



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)

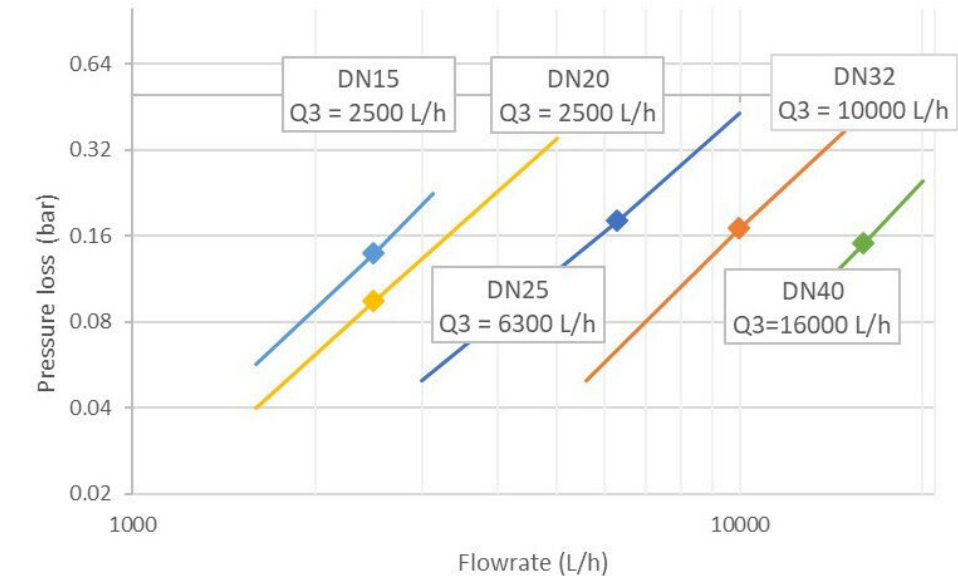
Properties

- 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 measurements
- Robust and sustainable design mainly made of brass and glass
- Simple to recycle - no potted battery and electronics

Execution			Q ₃ / 1.6	Q ₃ / 2.5	Q ₃ / 2.5	Q ₃ / 4.0	Q ₃ / 6.3	Q ₃ / 10	Q ₃ / 10	Q ₃ / 16
Nominal diameter	DN	mm	15	15	20	20	25	25	32	40
Operating pressure	MAP	bar	16	16	16	16	16	16	16	16
Nominal flow rate	Q ₃	m ³ /h	1.6	2.5	2.5	4	6.3	10	10	16
Overload flow rate	Q ₄	m ³ /h	2	3.1	3.1	5	7.9	12.5	12.5	20
Transitional flow rate	Q ₂	l/h	5.1	4.0	8.0	6.4	20.2	16	16	25.6
Minimum flow rate	Q ₁	l/h	3.2	2.5	5	4	12.6	10	10	16
Starting flow rate		l/h	1	1	2	2	3	3	5	8
Measuring range	R	Q ₃ /Q ₁	500	up to R1000 ¹⁾	500	up to R1000 ¹⁾	500	up to R1000 ¹⁾	up to R1000 ¹⁾	up to R1000 ¹⁾
Pressure loss		bar	0.10	0.16	0.16	0.25	0.25	0.40	0.25	0.16
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			Up to 16 years (depending on environment and configuration conditions)							
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							
Transmission power			Max. 14 dBm (25 mW)							
Sampling frequency			Up to 4Hz (1Hz by default)							

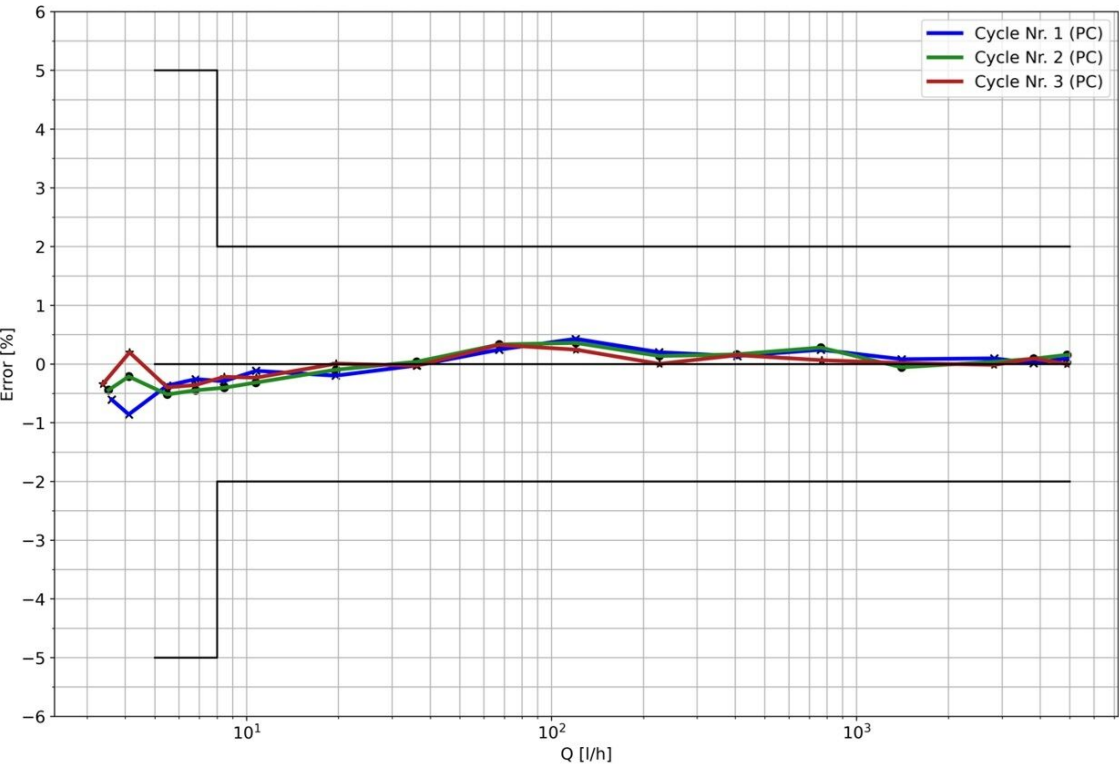
1) Default production calibration R800

Pressure loss curve



R1000 accuracy measurements

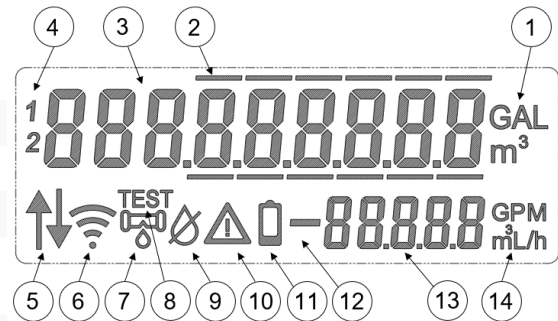
GWF 4D-Technology delivers best in class measuring range and repeatability.



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. Empty pipe icon |
| 3. Volume | 10. System alarm icon |
| 4. Tariff zone | 11. Battery level icon |
| 5. Main flow direction (automatic set) | 12. Actual flow direction arrow |
| 6. Radio status | 13. Flow rate |
| 7. Leakage icon | 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
16 days	1 hour
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

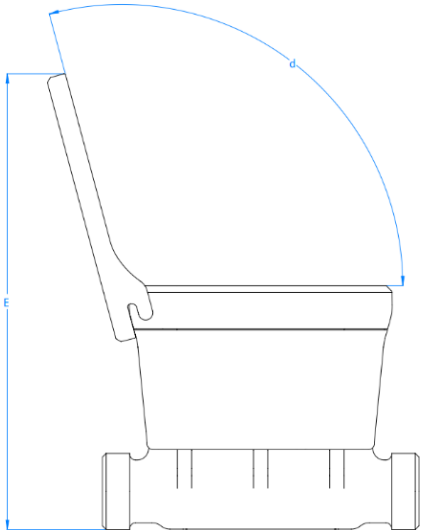
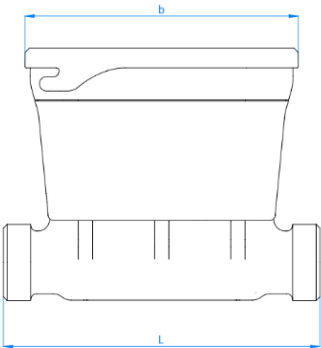
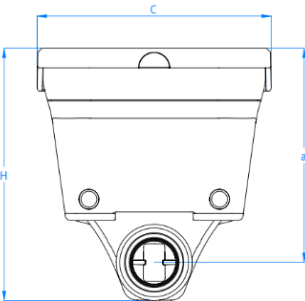
Materials and Sustainability

- 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.

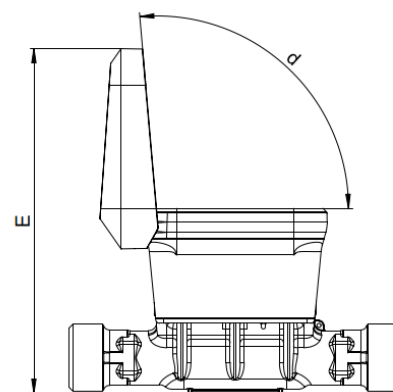
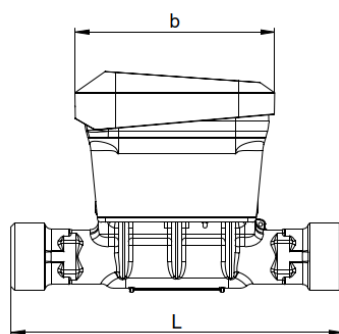
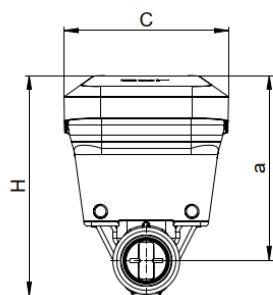
Dimensions and weight

sonico® NANO without NMB-1 (Wired M-Bus Modul)

Size	DN	mm	15	15	15	15	20	20	25	25	32	40
Nominal flow	Q3	m³/h	1.6	2.5	2.5	2.5	2.5	4.0	6.3	10	10	16
Lay length	L	mm	165	110 115	115	165	130 190	105 115 130 165 190 220	260	260	260	300
Height	H	mm	87.5	87.5	87.5	87.5	94.5	94.5	102.5	102.5	126	135
Register length	b	mm	95	95	95	95	95	95	95	95	95	95
Register width	C	mm	81	81	81	81	81	81	81	81	81	81
Register height	a	mm	74	74	74	74	76.5	76.5	79.5	79.5	100	105
Height incl. lid	E	mm	158	158	158	158	165	165	173	173	196.5	205.5
Lid opening angle	d	°	105	105	105	105	105	105	105	105	105	105
Meter tread connection		Inch	G¾B	G¾B	G¾B G¾B	G¾B	G1B	G1B	G1¼B	G1¼B	G1¼B	G2B
Adapter thread connection		Inch	R½	R½	R¾ R½	R½	R¾	R¾	R1	R1	R1¼	R1¼
Weight		kg	0.75	0.65 0.70	0.70	0.75	0.75 0.85	0.65 0.70 0.75 0.80 0.85 0.90	1.30	1.30	1.80	2.70



Size	DN	mm	15	15	15	15	20	20	25	25	32	40
Nominal flow	Q3	m³/h	1.6	2.5	2.5	2.5	2.5	4.0	6.3	10	10	16
Lay length	L	mm	165	110 115	115	165	130 190	105 115 130 165 190 220	260	260	260	300
Height	H	mm	102.5	102.5	102.5	102.5	109.5	109.5	120.5	120.5	141	150
Register length	b	mm	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
Register width	C	mm	82	82	82	82	82	82	82	82	82	82
Register height	a	mm	89.5	89.5	89.5	89.5	92	92	94.5	94.5	115	120
Height incl. lid	E	mm	164	164	164	164	171	171	179	179	202.5	211.5
Lid opening angle	d	°	95	95	95	95	95	95	95	95	95	95
Meter tread connection		Inch	G¾B	G¾B	G¾B G¾B	G¾B	G1B	G1B	G1¼B	G1¼B	G1¼B	G2B
Adapter thread connection		Inch	R½	R½	R¾ R½	R½	R¾	R¾	R1	R1	R1¼	R1¼
Weight		kg	0.83	0.73 0.78	0.78	0.75	0.83 0.93	0.73 0.78 0.83 0.88 0.93 0.98	1.38	1.38	1.88	2.78



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 142/24-5958 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