



Meistream Plus

Bulk water meters with GWFcoder® register
for cold water up to 50°C
DN 50, 65, 80, 100, 150

Our strength: Your benefit

- Measurement of low flow rates:
Increased cost effectiveness
- Removable measuring insert:
Retrofittability and replaceability guaranteed
- One measuring insert for various bodies:
Lower storage costs
- 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

Application

- Measurement of medium to high flow rates
- 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
- Measuring of
 - Desalinated / demineralized water
 - Caustic soda up to 20%
 - Saline water up to 10%
 - Chlorinated water up to 1%
 - Glycol-water solutions up to 30%
 - Caustic solutions up to pH value 9

Features

- Horizontal installation position
- No straight flow section required before the meter
- Register can be turned through 355°
- Maximum operating pressure PN 16 bar
- Temperatures 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
- SVGW certification
- **CE** Conformity according to the European Measuring Instrument Directive (MID)
- Flood-proof standard GWFcoder® register (IP68) with IEC interface, 5m cable and provision for a HRI pulser

Options

- Flood-proof GWFcoder® register (IP68) with M-Bus interface, 5m cable and provision for a HRI pulser
- High-resolution pulse generator HRI
 Documentation: HRI - EPe10213

Technical Data

			50	50	65	65	80	80	100	100	150
Nominal diameter ¹⁾	DN	mm	50	50	65	65	80	80	100	100	150
Nominal pressure	PN	bar	16	16	16	16	16	16	16	16	16
Nominal flow rate	Q ₃	m ³ /h	35	35	40	40	63	63	100	100	250
Overload flow rate (few minutes)	Q ₄	m ³ /h	55	55	60	60	120	120	160	160	400
Transitional flow rate ±2%	Q ₂	m ³ /h	0,13	0,13	0,16	0,16	0,25	0,25	0,4	0,4	0,63
Minimum flow rate ±5%	Q ₁	m ³ /h	0,07	0,07	0,1	0,1	0,13	0,13	0,2	0,2	0,35
Temperature		max. °C	50	50	50	50	50	50	50	50	50

Dimensions and weights											
Overall length	L	mm	200	270 ²⁾	200	300	225 ³⁾	300	250	360	300 ⁴⁾
Height ⁵⁾	H	mm	142	142	142	142	172	172	172	172	199
Height	h	mm	73	73	85	85	95	95	105	105	135
Dismantling height of measuring unit ⁵⁾	g	mm	222	222	222	222	292	292	292	292	378
Meter weight		app. kg	7,8	9,6	10,1	12	14,2	16,3	18,2	20,2	35,9
Measuring insert weight		app. kg	1,5	1,5	1,5	1,5	3,2	3,2	3,2	3,2	5,9
Body weight		app. kg	6,3	8,1	8,6	10,5	11	13,1	15	17	30

¹⁾ Nominal size DN40 upon request

²⁾ Also available with 300mm body length

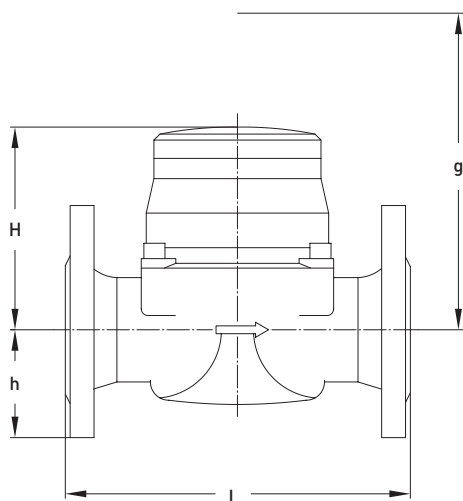
³⁾ Also available with 200mm body length

⁴⁾ Also available with 500mm body length

⁵⁾ The dimension g and H increase by 22mm if a HRI impulse generator and cover are installed

MID certification data											
Nominal flow rate	Q ₃	m ³ /h	25	25	40	40	63	63	100	100	250
Temperature		max. °C	50	50	50	50	50	50	50	50	50
Measuring range			R315	R315	R400	R400	R400	R400	R400	R400	R630
Standard marking			R315	R315	R315	R315	R315	R315	R315	R315	R315

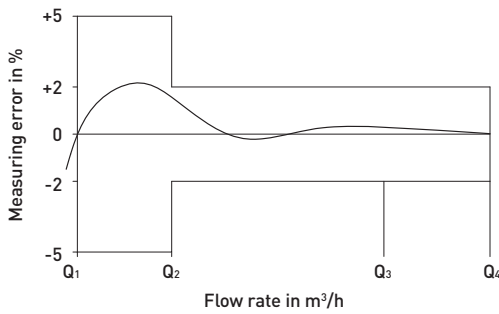
Dimension Diagram



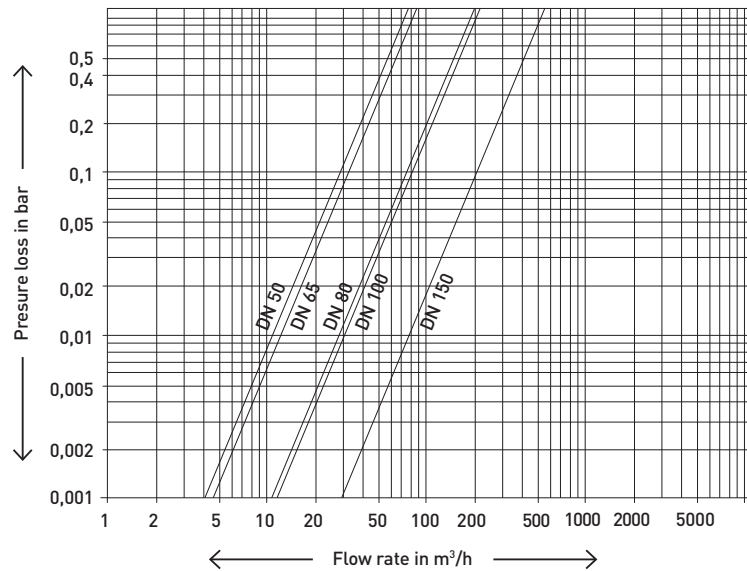
Materials

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

Measurement error curve



Typical Head Loss Curve



Installation

Pipeline: horizontal —

Meter head: upwards ↑



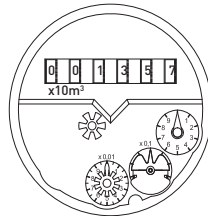
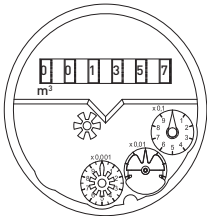
Commission

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

Dial

DN 50 – DN 100

DN 150



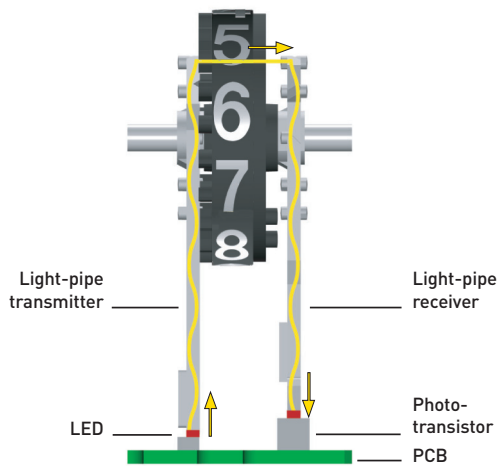
Nominal size	DN	50 – 100	150
Smallest reading	m ³	0,0005	0,005
Maximum register reading	m ³	1'000'000	10'000'000

Pulse values HRI Pulser

Meter sizes	DN 50...100 1 Pulse = ...Liter	DN 150 1 Pulse = ...Liter
Meistream Plus	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 5 light barriers (light-pipe 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.



GWFcoder®- Data package IEC

Medium:	Water/gas
Absolute meter reading:	123654m ³
Serial number:	43215678
Meter production date:	29-12-06
Meter size:	DN15 / G4

Standards and interface

GWFcoder®-registeres can be implemented with all common standardized or interface definitions. The GWFcoder® system currently supports the following interfaces:

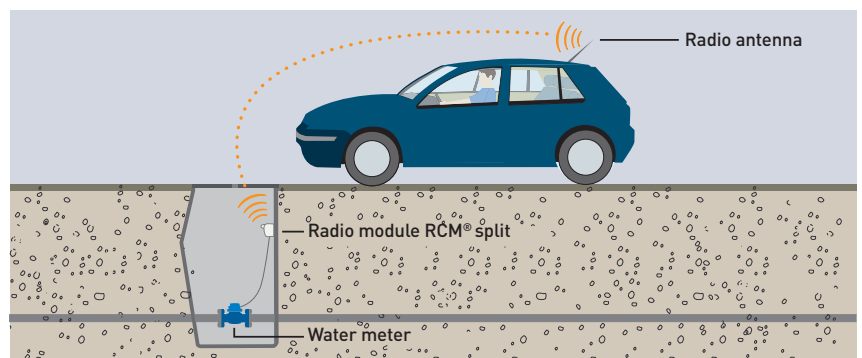
Interface

SCR/IEC:	IEC 62056-21 Mode A (IEC 1107)
M-Bus:	EN 13757-2/3
Namur:	EN 60947-5-6 (large-scale gas measurement)

Example of use

Wireless readout

Meter with GWFcoder® register and IEC interface is read out by radio using a mobile infrastructure.



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Subject to modification

GWF MessSysteme AG
Obergrundstrasse 119, 6002 Luzern
Switzerland

T +41 (0)41 319 50 50
F +41 (0)41 310 60 87
info@gwf.ch, www.gwf.ch

swiss.smart.simple.

GWF