The Neptune® High Performance (HP) Fire Service Turbine Stainless Steel (S) meter offers some of the widest flow ranges of any fire service turbine meters on the market. All HP Fire Service Turbines meet or exceed the latest AWWA Standard C703. Maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

Application
The HP Fire Service Turbine S meter is designed to measure both domestic and fire service usage where flow rates are moderate to high. All HP Fire Service Turbine meters are NSF/ANSI 61 and 372 certified, Underwriters Laboratory (UL) listed, and Factory Mutual (FM) approved for fire service use and include an attached fire service strainer.

Construction
The HP Fire Service Turbine S meter consists of a stainless steel fire service strainer, a rugged, lead free, high-copper alloy maincase, an AWWA Class II turbine measuring element, and a roll-sealed register.

The Unitized Measuring Element (UME) allows for quick, easy, in-line interchangeability. Water volume is measured accurately at all flows by a specially-designed assembly. The hydrodynamically-balanced, thrust-compensated rotor relieves pressure on the thrust bearing. Stationary stainless steel shafts minimize wear and provide sustained accuracy over an extended operating life. Direct coupling of the rotor to the gear train eliminates revenue loss due to slippage during fast starts and line surges. A calibration vane allows in-field calibration of the UME to lengthen service life and to ensure accurate registration.

The roll-sealed register eliminates leaking and fogging. A magnetic drive couples the register with the measuring element. For reading convenience, the register can be mounted in any one of four positions on the meter.

WARRANTY
Neptune provides a limited warranty with respect to its HP Fire Service Turbine S meters for performance, materials, and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of the UME.

Systems Compatibility
Adaptability to all present and future systems for flexibility.

KEY FEATURES

Turbine Measuring Element
- UL listed
- FM approved
- Wide flow ranges available at 98.5% - 101.5% accuracy
- Interchangeable measuring element
- Calibration vane
- Hydrodynamically-balanced rotor
- Reusable O-ring gasket provides superior seal

Lead Free Maincase
- NSF/ANSI 61 and 372
- Made from lead free, high-copper alloy
- Proven lifetime material
- Corrosion-resistant

Stainless Steel Strainer
- Stops debris while permitting full flow
- Lightweight and easy to handle

Roll-Sealed Registers
- Magnetic-driven, low-torque registration
- Low-flow indicator
- In-line serviceability
- Tamperproof seal design
These charts show typical meter performance. Individual results may vary.

**Registration**

<table>
<thead>
<tr>
<th>Registration (per sweep hand revolution)</th>
<th>3” &amp; 4”</th>
<th>6”</th>
<th>8” &amp; 10”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 Gallons</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>100 Gallons</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 Cubic Feet</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>10 Cubic Feet</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>10 Cubic Metres</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Cubic Metre</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Register Capacity (6-wheel odometer)</th>
<th>3” &amp; 4”</th>
<th>6”</th>
<th>8” &amp; 10”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000,000,000 Gallons</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>100,000,000 Gallons</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>100,000,000 Cubic Feet</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>10,000,000 Cubic Feet</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000,000 Cubic Metres</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000,000 Cubic Metres</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Operating Characteristics

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Normal Operating Range @ 100% Accuracy (+/- 1.5%)</th>
<th>Maximum Intermittent Flow</th>
<th>AWWA Standard Normal Operating Range @ 100% Accuracy (+/- 1.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>5 to 450 US gpm 1.14 to 102.2 m³/h</td>
<td>560 US gpm 127.2 m³/h</td>
<td>5 to 350 US gpm 1.15 to 80 m³/h</td>
</tr>
<tr>
<td>4&quot;</td>
<td>10 to 1200 US gpm 2.27 to 272.5 m³/h</td>
<td>1500 US gpm 340.7 m³/h</td>
<td>15 to 700 US gpm 3.4 to 160 m³/h</td>
</tr>
<tr>
<td>6&quot;</td>
<td>20 to 2500 US gpm 4.55 to 567.8 m³/h</td>
<td>3100 US gpm 704.1 m³/h</td>
<td>30 to 1600 US gpm 6.8 to 360 m³/h</td>
</tr>
<tr>
<td>8&quot;</td>
<td>35 to 4000 US gpm 7.95 to 908.5 m³/h</td>
<td>5000 US gpm 1135.6 m³/h</td>
<td>35 to 2800 US gpm 8 to 640 m³/h</td>
</tr>
<tr>
<td>10&quot;</td>
<td>50 to 6500 US gpm 11.36 to 1476.3 m³/h</td>
<td>8000 US gpm 1817 m³/h</td>
<td>55 to 4400 US gpm 12.5 to 1000 m³/h</td>
</tr>
</tbody>
</table>

Dimensions

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>A in/mm</th>
<th>B in/mm</th>
<th>C in/mm</th>
<th>D in/mm</th>
<th>E in/mm</th>
<th>F in/mm</th>
<th>G in/mm</th>
<th>Width in/mm</th>
<th>Weight lbs/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>14 ¾</td>
<td>12</td>
<td>10 ¾</td>
<td>10 ¾</td>
<td>17 ½</td>
<td>26 ½</td>
<td>2</td>
<td>13 ½</td>
<td>150</td>
</tr>
<tr>
<td>4&quot;</td>
<td>21 5/8</td>
<td>14</td>
<td>10 ¾</td>
<td>10 ¾</td>
<td>17 ½</td>
<td>35</td>
<td>2</td>
<td>13 ½</td>
<td>200</td>
</tr>
<tr>
<td>6&quot;</td>
<td>26 7/8</td>
<td>18 1/2</td>
<td>11 ¾</td>
<td>11 ¾</td>
<td>21 1/2</td>
<td>44 ¾</td>
<td>3</td>
<td>19</td>
<td>425</td>
</tr>
<tr>
<td>8&quot;</td>
<td>31 1/2</td>
<td>20 5/8</td>
<td>13 1/2</td>
<td>13 1/2</td>
<td>25 1/2</td>
<td>51 1/2</td>
<td>3</td>
<td>25</td>
<td>600</td>
</tr>
<tr>
<td>10&quot;</td>
<td>30 1/8</td>
<td>26 1/2</td>
<td>15 1/2</td>
<td>14 1/2</td>
<td>30 1/2</td>
<td>56</td>
<td>3</td>
<td>27 1/2</td>
<td>750</td>
</tr>
</tbody>
</table>

Specifications

**Application**
- Cold water measurement of flow in one direction

**Maximum Operating Water Pressure**
- 175 psi (1206 kPa)

**Registers**
- Direct reading, center-sweep, roll-sealed magnetic drive with low-flow indicator

**Measuring Element**
- AWWA Class II turbine, hydrodynamically-balanced rotor

**Strainer**
- Stainless steel body, stainless steel basket strainer element, NSF/ANSI 61 certified, UL listed, and FM approved

**300 Series Stainless Steel Bolts**

**Options**

**Sizes**
- 3", 4", 6", 8", and 10"

**300 Series Stainless Steel Strainer Cover**

**Units of Measure**
- U.S. gallons, imperial gallons, cubic feet, cubic metres

**Register Types**

**Reclaim**

**Companion Flanges**
- Cast iron
- Bronze (3" and 4" only)

*Consult factory for meter performance specifications when fitted with ARB.

Guaranteed Systems Compatibility

All HP Fire Service Turbine S meters are guaranteed adaptable to our ARB® V, ProRead™ (ARB VI), ProCoder™, E-CODER®, E-CODER)R900i®, E-CODER)R450i®, E-CODER)L900i®, TRICON/S, TRICON/E3, and Neptune meter reading systems without removing the meter from service.

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