

Cypress™ Ultrasonic Flowmeter

Ultrasonic flowmeters designed for speed and ease.



Cypress is a compact ultrasonic flowmeter with external power and industrial communications designed for long-term flow monitoring and certified for use in C1D2 hazardous areas. It installs on the outside of your pipe—and senses flow through the pipe wall. The Cypress Flowmeter connects with your mobile device or to the SoundWater Flow Computer for displaying measurements.

Whether you're using your mobile device or the Flow Computer, the setup is easy to follow. Quick, simple installation—5 minutes from start to finish.

Fast to install, easy to use.

SoundWater Advantages

MEASUREMENTS YOU CAN TRUST

Our proprietary SoundWater Reciprocity Architecture™ prevents zero-flow drift and eliminates the need for calibration, resulting in long-term measurement stability and accuracy.

INCREASES PRODUCTIVITY

Featuring compact lightweight construction and intuitive apps—our products streamline installation, training, and setup—saving you time and money.

MADE IN USA

Locally owned and operated out of Wenatchee, Washington, our products are built with American quality and ingenuity.

WORKS IN TOUGH APPLICATIONS

Our transducers auto-adjust ultrasonic power output depending upon pipe and fluid conditions—giving you more frequent measurements when things get tough (e.g., corroded pipe or murky fluid).






LONG LIFE / LOW MAINTENANCE

SoundWater products are built to last using the highest quality materials, gasketed & double O-ring seals, and silicone gel to protect electronics.

SERVICE & ACCOUNTABILITY

We establish long-term customer relationships based on trust and service. We will respond to your needs and requests within 24 hours.

Industries

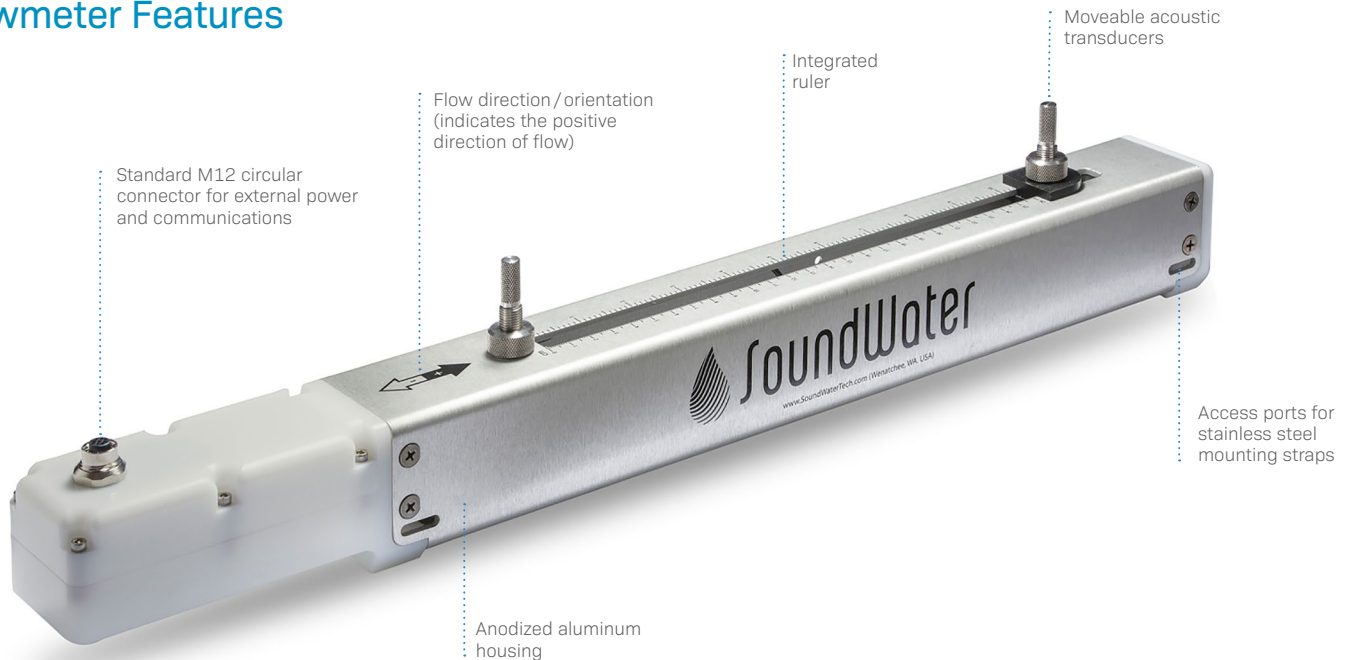
-  Water & Wastewater
-  Agriculture
-  Building Water Management
-  Oil & Gas
-  Chemical & Pharmaceutical

Advantages & Features

- Long-term flow monitoring
- Connects with your SCADA/PLC
- SoundWater Reciprocity Architecture
- Auto-Adjusting Ultrasonic Power
- Compatible with Mobile Orcas App or SoundWater Flow Computer; intuitive setup and use
- One-piece construction; no assembly
- Gel-free transducers (optional)
- Wireless design



Flowmeter Features



Orcas App Features

Interactive smartphone/tablet control app—iOS or Android.

- Save location information
- Handy built-in pipe specifications—or add your own
- Drag and drop output selection
- English or metric units
- Languages: English, Spanish, Portuguese
- Easy-to-use data logging
- Select liner and liquid types—or define your own



Flow Computer Features

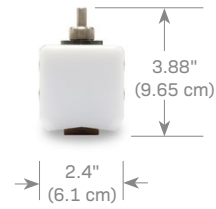
Interactive mounted screen for long-term flow monitoring.

- Connects with one or two flowmeters
- No contact with fluid
- Calculate analytics from two flowmeters
- Standard industrial outputs
- Touchscreen and intuitive app
- Install indoors or outdoors
- May be installed long distances from flow sensor

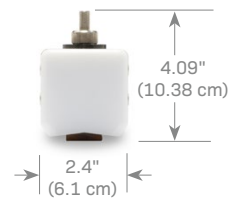


Dimensions

Cypress Txxx-C5



Cypress Txxx-C11



Cypress Txxx-CM5



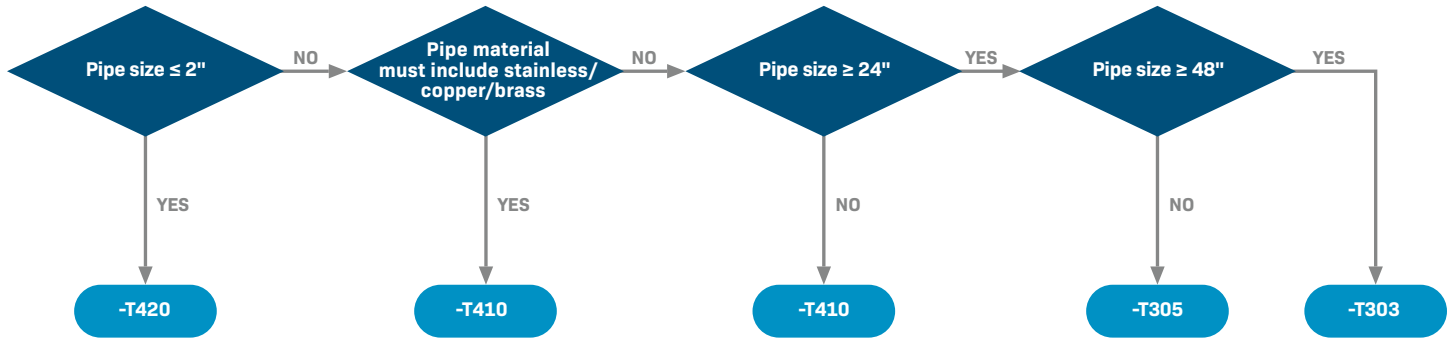
Cypress Txxx-CM11



Direct Mount (Cypress CM) Placement on Pipe



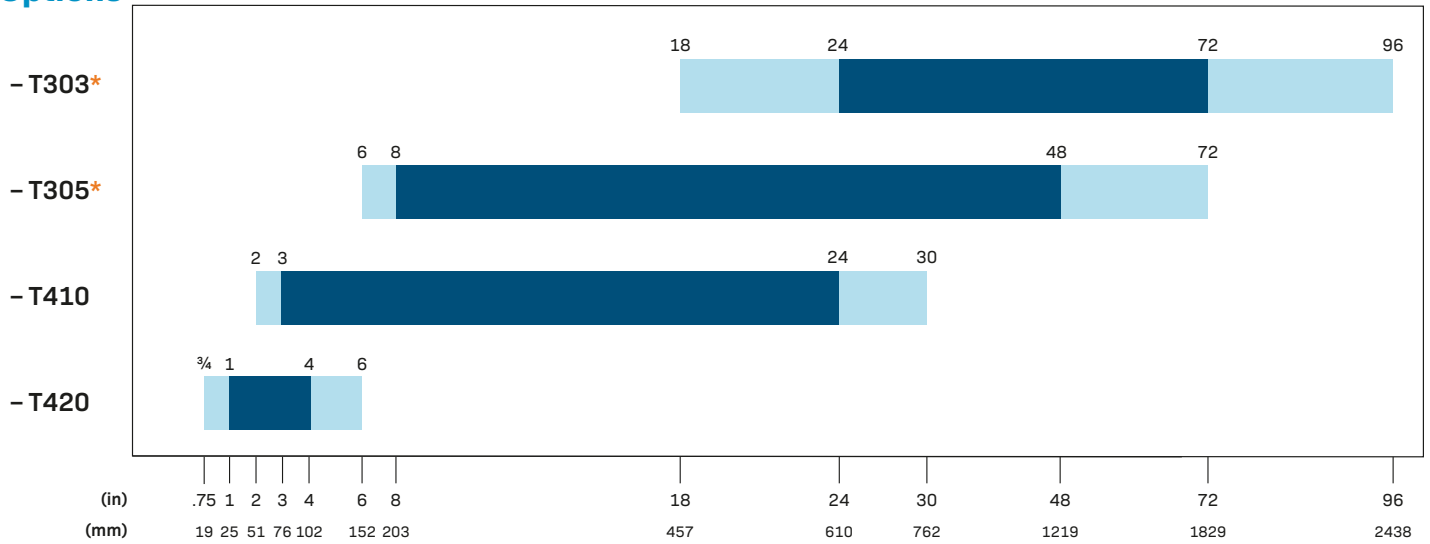
Transducer Selection



Transducer Selection Table

Transducer Options

■ Possible ■ Recommended



* Not compatible with copper or brass

Pipe Diameter

Pipe Materials	Metal: Steel, Stainless Steel, Copper, Brass, Aluminum, Ductile Iron Plastic: PVC, CPVC, HDPE, LDPE, PE, PIP, FRP, PEX			
Installation	Installs on pipe from 1" to 96" nominal diameter depending on hardware selection 15 pipe diameters upstream, 5 diameters downstream for optimal performance (typical)			
Flow Detection Range	Bi-directional; 0 ft/s to 64 ft/s (0 m/s to 20 m/s)			
Performance	PIPE SIZE RANGE	ACCURACY (% OF READING)	REPEATABILITY	
	3" to 96"	±1.0% to 2.0% typical	0.5%	
	1" to 2"	±2.0% to 3.0% typical	0.5%	
	*Under standard conditions, assuming fully developed and symmetrical flow profile (typically taken on a straight run of 15 diameters upstream and 5 diameters downstream; flow rate above 3 ft/s or 1m/s; non-aerated liquids). If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.			
Outputs (OPTIONAL)	CURRENT (4-20 mA) Current proportional to flow; user programmable. PULSE NFET (NPN type) open drain output; frequency proportional to flow; user-programmable; Max 39,000 (Hz) MODBUS RTU RS485, user programmable port settings.			
Display	SoundWater Flow Computer (optional; wall mount display) SoundWater Orcas™ App (iOS or Android) connected wirelessly to Cypress with Bluetooth 4.0 (BT LE) Metric and English units; Rate, Total, Velocity, Sound Speed			
Data Logger	Store up to 365 days, 10,000 measurements, 50,000 datapoints			
Security	Six digit password protection restricts unauthorized users from accessing or changing flowmeter setup, data logger, and totalizer			
Software	Save and recall setup information Mobile app for iPhone, iPad, iPod Touch and Android devices LANGUAGES: English, Spanish, Portuguese (app only)			
Flowmeter Kit	Flowmeter, silicone based coupling gel, mounting straps, power-communication cable			
Hardware	MODEL	PIPE SIZE RANGE	LENGTH	PIPE MATERIALS
	Cypress T420-C2	1" to 3"	12.0"	Steel, Stainless Stl, Plastics, Aluminum, FRP, Copper/Brass
	Cypress T420-CM5	2" to 6"	16.6"	Steel, Stainless Stl, Plastics, Aluminum, FRP, Copper/Brass
	Cypress T410-C5	2" to 6"	16.6"	Steel, Stainless, Iron, Plastics, Aluminum, FRP, Copper/Brass
	Cypress T410-C11	3" to 14"	22.6"	Steel, Stainless Stl, Iron, Plastics, Aluminum, FRP, Copper/Brass
	Cypress T410-CM5	3" to 14"	16.6"	Steel, Stainless Stl, Iron, Plastics, Aluminum, FRP, Copper/Brass
	Cypress T305-CM5*	8" to 18"	16.6"	Steel, Iron, Plastics, Aluminum, FRP
	Cypress T305-CM11*	8" to 72"	23-39"	Steel, Iron, Plastics, Aluminum, FRP
Cypress T303-CM14*	18" to 96"	30"	Steel, Iron, Plastics, Aluminum, FRP	
	*High corrosion, large pipe or tight spaces			
Power	12-24 VDC external power for continuous use; 0.6 W Typical (100 mAmp max current) REQUIRED: The cover must be installed on the equipment before use. REQUIRED: UL/CSA 62368-1 Listed Class 2 supply			
Turndown	200:1			
Environmental	Liquid/pipe temperature -40° to 140 F (-40° to 60° C); Ambient temperature -40° to 140° F (-40° to 60° C) NEMA 4/6P indoors or outdoors, wash-down environment, corrosion resistance, and occasional submersion			
Materials	BODY: Anodized aluminum channel, PVC electronics housing and footings			
	MOUNTING STRAPS: Stainless Steel		FASTENERS: Stainless steel	
	HARDWARE: Stainless steel, acetal, ultem		CONNECTOR: M12, nickel plated brass	

(Specifications continue, next page)

Manufacture	SoundWater Technologies, Wenatchee WA, USA
Zero Stability	Reciprocity based hardware for measurement stability and low flow performance.
Auto-Ranging	Auto-adjusting ultrasonic transducer power, and auto-adjusting transducer receiver gain. Maximizes usable signal and measurement quality.
Technology	Transit Time Ultrasonic

Regulatory Certification Class I, Division 2, Groups A-D T4, -40°C to +60°C
 Complies with UL61010-1, UL121201, CSA C22.2 No 61010-1, CSA C 22.2 No. 213



WARNING: EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE CONNECTOR WHILE CIRCUIT IS LIVE UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS

AVERTISSEMENT: RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER LE CONNECTEUR PENDANT QUE LE CIRCUIT EST SOUS TENSION, À MOINS LA ZONE EST EXEMPT DE CONCENTRATIONS INFLAMMABLES

This device complies with Part 15 of FCC Rules and Industry Canada license- exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Contains FCC ID: XDULE40-S2, Contains IC: 8456A-LE4S2. CAN ICES-1/NMB-1; CAN ICES-3 (B)/NMB-3(B)
 MODEL: SWT ORCAS-01

