OMNI™ Compound Water Meter

1-1/2”, 2”, 3”, 4”, 6”, 8” and 10” OMNI C² Meter

The OMNI Compound Water Meter (C²) operation is based on advanced Floating Ball Technology (FBT).

**Conformance to Standards**

The OMNI C² meter meets and far exceeds the most recent revision of AWWA Standard C701 and C702 class II. Additionally, the meter does not require a valve to meet these standards. Each meter is performance tested to ensure compliance. All OMNI meters are NSF/ANSI Standard 61, Annex F and G approved latest standards.

**Performance**

The patented measurement principles of the OMNI C² meter assure enhanced accuracy ranges, an overall greater accuracy and a longer service life than any other comparable class meter produced. The OMNI C² meter has no restrictions as to sustained flow rates within its continuous operating range. The floating ball measurement technology allows for flows up to its rated maximum capacity without undue wear or accuracy degradation when installed in any orientation.

**Construction**

The OMNI C² meter consists of two basic assemblies; the maincase and the measuring chamber. The measuring chamber assembly includes the “floating ball” impeller with a coated titanium shaft, hybrid axial bearings, integral flow straightener and an all electronic programmable register with protective bonnet. The maincase is made from industry proven Ductile Iron with an approved NSF epoxy coating. Maincase features are; easily removable measuring chamber, unique chamber seal to the maincase using a high pressure o-ring, testing port and an AWWA compliant strainer.

**OMNI Electronic Register**

The OMNI C² electronic register is hermetically sealed with an electronic pickup containing no mechanical gearing. The large character LCD displays AMR, Totalization and a Resettable Test Totalizer. OMNI register features; AMR resolution units that are fully programmable, Pulse output frequency that are fully programmable, Integral customer data logging capability, Integral resettable accuracy testing feature compatible with UniPro Testing Assistant Program, Large, easy-to-read LCD also displays both forward and reverse flow directions and all with a 10-year battery life guarantee.
**Measurements**

**Magnetic Drive**

Meter registration is achieved by utilizing a fully magnetic pickup system. This is accomplished by the magnetic actions of the embedded rotor magnets and the ultra sensitive register pickup probe. The only moving component in water is the “floating ball” impeller.

**Measuring Element**

The revolutionary thermoplastic, hydrodynamically balanced impeller floats between the bearings. The Floating Ball Technology (FBT) allows the measuring element to operate virtually without friction or wear, thus creating the extended upper and lower flow ranges capable on only the OMNI C² meter.

**Strainer**

The OMNI C² with the AWWA compliant “V” shaped strainer using a stainless steel screen along with Floating Ball Technology (FBT) create a design that gives far improved accuracy even in those once thought questionable settings. A removable strainer cover permits easy access to the screen for routine maintenance.

**Maintenance**

The OMNI C² meter is designed for easy maintenance. Should any maintenance be required, the measuring chamber and / or strainer cover can be removed independently. Parts and or a replacement measuring chamber may be utilized in the event repairs are needed. Replacement Measuring Chambers are available for the OMNI C² meters and may also be utilized for retrofitting to competitive meters to achieve increased accuracy and extended service life.

**AMR / AMI Systems**

Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee**

Sensus OMNI C² Meters are backed by “The Sensus Guarantee.” Ask your Sensus representative for details or see Bulletin G-500.
### Dimensions and Net Weights

<table>
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<tr>
<th>Meter and Pipe Size</th>
<th>Normal Operating Range</th>
<th>Connections</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>Net Weight</th>
<th>Shipping Weight</th>
</tr>
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<tbody>
<tr>
<td>1-1/2&quot; DN 40mm</td>
<td>.5 gpm 200 gpm .11 m³/hr 45 m³/hr</td>
<td>Flanged</td>
<td>13&quot;</td>
<td>330mm</td>
<td>7-7/8&quot;</td>
<td>200mm</td>
<td>15/16&quot;</td>
<td>24mm</td>
<td>5-1/8&quot;</td>
<td>130mm</td>
<td>2-5/16&quot;</td>
<td>59mm</td>
<td>4&quot;</td>
</tr>
<tr>
<td>2&quot; DN 50mm</td>
<td>.5 gpm 200 gpm .11 m³/hr 45 m³/hr</td>
<td>Flanged</td>
<td>15-1/4&quot;</td>
<td>387mm</td>
<td>7-7/8&quot;</td>
<td>200mm</td>
<td>1&quot;</td>
<td>25mm</td>
<td>5-3/4&quot;</td>
<td>146mm</td>
<td>2-5/16&quot;</td>
<td>59mm</td>
<td>4-1/2&quot;</td>
</tr>
<tr>
<td>3&quot; DN 80mm</td>
<td>1 gpm 500 gpm .23 m³/hr 114 m³/hr</td>
<td>Flanged</td>
<td>17&quot;</td>
<td>432mm</td>
<td>8-3/4&quot;</td>
<td>222mm</td>
<td>3/4&quot;</td>
<td>19mm</td>
<td>7-7/8&quot;</td>
<td>200mm</td>
<td>4-1/8&quot;</td>
<td>105mm</td>
<td>6&quot;</td>
</tr>
<tr>
<td>4&quot; DN 100mm</td>
<td>1.5 gpm 1000 gpm .34 m³/hr 227 m³/hr</td>
<td>Flanged</td>
<td>20&quot;</td>
<td>508mm</td>
<td>11-3/16&quot;</td>
<td>284mm</td>
<td>15/16&quot;</td>
<td>24mm</td>
<td>9-1/8&quot;</td>
<td>232mm</td>
<td>4-3/4&quot;</td>
<td>121mm</td>
<td>7-1/2&quot;</td>
</tr>
<tr>
<td>6&quot; DN 150mm</td>
<td>3 gpm 2500 gpm .68 m³/hr 5687 m³/hr</td>
<td>Flanged</td>
<td>24&quot;</td>
<td>610mm</td>
<td>13-1/4&quot;</td>
<td>336mm</td>
<td>15/16&quot;</td>
<td>24mm</td>
<td>11&quot;</td>
<td>279mm</td>
<td>5-3/4&quot;</td>
<td>146mm</td>
<td>9-1/2&quot;</td>
</tr>
<tr>
<td>8&quot; DN 200mm</td>
<td>4 gpm 2700 gpm .91 m³/hr 614 m³/hr</td>
<td>Flanged</td>
<td>30-1/8&quot;</td>
<td>765 mm</td>
<td>15&quot;</td>
<td>381 mm</td>
<td>11/16&quot;</td>
<td>17 mm</td>
<td>13-1/2&quot;</td>
<td>343 mm</td>
<td>6-3/4&quot;</td>
<td>172 mm</td>
<td>11-3/4&quot;</td>
</tr>
<tr>
<td>10&quot; DN 250mm</td>
<td>5 gpm 4000 gpm 1.1 m³/hr 908 m³/hr</td>
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<td>41-1/8&quot;</td>
<td>1045mm</td>
<td>19&quot;</td>
<td>485 mm</td>
<td>11/16&quot;</td>
<td>17 mm</td>
<td>16&quot;</td>
<td>406mm</td>
<td>8-1/2&quot;</td>
<td>216mm</td>
<td>14-1/4&quot;</td>
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**OMNI C²:** 3" - 10"
## OMNI™ C²

### Specifications

<table>
<thead>
<tr>
<th>Service</th>
<th>Measurement of potable and reclaim water. Operating temperature range of 33°F (0.56°C) - 150°F (65.6°C)</th>
</tr>
</thead>
</table>
| **Operating Range** (100% ± 1.5%)    | 1-1/2": 0.5 – 200 GPM (11 - 45 m³/hr)  
2": 0.5 – 200 GPM (11 - 45 m³/hr)  
3": 1.0 – 500 GPM (23 - 114 m³/hr)  
4": 1.5 – 1000 GPM (34 - 227 m³/hr)  
6": 3 – 2000 GPM (68 - 454 m³/hr)  
8": 4 – 2700 GPM (91 – 614 m³/hr)  
10": 5-4000 GPM (11-908 m³/hr)  |
| **Low flow** (95% – 101.5%)          | 1-1/2": 0.25 GPM (.06 m³/hr)  
2": 0.25 GPM (.06 m³/hr)  
3": 0.5 GPM (.11 m³/hr)  
4": 0.75 GPM (.17 m³/hr)  
6": 1.5 GPM (.34 m³/hr)  
8": 2.5 GPM (0.57 m³/hr)  
10": 3.5 GPM (0.8 m³/hr)  |
| **Maximum Continuous Operation**     | 1-1/2": 160 GPM (36 m³/hr)  
2": 160 GPM (36 m³/hr)  
3": 400 GPM (91 m³/hr)  
4": 800 GPM (182 m³/hr)  
6": 1600 GPM (363 m³/hr)  
8": 2700 GPM (614 m³/hr)  
10": 4000 GPM (908 m³/hr)  |
| **Maximum Intermittent Operation**   | 1-1/2": 200 GPM (45 m³/hr)  
2": 200 GPM (45 m³/hr)  
3": 500 GPM (114 m³/hr)  
4": 1000 GPM (227 m³/hr)  
6": 2000 GPM (454 m³/hr)  
8": 3400 GPM (773 m³/hr)  
10": 5000 GPM (1136 m³/hr)  |
| **Pressure Loss**                    | 1-1/2": 6.9 psi @ 160 GPM (48 bar @ 36 m³/hr)  
2": 4.3 psi @ 160 GPM (.30 bar @ 36 m³/hr)  
3": 3.2 psi @ 400 GPM (.22 bar @ 91 m³/hr)  
4": 6.4 psi @ 800 GPM (.51 bar @ 182 m³/hr)  
6": 5.5 psi @ 1600 GPM (.56 bar @ 363 m³/hr)  
8": 4 psi @ 2700 GPM (.27 bar @ 614 m³/hr)  
10": 4.5 psi @ 4000 GPM (.31 bar @ 908 m³/hr)  |
| **Maximum Operating Pressure**       | 200 PSI (13.8 bar)  |
| **Flange Connections**               | U.S. ANSI B16.1 / AWWA Class 125  |
| **Register**                         | Fully electronic sealed register with programmable registration (Gal. /Cu.Fl./ Cu. Mtr. / Imp. Gal. / Acre Ft.) Programmable AMR/AMI reading and pulse outputs Guaranteed 10-year battery life  |
| **NSF Approved Materials**           | Maincase: Coated Ductile Iron  
Measuring Chamber: Thermoplastic  
Rotor “Floating Ball”: Thermoplastic  
Radial Bearings: Hybrid Thermoplastic  
Thrust Bearings: Sapphire/Ceramic Jewel  
Magnets: Ceramic Magnet  
Strainer Screen: Stainless Steel  
Strainer Cover: Coated Ductile Iron  
Test Plug: Coated Ductile Iron  |
Headloss Curves

1.5” $C^2$ Pressure Loss Curve with Strainer

1.5” $C^2$ Accuracy Curve

2” $C^2$ Pressure Loss Curve with Strainer

2” $C^2$ Accuracy Curve

3” $C^2$ Pressure Loss Curve with Strainer

3” $C^2$ Accuracy Curve

4” $C^2$ Pressure Loss Curve with Strainer

4” $C^2$ Accuracy Curve

6” $C^2$ Pressure Loss Curve with Strainer

6” $C^2$ Accuracy Curve
Headloss Curves

**OMNI™ C²**

- **8" C² Pressure Loss Curve with Strainer**
- **8" C² Accuracy Curve**
- **10" C² Pressure Loss Curve with Strainer**
- **10" C² Accuracy Curve**