

CLUMP

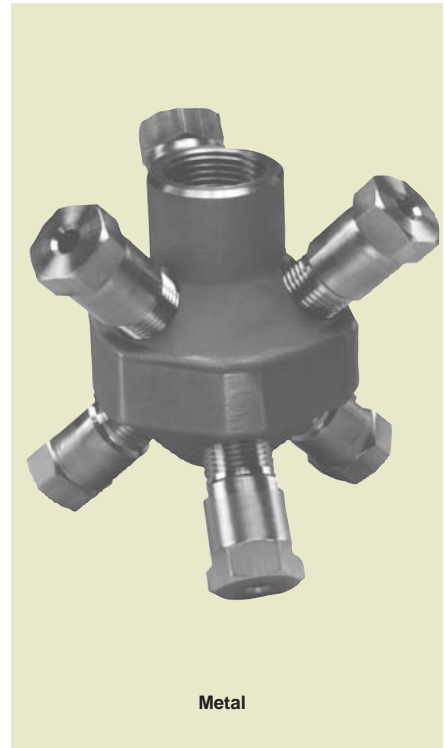
Tank Washing Nozzles

DESIGN FEATURES

- Each nozzle in the stationary cluster is a BETE clog-resistant full cone nozzle of the MaxiPass™ series
- Can be supplied with various other BETE nozzles for any desired application
- Female connection

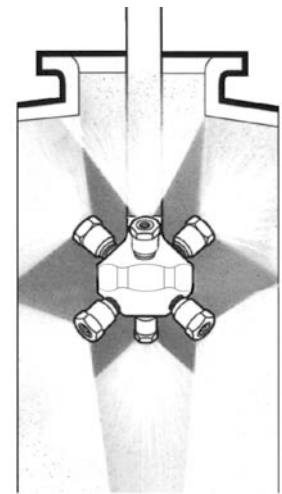
SPRAY CHARACTERISTICS

- Spherical omnidirectional coverage
 - Six nozzles arranged in cluster to project spray in all directions
- Flow rates:** 28.1 to 290 l/min (Special flow rates available)



Metal

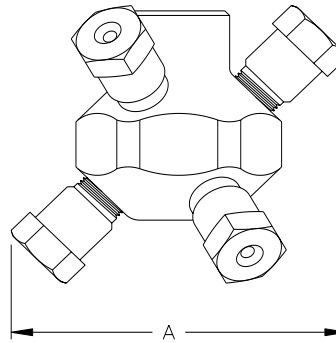
WHIRL



Typical CLUMP installation

CLUMP Coverage Chart When spraying at 3 bar

| Female Pipe Size | Nozzle Number | Scrubbing Diameter (mm) | Rinsing Diameter (mm) |
|------------------|---------------|-------------------------|-----------------------|
| 3/4" | CLUMP125 | 1200 | 2400 |
| | CLUMP156 | 1200 | 3700 |
| | CLUMP187 | 1800 | 4300 |
| 1" | CLUMP187 | 1800 | 4300 |
| | CLUMP218 | 2400 | 4300 |
| | CLUMP250 | 3000 | 4900 |



CLUMP Flow Rates and Dimensions

Spherical, 360° Spray Angle, 3/4" and 1" Pipe Size, BSP or NPT

| Female Pipe Size | Nozzle Number | K Factor | LITERS PER MINUTE @ BAR | | | | | | Minimum Entrance Opening (mm) A | Weight (kg) | |
|------------------|---------------|----------|-------------------------|-------|-------|-------|-------|-------|---------------------------------|-------------|-------|
| | | | 0.7 bar | 1 bar | 2 bar | 3 bar | 4 bar | 5 bar | | Metal | Plas. |
| 3/4" | CLUMP125 | 33.2 | 28.1 | 33.2 | 46.0 | 55.6 | 63.7 | 70.8 | 120 | 1.29 | 0.22 |
| | CLUMP156 | 52.7 | 44.6 | 52.7 | 73.2 | 88.2 | 101 | 112 | | | |
| | CLUMP187 | 76.2 | 65.7 | 76.2 | 106 | 128 | 146 | 163 | | | |
| 1" | CLUMP187 | 76.2 | 65.7 | 76.2 | 106 | 128 | 146 | 163 | 146 | 2.34 | 0.40 |
| | CLUMP218 | 121 | 103 | 121 | 168 | 203 | 232 | 258 | | | |
| | CLUMP250 | 136 | 115 | 136 | 188 | 228 | 261 | 290 | | | |

$$\text{Flow Rate (l/min)} = K (\text{bar})^{0.47}$$

Standard Materials: 316 Stainless Steel. Other materials available on request. 3/4" CLUMP not available in PTFE. See chart 21 for complete list.

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TO ORDER: Specify pipe size, connection type, nozzle number, spray angle, and material