Fire Protection

**Design Features**
- Simplicity of design
- One-piece/no internal parts
- Clog-resistant
- Three standard pipe sizes—1/2", 1", and 1-1/2"
- Male connection
- Factory Mutual, U.S. Coast Guard, and Lloyd's Register approved models

**Spray Characteristics**
- Two spray cones: an outer, wide angle cone and a narrower inner cone combine to give full cone effect

**Spray Pattern:** Full Cone

**Spray Angles:** 90° and 120° standard

**Flow Rates:** 3.0 to 534 gpm

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### Flow Rates and Dimensions

Full Cone, Medium 90° and Wide 120° (W) Spray Angles, 1/2" to 1 1/2" Pipe Sizes

<table>
<thead>
<tr>
<th>Male Pipe Size</th>
<th>Nozzle Number</th>
<th>K Factor</th>
<th>10 PSI</th>
<th>20 PSI</th>
<th>30 PSI</th>
<th>40 PSI</th>
<th>60 PSI</th>
<th>80 PSI</th>
<th>100 PSI</th>
<th>200 PSI</th>
<th>400 PSI</th>
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<tbody>
<tr>
<td>1/2</td>
<td>N1</td>
<td>0.949</td>
<td>3.00</td>
<td>4.24</td>
<td>5.20</td>
<td>6.00</td>
<td>7.35</td>
<td>8.49</td>
<td>9.49</td>
<td>13.4</td>
<td>19.0</td>
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<td></td>
<td>N2</td>
<td>1.68</td>
<td>5.30</td>
<td>7.50</td>
<td>9.18</td>
<td>10.6</td>
<td>13.0</td>
<td>15.0</td>
<td>16.8</td>
<td>23.7</td>
<td>33.5</td>
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<tr>
<td></td>
<td>N3</td>
<td>2.61</td>
<td>8.25</td>
<td>11.7</td>
<td>14.3</td>
<td>16.5</td>
<td>20.2</td>
<td>23.3</td>
<td>26.1</td>
<td>36.9</td>
<td>52.2</td>
</tr>
<tr>
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<td>N4</td>
<td>3.81</td>
<td>12.1</td>
<td>17.0</td>
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<td>24.1</td>
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<td>38.1</td>
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</tbody>
</table>

### Approximate Dimensions

- Orifice Dia. (in.): 0.34
- Free Pass. Dia. (in.): 1.2
- A (in.): 3.63
- B (in.): 1.38
- Metal Wt.: 8.50

### Approximate Flow Rates

- Flow Rate (GPM) = K × \( \sqrt{\text{PSI}} \)

### Standard Nozzle Materials
- Brass and 316 Stainless Steel
- Available in nickel aluminum bronze and titanium, plus other materials available on request.

### Standard Cover Materials
- Brass for brass nozzles, 304 Stainless Steel for other nozzle materials

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