

# N

## 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

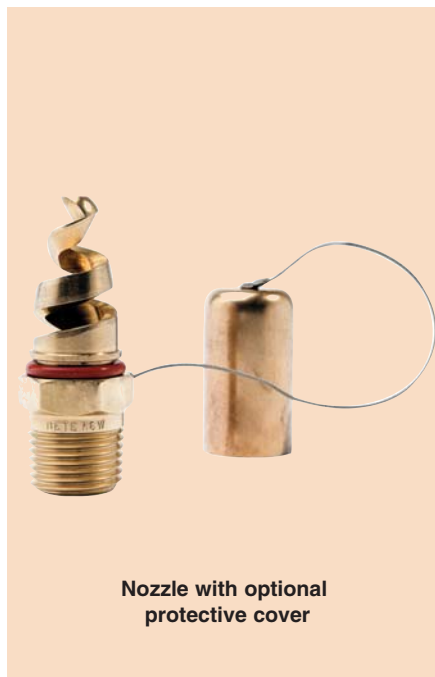
### SPRAY CHARACTERISTICS

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

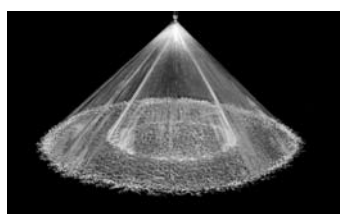
**Spray pattern:** Full Cone

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

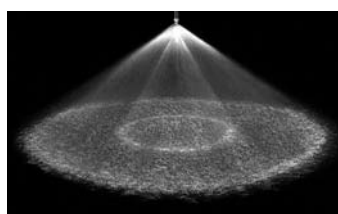
**Flow rates:** 9.67 to 1720 l/min



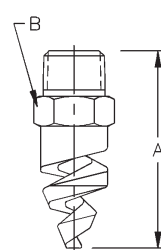
Nozzle with optional protective cover



Full Cone 90°



Full Cone 120° (W)



N6 nozzles protect a propane storage tank from fire and explosion.



N3-N5W: U.S. Coast Guard approved

TF24-150° also available in Factory Mutual approved model (see page 20)

Dimensions are approximate. Check with BETE for critical dimension applications.

### N Flow Rates and Dimensions

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

| Male Pipe Size | Nozzle Number | K Factor | LITERS PER MINUTE @ BAR |         |       |       |       |       |        |        | Approx. (mm) |                 | Approximate Dimensions (mm) |      | Wt. (g) Metal |
|----------------|---------------|----------|-------------------------|---------|-------|-------|-------|-------|--------|--------|--------------|-----------------|-----------------------------|------|---------------|
|                |               |          | 0.5 bar                 | 0.7 bar | 1 bar | 2 bar | 3 bar | 5 bar | 10 bar | 20 bar | Orifice Dia. | Free Pass. Dia. | A                           | B    |               |
| 1/2            | N1            | 13.7     | 9.67                    | 11.4    | 13.7  | 19.3  | 23.7  | 30.6  | 43.2   | 61.1   | 4.76         | 3.18            | 63.5                        | 22.4 | 85            |
|                | N2            | 24.2     | 17.1                    | 20.2    | 24.2  | 34.2  | 41.8  | 54.0  | 76.4   | 108    | 6.35         | 3.18            |                             |      |               |
|                | N3            | 37.6     | 26.6                    | 31.5    | 37.6  | 53.2  | 65.1  | 84.1  | 119    | 168    | 7.94         | 3.18            |                             |      |               |
|                | N4            | 54.9     | 38.8                    | 46.0    | 54.9  | 77.7  | 95.1  | 123   | 174    | 246    | 9.53         | 4.76            |                             |      |               |
|                | N5            | 75.2     | 53.2                    | 62.9    | 75.2  | 106   | 130   | 168   | 238    | 336    | 11.1         | 4.76            |                             |      |               |
|                | N6            | 95.7     | 67.7                    | 80.1    | 95.7  | 135   | 166   | 214   | 303    | 428    | 12.7         | 4.76            |                             |      |               |
| 1              | N6            | 95.7     | 67.7                    | 80.1    | 95.7  | 135   | 166   | 214   | 303    | 428    | 12.7         | 4.76            | 92.2                        | 35.1 | 241           |
|                | N7            | 153      | 108                     | 128     | 153   | 216   | 264   | 341   | 483    | 683    | 15.9         | 6.35            |                             |      |               |
| 1 1/2          | N8            | 216      | 153                     | 181     | 216   | 306   | 375   | 484   | 685    | 968    | 19.1         | 6.35            | 111                         | 50.8 | 765           |
|                | N9            | 294      | 208                     | 246     | 294   | 416   | 509   | 657   | 930    | 1320   | 22.2         | 7.94            |                             |      |               |
|                | N10           | 385      | 272                     | 322     | 385   | 545   | 667   | 861   | 1220   | 1720   | 25.4         | 7.94            |                             |      |               |

$$\text{Flow Rate (l/min)} = K \sqrt{\text{bar}}$$

Standard Materials: Brass and 316 Stainless Steel. All 316SS N series covers are 304 Stainless Steel.

Also available in nickel aluminum bronze and titanium, plus other materials on request.

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

SPECIAL PURPOSE

TO ORDER: specify pipe size, connection type, nozzle number, and material.