

SpiralAir®

High-flow Air Atomizing

DESIGN FEATURES

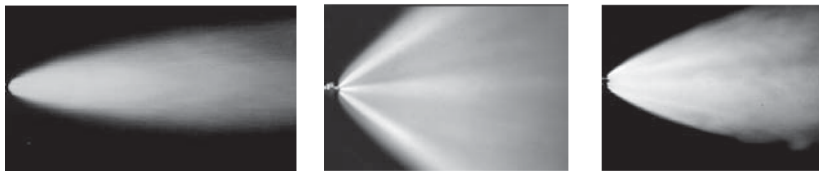
- A two-fluid nozzle using any gas as the atomizing fluid
- Three-stage atomization for highest performance
- Designed for high reliability in extremely hostile environments
- Efficient design reduces compressed air consumption

SPRAY CHARACTERISTICS

- Spray patterns:** Full Cone and Flat Fan
- Spray angles:** 20° to 90°
(Other angles available by special order)
- Flow rates:** 2.0 to 80 l/min



1 1/2" SA (Set-up #) - A - 00

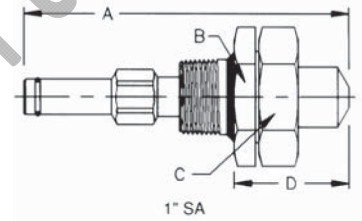


Narrow Round 20°

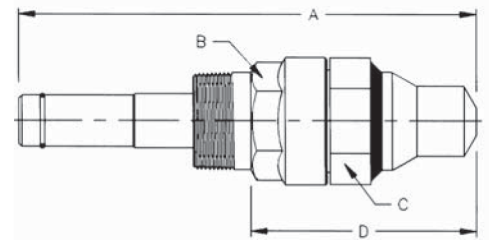
Wide Round 90°

Flat Fan 60°

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



1" SA (Set-up #) - A - 00



1 1/2" SA (Set-up #) - A - 00

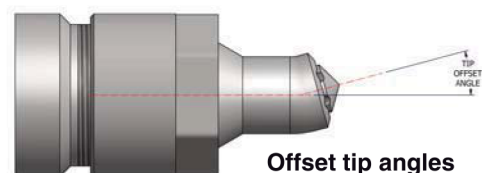
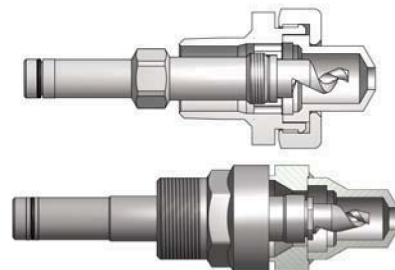
SpiralAir Spray Set-up, Spiral Tip and Dimensions

| Pipe Size | Spray Set-up No. | Spiral Tip No. | Spray Angle | Approx. Spray Type | Free Pass. Dia. (mm) | Pipe Size | Dimensions (mm) | | | | Wt. (Kg) |
|-----------|------------------|----------------|-------------|--------------------|----------------------|-----------|-----------------|------|------|------|----------|
| | | | | | | | A | B | C | D | |
| 1" | SA 101 | 14 | 20° | Narrow Round | 4.83 | 1 | 148 | 50.8 | 50.8 | 50.8 | 0.64 |
| | SA 308 | | 90° | Wide Round | 2.74 | | | | | | |
| | SA 310 | | 60° | Wide Round | 2.74 | | | | | | |
| | SA 402 | 20 | 90° | Flat Fan | 4.22 | | | | | | |
| | SA 404 | | 60° | Flat Fan | 4.22 | | | | | | |
| | SA 103 | 20 | 20° | Narrow Round | 7.14 | | | | | | |
| | SA 307 | | 90° | Wide Round | 3.48 | | | | | | |
| | SA 309 | | 60° | Wide Round | 3.48 | | | | | | |
| SA 401 | 90° | | Flat Fan | 5.21 | | | | | | | |
| SA 403 | 60° | | Flat Fan | 5.21 | | | | | | | |
| 1 1/2" | SA 2100 | 28 | 20° | Narrow Round | 9.27 | 1 1/2 | 229 | 50.8 | 55.6 | 113 | 1.5 |
| | SA 2300 | | 90° | Wide Round | 5.41 | | | | | | |
| | SA 2301 | | 60° | Wide Round | 5.41 | | | | | | |

Standard Materials: 316 Stainless Steel with optional Cobalt Alloy 6 wear components.

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

Larger sizes and flow rates available upon request.

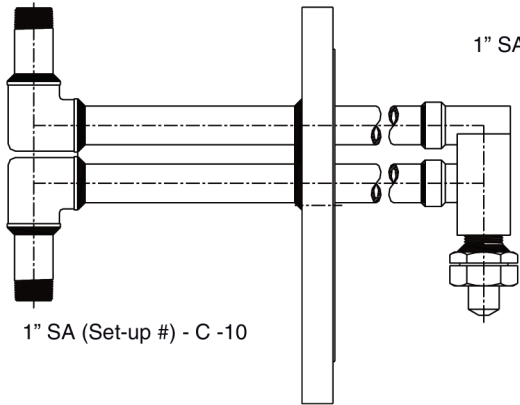
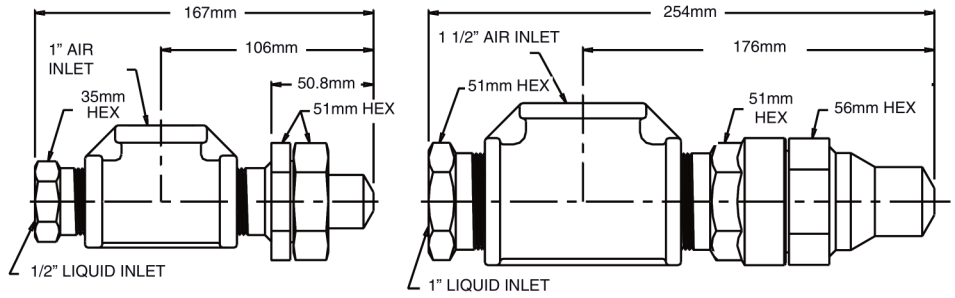


Offset tip angles available upon request

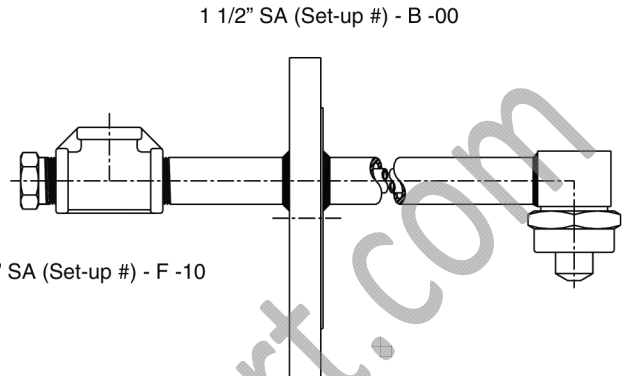
AIR ATOMIZING

The SpiralAir can be configured to fit any installation requirement. The examples shown are just a few of the custom assemblies available. For more information, contact BETE Applications Engineering.

A guide with additional engineering data about the SpiralAir series is available on request.

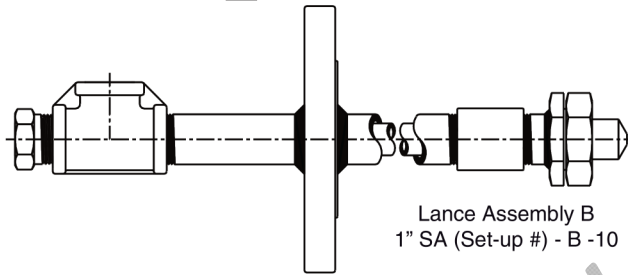


1" SA (Set-up #) - B -00



1 1/2" SA (Set-up #) - B -00

1" SA (Set-up #) - F -10



Lance Assembly B
1" SA (Set-up #) - B -10

Since very small variations in liquid pressure produce large variations in liquid flow, BETE recommends using a metering pump or other flow metering device to control the liquid flow.

AIR ATOMIZING

SpiralAir Set-Up Flow Rates
Narrow, Wide and Flat Fan Patterns 1" and 1 1/2" BSP or NPT

| BSP NPT | Spiral Tip Rating | 2.0 bar air | | | 3.0 bar air | | | 4.0 bar air | | | 5.0 bar air | | | 6.0 bar air | | | 7.0 bar air | | |
|------------|-------------------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|-------------------|-----------------|-----------------------------|
| | | liquid (l/min) | liquid (bar) | air (Nm ³ /h) | liquid (l/min) | liquid (bar) | air (Nm ³ /h) | liquid (l/min) | liquid (bar) | air (Nm ³ /h) | liquid (l/min) | liquid (bar) | air (Nm ³ /h) | liquid (l/min) | liquid (bar) | air (Nm ³ /h) | liquid (l/min) | liquid (bar) | air (Nm ³ /h) |
| 1" | 14 | 2 | 1.8 | 47.1 | 2 | 2.7 | 77.9 | 2 | 3.7 | 110.3 | 2 | 4.7 | 144.0 | 2 | 5.9 | 179.2 | 2 | 7.1 | 215.8 |
| | | 3 | 1.9 | 36.1 | 3 | 2.8 | 59.8 | 3 | 3.8 | 84.6 | 3 | 4.8 | 110.5 | 3 | 6.0 | 137.5 | 3 | 7.2 | 165.7 |
| | | 4 | 2.0 | 29.9 | 4 | 2.9 | 49.6 | 4 | 3.9 | 70.1 | 4 | 4.9 | 91.6 | 4 | 6.1 | 114.0 | 4 | 7.3 | 137.3 |
| | | 5 | 2.1 | 25.8 | 5 | 3.0 | 42.8 | 5 | 4.0 | 60.6 | 5 | 5.0 | 79.2 | 5 | 6.2 | 98.6 | 5 | 7.4 | 118.7 |
| | | 6 | 2.1 | 22.9 | 6 | 3.1 | 38.0 | 6 | 4.1 | 53.8 | 6 | 5.1 | 70.3 | 6 | 6.3 | 87.5 | 6 | 7.5 | 105.4 |
| | | 7 | 2.2 | 20.7 | 7 | 3.1 | 34.4 | 7 | 4.1 | 48.7 | 7 | 5.2 | 63.6 | 7 | 6.4 | 79.1 | 7 | 7.6 | 95.3 |
| | | 8 | 2.3 | 19.0 | 8 | 3.2 | 31.5 | 8 | 4.2 | 44.6 | 8 | 5.3 | 58.3 | 8 | 6.5 | 72.5 | 8 | 7.7 | 87.4 |
| | | 9 | 2.3 | 17.6 | 9 | 3.3 | 29.2 | 9 | 4.3 | 41.3 | 9 | 5.4 | 54.0 | 9 | 6.5 | 67.2 | 9 | 7.8 | 80.9 |
| | | 10 | 2.4 | 16.4 | 10 | 3.3 | 27.2 | 10 | 4.3 | 38.5 | 10 | 5.4 | 50.4 | 10 | 6.6 | 62.7 | 10 | 7.9 | 75.5 |
| | | 11 | 2.4 | 15.4 | 11 | 3.4 | 25.6 | 11 | 4.4 | 36.2 | 11 | 5.5 | 47.3 | 11 | 6.7 | 58.9 | 11 | 7.9 | 71.0 |
| | | 12 | 2.4 | 14.6 | 12 | 3.4 | 24.2 | 12 | 4.4 | 34.2 | 12 | 5.6 | 44.7 | 12 | 6.8 | 55.7 | 12 | 8.0 | 67.1 |
| | | 1" | 20 | 4 | 1.8 | 61.9 | 4 | 2.6 | 94.4 | 4 | 3.4 | 127.2 | 4 | 4.3 | 160.3 | 4 | 5.2 | 193.7 | 4 |
| 8 | 2.0 | | | 43.0 | 8 | 2.7 | 65.4 | 8 | 3.6 | 88.1 | 8 | 4.5 | 111.0 | 8 | 5.4 | 134.1 | 8 | 6.4 | 157.5 |
| 11 | 2.1 | | | 36.4 | 11 | 2.9 | 55.3 | 11 | 3.7 | 74.4 | 11 | 4.6 | 93.8 | 11 | 5.6 | 113.3 | 11 | 6.6 | 133.0 |
| 15 | 2.2 | | | 30.9 | 15 | 3.0 | 46.9 | 15 | 3.8 | 63.2 | 15 | 4.8 | 79.5 | 15 | 5.7 | 96.1 | 15 | 6.7 | 112.8 |
| 19 | 2.3 | | | 27.3 | 19 | 3.1 | 41.4 | 19 | 4.0 | 55.7 | 19 | 4.9 | 70.2 | 19 | 5.9 | 84.8 | 19 | 6.9 | 99.5 |
| 23 | 2.4 | | | 24.7 | 23 | 3.2 | 37.5 | 23 | 4.1 | 50.4 | 23 | 5.0 | 63.4 | 23 | 6.0 | 76.6 | 23 | 7.0 | 89.9 |
| 26 | 2.5 | | | 23.1 | 26 | 3.3 | 35.1 | 26 | 4.2 | 47.2 | 26 | 5.1 | 59.4 | 26 | 6.1 | 71.8 | 26 | 7.1 | 84.2 |
| 30 | 2.5 | | | 21.5 | 30 | 3.4 | 32.6 | 30 | 4.2 | 43.8 | 30 | 5.2 | 55.1 | 30 | 6.1 | 66.5 | 30 | 7.2 | 78.1 |
| 34 | 2.6 | 20.1 | 34 | 3.4 | 30.5 | 34 | 4.3 | 41.0 | 34 | 5.2 | 51.5 | 34 | 6.2 | 62.2 | 34 | 7.2 | 73.1 | | |
| 38 | 2.6 | 19.0 | 38 | 3.5 | 28.7 | 38 | 4.4 | 38.6 | 38 | 5.3 | 48.6 | 38 | 6.3 | 58.7 | 38 | 7.3 | 68.9 | | |
| 1 1/2" | 28 | 40 | 3.4 | 67.2 | 40 | 4.3 | 104.7 | 40 | 5.3 | 147.2 | 40 | 6.3 | 194.6 | 40 | 7.4 | 247.0 | | | |
| | | 45 | 3.5 | 61.3 | 45 | 4.4 | 95.6 | 45 | 5.4 | 134.4 | 45 | 6.4 | 177.7 | 45 | 7.5 | 225.5 | | | |
| | | 50 | 3.5 | 56.5 | 50 | 4.4 | 88.2 | 50 | 5.4 | 123.9 | 50 | 6.5 | 163.8 | 50 | 7.6 | 207.9 | | | |
| | | 55 | 3.6 | 52.5 | 55 | 4.5 | 81.9 | 55 | 5.5 | 115.2 | 55 | 6.5 | 152.2 | 55 | 7.6 | 193.1 | | | |
| | | 60 | 3.6 | 49.0 | 60 | 4.6 | 76.6 | 60 | 5.6 | 107.7 | 60 | 6.6 | 142.3 | 60 | 7.7 | 180.5 | | | |
| | | 65 | 3.7 | 46.1 | 65 | 4.6 | 72.0 | 65 | 5.6 | 101.3 | 65 | 6.7 | 133.8 | 65 | 7.8 | 169.7 | | | |
| | | 70 | 3.7 | 43.5 | 70 | 4.7 | 68.0 | 70 | 5.7 | 95.6 | 70 | 6.7 | 126.4 | 70 | 7.8 | 160.2 | | | |
| | | 75 | 3.8 | 41.2 | 75 | 4.7 | 64.5 | 75 | 5.7 | 90.7 | 75 | 6.8 | 119.8 | 75 | 7.9 | 151.9 | | | |
| 80 | 3.8 | 39.2 | 80 | 4.7 | 61.4 | 80 | 5.7 | 86.3 | 80 | 6.8 | 114.0 | 80 | 8.0 | 144.5 | | | | | |

Standard Materials: 316 Stainless Steel with optional Cobalt Alloy 6 wear components

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