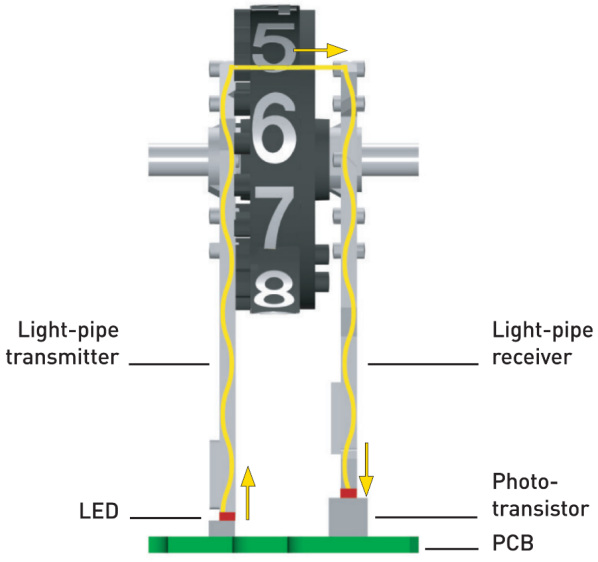


Nominal size	DN	50–125	150–300
Smallest reading	m^3	0,0005	0,005
Maximum register reading	m^3	1'000'000	10'000'000

Pulse values HRI Pulser

Meter sizes	DN 50...125 1 Pulse = ...Liter	DN 150...300 1 Pulse = ...Liter
Meistream	100 1000	1000 10000

GWFcoder®-Technology



In the GWFcoder® system, the individual rollers of the mechanical register are read out optoelectronically. The position of the various long asymmetrically arranged slits in the roller counters is scanned using five light barriers (lightpipe transmitter and receiver). The light barriers are implemented with phototransistors. LEDs and light conductors, which are all consecutively scanned and evaluated. The precisely defined position of each individual roller counter is encoded as an absolute roller counter reading and read out as a part of the protocol via the GWFcoder® interface. This functioning principle is patented by GWF. The GWFcoder® interface, compared to a meter with a pulse output, has an incomparably higher level of information content and readout accuracy. A GWFcoder® register does not require a battery, which, in turn, does not compromise existing revision cycles. The readout device supplies the power for the readout.

Moreover, all products with multiprotocol functionality provide the flexibility to switch between wall readout (inductive or CL), Wired M-Bus or radio readout which leads to an easy and fast «Plug & Play» installation on site.

GWFcoder®-Data package

Medium	Water
Absolute meter reading	123654 m^3
Serial number	43215678
Meter size	DN 50

M-Bus: EN 13757 --> Cable colors black / red, polarity independent

ECO: EN 13757-3 --> Cable colors black / green / red, note polarity

Example of use

Wireless read-out

Meter with GWFcoder® register is read out automatically by radio using a mobile infrastructure (for example radio module RCM®-H200 and MEx).