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Spraytech[®]
Systems (India) Pvt. Ltd. 
The Flow Technologists

Industrial Spray Nozzles, Spray Systems & Accessories

Complete Solution for Spray Applications





Spraytech Systems (India) Pvt. Ltd. was started by Shri. Bapusaheb Kharade, in early 2000 as a Spray Nozzle Manufacturer for replacement market catering to Steel Industries. Primarily company was started in a 1000 sq. feet workshop & within a decade it is elaborated to 7000 sq. feet modern factory. An another factory is started at Indapur 100 kms. away from Pune with a area of 2,00,000 sq. feet is again a big achievement for the Organisation. Recently Spraytech has started one another factory at Rabale (Navi Mumbai) with area of 13000 sq. feet. All three factories are facilitated with next generation class CNC machines, heavy material handling equipments to serve raising market demands with no compromise with world class product quality. Along with this field of engineering we are entered in forging to serve respective product demands.

"Spraytech" is a leading organization & a good name in the market for mfg. of Spray Nozzles.

We attribute our success to our motivated and skilled work force who can accomplish job orders of varying magnitudes and complexities. We are proud to have esteemed customers who have entrusted their faith in us over the years.

The aim of our organization is customer satisfaction which is achieved through following objectives: Commitment to quality, Prompt response, Technological solutions, On time delivery, After sales service.

Our challenge is to meet the widely ranging delivery demands of an equally diverse customer base coupled with constant up gradation of production equipment and techniques to keep pace with new market trends and applications.

Test Rig - 1



- A) Testing Capacity : 200 M³/Hr
Total Pressure Drop : 2 Bar
- B) Testing capacity : 43 M³/Hr
Total Pressure Drop : 7 Bar

Test Rig - 2



- A) Testing capacity : 1-350 LPM
Total Pressure Drop : 10 Bar
- B) Testing capacity : 1-260 LPM
Total Pressure Drop : 9 Bar

Quality Policy

We at SPRAYTECH SYSTEMS INDIA PVT. LTD. are committed to achieve total Customer satisfaction through Design, Development, Manufacturing and Supply of consistent quality Industrial Spray Nozzles & Systems with aim of zero percentage rejection at customer's end while remaining cost effective and competitive. This shall be achieved through team work and continual improvement in all our areas of operation.

Vision

We are putting all our efforts to improve efficiency of our products with effective cost cutting. We are all committed to on time delivery, quality products, prompt after sales service and product technical support.

Mission

We provide hygienic working environment with all necessary facilities for better working environment. We encourage to safety measures to avoid troubles to workers and processes. Our customer is our first priority and we always try to serve best to our customer.



Spray Nozzle Selection Guide - by Application & Spray Pattern

| Category of Nozzles | Applications | Spray Patterns |
|-------------------------|---|----------------|
| FLAT SPRAY | Rinsing, High Pressure Cleaning, Granulation, Coating | |
| FULL CONE | Surface Spraying, Coating, Washing & Cooling of flue gases, Scrubbing | |
| MIST SPRAY NOZZLE | LDO firing in Boiler & Dust suppression. | |
| HOLLOW CONE | Fugitive dust suppression, Scrubbing essentially small droplet size, Coating | |
| OIL BURNER SPRAY NOZZLE | LDO firing in kilns of cement, sponge, Iron plants & Dust suppression. | |
| TANK WASHING | Cleaning of inside surface of barrels & tanks.CIP | |
| FINE ATOMIZING NOZZLE | Gas cooling, conditioning or humidifying applications, for improving the chemical reaction by increased contact surface | |
| AIR ATOMIZING NOZZLE | Coating, Atomizing of viscous liquids, Gas cooling, conditioning or humidifying, Chemical process engineering. Pan coating. Tablet coating, FBD Granulation | |

Droplet Size Selection

| Single Fluid Spray Nozzles | Liquid Pressure [barg] | | | | | |
|---|------------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | 1 | | 2 | | 3 | |
| | Flowrate V [l/min] | Droplet size [μm] | Flowrate V [l/min] | Droplet size [μm] | Flowrate V [l/min] | Droplet size [μm] |
| Inline Entry Hollow Cone Spray Nozzle | 0.10 | 110 | 0.10 | 130 | 0.17 | 110 |
| | 0.5 | 210 | 1.50 | 230 | 1.60 | 190 |
| Tangential Entry Hollow Cone Spray Nozzle | 0.10 | 290 | 1.00 | 330 | 1.60 | 230 |
| | 1.80 | 690 | 25 | 650 | 40 | 480 |
| Full Cone Spray Nozzle | 0.70 | 550 | 1.00 | 390 | 1.60 | 310 |
| | 18 | 1310 | 25 | 1090 | 40 | 760 |
| Multi-Tip Spray Nozzle | 0.90 | 190 | 1.25 | 185 | 2.00 | 140 |
| | 20 | 390 | 28 | 275 | 44 | 180 |
| Flat Spray Nozzle | 0.70 | 410 | 1.00 | 350 | 1.60 | 310 |
| | 18 | 1210 | 25 | 990 | 4.00 | 700 |

| Air Atomizing Spray Nozzles | Air / Water [Nm³/h:l/min] | | | | | |
|-----------------------------|---------------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | 1 | | 2 | | 3 | |
| | Flowrate V [l/min] | Droplet size [μm] | Flowrate V [l/min] | Droplet size [μm] | Flowrate V [l/min] | Droplet size [μm] |
| External / Internal Mix | As Per Ratio | 95 | As Per Ratio | 95 | As Per Ratio | 95 |

Formulas

Specific gravity (fluid) =

$$\frac{\text{Density of fluid (kg / m}^3\text{)}}{1000}$$

$$Q_{\text{fluid}} = Q_{\text{Water}} \times \frac{1}{\sqrt{\text{Specific gravity (fluid)}}}$$

$$Q_2 = Q_1 \times \sqrt{\frac{P_2}{P_1}}$$

Units Conversion Data

| Multiply | By | To Obtain |
|--------------------|---------|---------------------|
| Feet/sec | 18.29 | Metres/Min |
| Feet or Water | 0.0295 | Atmospheres |
| Feet or Water | 0.884 | Inches of Mercury |
| Feet or Water | 0.433 | Psi |
| Gallons | 3785 | Cm ³ |
| Gallons | 0.1337 | Ft ³ |
| Gallons | 0.83257 | Imperial Gallons |
| Gallons | 3.785 | Litres |
| Gallons/min | 0.06308 | Litres /sec |
| Imperial Gallons | 1.2 | Gallons |
| Horsepower | 1.014 | Horsepower (metric) |
| Horsepower | 33.000 | Foot pounds/min |
| Horsepower | 746 | Watts |
| Inches | 2.54 | Centimeters |
| Kg/cm ² | 14.22 | Psi |
| Kilo Watts | 1.340 | Horsepower |
| Litres | 1000 | Cm ³ |
| Litres | 0.264 | Gallons |
| Litres | 0.22 | Imperial Gallons |
| Litres | 33.8 | Ounces (Fluid) |

| Multiply | By | To Obtain |
|---------------|------------|-----------------------|
| Metres | 3.281 | Feet |
| Microns (μ) | 0.0394 | Thousandth of an inch |
| Miles/hr | 44.7 | Centimeters/sec |
| Miles/hr | 1.467 | Feet/sec |
| Millimetres | 0.0394 | Inches |
| Psi | 0.06895 | Atmospheres |
| Psi | 0.06895 | Bar |
| Psi | 2.307 | Feet of Water |
| Psi | 0.0703 | Kg/cm ² |
| Psi | 6.895 | KPA |
| Atmospheres | 1.013 | Bar |
| Atmospheres | 33.931 | Feet of water |
| Atmospheres | 1.0332 | Kg/cm ³ |
| Atmospheres | 101.3Kilo | Pascals (k Pa) |
| Atmospheres | 14.696 | Psi |
| Bar | 100 | KPA |
| Bar | 14.5 | Psi |
| Barrels (oil) | 42 | Galions |
| Centimeters | 0.3937 | Inches |
| Centi Stokes | Sp.gravity | Centi Poise |

| Multiply | By | To Obtain |
|-------------------------|------------------|---------------------|
| Cm ³ | 0.061 | in ³ |
| Cm ³ | 0.000264 | in ³ |
| Cm ³ | 0.001 | M ³ |
| Ft ³ | 1728 | Gallons |
| Ft ³ | 0.02832 | Litres |
| Ft ³ | 7.48 | Pounds (Water) |
| Ft ³ | 28.32 | Cm ³ |
| Ft ³ (water) | 62.43 | Gallons |
| In ³ | 16.39 | Litres |
| In ³ | 0.00433 | Minutes |
| In ³ | 0.164 | Degree (Fahrenheit) |
| M ³ | 35.31 | Degree (Celsius) |
| M ³ | 61.016 | Metres |
| M ³ | 264.2 | Gallons |
| M ³ | 1000 | Litres |
| Degree (Angle) | 60 | Ft ³ |
| Degree (Celsius) | (°C x 1.8) + 32 | In ³ |
| Degree (Fahrenheit) | (°F - 32) x 0.56 | Gallons |
| Feet | 0.3048 | Centimeters/sec |
| Feet/sec | 30.48 | Litres |

| Unit | bar | Pascal [Pa] = N/m ² | kg/cm ² = 1 at | psi | lb/sq.ft. |
|--------------------|----------|--------------------------------|---------------------------|---------|-----------|
| 1 bar | 1 | 100000 | 1.02 | 14.5 | 2089 |
| | -5 | | -5 | -5 | |
| 1 Pascal | 1x10 | 1 | 1.02x10 | 14.5x10 | 0.0209 |
| 1 at | | | | | |
| kg/cm ² | 0.9807 | 98070 | 1 | 14.22 | 2048 |
| 1 Psi | 0.06895 | 6895 | 0.07031 | 1 | 144 |
| | -3 | | -3 | -3 | |
| 1lb/sq.ft. | 0.479x10 | 47.9 | 0.4882x10 | 6.94x10 | 1 |

| Unit | l/s | l/min | m ³ /hr | Us-gal/min | Imp-gal/min |
|----------------------|---------|-------|--------------------|------------|-------------|
| 1 l/s | 1 | 60 | 3.6 | 15.85 | 13.2 |
| 1 l/min | 0.01667 | 1 | 0.06 | 0.2642 | 0.22 |
| 1 m ³ /hr | 0.28 | 16.67 | 1 | 4.4 | 3.66 |
| 1 Us-gal/min | 0.0631 | 3.785 | 0.227 | 1 | 0.8327 |
| 1 Imp-gal/min | 0.076 | 4.546 | 0.273 | 1.201 | 1 |

| Theoretical spray Width (in mm) at various height from nozzle tip | | | | | | | | | | | | |
|---|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Spray Angle | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 1000 |
| 5° | 4 | 9 | 13 | 18 | 22 | 26 | 35 | 44 | 52 | 61 | 70 | 87 |
| 10° | 9 | 18 | 26 | 35 | 44 | 53 | 70 | 88 | 105 | 123 | 140 | 175 |
| 15° | 13 | 26 | 40 | 53 | 66 | 79 | 105 | 132 | 158 | 184 | 211 | 263 |
| 20° | 18 | 35 | 53 | 71 | 88 | 106 | 141 | 176 | 212 | 247 | 282 | 353 |
| 25° | 22 | 44 | 67 | 89 | 111 | 133 | 177 | 222 | 266 | 310 | 355 | 443 |
| 30° | 27 | 54 | 80 | 107 | 134 | 161 | 214 | 268 | 322 | 375 | 429 | 536 |
| 35° | 32 | 63 | 95 | 126 | 158 | 189 | 252 | 315 | 378 | 441 | 505 | 631 |
| 40° | 36 | 73 | 109 | 146 | 182 | 218 | 291 | 364 | 437 | 510 | 582 | 728 |
| 45° | 41 | 83 | 124 | 166 | 207 | 249 | 331 | 414 | 497 | 580 | 663 | 828 |
| 50° | 47 | 93 | 140 | 187 | 233 | 280 | 373 | 466 | 560 | 653 | 746 | 933 |
| 55° | 52 | 104 | 140 | 208 | 260 | 312 | 417 | 521 | 625 | 729 | 833 | 1040 |
| 60° | 58 | 116 | 173 | 231 | 289 | 346 | 462 | 577 | 693 | 808 | 924 | 1150 |
| 65° | 64 | 127 | 191 | 255 | 319 | 382 | 510 | 637 | 765 | 892 | 1020 | 1270 |
| 70° | 70 | 140 | 210 | 280 | 350 | 420 | 560 | 700 | 840 | 980 | 1120 | 1400 |
| 75° | 77 | 154 | 230 | 307 | 384 | 460 | 614 | 767 | 921 | 1070 | 1230 | 1530 |
| 80° | 84 | 168 | 252 | 336 | 420 | 504 | 671 | 839 | 1010 | 1180 | 1340 | 1680 |
| 85° | 92 | 183 | 275 | 367 | 458 | 550 | 733 | 916 | 1100 | 1280 | 1470 | 1830 |
| 90° | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 2000 |
| 95° | 109 | 218 | 327 | 437 | 546 | 655 | 873 | 1090 | 1310 | 1530 | 1750 | 2180 |
| 100° | 119 | 238 | 358 | 477 | 596 | 715 | 953 | 1190 | 1430 | 1670 | 1910 | 2380 |
| 110° | 143 | 286 | 429 | 571 | 714 | 857 | 1140 | 1430 | 1710 | 2000 | 2290 | 2860 |
| 120° | 173 | 346 | 520 | 693 | 866 | 1040 | 1390 | 1730 | 2080 | 2430 | 2771 | 3464 |
| 130° | 215 | 429 | 643 | 858 | 1070 | 1290 | 1720 | 2150 | 2570 | 3002 | 3431 | 4289 |

Metallurgical Industry



Continuous Casting of steel Secondary Cooling

For higher productivity secondary cooling plays critical part where various rates of heat flux are to be removed from hot slab at various stages. Thus, spray nozzles are used for secondary cooling. For this purpose single fluid, twin fluid spray nozzles are used.

Descaling

During the process of cooling, iron oxide scales are formed on hot steel surface where high pressure water jet are used to remove this scales. For this purpose specially designed flat spray nozzle are used which has operating pressure range from 80 to 450 bar.

Roll Cooling

As hot slab rolls through series of rollers, heat transfers due to mutual contact; Thus to recover this heat from rolls, spray nozzles are used. This also helps to control and improves the shape of rolls.

In steel industries spray nozzles are used for so many other applications elaborated as below :

Coke ovens

- Coke quenching
- Gas cleaning and droplet separators
- Strip spray-off and blow-off

Hot rolling

- Settlement of oxide dusts in the stand
- Intermediate stand cooling
- Strip surface quenching to protect the work rolls

Chemical Industry



Cleaning packing columns and Demister pads

Packing columns are used in chemical and petrochemical industries, for washing of packing materials / beds spray nozzles are used. Specially non-clogging spray nozzles are used for this purpose.

Wet gas scrubber

To absorb the chemical compounds from gas, some absorbents are sprayed into the gas scrubber. For even distribution of absorbents, spray nozzles are used.

Cleaning of fermentation tanks and reactors

Several types of cleaning agents and solvents are used to clean fermentation tanks and reactors. Thus, here specially designed self-rotating and stationary spray nozzles are used.

Food and Beverages Industries



Cooling and Heating (Pasteurization)

During the packaging of hot or cold foods full cone spray nozzles are used for thermal transfer, the uniform circular spray pattern helps to maintain uniform and steady heat transfer. In pasteurizing tunnels tangential entry hollow cone spray nozzles are used for both cooling or heating of packed cans, bottles, pouches of food or beverages.

Sanitizing, Washing Bottles and Cans

Spray nozzles and spray balls are used for sanitizing, washing and drying packaged or empty bottles / barrels. This is being used in automated packages and material handling equipments

Pharmaceutical Industry



Tablet coating

After making a good tablet, you must often coat it. The coating can have several functions. It can strengthen the tablet, control its release, improve its taste, colour, it makes it easier to handle and package, and protect it from moisture.

Clean In Place (CIP)

For efficient cleaning of mixing tanks, containers, equipment, coating pans spray balls / turbo disc spray nozzles are installed inside the equipments made of pharma grade stainless steel which cleans the equipments in place.

Granulation With RMG / HSG

Also known as wet granulation process. Material is loaded into bowl having agitator and chopper and mixed rigorously then binder material is sprayed from top and granules are formed.

Good quality granules are foundation for good quality tablet.

Various liquid blenders are used for wet granulation.

Spraying binder over bulk material could reduce wet granulation cycle time and increase productivity.

Air Pollution Control



Emission regulations are made compulsory everywhere by government for small, large industries which creates dust, exhaust gases which are dangerous for environment.

Dust Suppression system

Fine mist spray nozzle are used at various dumping, transfer points where large emission of dust happens to suppress flying contamination water spray nozzles are used. Application industries are power plants Cement Industry, Glass Industry, Refineries, Pulp and Paper Industries, Chemical Industries, Steel Industries, Mining Industries etc.

Some other applications

- Wet Flue Gas Desulphurization
- Circulating Fluidized Bed
- Spray Dry Absorber
- NOX Removal
- Fire Protection Systems
- Gas Conditioning

Automotive / Sheet Metal Industry



Surface treatment

Surface treatment consist of several process stations like cold / hot water rising, degreasing, phosphatising, coating, galvanzing, and cleaning. Full cone, Flat spray nozzles with quick release type assembly and clip on mountings are used to set in several spray angels, assemble and dismantle easily. Surface treatment plays critical role in automotive and sheet metal industries as it is giving base for painting operations.

Assembly and Quality Assurance

In the final stages of automotive production, many applications require the use of nozzles. These include sealing, dewaxing car bodies, vehicle washing, high-pressure cleaning and various simulation tests (e.g. corrosion tests, leak tests, aquaplaning tests).

Some other applications we provide spray nozzles for

- Humidification with water and steam
- Desuperheating
- Oil burners
- Incinerator

For any other application please contact with our technical experts.

Paper Industry



Coating

Surface sizing operations are performed to provide increased surface strength, as well as to produce paper with an increased resistance to penetration by liquid solutions. Treatment can also provide better surface characteristics and improve certain physical properties of the paper sheet.

Showers and Oscillators

spray showers with the built-in cleaning device have been successfully used in paper mills around the world for years. A simple turn of the handwheel sweeps contaminants away from the nozzle orifices and directs all debris down the flush-out valve.

Trimming

Paper trim and edge sprays are used in various sections of paper machines. Generally, they improve the mill speed and reduce risk of web breaks. Some machines use trim nozzles after the last drying roll as well.

Fire Suppression for Tanks

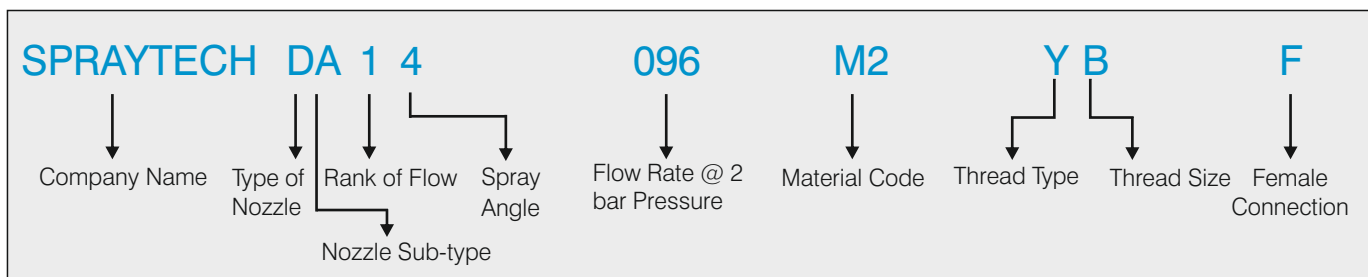


Spray irrigation of tanks aims to protect tanks and other vessels against unacceptable heating during burning. Here, heating must be understood as a condition where an increase of a tank's inner pressure and a decrease of the tank walls' resistance will lead to bursting of the tank.

Also important is the heat-influenced breakdown of the sealing elements in detachable connections. Water spray simultaneously extinguishes and cools the complete surface of the incendiary matter.

The following description will help to explain our Part Number/ Code in relation to the “SPRAYTECH” Spray Nozzle.

EXAMPLE ORDERING.



Note:- DA14.096.M2.YB(F)

'F' Only when there is female connection other wise DA14.096.M2.YB will be Male connection as standard.

Type of Nozzles

| Codes | Spray Nozzles Type |
|-------|--|
| A | Air Atomizing /Fine Atomizing Spray Nozzle |
| B | Hollow Cone Spray Nozzle |
| C | Flat Spray Nozzle |
| D | Full Cone Spray Nozzle |
| E | Tank Washing Spray Nozzle |
| F | Steel Mill Spray Nozzles |
| G | General Engineering & Accessories |
| H | Special Project |

| | | |
|---|---|---|
| B | A | Hollow Cone Spray Nozzle |
| B | B | Hollow Cone Spray Nozzle - Female Connection |
| B | C | Hollow Cone Spray Nozzle |
| B | D | Hollow Cone Spray Nozzle |
| B | E | Hollow Cone Spray Nozzle, Flanged Connection |
| B | F | Hollow Cone Spray Nozzles, Moulded Plastic Nozzle |
| B | G | Inline Entry Hollow Cone Spray Nozzle |
| B | H | Hollow Cone Spray Nozzles |
| B | I | Hollow Cone Spray Nozzle - Spiral |
| B | J | Hollow Cone Spray Nozzle - Adjustable |
| B | K | Hollow Cone Spray Nozzle - Fine Fog |

Hollow Cone Spray Nozzles

Nozzle Sub Types

| Codes | | |
|-------|---|---|
| C | A | Flat Spray Nozzle |
| C | B | Flat Spray Nozzle |
| C | C | Flat Spray Nozzle |
| C | D | Flat Spray Nozzle |
| C | E | Flat Spray Nozzle - Dove Tail Type |
| C | F | Flat Spray Nozzle - Dove Tail Type |
| C | G | High Impact Flat Spray Nozzles |
| C | H | Flood Spray Nozzle - Flat Type |
| C | I | Flood Spray Nozzle - Tip Flat Type |
| C | J | Air Wiping Spray Nozzle |
| C | K | Flat Spray Nozzle for Air & Saturated Steam |

Flat Spray Nozzles

| | | |
|---|---|---------------------------|
| C | L | Straight Jet Spray Nozzle |
|---|---|---------------------------|

Straight Jet Spray Nozzles

| | | |
|---|---|--|
| E | A | Self Rotating Spray Nozzle |
| E | B | Self Rotating Spray Nozzle |
| E | C | Self Rotating Spray Nozzle - CIP Application |
| E | D | Barrel Tank Washing Spray Nozzle |
| E | E | Gyro Jet Tank Washing Spray Nozzle |
| E | F | Turbo Cleaning Tank Washing Spray Nozzle |
| E | G | Slotted Spray Ball |
| E | H | Static Spray Ball |
| E | I | Static Spray Ball - Higher Flow Rates |
| E | J | Fixed Tank Washing Spray Nozzle |
| E | K | Pop - Up nozzle |

Tank Washing Spray Nozzles

| | | |
|---|---|--|
| D | A | Full Cone Spray Nozzle |
| D | B | Full Cone Spray Nozzle - Female Connection |
| D | C | Full Cone Flanged Connection Spray Nozzle |
| D | D | Full Cone Spray Nozzle - Square Pattern |
| D | E | Full Cone Spray Nozzle - Square Pattern - Female Connection |
| D | F | Spiral Full Cone Spray Nozzle |
| D | G | Multiple Full Cone Spray Nozzle |
| D | H | Multiple Full Cone Spray Nozzle |
| D | I | Tangential Entry Vaneless Full Cone Spray Nozzle |
| D | J | Tangential Entry Vaneless Full Cone Spray Nozzle - Female Connection |
| D | K | Narrow Angle Full Cone Spray Nozzle |
| D | L | Narrow Angle Full Cone Spray Nozzle - Female Connection |
| D | M | Full Cone Spray Nozzle - Customized |
| D | N | Full Cone Spray Nozzle - Customized -Female Connection |

Full Cone Spray Nozzles

| | | |
|---|----|-------------------------------|
| K | S | Steam Spray Nozzle |
| K | S1 | Steam Spray Nozzle (With NRV) |

Steam Spray Nozzles

Material Codes

| Code | Material (Metals & Alloys) |
|------|------------------------------|
| M0 | M.S. |
| M1 | SS 304 / SS303 |
| M1L | SS 304L |
| M1T | SS 304 Ti |
| M2 | SS 316 |
| M2L | SS 316L |
| M2T | SS 316 Ti |
| M3 | Brass |
| M3N | Nickel Plated Brass |
| M4A | SS 410 |
| M4B | SS 420 |
| M5 | Cast Iron |
| M6 | Aluminum |
| M7A | Hastelloy 2000 |
| M7B | Hastelloy B |
| M7C | Hastelloy C 276 |
| M7D | Hastelloy C 22 |
| M8A | Titanium Grade 2 |
| M8B | Titanium Grade 3 |
| M8C | Titanium Grade 7 |
| M9 | Monel |
| M10 | SS 310 |
| M11 | Carbon Steel |
| M12 | Bronze |
| M13 | Copper |
| M14 | Nickel |
| M15 | SS 416 |
| M16 | Alloy 20 |
| M17 | Inconel |
| M18 | Incoloy |
| M18A | Incoloy 625 |
| M18B | Incoloy 825 |
| M19 | Silicon Carbide |
| M20 | Tungsten Carbide |
| M21 | Ceramic |
| M3C | Chrome Plated Brass |
| M22 | SS 2205 Duplex |
| M22B | S32750 Super Duplex |

| Code | Material (Plastics) |
|------|---|
| P1 | PVC (Polyvinylchloride) |
| P2 | PP (Polypropylene) |
| P2G | Polypropylene with Glass Filled (25%) |
| P2H | PPH (Polypropylene Homopolymer) |
| P3 | PTFE (Polyterafluoroethylene) / Teflon® |
| P3C | C-PTFE (Carbon Filled PTFE) |
| P4 | Nylon (Polyamide) |
| P5 | Delrin® / POM (Polyacetate) |
| P6 | PVDF (Polyvinylidene fluoride) |
| P7 | Polyethylene |
| P7A | LDPE (Low density Polyethylene) |
| P7B | HDPE (high density Polyethylene) |
| P7C | UHMW (Ultra-High-Molecular-Weight Polyethylene) |
| P8 | CPVC (Chlorinated Polyvinyl Chloride) |
| P9 | Polyurethane |
| P10 | PEEK (Polyether ether ketone) |
| P11 | ABS |
| P12 | POM |
| P13 | Polyamide |

| Material code O rings (as per ASTM) | |
|-------------------------------------|----------------------------------|
| VMQ | Silicone Rubber |
| FKM | Fluoro Rubber (Viton®) |
| NBR | Nitrile Rubber |
| EPDM | Ethylene Propylene Diene Rubber |
| CR | Chlorobutadine Rubber (Neoprene) |
| PU | Polyurethane Rubber |
| ACM | Polyacrylic Rubber |
| IIR | Butyl Rubber |
| SBR | Styrene Butadine Rubber |

| Codes | Rank of Flow (LPM) |
|-------|--------------------|
| 1 | 0 - 9 |
| 2 | 10 - 99 |
| 3 | 100 - 999 |
| 4 | 1000 - 9999 |

| Codes | Spray Angle |
|-------|--------------|
| 1 | 15° |
| 2 | 30° |
| 3 | 45° |
| 4 | 60° |
| 5 | 75° |
| 6 | 90° |
| 7 | 105° |
| 8 | 120° |
| 9 | 130° & Above |

| Codes | Connections |
|-------|-------------|
| F | Female |
| M | Male |
| FLG | Flanged |
| PIN | Pin Type |
| TIP | Tip Models |
| DTL | Dove Tail |

| Codes | Thread Size |
|-------|-------------|
| A | 1/8" |
| B | 1/4" |
| C | 3/8" |
| D | 1/2" |
| E | 3/4" |
| F | 1" |
| G | 1 1/4" |
| H | 1 1/2" |
| K | 2" |
| L | 2 1/2" |
| M | 3" |
| N | 3 1/2" |
| O | 4" |
| P | 5" |
| Q | 6" |

| Codes | Thread Type |
|-------|-------------|
| X | BSPP |
| Y | BSPT |
| Z | NPT |
| M | METRIC |

Trademarks Registered Trademark Ownership

| Trademark | Property of : |
|------------|--|
| Hastelloy® | Haynes International, Inc. |
| Inconel® | Inco Nickel Sales, Inc. |
| Teflon® | E.I. Dupont de Nemours and Company |
| Viton® | Dupont Dow Elastomers. |
| Monel® | The International Nickel Company, Inc. |
| Stellite® | Stoody Deloro Stellite, Inc. |

| | |
|--------------------------------------|---------|
| FLAT SPRAY NOZZLE | 12-45 |
| STRAIGHT JET SPRAY NOZZLE | 46-47 |
| FULL CONE SPRAY NOZZLE | 48-77 |
| HOLLOW CONE SPRAY NOZZLE | 78-90 |
| CLEANING-IN-PLACE (CIP) SPRAY NOZZLE | 91-103 |
| AIR ATOMIZING SPRAY NOZZLE | 104-111 |
| TABLET COATING SPRAY NOZZLE | 112-125 |
| STEEL MILL SPRAY NOZZLE | 126-129 |
| SPRAY HEADER & SYSTEMS FABRICATION | 130-131 |
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Flat Spray Nozzles Series

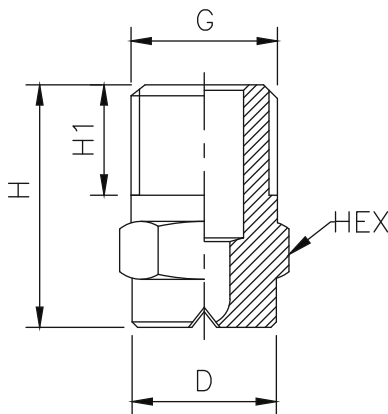


APPLICATION

- Belt cleaning
- Coating
- Steam cleaning
- Degreasing
- High pressure cleaning
- Gravel washing
- Cooling
- Surface treatment
- Phosphating
- Rain curtains
- Foam control
- Foam spraying
- Lubrication
- Filter cleaning
- Spray cleaning
- Washing processes and many others...

CA Series Flat Spray Nozzles

CA



Standard design with self sealing thread connection. Stable spray angle, Uniform distribution of liquid, parabolical distribution of liquid.

Design : One piece construction, Non clogging type.

Application : Rinsing, Lubricating, Industrial washing machines, Cake washing in Centrifuge, CIP, Tray washing.

'C' Series Flat Spray Nozzles are designed for high pressure / high impact washing application. These nozzles are specially designed and machined with precision which allows even spray coverage and distribution. This results in effective and uniform cleaning action over the surface being processed. Flat spray nozzles are available in all steel grades, Plastics & other alloys. Spray angle range available from 15° to 120°

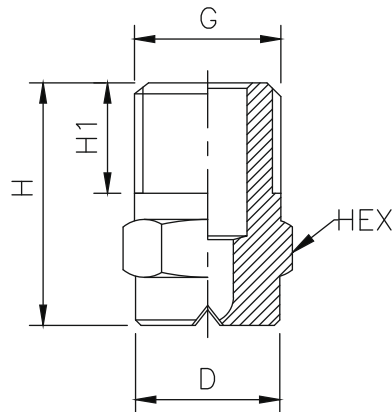
| 15° SPRAY ANGLE | CONNECTION END | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|-------------------|--|-------|--------------|-------|-------|-------|-------|-------|---------------------------------------|----|-----|------|-----|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | | | | | |
| CA11.050 | ● | ● | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10.2 | 11 |
| CA11.075 | ● | ● | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA11.100 | ● | ● | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA11.150 | ● | ● | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA11.175 | ● | ● | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | | | | | |
| CA11.200 | ● | ● | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | | | | | |
| CA11.250 | ● | ● | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | | | | | |
| CA11.300 | ● | ● | 2.1 | 1.5 | 2.12 | 3.0 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | | | | | |
| CA11.350 | ● | ● | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA11.400 | ● | ● | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA11.475 | ● | ● | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA11.650 | ● | ● | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA11.800 | ● | ● | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA21.100 | | ● | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA21.125 | | ● | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA21.160 | | ● | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA21.180 | | ● | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA21.200 | | ● | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA21.225 | | ● | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA21.250 | | ● | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |

CA Series Flat Spray Nozzles

Standard design with connection suitable spray angle uniform distribution of liquid. The internal geometry of each nozzles is specifically engineered to provide maximum uniformity of the spray angle and flow rate.

Application :

- Spray Coating
- Lubricating
- Circuit Board Rinsing
- Metal Processing
- Part Washing



Headers



| 30° SPRAY ANGLE | CONNECTION END | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|-------------------|--|-------|--------------|-------|-------|-------|-------|-------|---------------------------------------|----|-----|------|-----|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | | | | | |
| CA12.050 | ● | ● | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10.2 | 11 |
| CA12.075 | ● | ● | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA12.100 | ● | ● | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA12.150 | ● | ● | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA12.175 | ● | ● | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | | | | | |
| CA12.200 | ● | ● | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | | | | | |
| CA12.250 | ● | ● | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | | | | | |
| CA12.300 | ● | ● | 2.1 | 1.5 | 2.12 | 3.0 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | | | | | |
| CA12.350 | ● | ● | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA12.400 | ● | ● | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA12.475 | ● | ● | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA12.650 | ● | ● | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA12.800 | ● | ● | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA22.100 | | ● | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA22.125 | | ● | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA22.160 | | ● | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA22.180 | | ● | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA22.200 | | ● | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA22.225 | | ● | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA22.250 | | ● | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |

* Flow rate in US GPM @40 psi Pressure

CA Series Flat Spray Nozzles

| 45° SPRAY ANGLE | END CONNECTION | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|--------------------|-------------------|---|-------|--------------|-------|--------|--------|--------|--------|---------------------------------------|----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | | | | | |
| CA13.050 | ● | ● | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10 | 11 |
| CA13.075 | ● | ● | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA13.100 | ● | ● | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA13.150 | ● | ● | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA13.175 | ● | ● | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 3/8" | 25 | 12 | 16 | 17 |
| CA13.200 | ● | ● | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 3/8" Weight (Metals) = 28 gms. Approx | | | | |
| CA13.250 | ● | ● | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1/2" | 27 | 13.2 | 21 | 22 |
| CA13.300 | ● | ● | | | 2.1 | 1.5 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1/2" Weight (Metals) = 42 gms. Approx | | | | |
| CA13.350 | ● | ● | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA13.400 | ● | ● | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA13.475 | ● | ● | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA13.650 | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA13.800 | ● | ● | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA23.100 | | ● | ● | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA23.125 | | ● | ● | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA23.160 | | ● | ● | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA23.180 | | ● | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA23.200 | | ● | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA23.225 | | ● | ● | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA23.250 | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |
| CA23.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | | |
| CA23.400 | | | ● | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | | |
| CA23.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | | |
| CA23.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | | |
| CA23.800 | | | | ● | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | | |

| 60° SPRAY ANGLE | END CONNECTION | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|--------------------|-------------------|---|-------|--------------|-------|--------|--------|--------|--------|---------------------------------------|----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | | | | | |
| CA14.050 | ● | ● | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10 | 11 |
| CA14.075 | ● | ● | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA14.100 | ● | ● | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA14.150 | ● | ● | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA14.175 | ● | ● | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 3/8" | 25 | 12 | 16 | 17 |
| CA14.200 | ● | ● | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 3/8" Weight (Metals) = 28 gms. Approx | | | | |
| CA14.250 | ● | ● | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1/2" | 27 | 13.2 | 21 | 22 |
| CA14.300 | ● | ● | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1/2" Weight (Metals) = 42 gms. Approx | | | | |
| CA14.350 | ● | ● | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA14.400 | ● | ● | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA14.475 | ● | ● | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA14.650 | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA14.800 | ● | ● | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA24.100 | | ● | ● | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA24.125 | | ● | ● | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA24.160 | | ● | ● | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA24.180 | | ● | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA24.200 | | ● | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA24.225 | | ● | ● | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA24.250 | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |
| CA24.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | | |
| CA24.400 | | | ● | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | | |
| CA24.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | | |
| CA24.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | | |
| CA24.800 | | | | ● | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | | |

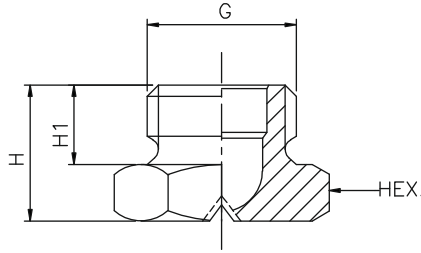
CA Series Flat Spray Nozzles

| 90° SPRAY ANGLE | END CONNECTION | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|--------------|-------------------|---|-------|--------------|-------|--------|--------|--------|--------|---------------------------------------|----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | | PRESSURE [BAR] | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | D | HEX |
| CA16.050 | ● | ● | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10 | 11 |
| CA16.075 | ● | ● | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA16.100 | ● | ● | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA16.150 | ● | ● | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA16.175 | ● | ● | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 3/8" | 25 | 12 | 16 | 17 |
| CA16.200 | ● | ● | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 3/8" Weight (Metals) = 28 gms. Approx | | | | |
| CA16.250 | ● | ● | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1/2" | 27 | 13.2 | 21 | 22 |
| CA16.300 | ● | ● | | | 2.1 | 1.5 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1/2" Weight (Metals) = 42 gms. Approx | | | | |
| CA16.350 | ● | ● | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA16.400 | ● | ● | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA16.475 | ● | ● | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA16.650 | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA16.800 | ● | ● | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA26.100 | | ● | ● | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA26.125 | | ● | ● | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA26.160 | | ● | ● | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA26.180 | | ● | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA26.200 | | ● | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA26.225 | | ● | ● | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA26.250 | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |
| CA26.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | | |
| CA26.400 | | | ● | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | | |
| CA26.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | | |
| CA26.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | | |
| CA26.800 | | | | ● | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | | |

| 120° SPRAY ANGLE | END CONNECTION | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|--------------|--------------|--------------|-------------------|---|-------|--------------|-------|-------|-------|-------|--------|---------------------------------------|----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | | PRESSURE [BAR] | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | D | HEX |
| CA18.050 | ● | ● | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/8" | 18 | 6.5 | 10 | 11 |
| CA18.075 | ● | ● | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CA18.100 | ● | ● | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 1/4" | 22 | 10 | 13 | 14 |
| CA18.150 | ● | ● | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CA18.175 | ● | ● | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 3/8" | 25 | 12 | 16 | 17 |
| CA18.200 | ● | ● | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 3/8" Weight (Metals) = 28 gms. Approx | | | | |
| CA18.250 | ● | ● | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1/2" | 27 | 13.2 | 21 | 22 |
| CA18.300 | ● | ● | | | 2.1 | 1.5 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1/2" Weight (Metals) = 42 gms. Approx | | | | |
| CA18.350 | ● | ● | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | | |
| CA18.400 | ● | ● | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | | |
| CA18.475 | ● | ● | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | | |
| CA18.650 | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | | |
| CA18.800 | ● | ● | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | | |
| CA28.100 | | ● | ● | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | | |
| CA28.125 | | ● | ● | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | | |
| CA28.160 | | ● | ● | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | | |
| CA28.180 | | ● | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | | |
| CA28.200 | | ● | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | | |
| CA28.225 | | ● | ● | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | | |
| CA28.250 | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | | |
| CA28.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | | |
| CA28.400 | | | ● | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | | |

CB Series Flat Spray Nozzles

CB



Uniform, Parabolic distribution of liquid. Compact design, suitable for confined installation conditions.

Application :

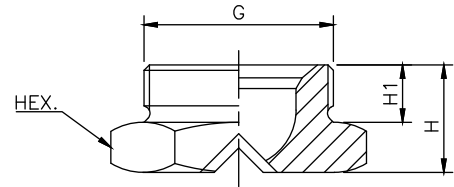
Cleaning plants, spray headers, cooling pipes. Small flow rates upon request.

| 15° SPRAY ANGLE | CONNECTION END | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|-------------------|--|-------|--------------|-------|-------|-------|-------|-------|---------------------------------------|----|----|-----|
| | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | HEX |
| CB11.050 | ● | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB11.075 | ● | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB11.100 | ● | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | | | | |
| CB11.150 | ● | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | | | | |
| CB11.175 | ● | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | | | | |
| CB11.200 | ● | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | | | | |
| CB11.250 | ● | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | | | | |
| CB11.300 | ● | 2.1 | 1.5 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | | | | |
| CB11.350 | ● | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | |
| CB11.400 | ● | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | |
| CB11.475 | ● | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB11.650 | ● | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB11.800 | ● | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB21.100 | ● | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB21.125 | ● | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB21.160 | ● | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB21.180 | ● | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | |
| CB21.200 | ● | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |

| 30° SPRAY ANGLE | CONNECTION END | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|-------------------|--|-------|--------------|-------|-------|-------|-------|-------|---------------------------------------|----|----|-----|
| | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | HEX |
| CB12.050 | ● | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB12.075 | ● | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB12.100 | ● | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | | | | |
| CB12.150 | ● | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | | | | |
| CB12.175 | ● | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | | | | |
| CB12.200 | ● | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | | | | |
| CB12.250 | ● | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | | | | |
| CB12.300 | ● | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | | | | |
| CB12.350 | ● | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | | | | |
| CB12.400 | ● | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | | | | |
| CB12.475 | ● | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB12.650 | ● | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB12.800 | ● | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB22.100 | ● | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB22.125 | ● | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB22.160 | ● | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB22.180 | ● | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.05 | 33.67 | 40.25 | 49.30 | | | | |
| CB22.200 | ● | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |

CB Series Flat Spray Nozzles

CB type nozzles deliver a flat spray with parabolic distribution pattern, which allows for obtaining an even distribution when several nozzles are assembled in a row on to a manifold. Their short body design makes it possible to use nozzle spray pipes in such machines or systems where the available space is very limited. CB nozzles are manufactured in two different capacity ranges, out of brass or 303 stainless steel and on request from a choice of additional metallic and plastic materials. Because of their limited length these nozzles can only be produced with a straight BSP thread and require some extra care when being assembled to get the proper flat alignment also note the different dimensions given in the table below

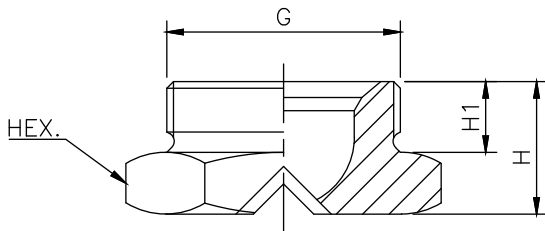


Application :

- Cooling of Roll Stock
- Water Treatment
- Cleaning Plants

| 45° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|-----|--------|-----|-------------------|--|--------|--------------|--------|--------|--------|--------|---------|--|----|----|-----|
| | 1/4" | 3/4" | 1" | 1 1/4" | 2" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | | | | |
| CB13.050 | ● | | | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB13.075 | ● | | | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB13.100 | ● | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 3/4" | 15 | 9 | 32 |
| CB13.150 | ● | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 3/4" Weight (Metals) = 53 gms. Approx | | | |
| CB13.175 | ● | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 1" | 20 | 12 | 36 |
| CB13.200 | ● | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 1" Weight (Metals) = 107 gms. Approx | | | |
| CB13.250 | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1 1/4" | 22 | 14 | 50 |
| CB13.300 | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1 1/4" Weight (Metals) = xxx gms. Approx | | | |
| CB13.350 | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | 2" | 32 | 20 | 70 |
| CB13.400 | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | 2" Weight (Metals) = XXX gms. Approx | | | |
| CB13.475 | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB13.650 | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB13.800 | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB23.100 | ● | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB23.125 | ● | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB23.160 | ● | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB23.180 | ● | | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | |
| CB23.200 | ● | | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |
| CB23.225 | ● | | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | |
| CB23.250 | ● | ● | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | |
| CB23.320 | | ● | | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | |
| CB23.400 | | ● | | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | |
| CB23.520 | | ● | ● | | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | |
| CB23.650 | | ● | ● | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | |
| CB23.800 | | ● | ● | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | |
| CB33.100 | | ● | ● | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | 273.86 | | | | |
| CB33.140 | | | | ● | | 12.6 | 70.00 | 89.09 | 140.0 | 171.46 | 221.36 | 261.92 | 313.92 | 383.41 | | | | |
| CB33.160 | | | | ● | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 438.18 | | | | |
| CB33.175 | | | | ● | | 14.9 | 87.50 | 123.74 | 175.0 | 214.33 | 276.70 | 327.40 | 391.31 | 479.26 | | | | |
| CB33.200 | | | | ● | | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | 547.72 | | | | |
| CB33.250 | | | | ● | | 17.8 | 125.0 | 176.78 | 250.0 | 306.19 | 395.28 | 467.71 | 559.02 | 684.65 | | | | |
| CB33.325 | | | | ● | | 20.3 | 162.5 | 229.81 | 325.0 | 398.04 | 513.87 | 608.02 | 726.72 | 890.05 | | | | |
| CB33.430 | | | | ● | | 23.4 | 215.0 | 304.06 | 430.0 | 526.64 | 679.89 | 804.46 | 961.51 | 1177.60 | | | | |

CB Series Flat Spray Nozzles



Characteristic

Increased, Non-clogging features. mor jet energy, Low share of fog. Headers, Equipped with these nozzles, Shows a highly uniform total distribution of liquids, Even at different installation heights and centers.

Application :

Cleaning plants spray headers, cooling pipes roll cooling of rolled products.

| 60° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|-----|--------|-----|-------------------|--|--------|-------|--------|--------|--------|--------|---------|---|----|----|-----|
| | 1/4" | 3/4" | 1" | 1 1/4" | 2" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | HEX |
| CB14.050 | ● | | | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB14.075 | ● | | | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB14.100 | ● | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 3/4" | 15 | 9 | 32 |
| CB14.150 | ● | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 3/4" Weight (Metals) = 53 gms. Approx | | | |
| CB14.175 | ● | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 1" | 20 | 12 | 36 |
| CB14.200 | ● | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 1" Weight (Metals) = 107 gms. Approx | | | |
| CB14.250 | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1 1/4" | 22 | 14 | 50 |
| CB14.300 | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1 1/4" Weight (Metals) = XX gms. Approx | | | |
| CB14.350 | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | 2" | 32 | 20 | 70 |
| CB14.400 | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | 2" Weight (Metals) = XXX gms. Approx | | | |
| CB14.475 | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB14.650 | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB14.800 | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB24.100 | ● | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB24.125 | ● | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB24.160 | ● | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB24.180 | ● | | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | |
| CB24.200 | ● | | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |
| CB24.225 | ● | | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | |
| CB24.250 | ● | ● | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | |
| CB24.320 | | ● | | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | |
| CB24.400 | | ● | | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | |
| CB24.520 | | ● | ● | | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | |
| CB24.650 | | ● | ● | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | |
| CB24.800 | | ● | ● | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | |
| CB34.100 | | ● | ● | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | 273.86 | | | | |
| CB34.140 | | | ● | ● | | 12.6 | 70.00 | 89.09 | 140.0 | 171.46 | 221.36 | 261.92 | 313.92 | 383.41 | | | | |
| CB34.160 | | | | ● | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 438.18 | | | | |
| CB34.175 | | | | | ● | 14.9 | 87.50 | 123.74 | 175.0 | 214.33 | 276.70 | 327.40 | 391.31 | 479.26 | | | | |
| CB34.200 | | | | | ● | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | 547.72 | | | | |
| CB34.250 | | | | | ● | 17.8 | 125.0 | 176.78 | 250.0 | 306.19 | 395.28 | 467.71 | 559.02 | 684.65 | | | | |
| CB34.325 | | | | | ● | 20.3 | 162.5 | 229.81 | 325.0 | 398.04 | 513.87 | 608.02 | 726.72 | 890.05 | | | | |
| CB34.430 | | | | | ● | 23.4 | 215.0 | 304.06 | 430.0 | 526.64 | 679.89 | 804.46 | 961.51 | 1177.60 | | | | |

CB Series Flat Spray Nozzles

Increased, non-clogging features, more jet energy, low share of fog. Headers, equipped with these nozzles, show a highly uniform total distribution of liquids, even at different installation heights and centers. These types of nozzles provide uniform parabolic distribution of liquid.

Application:

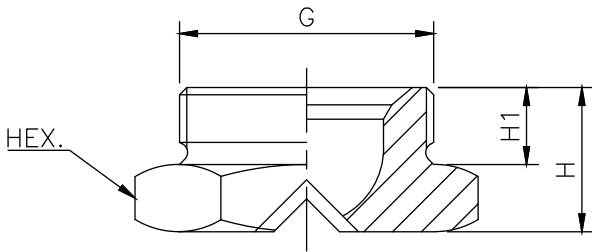
Cleaning plants, spray headers, cooling pipes, roll cooling, cooling of rolled products.

| 90° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|-----|--------|-----|-------------------|--|--------|--------------|--------|--------|--------|--------|---------|---|----|----|-----|
| | 1/4" | 3/4" | 1" | 1 1/4" | 2" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | HEX |
| CB16.050 | ● | | | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB16.075 | ● | | | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB16.100 | ● | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 3/4" | 15 | 9 | 32 |
| CB16.150 | ● | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 3/4" Weight (Metals) = 53 gms. Approx | | | |
| CB16.175 | ● | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 1" | 20 | 12 | 36 |
| CB16.200 | ● | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 1" Weight (Metals) = 107 gms. Approx | | | |
| CB16.250 | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1 1/4" | 22 | 14 | 50 |
| CB16.300 | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1 1/4" Weight (Metals) = XX gms. Approx | | | |
| CB16.350 | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | 2" | 32 | 20 | 70 |
| CB16.400 | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | 2" Weight (Metals) = XXX gms. Approx | | | |
| CB16.475 | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB16.650 | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB16.800 | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB26.100 | ● | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB26.125 | ● | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB26.160 | ● | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB26.180 | ● | | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | |
| CB26.200 | ● | | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |
| CB26.225 | ● | | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | |
| CB26.250 | ● | ● | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | |
| CB26.320 | | ● | | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | |
| CB26.400 | | ● | ● | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | |
| CB26.520 | | ● | ● | ● | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | |
| CB26.650 | | ● | ● | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | |
| CB26.800 | | ● | ● | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | |
| CB36.100 | | ● | ● | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | 273.86 | | | | |
| CB36.140 | | | ● | ● | | 12.6 | 70.00 | 89.09 | 140.0 | 171.46 | 221.36 | 261.92 | 313.92 | 383.41 | | | | |
| CB36.160 | | | | ● | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 438.18 | | | | |
| CB36.175 | | | | | ● | 14.9 | 87.50 | 123.74 | 175.0 | 214.33 | 276.70 | 327.40 | 391.31 | 479.26 | | | | |
| CB36.200 | | | | | ● | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | 547.72 | | | | |
| CB36.250 | | | | | ● | 17.8 | 125.0 | 176.78 | 250.0 | 306.19 | 395.28 | 467.71 | 559.02 | 684.65 | | | | |
| CB36.325 | | | | | ● | 20.3 | 162.5 | 229.81 | 325.0 | 398.04 | 513.87 | 608.02 | 726.72 | 890.05 | | | | |
| CB36.430 | | | | | ● | 23.4 | 215.0 | 304.06 | 430.0 | 526.64 | 679.89 | 804.46 | 961.51 | 1177.60 | | | | |

CB Series Flat Spray Nozzles



CB nozzles are manufactured in two different capacity ranges out of Brass or 303 stainless steel and in request from a choice of additional metallic and plastic material. Because of their limited length these nozzles can only be produced with a straight BSP thread also note the different dimension given in the table below.

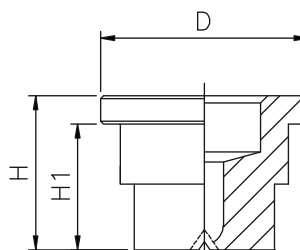


| 120° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|------|-----|--------|-----|-------------------|--|--------|-------|--------|--------|--------|--------|---------|---|----|----|-----|
| | 1/4" | 3/4" | 1" | 1 1/4" | 2" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | HEX |
| CB18.050 | ● | | | | | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | 1/4" | 13 | 8 | 17 |
| CB18.075 | ● | | | | | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | 2.05 | 1/4" Weight (Metals) = 12 gms. Approx | | | |
| CB18.100 | ● | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | 3/4" | 15 | 9 | 32 |
| CB18.150 | ● | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 4.11 | 3/4" Weight (Metals) = 53 gms. Approx | | | |
| CB18.175 | ● | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 4.79 | 1" | 20 | 12 | 36 |
| CB18.200 | ● | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 5.48 | 1" Weight (Metals) = 107 gms. Approx | | | |
| CB18.250 | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 6.85 | 1 1/4" | 22 | 14 | 50 |
| CB18.300 | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 8.22 | 1 1/4" Weight (Metals) = XX gms. Approx | | | |
| CB18.350 | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 9.59 | 2" | 32 | 20 | 70 |
| CB18.400 | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 10.95 | 2" Weight (Metals) = XXX gms. Approx | | | |
| CB18.475 | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 13.00 | | | | |
| CB18.650 | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 17.80 | | | | |
| CB18.800 | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 21.91 | | | | |
| CB28.100 | ● | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 27.39 | | | | |
| CB28.125 | ● | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 34.23 | | | | |
| CB28.160 | ● | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 43.82 | | | | |
| CB28.180 | | ● | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 49.30 | | | | |
| CB28.200 | | ● | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 54.77 | | | | |
| CB28.225 | | ● | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 61.62 | | | | |
| CB28.250 | | ● | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 68.47 | | | | |
| CB28.320 | | ● | | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 87.64 | | | | |
| CB28.400 | | ● | | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 109.54 | | | | |
| CB28.520 | | ● | ● | ● | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 142.41 | | | | |
| CB28.650 | | ● | ● | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 178.00 | | | | |
| CB28.800 | | ● | ● | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 219.09 | | | | |
| CB38.100 | | ● | ● | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | 273.86 | | | | |
| CB38.140 | | | ● | ● | | 12.6 | 70.00 | 89.09 | 140.0 | 171.46 | 221.36 | 261.92 | 313.92 | 383.41 | | | | |
| CB38.160 | | | | ● | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 438.18 | | | | |
| CB38.175 | | | | | ● | 14.9 | 87.50 | 123.74 | 175.0 | 214.33 | 276.70 | 327.40 | 391.31 | 479.26 | | | | |
| CB38.200 | | | | | ● | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | 547.72 | | | | |
| CB38.250 | | | | | ● | 17.8 | 125.0 | 176.78 | 250.0 | 306.19 | 395.28 | 467.71 | 559.02 | 684.65 | | | | |
| CB38.325 | | | | | ● | 20.3 | 162.5 | 229.81 | 325.0 | 398.04 | 513.87 | 608.02 | 726.72 | 890.05 | | | | |
| CB38.430 | | | | | ● | 23.4 | 215.0 | 304.06 | 430.0 | 526.64 | 679.89 | 804.46 | 961.51 | 1177.60 | | | | |

CC Series Flat Spray Nozzles



Versatile program offering a wide range of performance and stable jet angles, easy adjusting of jet by means of loosening the nut stable jet angles headers, equipped with these nozzles, show a highly uniform total distribution of liquids, even at different installation heights and centers universally suitable.



Application :

Jet cleaning, surface treatment, filter cleaning, band cleaning, lubricating, coating.

Flat nozzle tips are usually mounted onto a pipe by means of a welded nipple or a clamp, and secured in place with a retaining nut. Seals are available for higher pressure operation. They can be therefore easily replaced and the jet can be conveniently oriented in the desired direction.

The tip models shown in this page deliver very low flow values, the precision machined tiny orifices can be protected against the risk of plugging by means of a filter fitting inside our nipples and clamps which are designed for this purpose.

| 15° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
| CC11.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 11 | 9 | 14.8 |
| CC11.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 9.0 gms. Approx | | |
| CC11.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC11.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC11.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC11.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC11.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC11.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC11.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC11.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC11.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC11.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC11.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC21.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC21.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC21.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC21.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC21.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC21.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC21.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

CC Series Flat Spray Nozzles

| 30° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| MODEL NO. | | PRESSURE [BAR] | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
| CC12.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 11 | 9 | 14.8 |
| CC12.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 9.0 gms. Approx | | |
| CC12.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC12.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC12.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC12.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC12.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC12.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC12.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC12.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC12.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC12.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC12.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC22.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC22.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC22.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC22.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC22.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC22.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC22.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

| 45° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| MODEL NO. | | PRESSURE [BAR] | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
| CC13.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 11 | 9 | 14.8 |
| CC13.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 9.0 gms. Approx | | |
| CC13.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC13.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC13.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC13.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC13.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC13.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC13.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC13.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC13.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC13.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC13.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC23.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC23.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC23.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC23.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC23.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC23.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC23.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

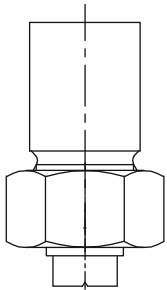
CC Series Flat Spray Nozzles

| 60° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| MODEL NO. | | PRESSURE [BAR] | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
| CC14.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 11 | 9 | 14.8 |
| CC14.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 9.0 gms. Approx | | |
| CC14.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC14.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC14.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC14.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC14.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC14.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC14.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC14.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC14.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC14.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC14.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC24.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC24.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC24.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC24.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC24.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC24.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC24.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

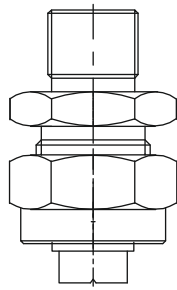
| 90° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| MODEL NO. | | PRESSURE [BAR] | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
| CC16.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 11 | 9 | 14.8 |
| CC16.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 9.0 gms. Approx | | |
| CC16.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC16.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC16.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC16.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC16.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC16.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC16.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC16.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC16.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC16.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC16.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC26.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC26.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC26.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC26.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC26.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC26.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC26.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

CC Series Flat Spray Nozzles

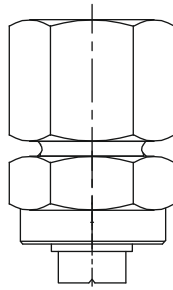
Type of Fitting Arrangements



Weldable



Threaded (M)



Threaded (F)

Typical application :

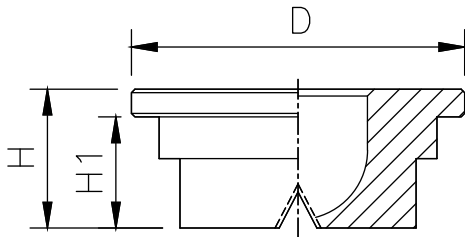
- Spray Coating
- Lubricating
- Metal Processing
- Spray Cooling
- Parts Washing



| 120° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|------------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | PRESSURE [BAR] | | | | | | | H | H1 | D |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 11 | 9 | 14.8 |
| CC18.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 9.0 gms. Approx | | |
| CC18.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | |
| CC18.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CC18.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CC18.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CC18.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CC18.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CC18.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CC18.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CC18.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CC18.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CC18.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CC18.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CC28.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CC28.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CC28.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CC28.180 | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CC28.200 | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CC28.225 | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CC28.250 | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |

CD Series Flat Spray Nozzles

CD



Headers, Equipped with these nozzles, Show a highly uniform total distribution of liquids even at different installation heights and centers.

Application

Cleaning plants, Spray headers cooling pipes roll products. Connection to pipe by means of nut and nipple.

| MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------------|--|----------------|-------|-------|-------|--------|--------|--------|----------------------------------|----|----|----|
| | | SPRAY ANGLE | PRESSURE [BAR] | | | | | | | | H | H1 | D |
| | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| CD11.650 | 3.1 | 15° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 | |
| CD11.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 12 gms. Approx | | | |
| CD21.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| CD21.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| CD21.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| CD21.180 | 2.1 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | |
| CD21.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| CD21.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| CD21.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| CD21.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| CD21.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| CD21.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| CD21.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| CD21.800 | 11.0 | | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| CD31.100 | 11.3 | | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | |
| CD12.650 | 3.1 | | 30° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 |
| CD12.800 | 3.5 | 4.00 | | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 12 gms. Approx | | | |
| CD22.100 | 3.9 | 5.00 | | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| CD22.125 | 4.3 | 6.25 | | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| CD22.160 | 4.9 | 8.00 | | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| CD22.180 | 5.2 | 9.00 | | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | |
| CD22.200 | 5.5 | 10.00 | | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| CD22.225 | 5.8 | 11.25 | | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| CD22.250 | 6.1 | 12.50 | | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| CD22.320 | 6.4 | 16.00 | | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| CD22.400 | 7.8 | 20.00 | | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| CD22.520 | 8.9 | 26.00 | | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| CD22.650 | 9.9 | 32.50 | | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| CD22.800 | 11.0 | 40.00 | | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| CD32.100 | 11.3 | 50.00 | | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | |

CD Series Flat Spray Nozzles

| | | | | | | | | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
|----------|------|-------|-------|-------|-------|-------|--------|--------|--------|-----|-----|-----|-----------------------------------|-----|-----|------|---|----|---|
| CD13.650 | 3.1 | 45° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 | Weight (Metals) = 12 gms. Approx | | | | | | |
| CD13.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | | | | | | | |
| CD23.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | | | | | | | |
| CD23.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | | | | | | |
| CD23.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | | | | | | |
| CD23.180 | 2.1 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | | | | | | |
| CD23.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | | | | | | |
| CD23.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | | | | | | |
| CD23.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | | | | | | |
| CD23.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | | | | | | |
| CD23.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | | | | | | |
| CD23.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | | | | | | |
| CD23.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | | | | | | |
| CD23.800 | 11.0 | | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | | | | | | |
| CD33.100 | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | | | | | | | | |
| CD14.650 | 3.1 | 60° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 | Weight (Metals) = 11 gms. Approx | | | | | | |
| CD14.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | | | | | | | |
| CD24.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | | | | | | | |
| CD24.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | | | | | | |
| CD24.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | | | | | | |
| CD24.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | | | | | | |
| CD24.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | | | | | | |
| CD24.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | | | | | | |
| CD24.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | | | | | | |
| CD24.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | | | | | | |
| CD24.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | | | | | | |
| CD24.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | | | | | | |
| CD24.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | | | | | | |
| CD24.800 | 11.0 | | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | | | | | | |
| CD34.100 | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | | | | | | | | |
| CD16.650 | 3.1 | 90° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 | Weight (Metals) = 8.5 gms. Approx | | | | | | |
| CD16.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | | | | | | | |
| CD26.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | | | | | | | |
| CD26.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | | | | | | |
| CD26.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | | | | | | |
| CD26.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | | | | | | |
| CD26.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | | | | | | |
| CD26.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | | | | | | |
| CD26.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | | | | | | |
| CD26.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | | | | | | |
| CD26.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | | | | | | |
| CD26.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | | | | | | |
| CD26.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | | | | | | |
| CD26.800 | 11.0 | | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | | | | | | |
| CD36.100 | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | | | | | | | | |
| CD18.650 | 3.1 | 120° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 10 | 8 | 24 | Weight (Metals) = 8.5 gms. Approx | | | | | | |
| CD18.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | | | | | | | |
| CD28.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | | | | | | | |
| CD28.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | | | | | | |
| CD28.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | | | | | | |
| CD28.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | | | | | | |
| CD28.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | | | | | | |
| CD28.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | | | | | | |
| CD28.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | | | | | | |
| CD28.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | | | | | | |
| CD28.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | | | | | | |
| CD28.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | | | | | | |
| CD28.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | | | | | | |
| CD28.800 | 11.0 | | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | | | | | | |
| CD38.100 | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | | | | | | | | |

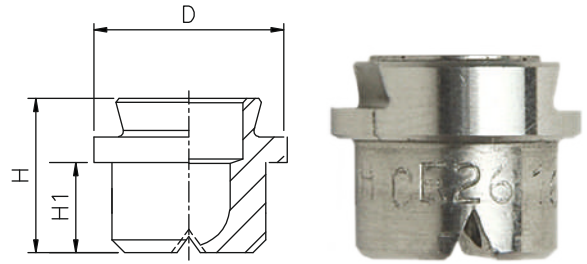
CE Series Flat Spray Nozzles - Dove Tail Type



Very uniform, parabolic distribution of liquid. Rectangular distribution pattern on request. Headers, equipped with these nozzles, show a highly uniform total distribution installation heights and centers.

Application :

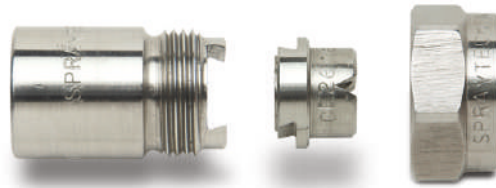
Cleaning plants, spray headers, cooling pipes, connection to pipe by means of screwed nut and nipple. The ideal nozzle position is always secured with the aid of the dove- tail fixing. The flat is pre-set at 5° to the tube axis.



| 15° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | PRESSURE [BAR] | | | | | | | H | H1 | D |
| MODEL NO. | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 12 | 7 | 14.8 |
| CE11.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 8.5 gms. Approx | | |
| CE11.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | |
| CE11.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CE11.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CE11.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CE11.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CE11.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CE11.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CE11.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CE11.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CE11.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CE11.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CE11.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CE21.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CE21.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CE21.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |

| 30° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | PRESSURE [BAR] | | | | | | | H | H1 | D |
| MODEL NO. | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 12 | 7 | 14.8 |
| CE12.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 8.5 gms. Approx | | |
| CE12.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | |
| CE12.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| CE12.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| CE12.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| CE12.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| CE12.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| CE12.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| CE12.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| CE12.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| CE12.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| CE12.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| CE12.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| CE22.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CE22.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CE22.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |

CE Series Flat Spray Nozzles - Dove Tail Type



| 45° SPRAY ANGLE | MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-----------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | | PRESSURE [BAR] | | | | | | | H | H1 | D |
| | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 12 | 7 | 14.8 |
| | CE13.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 8.5 gms. Approx | | |
| | CE13.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | |
| | CE13.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| | CE13.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| | CE13.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| | CE13.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| | CE13.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| | CE13.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| | CE13.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| | CE13.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| | CE13.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| | CE13.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| | CE13.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| | CE23.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| | CE23.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| | CE23.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |

| 60° SPRAY ANGLE | MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-----------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|----|------|
| | | | PRESSURE [BAR] | | | | | | | H | H1 | D |
| | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 12 | 7 | 14.8 |
| | CE14.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 8.5 gms. Approx | | |
| | CE14.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | |
| | CE14.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | |
| | CE14.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | |
| | CE14.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | |
| | CE14.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | |
| | CE14.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| | CE14.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| | CE14.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| | CE14.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| | CE14.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| | CE14.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| | CE14.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| | CE24.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| | CE24.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| | CE24.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |

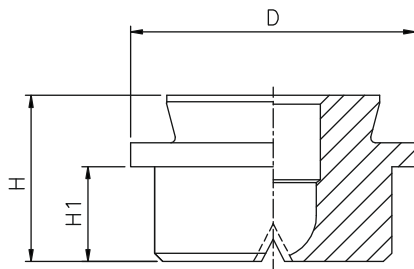
CE Series Flat Spray Nozzles - Dove Tail Type

| 90° Spray Angle | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|-------------------|------|--|
| Model No. | | PRESSURE [BAR] | | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D | |
| CE16.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 12 | 7 | 14.8 | |
| CE16.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 8.5 gms. Approx | | | |
| CE16.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | | |
| CE16.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | | |
| CE16.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | | |
| CE16.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | | |
| CE16.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | | |
| CE16.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | | |
| CE16.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | | |
| CE16.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | | |
| CE16.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| CE16.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| CE16.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| CE26.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| CE26.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| CE26.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |

| 120° SPRAY ANGLE | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | |
|------------------|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|-------------------|------|--|
| MODEL NO. | | PRESSURE [BAR] | | | | | | | | | | |
| | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D | |
| CE18.050 | 0.8 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 12 | 7 | 14.8 | |
| CE18.075 | 1.0 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 8.5 gms. Approx | | | |
| CE18.100 | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | | |
| CE18.150 | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | | |
| CE18.175 | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | | | |
| CE18.200 | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | | |
| CE18.250 | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | | |
| CE18.300 | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | | |
| CE18.350 | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | | |
| CE18.400 | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | | |
| CE18.475 | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| CE18.650 | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| CE18.800 | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| CE28.100 | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| CE28.125 | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| CE28.160 | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |

CF Series Flat Spray Nozzles - Dove Tail Type

CF



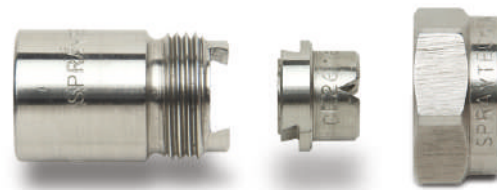
Uniform, parabolic distribution of liquid Headers, equipped with these nozzles, show a highly uniform total distribution of liquids, even at different installation heights and centers.

Application:

Cleaning plants, spray headers, cooling pipes, roll cooling, cooling of rolled products.

Note :

Connection to pipe by means of screwed nut and nipple. Nozzle position fixed by self-setting dove-tail. Flat preset at 15° to pipe axis.



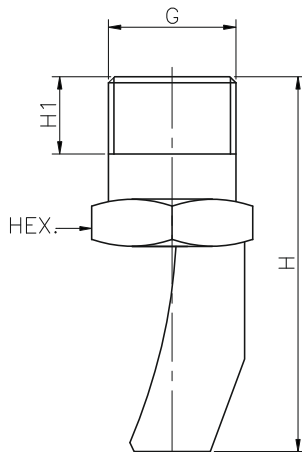
| MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | |
|-----------|-------------------|--|----------------|-------|-------|--------|--------|--------|--------|------------------------------------|----|----|
| | | SPRAY ANGLE | PRESSURE [BAR] | | | | | | | H | H1 | D |
| | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | |
| CF11.650 | 3.1 | 15° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF11.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35.0 gms. Approx | | |
| CF21.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF21.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF21.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF21.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF21.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF21.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF21.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF21.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF21.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF21.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF21.650 | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| CF12.650 | 3.1 | 30° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF12.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35.0 gms. Approx | | |
| CF22.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF22.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF22.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF22.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF22.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF22.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF22.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF22.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF22.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF22.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF22.650 | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |

CF Series Flat Spray Nozzles - Dove Tail Type

| | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | H | H1 | D |
|----------|-----|------|-------|-------|-------|-------|--------|--------|--------|----------------------------------|----|----|
| CF13.650 | 3.1 | 45° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF13.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35 gms. Approx | | |
| CF23.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF23.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF23.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF23.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF23.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF23.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF23.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF23.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF23.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF23.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF23.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |
| | | | | | | | | | | | | |
| CF14.650 | 3.1 | 60° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF14.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35 gms. Approx | | |
| CF24.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF24.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF24.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF24.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF24.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF24.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF24.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF24.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF24.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF24.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF24.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |
| | | | | | | | | | | | | |
| CF16.650 | 3.1 | 90° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF16.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35 gms. Approx | | |
| CF26.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF26.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF26.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF26.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF26.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF26.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF26.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF26.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF26.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF26.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF26.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |
| | | | | | | | | | | | | |
| CF18.650 | 3.1 | 120° | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 14 | 8 | 24 |
| CF18.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 35 gms. Approx | | |
| CF28.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| CF28.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CF28.160 | 4.9 | | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CF28.180 | 5.2 | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CF28.200 | 5.5 | | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CF28.225 | 5.8 | | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| CF28.250 | 6.1 | | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CF28.320 | 6.4 | | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CF28.400 | 7.8 | | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CF28.520 | 8.9 | | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CF28.650 | 9.9 | | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |

CG Series High Impact Flat Spray Nozzles

CG




CG Flat nozzles work on the deflection principal conveying a water vein onto a deflection surface designed to produce a narrow jet with flat spray pattern, high impact value and medium size droplets. CG style nozzles shown in this page are available with a threaded connection and, for the capacity sizes shown in the table with a quick coupling connection for assembly onto the matching quick connection nipple.


How to compose the nozzle code :

The nozzle shown on this page can be supplied with same capacity and a different connection thread, the size is indicated by the second digit in the nozzle code.


Application :


Cleaning, washing decreasing and phosphating processing Powerful jet narrowly defined spray pattern. Non-clogging.

| 15° SPRAY ANGLE η 10° | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|--|-------|-------|-------|--------|--------|--------|-------------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | | | | |
| MODEL NO.  | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX |
| CG11.350 | ● | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 65 | 10 | 17 |
| CG11.650 | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 55.0 gms. Approx | | | |
| CG21.100 | | ● | | | 3.9 | 5.00 | 7.07 | 10.0 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 75 | 10 | 17 |
| CG21.125 | | ● | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = 61.0 gms. Approx | | | |
| CG21.160 | | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 80 | 13.2 | 22 |
| CG21.180 | | | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | Weight (Metals) = 143.0 gms. Approx | | | |
| CG21.200 | | | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 3/4" | 102 | 14.5 | 27 |
| CG21.250 | | | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = 136 gms. Approx | | | |
| CG21.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| CG21.400 | | | | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| CG21.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| CG21.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |

| 30° SPRAY ANGLE η 20° | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|--|-------|-------|-------|--------|--------|--------|----------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | | | | |
| MODEL NO.  | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX |
| CG12.350 | ● | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 45 | 10 | 17 |
| CG12.650 | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = XX gms. Approx | | | |
| CG22.100 | | ● | | | 3.9 | 5.00 | 7.07 | 10.0 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 75 | 10 | 17 |
| CG22.125 | | ● | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | |
| CG22.160 | | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 80 | 13.2 | 22 |
| CG22.180 | | | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | Weight (Metals) = XX gms. Approx | | | |
| CG22.200 | | | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 3/4" | 102 | 14.5 | 27 |
| CG22.250 | | | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = XX gms. Approx | | | |
| CG22.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| CG22.400 | | | | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| CG22.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| CG22.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |

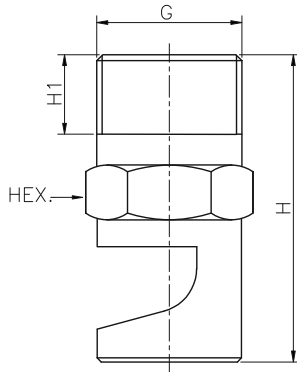
CG Series High Impact Flat Spray Nozzles

| 45° SPRAY ANGLE η 25° | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|--|-------|-------|-------|--------|--------|--------|----------------------------------|-------------------|------|-----|--|
| | 1/4" | 3/8" | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO.  | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX | |
| CG13.350 | ● | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 42 | 10 | 17 | |
| CG13.650 | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = XX gms. Approx | | | | |
| CG23.100 | | ● | | | 3.9 | 5.00 | 7.07 | 10.0 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 50 | 10 | 17 | |
| CG23.125 | | ● | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | | |
| CG23.160 | | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 60 | 13.2 | 22 | |
| CG23.180 | | | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | Weight (Metals) = XX gms. Approx | | | | |
| CG23.200 | | | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 3/4" | 70 | 14.5 | 27 | |
| CG23.250 | | | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = XX gms. Approx | | | | |
| CG23.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| CG23.400 | | | | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| CG23.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| CG23.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |

| 60° SPRAY ANGLE η 40° | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|--|-------|-------|-------|--------|--------|--------|----------------------------------|-------------------|------|-----|--|
| | 1/4" | 3/8" | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO.  | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX | |
| CG14.350 | ● | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 42 | 10 | 17 | |
| CG14.650 | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = XX gms. Approx | | | | |
| CG24.100 | | ● | | | 3.9 | 5.00 | 7.07 | 10.0 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 50 | 10 | 17 | |
| CG24.125 | | ● | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | | |
| CG24.160 | | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 60 | 13.2 | 22 | |
| CG24.180 | | | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | Weight (Metals) = XX gms. Approx | | | | |
| CG24.200 | | | ● | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 3/4" | 70 | 14.5 | 27 | |
| CG24.250 | | | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = XX gms. Approx | | | | |
| CG24.320 | | | ● | ● | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| CG24.400 | | | | ● | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| CG24.520 | | | | ● | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| CG24.650 | | | | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |

CH Series Flood Spray Nozzles - Flat Type

CH



CH series flat nozzles work on the deflection principal conveying a water vein onto a machined deflection surface and produce a jet with a wide angle flat spray pattern medium impact value and medium size droplets.

Wide angle flat with sharply defined spray pattern. It is available with a threaded connection for the sizes form 1/8" to 1". These type of nozzles assure a wide coverage and an even distribution.

- Characteristic : Flat nozzle work on the impact principle, with high efficiency and low plugging risks.
- Design : One Piece construction, non clogging type accurately machined to provide very high impact
- Application : Gravel washing, rinsing control of foam etc.

| 90° SPRAY ANGLE η 50° | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--|--------|-------|--------|--------|--------|--------|-----------------------------------|----|------|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | |
| | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX |
| MODEL NO. | | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 22 | 6.5 | 11 |
| CH16.100 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 21 gms. Approx | | | |
| CH16.150 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 30 | 10 | 14 |
| CH16.175 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 51 gms. Approx | | | |
| CH16.200 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36 | 10 | 17 |
| CH16.250 | ● | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 140 gms. Approx | | | |
| CH16.300 | ● | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 50 | 13.2 | 22 |
| CH16.350 | ● | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 185 gms. Approx | | | |
| CH16.400 | ● | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 56 | 14.5 | 27 |
| CH16.475 | ● | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 235 gms. Approx | | | |
| CH16.650 | ● | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 72 | 16.8 | 46 |
| CH16.800 | ● | ● | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = XX gms. Approx | | | |
| CH26.100 | ● | ● | ● | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| CH26.125 | | ● | ● | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| CH26.160 | | ● | ● | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | |
| CH26.180 | | | ● | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| CH26.200 | | | ● | ● | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| CH26.250 | | | | ● | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| CH26.320 | | | | ● | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| CH26.400 | | | | ● | | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| CH26.520 | | | | | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| CH26.650 | | | | | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| CH26.800 | | | | | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | | |
| CH36.100 | | | | | | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| CH36.160 | | | | | | ● | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| CH36.200 | | | | | | ● | | | | | | | | | | | | |

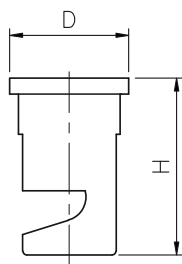
CH Series Flood Spray Nozzles - Flat Type

| 140° SPRAY ANGLE η 75° | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--|--------|-------|--------|--------|--------|--------|----------------------------------|-------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | |
| | MODEL NO. \star | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | BSP BSPT NPT | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H |
| CH19.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 25 | 11 |
| CH19.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | |
| CH19.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 27 | 14 |
| CH19.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = XX gms. Approx | | |
| CH19.250 | ● | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 33 | 17 |
| CH19.300 | ● | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = XX gms. Approx | | |
| CH19.350 | ● | ● | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 50 | 22 |
| CH19.400 | ● | ● | | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = XX gms. Approx | | |
| CH19.475 | ● | ● | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 56 | 27 |
| CH19.650 | ● | ● | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = XX gms. Approx | | |
| CH19.800 | ● | ● | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 72 | 46 |
| CH29.100 | ● | ● | ● | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = XX gms. Approx | | |
| CH29.125 | | ● | ● | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| CH29.160 | | ● | ● | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| CH29.180 | | | ● | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| CH29.200 | | | ● | ● | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| CH29.250 | | | | ● | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| CH29.320 | | | | ● | | | 6.4 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| CH29.400 | | | | ● | | | 7.8 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| CH29.520 | | | | | ● | | 8.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| CH29.650 | | | | | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |
| CH29.800 | | | | | ● | | 11.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | |
| CH39.100 | | | | | ● | | 11.3 | 50.00 | 70.71 | 100.0 | 122.4 | 158.1 | 187.0 | 223.6 | | | |
| CH39.160 | | | | | | ● | 14.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | |
| CH39.200 | | | | | | ● | 16.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | |
| CH39.250 | | | | | | ● | 17.8 | 125.00 | 176.00 | 250.0 | 306.19 | 395.28 | 467.71 | 559.02 | | | |



CI Series Flood Spray Nozzles - Flat Tip Type

CI



Wide angle jet with sharply defined spray pattern

Application :

Control of foam in effluent tanks, sewage treatment plants, coal treatment plants, coal washing cooling washing and rinsing operations where high jet impact flow is required.

| 90° SPRAY ANGLE | MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|-----------|-------------------|--|----------------|------|-------|-------|-------|-------|-------------------|----------------------------------|------|
| | | | SPRAY ANGLE | PRESSURE [BAR] | | | | | | | H | D |
| | | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 22 | 14.8 |
| | CI16.050 | 0.8 | 90° | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 32 gms. Approx | |
| | CI16.075 | 1.0 | | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | |
| | CI16.100 | 1.2 | | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | |
| | CI16.150 | 1.5 | | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | |
| | CI16.175 | 1.6 | | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | |
| | CI16.200 | 1.7 | | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | |
| | CI16.250 | 1.9 | | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | |
| | CI16.300 | 2.1 | | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | |
| | CI16.350 | 2.3 | | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | |
| | CI16.400 | 2.4 | | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | |
| | CI16.475 | 2.7 | | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | |
| | CI16.650 | 3.1 | | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | |
| | CI16.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | |
| | CI26.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | |

| 140° SPRAY ANGLE | MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|------------------|-----------|-------------------|--|----------------|------|-------|-------|-------|-------|-------------------|----------------------------------|------|
| | | | SPRAY ANGLE | PRESSURE [BAR] | | | | | | | H | D |
| | | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 22 | 14.8 |
| | CI19.050 | 0.8 | 140° | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = 32 gms. Approx | |
| | CI19.075 | 1.0 | | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | |
| | CI19.100 | 1.2 | | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | |
| | CI19.150 | 1.5 | | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | |
| | CI19.175 | 1.6 | | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | | |
| | CI19.200 | 1.7 | | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | |
| | CI19.250 | 1.9 | | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | |
| | CI19.300 | 2.1 | | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | |
| | CI19.350 | 2.3 | | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | |
| | CI19.400 | 2.4 | | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | |
| | CI19.475 | 2.7 | | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | |
| | CI19.650 | 3.1 | | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | |
| | CI19.800 | 3.5 | | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | |
| | CI29.100 | 3.9 | | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | |
| | CI29.125 | 4.3 | | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | |

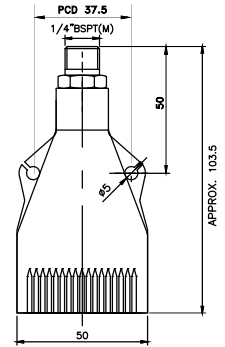
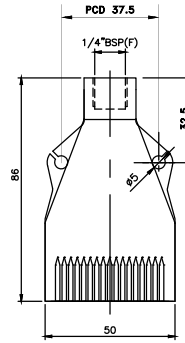
CJ Series Flat Spray Nozzles For Air Knife Nozzles



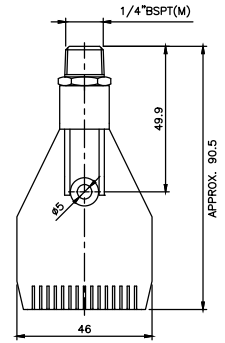
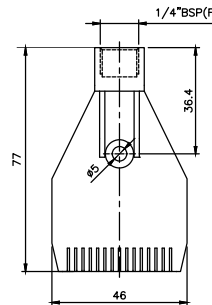
Multi channel flat air spray nozzle have been specially designed for high impact of compressed air with attenuate noise, to obtain an intensive, precise blowing power to minimize cost by reducing air consumption.



ALUMINIUM



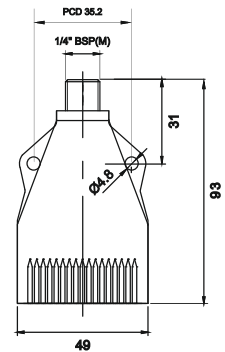
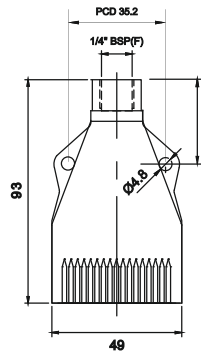
STEEL



ABS



ABS



| MOC | MODEL NO. | CONNECTION END | | ORIFICE SIZE (mm) | FLOW CAPACITY IN Nm ³ /hr AT DIFFERENT PRESSURE | | | | | WEIGHT (gram) |
|-----------|--------------|----------------|--------------|-------------------|--|----|----|----|----|-----------------------------------|
| | | 1/4" | 1/4" | | PRESSURE [BAR] | | | | | |
| | | (MALE) BSP | (FEMALE) BSP | | 1 | 2 | 3 | 4 | 5 | |
| ABS | CJ08.P11.XBM | ● | | 0.8 | 17 | 22 | 27 | 31 | - | MALE : Weight = 18 gms. Approx |
| | CJ08.P11.XBF | | ● | 0.8 | 17 | 22 | 27 | 31 | - | FEMALE : Weight = 16 gms. Approx |
| | CJ10.P11.XBM | ● | | 1.0 | 17 | 22 | 27 | 31 | - | |
| | CJ10.P11.XBF | | ● | 1.0 | 17 | 22 | 27 | 31 | - | |
| ALUMINIUM | CJ08.M6.XBM | ● | | 0.8 | 18 | 23 | 28 | 32 | 37 | MALE : Weight = 78 gms. Approx |
| | CJ08.M6.XBF | | ● | 0.8 | 18 | 23 | 28 | 32 | 37 | FEMALE : Weight = 70 gms. Approx |
| | CJ10.M6.XBM | ● | | 1.0 | 18 | 23 | 28 | 32 | 37 | |
| | CJ10.M6.XBF | | ● | 1.0 | 18 | 23 | 28 | 32 | 37 | |
| SS 304 | CJ08.M1.XBM | ● | | 0.8 | 27 | 33 | 42 | 55 | 70 | MALE : Weight = 127 gms. Approx |
| | CJ08.M1.XBF | | ● | 0.8 | 27 | 33 | 42 | 55 | 70 | FEMALE : Weight = 112 gms. Approx |
| | CJ10.M1.XBM | ● | | 1.0 | 27 | 33 | 42 | 55 | 70 | |
| | CJ10.M1.XBF | | ● | 1.0 | 27 | 33 | 42 | 55 | 70 | |
| SS 316 | CJ08.M2.XBM | ● | | 0.8 | 27 | 33 | 42 | 55 | 70 | MALE : Weight = 127 gms. Approx |
| | CJ08.M2.XBF | | ● | 0.8 | 27 | 33 | 42 | 55 | 70 | FEMALE : Weight = 112 gms. Approx |
| | CJ10.M2.XBM | ● | | 1.0 | 27 | 33 | 42 | 55 | 70 | |
| | CJ10.M2.XBF | | ● | 1.0 | 27 | 33 | 42 | 55 | 70 | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

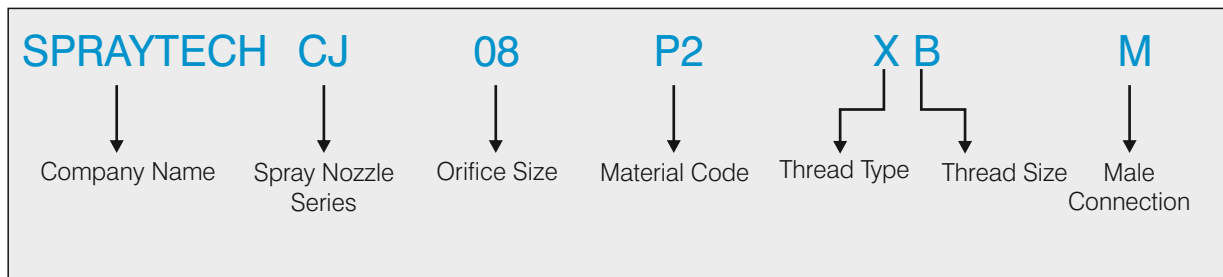
CJ Series Flat Spray Nozzles For Air Knife Nozzles

Air Knife Nozzles



The following description will help to explain our Part Number/ Code in relation to the “SPRAYTECH” Spray Nozzle.

EXAMPLE ORDERING.



SPRAY CHARACTERISTICS

Produces a flat pattern of high impact compressed air.

FEATURES

- With its multiple orifices a volume of compressed air is converted into a high speed stream with uniform distribution and good spray pattern.
- Low noise levels which are under OSHA standard.
- Low air consumption.
- Can be mounted side by side to produce an effective air curtain.

TYPICAL APPLICATIONS

- Cooling
- Warming
- Drying
- Cleaning, Wipping
- Moving of Parts

ORIFICE SIZE

- 08 = 0.8mm
- 10 = 1.0mm

MATERIAL

P2 = PP (Polypropylene)
M1 = SS304 / SS303
M6 = Aluminum

THREAD TYPE

- X=BSPP
- Y=BSPT
- Z=NPT

THREAD SIZE

- B=1/4"

CK Series Flat Spray Nozzles For Air & Saturated Steam

CK

Features :

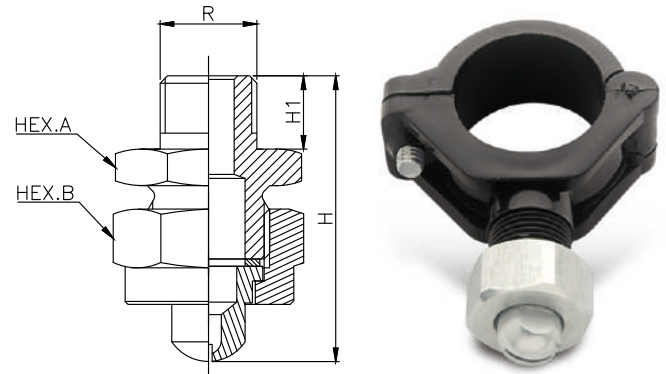
- Produce flat spray pattern in air or steam.
- Effective spray angle does not hold long since air or steam disperses very quickly.

Standard Operating Air Pressure :

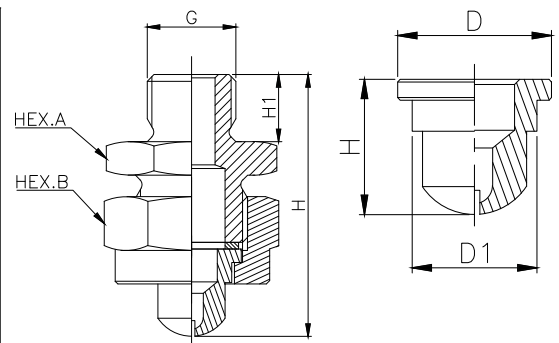
- 3 Bar

Applications :

- **Compressed air :**
Cleaning, dust suppression, drying air curtain, etc.
- **Steam :**
Humidification, temperature control, moisture control, etc.



| CK - series (3-piece structure) | |
|---------------------------------|--|
| Structure | <ul style="list-style-type: none"> • 3-piece structure of all metal • Comprises three parts : Spray tip, cap and adaptor, worn-out spray tip can be replaced separately. • Cap and adaptor standard flat spray nozzle for liquid. |
| Material | <ul style="list-style-type: none"> • B (Brass) or S.S.304 (Stainless Steel 304) • Optional material : S316 |



COMPLETE NOZZLE :

| Series | End Connection Size of Complete Nozzle | Dimensions(mm) | | | | Weight (g) | |
|--------|--|----------------|----|-------|-------|------------|---------|
| | | H | H1 | Hex A | Hex B | Brass | S.S.304 |
| CK | 1/4 ,3/8 G(M) | 39 | 10 | 22 | 22 | 47 | 44 |
| | 1/4 ,3/8 R(M) | 41.5 | 10 | 22 | 22 | 78 | 73 |

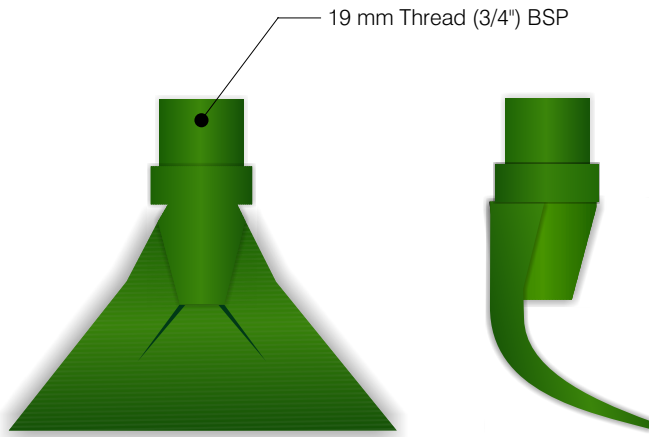
SPRAY TIP :

| Series | Spray Tip | Dimensions (mm) | | | Weight (g) | |
|--------|-----------|-----------------|------|----|------------|---------|
| | | H | D | D1 | Brass | S.S.304 |
| CK | 1/4 | 13 | 14.8 | 12 | 5.0 | 4.8 |
| | 3/8 | 13 | 14.8 | 12 | 8.2 | 7.8 |

Note : Appearance and dimensions may be slightly changed depending on materials and nozzle codes.

CM Series Deluge Type Spray Nozzle (Polyurethane)

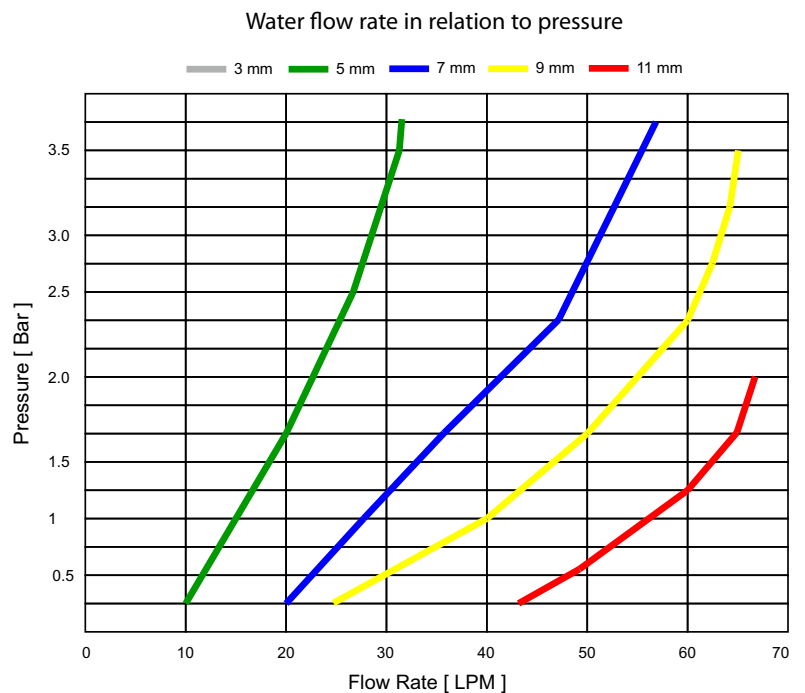
CM



- Features** :
- Uniform spray pattern,
 - Coarse flat fan spray,
 - Tough wear resistant,
 - One piece molded construction,
 - Corrosion-resistant,
 - Economical.

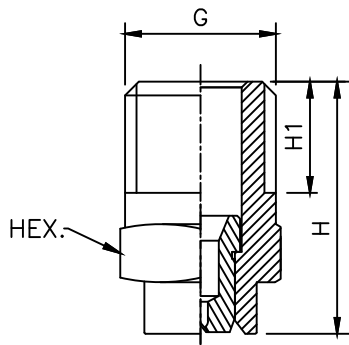
Spraytech's CM Series Spray nozzles work equally effectively. The nozzles give a sharp, defined, fan shaped water jet providing efficient cleaning. Spraytech Spray nozzles are ideal for washing, dust control and deslurrying applications and are made from polyurethane to ensure efficient cleaning.

| MODEL NO. | ORIFICE (mm) | COLOUR | END CONN |
|------------|--------------|--------|--------------|
| CM03.P9.XE | 3.0 | Grey | 3/4" BSP (M) |
| CM05.P9.XE | 5.0 | Green | 3/4" BSP (M) |
| CM07.P9.XE | 7.0 | Blue | 3/4" BSP (M) |
| CM09.P9.XE | 9.0 | Yellow | 3/4" BSP (M) |
| CM11.P9.XE | 11.0 | Red | 3/4" BSP (M) |



CN Series Flat Spray Nozzle (Insert Design)

CN



Standard design with self sealing thread connection. Stable spray angle, Uniform distribution of liquid, parabolical distribution of liquid.

Design : One piece construction, Non clogging type.

Application : Rinsing, Lubricating, Industrial washing machines, Cake washing in Centrifuge, CIP, Tray washing.

MOC : SS 304 - Body
SS 420 - Insert

'C' Series Flat Spray Nozzles are designed for high pressure / high impact washing application. These nozzles are specially designed and machined with precision which allows even spray coverage and distribution. This results in effective and uniform cleaning action over the surface being processed. Flat spray nozzles are available in all steel grades, Plastics & other alloys. Spray angle range available from 15° to 60° .

NOTE: Spray angle is designed considering 100 bar pressure; it may reduce or increase on higher or lower pressures. please confirm operating pressure while ordering.

| 15° SPRAY ANGLE | CONNECTION END | | APPROX ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------------------|--|-------|--------|--------|--------|-------|-------|-------|-------|---------------------------------------|----|-----|------|-----|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 2.0 | 10.0 | 40.0 | 60.0 | 80.0 | 100.0 | 120.0 | 150.0 | 200.0 | CONN. | H | H1 | D | HEX |
| CN11.075 | ● | ● | 1.0 | 0.75 | 1.68 | 3.35 | 4.11 | 4.74 | 5.30 | 5.81 | 6.50 | 7.50 | 1/8" | 18 | 6.5 | 10.2 | 11 |
| CN11.100 | ● | ● | 1.2 | 1.00 | 2.24 | 4.47 | 5.48 | 6.32 | 7.07 | 7.75 | 8.66 | 10.00 | 1/8" Weight (Metals) = 7 gms. Approx | | | | |
| CN11.150 | ● | ● | 1.5 | 1.50 | 3.35 | 6.71 | 8.22 | 9.49 | 10.61 | 11.62 | 12.99 | 15.00 | 1/4" | 22 | 10 | 13 | 14 |
| CN11.175 | ● | ● | 1.6 | 1.75 | 3.91 | 7.83 | 9.59 | 11.07 | 12.37 | 13.56 | 15.16 | 17.50 | 1/4" Weight (Metals) = 18 gms. Approx | | | | |
| CN11.200 | ● | ● | 1.7 | 2.00 | 4.47 | 8.94 | 10.95 | 12.65 | 14.14 | 15.49 | 17.32 | 20.00 | | | | | |
| CN11.250 | ● | ● | 1.9 | 2.50 | 5.59 | 11.18 | 13.69 | 15.81 | 17.68 | 19.36 | 21.65 | 25.00 | | | | | |
| CN11.300 | ● | ● | 2.1 | 3.0 | 6.71 | 13.42 | 16.43 | 18.97 | 21.21 | 23.24 | 25.98 | 30.00 | | | | | |
| CN11.350 | | ● | 2.3 | 3.50 | 7.83 | 15.65 | 19.17 | 22.14 | 24.75 | 27.11 | 30.31 | 35.00 | | | | | |
| CN11.400 | | ● | 2.4 | 4.00 | 8.94 | 17.89 | 21.91 | 25.30 | 28.28 | 30.98 | 34.64 | 40.00 | | | | | |
| CN11.475 | | ● | 2.7 | 4.75 | 10.62 | 21.24 | 26.02 | 30.04 | 33.59 | 36.79 | 41.14 | 47.50 | | | | | |
| CN11.650 | | ● | 3.1 | 6.50 | 14.53 | 29.07 | 35.60 | 41.11 | 45.96 | 50.35 | 56.29 | 65.00 | | | | | |
| CN11.800 | | ● | 3.5 | 8.00 | 17.89 | 35.78 | 43.82 | 50.60 | 56.57 | 61.97 | 69.28 | 80.00 | | | | | |
| CN21.100 | | ● | 3.9 | 10.00 | 22.36 | 44.72 | 54.77 | 63.25 | 70.71 | 77.46 | 86.60 | 100.0 | | | | | |
| CN21.125 | | ● | 4.3 | 12.50 | 27.95 | 55.90 | 68.47 | 79.06 | | | | | | | | | |
| CN21.160 | | ● | 4.9 | 16.00 | 35.78 | 71.55 | 87.64 | 101.19 | | | | | | | | | |
| CN21.180 | | ● | 5.2 | 18.00 | 40.25 | 80.50 | 98.59 | 113.84 | | | | | | | | | |
| CN21.200 | | ● | 5.5 | 20.00 | 44.72 | 89.44 | 109.54 | 126.49 | | | | | | | | | |
| CN21.225 | | ● | 5.8 | 22.50 | 50.31 | 100.62 | 123.24 | 142.30 | | | | | | | | | |
| CN21.250 | | ● | 6.1 | 25.00 | 55.90 | 111.80 | 136.93 | 158.11 | | | | | | | | | |

CN Series Flat Spray Nozzles (Insert Design)

| 30° SPRAY ANGLE | CONNECTION END | | APPROX ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------------------|--|-------|--------|--------|--------|-------|-------|-------|-------|---------------------------------------|-------------------|-----|------|-----|--|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 2.0 | 10.0 | 40.0 | 60.0 | 80.0 | 100.0 | 120.0 | 150.0 | 200.0 | CONN. | H | H1 | D | HEX | |
| CN12.075 | ● | ● | 1.0 | 0.75 | 1.68 | 3.35 | 4.11 | 4.74 | 5.30 | 5.81 | 6.50 | 7.50 | 1/8" | 18 | 6.5 | 10.2 | 11 | |
| CN12.100 | ● | ● | 1.2 | 1.00 | 2.24 | 4.47 | 5.48 | 6.32 | 7.07 | 7.75 | 8.66 | 10.00 | 1/8" Weight (Metals) = 7 gms. Approx | | | | | |
| CN12.150 | ● | ● | 1.5 | 1.50 | 3.35 | 6.71 | 8.22 | 9.49 | 10.61 | 11.62 | 12.99 | 15.00 | 1/4" | 22 | 10 | 13 | 14 | |
| CN12.175 | ● | ● | 1.6 | 1.75 | 3.91 | 7.83 | 9.59 | 11.07 | 12.37 | 13.56 | 15.16 | 17.50 | 1/4" Weight (Metals) = 18 gms. Approx | | | | | |
| CN12.200 | ● | ● | 1.7 | 2.00 | 4.47 | 8.94 | 10.95 | 12.65 | 14.14 | 15.49 | 17.32 | 20.00 | | | | | | |
| CN12.250 | ● | ● | 1.9 | 2.50 | 5.59 | 11.18 | 13.69 | 15.81 | 17.68 | 19.36 | 21.65 | 25.00 | | | | | | |
| CN12.300 | ● | ● | 2.1 | 3.00 | 6.71 | 13.42 | 16.43 | 18.97 | 21.21 | 23.24 | 25.98 | 30.00 | | | | | | |
| CN12.350 | ● | ● | 2.3 | 3.50 | 7.83 | 15.65 | 19.17 | 22.14 | 24.75 | 27.11 | 30.31 | 35.00 | | | | | | |
| CN12.400 | ● | ● | 2.4 | 4.00 | 8.94 | 17.89 | 21.91 | 25.30 | 28.28 | 30.98 | 34.64 | 40.00 | | | | | | |
| CN12.475 | ● | ● | 2.7 | 4.75 | 10.62 | 21.24 | 26.02 | 30.04 | 33.59 | 36.79 | 41.14 | 47.50 | | | | | | |
| CN12.650 | ● | ● | 3.1 | 6.50 | 14.53 | 29.07 | 35.60 | 41.11 | 45.96 | 50.35 | 56.29 | 65.00 | | | | | | |
| CN12.800 | ● | ● | 3.5 | 8.00 | 17.89 | 35.78 | 43.82 | 50.60 | 56.57 | 61.97 | 69.28 | 80.00 | | | | | | |
| CN22.100 | ● | ● | 3.9 | 10.00 | 22.36 | 44.72 | 54.77 | 63.25 | 70.71 | 77.46 | 86.60 | 100.0 | | | | | | |
| CN22.125 | ● | ● | 4.3 | 12.50 | 27.95 | 55.90 | 68.47 | 79.06 | | | | | | | | | | |
| CN22.160 | ● | ● | 4.9 | 16.00 | 35.78 | 71.55 | 87.64 | 101.19 | | | | | | | | | | |
| CN22.180 | ● | ● | 5.2 | 18.00 | 40.25 | 80.50 | 98.59 | 113.84 | | | | | | | | | | |
| CN22.200 | ● | ● | 5.5 | 20.00 | 44.72 | 89.44 | 109.54 | 126.49 | | | | | | | | | | |
| CN22.225 | ● | ● | 5.8 | 22.50 | 50.31 | 100.62 | 123.24 | 142.30 | | | | | | | | | | |
| CN22.250 | ● | ● | 6.1 | 25.00 | 55.90 | 111.80 | 136.93 | 158.11 | | | | | | | | | | |

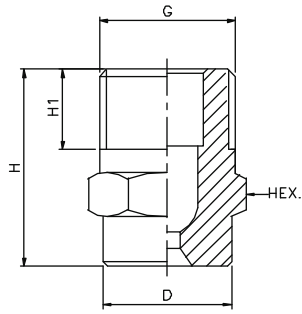
| 45° SPRAY ANGLE | CONNECTION END | | APPROX ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------------------|---|-------|--------|--------|--------|-------|-------|-------|-------|---------------------------------------|-------------------|-----|------|-----|--|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 2.0 | 10.0 | 40.0 | 60.0 | 80.0 | 100.0 | 120.0 | 150.0 | 200.0 | CONN. | H | H1 | D | HEX | |
| CN13.075 | ● | ● | 1.0 | 0.75 | 1.68 | 3.35 | 4.11 | 4.74 | 5.30 | 5.81 | 6.50 | 7.50 | 1/8" | 18 | 6.5 | 10.2 | 11 | |
| CN13.100 | ● | ● | 1.2 | 1.00 | 2.24 | 4.47 | 5.48 | 6.32 | 7.07 | 7.75 | 8.66 | 10.00 | 1/8" Weight (Metals) = 7 gms. Approx | | | | | |
| CN13.150 | ● | ● | 1.5 | 1.50 | 3.35 | 6.71 | 8.22 | 9.49 | 10.61 | 11.62 | 12.99 | 15.00 | 1/4" | 22 | 10 | 13 | 14 | |
| CN13.175 | ● | ● | 1.6 | 1.75 | 3.91 | 7.83 | 9.59 | 11.07 | 12.37 | 13.56 | 15.16 | 17.50 | 1/4" Weight (Metals) = 18 gms. Approx | | | | | |
| CN13.200 | ● | ● | 1.7 | 2.00 | 4.47 | 8.94 | 10.95 | 12.65 | 14.14 | 15.49 | 17.32 | 20.00 | | | | | | |
| CN13.250 | ● | ● | 1.9 | 2.50 | 5.59 | 11.18 | 13.69 | 15.81 | 17.68 | 19.36 | 21.65 | 25.00 | | | | | | |
| CN13.300 | ● | ● | 2.1 | 3.00 | 6.71 | 13.42 | 16.43 | 18.97 | 21.21 | 23.24 | 25.98 | 30.00 | | | | | | |
| CN13.350 | ● | ● | 2.3 | 3.50 | 7.83 | 15.65 | 19.17 | 22.14 | 24.75 | 27.11 | 30.31 | 35.00 | | | | | | |
| CN13.400 | ● | ● | 2.4 | 4.00 | 8.94 | 17.89 | 21.91 | 25.30 | 28.28 | 30.98 | 34.64 | 40.00 | | | | | | |
| CN13.475 | ● | ● | 2.7 | 4.75 | 10.62 | 21.24 | 26.02 | 30.04 | 33.59 | 36.79 | 41.14 | 47.50 | | | | | | |
| CN13.650 | ● | ● | 3.1 | 6.50 | 14.53 | 29.07 | 35.60 | 41.11 | 45.96 | 50.35 | 56.29 | 65.00 | | | | | | |
| CN13.800 | ● | ● | 3.5 | 8.00 | 17.89 | 35.78 | 43.82 | 50.60 | 56.57 | 61.97 | 69.28 | 80.00 | | | | | | |
| CN23.100 | ● | ● | 3.9 | 10.00 | 22.36 | 44.72 | 54.77 | 63.25 | 70.71 | 77.46 | 86.60 | 100.0 | | | | | | |
| CN23.125 | ● | ● | 4.3 | 12.50 | 27.95 | 55.90 | 68.47 | 79.06 | | | | | | | | | | |
| CN23.160 | ● | ● | 4.9 | 16.00 | 35.78 | 71.55 | 87.64 | 101.19 | | | | | | | | | | |
| CN23.180 | ● | ● | 5.2 | 18.00 | 40.25 | 80.50 | 98.59 | 113.84 | | | | | | | | | | |
| CN23.200 | ● | ● | 5.5 | 20.00 | 44.72 | 89.44 | 109.54 | 126.49 | | | | | | | | | | |
| CN23.225 | ● | ● | 5.8 | 22.50 | 50.31 | 100.62 | 123.24 | 142.30 | | | | | | | | | | |
| CN23.250 | ● | ● | 6.1 | 25.00 | 55.90 | 111.80 | 136.93 | 158.11 | | | | | | | | | | |

CN Series Flat Spray Nozzles (Insert Design)

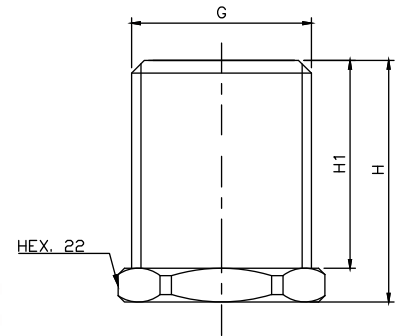
| 60° SPRAY ANGLE | CONNECTION END | | APPROX ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------------------|---|-------|--------|--------|--------|-------|-------|-------|-------|---------------------------------------|-------------------|-----|------|-----|--|
| | 1/8" | 1/4" | | PRESSURE [BAR] | | | | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 2.0 | 10.0 | 40.0 | 60.0 | 80.0 | 100.0 | 120.0 | 150.0 | 200.0 | CONN. | H | H1 | D | HEX | |
| CN14.075 | ● | ● | 1.0 | 0.75 | 1.68 | 3.35 | 4.11 | 4.74 | 5.30 | 5.81 | 6.50 | 7.50 | 1/8" | 18 | 6.5 | 10.2 | 11 | |
| CN14.100 | ● | ● | 1.2 | 1.00 | 2.24 | 4.47 | 5.48 | 6.32 | 7.07 | 7.75 | 8.66 | 10.00 | 1/8" Weight (Metals) = 7 gms. Approx | | | | | |
| CN14.150 | ● | ● | 1.5 | 1.50 | 3.35 | 6.71 | 8.22 | 9.49 | 10.61 | 11.62 | 12.99 | 15.00 | 1/4" | 22 | 10 | 13 | 14 | |
| CN14.175 | ● | ● | 1.6 | 1.75 | 3.91 | 7.83 | 9.59 | 11.07 | 12.37 | 13.56 | 15.16 | 17.50 | 1/4" Weight (Metals) = 18 gms. Approx | | | | | |
| CN14.200 | ● | ● | 1.7 | 2.00 | 4.47 | 8.94 | 10.95 | 12.65 | 14.14 | 15.49 | 17.32 | 20.00 | | | | | | |
| CN14.250 | ● | ● | 1.9 | 2.50 | 5.59 | 11.18 | 13.69 | 15.81 | 17.68 | 19.36 | 21.65 | 25.00 | | | | | | |
| CN14.300 | ● | ● | 2.1 | 3.00 | 6.71 | 13.42 | 16.43 | 18.97 | 21.21 | 23.24 | 25.98 | 30.00 | | | | | | |
| CN14.350 | ● | ● | 2.3 | 3.50 | 7.83 | 15.65 | 19.17 | 22.14 | 24.75 | 27.11 | 30.31 | 35.00 | | | | | | |
| CN14.400 | | ● | 2.4 | 4.00 | 8.94 | 17.89 | 21.91 | 25.30 | 28.28 | 30.98 | 34.64 | 40.00 | | | | | | |
| CN14.475 | | ● | 2.7 | 4.75 | 10.62 | 21.24 | 26.02 | 30.04 | 33.59 | 36.79 | 41.14 | 47.50 | | | | | | |
| CN14.650 | | ● | 3.1 | 6.50 | 14.53 | 29.07 | 35.60 | 41.11 | 45.96 | 50.35 | 56.29 | 65.00 | | | | | | |
| CN14.800 | | ● | 3.5 | 8.00 | 17.89 | 35.78 | 43.82 | 50.60 | 56.57 | 61.97 | 69.28 | 80.00 | | | | | | |
| CN24.100 | | ● | 3.9 | 10.00 | 22.36 | 44.72 | 54.77 | 63.25 | 70.71 | 77.46 | 86.60 | 100.0 | | | | | | |
| CN24.125 | | ● | 4.3 | 12.50 | 27.95 | 55.90 | 68.47 | 79.06 | | | | | | | | | | |
| CN24.160 | | ● | 4.9 | 16.00 | 35.78 | 71.55 | 87.64 | 101.19 | | | | | | | | | | |
| CN24.180 | | ● | 5.2 | 18.00 | 40.25 | 80.50 | 98.59 | 113.84 | | | | | | | | | | |
| CN24.200 | | ● | 5.5 | 20.00 | 44.72 | 89.44 | 109.54 | 126.49 | | | | | | | | | | |
| CN24.225 | | ● | 5.8 | 22.50 | 50.31 | 100.62 | 123.24 | 142.30 | | | | | | | | | | |
| CN24.250 | | ● | 6.1 | 25.00 | 55.90 | 111.80 | 136.93 | 158.11 | | | | | | | | | | |

KS Series Steam Spray Nozzles

KS



KS Series : 3/8" & 1/2"



KS1 Series : 3/4" & 1/2"

'Spraytech' make KS series steam spray nozzles offers various capacities of mass flow rate for saturated and superheated steam which is widely used for applications such as steam purging, heating, humidification, sterilization etc.

KS series are available with inbuilt NRV design which allows the nozzle to work in immersible conditions. It opens when pressure is applied and locks itself when there is no pressure.

Available in two body designs, Standard (KS) and Full Threading (KS1)

Note: Designs are available with and without NRV features, please mention while ordering.



| MODEL NO | END CONNECTION | | | MASS FLOW RATE OF SAT. STREAM (kg/hr) | | | | | G/A DIMENSION MM | | | | |
|----------|----------------|------|------|---------------------------------------|-------|-------|-------|-------|----------------------------------|----|------|----|-----|
| | | | | Pressure [bar] | | | | | | | | | |
| | 3/8" | 1/2" | 3/4" | 1 | 2 | 3 | 4 | 5 | CONN. | H | H1 | D | HEX |
| KS.03 | ● | | | 8.3 | 11.4 | 15.48 | 19.80 | 23.04 | 3/8" | 25 | 10 | 16 | 17 |
| KS.04 | ● | | | 10.6 | 15.3 | 21.60 | 27.36 | 32.40 | Weight (Metals) = XX gms. Approx | | | | |
| KS.05 | ● | ● | | 16.4 | 21.6 | 30.96 | 39.60 | 46.44 | 1/2" | 32 | 13.2 | 21 | 22 |
| KS.08 | KS1.08 | ● | | 31.8 | 47.71 | 63.61 | 79.51 | 95.42 | Weight (Metals) = XX gms. Approx | | | | |
| KS.13 | KS1.13 | | ● | 83.9 | 125.9 | 167.7 | 209.6 | 251.5 | 3/4" | 42 | 15 | 32 | 27 |
| | KS1.12 | | ● | 127.2 | 190.8 | 256.4 | 318.0 | 381.6 | Weight (Metals) = XX gms. Approx | | | | |
| | KS1.12 | | ● | 161.0 | 241.5 | 322.0 | 402.5 | 483.0 | | | | | |

End Connection : X – BSP, Y – BSPT, Z – NPT Available.



Straight Jet Spray Nozzle

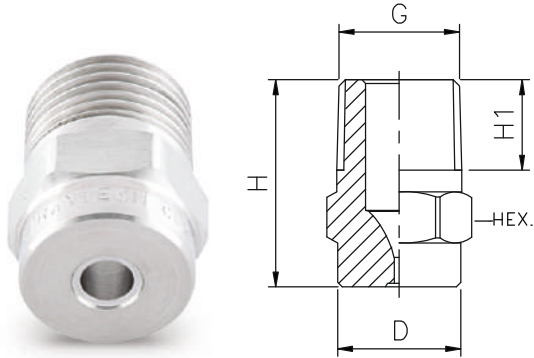


APPLICATION

- Paper cutting
- Paper slitting
- Component Washing machines
- Vehicles washing machines
- Floor washing machine

CL Series Straight Jet Spray Nozzle

CL



Design for : 1/8", 1/4", 3/8" & 1/2"



Design for : 3/4" & 1"

Compact stream jet with a defined jet length owing to optimum flow geometry. Flow conditions are not affected by turbulence. A concentrated jet with high impact force is achieved. This is used for powerful punctiform impact, wherever concentrated jet power is vital.

- Characteristic :** A high efficiency and economical performance is obtained.
- Design :** One Piece Construction.
- Application :** For High pressure cleaning systems, Jet Cutting and separating.
- Features :** Optimized flow maximum jet power concentrated energy.

| 0° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|----------------|----------------|------|------|------|------|-----|-------------------|--|--------|-------|--------|--------|--------|--------|-----------------------------------|----|------|------|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| CL10.100 | ● | ● | | | | | 1.1 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10.2 | 11 |
| CL10.150 | ● | ● | | | | | 1.3 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 10 gms. Approx | | | | |
| CL10.175 | ● | ● | | | | | 1.4 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| CL10.200 | ● | ● | | | | | 1.5 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 18 gms. Approx | | | | |
| CL10.250 | ● | ● | | | | | 1.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 12 | 16 | 17 |
| CL10.300 | ● | ● | | | | | 2.1 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| CL10.350 | ● | ● | ● | | | | 2.0 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| CL10.400 | ● | ● | ● | | | | 2.1 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 60 gms. Approx | | | | |
| CL10.475 | ● | ● | ● | | | | 2.3 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 14.5 | 32 | 27 |
| CL10.650 | | ● | ● | | | | 2.7 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 133 gms. Approx | | | | |
| CL10.800 | | ● | ● | | | | 3.0 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 16.8 | 39 | 36 |
| CL20.100 | | ● | ● | | | | 3.4 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 328 gms. Approx | | | | |
| CL20.125 | | ● | ● | | | | 3.7 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| CL20.160 | | ● | ● | | | | 4.2 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| CL20.180 | | ● | ● | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| CL20.200 | | ● | ● | | | | 4.7 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| CL20.225 | | ● | ● | | | | 5.0 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| CL20.250 | | ● | ● | ● | ● | | 5.3 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| CL20.320 | | | ● | ● | ● | | 6.0 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| CL20.400 | | | ● | ● | ● | | 6.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| CL20.520 | | | | ● | ● | ● | 7.6 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| CL20.650 | | | | ● | ● | ● | 8.5 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| CL20.720 | | | | | ● | ● | 9.0 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.00 | | | | | |
| CL20.800 | | | | | ● | ● | 9.5 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | |
| CL30.100 | | | | | ● | ● | 10.6 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | | |
| CL30.118 | | | | | ● | ● | 11.5 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | | |
| CL30.130 | | | | | ● | ● | 12.1 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | | |
| CL30.160 | | | | | ● | ● | 13.4 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

Full Cone Spray Nozzles Series



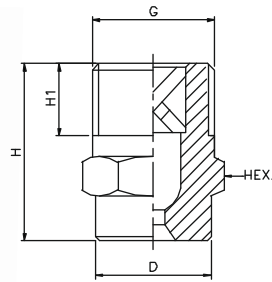
APPLICATION

- Absorption
- Chemical process engineering
- Chlorine precipitation
- Cleaning
- Cooling
- Desuperheating
- Dust control
- Fire protection
- Foam control
- Gas treatment
- Spraying onto mats in air
- Washers
- Spraying over packings
- Surface spraying
- Water treatment and many others...

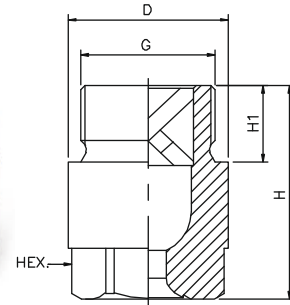
DA Series Full Cone Spray Nozzles



(Male)



Design for 1/8", 1/4", 3/8" & 1/2"



Design for 3/4" & 2"

Full Cone Spray Nozzle form complete spray coverage in a round area. It provides an uniform spray distribution of medium to large size drops resulting from their vane design which features large flow passage and control characteristics.

Characteristic : Internal vane design features large flow passage and fine control.

Design : Removable vane, Axial flow.

Type : Round pattern, Threaded connection.

| MODEL NO. | | CONNECTION END | | | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-------------|----------|----------------|------|------|------|------|-----|--------|--------|-----|-------------------|--|--------|-------|--------|--------|--------|--------|------------------------------------|-----|------|----|-----|
| | | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | PRESSURE [BAR] | | | | | | | | | | | | |
| SPRAY ANGLE | | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | ORIFICE SIZE (mm) | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX |
| 15° | 30° | | | | | | | | | | | | | | | | | | | | | | |
| DA11.100 | DA12.100 | ● | | | | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DA11.150 | DA12.150 | ● | | | | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DA11.175 | DA12.175 | ● | | | | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DA11.200 | DA12.200 | ● | | | | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DA11.250 | DA12.250 | ● | | | | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DA11.300 | DA12.300 | ● | | | | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DA11.350 | DA12.350 | ● | | | | | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DA11.400 | DA12.400 | ● | | | | | | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DA11.475 | DA12.475 | ● | ● | | | | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DA11.650 | DA12.650 | | ● | | | | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA11.800 | DA12.800 | | ● | | | | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DA21.100 | DA22.100 | | ● | ● | | | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DA21.125 | DA22.125 | | | ● | | | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 1 1/4" | 74 | 19 | 49 | 41 |
| DA21.160 | DA22.160 | | | ● | ● | | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = 670 gms. Approx | | | | |
| DA21.180 | DA22.180 | | | | ● | | | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 33.67 | 1 1/2" | 85 | 22 | 59 | 50 |
| DA21.200 | DA22.200 | | | | ● | | | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | Weight (Metals) = 1172 gms. Approx | | | | |
| DA21.225 | DA22.225 | | | | ● | | | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 2" | 106 | 24 | 68 | 60 |
| DA21.250 | DA22.250 | | | | ● | ● | | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = 1896 gms. Approx | | | | |
| DA21.320 | DA22.320 | | | | | ● | | | | | 6.9 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DA21.400 | DA22.400 | | | | | ● | ● | | | | 7.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DA21.520 | DA22.520 | | | | | | ● | ● | | | 8.8 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DA21.650 | DA22.650 | | | | | | | ● | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DA21.720 | DA22.720 | | | | | | | ● | ● | | 10.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.00 | | | | | |
| DA21.800 | DA22.800 | | | | | | | | ● | ● | 11.5 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | |
| DA31.100 | DA32.100 | | | | | | | | | ● | 12.9 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | | |
| DA31.118 | DA32.118 | | | | | | | | | ● | 14.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | | |
| DA31.130 | DA32.130 | | | | | | | | | ● | 14.7 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | | |
| DA31.160 | DA32.160 | | | | | | | | | ● | 16.3 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | | |
| DA31.200 | DA32.200 | | | | | | | | | ● | 18.2 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DA31.227 | DA32.227 | | | | | | | | | ● | 19.4 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DA31.250 | DA32.250 | | | | | | | | | ● | 20.4 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DA31.337 | DA32.337 | | | | | | | | | ● | 23.7 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DA Series Full Cone Spray Nozzles

(Male)

| 45° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|-------|-------|-------------------|-----------------------------------|----|------|-----|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | CONN. | H | H1 | D | HEX | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DA13.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DA13.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DA13.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DA13.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DA13.250 | ● | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DA13.300 | | ● | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DA13.350 | | ● | ● | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DA13.400 | | ● | ● | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DA13.475 | | ● | ● | | | | 2.6 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DA13.650 | | | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA13.800 | | | | ● | | | 3.4 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DA23.100 | | | | ● | | | 3.8 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DA23.125 | | | | ● | ● | | 4.2 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DA23.160 | | | | ● | ● | | 4.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DA23.180 | | | | | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DA23.200 | | | | | ● | | 5.4 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DA23.225 | | | | | | ● | 5.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DA23.250 | | | | | | ● | 6.0 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DA23.320 | | | | | | ● | 6.8 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |

| 60° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|-------|-------|-------------------|-----------------------------------|----|------|-----|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | CONN. | H | H1 | D | HEX | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DA14.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DA14.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DA14.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DA14.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DA14.250 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DA14.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DA14.350 | ● | ● | | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DA14.400 | | ● | ● | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DA14.475 | | ● | ● | | | | 2.6 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DA14.650 | | ● | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA14.800 | | | ● | | | | 3.4 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DA24.100 | | | ● | | | | 3.8 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DA24.125 | | | | ● | | | 4.2 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DA24.160 | | | | ● | | | 4.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DA24.180 | | | | ● | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DA24.200 | | | | | ● | | 5.4 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DA24.225 | | | | | ● | | 5.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DA24.250 | | | | | ● | | 6.0 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DA24.320 | | | | | | ● | 6.8 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DA24.400 | | | | | | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DA24.520 | | | | | | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DA Series Full Cone Spray Nozzles

DA

(Male)

| 90° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|-------------------|-----------------------------------|----|------|-----|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | CONN. | H | H1 | D | HEX | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DA16.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DA16.150 | ● | | | | | | 1.4 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DA16.175 | ● | | | | | | 1.5 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DA16.200 | ● | | | | | | 1.6 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DA16.250 | ● | | | | | | 1.8 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DA16.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DA16.350 | ● | ● | ● | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DA16.400 | ● | ● | ● | | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DA16.475 | ● | ● | ● | | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DA16.650 | ● | ● | ● | | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA16.800 | ● | ● | ● | | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DA26.100 | | | ● | | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DA26.125 | | | ● | | | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DA26.160 | | | ● | ● | | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DA26.180 | | | | ● | | | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DA26.200 | | | | ● | | | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DA26.225 | | | | ● | | | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DA26.250 | | | | ● | ● | | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DA26.320 | | | | ● | ● | | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DA26.400 | | | | | ● | | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DA26.520 | | | | | ● | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DA26.650 | | | | | ● | | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DA26.720 | | | | | ● | | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

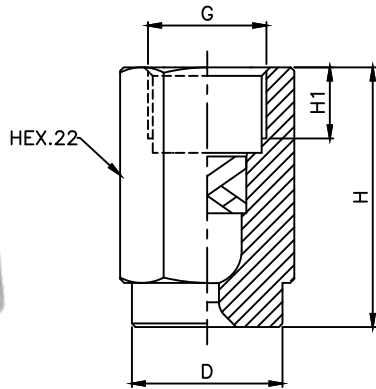
| 120° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | | | | | |
|------------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|-------------------|-----------------------------------|----|------|-----|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | CONN. | H | H1 | D | HEX | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DA18.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DA18.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DA18.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DA18.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DA18.250 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DA18.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DA18.350 | ● | | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DA18.400 | ● | ● | ● | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DA18.475 | ● | ● | ● | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DA18.650 | | ● | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA18.800 | | ● | ● | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DA28.100 | | | ● | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DA28.125 | | | ● | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DA28.160 | | | ● | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DA28.180 | | | | ● | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DA28.200 | | | | ● | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DA28.225 | | | | ● | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DA28.250 | | | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DA28.320 | | | | ● | ● | | 6.9 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DA28.400 | | | | | ● | | 7.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DA28.520 | | | | | ● | ● | 8.8 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DA28.650 | | | | | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DA28.720 | | | | | ● | | 10.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

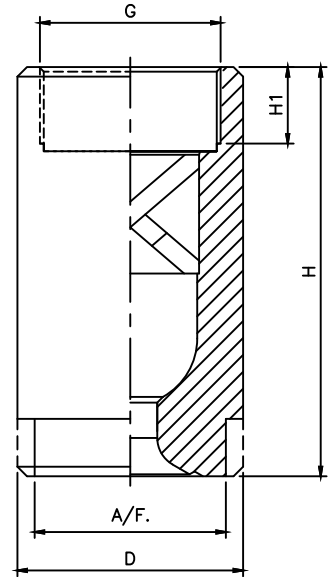
DB Series Full Cone Spray Nozzles

DB

(Female)



Design for 1/8", 1/4", 3/8" & 1/2"



Design for 3/4" & 2"

| MODEL NO. | | CONNECTION END | | | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | | |
|-------------|----------|----------------|------|------|------|------|-----|--------|--------|-----|-------------------|--|-------|--------|--------|--------|--------|--------|-------------------|------------------------------------|------|-----|------|----|
| | | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | ORIFICE SIZE (mm) | | | | | | | | | | | | | |
| SPRAY ANGLE | | | | | | | | | | | | PRESSURE [BAR] | | | | | | | | | | | | |
| 15° | 30° | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX | |
| DB11.100 | DB12.100 | ● | | | | | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 26.5 | 6.5 | 13.2 | 14 |
| DB11.150 | DB12.150 | ● | | | | | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | | | |
| DB11.175 | DB12.175 | ● | | | | | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 34 | 10 | 15.2 | 16 |
| DB11.200 | DB12.200 | ● | | | | | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 38 gms. Approx | | | | |
| DB11.250 | DB12.250 | ● | | | | | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36.5 | 10 | 21.2 | 22 |
| DB11.300 | DB12.300 | ● | | | | | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 90 gms. Approx | | | | |
| DB11.350 | DB12.350 | ● | | | | | | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 48.5 | 14 | 26.2 | 27 |
| DB11.400 | DB12.400 | ● | | | | | | | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 176 gms. Approx | | | | |
| DB11.475 | DB12.475 | ● | ● | | | | | | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 58 | 14 | 31.5 | 27 |
| DB11.650 | DB12.650 | | ● | ● | | | | | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 230 gms. Approx | | | | |
| DB11.800 | DB12.800 | | ● | ● | | | | | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 76 | 18 | 39.5 | 36 |
| DB21.100 | DB22.100 | | ● | ● | ● | | | | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 470 gms. Approx | | | | |
| DB21.125 | DB22.125 | | | ● | ● | | | | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 1 1/4" | 96 | 20 | 49 | 41 |
| DB21.160 | DB22.160 | | | ● | ● | ● | | | | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = 678 gms. Approx | | | | |
| DB21.180 | DB22.180 | | | | ● | ● | | | | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 1 1/2" | 107 | 20 | 59 | 50 |
| DB21.200 | DB22.200 | | | | ● | ● | ● | | | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | Weight (Metals) = 1176 gms. Approx | | | | |
| DB21.225 | DB22.225 | | | | ● | ● | ● | | | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 2" | 130 | 22 | 68 | 60 |
| DB21.250 | DB22.250 | | | | | ● | ● | ● | | | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = 2410 gms. Approx | | | | |
| DB21.320 | DB22.320 | | | | | | ● | ● | ● | | | 6.9 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DB21.400 | DB22.400 | | | | | | | ● | ● | | | 7.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DB21.520 | DB22.520 | | | | | | | | ● | ● | | 8.8 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DB21.650 | DB22.650 | | | | | | | | | ● | | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DB21.720 | DB22.720 | | | | | | | | | | ● | 10.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.00 | | | | | |
| DB21.800 | DB22.800 | | | | | | | | | | ● | 11.5 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | | |
| DB31.100 | DB32.100 | | | | | | | | | | ● | 12.9 | 50.00 | 70.71 | 100.00 | 122.47 | 158.11 | 187.08 | 223.61 | | | | | |
| DB31.118 | DB32.118 | | | | | | | | | | ● | 14.0 | 59.00 | 83.44 | 118.00 | 144.52 | 186.57 | 220.76 | 263.86 | | | | | |
| DB31.130 | DB32.130 | | | | | | | | | | ● | 14.7 | 65.00 | 91.92 | 130.00 | 159.22 | 205.55 | 243.21 | 290.69 | | | | | |
| DB31.160 | DB32.160 | | | | | | | | | | ● | 16.3 | 80.00 | 113.14 | 160.00 | 195.96 | 252.98 | 299.33 | 357.77 | | | | | |
| DB31.200 | DB32.200 | | | | | | | | | | ● | 18.2 | 100 | 141.42 | 200.00 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DB31.227 | DB32.227 | | | | | | | | | | ● | 19.4 | 113.5 | 160.51 | 227.00 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DB31.250 | DB32.250 | | | | | | | | | | ● | 20.4 | 125 | 176.78 | 250.00 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DB31.337 | DB32.337 | | | | | | | | | | ● | 23.7 | 168.5 | 238.29 | 337.00 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

End Connection : X – BSP, Y – BSPT, Z – NPT Available.

DB Series Full Cone Spray Nozzles

(Female)

| 45° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|------|-----|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX | |
| DB13.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 26.5 | 6.5 | 13.2 | 14 |
| DB13.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = xx gms. Approx | | | | |
| DB13.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 34 | 10 | 15.2 | 16 |
| DB13.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 38 gms. Approx | | | | |
| DB13.250 | ● | ● | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36.5 | 10 | 21.2 | 22 |
| DB13.300 | | ● | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 90 gms. Approx | | | | |
| DB13.350 | | ● | ● | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 48.5 | 14 | 26.2 | 27 |
| DB13.400 | | ● | ● | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 176 gms. Approx | | | | |
| DB13.475 | | ● | ● | | | | 2.6 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 58 | 14 | 31.5 | 27 |
| DB13.650 | | | ● | ● | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 230 gms. Approx | | | | |
| DB13.800 | | | | ● | | | 3.4 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 76 | 18 | 39.5 | 36 |
| DB23.100 | | | | ● | | | 3.8 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 470 gms. Approx | | | | |
| DB23.125 | | | | ● | ● | | 4.2 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DB23.160 | | | | ● | ● | | 4.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DB23.180 | | | | ● | ● | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DB23.200 | | | | ● | ● | | 5.4 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DB23.225 | | | | | ● | | 5.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DB23.250 | | | | | ● | | 6.0 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DB23.320 | | | | | ● | | 6.8 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |

| 60° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|-------|-------|--------|-----------------------------------|------|-----|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX | |
| DB14.100 | ● | | | | | | 1.1 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 26.5 | 6.5 | 13.2 | 14 |
| DB14.150 | ● | | | | | | 1.4 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = xx gms. Approx | | | | |
| DB14.175 | ● | | | | | | 1.5 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 34 | 10 | 15.2 | 16 |
| DB14.200 | ● | | | | | | 1.6 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 38 gms. Approx | | | | |
| DB14.250 | ● | | | | | | 1.8 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36.5 | 10 | 21.2 | 22 |
| DB14.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 90 gms. Approx | | | | |
| DB14.350 | ● | ● | | | | | 2.1 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 48.5 | 14 | 26.2 | 27 |
| DB14.400 | | ● | ● | | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 176 gms. Approx | | | | |
| DB14.475 | | ● | ● | | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 58 | 14 | 31.5 | 27 |
| DB14.650 | | ● | ● | | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 230 gms. Approx | | | | |
| DB14.800 | | | ● | | | | 3.25 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 76 | 18 | 39.5 | 36 |
| DB24.100 | | | ● | | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 470 gms. Approx | | | | |
| DB24.125 | | | | ● | | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DB24.160 | | | | ● | | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DB24.180 | | | | ● | | | 4.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DB24.200 | | | | | ● | | 5.1 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DB24.225 | | | | | ● | | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DB24.250 | | | | | ● | | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DB24.320 | | | | | ● | | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DB24.400 | | | | | ● | | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DB24.520 | | | | | ● | | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DB Series Full Cone Spray Nozzles

(Female)

| 90° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|--------|-----------------------------------|------|-----|------|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX | |
| DB16.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 26.5 | 6.5 | 13.2 | 14 |
| DB16.150 | ● | | | | | | 1.4 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = xx gms. Approx | | | | |
| DB16.175 | ● | | | | | | 1.5 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 34 | 10 | 15.2 | 16 |
| DB16.200 | ● | | | | | | 1.6 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 38 gms. Approx | | | | |
| DB16.250 | ● | | | | | | 1.8 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36.5 | 10 | 21.2 | 22 |
| DB16.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 90 gms. Approx | | | | |
| DB16.350 | ● | ● | | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 48.5 | 14 | 26.2 | 27 |
| DB16.400 | ● | ● | ● | | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 176 gms. Approx | | | | |
| DB16.475 | ● | ● | ● | | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 58 | 14 | 31.5 | 27 |
| DB16.650 | ● | ● | ● | | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 230 gms. Approx | | | | |
| DB16.800 | ● | ● | ● | | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 76 | 18 | 39.5 | 36 |
| DB26.100 | | | ● | | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 470 gms. Approx | | | | |
| DB26.125 | | | ● | | | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DB26.160 | | | ● | ● | | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DB26.180 | | | | ● | | | 4.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DB26.200 | | | | ● | | | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DB26.225 | | | | ● | | | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DB26.250 | | | | ● | ● | | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DB26.320 | | | | ● | ● | | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DB26.400 | | | | | ● | | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DB26.520 | | | | | ● | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DB26.650 | | | | | ● | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DB26.720 | | | | | | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

| 120° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|--------|-----------------------------------|------|-----|------|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX | |
| DB18.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 26.5 | 6.5 | 13.2 | 14 |
| DB18.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = xx gms. Approx | | | | |
| DB18.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 34 | 10 | 15.2 | 16 |
| DB18.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 38 gms. Approx | | | | |
| DB18.250 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 36.5 | 10 | 21.2 | 22 |
| DB18.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 90 gms. Approx | | | | |
| DB18.350 | ● | | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 48.5 | 14 | 26.2 | 27 |
| DB18.400 | ● | ● | | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 176 gms. Approx | | | | |
| DB18.475 | ● | ● | ● | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 58 | 14 | 31.5 | 27 |
| DB18.650 | ● | ● | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 230 gms. Approx | | | | |
| DB18.800 | ● | ● | ● | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 76 | 18 | 39.5 | 36 |
| DB28.100 | | | ● | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 470 gms. Approx | | | | |
| DB28.125 | | | ● | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DB28.160 | | | ● | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DB28.180 | | | | ● | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DB28.200 | | | | ● | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DB28.225 | | | | ● | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DB28.250 | | | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DB28.320 | | | | ● | ● | | 6.9 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DB28.400 | | | | | ● | | 7.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DB28.520 | | | | | ● | ● | 8.8 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DB28.650 | | | | | ● | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DB28.720 | | | | | | ● | 10.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

End Connection : X – BSP, Y – BSPT, Z – NPT Available.

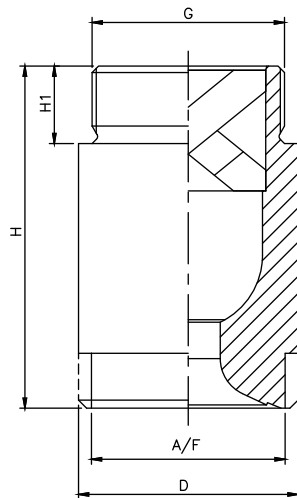
DA Series Full Cone Spray Nozzles

DA

(Axial Flow Male)



Design for 1-1/4", 1-1/2", 2"

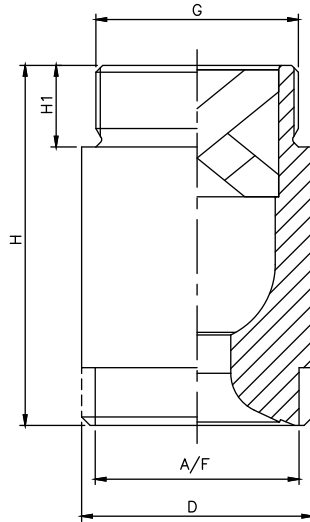


The larger spray nozzles in the D series are widely used in the industry, for a wide variety of applications. They maintain the simple design of the smaller nozzles, with the inherent resistance to clogging due to design of the X-vane, and are often manufactured out high quality alloys and special plastic materials.

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|-----------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 60° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DA24.650 | ● | | | 9.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 1 1/4" | 74 | 19 | 49 | 41 |
| DA24.800 | ● | | | 10.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = XXX gms. Approx | | | | |
| DA34.100 | ● | | | 11.20 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 1 1/2" | 85 | 22 | 59 | 50 |
| DA34.118 | | ● | | 12.2 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = XXX gms. Approx | | | | |
| DA34.130 | | ● | | 12.8 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | 2" | 106 | 24 | 68 | 60 |
| DA34.160 | | ● | | 14.2 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | Weight (Metals) = XXX gms. Approx | | | | |
| DA34.200 | | | ● | 15.8 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DA34.227 | | | ● | 16.9 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DA34.250 | | | ● | 17.7 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DA34.300 | | | ● | 19.1 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DA34.337 | | | ● | 20.6 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|--------------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 90° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DA26.650 | ● | | | 9.7 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 1 1/4" | | 19 | 49 | 41 |
| DA26.800 | ● | | | 10.7 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = 525.0 gms. Approx | | | | |
| DA36.100 | ● | | | 12.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 1 1/2" | 85 | 22 | 59 | 50 |
| DA36.118 | | ● | | 13.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = 915.0 gms. Approx | | | | |
| DA36.130 | | ● | | 13.7 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | 2" | 106 | 24 | 68 | 60 |
| DA36.160 | | ● | | 15.20 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | Weight (Metals) = 1535.0 gms. Approx | | | | |
| DA36.200 | | | ● | 17.0 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DA36.227 | | | ● | 18.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DA36.250 | | | ● | 19.0 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DA36.300 | | | ● | 20.5 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DA36.337 | | | ● | 22.0 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

DA



- Application** : Surface spraying, Washing & Cooling of flue gasses to remove fly ash, Cooling condenser, Scrubbing, Foam breaking.
- Flow Rate** : 65 LPM to 1250 LPM
- Pressure** : 2.0 Kg/cm² or specified
- Spray Angle** : 60° to 120°
- End Connection** : 1 1/4" to 4" BSPT / NPT or BSPP
- M.O.C.** : S.S. 316, 304, Brass, PVC, PVDF, PP, Teflon[®]

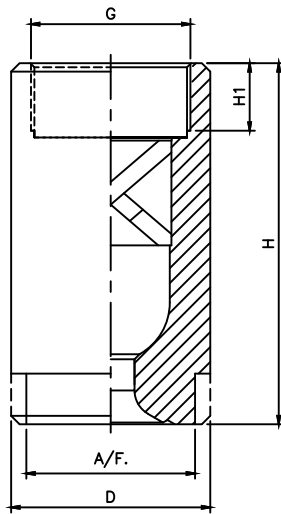
The larger spray nozzles in the DA Series are widely used in the industry, for a wide variety of applications. They maintain the simple design of the smaller nozzles, with the inherent resistance to clogging due to design of the X-vane and are often manufactured by any type of machinable material like SS304, SS316, PP/PVC etc.

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|--------------------|--------------------|--------------------|-------------------|--|--------|-------|--------|--------|--------|--------|----------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | | | | | |
| 120° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | A/F |
| DA28.800 | ● | | | 11.4 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 1 1/4" | 74 | 19 | 49 | 41 |
| DA38.100 | ● | | | 12.7 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | | |
| DA38.118 | ● | ● | | 13.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | 1 1/2" | 85 | 22 | 59 | 50 |
| DA38.130 | ● | ● | | 14.5 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | | |
| DA38.160 | | ● | | 16.1 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 2" | 106 | 24 | 68 | 60 |
| DA38.200 | | | ● | 18.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | | |
| DA38.227 | | | ● | 19.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DA38.250 | | | ● | 20.1 | 125.0 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DA38.300 | | | ● | 21.5 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DA38.337 | | | ● | 23.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

DB Series Full Cone Spray Nozzles

DB

(Axial Flow Female)



The larger spray nozzles in the D series are widely used in the industry, for a wide variety of applications. They maintain the simple design of the smaller nozzles, with the inherent resistance to clogging due to design of the X-vane, and are often manufactured out high quality alloys and special plastic materials.

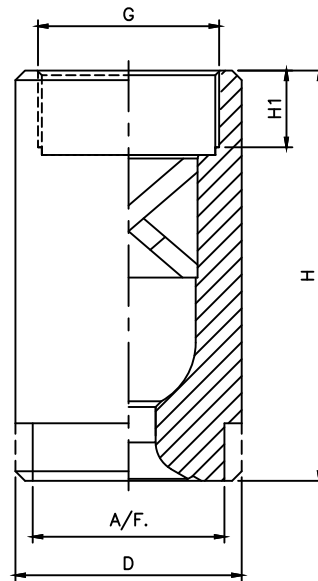
| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 60° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1 1/4" | H | H1 | D | A/F |
| DB24.650 | ● | | | 9.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | 96 | 20 | 49 | 41 |
| DB24.800 | ● | | | 10.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = XX gms. Approx | | | | |
| DB34.100 | ● | | | 11.20 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 1 1/2" | 107 | 20 | 59 | 50 |
| DB34.118 | | ● | | 12.2 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = XX gms. Approx | | | | |
| DB34.130 | | ● | | 12.8 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | 2" | 130 | 22 | 68 | 60 |
| DB34.160 | | ● | | 14.2 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | Weight (Metals) = XX gms. Approx | | | | |
| DB34.200 | | | ● | 15.8 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DB34.227 | | | ● | 16.9 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DB34.250 | | | ● | 17.7 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DB34.300 | | | ● | 19.1 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DB34.337 | | | ● | 20.6 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|--------------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 90° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | A/F |
| DB26.650 | ● | | | 9.7 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 1 1/4" | 96 | 20 | 49 | 41 |
| DB26.800 | ● | | | 10.7 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = 525.0 gms. Approx | | | | |
| DB36.100 | ● | | | 12.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 1 1/2" | 107 | 20 | 59 | 50 |
| DB36.118 | | ● | | 13.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = 915.0 gms. Approx | | | | |
| DB36.130 | | ● | | 13.7 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | 2" | 130 | 22 | 68 | 60 |
| DB36.160 | | ● | | 15.20 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | Weight (Metals) = 1535.0 gms. Approx | | | | |
| DB36.200 | | | ● | 17.0 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DB36.227 | | | ● | 18.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DB36.250 | | | ● | 19.0 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DB36.300 | | | ● | 20.5 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DB36.337 | | | ● | 22.0 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

DB Series Full Cone Spray Nozzles

(Female)

DB



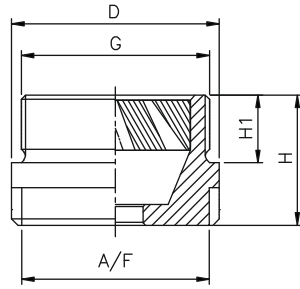
The larger spray nozzles in the DA Series are widely used in the industry, for a wide variety of applications. They maintain the simple design of the smaller nozzles, with the inherent resistance to clogging due to design of the X-vane and are often manufactured by any type of machinable material like SS304, SS316, PP/PVC etc.

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|--------------|--------------|-------------------|--|--------|-------|--------|--------|--------|--------|----------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | | | | | |
| 120° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | A/F |
| DB28.800 | ● | | | 11.4 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 1 1/4" | 96 | 20 | 49 | 41 |
| DB38.100 | ● | | | 12.7 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | | |
| DB38.118 | ● | ● | | 13.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | 1 1/2" | 107 | 20 | 59 | 50 |
| DB38.130 | ● | ● | | 14.5 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | | |
| DB38.160 | | ● | | 16.1 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 2" | 130 | 22 | 68 | 60 |
| DB38.200 | | | ● | 18.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | | |
| DB38.227 | | | ● | 19.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DB38.250 | | | ● | 20.1 | 125.0 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DB38.300 | | | ● | 21.5 | 150.0 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DB38.337 | | | ● | 23.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

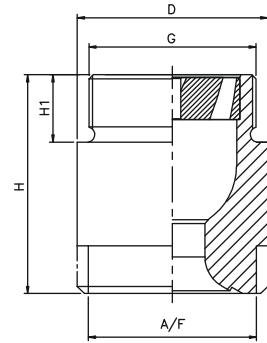
DA Series Full Cone Spray Nozzles

(Male)

DA



Spray Angle 60°/ 90°



Spray Angle 120°

| 60° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|----------------------------------|----|----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DA34.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 52 | 27 | 83 | 75 |
| DA34.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = XX gms. Approx | | | | |
| DA34.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 60 | 30 | 98 | 85 |
| DA34.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = XX gms. Approx | | | | |
| DA34.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 70 | 32 | 118 | 105 |
| DA44.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = XX gms. Approx | | | | |
| DA44.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 90 | 36 | 128 | 110 |
| | | | | | | | | | | | | | Weight (Metals) = XX gms. Approx | | | | |

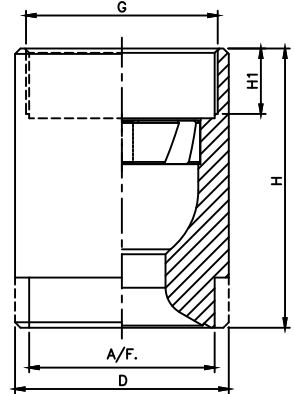
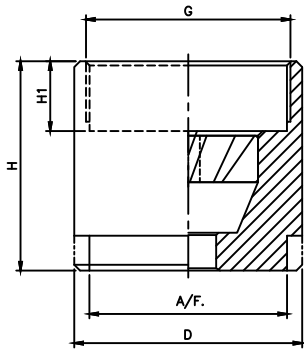
| 90° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|------------------------------------|----|----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DA36.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 52 | 27 | 83 | 75 |
| DA36.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = 1318 gms. Approx | | | | |
| DA36.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 60 | 30 | 98 | 85 |
| DA36.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = 1676 gms. Approx | | | | |
| DA36.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 70 | 32 | 118 | 105 |
| DA46.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = 3805 gms. Approx | | | | |
| DA46.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 90 | 36 | 128 | 110 |
| | | | | | | | | | | | | | Weight (Metals) = XX gms. Approx | | | | |

| 120° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|------------------------------------|-----|----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DA38.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 124 | 27 | 83 | 75 |
| DA38.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = 2989 gms. Approx | | | | |
| DA38.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 128 | 30 | 98 | 85 |
| DA38.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = 5073 gms. Approx | | | | |
| DA38.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 155 | 32 | 118 | 105 |
| DA48.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = 8380 gms. Approx | | | | |
| DA48.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 165 | 36 | 128 | 110 |
| | | | | | | | | | | | | | Weight (Metals) = 9513 gms. Approx | | | | |

DB Series Full Cone Spray Nozzles

(Female)

DB



| 60° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|----------------------------------|-------------------|----|-----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DB.34.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 82 | 27 | 83 | 75 | |
| DB.34.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.34.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 90 | 30 | 98 | 85 | |
| DB.34.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.34.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 105 | 32 | 118 | 105 | |
| DB.44.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.44.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 130 | 36 | 128 | 110 | |
| | | | | | | | | | | | | | Weight (Metals) = XX gms. Approx | | | | | |

| 90° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|----------------------------------|-------------------|----|-----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DB.36.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 82 | 27 | 83 | 75 | |
| DB.36.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.36.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 90 | 30 | 98 | 85 | |
| DB.36.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.36.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 105 | 32 | 118 | 105 | |
| DB.46.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = XX gms. Approx | | | | | |
| DB.46.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 130 | 36 | 128 | 110 | |
| | | | | | | | | | | | | | Weight (Metals) = XX gms. Approx | | | | | |

| 120° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|--------------|--------------|--------------|-------------------|--|--------|------|---------|---------|---------|---------|------------------------------------|-------------------|----|-----|-----|-----|
| | 2 1/2" | 3" | 3 1/2" | 4" | | PRESSURE [BAR] | | | | | | | | CONN. | H | H1 | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DB.38.400 | ● | | | | 25.0 | 200 | 282.84 | 400 | 489.90 | 632.46 | 748.33 | 894.43 | 2 1/2" | 124 | 27 | 83 | 75 | |
| DB.38.500 | ● | | | | 28.0 | 250 | 353.55 | 500 | 612.37 | 790.57 | 935.41 | 1118.03 | Weight (Metals) = 2989 gms. Approx | | | | | |
| DB.38.625 | | ● | | | 31.3 | 312.5 | 441.94 | 625 | 765.47 | 988.21 | 1169.27 | 1397.54 | 3" | 128 | 30 | 98 | 85 | |
| DB.38.710 | | ● | | | 33.3 | 355 | 502.05 | 710 | 869.57 | 1122.61 | 1328.29 | 1587.61 | Weight (Metals) = 5073 gms. Approx | | | | | |
| DB.38.800 | | | ● | | 35.4 | 400 | 565.69 | 800 | 979.80 | 1264.91 | 1496.66 | 1788.85 | 3 1/2" | 155 | 32 | 118 | 105 | |
| DB.48.1000 | | | ● | | 36.0 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | Weight (Metals) = 8380 gms. Approx | | | | | |
| DB.48.1250 | | | | ● | 42.0 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | 4" | 165 | 36 | 128 | 110 | |
| | | | | | | | | | | | | | Weight (Metals) = 9513 gms. Approx | | | | | |

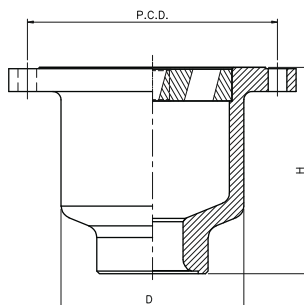
DC Series Full Cone Flanged Connection Spray Nozzles

DC

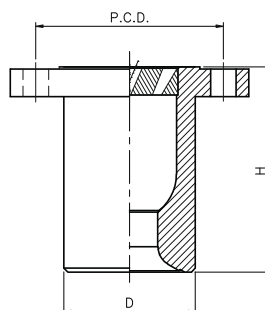
DC Type nozzles are designed to deliver large capacity value, with a carefully designed and machined inside profile, which offers uniform spray distribution and perfect performance even with very low inlet pressure values. The nozzle is made from castings or welded form steel bar.

Typical Application :

Even surface spraying, Cooling and washing of gas, column spraying as well as improvement of chemical reaction by surface enlargement



THIS DESIGN IS IN ABOVE
4" FLANGE END NOZZLE



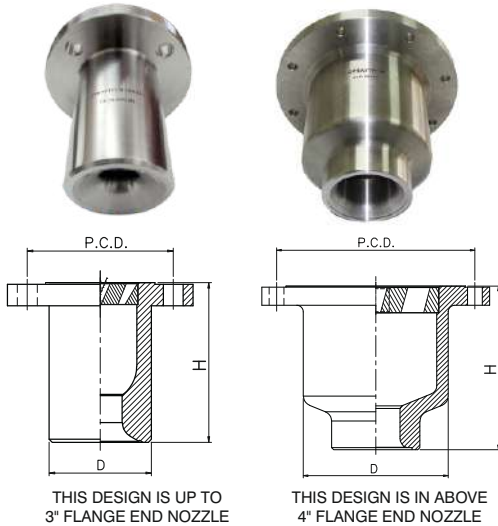
THIS DESIGN IS UP TO
3" FLANGE END NOZZLE



| MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | | |
|------------------|-------------------|---|------|------|---------|------|---------|----------|-----------------------|-------|-----|
| | | Pressure [bar] | | | | | | | ANSI 16.5 Flange Ø mm | PCD | H |
| 60° SPRAY ANGLE | | 0.3 | 0.5 | 0.7 | 1.0 | 2.0 | 3.0 | 5.0 | | | |
| DC34.800 (A) | 37.0 | 309 | 400 | 473 | 565.69 | 800 | 979.80 | 1264.91 | (3") 190.5 | 152.4 | 140 |
| DC44.1000 (A) | 41.4 | 387 | 500 | 591 | 707.11 | 1000 | 1224.74 | 1581.14 | (3") 190.5 | 152.4 | 140 |
| DC44.1250 (A) | 46.3 | 484 | 625 | 739 | 883.88 | 1250 | 1530.93 | 1976.42 | (4") 228.6 | 190.5 | 160 |
| DC44.1600 (A) | 52.3 | 619 | 800 | 946 | 1131.37 | 1600 | 1959.59 | 2529.82 | (5") 254.0 | 215.9 | 177 |
| DC44.2000 (A) | 58.5 | 774 | 1000 | 1183 | 1414.21 | 2000 | 2449.49 | 3162.28 | (5") 254.0 | 215.9 | 177 |
| DC44.2500 (A, B) | 65.4 | 968 | 1250 | 1479 | 1767.77 | 2500 | 3061.86 | 3952.85 | (6") 279.4 | 241.3 | 190 |
| DC44.3125 (A, B) | 73.1 | 1210 | 1562 | 1848 | 2209.71 | 3125 | 3827.33 | 4941.06 | (6") 279.4 | 241.3 | 190 |
| DC44.4000 (B) | 82.7 | 1549 | 2000 | 2366 | 2828.43 | 4000 | 4898.98 | 6324.56 | (8") 342.9 | 298.4 | 250 |
| DC44.5000 (B) | 92.5 | 1936 | 2500 | 2958 | 3535.53 | 5000 | 6123.72 | 7905.69 | (8") 342.9 | 298.4 | 250 |
| DC44.6250 (B) | 103.4 | 2420 | 3125 | 3697 | 4419.42 | 6250 | 7654.66 | 9882.12 | (10") 406.4 | 361.9 | 290 |
| DC44.8000 (B) | 117.0 | 3098 | 4000 | 4732 | 5656.85 | 8000 | 9797.96 | 12649.11 | (10") 406.4 | 361.9 | 290 |

Flange size can be changed to higher size on request

DC Series Full Cone Flanged Connection Spray Nozzles - Large Capacity



DC Type nozzles are designed to deliver large capacity value, with a carefully designed and machined inside profile, which offers uniform spray distribution and perfect performance even with very low inlet pressure values. The nozzle is made from castings or welded form steel bar.

Typical Application :

Even surface spraying, Cooling and washing of gas, column spraying as well as improvement of chemical reaction by surface enlargement

| MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | | |
|------------------|-------------------|---|------|------|---------|--------------|----------|----------|-----------------------|-------|-----|
| | | Pressure [bar] | | | | | | | ANSI 16.5 Flange Ø mm | PCD | H |
| 90° SPRAY ANGLE | | 0.3 | 0.5 | 0.7 | 1.0 | 2.0 | 3.0 | 5.0 | | | |
| DC36.800 (A) | 37.0 | 309 | 400 | 473 | 565.69 | 800 | 979.80 | 1264.91 | (3") 190.5 | 152.4 | 140 |
| DC46.1000 (A) | 41.4 | 387 | 500 | 591 | 707.11 | 1000 | 1224.74 | 1581.14 | (3") 190.5 | 152.4 | 140 |
| DC46.1250 (A) | 46.3 | 484 | 625 | 739 | 883.88 | 1250 | 1530.93 | 1976.42 | (4") 228.6 | 190.5 | 160 |
| DC46.1600 (A) | 52.3 | 619 | 800 | 946 | 1131.37 | 1600 | 1959.59 | 2529.82 | (5") 254.0 | 215.9 | 177 |
| DC46.2000 (A) | 58.5 | 774 | 1000 | 1183 | 1414.21 | 2000 | 2449.49 | 3162.28 | (5") 254.0 | 215.9 | 177 |
| DC46.2500 (A, B) | 65.4 | 968 | 1250 | 1479 | 1767.77 | 2500 | 3061.86 | 3952.85 | (6") 279.4 | 241.3 | 190 |
| DC46.3125 (A, B) | 73.1 | 1210 | 1562 | 1848 | 2209.71 | 3125 | 3827.33 | 4941.06 | (6") 279.4 | 241.3 | 190 |
| DC46.4000 (B) | 82.7 | 1549 | 2000 | 2366 | 2828.43 | 4000 | 4898.98 | 6324.56 | (8") 342.9 | 298.4 | 250 |
| DC46.5000 (B) | 92.5 | 1936 | 2500 | 2958 | 3535.53 | 5000 | 6123.72 | 7905.69 | (8") 342.9 | 298.4 | 250 |
| DC46.6250 (B) | 103.4 | 2420 | 3125 | 3697 | 4419.42 | 6250 | 7654.66 | 9882.12 | (10") 406.4 | 361.9 | 290 |
| DC46.8000 (B) | 117.0 | 3098 | 4000 | 4732 | 5656.85 | 8000 | 9797.96 | 12649.11 | (10") 406.4 | 361.9 | 290 |
| DC48.10000 (B) | 127.0 | 3872.98 | 3065 | 5000 | 7071.07 | 10000 | 12247.45 | 15811.39 | (10") 406.4 | 361.9 | 290 |

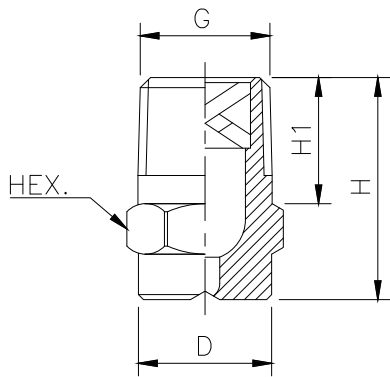
| MODEL NO. | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | | | |
|------------------|-------------------|---|--------|------|---------|--------------|----------|----------|-----------------------|-------|-----|
| | | Pressure [bar] | | | | | | | ANSI 16.5 Flange Ø mm | PCD | H |
| 120° SPRAY ANGLE | | 0.3 | 0.5 | 0.7 | 1.0 | 2.0 | 3.0 | 5.0 | | | |
| DC38.800 (A) | 37.0 | 309 | 400 | 473 | 565.69 | 800 | 979.80 | 1264.91 | (3") 190.5 | 152.4 | 140 |
| DC48.1000 (A) | 41.4 | 387 | 500 | 591 | 707.11 | 1000 | 1224.74 | 1581.14 | (3") 190.5 | 152.4 | 140 |
| DC48.1250 (A) | 46.3 | 484 | 625 | 739 | 883.88 | 1250 | 1530.93 | 1976.42 | (4") 228.6 | 190.5 | 160 |
| DC48.1600 (A) | 52.3 | 619 | 800 | 946 | 1131.37 | 1600 | 1959.59 | 2529.82 | (5") 254.0 | 215.9 | 177 |
| DC48.2000 (A) | 58.5 | 774 | 1000 | 1183 | 1414.21 | 2000 | 2449.49 | 3162.28 | (5") 254.0 | 215.9 | 177 |
| DC48.2500 (A, B) | 65.4 | 968 | 1250 | 1479 | 1767.77 | 2500 | 3061.86 | 3952.85 | (6") 279.4 | 241.3 | 190 |
| DC48.3125 (A, B) | 73.1 | 1210 | 1562.5 | 1848 | 2209.71 | 3125 | 3827.33 | 4941.06 | (6") 279.4 | 241.3 | 190 |
| DC48.4000 (B) | 82.7 | 1549 | 2000 | 2366 | 2828.43 | 4000 | 4898.98 | 6324.56 | (8") 342.9 | 298.4 | 250 |
| DC48.5000 (B) | 92.5 | 1936 | 2500 | 2958 | 3535.53 | 5000 | 6123.72 | 7905.69 | (8") 342.9 | 298.4 | 250 |
| DC48.6250 (B) | 103.4 | 2420 | 3125 | 3697 | 4419.42 | 6250 | 7654.66 | 9882.12 | (10") 406.4 | 361.9 | 290 |
| DC48.8000 (B) | 117.0 | 3098 | 4000 | 4732 | 5656.85 | 8000 | 9797.96 | 12649.11 | (10") 406.4 | 361.9 | 290 |
| DC48.10000 (B) | 127.0 | 3872 | 3065 | 5000 | 7071.07 | 10000 | 12247.45 | 15811.39 | (10") 406.4 | 361.9 | 290 |

Flange size can be changed to higher size on request

DD Series Full Cone Spray Nozzles - Square Pattern



Spray Angle 60°/ 90°



The square pattern full cone spray nozzle are used in continuous casting cooling areas. Secondary Cooling areas is of vital importance.

This nozzle gives uniform distribution of cooling water, fine sprays with narrow drop spectrums and quick removing of cooling water from the strand surface which are considered vital for obtaining a perfect steel quality.

Characteristic :

Full cone spray pattern with uniform distribution throughout the approximately square cone.

Typical Applications:

- Cooling and quenching
- Product washing
- Air and gas washers
- Scrubbers
- Liquor washers

| 60° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|-------|-------|--------|-----------------------------------|----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | | |
| DD14.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DD14.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DD14.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DD14.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DD14.250 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DD14.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DD14.350 | ● | ● | | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DD14.400 | | ● | ● | | | | 2.4 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DD14.475 | | ● | ● | | | | 2.6 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DD14.650 | | ● | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DA14.800 | | | ● | | | | 3.4 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DD24.100 | | | ● | | | | 3.8 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DD24.125 | | | | ● | | | 4.2 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DD24.160 | | | | ● | | | 4.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DD24.180 | | | | ● | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DD24.200 | | | | | ● | | 5.4 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DD24.225 | | | | | ● | | 5.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DD24.250 | | | | | ● | | 6.0 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DD24.320 | | | | | | ● | 6.8 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DD24.400 | | | | | | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DD24.520 | | | | | | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

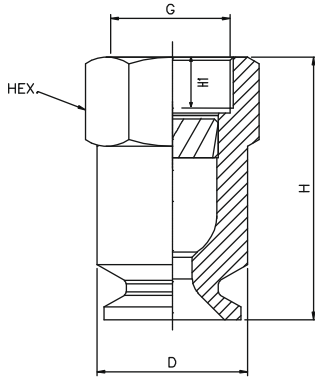
DD Series Full Cone Spray Nozzles - Square Pattern

| 90° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|--------|-----------------------------------|-----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1/8" | 18 | 6.5 | 10 | 11 | |
| DD16.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DD16.150 | ● | | | | | | 1.4 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DD16.175 | ● | | | | | | 1.5 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DD16.200 | ● | | | | | | 1.6 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DD16.250 | ● | | | | | | 1.8 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DD16.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DD16.350 | ● | ● | ● | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DD16.400 | ● | ● | ● | | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DD16.475 | | ● | ● | | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DD16.650 | | ● | ● | | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DD16.800 | | ● | ● | | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DD26.100 | | | ● | | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DD26.125 | | | ● | | | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DD26.160 | | | ● | ● | | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DD26.180 | | | | ● | | | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DD26.200 | | | | ● | | | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DD26.225 | | | | ● | | | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DD26.250 | | | | ● | ● | | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DD26.320 | | | | ● | ● | | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DD26.400 | | | | | ● | | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DD26.520 | | | | | ● | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DD26.650 | | | | | ● | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DD26.720 | | | | | ● | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

| 120° SPRAY ANGLE | CONNECTION END | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|------|------|------|------|-----|-------------------|--|-------|-------|-------|--------|--------|--------|-----------------------------------|-----|------|----|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1/8" | 18 | 6.5 | 10 | 11 | |
| DD18.100 | ● | | | | | | 1.2 | 0.50 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/8" | 18 | 6.5 | 10 | 11 |
| DD18.150 | ● | | | | | | 1.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 9 gms. Approx | | | | |
| DD18.175 | ● | | | | | | 1.6 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/4" | 22 | 10 | 13 | 14 |
| DD18.200 | ● | | | | | | 1.7 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 17 gms. Approx | | | | |
| DD18.250 | ● | | | | | | 1.9 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/8" | 25 | 10 | 16 | 17 |
| DD18.300 | ● | | | | | | 2.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 30 gms. Approx | | | | |
| DD18.350 | ● | | | | | | 2.3 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 32 | 13.2 | 21 | 22 |
| DD18.400 | ● | ● | ● | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 66 gms. Approx | | | | |
| DD18.475 | ● | ● | ● | | | | 2.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 42 | 15 | 32 | 27 |
| DD18.650 | | ● | ● | | | | 3.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 155 gms. Approx | | | | |
| DD18.800 | | ● | ● | | | | 3.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 56 | 17 | 39 | 36 |
| DD28.100 | | | ● | | | | 3.9 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 367 gms. Approx | | | | |
| DD28.125 | | | ● | | | | 4.3 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | | |
| DD28.160 | | | ● | ● | | | 4.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DD28.180 | | | | ● | | | 5.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DD28.200 | | | | ● | | | 5.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DD28.225 | | | | ● | | | 5.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DD28.250 | | | | ● | ● | | 6.1 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DD28.320 | | | | ● | ● | | 6.9 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DD28.400 | | | | | ● | | 7.7 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DD28.520 | | | | | ● | ● | 8.8 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DD28.650 | | | | | ● | ● | 9.9 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DD28.720 | | | | | ● | ● | 10.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DD Series Full Cone Spray Nozzles - Square Pattern



Typical Applications:

- Cooling and quenching
- Product washing
- Air and gas washers
- Scrubbers
- Liquor washers
- Dust control
- Fire protection

Full cone spray nozzle square spray pattern with a square impact area and uniform spray of medium to large drops across their entire spray area over a wide range of spraying pressure and flow rates. This uniform spray distribution is the result of unique vane design. Well suited for installation complete coverage of rectangular areas or spray zones

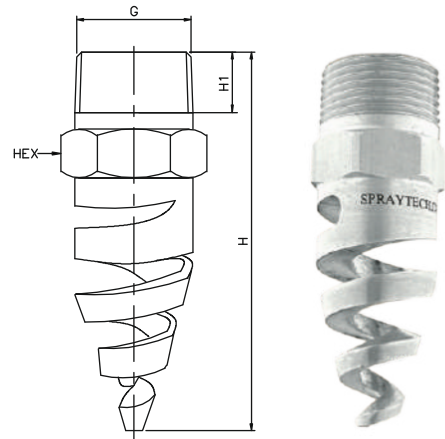
| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|--------------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 90° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1 1/4" | H | H1 | D | A/F |
| DD26.650 | ● | | | 9.7 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | 1 1/4" | | 19 | 49 | 41 |
| DD26.800 | ● | | | 10.7 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = 525.0 gms. Approx | | | | |
| DD36.100 | ● | | | 12.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 1 1/2" | 85 | 22 | 59 | 50 |
| DD36.118 | | ● | | 13.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = 915.0 gms. Approx | | | | |
| DD36.130 | | ● | | 13.7 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | 2" | 106 | 24 | 68 | 60 |
| DD36.160 | | ● | | 15.20 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | Weight (Metals) = 1535.0 gms. Approx | | | | |
| DD36.200 | | | ● | 17.0 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | | |
| DD36.227 | | | ● | 18.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DD36.250 | | | ● | 19.0 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DD36.300 | | | ● | 20.5 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DD36.337 | | | ● | 22.0 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

| MODEL NO. | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|--------------------|--------------------|--------------------|-------------------|--|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|----|----|-----|
| | 1 1/4" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | A/F |
| 120° SPRAY ANGLE | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | A/F |
| DD28.800 | ● | | | 11.4 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 1 1/4" | 74 | 19 | 49 | 41 |
| DD38.100 | ● | | | 12.7 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | | |
| DD38.118 | ● | ● | | 13.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | 1 1/2" | 85 | 22 | 59 | 50 |
| DD38.130 | ● | ● | | 14.5 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | | |
| DD38.160 | | ● | | 16.1 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 2" | 106 | 24 | 68 | 60 |
| DD38.200 | | | ● | 18.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | | |
| DD38.227 | | | ● | 19.1 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | | |
| DD38.250 | | | ● | 20.1 | 125.0 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | | |
| DD38.300 | | | ● | 21.5 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | | |
| DD38.337 | | | ● | 23.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | | |

DF Series Spiral Full Cone Spray Nozzles

DF

- Characteristic** : The absence of any internal parts make these nozzles non-clogging.
- Design** : One piece construction, non clogging type.
- Application** : Gas Washing, Cooling Towers , Fire Fighting Systems.
- Flow Rate** : 5 LPM TO 3410 LPM
- Pressure** : 2.0 Kg/cm² or Specified
- Spray Angle** : 60° To 180°
- End Connection** : 1/4" TO 4" BSP/ BSPT / NPT
- M.O.C.** : SS. 316, 304, BRASS, PVDF, PVC, PP, Teflon®



The helix spiral full cone nozzles combine small nozzle sizes with wide flow openings.

| 60° SPRAY ANGLE | CONNECTION END | | | | | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|------|------|-----|--------|-----|-----|-----|-----|-------------------|--|--------|--------|-------|---------|---------|---------|-------------------|-------------------------------------|-----|------|----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | 3" | 4" | | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | | |
| DF14.475 | ● | | | | | | | | | | | 2.4 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 1/4" | 48 | 10 | 14 |
| DF14.650 | ● | | | | | | | | | | | 2.8 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 27.0 gms. Approx | | | |
| DF14.800 | ● | | | | | | | | | | | 3.1 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 3/8" | 58 | 10 | 17 |
| DF24.100 | ● | ● | | | | | | | | | | 3.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 53.7 gms. Approx | | | |
| DF24.125 | ● | ● | | | | | | | | | | 3.9 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 1/2" | 76 | 13.2 | 22 |
| DF24.160 | ● | ● | | | | | | | | | | 4.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = 80.0 gms. Approx | | | |
| DF24.180 | ● | ● | | | | | | | | | | 4.6 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 3/4" | 86 | 14.5 | 27 |
| DF24.200 | ● | ● | | | | | | | | | | 4.9 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | Weight (Metals) = 170.0 gms. Approx | | | |
| DF24.225 | | ● | | | | | | | | | | 5.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 1" | 108 | 16.8 | 36 |
| DF24.250 | | ● | | | | | | | | | | 5.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = 323.0 gms. Approx | | | |
| DF24.320 | | ● | | | | | | | | | | 6.2 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 1 1/2" | 138 | 19.1 | 51 |
| DF24.400 | | ● | | | | | | | | | | 7.0 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | Weight (Metals) = 634.0 gms. Approx | | | |
| DF24.520 | | ● | | | | | | | | | | 7.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 2" | 148 | 23.4 | 64 |
| DF24.650 | | | ● | | | | | | | | | 8.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | Weight (Metals) = XX gms. Approx | | | |
| DF24.800 | | | ● | | | | | | | | | 9.8 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 3" | 216 | 29.8 | 89 |
| DF34.100 | | | ● | | | | | | | | | 11.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | |
| DF34.118 | | | ● | | | | | | | | | 12.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| DF34.130 | | | | ● | | | | | | | | 12.6 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| DF34.160 | | | | ● | | | | | | | | 13.9 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| DF34.200 | | | | | ● | | | | | | | 15.6 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| DF34.227 | | | | | ● | | | | | | | 16.6 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| DF34.250 | | | | | ● | | | | | | | 17.4 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | |
| DF34.300 | | | | | ● | | | | | | | 19.0 | 150 | 212.13 | 300 | 367.42 | 474.34 | 561.25 | 670.82 | | | | |
| DF34.337 | | | | | ● | | | | | | | 20.2 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| DF34.400 | | | | | | ● | | | | | | 22.0 | 200 | 282.84 | 400.0 | 489.90 | 632.46 | 748.33 | 894.43 | | | | |
| DF34.500 | | | | | | ● | | | | | | 24.6 | 250 | 353.55 | 500.0 | 612.37 | 790.57 | 935.41 | 1118.03 | | | | |
| DF34.625 | | | | | | ● | | | | | | 27.5 | 312.5 | 441.94 | 625.0 | 765.47 | 988.21 | 1169.27 | 1397.54 | | | | |
| DF34.710 | | | | | | ● | | | | | | 29.3 | 355 | 502.05 | 710.0 | 869.57 | 1122.61 | 1328.29 | 1587.61 | | | | |
| DF34.800 | | | | | | ● | | | | | | 31.1 | 400 | 565.69 | 800.0 | 979.80 | 1264.91 | 1496.66 | 1788.85 | | | | |
| DF44.1000 | | | | | | | ● | | | | | 34.8 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | | | | |
| DF44.1250 | | | | | | | ● | | | | | 38.9 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | | | | |
| DF44.1600 | | | | | | | ● | | | | | 44.0 | 800 | 1131 | 1600 | 1959.59 | 2529.82 | 2993.33 | 3577.71 | | | | |
| DF44.2000 | | | | | | | | ● | | | | 49.2 | 1000 | 1414 | 2000 | 2449.49 | 3162.28 | 3741.66 | 4472.14 | | | | |
| DF44.2500 | | | | | | | | ● | | | | 55.1 | 1250 | 1767 | 2500 | 3061.86 | 3952.85 | 4677.07 | 5590.17 | | | | |
| DF44.3125 | | | | | | | | ● | | | | 61.6 | 1562.5 | 2209 | 3125 | 3827.33 | 4941.06 | 5846.34 | 6987.71 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DF Series Spiral Full Cone Spray Nozzles

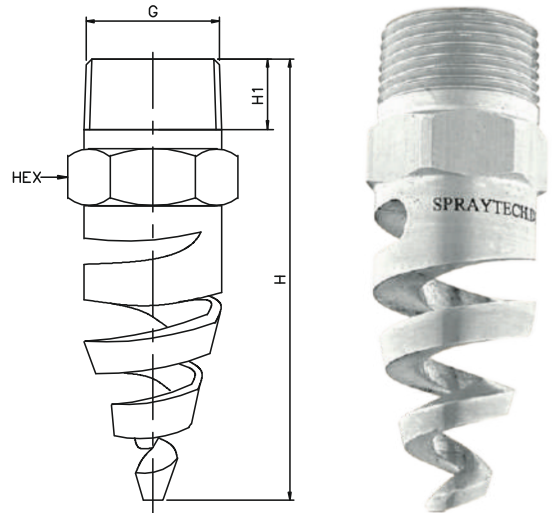
| 90° SPRAY ANGLE | CONNECTION END | | | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|------|------|-----|--------|-----|-----|-----|-------------------|--|--------|-------|---------|---------|---------|---------|-------------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | 3" | 4" | ORIFICE SIZE (mm) | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| DF16.475 | ● | | | | | | | | | 2.4 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 1/4" | 48 | 10 | 14 |
| DF16.650 | ● | | | | | | | | | 2.8 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 27.0 gms. Approx | | | |
| DF16.800 | ● | | | | | | | | | 3.1 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 3/8" | 58 | 10 | 17 |
| DF26.100 | ● | ● | | | | | | | | 3.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = 53.7 gms. Approx | | | |
| DF26.125 | ● | ● | ● | | | | | | | 3.9 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 1/2" | 76 | 13.2 | 22 |
| DF26.160 | ● | ● | ● | ● | | | | | | 4.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = 80.0 gms. Approx | | | |
| DF26.180 | ● | ● | ● | ● | ● | | | | | 4.6 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 3/4" | 86 | 14.5 | 27 |
| DF26.200 | ● | ● | ● | ● | ● | ● | | | | 4.9 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | Weight (Metals) = 170.0 gms. Approx | | | |
| DF26.225 | ● | ● | ● | ● | ● | ● | ● | | | 5.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 1" | 108 | 16.8 | 36 |
| DF26.250 | ● | ● | ● | ● | ● | ● | ● | ● | | 5.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = 323.0 gms. Approx | | | |
| DF26.320 | ● | ● | ● | ● | ● | ● | ● | ● | | 6.2 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 1 1/2" | 138 | 19.1 | 51 |
| DF26.400 | ● | ● | ● | ● | ● | ● | ● | ● | | 7.0 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | Weight (Metals) = 634.0 gms. Approx | | | |
| DF26.520 | ● | ● | ● | ● | ● | ● | ● | ● | | 7.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 2" | 148 | 23.4 | 64 |
| DF26.650 | | | ● | ● | ● | ● | ● | ● | | 8.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | Weight (Metals) = XX gms. Approx | | | |
| DF26.800 | | | ● | ● | ● | ● | ● | ● | | 9.8 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 3" | 216 | 29.8 | 89 |
| DF36.100 | | | ● | ● | ● | ● | ● | ● | | 11.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | |
| DF36.118 | | | ● | ● | ● | ● | ● | ● | | 12.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| DF36.130 | | | | ● | ● | ● | ● | ● | | 12.6 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| DF36.160 | | | | ● | ● | ● | ● | ● | | 13.9 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| DF36.200 | | | | | ● | ● | ● | ● | | 15.6 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| DF36.227 | | | | | ● | ● | ● | ● | | 16.6 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| DF36.250 | | | | | ● | ● | ● | ● | | 17.4 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | |
| DF36.300 | | | | | ● | ● | ● | ● | | 19.0 | 150 | 212.13 | 300 | 367.42 | 474.34 | 561.25 | 670.82 | | | | |
| DF36.337 | | | | | ● | ● | ● | ● | | 20.2 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| DF36.400 | | | | | | ● | ● | ● | | 22.0 | 200 | 282.84 | 400.0 | 489.90 | 632.46 | 748.33 | 894.43 | | | | |
| DF36.500 | | | | | | ● | ● | ● | | 24.6 | 250 | 353.55 | 500.0 | 612.37 | 790.57 | 935.41 | 1118.03 | | | | |
| DF36.625 | | | | | | ● | ● | ● | | 27.5 | 312.5 | 441.94 | 625.0 | 765.47 | 988.21 | 1169.27 | 1397.54 | | | | |
| DF36.710 | | | | | | | ● | ● | | 29.3 | 355 | 502.05 | 710.0 | 869.57 | 1122.61 | 1328.29 | 1587.61 | | | | |
| DF36.800 | | | | | | | ● | ● | | 31.1 | 400 | 565.69 | 800.0 | 979.80 | 1264.91 | 1496.66 | 1788.85 | | | | |
| DF46.1000 | | | | | | | | ● | | 34.8 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | | | | |
| DF46.1250 | | | | | | | | ● | | 38.9 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | | | | |
| DF46.1600 | | | | | | | | ● | | 44.0 | 800 | 1131 | 1600 | 1959.59 | 2529.82 | 2993.33 | 3577.71 | | | | |
| DF46.2000 | | | | | | | | ● | | 49.2 | 1000 | 1414 | 2000 | 2449.49 | 3162.28 | 3741.66 | 4472.14 | | | | |
| DF46.2500 | | | | | | | | ● | | 55.1 | 1250 | 1767 | 2500 | 3061.86 | 3952.85 | 4677.07 | 5590.17 | | | | |
| DF46.3125 | | | | | | | | ● | | 61.6 | 1562.5 | 2209 | 3125 | 3827.33 | 4941.06 | 5846.34 | 6987.71 | | | | |

| 120° SPRAY ANGLE | CONNECTION END | | | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|------|------|------|-----|--------|-----|-----|-----|-------------------|--|--------|-------|---------|---------|---------|---------|----------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | 3" | 4" | ORIFICE SIZE (mm) | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| DF18.475 | ● | | | | | | | | | 2.4 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 1/4" | 48 | 10 | 14 |
| DF18.650 | ● | | | | | | | | | 2.8 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = XX gms. Approx | | | |
| DF18.800 | ● | | | | | | | | | 3.1 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 3/8" | 58 | 10 | 17 |
| DF28.100 | ● | ● | | | | | | | | 3.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = XX gms. Approx | | | |
| DF28.125 | ● | ● | ● | | | | | | | 3.9 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 1/2" | 76 | 13.2 | 22 |
| DF28.160 | ● | ● | ● | ● | | | | | | 4.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = XX gms. Approx | | | |
| DF28.180 | ● | ● | ● | ● | ● | | | | | 4.6 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | 3/4" | 86 | 14.5 | 27 |
| DF28.200 | ● | ● | ● | ● | ● | ● | | | | 4.9 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | Weight (Metals) = XX gms. Approx | | | |
| DF28.225 | ● | ● | ● | ● | ● | ● | ● | | | 5.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | 1" | 108 | 16.8 | 36 |
| DF28.250 | ● | ● | ● | ● | ● | ● | ● | ● | | 5.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | Weight (Metals) = XX gms. Approx | | | |
| DF28.320 | ● | ● | ● | ● | ● | ● | ● | ● | | 6.2 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | 1 1/2" | 138 | 19.1 | 51 |
| DF28.400 | ● | ● | ● | ● | ● | ● | ● | ● | | 7.0 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | Weight (Metals) = XX gms. Approx | | | |
| DF28.520 | ● | ● | ● | ● | ● | ● | ● | ● | | 7.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | 2" | 148 | 23.4 | 64 |
| DF28.650 | | | ● | ● | ● | ● | ● | ● | | 8.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | Weight (Metals) = XX gms. Approx | | | |
| DF28.800 | | | ● | ● | ● | ● | ● | ● | | 9.8 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | 3" | 216 | 29.8 | 89 |
| DF38.100 | | | ● | ● | ● | ● | ● | ● | | 11.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | |
| DF38.118 | | | ● | ● | ● | ● | ● | ● | | 12.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| DF38.130 | | | | ● | ● | ● | ● | ● | | 12.6 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| DF38.160 | | | | ● | ● | ● | ● | ● | | 13.9 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| DF38.200 | | | | | ● | ● | ● | ● | | 15.6 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| DF38.227 | | | | | ● | ● | ● | ● | | 16.6 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| DF38.250 | | | | | ● | ● | ● | ● | | 17.4 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | |
| DF38.300 | | | | | ● | ● | ● | ● | | 19.0 | 150 | 212.13 | 300 | 367.42 | 474.34 | 561.25 | 670.82 | | | | |
| DF38.337 | | | | | ● | ● | ● | ● | | 20.2 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| DF38.400 | | | | | | ● | ● | ● | | 22.0 | 200 | 282.84 | 400.0 | 489.90 | 632.46 | 748.33 | 894.43 | | | | |
| DF38.500 | | | | | | ● | ● | ● | | 24.6 | 250 | 353.55 | 500.0 | 612.37 | 790.57 | 935.41 | 1118.03 | | | | |
| DF38.625 | | | | | | ● | ● | ● | | 27.5 | 312.5 | 441.94 | 625.0 | 765.47 | 988.21 | 1169.27 | 1397.54 | | | | |
| DF38.710 | | | | | | | ● | ● | | 29.3 | 355 | 502.05 | 710.0 | 869.57 | 1122.61 | 1328.29 | 1587.61 | | | | |
| DF38.800 | | | | | | | ● | ● | | 31.1 | 400 | 565.69 | 800.0 | 979.80 | 1264.91 | 1496.66 | 1788.85 | | | | |
| DF48.1000 | | | | | | | | ● | | 34.8 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | | | | |
| DF48.1250 | | | | | | | | ● | | 38.9 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | | | | |
| DF48.1600 | | | | | | | | ● | | 44.0 | 800 | 1131 | 1600 | 1959.59 | 2529.82 | 2993.33 | 3577.71 | | | | |
| DF48.2000 | | | | | | | | ● | | 49.2 | 1000 | 1414 | 2000 | 2449.49 | 3162.28 | 3741.66 | 4472.14 | | | | |
| DF48.2500 | | | | | | | | ● | | 55.1 | 1250 | 1767 | 2500 | 3061.86 | 3952.85 | 4677.07 | 5590.17 | | | | |
| DF48.3125 | | | | | | | | ● | | 61.6 | 1562.5 | 2209 | 3125 | 3827.33 | 4941.06 | 5846.34 | 6987.71 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DF Series Spiral Full Cone Spray Nozzles

- Characteristic** : Absence of any internal parts make these nozzles non-clogging.
- Design** : One piece construction, non clogging type.
- Application** : Gas Scrubbing, Washing, Cooling Towers , Fire Fighting Systems.
- Flow Rate** : 5 LPM TO 3410 LPM
- Pressure** : 2.0 Kg/cm² or Specified
- Spray Angle** : 60° To 180°
- End Connection** : 1/4" TO 4" BSP/ BSPT / NPT
- M.O.C.** : SS. 316, 304, BRASS, PVDF, PVC, PP, Teflon®



| 180° SPRAY ANGLE | CONNECTION END | | | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|------|------|------|-----|--------|-----|-------------------|--|--------|-------|---------|---------|---------|---------|-------------------|------|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1/4" | 3/8" | 1/2" | 3/4" | |
| DF19.475 | ● | | | | | | | 2.4 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| DF19.650 | ● | | | | | | | 2.8 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| DF19.800 | ● | | | | | | | 3.1 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| DF29.100 | ● | ● | | | | | | 3.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DF29.125 | ● | ● | | | | | | 3.9 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DF29.160 | ● | ● | | | | | | 4.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DF29.180 | ● | ● | | | | | | 4.6 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | |
| DF29.200 | ● | ● | | | | | | 4.9 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DF29.225 | | ● | | | | | | 5.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DF29.250 | | ● | | | | | | 5.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DF29.320 | | ● | | | | | | 6.2 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DF29.400 | | ● | | | | | | 7.0 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DF29.520 | | ● | | | | | | 7.9 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| DF29.650 | | | ● | | | | | 8.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| DF29.800 | | | ● | | | | | 9.8 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| DF39.100 | | | ● | | | | | 11.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| DF39.118 | | | ● | | | | | 12.0 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| DF39.130 | | | | ● | | | | 12.6 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| DF39.160 | | | | ● | | | | 13.9 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| DF39.200 | | | | | ● | | | 15.6 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| DF39.227 | | | | | ● | | | 16.6 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| DF39.250 | | | | | ● | | | 17.4 | 125 | 176.78 | 250.0 | 306.19 | 395.19 | 467.71 | 559.02 | | | | |
| DF39.300 | | | | | ● | | | 19.0 | 150 | 212.13 | 300.0 | 367.42 | 474.34 | 561.25 | 670.82 | | | | |
| DF39.337 | | | | | ● | | | 20.2 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| DF39.400 | | | | | | ● | | 22.0 | 200 | 282.84 | 400.0 | 489.90 | 632.46 | 748.33 | 894.43 | | | | |
| DF39.500 | | | | | | ● | | 24.6 | 250 | 353.55 | 500.0 | 612.37 | 790.57 | 935.41 | 1118.03 | | | | |
| DF39.625 | | | | | | ● | | 27.5 | 312.5 | 441.94 | 625.0 | 765.47 | 988.21 | 1169.27 | 1397.54 | | | | |
| DF39.710 | | | | | | | ● | 29.3 | 355 | 502.05 | 710.0 | 869.57 | 1122.61 | 1328.29 | 1587.61 | | | | |
| DF39.800 | | | | | | | ● | 31.1 | 400 | 565.69 | 800.0 | 979.80 | 1264.91 | 1496.66 | 1788.85 | | | | |
| DF49.1000 | | | | | | | ● | 34.8 | 500 | 707.11 | 1000 | 1224.74 | 1581.14 | 1870.83 | 2236.07 | | | | |
| DF49.1250 | | | | | | | ● | 38.9 | 625 | 883.88 | 1250 | 1530.93 | 1976.42 | 2338.54 | 2795.08 | | | | |

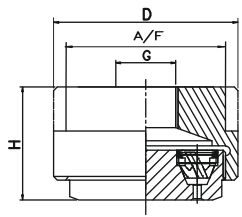
End Connection : X – BSP, Y – BSPT, Z – NPT Available.

DG Series Multiple Full Cone Spray Nozzles

DG



Multiple spray nozzles, consisting of seven fine atomizing hollow cone nozzles, provide a fog-like full cone pattern with relatively high flow volumes. The overlapping hollow cone nozzles produce a 130° full cone spray pattern of very fine droplets that cannot be achieved by a single orifice spray nozzle of the same flow rate size. The resulting increased droplet surface area of the atomized liquid provides greater efficiency in gas treatment and cooling application ideal for reaction towers which do not use packing.



Spray Angle 75°

Characteristic :

This type of nozzle gives fine atomization with the aid of several hollow cones spraying into one another.

Applications :

- Cooling Of Gaseous And Solid Material
- In Desuperheaters
- Chlorine Precipitation
- For Improving The Chemical Reaction By Means Of Enlarging the Contact Surface

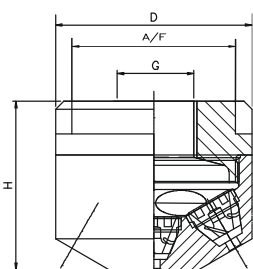
| 75° SPRAY ANGLE | CONNECTION END | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|--------------|-------------------|---|-------|--------------|-------|-------|-------|--------|-------------------------------------|----|----|-----|
| | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | CONN. | H | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| DG15.150 | ● | | 0.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 1/2" | 30 | 50 | 46 |
| DG15.200 | ● | | 0.5 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 216.0 gms. Approx | | | |
| DG15.300 | ● | | 1.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 3/4" | 46 | 75 | 65 |
| DG15.400 | ● | | 1.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 716.0 gms. Approx | | | |
| DG15.475 | ● | | 1.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| DG15.650 | ● | | 2.0 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| DG15.800 | ● | ● | 2.2 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| DG25.100 | ● | ● | 2.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DG25.125 | ● | ● | 2.8 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DG25.160 | | ● | 3.2 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DG25.200 | | ● | 3.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DG25.225 | | ● | 3.8 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DG25.250 | | ● | 4.0 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DG25.320 | | ● | 4.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DG25.400 | | ● | 5.0 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DG25.520 | | ● | 5.7 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |

DG Series Multiple Full Cone Spray Nozzles

DG



Multiple spray nozzles, consisting of seven fine atomizing hollow cone nozzles, provide a fog-like full cone pattern with relatively high flow volumes. The overlapping hollow cone nozzles produce a 130° full cone spray pattern of very fine droplets that cannot be achieved by a single orifice spray nozzle of the same flow rate size. The resulting increased droplet surface area of the atomized liquid provides greater efficiency in gas treatment and cooling application ideal for reaction towers which do not use packing.



Spray Angle 130°

Characteristic :

This type of nozzle gives fine atomization with the aid of several hollow cones spraying into one another.

Applications :

- Cooling Of Gaseous And Solid Material
- In Desuperheaters
- Chlorine Precipitation
- For Improving The Chemical Reaction By Means Of Enlarging the Contact Surface

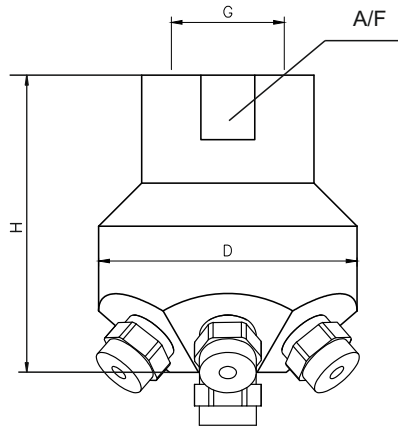
| 130° SPRAY ANGLE | CONNECTION END | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|--------------|-------------------|---|-------|-------|-------|--------|--------|--------|-------------------------------------|------|----|-----|
| | 1/2" | 3/4" | | PRESSURE [BAR] | | | | | | | CONN. | H | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| DG19.150 | ● | | 0.5 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | 1/2" | 38 | 40 | 30 |
| DG19.200 | ● | | 0.5 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 216.0 gms. Approx | | | |
| DG19.300 | ● | | 1.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | 3/4" | 51.5 | 60 | 50 |
| DG19.400 | ● | | 1.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 216.0 gms. Approx | | | |
| DG19.475 | ● | | 1.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| DG19.650 | ● | | 2.0 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| DG19.800 | ● | ● | 2.0 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| DG29.100 | ● | ● | 2.2 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DG29.125 | ● | ● | 2.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DG29.160 | | ● | 2.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DG29.200 | | ● | 3.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DG29.225 | | ● | 3.4 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DG29.250 | | ● | 3.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DG29.320 | | ● | 4.0 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DG29.400 | | ● | 4.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DG29.520 | | ● | 5.1 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| DG29.650 | | ● | 5.7 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |

DH Series Multiple Full Cone Spray Nozzles

DH

Application :

- Gas Scrubbing
- Gas Cooling
- Dust Control
- Tank Rinsing
- Humidifying Applications



Multiple Full Cone Nozzles

The nozzle assembly consists of a nozzle body and seven removable atomizing spray caps. Each cap has an internal core which is easily removed for cleaning or replacement. The nozzle provides large flow capacities with relatively small drops.

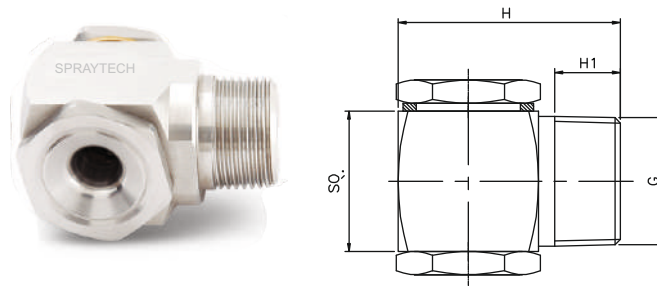
Characteristic :

With the aid of multiple fine full cone nozzles it gives large full cone with small droplets.

| 130° SPRAY ANGLE | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|--------------|--------------|-------------------|--|--------|--------------|--------|--------|--------|--------|-----------------------------------|----|----|-----|
| | 3/4" | 1" | 1 1/2" | | PRESSURE [BAR] | | | | | | | CONN. | H | D | A/F |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| DH29.125 | ● | | | 2.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | 3/4" | 44 | 60 | 50 |
| DH29.160 | ● | | | 2.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | Weight (Metals) = 700 gms. Approx | | | |
| DH29.200 | ● | | | 3.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | 1" | 50 | 60 | 50 |
| DH29.225 | ● | | | 3.4 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | Weight (Metals) = XXX gms. Approx | | | |
| DH29.250 | ● | | | 3.5 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 1 1/2" | 65 | 90 | 80 |
| DH29.320 | ● | | | 4.0 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | Weight (Metals) = XXX gms. Approx | | | |
| DH29.400 | ● | | | 4.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DH29.520 | ● | | | 5.1 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| DH29.650 | ● | | | 5.7 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| DH29.800 | | ● | | 6.3 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| DH39.100 | | ● | | 7.1 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| DH39.118 | | ● | | 7.7 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| DH39.130 | | ● | ● | 8.1 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| DH39.160 | | | ● | 8.9 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| DH39.200 | | | ● | 10.0 | 100.0 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| DH39.227 | | | ● | 10.7 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |

DI Series Tangential Entry Vaneless Full Cone Spray Nozzles

DI



ONE PIECE BODY
VANE LESS FULL CONE (TANGENTIAL ENTRY)

Typical Applications :

Washing and cleaning cooling of gas or solid product surface spraying Improvement of chemical reactions.

| MODEL NO. | CONNECTION END | | | | | ORIFIC SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-------------------------|----------------|------|------|------|-----|------------------|--|-------|--------------|-------|--------|--------|--------|-------------------------------------|----|------|----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | SQ |
| | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| 60° SPRAYNOZZLE | | | | | | | | | | | | | | | | | |
| DI14.350 | ● | ● | | | | 2.6 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 35 | 10 | 20 |
| DI14.400 | ● | ● | | | | 2.9 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 72.0 gms. Approx | | | |
| DI14.475 | | ● | | | | 3.2 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/8" | 35 | 10 | 20 |
| DI14.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 108 gms. Approx | | | |
| 90° SPRAYNOZZLE | | | | | | | | | | | | | | 1/2" | 45 | 13.2 | 25 |
| DI16.350 | ● | | | | | 2.6 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | Weight (Metals) = 135.0 gms. Approx | | | |
| DI16.400 | ● | | | | | 2.9 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 3/4" | 57 | 16 | 32 |
| DI16.475 | | ● | | | | 3.2 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | Weight (Metals) = 630.0 gms. Approx | | | |
| DI16.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 1" | 57 | 18 | 36 |
| DI16.800 | | ● | | | | 3.6 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = XX gms. Approx | | | |
| DI26.100 | | ● | | | | 4.3 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DI26.125 | | ● | | | | 5.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DI26.160 | | ● | | | | 5.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DI26.200 | | | ● | | | 6.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DI26.225 | | | ● | | | 7.3 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DI26.250 | | | ● | | | 9.6 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DI26.320 | | | | ● | | 11.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DI26.400 | | | | | ● | 8.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DI26.520 | | | | | ● | 10.5 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| 120° SPRAYNOZZLE | | | | | | | | | | | | | | | | | |
| DI18.350 | ● | | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | | |
| DI18.400 | ● | | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | | |
| DI18.475 | | ● | | | | 2.9 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| DI18.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| DI18.800 | | ● | | | | 3.6 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| DI28.100 | | ● | | | | 4.3 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DI28.125 | | ● | | | | 5.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DI28.160 | | ● | ● | | | 5.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DI28.200 | | | ● | | | 6.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DI28.225 | | | ● | | | 7.3 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DI28.250 | | | ● | | | 9.6 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DI28.320 | | | | ● | | 11.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DI28.400 | | | | | ● | 8.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DI28.520 | | | | | ● | 10.5 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| DI28.650 | | | | | ● | 11.7 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| DI28.720 | | | | | ● | 12.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | |
| DI28.800 | | | | | ● | 13.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |

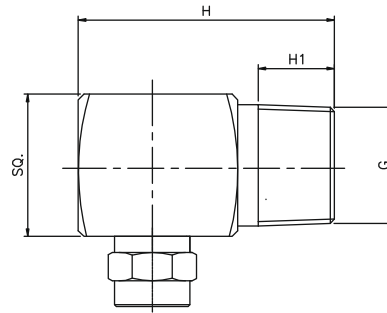
End Connection : X – BSP, Y - BSPT, Z – NPT Available.

DJ Series Tangential Entry Vaneless Full Cone Spray Nozzles

DJ



TWO PIECE BODY
TANGENTIAL ENTRY FULL CONE



Typical Applications :

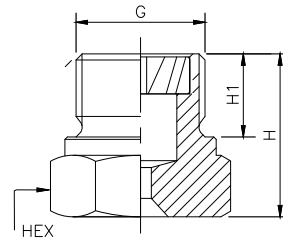
Washing and cleaning cooling of gas or solid product surface spraying Improvement of chemical reactions.

| MODEL NO. | CONNECTION END | | | | | ORIFIC SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-------------------------|----------------|------|------|------|-----|------------------|--|-------|--------------|-------|--------|--------|--------|-------------------------------------|----|------|----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | SQ |
| | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| 60° SPRAYNOZZLE | | | | | | | | | | | | | | | | | |
| DJ14.350 | ● | ● | | | | 2.6 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/4" | 35 | 10 | 20 |
| DJ14.400 | ● | ● | | | | 2.9 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 72.0 gms. Approx | | | |
| DJ14.475 | | ● | | | | 3.2 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/8" | 35 | 10 | 20 |
| DJ14.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 108.0 gms. Approx | | | |
| 90° SPRAYNOZZLE | | | | | | | | | | | | | | | | | |
| DJ16.350 | ● | | | | | 2.6 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1/2" | 45 | 13.2 | 25 |
| DJ16.400 | ● | | | | | 2.9 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 135.0 gms. Approx | | | |
| DJ16.475 | | ● | | | | 3.2 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | 3/4" | 57 | 16 | 32 |
| DJ16.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | Weight (Metals) = 630.0 gms. Approx | | | |
| DJ16.800 | | ● | | | | 3.6 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | 1" | 57 | 18 | 36 |
| DJ26.100 | | ● | | | | 4.3 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | Weight (Metals) = XX gms. Approx | | | |
| DJ26.125 | | ● | | | | 5.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DJ26.160 | | ● | | | | 5.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DJ26.200 | | | ● | | | 6.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DJ26.225 | | | ● | | | 7.3 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DJ26.250 | | | ● | | | 9.6 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DJ26.320 | | | | ● | | 11.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DJ26.400 | | | | | ● | 8.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DJ26.520 | | | | | ● | 10.5 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| 120° SPRAYNOZZLE | | | | | | | | | | | | | | | | | |
| DJ18.350 | ● | | | | | 2.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | | |
| DJ18.400 | ● | | | | | 2.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | | |
| DJ18.475 | | ● | | | | 2.9 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| DJ18.650 | | ● | | | | 3.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| DJ18.800 | | ● | | | | 3.6 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| DJ28.100 | | ● | | | | 4.3 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| DJ28.125 | | ● | | | | 5.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| DJ28.160 | | ● | ● | | | 5.8 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |
| DJ28.200 | | | ● | | | 6.5 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | |
| DJ28.225 | | | ● | | | 7.3 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | |
| DJ28.250 | | | ● | | | 9.6 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | |
| DJ28.320 | | | | ● | | 11.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | |
| DJ28.400 | | | | | ● | 8.5 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| DJ28.520 | | | | | ● | 10.5 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| DJ28.650 | | | | | ● | 11.7 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| DJ28.720 | | | | | ● | 12.4 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | |
| DJ28.800 | | | | | ● | 13.0 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

ABC Angular Full Cone Spray Nozzles

DM



DM Series ABC Angular Full Cone Spray Nozzle form uniform spray pattern and spray coverage. It provides solid full cone pattern with uniform spray distribution of medium to large size drops resulting from their unique vane design.

Characteristic : Angular drill disc vane design

Type : Full cone spray pattern

| 45° SPRAY ANGLE | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|-----|-------------------|--|-------|--------------|-------|--------|--------|--------|----------------------------------|----|----|----|-----|
| | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1/2" | H | H1 | D | HEX |
| DM13.400 | ● | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 1/2" | 32 | 13 | 21 | 22 |
| DM13.475 | ● | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | Weight (Metals) = 71 gms. Approx | | | | |
| DM13.650 | ● | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 3/4" | 42 | 15 | 32 | 27 |
| DM13.800 | ● | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = xx gms. Approx | | | | |
| DM23.100 | ● | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 1" | 56 | 18 | 39 | 36 |
| DM23.125 | ● | ● | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = xx gms. Approx | | | | |
| DM23.160 | ● | ● | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DM23.180 | | ● | | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DM23.200 | | ● | ● | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DM23.225 | | ● | ● | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DM23.250 | | ● | ● | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DM23.320 | | ● | ● | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DM23.400 | | | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DM23.520 | | | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DM23.650 | | | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DM23.720 | | | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

| 60° SPRAY ANGLE | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|------|-----|-------------------|--|-------|--------------|-------|--------|--------|--------|----------------------------------|----|----|----|-----|
| | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | D | HEX |
| MODEL NO. | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1/2" | H | H1 | D | HEX |
| DM14.400 | ● | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 1/2" | 32 | 13 | 21 | 22 |
| DM14.475 | ● | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | Weight (Metals) = 71 gms. Approx | | | | |
| DM14.650 | ● | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 3/4" | 42 | 15 | 32 | 27 |
| DM14.800 | ● | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = xx gms. Approx | | | | |
| DM24.100 | ● | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 1" | 56 | 18 | 39 | 36 |
| DM24.125 | ● | ● | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = xx gms. Approx | | | | |
| DM24.160 | ● | ● | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DM24.180 | | ● | | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DM24.200 | | ● | ● | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DM24.225 | | ● | ● | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DM24.250 | | ● | ● | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DM24.320 | | ● | ● | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DM24.400 | | | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DM24.520 | | | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DM24.650 | | | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DM24.720 | | | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

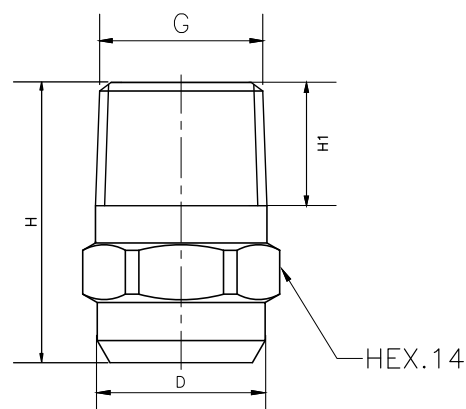
ABC Angular Full Cone Spray Nozzles

| 90° SPRAY ANGLE | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|-----------------|----------------|--------------|--------------|-------------------|--|-------|-------|-------|--------|--------|--------|----------------------------------|----|----|----|-----|
| | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX |
| DM16.400 | ● | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 1/2" | 32 | 13 | 21 | 22 |
| DM16.475 | ● | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | Weight (Metals) = 71 gms. Approx | | | | |
| DM16.650 | ● | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 3/4" | 42 | 15 | 32 | 27 |
| DM16.800 | ● | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = xx gms. Approx | | | | |
| DM26.100 | ● | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 1" | 56 | 18 | 39 | 36 |
| DM26.125 | ● | ● | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = xx gms. Approx | | | | |
| DM26.160 | ● | ● | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DM26.180 | | ● | | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DM26.200 | | ● | ● | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DM26.225 | | ● | ● | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DM26.250 | | ● | ● | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DM26.320 | | ● | ● | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DM26.400 | | ● | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DM26.520 | | ● | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DM26.650 | | | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DM26.720 | | | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

| 130° SPRAY ANGLE | CONNECTION END | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | | |
|------------------|----------------|--------------|--------------|-------------------|--|-------|-------|-------|--------|--------|--------|----------------------------------|----|----|----|-----|
| | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | D | HEX |
| DM19.400 | ● | | | 2.3 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | 1/2" | 32 | 13 | 21 | 22 |
| DM19.475 | ● | | | 2.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | Weight (Metals) = 71 gms. Approx | | | | |
| DM19.650 | ● | | | 2.9 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 3/4" | 42 | 15 | 32 | 27 |
| DM19.800 | ● | | | 3.3 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = xx gms. Approx | | | | |
| DM29.100 | ● | | | 3.6 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 1" | 56 | 18 | 39 | 36 |
| DM29.125 | ● | ● | | 4.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = xx gms. Approx | | | | |
| DM29.160 | ● | ● | | 4.6 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | | |
| DM29.180 | | ● | ● | 5.9 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | | | |
| DM29.200 | | ● | ● | 5.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | | | |
| DM29.225 | | ● | ● | 5.5 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | | | |
| DM29.250 | | ● | ● | 5.8 | 12.50 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | | | |
| DM29.320 | | ● | ● | 6.5 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | | | |
| DM29.400 | | ● | ● | 7.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | | |
| DM29.520 | | ● | ● | 8.3 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | | |
| DM29.650 | | | ● | 9.3 | 32.50 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | | |
| DM29.720 | | | ● | 9.8 | 36.00 | 50.91 | 72.00 | 88.18 | 113.8 | 134.7 | 161.0 | | | | | |

Full Cone Spray Nozzles (Mist Spray)

DN



DN series mist spray nozzle offers semi Full cone spray pattern.

Micro-finish of tip & vane permitting flow through the slots of the vane and extremely close manufacturing tolerances ensures accurate flow capacity control.

Application :-

Injection quill, Dust suppression, Humidification, Mist spray applications

Range :-

Spray Angle : 45°, 60°, 90°.

Connection : 1/4" BSP/BSPT/NPT (Male)

| MODEL NO. | END CONNECTION | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | | | | |
|------------------------|--------------------|-------------------|--|------|------|------|------|------|----------------------------------|----|----|----|-----|
| | 1/4" | | PRESSURE [BAR] | | | | | | CONN. | H | H1 | D | HEX |
| | BSP BSPT NPT | | | | | | | | | | | | |
| 45° SPRAY ANGLE | | | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 15.0 | CONN. | H | H1 | D | HEX |
| DN13.030 | ● | 1.0 | 0.3 | 0.37 | 0.47 | 0.56 | 0.67 | 0.82 | 1/4" | 22 | 10 | 13 | 14 |
| DN13.040 | ● | 1.1 | 0.4 | 0.49 | 0.63 | 0.75 | 0.89 | 1.10 | Weight (Metals) = XX gms. Approx | | | | |
| DN13.050 | ● | 1.2 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | | | | | |
| DN13.060 | ● | 1.4 | 0.6 | 0.73 | 0.95 | 1.12 | 1.34 | 1.64 | | | | | |
| DN13.070 | ● | 1.5 | 0.7 | 0.86 | 1.11 | 1.31 | 1.57 | 1.92 | | | | | |
| DN13.080 | ● | 1.6 | 0.8 | 0.98 | 1.26 | 1.50 | 1.79 | 2.19 | | | | | |
| DN13.090 | ● | 1.7 | 0.9 | 1.10 | 1.42 | 1.68 | 2.01 | 2.46 | | | | | |
| DN13.100 | ● | 1.8 | 1.0 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | | | | | |
| 60° SPRAY ANGLE | | | | | | | | | | | | | |
| DN14.030 | ● | 1.0 | 0.3 | 0.37 | 0.47 | 0.56 | 0.67 | 0.82 | | | | | |
| DN14.040 | ● | 1.1 | 0.4 | 0.49 | 0.63 | 0.75 | 0.89 | 1.10 | | | | | |
| DN14.050 | ● | 1.2 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | | | | | |
| DN14.060 | ● | 1.4 | 0.6 | 0.73 | 0.95 | 1.12 | 1.34 | 1.64 | | | | | |
| DN14.070 | ● | 1.5 | 0.7 | 0.86 | 1.11 | 1.31 | 1.57 | 1.92 | | | | | |
| DN14.080 | ● | 1.6 | 0.8 | 0.98 | 1.26 | 1.50 | 1.79 | 2.19 | | | | | |
| DN14.090 | ● | 1.7 | 0.9 | 1.10 | 1.42 | 1.68 | 2.01 | 2.46 | | | | | |
| DN14.100 | ● | 1.8 | 1.0 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | | | | | |
| 90° SPRAY ANGLE | | | | | | | | | | | | | |
| DN16.030 | ● | 1.0 | 0.3 | 0.37 | 0.47 | 0.56 | 0.67 | 0.82 | | | | | |
| DN16.040 | ● | 1.1 | 0.4 | 0.49 | 0.63 | 0.75 | 0.89 | 1.10 | | | | | |
| DN16.050 | ● | 1.2 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1.37 | | | | | |
| DN16.060 | ● | 1.4 | 0.6 | 0.73 | 0.95 | 1.12 | 1.34 | 1.64 | | | | | |
| DN16.070 | ● | 1.5 | 0.7 | 0.86 | 1.11 | 1.31 | 1.57 | 1.92 | | | | | |
| DN16.080 | ● | 1.6 | 0.8 | 0.98 | 1.26 | 1.50 | 1.79 | 2.19 | | | | | |
| DN16.090 | ● | 1.7 | 0.9 | 1.10 | 1.42 | 1.68 | 2.01 | 2.46 | | | | | |
| DN16.100 | ● | 1.8 | 1.0 | 1.22 | 1.58 | 1.87 | 2.24 | 2.74 | | | | | |



Hollow Cone Spray Nozzles Series



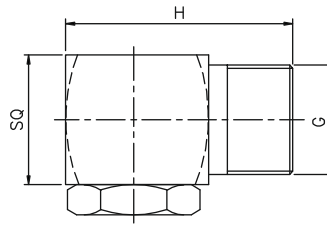
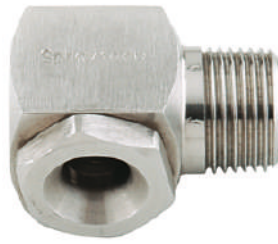
HOLLOW CONE

APPLICATION

- Absorption
- Chemical process engineering
- Cooling
- Disinfection
- Desuperheating
- Dust control
- Fire protection
- Foam destruction
- Gas treatment
- Humidification of air
- Humidification of goods
- Humidification of textiles
- Oil spraying
- Protection of storage tanks
- Spraying onto filters
- Spraying over germinating boxes
- Water recooling
- and many others...

BA Series Hollow Cone Spray Nozzles

BA



Tangential Entry Hollow Cone Standard Angle Spray Nozzles (Non-Clogging) :

Hollow cone spray nozzles work on the tangential flow principle and are manufactured by machine tool operation from metal bar stock. This offers versatile construction of small sized nozzles. In addition nozzles can be made on request from any special material and alloys that are available as a bar stock. This flow pattern is essentially a circular ring of liquid. Hollow cone nozzles are best for application requiring good atomization of liquids at lower pressures or where quick heat transfer is needed. These nozzles also feature large and unobstructed flow passage which provide a relatively high resistance to clogging.

There are Following types of hollow cone nozzles.

- 1) Tangential Entry
- 2) Inline (Axial) Entry
- 3) Spiral Hollow cone.

- Characteristic** : High resistance to clogging
- Design** : Vaneless (Two Piece Construction) Non clogging
- Application** : Cooling & Washing of gas

| 60° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (MM) | ORIFICE DIA. NOM. (MM) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BA14.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BA14.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 35 gms. Approx | | |
| BA14.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BA14.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 75 gms. Approx | | |
| BA14.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 20 |
| BA14.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 75 gms. Approx | | |
| BA14.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BA14.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 137 gms. Approx | | |
| BA14.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BA14.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 286 gms. Approx | | |
| BA14.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BA14.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BA14.800 | | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BA24.100 | | | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BA24.125 | | | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BA24.160 | | | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BA24.180 | | | ● | ● | | 6.5 | 7.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BA24.200 | | | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BA24.225 | | | | ● | ● | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BA24.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BA24.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BA24.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BA24.520 | | | | ● | | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.0 | | | |
| BA24.650 | | | | ● | | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.0 | 121.0 | 145.0 | | | |
| BA24.800 | | | | ● | | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126.0 | 149.0 | 178.0 | | | |

End Connection : X – BSP, Y – BSPT, Z – NPT Available.

BA Series Hollow Cone Spray Nozzles

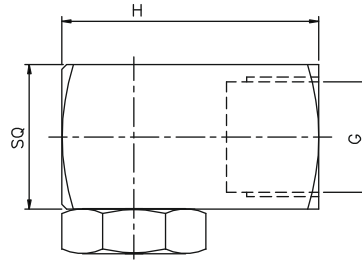
| 90° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE DIA. NOM. (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|--------|-------|-------|-----------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BA16.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BA16.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.7 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 35 gms. Approx | | |
| BA16.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BA16.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 75 gms. Approx | | |
| BA16.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 20 |
| BA16.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 75 gms. Approx | | |
| BA16.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BA16.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 137 gms. Approx | | |
| BA16.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BA16.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 286 gms. Approx | | |
| BA16.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BA16.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BA16.800 | ● | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BA26.100 | | ● | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BA26.125 | | ● | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BA26.160 | | ● | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BA26.180 | | ● | ● | ● | | 6.5 | 7.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BA26.200 | | ● | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BA26.225 | | ● | ● | ● | | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BA26.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BA26.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BA26.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BA26.520 | | | | ● | ● | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116 | | | |
| BA26.650 | | | | ● | ● | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121 | 145 | | | |
| BA26.800 | | | | ● | ● | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126.49 | 149 | 178 | | | |

| 120° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE DIA. NOM. (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|------------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|-------|-------|-------|-----------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BA18.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BA18.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.7 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 35 gms. Approx | | |
| BA18.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BA18.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 75 gms. Approx | | |
| BA18.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 20 |
| BA18.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 75 gms. Approx | | |
| BA18.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BA18.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 137 gms. Approx | | |
| BA18.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BA18.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 286 gms. Approx | | |
| BA18.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BA18.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BA18.800 | ● | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BA28.100 | | ● | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BA28.125 | | ● | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BA28.160 | | ● | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BA28.180 | | ● | ● | ● | | 6.5 | 7.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BA28.200 | | ● | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BA28.225 | | ● | ● | ● | | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BA28.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BA28.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BA28.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BA28.520 | | | | ● | ● | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116 | | | |
| BA28.650 | | | | ● | ● | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102 | 121 | 145 | | | |
| BA28.800 | | | | ● | ● | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126 | 149 | 178 | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BB Series Hollow Cone Spray Nozzles

BB



Tangential Entry Hollow Cone Standard Angle Spray Nozzles (Non-Clogging) :

Hollow cone spray nozzles work on the tangential flow principle and are manufactured by machine tool operation from metal bar stock. This offers versatile construction of small sized nozzles. In addition nozzles can be made on request from any special material and alloys that are available as a bar stock. This flow pattern is essentially a circular ring of liquid. Hollow cone nozzles are best for application requiring good atomization of liquids at lower pressures or where quick heat transfer is needed. These nozzles also feature large and unobstructed flow passage which provide a relatively high resistance to clogging.

There are Following types of hollow cone nozzles.

- 1) Tangential Entry
- 2) Inline (Axial) Entry
- 3) Spiral Hollow cone.

- Characteristic** : High resistance to clogging
- Design** : Vaneless (Two Piece Construction) Non clogging
- Application** : Cooling & Washing of gas

| 60° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (MM) | ORIFICE DIA. NOM. (MM) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|-------|-------|-------|-------------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BB14.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BB14.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = XX gms. Approx | | |
| BB14.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BB14.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 62.0 gms. Approx | | |
| BB14.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 22 |
| BB14.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 77.0 gms. Approx | | |
| BB14.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BB14.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = XX gms. Approx | | |
| BB14.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BB14.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 151.0 gms. Approx | | |
| BB14.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BB14.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BB14.800 | | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BB24.100 | | | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BB24.125 | | | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BB24.160 | | | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BB24.180 | | | ● | ● | | 6.5 | 7.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BB24.200 | | | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BB24.225 | | | | ● | ● | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BB24.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BB24.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BB24.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BB24.520 | | | | ● | ● | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.0 | | | |
| BB24.650 | | | | ● | ● | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.0 | 121.0 | 145.0 | | | |
| BB24.800 | | | | ● | ● | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126.0 | 149.0 | 178.0 | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BB Series Hollow Cone Spray Nozzles

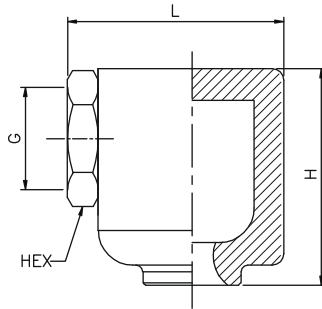
| 90° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE DIA. NOM. (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|--------|-------|-------|-------------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BB16.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BB16.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.7 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 35.0 gms. Approx | | |
| BB16.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BB16.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 62.0 gms. Approx | | |
| BB16.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 22 |
| BB16.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 77.0 gms. Approx | | |
| BB16.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BB16.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = 110.0 gms. Approx | | |
| BB16.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BB16.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 151.0 gms. Approx | | |
| BB16.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BB16.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BB16.800 | | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BB26.100 | | ● | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BB26.125 | | ● | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BB26.160 | | ● | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BB26.180 | | ● | ● | ● | | | | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BB26.200 | | ● | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BB26.225 | | ● | ● | ● | | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BB26.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BB26.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BB26.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BB26.520 | | | | ● | | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116 | | | |
| BB26.650 | | | | ● | | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121 | 145 | | | |
| BB26.800 | | | | ● | | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126.49 | 149 | 178 | | | |

| 120° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE DIA. NOM. (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|------------------|--------------------|------|------|------|------|----------------------|------------------------|--|-------|-------|-------|-------|-------|-------|----------------------------------|------|----|
| | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | SQ |
| BB18.050 | ● | | | | | 1.1 | 1.2 | 0.25 | 0.35 | 0.5 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 25.5 | 16 |
| BB18.075 | ● | ● | | | | 1.3 | 1.4 | 0.375 | 0.53 | 0.7 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = XX gms. Approx | | |
| BB18.100 | ● | ● | | | | 1.6 | 1.7 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 35 | 20 |
| BB18.150 | ● | ● | | | | 1.9 | 2.1 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | |
| BB18.175 | ● | ● | | | | 2.0 | 2.3 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 3/8" | 35 | 22 |
| BB18.200 | ● | ● | | | | 2.2 | 2.4 | 1.0 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = XX gms. Approx | | |
| BB18.250 | ● | ● | | | | 2.5 | 2.7 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 1/2" | 45 | 25 |
| BB18.300 | ● | ● | | | | 2.7 | 3.0 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = XX gms. Approx | | |
| BB18.350 | ● | ● | ● | | | 2.9 | 3.2 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 3/4" | 57 | 32 |
| BB18.400 | ● | ● | ● | | | 3.1 | 3.5 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = XX gms. Approx | | |
| BB18.475 | ● | ● | ● | | | 3.4 | 3.7 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BB18.650 | ● | ● | ● | | | 4.0 | 4.4 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BB18.800 | | ● | ● | | | 4.4 | 4.9 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BB28.100 | | ● | ● | | | 4.9 | 5.5 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BB28.125 | | ● | ● | | | 5.5 | 6.1 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BB28.160 | | | ● | ● | | 6.2 | 6.9 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BB28.180 | | | ● | ● | | 6.5 | 7.2 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BB28.200 | | | ● | ● | | 6.9 | 7.7 | 10.0 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BB28.225 | | | | ● | | 7.4 | 8.2 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BB28.250 | | | | ● | ● | 7.8 | 8.6 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BB28.320 | | | | ● | ● | 8.8 | 9.8 | 16.0 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BB28.400 | | | | ● | ● | 9.8 | 10.9 | 20.0 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | |
| BB28.520 | | | | ● | | 11.2 | 12.4 | 26.0 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116 | | | |
| BB28.650 | | | | ● | | 12.5 | 13.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102 | 121 | 145 | | | |
| BB28.800 | | | | ● | | 13.9 | 15.4 | 40.0 | 56.57 | 80.00 | 97.98 | 126 | 149 | 178 | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BC Series Hollow Cone Spray Nozzles

BC



Fine uniform hollow cone spray also at low pressures.

Application:

Cooling and cleaning of gas, Water re-cooling, Dust control, Chemical process engineering .

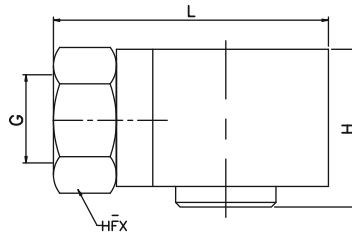
| 75° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|--------|-----|--------|-------------------|--|--------|--------------|--------|--------|---------|---------|----------------------------------|-----|-----|-----|
| | 1" | 1 1/2" | 2" | 2 1/2" | | PRESSURE [BAR] | | | | | | | CONN. | H | L | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1" | 60 | 75 | 46 |
| BC25.500 | ● | | | | 10.5 | 25.0 | 35.36 | 50.00 | 61.24 | 79.06 | 93.54 | 111.80 | Weight (Metals) = XX gms. Approx | | | |
| BC25.630 | ● | | | | 11.8 | 31.5 | 44.55 | 63.00 | 77.16 | 99.61 | 117.86 | 140.87 | 1 1/2" | 90 | 92 | 60 |
| BC25.800 | ● | | | | 13.3 | 40.0 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = XX gms. Approx | | | |
| BC35.100 | ● | | | | 14.9 | 50.0 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | 2" | 127 | 118 | 80 |
| BC35.118 | | ● | | | 16.2 | 59.0 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | Weight (Metals) = XX gms. Approx | | | |
| BC35.130 | | ● | | | 17.0 | 65.0 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | |
| BC35.160 | | ● | | | 18.8 | 80.0 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 2 1/2" | 156 | 140 | 100 |
| BC35.200 | | ● | | | 21.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | |
| BC35.227 | | ● | | | 22.4 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BC35.337 | | | ● | | 27.4 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| BC35.469 | | | ● | | 32.3 | 234.5 | 331.63 | 469.0 | 574.41 | 741.55 | 877.42 | 1048.72 | | | | |
| BC35.540 | | | | ● | 34.6 | 270 | 381.84 | 540.0 | 661.36 | 853.81 | 1010.25 | 1207.48 | | | | |

| 90° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|--------|-----|--------|-------------------|--|--------|-------------|--------|--------|--------|---------|----------------------------------|-----|-----|-----|
| | 1" | 1 1/2" | 2" | 2 1/2" | | PRESSURE [BAR] | | | | | | | CONN. | H | L | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1" | 60 | 75 | 46 |
| BC26.500 | ● | | | | 10.5 | 25.0 | 35.36 | 50.0 | 61.24 | 79.06 | 93.54 | 111.80 | Weight (Metals) = XX gms. Approx | | | |
| BC26.630 | ● | | | | 11.8 | 31.5 | 44.55 | 63.0 | 77.16 | 99.61 | 117.86 | 140.87 | 1 1/2" | 90 | 92 | 60 |
| BC26.800 | ● | | | | 13.3 | 40.0 | 56.57 | 80.0 | 97.98 | 126.49 | 149.67 | 178.89 | Weight (Metals) = XX gms. Approx | | | |
| BC36.100 | ● | | | | 14.9 | 50.0 | 70.71 | 100 | 122 | 158.11 | 187.08 | 223.61 | 2" | 127 | 118 | 80 |
| BC36.118 | | ● | | | 16.2 | 59.0 | 83.44 | 118 | 144 | 186.57 | 220.76 | 263.86 | Weight (Metals) = XX gms. Approx | | | |
| BC36.130 | | ● | | | 17.0 | 65.0 | 91.92 | 130 | 159 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | |
| BC36.160 | | ● | | | 18.8 | 80.0 | 113 | 160 | 195 | 252.98 | 299.33 | 357.77 | 2 1/2" | 156 | 140 | 100 |
| BC36.200 | | ● | | | 21.1 | 100 | 141 | 200 | 244 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | |
| BC36.227 | | ● | | | 22.4 | 113.5 | 160.51 | 227 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BC36.337 | | | ● | | 27.4 | 168.5 | 238.29 | 337 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| BC36.469 | | | ● | | 32.3 | 234.5 | 331.63 | 469 | 574.41 | 741.55 | 877.42 | 1048.72 | | | | |
| BC36.540 | | | | ● | 34.6 | 270 | 381.84 | 540 | 661.36 | 853.81 | 1010 | 1207 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BD Series Hollow Cone Spray Nozzles

BD

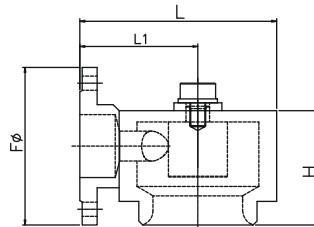


| 130° SPRAY ANGLE | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------|----------------|--------|-----|--------|-------------------|--|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|-----|-----|
| | 1" | 1 1/2" | 2" | 2 1/2" | | PRESSURE [BAR] | | | | | | | CONN. | H | L | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 1" | H | L | HEX | |
| BD29.500 | ● | | | | 12.6 | 25.0 | 35.36 | 50.0 | 61.24 | 79.06 | 93.54 | 111.80 | 1" | 60 | 94 | 46 |
| BD29.630 | ● | | | | 14.1 | 31.5 | 44.55 | 63.0 | 77.16 | 99.61 | 117.86 | 140.87 | Weight (Metals) = XX gms. Approx | | | |
| BD29.800 | ● | | | | 15.9 | 40.0 | 56.57 | 80.0 | 97.98 | 126.49 | 149.67 | 178.89 | 1 1/2" | 75 | 112 | 60 |
| BD39.100 | ● | | | | 17.8 | 50.0 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | Weight (Metals) = XX gms. Approx | | | |
| BD39.118 | | ● | | | 19.3 | 59.0 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | 2" | 90 | 140 | 75 |
| BD39.130 | | ● | | | 20.3 | 65.0 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | Weight (Metals) = XX gms. Approx | | | |
| BD39.160 | | ● | | | 22.5 | 80.0 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | 2 1/2" | 127 | 193 | 90 |
| BD39.200 | | ● | | | 25.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | Weight (Metals) = XX gms. Approx | | | |
| BD39.227 | | ● | | | 26.8 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BD39.337 | | | ● | | 32.6 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |
| BD39.469 | | | ● | | 38.5 | 234.5 | 331.63 | 469.0 | 574.41 | 741.55 | 877.42 | 1048 | | | | |
| BD39.540 | | | | ● | 41.3 | 270 | 381.84 | 540.0 | 661.36 | 853.81 | 1010 | 1207 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BE

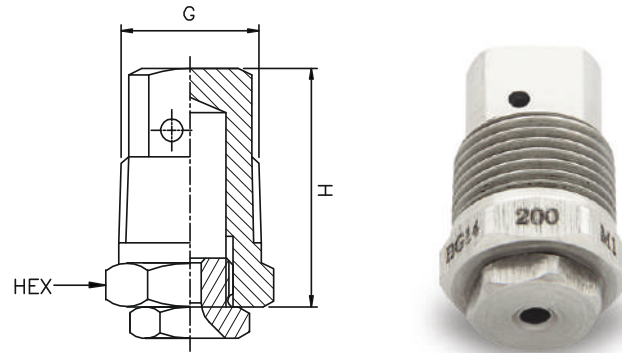
BE Series For Hollow Cone Spray Nozzles LARGE CAPACITY Flange Connection



| 130° SPRAY ANGLE | FLANGED CONNECTION | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------|--------------------|----|-------------------|--|---------|-------------|---------|---------|---------|---------|----------------------------------|-----|-----|-----|
| | 3" | 4" | | PRESSURE [BAR] | | | | | | | FØ | L | L1 | H |
| MODEL NO. | 3" | 4" | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | FØ | L | L1 | H | |
| BE39.510 | ● | | 32.0 | 255 | 360.62 | 510 | 624.62 | 806.38 | 954.12 | 1140.39 | 200 | 250 | 150 | 156 |
| BE39.571 | ● | | 33.8 | 285.5 | 403.76 | 571 | 699.33 | 902.83 | 1068.24 | 1276.79 | Weight (Metals) = XX gms. Approx | | | |
| BE39.642 | ● | | 35.9 | 321 | 453.96 | 642 | 786.29 | 1015.09 | 1201.07 | 1435.56 | | | | |
| BE39.724 | ● | | 38.1 | 362 | 511.95 | 724 | 886.72 | 1144.74 | 1354.48 | 1618.91 | | | | |
| BE39.816 | ● | | 40.4 | 408 | 577.00 | 816 | 999.39 | 1290.21 | 1526.60 | 1824.63 | | | | |
| BE39.918 | ● | | 42.9 | 459 | 649.12 | 918 | 1124.32 | 1451.49 | 1717.42 | 2052.71 | | | | |
| BE49.1020 | ● | | 45.2 | 510 | 721.25 | 1020 | 1249.24 | 1612.76 | 1908.25 | 2280.79 | | | | |
| BE49.1262 | ● | | 50.3 | 631 | 892.37 | 1262 | 1545.63 | 1995.40 | 2360.99 | 2821.92 | | | | |
| BE49.1616 | | ● | 56.9 | 808 | 1142.68 | 1616 | 1979.19 | 2555.12 | 3023.26 | 3613.49 | 220 | 354 | 200 | 240 |
| BE49.2020 | | ● | 63.6 | 1010 | 1428.36 | 2020 | 2473.98 | 3193.90 | 3779.07 | 4516.86 | Weight (Metals) = XX gms. Approx | | | |
| BE49.2525 | | ● | 71.2 | 1262.5 | 1785.44 | 2525 | 3092.48 | 3992.38 | 4723.84 | 5646.07 | | | | |
| BE49.3181 | | ● | 79.9 | 1590.5 | 2249.31 | 3181 | 3895.91 | 5029.60 | 5951.11 | 7112.93 | | | | |

BG Series Inline Entry Hollow Cone Spray Nozzles

BG



Inline Entry Hollow Cone Spray pattern with uniform distribution of finely atomized droplets. Smaller droplets in spray pattern than full cone nozzles of the same capacity at similar pressures.

Design : One piece in-line body with removable orifice tip, two piece construction

Application : Gas Cooling & Cleaning, Spray drying, Desuperheating, Water Cooling, Fugitive Dust suppression.

| 60° SPRAY ANGLE | END CONNECTION (G) | | | INLET DIA. NOM. (mm) | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|--------------|--------------|----------------------|-------------------|--|-------|-------|-------|-------|-------|-------|------------------------------------|------|-----|
| | 1/4" | 3/8" | 1/2" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP BSPT NPT | BSP BSPT NPT | BSP BSPT NPT | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | HEX |
| BG14.050 | ● | | | 1.2 | 1.1 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/4" | 28.5 | 14 |
| BG14.075 | ● | | | 1.4 | 1.3 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = 20.9 gms. Approx | | |
| BG14.100 | ● | | | 1.7 | 1.6 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 3/8" | 30 | 17 |
| BG14.150 | ● | ● | | 2.1 | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = 33.3 gms. Approx | | |
| BG14.175 | ● | ● | | 2.2 | 2.1 | 0.87 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/2" | 37.5 | 22 |
| BG14.200 | ● | ● | | 2.4 | 2.3 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = 60.1 gms. Approx | | |
| BG14.250 | ● | ● | | 2.7 | 2.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | |
| BG14.300 | | ● | | 2.9 | 2.8 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | | | |
| BG14.350 | | ● | | 3.2 | 3.0 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | |
| BG14.400 | | ● | | 3.4 | 3.2 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | |
| BG14.475 | | ● | | 3.7 | 3.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BG14.650 | | ● | ● | 4.3 | 4.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BG14.800 | | ● | ● | 4.8 | 4.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BG24.100 | | | ● | 5.4 | 5.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BG24.125 | | | ● | 6.0 | 5.7 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BG24.160 | | | ● | 6.8 | 6.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BG24.180 | | | ● | 7.2 | 6.8 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BG Series Inline Entry Hollow Cone Spray Nozzles

BG

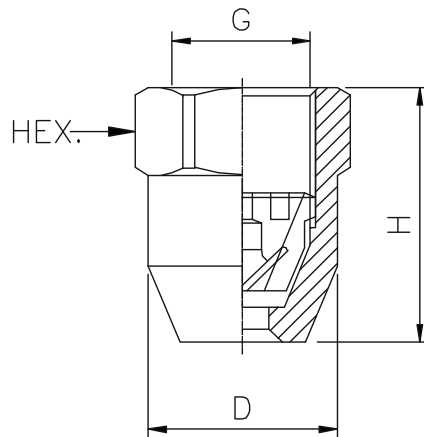
| 90° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|-----------------|--------------------|------|------|------|--------|----------------------|-------------------|--|-------|-------|-------|-------|-------|-------|----------------------------------|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1 1/2" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | HEX |
| BG16.050 | ● | | | | | 1.2 | 1.1 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/4" | 28.5 | 14 |
| BG16.075 | ● | | | | | 1.4 | 1.3 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = XX gms. Approx | | |
| BG16.100 | ● | | | | | 1.7 | 1.6 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 3/8" | 30.5 | 17 |
| BG16.150 | ● | ● | | | | 2.1 | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | |
| BG16.175 | ● | ● | | | | 2.2 | 2.1 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/2" | 37.5 | 22 |
| BG16.200 | ● | ● | | | | 2.4 | 2.3 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = XX gms. Approx | | |
| BG16.250 | ● | ● | | | | 2.7 | 2.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/4" | 44.5 | 27 |
| BG16.300 | | ● | | ● | | 2.9 | 2.8 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = XX gms. Approx | | |
| BG16.350 | | ● | | ● | | 3.2 | 3.0 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1 1/2" | 68 | 48 |
| BG16.400 | | ● | | ● | | 3.4 | 3.2 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = XX gms. Approx | | |
| BG16.475 | | ● | | ● | | 3.7 | 3.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BG16.650 | | ● | ● | ● | | 4.3 | 4.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BG16.800 | | | ● | ● | | 4.8 | 4.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BG26.100 | | | ● | ● | | 5.4 | 5.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BG26.125 | | | ● | ● | | 6.0 | 5.7 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BG26.160 | | | ● | ● | | 6.8 | 6.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BG26.180 | | | ● | ● | | 7.2 | 6.8 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BG26.200 | | | | ● | | 7.6 | 7.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BG26.225 | | | | ● | | 8.1 | 7.6 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BG26.250 | | | | ● | ● | 8.5 | 8.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BG26.320 | | | | ● | ● | 9.6 | 9.1 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |

| 120° SPRAY ANGLE | END CONNECTION (G) | | | | | INLET DIA. NOM. (mm) | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | |
|------------------|--------------------|------|------|------|--------|----------------------|-------------------|--|-------|-------|-------|--------|--------|--------|-----------------------------------|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1 1/2" | | | PRESSURE [BAR] | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | HEX |
| BG18.050 | ● | | | | | 1.2 | 1.1 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/4" | 28.5 | 14 |
| BG18.075 | ● | | | | | 1.4 | 1.3 | 0.37 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = XX gms. Approx | | |
| BG18.100 | ● | | | | | 1.7 | 1.6 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 3/8" | 30.5 | 17 |
| BG18.150 | ● | ● | | | | 2.1 | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | |
| BG18.175 | ● | ● | | | | 2.2 | 2.1 | 0.875 | 1.24 | 1.75 | 2.14 | 2.77 | 3.27 | 3.91 | 1/2" | 37.5 | 22 |
| BG18.200 | ● | ● | | | | 2.4 | 2.3 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | Weight (Metals) = XX gms. Approx | | |
| BG18.250 | ● | ● | | | | 2.7 | 2.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | 3/4" | 44.5 | 27 |
| BG18.300 | | ● | | ● | | 2.9 | 2.8 | 1.50 | 2.12 | 3.00 | 3.67 | 4.74 | 5.61 | 6.71 | Weight (Metals) = XX gms. Approx | | |
| BG18.350 | | ● | | ● | | 3.2 | 3.0 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | 1 1/2" | 68 | 48 |
| BG18.400 | | ● | | ● | | 3.4 | 3.2 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | Weight (Metals) = 595 gms. Approx | | |
| BG18.475 | | ● | | ● | | 3.7 | 3.5 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | |
| BG18.650 | | ● | ● | ● | | 4.3 | 4.1 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | |
| BG18.800 | | | ● | ● | | 4.8 | 4.5 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | |
| BG28.100 | | | ● | ● | | 5.4 | 5.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | |
| BG28.125 | | | ● | ● | | 6.0 | 5.7 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | |
| BG28.160 | | | ● | ● | | 6.8 | 6.4 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | |
| BG28.180 | | | ● | ● | | 7.2 | 6.8 | 9.00 | 12.73 | 18.00 | 22.05 | 28.46 | 33.67 | 40.25 | | | |
| BG28.200 | | | | ● | | 7.6 | 7.2 | 10.00 | 14.14 | 20.00 | 24.49 | 31.62 | 37.42 | 44.72 | | | |
| BG28.225 | | | | ● | | 8.1 | 7.6 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | | | |
| BG28.250 | | | | ● | ● | 8.5 | 8.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | | | |
| BG28.320 | | | | ● | ● | 9.6 | 9.1 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | | | |
| BG28.400 | | | | ● | | 10.8 | 10.1 | 20.00 | 28.28 | 40.00 | 48.99 | 63.60 | 74.83 | 89.44 | | | |
| BG28.520 | | | | ● | | 12.3 | 11.5 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | |
| BG28.650 | | | | ● | | 13.71 | 12.9 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | |
| BG28.800 | | | | ● | | 15.2 | 14.3 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BH Series Hollow Cone Spray Nozzles

BH



Axial hollow cone spray nozzles in two piece body and swirl insert spiral grooves conduct liquid along a straight through axial flow line, producing an especially fine atomized spray.

Application :

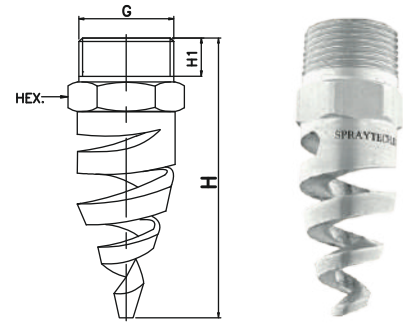
- Cooling and cleaning of air / gas
- Dust Suppression
- Spray drying
- Filter cleaning
- Desuperheating

| MODEL NO. | CONNECTION END | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-------------------------|----------------|------|------|------|-------------------|--|-------|--------------|-------|-------|-------|-------|----------------------------------|----|------|-----|
| | 1/8" | 1/4" | 3/8" | 1/2" | | PRESSURE [BAR] | | | | | | | CONN. | H | D | HEX |
| | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| 60 ° SPRAY ANGLE | | | | | | | | | | | | | | | | |
| BH14.050 | ● | ● | | | 1.0 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | 1/8" | 18 | 13.5 | 14 |
| BH14.075 | ● | ● | | | 1.1 | 0.375 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | Weight (Metals) = XX gms. Approx | | | |
| BH14.100 | ● | ● | ● | | 1.2 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | 1/4" | 22 | 16.5 | 17 |
| BH14.150 | ● | ● | ● | | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | Weight (Metals) = XX gms. Approx | | | |
| BH14.200 | ● | ● | ● | | 3.0 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | 3/8" | 29 | 21.5 | 22 |
| BH14.250 | | ● | ● | | 3.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | Weight (Metals) = XX gms. Approx | | | |
| 75 ° SPRAY ANGLE | | | | | | | | | | | | | 1/2" | 36 | 26.7 | 27 |
| BH15.050 | ● | ● | | | 1.0 | 0.25 | 0.35 | 0.50 | 0.61 | 0.79 | 0.94 | 1.12 | Weight (Metals) = XX gms. Approx | | | |
| BH15.075 | ● | ● | | | 1.1 | 0.375 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | | |
| BH15.100 | ● | ● | ● | | 1.2 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | | |
| BH15.150 | ● | ● | ● | | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | | |
| BH15.200 | ● | ● | ● | | 3.0 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | | |
| BH15.250 | | ● | ● | | 3.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | | |
| 90 ° SPRAY ANGLE | | | | | | | | | | | | | | | | |
| BH16.050 | ● | ● | | | 1.0 | 0.25 | 0.35 | 0.50 | 0.61 | 0.791 | 0.94 | 1.12 | | | | |
| BH16.275 | ● | ● | | | 1.1 | 0.375 | 0.53 | 0.75 | 0.92 | 1.19 | 1.40 | 1.68 | | | | |
| BH16.100 | ● | ● | ● | | 1.2 | 0.5 | 0.71 | 1.00 | 1.22 | 1.58 | 1.87 | 2.24 | | | | |
| BH16.150 | ● | ● | ● | | 2.0 | 0.75 | 1.06 | 1.50 | 1.84 | 2.37 | 2.81 | 3.35 | | | | |
| BH16.200 | ● | ● | ● | | 3.0 | 1.00 | 1.41 | 2.00 | 2.45 | 3.16 | 3.74 | 4.47 | | | | |
| BH16.250 | | ● | ● | | 3.5 | 1.25 | 1.77 | 2.50 | 3.06 | 3.95 | 4.68 | 5.59 | | | | |
| BH16.350 | | | ● | | 4.00 | 1.75 | 2.47 | 3.50 | 4.29 | 5.53 | 6.55 | 7.83 | | | | |
| BH16.400 | | | ● | | 4.50 | 2.00 | 2.83 | 4.00 | 4.90 | 6.32 | 7.48 | 8.94 | | | | |
| BH16.475 | | | ● | ● | 5.00 | 2.37 | 3.36 | 4.75 | 5.82 | 7.51 | 8.89 | 10.62 | | | | |
| BH16.650 | | | ● | ● | 5.50 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | | | | |
| BH16.800 | | | ● | ● | 6.00 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | | | | |
| BH26.100 | | | | ● | 7.00 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | | | | |
| BH26.125 | | | | ● | 8.00 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | | | | |
| BH26.160 | | | | ● | 9.00 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | | | | |

BI Series Hollow Cone Spray Nozzles



Spiral Hollow cone Spray Nozzle have no internal parts and features large free passage for minimized clogging & fine droplets at a higher velocity. Compact Nozzle design provide higher flow rates though smaller connection sizes.



Application :

Gas Scrubbers, Cooling Towers, Chemical processing.

| 60° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|------|------|-----|-------------------|--|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| BI14.650 | ● | | | | | 2.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 1/4" | 48 | 10 | 14 |
| BI14.800 | ● | | | | | 2.8 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = XX gms. Approx | | | |
| BI24.100 | ● | ● | | | | 3.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 58 | 10 | 17 |
| BI24.125 | ● | ● | | | | 3.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | |
| BI24.160 | | ● | | | | 4.0 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 76 | 13.2 | 22 |
| BI24.225 | | ● | | | | 4.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | Weight (Metals) = XX gms. Approx | | | |
| BI24.250 | | ● | | | | 5.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 3/4" | 86 | 14.5 | 27 |
| BI24.320 | | ● | | | | 5.6 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | Weight (Metals) = XX gms. Approx | | | |
| BI24.400 | | ● | | | | 6.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | | | | |
| BI24.520 | | ● | ● | | | 7.2 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | | | | |
| BI24.650 | | | ● | | | 8.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| BI24.800 | | | ● | | | 8.9 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| BI34.100 | | | ● | ● | | 10.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| BI34.118 | | | | ● | | 10.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| BI34.130 | | | | ● | | 11.4 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| BI34.160 | | | | ● | | 12.6 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| BI34.200 | | | | | ● | 14.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| BI34.227 | | | | | ● | 15.0 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BI34.337 | | | | | ● | 18.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | 1" | 108 | 16.8 | 36 |

| 90° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|-----------------|----------------|------|------|------|-----|-------------------|--|--------|--------------|--------|--------|--------|--------|-------------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | CONN. | H | H1 | HEX |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | | | | |
| BI16.650 | ● | | | | | 2.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 1/4" | 48 | 10 | 14 |
| BI16.800 | ● | | | | | 2.8 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = 27.0 gms. Approx | | | |
| BI26.100 | ● | ● | | | | 3.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 58 | 10 | 17 |
| BI26.125 | ● | ● | | | | 3.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = 53.7 gms. Approx | | | |
| BI26.160 | | ● | | | | 4.0 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 76 | 13.2 | 22 |
| BI26.225 | | ● | | | | 4.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | Weight (Metals) = 53.7 gms. Approx | | | |
| BI26.250 | | ● | | | | 5.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 3/4" | 86 | 14.5 | 27 |
| BI26.320 | | ● | | | | 5.6 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | Weight (Metals) = 170.0 gms. Approx | | | |
| BI26.400 | | ● | | | | 6.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 1" | 108 | 16.8 | 36 |
| BI26.520 | | ● | ● | | | 7.2 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | Weight (Metals) = 170.0 gms. Approx | | | |
| BI26.650 | | | ● | | | 8.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| BI26.800 | | | ● | | | 8.9 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| BI36.100 | | | ● | ● | | 10.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| BI36.118 | | | | ● | | 10.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| BI36.130 | | | | ● | | 11.4 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| BI36.160 | | | | ● | | 12.6 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| BI36.200 | | | | | ● | 14.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| BI36.227 | | | | | ● | 15.0 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BI36.337 | | | | | ● | 18.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BI Series Hollow Cone Spray Nozzles

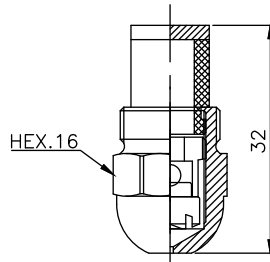
| 120° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE VALUES | | | | | | | G/A DIMENSION. MM | | | |
|------------------------|-------------------|------|------|------|-----|-------------------------|---|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | Pressure [bar] | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX |
| BI18.650 | ● | | | | | 2.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 1/4" | 48 | 10 | 14 |
| BI18.800 | ● | | | | | 2.8 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = XX gms. Approx | | | |
| BI28.100 | ● | ● | | | | 3.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 58 | 10 | 17 |
| BI28.125 | ● | ● | | | | 3.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | |
| BI28.160 | | ● | | | | 4.0 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 76 | 13.2 | 22 |
| BI28.225 | | ● | | | | 4.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | Weight (Metals) = XX gms. Approx | | | |
| BI28.250 | | ● | | | | 5.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 3/4" | 86 | 14.5 | 27 |
| BI28.320 | | ● | | | | 5.6 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | Weight (Metals) = XX gms. Approx | | | |
| BI28.400 | | ● | | | | 6.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 1" | 108 | 16.8 | 36 |
| BI28.520 | | ● | ● | | | 7.2 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | Weight (Metals) = XX gms. Approx | | | |
| BI28.650 | | | ● | | | 8.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| BI28.800 | | | ● | | | 8.9 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| BI38.100 | | | ● | ● | | 10.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| BI38.118 | | | | ● | | 10.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| BI38.130 | | | | ● | | 11.4 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| BI38.160 | | | | ● | | 12.6 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| BI38.200 | | | | | ● | 14.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| BI38.227 | | | | | ● | 15.0 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BI38.337 | | | | | ● | 18.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |

| 180° SPRAY ANGLE | CONNECTION END | | | | | ORIFICE SIZE (mm) | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | | G/A DIMENSION. MM | | | |
|------------------------|-------------------|------|------|------|-----|-------------------------|--|--------|--------------|--------|--------|--------|--------|----------------------------------|-----|------|-----|
| | 1/4" | 3/8" | 1/2" | 3/4" | 1" | | PRESSURE [BAR] | | | | | | | | | | |
| MODEL NO. | BSP | BSP | BSP | BSP | BSP | | 0.5 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | CONN. | H | H1 | HEX |
| BI19.650 | ● | | | | | 2.5 | 3.25 | 4.60 | 6.50 | 7.96 | 10.28 | 12.16 | 14.53 | 1/4" | 48 | 10 | 14 |
| BI19.800 | ● | | | | | 2.8 | 4.00 | 5.66 | 8.00 | 9.80 | 12.65 | 14.97 | 17.89 | Weight (Metals) = XX gms. Approx | | | |
| BI29.100 | ● | ● | | | | 3.1 | 5.00 | 7.07 | 10.00 | 12.25 | 15.81 | 18.71 | 22.36 | 3/8" | 58 | 10 | 17 |
| BI29.125 | ● | ● | | | | 3.5 | 6.25 | 8.84 | 12.50 | 15.31 | 19.76 | 23.39 | 27.95 | Weight (Metals) = XX gms. Approx | | | |
| BI29.160 | | ● | | | | 4.0 | 8.00 | 11.31 | 16.00 | 19.60 | 25.30 | 29.93 | 35.78 | 1/2" | 76 | 13.2 | 22 |
| BI29.225 | | ● | | | | 4.7 | 11.25 | 15.91 | 22.50 | 27.56 | 35.58 | 42.09 | 50.31 | Weight (Metals) = XX gms. Approx | | | |
| BI29.250 | | ● | | | | 5.0 | 12.5 | 17.68 | 25.00 | 30.62 | 39.53 | 46.77 | 55.90 | 3/4" | 86 | 14.5 | 27 |
| BI29.320 | | ● | | | | 5.6 | 16.00 | 22.63 | 32.00 | 39.19 | 50.60 | 59.87 | 71.55 | Weight (Metals) = XX gms. Approx | | | |
| BI29.400 | | ● | | | | 6.3 | 20.00 | 28.28 | 40.00 | 48.99 | 63.25 | 74.83 | 89.44 | 1" | 108 | 16.8 | 36 |
| BI29.520 | | ● | ● | | | 7.2 | 26.00 | 36.77 | 52.00 | 63.69 | 82.22 | 97.28 | 116.28 | Weight (Metals) = XX gms. Approx | | | |
| BI29.650 | | | ● | | | 8.0 | 32.5 | 45.96 | 65.00 | 79.61 | 102.77 | 121.60 | 145.34 | | | | |
| BI29.800 | | | ● | | | 8.9 | 40.00 | 56.57 | 80.00 | 97.98 | 126.49 | 149.67 | 178.89 | | | | |
| BI39.100 | | | ● | ● | | 10.0 | 50.00 | 70.71 | 100.0 | 122.47 | 158.11 | 187.08 | 223.61 | | | | |
| BI39.118 | | | | ● | | 10.8 | 59.00 | 83.44 | 118.0 | 144.52 | 186.57 | 220.76 | 263.86 | | | | |
| BI39.130 | | | | ● | | 11.4 | 65.00 | 91.92 | 130.0 | 159.22 | 205.55 | 243.21 | 290.69 | | | | |
| BI39.160 | | | | ● | | 12.6 | 80.00 | 113.14 | 160.0 | 195.96 | 252.98 | 299.33 | 357.77 | | | | |
| BI39.200 | | | | | ● | 14.1 | 100 | 141.42 | 200.0 | 244.95 | 316.23 | 374.17 | 447.21 | | | | |
| BI39.227 | | | | | ● | 15.0 | 113.5 | 160.51 | 227.0 | 278.02 | 358.92 | 424.68 | 507.59 | | | | |
| BI39.337 | | | | | ● | 18.3 | 168.5 | 238.29 | 337.0 | 412.74 | 532.84 | 630.47 | 753.55 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

BK Series Hollow Cone Spray Nozzles

BK



Oil burner nozzles are available in semi hollow cone spray pattern.

Micro-finish of tip & disc seats permitting flow only through the slots of the disc, plus extremely close manufacturing tolerances, ensure accurate capacity control. These nozzles are fitted with filter in order to provide highly efficient in depth filtration with one piece construction extra fine filter microns are supplied as standard on all small capacity nozzles.

Application :-

LDO firing in kilns of cement, sponge, Iron plants & Dust suppression.

Oil Burner Spray Nozzles

| G | L1 | L2 | HEX |
|-------------|------|---------|-------|
| 9/16 | 7 mm | 20.5 mm | 16 mm |
| With Filter | 7 mm | 32 mm | 16 mm |

Range :-

Spray Angle : 45°, 60°, 75°, 90°.

Connection : 9/16" UNEF

M. O. C. : SS303 /SS304 /SS316/ BRASS

| MODEL NO. | | | | Capacity in LPM @ 2 bar | Flow Rate (GPH) @ Various Pressure (psi) | | | | | |
|-----------------|-----------------|-----------------|-----------------|-------------------------|--|--------|--------|--------|--------|--------|
| 45° SPRAY ANGLE | 60° SPRAY ANGLE | 75° SPRAY ANGLE | 90° SPRAY ANGLE | | 75 | 100 | 125 | 150 | 175 | 200 |
| BK13.0.75 | BK14.0.75 | BK15.0.75 | BK16.0.75 | 0.03 | 0.63 | 0.75 | 0.79 | 0.95 | 0.97 | 1.10 |
| BK13.1.00 | BK14.1.00 | BK15.1.00 | BK16.1.00 | 0.03 | 0.79 | 1.00 | 1.10 | 1.24 | 1.26 | 1.42 |
| BK13.1.50 | BK14.1.50 | BK15.1.50 | BK16.1.50 | 0.05 | 1.26 | 1.50 | 1.74 | 1.90 | 1.92 | 2.06 |
| BK13.2.00 | BK14.2.00 | BK15.2.00 | BK16.2.00 | 0.07 | 1.74 | 2.00 | 2.21 | 2.37 | 2.69 | 2.85 |
| BK13.2.50 | BK14.2.50 | BK15.2.50 | BK16.2.50 | 0.09 | 2.16 | 2.50 | 2.80 | 3.06 | 3.30 | 3.54 |
| BK13.3.00 | BK14.3.00 | BK15.3.00 | BK16.3.00 | 0.1 | 2.59 | 3.00 | 3.35 | 3.68 | 3.97 | 4.25 |
| BK13.3.50 | BK14.3.50 | BK15.3.50 | BK16.3.50 | 0.12 | 3.03 | 3.50 | 3.91 | 4.29 | 4.63 | 4.95 |
| BK13.4.00 | BK14.4.00 | BK15.4.00 | BK16.4.00 | 0.13 | 3.46 | 4.00 | 4.47 | 4.90 | 5.30 | 5.66 |
| BK13.4.50 | BK14.4.50 | BK15.4.50 | BK16.4.50 | 0.15 | 3.90 | 4.50 | 5.04 | 5.51 | 5.95 | 6.36 |
| BK13.5.00 | BK14.5.00 | BK15.5.00 | BK16.5.00 | 0.17 | 4.33 | 5.00 | 5.59 | 6.13 | 6.61 | 7.07 |
| BK13.5.50 | BK14.5.50 | BK15.5.50 | BK16.5.50 | 0.18 | 4.76 | 5.50 | 6.15 | 6.74 | 7.27 | 7.78 |
| BK13.6.00 | BK14.6.00 | BK15.6.00 | BK16.6.00 | 0.2 | 5.19 | 6.00 | 6.71 | 7.33 | 7.94 | 8.48 |
| BK13.6.50 | BK14.6.50 | BK15.6.50 | BK16.6.50 | 0.22 | 5.63 | 6.50 | 7.26 | 7.96 | 8.60 | 9.20 |
| BK13.7.00 | BK14.7.00 | BK15.7.00 | BK16.7.00 | 0.24 | 6.05 | 7.00 | 7.82 | 8.58 | 9.25 | 9.90 |
| BK13.7.50 | BK14.7.50 | BK15.7.50 | BK16.7.50 | 0.25 | 6.49 | 7.50 | 8.38 | 9.19 | 9.91 | 10.60 |
| BK13.8.00 | BK14.8.00 | BK15.8.00 | BK16.8.00 | 0.27 | 6.93 | 8.00 | 8.94 | 9.80 | 10.58 | 11.31 |
| BK13.8.50 | BK14.8.50 | BK15.8.50 | BK16.8.50 | 0.29 | 7.36 | 8.50 | 9.50 | 10.45 | 11.27 | 12.08 |
| BK13.9.00 | BK14.9.00 | BK15.9.00 | BK16.9.00 | 0.3 | 7.79 | 9.00 | 10.06 | 11.02 | 11.91 | 12.73 |
| BK13.9.50 | BK14.9.50 | BK15.9.50 | BK16.9.50 | 0.32 | 8.22 | 9.50 | 10.60 | 11.70 | 12.60 | 13.50 |
| BK23.10.00 | BK24.10.00 | BK25.10.00 | BK26.10.00 | 0.34 | 8.71 | 10.00 | 11.09 | 12.20 | 13.15 | 14.10 |
| BK23.10.50 | BK24.10.50 | BK25.10.50 | BK26.10.50 | 0.36 | 9.10 | 10.50 | 11.70 | 12.90 | 13.90 | 14.90 |
| BK23.12.00 | BK24.12.00 | BK25.12.00 | BK26.12.00 | 0.4 | 10.40 | 12.00 | 13.40 | 14.70 | 15.90 | 17.00 |
| BK23.13.50 | BK24.13.50 | BK25.13.50 | BK26.13.50 | 0.46 | 11.65 | 13.50 | 15.07 | 16.53 | 17.90 | 19.17 |
| BK23.15.50 | BK24.15.50 | BK25.15.50 | BK26.15.50 | 0.55 | 13.37 | 15.50 | 17.33 | 18.95 | 20.56 | 21.89 |
| BK23.17.50 | BK24.17.50 | BK25.17.50 | BK26.17.50 | 0.6 | 15.10 | 17.50 | 19.60 | 21.40 | 23.20 | 24.80 |
| BK23.19.50 | BK24.19.50 | BK25.19.50 | BK26.19.50 | 0.65 | 16.90 | 19.50 | 21.80 | 23.90 | 25.80 | 27.60 |
| BK23.21.50 | BK24.21.50 | BK25.21.50 | BK26.21.50 | 0.7 | 18.60 | 21.50 | 24.00 | 26.40 | 28.40 | 30.40 |
| BK23.24.00 | BK24.24.00 | BK25.24.00 | BK26.24.00 | 0.8 | 20.80 | 24.00 | 26.80 | 29.40 | 31.80 | 34.00 |
| BK23.28.00 | BK24.28.00 | BK25.28.00 | BK26.28.00 | 0.9 | 24.20 | 28.00 | 31.30 | 34.30 | 37.00 | 39.60 |
| BK23.30.00 | BK24.30.00 | BK25.30.00 | BK26.30.00 | 1.0 | 26.00 | 30.00 | 33.60 | 36.80 | 39.70 | 42.50 |
| BK23.35.00 | BK24.35.00 | BK25.35.00 | BK26.35.00 | 1.2 | 30.30 | 35.00 | 39.10 | 42.90 | 46.30 | 49.50 |
| BK23.40.00 | BK24.40.00 | BK25.40.00 | BK26.40.00 | 1.3 | 34.60 | 40.00 | 44.70 | 49.00 | 53.00 | 56.50 |
| BK23.45.00 | BK24.45.00 | BK25.45.00 | BK26.45.00 | 1.5 | 39.00 | 45.00 | 50.40 | 55.20 | 59.50 | 63.70 |
| BK23.50.00 | BK24.50.00 | BK25.50.00 | BK26.50.00 | 1.7 | 43.30 | 50.00 | 55.90 | 61.30 | 66.10 | 70.70 |
| BK23.55.00 | BK24.55.00 | BK25.55.00 | BK26.55.00 | 1.8 | 47.60 | 55.00 | 61.50 | 67.40 | 72.70 | 77.70 |
| BK23.60.00 | BK24.60.00 | BK25.60.00 | BK26.60.00 | 2.0 | 52.00 | 60.00 | 67.00 | 73.50 | 79.40 | 84.00 |
| BK23.70.00 | BK24.70.00 | BK25.70.00 | BK26.70.00 | 2.4 | 60.60 | 70.00 | 78.20 | 85.70 | 92.50 | 99.00 |
| BK23.80.00 | BK24.80.00 | BK25.80.00 | BK26.80.00 | 2.7 | 60.20 | 80.00 | 89.40 | 98.00 | 106.00 | 113.50 |
| BK23.90.00 | BK24.90.00 | BK25.90.00 | BK26.90.00 | 3.0 | 77.90 | 90.00 | 100.90 | 110.50 | 119.20 | 127.50 |
| BK33.100.00 | BK34.100.00 | BK35.100.00 | BK36.100.00 | 3.4 | 86.50 | 100.00 | 111.90 | 122.50 | 132.30 | 141.40 |



Cleaning-In-Place (CIP) Spray Nozzles



APPLICATION

- Beverage industry
- Bioengineering
- Chemical industry
- Cosmetic industry
- Food industry
- Pharmaceutical industry
- Tank building and many others...

Tank Washing Spray Nozzles Selection

Overview

In this section a brief elaboration will clear the concept of spray nozzles selection for requirement and there various factors which affects and plays vital role in extent of cleaning required.

Following some factors should well studied when selecting CIP spray nozzles.

1) Extent of Cleaning

The nature of substance to be cleaned from tank should be considered like, solubility, viscosity, nature of powder / pigment material.

Based on all this factors we can decide which type of impact is necessary to flush substance from all internals of equipment.

- a) Rinsing : By virtue mass removal of substance and thick layers get dissolved by water or solvent
- b) Cleaning : After rinsing cleaning could be done with high pressure to remove rest of the residue from internal.
- c) High Impact Cleaning : Those substances which could not be satisfactory cleaned by means of cleaning cycle, should be treated with high pressure of cleaning fluid.
- d) Sanitizing : Sanitize chemical is applied after cleaning to kill microorganisms and bacteria.
- e) Disinfecting : Same procedure is applied for disinfectant
- f) Sterilizing : It kills all kinds of bacteria.

Heat energy's role

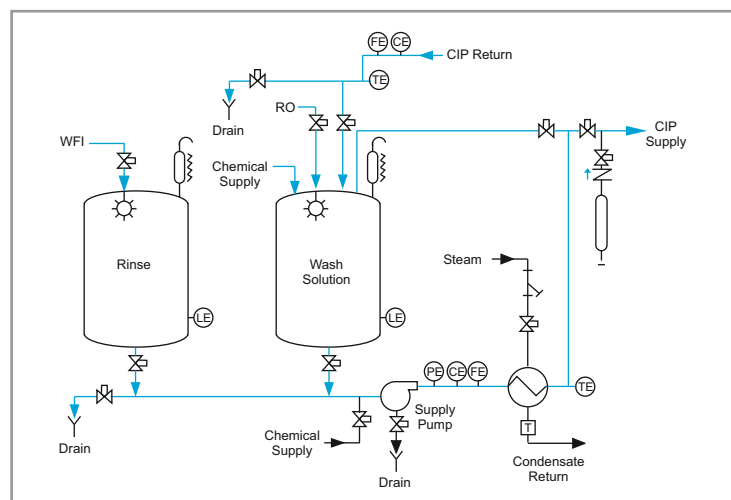
Viscosity of fluids decreases with increasing temperature so, effective cleaning can be achieved by using hot cleaning fluids or by increasing temperature of vessel tank by means of steam jackets. By virtue of this viscosity of substances to be cleaned decrease and effective cleanliness increases.

Spray Pattern

If cleaning is done manually then stationery spray nozzles are recommended to use. Ex. Flat spray nozzle, Straight jet spray nozzle, Full cone spray nozzle. For CIP self rotating spray nozzles gives droplets spray to clean the substances. For higher tank sizes tank cleaning machine is recommended as it gives cyclic control speed of rotation which provide the high impact jet cleaning with long impact distances.

Obstructions due to internals

If tank is having any central agitation / mixing arrangement then multiple spray nozzle should be utilized.



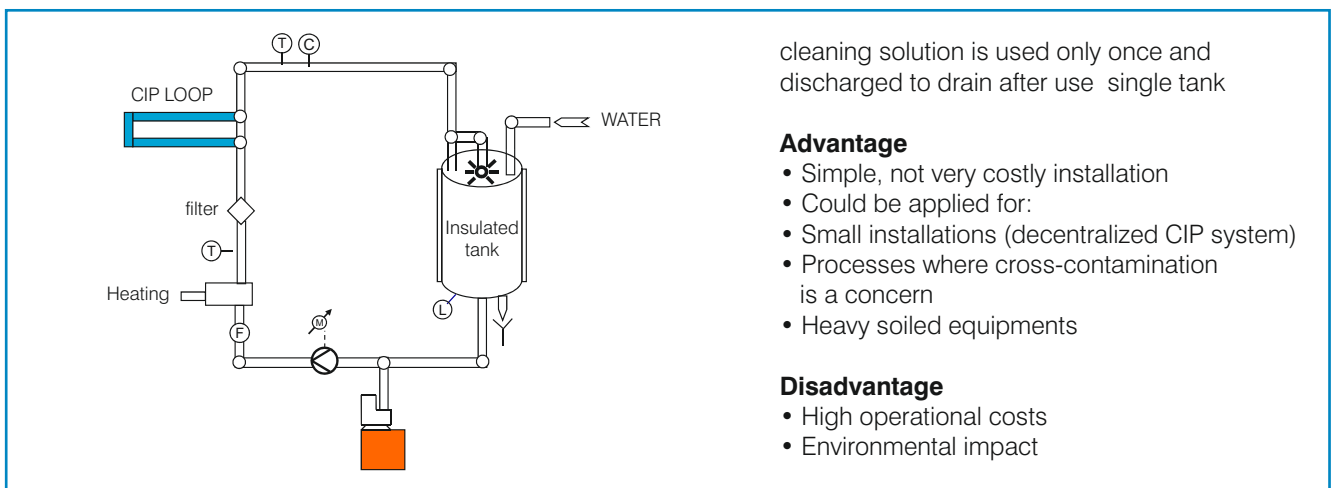
Cleaning-In-Place (CIP)

Fully or semi-automated, integrated cleaning technique that allows to clean closed or open circuits without dismantling equipments

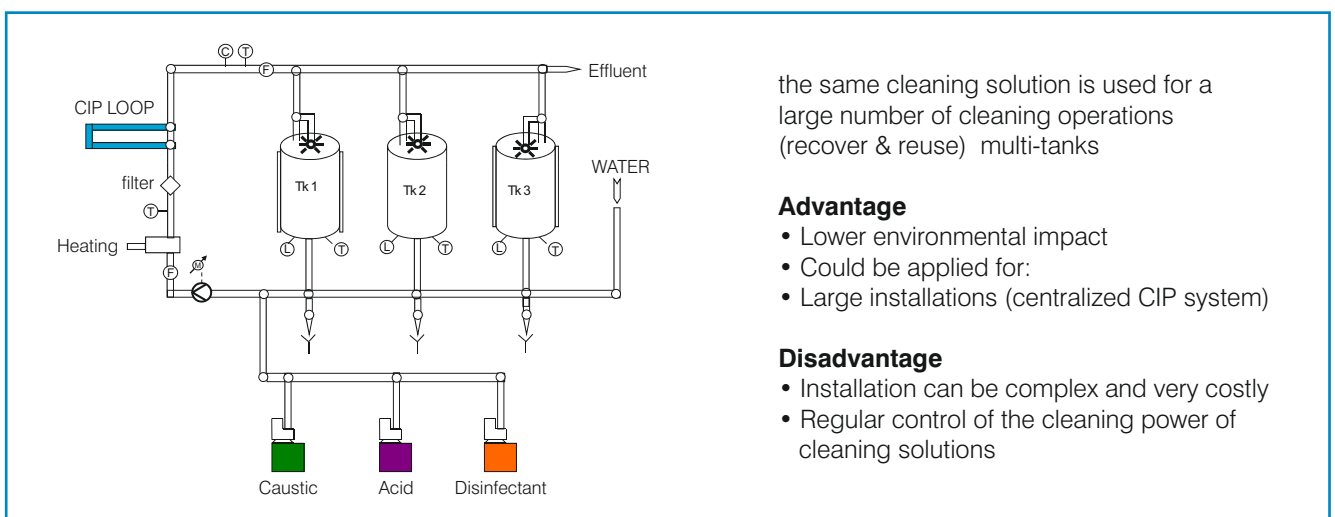
Standard CIP sequence

| | |
|-------------------|--|
| Alkaline cleaning | To eliminate organic trace elements |
| Rinsing | To push out caustic |
| Acid cleaning | To eliminate mineral deposits |
| Rinsing | To push out acid |
| Disinfection | To kill / inactivate micro-organisms |
| Rinsing | To eliminate CIP chemicals and prepare the line for production |

Single-use system



Re-use system

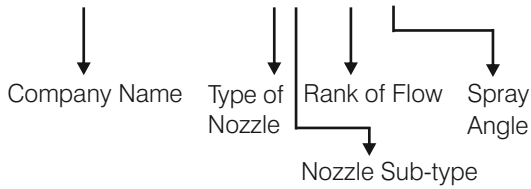


Spraytech Product Coding System

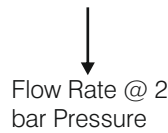
The following description will help to explain our Part Number/ Code in relation to the "SPRAYTECH" Spray Nozzle.

EXAMPLE ORDERING.

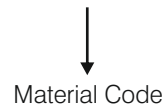
SPRAYTECH EA 1 A



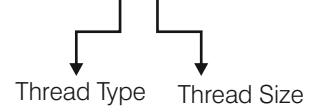
096



M2



Y B



| Codes | Spray Nozzles Type |
|-------|--|
| A | Air Atomizing /Fine Atomizing Spray Nozzle |
| B | Hollow Cone Spray Nozzle |
| C | Flat Spray Nozzle |
| D | Full Cone Spray Nozzle |
| E | Tank Washing Spray Nozzle |
| F | Steel Mill Spray Nozzles |
| G | General Engineering & Accessories |
| H | Special Project |

| Codes | Thread Size |
|-------|-------------|
| A | 1/8" |
| B | 1/4" |
| C | 3/8" |
| D | 1/2" |
| E | 3/4" |
| F | 1" |
| G | 1 1/4" |
| H | 1 1/2" |
| K | 2" |
| L | 2 1/2" |
| M | 3" |
| N | 3 1/2" |
| O | 4" |

Nozzle Sub-type (see table overleaf)

| Spray Angle Code | Spray Angle | Coverage Type |
|------------------|-------------|---------------|
| A | 180° | |
| B | 180° | |
| C | 270° | |
| D | 270° | |
| E | 360° | |

Note : special size on request
























| Code | Material |
|------|--|
| M0 | M.S. |
| M1 | SS303/SS304/ M1L = SS304L |
| M2 | SS316/ M 2L = SS316L |
| M3 | Brass |
| M4 | SS410 |
| M4-3 | SS310 |
| M5 | Cast Iron |
| M6 | Aluminum |
| M7 | Hastelloy C/B /2000 |
| M8 | Titanium |
| M9 | Monel |
| P1 | PVC(Polyvinylchloride) |
| P2 | PP (Polypropylene) |
| P3 | Teflon®/ PTFE (Polyterafluoroethylene) |
| P4 | Nylon(Polyamide) |
| P5 | Delrin®/ POM (Polyacetate) |
| P6 | PVDF(Polyvinylidenefloride) |
| P7 | Polyethylene |

Note : Special material on request

| Codes | Thread Type |
|-------|-------------|
| X | BSPP |
| Y | BSPT |
| Z | NPT |

Note : special Connection on request

Self-rotating / Stationery Tank Cleaning Nozzles

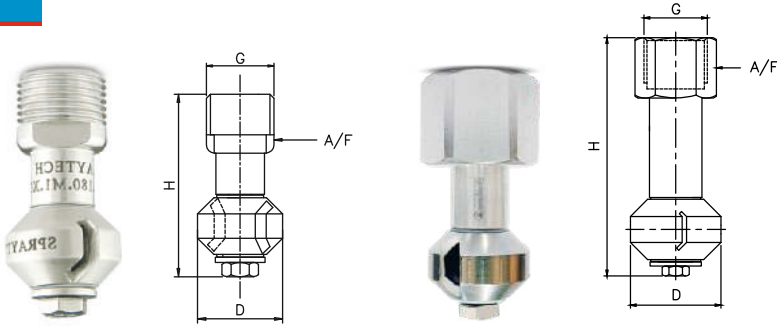
| Nozzle Type | Series | Spray Angle | Flow rate LPM @ 2 bar | End Connection | ATEX Certified | Specification |
|---|-----------|---|--------------------------|--|---|---|
|  | EA | 180° ↓ 270° ↓ 360° | 10-40 | 1/4" 3/8" 1/2" Tri-Clover End |  | Features: Compact design suitable for Cleaning small vessel/tanks Cleaning Diameter: Upto 1.5 M Type: Self - rotating. MOC: SS304, SS316, TEFLON |
|  | EB | 180° ↓ 270° ↓ | 18-38 | 1/2" Tri-Clover End |  | Features: Compact design suitable for Cleaning small vessel/tanks Cleaning Diameter: Upto 1.5 M Type: Self - rotating. MOC: SS304, SS316 |
|  | EC | 270° ↑↓ 360° | 32-250 | 1/2" 3/4" 1", 1 1/2", 2" Pin connection Tri-Clover End |  | Features: Jet type spray pattern, Best suitable For Glass lined reactors Cleaning Diameter: Upto 2.5 M Type: Self - rotating. MOC: SS304, SS316, TEFLON |
|  | ED | 270° ↑↓ 360° | 32-160 | 3/4" Pin connection Tri-Clover End |  | Features: Flat spray tips for high impact cleaning, Cleaning Diameter: Upto 2.5 M Type: Self - rotating. MOC: SS304, SS316 |
|  | EE | 180° ↑↓ 270° ↑↓ 360° | 140-1100 | 1" 1 1/2" 2" 3" Tri-Clover End |  | Features: Best suitable for Large vessels, High impact cleaning with maximum reach Cleaning Diameter: Upto 4 M Type: Self - rotating. MOC: SS304, SS316 |
|  | EF | 180° ↑↓ 360° | 40-140 | 3/4" 1" Tri-Clover End |  | Features: Unique rotating disc design. Best suitable for FBD, FB, FBC Cleaning Diameter: Upto 2 M Type: Self - rotating. MOC: SS304, SS316 |
|  | EG | 270° ↑↓ 360° | 15-200 | 3/8" 1/2" 3/4" 1" 1 1/4" Pin connection Tri-Clover End |  | Features: Double sided bearing for effortless rotation Best suitable for SS reactors, Pharmaceutical Vessels Cleaning Diameter: Upto 2.5 M Type: Self - rotating. MOC: SS304, SS316 |
|  | EH | 180° ↓ 270° ↓ | 18-100 | 3/8" 1/2" Tri-Clover End Pin connection |  | Features: Uni body design Multiple orifice for high impact jet spray, Cleaning Diameter: Upto 1.5 M Type: Stationary MOC: SS304, SS316, TEFLON |
|  | EI | 180° ↓ 270° ↓ 360° | 100-500 | 3/4" to 2" Pin connection Tri-Clover End |  | Features: Uni body design, Multiple jet spray with high flow Cleaning Diameter: Upto 2.5 M Type: Stationary MOC: SS304, SS316 |
|  | EJ | 180° ↑↓ 270° ↑↓ 360° | 15-100 | 3/8" 1/2" Tri-Clover End Pin connection |  | Features: Uni body compact design, Multiple jet spray for 360° cleaning Cleaning Diameter: Upto 1.5 M Type: Stationary MOC: SS304, SS316, TEFLON |
|  | EK |  270° | 20-40 | Tri-Clover End |  | Features: Unique retractable type pop up nozzle Best suitable for isolators Cleaning Diameter: Upto 1 M Type: Self - rotating, Retractable MOC: SS304, SS316 |

* Note: All Connections are available in BSP, BSPT, NPT.

* ↑:Upward Spray ↓:Downward spray.

EA Self-Rotating Spray Nozzles Stainless Steel & Plastic Versions

EA



EA series nozzles are very compact and designed for cleaning process in small bore or small size of containers. The rotary motion allows it to clean the vessels effectively. It is available in all grade of stainless steel material and also available in plastics like PTFE along with several spray angles.

| Coverage Type | Spray Angle |
|---------------|-------------|
| B | 180° |
| D | 270° |
| E | 360° |

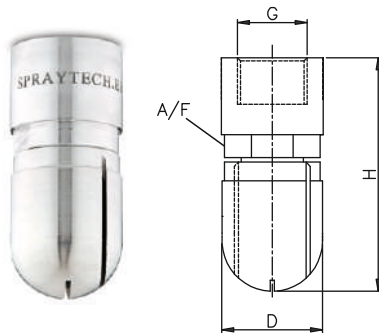
| MODEL NO. | SPRAY ANGLE | CONNECTION | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | CONNECTION | G/A DIMENSION. MM | | | | | |
|-----------|-------------|------------|------|------|--|-------|-------|-------|-------|------------------------------------|-------------------|------|------|--------|------|-----|
| | | 1/4" | 3/8" | 1/2" | PRESSURE [BAR] | | | | | | MALE | | | FEMALE | | |
| | | | | | 1.5 | 2 | 3 | 5 | 7 | | H | D | A/F | H | D | A/F |
| EA2.100 | B/D/E | ● | | | 8.66 | 10.00 | 12.25 | 15.81 | 18.71 | 1/4" | 45 | 16 | 12.8 | 45 | 16 | 16 |
| EA2.120 | B/D/E | ● | ● | | 10.39 | 12.00 | 14.70 | 18.97 | 22.45 | Weight (Metals) = XX gms. Approx | | | | | | |
| EA2.150 | B/D/E | | ● | | 12.99 | 15.00 | 18.37 | 23.72 | 28.06 | 3/8" | 45 | 22.2 | 12.8 | 51 | 22.2 | 22 |
| EA2.180 | B/D/E | | ● | | 15.59 | 18.00 | 22.05 | 28.46 | 33.67 | Weight (Metals) = 30.0 gms. Approx | | | | | | |
| EA2.220 | B/D/E | | ● | ● | 19.05 | 22.00 | 26.94 | 34.79 | 41.16 | 1/2" | 79 | 30 | 22 | 79 | 30 | 24 |
| EA2.300 | B/D/E | | | ● | 25.98 | 30.00 | 36.74 | 47.43 | 56.12 | Weight (Metals) = XX gms. Approx | | | | | | |
| EA2.350 | B/D/E | | | ● | 30.31 | 35.00 | 42.87 | 55.34 | 65.48 | | | | | | | |
| EA2.400 | B/D/E | | | ● | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | | | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

Female Connection On Request

EB Self-Rotating Spray Nozzles Stainless Steel Versions

EB



EB series self rotating nozzles are designed as a small dimensions and opening and perform inside cleaning which is required. Typically used for cleaning like kegs, small container where the requirement is for cleaning. Diameter of nozzle is (25mm) These nozzles are available in all grade of stainless steel.

Male Connection On Request

| Coverage Type | Spray Angle |
|---------------|-------------|
| B | 180° |
| D | 270° |

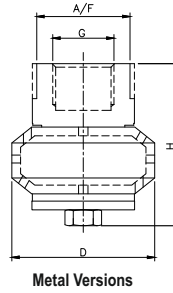
| MODEL NO. | SPRAY ANGLE | CONNECTION | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|------------|----------------|-------|--|-------|-------|----------------------------------|----|-------------------|-----|--|--|
| | | 1/2" | PRESSURE [BAR] | | | | | | | | | | |
| | | | 1.5 | 2 | 3 | 5 | 7 | CONN. | H | D | A/F | | |
| EB2.180 | B/D | ● | 15.59 | 18.00 | 22.05 | 28.46 | 33.67 | 1/2" | 55 | 24.2 | 21 | | |
| EB2.220 | B/D | ● | 19.05 | 22.00 | 26.94 | 34.79 | 41.16 | Weight (Metals) = XX gms. Approx | | | | | |
| EB2.280 | B/D | ● | 24.25 | 28.00 | 34.29 | 44.27 | 52.38 | 1/2" | 55 | 24.2 | 21 | | |
| EB2.320 | B/D | ● | 27.71 | 32.00 | 39.19 | 50.60 | 59.87 | Weight (Metals) = XX gms. Approx | | | | | |
| EB2.380 | B/D | ● | 32.91 | 38.00 | 46.54 | 60.08 | 71.09 | | | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

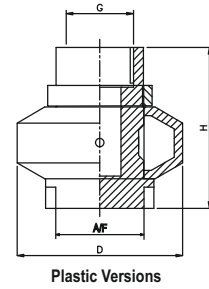
EC Self-Rotating Spray Nozzles Stainless Steel & Plastic Versions



Specially designed self rotating nozzle, rotates because of reaction principle of spraying water jets. For rinsing small and medium sized vessels for example dairy, chemical, pharmaceutical and food industries. Material of construction- corrosion – resistance PTFE. (Range available from 1/2" to 2")



Metal Versions



Plastic Versions



Male Connection On Request

| Coverage Type | Spray Angle |
|---------------|-------------|
| | 270° |
| | 270° |
| | 360° |

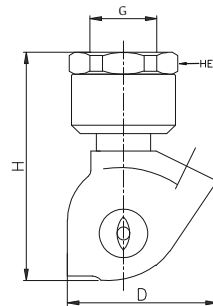
End Connection :
X – BSP,
Y - BSPT,
Z – NPT Available.

| MODEL NO. | SPRAY ANGLE | CONNECTION | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | M1/M2 | P3/P4 | | |
|-----------|-------------|------------|------|----|--------|----|--|-------|--------|--------|--------|----------------------------------|--------------|------|------|
| | | 1/2" | 3/4" | 1" | 1 1/2" | 2" | PRESSURE [BAR] | | | | | SS304/SS316 | TEFLON/NYLON | | |
| | | | | | | | 1.5 | 2 | 3 | 5 | 7 | G/A DIMENSION. MM | | | |
| | | | | | | | | | | | | CONN. | H | D | A/F |
| EC2.320 | C/D/E | ● | | | | | 27.71 | 32.00 | 39.19 | 50.60 | 59.87 | 1/2" | 60 | 50 | 28.6 |
| EC2.400 | C/D/E | ● | ● | | | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | Weight (Metals) = XX gms. Approx | | | |
| EC2.520 | C/D/E | ● | ● | ● | | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | 3/4" | 68 | 58.5 | 32 |
| EC2.720 | C/D/E | | ● | ● | | | 62.35 | 72.00 | 88.18 | 113.84 | 134.70 | Weight (Metals) = XX gms. Approx | | | |
| EC2.950 | C/D/E | | ● | ● | | | 82.27 | 95.00 | 116.35 | 150.21 | 177.73 | 1" | 76.2 | 78.5 | 42 |
| EC3.120 | C/D/E | | ● | ● | ● | | 103.92 | 120.0 | 146.97 | 189.74 | 224.50 | Weight (Metals) = XX gms. Approx | | | |
| EC3.140 | C/D/E | | ● | ● | ● | | 121.24 | 140.0 | 171.46 | 221.36 | 261.92 | 1 1/2" | 92 | 92 | 55 |
| EC3.150 | C/D/E | | | ● | ● | | 138.56 | 160.0 | 195.96 | 252.98 | 299.33 | Weight (Metals) = XX gms. Approx | | | |
| EC3.190 | C/D/E | | | | ● | ● | 164.54 | 190.0 | 232.70 | 300.42 | 355.46 | 2" | 111 | 124 | 66 |
| EC3.225 | C/D/E | | | | ● | ● | 194.54 | 225.0 | 275.57 | 355.76 | 420.94 | Weight (Metals) = XX gms. Approx | | | |
| EC3.250 | C/D/E | | | | ● | ● | 216.51 | 250.0 | 306.19 | 395.28 | 467.71 | | | | |

ED Barrel Tank Washing Spray Nozzles Stainless Steel Versions



Suited for CIP systems. No motor source is needed due to the reaction force of the cleaning liquid to rotate spray head. Low pressure for cleaning and rinsing application. For rinsing small and medium sized vessels for example dairy, chemical, pharmaceutical and food industries.



Male Connection On Request

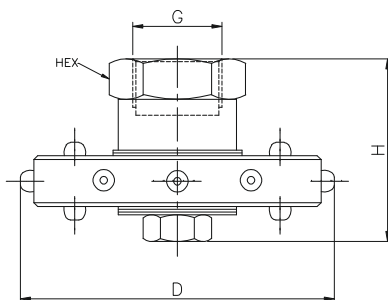
| Coverage Type | Spray Angle |
|---------------|-------------|
| | 270° |
| | 270° |
| | 360° |

End Connection :
X – BSP,
Y - BSPT,
Z – NPT Available.

| MODEL NO. | SPRAY ANGLE | CONNECTION | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | |
|-----------|-------------|------------|--|-------|--------|--------|--------|------------------------------------|-----|----|
| | | | PRESSURE [BAR] | | | | | CONN. | H | D |
| | | | 1.5 | 2 | 3 | 5 | 7 | | | |
| | | 3/4" | | | | | | | | |
| ED2.320 | C/D/E | ● | 27.71 | 32.00 | 39.19 | 50.60 | 59.87 | 3/4" | 100 | 70 |
| ED2.520 | C/D/E | ● | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | Weight (Metals) = 95.0 gms. Approx | | |
| ED2.720 | C/D/E | ● | 62.35 | 72.00 | 88.18 | 113.84 | 134.70 | | | |
| ED2.950 | C/D/E | ● | 82.27 | 95.00 | 116.35 | 150.21 | 177.73 | | | |
| ED3.120 | C/D/E | ● | 103.92 | 120.0 | 146.97 | 189.74 | 224.50 | | | |
| ED2.140 | C/D/E | ● | 121.24 | 140.0 | 171.46 | 221.36 | 261.92 | | | |
| ED3.160 | C/D/E | ● | 138.56 | 160.0 | 195.96 | 252.98 | 299.33 | | | |

EE Gyro Jet Tank Washing Spray Nozzles Stainless Steel Versions

EE



Self powered rotating tank cleaning nozzle used for cleaning large and medium size diameter tanks. Efficient cleaning action for medium and large size tanks. Recommended operating pressure 2 to 3 kg/cm² and also available coverage 180° (up and down), 270° (up and down) and 360°.

| Coverage Type | Spray Angle |
|---------------|-------------|
| A | 180° |
| B | 180° |
| C | 270° |
| D | 270° |
| E | 360° |

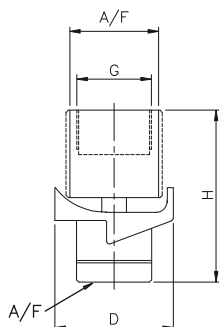
| MODEL NO. | SPRAY ANGLE | CONNECTION | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|------------|--------|----|----|--|------|---------|---------|---------|-------------------------------------|-------|-----|-----|
| | | 1" | 1 1/2" | 2" | 3" | PRESSURE [BAR] | | | | | CONN. | H | D | HEX |
| | | | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| EE3.140 | A/B/C/D/E | ● | | | | 121.24 | 140 | 171.46 | 221.36 | 261.92 | 1" | 62.5 | 117 | 41 |
| EE3.160 | A/B/C/D/E | ● | | | | 138.56 | 160 | 195.96 | 252.98 | 299.33 | Weight (Metals) = 771.0 gms. Approx | | | |
| EE3.200 | A/B/C/D/E | ● | | | | 173.21 | 200 | 244.95 | 316.23 | 374.17 | 1 1/2" | 97 | 131 | 71 |
| EE3.250 | A/B/C/D/E | ● | | | | 216.51 | 250 | 306.19 | 395.28 | 467.71 | Weight (Metals) = 1930gms. Approx | | | |
| EE3.275 | A/B/C/D/E | | ● | | | 238.16 | 275 | 336.80 | 434.81 | 514.48 | 2" | 116.5 | 131 | 100 |
| EE3.325 | A/B/C/D/E | | ● | ● | | 281.46 | 325 | 398.04 | 513.87 | 608.02 | Weight (Metals) = 3630gms. Approx | | | |
| EE3.375 | A/B/C/D/E | | ● | ● | | 324.76 | 375 | 459.28 | 592.93 | 701.56 | 3" | XX | XX | XX |
| EE3.500 | A/B/C/D/E | | | ● | | 443.01 | 500 | 612.37 | 790.57 | 935.41 | Weight (Metals) = XX gms. Approx | | | |
| EE3.625 | A/B/C/D/E | | | ● | | 541.27 | 625 | 765.47 | 988.21 | 1169.27 | | | | |
| EE3.800 | A/B/C/D/E | | | | ● | 692.82 | 800 | 979.80 | 1264.91 | 1496.66 | | | | |
| EE3.950 | A/B/C/D/E | | | | ● | 822.72 | 950 | 1163.51 | 1502.08 | 1777.29 | | | | |
| EE4.1100 | A/B/C/D/E | | | | ● | 952.63 | 1100 | 1347.22 | 1739.25 | 2057.91 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

Male Connection On Request

EF Turbo Cleaning Spray Nozzles Stainless Steel Versions

EF



The turbo nozzles are generally used for washing of industrial storage tanks small barrels and used in the dairy, chemical, pharmaceutical, food industries and process industries. The rotating Disc dispense an instant powerful dense spray to all the interior surface of the vessels. Spray coverage 180° up and down 360°.

| Coverage Type | Spray Angle |
|---------------|-------------|
| A | 180° |
| B | 180° |
| E | 360° |

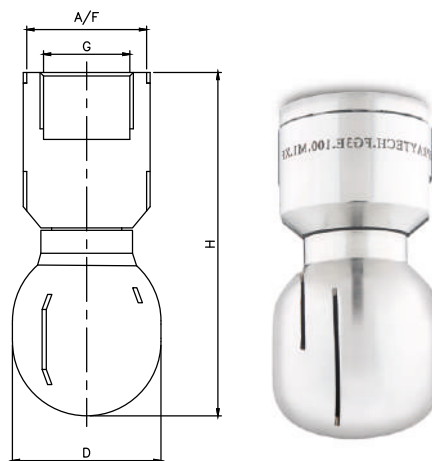
| MODEL NO. | SPRAY ANGLE | CONNECTION | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|------------|----|--|-------|--------|--------|--------|-----------------------------------|----|----|-----|
| | | 3/4" | 1" | PRESSURE [BAR] | | | | | CONN. | H | D | A/F |
| | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| EF2.400 | A/B/E | ● | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | 3/4" | 74 | 51 | 38 |
| EF2.520 | A/B/E | ● | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | Weight (Metals) = 460 gms. Approx | | | |
| EF2.720 | A/B/E | ● | ● | 62.35 | 72.00 | 88.18 | 113.84 | 134.70 | 1" | 74 | 51 | 38 |
| EF2.950 | A/B/E | ● | ● | 82.27 | 95.00 | 116.35 | 150.21 | 177.73 | Weight (Metals) = 460 gms. Approx | | | |
| EF3.120 | A/B/E | | ● | 103.92 | 120.0 | 146.97 | 189.74 | 224.50 | | | | |
| EF3.140 | A/B/E | | ● | 121.24 | 140.0 | 171.46 | 221.36 | 261.92 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

Male Connection On Request



EG Series Slotted spray ball series are available with different connection design that it is a female thread and clip-on connection as standard. Weld-on or tri-clamp connection on request. The simple design high quality construction and having a good efficiency and applicable for general purpose application and it is available in coverage of 270° up and down and 360°.

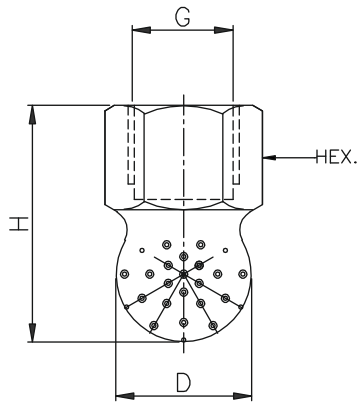


| Coverage Type | Spray Angle |
|---------------|-------------|
| | 270° |
| | 270° |
| | 360° |

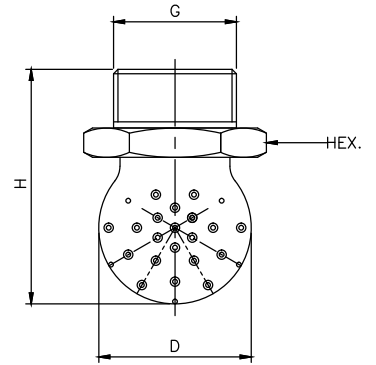
| MODEL NO. | SPRAY ANGLE | CONNECTION | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | |
|-----------|-------------|------------|------|------|------|------|----|--------|----------------|--|--------|--------|--------|----------------------------------|-------------------|------|--|
| | | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | PRESSURE [BAR] | | | | | CONN. | H | D | |
| | | | | | | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| EG2.100 | C/D/E | ● | | | | | | | 8.66 | 10.00 | 12.25 | 15.81 | 18.71 | 1/8" | 37 | 17 | |
| EG2.150 | C/D/E | ● | ● | ● | | | | | 12.99 | 15.00 | 18.37 | 23.72 | 28.06 | 1/4" | 48 | 21.5 | |
| EG2.200 | C/D/E | ● | ● | ● | | | | | 17.32 | 20.00 | 24.49 | 31.62 | 37.42 | Weight (Metals) = XX gms. Approx | | | |
| EG2.250 | C/D/E | | | ● | ● | | | | 21.65 | 25.00 | 30.62 | 39.53 | 46.77 | 3/8" | 60 | 27 | |
| EG2.300 | C/D/E | | | ● | ● | | | | 25.98 | 30.00 | 36.74 | 47.43 | 56.12 | Weight (Metals) = XX gms. Approx | | | |
| EG2.350 | C/D/E | | | ● | ● | | | | 30.31 | 35.00 | 42.87 | 55.34 | 65.48 | 1/2" | 77 | 33 | |
| EG2.400 | C/D/E | | | ● | ● | ● | | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | Weight (Metals) = XX gms. Approx | | | |
| EG2.520 | C/D/E | | | | ● | ● | | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | 3/4" | 98 | 41 | |
| EG2.600 | C/D/E | | | | | ● | | | 51.96 | 60.00 | 73.48 | 94.87 | 112.25 | Weight (Metals) = XX gms. Approx | | | |
| EG2.700 | C/D/E | | | | | ● | | | 60.62 | 70.00 | 85.73 | 110.68 | 130.96 | 1" | 104 | 47.5 | |
| EG2.800 | C/D/E | | | | | ● | ● | | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 | Weight (Metals) = XX gms. Approx | | | |
| EG2.900 | C/D/E | | | | | ● | ● | | 77.94 | 90.00 | 110.23 | 142.30 | 168.37 | 1 1/4" | 119 | 58 | |
| EG3.100 | C/D/E | | | | | | ● | ● | 86.60 | 100.0 | 122.11 | 158.11 | 187.08 | Weight (Metals) = XX gms. Approx | | | |
| EG3.110 | C/D/E | | | | | | ● | ● | 95.26 | 110.0 | 134.72 | 173.93 | 205.79 | | | | |
| EG3.120 | C/D/E | | | | | | ● | ● | 103.92 | 120.0 | 149.97 | 189.74 | 224.50 | | | | |
| EG3.130 | C/D/E | | | | | | ● | ● | 112.98 | 130.0 | 159.22 | 205.55 | 243.21 | | | | |
| EG3.140 | C/D/E | | | | | | ● | ● | 121.24 | 140.0 | 171.46 | 221.36 | 261.92 | | | | |
| EG3.150 | C/D/E | | | | | | ● | ● | 129.90 | 150.0 | 183.71 | 237.17 | 280.62 | | | | |
| EG3.160 | C/D/E | | | | | | | ● | 138.56 | 160.0 | 195.96 | 252.98 | 299.33 | | | | |
| EG3.170 | C/D/E | | | | | | | ● | 147.22 | 170.0 | 208.21 | 268.79 | 318.04 | | | | |
| EG3.180 | C/D/E | | | | | | | ● | 155.88 | 180.0 | 220.45 | 284.60 | 336.75 | | | | |
| EG3.190 | C/D/E | | | | | | | ● | 164.54 | 190.0 | 232.70 | 300.42 | 355.46 | | | | |
| EG3.200 | C/D/E | | | | | | | ● | 173.21 | 200.0 | 244.95 | 316.23 | 374.17 | | | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

Male Connection On Request



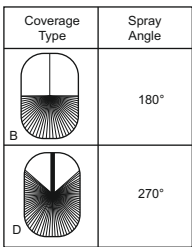
Female Connection



Male Connection

EH Series Static Spray Ball has very compact design that provides straight jets for high impact rinsing of small drums or container up to \varnothing 1.5m. Also it can be used with saturated steam. Spray coverage is available in 180° & 270°

SPRAY ANGLE



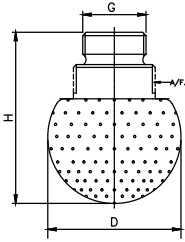
| MODEL NO. | SPRAY ANGLE | CONNECTION | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | |
|-----------|-------------|------------|------|------|--|----------------|-------|--------|--------|--------|
| | | 1/4" | 3/8" | 1/2" | FLOW CAPACITY (US GPM) | PRESSURE [BAR] | | | | |
| | | | | | | 40° psi | 1.5 | 2 | 3 | 5 |
| EH1.800 | B/D | ● | | | 2.45 | 6.93 | 8.00 | 9.80 | 12.65 | 14.97 |
| EH2.100 | B/D | ● | | | 3.09 | 8.66 | 10.00 | 12.25 | 15.81 | 18.71 |
| EH2.120 | B/D | ● | | | 3.71 | 10.39 | 12.00 | 14.70 | 18.97 | 22.45 |
| EH2.140 | B/D | ● | | | 4.33 | 12.12 | 14.00 | 17.15 | 22.14 | 26.19 |
| EH2.160 | B/D | ● | | | 4.90 | 13.86 | 16.00 | 19.60 | 25.30 | 29.93 |
| EH2.180 | B/D | ● | ● | ● | 5.50 | 15.59 | 18.00 | 22.05 | 28.46 | 33.67 |
| EH2.220 | B/D | | ● | ● | 6.32 | 19.05 | 22.00 | 26.94 | 34.79 | 41.16 |
| EH2.280 | B/D | | ● | ● | 8.58 | 24.25 | 28.00 | 34.29 | 44.27 | 52.38 |
| EH2.320 | B/D | | ● | ● | 9.81 | 27.71 | 32.00 | 39.19 | 50.60 | 59.87 |
| EH2.400 | B/D | | ● | ● | 12.38 | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 |
| EH2.520 | B/D | | ● | ● | 15.94 | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 |
| EH2.600 | B/D | | | ● | 18.58 | 51.96 | 60.00 | 73.48 | 94.87 | 112.25 |
| EH2.700 | B/D | | | ● | 21.68 | 60.62 | 70.00 | 85.73 | 110.68 | 130.96 |
| EH2.800 | B/D | | | ● | 24.52 | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 |
| EH2.900 | B/D | | | ● | 27.87 | 77.94 | 90.00 | 110.23 | 142.30 | 168.37 |
| EH3.100 | B/D | | | ● | 30.65 | 86.60 | 100.0 | 122.47 | 158.11 | 187.08 |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

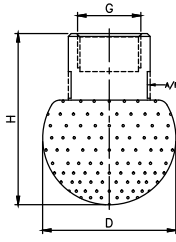
| CONNECTION | 1/4" | | | 3/8" | | | 1/2" | | |
|------------|----------------------------------|----|----|----------------------------------|------|----|----------------------------------|----|----|
| DIMENSION | H | H1 | D | H | H1 | D | H | H1 | D |
| MALE | 32 | 15 | 16 | 35 | 16.5 | 17 | 40 | 26 | 27 |
| | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | |
| FEMALE | 32 | 15 | 16 | 35 | 21.5 | 22 | 45.3 | 26 | 27 |
| | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | |

EI Series Static Spray Ball Stainless Steel & Plastic Versions

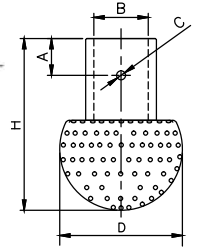
EI



Male Connection







Female Connection



Pin Type Connection

EI Series Static Spray Ball is a newly designed stationary spray ball with multiple orifices. Its unique design helps to cover complete 360 degree with impact type jet sprays. It is available in many sizes and flow rates. Impact type spray helps to remove sticky stains. Also it can be used with saturated steam.

| Coverage Type | Spray Angle |
|--|-------------|
|  | 180° |
|  | 180° |
|  | 270° |
|  | 360° |

Design features

- Jet type cleaning
- Impact type cleaning
- Can be used for steam applications
- Available in Threaded, Pin type and Tri Clover type end connection
- Available in SS304, SS316, SS316L, Hastelloy C-276, PTFE

Cleaning Diameter up to 2.0 meters

End Connection :

- X – BSP,
- Y – BSPT,
- Z – NPT Available.

| MODEL NO. | SPRAY ANGLE | CONNECTION | | | | | | | | | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | |
|-----------|-------------|------------|------|------|------|------|----|--------|--------|----|----------------|--|--------|--------|--------|--------|--------|
| | | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | PRESSURE [BAR] | | | | | | |
| | | | | | | | | | | | 1.5 | 2 | 3 | 5 | 7 | | |
| EI1.650 | A/B/D/E | ● | | | | | | | | | | | 5.63 | 6.50 | 7.96 | 10.28 | 28.06 |
| EI1.800 | A/B/D/E | ● | | | | | | | | | | | 6.93 | 8.00 | 9.80 | 12.65 | 14.97 |
| EI2.100 | A/B/D/E | ● | | | | | | | | | | | 8.66 | 10.00 | 12.25 | 15.81 | 18.71 |
| EI2.125 | A/B/D/E | ● | | | | | | | | | | | 10.39 | 12.50 | 14.70 | 18.97 | 22.45 |
| EI2.140 | A/B/D/E | ● | | | | | | | | | | | 12.12 | 14.00 | 17.15 | 22.14 | 26.19 |
| EI2.160 | A/B/D/E | ● | | | | | | | | | | | 13.86 | 16.00 | 19.60 | 25.30 | 29.93 |
| EI2.180 | A/B/D/E | ● | ● | ● | ● | | | | | | | | 15.59 | 18.00 | 22.05 | 28.46 | 33.67 |
| EI2.220 | A/B/D/E | ● | ● | ● | ● | | | | | | | | 19.05 | 22.00 | 26.94 | 34.79 | 41.16 |
| EI2.280 | A/B/D/E | | ● | ● | ● | | | | | | | | 24.25 | 28.00 | 34.29 | 44.27 | 52.38 |
| EI2.320 | A/B/D/E | | ● | ● | ● | | | | | | | | 27.71 | 32.00 | 39.19 | 50.60 | 59.87 |
| EI2.400 | A/B/D/E | | ● | ● | ● | | | | | | | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 |
| EI2.520 | A/B/D/E | | ● | ● | ● | | | | | | | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 |
| EI2.600 | A/B/D/E | | | ● | ● | | | | | | | | 51.96 | 60.00 | 73.48 | 94.87 | 112.25 |
| EI2.700 | A/B/D/E | | | | ● | | | | | | | | 60.62 | 70.00 | 85.73 | 110.68 | 130.96 |
| EI2.800 | A/B/D/E | | | | ● | ● | | | | | | | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 |
| EI2.900 | A/B/D/E | | | | ● | ● | | | | | | | 77.94 | 90.00 | 110.23 | 142.30 | 168.37 |
| EI3.100 | A/B/D/E | | | | ● | ● | ● | | | | | | 86.60 | 100.0 | 122.47 | 158.11 | 187.08 |
| EI3.120 | A/B/D/E | | | | | ● | ● | | | | | | 103.92 | 120.00 | 149.74 | 189.74 | 224.50 |
| EI3.140 | A/B/D/E | | | | | ● | ● | | | | | | 121.24 | 140.00 | 171.46 | 221.36 | 261.92 |
| EI3.160 | A/B/D/E | | | | | | ● | ● | | | | | 138.56 | 160.00 | 195.96 | 252.98 | 299.33 |
| EI3.190 | A/B/D/E | | | | | | | ● | ● | | | | 164.54 | 190.00 | 232.70 | 300.42 | 355.46 |
| EI3.225 | A/B/D/E | | | | | | | | ● | ● | ● | | 194.86 | 225.00 | 275.57 | 355.76 | 420.94 |
| EI3.250 | A/B/D/E | | | | | | | | | ● | ● | ● | 216.51 | 250.00 | 306.19 | 395.28 | 487.71 |
| EI3.275 | A/B/D/E | | | | | | | | | | ● | ● | 238.46 | 275.00 | 336.19 | 434.81 | 514.48 |
| EI3.300 | A/B/D/E | | | | | | | | | | | ● | 259.81 | 300.00 | 367.42 | 474.34 | 561.25 |
| EI3.325 | A/B/D/E | | | | | | | | | | | ● | 281.46 | 325.00 | 398.04 | 513.87 | 608.02 |
| EI3.350 | A/B/D/E | | | | | | | | | | | ● | 303.11 | 350.00 | 428.66 | 553.40 | 654.79 |
| EI3.375 | A/B/D/E | | | | | | | | | | | ● | 324.76 | 375.00 | 459.28 | 592.93 | 701.56 |
| EI3.400 | A/B/D/E | | | | | | | | | | | ● | 346.41 | 400.00 | 489.90 | 632.46 | 748.33 |
| EI3.425 | A/B/D/E | | | | | | | | | | | ● | 368.06 | 425.00 | 520.52 | 671.98 | 795.10 |
| EI3.450 | A/B/D/E | | | | | | | | | | | ● | 389.71 | 450.00 | 551.14 | 711.51 | 841.87 |

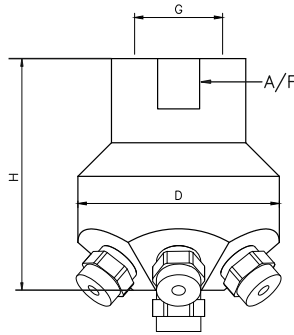
| CONNECTION | 1/8" | | | 1/4" | | | 3/8" | | | 1/2" | | | 3/4" | | | 1" | | | 1 1/4" | | | 1 1/2" | | | 2" | | |
|------------|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|----------------------------------|----|-----|-----|-----|-----|
| DIMENSION | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F | H | D | A/F |
| MALE | 30 | 20 | 12 | 33.5 | 22 | 12 | 42 | 30 | 15 | 60 | 40 | 19 | 78 | 55 | 32 | 90 | 70 | 40 | 105 | 80 | 46 | 115 | 90 | 55 | 128 | 100 | 62 |
| FEMALE | 30 | 20 | 12 | 33.5 | 28 | 16 | 50 | 40 | 22 | 55 | 48 | 27 | 78 | 55 | 32 | 90 | 70 | 40 | 105 | 80 | 46 | 115 | 90 | 55 | 128 | 100 | 62 |
| | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | Weight (Metals) = XX gms. Approx | | | | | |




| CONNECTION | DN 8 | | | | DN 10 | | | | DN 15 | | | | DN 20 | | | | DN 25 | | | | DN 32 | | | | DN 40 | | | | DN 50 | | | | | | | | | | | |
|------------|------|----|-----|-----|-------|------|----|------|-------|---|----|----|-------|-----|---|----|-------|------|-----|---|-------|----|------|-----|-------|-----|----|-----|-------|----|-----|----|---|-----|----|-----|-----|------|-----|----|
| DIMENSION | H | D | A/F | C | A | H | D | A/F | C | A | H | D | A/F | C | A | H | D | A/F | C | A | H | D | A/F | C | A | H | D | A/F | C | | | | | | | | | | | |
| PIN TYPE | 32.5 | 20 | 8.2 | 2.2 | 9 | 37.5 | 24 | 12.2 | 2.2 | 9 | 42 | 30 | 18.2 | 2.2 | 9 | 53 | 40 | 22.2 | 2.5 | 9 | 90 | 70 | 28.2 | 2.8 | 18 | 105 | 80 | - | 2.8 | 18 | 115 | 90 | - | 2.8 | 18 | 128 | 100 | 52.3 | 3.3 | 25 |

EJ Fixed Tank Washing Spray Nozzles Stainless Steel & Plastic Versions



Suitable for washing of thick kind of materials. Having multiple spray tips on peripheri which can provides upto 360° of spray coverage. Rigid construction. M.O.C SS316, SS304.



| Coverage Type | Spray Angle |
|---|-------------|
|  | 180° |
|  | 180° |
|  | 360° |

| MODEL NO. | SPRAY ANGLE | CONNECTION | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | | G/A DIMENSION. MM | |
|-----------|-------------|------------|--|----------------|---------|--------|--------|--------|---------------------------------|-----|
| | | | FLOW CAPACITY (US GPM) | PRESSURE [BAR] | | | | | | |
| | | | | 1 1/2" | 40° psi | 1.5 | 2 | 3 | 5 | 7 |
| EJ3.100 | A/B/E | ● | 30.65 | 86.60 | 100.0 | 122.47 | 158.11 | 187.08 | 121 | 127 |
| EJ3.140 | A/B/E | ● | 42.91 | 121.24 | 140.0 | 171.46 | 221.36 | 261.92 | Weight (Metals) = 1.7kg. Approx | |
| EJ3.190 | A/B/E | ● | 58.24 | 164.54 | 190.0 | 232.70 | 300.42 | 355.46 | | |

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

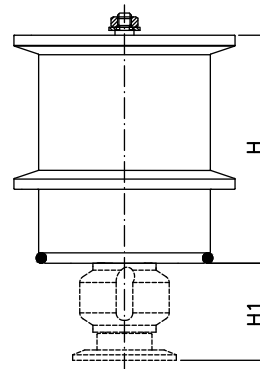
Male Connection On Request

EK Series Self Rotating Pop-Out Nozzle




EK series Self-retractable (Pop out) nozzles are best suitable for applications where the complete flush position is required. It is generally used the areas where the nozzle can get blocked or when the environment is contaminated or explosive.

EK series Pop out nozzle retracts its spray ball when pressure is applied and shut itself to complete flush position when operation is stopped.



2" TC (DIN32676-A DN50)

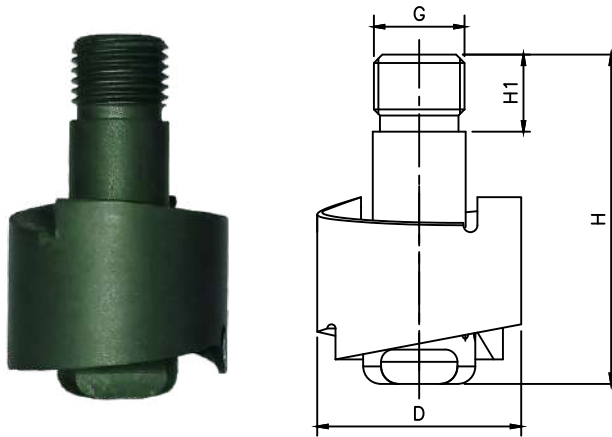
| Coverage Type | Spray Angle |
|---|-------------|
|  | 270° |

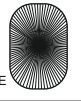
| MODEL NO. | SPRAY ANGLE | CONNECTION | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DAIMENTION | |
|-----------|-------------|------------|--|----------------|-------|-------|-------|-----------------------------|----|
| | | | Tri-Clamp | PRESSURE [BAR] | | | | | |
| | | | | 1.5 | 2 | 3 | 5 | 7 | H |
| EK2.200 | D | 2" TC | 17.32 | 20.0 | 24.49 | 31.62 | 37.42 | 66 | 28 |
| EK2.250 | D | 2" TC | 21.65 | 25.0 | 30.62 | 39.53 | 46.77 | Weight (Metals) = XX Approx | |
| EK2.300 | D | 2" TC | 25.98 | 30.0 | 36.74 | 47.43 | 56.12 | | |
| EK2.350 | D | 2" TC | 30.31 | 35.0 | 42.87 | 55.34 | 65.48 | | |
| EK2.400 | D | 2" TC | 34.64 | 40.0 | 48.99 | 63.25 | 74.83 | | |

* Note: Connections are available in threaded and TC end.

EN Series Free Rotating Cleaners

EN



| Coverage Type | Spray Angle |
|---|-------------|
|  | 360° |

Spraytech EN Series free rotating cleaners The unique ball bearing free design with only one rotating disc instantly generates high speed spherical droplets. Maximum surface coverage is attained by fast travelling sphere of droplets to cover full inside surface of the vessels. The droplets also reach inlet pipes and pipe entry points, where often contamination takes place.

Applications : These Tank washer are compact in design and effective in performance and are suitable for cleaning small/ medium process vessels, storage tanks etc. Where it is required to give longer chemical dwell times for improved cleaning result.

ENA



ENA - PTFE / CPTFE SHAFT & TROLL BALL

| MODEL NO. | SPRAY ANGLE | END CONN (G) | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|--------------|------|--|--------|--------|--------|--------|---------------------------------|----|----|----|
| | | 1/4" | 3/4" | PRESSURE [BAR] | | | | | CONN | H | H1 | D |
| | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| ENA2E.400 | E | ● | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | 1/4" | 47 | 11 | 29 |
| ENA2E.520 | E | ● | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | 3/4" | 65 | 15 | 39 |
| ENA2E.800 | E | | ● | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 | Weight (Metals) = XX kg. Approx | | | |
| ENA3E.100 | E | | ● | 86.60 | 100.00 | 122.47 | 158.11 | 187.67 | | | | |

ENB



ENB - SS16L SHAFT & PTFE TROLL BALL

| MODEL NO. | SPRAY ANGLE | END CONN (G) | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|--------------|------|--|--------|--------|--------|--------|---------------------------------|----|----|----|
| | | 1/4" | 3/4" | PRESSURE [BAR] | | | | | CONN | H | H1 | D |
| | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| ENB2E.400 | E | ● | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | 1/4" | 47 | 11 | 29 |
| ENB2E.520 | E | ● | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | 3/4" | 65 | 15 | 39 |
| ENB2E.800 | E | | ● | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 | Weight (Metals) = XX kg. Approx | | | |
| ENB3E.100 | E | | ● | 86.60 | 100.00 | 122.47 | 158.11 | 187.67 | | | | |

ENC



ENC - SS16L SHAFT & SS316L TROLL BALL

| MODEL NO. | SPRAY ANGLE | END CONN (G) | | FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE | | | | | G/A DIMENSION. MM | | | |
|-----------|-------------|--------------|------|--|--------|--------|--------|--------|---------------------------------|----|----|----|
| | | 1/4" | 3/4" | PRESSURE [BAR] | | | | | CONN | H | H1 | D |
| | | | | 1.5 | 2 | 3 | 5 | 7 | | | | |
| ENC2E.400 | E | ● | | 34.64 | 40.00 | 48.99 | 63.25 | 74.83 | 1/4" | 47 | 11 | 29 |
| ENC2E.520 | E | ● | | 45.03 | 52.00 | 63.69 | 82.22 | 97.28 | 3/4" | 65 | 15 | 39 |
| ENC2E.800 | E | | ● | 69.28 | 80.00 | 97.98 | 126.49 | 149.67 | Weight (Metals) = XX kg. Approx | | | |
| ENC3E.100 | E | | ● | 86.60 | 100.00 | 122.47 | 158.11 | 187.67 | | | | |

Air Atomizing Spray Nozzles



APPLICATION

- Tablet Coating
- Pallet Coating
- Atomization of viscous liquids
- Agglomeration
- Granulation
- Humidification of air

Air Atomizing Design, Features & Introduction

Air atomizing spray nozzles produces fine mist spray with the help of compressed air, liquid breaks into small droplets as air provides shearing effects on liquid droplets. Various spray patterns are available, they are categorized into Flat and Round spray patterns. The droplet size can be adjusted by flow adjustment of compressed air. Air atomizing nozzles are divided into two types Internal and External mix air atomizing nozzles. Those are available in various metals.

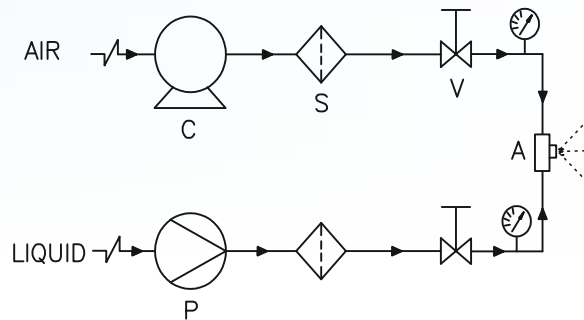
An air atomizing spray nozzle can work on three principles as below:

- 1) Pressure Principle
- 2) SIPHON Principle
- 3) Gravity Head Principle



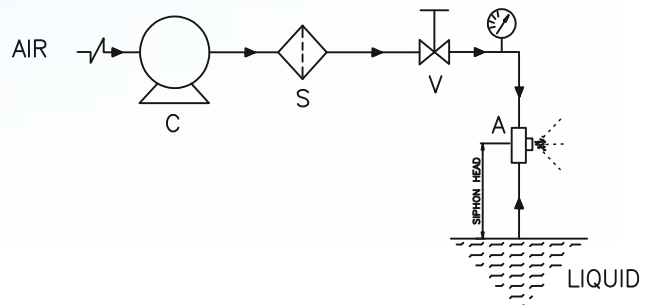
1) Pressure Principle

Liquid is supplied in pressurised form with the help of pump or pressurised container, separate compressed air is needed



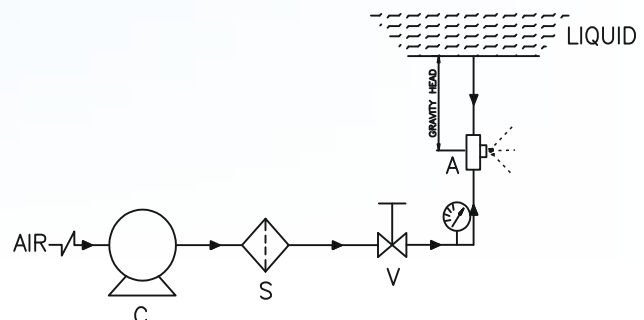
2) Siphon Principle

Siphon principle is utilised to lift liquid from certain height from spray nozzle, suitable where pump or pressurised container of liquid is not available.



3) Gravity head Principle

Gravitational head of liquid is utilised to feed liquid to the spray nozzle, suitable where pump or pressurized container of liquid is not available.



Choice of spray Nozzles

Each spray set-ups consists of an air cap and liquid cap which provide a specific spray pattern capacity and coverage performance

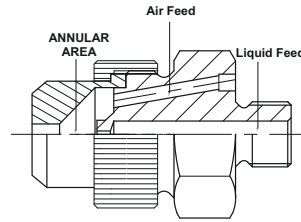
Inside Body Mixing

Liquid and air streams meet within nozzle and are mixed together and expelled through the same orifice. This internal mixing means the streams are not independent; a change in air flow will affect the liquid flow. This makes precise metering of the liquid more difficult than with an External Mix Set-up. Internal Mix set-ups are able to produce the finest atomization of any of the XA set-ups, but they are generally not suitable for use with liquids which have a viscosity that is above 200 centipoise.

Out Side Body Mixing

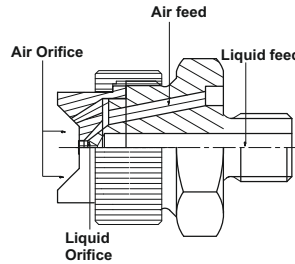
The air and liquid streams exit the nozzle independently and are combined and mixed outside of the nozzles. Because there is no connection between the air and liquid lines within the nozzles, the air and liquid flow rates can be controlled independently, allowing precise metering of the liquid. The atomization can be controlled by adjusting the air flow rate more air produces finer atomization. In most cases these set-up do not atomize as finely as Internal Mix Set-ups.

External Mix Set-up may be used with liquid having a viscosity above 200 centipoise and for abrasive suspensions. Spraytech provides Engineering guidance for spraying high viscosity liquids.



Internal Mix Set-Ups

Air & Liquid mix inside the nozzle



External Mix Set-Ups

Air & Liquid exit independently and combine outside the nozzle

Applications

1. Tablet Coating
2. Thin Film Coating
3. Humidification
4. Paper Moisturising
5. Dust Suppression

Optional Features

1. Manual Shut-off / Cleaning Needle
2. Automatic self Cleaning Needle
3. Auto shut-off Arrangement

Material Code

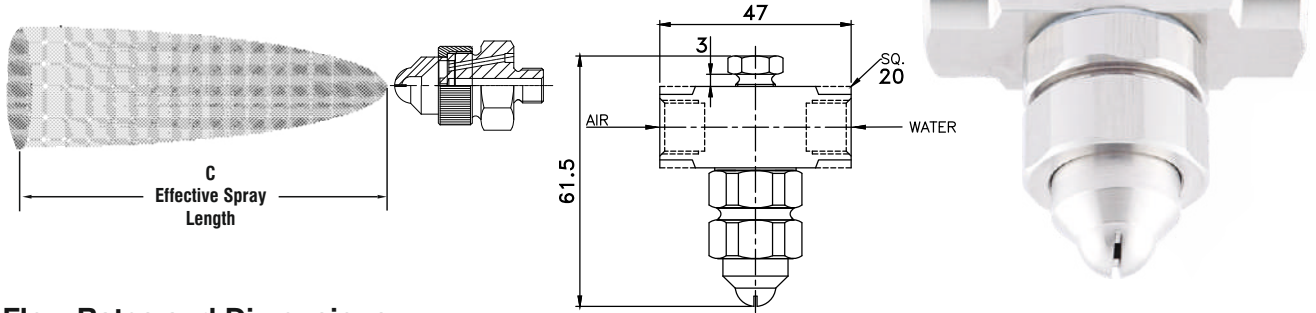
- M1 = SS303/SS304
- M2 = SS316/M2L=SS316L
- M3 = Brass (Nickel Plating on Request)
- M4 = SS410/ M4-3=SS310



CAIA Series Flat Internal Air Atomizing Spray Nozzles

DESIGN / SPRAY CHARACTERISTICS

- Internal mix
- Very fine atomization
- Flat fan, wide angle spray patterns (range 45° and 120°)



Flow Rates and Dimensions

Pressure-fed, Internal Mix, Flat Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

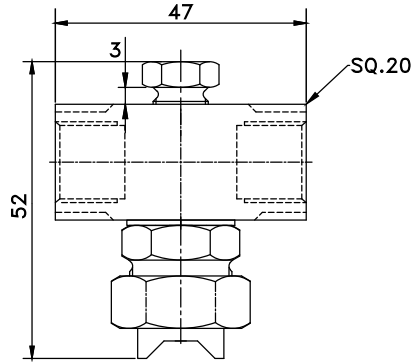
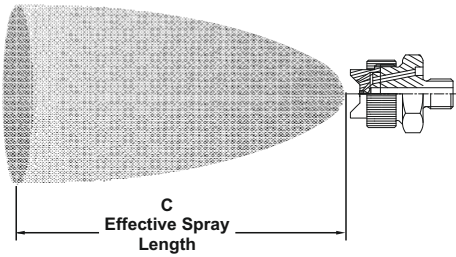
| Pipe Size | Model No. | 0.7 Bar Liquid | | | 1.5 Bar Liquid | | | 2.0 Bar Liquid | | | 3.0 Bar Liquid | | | 4.0 Bar Liquid | | | Spray Dimensions | |
|------------------|-----------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|---------------------------------|---------------------------------|
| | | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | "C" Effective Spray Length (mm) | Max. Spray Length (m) |
| 1/8 or 1/4 | CAIA 050 | 0.7 | 5.5 | 1.44 | 1.3 | 9.1 | 1.86 | 2.0 | 8.6 | 2.52 | 2.7 | 11.2 | 3.12 | 3.9 | 12.0 | 4.14 | 460 660 760 860 940 | 2.6 3.0 3.2 3.4 4.0 |
| | | 0.9 | 4.7 | 1.62 | 1.5 | 7.7 | 2.16 | 2.2 | 7.5 | 2.82 | 3.0 | 10.1 | 3.36 | 4.6 | 9.7 | 4.86 | | |
| | | 1.0 | 4.1 | 1.86 | 1.8 | 6.5 | 2.52 | 2.5 | 6.2 | 3.12 | 3.2 | 9.1 | 3.72 | 5.3 | 7.5 | 5.58 | | |
| | | 1.1 | 3.5 | 2.04 | 2.1 | 5.4 | 2.82 | 2.8 | 5.2 | 3.42 | 3.5 | 8.1 | 3.96 | 6.0 | 5.3 | 6.24 | | |
| | | 1.3 | 3.0 | 2.22 | 2.4 | 4.3 | 3.12 | 3.1 | 4.2 | 3.78 | 4.2 | 5.4 | 4.74 | 6.3 | 4.3 | 6.60 | | |
| | | 1.4 | 2.5 | 2.40 | 2.7 | 3.3 | 3.42 | 3.2 | 3.7 | 3.90 | 4.6 | 4.2 | 5.10 | 6.7 | 3.3 | 6.96 | | |
| 1.5 | 2.0 | 2.64 | 2.8 | 2.8 | 3.60 | 3.4 | 3.2 | 4.08 | 4.9 | 3.1 | 5.46 | 7.0 | 2.4 | 7.32 | | | | |
| 1/8 or 1/4 | CAIA 100 | 1.3 | 3.9 | 1.80 | 2.1 | 7.4 | 2.40 | 3.0 | 6.1 | 3.12 | 3.9 | 9.4 | 3.60 | 5.3 | 10.2 | 4.68 | 460 690 740 940 970 | 1.8 2.0 2.0 2.1 2.3 |
| | | 1.4 | 3.0 | 1.98 | 2.4 | 5.3 | 2.70 | 3.1 | 5.3 | 3.24 | 4.2 | 7.2 | 4.02 | 5.6 | 8.3 | 5.04 | | |
| | | 1.5 | 2.3 | 2.10 | 2.5 | 4.4 | 2.82 | 3.2 | 4.5 | 3.42 | 4.6 | 5.3 | 4.38 | 6.0 | 6.6 | 5.34 | | |
| | | 1.7 | 1.8 | 2.28 | 2.7 | 3.7 | 3.00 | 3.4 | 3.8 | 3.54 | 4.9 | 3.8 | 4.80 | 6.3 | 5.1 | 5.88 | | |
| | | 1.8 | 1.3 | 2.46 | 2.8 | 3.1 | 3.12 | 3.5 | 3.2 | 3.72 | | | | | | | | |
| | | 2.0 | 1.0 | 2.64 | 3.0 | 2.6 | 3.30 | 3.9 | 1.8 | 4.08 | | | | | | | | |
| 1/8 or 1/4 | CAIA 150 | 0.9 | 8.2 | 1.20 | 1.4 | 14.4 | 1.62 | 2.1 | 13.5 | 2.16 | 2.7 | 19.1 | 2.52 | 4.6 | 16.1 | 4.14 | 710 810 890 970 970 | 2.1 2.4 2.6 2.7 3.2 |
| | | 1.0 | 6.8 | 1.38 | 1.7 | 11.9 | 1.92 | 2.4 | 11.4 | 2.52 | 3.0 | 17.1 | 2.76 | 4.9 | 13.8 | 4.56 | | |
| | | 1.1 | 5.5 | 1.62 | 2.0 | 9.5 | 2.22 | 2.7 | 9.2 | 2.82 | 3.2 | 15.1 | 3.12 | 5.3 | 11.5 | 4.98 | | |
| | | 1.3 | 4.1 | 1.80 | 2.1 | 8.3 | 2.40 | 3.0 | 7.1 | 3.18 | 3.5 | 13.1 | 3.42 | 5.6 | 9.3 | 5.40 | | |
| | | 2.2 | 2.9 | 2.04 | 2.2 | 7.1 | 2.58 | 3.2 | 5.0 | 3.54 | 4.2 | 8.1 | 4.32 | 6.0 | 7.3 | 5.82 | | |
| | | 2.4 | 6.1 | 2.76 | 3.4 | 4.0 | 3.78 | 4.0 | 3.78 | 4.6 | 5.9 | 4.74 | 6.3 | 5.6 | 6.24 | | | |
| 2.5 | 5.1 | 2.94 | 3.5 | 3.3 | 3.96 | 3.5 | 3.3 | 3.96 | 4.9 | 4.0 | 5.16 | 6.7 | 4.3 | 6.72 | | | | |
| 1/8 or 1/4 | CAIA 200 | 1.0 | 9.0 | 1.50 | 2.0 | 10.4 | 2.46 | 2.4 | 11.6 | 2.88 | 3.1 | 15.6 | 3.36 | 4.2 | 17.1 | 4.38 | 170 200 220 280 330 | 3.0 3.7 4.0 4.2 4.8 |
| | | 1.1 | 7.8 | 1.80 | 2.1 | 9.3 | 2.70 | 2.5 | 10.4 | 3.06 | 3.2 | 14.6 | 3.54 | 4.6 | 15.0 | 4.80 | | |
| | | 1.3 | 6.6 | 1.92 | 2.2 | 8.2 | 2.88 | 2.7 | 9.4 | 3.24 | 3.4 | 13.7 | 3.72 | 4.9 | 12.8 | 5.22 | | |
| | | 1.4 | 5.2 | 2.16 | 2.5 | 6.1 | 3.30 | 3.0 | 7.3 | 3.66 | 3.8 | 10.8 | 4.26 | 5.3 | 11.0 | 5.64 | | |
| | | 1.7 | 3.1 | 2.64 | 2.8 | 4.3 | 3.72 | 3.2 | 5.5 | 4.08 | 4.2 | 8.5 | 4.92 | 5.6 | 9.4 | 6.18 | | |
| | | 2.0 | 2.0 | 3.00 | 3.1 | 3.0 | 4.14 | 3.5 | 4.1 | 4.50 | 4.9 | 5.2 | 5.88 | 6.3 | 7.2 | 7.14 | | |
| 2.2 | 1.1 | 3.36 | 3.4 | 2.0 | 4.50 | 3.8 | 2.9 | 4.86 | 6.0 | 2.3 | 7.20 | 7.0 | 6.1 | 8.04 | | | | |
| 1/8 or 1/4 | CAIA 250 | 1.1 | 11.2 | 3.24 | 2.1 | 18.0 | 4.47 | 2.7 | 19.6 | 5.58 | 3.5 | 27.0 | 6.72 | 4.6 | 33.0 | 8.22 | 200 330 400 460 480 | 3.0 3.2 3.4 3.5 4.0 |
| | | 1.3 | 8.5 | 3.60 | 2.2 | 15.8 | 5.04 | 2.8 | 17.3 | 5.88 | 3.7 | 25.0 | 6.96 | 4.9 | 28.0 | 8.94 | | |
| | | 1.4 | 6.5 | 3.90 | 2.4 | 13.6 | 5.34 | 3.0 | 15.2 | 6.18 | 3.8 | 23.0 | 7.26 | 5.3 | 24.0 | 9.66 | | |
| | | 1.5 | 5.0 | 4.26 | 2.5 | 11.6 | 5.70 | 3.1 | 13.2 | 6.54 | 3.9 | 21.0 | 7.56 | 5.6 | 19.7 | 10.4 | | |
| | | 1.7 | 3.8 | 4.62 | | | | 3.2 | 11.4 | 6.84 | 4.1 | 18.9 | 7.92 | 6.0 | 15.7 | 11.2 | | |
| 1.7 | | | | | | | | | 4.2 | 17.0 | 8.22 | 6.3 | 12.4 | 12.0 | | | | |
| 1/8 or 1/4 | CAIA 300 | 0.9 | 27.0 | 1.98 | 1.8 | 38.0 | 3.30 | 2.4 | 39.0 | 4.02 | 3.2 | 58.0 | 4.56 | 4.6 | 59.0 | 6.36 | 300 410 430 480 510 | 3.4 3.5 3.7 3.8 4.4 |
| | | 1.0 | 20.0 | 2.28 | 2.1 | 28.0 | 3.96 | 2.7 | 30.0 | 4.62 | 3.5 | 47.0 | 5.22 | 5.3 | 40.0 | 7.92 | | |
| | | 1.1 | 15.9 | 2.70 | 2.2 | 24.0 | 4.26 | 3.0 | 24.0 | 5.22 | 3.8 | 38.0 | 5.82 | 5.6 | 32.0 | 8.70 | | |
| | | 1.3 | 12.5 | 2.88 | 2.4 | 21.0 | 4.56 | 3.2 | 17.8 | 5.88 | 3.9 | 34.0 | 6.18 | 6.0 | 26.0 | 9.48 | | |
| | | 1.4 | 10.2 | 3.36 | 2.5 | 17.8 | 4.92 | 3.4 | 15.1 | 6.18 | 4.2 | 27.0 | 6.78 | 6.3 | 20.0 | 10.3 | | |
| | | 1.5 | 7.6 | 3.72 | 2.7 | 15.1 | 5.22 | 3.5 | 12.9 | 6.54 | 4.6 | 20.0 | 7.56 | 6.7 | 15.9 | 11.1 | | |
| 10.6 | | | 3.7 | 10.6 | 6.84 | 4.9 | 10.6 | 6.84 | 4.9 | 14.8 | 8.40 | 7.0 | 12.7 | 11.9 | | | | |
| 1/8 or 1/4 | CAIA 350 | 1.0 | 17.0 | 1.38 | 2.0 | 24.0 | 2.64 | 2.4 | 28.0 | 3.06 | 3.4 | 38.0 | 4.32 | 3.9 | 65.0 | 4.50 | 150 170 220 280 350 | 2.4 3.0 3.4 3.6 4.0 |
| | | 1.1 | 11.0 | 1.62 | 2.1 | 18.9 | 3.00 | 2.5 | 23.0 | 3.54 | 3.5 | 33.0 | 4.80 | 4.2 | 53.0 | 5.34 | | |
| | | 1.3 | 7.6 | 1.98 | 2.2 | 14.4 | 3.36 | 2.7 | 18.9 | 3.96 | 3.7 | 28.0 | 5.34 | 4.6 | 40.0 | 6.48 | | |
| | | 2.4 | 3.2 | 2.40 | 2.4 | 10.6 | 3.78 | 2.8 | 15.1 | 4.44 | 3.8 | 23.0 | 5.82 | 4.9 | 30.0 | 7.62 | | |
| | | 2.5 | | | 2.5 | 7.2 | 4.26 | 3.0 | 11.7 | 4.74 | 3.8 | 19.7 | 6.30 | 5.3 | 21.0 | 8.94 | | |
| 4.2 | | | | | | | | | 4.2 | 13.1 | 7.20 | 5.6 | 13.8 | 10.4 | | | | |
| 4.6 | | | | | | | | | 4.6 | 7.2 | 8.28 | 6.3 | 3.2 | 13.5 | | | | |
| 1/8 or 1/4 | CAIA 400 | 1.0 | 29.0 | 5.40 | 1.8 | 56.0 | 7.02 | 2.1 | 100 | 7.14 | 3.0 | 126 | 8.40 | 4.1 | 140 | 10.9 | 250 430 460 530 580 | 3.4 3.8 4.3 4.6 5.2 |
| | | 1.1 | 18.9 | 6.48 | 2.0 | 40.0 | 7.98 | 2.2 | 79.0 | 7.98 | 3.1 | 110 | 9.06 | 4.2 | 125 | 11.6 | | |
| | | | | | | | | 2.4 | 62.0 | 8.82 | 3.2 | 95.0 | 9.78 | 4.6 | 89.0 | 13.5 | | |
| | | | | | | | | 2.5 | 48.0 | 9.72 | 3.4 | 78.0 | 11.0 | 4.9 | 58.0 | 15.9 | | |
| | | | | | | | | 2.7 | 36.0 | 10.6 | 3.5 | 62.0 | 11.6 | 5.3 | 34.0 | 18.3 | | |
| | | | | | | | | | | | 3.7 | 48.0 | 12.6 | 5.6 | 16.0 | 20.4 | | |
| | | | | | | | | | 3.8 | 37.0 | 13.5 | | | | | | | |

Standard Materials: Nickel-plated Brass, 303 Stainless Steel and 316 Stainless Steel.

CAEA Series Flat External Air Atomizing Spray Nozzles

DESIGN / SPRAY CHARACTERISTICS

- External mix: allows spraying of viscous materials
- Variable atomization
- Moderate spray angle (range 60°- 90°)
- Precise metering of the liquid flow rate



Flow Rates and Dimensions

Siphon-fed, External Mix, Flat Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

| Orifice size & water flow | | Water Pressure [kg/cm ²] | | | | | | | | | |
|---------------------------|--------|--------------------------------------|------------------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|----------------|
| | | Pressure 0.2 Bar | Pressure 0.4 Bar | Pressure 0.6 Bar | Pressure 0.8 Bar | Pressure 1 Bar | Pressure 1.2 Bar | Pressure 1.4 Bar | Pressure 1.6 Bar | Pressure 1.8 Bar | Pressure 2 Bar |
| 0.5 | ML/MIN | 80 | 100 | 130 | 150 | 170 | 190 | 200 | 210 | 210 | 210 |
| | LPH | 4.8 | 6 | 7.8 | 9 | 10.2 | 11.4 | 12 | 12.6 | 12.6 | 12.6 |
| 0.6 | ML/MIN | 160 | 200 | 240 | 260 | 300 | 320 | 340 | 360 | 380 | 400 |
| | LPH | 9.6 | 12 | 14.4 | 15.6 | 18 | 19.2 | 20.4 | 21.6 | 22.8 | 24 |
| 0.7 | ML/MIN | 170 | 220 | 250 | 300 | 320 | 340 | 360 | 400 | 420 | 440 |
| | LPH | 10.2 | 13.2 | 15 | 18 | 19.2 | 20.4 | 21.6 | 24 | 25.2 | 26.4 |
| 0.8 | ML/MIN | 260 | 300 | 360 | 400 | 440 | 480 | 510 | 540 | 580 | 610 |
| | LPH | 15.6 | 18 | 21.6 | 24 | 26.4 | 28.8 | 30.6 | 32.4 | 34.8 | 36.6 |
| 0.9 | ML/MIN | 280 | 320 | 380 | 420 | 470 | 500 | 540 | 580 | 600 | 640 |
| | LPH | 16.8 | 19.2 | 22.8 | 25.2 | 28.2 | 30 | 32.4 | 34.8 | 36 | 38.4 |
| 1 | ML/MIN | 340 | 420 | 500 | 560 | 620 | 680 | 720 | 740 | 760 | 780 |
| | LPH | 20.4 | 25.2 | 30 | 33.6 | 37.2 | 40.8 | 43.2 | 44.4 | 45.6 | 46.8 |
| 1.1 | ML/MIN | | | | | | | | | | |
| | LPH | | | | | | | | | | |
| 1.2 | ML/MIN | 440 | 540 | 640 | 760 | 840 | 900 | 990 | 1040 | 1080 | 1100 |
| | LPH | 26.4 | 32.4 | 38.4 | 45.6 | 50.4 | 54 | 59.4 | 62.4 | 64.8 | 66 |
| 1.3 | ML/MIN | 740 | 760 | 880 | 1000 | 1100 | 1200 | 1300 | 1380 | 1200 | 1260 |
| | LPH | 44.4 | 45.6 | 52.8 | 60 | 66 | 72 | 78 | 82.8 | 72 | 75.6 |
| 1.4 | ML/MIN | 760 | 880 | 940 | 1100 | 1200 | 1300 | 1400 | 1500 | 1560 | 1600 |
| | LPH | 45.6 | 52.89 | 56.4 | 66 | 72 | 78 | 84 | 90 | 93.6 | 96 |
| 1.5 | ML/MIN | 800 | 1000 | 1200 | 1300 | 1440 | 1580 | 1660 | 1800 | 1900 | 1980 |
| | LPH | 48 | 60 | 72 | 78 | 86.4 | 94.8 | 99.6 | 108 | 114 | 118.8 |

Standard Materials: Nickel-plated Brass, 303 Stainless Steel and 316 Stainless Steel.

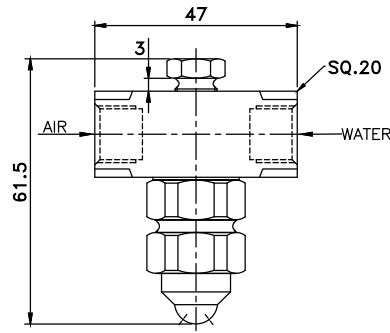
CAEA Series Flat External Air Atomizing Spray Nozzles



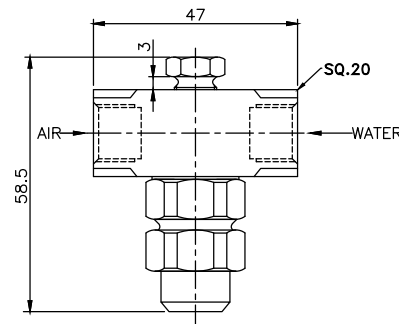
| Pipe Size | Model No. | 0.7 Bar Liquid | | | 1.5 Bar Liquid | | | 2.0 Bar Liquid | | | 3.0 Bar Liquid | | | 4.0 Bar Liquid | | | Spray Dimensions | | | | | | | | | | | |
|------------------|-----------|----------------|-----|--------------------|----------------|------|--------------------|----------------|------|--------------------|----------------|-----|--------------------|----------------|-----|--------------------|--------------------------------|-----------------------|-----|------|-----|------|-----|------|-----|------|-----|-----|
| | | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | "C" Effective Spray Length(mm) | Max. Spray Length (m) | | | | | | | | | | |
| 1/8 or 1/4 | CAEA 350 | 0.6 | 13 | 5.46 | 16 | 6.12 | 1.4 | 25 | 9.36 | 2.1 | 12.6 | 37 | 12.6 | 3.2 | 52 | 17.1 | 480 | 3.8 | | | | | | | | | | |
| | | 0.7 | | 6.12 | | | | | | | | | | | | | | | 1.1 | 7.80 | 2.1 | 15.6 | 2.8 | 15.6 | 4.2 | 21.6 | 560 | 4.3 |
| | | 1.1 | | 7.80 | | | | | | | | | | | | | | | 1.8 | 11.0 | 2.5 | 15.6 | 3.5 | 21.6 | 5.6 | 27.3 | 580 | 4.0 |
| 1/8 or 1/4 | CAEA 400 | 0.7 | 13 | 5.10 | 16 | 6.12 | 1.4 | 25 | 6.96 | 1.8 | 8.34 | 37 | 10.7 | 3.2 | 52 | 12.7 | 250 | 1.7 | | | | | | | | | | |
| | | 1.0 | | 6.12 | | | | | | | | | | | | | | | 1.4 | 8.34 | 2.1 | 9.36 | 3.5 | 13.6 | 4.2 | 15.3 | 250 | 2.7 |
| | | 1.4 | | 6.96 | | | | | | | | | | | | | | | 1.8 | 9.36 | 2.5 | 11.7 | 4.9 | 18.7 | 6.3 | 21.6 | 280 | 3.0 |
| 1/8 or 1/4 | CAEA 450 | 0.6 | 18 | 5.46 | 22 | 6.12 | 1.1 | 33 | 7.80 | 1.8 | 11.0 | 48 | 14.1 | 3.5 | 68 | 18.6 | 510 | 3.5 | | | | | | | | | | |
| | | 1.1 | | 7.80 | | | | | | | | | | | | | | | 1.4 | 9.36 | 2.5 | 15.6 | 4.2 | 21.6 | 4.6 | 31.5 | 640 | 3.0 |
| | | 1.4 | | 9.36 | | | | | | | | | | | | | | | 1.8 | 11.0 | 2.8 | 15.6 | 4.2 | 21.6 | 6.7 | 31.5 | 640 | 3.8 |
| 1/8 or 1/4 | CAEA 500 | 0.7 | 18 | 5.10 | 22 | 6.96 | 1.8 | 33 | 8.34 | 2.1 | 10.7 | 48 | 11.7 | 3.5 | 68 | 13.9 | 270 | 2.1 | | | | | | | | | | |
| | | 1.0 | | 6.12 | | | | | | | | | | | | | | | 1.8 | 8.34 | 2.5 | 9.36 | 3.5 | 13.6 | 4.2 | 16.5 | 270 | 3.0 |
| | | 1.4 | | 6.96 | | | | | | | | | | | | | | | 2.1 | 9.36 | 2.8 | 11.7 | 4.2 | 16.0 | 5.3 | 18.8 | 330 | 3.4 |
| 1/8 or 1/4 | CAEA 550 | 0.7 | 36 | 6.12 | 45 | 7.80 | 1.8 | 68 | 11.0 | 2.1 | 12.6 | 100 | 17.1 | 5.3 | 141 | 25.8 | 760 | 3.0 | | | | | | | | | | |
| | | 1.1 | | 7.80 | | | | | | | | | | | | | | | 1.4 | 9.36 | 2.8 | 15.6 | 4.9 | 27.3 | 6.0 | 33.0 | 810 | 4.0 |
| | | 1.4 | | 9.36 | | | | | | | | | | | | | | | 2.1 | 11.0 | 3.2 | 17.1 | 5.9 | 27.3 | 7.0 | 33.0 | 790 | 4.3 |
| 1/8 or 1/4 | CAEA 600 | 1.0 | 36 | 6.12 | 45 | 8.34 | 2.5 | 68 | 10.7 | 3.2 | 12.6 | 100 | 12.7 | 3.9 | 141 | 15.3 | 250 | 2.7 | | | | | | | | | | |
| | | 1.4 | | 6.96 | | | | | | | | | | | | | | | 2.1 | 9.36 | 2.8 | 11.7 | 3.5 | 14.8 | 4.6 | 17.8 | 290 | 3.0 |
| | | 1.8 | | 8.34 | | | | | | | | | | | | | | | 2.5 | 10.7 | 3.2 | 13.6 | 4.2 | 16.0 | 4.9 | 18.8 | 360 | 3.5 |
| 1/8 or 1/4 | CAEA 650 | 1.8 | 36 | 14.1 | 45 | 14.1 | 2.5 | 68 | 18.0 | 3.9 | 24.6 | 100 | 24.6 | 5.3 | 141 | 25.8 | 290 | 3.0 | | | | | | | | | | |
| | | 2.1 | | 15.6 | | | | | | | | | | | | | | | 2.1 | 15.6 | 2.8 | 18.0 | 4.2 | 26.7 | 6.0 | 28.8 | 300 | 3.4 |
| | | 2.5 | | 18.0 | | | | | | | | | | | | | | | 2.5 | 18.0 | 3.2 | 21.3 | 4.6 | 28.8 | 6.3 | 31.2 | 300 | 4.0 |
| 1/8 or 1/4 | CAEA 700 | 2.1 | 64 | 15.6 | 78 | 19.8 | 3.9 | 119 | 24.6 | 4.9 | 26.7 | 175 | 31.2 | 6.0 | 175 | 34.0 | 340 | 3.5 | | | | | | | | | | |
| | | 2.5 | | 18.0 | | | | | | | | | | | | | | | 3.2 | 21.3 | 4.2 | 24.8 | 5.6 | 31.2 | 6.3 | 36.0 | 360 | 4.3 |
| | | 2.8 | | 19.8 | | | | | | | | | | | | | | | 3.5 | 22.8 | 4.6 | 26.7 | 5.3 | 33.9 | 6.3 | 41.1 | 360 | 4.9 |
| 1/8 or 1/4 | CAEA 750 | 2.8 | 102 | 19.8 | 125 | 22.8 | 4.6 | 192 | 28.8 | 5.6 | 31.2 | 280 | 34.0 | 6.3 | 280 | 38.4 | 360 | 4.6 | | | | | | | | | | |
| | | 3.2 | | 21.3 | | | | | | | | | | | | | | | 3.8 | 24.6 | 4.9 | 26.7 | 5.3 | 33.9 | 6.3 | 41.1 | 370 | 4.9 |
| | | 3.5 | | 22.8 | | | | | | | | | | | | | | | 4.2 | 26.7 | 5.6 | 28.8 | 6.0 | 36.0 | 6.3 | 41.1 | 370 | 5.2 |
| 1/8 or 1/4 | CAEA 750 | 3.9 | 102 | 24.6 | 125 | 26.7 | 5.6 | 192 | 33.9 | 6.3 | 38.4 | 280 | 41.1 | 6.3 | 280 | 41.1 | 410 | 5.5 | | | | | | | | | | |
| | | 4.2 | | 26.7 | | | | | | | | | | | | | | | 4.9 | 31.2 | 6.0 | 33.9 | 6.3 | 41.1 | 6.3 | 41.1 | 410 | 5.8 |
| | | 4.6 | | 28.8 | | | | | | | | | | | | | | | 5.3 | 33.9 | 6.3 | 36.0 | 6.3 | 41.1 | 6.3 | 41.1 | 410 | 6.1 |

Standard Materials: Nickel-plated Brass, 303 Stainless Steel and 316 Stainless Steel.

DAIA Series Full Cone Internal Air Atomizing Spray Nozzles



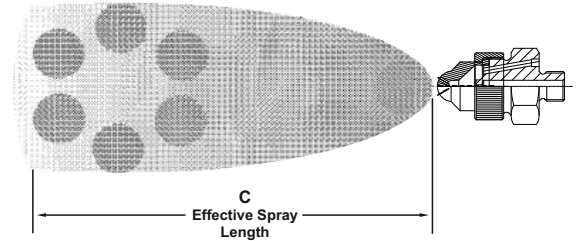
Full Cone spray pattern (range 45° to 120°)



Full Cone spray pattern (range 15° to 30°)

DESIGN / SPRAY CHARACTERISTICS

- Internal Mix
- Very fine atomization
- Full Cone spray pattern (range 15° to 120°)
- Moderate forward spray projection



Flow Rates and Dimensions

Pressure-fed, Internal Mix, Wide Angle Round Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

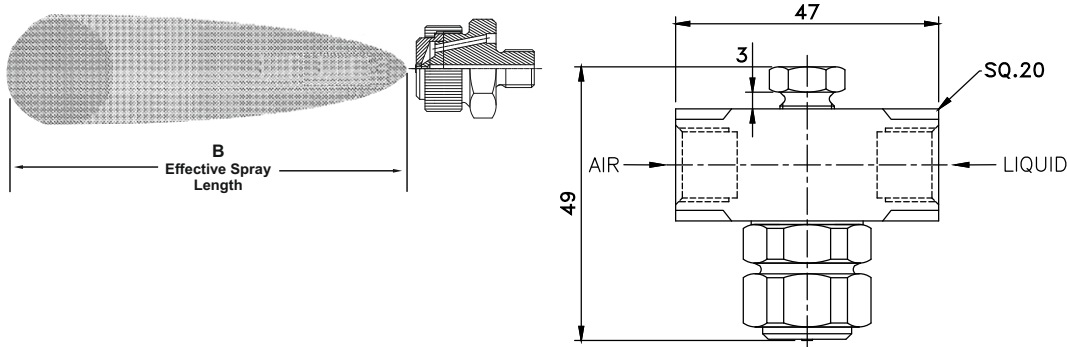
| Pipe Size | Model No. | 0.7 Bar Liquid | | | 1.5 Bar Liquid | | | 2.0 Bar Liquid | | | 3.0 Bar Liquid | | | 4.0 Bar Liquid | | | Spray Dimensions | |
|------------|-----------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|----------------|------|--------------------|---------------------------------|----------------------------------|
| | | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | Air (bar) | l/h | Nm ³ /h | "C" Effective Spray Length(mm) | Max. Spray Length (m) |
| 1/8 or 1/4 | DAIA 050 | 0.6 | 5.3 | 0.60 | 1.1 | 8.1 | 0.79 | 1.5 | 8.1 | 0.92 | 2.4 | 8.9 | 1.24 | 3.1 | 10.5 | 1.44 | 230 240 250 260 300 | 1.5 1.8 2.1 2.7 4.0 |
| | | 0.7 | 4.3 | 0.72 | 1.3 | 7.0 | 0.88 | 1.8 | 6.6 | 1.09 | 2.7 | 8.1 | 1.40 | 3.4 | 9.7 | 1.68 | | |
| | | 0.9 | 3.0 | 0.84 | 1.4 | 6.4 | 0.94 | 2.1 | 4.9 | 1.32 | 3.0 | 6.4 | 1.66 | 3.9 | 7.8 | 2.16 | | |
| | | 1.0 | 1.7 | 1.02 | 1.5 | 5.5 | 1.01 | 2.4 | 3.2 | 1.68 | 3.2 | 4.9 | 1.92 | 4.2 | 6.1 | 2.52 | | |
| | | | | | 1.7 | 4.5 | 1.16 | | | | 3.4 | 4.2 | 2.13 | 4.6 | 4.4 | 2.82 | | |
| 1/8 or 1/4 | DAIA 100 | 0.9 | 7.0 | 3.00 | 1.7 | 13.2 | 4.08 | 2.0 | 18.5 | 4.08 | 2.8 | 25.0 | 5.04 | 3.7 | 31.0 | 5.76 | 310 330 330 340 370 | 1.8 2.4 3.2 4.1 5.9 |
| | | 1.0 | 2.1 | 3.72 | 1.8 | 9.8 | 4.74 | 2.1 | 15.1 | 4.56 | 3.0 | 22.0 | 5.52 | 3.8 | 28.0 | 6.30 | | |
| | | | | | | | | 2.2 | 11.7 | 5.10 | 3.1 | 18.5 | 6.06 | 3.9 | 26.0 | 6.78 | | |
| | | | | | | | | | | | 3.2 | 15.1 | 6.54 | 4.1 | 23.0 | 7.32 | | |
| | | | | | | | | | | | 3.4 | 12.1 | 7.14 | 4.2 | 20.0 | 7.80 | | |
| 1/8 or 1/4 | DAIA 150 | 1.1 | 12.3 | 2.40 | 2.2 | 16.3 | 3.72 | 2.7 | 21.0 | 4.14 | 4.2 | 19.3 | 6.00 | 5.6 | 22.0 | 7.80 | 230 240 240 250 280 | 2.7 4.6 5.5 7.3 9.4 |
| | | 1.3 | 9.9 | 2.70 | 2.5 | 12.1 | 4.26 | 3.0 | 16.3 | 4.68 | 4.6 | 14.6 | 6.78 | 6.0 | 17.6 | 8.52 | | |
| | | 1.4 | 7.9 | 3.00 | 2.8 | 8.9 | 4.74 | 3.2 | 12.3 | 5.16 | 4.9 | 10.8 | 7.44 | 6.3 | 14.0 | 9.12 | | |
| | | 1.5 | 6.1 | 3.24 | 3.0 | 7.6 | 4.98 | 3.4 | 10.7 | 5.46 | 5.3 | 8.1 | 8.10 | 6.7 | 11.4 | 9.78 | | |
| | | 1.7 | 4.9 | 3.48 | 3.1 | 6.4 | 5.22 | 3.5 | 9.3 | 5.64 | 5.6 | 6.2 | 8.76 | 7.0 | 9.1 | 10.4 | | |
| 1/8 or 1/4 | DAIA 200 | 0.7 | 24.0 | 1.92 | 1.4 | 43.0 | 2.22 | 2.1 | 33.0 | 3.96 | 2.8 | 52.0 | 3.90 | 3.7 | 63.0 | 4.08 | 360 370 370 380 390 | 2.1 3.2 4.1 5.0 6.8 |
| | | 0.9 | 13.6 | 2.64 | 1.5 | 35.0 | 2.94 | 2.2 | 26.0 | 4.68 | 3.0 | 46.0 | 4.56 | 3.8 | 58.0 | 4.74 | | |
| | | 1.0 | 7.6 | 3.42 | 1.7 | 28.0 | 3.66 | 2.4 | 18.9 | 5.34 | 3.1 | 39.0 | 5.22 | 4.0 | 52.0 | 6.06 | | |
| | | | | | 1.8 | 21.0 | 4.26 | 2.5 | 11.7 | 6.00 | 3.2 | 33.0 | 5.94 | 4.2 | 41.0 | 6.66 | | |
| | | | | | | | | | | | 3.4 | 26.0 | 6.60 | 4.6 | 27.0 | 8.28 | | |
| 1/8 or 1/4 | DAIA 250 | 1.3 | 36.0 | 5.10 | 2.1 | 57.0 | 6.96 | 3.1 | 53.0 | 9.36 | 4.2 | 64.0 | 11.8 | 5.6 | 74.0 | 14.7 | 330 340 370 380 400 | 5.5 6.4 8.2 9.1 10.4 |
| | | 1.5 | 29.0 | 6.12 | 2.4 | 51.0 | 7.80 | 3.2 | 50.0 | 9.78 | 4.9 | 51.0 | 13.8 | 6.0 | 68.0 | 15.6 | | |
| | | 1.8 | 23.0 | 7.02 | 2.7 | 45.0 | 8.58 | 3.4 | 47.0 | 10.2 | 5.6 | 40.0 | 15.9 | 6.3 | 62.0 | 16.8 | | |
| | | 2.0 | 19.7 | 7.50 | 3.0 | 39.0 | 9.42 | 3.5 | 45.0 | 10.6 | 6.0 | 34.0 | 17.1 | 6.7 | 56.0 | 17.7 | | |
| | | 2.1 | 16.7 | 7.98 | 3.2 | 33.0 | 10.2 | 3.9 | 38.0 | 11.6 | 6.3 | 28.0 | 18.0 | 7.0 | 51.0 | 18.9 | | |
| 1/8 or 1/4 | DAIA 300 | 2.3 | 14.0 | 8.52 | 3.5 | 28.0 | 11.1 | 4.6 | 25.5 | 13.8 | 6.7 | 22.0 | 19.2 | | | | 460 470 510 530 580 | 5.5 6.4 7.3 7.9 9.8 |
| | | 2.4 | 11.4 | 8.94 | 4.2 | 13.6 | 13.2 | 4.9 | 18.5 | 14.7 | 7.0 | 17.8 | 20.1 | | | | | |
| | | 1.7 | 27.0 | 9.36 | 3.0 | 39.0 | 13.8 | 3.4 | 50.0 | 15.0 | 4.6 | 62.0 | 19.2 | 6.0 | 93.0 | 23.7 | | |
| | | 1.8 | 20.0 | 10.0 | 3.1 | 33.0 | 14.4 | 3.5 | 43.0 | 15.6 | 4.9 | 47.0 | 20.7 | 6.3 | 77.0 | 25.5 | | |
| | | 2.0 | 15.9 | 10.7 | 3.2 | 27.0 | 15.3 | 3.7 | 41.0 | 16.5 | 5.3 | 36.0 | 22.5 | 6.7 | 62.0 | 27.6 | | |

Standard Materials: Nickel-plated Brass, 303 Stainless Steel and 316 Stainless Steel.

DASA Series Full Cone Siphon Air Atomizing Spray Nozzles

DESIGN / SPRAY CHARACTERISTICS

- Lowest flow available
- Very fine atomization
- Narrow spray angle (12° - 25°)
- Full cone pattern
- Short to moderate forward spray projection



Flow Rates and Dimensions

Siphon-fed, External Mix, Round Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

| Pipe Size | Spray Set-up Number | ATOMIZING AIR | | Liquid Capacity in l/h (Liters Per Hour) | | | | | | | | Spray Dimensions at 200 mm. Siphon Height | |
|------------|---------------------|---------------|--------------------|--|--------|--------|--------|---------------|--------|--------|--------|---|-----------------------|
| | | | | Gravity Head | | | | Siphon Height | | | | | |
| | | Air (bar) | Nm ³ /h | 450 mm | 300 mm | 150 mm | 100 mm | 200 mm | 300 mm | 600 mm | 900 mm | "B" Effective Spray Length(mm) | Max. Spray Length (m) |
| 1/8 or 1/4 | DASA 050 | 0.7 | 0.66 | 1.5 | 1.3 | 1.1 | 0.9 | 0.7 | 0.5 | | | 280 | 1.8 |
| | | 1.5 | 1.02 | 1.8 | 1.7 | 1.5 | 1.3 | 1.2 | 1.1 | 0.6 | | 280 | 1.9 |
| | | 3.0 | 1.68 | 2.1 | 1.9 | 1.7 | 1.5 | 1.4 | 1.3 | 1.1 | 0.8 | 300 | 2.3 |
| | | 4.0 | 2.16 | 2.2 | 2.0 | 1.8 | 1.6 | 1.5 | 1.4 | 1.2 | 0.9 | 360 | 2.6 |
| 1/8 or 1/4 | DASA 150 | 0.7 | 0.78 | 24 | 2.1 | 1.7 | 1.5 | 1.2 | 0.8 | | | 300 | 2.1 |
| | | 1.5 | 1.20 | 2.8 | 2.6 | 2.4 | 2.1 | 1.9 | 1.6 | 0.9 | | 330 | 2.3 |
| | | 3.0 | 1.92 | 3.4 | 3.1 | 2.9 | 2.8 | 2.6 | 2.4 | 1.7 | 1.1 | 380 | 2.6 |
| | | 4.0 | 2.46 | 3.7 | 3.4 | 3.3 | 3.1 | 2.9 | 2.7 | 2.1 | 1.5 | 430 | 3.0 |
| 1/8 or 1/4 | DASA 200 | 0.7 | 1.38 | 2.5 | 2.3 | 2.0 | 1.6 | 1.4 | 1.1 | | | 300 | 2.4 |
| | | 1.5 | 2.16 | 2.9 | 2.8 | 2.5 | 2.2 | 2.0 | 1.7 | 0.9 | | 330 | 2.7 |
| | | 3.0 | 3.48 | 3.4 | 3.3 | 3.2 | 2.9 | 2.8 | 2.5 | 1.9 | 1.2 | 380 | 3.4 |
| | | 4.0 | 4.44 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.0 | 2.5 | 2.0 | 430 | 4.0 |
| 1/8 or 1/4 | DASA 250 | 0.7 | 1.14 | 4.5 | 4.0 | 3.4 | 2.1 | 1.8 | 1.4 | | | 380 | 3.0 |
| | | 1.5 | 1.86 | 5.3 | 4.9 | 4.4 | 3.5 | 2.9 | 2.7 | 1.8 | | 410 | 3.4 |
| | | 3.0 | 3.00 | 6.0 | 5.6 | 5.0 | 4.4 | 4.0 | 3.4 | 2.4 | 1.2 | 460 | 4.0 |
| | | 4.0 | 3.90 | 5.7 | 5.4 | 5.0 | 4.2 | 3.9 | 3.5 | 2.8 | 1.9 | 510 | 4.6 |
| 1/8 or 1/4 | DASA 400 | 1.5 | 3.48 | 22 | 19.9 | 16.3 | 12.3 | 10.5 | 8.3 | 2.8 | | 460 | 3.7 |
| | | 3.0 | 5.28 | 25 | 23 | 19.5 | 16.7 | 14.2 | 11.5 | 6.4 | 2.8 | 510 | 4.3 |
| | | 4.0 | 6.66 | 26 | 24 | 21 | 18.4 | 15.7 | 12.9 | 7.9 | 4.5 | 530 | 4.9 |
| | | 5.6 | 8.82 | 26 | 24 | 22 | 19.7 | 17 | 14.6 | 9.8 | 6.1 | 580 | 5.5 |
| 1/8 or 1/4 | DASA 450 | 2.0 | 8.64 | | | | 27 | 22 | 16.8 | | | 510 | 6.7 |
| | | 3.0 | 11.4 | | | | 30 | 26 | 21 | | | 530 | 7.0 |
| | | 4.0 | 14.4 | 44 | 43 | 40 | 31 | 28 | 23 | 11.0 | | 580 | 7.6 |
| | | 5.6 | 18.9 | | 42 | 39 | 31 | 28 | 24 | 16.7 | 8.3 | 630 | 8.2 |

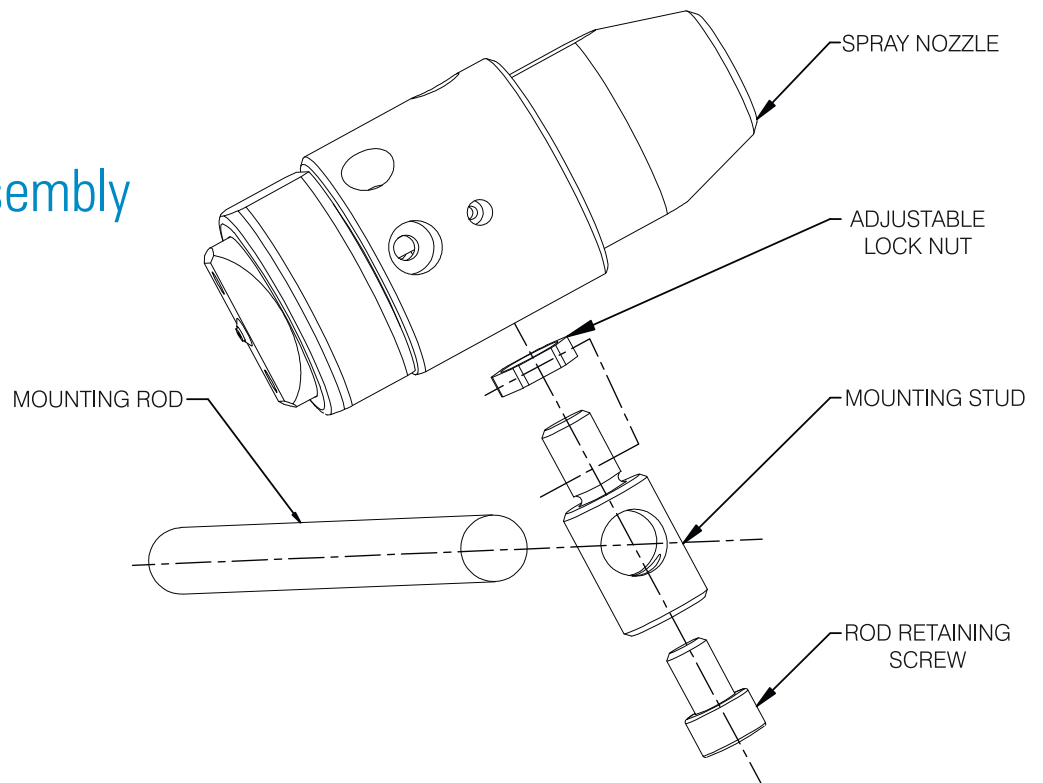
Standard Materials: Nickel-plated Brass, 303 Stainless Steel and 316 Stainless Steel.



Tablet Coating Spray Nozzles

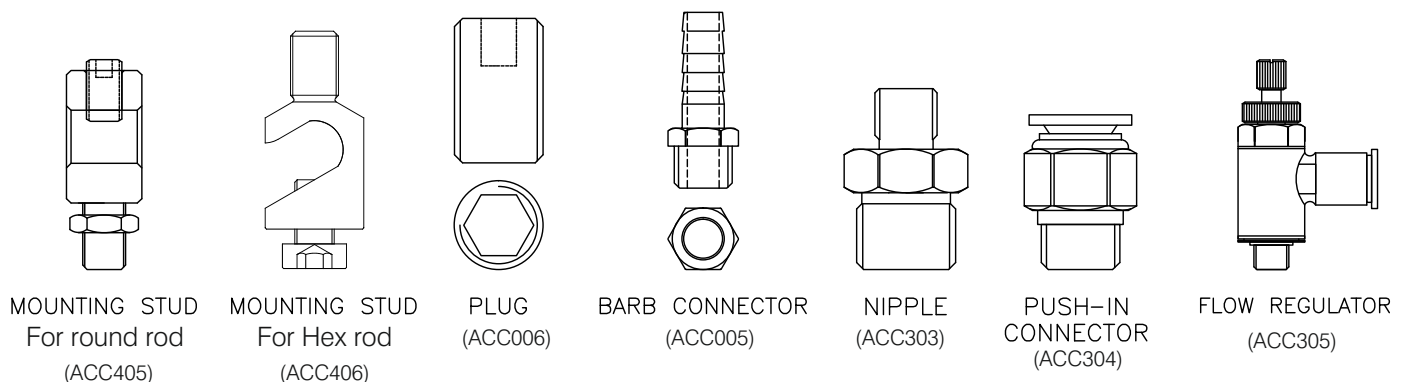
- RC Series
- RB Series
- RCS Series
- RDS Series

Mounting Assembly



Accessories

Optional Accessories available for R series coating spray nozzles



Tablet Coating Process

It is the process to apply coating material on external surface of tablets to enhance its efficiency and properties.

Today many solid pharmaceutical dosage mediums are produced with coatings, either on the external surface of tablets, or on materials dispensed within gelatine capsules.

Coating serves a number of purposes right from protecting stomach lining from aggressive drugs to protecting the tablet from stomach acids. It also helps in maintaining the shape of the tablet and thus can offer a delayed release of the medication.

But for good results, a better coating medium is required. And the same can be fulfilled by Tablet coating spray nozzles.

General purposes of tablet coating

- Covers unpleasant taste, colour and odour
- Chemical and physical protection from environment
- To control the release of drug with enteric coating
- It protects drug from gastric surrounding of stomach
- Provide way to identify the drug and improves appearance

Results of bad coating

- Sticking or picking
- Roughness
- Twinning
- Peeling
- Cracking



Example of Bad Tablet Coating

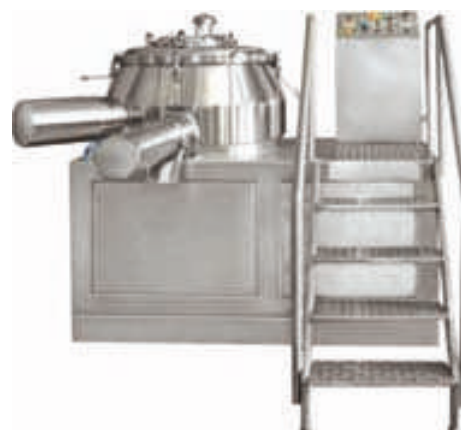
Granulation With RMG / HSG

Also known as wet granulation process. material is loaded into bowl having agitator and chopper and mixed rigorously then binder material is sprayed from top and granules are formed.

Good quality granules are foundation for good quality tablet.

Various liquid blenders are used for wet granulation.

Spraying binder over bulk material could reduce wet granulation cycle time and increase productivity.



Fluid bed process consists of following applications :

1. Drying

Process of extracting moisture from solid bulk material by making it fluidized with high flow blow of air, so moisture is removed homogeneously and all over surface of every single particle.

2. Granulation/ Agglomeration

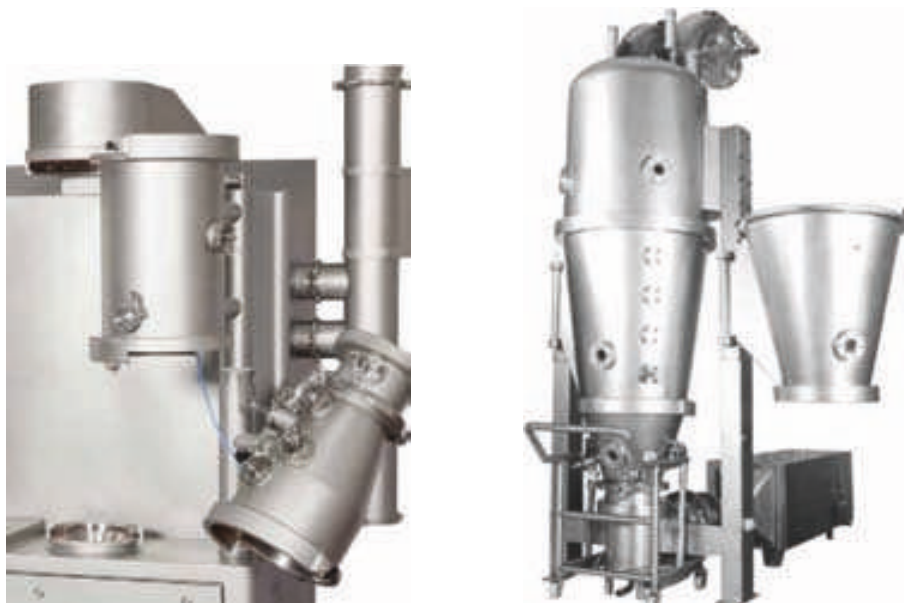
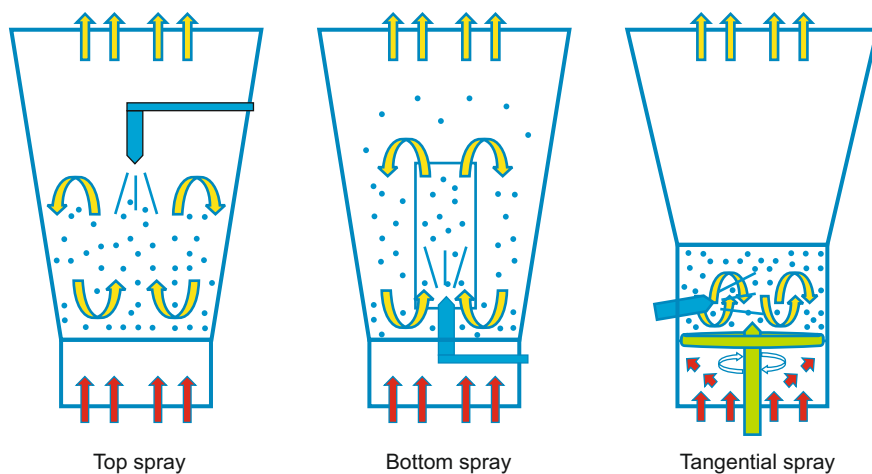
Powder particles of bulk material bonded by liquid fine spray. Liquid could be water or an organic solvent and the powder material will be mixed together. Agglomerate has less strength of particle bond.

3. Coating

Fluidized particles are coated with spray of coating material which enhances. coating film must be very uniform over the particle surface.

4. Tangential Coating

Centrifugal motion is used for making spherical pellets, at the same time particles are bonded by binder liquid. layering also can be done in same way.



Tablet Coating Spray Nozzles

The following description will help to explain our Part Number/ Code in relation to the "SPRAYTECH" Spray Nozzle
EXAMPLE ORDERING.

| SPRAYTECH | R C | 10 | M2L | X A | FC |
|-------------------|--------------------------|-------------------|--------------------|--------------------------------------|-------------------|
| ↓ Company Name | ↓ Spray Nozzle Series | ↓ Orifice Size | ↓ Material Code | ↓ Thread Type ↓ Thread Size | ↓ Flow Control |

1) Spray Nozzles Series

R = Coating Nozzle

2) Sub Type of Nozzles



RC



RB



RCS



RDS

3) Orifice Size

05 = 0.5mm
08 = 0.8mm
10 = 1.0mm
12 = 1.2mm
15 = 1.5mm
18 = 1.8mm
20 = 2.0mm

4) Material code

M2 = SS316
M2L = SS316L

5) Thread Type Code

X = BSPP
Note : Special Connection on request

6) Thread Size code

A = 1/8" B = 1/4"
C = 3/8"
Note : Special Size on request

RC Series Tablet Coating Spray Nozzles



Liquid Orifice Range: 0.5 to 1.8 MM



Spraytech's popular RC Series tablet coating spray nozzle are specially designed to meet GMP requirements where surface texture plays very important role.

The unique Air Cap design makes it Anti Bearding and keeps coating process shutdown free, thus higher production ratio and quality requirements are achieved.

RC series spray nozzle is a compact device incorporating of independent controls for Liquid, Atomizing Air and Fan Air for fine tuning of spray capacity, droplet size and spray patterns. It is available in wide variety of spray setups that give a complete selection of flow rate and flat spray patterns.

RC series spray nozzles are externally mix nozzles. This means the liquid and air are mixed outside of air cap to produce complete atomized spray.

The liquid atomization is controlled by varying atomizing air and fan air pressures without changing liquid flow rates. The flat spray pattern is controlled by varying the fan air pressure in conjunction with the atomizing air. This is effective for high viscosity liquids, coatings and suspensions.

Tablet coating spray nozzle features a cylinder for controlled "on-off" operation. The cylinder controls a liquid clean-out/ Shut-off needle which also cleans the liquid orifice.

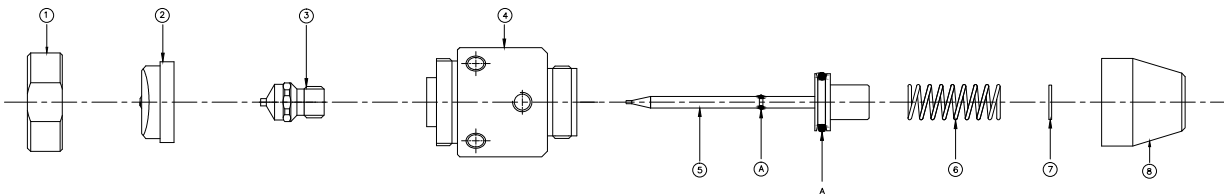
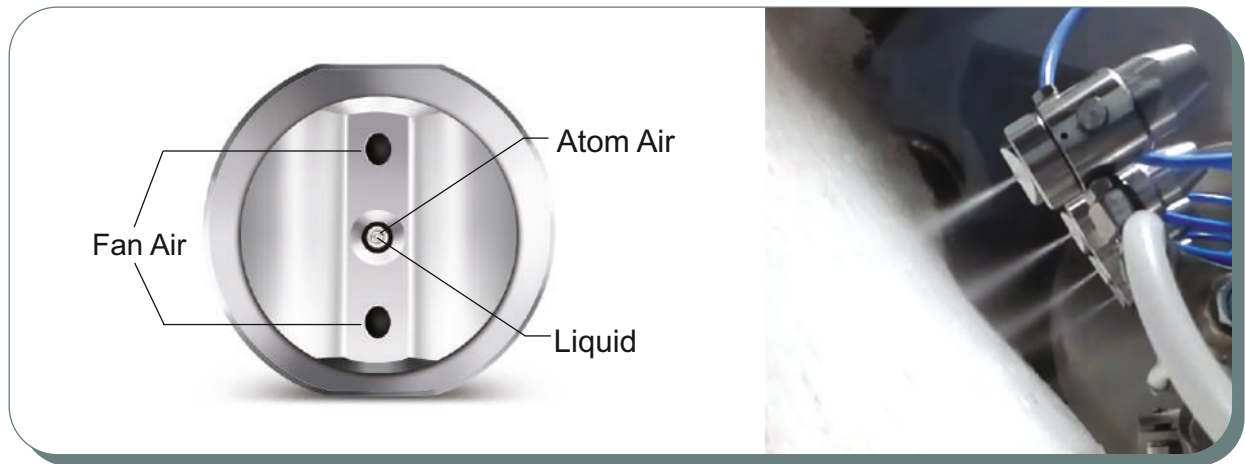
The RC Series coating Spray Nozzle are a compact, precision nozzles. Incorporating independent controls of liquid atomizing air and fan air for fine tuning of spray capacity droplet size and spray patterns. It is available in a wide variety of spray Set-ups that give a complete selection of flow rates and flat spray patterns.

| Spray Nozzle | Type | RC |
|--|-----------------------|------------------|
| Spray Type : | Airborne | Air Atomised |
| Liquid orifice size Range (standard) | mm | 0.8 - 1.8, (1.0) |
| Solution Flow Rate (typical per nozzle) | Liters/hour | 6 - 30 |
| Atomizing Air Pressure Range | bar | 0.7 - 3 |
| Spray Width Pressure Range | bar | 1.0 - 4.0 |
| Maximum Compressed Air Pressure | bar | 5.5 |
| Compressed Air Consumption (maximum @ 2.0 bar) | Nm ³ /hour | 10.5 |
| Seal Material (standard) check compatibility for organic use | FDA | Approved |

RC Series Tablet Coating Spray Nozzles

DESIGN FEATURES

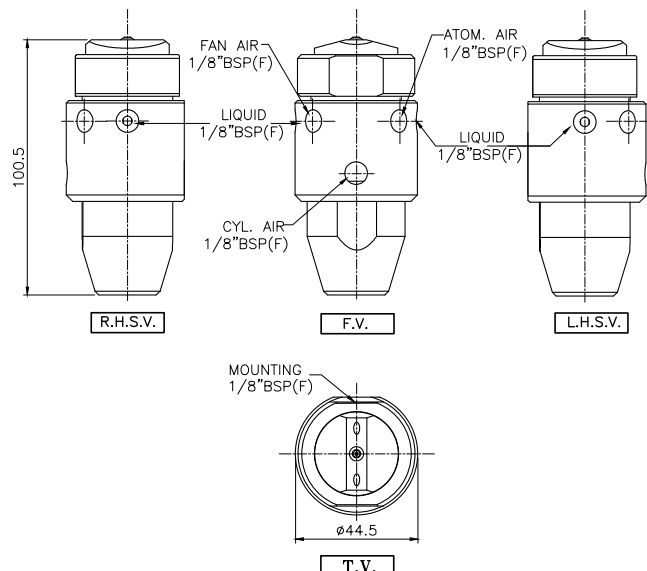
1. GMP model
2. Complete SS316L construction
3. Separate atomizing and fan air lines for complete control.
4. Minimum part assembly for easy maintenance
5. Only 2 O-rings
6. Provides variable coverage and fine control of drop size without affecting liquid flow rates.
7. Non clogging and anti - bearding design
8. Auto shut-off & anti-drip feature
9. Self-cleaning needle design.
10. Available with and Without flow control feature



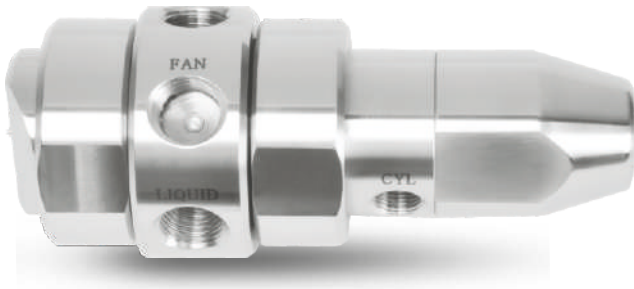
Part Details

- | | |
|-------------------|-----------------|
| 1 Lock Nut | 7 Strainer Disc |
| 2 Air Cap | 8 End Cap |
| 3 Liquid Nozzle | |
| 4 Body | |
| 5 Needle Assembly | |
| 6 Rear Spring | |

Details of Inlet Connections



RB Series Coating Spray Nozzles



Design Summary :

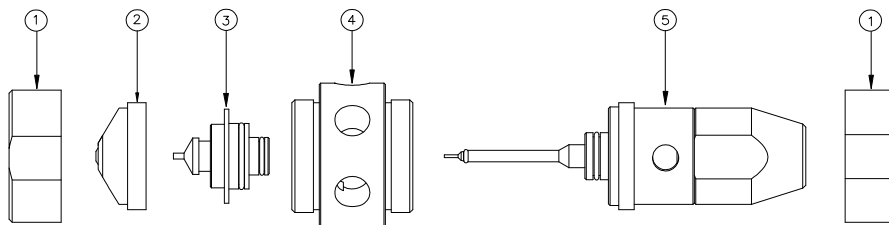
Liquid Orifice Range: 0.5 to 2.0 MM

- RB Series variable spray nozzles provide uniform spray distribution with uniform droplet sizes, even when spraying viscous fluids.
- RB series works with HVLP principle where the atomization is possible at lowest pressures.
- RB series comes with Independent inlets for Atomization air, Fan air, Cylinder air and Liquid for complete control over the spray nozzle.

DESIGN FEATURES

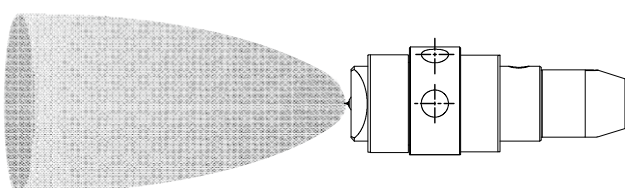
1. GMP model
2. Complete SS316L construction
3. Separate atomizing and fan air lines for complete control.
4. Provides variable coverage and fine control of drop size without affecting liquid flow rates.
5. Non clogging and anti - bearding design
6. Auto shut-off & anti-drip feature
7. Self-cleaning needle design.
8. Comes with Wide range of orifice size

- RB series is best suitable for auto coaters for large scale production.
- Additional inlet /outlet port allows for liquid re-circulation that effectively maintains the flow of viscous liquids.
- Having removable auto shut off and spring loaded needle cylinder assembly is provided for maintenance



Part Details

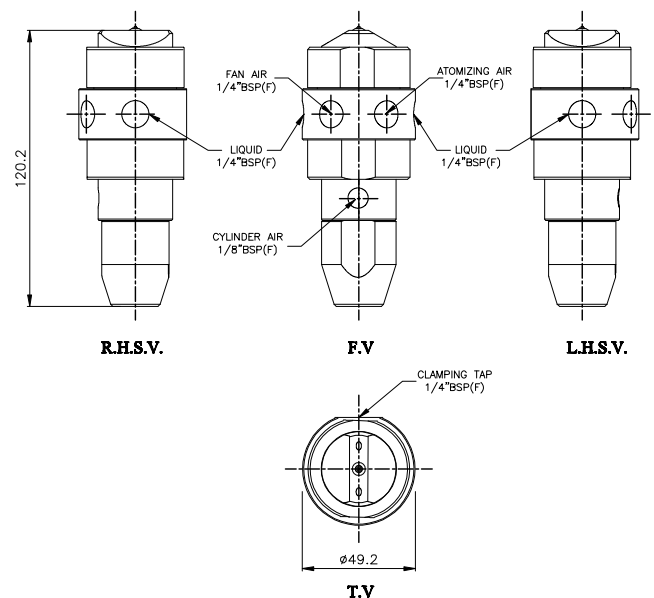
- 1 Lock Nut
- 2 Air Cap
- 3 Fluid Cap
- 4 Body
- 5 Cylinder (Needle) Assembly



With fan air: Flat Spray Pattern.

Without fan air: Round Spray Pattern.

Details of Inlet Connections :



RCS Series Coating Spray Nozzles



Liquid Orifice Range: 0.5 to 1.2MM

SPRAYTECH'S RCS series coating spray nozzles offers very compact design with innovative flow control feature. This feature offers the user to take the RCS coating nozzle from the lowest 20 ml to its max limit is just a spin.

RCS type coating spray nozzle is very light weight and features anti bearding air cap design which eliminates the deposition of material over the air cap and abolishes bearding over gun.

RCS comes with individual ports for liquid, Atomizing, Fan control and auto shut-off for total control. Also as it has external mixed design thus, atomized spray properties could be changed as per need with fine tuning of individual pressures of Atomizing air, Fan Air & Liquid pressure.

Innovative needle assembly provides the Auto-shut off, Anti-Drip and Auto Cleaning of liquid orifice.

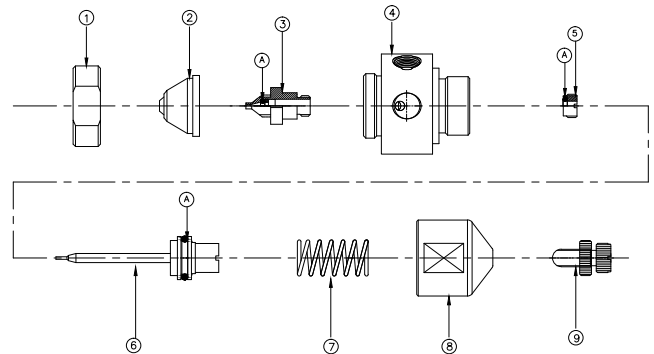
RCS type coating spray nozzle is best suitable for Lab-coater and Conventional coater.

Spray setup available with Flat Fan, and Round Pattern.

All Sealing materials are FDA Approved.

DESIGN FEATURES

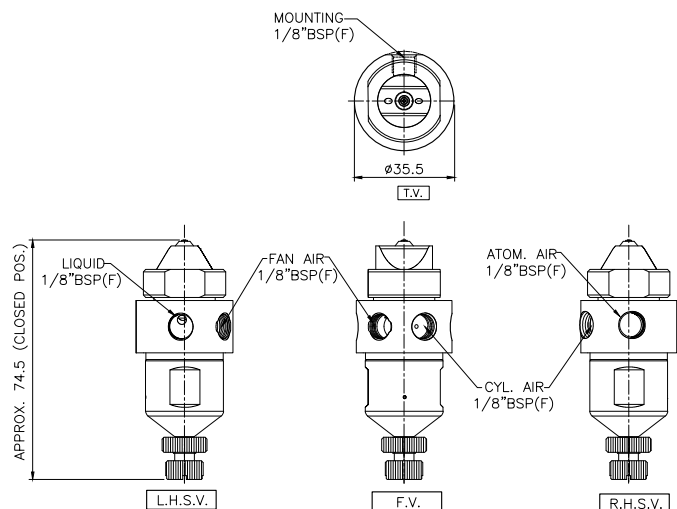
1. GMP model
2. Compact & lightweight design
3. Complete SS316L construction
4. Separate atomizing and fan air lines for complete control.
5. Minimum part assembly for easy maintenance
6. Provides variable coverage and fine control of drop size without affecting liquid flow rates.
7. Non clogging and anti - bearding design
8. Auto shut-off & anti-drip feature
9. Self-cleaning needle design.
10. Available with and Without flow control feature



Part Details

- 1 Lock Nut (Front)
- 2 Air Cap
- 3 Liquid Nozzle
- 4 Body
- 5 Gland
- 6 Needle Assembly
- 7 Needle Spring
- 8 End Cap
- 9 Flow Control Regulator
- 10 Flow Adjustment Screw

Details of Inlet Connections



RDS Series Coating Spray Nozzles

Liquid Orifice Range: 0.5 to 1.8 MM

SPRAYTECH'S Latest Development, RDS series coating spray nozzles offers operation of spray using just three connections, 1 for Atomization air & Fan air combined, 1 for cylinder air and 1 for liquid. Only two air connections makes it best suitable for conventional pan coaters.

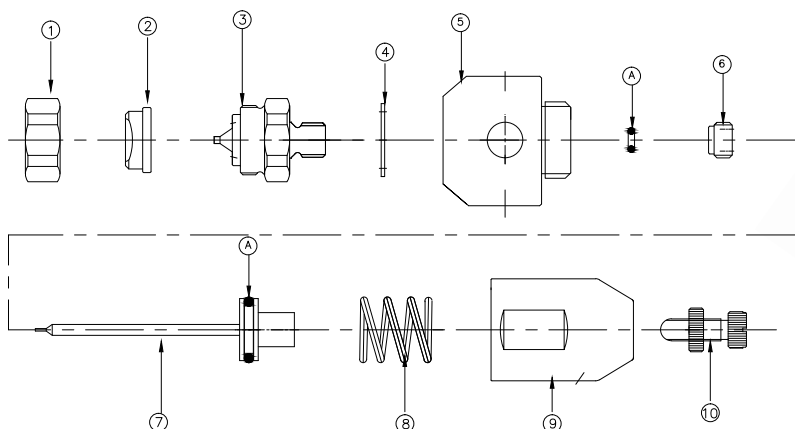
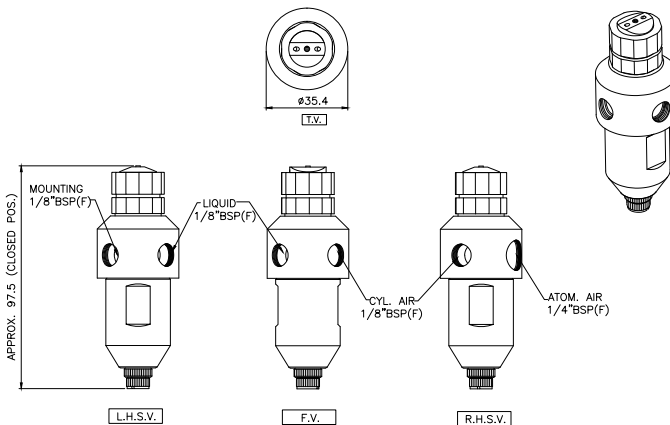
RDS offers variety of spray setups ranging from 0.5 mm to 1.8 mm.

RDS comes with Anti bearding air cap design for clog free operation and its special design needle makes it anti drip and auto shut off.

RDS comes with flow control feature to take total control over the flow rate.

DESIGN FEATURES

1. GMP model
2. Complete SS316L construction
3. Only 3 connections
4. Minimum part assembly for easy maintenance
5. Provides variable coverage and fine control of drop size without affecting liquid flow rates.
6. Non clogging and anti - bearding design
7. Auto shut-off & anti-drip feature
8. Self-cleaning needle design.
9. Available with flow control feature



TS 50

Spraytech's TS 50 is very compact spray nozzle designed specially for Lab Scale Fluid Bed Processors. With length less than 50 mm it can be easily mounted in any lab model FBP. It is also available with wide range of spray rates with fine atomization.

Design Features

- Compact design
- Narrow spray angle (Top down spray)
- Multiple orifice sizes for liquid nozzle
- Homogeneous spray distribution
- Minimum parts for easy maintenance
- Auto shut off feature (Available in TS 50AS)
- GMP Suitable design
- Made from SS316L and All O-rings from FDA Approved material



Specifications

| | |
|---------------|---------------------|
| Spray pattern | : Full cone |
| Spray angle | : 15°-20°(Variable) |
| Orifice range | : 0.5 to 2.0 mm |
| Capacity | : 0.1 to 1.5 LPM |

TS 100

Spraytech's TS100 is a compact design Top spray granulation nozzle equipped with one spray head (single head) and is ideal for lab scale and small capacity FBP. The single head provides fine atomized cone spray pattern with adjustable spray angles. The unique air cap has air flow adjustment where the atomization and the spray angle can be fine-tuned.

Manufactured and designed considering GMP standards, TS100 is equipped with cylinder assembly which offers auto shutoff feature and needle assembly which shuts the liquid orifice to provide anti-drip function.

Design Features

- Compact design
- Auto-shut off & Anti Drip feature
- Complete SS316L and Food grade Viton seals
- Anti-bearding air cap
- Interchangeable liquid nozzles
- Customised lance available



Specifications

| | |
|---------------|------------------------|
| Spray pattern | : Full cone |
| Spray angle | : 20° - 30° (Variable) |
| Orifice range | : 0.5 to 2.5 mm |
| Capacity | : 0.05 to 2 LPM |

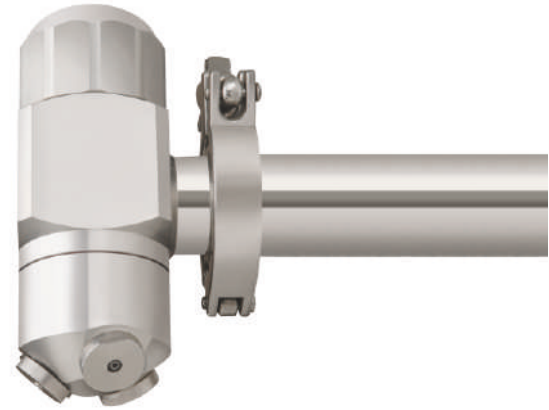
TS 300

Spraytech's TS300 is a multi-head design top spray granulation nozzle equipped with three spray head (Three head) suitable for medium capacity Fluid Bed Processors. It offers interchangeable liquid nozzle and air caps setups that works on external mix spray platform which enhances the spray quality and distribution in optimum way.

The multi-head setup provides three individual 20 degree full cone spray pattern which combines and forms a cluster of fine atomized spray. TS300 also offers cylinder assembly for auto shut-off operation.

Design Features

- Interchangeable Liquid nozzle and air cap setups
- Auto-shut off Feature
- Wider spray angle with maximum coverage area
- Finest droplet size & Homogeneous spray distribution
- Complete SS316L and Food grade Viton seals
- Customised lance available



Specifications

| | |
|---------------|-----------------|
| Spray pattern | : Full cone |
| Spray angle | : 60° - 90° |
| Orifice range | : 0.5 to 2.5 mm |
| Capacity | : 0.15 to 4 LPM |

TS 600

Spraytech's TS600 is a multi-head design top spray granulation nozzle equipped with six spray head (Referred as Six head) suitable for large capacity Fluid Bed Processors. The unique cluster head block comprises of six independent liquid nozzle and air cap setups. The six cluster head design provides higher capacity flow with homogenous spray pattern distribution.

Design Features

- Interchangeable Liquid nozzle and air cap setups
- Auto-shut off Feature
- Wider spray angle with maximum coverage area
- Finest droplet size & Homogeneous spray distribution
- Complete SS316L and Food grade Viton seals
- customised lance available



Specifications

| | |
|---------------|----------------------------|
| Spray pattern | : Full cone(Circular type) |
| Spray angle | : 60° - 90° |
| Orifice range | : 0.5 to 2.5 mm |
| Capacity: | : 0.15 to 5 LPM |

Lab Model FBP Bottom Spray Nozzle & Lance

WS 30

Spraytech's specially designed and customizable Fluid bed Bottom spray (Wurster coating) nozzle helps to improve the wurster coating application and also makes it possible to attain high-quality results in coating pellets and particles.

Designed for All type of Bottom Spray Coating, Allegiant spray distribution and fine droplets results in optimum quality of coating. Light weight design and easy to control the spray parameters. Minimum internal parts hence less maintenance.

Design Features

- Optimum spray quality
- Easy to assemble and dismantle
- GMP Suitable design
- Available with various orifices sizes
- Custom made designs available
- Variable mounting height
- Compact design



Specifications

| | |
|---------------|--------------------------|
| Spray pattern | : Full cone |
| Spray angle | : 15° - 25° (Adjustable) |
| Orifice range | : 0.5 to 2.2 mm |
| Capacity: | : 0.1 to 1.5 LPM |

WS 50 & WS 50AS

Spraytech's specially designed and customizable Fluid bed Bottom spray (Wurster coating) nozzle helps to improve the wurster coating application and also makes it possible to attain high-quality results in coating pellets and particles.

Designed for Lab & small of Bottom Spray Coating, Applications. Allegiant spray distribution and fine droplets results in optimum quality of coating. Light weight design and easy to control the spray parameters. Minimum internal parts hence less maintenance. Also can be mounted directly on perforated sheet

Design Features

- Optimum spray quality
- Easy to assemble and dismantle
- Auto shut off feature (Available in WS 50AS)
- Special air cap design to avoid material build-up
- GMP Suitable design
- Available with various orifices sizes
- Made from SS316L and All O-rings from FDA Approved material
- Custom made designs available
- Easy Mounting



Specifications

| | |
|---------------|--------------------------|
| Spray pattern | : Full cone |
| Spray angle | : 15° - 20° (Adjustable) |
| Orifice range | : 0.5 to 1.8 mm |
| Capacity: | : 0.1 to 1 LPM |

FBP Bottom Spray Nozzle & Lance

WS 200

Spraytech's specially designed and customizable WS 200 Fluid bed Bottom spray (Wurster coating) nozzle helps to improve the wurster coating application and also makes it possible to attain high-quality results in coating pellets and particles.

Suitable for all Small and Medium scale Bottom Spray Coating application. It provides homogenous spray distribution and fine droplets which results in optimum quality of coating. It is Light weight and easy to operate.



Design Features

- Optimum spray quality
- Anti-drip spray tip
- Spray angle and atomization Adjustment
- Easy to assemble and dismantle
- Special air cap design to avoid material build-up
- GMP Suitable design
- Available with various orifices sizes
- Made from SS316L and All O-rings from FDA Approved material
- Custom made designs available

Specifications

| | |
|---------------|--------------------------|
| Spray pattern | : Full cone |
| Spray angle | : 15° - 20° (Adjustable) |
| Orifice range | : 0.5 to 2.0 mm |
| Capacity | : 0.1 to 1.5 LPM |

WS 300

Spraytech's WS 300 popularly known as High speed gun is specially designed for higher capacity Fluid bed Bottom spray (Wurster coating) application. Its unique design and Higher capacity helps to improve the wurster coating application and also makes it possible to attain high-quality results in coating pellets and particles in less time.

Suitable for all type of Bottom Spray Coating application with homogenous spray distribution and fine droplets that results in optimum quality of coating.

Design Features

- High capacity spray nozzle
- Optimum spray quality
- Spray angle and atomization Adjustment
- Anti-drip spray tip
- Auto-clean needle assembly
- Special air cap design to avoid material build-up
- GMP Suitable design
- Anti-clogging lance
- Available with various orifices sizes
- Made from SS316L and All O-rings from FDA Approved material
- Custom made designs available

Specifications

| | |
|---------------|-------------------------|
| Spray pattern | : Full cone |
| Spray angle | : 15° -20° (Adjustable) |
| Orifice range | : 0.5 to 2.5 mm |
| Capacity | : 0.1 to 1.5 LPM |



RMG / HSG Top Spray Nozzle & Lance

GN 400

Spraytech's RMG / HSG Top Spray Nozzles & Lance are design for Large Scale, Medium Scale and Lab Scale Rapid Mixer Granulator and High - Shear Granulator for Wet Granulation. Superior spray quality produces best in class granules from bulk. Manufactured according to GMP and available in wide range of spray rates. And external mixing spray setup enhances the spray quality and distribution in optimum way.

Spray Nozzles and special purpose lance designs available

Design Features

- Available in 1, 3, 4 spray heads
- Available in various spray angles
- Auto-shut off feature
- Anti-drip spray heads
- Long Life Lance design
- Compact design of spray nozzle
- Homogeneous spray distribution
- Fine droplet size, best for wet granulation,
- GMP Suitable design
- Anti-clogging lance design
- Made from SS316L and All O-rings from FDA Approved material
- Custom made designs available



Internal Mix Setup



Spray angle range : 60° - 80°

Flow range : 10 LPM to 50 LPM

Features:

- Anti drip Spray setup
- Auto shut off
- Finest droplet Size



Special Design For R&D & Pilot RMG / HSG Equipment

Spray angle range: 20° - 90°

Flow range : 1 LPM to 8 LPM

Steel Mill Spray Nozzles Spray Header, Lance & Engineering Systems



Billet Caster Spray Nozzle

FULL CONE DB SERIES NOZZLE

Application : Continuous Casting Machine for Secondary Cooling

Spray Characteristics

- Produces a full cone pattern
- Sprayed volume is evenly distributed across spray pattern
- Available with a range of spray angle

Materials and Construction

- Standard materials are Brass and Stainless Steel
- Male and female thread available
- 3/8" or 1/4" BSP / NPT threaded connections available
- Specially designed internal core ensures a good resistance to clogging
- Standard spray angle 45°, 65°, 80°, 90°, and other spray angle on request.

Stainless steel

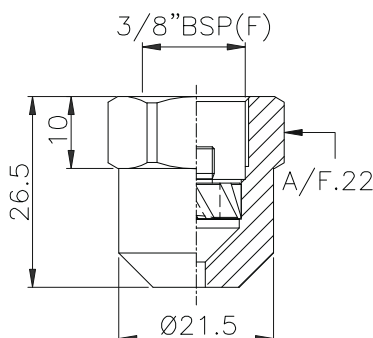


| Flow Rate (l/min) @ Different Pressure Value (Bar) | | | | | | | | | |
|--|-----------|-------|---------|---------|---------|---------|---------|---------|---------|
| Sr. No. | Model No. | Angle | 1.0 Bar | 2.0 Bar | 2.8 Bar | 4.0 Bar | 5.0 Bar | 6.0 Bar | 7.0 Bar |
| 1 | DB 2045 | 45° | 1.20 | 1.69 | 2.00 | 2.39 | 2.67 | 2.93 | 3.16 |
| 2 | DB 2545 | 45° | 1.99 | 2.11 | 2.50 | 2.98 | 3.34 | 3.65 | 3.95 |
| 3 | DB 3045 | 45° | 1.80 | 2.50 | 3.00 | 3.60 | 4.00 | 4.40 | 4.75 |
| 4 | DB 3545 | 45° | 2.10 | 2.95 | 3.50 | 4.20 | 4.70 | 5.10 | 5.55 |
| 5 | DB 4045 | 45° | 2.40 | 3.40 | 4.00 | 4.80 | 5.30 | 5.85 | 6.30 |
| 6 | DB 4745 | 45° | 2.80 | 4.00 | 4.70 | 5.60 | 6.30 | 6.90 | 7.40 |
| 7 | DB 5045 | 45° | 3.00 | 4.20 | 5.00 | 6.00 | 6.70 | 7.30 | 7.90 |
| 8 | DB 6045 | 45° | 3.60 | 5.10 | 6.00 | 7.20 | 8.00 | 8.80 | 9.50 |
| 9 | DB 7045 | 45° | 4.50 | 5.90 | 7.00 | 8.35 | 9.35 | 10.25 | 11.05 |
| 10 | DB 8045 | 45° | 4.80 | 6.80 | 8.00 | 9.60 | 10.70 | 11.70 | 12.65 |

Brass



| Flow Rate (l/min) @ Different Pressure Value (Bar) | | | | | | | | | |
|--|-----------|-------|---------|---------|---------|---------|---------|---------|---------|
| Sr. No. | Model No. | Angle | 1.0 Bar | 2.0 Bar | 2.8 Bar | 4.0 Bar | 5.0 Bar | 6.0 Bar | 7.0 Bar |
| 1 | DB 1565 | 65° | 0.90 | 1.25 | 1.50 | 1.80 | 2.00 | 2.20 | 2.35 |
| 2 | DB 2065 | 65° | 1.20 | 1.70 | 2.00 | 2.40 | 2.70 | 2.90 | 3.15 |
| 3 | DB 2565 | 65° | 1.49 | 2.11 | 2.50 | 2.98 | 3.34 | 3.65 | 3.95 |
| 4 | DB 3065 | 65° | 1.80 | 2.50 | 3.00 | 3.60 | 4.00 | 4.40 | 4.75 |
| 5 | DB 3565 | 65° | 2.10 | 2.95 | 3.50 | 4.20 | 4.70 | 5.10 | 5.55 |
| 6 | DB 4065 | 65° | 2.40 | 3.40 | 4.00 | 4.80 | 5.30 | 5.85 | 6.30 |
| 7 | DB 5065 | 65° | 3.00 | 4.20 | 5.00 | 6.00 | 6.70 | 7.30 | 7.90 |
| 8 | DB 6065 | 65° | 3.60 | 5.10 | 6.00 | 7.20 | 8.00 | 8.80 | 9.50 |
| 9 | DB 7065 | 65° | 4.20 | 5.90 | 7.00 | 8.35 | 9.35 | 10.25 | 11.05 |
| 10 | DB 7565 | 65° | 4.50 | 6.35 | 7.50 | 8.95 | 10.00 | 10.95 | 11.85 |
| 11 | DB 8065 | 65° | 4.80 | 6.80 | 8.00 | 9.60 | 10.70 | 11.70 | 12.65 |
| 12 | DB 9065 | 65° | 5.40 | 7.60 | 9.00 | 10.75 | 12.00 | 13.15 | 14.25 |
| 13 | DB 10065 | 65° | 6.00 | 8.45 | 10.00 | 11.95 | 13.40 | 14.60 | 15.80 |
| 14 | DB 12065 | 65° | 7.20 | 10.10 | 12.00 | 14.30 | 16.00 | 17.60 | 18.95 |
| 15 | DB 13065 | 65° | 7.77 | 10.99 | 13.00 | 15.54 | 17.37 | 19.03 | 20.55 |
| 16 | DB 15065 | 65° | 8.96 | 12.68 | 15.00 | 17.93 | 20.04 | 21.96 | 23.72 |
| 17 | DB 16065 | 65° | 9.55 | 13.50 | 16.00 | 19.10 | 21.40 | 23.40 | 25.30 |



These part numbers are easy to use and identify, example:

Brass or Stainless steel 3/8" Female - DB 2045 / DB2065 = 2.00 litre/min @ 2.8 bar with a 45° & 65° angle

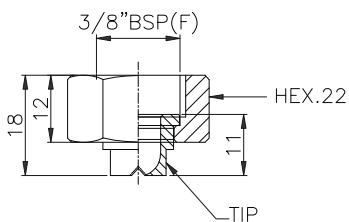
| Flow Rate (l/min) @ Different Pressure Value (Bar) | | | | | | | | | |
|--|-----------|-------|---------|---------|---------|---------|---------|---------|---------|
| Sr. No. | Model No. | Angle | 1.0 Bar | 2.0 Bar | 2.8 Bar | 4.0 Bar | 5.0 Bar | 6.0 Bar | 7.0 Bar |
| 1 | DB 1580 | 80° | 0.90 | 1.25 | 1.50 | 1.80 | 2.00 | 2.20 | 2.35 |
| 2 | DB 2080 | 80° | 1.20 | 1.70 | 2.00 | 2.40 | 2.65 | 2.90 | 3.15 |
| 3 | DB 3080 | 80° | 1.80 | 2.50 | 3.00 | 3.60 | 4.00 | 4.40 | 4.75 |
| 4 | DB 3580 | 80° | 1.80 | 2.50 | 3.50 | 3.60 | 4.00 | 4.40 | 4.75 |
| 5 | DB 4080 | 80° | 2.40 | 3.40 | 4.00 | 4.80 | 5.30 | 5.85 | 6.30 |
| 6 | DB 5080 | 80° | 3.00 | 4.20 | 5.00 | 6.00 | 6.70 | 7.30 | 7.90 |
| 7 | DB 6080 | 80° | 3.60 | 5.10 | 6.00 | 7.20 | 8.00 | 8.80 | 9.50 |

| Flow Rate (l/min) @ Different Pressure Value (Bar) | | | | | | | | | |
|--|-----------|-------|---------|---------|---------|---------|---------|---------|---------|
| Sr. No. | Model No. | Angle | 1.0 Bar | 2.0 Bar | 2.8 Bar | 4.0 Bar | 5.0 Bar | 6.0 Bar | 7.0 Bar |
| 1 | DB 1590 | 90° | 0.90 | 1.25 | 1.50 | 1.80 | 2.00 | 2.20 | 2.35 |
| 2 | DB 2090 | 90° | 1.20 | 1.70 | 2.00 | 2.40 | 2.65 | 2.90 | 3.15 |
| 3 | DB 3090 | 90° | 1.80 | 2.50 | 3.00 | 3.60 | 4.00 | 4.40 | 4.75 |
| 4 | DB 3590 | 90° | 1.80 | 2.50 | 3.50 | 3.60 | 4.00 | 4.40 | 4.75 |
| 5 | DB 4090 | 90° | 2.40 | 3.40 | 4.00 | 4.80 | 5.30 | 5.85 | 6.30 |
| 6 | DB 5090 | 90° | 3.00 | 4.20 | 5.00 | 6.00 | 6.70 | 7.30 | 7.90 |
| 7 | DB 6090 | 90° | 3.60 | 5.10 | 6.00 | 7.20 | 8.00 | 8.80 | 9.50 |

These part numbers are easy to use and identify, example:

Brass or Stainless steel 3/8" Female - DB 2080 / DB 2090 = 2.00 litre/min @ 2.8 bar with a 80° & 90° angle

Flat Tip in Billet Caster











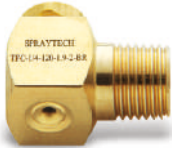

Flat nozzle tips are usually mounted onto a pipe using a welded 3/8" nipple or a clamp and secured in place with a retaining nut. The precision machined orifices can be protected against the risk of clogging by using a filter which fits neatly into the nipples and clamps, specifically designed for this purpose.







| Flow Rate (l/min) @ Different Pressure Value (Bar) | | | | | | | | | |
|--|-----------|-------|---------|---------|---------|---------|---------|---------|---------|
| Sr. No. | Model No. | Angle | 1.0 Bar | 2.0 Bar | 2.8 Bar | 4.0 Bar | 5.0 Bar | 6.0 Bar | 7.0 Bar |
| 1 | CC 2065 | 65° | 1.20 | 1.70 | 2.00 | 2.40 | 2.70 | 2.90 | 3.15 |
| 2 | CC 2565 | 65° | 1.49 | 2.11 | 2.50 | 2.98 | 3.34 | 3.65 | 3.95 |
| 3 | CC 3065 | 65° | 1.80 | 2.50 | 3.00 | 3.60 | 4.00 | 4.40 | 4.75 |
| 4 | CC 3565 | 65° | 2.10 | 2.95 | 3.50 | 4.20 | 4.70 | 5.10 | 5.55 |
| 5 | CC 4065 | 65° | 2.40 | 3.40 | 4.00 | 4.80 | 5.30 | 5.85 | 6.30 |
| 6 | CC 5065 | 65° | 3.00 | 4.20 | 5.00 | 6.00 | 6.70 | 7.30 | 7.90 |
| 7 | CC 5765 | 65° | 3.28 | 4.64 | 5.70 | 6.57 | 7.34 | 8.05 | 8.69 |
| 8 | CC 6065 | 65° | 3.60 | 5.10 | 6.00 | 7.20 | 8.00 | 8.80 | 9.50 |
| 9 | CC 8065 | 65° | 4.80 | 6.80 | 8.00 | 9.60 | 10.70 | 11.70 | 12.65 |

These part numbers are easy to use and identify, example:

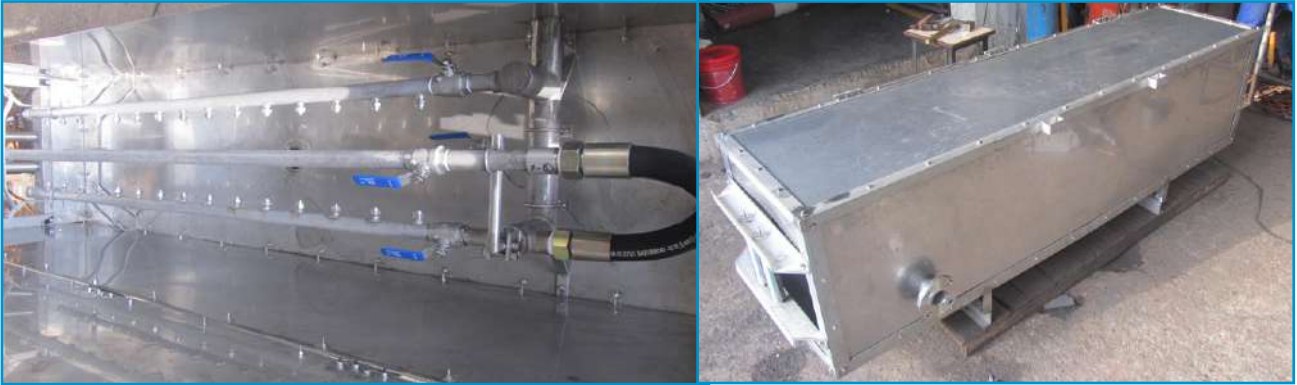
Brass or Stainless steel 3/8" Female - CC 2065 = 2.00 litre/min @ 2.8 bar with a 65° angle

Spray Nozzles for Secondary Cooling in Continuous Casting Machines

| Type of Nozzles | Spray pattern | Spray angle | V water [l/min] min/max | | | Turn down ratio (1 bar/7 bar water) | Material | | End Connection | Applications | Features |
|---|----------------------------|--|-------------------------|---------------|--------------|--|-------------------------|--------------|--|--|---|
| | | | at p [bar] | | | | Brass | SS 304 / 316 | | | |
| | | | 1.0 | 2.0 | 7.0 | | | | | | |
|  | Full cone circular pattern |  45° 60° 90° 120° | min. max. | 0.76 7.58 | 1.0 10.0 | 1.65 16.51 | 1:2.2 up to 1:2.5 | ✓ ✓ | 1/8 BSPT/NPT 1/4 BSPT/NPT 3/4 BSPT/NPT | Billet, Bloom (Rounds): as well as Slabcaster for narrow side or footroller area | ■ Stable spray angle |
|  | Full cone circular pattern |  45° 60° 90° 120° | min. max. | 0.76 7.58 | 1.0 10.0 | 1.65 16.51 | 1:2.2 up to 1:2.5 | ✓ ✓ | Retaining nut 3/8 BSPT/NPT | Billet, Bloom (Rounds): as well as Slabcaster for narrow side or footroller area | ■ Stable spray angle |
|  | Full cone square pattern |  60° 75° 85° 115° | min. max. | 0.95 7.58 | 1.25 10.0 | 2.06 16.51 | 1:2.2 | ✓ ✓ | 1/4 BSPT/NPT 3/8 BSPT/NPT 1/8 BSPT/NPT 1/4 BSPT/NPT | Thin slab, Slab (footroller area) | ■ Stable spray angle |
|  | Oval Full cone |  90° | min. max. | 3.37 5.1 | 4.45 6.85 | 7.34 11.31 | 1:2.2 | ✓ ✓ | 1/4 BSPT/NPT 1/4 BSPT/NPT 1/8 BSPT/NPT | Thin slab, Slab (e.g. footroller area) | ■ Stable spray angle |
|  | Vanless Full cone circular |  60° 90° 120° | min. max. | 0.71 11.31 | 1.0 16.0 | 1.87 29.9 | 1:2.6 | ✓ ✓ | 1/4 BSPT/NPT 3/8 BSPT/NPT | Billet, Bloom (Rounds): | ■ Vanless full cone nonclogging type |

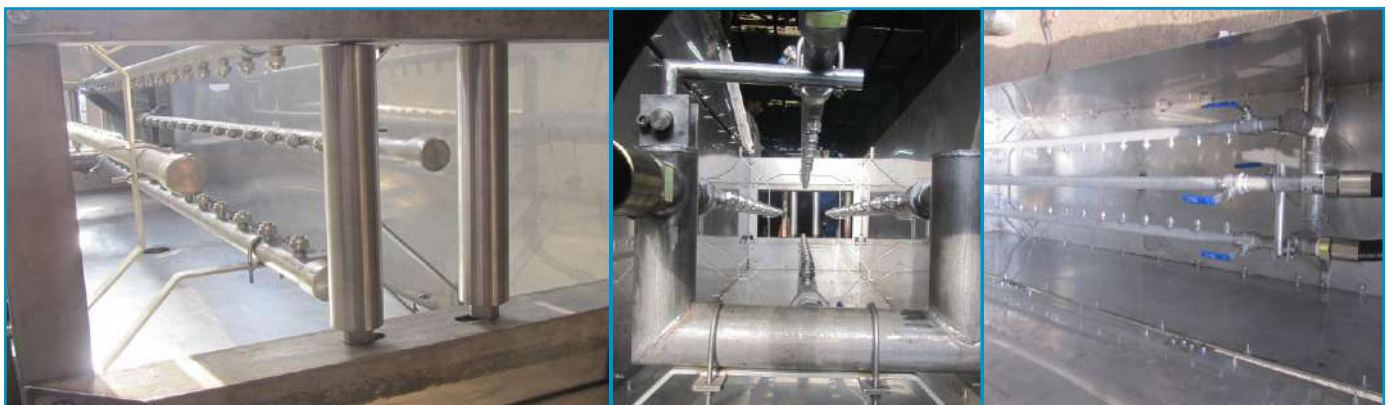
| Type of Nozzles | Spray pattern | Spray angle | Nozzles Size from -up to | Vwater [l/min] min/max | | | | | | Turn down ratio @ 2 bar air | Material | | End Connection | | Applications | Features |
|---|--------------------|---|-----------------------------|------------------------|------------|-------------|-----------|-------------|-------------|--------------------------------|----------|--------------------------------|--------------------------------|---|--|----------|
| | | | | 1 Bar Water | | 2 Bar Water | | 7 Bar Water | | | Brass | SS 304 / 316 | Water | Air | | |
| | | | | Water | Air | Water | Air | Water | Air | | | | | | | |
|  | Full cone circular |  30° 60° 90° | min. max. | 0.45 0.95 | 14 25.2 | 2.0 4.2 | 10 18 | 6.5 13.6 | 4 72 | 1:15 | ✓ ✓ | Console | Console | Billet, Bloom | <ul style="list-style-type: none"> ■ Finest droplet spectrum ■ Wide turn down ratio to flow rate ■ Large, free cross sections ■ Strong flow impuls | |
|  | Flat parabolic |  30° 60° 90° 120° 140° | min. max. | 0.5 0.95 | 19 70 | 1.6 8.5 | 18 50 | 4 28 | 16.5 28 | 1:35 | ✓ ✓ | 1/4 NPT 1/4 BSPP Console | 3/8 NPT 3/8 BSPP Console | Billet, Bloom, Slab | <ul style="list-style-type: none"> ■ Quick and easy cleaning ■ Patented mixing insert ■ Self aligning tip | |
|  | Flat parabolic |  80° 90° 100° 120° 130° or to suit | min. max. | 2.25 8 | 9.8 60 | 3.6 18 | 9.5 55 | 8.6 50 | 6.8 23.5 | 1:5 (1:8*) | ✓ ✓ | 3/8 BSPP 1/2 BSPP | 3/8 BSPP 1/2 BSPP | Billet, Bloom, Slab, thin slab | <ul style="list-style-type: none"> ■ Uniform water distribution ■ Stable spray angle at all pressures and flows | |

Spray Header & System Fabrication

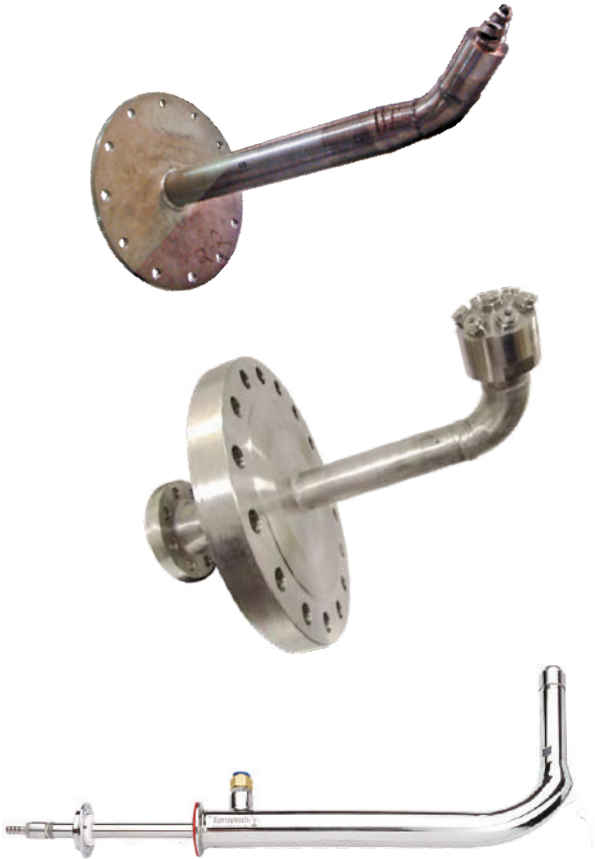


We are manufacturing “**SPRAY HEADERS**” as per **Indian, British, German, & Us Standard** for various applications. Spray headers that accommodate different types of nozzles and ensure perfect overlapping spray patterns or non-overlapping spray patterns for applications where uniform coverage is critical.

We design, Engineer & Manufacture complete **Roll Coolant Systems** including Headers, Spray Pipes also laminar spray headers for hot strip mill, Spray pipes for mould & Caster segment of integrated steel plants, Lance with & With out spill back type systems for sponge iron plants.



Spray Headers Fabrication

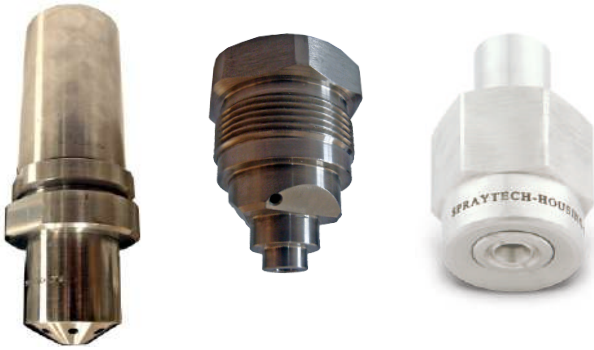


Spray Lance Fabrication



Special Purpose Spray Nozzle

Max Flow Spray Nozzle



Application example :

Gas Cooling in medium sized and large Gas Cooling Towers, e.g. in the Cement, Lime, Glass and Iron & Steel Industry

Technical data :

Spray Angle: 90°, 60°, 45°
Turn down ratio: ≥ 10 : 1
Typical operating pressure: 35 bar (g)

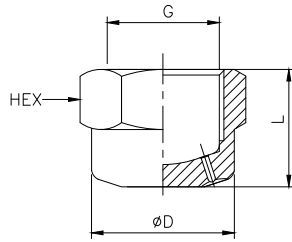
Spillback Spray Nozzle



Atomize liquids as a fine hollow cone Irrespective of the atomized flow rate, the medium is always carried to the nozzles at the same high pressure.

Regulation is performed by opening a control valve in the Reverse Flow Nozzle line which takes a partial flow rate from the atomization and carries it back to the tank. The maximum atomized flow rate is achieved with the control valve closed. Even, fine liquid atomization is achieved across the entire control range.

Fog Spray Nozzle



Design Features

: This non clogging nozzle gives fine atomization with the aid of several flat spraying into one another.

Applications

: Fire Protection, Dust Control, Aerating, Chemical Processing.

| Nozzle Conn. (G) | D | L | Hex |
|------------------|------|------|-----|
| 3/4" | 31.5 | 25.4 | 32 |
| 1" | 40.5 | 29.4 | 41 |
| 1-1/4" | 45.5 | 31 | 46 |

M.O.C. : SS304, SS316, Brass, PVC, etc.

| Nozzle Inlet Conn. NPT/BSP T/ BSPP | Hose Size | Nozzle Type | | Capacity | | | | | |
|------------------------------------|-----------|-------------|--------------|----------|-------|-------|-------|-------|--------|
| | | Spray Angle | Conn. Female | 1 bar | 2 bar | 3 bar | 5 bar | 7 bar | 10 bar |
| 3/4" | 1" | 70° / 90° | ✓ | 11 | 16 | 19.5 | 25.5 | 30 | 36 |
| 3/4" | 1" | 70° / 90° | ✓ | 21.5 | 30 | 36.5 | 47 | 56 | 67 |
| 3/4" | 1" | 70° / 90° | ✓ | 28 | 40 | 49 | 63 | 75 | 89.5 |
| 3/4" | 1" | 70° / 90° | ✓ | 42.5 | 60 | 73.5 | 95 | 112 | 134 |
| 1" | 1-1/4" | 70° / 90° | ✓ | 57 | 80 | 98 | 126.5 | 150 | 179 |
| 1" | 1-1/4" | 70° / 90° | ✓ | 79 | 112 | 137 | 177 | 209 | 250.5 |
| 1-1/4" | 1-1/2" | 70° / 90° | ✓ | 113 | 160 | 196 | 253 | 299.5 | 358 |
| 1-1/4" | 2" | 70° / 90° | ✓ | 159.5 | 225 | 275.5 | 356 | 421 | 503 |

Dry Fog Spray Nozzle

Nozzle For Humidification -
Nozzle Flow Charts at Nominal Settings



| Water Flow Litres / hour | Water Pressure Bar | Air Pressure Bar | Air Rate Litres / sec (cfm) | Droplet Size Range micron |
|--------------------------|---------------------|------------------|-----------------------------|---------------------------|
| Nozzle size 03 5H | 0.4-8 lts/hr | | | |
| 3 | 1.0 | 4.0 | 0.8 (1.7) | 1 to 5 |
| Nozzle size 05 2H | 1-20 lts/hr | | | |
| 8 | 1.0 | 5.0 | 1.84 (3.9) | 3 to 8 |
| Nozzle size 08 6H | 2-26 lts/hr | | | |
| 20 | 1.0 | 5.0 | 5.19 (11.0) | 5 to 20 |
| Nozzle Size 12 5H | 4-55 lts/hr | | | |
| 40 | 1.0 | 5.0 | 7.08 (15.0) | 25 to 65 |
| Nozzle size ST52 | 1-20 lts/hr | | | |
| 8 | 1.0 | 5.0 | 1.84 (3.9) | 3 to 10 |
| Nozzle size ST47 | 2-30 lts/hr | | | |
| 18 | 1.0 | 5.0 | 5.19 (11.0) | 5 to 20 |
| Nozzle size ST33 | 8-55 lts/hr | | | |
| 40 | 1.0 | 5.0 | 7.08 (15.0) | 25 to 65 |

Desuperheaters

Desuperheating, sometimes called attemperation or steam conditioning, is the reduction of gas temperature. Its most common application is the reduction of temperature in a steam line through the direct contact and vaporation of water. Desuperheaters use uniquely effective methods to inject the water and maximize the surface contact area between the steam and water to increase the rate of water evaporation. Most of our Desuperheaters inject water through several small holes into the path of the high velocity steam where the water is atomized into small water droplets and quickly evaporated into the steam.

The simple spray type Desuperheater is used in applications where the steam load remains relatively constant. Cooling water is injected into the superheated steam through a nozzle. The steam temperature is reduced by evaporative cooling. The maximum turndown ratio of the spray type Desuperheaters is 2:1. Air atomizing type Spray Nozzles & Hollow Cone type Spray Nozzles are a good option for Spray type Desuperheaters.



Deaerator

Deaeration is a process by which dissolved gases are removed from water. Since proper deaeration of boiler feed water is essential to minimise oxygen corrosion and carbon dioxide attack, almost every boiler plant uses deaerating systems. Nowadays modern deaerating systems can be designed to obtain a residual oxygen content as low as 0.005 ml/liter.

Spray type Deaerators are simple, cost effective and virtually maintenance free systems that can operate under variable loads without significant impact on heating or deaerating performances. For the above reasons, this kind of Deaerator is widely used for industrial applications. Spray Deaerators do not require corrosion resistant materials because all the water in contact with the shell is sufficiently deaerated and non-corrosive at the operating conditions.

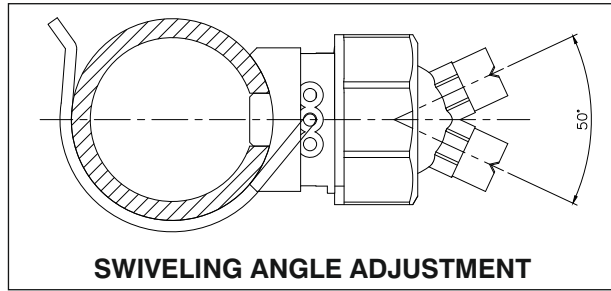
Full Cone and Spiral Full Cone series of Spraytech Nozzles can be used for this purpose.



General Engineering Spray Nozzles & Accessories



Clip On Spray Nozzles



SPRAY CHARACTERISTICS :

These nozzles simply clip over a pre-drilled pipe (9/16" dia. hole) and are available with a variety of easy clip, in various spray patterns, flow rates and spray angles. Retaining cap holds the tip in position, even when the nozzle is jarred or vibrated.

Range :

Flow rate (lpm) at 2 bar Pressure : 1 LPM to 40 LPM.
Connection : 1/4", 3/8" BSP

Construction :

Made of corrosion-resistant plastic and stainless steel. Heavy-duty spring clip good to 100 p.s.i. at 175°F. A 316SS clip is also available, if required. Simple quick assembling, Ball joint, omnidirectional swivelling range of 30° Simple quick assembling.

Applications :

Part Cleaning, phosphating, degreasing, rinsing, surface treatment. Easy adjusting and cleaning.

THE SPRAYTECH "CLIP-ON" ASSEMBLY

The spring clamp is the heaviest and most durable used in the industries. It provides long services at pressures up to 100 p.s.i.

Hundreds of standard nozzle balls and spray tip options are available when using our female threaded ball.

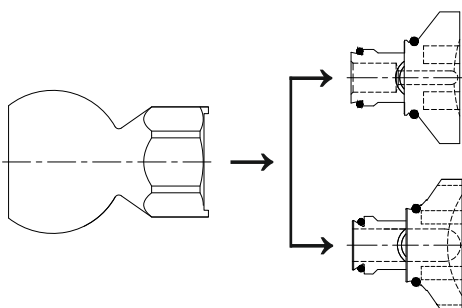
The cap has strong butress threads and is made from glass filled polypropylene.

Standard O-Ring seal is EPDM. Burna-N, Viton®, and special "retrofit" seals are available.

Square fitting glass filled polypropylene bodies are available in various pipe sizes and are good up to 175°F.

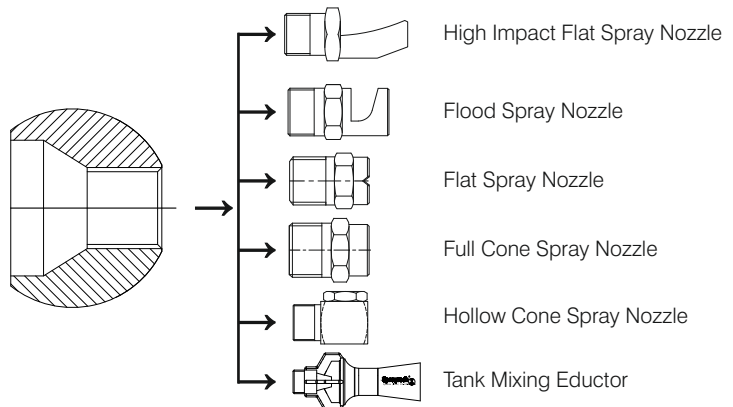
"Clip-on" assembly holds the ball securely in alignment to prevent movement when the cap is tightened. The "clip-on" assembly is optional on all Spraytech adjustable nozzles.

QUICK RELEASE CLIP-ON ADAPTERS

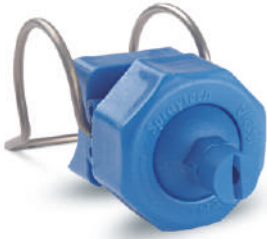


Any quick release type spray nozzle

THREADED BALL



Clip On Type Assembly With Flat Spray Nozzles



Specially purpose dedicated designed Clipon type spray nozzle allows to mounting and removal from spray riser / header without efforts and spanners for cleaning purposes. and ball type body of spray nozzle provides swivel type joint to adjust in various directions.

Clipon type spray nozzles are enhanced with different sized clips (made of spring steel) which provides strong clamping on riser/ header. Clips are available in 1", 1-1/4", 1-1/2", 2" ID etc sizes.

- Ball body type spray nozzles allow to set in various spray directions as per requirement for surface to be cleaned.
- Clips used for clamping withstand to the pressure of 4 BARG.(60 psi)
- Made of PP material which is resistant to chemicals, and give a long running life.
- Flat type spray tips give high impact with wide coverage.
- This type of spray nozzles can be used to spray Phosphates
- Maximum temperature of 180°F (82°C).

In addition to swivel ball type body, quick release type flat spray tip allow to get dismantled from clipon assembly without disturbing previous directional settings of assembly.

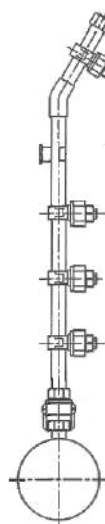
- Easy to mount on clipon assembly without disturbing previous directional settings
- Flat type spray tips give high impact with wide coverage.
- Clips used for clamping with stand to the pressure of 4 BARG.(60 psi)
- Made of PP material which is resistant to chemicals, and give a long running life.
- Maximum temperature of 180°F (82°C).



Quick Fit Risers & Header Manifolds

Our products for surface pretreatment plants is complete inclusive of the riser pipes, header manifolds as per the system manufacturers drawings & designs. As per the requirement of the system & equipment builders, Spraytech has developed all necessary parts for the professional assembly of the header manifolds and riser pipes. These are customized designs, to suit the process and plant layouts. All the header manifolds and riser pipes are also supplied with Spraytech fittings.

The header manifolds are fabricated to customized designed & plant layout. Typical manifold and risers mounted in a pre-treatment tunnel appears in the photo.



Material : PP : Polypropylene ; AISI 304 Stainless Steel

TE Series Tank Mixing Eductor

DESIGN FEATURES

- Effective, economical way to Circulate liquids in closed or open tanks
- No Moving parts
- Inherently clog resistant
- Requires minimal maintenance
- Nozzles operation creates multiplying effect on fluid flow



Plastic Versions

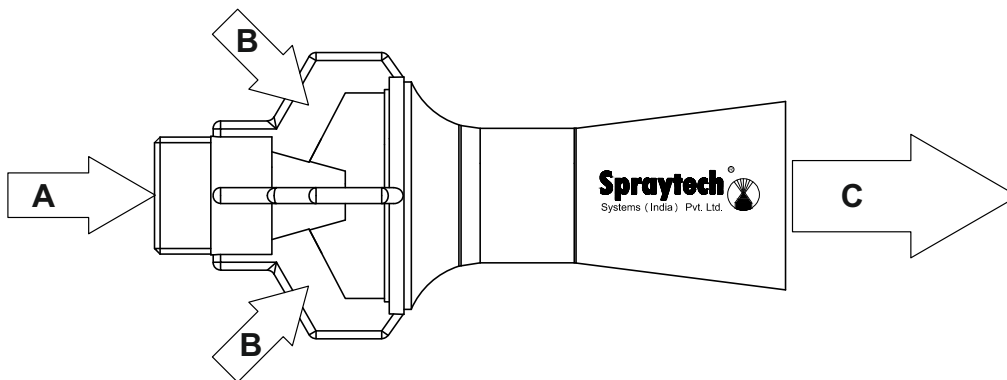


Metal Versions

SPRAY CHARACTERISTICS

- Cone -shaped plume Flow rates: 26.7 to 12000 L/min (motive)
- The volume of discharge liquid will be 3-5 times greater than the motive liquid pumped.
- It's unique venturi design ensures proper mixing of tank Solution.

Eductors have a unique venturi design which enables smaller pumps to circulate large volumes of tank solution. The eductor will circulate four to five gallons of solution for each gallon pumped. Eductors are used for mixing chemicals, suspending solids, adjusting pH, "sweeping" debris or sludge toward a filter intake and many other useful applications.



A = Inlet Flow Rate
B = Entrained Flow Rate
C = (A+B) Out Flow

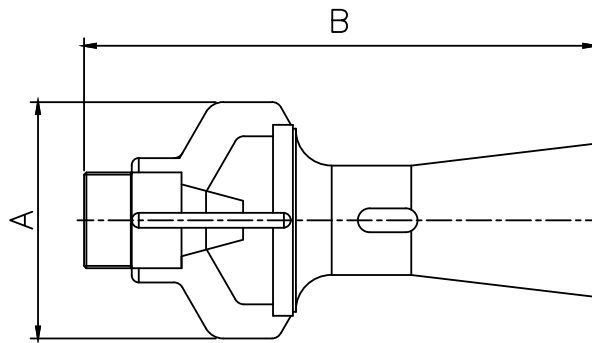
Application

- | | | |
|---------------------|----------------|------------------------|
| • Plating Tanks | • Pulp Tanks | • Anodizing Tanks |
| • Phosphating Tanks | • Sludge Tanks | • Cooling Towers |
| • Fertilizer tanks | • Paint Booths | • Decorative Fountains |

TE Series Tank Mixing Educator



Plastic Versions

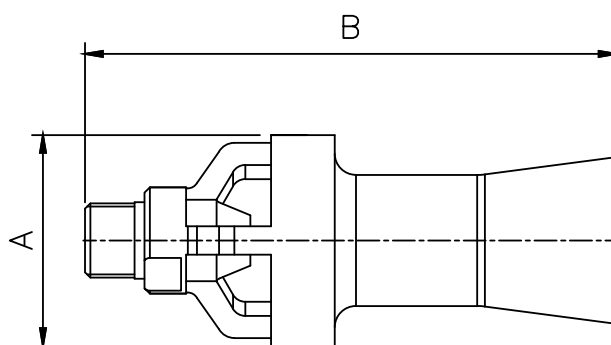


Plastic Versions

| PLASTIC | | | | | | | | | |
|------------------------|--------------|-------------------------------|----------|------------|----------|----------|----------|-----------------|-------|
| Connection Size BSP | Model Number | Motive Flow Rate LPM @ BAR | | | | | | Dimensions (mm) | |
| | | 0.7 bar | 1 bar | 1.5 bar | 2 bar | 3 bar | 4 bar | A | B |
| 1/4 | TE30 | 11.54 | 13.79 | 16.89 | 19.50 | 23.88 | 27.58 | 30.8 | 82.0 |
| 3/8 | TE80 | 30.94 | 37.00 | 45.30 | 52.30 | 64.00 | 74.00 | 52.0 | 114.7 |
| 1/2 | TE93 | 35.50 | 42.43 | 51.96 | 60.00 | 73.48 | 84.85 | 71.0 | 161.0 |
| 3/4 | TE120 | 44.37 | 53.03 | 64.95 | 75.00 | 91.86 | 106.07 | 71.7 | 164.3 |
| 1 | TE240 | 88.74 | 106.00 | 129.90 | 150.00 | 183.71 | 212.13 | - | - |
| 1 1/2 | TE350 | 133.11 | 159.10 | 195.86 | 225.00 | 275.57 | 318.20 | 115.4 | 254.1 |



Metal Versions



Metal Versions

| METAL | | | | | | | | | | |
|-------------------------------------|-------|--------------|-------------------------------|----------|------------|----------|----------|----------|-----------------|-------|
| Connection Size BSP / BSPT / NPT | | Model Number | Motive Flow Rate LPM @ BAR | | | | | | Dimensions (mm) | |
| | | | 0.7 bar | 1 bar | 1.5 bar | 2 bar | 3 bar | 5 bar | A | B |
| Threaded | 1/4 | TE35 | 13.6 | 16.2 | 19.92 | 23 | 28.1 | 36.3 | 36 | 80 |
| | 3/8 | TE73 | 27.8 | 33.2 | 40.70 | 47 | 57.5 | 74.3 | 49.5 | 115 |
| | 1/2 | TE120 | 45.8 | 54.2 | 66.4 | 76.7 | 93.94 | 121.2 | 59.5 | 150 |
| | 3/4 | TE150 | 57.2 | 68.3 | 83.7 | 96.7 | 118.4 | 152.9 | 69.5 | 167 |
| | 1 | TE240 | 88.74 | 106.7 | 129.9 | 150 | 183.7 | 237.1 | 89 | 241 |
| | 1 1/2 | TE340 | 129.5 | 154.8 | 189.6 | 219 | 268.2 | 346.2 | 114 | 252 |
| | 2 | TE620 | 236.5 | 282.1 | 345.5 | 399 | 488.6 | 630.8 | 134 | 290 |
| | 3 | TE1500 | 572.0 | 683.7 | 837.4 | 967 | 1184.3 | 1528.9 | 174 | 375.5 |
| Flange End | 4 | TE2510 | 952.5 | 1138.4 | 1394.3 | 1610 | 1971.8 | 2545.6 | -- | -- |
| | 6 | TE6010 | 2271.7 | 2715.2 | 3325.5 | 3840 | 4703.0 | 6071.5 | -- | -- |
| | 8 | Te10050 | 3804.0 | 4546.7 | 5568.5 | 6430 | 7875.1 | 10166.7 | -- | -- |

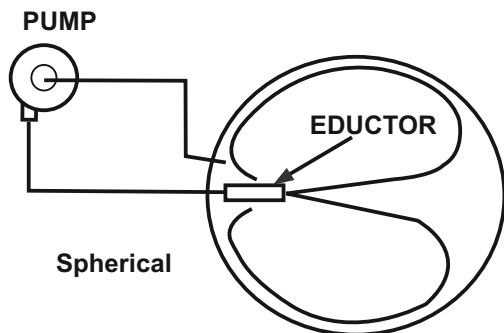


Figure 1
Eductor in a round tank



Figure 2
Eductors in a tank providing mixing.

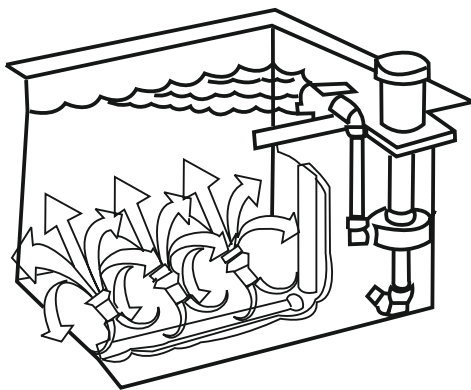


Figure 3
Multiple eductor assembly

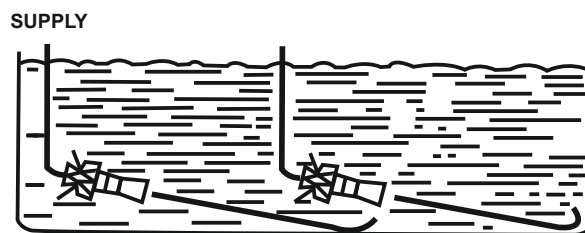


Figure 4
Eductors in a tank maintaining suspension and mixing of solids.

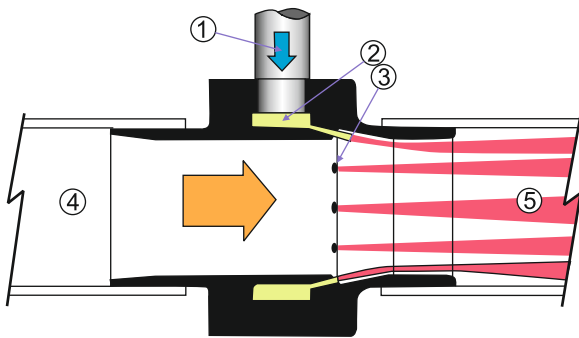
Mounting

An eductor can be mounted in any position. The supply line and manifold piping to multiple eductors must be sized to supply uniform pressure to each eductor. It is important that the eductor be positioned within the tank to insure the free flow of liquid to be mixed into and out of the units. The greatest agitation occurs within the discharge plume; therefore, the discharge end should be aimed towards the most remote part of the tank. On the other hand, the intake end of the unit must be just far enough from the tank corner or wall to allow the free flow of liquid into the suction openings.

Tank shape and size influence the placement and number of eductors required to maintain even agitation. With a spherical tank, a single eductor mounted as shown in the Figure 1 illustration makes the best use of the mixing characteristics of the eductor. With no corners to impede liquid flow, the liquid circulates evenly.

In simple mixing applications in a cylindrical, square or rectangular tank, not a plating tank, the angular intersection of stagnation in these areas. A single eductor mounted as shown in Figure 2 will minimize this. For high agitation, use of multiple eductors are recommended as shown in Figure 3.

A slight downward angle of the eductors can be helpful in maintaining the velocity at the tank bottom which is necessary to keep solids in suspension for easier removal by a filter system. (See Figure 4)



Compressed air flows through the inlet

(1) into an annular plenum chamber (2) It is then injected into the throat through directed nozzles (3) These jets of air create a vacuum at the intake (4) which draws material in and accelerates it through the unit (5) for conveying over long vertical or horizontal distances.

Air Conveyor is available in a number of styles, materials, and sizes. Each has a large, smooth, straight bore that allows as much material to pass through as possible. Infinite control of the flow rate though the Air conveyor can be controlled by a pressure regulator. Kits include a pressure regulator that is sized properly for flow.

The actual conveying rate is affected by the size, mass and geometry of the part to be conveyed along with the length, lift and number of bends in the hose, tube or pipe. These variables make it difficult to determine the exact conveying rate for any product, however, the application engineering can assist you by comparing the material you want to convey with something that has already been tested.

Air Conveyor Performance

| 80 PSIG (5.5 BAR) | Air Consumption | | Vacuum | |
|-------------------|-----------------|------|--------|------|
| | SCFM | SLPM | H2O | kPa |
| Model | | | | |
| 2710 | 10.7 | 303 | -72 | -18 |
| 4214 | 14.7 | 416 | -42 | -11 |
| 4225 | 25.9 | 733 | -42 | -11 |
| 3633 | 33 | 934 | -36.8 | -9 |
| 2845 | 45 | 1274 | -28.5 | -7 |
| 2358 | 58.5 | 1656 | -23.5 | -6 |
| 1468 | 68.5 | 1939 | -14.7 | -4 |
| 1395 | 95 | 2690 | -13.6 | -3.4 |
| 1012 | 128 | 3625 | -10.5 | -2.6 |

| Air Conveyor Comparison | | |
|---|--------------------|----------------------|
| Material Type | Temperature Rating | Corrosion Resistance |
| Aluminum | 275° F (135° C) | Fair |
| Stainless Steel (Type 303) | 400° F (204° C) | Good |
| Stainless Steel (Type 316) | 400° F (204° C) | Excellent |
| High Temperature Stainless Steel (Type 303) | 900° F (482° C) | Good |

Applications :

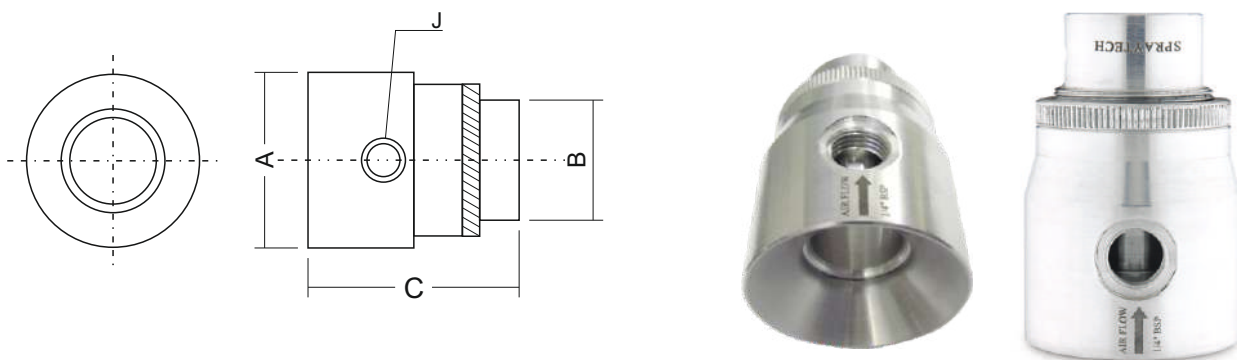
- Hopper loading
- Fiber tensioning
- Material conveying
- Water/trim removal
- Chip removal
- Part transfer
- Filling operations

Adjustable Air Booster

Adjustable Air Booster

The air gap is infinitely adjustable which regulates the consumption and outlet flow from a "breeze" to a "blast". They are available in aluminum or in stainless steel for food service, higher temperatures (400°F/204°C), and corrosive applications. High Temperature Stainless Steel Air Boosters for temperatures up to 700°F (374°C) are also available.

Force and flow for the Adjustable Air Booster is changed by turning the exhaust end (with the knurled ring loose) to open or close the continuous air gap. When desired performance is obtained, the knurled ring can be tightened to lock the flow at that setting. In most cases, a .002" to .004" (0.05mm to 0.10mm) air gap is ideal.



Adjustable Air Booster Performance at 80 PSIG (5.5 BAR)

| MODEL | Air Consumption | | Amplification RATIO | Air Volume at Outlet | | Air Volume at 6" (152mm) | | Sound Level dBA |
|-------|-----------------|------|------------------------|----------------------|-------|--------------------------|--------|--------------------|
| | SCFM | SLPM | | SCFM | SLPM | SCFM | SLPM | |
| 1089 | 8.9 | 252 | 10 | 89 | 2430 | 267 | 7556 | 78 |
| 1612 | 12.9 | 365 | 16 | 206 | 5635 | 618 | 17489 | 81 |
| 2021 | 21.5 | 608 | 20 | 430 | 11739 | 1290 | 36507 | 82 |
| 2235 | 35.2 | 997 | 22 | 774 | 21928 | 2323 | 65784 | 83 |
| 2450 | 50 | 1415 | 24 | 1200 | 33960 | 3600 | 101880 | 84 |

Adjustable Air Booster Dimensions

| MODEL # | A | B | C | D | E | F | G | H | J | |
|---------|----|-----|-----|-----|----|----|----|----|-----|----------|
| 1089 | mm | 38 | 19 | 57 | 11 | 18 | 14 | 27 | 32 | 1/8" NPT |
| 1612 | mm | 51 | 32 | 73 | 21 | 25 | 19 | 35 | 44 | 1/4" NPT |
| 2021 | mm | 79 | 51 | 83 | 42 | 27 | 19 | 38 | 70 | 3/8" NPT |
| 2235 | mm | 102 | 76 | 103 | 56 | 31 | 32 | 46 | 89 | 1/2" NPT |
| 2450 | mm | 127 | 102 | 127 | 77 | 38 | 44 | 54 | 114 | 1/2" NPT |




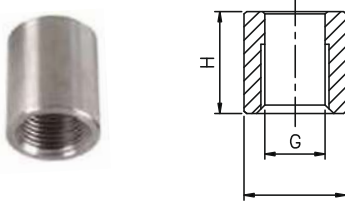
NIPPLES, LOCKNUTS & INTERNAL FILTERS

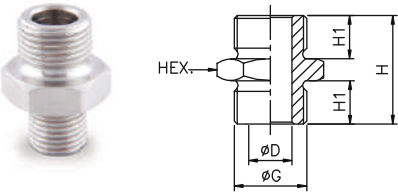
We offer a range of nipples and locknuts in different types and materials to suit most of our customers requirements. Produced in high quality materials and under strict tolerances they ensure a precise and reliable assembly with all nozzles. In your system small size filters ensure individual protection against clogging for individual low capacity nozzles.

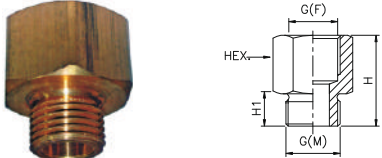
PIPE CLAMPS AND SWIVEL JOINTS


The most extensive range of nozzle clamps engineered for industrial applications to give your system a modern and efficient design with the added value of an easy and well kept at peak performance and long periods of time. Three series of swivels in a wide size range allow the proper connection and quick pointing of the nozzles in your system, improving its overall performances. Swivel joints are available in brass and several stainless steel qualities.

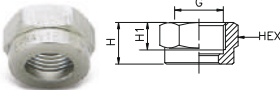
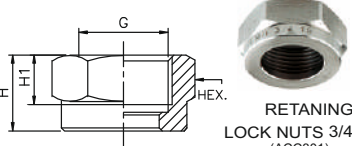
|  | Connector (ACC001) | CONNECTION | H | H1 | H2 | D | HEX |
|---|-----------------------|---------------------|----|----|----|----|-----|
| | | 3/8" (F) X 1/4" (F) | 26 | 10 | 10 | - | 22 |
| | | 1/2" (F) X 3/8" (F) | 30 | 14 | 12 | 30 | 26 |
| | | 3/4" (F) X 3/8" (F) | 34 | 16 | 12 | 36 | 32 |
| | | 1" (F) X 3/8" (F) | 32 | 18 | 12 | 40 | 34 |
| | | 1" (F) X 1/2" (F) | 34 | 18 | 14 | 40 | 34 |
| | | 1" (F) X 3/4" (F) | 36 | 18 | 16 | 40 | 34 |
| | | 2" (F) X 3/8" (F) | 38 | 24 | 12 | 68 | 60 |
| | | 2" (F) X 1/2" (F) | 43 | 24 | 16 | 68 | 60 |
| 2" (F) X 3/4" (F) | 43 | 24 | 16 | 68 | 60 | | |

|  | COUPLING (ACC002) | CONNECTION | H | D |
|---|----------------------|------------|----|------|
| | | 1/8" | 14 | 16 |
| | | 1/4" | 20 | 20 |
| | | 3/8" | 22 | 22 |
| | | 1/2" | 25 | 27 |
| | | 3/4" | 30 | 33.5 |
| | | 1" | 30 | 42 |
| | | 1 1/4" | 40 | 60 |
| | | 1 1/2" | 45 | 60 |
| | | 2" | 50 | 73 |
| | | 2 1/2" | 50 | 90 |
| 3" | 55 | 101.5 | | |


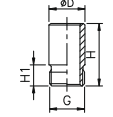

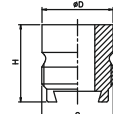

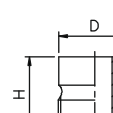

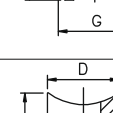

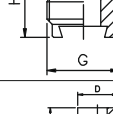
|  | <p>NIPPLE (ACC003)</p> | CONNECTION | H | H1 | HEX |
|---|-----------------------------------|-------------|----|-------|-----|
| | | 3/8" X 1/4" | 25 | 10 | 22 |
| | | 3/8" X 3/8" | 25 | 10 | 22 |
| | | 3/8" X 1/2" | 30 | 10/14 | 24 |
| | | 3/4" X 3/4" | 36 | 14 | 32 |
| | | 3/4" X 1/2" | 36 | 14 | 32 |
| | | 1" X 3/4" | 38 | 16/14 | 38 |
| | | 1" X 1" | 42 | 17 | 38 |

|  | <p>SOCKET (ACC004)</p> | CONNECTION | H | H1 | H2 | HEX |
|---|-----------------------------------|---------------------|------|------|----|-----|
| | | 1/8" (M) X 1/8" (F) | 20 | 6.5 | 7 | 14 |
| | | 1/4" (M) X 1/4" (F) | 27.5 | 9.7 | 11 | 17 |
| | | 1/4" (M) X 3/8" (F) | 27 | 10 | 12 | 22 |
| | | 3/8" (M) X 1/8" (F) | 18.5 | 10.1 | 8 | 17 |
| | | 3/8" (M) X 1/4" (F) | 24 | 12 | 12 | 19 |
| | | 1/2" (M) X 1/8" (F) | 23 | 13.2 | 8 | 22 |
| | | 1/2" (M) X 1/4" (F) | 23 | 13.2 | 11 | 22 |
| | | 1/2" (M) X 3/8" (F) | 25 | 13.2 | 11 | 22 |
| | | 3/4" (M) X 3/8" (F) | 21 | 14.5 | 12 | 27 |
| | | 3/4" (M) X 3/4" (F) | 36 | 14 | 16 | 32 |
| 1" (M) X 1/2" (F) | 26 | 18 | 14 | 36 | | |


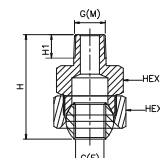

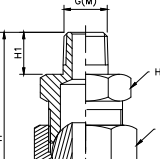

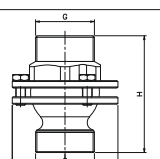

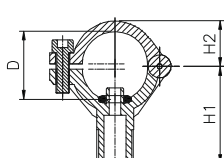
|  | <p>WELDING NIPPLE With Radius (ACC201)</p> | CONNECTION | H | H1 | D |
|---|---|------------|----|------|------|
| | | 3/8" | 18 | 11.5 | 17.5 |
| | | 3/4" | 27 | 15.5 | 27.5 |

|  <p>LOCK NUTS 3/8" (ACC302)</p> |  <p>RETAINING LOCK NUTS 3/4" (ACC301)</p> | CONNECTION | H | H1 | HEX |
|---|---|------------|----|-----|-----|
| | | 3/8"BSPP | 13 | 9.8 | 22 |
| | | 3/4"BSPP | 16 | 13 | 32 |
| | | 1"BSPP | 38 | 32 | 41 |

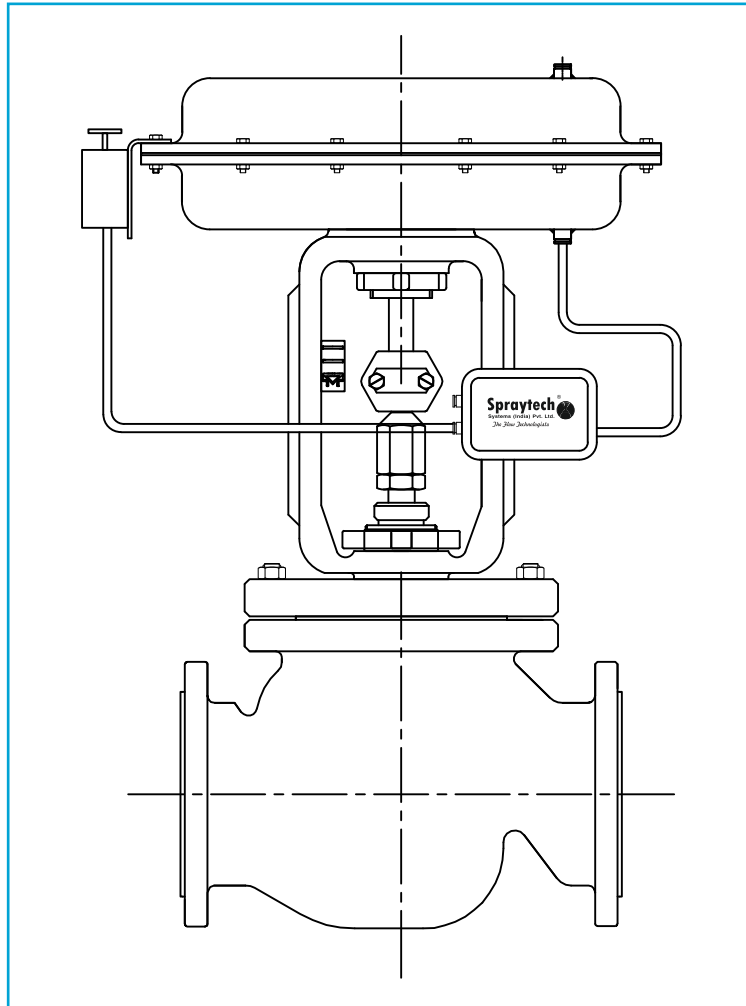
Accessories Welding Nipple

| | | | | | |
|---|--|-------------------|----------|-----------|----------|
|   | Welding Nipple (ACC202) | CONNECTION | H | H1 | D |
| | | 3/8" BSPP | 18 | 11.5 | 17.2 |
|   | Welding Nipple Dovetail (ACC203) | CONNECTION | H | H1 | D |
| | | 3/8" BSPP | 18 | 11.5 | 17 |
|   | Dovetail Nipple (ACC204) | CONNECTION | H | H1 | D |
| | | 3/4" BSPP | 27 | 15.5 | 28 |
| | | 3/4" BSPP | 35 | 15.5 | 28 |
|   | Dovetail Nipple With Radius (ACC205) | CONNECTION | H | H1 | D |
| | | 1" BSPP | 50 | 24 | 38 |
|   | Dovetail Nipple (ACC205) | CONNECTION | H | H1 | D |
| | | 1 1/4" BSPP | 120 | 24 | 44 |

Accessories Ball Joint

| | | | | | | |
|---|---|-------------------|------------|-----------|------------|----------|
|  (ACC401) |  | CONNECTION | H | H1 | HEX | |
| | | 1/8"(M) X 1/8"(F) | 35 | 6.5 | 22/22 | |
| | | 1/4"(M) X 1/4"(F) | 43.5 | 10 | 24/27 | |
| | | 3/8"(M) X 3/8"(F) | 40 | 10.1 | 27/30 | |
| | | 3/8"(M) X 1/4"(F) | 43.5 | 10.1 | 24/27 | |
| | | 1/2"(M) X 1/2"(F) | 61 | 13.2 | 41/41 | |
|  (ACC402) |  | CONNECTION | H | H1 | HEX | |
| | | 1/8"(M) X 1/8"(F) | - | - | - | |
| | | 1/4"(M) X 1/4"(F) | - | - | - | |
| | | 3/8"(M) X 3/8"(F) | - | - | - | |
| | | 3/8"(M) X 1/4"(F) | - | - | - | |
| | | 1/2"(M) X 1/2"(F) | - | - | - | |
|  (ACC403) |  | CONNECTION | H | H1 | D | |
| | | 1" | 90 | 22 | 90 | |
| | | 1 1/2" | 130 | 30 | 90 | |
|  clamp (ACC404) |  | PIPE | MOC | H1 | H2 | D |
| | | 1/2" | PP/PVC | 36 | 16 | 20/22 |
| | | 3/4" | PP/PVC | 40 | 17 | 25/27 |
| | | 1" | PP/PVC | 44 | 21 | 32/35 |

Flow Elements



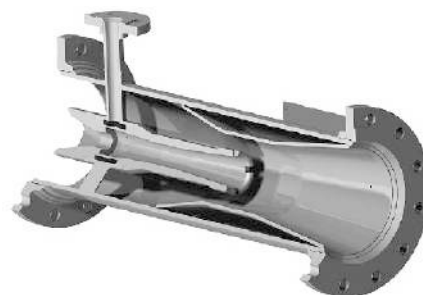
- PRDS
- Orifice assemblies
- Integral assemblies
- Differential pressure flow meter and transmitters analog and digital
- Multistage orifice assemblies
- Single seat globe control and manual valves
- Averaging pitot tubes
- V notch ball control valve
- Flow nozzle
- Positioners and position transmitters
- Flow venturi
- PID Sanitary globe control valve
- 3 way Globe control valve
- Self actuated pressure and flow and temperature regulators
- Manual valves ball, butterfly and gate type
- Sight flow indicators

Pressure Reducing & Desuperheating Station

Desuperheaters reduce the temperature of superheated process steam by introducing finely atomized cooling water droplets into the steam flow.

Desuperheated steam is more efficient in the transfer of thermal energy, consequently desuperheaters are used to bring the outlet degree of superheat closer to that of saturation.

In typical process plants, process steam is usually superheated or heated to a temperature above saturation. The difference, between the saturation temperature and the actual temperature of the steam is called 'superheat'.



Single seat globe control and manual valves

Spraytech Systems have gone ahead with its endeavour of optimizing in process control instruments, in adding control elements in its range of manufacture. We at Spraytech Systems have globe control valves till 16" and upto 2500#RF for applications from -196 °C till 550 °C.

Applications in flow element control lead to control of flow through a globe control valve affecting control of flow, pressure and temperature thus a playing a wide role in the control element of the plant.

Applications

As a main manufacturer of process Instruments, we provide a comprehensive product range for all chemical processes from light and heavy-duty valves in modular design made of all common materials and exotic alloys according to DIN, ANSI to high-pressure valves complying with important company standards. Forged bodies, live-loaded packing, metal bellows, pressure-balanced plugs, heating jackets as well as corrosion-resistant, low-noise and low wear valve trims are included in our product portfolio for this field.

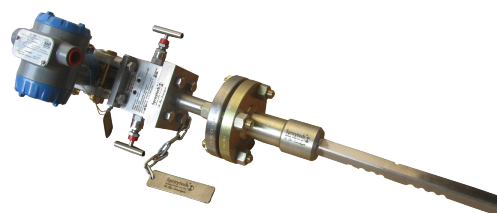
Averaging pitot tubes

Spraytech Systems manufactured Averaging Pitot Tubes are another type of differential pressure flow meters. Averaging Pitot tubes are basically used to detect flow velocity of fluids, gasses, steam, steam water and absolutely all those media which at most with 3-5ppm of solids as the max size.

Principle of operation

Averaging Pitot tube is nothing but an element which is suppose to measure the flow rate and offer the differential pressure to the flow meter mounted on top. The averaging Pitot tube works on the 80% velocity of the media rate at the top of the centre line in a velocity gradient in a pipe line or duct and 70% velocity of the media in the below portion of the centre line.

It does not work on the centre line velocity which is 100% for the media as what a orifice, a venturi and nozzle, and many more flow meter works. Thus the velocity of the media is perfectly averaged out and offered for DP measurement in the flow meter.



Orifice and Orifice assemblies

Spraytech Systems orifice plate is a device used for measuring flow rate. Either a volumetric or mass flow rate may be determined, depending on the calculation associated with the it. It uses the same principle, namely Bernoulli's principle which states that there is a relationship between the pressure of the fluid and the velocity of the fluid. When the velocity increases, the pressure decreases and vice versa.

Following factors are used to judge the performance of Spraytech Systems Orifice plate :

1. Precision in the bore calculations
2. Quality of the installation
3. Condition of the plate itself
4. Orifice area ratio
5. Physical properties of the fluid flow under measurement, refer the free length table mentioned below



3 way globe control valve



Spraytech Systems have gone ahead with its endeavour of optimizing in process control instruments, in adding control elements in its range of manufacture. We at Spraytech Systems have 3 way globe control valves till 16" and up to 2500# RF for applications from -196°C till 550°C.

Valve body made of

- Cast iron
- Cast steel
- Cast stainless steel

Undivided valve bonnet

The control valves, designed according to the modular assembly principle, can be equipped with various accessories: Positioners, limit switches, solenoid valves and other accessories according to IEC 60534-6 and NAMUR recommendation.

Sight flow indicators

SPRAYTECH SYSTEMS (INDIA) PVT. LTD. offers sight flow indicators of following types :

- Double Window - Plain
- Double Window - Rotary Wheel
- Double Window - Flapper
- Double Window - Drip Tube
- Full View

Specifications :-

| | |
|--------------------|--|
| Type | : Double Window - Plain / Rotary Wheel / Flapper / Drip Tube / Full View |
| Body | : CS, SS 304, SS 304L, SS 316, SS 316L, others on request |
| Retainer Flange | : CS, SS 304, SS 304L, SS 316, SS 316L, others on request |
| Cushion / Gasket | : C.A.F. / P.T.F.E. / Graph oils |
| Glass | : Toughened Borosilicate |
| Process Connection | : Flanged / Screwed / Welded / Triclamp |
| Fasteners | : SS, ASTM A193 Gr. B7 / A 194 Gr. 2H |





GLOBE 2 WAY CONTROL VALVE



GLOBE 3 WAY CONTROL VALVE



BALL VALVE ON OFF / CONTROL VALVE



FLUSH BOTTOM VALVE



BUTTERFLY CONTROL VALVE



V-NOTCH BALL CONTROL VALVE

Applications

- Water & Environment
- Irrigation
- Water Transportation
- Water Treatment Plant
- Drinking Water Supply Schemes
- Hydro Projects
- Industrial Water
- Sewage Systems
- Ash Handling Plant
- Coal Handling Plant
- Steel Melting Shop

Strainers & Filters Elements



- Filters
- Strainers
- Mixers
- Separators
- Pr. Vessels
- Valves

Simplex / Duplex Basket Filters

1) Fabricated design with MOC in

A 106 / A53 / IS 2062 / AISI304 / 316 / 304L / 316L A 312 TP 304 / 316 / 304L / 316L / A 240 TP 304 Hastelloy, alloy 20, high / low temp. Alloys. Nonferrous like Monel etc.

2) Cast Design

A 216 Gr. WCB / A351 Gr. CF8[M] CF3[M] A 217 Gr. C5 / WC6 / WC9 / A352 LCB etc.

3) For duplex filters sizes up to 4" in 3 way ball valve design, common lever for change over

4) "6" & above in

- a) Transfer Valve design
- b) Butterfly Valve design
- c) Header design

Fabricated / cast. Operation by pneumatic / electrical actuator, Used where down time is unavailable.



Duplex Basket Filter



Simplex Basket Filters



- 1) Wedge wire design
- 2) SMP france STR design
- 3) Stampings design
- 4) Four compartments - auto wash design

Manual / Motorized. These filters are used for water, oil, Pulp, grease applications, element is provided with backwash arm. When element gets choked, diff. Pressure switch across the inlet / outlet gives a signal to the motor & drain gets opened simultaneously. The part of clean liquid goes in the reverse direction. Suitable where continuous flow is required. It can be supplied with control panel, motor, actuated drain valves, etc.

Self Cleaning Filters

Lube oil Filters Element

Available in pleated wire mesh Elements / Pleated paper elements as required for highly viscous fluids. These can be supplied at higher pressures upto 300 bar, DOF as fine as 5 microns.

Compressed Air Filters

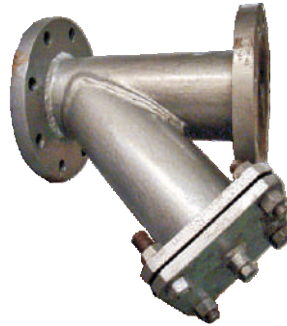
The unique design of Coalescing Separator, combines the simplicity & efficiency. As wet compressed air / gas / steam enters the Moisture Separator, it comes in contact with the multi layer dense media. Water droplets, as well as any other aerosols are intercepted by the coalesces and forced to coalesce. As the droplets grow in size and weight, the gravity pulls them down to Sump. The liquid that accumulates can then be drained.



Strainers

- 1) 'Y' type cast / fabricated / forged
- 2) 'T' type fabricated / forged
- 3) Conical / Temporary, fabricated

MOC in CS / SS / alloy steel / non - ferrous,
CSRL for housings and SS304 / 316 / 304L /
316L / MONEL / PP / Brass for element.



Sand Filters

- 1) Gravity sand filters
- 2) Pressure sand filters
- 3) Valveless auto gravity filters, spares for all above

Valveless Auto Gravity Filters

1. Work on syphon, hence automatic.
2. No moving parts, hence less maintenance.
3. No pumps, electricity, compressed air required.
4. No scope for human error.

Cartridge Filters [0.1 to any micron size]

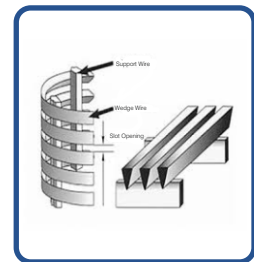
Cartridge of

| | |
|-------------|----------------|
| PP | Borosilicate |
| Ceramic | Cellulose |
| Charcoal | Asbestos |
| Glass fibre | SS sintered |
| Cotton | Taper Basket |
| SS | Pleated Basket |

Application :- Solid Liquid, Liquid Gas, Solid Gas.



Wedge Wire Element



Mixer



For viscous fluid, the mixer is provided with 2 sets of blades, the outer one rotating at as low RPM as 15 to 25 & the inner one at comparatively higher RPM & in the reverse direction which mixes the ingredients uniformly all over.

Other versions of mixers are tiltable, rotating at higher RPM as required for low viscosity fluids.

Planetary gear mixers are also meant for higher viscous fluids.

MOC - AISI 304 / 316 / 304-L / 316-L etc.
Provision for variable speed is available.

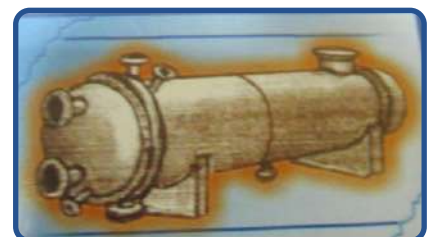
Vessels

Pressure Vessels, heat Exchangers, Condensers, Reaction towers in accordance with ASME sec. -VIII Div.1, sec. IX, Tema, IS 2825 etc.

MOC :

SA515 / SA516 / IS2002 / 2062 , A106 / A53 / IS1239 / 3589 / A105, ASTM A240 TP304 / SS316 / 304-L / 316-L / A 385 / 335 / A 312 TP 304 / 316 A182 / F304 / 316 / F69 / F22 / F11 etc.

Also consultancy available in: Design of filters / Valves / Vessels / Mixers. Computation of pressure drop, CV value, Thickness calculations, etc.



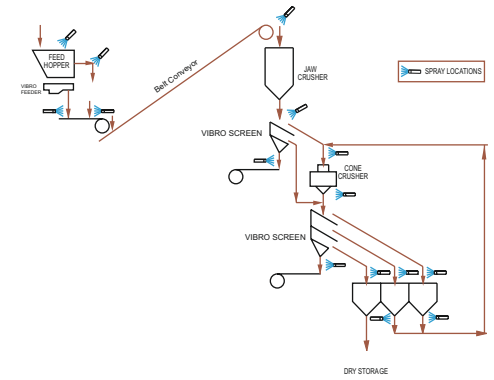
Dust Suppression Systems

Technical Data on Request

Introduction:-

The dust suppression system is meant to suppress the dust generated during transfer of material at feed/discharge points of conveyors in various transfer towers.

This system uses water and compressed air to produce micron sized droplets that are able to suppress respirable dust without adding any detectable moisture to the process.

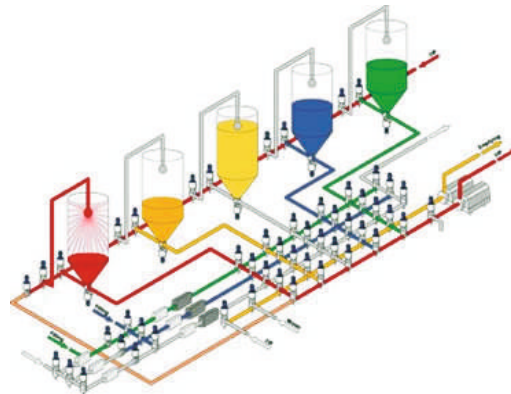
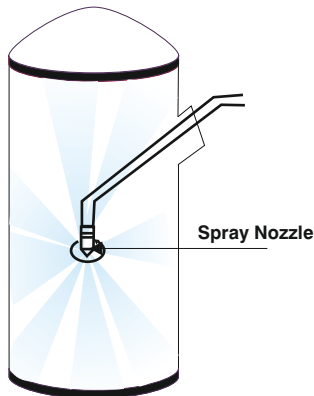


Technical Data on Request

CIP (Clean In Place) Spray Systems

Introduction:-

Tank cleaning system is used to clean the various types of industrial tanks. Tanks must be cleaned from Time to time for various reasons. We provide portable as well as fixed spray systems.

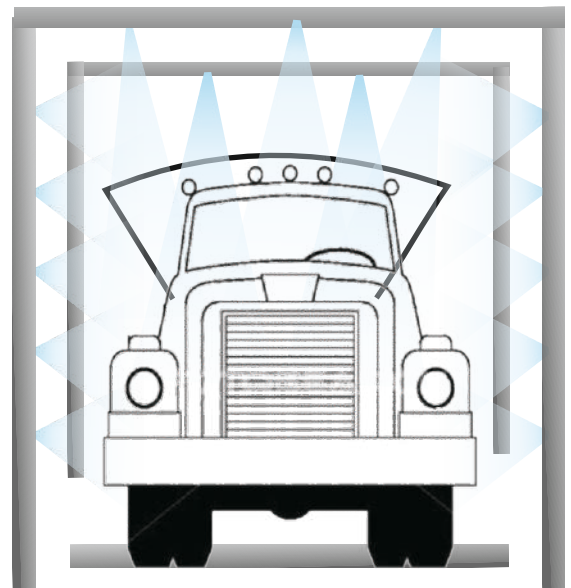


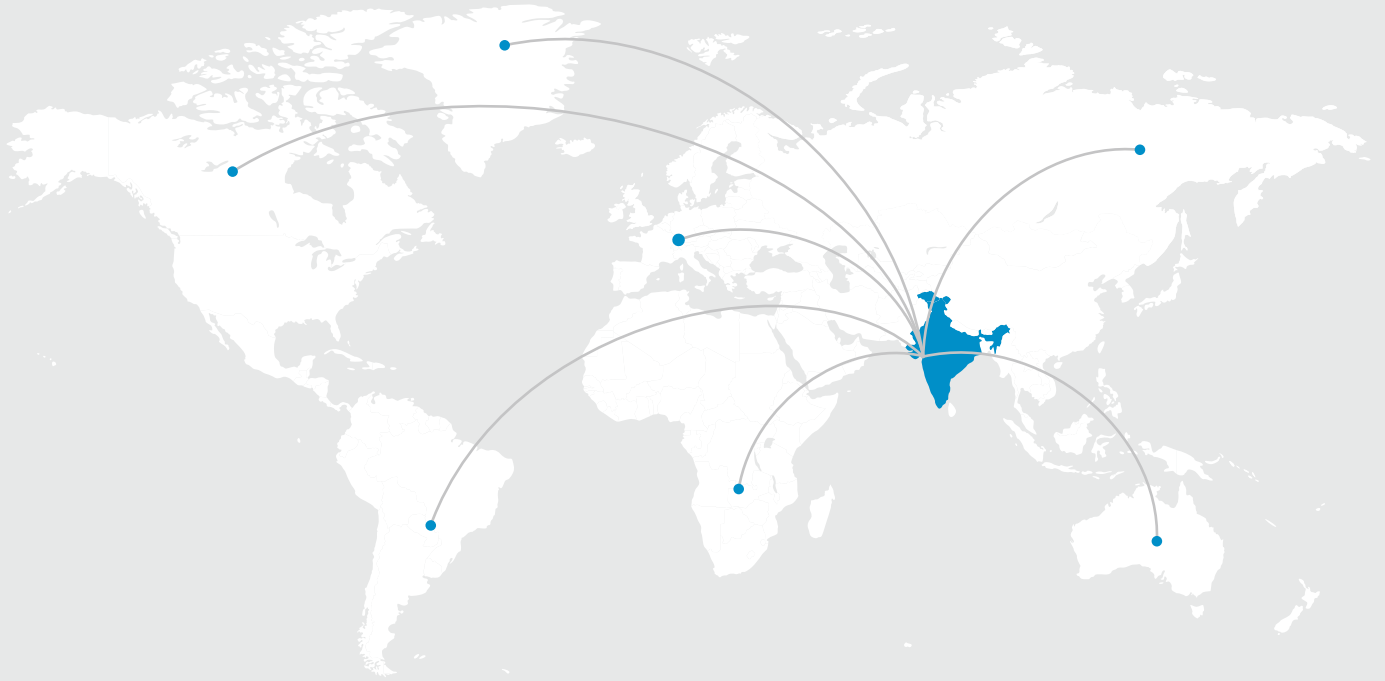
Vehicle Washing Systems

Technical Data on Request

Introduction:-

"SPRAYTECH" have introduces a compressive list of semi automatic vehicle washing systems specifically designed for most types & sizes of vehicles. Depending on the type of vehicle only variation occurs in costs, washing speed & capabilities dependability, construction & washing techniques.





OUR BRANCHES

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E-mail :- sales@spraytechindia.com
sales1@spraytechindia.com

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