The Series PUB & PUF Portable Ultrasonic Flowmeter Kits utilize the transit-time difference for measuring flow rates in pipes non-invasively. Units offer flow rate local display with analog and pulsed outputs. The Series PUF offers the same features plus data logging capability.

**SPECIFICATIONS**

- **Service:** Homogeneous liquids that do not contain air bubbles capable of ultrasonic wave propagation.
- **Display:** 240 x 64 pixel graphic display, high contrast black on white with backlight; Languages: English, French, German, Swedish, Italian, Spanish, Portuguese, Russian, Norwegian, and Dutch; 5.2˝ W x 1.5˝ H.
- **Accuracy:** ±0.5 to 2% of flow reading for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID > 2.95 in (75 mm); ±3% of flow reading for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID in range 0.512 to 2.95˝ (13 to 75 mm); ±6% of flow reading for flow rate < 0.66 ft/s (0.2 m/s).
- **Power Requirements:** 9-24 VDC, (1) 5-Cell NiMH battery, internal, factory replaceable (continuous operation time: 20 hours with back-light and output off) (recharging time: 6.5 hours, power adaptor used).
- **Power Consumption:** 10.5 W.
- **Power Adaptor:** 110/240 VAC adaptor. UK, US, European adaptors included.
- **Temperature Limits:** -4 to 275°F (-20 to 135°C).
- **Outputs:** Analog: 1 opto-isolated output: 4-20 mA, 0-16 mA or 0-20 mA (selectable); Error current: 0-26 mA (selectable); Load resistance: 620 Ω max; Pulse: 1 opto-isolated MOSFET relay, 150 mA max, 500 pps max, 200 Hz max.
- **Serial Communications:** USB, RS-232 (PUF only).
- **Enclosure Rating:** Converter: IP54; Transducers: IP51.
- **Materials:** Flame retardant injection molded ABS plastic.
- **Response Time:** < 500 ms.
- **Weight:** Unit without accessories: 2.3 lb (1.06 kg); Unit with accessories in carrying case: 13.23 lb (6.0 kg).
- **Agency Approvals:** CE.

**ADDITIONAL SPECIFICATIONS**

- **Applicable Pipe Material:** Carbon steel, SS, copper, UPVC/PVDF, concrete, galvanized steel, mild steel, glass, brass.
- **Applicable Pipe Lining:** Rubber, glass, concrete, epoxy, steel, other*.
- **Pipe Wall Thickness:** 0.04 to 3˝ (1 to 75 mm).
- **Pipe Lining Thickness:** < 1” (< 25 mm).

*Selectable option for special material with known propagation rate of lining material.

**BENEFITS/FEATURES**

- Non-invasive pipe measurement
- Compact and lightweight
- Incorporate the latest electronics and signal processing technologies realizing high performance and easy operation
- Ideal for on-the-go flow monitoring, capable of 20 hours continuous operation with built-in, rechargeable battery
- Easy to read graphic display with convenient backlight for visual comfort
- Efficient layout of the function keys for easy to use programming
- PUB features rugged carrying case with molded foam inserts
- PUF boasts an IP67 rated case to hold and protect all equipment conveniently

**APPLICATIONS**

- Water treatment
- Industrial systems
- Irrigation applications
- Treated water flow
- River water
- Sea water
- Potable water
- Demineralized water
- Glycol/water mix
- Hydraulic system
- Diesel oil
- Water use data logging

**KIT INCLUDES**

- Converter
- Set of transducers
- Transducer holders
- Set of transducer cables (6.56’ (2 m))
- 4-20 mA communication cables
- 12 VDC power supply
- Ultrasonic coupling grease
- Set of chains
- Ruled guide rail
- Test block
- Carrying case

**MODEL CHART - STANDARD VERSION**

<table>
<thead>
<tr>
<th>Model</th>
<th>Pipe Size Range in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUB-10</td>
<td>0.5 to 4.5 (13 to 115)</td>
</tr>
<tr>
<td>PUB-20</td>
<td>2 to 40 (50.7 to 1016)</td>
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</tbody>
</table>

**MODEL CHART - DATA LOGGING VERSION**

<table>
<thead>
<tr>
<th>Model</th>
<th>Pipe Size Range in (mm)</th>
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</thead>
<tbody>
<tr>
<td>PUF-1001</td>
<td>0.5 to 78 (13 to 2000)</td>
</tr>
<tr>
<td>PUF-1002</td>
<td>0.5 to 4.5 (13 to 115)</td>
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<tr>
<td>PUF-1003</td>
<td>2 to 78 (50 to 2000)</td>
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</tbody>
</table>

**OPTIONS**

<table>
<thead>
<tr>
<th>Use order code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NISTCAL-FU</td>
<td>NIST traceable calibration certificate</td>
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