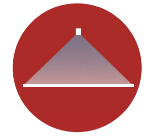
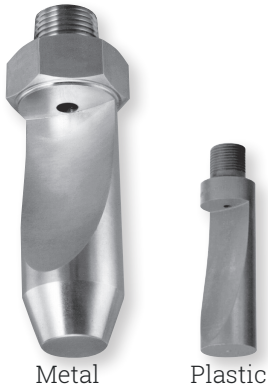


# SPN



## High Impact/Narrow Fan Spray



Metal

Plastic

### DESIGN FEATURES

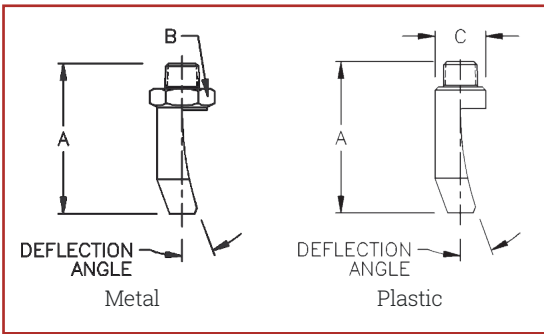
- One-piece/heavy construction
- Straight-through orifice minimizes clogging
- Machined from bar stock to exacting standards
- Male connection

### SPRAY CHARACTERISTICS

- Yields highest impact, narrow flat spray with least atomization
- Spoon-shaped deflector surface efficiently forms a hard-driving spray

**Spray angles:** 15°, 25°, 35°, 40°, 50°

**Flow rates:** 0.50 to 44.7 GPM



| Pipe Size | Dimensions (in.) |      |      | Wt. (oz.) |
|-----------|------------------|------|------|-----------|
|           | A                | B    | C    |           |
| 1/8"      | 0.86             | 0.50 | 0.56 | 0.5       |
| 1/4"      | 2.00             | 0.88 | 0.75 | 2.5       |
| 3/8"      | 3.00             | 1.12 | 1.00 | 8         |
| 1/2"      | 4.50             | 1.38 | 1.25 | 19        |
| 3/4"      | 4.80             | 1.75 | 1.69 | 30        |

## SPN FLOW RATES & SPRAY ANGLES

Materials: Brass, 303 Stainless Steel, 316 Stainless Steel, PVC and PTFE.

| Pipe Size | Nozzle Number | K Factor | Spray Angles |     | Flow Rate (GPM) @ Differential Pressure (psi) |      |      |      |      |      |      |      |      |       | Approx. Orifice Dia. (in.) | Deflection Angle @ Spray Angle |     |     |     |     |
|-----------|---------------|----------|--------------|-----|---|------|------|------|------|------|------|------|------|-------|----------------------------|--------------------------------|-----|-----|-----|-----|
|           |               |          |              |     | 10  | 20   | 30   | 40   | 50   | 60   | 80   | 100  | 200  | 15°   |                            | 25°                            | 35° | 40° | 50° |     |
|           |               |          |              |     | psi   | psi  | psi  | psi  | psi  | psi  | psi  | psi  | psi  |       |                            |                                |     |     |     |     |
| 1/8"      | SPN 04        | 0.063    |              | 35° |   | 0.20 | 0.28 | 0.35 | 0.40 | 0.45 | 0.49 | 0.56 | 0.63 | 0.89  | 0.049                      |                                |     | 15° |     |     |
| 1/4"      | SPN 10        | 0.158    | 15°          | 35° | 50°   | 0.50 | 0.71 | 0.87 | 1.00 | 1.12 | 1.21 | 1.40 | 1.58 | 2.20  | 0.078                      | 5°                             |     | 35° |     | 55° |
|           | SPN 20        | 0.316    | 15°          | 35° | 50°   | 1.00 | 1.41 | 1.73 | 2.00 | 2.24 | 2.50 | 2.80 | 3.16 | 4.50  | 0.109                      | 5°                             |     | 35° |     | 45° |
|           | SPN 25        | 0.395    |              |     | 50°   | 1.30 | 1.80 | 2.20 | 2.50 | 2.80 | 3.10 | 3.50 | 3.95 | 5.60  | 0.120                      |                                |     |     |     | 50° |
|           | SPN 40        | 0.633    | 25°          |     | 50°   | 2.00 | 2.83 | 3.50 | 4.00 | 4.47 | 4.90 | 5.66 | 6.33 | 8.90  | 0.152                      |                                | 20° |     |     | 45° |
| 3/8"      | SPN 20        | 0.316    |              | 35° |   | 1.00 | 1.41 | 1.73 | 2.00 | 2.24 | 2.40 | 2.83 | 3.16 | 4.50  | 0.109                      |                                |     | 30° |     |     |
|           | SPN 25        | 0.395    |              | 35° |   | 1.25 | 1.77 | 2.17 | 2.50 | 2.80 | 3.06 | 3.54 | 3.95 | 5.59  | 0.120                      |                                |     | 28° |     | 45° |
|           | SPN 30        | 0.474    | 15°          | 35° |   | 1.50 | 2.12 | 2.60 | 3.00 | 3.35 | 3.67 | 4.24 | 4.74 | 6.71  | 0.125                      | 5°                             |     | 28° |     |     |
|           | SPN 40        | 0.633    | 15°          | 35° | 50°   | 2.00 | 2.83 | 3.46 | 4.00 | 4.47 | 4.90 | 5.66 | 6.33 | 9.00  | 0.152                      | 5°                             |     | 35° | 35° | 50° |
|           | SPN 50        | 0.791    |              | 35° |   | 2.50 | 3.54 | 4.33 | 5.00 | 5.59 | 6.12 | 7.07 | 7.91 | 11.2  | 0.171                      |                                |     | 23° | 33° |     |
|           | SPN 60        | 0.949    | 15°          | 35° | 50°   | 3.00 | 4.24 | 5.20 | 6.00 | 6.71 | 7.35 | 8.49 | 9.49 | 13.4  | 0.187                      | 5°                             |     | 20° | 33° | 35° |
|           | SPN 70        | 1.11     |              |     |   | 3.50 | 4.95 | 6.06 | 7.00 | 7.83 | 8.57 | 9.90 | 11.1 | 15.7  | 0.199                      |                                |     |     | 29° |     |
|           | SPN 80        | 1.26     | 15°          | 35° | 50°   | 4.00 | 5.66 | 6.93 | 8.00 | 8.90 | 9.80 | 11.3 | 12.6 | 17.9  | 0.209                      | 5°                             |     | 25° | 26° | 35° |
|           | SPN 90        | 1.42     |              |     |   | 4.50 | 6.36 | 7.80 | 9.00 | 10.1 | 11.0 | 12.7 | 14.2 | 20.1  | 0.218                      |                                |     |     | 28° |     |
|           | SPN 100       | 1.58     | 15°          | 35° | 50°   | 5.00 | 7.10 | 8.60 | 10.0 | 11.2 | 12.2 | 14.1 | 15.8 | 22.3  | 0.234                      | 5°                             |     | 25° | 28° | 40° |
|           | SPN 120       | 1.90     | 15°          | 35° | 50°   | 6.00 | 8.49 | 10.4 | 12.0 | 13.4 | 14.7 | 17.0 | 19.0 | 26.8  | 0.265                      | 5°                             |     | 25° |     | 40° |
|           | SPN 125       | 1.98     |              |     | 50°   | 6.25 | 8.84 | 10.8 | 12.5 | 14.0 | 15.3 | 17.7 | 19.8 | 28.0  | 0.272                      |                                |     |     |     | 38° |
| SPN 160   | 2.53          |          |              | 50° | 8.00  | 11.3 | 13.9 | 16.0 | 17.9 | 19.6 | 23.0 | 25.3 | 35.8 | 0.312 |                            |                                | 25° |     | 37° |     |
| SPN 200   | 3.16          |          |              | 50° | 10.0  | 14.2 | 17.0 | 20.0 | 22.4 | 24.0 | 28.0 | 31.6 | 44.7 | 0.328 |                            |                                |     |     | 32° |     |
| 1/2"      | SPN 60        | 0.949    | 15°          | 35° |   | 3.00 | 4.24 | 5.20 | 6.00 | 6.71 | 7.35 | 8.49 | 9.49 | 13.4  | 0.187                      | 5°                             |     | 27° |     |     |
|           | SPN 80        | 1.26     | 15°          | 35° | 50°   | 4.00 | 5.66 | 6.93 | 8.00 | 8.14 | 9.80 | 11.3 | 12.6 | 17.9  | 0.209                      | 5°                             |     | 25° |     |     |
|           | SPN 100       | 1.58     | 15°          | 35° |   | 5.00 | 7.10 | 8.60 | 10.0 | 11.2 | 12.2 | 14.1 | 15.8 | 22.4  | 0.234                      | 5°                             |     | 19° |     |     |
|           | SPN 140       | 2.21     | 15°          | 35° | 50°   | 7.00 | 10.0 | 12.0 | 14.0 | 15.7 | 17.0 | 20.0 | 22.1 | 32.0  | 0.296                      | 25°                            |     | 25° |     | 40° |
| SPN 160   | 2.53          | 15°      | 35°          | 50° | 8.00  | 11.3 | 13.9 | 16.0 | 17.9 | 19.5 | 22.5 | 25.2 | 35.5 | 0.312 | 5°                         |                                | 25° |     | 40° |     |
| 3/4"      | SPN 160       | 2.53     |              | 35° |   | 8.00 | 11.3 | 13.9 | 16.0 | 17.9 | 19.6 | 22.6 | 25.3 | 35.8  | 0.312                      |                                |     | 23° |     |     |
|           | SPN 200       | 3.16     | 15°          | 35° |   | 10.0 | 14.2 | 17.0 | 20.0 | 22.4 | 24.0 | 28.0 | 31.6 | 44.7  | 0.328                      | 5°                             |     | 22° |     |     |

Flow Rate (GPM) =  $K\sqrt{PSI}$

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