**MODEL ML04-D FLANGED TUBE METERS**

150 psi FLANGED TUBE METER
SOLID STATE ELECTRONIC PROPELLER METER
DIGITAL INDICATOR - TOTALIZER
SIZES 2" thru 48"

**DESCRIPTION**

MODEL ML04-D FLANGED TUBE METERS are manufactured to the highest standards. Materials used on all meters and flow ranges meet, or exceed, AWWA standard C704-02. The flanged end tube design permits use in a wide range of applications with up to 150 psi working pressure. Flanged ends are 150 lb. AWWA class D flat face steel flanges. Fabricated steel meter tubes have straightening vanes and are protected internally and externally with 12-15 mils of NSF-approved, fusion bonded epoxy resin.

**INSTALLATION** is made similar to placing a short length of flanged end pipe in the line. The meter can be installed vertically, horizontally or inclined on suction or discharge lines. The meter must have a full flow of liquid for proper accuracy. Fully opened gate valves, fittings or other obstructions that tend to set up flow disturbances should be a minimum of five pipe diameters upstream and one pipe diameter downstream from the meter. An optional kit of adapters with up to 50 feet of cable is available to locate the indicator-totalizer at remote locations.

**PROPELLER** is magnetically coupled with the electronic sensor through the sealed gearbox. This completely eliminates water entering the meter assembly, and eliminates all moving parts except for the propeller. The propeller is a conical shaped three bladed propeller, injection molded of thermoplastic material resistant to normal water corrosion and deformity due to high flow velocities.

**BEARING** in propeller is a water lubricated ceramic sleeve and spindle bearing system with a ceramic/stainless spindle. Dual ceramic thrust bearings, standard on all meters, handle flows in both forward and reverse directions. The bearing design promotes extended periods of maintenance free propeller operation.

**DIGITAL INDICATOR-TOTALIZER** has a non-volatile EEPROM memory to store totalizer count (updated hourly while running). Features a large two line display. Five digit top line indicates flow rate, and eight digit bottom line provides volumetric flow data. Indicator is available in 22 different units, including GPM, CFS, MGD. Totalizer is available in 20 different units, including Gallons, AF, CF. Units of measurement are user-selectable. Battery life is 6 - 10 years. Housing is NEMA 4X rated.

Available with optional 4-20mA and/or pulse output.

**SPECIFICATIONS**

**ACCURACY**

Plus or minus 2% of actual flow within the range specified for each meter size.

**PRESSURE RANGE**

Up to 150 PSI maximum working pressure.

**TEMPERATURE RANGE**

140° F Maximum. Consult factory for special construction for higher temperatures.

**MINIMUM FLOWS**

As shown for each meter size and construction are required for accurate registration. See flow chart.

**MAXIMUM FLOWS**

As shown for each meter size and construction are rated for continuous operation. See flow chart.

**INTERMITTENT FLOWS**

As shown for each meter size are rated for 10% to 15% of the total time the meter is operating. Consult factory for High Velocity construction when intermittent flows are higher than shown on flow chart and/or when longer operating periods are required.

**MATERIALS**

Used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly.

**PROPELLER MAGNETS** – anticorrosive aluminized barrier coated magnets; Everlube 6155

**PROPELLER BEARING** - ceramic sleeve type.

**PROPELLER SPINDLE** - ceramic sleeve/stainless steel.

**GEARBOX** - stainless steel.

**SEPARATOR** - stainless steel.

**METER HEAD BOLTS** - stainless steel (2" - 20"), plated steel (24" - 48").

**METER HEAD** - cast iron or fabricated steel, NSF approved fusion epoxy coated.

**METERTUBE** - fabricated steel with straightening vanes and coated inside and out with 12-15 mils of NSF approved, fusion epoxy by the fluidized bed method.

**OPTIONAL EQUIPMENT**

Remote mounting kit with up to 50 feet of cable, totalizer extensions, digital transmitter, and a wide range of controls and instruments for indicating, totalizing and recording flow data for each meter. Special constructions and materials are available upon request.

Must be specified by the customer and includes:

- Minimum & maximum flow ranges
- Temperature of meter environment
- Indicator scale & units
- Totalizer dial units
- Type of materials and construction
- Optional equipment desired

**ORDERING INFO**

- Minimum & maximum flow ranges
- Temperature of meter environment
- Indicator scale & units
- Totalizer dial units
- Type of materials and construction
- Optional equipment desired
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Standard construction will be supplied for all main line meters unless special flow range, materials, or construction are required.

<table>
<thead>
<tr>
<th>METER &amp; PIPE SIZE</th>
<th>FLOW RANGES, GPM STANDARD CONSTRUCTION MIN-MAX-INT</th>
<th>HIGH VELOCITY CONSTRUCTION MIN-MAX</th>
<th>DIMENSIONS</th>
<th>EST. SHIPPING WEIGHT POUNDS</th>
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<tbody>
<tr>
<td>2</td>
<td>40-160-225</td>
<td>N/A</td>
<td>A: 18¼</td>
<td>6 5/8 71/8 4¾ 4 5/8 5¼ 9</td>
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<tr>
<td>3</td>
<td>45-250-350</td>
<td>N/A</td>
<td>B: 7½ 5/8 7 6 4 5/8 5¼ 9</td>
<td>70</td>
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<tr>
<td>4</td>
<td>55-500-700</td>
<td>200-700</td>
<td>C: 18 9 5/8 7 7½ 8 5/8 5¼ 9</td>
<td>80</td>
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<tr>
<td>6</td>
<td>120-1200-1500</td>
<td>300-1500</td>
<td>D: 22 11 11/16 9 9½ 8 3/4 6½ 9</td>
<td>150</td>
</tr>
<tr>
<td>8</td>
<td>150-1500-2000</td>
<td>400-2500</td>
<td>E: 24 13½ 11/16 9 11¾ 8 3/4 7¼ 9</td>
<td>170</td>
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<tr>
<td>12</td>
<td>200-3000-3500</td>
<td>800-5000</td>
<td>G: 28 19 13/16 10 17 12 7/8 9½ 11</td>
<td>288</td>
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<tr>
<td>14</td>
<td>300-4000-4500</td>
<td>1000-6000</td>
<td>H: 42 21 15/16 12 18½ 12 1 10½ 13½</td>
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<tr>
<td>16</td>
<td>400-5000-6000</td>
<td>1200-7500</td>
<td>I: 48 23½ 1 12 21¼ 16 1 11½ 13½</td>
<td>547</td>
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<tr>
<td>18</td>
<td>700-6000-7500</td>
<td>1500-9000</td>
<td>J: 54 25 1½ 15 22½ 16 1½ 12½ 13½</td>
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<td>20</td>
<td>850-8000-9000</td>
<td>2000-12000</td>
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<tr>
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<td>3000-15000</td>
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<td>1250</td>
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<td>30</td>
<td>1800-15000-21000</td>
<td>4000-25000</td>
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<td>2000-20000-30000</td>
<td>5000-35000</td>
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<tr>
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<td>6000-50000</td>
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<td>5500-35000-50000</td>
<td>7000-60000</td>
<td>E: 96 59½ 1½ 24 56 44 1½ 31 32</td>
<td>4730</td>
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</tbody>
</table>

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