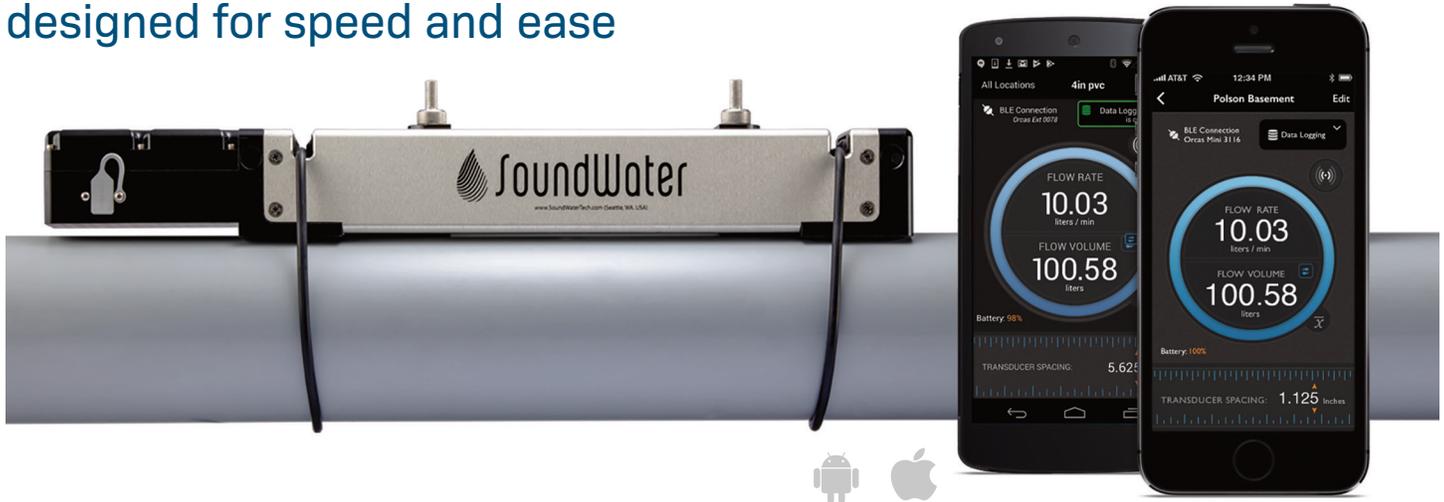


# Orcas™ Ultrasonic Flowmeter

A portable flowmeter designed for speed and ease



**Orcas** is a portable ultrasonic flowmeter designed for speed and ease of use. With the Orcas, you can capture accurate and reliable flow measurements in under one minute—saving you time and money.

There are no wires and no bulky electronics to haul around. Your mobile device connects wirelessly to display measurements. And, the ultrasonic flowmeter installs on the outside of your pipe. With Orcas Flowmeter and the Orcas App, you'll get your job done more quickly every time.

## 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



**Waterparks, Pools, and Aquariums**



**Building Commissioning and Maintenance**

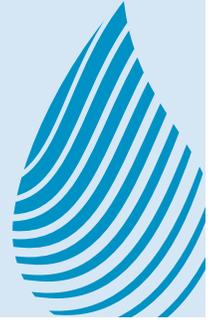


**Agricultural Irrigation**

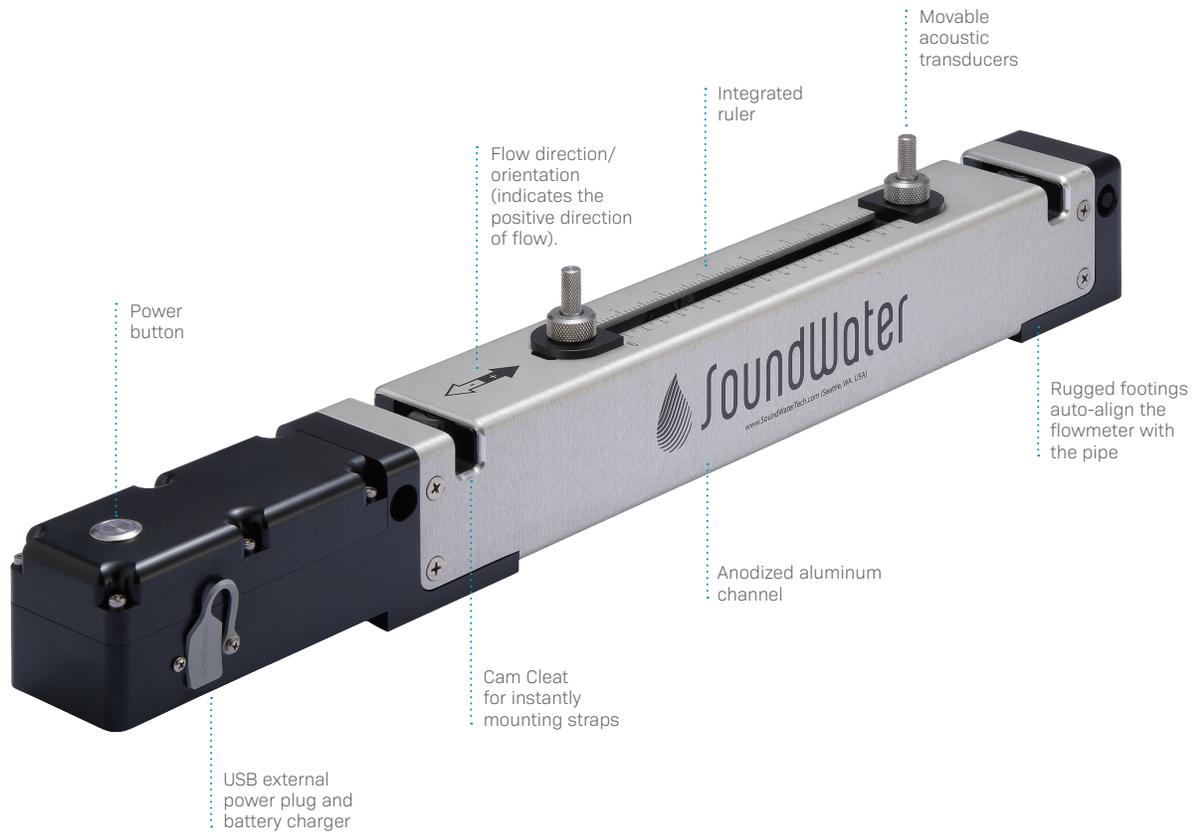


**Building Water Management**

# Advantages & Features



- Measure flow in under one minute
- SoundWater Reciprocity Architecture
- Long battery life, lasting up to 24 hours
- Auto-Adjusting Ultrasonic Power
- Mobile App for fast, intuitive setup and use
- One-piece construction; no assembly
- Integrated cam-cleats that instantly snap on/off the pipe
- Wireless design
- Compact size for carry-on/travel
- Gel-free transducers (optional)
- Battery powered & portable



## 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

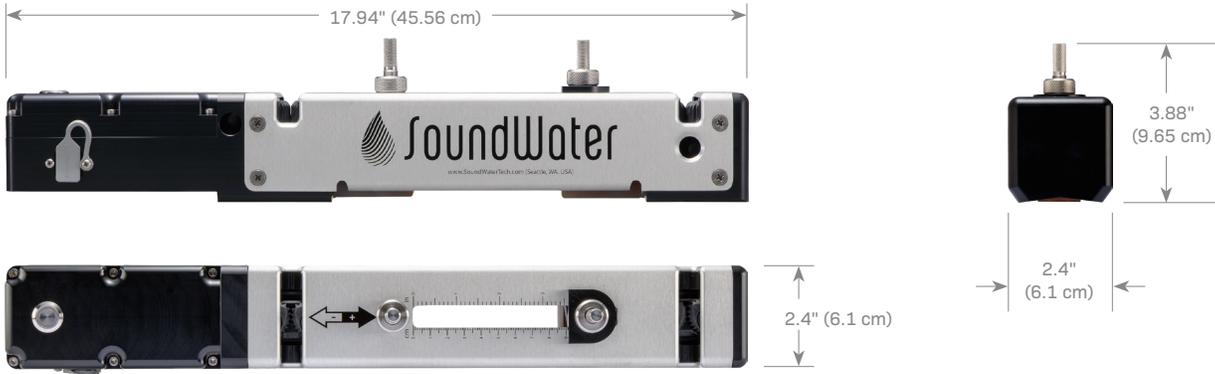


- English or metric units
- Languages: English, Spanish, Portuguese
- Easy-to-use data logging
- Select liner and liquid types — or define your own



## Dimensions

### Orcas Txxx-C5



### Orcas Txxx-C7



### Orcas Txxx-C11



## 2-Part (Orcas CM) Placement on Pipe



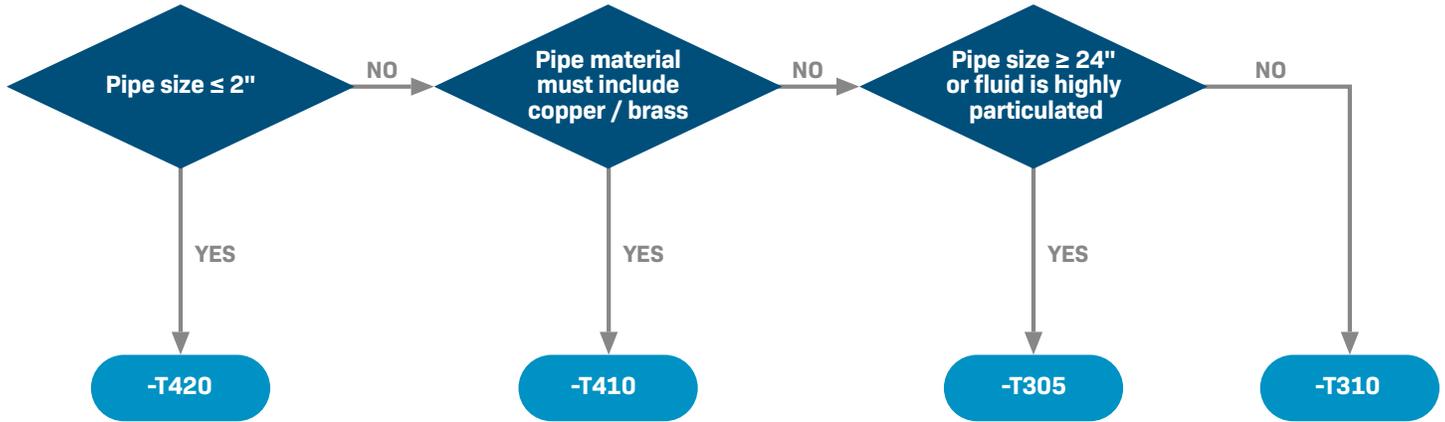
### ORCAS-Txxx-CM LENGTH

Longest part (top) is 12.5"

Total installed length depends upon part spacing, determined by pipe size. Overall length based on various pipe sizes is listed below:

PIPE DIAMETER	INSTALLED LENGTH
<12"	14"
16"	15"
24"	18"
72"	30"

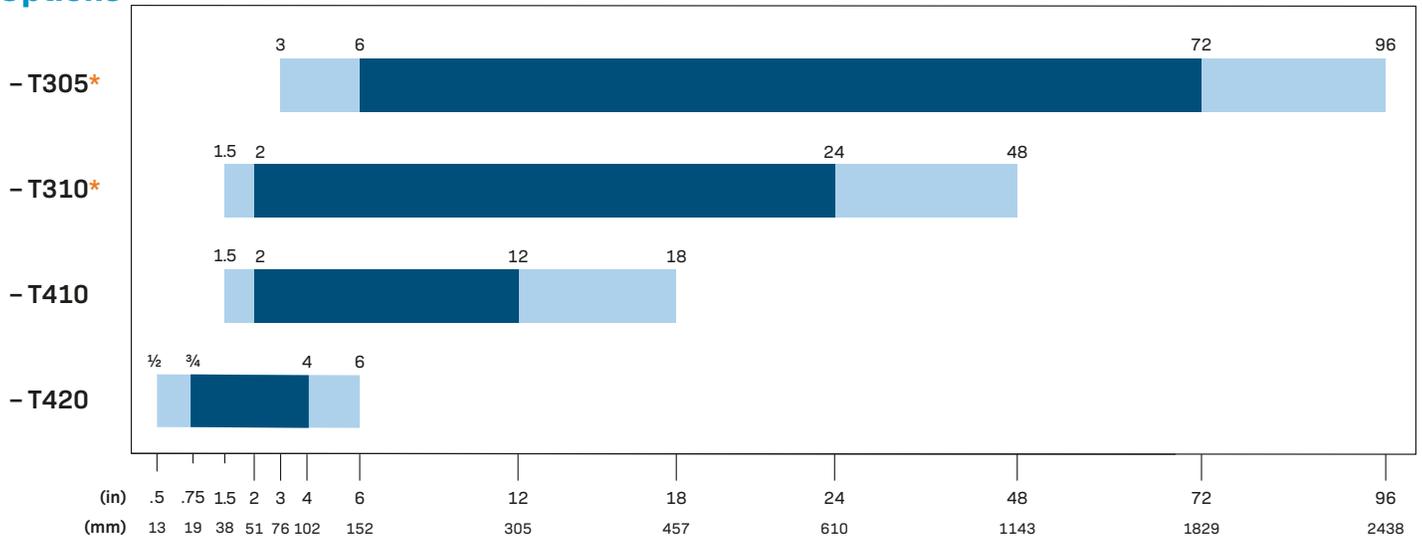
# Transducer Selection



## Transducer Selection Table

### Transducer Options

■ Possible     ■ Recommended



\* Not compatible with copper or brass

### Pipe Diameter

<b>Installation</b>	Installs on pipe from 0.75" to 72" nominal diameter depending on hardware selection 15 pipe diameters upstream, 5 diameters downstream for optimal performance (typical)		
<b>Pipe Materials</b>	Metal: Steel, Stainless Steel, Copper, Brass, Aluminum, Iron Plastic: PVC, CPVC, HDPE, LDPE, PE, PIP, FRP, PEX		<b>NOTE:</b> Pipe material compatibility depends upon transducer selection. See Hardware options below for details.
<b>Flow Range</b>	Bi-directional; 0.1 ft/s to 60 ft/s (0.03 m/s to 20 m/s)		
<b>Performance</b>	<b>PIPE SIZE RANGE</b>	<b>ACCURACY</b>	<b>REPEATABILITY</b>
	1.5" to 72"	±1.0% to 2.0% typical	0.5%
	1" to 1.5"	±2.0% to 3.0% typical	0.5%
	0.75" to 1"	±3.0% to 4.0% 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.		
<b>Display</b>	Flow measurements display on SoundWater Orcas™ App (iOS or Android) Mobile devices connect wirelessly to Orcas with Bluetooth 4.0 (BT LE) Metric and English units; Rate, Total, Velocity, Sound Speed		
<b>Data Logger</b>	Store up to 365 days, 10,000 measurements, 50,000 datapoints		
<b>Software</b>	Save and recall setup information Mobile device app for iPhone, iPad, iPod Touch and Android devices <b>LANGUAGES:</b> English, Spanish, Portuguese (app only)		
<b>Hardware</b>	<b>MODEL</b>	<b>PIPE SIZE RANGE</b>	<b>LENGTH</b>
	Orcas T420-C2	0.75" to 3"	12"
	Orcas T420-C5	1" to 5"	18"
	Orcas T410-C5	2" to 5"	18"
	Orcas T410-C7	2" to 10"	22"
	Orcas T410-C11	2" to 14"	27"
	Orcas T310-C5	2" to 6"	18"
	Orcas T310-C7	2" to 12"	22"
	Orcas T310-C11	2" to 18"	27"
	<b>TWO-PART MODELS FOR DIRECT MOUNT</b>		
	Orcas T305-CM	6" to 72"	*
	Orcas T310-CM	4" to 30"	*
	Orcas T410-CM	4" to 18"	*
			* Length depends on transducer spacing
<b>Power</b>	Rechargeable lithium-ion battery* (24+ hours), or USB-powered continuous operation (5 volts) 0.5W Max (100 mAmp max current; when discharging); 9W Max (1.5 Amp max current, when charging) <small>*Use only the charger provided with the flowmeter. Battery holds charge for 5 months when not in use. Charger compatible with 110/220VAC 50/60 Hz. <b>All domestic and international shipments containing lithium-ion batteries are subject to transport regulation on hazardous goods according to ADR RID, ADN, IMDG, ICAO/IATA Regulations. This product is classified as UN3841. It is your responsibility to observe these regulations.</b></small>		
<b>Power Adapter</b>	For recharging battery — must use the 12W USB power adapter supplied with the Orcas		
<b>Environmental</b>	Liquid/pipe temperature -40° to 212 F (-40° to 100° C); Ambient temperature -40° to 140° F (-40° to 60° C) IP65 splash proof; weather resistant		
<b>Materials</b>	<b>BODY:</b> Anodized aluminum channel, acetal electronics housing and footings <b>HARDWARE:</b> Stainless steel, acetal	<b>MOUNTING STRAPS:</b> EPDM <b>FASTENERS:</b> Stainless steel	
<b>Flowmeter Kit</b>	Flowmeter, carrying case, 4 oz. coupling gel, mounting straps, USB power adapter		
<b>Manufacture</b>	SoundWater Technologies, Wenatchee WA, USA		
<b>Zero Stability</b>	Reciprocity based hardware for measurement stability and low flow performance.		
<b>Auto-Ranging</b>	Auto-adjusting ultrasonic transducer power, and auto-adjusting transducer receiver gain. Maximizes usable signal and measurement quality.		
<b>Technology</b>	Transit Time Ultrasonic		
<b>Regulatory Certification</b>	    		
	<small>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)</small> <b>MODEL: SWT ORCAS-01</b>    		