Cordonel

Ultrasonic C&I water meter

Cordonel® is an innovative ultrasonic C&I water meter with patented flow technology that measures low- to high-volume flow with unmatched accuracy. Equipped with pressure and temperature sensing, alarms, and data storage, it fills a critical need in commercial, industrial, and irrigation markets.

Superior accuracy

Cordonel's patented flow rate technology ensures that every drop of water passes through one of its three individual measuring paths. Cordonel's horizontal and vertical pipe orientations means no straight upstream and downstream pipe requirements; measurements are accurate even behind a 90-degree bend. With solid-state ultrasonic engineering and reliable readings over its 20-year battery life, Cordonel delivers accuracy unmatched in the industry.

Conformance to standards

The Cordonel Ultrasonic water meter meets and far exceeds the most recent revision of AWWA Standard C715 class I & II. Each meter is performance tested to ensure compliance. All Cordonel Ultrasonic water meters are NSF/ANSI Standard 61, Annex F and G approved latest standards.

Display

🏳 Alarm is triggered

◇ Low battery level is reached

TST System is set up in hydraulic testing mode

⊕⊖ Indicates positive or negative flow

FEATURES

- Advanced U0D0 capability - zero straight pipe requirements
- Installation in horizontal and vertical pipe orientations
- LCD for consumption, flow, temperature, pressure (optional) and status information
- NFC wireless interface for readout of the last volume reading
- Optional pulse output with programmable weights and widths
- 180 days of hourly consumption, pressure, and temperature data logging

BENEFITS

- Maintenance free
- No accuracy degradation
- Secure encrypted data transmission
- 20-year warranty in normal operating conditions

APPLICATIONS

- Residential, Irrigation, and Commercial
- AMI and AMR output
- Hot water measurement up to 122 °F
- High, low, and variable flow monitoring
- Leak detection
- Pulse output capability
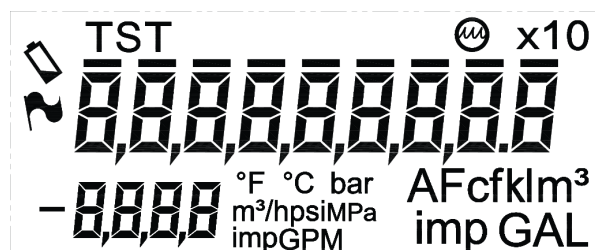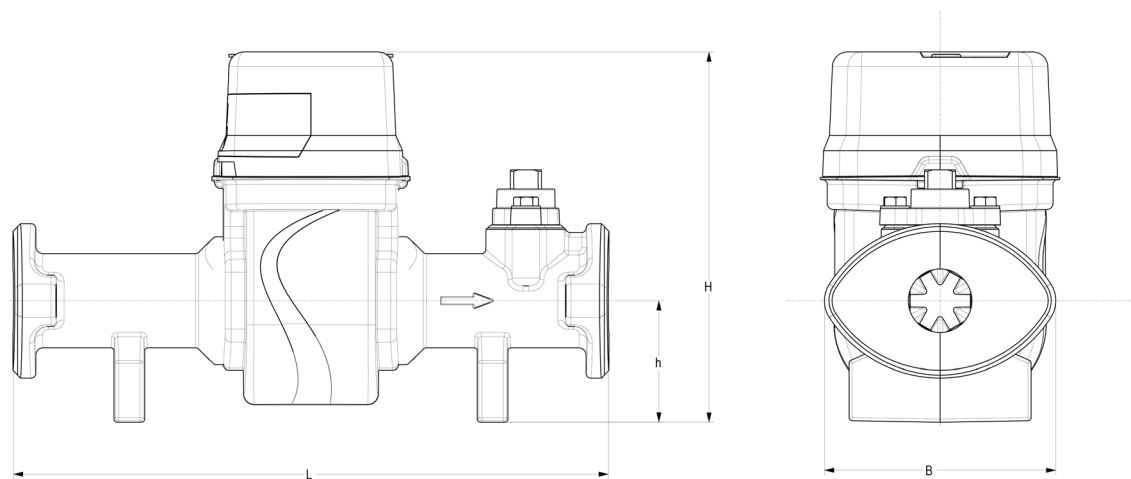- District Metering Area analysis

sensus
a xylem brand

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DIMENSIONS AND NET WEIGHTS

Size	L (lay length)	B (width)	H (Height)	h (Height to pipe axis)	Net Weight
1.5″ (DN 40 mm)	13″ 330 mm	6.22″ 158 mm	9.6″ 244 mm	3.15″ 80 mm	25.13 lb 11.4 kg
2″ (DN 50 mm)	10″ 254 mm	6.22″ 158 mm	9.6″ 244 mm	3.15″ 80 mm	23.81 lb 10.8 kg
	15.25″ 387 mm	6.22″ 158 mm	9.6″ 244 mm	3.15″ 80 mm	27.78 lb 12.6 kg
	17″ 432 mm	6.22″ 158 mm	9.6″ 244 mm	3.15″ 80 mm	28.89 lb 13.1 kg
3″ (DN 80 mm)	17″ 432 mm	7.87″ 200 mm	10.8″ 275 mm	3.74″ 95 mm	52.47 lb 23.8 kg
	19″ 483 mm	7.87″ 200 mm	10.8″ 275 mm	3.74″ 95 mm	54.90 lb 24.9 kg
4″ (DN 100 mm)	14″ 355 mm	9″ 229 mm	12.2″ 310 mm	4.37″ 111 mm	51 lb 23.2 kg
	20″ 508 mm	9″ 229 mm	12.2″ 310 mm	4.37″ 111 mm	74.96 lb 34.0 kg
	23″ 584 mm	9″ 229 mm	12.2″ 310 mm	4.37″ 111 mm	79.81 lb 36.2 kg

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SPECIFICATIONS

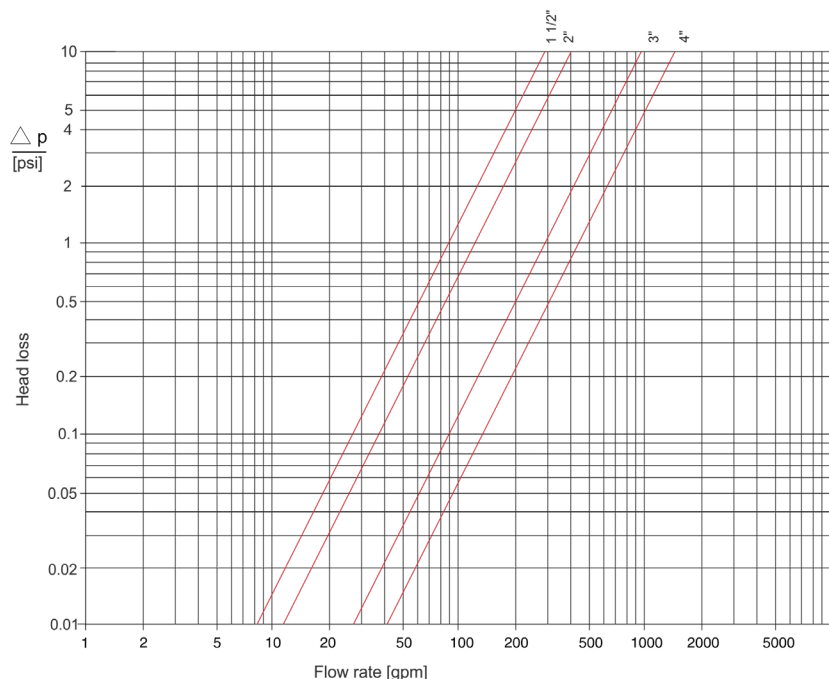|			
Service	Measurement of potable and reclaim water; IP68 Rated		
Temperature Ranges	Water operating: Ambient air operating: Storage air:	33 °F (0.55 °C) to 122 °F (50 °C) -22 °F (-30 °C) to 140 °F (60 °C) -30 °F (-34.4 °C) to 158 °F (70 °C)	
Starting Flow	1-1/2" (DN 40 mm) size: 0.05 gpm (0.012 m³/h)	2" (DN 50 mm) size: 0.05 gpm (0.012 m³/h)	3" (DN 80 mm) size: 0.15 gpm (0.033 m³/h)	4" (DN 100 mm) size: 0.24 gpm (0.054 m³/h)
Low Flow (±3%)	1-1/2" (DN 40 mm) size: 0.18 gpm (0.04 m³/hr)	2" (DN 50 mm) size: 0.18 gpm (0.04 m³/hr)	3" (DN 80 mm) size: 0.44 gpm (0.10 m³/hr)	4" (DN 100 mm) size: 0.70 gpm (0.16m³/hr)
Normal Water Operating Flow Range (±1.5%)	1-1/2" (DN 40 mm) size: 0.26 to 220 gpm (0.06 to 50 m³/hr)	2" (DN 50 mm) size: 0.26 to 220 gpm (0.06 to 50 m³/hr)	3" (DN 80 mm) size: 0.70 to 550 gpm (0.16 to 125 m³/hr)	4" (DN 100 mm) size: 1.14 to 1000 gpm (0.26 to 227 m³/hr)
Maximum Continuous Operation	1-1/2" (DN 40 mm) size: 220 gpm (50 m³/hr)	2" (DN 50 mm) size: 220 gpm (50 m³/hr)	3" (DN 80 mm) size: 550 gpm (125 m³/hr)	4" (DN 100 mm) size: 1000 gpm (227 m³/hr)
Maximum Intermittent Operation	1-1/2" (DN 40 mm) size: 220 gpm (50 m³/hr)	2" (DN 50 mm) size: 220 gpm (50 m³/hr)	3" (DN 80 mm) size: 550 gpm (125 m³/hr)	4" (DN 100 mm) size: 1000 gpm (227 m³/hr)
Maximum Operating Pressure	175 PSI (12.07 bar)		
Register	Fully electronic sealed register with programmable registration (Gal. /Cu.Ft./ Cu. Mtr. / Imp. Gal. / Acre Ft.) Programmable	AMR/AMI reading and pulse outputs Guaranteed 20-year battery life	
Access Port	Stainless steel with optional NPT riser		
Flange Connections	U.S. ANSI B16.1 / AWWA Class 125		
Materials	Maincase – Epoxy coated ductile iron Measuring Transducers – High grade polymer Inner tube - High grade polymer; stainless steel	Battery – Lithium Gaskets – EPDM Other materials - Glass fiber reinforced polymer; stainless steel	

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Smart Alarms

Cordonel meters have many configurable smart alarms designed to protect your utility's investment, enhance customer service, and monitor/optimize distribution systems. These alarms include:

- **Empty Pipe**
Detects the absence of water in the flow tube and sends an alert. Allows you to identify main breaks downstream and water shortages for quicker resolution to ensure water availability. This alarm can also indicate the water meter has been removed from service, or notify you of potential tamper.

- **Customer Leak**
Detect continual consumption of water over a period of time to indicate downstream leaks. This protects your utility, infrastructure and customers through alarm notifications that can reduce water loss and leak adjustment costs.

- **Low Battery**
Replace your meters before they stop recording consumption through alerts indicating battery capacity to the meter or valve is running low.

- **Reverse Flow**
Keep untreated water from re-entering your distribution system and deter tampering attempts through an alarm triggered when reverse flow is detected at the meter.

- **High Flow**
Detect broken pipes and reduce property damage through an alert triggered by the detection of excessive flow rates.

- **Pressure**
Get alerted when water pressure exceeds or falls below the pressure threshold to prevent potential disruptions of service. Standard in 3" and above; optional in 1.5" and 2" sizes.

- **Temperature**
Get alerted when water temperature exceeds or falls below the temperature threshold so you can take action to better protect your meter and water network assets.

Typical Headloss Curve

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