SoundWater Orcas

Smart flowmeter.  
Smart phone. 
Smart idea.

The next level in portable transit time ultrasonic flow measurement is here.

Meet Orcas.

Now you can capture accurate and reliable flow readings with your mobile device, with less hassle and in less time—wherever you need a flow or volume measurement.

No wires. No bulky electronics box to lug around. Your ultrasonic sensor hardware installs on the outside of your pipe in a snap—and senses through the pipe wall. Your mobile device displays readings and helps you set up the hardware. And Bluetooth replaces the wires.

So you’ll get your job done more quickly, every time.

Features

• Portable, accurate, versatile
• Quick, easy setup
• Installed on outside of pipe – non-invasive, no break in piping, no production down time
• Covers pipe sizes ranging in diameter from 1" to 20"
• iOS & Android compatible
• Uses Bluetooth 4.0 (BT LE) – no wires
• Built-in data logging
• Reusable location settings
• Measures a wide range of fluids

Certifications

FCC

Markets

Water, Irrigation, Building Services, Food & Beverage
The Orcas portable transit time ultrasonic flow metering solution.

**What is Orcas?**

The Orcas Flowmeter solution starts with the Orcas App (downloadable from the app stores) and works on both iOS and Android devices. The companion Orcas Sensor, is a compact, clamp-on ultrasonic transducer device that wirelessly transmits flow measurements.

**Orcas is highly portable.** With Orcas, just bring the rechargeable clamp-on sensor in its lightweight, weatherproof case, along with a tablet or smartphone [iOS™ or Android™]. Bluetooth connectivity replaces wires, and the Orcas app guides you through your application setup.

**Parameters all set!** Now the convenient Cam Cleat lets you mount the sensor on any pipe in seconds—no cumbersome clamps required. Bi-directional readings are transmitted to your mobile device for display, and your location’s settings are stored in the Orcas app, ready for reuse.

**Got it!** Now simply release the cleats, then take the compact sensor on to your next location.

**The Orcas family of sensors.**

**Orcas Mini**
Ideal for pipes ranging in size from 1” to 4.5”.

**Orcas Short or Standard**
Ideal for pipes ranging in size from 2” to 12”.

**Orcas Extended**
Ideal for pipes ranging in size from 2” to 20”.

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Dimensions

Orcas Mini

Orcas Short

Orcas Standard and Orcas Extended
Orcas Features

✅ **Portable**

The clamp-on ultrasonic sensor design mounts onto the outside of your pipe and senses through the pipe wall. It may be installed in seconds, and is the only piece of hardware you transport.

Wireless Bluetooth connection sends readings to the Orcas app on your mobile device. Works with any BLE-enabled [Bluetooth Low Energy] iPhone™ mobile digital device, iPod Touch™ mobile digital device or Android™ mobile device.

The durable Orcas carrying case protects your equipment even in extreme conditions.

✅ **Efficient**

All-in-one clamp-on ultrasonic design mounts on the outside of your pipe—and with no wires to untangle or connect.

The intuitive Orcas app guides you through setup with pre-loaded libraries for pipes and, liquids—so you get it right the first time.

Our Cam Cleat mounting system is the fastest available. Install the sensor in seconds.

✅ **Accurate**

Orcas is typically accurate within 1.0 to 2.0 percent (depending upon the application and pipe size), with a wide operating range and no pressure drop.

✅ **Versatile**

Bi-directional readings improve accuracy.

Metric or English units of measure.

High-power transducer design enables continued operation even in difficult applications.

✅ **Intuitive**

Orcas App displays transducer spacing, and the integrated ruler on the Orcas Sensor makes setting it a snap.

Setup information for any location can be saved and re-used for later readings.

Flow rate and volume are presented clearly on your device’s display.

✅ **Easy to Own**

**Always up-to-date.** The Orcas app and sensor firmware are automatically updated with new features as they are introduced.

**Highly affordable.** With all its advantages, Orcas is priced competitively with comparable (but bulkier) devices.

**Extended battery life.** Orcas works for up to 12+ hours between charges. Recharge it with any USB connection.

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App Features

Interactive smart phone/tablet control app—iOS or Android

- English or metric units
- Easy-to-use data logging
- Select liner and liquid types—or define your own
- Drag and drop output selection
# Orcas Specifications

**Installation**
Installs on pipe from 1” to 20” nominal diameter depending on hardware selection
15 pipe diameters upstream; 5 diameters downstream required for optimal performance (typical)
Maximum diameter depends upon pipe material (20” for plastic, 18” for metal)

**Pipe Materials**
- Metal: Steel, Stainless Steel, Copper, Brass, Aluminum
- Plastic: PVC, HDPE, PIP

**Flow Range**
Bi-directional; 0.1 ft/s to 20 ft/s (0.03 m/s to 6 m/s)

**Performance**
- ±1.0% to 2.0% accuracy typical [for pipe sizes >1.5”]
- ±2.0% to 3.0% accuracy typical [for pipe sizes <1.5”]
- 0.5% repeatability

*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.

**Display**
Flow measurements display on SoundWater Technology’s Orcas™ App (iOS or Android)
Mobile devices connect wirelessly to Orcas™ with Bluetooth 4.0 (BT LE)
Metric and English units

**Data Logger**
Store up to 14 days of flow data

**Software**
Save and recall site setup information
Mobile device App for iPhone, iPad, iPod touch and Android devices (*For Android devices, Samsung recommended)

<table>
<thead>
<tr>
<th>Hardware</th>
<th>PIPE SIZE RANGE</th>
<th>LENGTH</th>
<th>PIPE MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orcas Mini</td>
<td>1” to 4.5”</td>
<td>19”</td>
<td>Steel, Stainless, Copper, Brass, Aluminum, Plastics</td>
</tr>
<tr>
<td>Orcas Short</td>
<td>2” to 12”</td>
<td>22”</td>
<td>Steel, Stainless, Aluminum, Plastics</td>
</tr>
<tr>
<td>Orcas Standard</td>
<td>2” to 12”</td>
<td>29”</td>
<td>Steel, Stainless, Copper, Brass, Aluminum, Plastics</td>
</tr>
<tr>
<td>Orcas Extended</td>
<td>2” to 20”</td>
<td>29”</td>
<td>Steel, Stainless, Aluminum, Plastics</td>
</tr>
</tbody>
</table>

**Power**
- Rechargeable battery [12+ 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]
- 5 “AA” NiMH 6V pack with thermistor

**Power Adapter**
For recharging battery - must use the 12W USB power adapter supplied with the Orcas

**Environmental**
- Ambient and flow temperatures -20˚ to 150˚ F [-20˚ to 65˚ C]
- Optional high temperature option -20˚ to 212˚ F [-20˚ to 100˚ C]
- IP65 splash proof
- Weather resistant

**Materials**
- Body: Anodized aluminum channel, acetal end housings and feet
- Mounting Straps: EPDM

**Manufacture**
SoundWater Technologies, United States

*Specifications subject to change.
Flowmeter Kits

Our Portable Orcas Ultrasonic Flowmeter kits include:

- USB Cable
- Mounting straps
- USB power adapter kit
- Carrying case
- 4 oz. Coupling gel

**PART NUMBER** | **DESCRIPTION**
--- | ---
2138 | Orcas Mini Flowmeter Kit: 1”– 4.5” pipe diameters
3278 | Orcas Short Flowmeter Kit: 2”– 12” pipe diameters
8894 | Orcas Standard Flowmeter Kit: 2”– 12” pipe diameters
2433 | Orcas Extended Flowmeter Kit: 2”– 20” pipe diameters

Parts & Accessories

**PART NUMBER** | **DESCRIPTION**
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3065 | Mounting Straps: 2x75", 190cm
0875 | Carrying Case
9755 | USB 2.0 Cable; A Male/B Male
6726 | USB Power Adapter; 5W; CE
5900 | SoundSafe Coupling Gel (12 oz.)

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

Ordering Orcas Portable Ultrasonic Flowmeter Kits, Parts, & Accessories

Contact your local supplier to order your Portable Orcas Ultrasonic Flow Metering solution.

Benefits

- Install in 30 seconds
- Portable
- Non-invasive
- Low-installation cost
- Accurate
- Flow Verification
- Fast!

Applications

- Irrigation Water
- Condenser Water
- Municipal Water
- Process Water
- Potable Water
- Ground Water
- Pump Verification
- Water Treatment
- Food & Beverage
- Well Monitoring
- HVAC & Energy
- System Audits
- Check System Meters
- Leak detection
- Ultrapure Water Measurement
- Clean in place evaluation
- Fire System testing

Markets

- Water
- Water Parks
- Irrigation
- Building Services
- Chemical
- Food & Beverage
- Energy
- Oil & Gas

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