## FULL CONE NOZZLES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| AA   | Short body  | Thread size: 3/4" - 3"  
|      |             | Spray angle: 90°, 120°  
|      |             | Capacity: 30.5 - 775 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| AE   | Flange      | Flange size: 80 - 250mm  
|      |             | Spray angle: 30°, 120°  
|      |             | Capacity: 340 - 9410 l/min  
|      |             | Materials: AISI 316L, Cast iron, Carbon steel  |
| AH   | Fine mist   | Thread size: 1/4" - 1/2"  
|      |             | Spray angle: 65°, 85°  
|      |             | Capacity: 2.27 - 15.4 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| AL   | Non clogging| Thread size: 3/8" - 2"  
|      |             | Spray angle: 60°, 90°, 120°  
|      |             | Capacity: 6.27 - 2780 l/min  
|      |             | Materials: AISI 316L, PP, PVDF  |
| AT   | Tangential  | Thread size: 1/8" - 1"  
|      |             | Spray angle: 60°, 90°, 120°  
|      |             | Capacity: 2.30 - 122 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BA   | Cleanable   | Thread size: 1/8" - 1/2"  
|      |             | Spray angle: 60°, 120°  
|      |             | Capacity: 0.74 - 36 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BB   | Cleanable   | Thread size: 1/8" - 1/2"  
|      |             | Spray angle: 60°  
|      |             | Square spray pattern  
|      |             | Capacity: 2.7 - 27 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BC   | Cleanable   | Thread size: 1/8" - 1/2"  
|      |             | Spray angle: 60°, 120°  
|      |             | Capacity: 0.74 - 36 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, Hastelloy C22  |
| BD   | Cleanable   | Thread size: 1/8" - 1/2"  
|      |             | Spray angle: 60°, 120°  
|      |             | Square spray pattern  
|      |             | Capacity: 2.7 - 27 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BE   | Large capacity| Thread size: 3/4" - 6"  
|      |             | Spray angle: 50° - 120°  
|      |             | Capacity: 22 - 7850 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, Hastelloy C22  |
| BF   | Large capacity| Thread size: 3/4" - 6"  
|      |             | Spray angle: 80° - 115°  
|      |             | Capacity: 50 - 4200 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, Hastelloy C22, PVC, PTFE  |
| BG   | Large capacity| Thread size: 3/4" - 6"  
|      |             | Spray angle: 92°  
|      |             | Capacity: 1390 - 11300 l/min  
|      |             | Materials: AISI 316L, Cast iron, Carbon steel  |
| BH   | Large capacity| Thread size: 3/4" - 6"  
|      |             | Spray angle: 92°  
|      |             | Capacity: 1390 - 11300 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, Hastelloy C22, PVC, PTFE  |
| BL   | Large capacity| Thread size: 4° - 10°  
|      |             | Spray angle: 30°  
|      |             | Capacity: 27 - 472 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, PVC, PP  |
| BR   | Narrow spray| Thread size: 1/8" - 3/4"  
|      |             | Spray angle: 15°, 30°  
|      |             | Capacity: 0.20 - 35.2 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, PVC, PP  |
| BS   | Narrow spray| Thread size: 1/8" - 3/4"  
|      |             | Spray angle: 15°, 30°  
|      |             | Capacity: 0.98 - 35.2 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, PVC, PP  |
| BT   | Narrow spray| Thread size: 1" - 21/2"  
|      |             | Spray angle: 30°  
|      |             | Capacity: 27 - 472 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass, PTFE, PVC, PP  |
| BV   | Narrow spray| Thread size: 1/8" - 3/4"  
|      |             | Spray angle: 60°, 120°  
|      |             | Capacity: 1.5 - 36 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BW   | Tangential  | Thread size: 1/8" - 1/2"  
|      |             | Spray angle: 60°, 120°  
|      |             | Capacity: 1.5 - 36 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BX   | Three-piece | Spray angle: 60°  
|      |             | Capacity: 1.49 - 7.43 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |
| BJ   | Three-piece | Spray angle: 60°  
|      |             | Capacity: 1.49 - 7.43 l/min  
|      |             | Materials: AISI 303, AISI 316L, Brass  |

Unless otherwise specified, the maximum and minimum capacities of every range refer to the pressure of 3.0 bar.
INDEX

FULL CONE NOZZLES

CAS Cluster nozzle
- Standard spray
- Thread size: 1/2" – 2"
- Spray angle: 70°
- Capacity: 1.53 – 245 l/min
- Materials: AISI 303, AISI 316L, Brass, Nickel-plated brass

CAY Cluster nozzle
- Wide spray angle
- Thread size: 1/2" – 2"
- Spray angle: 130°
- Capacity: 1.53 – 450 l/min
- Materials: AISI 303, AISI 316L, Brass

CH 7 / 13 cluster nozzle
- Thread size: 3/4" – 2"
- Spray angle: 200°, 360°
- Capacity: 0.26 – 481 l/min
- Materials: AISI 303, AISI 316L, Brass

D Two-piece nozzle
- Thread size: 1/8" – 1/2"
- Spray angle: 45°, 60°, 90°, 120°
- Capacity: 0.78 – 37 l/min
- Materials: AISI 303, AISI 316L, Brass

D Large capacity nozzle
- Thread size: 3/4" – 4"
- Spray angle: 60°, 90°, 120°
- Capacity: 23.5 – 1470 l/min
- Materials: AISI 303, AISI 316L, Brass

E Spiral nozzle
- Thread size: 1/4" – 4"
- Spray angle: 60°, 90°, 120°, 150°, 180°
- Capacity: 5.5 – 4120 l/min
- Materials: AISI 316L, Brass, PP, PVC, PTFE, PVDF, Hastelloy C22

E-X Spiral nozzle
- Thread size: 3/8" – 4"
- Spray angle: 120°
- Capacity: 23.5 – 4120 l/min
- Materials: AISI 316L, Brass, PP, PVC, PTFE, PVDF, Hastelloy C22

ES Silicon carbide nozzle
- Spray angle: 90°, 120°, 150°
- Capacity: 23.5 – 4120 l/min
- Material: Silicon carbide

STRAIGHT JET NOZZLES

F High impact nozzle
- Thread size: 1/8", 1/4"
- Spray angle: 0°
- Capacity: 3.4 – 68.2 l/min (100 bar)
- Material: AISI 416

GDA Needle jet nozzles
- Thread size: 1/4", 3/16", 24NPSF
- Spray angle: 0°
- Capacity: 0.12 – 7.3 l/min (10 bar)
- Materials: AISI 303 / AISI 316L (with ruby insert)

GFA Self-cleaning nozzles
- Spray angle: 0°
- Capacity: 1.0 – 3.3 l/min
- Material: AISI 316L

GEA Disc nozzle
- Spray angle: 0°
- Capacity: 0.17 – 3.1 l/min
- Materials: AISI 303 with ruby insert, AISI 316L with ruby insert, AISI 316L with diamond insert

GMA Paper web trimmers
- Thread size: 3/8"
- Spray angle: 0°
- Capacity: 0.08 – 2.2 l/min
- Materials: AISI 303 with ruby insert, AISI 316L with ruby insert

J General purpose nozzle
- Thread size: 1/8", 1/4"
- Spray angle: 0°
- Capacity: 0.17 – 47 l/min
- Materials: AISI 303, AISI 316L, Brass, AISI 316L with ruby insert, AISI 316L with diamond insert

Unless otherwise specified, the maximum and minimum capacities of every range refer to the pressure of 3.0 bar.
FLAT FAN NOZZLES

**F** High impact
- Thread size: 1/8" - 1/4"
- Spray angle: 0°, 15°, 25°, 40°, 65°
- Capacity: 3.450 - 135 l/min (100 bar)
- Material: AISI 416

**FX** High impact
- Spray angle: 0°, 15°, 25°, 40°, 65°
- Capacity: 3.450 - 68.2 l/min (100 bar)
- Material: AISI 416

**GA** Short body
- Thread size: 1/4", 3/8"
- Spray angle: 45°, 90°, 120°
- Capacity: 3.10 - 76 l/min
- Materials: AISI303, AISI 316L, Brass, PVC, PP, PTFE

**GE** Disc nozzles
- Spray angle: 60°, 75°
- Capacity: 0.90 - 23.0 l/min
- Materials: AISI 316Ti

**GF** Self cleaning nozzles
- Spray angle: 0° - 80°
- Capacity: 1.0 - 13.9 l/min
- Material: AISI 316L

**GX** Low capacity
- Spray angle: 25° - 110°
- Capacity: 0.05 - 1.6 l/min
- Materials: AISI303, AISI 316L, Brass

**GX** Std / large capacity
- Spray angle: 0° - 120°
- Materials: AISI 303, AISI 316L, Brass, PVDF

**J** Low capacity
- Thread size: 1/8", 1/4"
- Spray angle: 25° - 110°
- Capacity: 0.95 - 1.6 l/min
- Materials: AISI 303, AISI 316L, Brass

**J** Standard capacity
- Thread size: 1/8", 3/8"
- Spray angle: 0° - 120°
- Capacity: 1.53 - 47 l/min
- Materials: AISI 303, AISI 316L, Brass, PVC, PTFE

**J** Large capacity
- Thread size: 1/2" - 1"
- Spray angle: 0° - 90°
- Capacity: 19.5 - 435 l/min
- Materials: AISI303, AISI 316L, Brass

**K** Large spray angle
- Thread size: 1/8", 1/4"
- Spray angle: 90° - 140°
- Capacity: 0.39 - 350 l/min
- Materials: AISI 303, AISI316L, Brass

**K** High impact
- Thread size: 1/8", 3/4"
- Spray angle: 15° - 50°
- Capacity: 1.63 - 78 l/min
- Materials: AISI 303, AISI 316L, Brass

**KX** Large spray angle
- Spray angle: 90° - 140°
- Capacity: 0.39 - 31 l/min
- Materials: AISI 303, AISI 316L, Brass

**Shower Pipe**

Unless otherwise specified, the maximum and minimum capacities of every range refer to the pressure of 3.0 bar.
HOLLOW CONE NOZZLES

PA  Large capacity
- Thread size: 3/8" – 2.1/2"
- Spray angle: 70° – 90°
- Capacity: 1.70 – 660 l/min
- Materials: AISI 316L, Brass

PB  Large capacity
- Thread size: 3/8" – 2.1/2"
- Spray angle: 130°
- Capacity: 3.00 – 660 l/min
- Materials: AISI 316L, Brass

PE  Standard capacity
- Thread size: 1/4" – 3/4"
- Spray angle: 70° – 120°
- Capacity: 0.39 – 63 l/min
- Materials: AISI 303, AISI 316L, Brass

PF  Standard capacity
- Thread size: 1/8" – 3/4"
- Spray angle: 50° – 120°
- Capacity: 0.39 – 94 l/min
- Materials: AISI 303, AISI 316L, Brass

PN  Moulded plastic
- Thread size: 3/8"
- Spray angle: 60° – 130°
- Capacity: 1.70 – 42 l/min
- Material: Fiberglass reinforced PP

PO  Moulded plastic
- Thread size: 3/8"
- Spray angle: 60° – 130°
- Capacity: 1.70 – 22 l/min
- Material: Fiberglass reinforced PP

PR  Large capacity
- Thread size: 3/4" – 1"
- Spray angle: 130°
- Capacity: 612 – 3850 l/min
- Materials: AISI 316L, Cast iron

PS  Moulded plastic
- Thread size: 3/8"
- Spray angle: 130°
- Capacity: 1.70 – 22 l/min
- Material: Fiberglass reinforced PP

PT  Quick connection
- Thread size: 1/4" – 1/2"
- Spray angle: 50° – 120°
- Capacity: 0.78 – 47 l/min
- Materials: AISI 303, AISI 316L, Brass

RA  Fine spray small passages
- Thread size: 1/8" – 1/2"
- Spray angle: 60° – 90°
- Capacity: 0.20 – 19.5 l/min
- Materials: AISI 303, AISI 316L, Brass

RB  Fine spray clog resistant
- Thread size: 3/8" – 1.1/2"
- Spray angle: 60° – 80°
- Capacity: 1.60 – 94 l/min
- Materials: AISI 303, AISI 316L Brass

RO  Non clogging
- Thread size: 1/2", 3/4"
- Spray angle: 130°
- Capacity: 8.1 – 164 l/min
- Materials: AISI 316L, Brass, Ni-plated brass (chemical)

RW  Low capacity
- Tip + nipple + locknut
- Spray angle: 80°
- Capacity: 3.6 – 99.6 l/hour
- Materials: AISI 303, AISI 316L, Brass

RX  Low capacity
- Thread size: 1/4"
- Spray angle: 80°
- Capacity: 3.6 – 99.6 l/hour
- Materials: AISI 303, AISI 316L, Brass

RZ  Low capacity
- Thread size: 1/4"
- Spray angle: 30° – 90°
- Capacity: 0.08 – 2.0 l/min
- Materials: AISI 303, AISI 316L, Brass

Unless otherwise specified, the maximum and minimum capacities of every range refer to the pressure of 3.0 bar.
AIR BLOWING NOZZLES

GZS Air & steam flat fan tips
- Thread size: 1/4" 
- Spray angle: 70° 
- Capacity: 3 – 31.5 Nm³/hour (2 bar) 
- Materials: AISI 303, AISI 316L, Brass

UEA D020 Air blow-off nozzles
- Thread size: 1/4" 
- Spray angle: 90° 
- Capacity: 20 Nm³/hour (3 bar) 
- Materials: Electroless Ni-plated aluminum, AISI 316L

UEA 0525 Air blow-off nozzles
- Thread size: 1/4" 
- Spray width: 48 mm 
- Capacity: 22 Nm³/hour (3 bar) 
- Material: POM

UEA 0527 Air blow-off nozzles
- Thread size: 1/4" 
- Spray width: 51 mm 
- Capacity: 22 Nm³/hour (3 bar) 
- Materials: Electroless Ni-plated aluminum, AISI 316L

UPB Mixing eductors
- Thread size: 3/8" – 2" 
- Capacity: 56 – 357 l/min 
- Materials: AISI 316L, PVDF, Fiberglass reinforced PP

UPD Mixing eductors
- Thread size: 3/4" – 2" 
- Capacity: 109 – 357 l/min 
- Materials: AISI 316L, Fiberglass reinforced PP

MIXING EDUCTORS

ASSEMBLY ACCESSORIES

VAZ Locknut
- Thread size: 3/8", 3/4", 1-1/4" 
- Materials: AISI 303, AISI1316, Brass, Fiberglass reinforced PP

ZAA Standard welding nipples
- Thread size: 3/8", 3/4" 
- Materials: AISI 303, AISI 316L, PP, PVDF

ZAC Dovetail welding nipples
- Thread size: 3/8", 3/4", 1-1/4" 
- Materials: AISI 303, AISI 316L, PP, PVDF

ZLA Standard threaded nipples
- Thread size: 1/8" – 1/2" 
- Materials: AISI 303, AISI1316L, Brass, PVC, PP, PVDF

ZPB Plastic pipe clamps
- Pipe size: 1/2" – 1-1/4" 
- Body: Fiberglass reinforced PP 
- O-ring: NBR 
- Metal Parts: AISI 304

ZPC Plastic bayonet pipe clamps
- Pipe size: 1/2" 
- Body: PVDF 
- O-ring: Viton 
- Material: AISI 316

ZPH Disk nozzle pipe clamp
- Pipe external diameter: 2" 
- Body: Fiberglass reinforced PP 
- O-ring: EPDM 
- Pin, bolt: AISI 316

ZPM Metal pipe clamps
- Pipe size: 1/2" – 2-1/2" 
- Body: AISI 304, Zinc coated steel 
- Gasket: EPDM 
- Nipple: AISI1316L, Brass

Unless otherwise specified, the maximum and minimum capacities of every range refer to the pressure of 3.0 bar.