# SERIES B3: 5M175 ROOTS® Meter

<table>
<thead>
<tr>
<th><strong>Temperature Range</strong></th>
<th><strong>UNITS</strong></th>
<th><strong>Imperial</strong></th>
<th><strong>UNITS</strong></th>
<th><strong>Metric</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deg. F</td>
<td>-40 to +140</td>
<td>Deg. C</td>
<td>-40 to +60</td>
<td></td>
</tr>
<tr>
<td>Base Rating (Q Max.)</td>
<td>acfh</td>
<td>5000</td>
<td>m³/h</td>
<td>141.5</td>
</tr>
<tr>
<td>Max. Operating Pressure (MAOP)</td>
<td>psig</td>
<td>175</td>
<td>kPa</td>
<td>1200</td>
</tr>
<tr>
<td>Static Test (2 x MAOP)</td>
<td>psig</td>
<td>350</td>
<td>kPa</td>
<td>2400</td>
</tr>
<tr>
<td>Rangeability +/- 1%</td>
<td>ratio</td>
<td>120:1</td>
<td>ratio</td>
<td>120:1</td>
</tr>
<tr>
<td>Rangeability +/- 2%</td>
<td>ratio</td>
<td>215:1</td>
<td>ratio</td>
<td>215:1</td>
</tr>
<tr>
<td>Start Rate</td>
<td>cfh</td>
<td>1.2</td>
<td>m³/h</td>
<td>0.0340</td>
</tr>
<tr>
<td>Stop Rate</td>
<td>cfh</td>
<td>0.8</td>
<td>m³/h</td>
<td>0.0227</td>
</tr>
<tr>
<td>Flow Rate @ 0.5&quot; w.c., Gas</td>
<td>in. w.c.</td>
<td>1.1</td>
<td>mbar</td>
<td>2.6</td>
</tr>
<tr>
<td>Avg. Differential, 100% Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Pressurization Rate</td>
<td>psig/sec</td>
<td>5</td>
<td>kPa/sec</td>
<td>35</td>
</tr>
<tr>
<td>Gear Ratio</td>
<td>ratio</td>
<td>270:1</td>
<td>ratio</td>
<td>953,125:1</td>
</tr>
<tr>
<td>Displaced Volume/Revolution</td>
<td>cf</td>
<td>0.037037</td>
<td>m³</td>
<td>0.0001049</td>
</tr>
<tr>
<td>Drive Rate, CD</td>
<td>cf/rev</td>
<td>10</td>
<td>m³/rev</td>
<td>1</td>
</tr>
<tr>
<td>Drive Rate, TD</td>
<td>cf/rev</td>
<td>100</td>
<td>m³/rev</td>
<td>10</td>
</tr>
<tr>
<td>Temp. Compensating Range (TC, TD)</td>
<td>deg. F</td>
<td>-20 to +120</td>
<td>deg. C</td>
<td>-29 to +49</td>
</tr>
<tr>
<td>Min. Odometer Reading</td>
<td>cf</td>
<td>0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odometer Turnover</td>
<td>yrs.</td>
<td>2.28</td>
<td>yrs.</td>
<td>8.06</td>
</tr>
<tr>
<td>Nominal Pipe Size</td>
<td>in.</td>
<td>3</td>
<td>mm</td>
<td>80</td>
</tr>
<tr>
<td>Flange-to-Flange</td>
<td>in.</td>
<td>6-3/4</td>
<td>mm</td>
<td>172</td>
</tr>
<tr>
<td>Flange Connection</td>
<td>ANSI</td>
<td>150#FF</td>
<td>ANSI</td>
<td>150#FF</td>
</tr>
<tr>
<td>Bolts per Flange</td>
<td>qty.</td>
<td>4</td>
<td>qty.</td>
<td>4</td>
</tr>
<tr>
<td>Flange Bolt Hole Depth</td>
<td>in.</td>
<td>5/8 - 11</td>
<td>in.</td>
<td>5/8 - 11</td>
</tr>
<tr>
<td>Bolt Torque: Lubricated/Non-Lub.</td>
<td>in.</td>
<td>15/16</td>
<td>mm</td>
<td>23.8</td>
</tr>
<tr>
<td>Restricting Orifice (120%)</td>
<td>ft.-lb.</td>
<td>55/60</td>
<td>N·m</td>
<td>74/81</td>
</tr>
<tr>
<td>Oil Capacity – Side Inlet</td>
<td>oz.</td>
<td>1.25</td>
<td>ml</td>
<td>37</td>
</tr>
<tr>
<td>Oil Capacity – Top Inlet</td>
<td>oz.</td>
<td>7.65</td>
<td>ml</td>
<td>226</td>
</tr>
<tr>
<td>Counter Version (CTR)²</td>
<td>Net Weight</td>
<td>lbs.</td>
<td>35</td>
<td>kg</td>
</tr>
<tr>
<td>Counter with Instrument Drive (CD)²</td>
<td>Shipping Weight</td>
<td>lbs.</td>
<td>38</td>
<td>kg</td>
</tr>
<tr>
<td>Carton Size</td>
<td>in.</td>
<td>27 x 11 x 9</td>
<td>cm</td>
<td>69 x 28 x 23</td>
</tr>
</tbody>
</table>

## NOTES:
1. Bolt Length varies by application.
2. Weights and dimensions available for CPS, TC, TD, TPS upon request.
Above data has been determined from tests performed with air at atmospheric pressure and ambient temperature, using positive displacement bell or piston provers dimensionally traceable to the United States National Institute of Standards and Technology (NIST) and traceable to NMi- Netherlands Measurements Institute for volumetric flow rate.

**To order**
Specify: Meter Series, Size and Type (i.e., ROOTS Meter Series B3 5M175 CD).
For CD or TD, specify Inlet (Top or Side) and ID Rotation (CW-B or CCW-A).
For Pulser, specify Single or Dual Connectors and Connector Type (MS Circular, Conduit or Cable Gland).
For more specific ordering information on the electronic products, request: TS:SSP, TS:IMC/C or S:IMC/W. Contact the factory for other available information, options, or special requests.