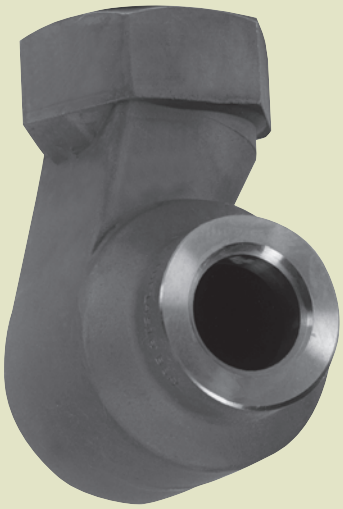
# TH

## *Tangential Inlet/Right Angle*



**Metal**

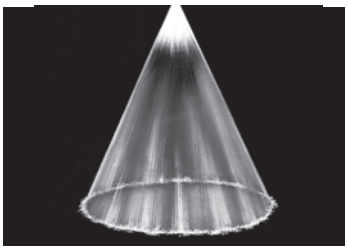
### DESIGN FEATURES

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

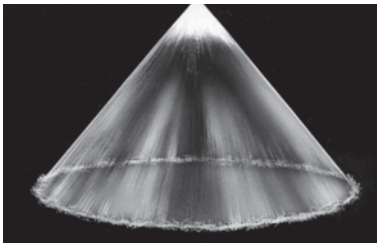
### SPRAY CHARACTERISTICS

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

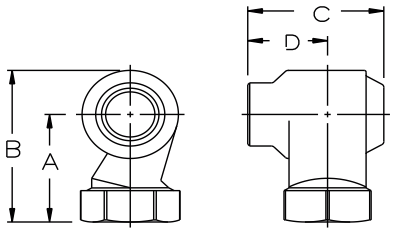
**Spray pattern:** Hollow Cone
**Spray angles:** Narrow to Medium
**Flow rates:** 15.3 to 2230 l/min



Hollow Cone - Narrow Angle



Hollow Cone - Medium Angle




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

### *TH Flow Rates and Dimensions*

*Hollow Cone, Narrow to Medium Spray Angles, 1" to 3" Pipe Sizes, BSP or NPT*

| Female Pipe Size | Nozzle Number | Spray Ang. 0.3 bar | Spray Ang. 1 bar | Spray Ang. 3 bar | K Factor | LITERS PER MINUTE @ BAR 0.2 bar | 0.3 bar | 0.5 bar | 0.7 bar | 1 bar | 1.5 bar | 2 bar | 3 bar | Approx. Orifice Dia. (mm) | Free Pass. Dia. (mm) | Dimensions (mm) (MAX) A | B | C | D | Wt. (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | THF1508 | 54° | 54° | 54° | 34.2 | 15.3 | 18.7 | 24.2 | 28.6 | 34.2 | 41.9 | 48.3 | 59.2 | 8.73 | 8.73 | 58.7 | 79.5 | 63.3 | 39.4 | 0.47 |
| | THF1808 | 56° | 56° | 56° | 41.0 | 18.3 | 22.5 | 29.0 | 34.3 | 41.0 | 50.2 | 58.0 | 71.0 | 9.53 | 9.53 | | | | | |
| | THF2308 | 63° | 66° | 66° | 52.4 | 23.4 | 28.7 | 37.1 | 43.9 | 52.4 | 64.2 | 74.1 | 90.8 | 11.1 | 11.1 | | | | | |
| | THF2708 | 66° | 70° | 70° | 61.5 | 27.5 | 33.7 | 43.5 | 51.5 | 61.5 | 75.4 | 87.0 | 107 | 11.9 | 11.9 | | | | | |
| | THF3208 | 68° | 72° | 71° | 72.9 | 32.6 | 39.9 | 51.6 | 61.0 | 72.9 | 89.3 | 103 | 126 | 14.35 | 13.9 | | | | | |
| | THF 3808 | 68° | 72° | 71° | 86.6 | 38.7 | 47.4 | 61.2 | 72.5 | 86.6 | 106 | 122 | 150 | 15.2 | 15.2 | | | | | |
| 1 1/4 | THF3210 | 66° | 66° | 66° | 72.9 | 32.6 | 39.9 | 51.6 | 61.0 | 72.9 | 89.3 | 103 | 126 | 13.08 | 13.9 | 74.2 | 99.3 | 75.4 | 46.7 | 0.75 |
| | THF3810 | 68° | 70° | 70° | 86.6 | 38.7 | 47.4 | 61.2 | 72.5 | 86.6 | 106 | 122 | 150 | 15.9 | 15.9 | | | | | |
| | THF4110 | 73° | 74° | 74° | 93.4 | 41.8 | 51.2 | 66.1 | 78.2 | 93.4 | 114 | 132 | 162 | 16.7 | 16.7 | | | | | |
| | THF5210 | 90° | 90° | 90° | 119 | 53.0 | 64.9 | 83.8 | 99.1 | 119 | 145 | 168 | 205 | 19.8 | 19.8 | | | | | |
| | THF7010 | 83° | 85° | 85° | 160 | 71.3 | 87.4 | 113 | 133 | 160 | 195 | 226 | 276 | 26.2 | 22.6 | | | | | |
| 1 1/2 | THF6112 | 58° | 60° | 60° | 139 | 62.2 | 76.1 | 98 | 116 | 139 | 170 | 197 | 241 | 19.4 | 19.4 | 75.7 | 105 | 92.0 | 57.9 | 0.85 |
| | THF7012 | 63° | 65° | 65° | 160 | 71.3 | 87.4 | 113 | 133 | 160 | 195 | 226 | 276 | 21.4 | 21.4 | | | | | |
| | THF7712 | 63° | 66° | 66° | 175 | 78.5 | 96.1 | 124 | 147 | 175 | 215 | 248 | 304 | 23.4 | 23.4 | | | | | |
| | THF9012 | 67° | 70° | 70° | 205 | 91.7 | 112 | 145 | 172 | 205 | 251 | 290 | 355 | 26.2 | 26.2 | | | | | |
| | THF12712 | 75° | 80° | 80° | 289 | 129 | 159 | 205 | 242 | 289 | 354 | 409 | 501 | 32.9 | 27.0 | | | | | |
| | THF14512 | 80° | 80° | 83° | 330 | 148 | 181 | 234 | 276 | 330 | 405 | 467 | 572 | 36.1 | 27.0 | | | | | |

*Flow Rate* ( $^{l}/_{min}$ ) = $K\sqrt{bar}$

**Standard Materials: Brass, Carbon Steel, and 316 Stainless Steel**

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

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

**Silicon Carbide, Flanged**

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

## *TH Flow Rates and Dimensions*

*Hollow Cone, Narrow to Medium Spray Angles, 1" to 3" Pipe Sizes, BSP or NPT*

| Female Pipe Size | Nozzle Number | Spray Ang. 0.3 bar | Spray Ang. 1 bar | Spray Ang. 3 bar | K Factor | LITERS PER MINUTE @ BAR 0.2 bar | 0.3 bar | 0.5 bar | 0.7 bar | 1 bar | 1.5 bar | 2 bar | 3 bar | Approx. Orifice Dia. (mm) | Free Pass. Dia. (mm) | Dimensions (mm) A | B | C (MAX) | D (MAX) | Wt. (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | THF8516 | 63° | 65° | 65° | 194 | 86.6 | 106 | 137 | 162 | 194 | 237 | 274 | 336 | 21.8 | 21.8 | 93.2 | 132 | 109 | 64.5 | 1.43 |
| | THF10516 | 65° | 67° | 67° | 239 | 107 | 131 | 169 | 200 | 239 | 293 | 338 | 414 | 25.4 | 25.4 | | | | | |
| | THF12516 | 68° | 70° | 70° | 285 | 127 | 156 | 201 | 238 | 285 | 349 | 403 | 493 | 29.0 | 29.0 | | | | | |
| | THF14516 | 74° | 79° | 79° | 330 | 148 | 181 | 234 | 276 | 330 | 405 | 467 | 572 | 32.1 | 32.1 | | | | | |
| | THF17016 | 77° | 80° | 80° | 387 | 173 | 212 | 274 | 324 | 387 | 474 | 548 | 671 | 35.3 | 35.3 | | | | | |
| | THF19216 | 77° | 80° | 80° | 438 | 196 | 240 | 309 | 366 | 438 | 536 | 619 | 758 | 38.5 | 36.5 | | | | | |
| | THF20516 | 77° | 83° | 83° | 467 | 209 | 256 | 330 | 391 | 467 | 572 | 661 | 809 | 41.3 | 36.5 | | | | | |
| | THF23016 | 76° | 83° | 83° | 524 | 234 | 287 | 371 | 439 | 524 | 642 | 741 | 908 | 44.5 | 36.5 | | | | | |
| 2 1/2 | THF17020 | 85° | 85° | 85° | 387 | 173 | 212 | 274 | 324 | 387 | 474 | 548 | 671 | 33.7 | 33.7 | 126 | 173 | 143 | 88.1 | 2.94 |
| | THF19020 | 70° | 73° | 73° | 433 | 194 | 237 | 306 | 362 | 433 | 530 | 612 | 750 | 36.1 | 36.1 | | | | | |
| | THF20520 | 72° | 75° | 73° | 467 | 209 | 256 | 330 | 391 | 467 | 572 | 661 | 809 | 37.3 | 37.3 | | | | | |
| | THF23020 | 76° | 78° | 78° | 524 | 234 | 287 | 371 | 439 | 524 | 642 | 741 | 908 | 40.1 | 40.1 | | | | | |
| | THF28020 | 79° | 80° | 80° | 638 | 285 | 349 | 451 | 534 | 638 | 781 | 902 | 1105 | 46.0 | 44.5 | | | | | |
| | THF32020 | 83° | 85° | 85° | 729 | 326 | 399 | 516 | 610 | 729 | 893 | 1031 | 1263 | 51.2 | 44.5 | | | | | |
| | THF34020 | 87° | 90° | 90° | 775 | 347 | 424 | 548 | 648 | 775 | 949 | 1096 | 1342 | 53.2 | 44.5 | | | | | |
| | THF43520 | 92° | 95° | 95° | 991 | 443 | 543 | 701 | 829 | 991 | 1214 | 1402 | 1717 | 61.9 | 44.5 | | | | | |
| 3 | THF18524 | 58° | 58° | 58° | 422 | 189 | 231 | 298 | 353 | 422 | 516 | 596 | 730 | 32.5 | 32.5 | 146 | 201 | 162 | 99.0 | 4.03 |
| | THF23024 | 65° | 65° | 65° | 524 | 234 | 287 | 371 | 439 | 524 | 642 | 741 | 908 | 36.5 | 36.5 | | | | | |
| | THF28024 | 70° | 70° | 70° | 638 | 285 | 349 | 451 | 534 | 638 | 781 | 902 | 1110 | 41.3 | 41.3 | | | | | |
| | THF32024 | 65° | 70° | 70° | 729 | 326 | 399 | 516 | 610 | 729 | 893 | 1030 | 1260 | 45.2 | 45.2 | | | | | |
| | THF34024 | 68° | 70° | 70° | 775 | 347 | 424 | 548 | 648 | 775 | 949 | 1100 | 1340 | 46.8 | 46.8 | | | | | |
| | THF41224 | 75° | 78° | 78° | 939 | 420 | 514 | 664 | 786 | 939 | 1150 | 1330 | 1630 | 53.6 | 53.6 | | | | | |
| | THF46924 | 75° | 80° | 80° | 1070 | 478 | 585 | 756 | 894 | 1070 | 1310 | 1510 | 1850 | 57.9 | 54.0 | | | | | |
| | THF52624 | 78° | 80° | 80° | 1200 | 536 | 657 | 848 | 1000 | 1200 | 1470 | 1700 | 2080 | 63.1 | 54.0 | | | | | |
| | THF56424 | 78° | 80° | 80° | 1290 | 575 | 704 | 909 | 1080 | 1290 | 1570 | 1820 | 2230 | 65.9 | 54.0 | | | | | |

*Flow Rate* ( $^{l}/_{min}$ ) $= K\sqrt{bar}$

**Standard Materials: Brass, Carbon Steel, and 316 Stainless Steel**

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

CALL 413-772-0846
Call for the name of your nearest BETE representative.