



Water

GWF



sonico[®] NANO

Smart Water Meter



Your benefits

- Best in class accuracy and repeatability up to R1000
Accurate low-flow measurements and ondemand leakage notification. Reduces nonrevenue water and scarcity water.
- Accurate measurements in all possible directions and installation conditions
High installation flexibility reduces installation costs.
- Integrated LoRaWAN over wMBus dual mode and seamless data integration
Reduction of network initialization, maintenance, and meter reading costs.
- Over the air software update to upgrade new features or radio settings and to increase lifetime
Sustainable design and extendend product life time.

Applications

- Cold water supply systems (water temperature up to 50 °C) requiring reliable and accurate water consumption metering
- Reliable data communication on site (NFC) and integrated radio technology (RF) for mobile or fixed network / smart metering collection systems (AMR)

Properties

- Measuring range up to R1000 and starting flow down to 1 l/h for DN15
- Precise in any type of installation and flow conditions U0/DO
- Extremely low-pressure loss (down to only 0,10 bar for DN15)
- Highly resistant to overload flow rates, resistance to hydraulic shock and unaffected by magnetic fields
- Firmware updates or protocol changes over-the-air or over the NFC interface
- Automatic radio connection by integrated dual mode for 868MHz LoRaWAN or wMBus
- Automated and fast (16s resolution) wirelessly data collection either by walk or drive-by
- infin.io back-end solution for data visualization and management
- Open standards and non-proprietary communication protocols
- GWF LIFE software app for local meter readings and configurations over NFC
- End-to-end AES-128 Bit data encryption
- Selectable simulation, standby or operation meter mode
- NFC pulse module for test bench maeasurements
- Robust and sustainable design mainly made of brass and glass
- Simple to recycle - no potted battery and electronics

Metrology and radio data

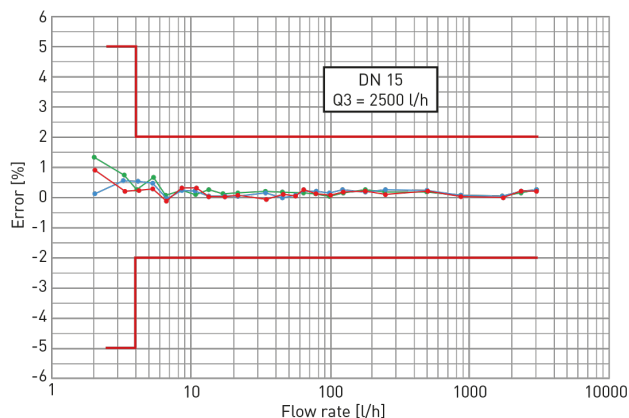
Execution			Q ₃ / 1.6	Q ₃ / 2.5	Q ₃ / 2.5	Q ₃ / 4.0
Nominal diameter	DN	mm	15	15	20	20
Operating pressure	MAP	bar	16	16	16	16
Nominal flow rate	Q ₃	m ³ /h	1.6	2.5	2.5	4
Overload flow rate	Q ₄	m ³ /h	2	3.125	3.125	5
Transitional flow rate	Q ₂	l/h	5.1	4	8	6.4
Minimum flow rate	Q ₁	l/h	3.2	2.5	5	4
Starting flow rate		l/h	1	1	2	2
Measuring range	R	Q ₃ /Q ₁	500	up to R1000 ¹⁾	500	up to R1000 ¹⁾
Installation orientation			H, V, H/V			
Smallest readable volume		l	0.01 (test mode)			
Maximum register reading		m ³ /GAL	9 - digits			
Flow disturbance class			U0/D0			
Batteries			1 x integrated 3.6 DC lithium C battery			
IP rating			IP68			
Operating ambient temperature range		°C	-10 / +70			
Storage temperature range		°C	-25 / +70 (>35 max. 4 weeks)			
Battery life time			16 years ²⁾			
Integrated wMBus C1 /C2 / OMS / 868 MHz			Default transmission interval: 16 seconds			
Integrated LoRaWAN / 868 MHz			Default transmission interval: 1 day SF12. 15 minutes SF7			
Sampling frequency			Up to 4Hz			

1) Default production calibration R800

2) At default configurations

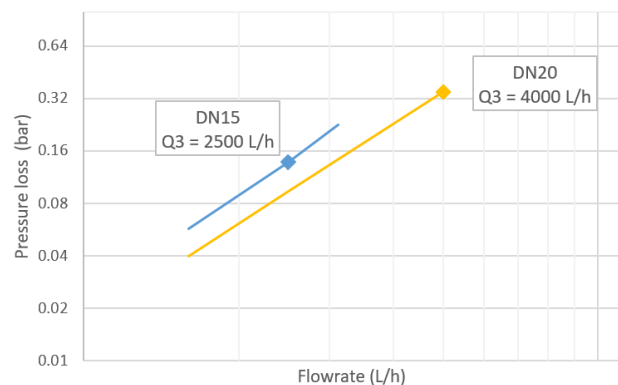
R1000 accuracy measurements

GWF 4D-Technology delivers best in class measuring range and repeatability.



Pressure loss curve

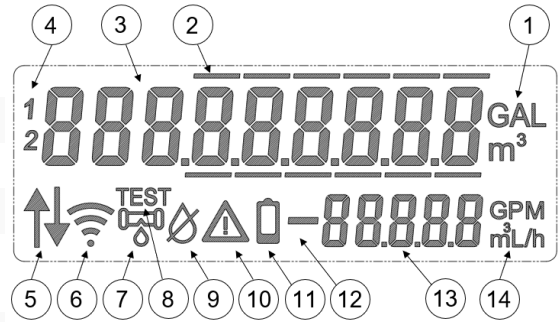
The clean and homogenous measuring channel results in best in class head loss.



Display information

The display is updated every second and shows beside the WELMEC information the following content:

- | | |
|--|--|
| 1. Volume unit indicator (digital) | 8. Test mode information |
| 2. Non-billing relevant lines | 9. Air in pipe icon |
| 3. Volume | 10. System alarm icon |
| 4. Tariff zone | 11. Battery level symbol |
| 5. Main flow direction (automatic set) | 12. Actual flow direction arrow |
| 6. Radio connection status | 13. Flow rate |
| 7. Leakage indicator | 14. Flow rate unit indicator (digital) |



Configurable alerts

The following integrated alerts are displayed on the meter LCD and transmitted over the integrated radio or NFC interface.

Metrology alerts:

- Water leak
- Water burst
- Air in pipe
- Empty pipe
- Reverse flow over configured time or volume
- No flow over configured time or volume
- Tampering
- Ambient temperature too high or low
- Water temperature too high or low
- Low battery

Communication alerts:

- NFC error
- Invalid configuration

Internal data backup and security

The meter has a permanent memory, in which more than 400 log's are saved. The data logging interval is configurable and results in the following history log periode:

History log period	Data logging interval
4 days	15 min
16 days	1 heour
400 days	1 day
20 years	1 month

Each logging interval backup's the following data:

1. Cumulative, forward and reverse volume
2. All possible active alerts
3. Max. and min. flow rates incl. timestamp
4. Max. and min. temperatures incl. timestamp

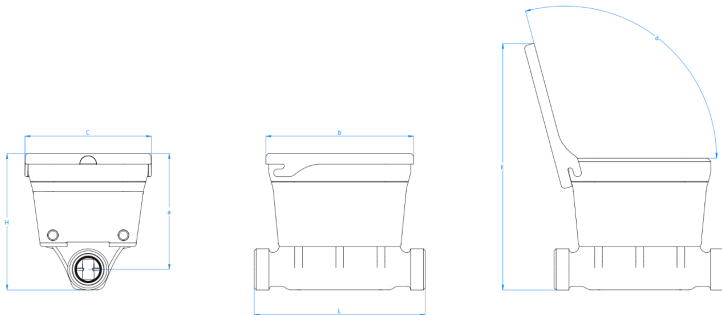
The monthly/yearly log is written on the first day of the month/year, the daily log at midnight.

Materials and Sustainability

- Meter is made of fully recyclable materials for low CO2 footprint.
- Meter body made of lead-free eco brass.
- Mineral glass for high hygenic standard.
- Battery is connected by plug to electronics and allows at end of live a proper component separation and recycling.
- Production, packaging and distribution with minimal CO2 footprint.

Dimensions and weight

Size	DN	mm	15	15	15	15	15	20	20	20	20	20	20	20	20
Nominal flow	Q ₃	m ³ /h	1.6	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	4.0	4.0	4.0
Lay length	L	mm	165	110	115	115	165	130	190	105	115	130	165	190	220
Height	H	mm	87.5	87.5	87.5	87.5	87.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5
Register length	b	mm	95	95	95	95	95	95	95	95	95	95	95	95	95
Register width	C	mm	81	81	81	81	81	81	81	81	81	81	81	81	81
Register height	a	mm	74	74	74	74	74	77	77	77	77	77	77	77	77
Height incl. lid	E	mm	158	158	158	158	158	165	165	165	165	165	165	165	165
Lid opening angle	d	°	105	105	105	105	105	105	105	105	105	105	105	105	105
Meter thread connection		Inch	G ³ / ₄ B	G ³ / ₄ B	G ³ / ₄ B	G ⁷ / ₈ B G ³ / ₄ B	G ³ / ₄ B	G1B	G1B	G1B	G1B	G1B	G1B	G1B	G1B
Adapter thread connection		Inch	R ¹ / ₂	R ¹ / ₂	R ¹ / ₂	R ³ / ₄ R ¹ / ₂	R ¹ / ₂	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄
Weight		kg	0.75	0.65	0.7	0.7	0.75	0.75	0.85	0.65	0.7	0.75	0.8	0.85	0.9



Regulatory and Standard Compliance

CE Design-examination Certificate in conformity with:

- > 2014/32/EU (MID) (2019)
- > OIML R49:2013 (2019)
- > EN-ISO 4064-1 to 5:2014(E) – Flow meters for cold potable water and hot water
- > EC Type Test Certificate TCM 142/16-5405 for cold water applications
- > Class E2 (EN-ISO 4064:2014)
- > Class M3 (EN-ISO 4064:2014)
- > Class M3 (Directive 2014/32/EU of 26 February 2014)
- > WELMEC 7.2
- > RED (2025)

Drinking water approvals:

- > KTW / W270 (2019)
- > SVGW
- > ACS