Description

1-1/2”, 2”, 3”, 4”, 6”, 8” and 10” Sizes

The OMNI T² meter operation is based on advanced Floating Ball Technology (FBT).

Features

CONFORMANCE TO STANDARDS
The OMNI T² meter meets and far exceeds the most recent revision of AWWA Standard C701 class II standards. Each meter is performance tested to ensure compliance. All OMNI meters are NSF/ANSI Standard 61, Annex F and G approved.

PERFORMANCE
The patented measurement principles of the OMNI T² meter assure enhanced accuracy ranges, an overall greater accuracy, and a longer service life than any other comparable class meter produced. The OMNI T² 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 affecting undue wear or accuracy degradation when installed in any orientation.

CONSTRUCTION
The OMNI T² 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 a convenient integral strainer.

OMNI ELECTRONIC REGISTER
The OMNI T² electronic register consist of a hermetically sealed register 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 the 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.

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, hydro dynamically 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 T² meter.

STRAINER
The OMNI T² with the “V” shaped integral 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 T² 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 Exchange are available for the OMNI T² 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 T² Meters are backed by “The Sensus Guarantee.” Ask your Sensus representative for details or see Bulletin G-500.
OMNI T²: 1-1/2”, 2”, 3”, 4”, 6”, 8” and 10” Sizes

DIMENSIONS AND NET WEIGHTS

<table>
<thead>
<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>
</thead>
<tbody>
<tr>
<td>1-1/2” DN 40mm</td>
<td>1.25 gpm .28 m³/hr</td>
<td>Flanged</td>
<td>13”</td>
<td>330mm</td>
<td>7-7/8”</td>
<td>200mm</td>
<td>15/16”</td>
<td>24mm</td>
<td>5-1/8”</td>
<td>130mm</td>
<td>2-5/16”</td>
<td>114mm</td>
<td>2” 5/8”</td>
</tr>
<tr>
<td>2” DN 50mm</td>
<td>1.5 gpm .34 m³/hr</td>
<td>Flanged</td>
<td>17”</td>
<td>432mm</td>
<td>7-7/8”</td>
<td>200mm</td>
<td>1”</td>
<td>25mm</td>
<td>5-3/4”</td>
<td>146mm</td>
<td>2-5/16”</td>
<td>114mm</td>
<td>2” 5/8”</td>
</tr>
<tr>
<td>2” without Strainer DN 50mm</td>
<td>1.5 gpm .34 m³/hr</td>
<td>Flanged</td>
<td>10”</td>
<td>254mm</td>
<td>7-7/8”</td>
<td>200mm</td>
<td>1”</td>
<td>25mm</td>
<td>5-3/4”</td>
<td>146mm</td>
<td>2-5/16”</td>
<td>114mm</td>
<td>2” 5/8”</td>
</tr>
<tr>
<td>3” DN 80mm</td>
<td>2.5 gpm .57 m³/hr</td>
<td>Flanged</td>
<td>19”</td>
<td>432mm</td>
<td>8-3/4”</td>
<td>222mm</td>
<td>3/4”</td>
<td>19mm</td>
<td>7-7/8”</td>
<td>200mm</td>
<td>4-1/8”</td>
<td>105mm</td>
<td>6”</td>
</tr>
<tr>
<td>4” DN 100mm</td>
<td>3.0 gpm .68 m³/hr</td>
<td>Flanged</td>
<td>23”</td>
<td>584mm</td>
<td>11-3/16”</td>
<td>284mm</td>
<td>15/16”</td>
<td>24mm</td>
<td>9-1/8”</td>
<td>232mm</td>
<td>4-3/4”</td>
<td>121mm</td>
<td>7-1/2”</td>
</tr>
<tr>
<td>6” DN 150mm</td>
<td>4.0 gpm .91 m³/hr</td>
<td>Flanged</td>
<td>27”</td>
<td>685mm</td>
<td>13-1/4”</td>
<td>336mm</td>
<td>15/16”</td>
<td>24mm</td>
<td>11”</td>
<td>279mm</td>
<td>5-3/4”</td>
<td>146mm</td>
<td>9-1/8”</td>
</tr>
<tr>
<td>8” DN 200mm</td>
<td>5.0 gpm 1.1 m³/hr</td>
<td>Flanged</td>
<td>30”</td>
<td>765mm</td>
<td>15”</td>
<td>381mm</td>
<td>11/16”</td>
<td>17mm</td>
<td>13-1/2”</td>
<td>343mm</td>
<td>6-3/4”</td>
<td>172mm</td>
<td>11-3/4”</td>
</tr>
<tr>
<td>10” DN 250mm</td>
<td>6.0 gpm 1.4 m³/hr</td>
<td>Flanged</td>
<td>41-1/8</td>
<td>485mm</td>
<td>19”</td>
<td>455mm</td>
<td>11/16”</td>
<td>17mm</td>
<td>16”</td>
<td>406mm</td>
<td>8-1/2”</td>
<td>216mm</td>
<td>14-1/4”</td>
</tr>
</tbody>
</table>
## OMNI T²: 1-1/2”, 2”, 3”, 4”, 6”, 8” and 10” Sizes

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>Measurement of potable and reclaim water. Operating temperature range of 33 °F (56 °C) - 150 °F (65.6 °C)</th>
</tr>
</thead>
</table>
| OPERATING RANGE | 1-1/2": 1.25 – 200 GPM (.28 - 45 m³/hr)  
2" and 2" without Strainer: 1.5 – 250 GPM (.34 – 57 m³/hr)  
3": 2.5 – 650 GPM (.57 – 148 m³/hr)  
4": 3 – 1250 GPM (.68 – 284 m³/hr)  
6": 4 – 2500 GPM (.91 – 568 m³/hr)  
8": 5 – 3500 GPM (1.1-795 m³/hr)  
10": 6 – 5500 GPM (1.4 - 1249 m³/hr) |
| LOW FLOW (95% – 101.5%) | 1-1/2": .75 GPM (.17 m³/hr)  
2" and 2" without Strainer: 1.0 GPM (.23 m³/hr)  
3": 1.5 GPM (.34 m³/hr)  
4": 2.0 GPM (.45 m³/hr)  
6": 2.5 GPM (.57 m³/hr)  
8": 4 GPM (0.9 m³/hr)  
10": 5 GPM (1.1 m³/hr) |
| MAXIMUM CONTINUOUS OPERATION | 1-1/2": 160 GPM (36 m³/hr)  
2" and 2" without Strainer: 200 GPM (45 m³/hr)  
3": 500 GPM (114 m³/hr)  
4": 1000 GPM (227 m³/hr)  
6": 2000 GPM (454 m³/hr)  
8": 3500 GPM (795 m³/hr)  
10": 5500 GPM (1249 m³/hr) |
| MAXIMUM INTERMITTENT OPERATION | 1-1/2": 200 GPM (45 m³/hr)  
2" and 2" without Strainer: 250 GPM (57 m³/hr)  
3": 650 GPM (148 m³/hr)  
4": 1250 GPM (284 m³/hr)  
6": 2500 GPM (568 m³/hr)  
8": 4700 GPM (1067 m³/hr)  
10": 7000 GPM (1590 m³/hr) |
| PRESSURE LOSS | 1-1/2": 6.9 psi @ 160 GPM (48 bar @ 36 m³/hr)  
2" and 2" without Strainer: 7.0 psi @ 200 GPM (48 bar @ 45 m³/hr)  
3": 5.1 psi @ 500 GPM (.35 bar @ 114 m³/hr)  
4": 8.7 psi @ 1000 GPM (.60 bar @ 227 m³/hr)  
6": 8.2 psi @ 2000 GPM (.56 bar @ 454 m³/hr)  
8": 5.1 psi @ 3500 GPM (.35 bar @ 795 m³/hr)  
10": 7.2 psi @ 5500 GPM (.50 bar @ 1249 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 |
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Headloss Curves

1.5” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)
Rate of Flow (GPM)

1.5” T² Accuracy Curve

Accuracy (%)
Rate of Flow (GPM)

2” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)
Rate of Flow (GPM)

2” T² Accuracy Curve

Accuracy (%)
Rate of Flow (GPM)

2” T² Pressure Loss Curve without Strainer

Pressure Loss (PSI)
Rate of Flow (GPM)

3” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)
Rate of Flow (GPM)

3” T² Accuracy Curve

Accuracy (%)
Rate of Flow (GPM)

4” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)
Rate of Flow (GPM)

4” T² Accuracy Curve

Accuracy (%)
Rate of Flow (GPM)
OMNI T²: 1-1/2”, 2”, 3”, 4”, 6”, 8” and 10” Sizes

Headloss Curves

6” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)

Rate of Flow (GPM)

6” T² Accuracy Curve

Accuracy (%)

Rate of Flow (GPM)

8” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)

Rate of Flow (GPM)

8” T² Accuracy Curve

Accuracy (%)

Rate of Flow (GPM)

10” T² Pressure Loss Curve with Strainer

Pressure Loss (PSI)

Rate of Flow (GPM)

10” T² Accuracy Curve

Accuracy (%)

Rate of Flow (GPM)