



Tangential Inlet/Right Angle



Silicon, Flanged

DESIGN FEATURES

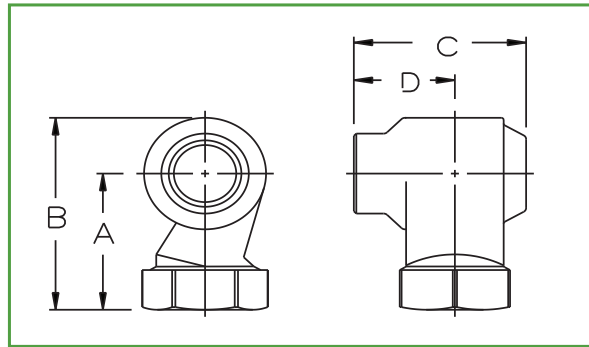
- Large free passage
- Clog-resistant; nozzles have no internal parts
- One-piece casting
- Female connection
- Flanged connection available
- Silicon carbide available upon request
- Inlet and outlet are in-line

SPRAY CHARACTERISTICS

- Patented geometry designed to give the most uniform liquid distribution around the periphery of the spray

Spray angles: Narrow to Medium

Flow rates: 4.11 to 564 GPM



| Female Pipe Size | Dimensions (in.) | | | |
|------------------|------------------|------|------|------|
| | A | B | C | D |
| 1" | 2.31 | 3.13 | 2.33 | 1.4 |
| 1 1/4" | 2.81 | 3.79 | 2.86 | 1.74 |
| 1 1/2" | 2.96 | 4.12 | 3.43 | 2.09 |
| 2" | 3.64 | 5.12 | 4.2 | 2.44 |
| 2 1/2" | 4.94 | 6.79 | 5.19 | 3.03 |
| 3" | 5.74 | 7.9 | 6.18 | 3.66 |

TH FLOW RATES & DIMENSIONS

Materials: Brass, Carbon Steel and 316 Stainless Steel.

| Pipe Size | Nozzle Number | Spray Angle | | | | K Factor | Flow Rate (GPM) @ Differential Pressure (psi) | | | | | | | | Aprox. Orifice Dia. (in.) | Free Pass. Dia. (in.) | Wt. (lbs.) |
|-----------|---------------|-------------|-----|------|------|----------|---|------|------|------|------|------|------|------|---------------------------|-----------------------|------------|
| | | 5 | 15 | 40 | psi | | 3 | 5 | 7 | 10 | 15 | 20 | 30 | 40 | | | |
| | | psi | psi | psi | | | psi | psi | psi | psi | psi | psi | psi | psi | | | |
| 1" | THF1508 | 54° | 54° | 54° | 2.37 | 4.11 | 5.30 | 6.27 | 7.50 | 9.19 | 10.6 | 13.0 | 15.0 | 0.34 | 0.34 | 1.04 | |
| | THF1808 | 56° | 56° | 56° | 2.85 | 4.93 | 6.36 | 7.53 | 9.00 | 11.0 | 12.7 | 15.6 | 18.0 | 0.38 | 0.38 | | |
| | THF2308 | 63° | 66° | 66° | 3.64 | 6.30 | 8.13 | 9.62 | 11.5 | 14.1 | 16.3 | 19.9 | 23.0 | 0.44 | 0.44 | | |
| | THF2708 | 66° | 70° | 70° | 4.27 | 7.39 | 9.55 | 11.3 | 13.5 | 16.5 | 19.1 | 23.4 | 27.0 | 0.47 | 0.47 | | |
| | THF3208 | 68° | 72° | 71° | 5.06 | 8.76 | 11.3 | 13.4 | 16.0 | 19.6 | 22.6 | 27.7 | 32.0 | 0.56 | 0.56 | | |
| 1 1/4" | THF3808 | 68° | 72° | 71° | 6.01 | 10.4 | 13.4 | 15.9 | 19.0 | 23.3 | 26.9 | 32.9 | 38.0 | 0.60 | 0.60 | 1.65 | |
| | THF3210 | 66° | 66° | 66° | 5.06 | 8.76 | 11.3 | 13.4 | 16.0 | 19.6 | 22.6 | 27.7 | 32.0 | 0.52 | 0.52 | | |
| | THF3810 | 68° | 70° | 70° | 6.01 | 10.4 | 13.4 | 15.9 | 19.0 | 23.3 | 26.9 | 32.9 | 38.0 | 0.63 | 0.63 | | |
| | THF4110 | 73° | 74° | 74° | 6.48 | 11.2 | 14.5 | 17.2 | 20.5 | 25.1 | 29.0 | 35.5 | 41.0 | 0.66 | 0.66 | | |
| | THF5210 | 90° | 90° | 90° | 8.22 | 14.2 | 18.4 | 21.8 | 26.0 | 31.8 | 36.8 | 45.0 | 52.0 | 0.78 | 0.78 | | |
| 1 1/2" | THF7010 | 83° | 85° | 85° | 11.1 | 19.2 | 24.7 | 29.3 | 35.0 | 42.9 | 49.5 | 60.6 | 70.0 | 1.03 | 0.89 | 1.88 | |
| | THF6112 | 58° | 60° | 60° | 9.65 | 16.7 | 21.6 | 25.5 | 30.5 | 37.4 | 43.1 | 52.8 | 61.0 | 0.77 | 0.77 | | |
| | THF7012 | 63° | 65° | 65° | 11.1 | 19.2 | 24.7 | 29.3 | 35.0 | 42.9 | 49.5 | 60.6 | 70.0 | 0.84 | 0.84 | | |
| | THF7712 | 63° | 66° | 66° | 12.2 | 21.1 | 27.2 | 32.2 | 38.5 | 47.2 | 54.4 | 66.7 | 77.0 | 0.92 | 0.92 | | |
| | THF9012 | 67° | 70° | 70° | 14.2 | 24.6 | 31.8 | 37.6 | 45.0 | 55.1 | 63.6 | 77.9 | 90.0 | 1.03 | 1.03 | | |
| | THF12712 | 75° | 80° | 80° | 20.1 | 34.8 | 44.9 | 53.1 | 63.5 | 77.8 | 89.8 | 110 | 127 | 1.30 | 1.06 | | |
| THF14512 | 80° | 80° | 83° | 22.9 | 39.7 | 51.3 | 60.7 | 72.5 | 88.8 | 103 | 126 | 145 | 1.42 | 1.06 | | | |

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

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



TH FLOW RATES & DIMENSIONS

Materials: Brass, Carbon Steel and 316 Stainless Steel.

| Female Pipe Size | Nozzle Number | Spray Angle | | | K Factor | Flow Rate (GPM) @ Differential Pressure (psi) | | | | | | | | Aprox. Orifice Dia. (in.) | Free Pass. Dia. (in.) | Wt. (lbs.) |
|------------------|---------------|-------------|-----|------|----------|---|------|------|------|------|------|------|------|---------------------------|-----------------------|------------|
| | | 5 | 15 | 40 | | 3 | 5 | 7 | 10 | 15 | 20 | 30 | 40 | | | |
| | | psi | psi | psi | | psi | psi | psi | psi | psi | psi | psi | psi | | | |
| 2" | THF8516 | 63° | 65° | 65° | 13.4 | 23.3 | 30.1 | 35.6 | 42.5 | 52.1 | 60.1 | 73.6 | 85.0 | 0.86 | 0.86 | 3.16 |
| | THF10516 | 65° | 67° | 67° | 16.6 | 28.8 | 37.1 | 43.9 | 52.5 | 64.3 | 74.2 | 90.9 | 105 | 1.00 | 1.00 | |
| | THF12516 | 68° | 70° | 70° | 19.8 | 34.2 | 44.2 | 52.3 | 62.5 | 76.5 | 88.4 | 108 | 125 | 1.14 | 1.14 | |
| | THF14516 | 74° | 79° | 79° | 22.9 | 39.7 | 51.3 | 60.7 | 72.5 | 88.8 | 103 | 126 | 145 | 1.27 | 1.27 | |
| | THF17016 | 77° | 80° | 80° | 26.9 | 46.6 | 60.1 | 71.1 | 85.0 | 104 | 120 | 147 | 170 | 1.39 | 1.39 | |
| | THF19216 | 77° | 80° | 80° | 30.4 | 52.6 | 67.9 | 80.3 | 96.0 | 118 | 136 | 166 | 192 | 1.52 | 1.44 | |
| | THF20516 | 77° | 83° | 83° | 32.4 | 56.1 | 72.5 | 85.8 | 103 | 126 | 145 | 178 | 205 | 1.63 | 1.44 | |
| THF23016 | 76° | 83° | 83° | 36.4 | 63.0 | 81.3 | 96.2 | 115 | 141 | 163 | 199 | 230 | 1.75 | 1.44 | | |
| 2 1/2" | THF17020 | 85° | 85° | 85° | 26.9 | 46.6 | 60.1 | 71.1 | 85.0 | 104 | 120 | 147 | 170 | 1.33 | 1.33 | 6.48 |
| | THF19020 | 70° | 73° | 73° | 30.0 | 52.0 | 67.2 | 79.5 | 95.0 | 116 | 134 | 165 | 190 | 1.42 | 1.42 | |
| | THF20520 | 72° | 75° | 73° | 32.4 | 56.1 | 72.5 | 85.8 | 103 | 126 | 145 | 178 | 205 | 1.47 | 1.47 | |
| | THF23020 | 76° | 78° | 78° | 36.4 | 63.0 | 81.3 | 96.2 | 115 | 141 | 163 | 199 | 230 | 1.58 | 1.58 | |
| | THF28020 | 79° | 80° | 80° | 44.3 | 76.7 | 99.0 | 117 | 140 | 171 | 198 | 242 | 280 | 1.81 | 1.75 | |
| | THF32020 | 83° | 85° | 85° | 50.6 | 87.6 | 113 | 134 | 160 | 196 | 226 | 277 | 320 | 2.02 | 1.75 | |
| | THF34020 | 87° | 90° | 90° | 53.8 | 93.1 | 120 | 142 | 170 | 208 | 240 | 294 | 340 | 2.09 | 1.75 | |
| THF43520 | 92° | 95° | 95° | 68.8 | 119 | 154 | 182 | 218 | 266 | 308 | 377 | 435 | 2.44 | 1.75 | | |
| 3" | THF18524 | 58° | 58° | 58° | 29.3 | 50.7 | 65.4 | 77.4 | 92.5 | 113 | 131 | 160 | 185 | 1.28 | 1.28 | 8.88 |
| | THF23024 | 65° | 65° | 65° | 36.4 | 63.0 | 81.3 | 96.2 | 115 | 141 | 163 | 199 | 230 | 1.44 | 1.44 | |
| | THF28024 | 70° | 70° | 70° | 44.3 | 76.7 | 99.0 | 117 | 140 | 171 | 198 | 242 | 280 | 1.63 | 1.63 | |
| | THF32024 | 65° | 70° | 70° | 50.6 | 87.6 | 113 | 134 | 160 | 196 | 226 | 277 | 320 | 1.78 | 1.78 | |
| | THF34024 | 68° | 70° | 70° | 53.8 | 93.1 | 120 | 142 | 170 | 208 | 240 | 294 | 340 | 1.84 | 1.84 | |
| | THF41224 | 75° | 78° | 78° | 65.1 | 113 | 146 | 172 | 206 | 252 | 291 | 357 | 412 | 2.11 | 2.11 | |
| | THF46924 | 75° | 80° | 80° | 74.2 | 128 | 166 | 196 | 235 | 287 | 332 | 406 | 469 | 2.28 | 2.13 | |
| | THF52624 | 78° | 80° | 80° | 83.2 | 144 | 186 | 220 | 263 | 322 | 372 | 456 | 526 | 2.48 | 2.13 | |
| THF56424 | 78° | 80° | 80° | 89.2 | 154 | 199 | 236 | 282 | 345 | 399 | 488 | 564 | 2.59 | 2.13 | | |

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

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

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