**Wide Range of Flows and Angles**

**DESIGN FEATURES**
- The original spiral nozzle invented by BETE and continuously improved!
- High energy efficiency
- One-piece/no internal parts
- Clog-resistant performance
- High discharge velocity
- Male connection standard; female connection available by special order

**SPRAY CHARACTERISTICS**
- Wide range of flow rates and spray angles
- Fine atomization

**Spray patterns:** Full Cone.
For Hollow Cone, see page 45

**Spray angles:** 50° to 180°

**Flow rates:** 2.26 to 10700 l/min
(Higher flow rates available)

**Available with FM approval:** N series (page 106), 1/4" TF8 NN, FCN in brass,
1/2" TF24-150 in multiple materials

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**TF Full Cone Flow Rates and Dimensions**

<table>
<thead>
<tr>
<th>Male Pipe Size</th>
<th>Nozzle Number</th>
<th>Available Spray Angles</th>
<th>K Factor</th>
<th>LITERS PER MINUTE @ BAR</th>
<th>PTFE not recommended at pressures above red line</th>
<th>Approx. (mm)</th>
<th>Orif. Dia.</th>
<th>Free Pass Dia.</th>
<th>Dim. (mm) for Metal Only*</th>
<th>WL (g) 60° 90° 120° Metal</th>
<th>60° 90° 120° 150° 170°</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>TF6</td>
<td>90° 120° 150° 170°</td>
<td>3.19</td>
<td>2.26 2.67 3.19 4.5 5.5</td>
<td>7.1 10.1 14.3 2.38 2.38</td>
<td>28</td>
<td>A B C</td>
<td>63.5 22.7 77.9</td>
<td>156 25</td>
<td>241 71</td>
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<td>63.5 22.7 77.9</td>
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<td>7.1 10.1 14.3 2.38 2.38</td>
<td>46</td>
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<td>156 25</td>
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<td>1/2</td>
<td>TF24</td>
<td>90° 120° 150° 170°</td>
<td>54.9</td>
<td>38.8 46.0 54.9 77.7 95.1</td>
<td>123 174 246 9.53 4.76</td>
<td>85</td>
<td>14</td>
<td>69.9 28.6 88.9</td>
<td>156 25</td>
<td>241 71</td>
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<tr>
<td>3/4</td>
<td>TF32</td>
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<td>96.7</td>
<td>67.7 80.1 95.7 135 166</td>
<td>214 303 428 12.7 4.76</td>
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<td>25</td>
<td>69.9 28.6 88.9</td>
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</tr>
</tbody>
</table>

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**Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.**