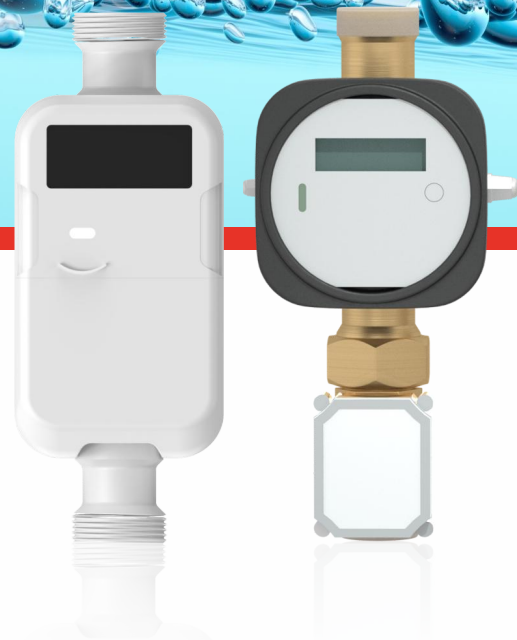




Smart Water Metering Solution

I With Ultrasonic Metrology and Remote Reading Systems



Cubic Sensor and Instrument Co.,Ltd.

Smart Ultrasonic Water Meter

Precise Measurement, Intelligent Management

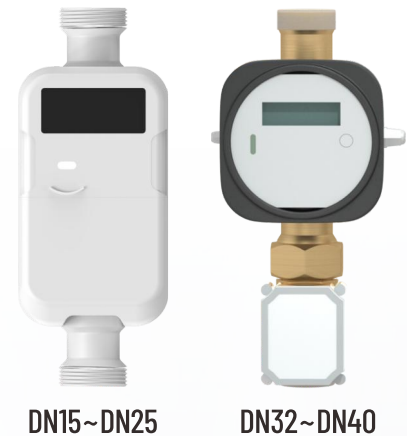
Cubic ultrasonic water meter is an advanced electronic meter for precise water flow volume measurement. Designed for applications requiring high accuracy and long life, this advanced all-digital technology provides precise measurements without moving parts and high resistance to magnetic interference. This ensures optimal revenue and consistent performance over time.

Ultrasonic technology also features very low pressure loss, reducing customer complaints and lowering pumping costs for utilities.

Equipped with integrated IoT module, it enables remote reading and data monitoring, which reduces data collection time from weeks to hours. Real-time reporting of volume logs, diagnostics, and alarms enables more efficient water distribution and resource management, and facilitates predictive maintenance, ensuring rapid response and resolution.

With the ability to separately accumulate reverse flow, it can accurately identify normal and abnormal water usage, promptly detect anomalies such as pipe leaks and backflow, and monitor illegal connections and water theft, ensuring legitimate water usage. Moreover, it can also detect water leaks and send alarms to cloud platform, making it an efficient and effective smart metering solution to reduce water wastage.

Housed in a compact, tamper-proof, weatherproof, and UV-resistant casing, the Cubic ultrasonic water meter is especially robust, durable, and suitable for challenging climates. Unlike mechanical meters, the ultrasonic technology is unaffected by suspended particles in the water, making it a superior choice for reliable and long-lasting performance.

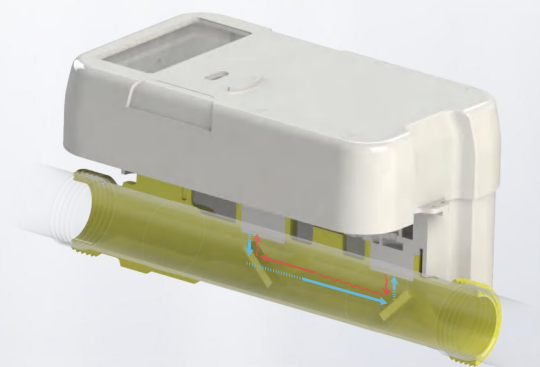


Application

The Cubic ultrasonic water meter, designed for residential and commercial applications, delivers exceptional accuracy in measuring both potable and non-potable cold water, including challenging conditions such as irrigation systems and water containing small particles. It also supports customized solutions for hot water applications.

Utilizing advanced ultrasonic flow measurement, this meter complies with the GB/T 778-2018 standard and JJG 162-2019 calibration procedures. Compared to mechanical meters, it significantly enhances low flow measurement accuracy, offers long-term stability, and maintains the same turn-down ratio when installed in both horizontal and vertical orientations.

With optional wireless communication functions such as GPRS, NB-IoT, LoRaWAN, and LTE, the Cubic ultrasonic water meter supports remote reading of water consumption and status information. This enables a highly responsive infrastructure, allowing for immediate action. The meter also offers customized integrated solutions to facilitate data transmission to utility cloud platforms over private or public networks.



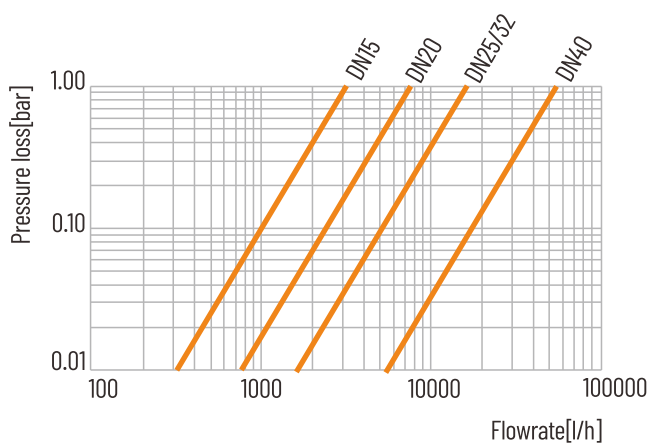
Features



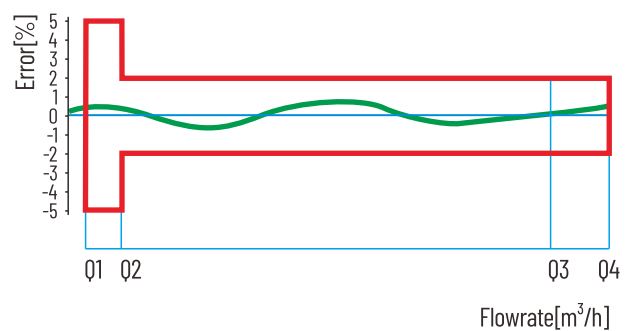
DN 15 to 40

- No moving parts, ensuring long-term accuracy.
- Resistant to deposits and particles.
- High turn-down ratio for accurate low-flow measurements; customizable R500 option.
- IP 68 rating, ideal for outdoor installations.
- Reverse flow is separately accumulated, guaranteeing precise recording of all water usage.
- Up to 10 years of battery life.
- Alarms for active leaks, theft, backflow, tampering, flow rate issues, and battery life indication.
- 9-digit LCD for high-precision readings and versatile display options.
- Local optical port for easy parameter reading and troubleshooting.
- Integrated wireless communication module for remote monitoring and data collection.
- Self-diagnostics and alarms to reduce failures and minimize downtime.
- Compatible for seamless integration with AMR/AMI systems.

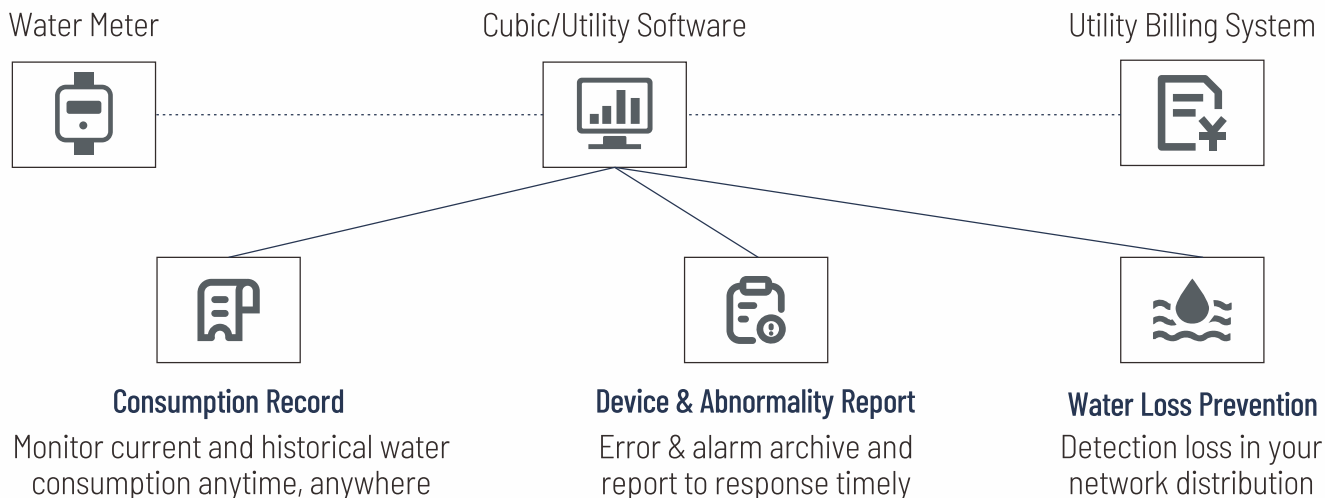
Typical pressure loss curve



Typical error curve



Smart & Efficient Water Management



Launching a New Era of Smart Water Management

Wireless Data Upload

Measurement Data

- Current & reverse flow volume
- Instant flow rate
- Temperature & pressure
- 24H data available
- Daily freezing record

Error & Alarm Record

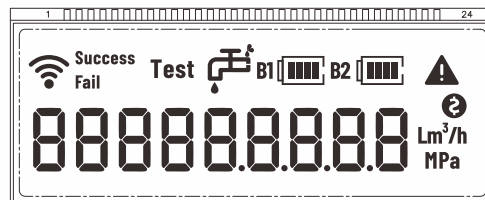
- Leakages
- Air in the pipe
- Reverse flow
- Overload flow
- Valve Status
- Abnormal measurement data
- Sensor module communication failure
- Temperature overlimit
- Low battery
- Weak signal strength



Display

Easy to Read

- 9-digits for high precision design
- Multi-function switching loops
- Error code
- Battery level
- Valve status



Data Archive

Easy for Data Tracking

- Hourly, daily & monthly data
- Measurement volume, errors & alarms
- Data can be read-out with an opto head-on-site



Benefits:

Enhances record-keeping and transparency, enabling utilities to track historical data and understand water meter activity. This capability improves the efficiency of water management and take response quickly.

Specifications



Ultrasonic Water Meter					
Specification	DN15	DN20	DN25	DN32	DN40
R Value(Q3/Q1)	250				
Minimum Working Flow(Q1), m ³ /h	0.01	0.016	0.0252	0.04	0.064
Boundary Flow(Q2), m ³ /h	0.016	0.0256	0.04032	0.064	0.1024
Maximum Working Flow(Q3), m ³ /h	2.5	4	6.3	10	16
Overload Flow(Q4), m ³ /h	3.125	5	7.875	12.5	20
Measurement Accuracy	Class 2				
Cumulative Volume Resolution	0.001m ³ (User mode)		0.001L(Test mode)		
Current Flow Rate Resolution	0.0001m ³ /h(User mode)		0.0001m ³ /h(Test mode)		
Climatic and Mechanical Environments	Class O (outdoor installation)				
Electromagnetic Environment Level	E2				
Temperature Level	T30				
Protection Level	IP68				
Pressure Level	MAP16				
Pressure Loss Level	△p40				
Register Type	LCD 9 digits + icons, permanently sealed electronic LCD				
Register Capacity	100,000 cubic meters				
Sensitivity Level of Upstream/ Downstream Flow Field	U5/D3				
Battery	10 years				
Sensitivity to Installation	H/V				
Wireless Communication	GPRS				
Data Storage Duration	720 hours for hourly data 120 days for daily data 120 months for monthly data				
Water-Proof	IP68				



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