



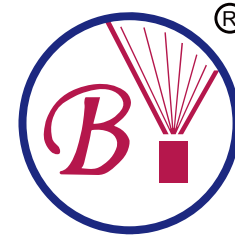
Boyuan Spraying  
Benefit The World

## Boyuan Spray Nozzle UK Office

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Boyuan Spraying

## Industrial Nozzle Manufacturer

- Energy Saving
- Environmental
- Promote Sustainable Social and Economic Development



**MASTER THE CORE TECHNOLOGY OF SPRAY APPLICATION**

— Experience the baptism of 20,000 different industry cases —



## Company Profile

Established in 2006 and located in Chang'an Town, Dongguan City, Guangdong Boyuan spray Technology Co., Ltd. is a leading manufacturer of industrial nozzles and one of the suppliers of spray solutions in China.

After more than ten years of development, Guangdong Boyuan has become a technology-based company that integrates research and development, production, sales, and service. We have certain research and technical precipitation on imported nozzles, domestic nozzles and spray systems in various countries, and have accumulated more than 1000 kinds of nozzles and more than 10 years of experience in the production and application of nozzles to ensure that we can provide customers with accurate nozzle selection and mold spraying solutions.

Current customers include: Gree Electric, BMW, GAC Honda, Dongfeng Honda, Shanghai FAW, Coca Cola, Yihai Kerry, Tsinghua University, Nongfu Spring, Mengniu Dairy, Want Want Liansu Pipe, COSCO Light Industry, Dabaoqi...

All kinds of spray and spray products produced by Boyuan are famous for their "high accuracy, good zero spraying effect and long service life". There are more than 1000 varieties, which are widely used in 66 industries such as "steel, automobile, paper making, environmental protection, electronic food processing, spraying equipment, agricultural sprinkler irrigation and fire protection", especially in the application fields of flue gas dedusting and desulfurization and denitrification!

Boyuan's existing factory covers an area of 2500 square meters, with a construction area of 3500 square meters. It has an elite team with exquisite technology, rich insurance management, and professional services. The company has passed the 1509001:2000 international quality system certification and has introduced imported fully automatic production equipment, professional and complete testing equipment, and rigorous quality testing processes, ensuring the excellent performance of the Boyuan nozzle.

Boyuan is committed to providing customers with high-quality industrial nozzles and a high-quality service experience. With its excellent quality, good reputation, and high cost-effectiveness, Boyuan has won market recognition, customer trust, and peer respect. In China, the nozzle industry The industry has occupied an important position!



Qualification

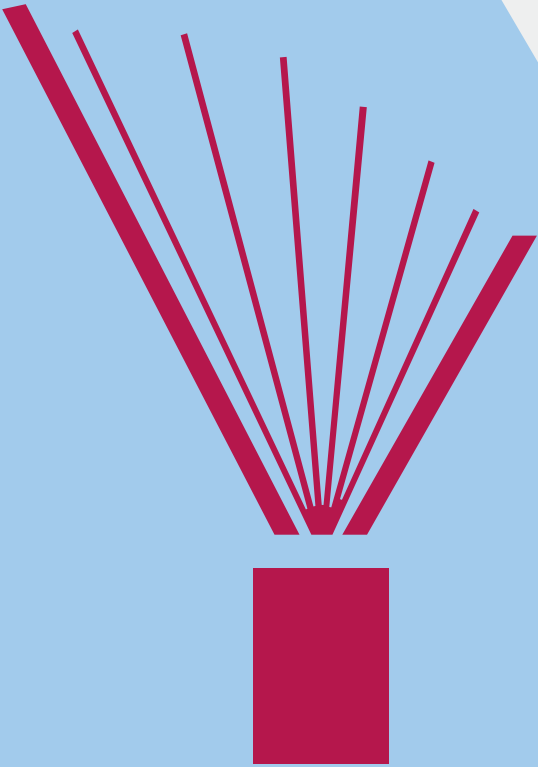


Our Values

- The morality is more important than ability
- The product is the character
- Quality ServiceEfficiency

Our Misson

- Reduce environmental pollution and waste of resources
- Promote social and economic sustainable development



**Spray Theory** 01

**Universal Nozzle**

**A Series - Hollow Cone**

|                                  |    |
|----------------------------------|----|
| Standard Type                    | 10 |
| Direct Injection Type            | 12 |
| Direct Injection Wide Angle Type | 13 |
| Cannon Nozzle                    | 14 |
| Oil Burner nozzle                | 15 |

**B Series - Full Cone**

|                      |    |
|----------------------|----|
| Standard Type        | 16 |
| Conventional Type    | 18 |
| Type 15°/30°         | 20 |
| Square Cone Nozzle   | 21 |
| Elliptic Cone Nozzle | 22 |
| Solid Cone nozzle    | 23 |
| SMP Nozzle           | 24 |

**C Series - Flat Fan**

|                    |    |
|--------------------|----|
| Standard Type      | 25 |
| High Pressure Type | 29 |
| Narrow Angle Type  | 30 |
| Wide Angle Type    | 31 |

**S Series**

|               |    |
|---------------|----|
| Spiral Nozzle | 32 |
|---------------|----|

**Misting Nozzle**

**Fine atomization nozzle**

|                           |    |
|---------------------------|----|
| Standard Type             | 34 |
| PJ Type                   | 35 |
| Anti-Drip Type            | 36 |
| Multiple Fine Mist        | 37 |
| High Pressure Fire Nozzle | 38 |

**SU Series Air Atomizing Nozzle**

|                                             |    |
|---------------------------------------------|----|
| Round Spray (SUA) Internal Mix              | 42 |
| Round Spray (SUA-Z) External Mix            | 43 |
| Wide Angle (SUB) Internal Mix               | 44 |
| Wide Angle Round Spray (SUB-T) Internal Mix | 45 |
| Flat Spray (SUC) Internal Mix               | 46 |

|                                            |    |
|--------------------------------------------|----|
| Wide Angle Flat Spray (SUC-W) Internal Mix | 47 |
| Flat Spray (SUC-Z) External Mix            | 48 |
| Dry Mist Humidifier                        | 50 |
| Flat Fan KQWHVVRA                          | 51 |
| Dry Fog Nozzle                             | 52 |
| Automatic Spray Gun                        | 53 |
| DAU Air Atomizing Nozzle                   | 54 |
| Air Atomizing Nozzles Of Various Products  | 55 |

**Combined Nozzle**

**T Series**

|                                   |    |
|-----------------------------------|----|
| Full cone Standard Type(TB)       | 57 |
| TPC-Tungsten Core Flat Fan Nozzle | 59 |
| Flat Fan Standard(TC)             | 60 |
| Flat Fan Blowing(TBL)             | 61 |

**M Series**

|                 |    |
|-----------------|----|
| Clip Type(155M) | 62 |
|-----------------|----|

**Other Nozzles**

|                      |    |
|----------------------|----|
| Mixing Nozzle        | 64 |
| Air Shower Nozzle    | 65 |
| Tank Cleaning Nozzle | 66 |

**Nozzles For Special Industries**

|                |    |
|----------------|----|
| Paper Industry | 72 |
|----------------|----|

**Plastic Nozzle Series**

|                                |    |
|--------------------------------|----|
| Quick Remove Plastic Nozzle    | 77 |
| One-Piece Plastic Nozzle       | 79 |
| Adjustable Ball Plastic Nozzle | 80 |

**Accessories**

83

**Customized**

84

Wide Range Of Applications

Guangdong Boyuan Spray Technology Co., Ltd. has a wide range of products, ranging from general cleaning nozzles to high-pressure micro-fog, high-pressure cleaning nozzles from workpiece cleaning to environmental protection chemical dust removal, desulfurization to electronic circuit board industry etching, cleaning, from phosphating to humidification, lubrication, steel phosphorus removal, etc., everything.



High pressure phosphorus removal in steel works



Washing dust removal



Automobile spray cleaning



Rig fire suppression



Landscaping



Garden irrigation



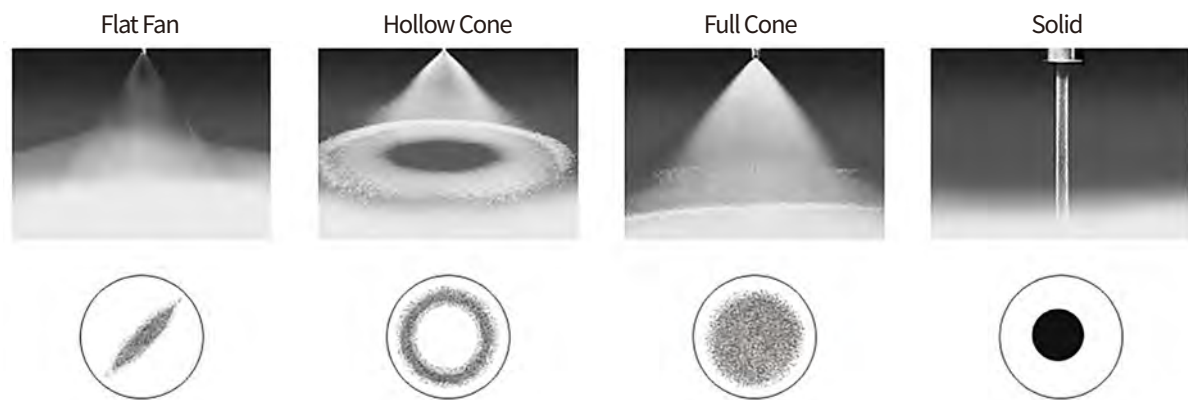
Open-air square



Exhibition hall

Spray Patterns

The spray patterns of the nozzle is generally divided into four types:



Tolerance Range Of Nozzle Flow And Nozzle Angle

- The division's nozzle flow tolerance - General 5.5%.
- The division's nozzle Angle tolerance is generally Earth 5°.
- The tolerance of the liquid column flow Angle is generally within 3°.

Material Selection Of Nozzle

In each type of nozzle, Boyuan company has indicated the material selection, general engineering polypropylene uses PP code, stainless steel generally uses SS code, BRASS code, detailed table is as follows:

|         |          |                  |        |
|---------|----------|------------------|--------|
| Plastic | PVC      | Metal            | BRASS  |
|         | PP       |                  | 303SS  |
|         | PPO      |                  | 304SS  |
|         | ABS      |                  | 316SS  |
|         | PVDF     |                  | 316LSS |
|         | PPS      |                  | TN     |
|         | PTFE     |                  | CCA    |
|         | ARALDITE |                  | ALMA   |
|         | FRP      | Special Material | SAS    |
|         |          |                  | RUS    |
|         |          |                  | GRS    |
|         |          |                  | SIS    |

Application Of Nozzles

The nozzles of Boyuan company are widely used in various fields of industrial applications. The products have covered surface treatment, electronics, textile, steel, pharmaceutical and other industries. More and more applications show that the influence of Boyuan Company's nozzles is further expanding.

·Cooling

Remove burning gas from the plant  
Continuous casting in steelmaking  
Stretch works for covered wires  
Forming of plastic pipe  
Cooling tower  
Belt cooling  
Post-heat hardening  
Die cooling  
PVC pipe extrusion cooling  
Secondary cooling of continuous casting in steel  
Roll cooling in steel  
Tank cooling  
Roof cooling  
Condenser coil cooling  
Kiln tail gas cooling  
Aluminum products are pressed and cooled  
Strip binding machine cooling  
Cooling of tools, materials, etc  
Cooling and humidification before electrostatic precipitation and dust removal  
Cooling of belt grinder  
Cooling of beverages  
Cooling of wire extension works  
Plastic forming product cooling  
Direct and indirect cooling of products  
Cooling granulation  
Spray cooling of equipment

·Cleaning

Clean semiconductor chips  
Desulfurization of exhaust gases, removal of dioxin  
High pressure cleaning of cement mixer  
Automatic cleaning of beer kegs  
Cars, motorcycles, household appliances, etc  
Cleaning of electronic circuit board  
Circuit board chemical cleaning  
Beer bottle cleaning  
Glass cleaning in the mirror industry  
Clean the sand and gravel from the screen  
Cleaning of iron sand on conveyor belt  
Cleaning of blankets and netting in paper mills  
Cleaning the inner wall of tank and container  
Disinfection and sanitation equipment in food processing plants  
Strainer and filter  
Fruit and vegetable washing  
Food processing plant bottle cap cleaning  
Cleaning industrial equipment  
Clean the items on the hanging chain  
Pretreatment of metal surfaces  
Bottle cleaning  
High pressure water dephosphorization of rolled steel surface  
The tank is automatically cleaned  
Wash the plastic container  
Cleaning of various bottles and oil tanks  
Machining workshop floor cleaning

·Spatial And Local Humidification

Humidity adjustment in the printing plant  
Prevent surface 1 of the processed paper from cracking  
Prevent static electricity from plastic parts  
Mushroom cultivation  
Fresh fruit pickling storage moisture  
Textile workshop humidification  
Printing room humidification  
Cellophane humidification  
Printing roller. Coated with silicone  
Cold and wet products room  
Oxygen tents in hospitals  
greenhouse  
Cuttings and flowers freezer  
Paper humidification system  
Spray drying  
Temperature control function  
Simple portable pavilion  
Artificial snow machine  
fountain  
Fog in the garden. Generator

·Sterilization And Disinfection

Disinfection of bottle caps  
Food conveyor belt disinfectant spray cloth  
Coliform countermeasures in rice containers  
Building cleaning



Conversion Unit

• Under different pressure, the nozzle angle will have different changes

When the pressure is low, the Angle will become smaller and the impact force will be relatively small. When the pressure gradually increases, the injection Angle will gradually increase, and the impact cleaning force will gradually increase. Different materials have different pressure tolerance, so the general nozzle will be required to be used under standard pressure. On the one hand, it will change the flow rate of the nozzle, but also affect its standard injection Angle, the flow rate increases, the pressure will decrease, the Angle will decrease accordingly, the wear nozzle will change the direction of the injection, the use efficiency is greatly reduced.

| Area                 |                       |                      |                       |
|----------------------|-----------------------|----------------------|-----------------------|
| cm <sup>2</sup>      | m <sup>2</sup>        | in <sup>2</sup>      | ft <sup>2</sup>       |
| 1                    | 1x10 <sup>-4</sup>    | 0.155                | 1.08x10 <sup>-6</sup> |
| 1x10 <sup>4</sup>    | 1                     | 1.55x10 <sup>3</sup> | 10.8                  |
| 6.45                 | 6.45x10 <sup>-4</sup> | 1                    | 6.94x10 <sup>-3</sup> |
| 9.30x10 <sup>2</sup> | 9.30x10 <sup>-2</sup> | 1.44x10 <sup>2</sup> | 1                     |

| Length               |                      |                    |                       |                       |                       |
|----------------------|----------------------|--------------------|-----------------------|-----------------------|-----------------------|
| μm                   | mm                   | cm                 | m                     | in                    | ft                    |
| 1                    | 1x10 <sup>-3</sup>   | 1x10 <sup>-4</sup> | 1x10 <sup>-6</sup>    | 3.94x10 <sup>-5</sup> | 3.28x10 <sup>-6</sup> |
| 1,000                | 1                    | 0.1                | 1x10 <sup>-3</sup>    | 3.94x10 <sup>-2</sup> | 3.28x10 <sup>-3</sup> |
| 1x10 <sup>4</sup>    | 10                   | 1                  | 1x10 <sup>-2</sup>    | 3.94x10 <sup>-1</sup> | 3.28x10 <sup>-2</sup> |
| 1x10 <sup>6</sup>    | 1x10 <sup>3</sup>    | 100                | 1                     | 3.94x10               | 3.28                  |
| 2.54x10 <sup>4</sup> | 25.4                 | 2.54               | 2.54x10 <sup>-2</sup> | 1                     | 8.33x10 <sup>-2</sup> |
| 3.05x10 <sup>5</sup> | 3.05x10 <sup>2</sup> | 3.05x10            | 3.05x10 <sup>-1</sup> | 12                    | 1                     |

| Flow Rate             |                      |                       |                      |                       |                       |                       |
|-----------------------|----------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|
| L/min                 | m <sup>3</sup> /min  | m <sup>3</sup> /h     | in <sup>3</sup> /h   | ft <sup>3</sup> /h    | gal/min               | gal/min               |
| 1                     | 0.001                | 0.06                  | 3.66x10 <sup>3</sup> | 2.12                  | 0.264                 | 0.22                  |
| 1,000                 | 1                    | 60                    | 3.66x10 <sup>6</sup> | 2.12x10 <sup>3</sup>  | 264                   | 220                   |
| 16.67                 | 0.017                | 1                     | 6.10x10 <sup>4</sup> | 35.3                  | 4.40                  | 3.67                  |
| 2.73x10 <sup>-4</sup> | 2.7x10 <sup>-7</sup> | 1.64x10 <sup>-5</sup> | 1                    | 5.79x10 <sup>-4</sup> | 7.22x10 <sup>-5</sup> | 60.1x10 <sup>-5</sup> |
| 0.472                 | 4.72x10 <sup>4</sup> | 0.028                 | 1.728                | 1                     | 0.125                 | 0.104                 |
| 3.79                  | 0.004                | 0.227                 | 1.39x10 <sup>4</sup> | 8.02                  | 1                     | 0.833                 |
| 4.55                  | 0.005                | 0.273                 | 1.66x10 <sup>4</sup> | 9.63                  | 1.2                   | 1                     |

| Pressure             |       |                    |                          |                       |                       |                        |
|----------------------|-------|--------------------|--------------------------|-----------------------|-----------------------|------------------------|
| Kpa                  | Bra   | kg/cm <sup>2</sup> | ib/in <sup>2</sup> (psi) | Atm                   | MHg                   | MH <sub>2</sub> O(mAg) |
| 1                    | 0.01  | 0.01               | 0.145                    | 9.87×10 <sup>-3</sup> | 7.50×10 <sup>-3</sup> | 0.102                  |
| 100                  | 1     | 1.020              | 14.5                     | 0.987                 | 0.750                 | 10.2                   |
| 98.07                | 0.981 | 1                  | 14.22                    | 0.968                 | 0.736                 | 10.01                  |
| 6.89                 | 0.069 | 0.070              | 1                        | 0.068                 | 0.052                 | 0.704                  |
| 1.01×10 <sup>2</sup> | 1.013 | 1.033              | 14.7                     | 1                     | 0.76                  | 10.34                  |
| 1.33×10 <sup>2</sup> | 1.33  | 1.36               | 19.3                     | 1.32                  | 1                     | 13.61                  |
| 9.807                | 0.098 | 0.10               | 1.42                     | 0.097                 | 0.073                 | 1                      |

| Volume               |                    |                       |                       |                      |                       |
|----------------------|--------------------|-----------------------|-----------------------|----------------------|-----------------------|
| cm <sup>3</sup>      | L                  | M <sup>3</sup> (kl)   | ft <sup>3</sup>       | gal                  | gal                   |
| 1                    | 1×10 <sup>-3</sup> | 1×10 <sup>-6</sup>    | 3.53×10 <sup>-5</sup> | 2.2×10 <sup>-4</sup> | 2.64×10 <sup>-4</sup> |
| 1000                 | 1                  | 1×10 <sup>-3</sup>    | 3.52×10 <sup>-2</sup> | 0.22                 | 0.264                 |
| 1×10                 | 1000               | 1                     | 353                   | 220                  | 264                   |
| 2.83×10 <sup>4</sup> | 28.3               | 2.83×10 <sup>-2</sup> | 1                     | 0.623                | 0.749                 |
| 4.55×10 <sup>3</sup> | 4.55               | 4.55×10 <sup>-3</sup> | 1.6                   | 1                    | 1.2                   |
| 3.79×10 <sup>3</sup> | 3.79               | 3.79×10 <sup>-3</sup> | 1.34                  | 0.833                | 1                     |

| Other       |                    |
|-------------|--------------------|
| Viscosity   | 1p=100cp           |
|             | 1st=100cst         |
| Weight      | 1kg=2.205lb        |
|             | 1ib=0.454kg        |
| Temperature | [°F]=([°C]×5/9)+32 |
|             | [°C]=5/9([°F]-32)  |

| Water flow and appropriate piping diameter |        |                 |                |                                                                                          | Water flow and appropriate piping diameter |        |                 |                |                                                                                          |
|--------------------------------------------|--------|-----------------|----------------|------------------------------------------------------------------------------------------|--------------------------------------------|--------|-----------------|----------------|------------------------------------------------------------------------------------------|
| Diameter                                   |        | Steel Pipe      |                | The flow rate when the pipe length is 10cm and the pressure loss is 0.01-0.03mpa (L/min) | Diameter                                   |        | Steel Pipe      |                | The flow rate when the pipe length is 10cm and the pressure loss is 0.01-0.03mpa (L/min) |
| A                                          | B      | Inside diameter | Outer diameter |                                                                                          | A                                          | B      | Inside diameter | Outer diameter |                                                                                          |
| 6A                                         | 1/8B   | 6.5             | 10.5           | 1.3-2.2                                                                                  | 40A                                        | 1-1/2B | 41.6            | 48.6           | 120-210                                                                                  |
| 8A                                         | 1/4B   | 9.2             | 13.8           | 3-5.2                                                                                    | 50A                                        | 2B     | 52.9            | 60.5           | 215-370                                                                                  |
| 10A                                        | 3/8B   | 12.7            | 17.3           | 7-12                                                                                     | 65A                                        | 2-1/2B | 67.9            | 76.3           | 410-700                                                                                  |
| 15A                                        | 1/2B   | 16.1            | 21.7           | 12-21                                                                                    | 80A                                        | 3B     | 80.7            | 89.1           | 680-1200                                                                                 |
| 20A                                        | 3/4B   | 21.6            | 27.2           | 22-38                                                                                    | 100A                                       | 4B     | 105.3           | 114.3          | 1200-2100                                                                                |
| 25A                                        | 1B     | 27.6            | 34.0           | 38-65                                                                                    | 125A                                       | 5B     | 130.8           | 139.8          | 2100-3600                                                                                |
| 32A                                        | 1-1/4B | 35.7            | 42.7           | 70-120                                                                                   | 150A                                       | 6B     | 155.2           | 165.2          | 3300-5700                                                                                |

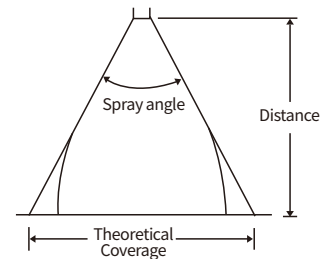




Spray Angle and Coverage

The spray flow rate increases or decreases in direct proportion to the square root of the spray pressure under the same medium condition, and the flow rate of any nozzle under a certain pressure can be calculated. If the known spray flow rate is Q1 and the corresponding pressure is F1, and if the known pressure is F2, the unknown flow rate Qx is calculated as follows: The theoretical coverage of the spray shape listed in this table is calculated according to the spray Angle and the distance from the nozzle mouth. These values are based on the assumption that the base spray Angle remains constant throughout the spray distance. In practical applications, the spray Angle listed in the table is not applicable to the spray distance, the actual spray coverage data.

The spray Angle included in the table shows approximate spray coverage with water as the basic. In the actual spray, the effective spray Angle is measured by the spray distance surface, if the required spray coverage is critical, specific spray coverage data. When the liquid is compared to water, the spray Angle formed is relatively small (or even forms a liquid column flow), and the Angle depends on the viscosity, nozzle flow rate and injection pressure. A liquid whose surface pressure is lower than water produces a spray Angle that is relatively wider than that listed by water.



| Spray Angle | Theoretical coverage at different distances (cm) |      |       |      |      |      |      |      |      |      |      |      |
|-------------|--------------------------------------------------|------|-------|------|------|------|------|------|------|------|------|------|
|             | 5                                                | 10   | 15    | 2米   | 25   | 30   | 40   | 50   | 60   | 70   | 80   | 100  |
| 5°          | 0.4                                              | 0.9  | 1.3   | 1.8  | 2.2  | 2.6  | 3.5  | 4.4  | 5.2  | 6.1  | 7    | 8.7  |
| 10°         | 0.9                                              | 1.8  | 2.6   | 3.5  | 4.4  | 5.3  | 7    | 8.8  | 10.5 | 12.3 | 14   | 17.5 |
| 15°         | 1.3                                              | 2.6  | 4.0   | 5.3  | 6.6  | 7.9  | 10.5 | 13.2 | 15.8 | 18.4 | 21.1 | 26.3 |
| 20°         | 1.8                                              | 3.5  | 5.3   | 7.1  | 8.8  | 10.6 | 14.1 | 17.6 | 21.2 | 24.7 | 28.2 | 35.3 |
| 25°         | 2.2                                              | 4.4  | 6.7   | 8.9  | 11.1 | 13.3 | 17.7 | 22.2 | 26.6 | 31.0 | 35.5 | 44.3 |
| 30°         | 2.7                                              | 5.4  | 8.0   | 10.7 | 13.4 | 16.1 | 21.4 | 26.8 | 32.2 | 37.5 | 42.9 | 53.6 |
| 35°         | 3.2                                              | 6.3  | 9.5   | 12.6 | 15.8 | 18.9 | 25.2 | 31.5 | 37.8 | 44.1 | 50.5 | 63.1 |
| 40°         | 3.6                                              | 7.3  | 10.9  | 14.6 | 18.2 | 21.8 | 29.1 | 36.4 | 43.7 | 51.0 | 58.2 | 72.8 |
| 45°         | 4.1                                              | 8.3  | 12.4  | 16.6 | 20.7 | 24.9 | 33.1 | 41.4 | 49.7 | 58.0 | 66.3 | 82.8 |
| 50°         | 4.7                                              | 9.3  | 14.0  | 18.7 | 23.3 | 28.0 | 37.3 | 46.6 | 56.0 | 65.3 | 74.6 | 93.3 |
| 55°         | 5.2                                              | 10.4 | 15.6  | 20.8 | 26.0 | 31.2 | 41.7 | 52.1 | 62.5 | 72.9 | 83.3 | 104  |
| 60°         | 5.8                                              | 11.6 | 17.3  | 23.1 | 28.9 | 34.6 | 46.2 | 57.7 | 69.3 | 80.8 | 92.4 | 115  |
| 65°         | 6.4                                              | 12.7 | 19.1  | 25.5 | 31.9 | 38.2 | 51.0 | 63.7 | 76.5 | 89.2 | 102  | 127  |
| 70°         | 7.0                                              | 14.0 | 21.0  | 28.0 | 35.0 | 42.0 | 56.0 | 70.0 | 84.0 | 98.0 | 112  | 140  |
| 75°         | 7.7                                              | 15.4 | 23.0  | 30.7 | 38.4 | 46.0 | 61.4 | 76.7 | 92.1 | 107  | 123  | 153  |
| 80°         | 8.4                                              | 16.8 | 25.2  | 33.6 | 42.0 | 50.4 | 67.1 | 83.9 | 101  | 118  | 134  | 168  |
| 85°         | 9.2                                              | 18.3 | 27.5  | 36.7 | 45.8 | 55.0 | 73.6 | 91.6 | 120  | 128  | 147  | 183  |
| 90°         | 10.0                                             | 20.0 | 30.0  | 40.0 | 50.0 | 60.0 | 80.0 | 100  | 131  | 140  | 160  | 200  |
| 95°         | 10.9                                             | 21.8 | 32.7  | 43.7 | 54.6 | 65.5 | 87.3 | 109  | 143  | 153  | 175  | 218  |
| 100°        | 11.9                                             | 23.8 | 35.8  | 47.7 | 59.6 | 71.5 | 95.3 | 119  | 171  | 167  | 191  | 238  |
| 110°        | 14.3                                             | 28.6 | 42.9  | 57.1 | 71.4 | 85.7 | 114  | 143  | 208  | 200  | 229  | 286  |
| 120°        | 17.3                                             | 34.6 | 52.0  | 69.1 | 86.6 | 104  | 139  | 173  | 257  | 243  | -    | -    |
| 130°        | 21.5                                             | 42.9 | 64.3  | 69.3 | 107  | 129  | 172  | 215  | -    | -    | -    | -    |
| 140°        | 27.5                                             | 55.0 | 82.4  | 85.8 | 137  | 165  | 220  | 275  | -    | -    | -    | -    |
| 150°        | 37.3                                             | 74.6 | 112.0 | 110  | 187  | 224  | 299  | -    | -    | -    | -    | -    |
| 160°        | 56.7                                             | 113  | 170.0 | 149  | 284  | -    | -    | -    | -    | -    | -    | -    |
| 170°        | 114                                              | 229  | -     | 227  | -    | -    | -    | -    | -    | -    | -    | -    |

Flow and Pressure

The spray flow rate increases or decreases roughly in direct proportion to the square root of the spray pressure under the same medium condition, and the flow rate of any nozzle under a certain pressure can be calculated. For the flow rate of any pressure, let the known spray flow rate be Q and the corresponding pressure be F. When the known pressure is F, the unknown flow rate Q is obtained, and the relationship is as follows

$$\frac{Q_{\text{流量}}(\text{L/min})}{Q_{\text{流量}}(\text{L/min})} = \frac{\sqrt{F_1 \text{压力}(\text{kg})}}{\sqrt{F_2 \text{压力}(\text{kg})}} \text{ 即 } Q_x = Q_1 \sqrt{\frac{F_2 \text{压力}(\text{kg})}{F_1 \text{压力}(\text{kg})}}$$

Different materials of nozzle have different effects on the wear resistance of liquid

Due to the high-speed flow of the body at the nozzle mouth, the nozzle part is often subjected to wear, different chemical liquids have different pH and viscosity, the wear of the nozzle will cause different effects, different materials of the same pH and viscosity wear is different, ceramic (SIS) hardness is 7, its wear resistance is 20-30 times that of stainless steel, But the ceramic is easy to break, not easy to make, the wear resistance of the alloy is also quite high, but the production cost is high, the use of stainless steel nozzle is very wide, because its wear resistance is better, although the price is higher than plastic, but far lower than alloy and ceramics, so it has been vigorously promoted. Engineering plastic material has poor wear resistance, but its production cost is low, chemical resistance is particularly good, is the most used class of nozzles.



Engineering Description

Key performance considerations (Selecting spray nozzles for specific applications is important)

•Impact force

The impact of the spray on the target surface can be expressed in several different ways. The most useful impact value related to the performance of the spray nozzle is the impact force per square centimeter. Essentially, the value depends on the spray shape distribution and the spray Angle. To obtain an impact force per square centimeter of a known nozzle (kg/cm2), Firstly, the formula is used to determine the theoretical total impact force: Then look up the percentage of square centimeters that account for the theoretical total impact force from the table below and multiply by the theoretical total impact force. The result is a spray impact force in kilograms per square centimeter. The liquid column flow nozzle produces a maximum impact force of kg/cm2, which can be calculated according to the formula 1.9X (injection pressure, kg/cm2).

| Spray Pattern | Spray Angle | Impact the percentage of theoretical impact per square centimeter |
|---------------|-------------|-------------------------------------------------------------------|
| Flat fan      | 15°         | 30%                                                               |
|               | 35°         | 18%                                                               |
|               | 35°         | 13%                                                               |
|               | 40°         | 12%                                                               |
|               | 50°         | 10%                                                               |
|               | 65°         | 7%                                                                |
|               | 80°         | 5%                                                                |
| Full cone     | 15°         | 11%                                                               |
|               | 30°         | 2.5%                                                              |
|               | 50°         | 1%                                                                |
|               | 65°         | 0.4%                                                              |
|               | 80°         | 0.2%                                                              |
|               | 100°        | 0.1%                                                              |
| Hollow cone   | 60° 80°     | 1到2%                                                              |

\*At a distance of 30 centimeters from the nozzle.

$$\text{Total impact force of spray water theory} = (\text{KG-Force}) = 0.024X (\text{L/Min, At injection pressure}) \times \sqrt{\text{Injection Pressure, (kg/cm2)}}$$

•Working Pressure

The values provided in the listing section of this catalog indicate the most commonly used pressure ranges for the relevant spray nozzles or parts. - Some spray nozzles and spare parts can work at or above the given pressure, while others can be modified or redesigned in our factory to suit the needs of specific new applications.

•Density

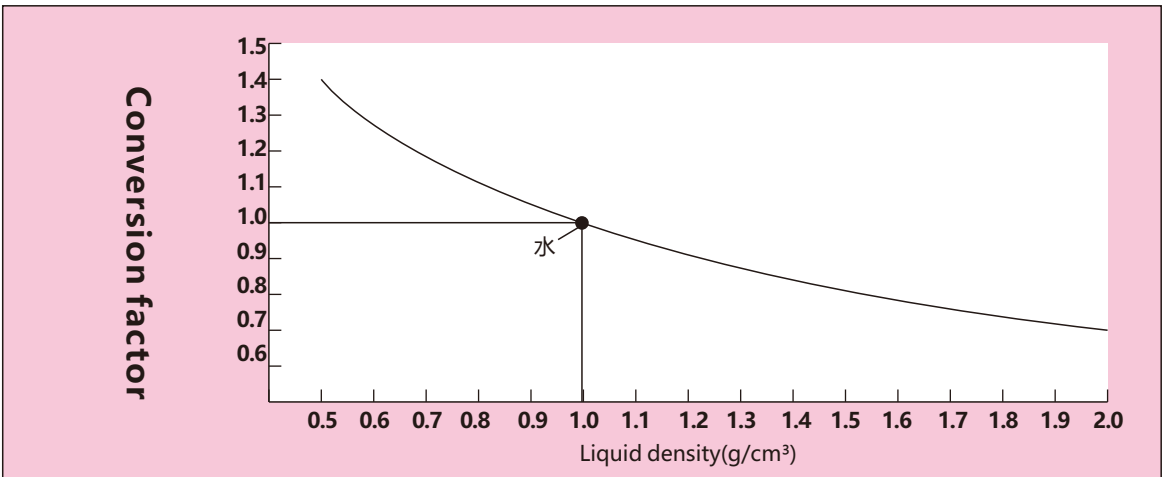
Density is the ratio of a given volume of liquid to the mass of the same volume of water. In spray, the main influence of the specific gravity of the liquid (other than water) is the flow rate of the spray nozzle. Because the values listed in this catalog are based on jet water, a conversion factor can be applied to determine the nozzle flow rate when you apply it to liquids other than water.

The formula used to replace the chart is as follows:

$$\text{The flow of liquid sprayed} = \text{water flow} \sqrt{\frac{1}{\text{Density}}}$$

The key:

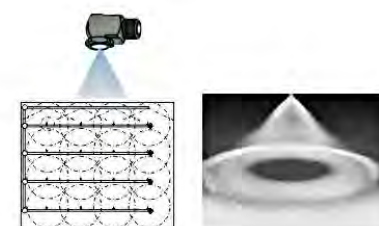
The conversion factor is multiplied by the flow rate of the nozzle when spraying water to obtain the flow rate of the nozzle when the nozzle sprays the liquid with the density corresponding to the conversion factor. This conversion factor only includes the effect of density on the flow rate, and does not include other factors affecting the flow rate.



## The Nozzle Distribution Scheme

### • Hollow Cone Nozzle

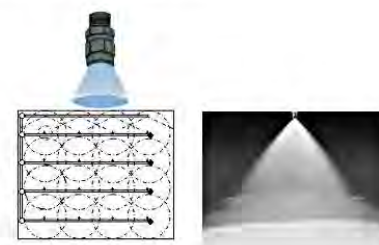
In the case of the same spray pressure, spray flow, spray Angle, the average particle size of the hollow cone nozzle is the smallest, and the average particle diameter is small, so that the surface area of the workpiece is increased, and the processing is more delicate. It has a great impact on the movement of substances, and the hollow cone nozzle can produce good results in gas cooling, air humidification, metal treatment, dust control, gas cleaning and chemical reactions. In the hollow conical nozzle, because the liquid is sprayed through a single hole several times by centrifugal action, there is the largest unimpeded diameter, which is an ideal choice for the liquid that is easy to produce precipitation, which can minimize the generation of blockage. Customers can choose the appropriate use method according to the general distribution map.



Hollow cone nozzle distribution diagram

### • Full Cone Nozzle

There are generally two types of full cone nozzles, the ordinary type has a built-in swirl blade, the special type has no built-in swirl blade, the full cone nozzle produces a uniform distribution, the droplet size is medium to large spray, the spray area is uniform round, suitable for washing and rinsing dust removal, fire extinguishing, etching and cleaning of electronic circuit board. Customers can choose the appropriate use method according to the general distribution map.

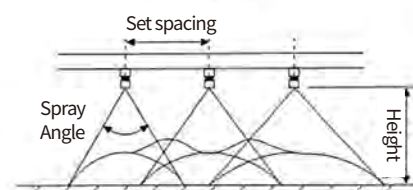


Full cone nozzle distribution diagram

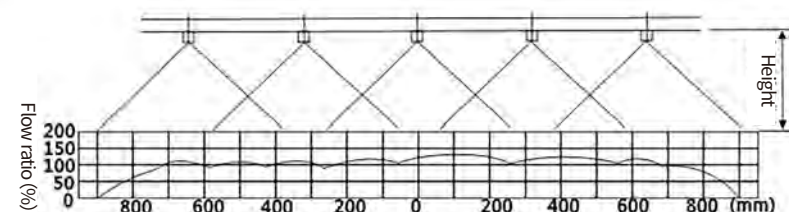
### • Flat Fan Nozzle

The impact force of the flat fan nozzle is larger than that of the hollow cone and the full cone. In order to obtain a more equal flow distribution when several flat fan nozzles are installed, the distribution is generally designed as a mountain distribution. In the flow distribution, spray height, installation position spacing, spray pressure and liquid properties are different, if there are errors in the performance of multiple nozzles, the design value and the actual value will be inconsistent.

(1) When there is a performance error and the flow distribution is uneven.



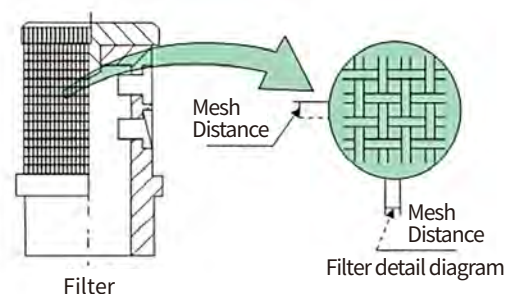
(2) An example of nozzle distribution with guaranteed accuracy has an equal fan distribution when the performance is concentrated.



### • Filter selection

The nozzle generally selects different filters according to the use of the situation, the choice of large particle size is larger than the coarse filter particle size small color selection of fine filters, filters are determined according to the number of mesh specifications. Please see the chart below:  
The filter in the nozzle is composed of the main body, the cap and the filter screen.

| Mesh Number | Mesh Distance (mm) | Particle Path (mm) |
|-------------|--------------------|--------------------|
| #200        | 0.07               | 0.2under           |
| #150        | 0.10               | 0.3-0.4            |
| #100        | 0.15               | 0.5-0.7            |
| #50         | 0.30               | 0.8-0.9            |



## Factors Affecting Nozzle Performance

### • Viscosity

When a liquid flows, the property of internal friction between its molecules is called the viscosity of the liquid. The viscosity is expressed by viscosity, which is used to characterize the resistance factor related to the nature of the liquid. Liquid viscosity is the main factor affecting the spray shape, and to a lesser extent it also affects the flow rate. Relative to water, high viscosity liquids require a higher minimum pressure to produce a spray, and at the same time produce a smaller spray angle.

The influence of non-aqueous fluid viscosity on nozzle performance is shown in the following table.

### • Temperature

Temperature changes affect the spray performance of the nozzle, but it often affects viscosity, surface tension, and specific gravity, which in turn affect the performance of the spray nozzle.

The effect of temperature changes on spray nozzle performance is summarized in the following table.

### • Surface Tension

Surface tension is the tension acting on any boundary line along the surface of a liquid due to the imbalance of molecular attraction. In general, the forces on the molecules at the interface and the molecules in the bulk of the phase are different due to the different environments. The direction of the force is on the surface, and its value per unit length is the surface tension. The surface tension of water is 73 dynes/cm at 21°C. Surface tension primarily affects the minimum operating pressure, spray angle, and droplet size.

The nature of surface tension is evident in the low operating pressure regime. Higher surface tension reduces spray angle, especially for hollow cone and flat fan spray nozzles. Low surface tension allows the nozzle to operate at low pressure.

See the following table for the general effect of surface tension on the performance of spray nozzles.

| Nozzle Characteristic  | Increase In Operating Pressure | Increase Of Specific Gravity | Viscosity Increase                                | Fluid Temperature Increase                                      | Increased Surface Tension |
|------------------------|--------------------------------|------------------------------|---------------------------------------------------|-----------------------------------------------------------------|---------------------------|
| Pattern Characteristic | Improvement                    | Negligible                   | Deteriorate                                       | Improvement                                                     | Negligible                |
| Droplet Size           | Decrease                       | Negligible                   | Increase                                          | Decrease                                                        | Increase                  |
| Spray Angle            | Increase and then decrease     | Negligible                   | Decrease                                          | Increase                                                        | Decrease                  |
| Flow Rate              | Increase                       | Decrease                     | Solid/hollow cone - Increase - flatten - decrease | Depends on the liquid being sprayed and the type of nozzle used | Have no influence         |
| Striking Power         | Increase                       | Negligible                   | Decrease                                          | Increase                                                        | Negligible                |
| Speed                  | Increase                       | Decrease                     | Decrease                                          | Increase                                                        | Negligible                |
| Wear                   | Increase                       | Negligible                   | Decrease                                          | Depends on the liquid being sprayed and the type of nozzle used | Have no influence         |



## Universal Nozzle Series



Boyuan Spray Nozzle UK Office  
sale.uk@boyuanspray.com

Boyuan Spraying

## A Series - Hollow Cone Standard Type

### AA Series Standard Type



A Internal Thread Type

AA Thread Type

### Design Features

- Spray Angle : 51°-144°.
- Spray Pattern : Hollow cone- shaped spray pattern with a ring-shaped impact area.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE.
- Features : Large, unobstructed flow passages minimize clogging ;  
Good atomization of liquids at lower pressures, quick heat transfer, effective airborne droplet impingement.

### Applications

- Water cooling
- Chemical processing
- Cooling towers
- Dust control
- Gas cooling & scrubbing
- Metal treating
- Degreasing
- Washing & cooling

### Performance State

#### · Standard Angle

At the stated pressure in bar.

| Inlet Conn. (in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |         |       |         |       |       |       |       |       |       | Spray Angle (°) |         |       |
|-------------------|---------------|--------------|----------------------------|---------|-------|---------|-------|-------|-------|-------|-------|-------|-----------------|---------|-------|
|                   |               |              | 0.2 bar                    | 0.5 bar | 1 bar | 1.5 bar | 2 bar | 3 bar | 4 bar | 5 bar | 6 bar | 7 bar | 0.5 bar         | 1.5 bar | 6 bar |
| 1/8               | 0.5           | 1.2          | -                          | 0.16    | 0.23  | 0.28    | 0.32  | 0.39  | 0.46  | 0.51  | 0.56  | 0.60  | -               | 58      | 69    |
|                   | 1             | 1.6          | -                          | 0.32    | 0.46  | 0.56    | 0.61  | 0.79  | 0.91  | 1.1   | 1.1   | 1.2   | -               | 64      | 76    |
|                   | 2             | 2.0          | -                          | 0.64    | 0.91  | 1.1     | 1.3   | 1.6   | 1.8   | 2.0   | 2.2   | 2.4   | 52              | 61      | 69    |
|                   | 3             | 2.4          | -                          | 0.97    | 1.4   | 1.7     | 1.9   | 2.4   | 2.7   | 3.1   | 3.3   | 3.6   | 52              | 64      | 77    |
|                   | 5             | 3.2          | 1.0                        | 1.6     | 2.3   | 2.8     | 3.2   | 3.9   | 4.6   | 5.1   | 5.6   | 6.0   | 56              | 67      | 76    |
|                   | 8             | 4.0          | 1.6                        | 2.6     | 3.6   | 4.5     | 5.2   | 6.3   | 7.3   | 8.2   | 8.9   | 9.6   | 56              | 65      | 70    |
| 1/4               | 10            | 4.4          | 2.0                        | 3.2     | 4.6   | 5.6     | 6.4   | 7.9   | 9.1   | 10.2  | 11.2  | 12.1  | 55              | 65      | 72    |
|                   | 1             | 1.6          | -                          | -       | 0.46  | 0.56    | 0.64  | 0.79  | 0.91  | 1.0   | 1.1   | 1.2   | -               | 53      | 67    |
|                   | 2             | 2.0          | -                          | 0.64    | 0.91  | 1.1     | 1.3   | 1.6   | 1.8   | 2.0   | 2.2   | 2.4   | -               | 62      | 71    |
|                   | 3             | 2.4          | -                          | 0.97    | 1.4   | 1.7     | 1.9   | 2.4   | 2.7   | 3.1   | 3.3   | 3.6   | 51              | 65      | 78    |
|                   | 5             | 3.6          | 1.0                        | 1.6     | 2.3   | 2.8     | 3.2   | 3.9   | 4.6   | 5.1   | 5.6   | 6.0   | 63              | 73      | 79    |
|                   | 8             | 4.0          | 1.6                        | 2.6     | 3.6   | 4.5     | 5.2   | 6.3   | 7.3   | 8.2   | 8.9   | 9.6   | 61              | 69      | 73    |
| 3/8               | 10            | 4.4          | 2.0                        | 3.2     | 4.6   | 5.6     | 6.4   | 7.9   | 9.1   | 10.2  | 11.2  | 12.1  | 63              | 70      | 74    |
|                   | 15            | 5.2          | 3.1                        | 4.8     | 6.8   | 8.4     | 9.7   | 11.8  | 13.7  | 15.1  | 16.7  | 18.1  | 63              | 71      | 72    |
|                   | 5             | 3.2          | 1.0                        | 1.6     | 2.3   | 2.8     | 3.2   | 3.9   | 4.6   | 5.1   | 5.6   | 6.0   | 64              | 73      | 79    |
|                   | 8             | 4.0          | 1.6                        | 2.6     | 3.6   | 4.5     | 5.2   | 6.3   | 7.3   | 8.2   | 8.9   | 9.6   | 62              | 70      | 74    |
|                   | 10            | 4.4          | 2.0                        | 3.2     | 4.6   | 5.6     | 6.4   | 7.9   | 9.1   | 10.2  | 11.2  | 12.1  | 64              | 72      | 75    |
|                   | 15            | 5.6          | 3.1                        | 4.6     | 6.8   | 8.4     | 9.7   | 11.8  | 13.7  | 15.3  | 16.7  | 18.1  | 64              | 72      | 74    |
| 1/2               | 20            | 6.4          | 4.1                        | 6.4     | 9.1   | 11.2    | 12.9  | 15.8  | 18.2  | 20    | 22    | 24    | 63              | 70      | 74    |
|                   | 25            | 7.5          | 5.1                        | 8.1     | 11.4  | 14.0    | 16.1  | 19.7  | 23    | 25    | 28    | 30    | 63              | 70      | 74    |
|                   | 30            | 7.9          | 6.1                        | 9.7     | 13.7  | 16.7    | 19.3  | 24    | 27    | 31    | 33    | 36    | 63              | 70      | 74    |
|                   | 25            | 6.4          | 5.1                        | 8.1     | 11.4  | 14.0    | 16.1  | 19.7  | 23    | 25    | 28    | 30    | 63              | 66      | 71    |
|                   | 30            | 7.5          | 6.1                        | 9.7     | 13.7  | 16.7    | 19.3  | 24    | 27    | 31    | 33    | 36    | 67              | 71      | 75    |
|                   | 40            | 9.1          | 8.2                        | 12.9    | 18.2  | 22      | 26    | 32    | 36    | 41    | 45    | 48    | 72              | 76      | 78    |
|                   | 50            | 11.1         | 10.2                       | 16.1    | 23    | 28      | 32    | 39    | 46    | 51    | 56    | 60    | 74              | 79      | 82    |
|                   | 60            | 13.1         | 12.2                       | 19.3    | 27    | 33      | 39    | 47    | 55    | 61    | 67    | 72    | 77              | 82      | 86    |



Wide Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Capacity Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |      |        |      |      |      |      |      |      | Spray Angle<br>(°) |        |      |
|----------------------|---------------|-----------------|-------------------------------|--------|------|--------|------|------|------|------|------|------|--------------------|--------|------|
|                      |               |                 | 0.2bar                        | 0.5bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 0.5bar             | 1.5bar | 6bar |
| 1/8                  | 0.5-0.5W      | 1.2             | -                             | -      | 0.23 | 0.28   | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.6  | -                  | 117    | 98   |
|                      | 1-1W          | 1.6             | -                             | -      | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | -                  | 125    | 110  |
|                      | 2-3W          | 2.8             | -                             | 0.81   | 1.1  | 1.4    | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 2.9  | 114                | 114    | 97   |
|                      | 3-3W          | 2.8             | -                             | 1.97   | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.7  | 114                | 114    | 97   |
|                      | 3-5W          | 3.2             | -                             | 1.1    | 1.5  | 1.9    | 2.2  | 2.7  | 3.1  | 3.5  | 3.8  | 4.0  | 116                | 110    | 95   |
|                      | 2-10W         | 4.4             | -                             | 1.3    | 1.9  | 2.3    | 2.6  | 3.2  | 3.7  | 4.2  | 4.6  | 5.0  | 130                | 135    | 120  |
|                      | 5-5W          | 3.2             | -                             | 1.6    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 5.5  | 6.1  | 116                | 110    | 92   |
|                      | 5-10W         | 4.4             | 1.3                           | 2.1    | 3.0  | 3.6    | 4.2  | 5.1  | 5.9  | 6.6  | 7.3  | 7.9  | 126                | 121    | 95   |
| 1/4                  | 8-10W         | 4.4             | 1.8                           | 2.9    | 4.1  | 5.0    | 5.8  | 7.1  | 8.2  | 9.2  | 10.0 | 10.8 | 124                | 112    | 90   |
|                      | 1-1W          | 1.6             | -                             | -      | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | -                  | 117    | 111  |
|                      | 1-5W          | 3.2             | -                             | -      | 0.77 | 0.95   | 1.1  | 1.3  | 1.5  | 1.7  | 1.9  | 2.0  | -                  | 123    | 124  |
|                      | 1-10W         | 4.4             | -                             | -      | 0.96 | 1.2    | 1.4  | 1.7  | 1.9  | 2.1  | 2.3  | 2.5  | -                  | 144    | 139  |
|                      | 1-15W         | 5.6             | -                             | -      | 1.1  | 1.3    | 1.5  | 1.9  | 2.2  | 2.4  | 2.7  | 2.9  | -                  | 128    | 132  |
|                      | 2-5W          | 3.2             | -                             | 1.1    | 1.5  | 1.9    | 2.2  | 2.7  | 3.1  | 3.5  | 3.8  | 4.0  | 118                | 123    | 113  |
|                      | 2-10W         | 4.4             | -                             | 1.3    | 1.9  | 2.3    | 2.6  | 3.2  | 3.7  | 4.2  | 4.6  | 5.0  | 138                | 136    | 126  |
|                      | 5-5W          | 3.2             | -                             | 1.6    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.1  | 114                | 113    | 104  |
|                      | 5-10W         | 4.4             | 1.3                           | 2.1    | 3.0  | 3.6    | 4.2  | 5.1  | 5.9  | 6.6  | 7.3  | 7.9  | 130                | 130    | 119  |
|                      | 5-15W         | 5.6             | 1.6                           | 2.5    | 3.5  | 4.3    | 5.0  | 6.1  | 7.0  | 7.8  | 8.6  | 9.3  | 130                | 132    | 120  |
|                      | 8-10W         | 4.4             | 1.8                           | 2.9    | 4.1  | 5.0    | 5.8  | 7.1  | 8.2  | 9.2  | 10.0 | 10.8 | 129                | 122    | 103  |
|                      | 10-10W        | 4.4             | 2.0                           | 3.2    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1  | 10.2 | 11.2 | 12.2 | 120                | 108    | 95   |
| 3/8                  | 8-15W         | 5.6             | 2.2                           | 3.5    | 5.0  | 6.1    | 7.1  | 8.7  | 10.0 | 11.2 | 12.3 | 13.2 | 129                | 122    | 107  |
|                      | 10-15W        | 5.6             | 2.4                           | 3.9    | 5.5  | 6.7    | 7.7  | 9.5  | 10.9 | 12.2 | 13.4 | 14.6 | 120                | 108    | 97   |
|                      | 15-15W        | 5.6             | 3.0                           | 4.8    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.0 | 101                | 95     | 90   |
|                      | 5-10W         | 4.4             | 1.3                           | 2.1    | 3.0  | 3.6    | 4.2  | 5.1  | 5.9  | 6.6  | 7.3  | 7.9  | 130                | 123    | 102  |
|                      | 5-15W         | 5.6             | 1.6                           | 2.5    | 3.5  | 4.3    | 5.0  | 6.1  | 7.0  | 7.8  | 8.6  | 9.3  | 138                | 131    | 112  |
|                      | 8-10W         | 4.4             | 1.8                           | 2.9    | 4.1  | 5.0    | 5.8  | 7.1  | 8.2  | 9.2  | 10.0 | 10.8 | 122                | 110    | 96   |
|                      | 10-10W        | 4.4             | 2.0                           | 3.2    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1  | 10.2 | 11.2 | 12.2 | 116                | 108    | 93   |
|                      | 8-15W         | 5.6             | 2.2                           | 3.5    | 5.0  | 6.1    | 7.1  | 8.7  | 10.0 | 11.2 | 12.3 | 13.2 | 133                | 120    | 105  |
|                      | 10-15W        | 5.6             | 2.4                           | 3.9    | 5.5  | 6.7    | 7.7  | 9.5  | 10.9 | 12.2 | 13.4 | 14.6 | 126                | 115    | 100  |
|                      | 8-25W         | 7.5             | 2.6                           | 4.2    | 5.9  | 7.3    | 8.4  | 10.3 | 11.9 | 13.3 | 14.5 | 15.6 | 122                | 118    | 109  |
|                      | 10-20W        | 6.0             | 2.9                           | 4.5    | 6.4  | 7.8    | 9.0  | 11.1 | 12.8 | 14.3 | 15.6 | 16.9 | 118                | 112    | 102  |
|                      | 15-15W        | 5.6             | 3.0                           | 4.8    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.0 | 116                | 106    | 95   |
| 1/2                  | 15-20W        | 6.0             | 3.4                           | 5.5    | 7.7  | 9.5    | 11.0 | 13.4 | 15.5 | 17.3 | 16.0 | 20.4 | 113                | 108    | 98   |
|                      | 20-20W        | 6.0             | 4.1                           | 6.4    | 9.1  | 11.2   | 12.9 | 15.8 | 18.2 | 20   | 22   | 24.1 | 106                | 102    | 95   |
|                      | 15-30W        | 7.9             | 4.5                           | 7.1    | 10.0 | 12.3   | 14.2 | 17.4 | 20   | 22   | 25   | 26.5 | 116                | 110    | 102  |
|                      | 25-25W        | 7.5             | 5.1                           | 8.1    | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 25   | 28   | 30.2 | 105                | 100    | 93   |
|                      | 25-30W        | 7.9             | 5.7                           | 9.0    | 12.8 | 15.6   | 18.0 | 22   | 26   | 29   | 31   | 33.9 | 105                | 101    | 94   |
| 1/2                  | 50-50W        | 11.1            | 10.2                          | 16.1   | 23   | 28     | 32   | 39   | 46   | 51   | 56   | 60.9 | 110                | 102    | 93   |

Special size please consult our sale dept!

Order Info

|             |   |            |   |               |   |               |
|-------------|---|------------|---|---------------|---|---------------|
| AA          | - | 1/4        | - | SS            | - | 25            |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



AD Type



Removable Cap

Design Features

- Spray Angle : 52°-124°.
- Spray Pattern : Hollow cone- shaped spray pattern with a ring-shaped impact area.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS
- Features : Interchangeable spray caps within each inlet connection size group for maximum versatility;  
Lower profile projection for installation in a tee or pipe header.

Applications

- Water aerating
- Degreasing
- Dust control
- Metal treating
- Gas cooling & scrubbing
- Washing & cooling

Order Info

|             |   |            |   |               |   |               |
|-------------|---|------------|---|---------------|---|---------------|
| AD          | - | 3/4        | - | SS            | - | 10            |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

基本参数

Standard Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |        |        |        |      |        |      |      |      |      |      |        | Spray Angle (°) |      |  |
|----------------------|---------------|--------------|----------------------------|--------|--------|--------|------|--------|------|------|------|------|------|--------|-----------------|------|--|
|                      |               |              | 0.2bar                     | 0.4bar | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 0.5bar | 1.5bar          | 6bar |  |
| 3/8                  | 2             | 2.0          | 0.14                       | 0.58   | 0.64   | 0.76   | 0.91 | 1.1    | 1.3  | 1.6  | 1.8  | 2.2  | 2.4  | -      | 60              | 70   |  |
|                      | 3             | 2.4          | 0.61                       | 0.86   | 0.97   | 1.1    | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.4  | 3.6  | 52     | 64              | 77   |  |
|                      | 5             | 3.2          | 1.0                        | 1.4    | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 56     | 67              | 76   |  |
|                      | 8             | 4.0          | 1.6                        | 2.3    | 2.6    | 3.1    | 3.6  | 4.5    | 5.2  | 6.3  | 7.3  | 8.9  | 9.6  | 56     | 65              | 70   |  |
|                      | 10            | 4.4          | 2.0                        | 2.9    | 3.2    | 3.8    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1  | 11.2 | 12.1 | 55     | 65              | 72   |  |
|                      | 20-10         | 4.4          | -                          | 4.0    | 4.5    | 5.3    | 6.4  | 7.8    | 9.0  | 11.1 | 12.8 | 15.6 | 16.9 | 61     | 65              | 67   |  |
| 1/2                  | 5             | 3.6          | 1.0                        | 1.4    | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 63     | 73              | 79   |  |
|                      | 8             | 4.0          | 1.6                        | 2.3    | 2.6    | 3.1    | 3.6  | 4.5    | 5.2  | 6.3  | 7.3  | 8.9  | 9.6  | 61     | 69              | 73   |  |
|                      | 10            | 4.4          | 2.0                        | 2.9    | 3.2    | 3.8    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1  | 11.2 | 12.1 | 63     | 70              | 74   |  |
|                      | 15            | 5.2          | 3.1                        | 4.3    | 4.8    | 5.7    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 | 16.8 | 18.1 | 60     | 67              | 70   |  |
|                      | 20            | 6.0          | 4.1                        | 5.8    | 6.4    | 7.6    | 9.1  | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 63     | 65              | 69   |  |
|                      | 25            | 7.1          | 5.1                        | 7.2    | 8.1    | 9.5    | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 59     | 63              | 68   |  |
| 3/4                  | 5             | 3.2          | 1.0                        | 1.4    | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 64     | 73              | 79   |  |
|                      | 8             | 4.0          | 1.6                        | 2.3    | 2.6    | 3.1    | 3.6  | 4.5    | 5.2  | 6.3  | 7.3  | 8.9  | 9.6  | 62     | 70              | 74   |  |
|                      | 10            | 4.4          | 2.0                        | 2.9    | 3.2    | 3.8    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1  | 11.2 | 12.1 | 64     | 72              | 75   |  |
|                      | 15            | 5.6          | 3.1                        | 4.3    | 4.8    | 5.7    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 | 16.8 | 18.1 | 64     | 72              | 74   |  |
|                      | 20            | 6.4          | 4.1                        | 5.8    | 6.4    | 7.6    | 9.1  | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 63     | 70              | 74   |  |
|                      | 25            | 7.5          | 5.1                        | 7.2    | 8.1    | 9.5    | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 63     | 70              | 74   |  |
| 1-1/2                | 50-50.3       | 9.5          | 10.2                       | 14.4   | 16.1   | 19.1   | 23   | 28     | 32   | 39   | 46   | 56   | 60   | 70     | 72              | 73   |  |
|                      | 40            | 7.9          | 8.2                        | 11.5   | 12.9   | 15.3   | 18.2 | 22     | 26   | 32   | 36   | 45   | 48   | 70     | 73              | 74   |  |
|                      | 50            | 9.5          | 10.2                       | 14.4   | 16.1   | 19.1   | 23   | 28     | 32   | 39   | 46   | 56   | 60   | 72     | 75              | 77   |  |
|                      | 60            | 11.1         | 12.2                       | 17.3   | 19.3   | 23     | 27   | 34     | 39   | 47   | 55   | 67   | 72   | 74     | 76              | 79   |  |
|                      | 70            | 12.7         | 14.3                       | 20     | 23     | 27     | 32   | 39     | 45   | 55   | 64   | 78   | 84   | 76     | 79              | 83   |  |
|                      | 80            | 14.3         | 16.3                       | 23     | 26     | 31     | 36   | 45     | 52   | 63   | 73   | 89   | 96   | 78     | 82              | 84   |  |
|                      | 90            | 14.7         | 18.3                       | 26     | 29     | 34     | 41   | 50     | 58   | 71   | 82   | 101  | 109  | 81     | 84              | 84   |  |
|                      | 100           | 15.9         | 20                         | 29     | 32     | 38     | 46   | 56     | 64   | 79   | 91   | 112  | 121  | 83     | 86              | 86   |  |
|                      | 110           | 17.1         | 22                         | 32     | 35     | 42     | 50   | 61     | 71   | 87   | 100  | 123  | 133  | 85     | 88              | 88   |  |
|                      | 120           | 18.3         | 24                         | 35     | 39     | 46     | 55   | 67     | 77   | 95   | 109  | 134  | 145  | 87     | 90              | 90   |  |



• Wide Angle

在指定的压力下 (以bar为单位)。

| Inlet Conn. (in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |        |        |        |      |        |      |      |      |      |      | Spray Angle (°) |        |      |
|-------------------|---------------|--------------|----------------------------|--------|--------|--------|------|--------|------|------|------|------|------|-----------------|--------|------|
|                   |               |              | 0.2bar                     | 0.4bar | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 0.5bar          | 1.5bar | 6bar |
| 3/8               | 3-2W          | 2.0          | -                          | -      | 0.73   | 0.84   | 1.0  | 1.2    | 1.4  | 1.7  | 2.0  | 2.5  | 2.7  | 112             | 109    | 90   |
|                   | 3-3W          | 2.8          | -                          | -      | 0.96   | 1.1    | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.4  | 3.6  | 115             | 112    | 97   |
|                   | 3-5W          | 3.2          | -                          | -      | 1.1    | 1.3    | 1.6  | 1.9    | 2.2  | 2.7  | 3.1  | 3.8  | 4.2  | 117             | 113    | 103  |
|                   | 5-5W          | 3.2          | -                          | -      | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.5  | 5.6  | 6.1  | 115             | 112    | 102  |
|                   | 5-10W         | 4.4          | -                          | 1.5    | 2.1    | 2.5    | 3.0  | 3.6    | 4.1  | 5.1  | 6.0  | 7.2  | 8.0  | 119             | 119    | 109  |
|                   | 8-8W          | 3.9          | -                          | 1.8    | 2.6    | 3.1    | 3.6  | 4.4    | 5.2  | 6.3  | 7.4  | 9.0  | 9.5  | 116             | 110    | 98   |
|                   | 8-10W         | 4.4          | -                          | 2.1    | 2.9    | 3.4    | 4.1  | 5.1    | 6.0  | 7.1  | 8.2  | 9.9  | 10.7 | 118             | 113    | 101  |
|                   | 10-10W        | 4.4          | -                          | 2.3    | 3.2    | 3.8    | 4.5  | 5.5    | 6.3  | 7.9  | 9.3  | 11.0 | 11.8 | 118             | 111    | 100  |
| 1/2               | 5-3W          | 2.8          | 0.67                       | 0.75   | 1.0    | 1.2    | 1.5  | 1.8    | 2.0  | 2.5  | 2.9  | 3.5  | 3.8  | 118             | 113    | 100  |
|                   | 5-5W          | 3.2          | 1.0                        | 1.1    | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.5  | 5.6  | 6.1  | 121             | 116    | 102  |
|                   | 8-8W          | 3.9          | 1.6                        | 1.8    | 2.6    | 3.1    | 3.6  | 4.4    | 5.2  | 6.3  | 7.4  | 9.0  | 9.5  | 119             | 113    | 103  |
|                   | 10-15W        | 5.6          | 2.5                        | 2.8    | 3.9    | 4.6    | 5.6  | 6.7    | 7.8  | 9.5  | 11.1 | 13.4 | 14.5 | 120             | 112    | 102  |
|                   | 15-15W        | 5.6          | 3.0                        | 3.4    | 5.0    | 5.7    | 6.7  | 8.3    | 9.7  | 11.9 | 14.1 | 16.7 | 18.3 | 117             | 111    | 104  |
|                   | 8-25W         | 7.5          | 2.6                        | 2.9    | 4.2    | 5.0    | 6.0  | 7.5    | 8.6  | 10.3 | 11.9 | 14.6 | 15.6 | 124             | 120    | 111  |
| 3/4               | 10-10W        | 4.4          | 2.0                        | 2.2    | 3.2    | 3.8    | 4.5  | 5.5    | 6.3  | 7.9  | 9.3  | 11.0 | 11.8 | 118             | 111    | 100  |
|                   | 10-30W        | 7.9          | 3.7                        | 4.1    | 6.2    | 7.2    | 8.6  | 10.3   | 11.9 | 14.6 | 16.8 | 21   | 23   | 124             | 117    | 108  |
|                   | 15-15W        | 5.6          | 3.0                        | 3.4    | 5.0    | 5.7    | 6.7  | 8.3    | 9.7  | 11.9 | 13.8 | 16.7 | 18.3 | 117             | 112    | 102  |
|                   | 15-25W        | 7.5          | 4.1                        | 4.6    | 6.2    | 7.3    | 8.9  | 10.7   | 12.6 | 15.4 | 17.9 | 22   | 23   | 119             | 114    | 106  |
|                   | 20-25W        | 7.5          | 4.8                        | 5.4    | 8.1    | 9.5    | 11.5 | 13.8   | 16.0 | 19.7 | 23   | 28   | 30   | 118             | 112    | 105  |
|                   | 20-30W        | 7.9          | 5.2                        | 5.8    | 8.5    | 9.9    | 11.9 | 14.6   | 16.8 | 21   | 24   | 29   | 31   | 118             | 112    | 105  |
|                   | 25-25W        | 7.5          | 5.2                        | 5.8    | 8.1    | 9.5    | 11.5 | 13.8   | 16.0 | 19.7 | 23   | 28   | 30   | 117             | 110    | 103  |
|                   | 25-30W        | 7.9          | 5.6                        | 6.3    | 8.9    | 10.7   | 12.7 | 15.8   | 18.2 | 22   | 26   | 31   | 34   | 117             | 110    | 103  |
|                   |               |              |                            |        |        |        |      |        |      |      |      |      |      |                 |        |      |
|                   |               |              |                            |        |        |        |      |        |      |      |      |      |      |                 |        |      |

• Special size please consult our sale dept!

A Series - Hollow Cone Direct Injection Wide Angle Type

AAT



Removable Reflective Cap

Design Features

- Spray Angle : 120° /150° /180°
- Spray Pattern : Hollow cone- shaped spray pattern with a ring-shaped impact area.
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS
- Features : Interchangeable spray caps within each inlet connection size group for maximum versatility.

Order Info

|             |   |            |   |               |   |               |   |             |
|-------------|---|------------|---|---------------|---|---------------|---|-------------|
| AAT         | - | 3/4        | - | SS            | - | 4             | - | 120         |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Capacity Size |   | Spray Angle |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

Applications

- Water aerating
- Degreasing
- Dust control
- Metal treating
- Gas cooling & srcubbing
- Washing & cooling

Performance State

At the stated pressure in bar.

| Inlet Conn (in.) | Capacity Size | Flow Rate Capacity(L/min) |        |        |      |      |      |      |
|------------------|---------------|---------------------------|--------|--------|------|------|------|------|
|                  |               | 0.4bar                    | 0.7bar | 1.5bar | 3bar | 4bar | 6bar | 7bar |
| 1/8              | 0.37          | 1.1                       | 1.4    | 2.1    | 3.0  | 3.4  | 4.2  | 4.5  |
|                  | 0.5           | 1.4                       | 1.9    | 2.8    | 4.0  | 4.6  | 5.6  | 6.0  |
|                  | 0.75          | 2.2                       | 2.9    | 4.2    | 5.9  | 6.8  | 8.4  | 9.0  |
| 1/4              | 1             | 2.9                       | 3.8    | 5.6    | 7.9  | 9.1  | 11.2 | 12.1 |
|                  | 1.5           | 4.3                       | 5.7    | 8.3    | 11.8 | 13.7 | 16.8 | 18.1 |
|                  | 2             | 5.8                       | 7.7    | 11.2   | 15.8 | 18.2 | 22   | 24   |
|                  | 2.5           | 7.2                       | 9.5    | 13.9   | 19.7 | 23   | 28   | 30   |
| 3/8              | 3             | 8.8                       | 11.6   | 17.0   | 24   | 27   | 34   | 36   |
|                  | 3.5           | 10.4                      | 13.7   | 20     | 28   | 32   | 39   | 42   |
|                  | 4             | 11.9                      | 15.7   | 23     | 32   | 36   | 45   | 48   |
|                  | 4.5           | 12.9                      | 17.1   | 25     | 36   | 41   | 50   | 54   |
|                  | 5             | 14.4                      | 19.1   | 28     | 39   | 46   | 56   | 60   |

• Special size please consult our sale dept!



Cannon Nozzle



Design Features

- Spray Angle : 15°-65°
- Spray Pattern : Hollow cone spray, spray area in a ring.
- Orifice : 0.8mm/1.0mm/1.2mm/1.5mm
- Material : SS
- Features : Injection Angle can be adjusted, through the fan injection distance of 30-100 meters.

Order Info

|             |   |            |   |               |   |         |
|-------------|---|------------|---|---------------|---|---------|
| A           | - | 1/4        | - | SS            | - | 1.0K    |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Orifice |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

Applications

- Air humidifying purification
- Dust control
- Disinfection

Performance State

At the stated pressure in bar.

| Orifice (mm) | Flow Rate Capacity (L/min) |      |      |      |      |      |       |       |       |
|--------------|----------------------------|------|------|------|------|------|-------|-------|-------|
|              | 2bar                       | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 20bar | 35bar |
| 0.8          | 0.22                       | 0.26 | 0.31 | 0.34 | 0.37 | 0.4  | 0.48  | 0.68  | 0.9   |
| 1.0          | 0.29                       | 0.33 | 0.37 | 0.41 | 0.43 | 0.47 | 0.53  | 0.7   | 0.95  |
| 1.2          | 0.32                       | 0.39 | 0.46 | 0.51 | 0.56 | 0.6  | 0.72  | 1     | 1.3   |
| 1.5          | 0.39                       | 0.48 | 0.55 | 0.61 | 0.67 | 0.72 | 0.86  | 1.3   | 1.7   |



## A Series - Hollow Cone

### Oil Burner nozzle



#### Design Features

- Spray Angle : 50°-90°
- Spray Pattern : shaped spray pattern with round impact area.
- Orifice: 0.8mm/1.0mm/1.2mm/1.5mm/1.8mm
- Material : SS
- Features : Stainless steel nozzle core and flow guide groove are built in, forming a centrifugal vortex in the flow guide groove.

#### Applications

- Cooling    · Dust control    · Artificial fog
- Atomized fuel oil    · Cleaning & disinfection
- Garden landscape construction

#### Order Info

**AAZ** - **1/4** - **SS** - **3#**  
Nozzle Type    Inlet Conn    Material Code    Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.

#### Performance State

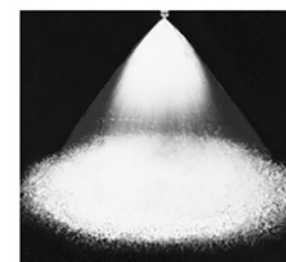
At the stated pressure in bar.

| Inlet Conn | Orifice | Atomized Particle | Mesh Number | Flow Rate Capacity (L/min) |      |      |      |      |       |       |       |       | Spray Angle (°) |       |
|------------|---------|-------------------|-------------|----------------------------|------|------|------|------|-------|-------|-------|-------|-----------------|-------|
|            |         |                   |             | 1.5bar                     | 2bar | 3bar | 5bar | 7bar | 10bar | 15bar | 20bar | 25bar | 3bar            | 10bar |
| 1/4        | 0.3     | 50                | 120         | -                          | -    | 0.05 | 0.06 | 0.07 | 0.08  | 0.10  | 0.12  | 0.14  | 30              | 45    |
|            | 0.4     | 60                | 120         | -                          | -    | 0.06 | 0.08 | 0.09 | 0.11  | 0.13  | 0.15  | 0.16  | 30              | 45    |
|            | 0.5     | 70                | 100         | -                          | -    | 0.08 | 0.10 | 0.12 | 0.14  | 0.17  | 0.20  | 0.22  | 45              | 60    |
|            | 0.6     | 70                | 100         | -                          | 0.10 | 0.13 | 0.16 | 0.20 | 0.25  | 0.30  | 0.35  | 0.40  | 50              | 70    |
|            | 0.7     | 80                | 100         | 0.14                       | 0.16 | 0.20 | 0.26 | 0.30 | 0.35  | 0.43  | 0.49  | 0.55  | 50              | 70    |
|            | 0.8     | 80                | 100         | 0.22                       | 0.25 | 0.30 | 0.38 | 0.45 | 0.53  | 0.66  | 0.74  | 0.82  | 60              | 70    |
|            | 0.9     | 90                | 50          | 0.29                       | 0.33 | 0.40 | 0.50 | 0.60 | 0.71  | 0.86  | 0.99  | 1.10  | 60              | 70    |
|            | 1.0     | 110               | 50          | 0.36                       | 0.41 | 0.50 | 0.64 | 0.75 | 0.89  | 1.08  | 1.23  | 1.37  | 60              | 80    |
|            | 1.1     | 120               | 50          | 0.43                       | 0.49 | 0.60 | 0.77 | 0.90 | 1.06  | 1.29  | 1.48  | 1.65  | 60              | 80    |
|            | 1.2     | 130               | 50          | 0.58                       | 0.66 | 0.80 | 1.02 | 1.20 | 1.42  | 1.72  | 1.97  | 2.20  | 60              | 80    |
|            | 1.3     | 140               | 50          | 0.72                       | 0.82 | 1.00 | 1.28 | 1.50 | 1.77  | 2.15  | 2.47  | 2.74  | 60              | 80    |
|            | 1.4     | 140               | 50          | 0.86                       | 0.99 | 1.20 | 1.53 | 1.80 | 2.13  | 2.58  | 2.96  | 3.29  | 80              | 80    |
|            | 1.5     | 150               | 50          | 1.01                       | 1.15 | 1.40 | 1.79 | 2.10 | 2.48  | 3.01  | 3.46  | 3.84  | 80              | 80    |
|            | 1.6     | 180               | 50          | 1.15                       | 1.32 | 1.60 | 2.04 | 2.40 | 2.84  | 3.44  | 3.95  | 4.39  | 80              | 80    |
|            | 1.7     | 210               | 50          | 1.29                       | 1.48 | 1.80 | 2.20 | 2.69 | 3.19  | 3.87  | 4.44  | 4.94  | 80              | 80    |
|            | 1.8     | 230               | 50          | 1.45                       | 1.70 | 2.08 | 2.40 | 3.02 | 3.65  | 4.25  | 4.98  | 5.50  | 80              | 80    |



## B Series - Full Cone Standard Type

### BB Series Standard Type



BB Thread Type

#### Design Features

- Spray Angle : 42°-120°
- Spray Pattern : Solid cone- shaped spray pattern with round impact area.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : Unique vane design with large flow passages provides superior control and uniform distribution.

#### Applications

- Water aerating    · Fire prevention    · Dust control
- Metal treating    · Gas cooling & scrubbing

#### Performance State

##### · Standard Angle

At the stated pressure in bar.

| Inlet Conn. (in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |      |        |      |      |      |      |      |      |       | Spray Angle (°) |        |      |
|-------------------|---------------|--------------|----------------------------|------|--------|------|------|------|------|------|------|-------|-----------------|--------|------|
|                   |               |              | 0.5bar                     | 1bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 0.5bar          | 1.5bar | 6bar |
| 1/8               | 1             | 0.79         | -                          | 0.44 | 0.54   | 0.62 | 0.74 | 0.85 | 0.94 | 1.0  | 1.1  | 1.3   | -               | 58     | 53   |
|                   | 1.5           | 1.2          | 0.49                       | 0.69 | 0.81   | 0.93 | 1.1  | 1.3  | 1.4  | 1.5  | 1.7  | 1.9   | 65              | 65     | 59   |
|                   | 2             | 1.2          | 0.65                       | 0.92 | 1.1    | 1.2  | 1.5  | 1.7  | 1.9  | 2.0  | 2.2  | 2.6   | 43              | 50     | 46   |
|                   | 3             | 1.5          | 0.98                       | 1.4  | 1.6    | 1.9  | 2.2  | 2.5  | 2.8  | 3.1  | 3.3  | 3.9   | 52              | 65     | 59   |
|                   | 3.5           | 1.6          | 1.1                        | 1.6  | 1.9    | 2.2  | 2.6  | 3.0  | 3.3  | 3.6  | 3.9  | 4.5   | 43              | 50     | 46   |
|                   | 3.9           | 2.0          | 1.3                        | 1.8  | 2.1    | 2.4  | 2.9  | 3.3  | 3.7  | 4.0  | 4.3  | 5.1   | 77              | 84     | 79   |
|                   | 5             | 2.0          | 1.6                        | 2.3  | 2.7    | 3.1  | 3.7  | 4.2  | 4.7  | 5.1  | 5.5  | 6.5   | 52              | 65     | 59   |
| 1/4               | 6.1           | 2.3          | 2.0                        | 2.8  | 3.3    | 3.8  | 4.5  | 5.2  | 5.7  | 6.2  | 6.7  | 7.9   | 69              | 74     | 68   |
|                   | 6.5           | 2.4          | 2.1                        | 3.0  | 3.5    | 4.0  | 4.8  | 5.5  | 6.1  | 6.7  | 7.1  | 8.4   | 45              | 50     | 46   |
|                   | 10            | 3.2          | 3.3                        | 4.7  | 5.4    | 6.2  | 7.4  | 8.5  | 9.4  | 10.2 | 11.0 | 13.0  | 58              | 67     | 61   |
| 3/8               | 12.5          | 3.2          | 4.1                        | 5.8  | 6.8    | 7.7  | 9.3  | 10.6 | 11.8 | 12.8 | 13.7 | 16.2  | 69              | 74     | 68   |
|                   | 9.5           | 2.6          | 3.1                        | 4.7  | 5.1    | 5.9  | 7.1  | 8.1  | 8.9  | 9.7  | 10.4 | 12.3  | 45              | 50     | 46   |
|                   | 15            | 3.6          | 4.9                        | 6.9  | 8.1    | 9.3  | 11.2 | 12.7 | 14.1 | 15.4 | 16.5 | 19.4  | 64              | 67     | 61   |
| 1/2               | 20            | 4.0          | 6.5                        | 9.2  | 10.8   | 12.4 | 14.9 | 17.0 | 18.8 | 20   | 22   | 26    | 76              | 80     | 73   |
|                   | 22            | 4.5          | 7.2                        | 10.2 | 11.9   | 13.6 | 16.4 | 18.7 | 21   | 23   | 24   | 28    | 87              | 90     | 82   |
|                   | 16            | 3.5          | 5.2                        | 7.4  | 8.7    | 9.9  | 11.9 | 13.6 | 15.1 | 16.4 | 17.6 | 21    | 48              | 50     | 46   |
|                   | 25            | 4.6          | 8.2                        | 11.6 | 13.5   | 15.4 | 18.6 | 21   | 24   | 26   | 27   | 32    | 64              | 67     | 61   |
|                   | 32            | 5.2          | 10.4                       | 14.7 | 17.3   | 19.8 | 24   | 27   | 30   | 33   | 35   | 41    | 72              | 75     | 68   |
| 3/4               | 40            | 6.2          | 13.1                       | 18.5 | 22     | 25   | 30   | 34   | 38   | 41   | 44   | 52    | 88              | 91     | 83   |
|                   | 50            | 6.7          | 16.3                       | 23.1 | 27     | 31   | 37   | 42   | 47   | 51   | 55   | 65    | 91              | 94     | 86   |
|                   | 2.5           | 4.9          | 9.6                        | 12.7 | 15.9   | 18.2 | 22   | 25   | 28.5 | 30   | 32   | 38    | 48              | 50     | 46   |
|                   | 4.0           | 6.4          | 15.4                       | 20   | 26     | 29   | 35   | 40   | 45   | 48   | 52   | 61    | 67              | 70     | 63   |
|                   | 7.0           | 9.5          | 27                         | 35   | 45     | 51   | 61   | 70   | 78   | 84   | 91   | 107   | 89              | 92     | 84   |
| 1                 | 4.2           | 6.0          | 16.2                       | 21   | 27     | 31   | 37   | 42   | 48   | 51   | 54   | 64    | 48              | 50     | 46   |
|                   | 7.0           | 8.3          | 27                         | 35   | 45     | 51   | 61   | 70   | 79   | 84   | 91   | 107   | 67              | 68     | 62   |
|                   | 8.0           | 9.5          | 31                         | 40   | 51     | 58   | 70   | 80   | 90   | 97   | 104  | 122   | 72              | 81     | 82   |
|                   | 10            | 11.9         | 38                         | 51   | 65     | 73   | 88   | 100  | 113  | 121  | 130  | 153   | 78              | 90     | 94   |
|                   | 12            | 11.9         | 46                         | 60   | 77     | 87   | 105  | 120  | 135  | 145  | 155  | 183   | 89              | 92     | 84   |



•Wide Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |      |        |      |      |      |      |      |      |       | Spray Angle (°) |        |      |
|----------------------|---------------|--------------|----------------------------|------|--------|------|------|------|------|------|------|-------|-----------------|--------|------|
|                      |               |              | 0.5bar                     | 1bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 0.5bar          | 1.5bar | 6bar |
| 1/8                  | 2.8W          | 1.6          | -                          | 1.2  | 1.5    | 1.7  | 2.0  | 2.3  | 2.5  | 2.7  | 2.9  | 3.5   | 116             | 120    | 102  |
|                      | 4.3W          | 2.0          | -                          | 1.9  | 2.3    | 2.6  | 3.1  | 3.5  | 3.9  | 4.2  | 4.5  | 5.4   | 116             | 120    | 102  |
|                      | 5.6W          | 2.4          | 1.8                        | 2.5  | 3.1    | 3.4  | 4.0  | 4.6  | 5.1  | 5.5  | 5.9  | 7.1   | 116             | 120    | 102  |
|                      | 8W            | 2.4          | 2.6                        | 3.6  | 4.4    | 4.8  | 5.8  | 6.6  | 7.2  | 7.8  | 8.4  | 10.1  | 116             | 120    | 103  |
| 1/4                  | 10W           | 2.8          | 3.3                        | 4.5  | 5.5    | 6.0  | 7.2  | 8.2  | 9.1  | 9.8  | 10.6 | 12.7  | 116             | 120    | 103  |
|                      | 12W           | 3.2          | 3.9                        | 5.3  | 6.5    | 7.3  | 8.7  | 9.8  | 10.9 | 11.8 | 12.7 | 15.2  | 117             | 120    | 103  |
|                      | 14W           | 3.6          | 4.6                        | 6.2  | 7.6    | 8.5  | 10.1 | 11.5 | 12.7 | 13.7 | 14.8 | 17.7  | 117             | 120    | 103  |
| 3/8                  | 17W           | 4.0          | 5.6                        | 7.6  | 9.3    | 10.3 | 12.3 | 13.9 | 15.4 | 16.7 | 18.0 | 21.6  | 117             | 120    | 103  |
|                      | 20W           | 4.4          | 6.6                        | 8.9  | 10.9   | 12.1 | 14.5 | 16.5 | 18.1 | 19.6 | 21.2 | 25.3  | 117             | 120    | 104  |
|                      | 24W           | 4.8          | 7.9                        | 10.7 | 13.1   | 14.5 | 17.3 | 19.7 | 22   | 24   | 25.9 | 31.0  | 117             | 120    | 104  |
|                      | 27W           | 5.2          | 8.9                        | 12.0 | 14.7   | 16.3 | 19.5 | 22   | 24   | 26   | 28.1 | 33.6  | 117             | 120    | 106  |
| 1/2                  | 30W           | 5.6          | 9.9                        | 13.4 | 16.4   | 18.1 | 22   | 25   | 27   | 29   | 31.3 | 37.4  | 117             | 120    | 108  |
|                      | 35W           | 6.0          | 11.5                       | 15.6 | 19.1   | 21   | 25   | 29   | 32   | 34   | 36.7 | 43.9  | 117             | 120    | 108  |
|                      | 40W           | 6.4          | 13.1                       | 17.8 | 21.8   | 24   | 29   | 33   | 36   | 39   | 42.1 | 50.3  | 117             | 120    | 108  |
|                      | 45W           | 6.4          | 14.8                       | 20   | 24.5   | 27   | 33   | 37   | 41   | 44   | 47.5 | 56.8  | 117             | 120    | 110  |
|                      | 50W           | 6.7          | 16.4                       | 22   | 26.9   | 30   | 36   | 41   | 45   | 49   | 52.9 | 63.3  | 117             | 120    | 112  |
| 3/4                  | 6W            | 9.9          | 23                         | 31   | 37     | 42   | 51   | 58   | 63   | 69   | 74   | 89    | 115             | 120    | 112  |
| 1                    | 11W           | 13.1         | 42                         | 57   | 69     | 78   | 93   | 106  | 115  | 126  | 136  | 162   | 117             | 120    | 117  |
| 1-1/4                | 16W           | 15.5         | 62                         | 83   | 100    | 113  | 135  | 154  | 168  | 184  | 199  | 238   | 118             | 121    | 119  |
| 1-1/2                | 24W           | 18.3         | 92                         | 125  | 150    | 170  | 203  | 230  | 251  | 275  | 297  | 355   | 119             | 124    | 119  |
| 2                    | 47W           | 25           | 181                        | 245  | 293    | 333  | 398  | 451  | 492  | 539  | 582  | 695   | 120             | 124    | 119  |

• Special size please consult our sale dept!

Order Info

BB - 1/4 - SS - 10  
Nozzle Type Inlet Conn Material Code Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.



BG/BH Series



Design Features

- Spray Angle : 43°-125°
- Spray Pattern : Solid cone- shaped spray pattern with round impact area.
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : Interchangeable spray caps within each inlet connection size group for maximum versatility  
Removable caps and vanes for easy inspection and cleaning on most models.  
Unique vane design with large flow passages provides superior control and uniform distribution.

BG-A



Corner Type (Internal Thread)

BBG-A



Corner Type (External Thread)

BG



Removable Cap Type (Inside)

BBG



Removable Cap type (Outer)

BJ



Integral Casting Type (Inside)

BH-D



Wall-mounted,  
one-piece (Inside)

BG-D



Wall-mounted,  
Removable Cap Type (Inside)

BBG-D



Wall-mounted,  
Removable Cap type (Outer)

Applications

- Water aerating
- Fire prevention
- Dust control
- Metal treating
- Gas cooling & scrubbing

Order Info

BBGA - 1/4 - SS - 10  
Nozzle Type Inlet Conn Material Code Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## Performance State

### Standard Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Nozzle Type    |     |     |      |                 |     |      | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |        |        |      |      |      |      |      |       |        |        | Spray Angle<br>(°) |  |  |
|----------------------|----------------|-----|-----|------|-----------------|-----|------|------------------|-----------------|-------------------------------|--------|--------|--------|------|------|------|------|------|-------|--------|--------|--------------------|--|--|
|                      | Standard Model |     |     |      | Wall Mount Type |     |      |                  |                 |                               |        |        |        |      |      |      |      |      |       |        |        |                    |  |  |
|                      | BG             | BBG | BGA | BBGA | BGD             | BGH | BBGD |                  |                 | 0.4bar                        | 0.5bar | 0.7bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 10bar | 0.5bar | 1.5bar | 6bar               |  |  |
| 1/8                  | ●              | ●   |     |      | ●               |     | ●    | 1                | 0.79            | 0.29                          | 0.33   | 0.38   | 0.54   | 0.62 | 0.74 | 0.85 | 1.0  | 1.1  | 1.3   | -      | 58     | 53                 |  |  |
|                      | ●              | ●   |     |      | ●               |     | ●    | 1.5              | 1.2             | 0.44                          | 0.49   | 0.57   | 0.81   | 0.93 | 1.1  | 1.3  | 1.5  | 1.6  | 1.9   | 52     | 65     | 59                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 2                | 1.2             | 0.59                          | 0.65   | 0.76   | 1.1    | 1.2  | 1.5  | 1.7  | 2.0  | 2.2  | 2.6   | 43     | 50     | 46                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 3                | 1.5             | 0.88                          | 0.98   | 1.1    | 1.6    | 1.9  | 2.2  | 2.5  | 3.1  | 3.3  | 3.9   | 52     | 65     | 59                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 3.5              | 1.6             | 1.0                           | 1.1    | 1.3    | 1.9    | 2.2  | 2.6  | 3.0  | 3.6  | 3.8  | 4.5   | 43     | 50     | 46                 |  |  |
|                      |                |     | ●   | ●    |                 |     |      | 3.9              | 2.0             | 1.1                           | 1.3    | 1.5    | 2.1    | 2.4  | 2.9  | 3.3  | 4.0  | 4.3  | 5.1   | 77     | 84     | 79                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 5                | 2.0             | 1.5                           | 1.6    | 1.9    | 2.7    | 3.1  | 3.7  | 4.2  | 5.1  | 5.5  | 6.5   | 52     | 65     | 59                 |  |  |
| 1/4                  |                |     | ●   | ●    |                 |     |      | 6.1              | 2.3             | 1.8                           | 2.0    | 2.3    | 3.3    | 3.8  | 4.5  | 5.2  | 6.2  | 6.7  | 7.9   | 69     | 76     | 68                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 6.5              | 2.4             | 1.9                           | 2.1    | 2.5    | 3.5    | 4.0  | 4.8  | 5.5  | 6.7  | 7.1  | 8.4   | 45     | 50     | 46                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 10               | 3.2             | 2.9                           | 3.3    | 3.8    | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 11.0 | 13.0  | 58     | 67     | 61                 |  |  |
|                      |                |     | ●   | ●    |                 |     |      | 12.5             | 3.2             | 3.7                           | 4.1    | 4.8    | 6.8    | 7.7  | 9.3  | 10.6 | 12.8 | 13.7 | 16.2  | 69     | 76     | 68                 |  |  |
| 3/8                  | ●              | ●   | ●   | ●    | ●               |     | ●    | 9.5              | 2.6             | 2.8                           | 3.1    | 3.6    | 5.1    | 5.9  | 7.1  | 8.1  | 9.7  | 10.4 | 12.3  | 45     | 50     | 46                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 15               | 3.6             | 4.4                           | 4.9    | 5.7    | 8.1    | 9.3  | 11.2 | 12.7 | 15.4 | 16.5 | 19.4  | 64     | 67     | 61                 |  |  |
|                      |                |     | ●   | ●    |                 |     |      | 20               | 4.0             | 5.9                           | 6.5    | 7.6    | 10.8   | 15.4 | 14.9 | 17.0 | 20   | 22   | 26    | 76     | 80     | 73                 |  |  |
|                      | ●              | ●   | ●   | ●    | ●               |     | ●    | 22               | 4.5             | 6.5                           | 7.2    | 8.4    | 11.9   | 13.6 | 16.4 | 18.7 | 23   | 24   | 28    | 87     | 90     | 82                 |  |  |
| 1/2                  | ●              | ●   | ●   | ●    |                 |     |      | 16               | 3.5             | 4.7                           | 5.2    | 6.1    | 8.7    | 9.9  | 11.9 | 13.6 | 16.4 | 17.6 | 21    | 48     | 50     | 46                 |  |  |
|                      | ●              | ●   | ●   | ●    |                 |     |      | 25               | 4.6             | 9.4                           | 8.2    | 9.5    | 13.5   | 15.4 | 18.6 | 21   | 26   | 27   | 32    | 64     | 67     | 61                 |  |  |
|                      | ●              | ●   | ●   | ●    |                 |     |      | 32               | 5.2             | 9.4                           | 10.4   | 12.2   | 17.3   | 19.8 | 24   | 27   | 33   | 35   | 41    | 72     | 75     | 68                 |  |  |
|                      | ●              | ●   | ●   | ●    |                 |     |      | 40               | 6.2             | 11.8                          | 13.1   | 15.2   | 22     | 25   | 30   | 34   | 41   | 44   | 52    | 88     | 91     | 83                 |  |  |
|                      |                |     | ●   | ●    |                 |     |      | 50               | 6.7             | 14.7                          | 16.3   | 19.1   | 27     | 31   | 37   | 42   | 51   | 55   | 65    | 91     | 94     | 86                 |  |  |
| 3/4                  |                |     |     |      |                 | ●   |      | 2.5              | 4.9             | 8.7                           | 9.4    | 11.2   | 15.9   | 18.2 | 22   | 25   | 30   | 32   | 38    | 48     | 50     | 46                 |  |  |
|                      |                |     |     |      |                 | ●   |      | 4.0              | 6.4             | 13.9                          | 15.4   | 18.0   | 26     | 29   | 35   | 40   | 48   | 52   | 61    | 67     | 70     | 63                 |  |  |
|                      |                |     |     |      |                 | ●   |      | 7.0              | 9.5             | 24                            | 27     | 31     | 45     | 51   | 61   | 70   | 84   | 91   | 107   | 89     | 92     | 84                 |  |  |
| 1                    |                |     |     |      |                 | ●   |      | 4.2              | 6.0             | 14.6                          | 16.2   | 18.69  | 27     | 31   | 37   | 45   | 51   | 54   | 64    | 48     | 50     | 46                 |  |  |

### Wide Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Nozzle Type    |     |     |      | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |        |      |        |      |      |      |      |        |        |      | Spray Angle<br>(°) |  |  |
|----------------------|----------------|-----|-----|------|------------------|-----------------|-------------------------------|--------|--------|------|--------|------|------|------|------|--------|--------|------|--------------------|--|--|
|                      | Standard Model |     |     |      |                  |                 |                               |        |        |      |        |      |      |      |      |        |        |      |                    |  |  |
|                      | BG             | BBG | BGA | BBGA |                  |                 | 0.4bar                        | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 0.4bar | 0.7bar | 6bar |                    |  |  |
| 1/8                  | ●              | ●   |     |      | 1.5W             | 1.2             | -                             | -      | 0.57   | 0.67 | 0.81   | 0.93 | 1.1  | 1.3  | 1.5  | -      | 120    | 86   |                    |  |  |
|                      | ●              | ●   |     |      | 2.8W             | 1.6             | -                             | -      | 1.1    | 1.3  | 1.5    | 1.7  | 2.1  | 2.4  | 2.9  | -      | 120    | 102  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 4.3W             | 2.0             | -                             | -      | 1.6    | 1.9  | 2.3    | 2.7  | 3.2  | 3.7  | 4.4  | -      | 120    | 102  |                    |  |  |
|                      | ●              | ●   |     |      | 5.6W             | 2.4             | -                             | 1.8    | 2.1    | 2.5  | 3.0    | 3.5  | 4.2  | 4.8  | 5.7  | -      | 120    | 102  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 8W               | 2.4             | -                             | 2.6    | 3.0    | 3.6  | 4.3    | 4.9  | 6.0  | 6.8  | 8.2  | -      | 120    | 103  |                    |  |  |
| 1/4                  | ●              | ●   |     |      | 10W              | 2.8             | 2.9                           | 3.3    | 3.8    | 4.5  | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 112    | 120    | 103  |                    |  |  |
|                      | ●              | ●   |     |      | 12W              | 3.2             | 3.5                           | 3.9    | 4.6    | 5.4  | 6.5    | 7.4  | 8.9  | 10.2 | 12.3 | 114    | 120    | 103  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 14W              | 3.6             | 4.1                           | 4.6    | 5.3    | 6.3  | 7.6    | 8.6  | 10.4 | 11.9 | 14.3 | 114    | 120    | 103  |                    |  |  |
| 3/8                  | ●              | ●   |     |      | 17W              | 4.0             | 5.0                           | 5.6    | 6.5    | 7.6  | 9.2    | 10.8 | 12.7 | 14.4 | 17.4 | 114    | 120    | 103  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 20W              | 4.4             | 5.9                           | 6.5    | 7.6    | 9.0  | 10.8   | 12.4 | 14.9 | 17.0 | 20   | 114    | 120    | 104  |                    |  |  |
|                      | ●              | ●   |     |      | 24W              | 4.8             | 7.1                           | 7.8    | 9.1    | 10.8 | 13.0   | 14.8 | 17.9 | 20   | 25   | 114    | 120    | 104  |                    |  |  |
|                      | ●              | ●   |     |      | 27W              | 5.2             | 8.0                           | 8.8    | 10.3   | 12.1 | 14.6   | 16.7 | 20   | 23   | 28   | 114    | 120    | 106  |                    |  |  |
| 1/2                  | ●              | ●   |     |      | 30W              | 5.6             | 8.8                           | 9.8    | 11.4   | 13.5 | 16.2   | 18.5 | 22   | 25   | 31   | 114    | 120    | 108  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 35W              | 6.0             | 10.3                          | 11.4   | 13.3   | 15.7 | 18.9   | 22   | 26   | 30   | 36   | 114    | 120    | 108  |                    |  |  |
|                      | ●              | ●   |     |      | 40W              | 6.4             | 11.8                          | 13.1   | 15.2   | 18.0 | 22     | 25   | 30   | 34   | 41   | 114    | 120    | 108  |                    |  |  |
|                      | ●              | ●   |     |      | 45W              | 6.4             | 13.3                          | 14.7   | 17.2   | 20   | 24     | 28   | 34   | 38   | 46   | 114    | 120    | 110  |                    |  |  |
|                      | ●              | ●   | ●   | ●    | 50W              | 6.7             | 14.7                          | 16.3   | 19.1   | 22   | 27     | 31   | 37   | 42   | 51   | 114    | 120    | 112  |                    |  |  |
| 3/4                  |                |     |     | 6W   | 9.9              | 21              | 23                            | 27     | 31     | 37   | 42     | 51   | 58   | 69   | 115  | 120    | 112    |      |                    |  |  |
| 1                    |                |     |     |      | 11W              | 13.1            | 38                            | 42     | 49     | 57   | 69     | 78   | 93   | 106  | 126  | 117    | 120    | 117  |                    |  |  |

Special size please consult our sale dept!



## Type 15°/30°



## Design Features

- Spray Angle : 15°/30°
- Spray Pattern : Flat spray pattern distributes the liquid as a flat - or sheet-type spray.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS
- Features : Except BH type, all models are designed with removable cap, which is convenient for maintenance and cleaning; The internal design of blades and large flow channels ensures and controls the uniform distribution of spray.

## Applications

- Water aeration
- Fire prevention
- Metal treating
- Air and gas washers

## Order Info

**BBG - 1/4 - SS - 15 - 30**  
| | | | |  
Nozzle Inlet Material Spray Orifice  
Type Conn Code Angle

For NPT threaded connections, add the letter "N" before the nozzle connection size.

## BG-15



Removable Cap Type  
(internal thread)

## BBG-15



Removable Cap Type  
(External Thread)

## BH-15



Integral Casting Type  
(Inside)

## BG-30



Removable Cap Type  
(Inside)

## BBG-30



Removable Cap type  
(Outer)

## BH-30



Integral Casting Type  
(Inside)

## Performance State

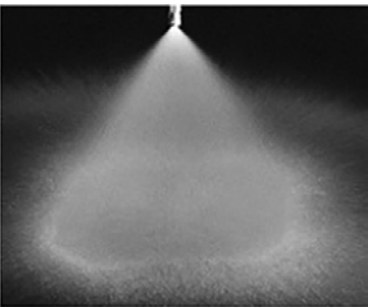
### Type 15°

At the stated pressure in bar.

| Inlet<br>Conn.<br>(in.) | Nozzle Type |        |       | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |      |      |      |      |      |       |       |       |        |      | Spray Angle<br>(°) |  |  |
|-------------------------|-------------|--------|-------|------------------|-----------------|-------------------------------|--------|------|------|------|------|------|-------|-------|-------|--------|------|--------------------|--|--|
|                         |             |        |       |                  |                 |                               |        |      |      |      |      |      |       |       |       |        |      |                    |  |  |
|                         | BG-15       | BBG-15 | BH-15 |                  |                 | 0.7bar                        | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 10bar | 15bar | 20bar | 0.7bar | 3bar | 7bar               |  |  |
| 1/8                     | ●           | ●      |       | 07               | 1.6             | 1.3                           | 2.0    | 2.3  | 2.8  | 3.2  | 3.9  | 4.2  | 5.0   | 6.2   | 7.1   | 13     | 15   | 15                 |  |  |
| 1/8                     | ●           | ●      |       | 14               | 2.4             | 2.7                           | 3.9    | 4.5  | 5.5  | 6.4  | 7.8  | 8.4  | 10.1  | 12.4  | 14.3  | 13     | 15   | 15                 |  |  |
| 1/4                     | ●           | ●      |       | 30               | 3.2             | 5.7                           | 8.4    | 9.7  | 11.8 | 13.7 | 16.8 | 18.1 | 22    | 26    | 31    | 13     | 15   | 15                 |  |  |
| 3/8                     | ●           | ●      |       | 50               | 4.4             | 9.5                           | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 36    | 44    | 51    | 13     | 15   | 15                 |  |  |
| 1/2                     | ●           | ●      |       | 90               | 5.6             | 17.2                          | 25     | 29   | 36   | 41   | 50   | 54   | 65    | 79    | 92    | 13     | 15   | 15                 |  |  |
| 3/4                     |             |        | ●     | 150              | 7.5             | 29                            | 42     | 48   | 59   | 68   | 84   | 90   | 108   | 132   | 153   | 13     | 15   | 15                 |  |  |
| 1                       |             |        | ●     | 280              | 9.9             | 53                            | 78     | 90   | 111  | 128  | 156  | 169  | 202   | 247   | 285   | 13     | 15   | 15                 |  |  |



SQ Series



BH-SQ



One-Piece  
(Internal Thread)

BBH-SQ



One-Piece  
(External Thread)

BG-SQ



Removable Cap Type  
(Inside)

BBG-SQ



Removable Cap type  
(Outer)

Design Features

- Spray Angle : 40°-105°
- Spray Pattern : Solid cone- shaped spray pattern with square impact area.
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS
- Features : Uniform coverage in the rectangular range, the effect is very ideal;  
DG/DDG models are removable caps for easy maintenance and cleaning;  
Unique vane design with large flow passages provides superior control and uniform distribution.

Order Info

|             |   |            |   |               |   |         |
|-------------|---|------------|---|---------------|---|---------|
| BBH         | - | 1/4        | - | SS            | - | 12SQ    |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Orifice |

For NPT threaded connections, add the letter "N "before the nozzle connection size.

Performance State

·Standard Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Nozzle Type |        |       |        | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |        |        |      |      |      |      |      |       | Spray Angle<br>(°) |        |      |  |
|----------------------|-------------|--------|-------|--------|------------------|-----------------|-------------------------------|--------|--------|--------|------|------|------|------|------|-------|--------------------|--------|------|--|
|                      | BH-SQ       | BBH-SQ | BG-SQ | BBG-SQ |                  |                 | 0.4bar                        | 0.5bar | 0.7bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 6bar | 10bar | 0.5bar             | 1.5bar | 6bar |  |
| 1/8                  | ●           | ●      | ●     | ●      | 3.6SQ            | 1.6             | 1.1                           | 1.2    | 1.4    | 1.9    | 2.2  | 2.7  | 3.1  | 3.7  | 4.0  | 4.7   | 40                 | 52     | 47   |  |
|                      | ●           | ●      | ●     | ●      | 4.8SQ            | 1.9             | 1.4                           | 1.6    | 1.8    | 2.6    | 3.0  | 3.6  | 4.1  | 4.9  | 5.3  | 6.2   | 48                 | 63     | 57   |  |
|                      | ●           | ●      | ●     | ●      | 6SQ              | 2.4             | 1.8                           | 2.0    | 2.3    | 3.2    | 3.7  | 4.5  | 5.1  | 6.1  | 6.6  | 7.8   | 60                 | 66     | 60   |  |
| 1/4                  | ●           | ●      | ●     | ●      | 10SQ             | 2.8             | 2.9                           | 3.3    | 3.8    | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 11.0 | 13.0  | 62                 | 67     | 61   |  |
|                      | ●           | ●      | ●     | ●      | 12SQ             | 3.2             | 3.5                           | 3.9    | 4.6    | 6.5    | 7.4  | 8.9  | 10.2 | 12.3 | 13.2 | 15.5  | 70                 | 75     | 68   |  |
|                      | ●           | ●      | ●     | ●      | 14.5SQ           | 3.9             | 4.3                           | 4.7    | 5.5    | 7.8    | 9.0  | 10.8 | 12.3 | 14.8 | 15.9 | 18.8  | 78                 | 82     | 75   |  |
| 3/8                  | ●           | ●      | ●     | ●      | 18SQ             | 4.0             | 5.3                           | 5.9    | 6.9    | 9.7    | 11.1 | 13.4 | 15.3 | 18.4 | 19.8 | 23    | 71                 | 75     | 68   |  |
| 1/2                  | ●           | ●      | ●     | ●      | 29SQ             | 5.6             | 8.5                           | 9.5    | 11.1   | 15.7   | 17.9 | 22   | 25   | 30   | 32   | 38    | 71                 | 75     | 68   |  |
|                      | ●           | ●      | ●     | ●      | 36SQ             | 6.4             | 10.6                          | 11.8   | 13.7   | 19.5   | 22   | 27   | 31   | 37   | 40   | 47    | 78                 | 82     | 75   |  |
| 3/4                  | ●           | ●      | ●     | ●      | 50SQ             | 6.7             | 14.7                          | 16.3   | 19.1   | 27     | 31   | 37   | 42   | 51   | 55   | 65    | 71                 | 75     | 68   |  |
| 1                    | ●           | ●      | ●     | ●      | 106SQ            | 9.9             | 31                            | 35     | 40     | 57     | 65   | 79   | 90   | 109  | 117  | 137   | 78                 | 80     | 73   |  |
| 1-1/4                | ●           | ●      | ●     | ●      | 177SQ            | 12.7            | 52                            | 58     | 67     | 96     | 109  | 132  | 150  | 181  | 195  | 229   | 78                 | 80     | 73   |  |
| 1-1/2                | ●           | ●      | ●     | ●      | 230SQ            | 14.3            | 68                            | 75     | 88     | 124    | 142  | 171  | 195  | 236  | 253  | 298   | 73                 | 77     | 70   |  |
| 2                    | ●           | ●      | ●     | ●      | 290SQ            | 15.5            | 85                            | 95     | 111    | 157    | 179  | 216  | 246  | 297  | 319  | 376   | 66                 | 70     | 64   |  |
|                      | ●           | ●      | ●     | ●      | 360SQ            | 17.4            | 106                           | 118    | 137    | 195    | 222  | 268  | 306  | 369  | 396  | 466   | 70                 | 74     | 67   |  |
|                      | ●           | ●      | ●     | ●      | 480SQ            | 21              | 141                           | 157    | 183    | 260    | 297  | 357  | 408  | 492  | 528  | 622   | 79                 | 82     | 74   |  |
|                      | ●           | ●      | ●     | ●      |                  |                 |                               |        |        |        |      |      |      |      |      |       |                    |        |      |  |



·Wide Angle

At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Nozzle Type |     | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |        |      |        |      |      |      |      |        | Spray Angle<br>(°) |      |  |
|----------------------|-------------|-----|------------------|-----------------|-------------------------------|--------|--------|------|--------|------|------|------|------|--------|--------------------|------|--|
|                      | BH          | BBH |                  |                 | 0.4bar                        | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 0.5bar | 1.5bar             | 6bar |  |
| 1/4                  | ●           | ●   | 14WSQ            | 3.6             | 4.2                           | 4.6    | 5.3    | 6.2  | 7.5    | 8.5  | 10.1 | 11.5 | 13.7 | 99     | 101                | 93   |  |
| 3/8                  | ●           | ●   | 17WSQ            | 4.0             | 5.1                           | 5.6    | 6.5    | 7.6  | 9.1    | 10.3 | 12.3 | 13.9 | 16.7 | 99     | 101                | 93   |  |
|                      | ●           | ●   | 20WSQ            | 4.4             | 6.0                           | 6.6    | 7.6    | 8.9  | 10.7   | 12.1 | 14.5 | 16.4 | 19.6 | 104    | 110                | 94   |  |
|                      | ●           | ●   | 24WSQ            | 4.8             | 7.1                           | 7.9    | 9.1    | 10.7 | 12.8   | 14.5 | 17.4 | 19.7 | 24   | 104    | 110                | 94   |  |
|                      | ●           | ●   | 27WSQ            | 5.2             | 8.0                           | 8.9    | 10.3   | 12.0 | 14.4   | 16.3 | 19.5 | 22   | 26   | 104    | 110                | 98   |  |
| 1/2                  | ●           | ●   | 30WSQ            | 5.6             | 8.9                           | 9.9    | 11.4   | 13.4 | 16.0   | 18.1 | 22   | 25   | 29   | 104    | 110                | 102  |  |
|                      | ●           | ●   | 35WSQ            | 6.0             | 10.4                          | 11.5   | 13.3   | 15.6 | 18.7   | 21   | 25   | 29   | 34   | 104    | 110                | 102  |  |
|                      | ●           | ●   | 40WSQ            | 6.4             | 11.9                          | 13.1   | 15.2   | 17.8 | 21     | 24   | 29   | 33   | 39   | 104    | 110                | 102  |  |
|                      | ●           | ●   | 45WSQ            | 6.4             | 13.4                          | 14.8   | 17.1   | 20   | 24     | 27   | 33   | 37   | 44   | 104    | 110                | 102  |  |
|                      | ●           | ●   | 50WSQ            | 6.7             | 14.9                          | 16.4   | 19.1   | 22   | 27     | 30   | 36   | 41   | 49   | 104    | 110                | 102  |  |
| 3/4                  | ●           | ●   | 71WSQ            | 9.9             | 21                            | 23     | 27     | 32   | 38     | 43   | 51   | 58   | 70   | 105    | 110                | 102  |  |
| 1                    | ●           | ●   | 130WSQ           | 13.1            | 39                            | 43     | 50     | 58   | 69     | 79   | 94   | 107  | 127  | 107    | 110                | 107  |  |

·Special size please consult our sale dept!

E Series - Elliptic Cone Standard Type



Design Features

- Spray Angle : 45°-106°
- Spray Pattern : Solid cone- shaped spray pattern with oval impact area.
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS
- Features : Uniform spray across their entire spray area.  
Unique vane design with large flow passages provides superior control and uniform distribution.

EG



Disassembly Type  
(Internal Thread)

EEG



Detachable  
(External Thread)

Applications

- Water aerating
- Fire prevention
- Spray cooling
- Dust control
- Metal treating
- Gas cooling & srcubbing

Order Info

|             |   |            |   |               |   |         |
|-------------|---|------------|---|---------------|---|---------|
| EG          | - | 3/8        | - | SS            | - | 4.9VL   |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Orifice |

For NPT threaded connections, add the letter "N "before the nozzle connection size.

Performance State

·Standard Angle

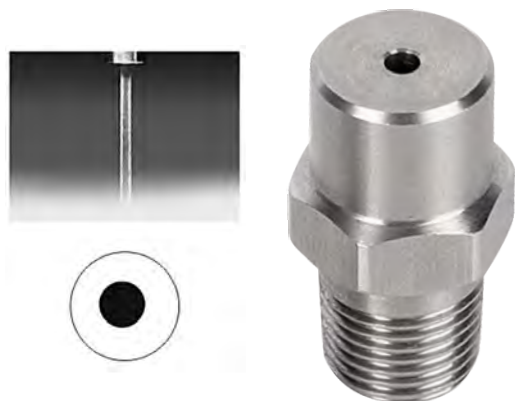
At the stated pressure in bar.

| Inlet Conn.<br>(in.) | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |      |      |      |      |      |       |  | Spray Angle<br>(°) |      |      |       |    |    |    |    |
|----------------------|------------------|-----------------|-------------------------------|------|------|------|------|------|-------|--|--------------------|------|------|-------|----|----|----|----|
|                      |                  |                 | 1bar                          | 2bar | 3bar | 4bar | 6bar | 7bar | 10bar |  | 1bar               | 3bar | 7bar | 10bar | A° | B° | A° | B° |
| 3/8                  | 4.9VL            | 1.0             | 2.2                           | 3.0  | 3.6  | 4.2  | 5.0  | 5.4  | 6.3   |  | 104                | 66   | 90   | 60    | 86 | 52 | 83 | 47 |
|                      | 6.5VL            | 1.3             | 2.9                           | 4.0  | 4.8  | 5.5  | 6.7  | 7.1  | 8.4   |  | 106                | 64   | 95   | 60    | 85 | 50 | 81 | 45 |
|                      | 8.1VL            | 1.3             | 3.6                           | 5.0  | 6.0  | 6.9  | 8.3  | 8.9  | 10.5  |  | 102                | 64   | 100  | 65    | 84 | 50 | 80 | 45 |
|                      | 9.2VL            | 1.3             | 4.1                           | 5.7  | 6.8  | 7.8  | 9.4  | 10.1 | 11.9  |  | 103                | 65   | 100  | 65    | 86 | 51 | 81 | 46 |

For NPT threaded connections, add the letter "N "before the nozzle connection size.



## Solid Cone nozzle



## Design Features

- Spray Pattern : The jet is a single water column with high impact force.
- Drops : Small- to Medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material :303SS/316SS/BRASS
- Features : Concentrated water flow, high impact, suitable for small cavity cleaning.

## Applications

- High pressure cleaning
- Engineering vehicle cleaning
- Automobile chassis cleaning

## Order Info

YZL - 1/4 - SS - 1.5K  
Nozzle Type Inlet Conn Material Code Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.

## Performance State

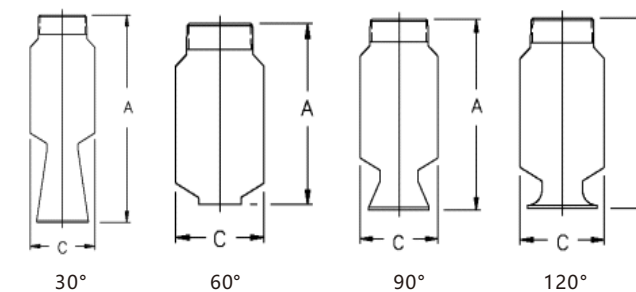
At the stated pressure in bar.

| Capacity Size | Inlet Conn(in.) |     |     |     | Orifice (mm) | Flow Rate Capacity(L/min) |      |      |      |      |      |      |      |       |       |       |
|---------------|-----------------|-----|-----|-----|--------------|---------------------------|------|------|------|------|------|------|------|-------|-------|-------|
|               | 1/8             | 1/4 | 3/8 | 1/2 |              | 0.3bar                    | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 20bar | 35bar |
| 003           | ●               | ●   |     |     | 1            | 0.37                      | 0.68 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   | 3.1   | 4     |
| 004           | ●               | ●   |     |     | 1.2          | 0.5                       | 0.91 | 1.3  | 1.6  | 1.8  | 2    | 2.2  | 2.4  | 2.9   | 4.1   | 5.4   |
| 005           | ●               | ●   |     |     | 1.3          | 0.62                      | 1.1  | 1.6  | 2    | 2.3  | 2.5  | 2.8  | 3    | 3.6   | 5.1   | 6.7   |
| 006           | ●               | ●   |     |     | 1.5          | 0.75                      | 1.4  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 6.1   | 8.1   |
| 008           | ●               | ●   |     |     | 1.7          | 1                         | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 8.2   | 10.8  |
| 010           | ●               | ●   |     |     | 1.9          | 1.2                       | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6    | 7.2   | 10.2  | 13.5  |
| 015           | ●               | ●   |     |     | 2.3          | 1.9                       | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9    | 10.8  | 15.3  | 20    |
| 020           | ●               | ●   | ●   |     | 2.7          | 2.5                       | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 20    | 27    |
| 030           | ●               | ●   | ●   |     | 3.6          | 3.7                       | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 31    | 40    |
| 040           | ●               | ●   | ●   |     | 4            | 5                         | 9.1  | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 41    | 54    |
| 050           |                 | ●   | ●   |     | 4.4          | 6.2                       | 11.4 | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 51    | 68    |
| 060           |                 | ●   | ●   |     | 4.8          | 7.5                       | 13.7 | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 61    | 81    |
| 070           |                 | ●   | ●   |     | 5.2          | 8.7                       | 16   | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 71    | 94    |
| 080           |                 | ●   | ●   |     | 5.2          | 10                        | 18.2 | 26   | 32   | 36   | 41   | 45   | 48   | 58    | 82    | 108   |
| 100           |                 |     | ●   | ●   | 6            | 12.5                      | 23   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 102   | 135   |
| 120           |                 |     | ●   | ●   | 6.4          | 15                        | 27   | 39   | 47   | 55   | 61   | 67   | 72   | 86    | 122   | 162   |
| 150           |                 |     | ●   | ●   | 7.5          | 18.7                      | 34   | 48   | 59   | 68   | 76   | 84   | 90   | 108   | 153   | 205   |
| 200           |                 |     | ●   | ●   | 8.3          | 25                        | 46   | 64   | 79   | 91   | 102  | 112  | 121  | 144   | 205   | 270   |
| 250           |                 |     | ●   | ●   | 9.5          | 31                        | 57   | 81   | 99   | 114  | 127  | 140  | 151  | 180   | 255   | 340   |

· Special size please consult our sale dept!



## SMP High Flow Full Cone Nozzle



## Design Features

- Spray Angle : 30° /60°/90°/120°
- Spray Pattern : Solid Cone
- Drops : Small- to Medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material :316SS/PTFE/PP/PVC
- Features : Integral structure, the internal two S-shaped blades form the maximum smooth path to prevent plugging, especially suitable for spraying large flow of slurry containing more particles and impurities; Low pressure to 0.2 bar for effective injection.

## Applications

- High temperature flue gas cooling
- Waste gas washing
- Dust control
- Wet desulfurization
- Fire prevention
- Packing tower spray

## Performance State

At the stated pressure in bar.

| Inlet Conn<br>(in.) | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity(L/min) |        |        |        |      |      |      |      |
|---------------------|------------------|-----------------|---------------------------|--------|--------|--------|------|------|------|------|
|                     |                  |                 | 0.2bar                    | 0.3bar | 0.5bar | 0.7bar | 1bar | 2bar | 3bar | 5bar |
| 3/8                 | 125              | 3.18            | 2.6                       | 3.14   | 3.99   | 4.68   | 5.53 | 7.66 | 9.27 | 11.8 |
|                     | 156              | 3.97            | 4.13                      | 4.99   | 6.35   | 7.43   | 8.79 | 12.2 | 14.7 | 18.7 |
|                     | 187              | 4.76            | 5.96                      | 7.21   | 9.17   | 10.7   | 12.7 | 17.6 | 21.3 | 27.1 |
| 1/2                 | 187              | 4.76            | 5.96                      | 7.21   | 9.17   | 10.7   | 12.7 | 17.6 | 21.3 | 27.1 |
|                     | 218              | 5.56            | 9.48                      | 11.5   | 14.6   | 17.1   | 20.2 | 28   | 33.9 | 43   |
|                     | 250              | 6.35            | 10.7                      | 12.9   | 16.4   | 19.2   | 22.7 | 31.4 | 38   | 48.4 |
| 3/4                 | 281              | 7.14            | 13.1                      | 15.8   | 20.1   | 23.6   | 27.9 | 38.6 | 46.8 | 59.4 |
|                     | 312              | 7.94            | 15.9                      | 19.2   | 24.4   | 28.6   | 33.8 | 46.8 | 56.6 | 72   |
|                     | 343              | 8.73            | 19.4                      | 23.5   | 29.9   | 35     | 41.4 | 57.3 | 69.4 | 88.2 |
|                     | 375              | 9.53            | 22.9                      | 27.7   | 35.2   | 41.3   | 48.8 | 67.6 | 81.8 | 104  |
| 1                   | 375              | 9.53            | 22.9                      | 27.7   | 35.2   | 41.3   | 48.8 | 67.6 | 81.8 | 104  |
|                     | 406              | 10.3            | 27.6                      | 33.3   | 42.3   | 49.3   | 58.6 | 81.1 | 98.1 | 126  |
|                     | 437              | 11.1            | 34                        | 40.6   | 50.9   | 59     | 69   | 93.6 | 112  | 140  |
| 1-1/4               | 437              | 11.1            | 34                        | 40.6   | 50.9   | 59     | 69   | 93.6 | 112  | 140  |
|                     | 500              | 11.1            | 43.7                      | 52.2   | 65.4   | 75.8   | 88.7 | 120  | 144  | 180  |
|                     | 531              | 12.7            | 48.5                      | 58     | 72.7   | 84.2   | 98.6 | 134  | 160  | 200  |
|                     | 562              | 13.5            | 53.4                      | 63.8   | 79.9   | 92.7   | 108  | 147  | 176  | 220  |
| 1-1/2               | 562              | 14.3            | 53.4                      | 63.8   | 79.9   | 92.7   | 108  | 147  | 176  | 220  |
|                     | 593              | 15.1            | 60.7                      | 72.5   | 90.9   | 105    | 123  | 167  | 200  | 250  |
|                     | 625              | 15.9            | 64.7                      | 77.4   | 96.9   | 112    | 131  | 178  | 213  | 267  |
|                     | 656              | 16.7            | 78.5                      | 93.5   | 117    | 136    | 159  | 216  | 258  | 324  |
|                     | 687              | 17.5            | 82.5                      | 98.7   | 124    | 143    | 168  | 227  | 272  | 340  |

· Special size please consult our sale dept!



## Standard Of Series CC



External Thread Type CC

## Design Features

- Spray Angle : 0°(Liquid column flow)-110°
- Spray Pattern : Flat spray pattern distributes the liquid as a flat - or sheet-type spray.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : Large, unobstructed flow passages minimize clogging.  
High impact solid stream provides highest impact per unit area.  
Specially tapered spray pattern is ideal for use in manifold.

## Applications

- Fire prevention
- Spray cooling
- Air purification
- Cooling and hardening
- Dust control
- Metal treating
- Gas cooling & scrubbing

## Performance State

At the stated pressure in bar.

| Jet Angle<br>(3 bar) | Capacity<br>Size | Nozzle Type/Inlet Conn.(in.) |     |       |     |     |     |     |     |     |   |       | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |      |      |      |      |      |      |      |       |       |       |        | Spray Angle<br>(°) |      |       |  |
|----------------------|------------------|------------------------------|-----|-------|-----|-----|-----|-----|-----|-----|---|-------|-----------------|-------------------------------|--------|------|------|------|------|------|------|------|-------|-------|-------|--------|--------------------|------|-------|--|
|                      |                  | H-VV                         |     | H-VVL |     | H-U |     |     |     | U   |   |       |                 |                               |        |      |      |      |      |      |      |      |       |       |       |        |                    |      |       |  |
|                      |                  | 1/8                          | 1/4 | 1/8   | 1/4 | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1 | 1-1/4 |                 | 2                             | 0.3bar | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 20bar | 35bar | 1.5bar | 3bar               | 6bar | 14bar |  |
| 50°                  | 5001             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 0.66                          |        | 0.23 | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72  | 1.0   | 1.3   | 37°    | 50°                | 59°  | 65°   |  |
|                      | 5002             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 0.91                          |        | 0.46 | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.0   | 2.7   | 39°    | 50°                | 57°  | 63°   |  |
|                      | 5003             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.1                           | 0.37   | 0.68 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   | 3.1   | 4.0   | 40°    | 50°                | 56°  | 62°   |  |
|                      | 5004             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.3                           | 0.50   | 0.91 | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 4.1   | 5.4   | 42°    | 50°                | 56°  | 61°   |  |
|                      | 5005             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.4                           | 0.62   | 1.1  | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 5.1   | 6.7   | 44°    | 50°                | 56°  | 61°   |  |
|                      | 5006             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.6                           | 0.75   | 1.4  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 6.1   | 8.1   | 45°    | 50°                | 56°  | 60°   |  |
|                      | 5008             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.8                           | 1.0    | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 8.2   | 10.8  | 45°    | 50°                | 55°  | 60°   |  |
|                      | 5010             |                              |     |       |     | ●   | ●   | ●   |     |     |   |       |                 | 2.0                           | 1.2    | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 7.2   | 10.2  | 13.5  | 45°    | 50°                | 55°  | 59°   |  |
|                      | 5015             |                              |     |       |     | ●   | ●   | ●   | ●   |     |   |       |                 | 2.4                           | 1.9    | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  | 15.3  | 20    | 45°    | 50°                | 55°  | 59°   |  |
|                      | 5020             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 2.8                           | 2.5    | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 20    | 27    | 45°    | 50°                | 55°  | 59°   |  |
|                      | 5030             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 3.6                           | 3.7    | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 31    | 40    | 45°    | 50°                | 55°  | 59°   |  |
|                      | 5040             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.0                           | 5.0    | 9.1  | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 41    | 54    | 46°    | 50°                | 54°  | 59°   |  |
|                      | 5050             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.4                           | 6.2    | 11.4 | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 51    | 68    | 46°    | 50°                | 54°  | 59°   |  |
|                      | 5060             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.8                           | 7.5    | 13.7 | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 61    | 81    | 46°    | 50°                | 54°  | 59°   |  |
|                      | 5070             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 5.2                           | 8.7    | 16.0 | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 71    | 94    | 46°    | 50°                | 54°  | 59°   |  |
|                      | 50100            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 6.4                           | 12.5   | 23   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 102   | 135   | 44°    | 50°                | 52°  | 54°   |  |
|                      | 50120            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 6.7                           | 15.0   | 27   | 39   | 47   | 55   | 61   | 67   | 72   | 86    | 122   | 162   | 44°    | 50°                | 53°  | 55°   |  |
|                      | 50150            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 7.5                           | 18.7   | 34   | 48   | 59   | 68   | 76   | 84   | 90   | 108   | 153   | 205   | 45°    | 50°                | 52°  | 55°   |  |
|                      | 50200            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 8.7                           | 25     | 46   | 64   | 79   | 91   | 102  | 112  | 121  | 144   | 205   | 270   | 46°    | 50°                | 52°  | 55°   |  |
|                      | 50400            |                              |     |       |     |     |     |     |     |     | ● |       |                 | 12.7                          | 50     | 91   | 129  | 158  | 182  | 205  | 225  | 240  | 290   | 410   | 540   | 46°    | 50°                | 52°  | 55°   |  |
| 50500                |                  |                              |     |       |     |     |     |     |     |     | ● | ●     | 13.1            | 62                            | 114    | 161  | 197  | 230  | 255  | 280  | 300  | 360  | 510   | 680   | 49°   | 50°    | 51°                | 54°  |       |  |
| 50580                |                  |                              |     |       |     |     |     |     |     |     | ● | ●     | 13.9            | 72                            | 132    | 187  | 230  | 265  | 295  | 325  | 350  | 420  | 600   | 780   | 49°   | 50°    | 51°                | 53°  |       |  |
| 50750                |                  |                              |     |       |     |     |     |     |     |     |   | ●     | 15.9            | 94                            | 171    | 240  | 295  | 340  | 385  | 420  | 455  | 540  | 770   | 1010  | 49°   | 50°    | 51°                | 53°  |       |  |
| 501000               |                  |                              |     |       |     |     |     |     |     |     |   | ●     | 18.3            | 125                           | 230    | 325  | 395  | 455  | 510  | 560  | 610  | 720  | 1020  | 1350  | 49°   | 50°    | 51°                | 53°  |       |  |
| 501500               |                  |                              |     |       |     |     |     |     |     |     |   | ●     | 22.6            | 187                           | 340    | 485  | 600  | 690  | 770  | 840  | 910  | 1080 | 1530  | 2020  | 49°   | 50°    | 51°                | 52°  |       |  |
| 502000               |                  |                              |     |       |     |     |     |     |     |     | ● | 26.2  | 250             | 460                           | 650    | 790  | 910  | 1020 | 1120 | 1210 | 1440 | 2040 | 2700  | 49°   | 50°   | 51°    | 52°                |      |       |  |
| 40°                  | 4001             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 0.66                          |        | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72 | 1.0   | 1.3   | 26°   | 40°    | 52°                | 59°  |       |  |
|                      | 40015            | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 0.79                          |        | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.90 | 1.1  | 1.5   | 2.0   | 27°   | 40°    | 52°                | 59°  |       |  |
|                      | 4002             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 0.91                          |        | 0.46 | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.0   | 2.7   | 29°    | 40°                | 51°  | 58°   |  |
|                      | 4003             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.1                           |        | 0.68 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   | 3.1   | 4.0   | 30°    | 40°                | 50°  | 57°   |  |
|                      | 4004             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.3                           |        | 0.91 | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 4.1   | 5.4   | 30°    | 40°                | 50°  | 56°   |  |
|                      | 4005             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.4                           |        | 1.1  | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 5.1   | 6.7   | 31°    | 40°                | 49°  | 55°   |  |
|                      | 4006             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.6                           |        | 1.4  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 6.1   | 8.1   | 31°    | 40°                | 49°  | 55°   |  |
|                      | 4008             | ●                            | ●   | ●     | ●   |     |     |     |     |     |   |       |                 | 1.8                           | 1.0    | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 8.2   | 10.8  | 31°    | 40°                | 47°  | 53°   |  |
|                      | 4010             |                              |     |       |     | ●   | ●   | ●   |     |     |   |       |                 | 2.0                           | 1.2    | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 7.2   | 10.2  | 13.5  | 32°    | 40°                | 45°  | 48°   |  |
|                      | 4015             |                              |     |       |     | ●   | ●   | ●   | ●   |     |   |       |                 | 2.4                           | 1.9    | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  | 15.3  | 20    | 32°    | 40°                | 45°  | 48°   |  |
|                      | 4020             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 2.8                           | 2.5    | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 20    | 27    | 32°    | 40°                | 45°  | 48°   |  |
|                      | 4030             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 3.6                           | 3.7    | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 31    | 40    | 33°    | 40°                | 45°  | 48°   |  |
|                      | 4040             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.0                           | 5.0    | 9.1  | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 41    | 54    | 34°    | 40°                | 45°  | 48°   |  |
|                      | 5050             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.4                           | 6.2    | 11.4 | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 51    | 68    | 35°    | 40°                | 45°  | 48°   |  |
|                      | 4060             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 4.8                           | 7.5    | 13.7 | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 61    | 81    | 35°    | 40°                | 45°  | 48°   |  |
|                      | 4070             |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 5.2                           | 8.7    | 16.0 | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 71    | 94    | 35°    | 40°                | 45°  | 48°   |  |
|                      | 40100            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 6.4                           | 12.5   | 23   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 102   | 135   | 34°    | 40°                | 43°  | 46°   |  |
|                      | 40150            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 7.5                           | 18.7   | 34   | 48   | 59   | 68   | 76   | 84   | 90   | 108   | 153   | 205   | 35°    | 40°                | 43°  | 44°   |  |
|                      | 40200            |                              |     |       |     | ●   | ●   | ●   | ●   | ●   |   |       |                 | 8.7                           | 25     | 46   | 64   | 79   | 91   | 102  | 112  | 121  | 144   | 205   | 270   | 36°    | 40°                | 42°  | 44°   |  |



Performance State

Standard Angle

At the stated pressure in bar.

| Spray Angle | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |      |        |      |      |      |      |      |      |       |       | Spray Angle (°) |        |      |
|-------------|---------------|--------------|----------------------------|------|--------|------|------|------|------|------|------|-------|-------|-----------------|--------|------|
|             |               |              | 0.5bar                     | 1bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 35bar | 0.5bar          | 1.5bar | 6bar |
| 65°         | 650033        | 0.28         | -                          | -    | 0.09   | 0.11 | 0.13 | 0.15 | 0.17 | 0.18 | 0.2  | 0.24  | 0.45  | -               | 47     | 76   |
|             | 650050        | 0.46         | -                          | -    | 0.14   | 0.16 | 0.2  | 0.23 | 0.26 | 0.28 | 0.3  | 0.36  | 0.67  | -               | 48     | 75   |
|             | 650067        | 0.53         | -                          | -    | 0.19   | 0.22 | 0.26 | 0.31 | 0.33 | 0.37 | 0.4  | 0.47  | 0.9   | -               | 50     | 75   |
|             | 6501          | 0.66         | -                          | 0.23 | 0.28   | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72  | 1.3   | 51              | 65     | 74   |
|             | 65015         | 0.79         | -                          | 0.34 | 0.42   | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.90 | 1.1   | 2.0   | 51              | 65     | 74   |
|             | 6502          | 0.91         | 0.32                       | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.7   | 52              | 65     | 73   |
|             | 65025         | 1.0          | 0.40                       | 0.57 | 0.70   | 0.81 | 0.99 | 1.1  | 1.3  | 1.4  | 1.5  | 1.8   | 3.4   | 52              | 65     | 73   |
|             | 6503          | 1.1          | 0.48                       | 0.68 | 0.83   | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   | 4.0   | 53              | 65     | 72   |
|             | 6504          | 1.3          | 0.65                       | 0.91 | 1.1    | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 5.4   | 53              | 65     | 72   |
|             | 6505          | 1.4          | 0.80                       | 1.1  | 1.3    | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 6.7   | 53              | 65     | 72   |
|             | 6506          | 1.6          | 0.97                       | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 8.1   | 54              | 65     | 72   |
|             | 6508          | 1.8          | 1.3                        | 1.8  | 2.2    | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 10.8  | 55              | 65     | 71   |
|             | 6510          | 2.0          | 1.5                        | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 7.2   | 13.5  | 56              | 65     | 71   |
|             | 6515          | 2.4          | 2.5                        | 3.4  | 4.2    | 4.8  | 5.9  | 6.6  | 7.6  | 8.4  | 9.0  | 10.8  | 20    | 56              | 65     | 70   |
|             | 6520          | 2.8          | 3.2                        | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 27    | 57              | 65     | 70   |
|             | 6530          | 3.6          | 4.8                        | 6.8  | 8.3    | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 40    | 58              | 65     | 69   |
|             | 6540          | 4.0          | 6.5                        | 9.1  | 11.1   | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 54    | 59              | 65     | 68   |
|             | 6550          | 4.4          | 8.0                        | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 68    | 60              | 65     | 68   |
|             | 6560          | 4.8          | 9.7                        | 13.7 | 16.8   | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 81    | 60              | 65     | 68   |
|             | 6570          | 5.2          | 11.2                       | 16.0 | 19.6   | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 94    | 60              | 65     | 68   |
|             | 65100         | 6.4          | 16.1                       | 23   | 28.2   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 135   | 58              | 65     | 69   |



Wide Angle

At the stated pressure in bar.

| Spray Angle | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |      |        |      |      |      |      |      |      |       |       | Spray Angle (°) |        |      |
|-------------|---------------|--------------|----------------------------|------|--------|------|------|------|------|------|------|-------|-------|-----------------|--------|------|
|             |               |              | 0.5bar                     | 1bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 35bar | 0.5bar          | 1.5bar | 6bar |
| 110°        | 11001         | 0.66         | 0.15                       | 0.23 | 0.28   | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72  | 1.3   | 94              | 110    | 121  |
|             | 110015        | 0.79         | 0.25                       | 0.34 | 0.42   | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.90 | 1.1   | 2.0   | 97              | 110    | 121  |
|             | 11002         | 0.91         | 0.32                       | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.7   | 98              | 110    | 120  |
|             | 11003         | 1.1          | 0.48                       | 0.68 | 0.83   | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   | 4.0   | 99              | 110    | 120  |
|             | 11004         | 1.3          | 0.65                       | 0.91 | 1.1    | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 5.4   | 100             | 110    | 119  |
|             | 11005         | 1.4          | 0.80                       | 1.1  | 1.3    | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 6.7   | 100             | 110    | 118  |
|             | 11006         | 1.6          | 0.97                       | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 8.1   | 101             | 110    | 117  |
|             | 11008         | 1.8          | 1.3                        | 1.8  | 2.2    | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 10.8  | 102             | 110    | 117  |
|             | 11010         | 2.0          | 1.5                        | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 7.2   | 13.5  | 103             | 110    | 117  |
|             | 11015         | 2.4          | 2.5                        | 3.4  | 4.2    | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  | 20    | 104             | 110    | 117  |
| 95°         | 11020         | 2.8          | 3.2                        | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 27    | 105             | 110    | 117  |
|             | 9501          | 0.66         | 0.15                       | 0.23 | 0.28   | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72  | 1.3   | 81              | 95     | 105  |
|             | 95015         | 0.79         | 0.25                       | 0.34 | 0.42   | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.90 | 1.1   | 2.0   | 82              | 95     | 105  |
|             | 9502          | 0.91         | 0.32                       | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.7   | 82              | 95     | 105  |
|             | 9503          | 1.1          | 0.48                       | 0.68 | 0.83   | 0.97 | 1.2  | 1.1  | 1.5  | 1.7  | 1.8  | 2.2   | 4.0   | 83              | 95     | 104  |
|             | 9504          | 1.3          | 0.65                       | 0.91 | 1.1    | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 5.4   | 84              | 95     | 103  |
|             | 9505          | 1.4          | 0.80                       | 1.1  | 1.3    | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 6.7   | 84              | 95     | 102  |
|             | 9506          | 1.6          | 0.97                       | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 8.1   | 86              | 95     | 101  |
|             | 9508          | 1.8          | 1.3                        | 1.8  | 2.2    | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 10.8  | 87              | 95     | 100  |
|             | 9510          | 2.0          | 1.5                        | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 4.6  | 6.0  | 7.2   | 13.5  | 89              | 95     | 100  |
|             | 9515          | 2.4          | 2.5                        | 3.4  | 4.2    | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  | 20    | 90              | 95     | 100  |
|             | 9520          | 2.8          | 3.2                        | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 27    | 90              | 95     | 100  |
|             | 9530          | 3.6          | 4.8                        | 6.8  | 8.3    | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 40    | 91              | 95     | 101  |
|             | 9540          | 4.0          | 6.5                        | 9.1  | 11.1   | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 54    | 92              | 95     | 100  |
|             | 9550          | 4.4          | 8.0                        | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 68    | 93              | 95     | 99   |
| 80°         | 9560          | 4.8          | 9.7                        | 13.7 | 16.8   | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 81    | 93              | 95     | 99   |
|             | 9570          | 5.2          | 11.2                       | 16.0 | 19.6   | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 94    | 93              | 95     | 99   |
|             | 95100         | 6.4          | 16.1                       | 23   | 28.2   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 135   | 93              | 95     | 99   |
|             | 8001          | 0.66         | -                          | 0.23 | 0.28   | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.60 | 0.72  | 1.3   | 68              | 80     | 89   |
|             | 80015         | 0.79         | -                          | 0.34 | 0.42   | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.90 | 1.1   | 2.0   | 68              | 80     | 89   |
|             | 8002          | 0.91         | 0.32                       | 0.46 | 0.56   | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   | 2.7   | 69              | 80     | 88   |
|             | 8003          | 1.1          | 0.48                       | 0.68 | 0.83   | 0.97 | 1.2  | 1.1  | 1.5  | 1.7  | 1.8  | 2.2   | 4.0   | 70              | 80     | 87   |
|             | 8004          | 1.3          | 0.65                       | 0.91 | 1.1    | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   | 5.4   | 71              | 80     | 86   |
|             | 8005          | 1.4          | 0.80                       | 1.1  | 1.3    | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   | 6.7   | 71              | 80     | 86   |
|             | 8006          | 1.6          | 0.97                       | 1.4  | 1.7    | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   | 8.1   | 72              | 80     | 85   |
|             | 8008          | 1.8          | 1.3                        | 1.8  | 2.2    | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   | 10.8  | 72              | 80     | 84   |
|             | 8010          | 2.0          | 1.5                        | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  | 5.1  | 4.6  | 6.0  | 7.2   | 13.5  | 73              | 80     | 84   |
|             | 8015          | 2.4          | 2.5                        | 3.4  | 4.2    | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  | 20    | 74              | 80     | 83   |
|             | 8020          | 2.8          | 3.2                        | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  | 27    | 74              | 80     | 83   |
|             | 8030          | 3.6          | 4.8                        | 6.8  | 8.3    | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    | 40    | 74              | 80     | 83   |
|             | 8040          | 4.0          | 6.5                        | 9.1  | 11.1   | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    | 54    | 74              | 80     | 83   |
|             | 8050          | 4.4          | 8.0                        | 11.4 | 14.0   | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    | 68    | 74              | 80     | 83   |
|             | 8060          | 4.8          | 9.7                        | 13.7 | 16.8   | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    | 81    | 75              | 80     | 83   |
|             | 8070          | 5.2          | 11.2                       | 16.0 | 19.6   | 23   | 28   | 32   | 36   | 39   | 42   | 50    | 94    | 75              | 80     | 83   |
|             | 80100         | 6.4          | 16.1                       | 23   | 28.2   | 32   | 39   | 46   | 51   | 56   | 60   | 72    | 135   | 75              | 80     | 83   |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

Order Info

|             |   |            |   |               |   |         |
|-------------|---|------------|---|---------------|---|---------|
| CC          | - | 1/4        | - | SS            | - | 6505    |
|             |   |            |   |               |   |         |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Orifice |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## C Series - Flat Fan High Pressure Type

Boyuan Spraying

### Series MEG



### MEG



Integrated

### MEG-CCL



Integrated Plus Filter

### MEG-WGX



Integrated Tungsten Core

### TPC-WGX



Tungsten Steel Core

### Design Features

- Spray Angle : Injection radians of 5° to 65° at working pressures from 20 to 275 bar (kg).
- Spray Pattern : Fan spray, spray area in line.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : SS
- Features : The liquid column flow pattern provides the maximum impact force per unit area;  
The built-in guide blade stabilizes the turbulent flow to achieve uniform spray distribution.

### Performance State

At the stated pressure in bar.

| Nozzle Type & Spray Angle |     |     |     |     |      |      |    |        |     |     |     |     |     |    |    |            |     |     |     | Capacity<br>Size | Flow Rate Capacity<br>(L/min) |       |       |       |       |       |       |       |        |        |        |        |    |
|---------------------------|-----|-----|-----|-----|------|------|----|--------|-----|-----|-----|-----|-----|----|----|------------|-----|-----|-----|------------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|----|
| TPC-WGX                   |     |     |     |     |      |      |    | 1/4MEG |     |     |     |     |     |    |    | 1/4MEG-WGX |     |     |     |                  |                               |       |       |       |       |       |       |       |        |        |        |        |    |
| 40°                       | 50° | 65° | 80° | 95° | 110° | 130° | 0° | 5°     | 15° | 25° | 40° | 50° | 65° | 0° | 5° | 15°        | 25° | 40° | 50° |                  | 65°                           | 20bar | 25bar | 35bar | 40bar | 45bar | 60bar | 80bar | 100bar | 140bar | 170bar | 200bar |    |
|                           |     |     |     |     |      |      |    |        |     |     |     |     |     |    |    |            |     |     |     |                  | 010                           | 1.0   | 1.1   | 1.3   | 1.4   | 1.5   | 1.8   | 2.0   | 2.3    | 2.7    | 3.0    | 3.2    |    |
|                           |     |     |     |     |      |      |    |        |     |     |     |     |     |    |    |            |     |     |     |                  | 015                           | 1.5   | 1.7   | 2.0   | 2.2   | 2.3   | 2.6   | 3.1   | 3.4    | 4.0    | 4.5    | 4.8    |    |
| ●                         | ●   | ●   | ●   | ●   |      | ●    | ●  | ●      | ●   | ●   |     |     | ●   | ●  |    | ●          |     |     | ●   | ●                | 020                           | 2.0   | 2.3   | 2.7   | 2.9   | 3.1   | 3.5   | 4.1   | 4.6    | 5.4    | 5.9    | 6.4    |    |
|                           |     |     |     |     |      |      |    |        |     |     |     |     |     | ●  |    |            |     |     |     |                  | 025                           | 2.5   | 2.8   | 3.4   | 3.6   | 3.8   | 4.4   | 5.1   | 5.7    | 6.7    | 7.4    | 8.1    |    |
| ●                         |     | ●   | ●   | ●   | ●    |      | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   |     |     | ●                | 030                           | 3.1   | 3.4   | 4.0   | 4.3   | 4.6   | 5.3   | 6.1   | 6.8    | 8.1    | 8.9    | 9.7    |    |
|                           |     |     |     |     |      |      |    | ●      |     | ●   | ●   | ●   |     |    |    |            |     |     |     |                  | 035                           | 3.6   | 4.0   | 4.7   | 5.0   | 5.4   | 6.2   | 7.1   | 8.0    | 9.4    | 10.4   | 11.3   |    |
| ●                         |     | ●   | ●   | ●   | ●    |      | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | 25° |     | ●                | 040                           | 4.1   | 4.6   | 5.4   | 5.8   | 6.1   | 7.1   | 8.2   | 9.1    | 10.8   | 11.9   | 12.9   |    |
| ●                         |     | ●   | ●   | ●   |      |      | ●  | ●      | ●   | ●   | ●   |     | ●   |    |    |            | ●   | ●   |     |                  | 045                           | 4.6   | 5.1   | 6.1   | 6.5   | 6.9   | 7.9   | 9.2   | 10.3   | 12.1   | 13.4   | 14.5   |    |
| ●                         | ●   | ●   | ●   | ●   | ●    | ●    | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | ●   | ●   | ●                | 050                           | 5.1   | 5.7   | 6.7   | 7.2   | 7.6   | 8.8   | 10.2  | 11.4   | 13.5   | 14.9   | 16.1   |    |
| ●                         |     | ●   | ●   | ●   | ●    | ●    | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | ●   |     |                  | 055                           | 5.6   | 6.3   | 7.4   | 7.9   | 8.4   | 9.7   | 11.2  | 12.5   | 14.8   | 16.3   | 17.7   |    |
| ●                         | ●   | ●   | ●   | ●   | ●    | ●    | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | ●   | ●   |                  | 060                           | 6.1   | 6.8   | 8.1   | 8.6   | 9.2   | 10.6  | 12.2  | 13.7   | 16.2   | 17.8   | 19.3   |    |
| ●                         |     | ●   | ●   | ●   |      |      | ●  |        | ●   | ●   | ●   |     | ●   |    |    |            |     |     |     |                  | 065                           | 6.6   | 7.4   | 8.8   | 9.4   | 9.9   | 11.5  | 13.3  | 14.8   | 17.2   | 19.3   | 21     |    |
| ●                         | ●   | ●   | ●   | ●   | ●    | ●    | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | ●   | ●   | ●                | 070                           | 7.1   | 8.0   | 9.4   | 10.1  | 10.7  | 12.4  | 14.3  | 16.0   | 18.9   | 21     | 23     |    |
| ●                         |     | ●   | ●   | ●   |      |      | ●  |        | ●   | ●   | ●   |     |     |    |    |            |     |     |     |                  | 075                           | 7.6   | 8.5   | 10.1  | 10.8  | 11.5  | 13.2  | 15.3  | 17.1   | 20     | 22     | 24     |    |
| ●                         |     | ●   | ●   | ●   | ●    | ●    | ●  |        | ●   | ●   | ●   | ●   | ●   | ●  | ●  |            | ●   | ●   | ●   |                  | 080                           | 8.2   | 9.1   | 10.8  | 11.5  | 12.2  | 14.1  | 16.3  | 18.2   | 22     | 24     | 26     |    |
| ●                         |     | ●   | ●   | ●   |      |      | ●  |        | ●   | ●   | ●   |     |     |    |    |            |     |     |     |                  | 085                           | 8.7   | 9.7   | 11.5  | 12.3  | 13.0  | 15.0  | 17.3  | 19.4   | 23     | 25     | 27     |    |
| ●                         |     | ●   | ●   | ●   | ●    | ●    | ●  | ●      | ●   | ●   | ●   | ●   | ●   | ●  | 0° |            | 15° | ●   | ●   | ●                |                               | 090   | 9.2   | 10.3  | 12.1  | 13.0  | 13.8  | 15.9  | 18.3   | 21     | 24     | 27     | 29 |
|                           |     | ●   | ●   |     |      |      | ●  |        |     | ●   |     |     |     |    |    |            |     |     |     |                  | 095                           | 9.7   | 10.8  | 12.8  | 13.7  | 14.5  | 16.8  | 19.4  | 22     | 26     | 28     | 31     |    |
| ●                         |     | ●   | ●   | ●   | ●    | ●    |    |        | ●   | ●   | ●   | ●   | ●   | ●  |    |            | ●   | ●   |     |                  | 100                           | 10.2  | 11.4  | 13.5  | 14.4  | 15.3  | 17.7  | 20    | 23     | 27     | 30     | 32     |    |
| ●                         |     |     | ●   |     |      |      | ●  |        | ●   | ●   | ●   |     |     |    |    |            |     | ●   |     |                  | 110                           | 11.2  | 12.5  | 14.8  | 15.9  | 16.8  | 19.4  | 22    | 25     | 30     | 33     | 35     |    |
| ●                         |     | ●   | ●   |     |      |      |    |        |     |     |     |     |     |    |    |            |     |     |     |                  | 115                           | 11.7  | 13.1  | 15.5  | 16.6  | 17.6  | 20    | 23    | 26     | 31     | 34     | 37     |    |
| ●                         |     |     |     | ●   |      | ●    | ●  | ●      | ●   | ●   | ●   | ●   |     |    | ●  |            |     |     |     |                  | 120                           | 12.2  | 13.7  | 16.2  | 17.3  | 18.3  | 21    | 24    | 27     | 32     | 36     | 39     |    |
| ●                         |     |     |     |     | ●    |      |    | ●      | ●   | ●   |     |     |     |    |    |            |     |     |     |                  | 125                           | 12.7  | 14.2  | 16.9  | 18.0  | 19.1  | 22    | 25    | 28     | 34     | 37     | 40     |    |

0°=Liquid Solid Cone · Special size please consult our sale dept!

### Order Info

|             |   |            |   |               |   |             |   |               |   |                     |
|-------------|---|------------|---|---------------|---|-------------|---|---------------|---|---------------------|
| MEG         | - | 1/4        | - | SS            | - | 15          | - | 040           | - | WGX                 |
| Nozzle Type |   | Inlet Conn |   | Material Code |   | Spray Angle |   | Capacity Size |   | Tungsten steel core |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## V Series - Flat Fan Narrow Angle Type

Boyuan Spraying

### Series V



Integrated

### Design Features

- Spray Angle : 15°-50°
- Spray Pattern : Fan spray, spray area in line.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : The unobstructed liquid column flow channel reduces the blockage as much as possible;  
Integrated flow surface design, high impact flat fan spray shape, clear edge, uniform distribution.

### Applications

- Degreasing · Fire prevention · Air purification · Cooling & quenching
- Metal treating · Cleaning gravel · Cleaning & cooling

### Performance State

At the stated pressure in bar.

| Jet Angle<br>at 3bar<br>pressure | Inlet Conn(in.) |     |     |     |     | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity(L/min) |        |      |      |      |      |      |       |      |      | Spray Angle(°) |                     |                              | Size                     |                       |  |  |
|----------------------------------|-----------------|-----|-----|-----|-----|------------------|-----------------|---------------------------|--------|------|------|------|------|------|-------|------|------|----------------|---------------------|------------------------------|--------------------------|-----------------------|--|--|
|                                  | 1/8             | 1/4 | 3/8 | 1/2 | 3/4 |                  |                 | 1bar                      | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 10bar | 1bar | 3bar | 7bar           | A<br>length<br>(mm) | B<br>Deflection<br>Angle (°) | C<br>Bar size<br>(mmsq.) | Net<br>weight<br>(kg) |  |  |
| 50°                              |                 | ●   |     |     |     | 05               | 1.3             | 1.1                       | 1.4    | 1.6  | 2.0  | 2.3  | 2.8  | 3.0  | 3.6   | 33   | 50   | 60             | 31                  | 60                           | 15.9                     | 0.03                  |  |  |
|                                  |                 | ●   |     |     |     | 10               | 1.9             | 2.3                       | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 7.2   | 34   | 50   | 60             | 31                  | 60                           | 15.9                     | 0.03                  |  |  |
|                                  |                 | ●   | ●   |     |     | 25               | 3.0             | 5.7                       | 7.0    | 8.1  | 9.9  | 11.4 | 14.0 | 15.1 | 18.0  | 42   | 50   | 59             | 41.5                | 42                           | 19.1                     | 0.09                  |  |  |
|                                  |                 | ●   | ●   |     |     | 40               | 3.8             | 9.1                       | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 29    | 39   | 50   | 60             | 47                  | 45                           | 19.1                     | 0.09                  |  |  |
|                                  |                 |     | ●   |     |     | 60               | 4.6             | 13.7                      | 16.8   | 19.3 | 24   | 27   | 34   | 36   | 43    | 42   | 50   | 53             | 55                  | 37                           | 25.4                     | 0.14                  |  |  |
|                                  |                 |     | ●   |     |     | 100              | 5.9             | 23                        | 28     | 32   | 39   | 46   | 56   | 60   | 72    | 43   | 50   | 55             | 72                  | 40                           | 31.8                     | 0.33                  |  |  |
|                                  |                 |     | ●   |     |     | 125              | 6.6             | 28                        | 35     | 40   | 49   | 57   | 70   | 75   | 90    | 38   | 50   | 59             | 72                  | 38                           | 31.8                     | 0.31                  |  |  |
|                                  |                 |     | ●   |     |     | 160              | 7.5             | 36                        | 45     | 52   | 63   | 73   | 89   | 96   | 115   | 44   | 50   | 55             | 72                  | 37                           | 31.8                     | 0.31                  |  |  |
| 40°                              |                 |     | ●   |     |     | 200              | 8.4             | 46                        | 56     | 64   | 79   | 91   | 112  | 121  | 144   | 46   | 50   | 53             | 72                  | 32                           | 31.8                     | 0.31                  |  |  |
|                                  |                 |     | ●   |     |     | 40               | 3.8             | 9.1                       | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 29    | 31   | 40   | 50             | 60.5                | 35                           | 22.2                     | 0.14                  |  |  |
|                                  |                 |     | ●   |     |     | 50               | 4.2             | 11.4                      | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 36    | 31   | 40   | 49             | 63.5                | 33                           | 25.4                     | 0.20                  |  |  |
|                                  |                 |     | ●   |     |     | 60               | 4.6             | 13.7                      | 16.8   | 19.3 | 24   | 27   | 34   | 36   | 43    | 32   | 40   | 49             | 72                  | 33                           | 25.4                     | 0.23                  |  |  |
|                                  |                 |     | ●   |     |     | 70               | 5.0             | 16.0                      | 19.5   | 23   | 28   | 32   | 39   | 42   | 50    | 32   | 40   | 49             | 75.5                | 29                           | 25.4                     | 0.26                  |  |  |
|                                  |                 |     | ●   |     |     | 80               | 5.3             | 18.2                      | 22     | 26   | 32   | 36   | 45   | 48   | 58    | 32   | 40   | 48             | 77                  | 26                           | 25.4                     | 0.26                  |  |  |
|                                  |                 |     | ●   |     |     | 90               | 5.6             | 21                        | 25     | 29   | 36   | 41   | 50   | 54   | 65    | 34   | 40   | 44             | 77                  | 28                           | 25.4                     | 0.23                  |  |  |
|                                  |                 |     | ●   |     |     | 100              | 5.9             | 23                        | 28     | 32   | 39   | 46   | 56   | 60   | 72    | 35   | 40   | 44             | 86.5                | 28                           | 25.4                     | 0.26                  |  |  |
| 35°                              | ●               |     |     |     |     | 04               | 1.2             | 0.91                      | 1.1    | 1.3  | 1.6  | 1.8  | 2.2  | 2.4  | 2.9   | 20   | 35   | 41             | 23                  | 40                           | 11.1                     | 0.01                  |  |  |
|                                  |                 | ●   |     |     |     | 10               | 1.9             | 2.3                       | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 7.2   | 18   | 35   | 39             | 36.5                | 36                           | 15.9                     | 0.06                  |  |  |
|                                  |                 | ●   | ●   |     |     | 20               | 2.7             | 4.6                       | 5.6    | 6.4  | 7.9  | 9.1  | 11.2 | 12.1 | 14.4  | 24   | 35   | 40             | 42                  | 30                           | 19.1                     | 0.06                  |  |  |
|                                  |                 |     | ●   |     |     | 25               | 3.0             | 5.7                       | 7.0    | 8.1  | 9.9  | 11.4 | 14.0 | 15.1 | 18.0  | 24   | 35   | 39             | 49                  | 28                           | 19.1                     | 0.09                  |  |  |
|                                  |                 |     | ●   |     |     | 30               | 3.3             | 6.8                       | 8.4    | 9.7  | 11.8 | 13.7 | 16.8 | 18.1 | 22    | 26   | 35   | 41             | 52.5                | 28                           | 19.1                     | 0.09                  |  |  |
|                                  |                 |     | ●   |     |     | 40               | 3.8             | 9.1                       | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 29    | 28   | 35   | 38             | 58                  | 26                           | 22.2                     | 0.11                  |  |  |
|                                  |                 |     | ●   |     |     | 50               | 4.2             | 11.4                      | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 36    | 31   | 35   | 38             | 63.5                | 23                           | 22.2                     | 0.14                  |  |  |
|                                  |                 |     |     | ●   |     | 60               | 4.6             | 13.7                      | 16.8   | 19.3 | 24   | 27   | 34   | 36   | 43    | 29   | 35   | 39             | 73                  | 27                           | 25.4                     | 0.23                  |  |  |
| 25°                              |                 |     |     | ●   |     | 80               | 5.3             | 18.2                      | 22     | 26   | 32   | 36   | 45   | 48   | 58    | 26   | 35   | 40             | 81                  | 24                           | 25.4                     | 0.26                  |  |  |
|                                  |                 |     |     | ●   |     | 100              | 5.9             | 23                        | 28     | 32   | 39   | 46   | 56   | 60   | 72    | 26   | 35   | 40             | 89                  | 19                           | 25.4                     | 0.26                  |  |  |
|                                  |                 |     |     |     | ●   | 160              | 7.5             | 36                        | 45     | 52   | 63   | 73   | 89   | 96   | 115   | 26   | 35   | 40             | 114                 | 23                           | 31.8                     | 0.57                  |  |  |
| 15°                              |                 | ●   |     |     |     | 200              | 8.4             | 46                        | 56     | 64   | 79   | 91   | 112  | 121  | 144   | 25   | 35   | 40             | 122                 | 22                           | 31.8                     | 0.57                  |  |  |
|                                  |                 | ●   |     |     |     | 40               | 3.8             | 9.1                       | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 29    | 15   | 25   | 34             | 65                  | 25                           | 19.1                     | 0.11                  |  |  |
|                                  |                 | ●   |     |     |     | 10               | 1.9             | -                         | 2.8    | 3.2  | 3.9  | 4.6  | 5.6  | 6.0  | 7.2   | -    | 15   | 23             | 47.5                | 22                           | 15.9                     | 0.06                  |  |  |
|                                  |                 | ●   |     |     |     | 20               | 2.7             | -                         | 5.6    | 6.4  | 7.9  | 9.1  | 11.2 | 12.1 | 14.4  | -    | 15   | 19             | 54                  | 19                           | 15.9                     | 0.06                  |  |  |
|                                  |                 |     | ●   |     |     | 30               | 3.3             | 6.8                       | 8.4    | 9.7  | 11.8 | 13.7 | 16.8 | 18.1 | 22    | 6    | 15   | 24             | 72                  | 25                           | 19.1                     | 0.11                  |  |  |
|                                  |                 |     | ●   |     |     | 40               | 3.8             | 9.1                       | 11.2   | 12.9 | 15.8 | 18.2 | 22   | 24   | 29    | 8    | 15   | 21             | 92                  | 18                           | 22.2                     | 0.23                  |  |  |
|                                  |                 |     | ●   |     |     | 50               | 4.2             | 11.4                      | 14.0   | 16.1 | 19.7 | 23   | 28   | 30   | 36    | 9    | 15   | 20             | 90.5                | 15                           | 22.2                     | 0.17                  |  |  |
|                                  |                 |     |     | ●   |     | 60               | 4.6             | 13.7                      | 16.8   | 19.3 | 24   | 27   | 34   | 36   | 43    | 10   | 15   | 19             | 125                 | 14                           | 25.4                     | 0.34                  |  |  |
| 15°                              |                 |     |     | ●   |     | 80               | 5.3             | 18.2                      | 22     | 26   | 32   | 36   | 45   | 48   | 58    | 11   | 15   | 18             | 130                 | 14                           | 25.4                     | 0.34                  |  |  |
|                                  |                 |     |     | ●   |     | 100              | 5.9             | 23                        | 28     | 32   | 39   | 46   | 56   | 60   | 72    | 11   | 15   | 18             | 137                 | 14                           | 25.4                     | 0.40                  |  |  |
|                                  |                 |     |     |     | ●   | 200              | 8.4             | 46                        | 56     | 64   | 79   | 91   | 112  | 121  | 144   | 12   | 15   | 18             | 191                 | 14                           | 31.8                     | 0.91                  |  |  |



Series W



Integrated

Design Features

- Spray Angle : 15°-50°
- Spray Pattern : Fan spray, spray area in line.
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : The unobstructed liquid column flow channel reduces the blockage as much as possible;  
Integrated flow surface design, high impact flat fan spray shape, clear edge, uniform distribution.

Applications

- Degreasing · Fire prevention · Air purification · Cooling & quenching
- Metal treating · Cleaning gravel · Cleaning & cooling

Performance State

At the stated pressure in bar.

| Inlet Conn(in.) |     |     |     |     |    | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |        |        |        |      |        |      |      | Spray Angle<br>(°) |        |        |      |
|-----------------|-----|-----|-----|-----|----|------------------|-----------------|-------------------------------|--------|--------|--------|------|--------|------|------|--------------------|--------|--------|------|
| 1/8             | 1/4 | 3/8 | 1/2 | 3/4 | 1" |                  |                 | 0.2bar                        | 0.4bar | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar               | 0.5bar | 1.5bar | 4bar |
| ●               |     |     |     |     |    | 0.25             | 0.43            | -                             | -      | -      | -      | 0.11 | 0.14   | 0.16 | 0.20 | 0.23               | -      | 83     | 117  |
| ●               |     |     |     |     |    | 0.50             | 0.58            | -                             | -      | -      | -      | 0.23 | 0.28   | 0.32 | 0.39 | 0.46               | -      | 89     | 122  |
| ●               |     |     |     |     |    | 0.72             | 0.74            | -                             | -      | -      | 0.29   | 0.34 | 0.42   | 0.48 | 0.59 | 0.68               | -      | 106    | 125  |
| ●               |     |     |     |     |    | 1                | 0.84            | -                             | -      | -      | 0.38   | 0.46 | 0.56   | 0.64 | 0.79 | 0.91               | -      | 103    | 128  |
| ●               |     |     |     |     |    | 1.5              | 1.0             | -                             | -      | 0.48   | 0.57   | 0.68 | 0.84   | 0.97 | 1.2  | 1.4                | 73     | 103    | 125  |
| ●               | ●   |     |     |     |    | 2                | 1.2             | -                             | -      | 0.64   | 0.76   | 0.91 | 1.1    | 1.3  | 1.6  | 1.8                | 83     | 113    | 129  |
| ●               | ●   |     |     |     |    | 2.5              | 1.3             | -                             | 0.72   | 0.81   | 0.95   | 1.1  | 1.4    | 1.6  | 2.0  | 2.3                | 98     | 122    | 133  |
| ●               | ●   |     |     |     |    | 3                | 1.4             | -                             | 0.86   | 0.97   | 1.1    | 1.4  | 1.7    | 1.9  | 2.4  | 2.7                | 86     | 112    | 126  |
| ●               | ●   |     |     |     |    | 4                | 1.7             | -                             | 1.2    | 1.3    | 1.5    | 1.8  | 2.2    | 2.6  | 3.2  | 3.6                | 97     | 123    | 132  |
| ●               | ●   |     |     |     |    | 5                | 1.9             | 1.0                           | 1.4    | 1.6    | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6                | 114    | 128    | 142  |
| ●               | ●   |     |     |     |    | 7.5              | 2.3             | 1.5                           | 2.2    | 2.4    | 2.9    | 3.4  | 4.2    | 4.8  | 5.9  | 6.8                | 101    | 119    | 134  |
| ●               | ●   |     |     |     |    | 10               | 2.7             | 2.0                           | 2.9    | 3.2    | 3.8    | 4.6  | 5.6    | 6.4  | 7.9  | 9.1                | 115    | 133    | 145  |
| ●               | ●   |     |     |     |    | 12               | 2.9             | 2.4                           | 3.5    | 3.9    | 4.6    | 5.5  | 6.7    | 7.7  | 9.5  | 10.9               | 128    | 139    | 153  |
| ●               | ●   |     |     |     |    | 15               | 3.3             | 3.1                           | 4.3    | 4.8    | 5.7    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7               | 98     | 113    | 123  |
| ●               | ●   |     |     |     |    | 18               | 3.6             | 3.7                           | 5.2    | 5.8    | 6.9    | 8.2  | 10.1   | 11.6 | 14.2 | 16.4               | 106    | 120    | 131  |
| ●               | ●   |     |     |     |    | 20               | 3.8             | 4.1                           | 5.8    | 6.4    | 7.6    | 9.1  | 11.2   | 12.9 | 15.8 | 18.2               | 110    | 122    | 133  |
|                 | ●   |     |     |     |    | 22               | 3.9             | 4.5                           | 6.3    | 7.1    | 8.4    | 10.0 | 12.3   | 14.2 | 17.4 | 20                 | 113    | 125    | 136  |
|                 | ●   |     |     |     |    | 24               | 4.1             | 4.9                           | 6.9    | 7.7    | 9.2    | 10.9 | 13.4   | 15.5 | 19.0 | 22                 | 115    | 131    | 144  |
|                 | ●   |     |     |     |    | 27               | 4.4             | 5.5                           | 7.8    | 8.7    | 10.3   | 12.3 | 15.1   | 17.4 | 21   | 25                 | 119    | 135    | 148  |
|                 |     | ●   |     |     |    | 30               | 4.6             | 6.1                           | 8.6    | 9.7    | 11.4   | 13.7 | 16.8   | 19.3 | 24   | 27                 | 100    | 110    | 121  |
|                 |     | ●   |     |     |    | 35               | 5.0             | 7.1                           | 10.1   | 11.3   | 13.3   | 16.0 | 19.5   | 23   | 28   | 32                 | 105    | 118    | 128  |
|                 |     | ●   | ●   |     |    | 40               | 5.3             | 8.2                           | 11.5   | 12.9   | 15.3   | 18.2 | 22     | 26   | 32   | 36                 | 111    | 126    | 136  |
|                 |     | ●   | ●   |     |    | 45               | 5.6             | 9.2                           | 13.0   | 14.5   | 17.2   | 21   | 25     | 29   | 36   | 41                 | 115    | 130    | 140  |
|                 |     |     | ●   |     |    | 50               | 5.9             | 10.2                          | 14.4   | 16.1   | 19.1   | 23   | 28     | 32   | 39   | 46                 | 117    | 131    | 140  |
|                 |     |     | ●   |     |    | 60               | 6.5             | 12.2                          | 17.3   | 19.3   | 23     | 27   | 34     | 39   | 47   | 55                 | 120    | 134    | 142  |
|                 |     |     | ●   |     |    | 70               | 7.0             | 14.3                          | 20     | 23     | 27     | 32   | 39     | 45   | 55   | 64                 | 123    | 137    | 146  |
|                 |     |     | ●   |     |    | 80               | 7.5             | 16.3                          | 23     | 26     | 31     | 36   | 45     | 52   | 63   | 73                 | 127    | 138    | 149  |
|                 |     |     |     | ●   |    | 90               | 8.1             | 18.3                          | 26     | 29     | 34     | 41   | 50     | 58   | 71   | 82                 | 120    | 133    | 140  |
|                 |     |     |     | ●   |    | 100              | 8.5             | 20                            | 29     | 32     | 38     | 46   | 56     | 64   | 79   | 91                 | 123    | 136    | 145  |
|                 |     |     |     | ●   |    | 110              | 8.9             | 22                            | 32     | 35     | 42     | 50   | 61     | 71   | 87   | 100                | 125    | 138    | 148  |
|                 |     |     |     | ●   |    | 120              | 9.3             | 24                            | 35     | 39     | 46     | 55   | 67     | 77   | 95   | 109                | 129    | 143    | 150  |
|                 |     |     |     | ●   |    | 140              | 10.0            | 29                            | 40     | 45     | 53     | 64   | 78     | 90   | 111  | 128                | 118    | 127    | 135  |
|                 |     |     |     | ●   |    | 160              | 10.7            | 33                            | 46     | 52     | 61     | 73   | 89     | 103  | 126  | 146                | 121    | 130    | 137  |
|                 |     |     |     | ●   |    | 180              | 11.4            | 37                            | 52     | 58     | 69     | 82   | 101    | 116  | 142  | 164                | 124    | 133    | 139  |
|                 |     |     |     | ●   |    | 210              | 12.3            | 43                            | 61     | 68     | 80     | 96   | 117    | 135  | 166  | 191                | 128    | 139    | 145  |
|                 |     |     |     | ●   | ●  | 300              | 14.8            | 61                            | 86     | 97     | 114    | 137  | 168    | 193  | 237  | 274                | 110    | 128    | 135  |
|                 |     |     |     | ●   | ●  | 450              | 18.0            | 92                            | 130    | 145    | 172    | 205  | 251    | 290  | 355  | 410                | 118    | 132    | 138  |

· Special size please consult our sale dept!

Order Info

W - 1/4 - SS - 20  
| | | |  
Nozzle Type Inlet Conn Material Code Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.



SJ-SS



Stainless Steel

SJ-PTFE



Teflon

SJ-PP



Plastic

SJF-SS



Flanged, Stainless Steel

SJF-BRASS



Flanged, Brass

SJ-180



180° Brass

Design Features

- Spray Angle : 60°-180°
- Spray Pattern : Solid (hollow) conical spray, spray area into a circle (ring).
- Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE/SIS
- Features : The interior is designed for large flow channels to minimize liquid blockage.  
The spiral nozzle produces a solid (hollow) conical spray with relatively coarse droplets.

Applications

- Water aerating · Fire prevention · Spray cooling
- Dust control · Metal treating · Gas cooling & scrubbing

Order Info

SPJT - 1/4 - 316SS - 12020  
| | | |  
Nozzle Inlet Material Orifice  
Type Conn Code

For NPT threaded connections,  
add the letter "N" before the nozzle connection size.

Performance State

At the stated pressure in bar.

| Inlet<br>Conn<br>(in.) | Spray Angle(0.7bar) |     |      |      |      | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity(L/min) |        |      |      |       |
|------------------------|---------------------|-----|------|------|------|------------------|-----------------|---------------------------|--------|------|------|-------|
|                        | 60°                 | 90° | 120° | 150° | 170° |                  |                 | 0.7bar                    | 1.5bar | 3bar | 7bar | 25bar |
| 1/4                    | ●                   | ●   | ●    |      |      | 07               | 2.4             | 2.6                       | 3.9    | 5.5  | 8.4  | 16    |
|                        | ●                   | ●   | ●    | ●    | ●    | 13               | 3.2             | 4.9                       | 7.3    | 10.3 | 15.7 | 30    |
|                        | ●                   | ●   | ●    | ●    | ●    | 20               | 4.0             | 7.6                       | 11.2   | 15.8 | 24   | 46    |
| 3/8                    | ●                   |     |      |      |      | 07               | 2.4             | 2.6                       | 3.9    | 5.5  | 8.4  | 16    |
|                        | ●                   |     |      |      |      | 13               | 3.2             | 4.9                       | 7.3    | 10.3 | 15.7 | 30    |
|                        | ●                   |     |      |      |      | 20               | 4.0             | 7.6                       | 11.2   | 15.8 | 24   | 46    |
|                        | ●                   | ●   | ●    | ●    | ●    | 30               | 4.8             | 11.4                      | 16.7   | 24   | 36   | 68    |
|                        | ●                   | ●   | ●    | ●    | ●    | 40               | 5.6             | 15.1                      | 22     | 32   | 48   | 91    |
|                        | ●                   | ●   | ●    | ●    | ●    | 53               | 6.4             | 20                        | 30     | 42   | 64   | 121   |
| 1/2                    | ●                   | ●   | ●    | ●    | ●    | 82               | 7.9             | 31                        | 46     | 65   | 99   | 187   |
|                        | ●                   | ●   | ●    | ●    | ●    | 120              | 9.5             | 45                        | 67     | 95   | 145  | 270   |
| 3/4                    | ●                   | ●   | ●    | ●    | ●    | 164              | 11.1            | 62                        | 92     | 129  | 198  | 370   |
|                        | ●                   | ●   | ●    | ●    | ●    | 210              | 12.7            | 80                        | 117    | 166  | 255  | 480   |
| 1                      | ●                   | ●   | ●    | ●    | ●    | 340              | 15.9            | 130                       | 190    | 270  | 410  | 775   |
|                        | ●                   | ●   | ●    | ●    | ●    | 470              | 19.1            | 179                       | 260    | 370  | 565  | 1070  |
| 1-1/2                  | ●                   | ●   | ●    | ●    | ●    | 640              | 22.2            | 245                       | 355    | 505  | 770  | 1460  |
|                        | ●                   | ●   | ●    | ●    | ●    | 820              | 25.4            | 310                       | 455    | 645  | 990  | 1870  |
|                        | ●                   | ●   | ●    | ●    | ●    | 960              | 28.6            | 365                       | 535    | 755  | 1160 | 2190  |
| 2                      | ●                   | ●   | ●    | ●    | ●    | 1400             | 34.9            | 535                       | 780    | 1105 | 1690 | 3190  |
|                        | ●                   | ●   | ●    | ●    | ●    | 1780             | 38.1            | 680                       | 995    | 1405 | 2150 | 4060  |
| 3                      | ●                   | ●   | ●    |      |      | 2560             | 44.5            | 980                       | 1430   | 2020 | 3090 | 5830  |
|                        | ●                   | ●   | ●    |      |      | 3360             | 50.8            | 1280                      | 1880   | 2650 | 4050 | 7660  |
| 4                      | ●                   | ●   | ●    |      |      | 5250             | 63.5            | 2000                      | 2930   | 4140 | 6330 | 11960 |

For higher pressure, brass and transition 316 stainless steel nozzles are used.

Special size please consult our sale dept.



## Fine Mist Nozzle



Boyuan Spray Nozzle UK Office  
sale.uk@boyuanspray.com

Boyuan Spraying

## L Series - Fine Mist Standard Type

**L**



Removable  
cap(M)

**LL**



Removable  
cap(F)

**LD**



Detachable  
Wall install(M)

**LLD**



Detachable  
Wall install(F)

**LLM**



Removable cap  
with filter

### Design Features

- Spray Angle : 60°-180°
- Spray Pattern : Solid (hollow) conical spray, spray area into a circle (ring).
- Drops : SVery small, forming a mist spray effect. Wide range of pressure and flow.
- Material : BRASS/SS
- Features : Most models are equipped with built-in filters.  
Wall-mounted (LD/LLD) fine atomizer nozzles can be used on exterior walls, containers or pipes.  
Without compressed air, only hydraulic pressure can be used to form a very fine conical atomizing spray.

### Applications

- Water aeration
- Fire extinguishing
- Spray cooling
- Dust control
- Metal treating
- Gas cooling & scrubbing

### Order Info

|             |          |            |          |               |          |          |
|-------------|----------|------------|----------|---------------|----------|----------|
| <b>LL</b>   | <b>-</b> | <b>1/4</b> | <b>-</b> | <b>SS</b>     | <b>-</b> | <b>8</b> |
| Nozzle Type |          | Inlet Conn |          | Material Code |          | Orifice  |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

### Performance State

#### • Standard Angle

At the stated pressure in bar.

| Inlet Conn (in.) | Nozzle Type |   |   |   |   | Capacity Size | Orifice (mm) | Core number | Flow Rate Capacity (L/min) |      |      |      |       |       |       |       |       |      | Spray Angle (°) |       |  |
|------------------|-------------|---|---|---|---|---------------|--------------|-------------|----------------------------|------|------|------|-------|-------|-------|-------|-------|------|-----------------|-------|--|
|                  |             |   |   |   |   |               |              |             | 2bar                       | 3bar | 4bar | 7bar | 15bar | 20bar | 35bar | 45bar | 80bar | 3bar | 6bar            | 20bar |  |
| 1/4              | ●           | ● | ● | ● | ● | 1             | 0.51         | 210         | -                          | 3.9  | 4.6  | 6.0  | 8.8   | 10.2  | 13.5  | 15.3  | 20    | 45   | 62              | 72    |  |
|                  | ●           | ● | ● | ● | ● | 1.5           | 0.51         | 216         | 4.8                        | 5.9  | 6.8  | 9.0  | 13.2  | 15.3  | 20    | 23    | 31    | 65   | 70              | 72    |  |
|                  | ●           | ● | ● | ● | ● | 2             | 0.71         | 216         | 6.4                        | 7.9  | 9.1  | 12.1 | 17.7  | 20    | 27    | 31    | 41    | 70   | 75              | 77    |  |
|                  | ●           | ● | ● | ● | ● | 3             | 0.71         | 220         | 9.7                        | 11.8 | 13.7 | 18.1 | 26    | 31    | 40    | 46    | 61    | 65   | 70              | 73    |  |
|                  | ●           | ● | ● | ● | ● | 4             | 1.1          | 220         | 12.9                       | 15.8 | 18.2 | 24   | 35    | 41    | 54    | 61    | 82    | 72   | 81              | 84    |  |
|                  | ●           | ● | ● | ● | ● | 6             | 1.1          | 225         | 19.3                       | 24   | 27   | 36   | 53    | 61    | 81    | 92    | 122   | 73   | 79              | 81    |  |
|                  | ●           | ● | ● | ● | ● | 8             | 1.5          | 225         | 26                         | 32   | 36   | 48   | 71    | 82    | 108   | 122   | 163   | 85   | 89              | 91    |  |
|                  | ●           | ● | ● | ● | ● | 10            | 1.6          | 420         | 32                         | 39   | 46   | 60   | 88    | 102   | 135   | 204   | 204   | 82   | 84              | 86    |  |
|                  | ●           | ● | ● | ● | ● | 12            | 1.9          | 420         | 39                         | 47   | 55   | 72   | 106   | 122   | 162   | 183   | 245   | 78   | 82              | 85    |  |
|                  | ●           | ● | ● | ● | ● | 14            | 1.9          | 421         | 45                         | 55   | 64   | 84   | 124   | 143   | 189   | 214   | 285   | 85   | 88              | 90    |  |
|                  |             |   |   |   |   | 16            | 2.2          | 421         | 52                         | 63   | 73   | 96   | 141   | 163   | 216   | 245   | 326   | 83   | 86              | 88    |  |
|                  | ●           | ● | ● | ● | ● | 18            | 1.9          | 422         | 58                         | 71   | 82   | 109  | 159   | 183   | 243   | 275   | 367   | 81   | 84              | 86    |  |
|                  | ●           |   |   |   | ● | 20            | 2.1          | 422         | 64                         | 79   | 91   | 121  | 177   | 204   | 270   | 306   | 408   | 75   | 78              | 80    |  |
|                  | ●           | ● | ● | ● | ● | 22            | 1.9          | 625         | 71                         | 87   | 100  | 133  | 194   | 224   | 297   | 336   | 449   | 70   | 72              | 75    |  |
|                  | ●           | ● | ● | ● | ● | 26            | 2.2          | 625         | 84                         | 103  | 119  | 157  | 230   | 265   | 361   | 398   | 530   | 73   | 74              | 77    |  |

#### • Wide Angle

At the stated pressure in bar.

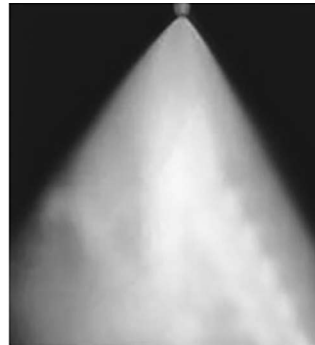
| Inlet Conn (in.) | Nozzle Type |    | Capacity Size | Orifice (mm) | Core number | Flow Rate Capacity(L/min) |      |      |      | Spray Angle(°) |      |
|------------------|-------------|----|---------------|--------------|-------------|---------------------------|------|------|------|----------------|------|
|                  | L           | LL |               |              |             | 1.5bar                    | 2bar | 3bar | 6bar | 3bar           | 6bar |
| 1/4              | •           | •  | 2W            | 0.99         | 210         | 5.6                       | 6.4  | 7.9  | 11.2 | -              | 165  |
|                  | •           | •  | 3W            | 0.99         | 216         | 8.4                       | 9.7  | 11.8 | 16.8 | -              | 157  |
|                  | •           | •  | 4W            | 1.5          | 220         | 11.2                      | 12.9 | 15.8 | 22   | 156            | 155  |
|                  | •           | •  | 8W            | 1.5          | 225         | 22                        | 26   | 32   | 45   | 152            | 153  |

• Special size please consult our sale dept!

Fine Mist



## P Series - Fine Mist PJ Type



PJ



Integrated Type

### Design Features

- Spray Angle : 90°
- Spray Pattern : Hhollow conical spray, spray area into a ring.
- Drops : Fine in size and evenly distributed.
- Material : BRASS/SS
- Features : High energy efficiency, integrated construction, no vortex and parts construction; Direct pressure nozzle, pressure impact needle target to produce atomization effect; In some conditions, it can replace the air atomizing nozzle and reduce the cost.

### Applications

- Water cooling
- Dust control
- Product degreasing
- Metal treating
- Chemical treatment
- Gas cooling & scrubbing

### Performance State

#### · PJ Type

At the stated pressure in bar.

| Inlet Conn (in.) | Capacity Size | Flow Rate Capacity (L/min) |       |       |       |       |       |       |       | Orifice (mm) | Coverage Area Diameter (mm) | Rated Spray Altitude (mm) |
|------------------|---------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|--------------|-----------------------------|---------------------------|
|                  |               | 2bar                       | 3bar  | 5bar  | 10bar | 20bar | 30bar | 50bar | 70bar |              |                             |                           |
| 1/8              | 1#            | -                          | -     | 0.031 | 0.043 | 0.061 | 0.075 | 0.097 | 0.114 | 0.152        | 203                         | 103                       |
|                  | 2#            | -                          | -     | 0.058 | 0.082 | 0.116 | 0.142 | 0.183 | 0.217 | 0.203        | 254                         | 127                       |
|                  | 3#            | -                          | 0.067 | 0.087 | 0.123 | 0.173 | 0.212 | 0.274 | 0.324 | 0.2554       | 254                         | 127                       |
|                  | 4#            | -                          | 0.091 | 0.117 | 0.166 | 0.234 | 0.287 | 0.371 | 0.439 | 0.305        | 254                         | 127                       |
|                  | 5#            | 0.119                      | 0.146 | 0.189 | 0.267 | 0.377 | 0.462 | 0.596 | 0.705 | 0.381        | 254                         | 127                       |

· Special size please consult our sale dept!

### Order Info

PJ - 1/8 - SS - 1#  
Nozzle Inlet Material Orifice  
Type Conn Code size

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## FD Series - Fine Mist Anti-Drip Type

### FD Series



### Design Features

- Spray Angle : about 50°
- Spray Pattern : Hhollow conical spray, spray area into a ring.
- Drops : Very small (about 50μm), forming a mist spray effect. Wide range of applicable pressures.
- Material : BRASS/SS
- Features : Fine, small size, relatively low cost; It can be used normally under the water pressure of 20kg-70kg. Brass body with stainless steel nozzle core, flow guide, and anti-drip device.

### Applications

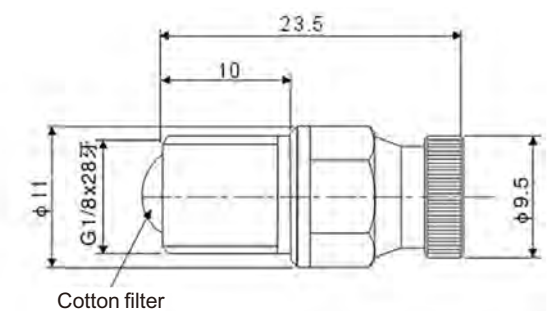
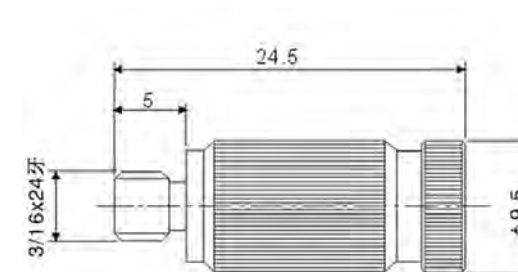
- Artificial fog
- Air humidification
- Wetting and rust removal
- Chemical spraying
- Chemical treatment
- Tablet coating
- Sterilization and disinfection

### Performance State

At the stated pressure in bar.

| FD Nozzle |          | Flow Rate Capacity(L/min) |        |        |        |        |        |       |       |       |
|-----------|----------|---------------------------|--------|--------|--------|--------|--------|-------|-------|-------|
| Type      | Aperture | 3bar                      | 4bar   | 7bar   | 10bar  | 15bar  | 18bar  | 35bar | 50bar | 70bar |
| FD1       | 0.1      | 0.003                     | 0.0033 | 0.0044 | 0.0053 | 0.0065 | 0.0071 | 0.01  | 0.02  | 0.03  |
| FD2       | 0.15     | 0.008                     | 0.01   | 0.012  | 0.015  | 0.018  | 0.02   | 0.03  | 0.04  | 0.05  |
| FD3       | 0.2      | 0.022                     | 0.0258 | 0.034  | 0.04   | 0.05   | 0.06   | 0.07  | 0.08  | 0.09  |
| FD4       | 0.3      | 0.032                     | 0.038  | 0.05   | 0.06   | 0.07   | 0.08   | 0.09  | 0.1   | 0.11  |
| FD5       | 0.4      | 0.07                      | 0.09   | 0.12   | 0.15   | 0.18   | 0.2    | 0.22  | 0.25  | 0.28  |
| FD6       | 0.5      | 0.08                      | 0.1    | 0.13   | 0.16   | 0.19   | 0.21   | 0.23  | 0.26  | 0.3   |
| FD7       | 0.6      | 0.09                      | 0.12   | 0.14   | 0.17   | 0.2    | 0.23   | 0.27  | 0.32  | 0.38  |
| Fd8       | 0.8      | 0.11                      | 0.13   | 0.15   | 0.18   | 0.22   | 0.26   | 0.3   | 0.36  | 0.48  |

· Special size please consult our sale dept!



### Order Info

FD - 1/8 - SS - 2#  
Nozzle Inlet Material Orifice  
Type Conn Code size

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## Multiple Fine Mist

Boyuan Spraying

7N



7G



### Design Features

- Spray Angle : 60-120°
- Spray Pattern : Hhollow conical spray, spray area into a ring.
- Drops : Fine in size and evenly distributed.
- Material : BRASS/SS
- Features : Easy to disassemble and clean;  
Large traffic range.

### Applications

- Dust control
- Fire extinguishing
- Smoke washing and cooling

### Performance State

·7N

At the stated pressure in bar.

| Inlet Conn. | Capacity Size | Flow Rate Capacity(L/min) |      |      |      |      |      |       |
|-------------|---------------|---------------------------|------|------|------|------|------|-------|
|             |               | 1.5bar                    | 3bar | 4bar | 6bar | 7bar | 8bar | 10bar |
| 1           | 0.6           | -                         | -    | -    | -    | 0.42 | 0.45 | 0.5   |
|             | 1             | -                         | 0.46 | 0.56 | 0.65 | 0.7  | 0.75 | 0.84  |
|             | 1.5           | -                         | 0.69 | 0.85 | 0.98 | 1    | 1.1  | 1.3   |
|             | 2             | -                         | 0.92 | 1.1  | 1.3  | 1.4  | 1.5  | 1.7   |
|             | 3             | 1.1                       | 1.4  | 1.7  | 2    | 2.1  | 2.3  | 2.5   |
|             | 4             | 1.5                       | 1.8  | 2.2  | 2.6  | 2.8  | 3    | 3.4   |
|             | 6             | 2.2                       | 2.8  | 3.4  | 3.9  | 4.2  | 4.5  | 5     |
|             | 8             | 2.9                       | 3.7  | 4.5  | 5.2  | 5.6  | 6    | 6.7   |
|             | 10            | 3.7                       | 4.5  | 5.6  | 6.5  | 7    | 7.5  | 8.4   |
|             | 12            | 4.4                       | 5.5  | 6.7  | 7.8  | 8.4  | 9    | 10.1  |
|             | 14            | 5.1                       | 6.4  | 7.9  | 9.1  | 9.8  | 10.5 | 11.8  |
|             | 16            | 5.9                       | 7.4  | 9.1  | 10.4 | 11.2 | 12   | 13.5  |
|             | 18            | 6.6                       | 8.3  | 10.2 | 11.7 | 12.6 | 13.5 | 15.1  |
|             | 22            | 8                         | 10.1 | 12.4 | 14.3 | 15.3 | 16.5 | 18.5  |
|             | 26            | 9.5                       | 12   | 14.7 | 16.9 | 18.1 | 19.6 | 22    |

·7G

At the stated pressure in bar.

| Inlet Conn. | Capacity Size | Flow Rate Capacity(L/min) |      |      |      |      |      |       |
|-------------|---------------|---------------------------|------|------|------|------|------|-------|
|             |               | 1.5bar                    | 3bar | 4bar | 6bar | 7bar | 8bar | 10bar |
| 3/4         | 1             | 4.3                       | 5.2  | 6.4  | 7.2  | 7.7  | 8.2  | 9.1   |
|             | 1.5           | 6.5                       | 7.8  | 9.6  | 10.8 | 11.6 | 12.3 | 13.6  |
|             | 3             | 13                        | 15.6 | 191  | 22   | 24   | 25   | 27    |
|             | 5             | 22                        | 26   | 32   | 39   | 39   | 41   | 45    |

· Special size please consult our sale dept!

### Order Info

7N - 1" - SS - 1.5  
Nozzle Type Inlet Conn Material Code Orifice

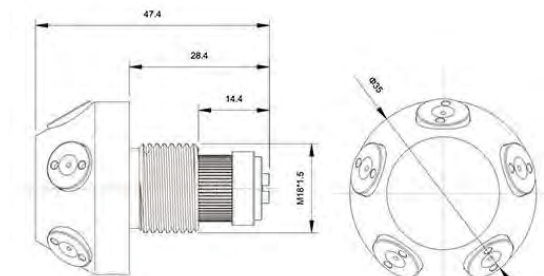
For NPT threaded connections, add the letter "N" before the nozzle connection size.



## Fine Mist High Pressure Type

Boyuan Spraying

### High Pressure Fire Nozzle



### Design Features

- Spray Angle : 60-120°
- Spray Pattern : Cone spray.
- Drops : Fine in size and evenly distributed.
- Material : BRASS/SS
- Features : Fixed, porous jet, covering a wide area;  
Low water consumption, large surface area, can dissolve, adsorption part of the smoke and gas, clean the fire environment.

### Applications

- Dust control
- Fire extinguishing
- Smoke washing and cooling

### Performance State

| Nozzle Type | Flow Coefficient(K) | Working Pressure(Mpa) | Working Flow(L/min) |
|-------------|---------------------|-----------------------|---------------------|
| XSWT0.3/10  | 0.3                 | 10.0-14.0             | 3.0-3.5             |
| XSWT0.5/10  | 0.5                 | 10.0-14.0             | 5.0-5.9             |
| XSWT0.7/10  | 0.7                 | 10.0-14.0             | 7.0-8.3             |
| XSWT0.9/10  | 0.9                 | 10.0-14.0             | 9.0-10.6            |
| XSWT1.0/10  | 1.0                 | 10.0-14.0             | 10.0-11.8           |
| XSWT1.2/10  | 1.2                 | 10.0-14.0             | 12.0-14.2           |
| XSWT1.5/10  | 1.5                 | 10.0-14.0             | 15.0-17.7           |
| XSWT1.7/10  | 1.7                 | 10.0-14.0             | 17.0-20.1           |
| XSWT2.0/10  | 2.0                 | 10.0-14.0             | 20.0-23.7           |
| XSWT2.5/10  | 2.5                 | 5.0-10.0              | 12.5-29.6           |
| XSWT3.0/10  | 3.0                 | 5.0-10.0              | 15.0-35.5           |
| XSWT3.5/10  | 3.5                 | 5.0-10.0              | 17.5-41.4           |
| XSWT4.0/10  | 4.0                 | 3.5-10.0              | 14.0-47.3           |
| XSWT4.5/10  | 4.5                 | 3.5-10.0              | 15.8-53.2           |
| XSWT5.0/10  | 5.0                 | 3.5-10.0              | 17.5-59.2           |
| XSWT5.5/10  | 5.5                 | 3.5-10.0              | 19.3-65.1           |



## Air Atomizing Nozzles

DJN



DCO



DACN



8650



DDJ



2DJ



DJN-BB



DBC



FM



DAU



ST-6



MACYB



KQWH



KQWH VVRA



PQ

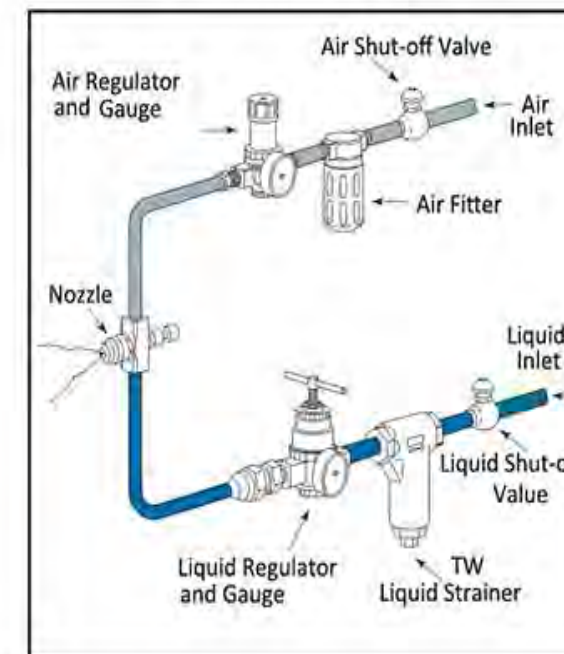


GWJSQ

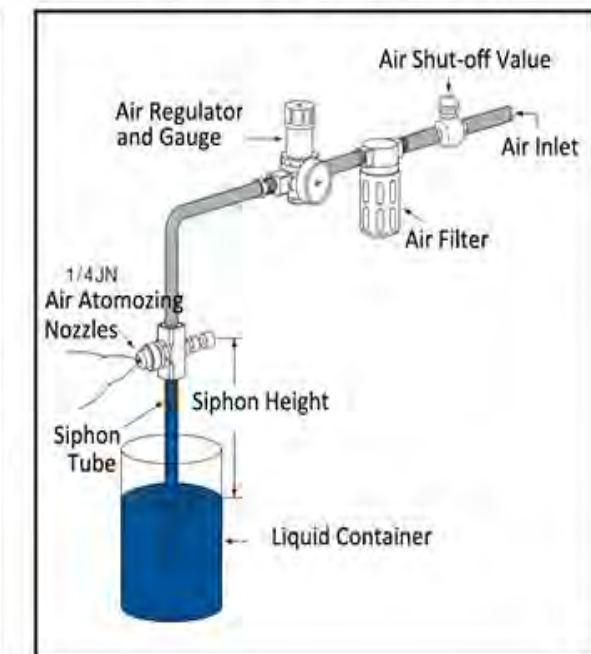


### SET-UPS

#### Pressure Set-ups



#### Siphon or Gravity-Fed Liquid Set-ups



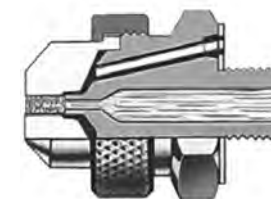
### Mixed Features

#### Internal Mix

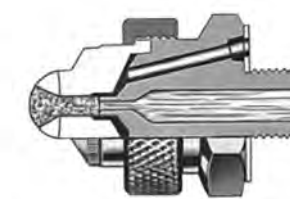
- Liquid and air mix internally
- Fluid flow and air flow are not independent and a change in airflow will affect the liquid flow
- Pressure units are mixed internally to provide the following spray patterns:
  - Round Spray (SUA Series)
  - Wide Angle Round Spray (SUB series)
  - Flat Spray (SUC Series)

#### External Mix

- Liquid and air streams are mixed outside of the nozzle
- Air and liquid flow can be controlled independently
- Effective for higher viscosity liquids and abrasive suspensions
- External mix can use pressure set-ups provide the following spray patterns:
  - Round Spray (SUA-Z)
  - Flat Spray (SUC-Z)



Internal mix with pressure set-ups: round spray patterns



Internal mix with pressure set-ups: flat spray patterns



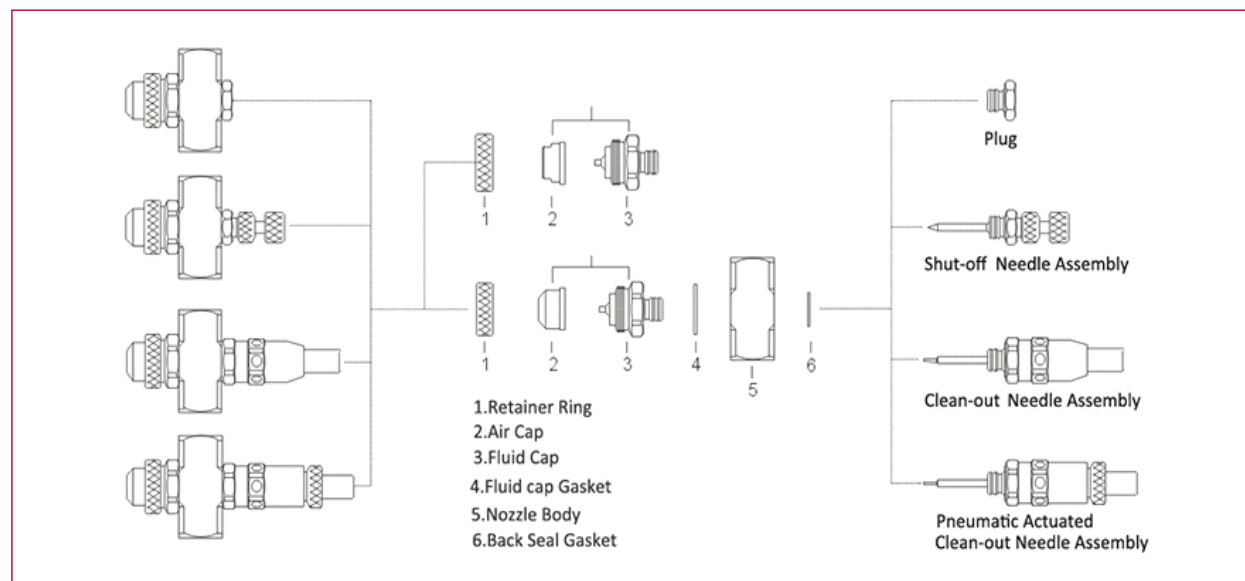
External mix with pressure set-ups: round spray patterns



External mix with pressure set-ups: flat spray patterns



### Installation



### Standard Type

The Standard SU Series Nozzles Include An Air Cap Body Adjusting Needle (Adjustable Only) And Various Components.



1/8" & 1/4" NPT or BSPT



1/8" & 1/4" NPT or BSPT with Shut-off needle

### Normal Type

DCO



1/8" & 1/4" NPT or BSPT with clean needle

11005



1/8" & 1/4" NPT or BSPT with clean and Shut-off needle

### Order Info

|            |   |             |   |               |   |              |   |                  |
|------------|---|-------------|---|---------------|---|--------------|---|------------------|
| 1/4        | - | DJN         | - | SS            | + | SU11         | + | SS               |
|            |   |             |   |               |   |              |   |                  |
| Inlet Conn |   | Nozzle Type |   | Body Material |   | Air cap Size |   | Air cap Material |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



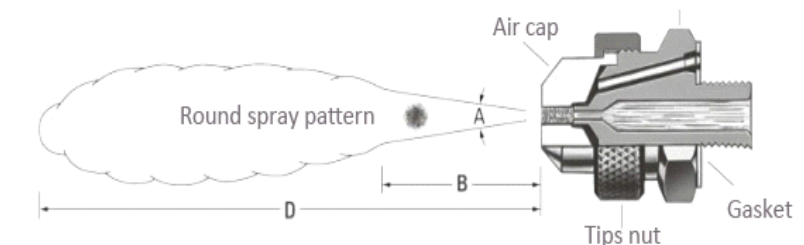
### SUA



Round spray air caps produce a narrow, full cone round spray pattern

### Design Features

- Spray Angle : 15°-30°
  - Spray Pattern : Hollow cone- shaped spray pattern with irregularly round impact area.
  - Drops : Small- to much small-size, uniform distribution .
  - Features : The nozzle body has air inlet and liquid inlet at opposite ends.
- Wide selection, includes adjustable nozzle, fixed nozzle and self-cleaning nozzle.



For round spray pattern, angle "A" is maintained throughout distance "B". Beyond "B", the spray becomes turbulent and will project out to distance "D".

### Performance State

At the stated pressure in bar.

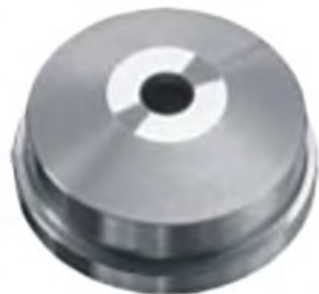
| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |            |      |           |            |      |           |            |      |           |            |      |           | Spray Dimensions |          |                  |        |       |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|------------|------|-----------|------------|------|-----------|------------|------|-----------|------------|------|-----------|------------------|----------|------------------|--------|-------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |            |      |           |            |      |           |            |      |           |            |      |           | Air *            | Liquid * | Spray Angle A(°) | B (cm) | D (m) |
|                  |                                                        |              | 0.7bar                                                                   |      |           | 1.5bar     |      |           | 2bar       |      |           | 3bar       |      |           | 4bar       |      |           |                  |          |                  |        |       |
|                  |                                                        |              | Air Press.                                                               | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min |                  |          |                  |        |       |
| SU11             | Fluid Cap 2050 + Air Cap 67147                         | 0.5          | 0.7                                                                      | 2.5  | 15.6      | 1.1        | 6.4  | 11.9      | 1.4        | 6.4  | 13.9      | 2.7        | 6.2  | 23        | 3.5        | 7.8  | 28        |                  |          |                  |        |       |
|                  |                                                        |              | 0.9                                                                      | 1.8  | 19        | 1.4        | 5.0  | 15        | 1.7        | 5.5  | 16.7      | 2.8        | 5.7  | 25        | 3.7        | 7.3  | 29        | 0.9              | 0.7      | 13               | 30     | 2.7   |
|                  |                                                        |              | 1.0                                                                      | 1.4  | 22        | 1.7        | 4.1  | 18.7      | 2.0        | 4.5  | 19.8      | 3.0        | 5.2  | 27        | 3.9        | 6.4  | 33        | 1.7              | 1.5      | 13               | 33     | 3.0   |
|                  |                                                        |              | —                                                                        | —    | —         | 1.8        | 3.4  | 20        | 2.2        | 3.4  | 24        | 3.1        | 4.7  | 29        | 4.2        | 5.5  | 38        | 2.5              | 2.0      | 13               | 36     | 3.4   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.0        | 3.0  | 23        | 2.4        | 3.0  | 26        | 3.2        | 4.3  | 31        | 4.5        | 4.5  | 43        | 3.1              | 3.0      | 14               | 39     | 3.8   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.1        | 2.6  | 25        | 2.5        | 2.5  | 28        | 3.4        | 3.9  | 33        | 4.6        | 4.1  | 45        | 4.5              | 4.0      | 15               | 44     | 4.4   |
| SU12A            | Fluid Cap 2050 + Air Cap 73160                         | 0.5          | —                                                                        | —    | —         | 2.2        | 2.0  | 27        | 2.7        | 2.3  | 31        | 3.7        | 3.0  | 38        | 4.8        | 3.7  | 47        |                  |          |                  |        |       |
|                  |                                                        |              | 0.7                                                                      | 2.5  | 18.7      | 1.4        | 5.7  | 27        | 1.7        | 6.7  | 29        | 2.2        | 9.2  | 34        | 2.8        | 11.9 | 39        |                  |          |                  |        |       |
|                  |                                                        |              | 0.9                                                                      | 2.0  | 22        | 1.5        | 5.2  | 29        | 1.8        | 6.4  | 31        | 2.5        | 8.2  | 39        | 3.1        | 11.0 | 43        | 0.9              | 0.7      | 12               | 43     | 3.7   |
|                  |                                                        |              | 1.0                                                                      | 1.6  | 26        | 1.7        | 4.8  | 32        | 2.0        | 5.9  | 34        | 2.8        | 7.2  | 44        | 3.4        | 10.1 | 47        | 1.5              | 1.5      | 13               | 46     | 4.0   |
|                  |                                                        |              | —                                                                        | —    | —         | 1.8        | 4.3  | 35        | 2.1        | 5.2  | 37        | 3.0        | 6.7  | 47        | 3.7        | 9.2  | 52        | 2.4              | 2.0      | 13               | 48     | 4.3   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.0        | 3.9  | 37        | 2.2        | 4.8  | 40        | 3.1        | 6.3  | 49        | 3.9        | 8.4  | 58        | 3.0              | 3.0      | 13               | 51     | 4.6   |
| SU12             | Fluid Cap 2850 + Air Cap 67149                         | 0.7          | —                                                                        | —    | —         | 2.1        | 3.4  | 40        | 2.4        | 4.3  | 43        | 3.2        | 5.9  | 52        | 4.2        | 7.6  | 62        | 3.9              | 4.0      | 15               | 56     | 5.2   |
|                  |                                                        |              | —                                                                        | —    | —         | —          | —    | —         | 2.7        | 3.6  | 48        | 3.4        | 5.5  | 55        | 4.5        | 6.8  | 68        |                  |          |                  |        |       |
|                  |                                                        |              | 0.9                                                                      | 4.8  | 21        | 1.7        | 8.4  | 31        | 2.0        | 10.7 | 33        | 2.7        | 16.5 | 37        | 3.4        | 20   | 43        |                  |          |                  |        |       |
|                  |                                                        |              | 1.1                                                                      | 4.1  | 27        | 1.8        | 7.5  | 35        | 2.1        | 9.8  | 37        | 2.8        | 15.4 | 38        | 3.7        | 18.4 | 47        | 1.5              | 0.7      | 12               | 48     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 3.4  | 33        | 2.0        | 7.0  | 37        | 2.4        | 8.2  | 42        | 3.1        | 13.6 | 43        | 3.9        | 16.8 | 50        | 2.5              | 1.5      | 13               | 51     | 4.3   |
|                  |                                                        |              | 1.5                                                                      | 3.1  | 35        | 2.2        | 5.7  | 44        | 2.7        | 6.8  | 48        | 3.4        | 11.8 | 49        | 4.2        | 15.2 | 55        | 3.0              | 2.0      | 13               | 53     | 4.6   |
| SU22B            | Fluid Cap 40100 + Air Cap 1401110                      | 1.0          | 1.7                                                                      | 3.0  | 39        | 2.5        | 4.8  | 49        | 3.0        | 5.9  | 55        | 3.7        | 10.4 | 55        | 4.5        | 13.8 | 60        | 3.4              | 3.0      | 14               | 56     | 4.9   |
|                  |                                                        |              | 1.8                                                                      | 2.9  | 41        | 2.8        | 4.1  | 54        | 3.2        | 5.0  | 59        | 3.9        | 9.1  | 61        | 4.8        | 12.4 | 65        | 4.2              | 4.0      | 15               | 60     | 5.3   |
|                  |                                                        |              | 2.0                                                                      | 2.8  | 44        | 3.1        | 3.6  | 59        | 3.5        | 4.1  | 65        | 4.2        | 7.9  | 65        | 4.9        | 11.8 | 68        |                  |          |                  |        |       |
|                  |                                                        |              | 1.1                                                                      | 13   | 76        | 2.2        | 17.8 | 116       | 2.8        | 20   | 136       | 3.4        | 32   | 149       | 4.6        | 37   | 193       |                  |          |                  |        |       |
|                  |                                                        |              | 1.4                                                                      | 8.9  | 91        | 2.5        | 13.1 | 130       | 3.1        | 16.3 | 149       | 3.9        | 25   | 170       | 5.3        | 29   | 220       | 1.7              | 0.7      | 18               | 66     | 4.9   |
|                  |                                                        |              | 1.5                                                                      | 7.2  | 98        | 2.8        | 9.5  | 143       | 3.4        | 11.9 | 163       | 4.6        | 15.9 | 205       | 5.6        | 25   | 235       | 2.8              | 1.5      | 20               | 76     | 6.1   |
| SU22             | Fluid Cap 60100 + Air Cap 1401110                      | 1.5          | 1.7                                                                      | 5.8  | 105       | 3.1        | 7.0  | 157       | 3.9        | 7.0  | 187       | 5.3        | 9.1  | 240       | 6.0        | 21   | 250       | 3.9              | 2.0      | 20               | 81     | 6.7   |
|                  |                                                        |              | 1.8                                                                      | 4.7  | 112       | 3.4        | 4.9  | 171       | 4.2        | 4.7  | 205       | 5.6        | 6.8  | 255       | 6.3        | 17.4 | 270       | 5.3              | 3.0      | 21               | 91     | 7.9   |
|                  |                                                        |              | 2.0                                                                      | 3.6  | 119       | 3.5        | 4.2  | 178       | 4.6        | 3.0  | 220       | 6.0        | 5.0  | 275       | 6.7        | 14   | 290       | 6.0              | 4.0      | 21               | 97     | 9.1   |
|                  |                                                        |              | 2.1                                                                      | 2.7  | 127       | —          | —    | —         | —          | —    | —         | 6.3        | 3.6  | 290       | 7.0        | 11   | 305       |                  |          |                  |        |       |
|                  |                                                        |              | 0.9                                                                      | 31   | 57        | 1.4        | 61   | 69        | 2.1        | 53   | 96        | 2.7        | 80   | 103       | 3.8        | 88   | 135       |                  |          |                  |        |       |
|                  |                                                        |              | 1.0                                                                      | 25   | 66        | 1.5        | 54   | 76        | 2.4        | 41   | 112       | 3.0        | 69   | 117       | 4.2        | 73   | 156       | 1.0              | 0.7      | 17               | 61     | 4.9   |
| SU42             | Fluid Cap 100150 + Air Cap 1891125                     | 2.5          | 1.1                                                                      | 18.5 | 75        | 1.7        | 48   | 85        | 2.7        | 31   | 127       | 3.2        | 59   | 130       | 4.6        | 61   | 176       | 1.8              | 1.5      | 18               | 69     | 5.8   |
|                  |                                                        |              | 1.3                                                                      | 12.9 | 85        | 1.8        | 41   | 93        | 2.8        | 26   | 136       | 3.5        | 49   | 146       | 4.9        | 48   | 196       | 2.8              | 2.0      | 20               | 76     | 6.7   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.0        | 35   | 102       | 3.0        | 22   | 144       | 3.7        | 44   | 154       | 5.3        | 39   | 215       | 3.5              | 3.0      | 20               | 79     | 7.0   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.1        | 30   | 110       | —          | —    | —         | 3.8        | 37   | 161       | 5.6        | 31   | 240       | 4.9              | 4.0      | 21               | 91     | 8.5   |
|                  |                                                        |              | —                                                                        | —    | —         | 2.2        | 25   | 119       | —          | —    | —         | 3.9        | 35   | 170       | 6.0        | 23   | 260       |                  |          |                  |        |       |
|                  |                                                        |              | —                                                                        | —    | —         | —          | —    | —         | —          | —    | —         | 2.8        | 42   | 178       | 2.5        | 84   | 197       | 4.9              | 92       | 255              |        |       |



## SU Series - Siphon Spray Set-Ups

### Round Spray (SUA-Z) External Mix

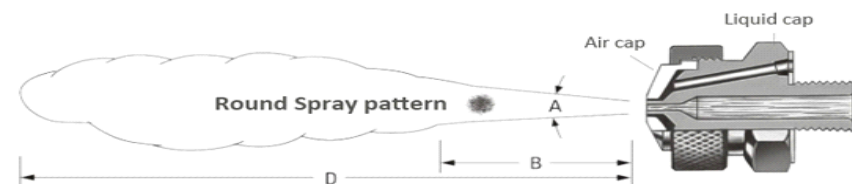
#### SUA-Z



Round spray air caps produce round spray

#### Design Features

- Spray Angle : 18°-22°
- Spray Pattern : Hollow cone- shaped spray pattern with irregularly ellipse impact area.
- Drops : Small- to much small-size,uniform distribution .
- Features :The nozzle body has air inlet and liquid inlet at opposite ends.  
Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.



For round spray pattern,angle "A" is maintained throughout distance "B".  
Beyond "B", the spray becomes turbulent and will project out to distance "D".

#### Performance State

##### · Round Spray

At the stated pressure in bar.

| Spray Set-up No. | SpraySet-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Atomizing Air |                    | Liquid Capacity (liters per hour)* |      |      |                    |      |      |      |      | Spray Dimensions at 20cm Siphon Height |                  |        |       |
|------------------|-------------------------------------------------------|--------------|---------------|--------------------|------------------------------------|------|------|--------------------|------|------|------|------|----------------------------------------|------------------|--------|-------|
|                  |                                                       |              | Air Press.    | Air Capacity L/min | Gravity Head (cm)                  |      |      | Siphon Height (cm) |      |      |      |      | Air*                                   | Spray Angle A(°) | B (cm) | D (m) |
|                  |                                                       |              |               |                    | 45                                 | 30   | 15   | 10                 | 20   | 30   | 60   | 90   |                                        |                  |        |       |
| SU1A             | Fluid Cap 1650 + Air Cap 64                           | 0.4          | 0.7           | 11.3               | 1.5                                | 1.3  | 1.1  | 0.87               | 0.68 | 0.53 | —    | —    | 0.7                                    | 18               | 28     | 1.8   |
|                  |                                                       |              | 1.5           | 17.0               | 1.8                                | 1.7  | 1.5  | 1.3                | 1.2  | 1.1  | 0.62 | —    | 1.5                                    | 18               | 28     | 1.9   |
|                  |                                                       |              | 3.0           | 28                 | 2.1                                | 1.9  | 1.7  | 1.5                | 1.4  | 1.3  | 1.1  | 0.76 | 3.0                                    | 18               | 30     | 2.3   |
|                  |                                                       |              | 4.0           | 36                 | 2.2                                | 2.0  | 1.8  | 1.6                | 1.5  | 1.4  | 1.2  | 0.87 | 4.0                                    | 18               | 36     | 2.6   |
| SU1              | Fluid Cap 2050 + Air Cap 64                           | 0.5          | 0.7           | 13.3               | 2.4                                | 2.1  | 1.7  | 1.5                | 1.2  | 0.79 | —    | —    | 0.7                                    | 18               | 30     | 2.1   |
|                  |                                                       |              | 1.5           | 20                 | 2.8                                | 2.6  | 2.4  | 2.1                | 1.9  | 1.6  | 0.91 | —    | 1.5                                    | 18               | 33     | 2.3   |
|                  |                                                       |              | 3.0           | 32                 | 3.4                                | 3.1  | 2.9  | 2.8                | 2.6  | 2.4  | 1.7  | 1.1  | 3.0                                    | 18               | 38     | 2.6   |
|                  |                                                       |              | 4.0           | 41                 | 3.7                                | 3.4  | 3.3  | 3.1                | 2.9  | 2.7  | 2.1  | 1.5  | 4.0                                    | 19               | 43     | 3.0   |
| SU2A             | Fluid Cap 2050 + Air Cap 70                           | 0.5          | 0.7           | 23                 | 2.5                                | 2.3  | 2.0  | 1.6                | 1.4  | 1.1  | —    | —    | 0.7                                    | 18               | 30     | 2.4   |
|                  |                                                       |              | 1.5           | 36                 | 2.9                                | 2.8  | 2.5  | 2.2                | 2.0  | 1.7  | 0.89 | —    | 1.5                                    | 18               | 33     | 2.7   |
|                  |                                                       |              | 3.0           | 58                 | 3.4                                | 3.3  | 3.2  | 2.9                | 2.8  | 2.5  | 1.9  | 1.2  | 3.0                                    | 20               | 38     | 3.4   |
|                  |                                                       |              | 4.0           | 74                 | 3.7                                | 3.6  | 3.5  | 3.4                | 3.3  | 3.0  | 2.5  | 2.0  | 4.0                                    | 21               | 43     | 4.0   |
| SU2              | Fluid Cap 2850 + Air Cap 70                           | 0.7          | 0.7           | 19.3               | 4.5                                | 4.0  | 3.4  | 2.1                | 1.8  | 1.4  | —    | —    | 0.7                                    | 21               | 38     | 3.0   |
|                  |                                                       |              | 1.5           | 31                 | 5.3                                | 4.9  | 4.4  | 3.5                | 2.9  | 2.7  | 1.8  | —    | 1.5                                    | 21               | 41     | 3.4   |
|                  |                                                       |              | 3.0           | 50                 | 6.0                                | 5.6  | 5.0  | 4.4                | 4.0  | 3.4  | 2.4  | 1.2  | 3.0                                    | 22               | 46     | 4.0   |
|                  |                                                       |              | 4.0           | 65                 | 5.7                                | 5.4  | 5.0  | 4.2                | 3.9  | 3.5  | 2.8  | 1.9  | 4.0                                    | 17               | 51     | 4.6   |
| SU4              | Fluid Cap 60100 + Air Cap 120                         | 1.5          | 1.5           | 58                 | 22                                 | 19.9 | 16.3 | 12.3               | 10.5 | 8.3  | 2.8  | —    | 1.5                                    | 18               | 46     | 3.7   |
|                  |                                                       |              | 3.0           | 88                 | 25                                 | 23   | 19.5 | 16.7               | 14.2 | 11.5 | 6.4  | 2.8  | 3.0                                    | 18               | 51     | 4.3   |
|                  |                                                       |              | 4.0           | 111                | 26                                 | 24   | 21   | 18.4               | 15.7 | 12.9 | 7.9  | 4.5  | 4.0                                    | 19               | 53     | 4.9   |
|                  |                                                       |              | 5.6           | 147                | 26                                 | 24   | 22   | 19.7               | 17.0 | 14.6 | 9.8  | 6.1  | 5.6                                    | 20               | 58     | 5.5   |
| SU5              | Fluid Cap 100150 + Air Cap 180                        | 2.5          | 2.0           | 144                | —                                  | —    | —    | 27                 | 22   | 16.8 | —    | —    | 2.0                                    | 20               | 51     | 6.7   |
|                  |                                                       |              | 3.0           | 190                | —                                  | —    | —    | 30                 | 26   | 21   | —    | —    | 3.0                                    | 20               | 53     | 7.0   |
|                  |                                                       |              | 4.0           | 240                | —                                  | 43   | 40   | 31                 | 28   | 23   | 11.0 | —    | 4.0                                    | 21               | 58     | 7.6   |
|                  |                                                       |              | 5.6           | 315                | 44                                 | 42   | 39   | 31                 | 28   | 24   | 16.7 | 8.3  | 5.6                                    | 22               | 63     | 8.2   |



## SU Series - Pressure Spray Set-Ups

### Wide Angle (SUB) Internal Mix

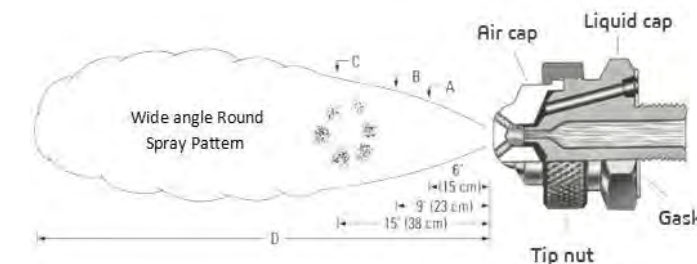
#### SUB



Wide angle round spray air caps produce wide angle round spray

#### Design Features

- Spray Angle : 70°
- Spray Pattern : Full/hollow cone- shaped spray pattern with irregularly ring-shaped/round impact area.
- Drops : Small- to much small-size,uniform distribution .
- Features : The nozzle body has air inlet and liquid inlet at opposite ends.  
Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.



For wide angle round spray,angle "A" is maintained throughout distance "B".

#### Performance State

##### · Wide Angle Round Spray

At the stated pressure in bar.

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |           |      |           |           |      |           |           |      |           |           |      |           | Spray Dimensions |         |       |       |       |      |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|------------------|---------|-------|-------|-------|------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              | 0.7bar                                                                   |      |           | 1.5bar    |      |           | 2bar      |      |           | 3bar      |      |           | 4bar      |      |           |                  |         |       |       |       |      |
|                  |                                                        |              | Air Press                                                                | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air*             | Liquid* | A(cm) | B(cm) | C(cm) | D(m) |
| SU16             | Fluid Cap 2050 + Air Cap 67-6-20-70°                   | 0.5          | 0.6                                                                      | 5.3  | 10.2      | 1.1       | 8.1  | 13.3      | 1.5       | 8.1  | 16.4      | 2.4       | 8.9  | 22        | 3.1       | 10.5 | 24        | 0.70             | 0.70    | 14    | 18    | 23    | 1.5  |
|                  |                                                        |              | 0.7                                                                      | 4.3  | 12.2      | 1.3       | 7    | 15        | 1.8       | 6.6  | 21        | 2.7       | 8.1  | 26        | 3.4       | 9.7  | 28        | 1.4              | 1.5     | 15    | 19    | 24    | 1.8  |
|                  |                                                        |              | 0.85                                                                     | 3    | 14.2      | 1.4       | 6.4  | 17        | 2.1       | 4.9  | 25        | 3         | 6.4  | 30        | 3.9       | 7.8  | 36        | 1.8              | 2.0     | 16    | 20    | 25    | 2.1  |
|                  |                                                        |              | 1                                                                        | 1.7  | 17        | 1.5       | 5.5  | 19        | 2.4       | 3.2  | 29        | 3.2       | 4.9  | 34        | 4.2       | 6.1  | 42        | 3.0              | 3.0     | 16    | 20    | 26    | 2.7  |
|                  |                                                        |              | -                                                                        | -    | -         | 1.7       | 4.5  | 22        | -         | -    | -         | 3.4       | 4.2  | 37        | 4.6       | 4.4  | 47        | 3.9              | 4.0     | 19    | 23    | 30    | 4.0  |
|                  |                                                        |              | -                                                                        | -    | -         | 1.8       | 3.5  | 24        | -         | -    | -         | 3.5       | 3.4  | 40        | 4.9       | 2.8  | 54        |                  |         |       |       |       |      |
| SU26B            | Fluid Cap 40100 + Air Cap 140-6-37-70°                 | 1.0          | 0.85                                                                     | 7    | 50        | 1.7       | 13.2 | 68        | 2         | 18.5 | 68        | 2.8       | 25   | 84        | 3.7       | 31   | 96        | 0.85             | 0.70    | 18    | 24    | 31    | 1.8  |
|                  |                                                        |              | 1                                                                        | 2.1  | 62        | 1.8       | 9.8  | 79        | 2.1       | 15.1 | 76        | 3         | 22   | 92        | 3.8       | 28   | 105       | 1.7              | 1.5     | 19    | 25    | 33    | 2.4  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | 2.2       | 11.7 | 85        | 3.1       | 18.5 | 101       | 3.9       | 26   | 113       | 2.1              | 2.0     | 19    | 25    | 33    | 3.2  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 3.2       | 15.1 | 109       | 4.1       | 23   | 122       | 3.2              | 3.0     | 20    | 26    | 34    | 4.1  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 3.4       | 12.1 | 119       | 4.2       | 20   | 130       | 4.1              | 4.0     | 21    | 28    | 37    | 5.9  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 3.7       | 6.1  | 142       | 4.9       | 6.8  | 183       |                  |         |       |       |       |      |
| SU26             | Fluid Cap 60100 + Air Cap 140-6-37-70°                 | 1.5          | 0.7                                                                      | 24   | 32        | 1.4       | 43   | 37        | 2.1       | 33   | 66        | 2.8       | 52   | 65        | 3.7       | 63   | 68        | 0.85             | 0.70    | 19    | 25    | 36    | 2.1  |
|                  |                                                        |              | 0.85                                                                     | 13.6 | 44        | 1.5       | 35   | 49        | 2.2       | 26   | 78        | 3         | 46   | 76        | 3.8       | 58   | 79        | 1.5              | 1.5     | 20    | 27    | 37    | 3.2  |
|                  |                                                        |              | 1                                                                        | 7.6  | 57        | 1.7       | 28   | 61        | 2.4       | 18.9 | 89        | 3.1       | 39   | 87        | 3.9       | 52   | 101       | 2.4              | 2.0     | 20    | 27    | 37    | 4.1  |
|                  |                                                        |              | -                                                                        | -    | -         | 1.8       | 21   | 71        | 2.5       | 11.7 | 100       | 3.2       | 33   | 99        | 4.2       | 41   | 111       | 3.2              | 3.0     | 20    | 28    | 38    | 5.0  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 3.4       | 26   | 110       | 4.6       | 27   | 138       | 3.9              | 4.0     | 20    | 28    | 39    | 6.8  |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 3.7       | 13.2 | 133       | -         | -    | -         |                  |         |       |       |       |      |
| SU29             | Fluid Cap 60100 + Air Cap 140-6-52-70°                 | 1.5          | 1.3                                                                      | 36   | 85        | 2.1       | 57   | 116       | 3.1       | 53   | 156       | 4.2       | 64   | 197       | 5.6       | 74   | 245       | 2.0              | 0.70    | 20    | 25    | 33    | 5.5  |
|                  |                                                        |              | 1.5                                                                      | 29   | 102       | 2.4       | 51   | 130       | 3.2       | 50   | 163       | 4.9       | 51   | 230       | 6         | 66   | 260       | 3.0              | 1.5     | 20    | 27    | 34    | 6.4  |
|                  |                                                        |              | 1.8                                                                      | 23   | 117       | 2.7       | 45   | 143       | 3.4       | 47   | 170       | 5.6       | 40   | 265       | 6.3       | 62   | 280       | 3.9              | 2.0     | 22    | 28    | 37    | 8.2  |
|                  |                                                        |              | 2                                                                        | 19.7 | 125       | 3         | 39   | 157       | 3.5       | 45   | 177       | 6         | 34   | 285       | 6.7       | 56   | 295       | 6.0              | 3.0     | 23    | 29    | 38    | 9.1  |
|                  |                                                        |              | 2.1                                                                      | 16.7 | 133       | 3.2       | 33   | 170       | 3.9       | 38   | 194       | 6.3       | 28   | 300       | 7         | 51   | 315       | 6.3              | 4.0     | 24    | 32    | 41    | 10.4 |
|                  |                                                        |              | 2.3                                                                      | 14   | 142       | 3.5       | 28   | 185       | 4.6       | 25   | 230       | 6.7       | 22   | 320       | -         | -    | -         |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |
|                  |                                                        |              |                                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |



## SU Series - Pressure Spray Set-Ups

### Wide Angle Round Spray (SUB) Internal Mix

Boyuan Spraying

#### Wide Angle Round Spray

At the stated pressure in bar.

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |           |      |           |           |      |           |           |      |           |           |      |           | Spray Dimensions |         |       |       |       |      |   |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|------------------|---------|-------|-------|-------|------|---|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |       |       |       |      |   |
|                  |                                                        |              | 0.7bar                                                                   |      |           | 1.5bar    |      |           | 2bar      |      |           | 3bar      |      |           | 4bar      |      |           |                  |         |       |       |       |      |   |
|                  |                                                        |              | Air Press                                                                | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air*             | Liquid* | A(cm) | B(cm) | C(cm) | D(m) |   |
| SU30             | Fluid Cap 40100 + Air Cap 120-6-35-70°                 | 1.0          | 1.1                                                                      | 12.3 | 40        | 2.2       | 16.3 | 62        | 2.7       | 21   | 69        | 4.2       | 19.3 | 100       | 5.6       | 22   | 130       | 1.5              | 0.70    | 15    | 19    | 23    | 2.7  |   |
|                  |                                                        |              | 1.3                                                                      | 9.9  | 45        | 2.5       | 12.1 | 71        | 3         | 16.3 | 78        | 4.6       | 14.6 | 113       | 6         | 17.6 | 142       | 3.0              | 1.5     | 16    | 20    | 24    | 4.6  |   |
|                  |                                                        |              | 1.4                                                                      | 7.9  | 50        | 2.8       | 8.9  | 79        | 3.2       | 12.3 | 86        | 4.9       | 10.8 | 124       | 6.3       | 14   | 152       | 3.4              | 2.0     | 16    | 20    | 24    | 5.5  |   |
|                  |                                                        |              | 1.5                                                                      | 6.1  | 54        | 3         | 7.6  | 83        | 3.4       | 10.7 | 91        | 5.3       | 8.1  | 135       | 6.7       | 11.4 | 163       | 5.3              | 3.0     | 18    | 22    | 25    | 7.3  |   |
|                  |                                                        |              | 1.7                                                                      | 4.9  | 58        | 3.1       | 6.4  | 87        | 3.5       | 9.3  | 94        | 5.6       | 6.2  | 146       | 7         | 9.1  | 174       | 6.3              | 4.0     | 19    | 24    | 30    | 9.4  |   |
|                  |                                                        |              | 1.8                                                                      | 3.9  | 62        | 3.2       | 5.5  | 91        | 3.9       | 6.4  | 105       | 6         | 4.9  | 157       | -         | -    | -         | -                | -       | -     | -     | -     | -    | - |
| SU46             | Fluid Cap 100150 + Air Cap 189-6-62-70°                | 2.5          | 2                                                                        | 3.1  | 67        | 3.4       | 4.7  | 95        | 4.2       | 4.7  | 115       | 6.3       | 4    | 167       | -         | -    | -         | -                | -       | -     | -     | -     | -    |   |
|                  |                                                        |              | 1.7                                                                      | 25   | 156       | 3         | 39   | 230       | 3.4       | 50   | 250       | 4.6       | 62   | 320       | 6         | 93   | 395       | -                | -       | -     | -     | -     | -    | - |
|                  |                                                        |              | 1.8                                                                      | 19.7 | 167       | 3.1       | 33   | 240       | 3.5       | 43   | 260       | 4.9       | 47   | 345       | 6.3       | 77   | 425       | 2.0              | 0.70    | 24    | 33    | 46    | 5.5  |   |
|                  |                                                        |              | 2                                                                        | 15.1 | 178       | 3.2       | 27   | 255       | 3.7       | 41   | 275       | 5.3       | 36   | 375       | 6.7       | 62   | 460       | 3.2              | 1.5     | 25    | 34    | 47    | 6.4  |   |
|                  |                                                        |              | 2.1                                                                      | 11.4 | 193       | 3.4       | 23   | 265       | 3.9       | 27   | 300       | 5.6       | 26   | 405       | 7         | 52   | 495       | 3.9              | 2.0     | 28    | 37    | 51    | 7.3  |   |
|                  |                                                        |              | 2.3                                                                      | 7.6  | 205       | 3.5       | 18.5 | 280       | 4.1       | 23   | 310       | 6         | 18.9 | 435       | -         | -    | -         | 5.3              | 3.0     | 29    | 38    | 53    | 7.9  |   |
| -                | -                                                      | -            | 3.7                                                                      | 14.8 | 290       | 4.2       | 18.9 | 320       | 6.3       | 13.6 | 460       | -         | -    | -         | 6.3       | 4.0  | 33        | 42               | 58      | 9.8   | -     |       |      |   |
| -                | -                                                      | -            | -                                                                        | -    | -         | 4.4       | 15.9 | 335       | -         | -    | -         | -         | -    | -         | -         | -    | -         | -                | -       | -     | -     |       |      |   |

## SU Series - Pressure Spray Set-Ups Wide Angle Round Spray (SUB-T) Internal Mix

### SUA-T



360°circular spray air caps produce hollow Cone,360°circular spray pattern

#### Design Features

- Spray Angle : 360°
- Spray Pattern :Hollow cone- shaped spray pattern with irregularly ring-shaped impact area.
- Drops : Small- to much small-size,uniform distribution .
- Features : The nozzle body has air inlet and liquid inlet at opposite ends.  
Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.

#### Performance State

At the stated pressure in bar.

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |           |      |           |           |      |           |           |      |           |           |     |           |
|------------------|--------------------------------------------------------|--------------------------------------------------------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|-----|-----------|
|                  |                                                        | Liquid Pressure                                                          |      |           |           |      |           |           |      |           |           |      |           |           |     |           |
|                  |                                                        | 0.7bar                                                                   |      |           | 1.5bar    |      |           | 2bar      |      |           | 3bar      |      |           | 4bar      |     |           |
|                  |                                                        | Air Press                                                                | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h | Air L/min |
| SU340C           | Fluid Cap 60150 + Air Cap 189-6-62-160HC               | 1.4                                                                      | 15.1 | 69        | 2.8       | 19.5 | 142       | 3.5       | 21   | 185       | 4.2       | 48   | 210       | 6         | 45  | 340       |
|                  |                                                        | 1.5                                                                      | 10.6 | 77        | 3         | 16.1 | 153       | 3.7       | 17.6 | 196       | 4.6       | 37   | 240       | 6.3       | 37  | 375       |
|                  |                                                        | 1.7                                                                      | 7.6  | 84        | 3.1       | 13.2 | 165       | 3.8       | 14.8 | 210       | 4.9       | 28   | 275       | 6.7       | 30  | 405       |
|                  |                                                        | 1.8                                                                      | 5.7  | 93        | 3.2       | 10.6 | 177       | 3.9       | 12.5 | 220       | 5.6       | 15.5 | 340       | 7         | 24  | 440       |
|                  |                                                        | 2                                                                        | 4.2  | 103       | 3.4       | 8.3  | 188       | 4.2       | 8.1  | 245       | 6.3       | 7.8  | 425       | -         | -   | -         |



## SU Series - Pressure Spray Set-Ups

### Flat Spray (SUC) Internal Mix

Boyuan Spraying

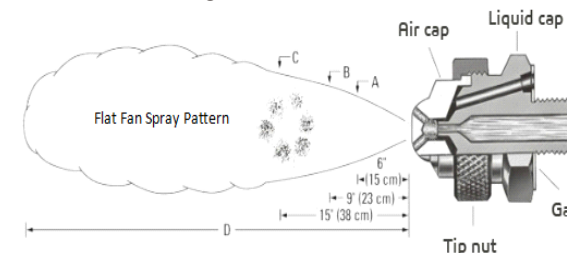
### SUC



Flat spray air caps produce flat fan spray patterns

#### Design Features

- Spray Angle : 28°-51°
- Spray Pattern :Flat fan spray pattern with irregularly ellipse impact area.
- Drops : Small- to much small-size,uniform distribution .
- Features : The nozzle body has air inlet and liquid inlet at opposite ends.  
Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.



For flat spray pattern,angle "A" is maintained throughout distance "B".

#### Performance State

##### Flat Fan Spray(Pressure)

At the stated pressure in bar.

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |           |      |           |           |      |           |           |      |           |           |      |           | Spray Dimensions |         |        |        |        |       |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|------------------|---------|--------|--------|--------|-------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |                  |         |        |        |        |       |
|                  |                                                        |              | 0.7巴                                                                     |      |           | 1.5巴      |      |           | 2巴        |      |           | 3巴        |      |           | 4巴        |      |           | Air*             | Liquid* | A (cm) | B (cm) | C (cm) | D (m) |
|                  |                                                        |              | Air Press                                                                | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min | Air Press | L/h  | Air L/min |                  |         |        |        |        |       |
| SU13A            | Fluid Cap 2050 + Air Cap 73328                         | 0.5          | 0.7                                                                      | 5.5  | 24        | 1.3       | 9.1  | 31        | 2         | 8.6  | 42        | 2.7       | 11.2 | 52        | 3.9       | 12   | 69        | 1.1              | 0.7     | 25     | 36     | 46     | 2.6   |
|                  |                                                        |              | 0.85                                                                     | 4.7  | 27        | 1.5       | 7.7  | 36        | 2.2       | 7.5  | 47        | 3         | 10.1 | 56        | 4.6       | 9.7  | 81        | 2.1              | 1.5     | 36     | 48     | 66     | 3.0   |
|                  |                                                        |              | 1                                                                        | 4.1  | 31        | 1.8       | 6.5  | 42        | 2.5       | 6.2  | 52        | 3.2       | 9.1  | 62        | 5.3       | 7.5  | 93        | 2.8              | 2.0     | 38     | 53     | 76     | 3.2   |
|                  |                                                        |              | 1.1                                                                      | 3.5  | 34        | 2.1       | 5.4  | 47        | 2.8       | 5.2  | 57        | 3.5       | 8.1  | 66        | 6         | 5.3  | 104       | 3.5              | 3.0     | 47     | 61     | 86     | 3.4   |
|                  |                                                        |              | 1.3                                                                      | 3    | 37        | 2.4       | 4.3  | 52        | 3.1       | 4.2  | 63        | 4.2       | 5.4  | 79        | 6.3       | 4.3  | 110       | 6.0              | 4.0     | 56     | 74     | 94     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 2.5  | 40        | 2.7       | 3.3  | 57        | 3.2       | 3.7  | 65        | 4.6       | 4.2  | 85        | 6.7       | 3.3  | 116       |                  |         |        |        |        |       |
| SU13             | Fluid Cap 2850 + Air Cap 73328                         | 0.7          | 1.5                                                                      | 2    | 44        | 2.8       | 2.8  | 60        | 3.4       | 3.2  | 68        | 4.9       | 3.1  | 91        | 7         | 2.4  | 122       |                  |         |        |        |        |       |
|                  |                                                        |              | 0.85                                                                     | 8.2  | 19.8      | 1.4       | 14.4 | 27        | 2.1       | 13.5 | 36        | 2.7       | 19.1 | 42        | 4.6       | 16.1 | 69        | 1.1              | 0.7     | 36     | 46     | 71     | 2.1   |
|                  |                                                        |              | 1                                                                        | 6.8  | 23        | 1.7       | 11.9 | 32        | 2.4       | 11.4 | 42        | 3         | 17.1 | 46        | 4.9       | 13.8 | 76        | 2.1              | 1.5     | 43     | 61     | 81     | 2.4   |
|                  |                                                        |              | 1.1                                                                      | 5.5  | 27        | 2         | 9.5  | 37        | 2.7       | 9.2  | 47        | 3.2       | 15.1 | 52        | 5.3       | 11.5 | 83        | 3.0              | 2.0     | 51     | 66     | 89     | 2.6   |
|                  |                                                        |              | 1.3                                                                      | 4.1  | 30        | 2.1       | 8.3  | 40        | 3         | 7.1  | 53        | 3.5       | 13.1 | 57        | 5.6       | 9.3  | 90        | 3.5              | 3.0     | 58     | 76     | 97     | 2.7   |
|                  |                                                        |              | 1.4                                                                      | 2.9  | 34        | 2.2       | 7.1  | 43        | 3.2       | 5    | 59        | 4.2       | 8.1  | 72        | 6         | 7.3  | 97        | 5.6              | 4.0     | 58     | 76     | 97     | 3.2   |
| SUN13            | Fluid Cap 2850 + Air Cap 73335                         | 0.7          | -                                                                        | -    | -         | 2.4       | 6.1  | 46        | 3.4       | 4    | 62        | 4.6       | 5.9  | 79        | 6.3       | 5.6  | 104       |                  |         |        |        |        |       |
|                  |                                                        |              | -                                                                        | -    | -         | 2.5       | 5.1  | 49        | 3.5       | 3.3  | 66        | 4.9       | 4    | 86        | 6.7       | 4.3  | 112       | 1.4              | 0.7     | 10     | 13     | 17     | 3.0   |
|                  |                                                        |              | 1                                                                        | 9    | 25        | 2         | 10.4 | 41        | 2.4       | 11.6 | 48        | 3.1       | 15.6 | 56        | 4.2       | 17.1 | 73        | 2.5              | 1.5     | 13     | 15     | 20     | 3.7   |
|                  |                                                        |              | 1.3                                                                      | 6.6  | 32        | 2.2       | 8.2  | 48        | 2.7       | 9.4  | 54        | 3.4       | 13.7 | 62        | 4.9       | 12.8 | 87        | 3.2              | 2.0     | 13     | 17     | 22     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 5.2  | 36        | 2.5       | 6.1  | 55        | 3         | 7.3  | 61        | 3.8       | 10.8 | 71        | 5.3       | 11   | 94        | 3.8              | 3.0     | 15     | 22     | 28     | 4.2   |
|                  |                                                        |              | 1.7                                                                      | 3.1  | 44        | 2.8       | 4.3  | 62        | 3.2       | 5.5  | 68        | 4.2       | 8.5  | 82        | 5.6       | 9.4  | 103       | 5.3              | 4.0     | 20     | 25     | 33     | 4.8   |
| SU14             | Fluid Cap 2850 + Air Cap 73320                         | 0.7          | 2                                                                        | 2    | 50        | 3.1       | 3    | 69        | 3.5       | 4.1  | 75        | 4.9       | 5.2  | 98        | 6.3       | 7.2  | 119       |                  |         |        |        |        |       |
|                  |                                                        |              | 2.2                                                                      | 1.1  | 56        | 3.4       | 2    | 75        | 3.8       | 2.9  | 81        | 6         | 2.3  | 120       | 7         | 6.1  | 134       | 1.5              | 0.7     | 25     | 33     | 46     | 1.8   |
|                  |                                                        |              | 1.3                                                                      | 3.9  | 30        | 2.1       | 7.4  | 40        | 3         | 6.1  | 52        | 3.9       | 9.4  | 60        | 5.3       | 10.2 | 78        | 2.7              | 1.5     | 36     | 51     | 69     | 2.0   |
|                  |                                                        |              | 1.4                                                                      | 3    | 33        | 2.4       | 5.3  | 45        | 3.1       | 5.3  | 54        | 4.2       | 7.2  | 67        | 5.6       | 8.3  | 84        | 3.2              | 2.0     | 58     | 74     | 91     | 2.0   |
|                  |                                                        |              | 1.5                                                                      | 2.3  | 35        | 2.5       | 4.4  | 47        | 3.2       | 4.5  | 57        | 4.6       | 5.3  | 73        | 6         | 6.6  | 89        | 4.2              | 3.0     | 61     | 74     | 94     | 2.1   |
|                  |                                                        |              | 1.7                                                                      | 1.8  | 38        | 2.7       | 3.7  | 50        | 3.4       | 3.8  | 59        | 4.9       | 3.8  | 80        | 6.3       | 5.1  | 98        | 5.6              | 4.0     | 64     | 76     | 97     | 2.3   |
| SUN23            | Fluid Cap 60100 + Air Cap 125340                       | 1.5          | 2                                                                        | 0.95 | 44        | 3         | 2.6  | 55        | 3.9       | 1.8  | 68        | -         | -    | -         | -         | -    | -         | 1.1              | 0.7     | 10     | 13     | 15     | 2.4   |
|                  |                                                        |              | -                                                                        | -    | -         | 3.1       | 2.1  | 57        | -         | -    | -         | -         | -    | -         | -         | -    | -         | 2.1              | 1.5     | 10     | 13     | 17     | 3.0   |
|                  |                                                        |              | 1                                                                        | 17   | 23        | 2         | 24   | 44        | 2.4       | 28   | 51        | 3.4       | 38   | 72        | 3.9       | 65   | 75        | 2.8              | 2.0     | 13     | 17     | 22     | 3.4   |
|                  |                                                        |              | 1.1                                                                      | 11   | 27        | 2.1       | 18.9 | 50        | 2.5       | 23   | 59        | 3.5       | 33   | 80        | 4.2       | 53   | 89        | 3.7              | 3.0     | 15     | 20     | 28     | 3.6   |
|                  |                                                        |              | 1.3                                                                      | 7.6  | 33        | 2.2       | 14.4 | 56        | 2.7       | 18.9 | 66        | 3.7       | 28   | 89        | 4.6       | 40   | 108       | 4.9              | 4.0     | 20     | 25     | 35     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 3.2  | 40        | 2.4       | 10.6 | 63        | 2.8       | 15.1 | 74        | 3.8       | 23   | 97        | 4.9       | 30   | 127       |                  |         |        |        |        |       |
| SU23B            | Fluid Cap 40100 + Air Cap 125328                       | 1.0          | -                                                                        | -    | -         | 2.5       | 7.2  | 71        | 3         | 11.7 | 79        | 3.9       | 19.7 | 105       | 5.3       | 21   | 149       |                  |         |        |        |        |       |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 4.2       | 13.1 | 120       | 5.6       | 13.8 | 173       | 1.4              | 0.7     | 15     | 18     | 20     | 3.0   |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 4.6       | 7.2  | 138       | 6.3       | 3.2  | 225       | 2.4              | 1.5     | 23     | 28     | 33     | 3.2   |
|                  |                                                        |              | 1.1                                                                      | 11.2 | 54        | 2.1       | 18   | 79        | 2.7       | 19.6 | 93        | 3.5       | 27   | 112       | 4.6       | 33   | 137       | 3.0              | 2.0     | 25     | 33     | 46     | 3.4   |
|                  |                                                        |              | 1.3                                                                      | 8.5  | 60        | 2.2       | 15.8 | 84        | 2.8       | 17.3 | 98        | 3.7       | 25   | 116       | 4.9       | 28   | 149       | 3.7              | 3.0     | 30     | 38     | 46     | 3.5   |
|                  |                                                        |              | 1.4                                                                      | 6.5  | 65        | 2.4       | 13.6 | 89        | 3         | 15.2 | 103       | 3.8       | 23   | 121       | 5.3       | 24   | 161       | 5.3              | 4.0     | 33     | 41     | 48     | 4.0   |
| SU23             | Fluid Cap 60100 + Air Cap 125328                       | 1.5          | 1.5                                                                      | 5    | 71        | 2.5       | 11.6 | 95        | 3.1       | 13.2 | 109       | 3.9       | 21   | 126       | 5.6       | 19.7 | 174       |                  |         |        |        |        |       |
|                  |                                                        |              | 1.7                                                                      | 3.8  | 77        | -         | -    | -         | 3.2       | 11.4 | 114       | 4.1       | 18.9 | 132       | 6         | 15.7 | 187       | 1.1              | 0.7     | 18     | 23     | 30     | 3.4   |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | -         | -    | -         | 4.2       | 17   | 137       | 6.3       | 12.4 | 200       | 2.4              | 1.5     | 23     | 30     | 41     | 3.5   |
|                  |                                                        |              | 0.85                                                                     | 27   | 33        | 1.8       | 38   | 55        | 2.4       | 39   | 67        | 3.2       | 58   | 76        | 4.6       | 59   | 106       | 3.2              | 2.0     | 25     | 33     | 43     | 3.7   |
|                  |                                                        |              | 1                                                                        | 20   | 38        | 2.1       | 28   | 66        | 2.7       | 30   | 77        | 3.5       | 47   | 87        | 5.3       | 40   | 132       | 3.9              | 3.0     | 30     | 38     | 48     | 3.8   |
|                  |                                                        |              | 1.1                                                                      | 15.9 | 45        | 2.2       | 24   | 71        | 3         | 24   | 87        | 3.8       | 38   | 97        | 5.6       | 32   | 145       | 6.0              | 4.0     | 33     | 41     | 51     | 4.4   |
| SU43             | Fluid Cap 100150 + Air Cap 189351                      | 2.5          | 1.3                                                                      | 12.5 | 48        | 2.4       | 21   | 76        | 3.2       | 17.8 | 98        | 3.9       | 34   | 103       | 6         | 26   | 158       |                  |         |        |        |        |       |
|                  |                                                        |              | 1.4                                                                      | 10.2 | 56        | 2.5       | 17.8 | 82        | 3.4       | 15.1 | 103       | 4.2       | 27   | 113       | 6.3       | 20   | 172       | 1.0              | 0.7     | 18     | 20     | 25     | 3.4   |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | 3.7       | 10.6 | 114       | 4.9       | 14.8 | 140       | 7         | 12.7 | 198       | 1.8              | 1.5     | 25     | 30     | 43     | 3.8   |
|                  |                                                        |              | 1                                                                        | 29   | 90        | 1.8       | 56   | 117       | 2.1       | 100  | 119       | 3         | 126  | 140       | 4.1       | 140  | 181       | 2.4              | 2.0     | 25     | 30     | 46     | 4.3   |
|                  |                                                        |              | 1.1                                                                      | 18.9 | 108       | 2         | 40   | 133       | 2.2       | 79   | 133       | 3.1       | 110  | 151       | 4.2       | 125  | 193       | 3.4              | 3.0     | 33     | 41     | 53     | 4.6   |
|                  |                                                        |              | -                                                                        | -    | -         | -         | -    | -         | 2.4       | 62   | 147       | 3.2       | 95   | 163       | 4.6       | 89   | 225       | 4.9              | 4.0     | 36     | 43     | 58     | 5.2   |



## SU Series - Siphon Spray Set-Ups

### Flat Spray (SUC) External Mix

Boyuan Spraying

### Performance State

#### • Flat Fan Spray(Siphon)

|                  |                                                        |              |               |                    |                                    |      |      |                    |      |      |      |      | At the stated pressure in bar.         |        |        |        |       |
|------------------|--------------------------------------------------------|--------------|---------------|--------------------|------------------------------------|------|------|--------------------|------|------|------|------|----------------------------------------|--------|--------|--------|-------|
| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Atomizing Air |                    | Liquid Capacity (liters per hour)* |      |      |                    |      |      |      |      | Spray Dimensions at 20cm Siphon Height |        |        |        |       |
|                  |                                                        |              | Air Press.    | Air Capacity L/min | Gravity Head (cm)                  |      |      | Siphon Height (cm) |      |      |      |      | Air*                                   | A (cm) | B (cm) | C (cm) | D (m) |
|                  |                                                        |              |               |                    | 45                                 | 30   | 15   | 10                 | 20   | 30   | 60   | 90   |                                        |        |        |        |       |
| SUF1             | Fluid Cap 2850 + Air Cap 73420                         | 0.7          | 0.7           | 28                 | 1.3                                | 1.2  | 1.1  | 1.0                | 0.95 | 0.83 | 0.64 | 0.49 | 0.7                                    | 20     | 26     | 38     | 2.1   |
|                  |                                                        |              | 1.5           | 43                 | 1.2                                | 1.1  | 1.0  | 0.9                | 0.86 | 0.78 | 0.66 | 0.54 | 1.5                                    | 21     | 29     | 38     | 2.1   |
|                  |                                                        |              | 2.0           | 50                 | 0.82                               | 0.76 | 0.68 | 0.57               | 0.50 | -    | -    | -    | 2.0                                    | 23     | 30     | 38     | 1.8   |
| SUF2C            | Fluid Cap 35100 + Air Cap 120432                       | 0.8          | 1.5           | 56                 | 3.7                                | 3.5  | 3.3  | 2.9                | 2.8  | 2.5  | 2.3  | 2.1  | 1.5                                    | 23     | 32     | 38     | 2.7   |
|                  |                                                        |              | 2.0           | 65                 | 3.4                                | 3.3  | 3.1  | 2.8                | 2.7  | 2.6  | 2.4  | 2.2  | 2.0                                    | 24     | 34     | 42     | 2.7   |
|                  |                                                        |              | 3.0           | 87                 | 2.8                                | 2.7  | 2.5  | 2.4                | 2.2  | 2.1  | 1.9  | 1.7  | 3.0                                    | 27     | 37     | 46     | 3.0   |
|                  |                                                        |              | 4.0           | 110                | 1.9                                | 1.8  | 1.6  | 1.5                | 1.3  | 1.2  | -    | -    | 4.0                                    | 28     | 39     | 48     | 2.7   |
| SUF3B            | Fluid Cap 40100 + Air Cap 122435                       | 1.0          | 1.5           | 68                 | 5.1                                | 4.8  | 4.5  | 3.8                | 3.7  | 3.5  | 3.0  | 2.4  | 1.5                                    | 19     | 23     | 27     | 3.4   |
|                  |                                                        |              | 2.0           | 78                 | 4.9                                | 4.7  | 4.4  | 3.6                | 3.4  | 3.2  | 2.9  | 2.3  | 2.0                                    | 20     | 25     | 28     | 3.4   |
|                  |                                                        |              | 3.0           | 103                | 3.4                                | 3.2  | 3.0  | 2.2                | 2.0  | 1.7  | -    | -    | 3.0                                    | 22     | 27     | 30     | 3.0   |
|                  |                                                        |              | 3.5           | 117                | 2.2                                | 2.0  | 1.7  | -                  | -    | -    | -    | -    |                                        |        |        |        |       |
| SUF4B            | Fluid Cap 40100 + Air Cap 122440                       | 1.0          | 1.5           | 63                 | 7.6                                | 7.2  | 6.6  | 5.7                | 5.4  | 5.1  | 4.6  | 3.7  | 1.5                                    | 17     | 22     | 27     | 3.4   |
|                  |                                                        |              | 2.0           | 73                 | 7.6                                | 7.3  | 6.8  | 5.9                | 5.7  | 5.5  | 5.0  | 4.2  | 2.0                                    | 18     | 23     | 29     | 3.4   |
|                  |                                                        |              | 3.0           | 96                 | 6.4                                | 6.1  | 5.7  | 5.0                | 4.5  | 4.1  | 3.3  | -    | 3.0                                    | 20     | 27     | 33     | 3.4   |
|                  |                                                        |              | 3.5           | 110                | 4.2                                | 3.7  | 3.2  | 2.6                | -    | -    | -    | -    |                                        |        |        |        |       |

At the stated pressure in bar.

## SU Series - Pressure Spray Set-Ups

### Wide Angle Flat Spray (SUC-W) Internal Mix

### SUC-W



Deflected flat fan spray air cap produce deflected Flat Fan Spray Pattern

### Design Features

- Spray Angle :75°
  - Spray Pattern :Flat fan spray pattern with irregularly ellipse impact area.
  - Drops : Small- to much small-size,uniform distribution .
  - Features : The nozzle body has air inlet and liquid inlet at opposite ends.
- Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.

### Performance State

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |           |      |           |           |      |           |           |      |           |           |      |           |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |           |      |           |           |      |           |           |      |           |           |      |           |
|                  |                                                        |              | 0.7bar                                                                   |      |           | 1.5bar    |      |           | 2bar      |      |           | 3bar      |      |           | 4bar      |      |           |
|                  |                                                        |              | Air Press                                                                | l/h  | Air L/min | Air Press | l/h  | Air L/min | Air Press | l/h  | Air L/min | Air Press | l/h  | Air L/min | Air Press | l/h  | Air L/min |
| SUC-W            | Fluid Cap 28150 + Air Cap 189110-75°                   | 0.7          | 0.4                                                                      | 11.0 | 45        | 1.1       | 14.5 | 79        | 1.5       | 15.7 | 96        | 2.1       | 20   | 114       | 2.7       | 26   | 133       |
|                  |                                                        |              | 0.6                                                                      | 9.5  | 54        | 1.3       | 13.2 | 86        | 1.7       | 14.3 | 104       | 2.2       | 19.2 | 121       | 3.2       | 22   | 160       |
|                  |                                                        |              | 0.7                                                                      | 7.6  | 65        | 1.4       | 11.8 | 95        | 1.8       | 12.9 | 112       | 2.7       | 15.8 | 146       | 3.8       | 17.7 | 186       |
|                  |                                                        |              | 0.8                                                                      | 5.7  | 77        | 1.5       | 10.0 | 103       | 2.1       | 9.8  | 130       | 3.1       | 11.8 | 173       | 4.4       | 13.1 | 230       |
|                  |                                                        |              | -                                                                        | -    | -         | 1.7       | 8.7  | 113       | 2.2       | 8.3  | 142       | 3.2       | 10.3 | 183       | 4.6       | 10.2 | 250       |

At the stated pressure in bar.



Boyuan Spraying

## SU Series - Pressure Spray Set-Ups

### Flat Spray (SUC-Z) External Mix

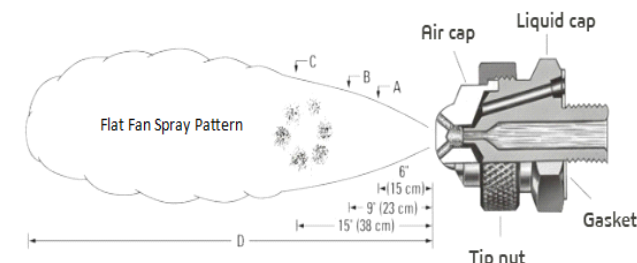
### SUC-Z



External mix caps produce a flat spray pattern

### Design Features

- Spray Angle : 45°-60°
  - Spray Pattern :Flat fan spray pattern with irregularly ellipse impact area.
  - Drops : Small- to much small-size,uniform distribution .
  - Features : The nozzle body has air inlet and liquid inlet at opposite ends.
- Wide selection,includes adjustable nozzle,fixed nozzle and self-cleaning nozzle.



For flat spray ,angle "A" is maintained throughout distance "B".  
Beyond "B",the spray becomes turbulent and will project out to distance "D".

### Performance State

#### • Flat Spray (External Mix)

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |            |      |           |            |      |           |            |      |           |            |      |           | Spray Dimensions |         |        |        |        |       |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|------------|------|-----------|------------|------|-----------|------------|------|-----------|------------|------|-----------|------------------|---------|--------|--------|--------|-------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |            |      |           |            |      |           |            |      |           |            |      |           |                  |         |        |        |        |       |
|                  |                                                        |              | 0.2bar                                                                   |      |           | 0.3bar     |      |           | 0.7bar     |      |           | 1.5bar     |      |           | 3bar       |      |           | Air*             | Liquid* | A (cm) | B (cm) | C (cm) | D (m) |
|                  |                                                        |              | Air Press.                                                               | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h  | Air L/min |                  |         |        |        |        |       |
| SUE15B           | Fluid Cap 1650 + Air Cap 67228-45°                     | 0.4          | 0.20                                                                     | 2.8  | 25.2      | 3.5        | 3.5  | 26.3      | 0.70       | 5.3  | 31.2      | 1.4        | 7.8  | 45.3      | 2.8        | 11.0 | 73.6      | 0.20             | 0.20    | 9.0    | 15.0   | 23     | 0.90  |
|                  |                                                        |              | 0.35                                                                     | 2.8  | 26.3      | 0.70       | 3.5  | 31.2      | 1.05       | 5.3  | 39.6      | 1.75       | 7.8  | 53.8      | 3.5        | 11.0 | 85        | 1.05             | 0.20    | 9.0    | 15.0   | 23     | 1.2   |
|                  |                                                        |              | 0.70                                                                     | 2.8  | 31.2      | 1.05       | 3.5  | 39.6      | 1.4        | 5.3  | 45.3      | 2.1        | 7.8  | 59.5      | 4.2        | 11.0 | 102       | 1.4              | 0.35    | 10.0   | 15.0   | 23     | 1.2   |
|                  |                                                        |              | 1.05                                                                     | 2.8  | 39.6      | 1.4        | 3.5  | 45.3      | 1.75       | 5.3  | 53.8      | 2.8        | 7.8  | 73.6      | 4.9        | 11.0 | 119       | 1.4              | 1.4     | 11.5   | 18.0   | 25     | 1.5   |
|                  |                                                        |              | 1.4                                                                      | 2.8  | 45.3      | 1.75       | 3.5  | 53.8      | 2.1        | 5.3  | 59.4      | 3.5        | 7.8  | 85        | 5.3        | 11.0 | 127.5     | 1.75             | 0.70    | 11.5   | 15.0   | 24     | 1.5   |
|                  |                                                        |              | 1.75                                                                     | 2.8  | 53.8      | 2.1        | 3.5  | 59.4      | 2.8        | 5.3  | 73.6      | 4.2        | 7.8  | 102       | 5.6        | 11.0 | 139       | 2.8              | 1.4     | 13.0   | 18.0   | 28     | 1.8   |
| 2.1              | 2.8                                                    | 59.4         | 2.8                                                                      | 3.5  | 73.6      | 3.5        | 5.3  | 85        | 5.6        | 7.8  | 139       | 6.3        | 11.0 | 159       | 4.9        | 2.8  | 15.0      | 18.0             | 24      | 2.4    |        |        |       |
| SUE18B           | Fluid Cap 1650 + Air Cap 62240-60°                     | 0.4          | 0.35                                                                     | 2.8  | 22        | 0.35       | 3.5  | 22        | 0.40       | 5.3  | 25        | 0.60       | 7.8  | 28        | 0.7        | 11.0 | 34        | 0.40             | 0.30    | 20     | 28     | 33     | 1.2   |
|                  |                                                        |              | 0.40                                                                     | 2.8  | 25        | 0.40       | 3.5  | 25        | 0.60       | 5.3  | 28        | 0.70       | 7.8  | 34        | 1.1        | 11.0 | 45        | 0.60             | 0.70    | 23     | 30     | 40     | 1.8   |
|                  |                                                        |              | 0.50                                                                     | 2.8  | 27.5      | 0.60       | 3.5  | 28        | 0.70       | 5.3  | 34        | 1.1        | 7.8  | 45        | 1.8        | 11.0 | 62        | 1.1              | 1.5     | 28     | 35     | 46     | 1.8   |
|                  |                                                        |              | 0.60                                                                     | 2.8  | 28        | 0.70       | 3.5  | 34        | 0.85       | 5.3  | 40        | 1.4        | 7.8  | 54        | 2.5        | 11.0 | 79        | 1.4              | 1.5     | 25     | 30     | 41     | 2.7   |
| SUE15A           | Fluid Cap 2050 + Air Cap 67228-45°                     | 0.5          | 0.35                                                                     | 4.5  | 26.3      | 0.70       | 5.5  | 31.2      | 1.05       | 8.3  | 39.6      | 1.75       | 12.2 | 53.8      | 3.15       | 16.6 | 82        | 0.35             | 0.20    | 7.5    | 14.0   | 22     | 1.0   |
|                  |                                                        |              | 0.70                                                                     | 4.5  | 31.2      | 1.05       | 5.5  | 39.6      | 1.4        | 8.3  | 45.3      | 2.1        | 12.2 | 59.4      | 3.5        | 16.6 | 85        | 1.4              | 0.20    | 9.0    | 15.0   | 22     | 1.7   |
|                  |                                                        |              | 1.05                                                                     | 4.5  | 39.6      | 1.4        | 5.5  | 45.3      | 1.75       | 8.3  | 53.8      | 2.8        | 12.2 | 73.6      | 4.2        | 16.6 | 102       | 1.75             | 0.35    | 10.0   | 16.5   | 23     | 1.8   |
|                  |                                                        |              | 1.4                                                                      | 4.5  | 45.3      | 1.75       | 5.5  | 53.8      | 2.1        | 8.3  | 59.4      | 3.5        | 12.2 | 85        | 4.9        | 16.6 | 119       | 1.75             | 1.4     | 13.0   | 19.0   | 29     | 2.1   |
|                  |                                                        |              | 1.75                                                                     | 4.5  | 53.8      | 2.1        | 5.5  | 59.4      | 2.8        | 8.3  | 73.6      | 4.2        | 12.2 | 102       | 5.25       | 16.6 | 127       | 2.1              | 0.70    | 13.0   | 18.0   | 25     | 1.8   |
|                  |                                                        |              | 2.1                                                                      | 4.5  | 59.4      | 2.8        | 5.5  | 73.6      | 3.5        | 8.3  | 85        | 4.9        | 12.2 | 119       | 6.3        | 16.6 | 159       | 3.5              | 1.4     | 13.0   | 22     | 30     | 2.4   |
| 2.8              | 4.5                                                    | 73.6         | 3.5                                                                      | 5.5  | 85        | 4.2        | 8.3  | 102       | 6.3        | 12.2 | 159       | 6.7        | 16.6 | 164       | 5.3        | 2.8  | 15.0      | 19.0             | 25      | 3.0    |        |        |       |
| SUE18A           | Fluid Cap 2050 + Air Cap 62240-60°                     | 0.5          | 0.35                                                                     | 4.5  | 22        | 0.35       | 5.5  | 22        | 0.60       | 8.3  | 28        | 0.70       | 12.2 | 34        | 1.1        | 16.6 | 45        | 0.70             | 0.30    | 28     | 33     | 40     | 1.5   |
|                  |                                                        |              | 0.60                                                                     | 4.5  | 28        | 0.70       | 5.5  | 34        | 0.70       | 8.3  | 34        | 1.4        | 12.2 | 54        | 1.4        | 16.6 | 54        | 1.1              | 0.70    | 30     | 38     | 48     | 2.1   |
|                  |                                                        |              | 0.70                                                                     | 4.5  | 34        | 1.1        | 5.5  | 45        | 1.4        | 8.3  | 54        | 2.1        | 12.2 | 71        | 2.1        | 16.6 | 71        | 1.4              | 1.5     | 38     | 46     | 58     | 1.8   |
|                  |                                                        |              | 1.1                                                                      | 4.5  | 45        | 1.4        | 5.5  | 54        | 2.1        | 8.3  | 71        | 2.5        | 12.2 | 79        | 2.5        | 16.6 | 79        | 2.5              | 1.5     | 35     | 43     | 56     | 2.4   |
| SUE15            | Fluid Cap 2850 + Air Cap 67228-45°                     | 0.7          | 0.70                                                                     | 8.5  | 31.2      | 1.05       | 10.4 | 39.6      | 1.4        | 15.9 | 45.3      | 2.5        | 23   | 68        | 3.5        | 33   | 85        | 0.70             | 0.20    | 13.0   | 16.5   | 25     | 1.2   |
|                  |                                                        |              | 1.05                                                                     | 8.5  | 39.6      | 1.4        | 10.4 | 45.3      | 1.75       | 15.9 | 53.8      | 2.8        | 23   | 73.6      | 4.2        | 33   | 102       | 1.75             | 0.20    | 13.0   | 16.5   | 25     | 1.8   |
|                  |                                                        |              | 1.4                                                                      | 8.5  | 45.3      | 1.75       | 10.4 | 53.8      | 2.1        | 15.9 | 59.4      | 3.5        | 23   | 85        | 4.9        | 33   | 119       | 2.1              | 0.35    | 13.0   | 18.0   | 24     | 1.8   |
|                  |                                                        |              | 1.75                                                                     | 8.5  | 53.8      | 2.1        | 10.4 | 59.4      | 2.8        | 15.9 | 73.6      | 4.2        | 23   | 102       | 5.3        | 33   | 127       | 2.5              | 1.4     | 14.0   | 20     | 32     | 1.8   |
|                  |                                                        |              | 2.1                                                                      | 8.5  | 59.4      | 2.8        | 10.4 | 73.6      | 3.5        | 15.9 | 85.0      | 4.9        | 23   | 119       | 5.6        | 33   | 139       | 2.8              | 0.70    | 14.0   | 19.0   | 30     | 2.3   |
|                  |                                                        |              | 2.8                                                                      | 8.5  | 73.6      | 3.5        | 10.4 | 85        | 4.2        | 15.9 | 102       | 5.6        | 23   | 139       | 6.3        | 33   | 159       | 4.2              | 1.4     | 14.0   | 20     | 36     | 3.0   |
| 3.5              | 8.5                                                    | 85           | 4.2                                                                      | 10.4 | 102       | 4.9        | 15.9 | 119       | 6.3        | 23   | 159       | 7.0        | 33   | 176       | 5.3        | 2.8  | 16.5      | 20               | 30      | 4.0    |        |        |       |
| SUE18            | Fluid Cap 2850 + Air Cap 62240-60°                     | 0.7          | 0.40                                                                     | 8.5  | 25        | 0.40       | 10.4 | 25        | 0.40       | 15.9 | 25        | 0.70       | 23   | 34        | 1.4        | 33   | 54        | 0.60             | 0.30    | 35     | 48     | 61     | 1.8   |
|                  |                                                        |              | 0.50                                                                     | 8.5  | 27.5      | 0.60       | 10.4 | 28        | 0.60       | 15.9 | 28        | 0.85       | 23   | 40        | 1.8        | 33   | 62        | 0.60             | 0.70    | 35     | 48     | 63     | 1.5   |
|                  |                                                        |              | 0.60                                                                     | 8.5  | 28        | 0.65       | 10.4 | 31        | 0.70       | 15.9 | 34        | 1.1        | 23   | 45        | 2.1        | 33   | 71        | 1.1              | 1.5     | 41     | 51     | 66     | 2.1   |
|                  |                                                        |              | 1.4                                                                      | 8.5  | 34        | 0.70       | 10.4 | 34        | 0.85       | 15.9 | 40        | 1.4        | 23   | 54        | 2.5        | 33   | 79        | 1.4              | 1.5     | 43     | 53     | 66     | 2.4   |
| 1.8              | 8.5                                                    | 34           | 0.70                                                                     | 10.4 | 34        | 0.85       | 15.9 | 40        | 1.4        | 23   | 54        | 2.5        | 33   | 79        | 1.8        | 2.0  | 41        | 51               | 69      | 2.7    |        |        |       |
| 2.1              | 8.5                                                    | 34           | 0.70                                                                     | 10.4 | 34        | 0.85       | 15.9 | 40        | 1.4        | 23   | 54        | 2.5        | 33   | 79        | 2.1        | 3.0  | 41        | 51               | 69      | 2.9    |        |        |       |

Performance State

Flat Fan Spray(Siphon)

At the stated pressure in bar.

| Spray Set-up No. | Spray Set-up Consists of Fluid and Air Cap Combination | Orifice (mm) | Liquid Capacity (liters per hour)* and Air Capacity (liters per minute)* |      |           |            |      |           |            |     |           |            |     |           |            |     |           | Spray Dimensions |         |        |        |        |       |
|------------------|--------------------------------------------------------|--------------|--------------------------------------------------------------------------|------|-----------|------------|------|-----------|------------|-----|-----------|------------|-----|-----------|------------|-----|-----------|------------------|---------|--------|--------|--------|-------|
|                  |                                                        |              | Liquid Pressure                                                          |      |           |            |      |           |            |     |           |            |     |           |            |     |           | Air*             | Liquid* | A (cm) | B (cm) | C (cm) | D (m) |
|                  |                                                        |              | 0.2bar                                                                   |      |           | 0.3bar     |      |           | 0.7bar     |     |           | 1.5bar     |     |           | 3bar       |     |           |                  |         |        |        |        |       |
|                  |                                                        |              | Air Press.                                                               | L/h  | Air L/min | Air Press. | L/h  | Air L/min | Air Press. | L/h | Air L/min | Air Press. | L/h | Air L/min | Air Press. | L/h | Air L/min |                  |         |        |        |        |       |
| SUE25B           | Fluid Cap 35100 + Air Cap 134255-45°                   | 0.8          | 0.70                                                                     | 13.4 | 85        | 1.0        | 16.4 | 102       | 1.4        | 25  | 116       | 2.5        | 37  | 178       | 3.2        | 52  | 212       | 0.70             | 0.20    | 13.0   | 19.0   | 25     | 1.7   |
|                  |                                                        |              | 1.0                                                                      | 13.4 | 102       | 1.4        | 16.4 | 116       | 1.8        | 25  | 139       | 2.8        | 37  | 195       | 3.5        | 52  | 232       | 1.8              | 0.20    | 13.0   | 19.0   | 25     | 2.7   |
|                  |                                                        |              | 1.4                                                                      | 13.4 | 116       | 1.8        | 16.4 | 139       | 2.1        | 25  | 156       | 3.5        | 37  | 227       | 3.9        | 52  | 255       | 2.1              | 0.35    | 15.0   | 19.0   | 28     | 3.0   |
|                  |                                                        |              | 1.8                                                                      | 13.4 | 139       | 2.1        | 16.4 | 156       | 2.5        | 25  | 178       | 4.2        | 37  | 266       | 4.2        | 52  | 275       | 2.5              | 0.70    | 15.0   | 22     | 28     | 3.5   |
|                  |                                                        |              | 2.1                                                                      | 13.4 | 156       | 2.8        | 16.4 | 195       | 2.8        | 25  | 195       | 4.9        | 37  | 312       | 4.9        | 52  | 314       | 2.5              | 1.4     | 16.5   | 23     | 36     | 3.7   |
|                  |                                                        |              | 2.8                                                                      | 13.4 | 195       | 3.5        | 16.4 | 227       | 3.5        | 25  | 227       | 5.6        | 37  | 360       | 5.6        | 52  | 360       | 4.2              | 1.4     | 16.5   | 23     | 37     | 4.3   |
|                  |                                                        |              | 3.5                                                                      | 13.4 | 227       | 4.2        | 16.4 | 266       | 4.2        | 25  | 266       | 6.3        | 37  | 411       | 6.3        | 52  | 411       | 4.9              | 2.8     | 16.5   | 22     | 32     | 4.9   |
| SUE28B           | Fluid Cap 35100 + Air Cap 122281-60°                   | 0.8          | 0.60                                                                     | 13.4 | 91        | 0.7        | 16.4 | 102       | 1.4        | 25  | 156       | 2.1        | 37  | 210       | 3.2        | 52  | 285       | 1.4              | 0.30    | 33     | 38     | 48     | 3.8   |
|                  |                                                        |              | 0.70                                                                     | 13.4 | 102       | 1.1        | 16.4 | 130       | 2.1        | 25  | 210       | 2.8        | 37  | 260       | 4.2        | 52  | 360       | 2.1              | 0.70    | 33     | 40     | 56     | 4.3   |
|                  |                                                        |              | 1.1                                                                      | 13.4 | 130       | 1.8        | 16.4 | 184       | 2.5        | 25  | 235       | 3.5        | 37  | 310       | 5.3        | 52  | 430       | 3.2              | 1.5     | 35     | 46     | 58     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 13.4 | 156       | 2.1        | 16.4 | 210       | 2.8        | 25  | 260       | 4.2        | 37  | 360       | 5.6        | 52  | 455       | 4.2              | 1.5     | 38     | 48     | 66     | 4.6   |
| SUE25A           | Fluid Cap 40100 + Air Cap 134255-45°                   | 1.0          | 0.70                                                                     | 17.6 | 85        | 1.4        | 22   | 116       | 1.8        | 33  | 139       | 2.8        | 48  | 195       | 3.5        | 68  | 232       | 0.70             | 0.35    | 15.0   | 19.0   | 27     | 2.1   |
|                  |                                                        |              | 1.0                                                                      | 17.6 | 102       | 1.8        | 22   | 139       | 2.1        | 33  | 156       | 3.2        | 48  | 212       | 4.2        | 68  | 275       | 1.8              | 0.70    | 15.0   | 19.0   | 27     | 3.0   |
|                  |                                                        |              | 1.4                                                                      | 17.6 | 116       | 2.1        | 22   | 156       | 2.5        | 33  | 178       | 3.5        | 48  | 227       | 4.9        | 68  | 314       | 2.5              | 1.4     | 15.0   | 22     | 33     | 3.4   |
|                  |                                                        |              | 1.8                                                                      | 17.6 | 139       | 2.5        | 22   | 178       | 2.8        | 33  | 195       | 4.2        | 48  | 266       | 5.3        | 68  | 340       | 2.8              | 1.4     | 15.0   | 22     | 36     | 3.8   |
|                  |                                                        |              | 2.1                                                                      | 17.6 | 156       | 2.8        | 22   | 195       | 3.5        | 33  | 227       | 4.9        | 48  | 312       | 5.6        | 68  | 360       | 2.8              | 1.4     | 16.5   | 25     | 37     | 4.0   |
|                  |                                                        |              | 2.8                                                                      | 17.6 | 195       | 3.5        | 22   | 227       | 4.2        | 33  | 266       | 5.6        | 48  | 360       | 6.3        | 68  | 411       | 4.2              | 2.1     | 16.5   | 25     | 37     | 4.9   |
|                  |                                                        |              | 3.5                                                                      | 17.6 | 227       | 4.2        | 22   | 266       | 4.9        | 33  | 312       | 6.3        | 48  | 411       | 6.6        | 68  | 428       | 5.3              | 2.8     | 18.0   | 23     | 36     | 5.8   |
| SUE28A           | Fluid Cap 40100 + Air Cap 122281-60°                   | 1.0          | 0.60                                                                     | 17.6 | 91        | 0.70       | 22   | 102       | 1.1        | 33  | 130       | 2.5        | 48  | 235       | 3.5        | 68  | 310       | 1.1              | 0.20    | 33     | 38     | 51     | 3.5   |
|                  |                                                        |              | 1.1                                                                      | 17.6 | 130       | 1.4        | 22   | 156       | 1.8        | 33  | 184       | 3.2        | 48  | 285       | 4.6        | 68  | 380       | 1.8              | 0.70    | 35     | 48     | 64     | 3.0   |
|                  |                                                        |              | 1.4                                                                      | 17.6 | 156       | 1.8        | 22   | 184       | 2.5        | 33  | 235       | 3.9        | 48  | 330       | 6.0        | 68  | 475       | 2.5              | 1.5     | 38     | 46     | 64     | 3.8   |
|                  |                                                        |              | 1.8                                                                      | 17.6 | 184       | 2.1        | 22   | 210       | 2.8        | 33  | 260       | 4.2        | 48  | 360       | 6.7        | 68  | 525       | 3.2              | 1.5     | 33     | 43     | 61     | 4.3   |
| SUE28            | Fluid Cap 60100 + Air Cap 122281-60°                   | 1.5          | 0.70                                                                     | 36   | 102       | 1.1        | 45   | 130       | 1.8        | 68  | 184       | 3.2        | 100 | 285       | 5.3        | 141 | 430       | 2.1              | 0.30    | 40     | 56     | 76     | 3.0   |
|                  |                                                        |              | 1.1                                                                      | 36   | 130       | 1.4        | 45   | 156       | 2.1        | 68  | 210       | 3.5        | 100 | 310       | 6.0        | 141 | 475       | 2.8              | 0.70    | 46     | 58     | 81     | 4.0   |
|                  |                                                        |              | 1.4                                                                      | 36   | 156       | 2.1        | 45   | 210       | 2.8        | 68  | 260       | 4.9        | 100 | 405       | 6.7        | 141 | 525       | 3.2              | 1.5     | 48     | 58     | 79     | 4.3   |
|                  |                                                        |              | 1.8                                                                      | 36   | 184       | 2.5        | 45   | 235       | 3.2        | 68  | 285       | 5.9        | 100 | 455       | 7.0        | 141 | 550       | 4.6              | 1.5     | 43     | 53     | 76     | 4.9   |

|        |                                       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |    |    |     |
|--------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|----|----|-----|
| SUE25  | Fluid Cap 60100 + Air Cap 134255-45°  | 1.5 | 1.0 | 36  | 102 | 1.8 | 45  | 139 | 2.5 | 68  | 178 | 3.2 | 100 | 212 | 3.9 | 141 | 255 | 1.0 | 0.20 | 15.0 | 20 | 25 | 2.7 |
|        |                                       |     | 1.4 | 36  | 116 | 2.1 | 45  | 156 | 2.8 | 68  | 195 | 3.5 | 100 | 227 | 4.2 | 141 | 275 | 2.1 | 0.20 | 15.0 | 22 | 29 | 3.0 |
|        |                                       |     | 1.8 | 36  | 139 | 2.5 | 45  | 178 | 3.2 | 68  | 212 | 3.9 | 100 | 246 | 4.6 | 141 | 297 | 2.8 | 0.35 | 18.0 | 24 | 36 | 3.5 |
|        |                                       |     | 2.1 | 36  | 156 | 2.8 | 45  | 195 | 3.5 | 68  | 227 | 4.2 | 100 | 266 | 4.9 | 141 | 314 | 3.2 | 1.4  | 20   | 28 | 39 | 3.7 |
|        |                                       |     | 2.5 | 36  | 178 | 3.2 | 45  | 212 | 4.2 | 68  | 266 | 4.9 | 100 | 312 | 5.6 | 141 | 360 | 3.5 | 0.70 | 19.0 | 27 | 38 | 4.0 |
|        |                                       |     | 2.8 | 36  | 195 | 3.5 | 45  | 227 | 4.9 | 68  | 312 | 5.6 | 100 | 360 | 6.3 | 141 | 411 | 4.2 | 1.4  | 20   | 28 | 39 | 4.3 |
|        |                                       |     | 3.5 | 36  | 227 | 4.2 | 45  | 266 | 5.6 | 68  | 360 | 6.3 | 100 | 411 | 7.0 | 141 | 453 | 5.6 | 2.8  | 18.0 | 24 | 38 | 5.9 |
| SUE45B | Fluid Cap 60150 + Air Cap 200278-45°  | 1.5 | 1.8 | 36  | 235 | 1.8 | 45  | 235 | 2.5 | 68  | 300 | 3.9 | 100 | 410 | -   | -   | -   | 1.8 | 0.20 | 15.0 | 20 | 29 | 3.0 |
|        |                                       |     | 2.1 | 36  | 260 | 2.1 | 45  | 260 | 2.8 | 68  | 330 | 4.2 | 100 | 445 | -   | -   | -   | 2.8 | 0.20 | 15.0 | 20 | 30 | 3.4 |
|        |                                       |     | 2.5 | 36  | 300 | 2.5 | 45  | 300 | 3.2 | 68  | 355 | 4.6 | 100 | 480 | -   | -   | -   | 2.8 | 0.30 | 15.0 | 20 | 30 | 4.0 |
|        |                                       |     | 2.8 | 36  | 330 | 2.8 | 45  | 330 | 3.5 | 68  | 380 | 4.9 | 100 | 529 | -   | -   | -   | 3.5 | 0.70 | 17.0 | 22 | 32 | 4.3 |
|        |                                       |     | 3.2 | 36  | 355 | 3.2 | 45  | 355 | 3.9 | 68  | 410 | 5.3 | 100 | 565 | -   | -   | -   | 3.9 | 1.5  | 17.0 | 22 | 34 | 4.6 |
|        |                                       |     | 3.5 | 36  | 380 | 3.5 | 45  | 380 | 4.2 | 68  | 445 | 5.6 | 100 | 600 | -   | -   | -   | 4.2 | 1.0  | 17.0 | 23 | 33 | 4.7 |
|        |                                       |     | 4.2 | 36  | 445 | 4.2 | 45  | 445 | 4.9 | 68  | 520 | 6.3 | 100 | 685 | -   | -   | -   | 4.9 | 1.5  | 17.0 | 23 | 34 | 5.5 |
| SUE45A | Fluid Cap 80150 + Air Cap 200278-45°  | 2.0 | 2.1 | 64  | 260 | 2.8 | 78  | 330 | 3.9 | 119 | 410 | 4.9 | 175 | 520 | -   | -   | -   | 2.1 | 0.20 | 17.0 | 24 | 34 | 3.5 |
|        |                                       |     | 2.5 | 64  | 300 | 3.2 | 78  | 355 | 4.2 | 119 | 445 | 5.3 | 175 | 565 | -   | -   | -   | 3.2 | 0.20 | 18.0 | 24 | 36 | 4.3 |
|        |                                       |     | 2.8 | 64  | 330 | 3.5 | 78  | 380 | 4.6 | 119 | 480 | 5.6 | 175 | 600 | -   | -   | -   | 3.9 | 0.30 | 18.0 | 25 | 36 | 4.9 |
|        |                                       |     | 3.2 | 64  | 355 | 3.9 | 78  | 410 | 4.9 | 119 | 520 | 6.0 | 175 | 640 | -   | -   | -   | 4.9 | 0.70 | 18.0 | 25 | 36 | 5.5 |
|        |                                       |     | 3.5 | 64  | 380 | 4.2 | 78  | 445 | 5.3 | 119 | 565 | 6.3 | 175 | 685 | -   | -   | -   | 4.9 | 1.5  | 20   | 25 | 38 | 5.5 |
|        |                                       |     | 4.2 | 64  | 445 | 4.9 | 78  | 520 | 5.6 | 119 | 600 | -   | -   | -   | -   | -   | -   | 5.3 | 1.0  | 18.0 | 25 | 38 | 5.8 |
|        |                                       |     | 4.9 | 64  | 520 | 5.6 | 78  | 600 | 6.3 | 119 | 685 | -   | -   | -   | -   | -   | -   | 5.6 | 1.5  | 20   | 25 | 38 | 6.1 |
| SUE45  | Fluid Cap 100150 + Air Cap 200278-45° | 2.5 | 2.8 | 102 | 330 | 3.5 | 125 | 380 | 4.6 | 192 | 480 | 5.6 | 280 | 600 | -   | -   | -   | 2.8 | 0.20 | 19.0 | 25 | 36 | 4.6 |
|        |                                       |     | 3.2 | 102 | 355 | 3.9 | 125 | 410 | 4.9 | 192 | 520 | 6.0 | 280 | 640 | -   | -   | -   | 3.9 | 0.20 | 20   | 25 | 37 | 4.9 |
|        |                                       |     | 3.5 | 102 | 380 | 4.2 | 125 | 445 | 5.3 | 192 | 565 | 6.3 | 280 | 685 | -   | -   | -   | 4.6 | 0.30 | 20   | 25 | 37 | 5.2 |
|        |                                       |     | 3.9 | 102 | 410 | 4.6 | 125 | 480 | 5.6 | 192 | 600 | -   | -   | -   | -   | -   | -   | 5.3 | 0.70 | 22   | 27 | 38 | 5.5 |
|        |                                       |     | 4.2 | 102 | 445 | 4.9 | 125 | 520 | 6.0 | 192 | 640 | -   | -   | -   | -   | -   | -   | 5.6 | 1.0  | 22   | 27 | 41 | 5.5 |
|        |                                       |     | 4.6 | 102 | 480 | 5.3 | 125 | 565 | 6.3 | 192 | 685 | -   | -   | -   | -   | -   | -   | 5.6 | 1.5  | 22   | 27 | 41 | 5.8 |
|        |                                       |     | 4.9 | 102 | 520 | 5.6 | 125 | 600 | -   | -   | -   | -   | -   | -   | -   | -   | -   | 6.0 | 1.5  | 22   | 27 | 41 | 6.1 |

Dry Mist Humidifier WMD



Features

- Spraying distance of 4M or more;
- Can prevent drying and static electricity generation;
- More energy efficient than other humidification methods.

Applications

- Workshop anti-static cooling and humidification.
- Cooling and dust removal
- Farm disinfection
- Garden irrigation

Performance State

Siphon Type

| Model Number |
|--------------|
|--------------|



## Compact Air Atomization

### Flat Fan KQWHVRA



#### Design Features

- Spray Angle : 15°-80°
- Spray Pattern : Fan spray,
- Drops : More than 50μm
- Features : The average particle size is 50μm prose mist, the spray shape is equal, the flow range is adjusted greatly, and the Angle change is small.

#### Applications

- Cleaning
- Humidification
- Dust Control
- Spray

### Performance State

At the stated pressure in bar.

| Capacity Size | Air Press. | Liquid Air Press.<br>Capacity | 2bar         |           | 3bar         |           | 5bar         |           |
|---------------|------------|-------------------------------|--------------|-----------|--------------|-----------|--------------|-----------|
|               |            |                               | Liquid L/min | Air L/min | Liquid L/min | Air L/min | Liquid L/min | Air L/min |
| 05            | 2bar       |                               | 0.31         | 17        | 0.45         | 14        | -            | -         |
|               | 3bar       |                               | 0.23         | 24        | 0.36         | 22        | 0.58         | 18        |
|               | 4bar       |                               | -            | -         | 0.29         | 29        | 0.5          | 25        |
|               | 5bar       |                               | -            | -         | -            | -         | 0.43         | 33        |
| 10            | 2bar       |                               | 0.54         | 36        | 0.9          | 24        | -            | -         |
|               | 3bar       |                               | 0.3          | 58        | 0.6          | 49        | 1.28         | 25        |
|               | 4bar       |                               | -            | -         | 0.39         | 74        | 1            | 50        |
|               | 5bar       |                               | -            | -         | -            | -         | 0.81         | 69        |
| 20            | 2bar       |                               | 0.96         | 44        | 1.98         | 18        | -            | -         |
|               | 3bar       |                               | 0.53         | 81        | 1.1          | 59        | 2.63         | 19        |
|               | 4bar       |                               | -            | -         | 0.53         | 104       | 2            | 50        |
|               | 5bar       |                               | -            | -         | -            | -         | 1.3          | 89        |
| 30            | 2bar       |                               | 1.34         | 50        | -            | -         | -            | -         |
|               | 3bar       |                               | 0.63         | 100       | 0.88         | 128       | -            | -         |
|               | 4bar       |                               | -            | -         | 15.3         | 245       | 3            | 50        |
|               | 5bar       |                               | -            | -         | -            | -         | 2.25         | 85        |



## Dry Fog Nozzle

### Dry Fog Nozzle



#### Design Features

- Spray Angle : 15°-50°
- Spray Pattern : Cone spray.
- Drops : 10-50μm
- Features : Compared with similar products, it can save energy and reduce consumption significantly, and can produce small particle size dry fog particles under low pressure and low gas volume conditions, which is not easy to plug.

#### Applications

- Dry mist suppresses dust
- Environmental humidification
- Disinfection and sterilization
- Cooling
- Dust falls from coal yard
- Dust removal and ash suppression in the discharge yard

### Performance State

At the stated pressure in bar.

| Model Number | Air Press. | Liquid Press. | Liquid Capacity (L/min) | Air Capacity (L/min) | Injection Distance (m) | Spray Angle (°)* |
|--------------|------------|---------------|-------------------------|----------------------|------------------------|------------------|
| SK508        | 5.0        | 1.0           | 0.359                   | 112                  | ≈2                     | 80               |
| SV882        | 5.0        | 1.0           | 0.746                   | 240                  | ≈3.5                   | 60               |
| SV980        | 3.0        | 0.5           | 0.688                   | 307                  | ≈4                     | 30               |



## ST Series -Automatic Spray Gun

### ST



### ST-5

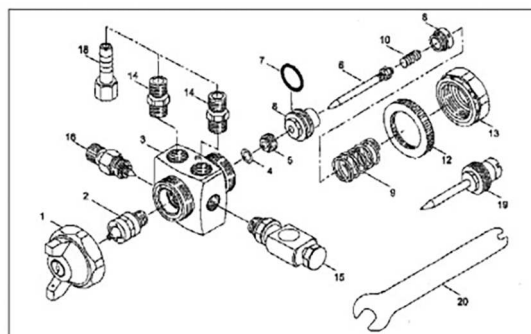
#### Design Features

- Spray Pattern : Cone- shaped spray pattern or flat fan spray pattern.(Based on air pressure)
- Drops : Much small-size,uniform distribution .
- Material : SS
- Features : Spray gun piston work with air and using the fog to seperate the liquid.  
Being suitable for the circumstance of superior fog and spray switch in lower frequency.

#### Applications

- Coating
- Workshop wetting

### Spray Breakdown Structure



### Performance State

#### ST-5

| Orifice Φmm | Water Flow rate<br>ML/min | Flat Spraying Width |       | Air Flow rate | Air pressure machine |
|-------------|---------------------------|---------------------|-------|---------------|----------------------|
|             |                           | 200mm               | 300mm |               |                      |
| 0.5         | 0~60                      | 180                 | 200   | 60            | 0.4~0.75             |
| 1.0         | 0~250                     | 200                 | 250   | 80            | 0.4~0.76             |
| 1.3         | 0~360                     | 250                 | 350   | 100           | 0.75~1.5             |
| 2.0         | 0~600                     | 300                 | 400   | 140           | 0.75~1.5             |

#### ST-6

| Orifice Φmm | Water Flow rate<br>ML/min | Flat Spraying Width |       | Round Spraying Width |       | Drop Size | Air Flow rate | Air pressure machine |
|-------------|---------------------------|---------------------|-------|----------------------|-------|-----------|---------------|----------------------|
|             |                           | 200mm               | 300mm | 200mm                | 300mm |           |               |                      |
| 0.5         | 0~60                      | 180                 | 180   | φ40                  | φ50   | 40        | 60            | 0.4~0.75             |
| 1.0         | 0~250                     | 200                 | 200   | φ60                  | φ70   | 80        | 80            | 0.4~0.75             |
| 1.3         | 0~360                     | 250                 | 250   | φ70                  | φ80   | 100       | 100           | 0.75~1.5             |
| 2.0         | 0~600                     | 300                 | 300   | φ80                  | φ90   | 130       | 140           | 0.75~1.5             |

· Special size please consult our sale dept!

### Order Info

ST-5 - 1.0  
|  
Nozzle Type Orifice

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## DAU Series -Air Atomization Automatic Type

### DAU-Standard



The 1/4DJ features a 1/4 inch NPT or BSPT(inner) pipe threaded gas and liquid inlet, and a 1/8 inch NPT or BSPT(inner) pipe threaded gas actuated cavity inlet. The 1/4DJ model is used with a low flow liquid cap.

### DAU-45°



The 1/8DJ features a compact automatic atomization nozzle that is characterized by atomization And the gas of the driving chamber has only a single inlet, and the spray of this designed nozzle is at a 45° Angle with the inlet axis of the nozzle.

### DDAU-Compacted



The 1/8DJ features a compact automatic atomizing nozzle with a single gas line type of operation and is specifically designed for use in small areas. Gas and liquid inbreaths are 1/8 inch NPT or BSPT(inner) pipe threaded connections.

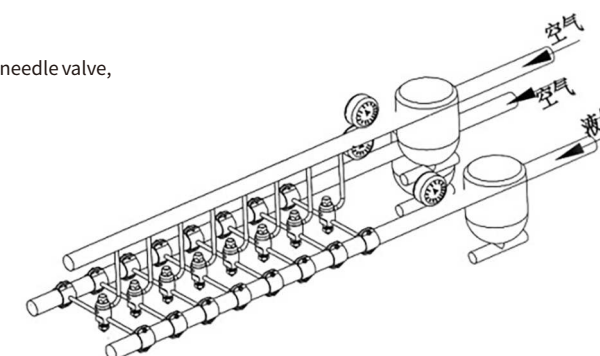
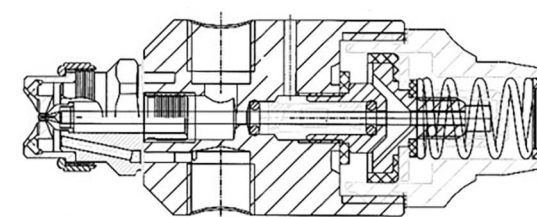
### DAU-Single PiPeline Gas



1/4DJ features a single air line used both for spray atomization and for operation of the air cylinder. The single air line is regulated at the desired "on-off" cycle time causing simultaneous flow of atomizing air and liquid.The nozzle operates up to 180 cycles per minute and requires a minimum air pressure of 30 psi(2 bar).

### Basical Info.

- Use siphon to transmit but also pressure.
- The inner space with gas driving control the switch to process.
- Assembly is made of Nickel plated brass or SS while combined with SS needle valve, liquid cap and SS spring.



### 订购信息

1/4 - DAU - SS + SU13 + SS  
| | | | |  
Inlet Conn Nozzle Type Material Code Air Cap Type Air Cap Material

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## Air Atomizing Nozzles Of Various Products

### JF With Strainer



Model 1/4JF and 1/4JFN both feature built-in liquid strainers, but the 1/4JFN has the addition of a liquid shut-off needles. Both of them use 1/4" NPT or BSPT(F) liquid inlet conn.

### DACN Top Inlet



Model JAC and JACN both feature air and liquid inlet connections entering the nozzle at 90° to spray projection axis. The JACN features the addition of a shut-off needle, as shown. Inlet conn. adopt 1/8" or 1/4" NPT or BSPT(F).

### 2DAC Top Inlet Dual Head



The Model 1/8-JAC2 Dual Spray Assembly features two opposing spray set-ups with the air and liquid inlet connections perpendicular to the spray axis. Module take 1/8" or 1/4" NPT or BSPT(F) inlet conn.

### 6552-JAC Mini Set-Up



1/8" or 1/4" NPT or BSPT(F) air and liquid inlet conn. Model 6552-1/8JAC miniature assembly body is only 1/2" (13mm) thick with a 1-5/32" (29mm) by 1-1/4" (32mm) rectangular face. The top of the nozzle projects from the face a maximum of 1-3/16" (30mm) depending upon the spray set-up used.

### JBCJ Atomizing Set



1/4" NPT or BSPT(F) inlet/outlet conn. The Model 1/4JBCJ features a steam jacket around the nozzle body for spraying liquid that are too viscous to spray at room temperature.

### JDLN Thread Set-up



1/4" NPT or BSPT(F) air and liquid inlet conn. Model 1/4JDLN and 1/4JDLCO feature a screw mount with 9/32" (7mm) diameter mounting holes. Standard 1/4" (6mm) screws hold the body to wall with a gasket providing the seal. The 1/4JDLN features a shut-off needles and the 1/4JDLCO features a clean out needle.

### 8650 Multi-head



1/4" NPT or BSPT(F) air and liquid inlet conn. The Model 8650 Multiple Spray Assembly features five spray set-ups located on the faces of the assembly (as shown) or four set-ups located on the side faces.

### 7545 Steering Joint



1/8" NPT or BSPT(F) air and liquid inlet conn. The Model 7545 Multiple Swivel Spray Assembly features each spray set-up mounted on its own swivel body. One or two bodies may be used and each can be rotated 360° to the desired position. The swivel bodies are locked in place by a stainless steel lockscrew that runs vertical through the assembly.

### DDJ Compact



1/8" NPT or BSPT normal inlet conn. Nozzle assembly include spray body and setting with shut-off and clean-up needles can be choised. Be suitable for intermittent spray which ensure to make use of liquid.

### 2DJ Two-Way Spray Type



1/4" NPT or BSPT(F) inlet conn. The Model J2 is a dual spray assembly with opposing spray set-ups perpendicular to opposing air and liquid inlets.

### DJN Thin Wall Type



1/8J and 1/4J assemblies Thin Wall Adapters add an adapter locknut and gasket to the Thick Wall Adapters to provide secure mounting in thin walls, and include a locknut and gasket.

### DJN Thick-Walled Type



Replace the retainer on the nozzle assembly with a thick wall adapter that fits into the threaded wall opening and securely holds the nozzle in place. They are suitable for 1/8JKD and 1/4JKD has a 3/4 inch NPT or BSPT (outside) connection, 1/2JKD has a 1-1/4 inch NPT or BSPT (outside) connection, and 1JKD has a 1-1/2 inch NPT or BSPT (outside) nozzle assemblies, including those with cut-out pins and removal pin attachments.

### DBC Back Connection Type



1/8" or 1/4" NPT or BSPT(F) inlet conn. The Model JBC features the center lines of the air and liquid inlet entering in the back of the nozzle and parallel to the spray projection axis.

### 17370 Prolong Gun



Model 17370-1/8JJ nozzles feature spray unit sections attached to spray pack assemblies with extension sections of 8 cm or 15 cm or 23 cm or 30 cm or 46 cm in length.

### 20470



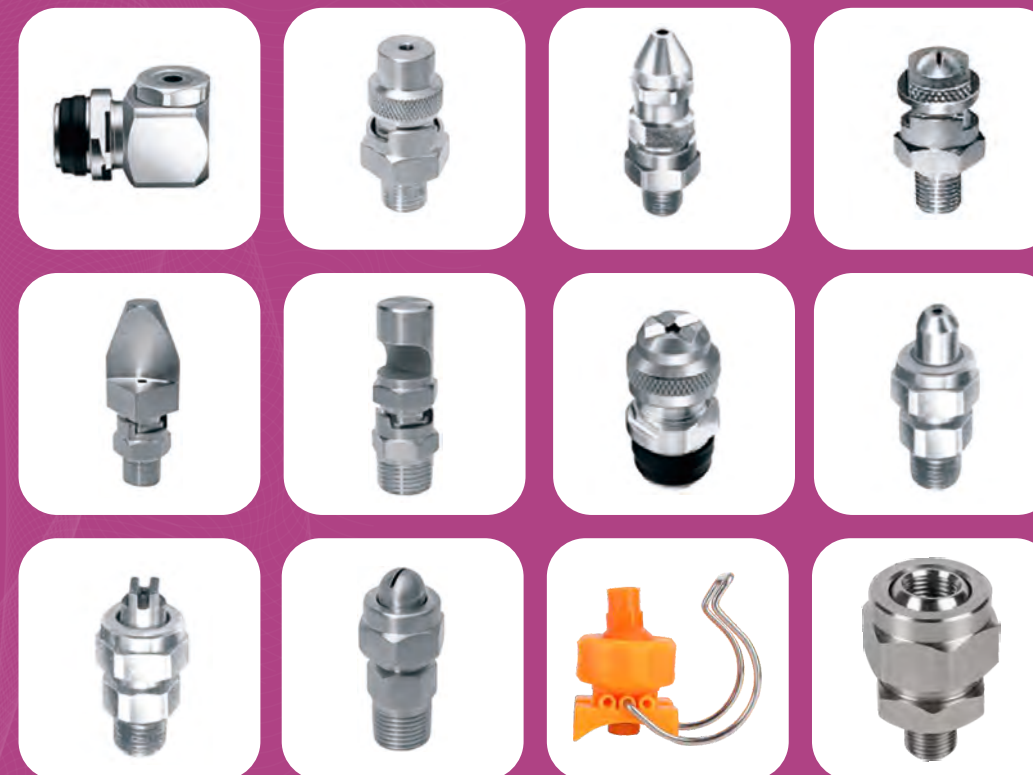
The 20470 Series hand-held air atomizing spray guns feature lightweight aluminum construction and a comfortable, easy-to-operate design. Extensions are available in up to 36" (91cm) lengths.



## Quick-release nozzles

## Three combination nozzles

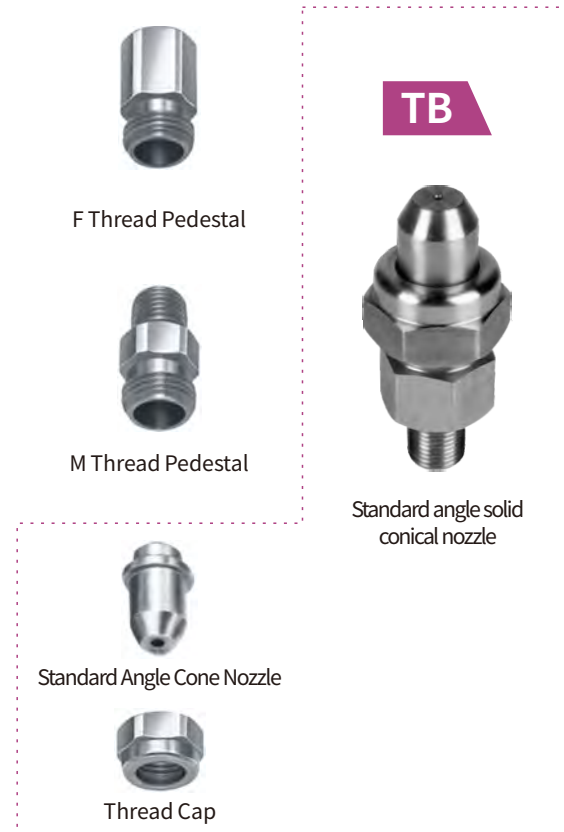
## Adjustable ball nozzles





## T Series -Three Piece Set Full cone Standard Type(TB)

### Standard three-piece



### Standard two-piece



### Design Features

Spray Angle : 45°-120°

Spray Pattern : Solid cone- shaped spray pattern with round impact area.

Drops : Small- to medium-size, uniform distribution over a wide range of flow rates and pressure.

Material : BRASS/SS

Features : Fast way to install spray tip .

Large, unobstructed flow passages minimize clogging.

Removable caps and vanes for easy inspection and cleaning on most models.

### Applications

- Degreasing
- Fire prevention
- Air cleaning
- Cooling in heat treat process
- Quenching during heat treat process
- Metal treating
- Gas cooling & scrubbing



## T Series -Three Piece Set Full Cone Standard Type(TB)

### Performance State

#### •Standard Angle

At the stated pressure in bar.

| Inlet Conn (in.) | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |        |        |        |      |      |      |      |      |       | Spray Angle (°) |        |      |
|------------------|---------------|--------------|----------------------------|--------|--------|--------|------|------|------|------|------|-------|-----------------|--------|------|
|                  |               |              | 0.4bar                     | 0.5bar | 0.7bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 10bar | 0.5bar          | 1.5bar | 6bar |
| 1/4              | 0.3           | 0.51         | -                          | -      | -      | 0.16   | 0.19 | 0.22 | 0.25 | 0.31 | 0.33 | 0.39  | -               | 50     | 61   |
|                  | 0.4           | 0.56         | -                          | -      | -      | 0.22   | 0.25 | 0.3  | 0.34 | 0.41 | 0.44 | 0.52  | -               | 56     | 63   |
|                  | 0.5           | 0.61         | -                          | -      | -      | 0.27   | 0.31 | 0.37 | 0.42 | 0.51 | 0.55 | 0.65  | -               | 56     | 63   |
|                  | 0.6           | 0.69         | -                          | -      | -      | 0.32   | 0.37 | 0.45 | 0.51 | 0.61 | 0.66 | 0.78  | -               | 54     | 62   |
|                  | 0.7           | 0.76         | -                          | -      | -      | 0.38   | 0.43 | 0.52 | 0.59 | 0.72 | 0.77 | 0.91  | -               | 54     | 63   |
|                  | 1             | 0.94         | -                          | -      | -      | 0.54   | 0.62 | 0.74 | 0.85 | 1    | 1.1  | 1.3   | -               | 58     | 53   |
|                  | 2             | 1.19         | -                          | -      | 0.76   | 1.1    | 1.2  | 1.5  | 1.7  | 2    | 2.2  | 2.6   | -               | 50     | 46   |
|                  | 3             | 1.57         | -                          | -      | 1.1    | 1.6    | 1.9  | 2.2  | 2.5  | 3.1  | 3.3  | 3.9   | -               | 65     | 59   |
|                  | 3.5           | 1.7          | -                          | -      | 1.3    | 1.9    | 2.2  | 2.6  | 3    | 3.6  | 3.8  | 4.5   | -               | 50     | 46   |
|                  | 5             | 2.08         | -                          | -      | 1.9    | 2.7    | 3.1  | 3.7  | 4.2  | 5.1  | 5.5  | 6.5   | -               | 65     | 59   |
|                  | 6.5           | 2.38         | 1.9                        | 2.1    | 2.5    | 3.5    | 4    | 4.8  | 5.5  | 6.7  | 7.1  | 8.4   | 45              | 50     | 46   |
|                  | 10            | 3.18         | 2.9                        | 3.3    | 3.8    | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 11   | 13    | 58              | 67     | 61   |

#### •Wide Angle

At the stated pressure in bar.

| Inlet Conn<br>(in.) | Nozzle Type |     | Capacity Size | Orifice (mm) | Flow Rate Capacity (L/min) |        |        |      |        |      |      |      |      |        | Spray Angle (°) |      |  |
|---------------------|-------------|-----|---------------|--------------|----------------------------|--------|--------|------|--------|------|------|------|------|--------|-----------------|------|--|
|                     | TB          | TB2 |               |              | 0.4bar                     | 0.5bar | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 6bar | 0.4bar | 0.7bar          | 6bar |  |
| 1/8,1/4             | ●           | ●   | 2.8W          | 1.6          | 0.83                       | 0.91   | 1.1    | 1.3  | 1.5    | 1.7  | 2.1  | 2.4  | 2.9  | -      | 120             | 102  |  |
|                     | ●           | ●   | 4.3W          | 2            | 1.3                        | 1.4    | 1.6    | 1.9  | 2.3    | 2.7  | 3.2  | 3.7  | 4.4  | -      | 120             | 102  |  |
|                     | ●           | ●   | 5.6W          | 2.4          | 1.7                        | 1.8    | 2.1    | 2.5  | 3      | 3.5  | 4.2  | 4.8  | 5.7  | -      | 120             | 102  |  |
|                     | ●           | ●   | 8W            | 2.4          | 2.4                        | 2.6    | 3      | 3.6  | 4.3    | 4.9  | 6    | 6.8  | 8.2  | -      | 120             | 103  |  |
| 1/4                 | ●           | ●   | 10W           | 2.8          | 2.9                        | 3.3    | 3.8    | 4.5  | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 112    | 120             | 103  |  |
|                     | ●           |     | 12W           | 3.2          | 3.5                        | 3.9    | 4.6    | 5.4  | 6.5    | 7.4  | 8.9  | 10.2 | 12.3 | 114    | 120             | 103  |  |
|                     | ●           | ●   | 14W           | 3.6          | 4.1                        | 4.6    | 5.3    | 6.3  | 7.6    | 8.6  | 10.4 | 11.9 | 14.3 | 114    | 120             | 103  |  |
| 3/8                 |             | ●   | 17W           | 4            | 5                          | 5.6    | 6.5    | 7.6  | 9.2    | 10.5 | 12.7 | 14.4 | 17.4 | 114    | 120             | 103  |  |
|                     |             | ●   | 20W           | 4.4          | 5.9                        | 6.5    | 7.6    | 9    | 10.8   | 12.4 | 14.9 | 17   | 20   | 114    | 120             | 104  |  |
|                     |             | ●   | 24W           | 4.8          | 7.1                        | 7.8    | 9.1    | 10.8 | 13     | 14.8 | 17.9 | 20   | 25   | 114    | 120             | 104  |  |
|                     |             | ●   | 27W           | 5.2          | 8                          | 8.8    | 10.3   | 12.1 | 14.6   | 16.7 | 20   | 23   | 28   | 114    | 120             | 106  |  |
| 1/2                 |             | ●   | 30W           | 5.6          | 8.8                        | 9.8    | 11.4   | 13.5 | 16.2   | 18.5 | 22   | 25   | 31   | 114    | 120             | 108  |  |
|                     |             | ●   | 35W           | 6            | 10.3                       | 11.4   | 13.3   | 15.7 | 18.9   | 22   | 26   | 30   | 36   | 114    | 120             | 108  |  |

· Special size please consult our sale dept!

### Order Info

| Nozzle Body |   |           | Spray Tip |               |               |
|-------------|---|-----------|-----------|---------------|---------------|
| 1/4         | - | TB        | -         | SS            | 14W           |
| Inlet Conn  |   | Body Type |           | Material Code | Capacity Size |

For NPT threaded connections, add the letter "N "before the nozzle connection size.



## TPC-Tungsten Core Flat Fan Nozzle

### Design Features

- TPC tungsten core sector nozzle is suitable for high pressure and has exceptional wear resistance;
- TPC nozzle is embedded with a large tungsten steel core spray core to make it have the strongest wear resistance;
- The inlay is installed in the groove of the stainless steel mouth body to avoid bad damage;
- The nozzle is a high impact plane injection type, and the injection Angle is from 5° to 110°;
- The spray effect of the nozzle is uniform distribution of small droplets;
- The edge of the jet surface is gradually reduced to ensure uniform coverage during overlapping injection.
- The grinding surface of the TPC tungsten core fan-shaped nozzle is parallel to the jet surface so that it can be quickly adjusted into a straight jet through vision.

### Order Info

1/4 - BTT + TPC - SS - 11001 - WGX  
Inlet Conn. Three-piece combination Body Type Material Code Flow rate Tungsten steel core

For NPT threaded connections, add the letter "N" before the nozzle connection size.

### Performance State

| Nozzle Type | Orifice (mm) | Flow Rate Capacity (L/min) |        |        |        | Spray Shape Wide (Distance 30cm) (cm) |
|-------------|--------------|----------------------------|--------|--------|--------|---------------------------------------|
|             |              | 50bar                      | 100bar | 150bar | 200bar |                                       |
| 1100025     | 0.33         | 0.40                       | 0.57   | 0.70   | 0.81   | 42                                    |
| 1100033     | 0.38         | 0.53                       | 0.75   | 0.92   | 1.1    | 43                                    |
| 1100039     | 0.41         | 0.63                       | 0.89   | 1.1    | 1.3    | 46                                    |
| 1100050     | 0.46         | 0.81                       | 1.1    | 1.4    | 1.6    | 48                                    |
| 1100067     | 0.53         | 1.1                        | 1.5    | 1.9    | 2.2    | 53                                    |
| 1100080     | 0.58         | 1.3                        | 1.8    | 2.2    | 2.6    | 56                                    |
| 11001       | 0.66         | 1.6                        | 2.3    | 2.8    | 3.2    | 58                                    |
| 110015      | 0.79         | 2.4                        | 3.4    | 4.2    | 4.8    | 63                                    |
| 11002       | 0.91         | 3.2                        | 4.6    | 5.6    | 6.4    | 66                                    |
| 11003       | 1.1          | 4.8                        | 6.8    | 8.4    | 9.7    | 68                                    |
| 11004       | 1.3          | 6.4                        | 9.1    | 11.2   | 12.9   | 71                                    |
| 11005       | 1.4          | 8.1                        | 11.4   | 14.0   | 16.1   | 71                                    |
| 11006       | 1.6          | 9.7                        | 13.7   | 16.7   | 19.3   | 71                                    |
| 11007       | 1.7          | 11.3                       | 16.0   | 19.5   | 23     | 71                                    |
| 11008       | 1.8          | 12.9                       | 18.2   | 22     | 26     | 71                                    |
| 11009       | 1.9          | 14.5                       | 21     | 25     | 29     | 71                                    |
| 11010       | 2.0          | 16.1                       | 23     | 28     | 32     | 71                                    |
| 11012       | 2.3          | 19.3                       | 27     | 33     | 39     | 71                                    |
| 950017      | 0.28         | 0.27                       | 0.39   | 0.47   | 0.55   | 33                                    |
| 950025      | 0.33         | 0.40                       | 0.57   | 0.70   | 0.81   | 36                                    |
| 950033      | 0.38         | 0.53                       | 0.75   | 0.92   | 1.1    | 38                                    |
| 950039      | 0.41         | 0.63                       | 0.89   | 1.1    | 1.3    | 40                                    |
| 950050      | 0.46         | 0.81                       | 1.1    | 1.4    | 1.6    | 43                                    |
| 950067      | 0.53         | 1.1                        | 1.5    | 1.9    | 2.2    | 48                                    |
| 950080      | 0.58         | 1.3                        | 1.8    | 2.2    | 2.6    | 48                                    |
| 9501        | 0.66         | 1.6                        | 2.3    | 2.8    | 3.2    | 53                                    |
| 95015       | 0.79         | 2.4                        | 3.4    | 4.2    | 4.8    | 53                                    |
| 9502        | 0.91         | 3.2                        | 4.6    | 5.6    | 6.4    | 56                                    |
| 9503        | 1.1          | 4.8                        | 6.8    | 8.4    | 9.7    | 56                                    |
| 9504        | 1.3          | 6.4                        | 9.1    | 11.2   | 12.9   | 58                                    |
| 9505        | 1.4          | 8.1                        | 11.4   | 14.0   | 16.1   | 58                                    |
| 9506        | 1.6          | 9.7                        | 13.7   | 16.7   | 19.3   | 58                                    |



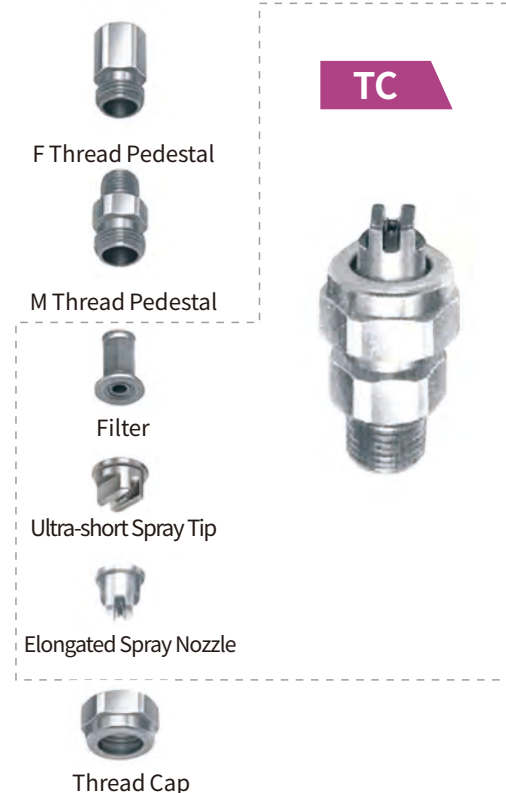
## T Series -Three Piece Set Flat Fan Standard(TC)

### Design Features

- Spray Angle : 0° (Liquid column flow) -110°
- Spray Pattern : Flat spray pattern distributes the liquid as a flat - or sheet-type spray.
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS, SS
- Features : Fast way to install spray tip and adjust angle.  
Large,unobstructed flow passages minimize clogging.  
Removable caps and vanes for easy inspection and cleaning on most models.

### Applications

- Fire prevention
- Spray cooling
- Air cleaning
- Cooling in heat treat process
- Quenching during heat treat process
- Dust control
- Metal treating
- Gas cooling & scrubbing



### Performance State

At the stated pressure in bar.

| Flat Fan Nozzle Type |      |       |      |       |       |       |        | Orifice (mm) | Capacity at 1.0-10.0kg pressure (liters per minute)* |      |      |      |      |      |      |       |
|----------------------|------|-------|------|-------|-------|-------|--------|--------------|------------------------------------------------------|------|------|------|------|------|------|-------|
| 15°                  | 25°  | 40°   | 50°  | 65°   | 80°   | 95°   | 110°   |              | 1bar                                                 | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar |
| 1501                 | 2501 | 4001  | 5001 | 6501  | 8001  | 9501  | 11001  | 0.66         | -                                                    | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.6  | 0.72  |
| -                    | -    | 40015 | -    | 65015 | 80015 | 95015 | 110015 | 0.79         | -                                                    | 0.48 | 0.59 | 0.68 | 0.76 | 0.84 | 0.9  | 1.1   |
| 1502                 | 2502 | 4002  | 5002 | 6502  | 8002  | 9502  | 11002  | 0.91         | 0.46                                                 | 0.64 | 0.79 | 0.91 | 1    | 1.1  | 1.2  | 1.4   |
| 1503                 | 2503 | 4003  | 5003 | 6503  | 8003  | 9503  | 11003  | 1.1          | 0.68                                                 | 0.97 | 1.2  | 1.1  | 1.5  | 1.7  | 1.8  | 2.2   |
| 1504                 | 2504 | 4004  | 5004 | 6504  | 8004  | 9504  | 11004  | 1.3          | 0.91                                                 | 1.3  | 1.6  | 1.8  | 2    | 2.2  | 2.4  | 2.9   |
| 1505                 | 2505 | 4005  | 5005 | 6505  | 8005  | 9505  | 11005  | 1.4          | 1.1                                                  | 1.6  | 2    | 2.3  | 2.5  | 2.8  | 3    | 3.6   |
| 1506                 | 2506 | 4006  | 5006 | 6506  | 8006  | 9506  | 11006  | 1.6          | 1.4                                                  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   |
| 1508                 | 2508 | 4008  | 5008 | 6508  | 8008  | 9508  | 11008  | 1.8          | 1.8                                                  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   |
| 1510                 | 2510 | 4010  | 5010 | 6510  | 8010  | 9510  | 11010  | 2            | 2.3                                                  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6    | 7.2   |
| 1515                 | 2515 | 4015  | 5015 | 6515  | 8015  | 9515  | 11015  | 2.4          | 2.4                                                  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9    | 10.8  |
| 1520                 | 2520 | 4020  | 5020 | 6520  | 8020  | 9520  | 11020  | 2.8          | 2.8                                                  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  |
| 1530                 | 2530 | 4030  | 5030 | 6530  | 8030  | 9530  | 11030  | 3.6          | 3.6                                                  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    |
| 1540                 | 2540 | 4040  | 5040 | 6540  | 8040  | 9540  | -      | 4            | 4                                                    | 12.9 | 15.8 | 18.2 | 20   | 22   | 24   | 29    |
| 1550                 | 2550 | 4050  | 5050 | 6550  | 8050  | 9550  | -      | 4.4          | 4.4                                                  | 16.1 | 19.7 | 23   | 25   | 28   | 30   | 36    |
| 1560                 | 2560 | 4060  | 5060 | 6560  | 8060  | 9560  | -      | 4.8          | 4.8                                                  | 19.3 | 24   | 27   | 31   | 33   | 36   | 43    |
| 1570                 | 2570 | 4070  | 5070 | 6570  | 8070  | 9570  | -      | 5.2          | 5.2                                                  | 23   | 28   | 32   | 36   | 39   | 42   | 50    |

\* Special size please consult our sale dept!

### Order Info

1/4 - TC - SS + SS - 65 - 10  
Inlet Conn. Body Type Material Code Material Code Spray angle Capacity Size

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## T Series -Three Piece Set Flat Fan Blowing(TBL)

### Design Features

- Spray Angle : 90°
- Spray Pattern : Flat spray pattern distributes the liquid as a flat - or sheet-type spray.
- Drops : Small,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS, SS
- Features : Split type, can quickly install the nozzle, adjust the Angle.  
Liquid air dual use, suitable for a variety of occasions.  
An open flow channel minimizes clogging as much as possible.  
The nozzle body can be used repeatedly, only need to replace the nozzle, easy maintenance and cleaning.

### Applications

- Spray cooling
- Air cleaning
- Cooling in heat treat process
- Quenching during heat treat process
- Dust control
- Metal treating
- Gas cooling & scrubbing



### Performance State

At the stated pressure in bar.

| Inlet Conn. (in.) | Spray Angle | Capacity Size | Slot width (mm) | Capacity for Air at 0.2-7kg pressure (liters per minute)* |      |      |      |      | Capacity for Steam at 0.2-7kg pressure (liters per minute)* |      |      |      |      |
|-------------------|-------------|---------------|-----------------|-----------------------------------------------------------|------|------|------|------|-------------------------------------------------------------|------|------|------|------|
|                   |             |               |                 | 1bar                                                      | 2bar | 3bar | 5bar | 7bar | 1                                                           | 2    | 3    | 5    | 7    |
| 1/4               | 90°         | 150           | 0.2             | 77.6                                                      | 116  | 154  | 230  | 307  | 3.56                                                        | 5.27 | 6.97 | 10.3 | 13.7 |
| 3/8               | 90°         | 200           | 0.3             | 102                                                       | 152  | 202  | 302  | 402  | 4.67                                                        | 6.92 | 9.14 | 13.6 | 17.9 |
|                   | 90°         | 250           | 0.4             | 126                                                       | 188  | 250  | 374  | 498  | 5.78                                                        | 8.57 | 11.3 | 16.8 | 22.2 |
|                   | 90°         | 300           | 0.5             | 150                                                       | 224  | 298  | 446  | 594  | 6.9                                                         | 10.2 | 13.5 | 20   | 26.5 |
|                   | 90°         | 350           | 0.6             | 175                                                       | 261  | 346  | 518  | 690  | 8                                                           | 11.9 | 15.7 | 23.2 | 30.7 |
|                   | 90°         | 400           | 0.7             | 199                                                       | 297  | 394  | 590  | 768  | 9.12                                                        | 13.5 | 17.9 | 26.5 | 35   |
|                   | 90°         | 450           | 0.8             | 223                                                       | 333  | 443  | 662  | 882  | 10.2                                                        | 15.2 | 20.2 | 29.7 | 39.3 |
|                   | 90°         | 500           | 0.9             | 247                                                       | 369  | 491  | 734  | 977  | 11.3                                                        | 16.8 | 22.2 | 32.9 | 43.5 |
|                   | 90°         | 550           | 0.6             | 278                                                       | 414  | 551  | 823  | 1096 | 12.7                                                        | 18.8 | 24.9 | 36.9 | 48.8 |
|                   | 90°         | 600           | 0.7             | 305                                                       | 455  | 605  | 905  | 1205 | 14                                                          | 20.7 | 27.4 | 40.6 | 53.7 |
|                   | 90°         | 650           | 0.8             | 328                                                       | 489  | 650  | 972  | 1295 | 15                                                          | 22.3 | 29.4 | 43.6 | 57.7 |
|                   | 90°         | 700           | 0.8             | 353                                                       | 526  | 700  | 1047 | 1394 | 16.2                                                        | 24   | 31.7 | 46.9 | 62.1 |
|                   | 90°         | 750           | 0.9             | 380                                                       | 566  | 753  | 1126 | 1500 | 17.4                                                        | 25.8 | 34.1 | 50.5 | 66.8 |
|                   | 90°         | 900           | 1.1             | 454                                                       | 677  | 901  | 1347 | 1794 | 20.8                                                        | 30.8 | 40.7 | 60.4 | 79.9 |
|                   | 90°         | 1130          | 1.4             | 566                                                       | 844  | 1122 | 1678 | 2235 | 25.9                                                        | 38.4 | 50.8 | 75.2 | 99.5 |

· Special size please consult our sale dept!

### Order Info

1/4BTT + TBL - SS - 150  
Inlet Conn. Body Type Material Code Capacity Size

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## M Series -Adjustable Ball Type Clip Type(155M)

### 155M



155M Body

### 155MG



1552M Detachable

### Design Features

- Spray Angle : 0°-144°(based on nozzle type)
- Spray Pattern :Solid cone- shaped spray pattern or hollow cone- shaped spray pattern or flat fan spray pattern or square spray pattern .  
(Based on nozzle type)
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS, SS, PP/PVC/PTFE
- Features : Fast way to install spray tip and adjust angle.  
Adjustable swivel ball provides a quick change direction.  
Removable caps and vanes for easy inspection and cleaning on most models.

### 155MGL



Detachable

### 155MH



One Shape

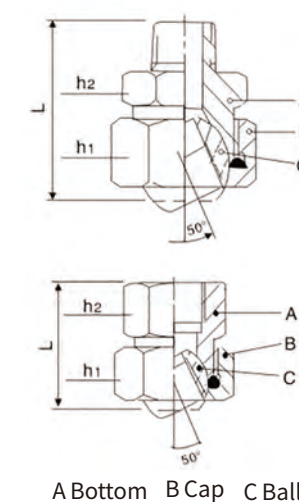
### Applications

- Water aerating
- Fire prevention
- Spray cooling
- Dust control
- Metal treating
- Gas cooling & scrubbing

### Performance State

| Thread                | Nozzle Type | Bottom Connect size (inch) | Outside size (mm) |                |                | Gross Weight(gr.) |      |
|-----------------------|-------------|----------------------------|-------------------|----------------|----------------|-------------------|------|
|                       |             |                            | L                 | h <sub>1</sub> | h <sub>2</sub> | BRASS             | SUSS |
| Connect Size (Male)   | 155M        | 1/8                        | 32                | 22             | 21             | 60                | 56   |
|                       | 155M        | 1/4                        | 36                | 22             | 21             | 65                | 60   |
|                       | 155M        | 1/4                        | 39                | 29             | 24             | 110               | 110  |
|                       | 155M        | 3/8                        | 40                | 29             | 24             | 115               | 105  |
|                       | 155M        | 3/8                        | 47                | 35             | 30             | 205               | 190  |
|                       | 155M        | 1/2                        | 54                | 41             | 41             | 350               | 325  |
|                       | 155M        | 3/4                        | 61                | 50             | 46             | 525               | 490  |
| Connect Size (Female) | 155M        | 1/8                        | 28                | 22             | 21             | 69                | 63   |
|                       | 155M        | 1/4                        | 28                | 22             | 21             | 63                | 58   |
|                       | 155M        | 1/4                        | 33                | 29             | 24             | 120               | 110  |
|                       | 155M        | 3/8                        | 33                | 29             | 24             | 110               | 100  |
|                       | 155M        | 3/8                        | 44                | 35             | 30             | 235               | 220  |
|                       | 155M        | 1/2                        | 48                | 41             | 41             | 405               | 375  |
|                       | 155M        | 3/4                        | 55                | 50             | 46             | 600               | 560  |

· Special size please consult our sale dept!



A Bottom B Cap C Ball

### Order Info

Nozzle Body + Spray Tip  
3/8 - 155M - SS + CT6540 - 3/8 - SS  
Inlet Conn. Body Type Material Code Tip Type Inlet Conn. Material Code

For NPT threaded connections, add the letter "N" before the nozzle connection size.



# Mixing nozzles

## Air Shower Nozzle

## Tank Cleaning Nozzle



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Boyuan Spraying

## Mixing Nozzle Series

### Type H



### Design Features

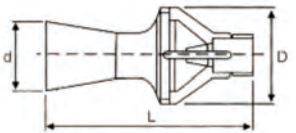
- Material : SS, PP
- Features : Circulation turbulent movement, improve the effect of solution mixing. Realize solution without air mixing, reduce solution oxidation decomposition. Plastic can withstand high temperatures up to 120 degrees ;Stainless steel resistant to high temperature. According to the gravity principle of Berboulli jet, the working jet and the attracted liquid are mixed and diffused in a ratio of 1:4.

### Performance State

At the stated pressure in bar.

| Type | InletConn.<br>(in.) | L<br>(mm) | D<br>(mm) | d<br>(mm) | Flow Rate Capacity (L/min) |      |    |     |     |
|------|---------------------|-----------|-----------|-----------|----------------------------|------|----|-----|-----|
|      |                     |           |           |           | 1巴                         | 1.5巴 | 2巴 | 3巴  | 4巴  |
| H40  | 1/4                 | 70        | 30        | 23        | 15                         | 18   | 21 | 26  | 30  |
| H60  | 3/8                 | 115       | 50        | 38        | 34                         | 42   | 48 | 59  | 68  |
| H90  | 1/2                 | 115       | 50        | 38        | 34                         | 42   | 48 | 59  | 68  |
| H130 | 3/4                 | 165       | 65        | 50        | 64                         | 78   | 90 | 110 | 127 |

· Special size please consult our sale dept!



### Type E



### Design Features

- Material : SS, PP
- Features : Cyclic turbulent motion improves the mixing effect of solution. The working jet and the attracted liquid are mixed and diffused in a ratio of 1:4. To realize the solution without air mixing, reduce the solution oxidation decomposition. It is suitable for liquid stirring in the tank to improve the effect of liquid plating and etching.

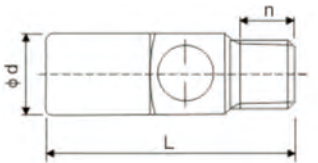
### Applications

- Etched in liquid
- Electroplating solution stirring
- Liquid cleaning
- Stir the liquid in the tank

### Size & Weight

| Series | Thread Specification | Overall dimension ( mm ) |    |      | Foreign body path (mm) | Weight (kg) |
|--------|----------------------|--------------------------|----|------|------------------------|-------------|
|        |                      | L                        | φd | n    |                        |             |
| E      | 1/8"                 | 30                       | 11 | 7    | 1.5                    | 0.001       |
|        | 1/4"                 | 48                       | 16 | 10.5 | 2.8                    | 0.003       |

· Special size please consult our sale dept!



### Order Info

|             |   |            |   |               |
|-------------|---|------------|---|---------------|
| JBZ         | — | 1/4        | — | SS            |
|             |   |            |   |               |
| Nozzle Type |   | Inlet Conn |   | Material Code |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



F-PP



Standard Plastic Air Shower Nozzle

F973-SS



Standard Stainless Steel Air Shower Nozzle

F-ALMA



Aluminium Alloy Air Shower Nozzle

FCH-SS



One-piece duck bill Air Shower Nozzle

F010-SS



Double row Air Shower Nozzle

F921-SS



Small 7-hole Air Shower Nozzle

F703-SS



Solid Air Shower Nozzle

FCM-SS



Aerosol Dual Use Nozzle

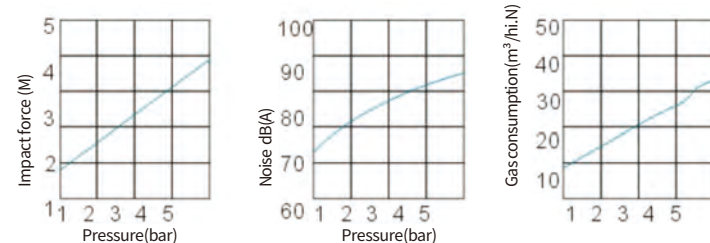
Special Customized



Design Features

- Material: ALMA, BRASS, SS, PP
- Features: High impact sector air flow;  
Plastic material can withstand pressure of 7Bar, temperature resistance up to 77 degrees;  
Aluminum alloy material can withstand pressure of 30 Bar, temperature resistance up to 250 degrees;  
The connection is 1/4 BSPT external thread. (If you need other interfaces, use adapters, etc.)  
Nozzle design ensures low noise, low consumption and high airflow impact.

Performance State



Applications

- Parts cooling
- Parts drying
- Parts cleaning
- Moving of materials
- Paper injection

Order Info

|             |   |            |   |               |
|-------------|---|------------|---|---------------|
| F           | - | 1/8        | - | PP            |
| Nozzle Type |   | Inlet Conn |   | Material Code |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



Fixed and used for tank diameter 1.6 meters

F1601



1"NPT or BSPT (M)

F1602



1"NPT or BSPT (M)

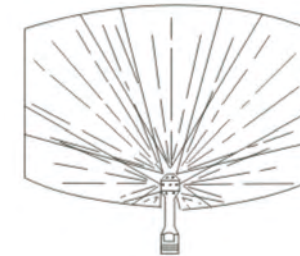
Design Features

- Maximum Operating Temperature: 93°C-177°C
- Spray Impact Area: 360°
- Capacity/Pressure Range: 34-384L/min; 0.7-4bar
- Material: SS, BRASS, PTFE
- Features: Fixed and used for tank diameter 1.6 meters.  
Nozzles tip fixed, clean the small tank is better, different jet to spray, spray cover area and shape is different.  
Durable and corrosion resistant design.

F1603



1/2" or 3/4" NPT or BSPT (F)



Applications

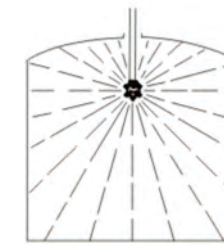
- Tank Cleaning
- Bucket Cleaning
- Pipeline Cleaning
- Container Cleaning
- Drum Barrel Cleaning

Fixed and used for tank diameter 6.7 meters

F6713



1-1/2"NPT or BSPT (F)



Design Features

- Maximum Operating Temperature: 100°C
- Spray Impact Area: 180° (upward or downward) or 360°
- Capacity/Pressure Range: 34-384L/min; 0.7-4bar
- Material: SS, BRASS
- Features: Fixed and used for tank diameter 6.7 meters.  
Nozzles tip fixed, clean the small tank is better, different jet to spray, spray cover area and shape is different.  
Durable and corrosion resistant design.

Applications

- Tank Cleaning
- Bucket Cleaning
- Pipeline Cleaning
- Container Cleaning
- Drum Barrel Cleaning

Fixed and used for tank diameter 6.7 meters

F7001

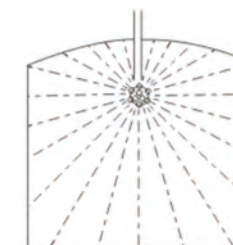


1/2"NPT or BSPT

F7002



3/4"-2"inch



Design Features

- Maximum Operating Temperature: 204°C
- Spray Impact Area: 180° (upward or downward) or 360°
- Capacity/Pressure Range: 83-965L/min; 1-2bar
- Material: SS, BRASS
- Features: Fixed and used for tank diameter 7 meters.  
Nozzles tip fixed, clean the small tank is better, different jet to spray, spray cover area and shape is different.  
Durable and corrosion resistant design.

Applications

- Chemical manufacturing tank cleaning
- Food processing tank cleaning
- Drug processing tank cleaning



## Rotating and used for tank diameter 2.4 meters

### R2401



1/2"NPT or BSPT(F)

### R2403



3/4"NPT or BSPT(F)

### Design Features

- Maximum Operating Temperature : 93°C-177°C
- Spray Impact Area : 360°
- Capacity/Pressure Range : 34-384 L/min;0.7-4 bar
- Material :SS, BRASS, PTFE
- Features : Rotating tank washing, used for the interior of small tank and barrel with diameter up to 2.4 m.  
Precise installation and positioning of jet holes, which can cover all surfaces in tank during injection.  
It can be installed in both vertical and horizontal positions.

### Applications

- Bucket cleaning    · Pipeline cleaning    · Chemical container cleaning
- Food processing tank cleaning    · Drug processing tank cleaning

### R2401 Parameter

At the stated pressure in bar.

| Nozzle Type     | Flow Rate Capacity (L/min) |      |      |      |      |      |       |       |
|-----------------|----------------------------|------|------|------|------|------|-------|-------|
|                 | 1.5bar                     | 3bar | 4bar | 5bar | 6bar | 8bar | 10bar | 12bar |
| R2401-2-HSS-5   | 14                         | 19.7 | 23   | 25   | 28   | 32   | 36    | 39    |
| R2401-2-HSS-8   | 22                         | 32   | 36   | 41   | 45   | 52   | 58    | 63    |
| R2401-3-HSS-5.7 | 15.9                       | 22   | 26   | 29   | 32   | 37   | 41    | 45    |
| R2401-3-HSS-7   | 19.5                       | 28   | 32   | 36   | 39   | 45   | 50    | 55    |
| R2401-3-HSS-10  | 28                         | 39   | 46   | 51   | 56   | 64   | 72    | 79    |

### R2403 Parameter

At the stated pressure in bar.

| Nozzle Type  | Flow Rate Capacity (L/min) |        |      |        |      |      |
|--------------|----------------------------|--------|------|--------|------|------|
|              | 1bar                       | 1.5bar | 2bar | 2.5bar | 3bar | 4bar |
| R2403-HSS-10 | 23                         | 28     | 32   | 36     | 39   | 46   |
| R2403-HSS-18 | 41                         | 50     | 58   | 65     | 71   | 82   |
| R2403-HSS-21 | 48                         | 59     | 68   | 76     | 83   | 96   |
| R2403-HSS-45 | 103                        | 126    | 145  | 162    | 178  | 205  |

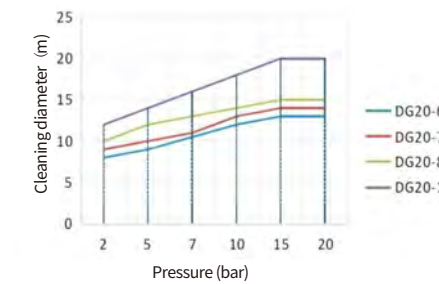


## Rotary type for tank diameters up to 5-20 meters

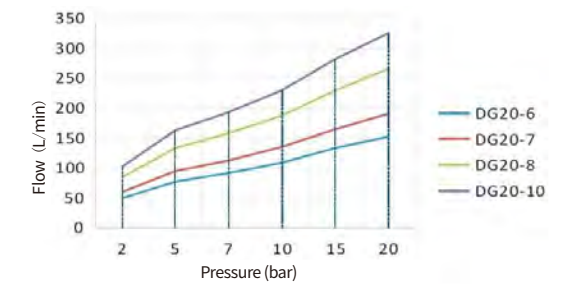
### R20



Cleaning diameter parameter



Flow parameter curve



### Design Features

- 360° no dead Angle cleaning design, through horizontal and vertical rotation to achieve 360° coverage;
- Using medium driven design, cleaning liquid driven vortex rotation to achieve horizontal and vertical rotation;
- In the cleaning process, it can clean itself and lubricate itself through the cleaning liquid.

### R5501



3/4", 1", 1-1/2 DN20, DN25 or DN40  
Hygienic Pipe Nozzle

### Design Features

- Maximum Operating Temperature : 93°C
- Spray Impact Area : 180° (upward or downward) ,270° or 360°
- Capacity/Pressure Range : 34-384 L/min; 0.7-3.5 bar
- Material : PTFE
- Features : Rotating and used for the interior of small tank and container with diameter up to 5.5 meters .It works well.  
No thread,tapered design facilitates self-draining and prevents the formation of nozzle effusion.The material contains fluoropolymer resin, suitable for corrosive chemical cleaning agent.

### Applications

- Chemical container cleaning    · Food processing tank cleaning
- Drug processing tank cleaning



## Rotary type and used for tank diameter 7.6 meters

### R7601



1/2-3"NPT or BSPT

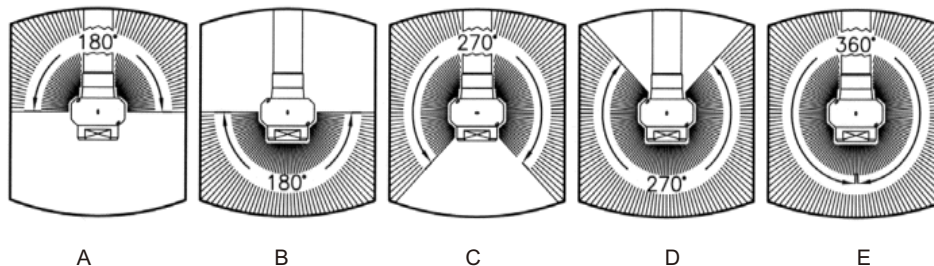
### Design Features

- Maximum Operating Temperature : 93°C
- Spray Impact Area : 180° (upward or downward) ,270° or 360°
- Capacity/Pressure Range : 15-1490L/min;0.7-3.5bar
- Material : SS, BRASS, PVDF
- Features : Rotating and used for the interior of small tank and container with diameter up to 7.6 meters .The material is fluoropolymer resin with corrosion resistance and long service life. Meet low pressure requirements for cleaning and rinsing.

### Applications

- Container cleaning
- Mixing tank cleaning
- Chemical container cleaning

### Spray direction



### Performance State

At the stated pressure in bar.

| Interface Size | Capacity Code | Flow Rate Corresponding To Different Pressures (liters per minute)* |        |      |        |      |        |      |        | Maximum Spray Distance |
|----------------|---------------|---------------------------------------------------------------------|--------|------|--------|------|--------|------|--------|------------------------|
|                |               | 0.5bar                                                              | 0.7bar | 1bar | 1.5bar | 2bar | 2.5bar | 3bar | 3.5bar |                        |
| 1/2"           | 8             | 13                                                                  | 15     | 18   | 22     | 26   | 29     | 32   | 34     | 3m                     |
| 3/4"           | 18            | 29                                                                  | 34     | 41   | 50     | 58   | 65     | 71   | 77     | 4.5m                   |
|                | 23            | 37                                                                  | 44     | 53   | 64     | 74   | 83     | 91   | 99     |                        |
|                | 32            | 52                                                                  | 61     | 73   | 90     | 104  | 116    | 127  | 137    |                        |
|                | 33            | 53                                                                  | 63     | 76   | 93     | 106  | 119    | 131  | 141    |                        |
|                | 46            | 74                                                                  | 88     | 105  | 129    | 149  | 166    | 182  | 197    |                        |
| 1"             | 50            | 81                                                                  | 96     | 114  | 140    | 162  | 181    | 198  | 214    | 5.5m                   |
|                | 53            | 86                                                                  | 102    | 121  | 149    | 172  | 192    | 210  | 227    |                        |
|                | 70            | 113                                                                 | 135    | 160  | 196    | 227  | 253    | 278  | 300    |                        |
|                | 90            | 146                                                                 | 172    | 206  | 252    | 291  | 326    | 357  | 385    |                        |
| 2"             | 100           | 162                                                                 | 192    | 229  | 280    | 324  | 362    | 396  | 428    | 6m                     |
|                | 125           | 202                                                                 | 239    | 286  | 350    | 405  | 452    | 496  | 535    |                        |
|                | 150           | 243                                                                 | 287    | 343  | 421    | 486  | 543    | 595  | 642    |                        |
|                | 175           | 283                                                                 | 335    | 401  | 491    | 567  | 633    | 693  | 749    |                        |
|                | 200           | 323                                                                 | 383    | 457  | 560    | 647  | 723    | 792  | 856    |                        |
| 3"             | 250           | 404                                                                 | 478    | 572  | 700    | 809  | 904    | 991  | 1070   | 7.5m                   |
|                | 300           | 485                                                                 | 574    | 686  | 841    | 971  | 1085   | 1189 | 1284   |                        |
|                | 350           | 566                                                                 | 670    | 801  | 981    | 1133 | 1266   | 1387 | 1498   |                        |

## IBC Tank Cleaning Nozzle



### Design Features

·Working principle: The series can washer is driven by an external motor to drive the gear of the can washer to rotate. The running track set by the gear mechanism realizes rotation and revolution, thus achieving 360° no-dead Angle cleaning.

·Features:

1. Large mechanical effect: combined with pressure and flow to produce a strong impact jet, with several times more than the impact of other products, can achieve a large cleaning distance and range. The kinetic energy generated by the high pressure pump to flush the water can effectively remove the residue on the container wall. The positive impact force from the vertical direction helps to penetrate the dirt. Tangential forces help remove the walls of the vessel. The residue on it.

2. Low leakage :3% of the leakage, 97% of the cleaning fluid for cleaning, can make the three-dimensional rotary can wash the mechanical force to play a greater benefit, and reduce the dependence on time, chemical reaction and temperature. IBC three-dimensional rotary can washer saves water, time and energy, only 20% to 50% of other products.

3. Model configuration standardization: all parts are precision machined, the same model parts are interchangeable, simple and convenient maintenance, to ensure efficient cleaning.

4. Truly realize three-dimensional cleaning: with accurate and completely repeated reliable tight jet trajectory, guided impact,360\* spherical full coverage, 3-5 minutes of cleaning time to reduce the tank downtime; Reduce resource consumption and reduce sewage treatment costs accordingly; Clean the bottom, reduce the use of chemicals can reduce environmental pollution.

### Performance State

|                               |                                                          |
|-------------------------------|----------------------------------------------------------|
| Manufacturing Material        | 304/316L SS, PEEK                                        |
| Oiling                        | Self-lubricating by cleaning fluid                       |
| Working Pressure              | 2- 150bar                                                |
| Maximum Operating Temperature | 95°C                                                     |
| Cleaning Angle                | 360 °                                                    |
| Connection mode               | Flange or thread                                         |
| Weight                        | 7.5-12kg                                                 |
| Nozzle Diameter               | 1-1.5 mm                                                 |
| Recommended Pressure          | 3- 100bar                                                |
| Maximum Ambient Temperature   | 140°C                                                    |
| Cleaning diameter             | 4m                                                       |
| Interface Size                | G3/8 External thread                                     |
| Cleaning Cycle                | 3-5 minutes (spray rod length can be selected 500, 1000) |



# Paper industry

# Iron & steel industry



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Boyuan Spraying

## High Pressure Needle Nozzle

### P1070



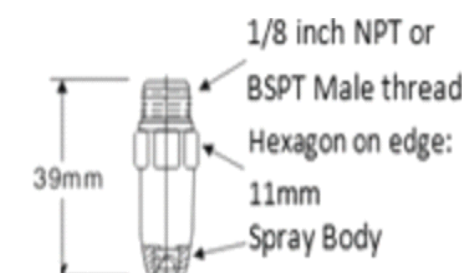
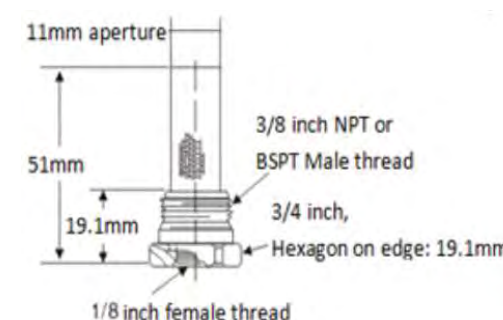
### Design Features

- Material : SS, BRASS
- Features: Used for cutting edge of paper, precise and clean.  
It can withstand up to 140bar of pressure, and the nozzle is made of a variety of materials, 316SS, ruby core, tungsten alloy, ceramic and so on.

### Applications

- High pressure swing cleaning of the net
- Blind roll cleaning
- Press section blanket high pressure swing cleaning
- Groove cleaning

### Design Size



### Performance State

At the stated pressure in bar.

| Nozzle Type | No. | Orifice (mm) | Flow Rate Capacity (L/min) |       |       |       |       |       |       |       |        |        |
|-------------|-----|--------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
|             |     |              | 7bar                       | 10bar | 20bar | 30bar | 40bar | 50bar | 60bar | 70bar | 100bar | 138bar |
| P1070       | 15  | 0.38         | 0.17                       | 0.21  | 0.29  | 0.36  | 0.41  | 0.46  | 0.5   | 0.54  | 0.65   | 0.76   |
| P1070       | 20  | 0.51         | 0.31                       | 0.36  | 0.52  | 0.63  | 0.73  | 0.82  | 0.89  | 0.96  | 1.2    | 1.4    |
| P1070       | 25  | 0.64         | 0.48                       | 0.57  | 0.81  | 0.99  | 1.1   | 1.3   | 1.4   | 1.5   | 1.8    | 2.1    |
| P1070       | 30  | 0.76         | 0.69                       | 0.82  | 1.2   | 1.4   | 1.6   | 1.8   | 2     | 2.2   | 2.6    | 3.1    |
| P1070       | 35  | 0.89         | 0.93                       | 1.1   | 1.6   | 1.9   | 2.2   | 2.5   | 2.7   | 3     | 3.5    | 4.2    |
| P1070       | 40  | 1.0          | 1.2                        | 1.5   | 2.1   | 2.5   | 2.9   | 3.3   | 3.6   | 3.9   | 4.6    | 5.4    |
| P1070       | 45  | 1.1          | 1.5                        | 1.9   | 2.6   | 3.2   | 3.7   | 4.1   | 4.5   | 4.9   | 5.8    | 6.9    |
| P1070       | 50  | 1.3          | 1.9                        | 2.3   | 3.2   | 4     | 4.6   | 5.1   | 5.6   | 6     | 7.2    | 8.5    |
| P1070       | 60  | 1.5          | 2.8                        | 3.3   | 4.6   | 5.7   | 6.6   | 7.3   | 8     | 8.7   | 10.4   | 12.2   |

· Special size please consult our sale dept!

### Order Info

| Nozzle Body |   |           | Spray Tip |               |                        |
|-------------|---|-----------|-----------|---------------|------------------------|
| 1/4         | - | P1070     | -         | SS            | + RUS - 20             |
| Inlet Conn. |   | Body Type |           | Material Code | Tip Type Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.



## High Pressure Needle Nozzle

### PN2070-SS



SS Normal Type

### PN2070-RUS



Standard Ruby Inset

### PN2070-SIS



Standard Ceramic Inset

### PN2071-SS



Standard Longer SS Type

### PN2071-RUS



Longer with Ruby Inset

### PN2071-SIS



Longer with Ceramic Inset

### Design Features

- Material: SS
- Features: High impact cleaning. It can be used with swing spray bar, and can be interchangeable with other needle nozzles, and the nozzle is made of a variety of materials, SS, ruby core, tungsten alloy, ceramic and so on.

### Applications

- Washing net
- Washing machine
- Blind hole roll cleaning
- Blanket cleaning

### Order Info

| Nozzle Body |           |               | Spray Tip |    |               |
|-------------|-----------|---------------|-----------|----|---------------|
| 1/4         | -         | P2070         | -         | SS | + RUS - 1P    |
| Inlet Conn. | Body Type | Material Code | Tip Type  |    | Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

### Performance State

At the stated pressure in bar.

| Nozzle Type |     |     |          |     |     | Capacity<br>Size | Orifice<br>(mm) | Flow Rate Capacity<br>(L/min) |      |      |       |       |       |       |       |
|-------------|-----|-----|----------|-----|-----|------------------|-----------------|-------------------------------|------|------|-------|-------|-------|-------|-------|
| PN2070      |     |     | PN2071   |     |     |                  |                 | 3bar                          | 5bar | 7bar | 15bar | 30bar | 40bar | 50bar | 60bar |
| Material    |     |     | Material |     |     |                  |                 |                               |      |      |       |       |       |       |       |
| 316SS       | SIS | RUS | 316SS    | SIS | RUS |                  |                 |                               |      |      |       |       |       |       |       |
| ●           | ●   | ●   | ●        | ●   | ●   | 1P               | 0.8             | 0.54                          | 0.7  | 0.83 | 1.22  | 1.73  | 2     | 2.23  | 2.45  |
| ●           |     |     |          |     |     | 2P               | 0.84            | 0.62                          | 0.81 | 0.95 | 1.4   | 2     | 2.4   | 2.7   | 2.9   |
| ●           | ●   | ●   | ●        | ●   | ●   | 3P               | 0.9             | 0.6                           | 0.89 | 1.05 | 1.55  | 2.19  | 2.53  | 2.83  | 2.1   |
| ●           | ●   | ●   | ●        | ●   | ●   | 4P               | 1               | 0.85                          | 1.1  | 1.3  | 1.91  | 2.7   | 3.21  | 3.49  | 3.83  |
| ●           |     |     |          |     |     | 5P               | 1.02            | 0.89                          | 1.1  | 1.4  | 2     | 2.8   | 3.2   | 3.6   | 3.9   |
| ●           | ●   | ●   | ●        | ●   | ●   | 6P               | 1.2             | 1.23                          | 1.59 | 1.88 | 2.75  | 3.9   | 4.5   | 5.03  | 5.51  |
| ●           |     |     |          |     |     | 7P               | 1.4             | 1.6                           | 2.1  | 2.4  | 3.6   | 5     | 5.8   | 6.5   | 7     |
| ●           | ●   | ●   | ●        | ●   | ●   | 8P               | 1.5             | 1.92                          | 2.48 | 2.94 | 4.3   | 6.09  | 7.03  | 7.86  | 8.61  |
| ●           |     |     |          |     |     | 9P               | 1.78            | 2.7                           | 3.5  | 4.2  | 6.1   | 8.8   | 10    | 11    | 13    |
| ●           | ●   | ●   | ●        | ●   | ●   | 10P              | 1.8             | 2.77                          | 3.58 | 4.23 | 6.2   | 8.77  | 10.1  | 11.3  | 12.4  |
| ●           | ●   | ●   | ●        | ●   | ●   | 11P              | 2               | 3.42                          | 4.42 | 5.23 | 7.66  | 10.8  | 2.5   | 13.9  | 15.3  |
| ●           |     |     |          |     |     | 12P              | 2.39            | 4.5                           | 5.9  | 7    | 10    | 15    | 18    | 20    | 22    |
| ●           |     |     |          |     |     | 13P              | 3.18            | 7.3                           | 9.6  | 11   | 17    | 25    | 30    | 33    | 37    |

Special size please consult our sale dept!



## Slice High Pressure Needle Nozzle

### PN3070-SS



Stainless steel body

### PN3070-RUS/SIS



Ceramic and ruby core

### PNH3071-RUS



Ruby core and gasket

### PN3071-RUS



Ruby core

### Design Features

- Spray angle: 0° (stream)
- Material: SS
- Features: Wafer high pressure needle nozzle. Apply to blind hole roll cleaning blanket cleaning

### Order Info

|             |   |               |   |               |
|-------------|---|---------------|---|---------------|
| PN3070      | - | SS            | - | 00004         |
| Nozzle Type |   | Material Code |   | Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

### PN3070-SS SS One-piece

At the stated pressure in bar.

| Nozzle Type     | Orifice (mm) | Flow Rate Capacity (L/min) |      |      |       |       | Spray Angle at 4 bar |
|-----------------|--------------|----------------------------|------|------|-------|-------|----------------------|
|                 |              | 1.5bar                     | 3bar | 7bar | 20bar | 55bar |                      |
| PN3070-SS-00004 | 0.3          | 0.11                       | 0.16 | 0.24 | 0.41  | 0.68  | 0°                   |
| PN3070-SS-00007 | 0.4          | 0.2                        | 0.28 | 0.42 | 0.71  | 1.2   |                      |
| PN3070-SS-00009 | 0.5          | 0.25                       | 0.36 | 0.54 | 0.92  | 1.5   |                      |
| PN3070-SS-0001  | 0.6          | 0.36                       | 0.51 | 0.78 | 1.3   | 2.2   |                      |
| PN3070-SS-0002  | 1            | 0.64                       | 0.91 | 1.4  | 2.3   | 3.9   |                      |
| PN3070-SS-0003  | 1.2          | 0.92                       | 1.3  | 2    | 3.4   | 5.6   |                      |
| PN3070-SS-0004  | 1.5          | 1.2                        | 1.7  | 2.6  | 4.4   | 7.3   |                      |
| PN3070-SS-0008  | 1.9          | 2.2                        | 3.1  | 4.8  | 8.1   | 13.4  |                      |
| PN3070-SS-0012  | 2.4          | 3.5                        | 4.9  | 7.5  | 12.6  | 21    |                      |
| PN3070-SS-0020  | 3.2          | 5.5                        | 7.8  | 11.9 | 20    | 33    |                      |

### PN3070-SIS ceramic core type

At the stated pressure in bar.

| Nozzle Type        | Orifice (mm) | Flow Rate Capacity (L/min) |      |      |       |       | Spray Angle at 4 bar |
|--------------------|--------------|----------------------------|------|------|-------|-------|----------------------|
|                    |              | 1.5bar                     | 3bar | 7bar | 20bar | 55bar |                      |
| PN3070-SIS-00005   | 0.5          | 0.14                       | 0.20 | 0.31 | 0.52  | 0.86  | 0°                   |
| PN3070-SIS-00008   | 0.64         | 0.22                       | 0.31 | 0.45 | 0.81  | 1.34  |                      |
| PN3070-SIS-00010   | 0.76         | 0.32                       | 0.45 | 0.69 | 1.16  | 1.93  |                      |
| PN3070-SIS-00015   | 0.9          | 0.43                       | 0.61 | 0.94 | 1.58  | 2.62  |                      |
| PN3070-SIS-00020   | 1.0          | 0.56                       | 0.80 | 1.22 | 2.06  | 3.42  |                      |
| PN3070-SIS-00025   | 1.1          | 0.72                       | 1.01 | 1.54 | 2.61  | 4.33  |                      |
| PN3070-SIS-00030   | 1.3          | 0.88                       | 1.25 | 1.91 | 3.22  | 5.34  |                      |
| PN3070-SSCER-00045 | 1.5          | 1.27                       | 1.80 | 2.75 | 4.64  | 7.7   |                      |

### PN3070-RUS ruby core type

At the stated pressure in bar.

| Nozzle Type      | Inch           |
|------------------|----------------|
| PN3070-RUS-00003 | 0.015"(0.38mm) |
| PN3070-RUS-00005 | 0.020"(0.51mm) |
| PN3070-RUS-00008 | 0.025"(0.64mm) |
| PN3070-RUS-00011 | 0.030"(0.76mm) |
| PN3070-RUS-00015 | 0.035"(0.89mm) |
| PN3070-RUS-00020 | 0.040"(1.02mm) |
| PN3070-RUS-00025 | 0.045"(1.14mm) |

### PNH3071-RUS ruby core type

At the stated pressure in bar.

| Nozzle Type       | Inch           |
|-------------------|----------------|
| PNH3071-RUS-00003 | 0.015"(0.38mm) |
| PNH3071-RUS-00005 | 0.020"(0.51mm) |
| PNH3071-RUS-00008 | 0.025"(0.64mm) |
| PNH3071-RUS-00011 | 0.030"(0.76mm) |
| PNH3071-RUS-00015 | 0.035"(0.89mm) |
| PNH3071-RUS-00020 | 0.040"(1.02mm) |
| PNH3071-RUS-00025 | 0.055"(1.14mm) |

Special size please consult our sale dept!



## Slice High Pressure Needle Nozzle

### PC1080



### Design Features

- Spray angle: 0° (stream) - 75°
- Material: SS
- Features: It is suitable for use when space is limited and the height of spray rod and net is small. Apply to low-pressure fan cleaning and scraper type stream and lubrication.

### Order Info

|             |   |               |   |             |   |               |
|-------------|---|---------------|---|-------------|---|---------------|
| PC1080      | - | SS            | - | 60          | - | 02            |
| Nozzle Type |   | Material Code |   | Spray Angle |   | Capacity Size |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

### Performance State

At the stated pressure in bar.

| Nozzle Type |       |       |       | Orifice (mm) | Flow Rate Capacity(L/min) |      |      |       |       |
|-------------|-------|-------|-------|--------------|---------------------------|------|------|-------|-------|
| 0°          | 30°   | 60°   | 75°   |              | 1.5bar                    | 3bar | 7bar | 20bar | 55bar |
| 0002        | -     | 6002  | 7502  | 1.0          | 0.64                      | 0.91 | 1.4  | 2.3   | 3.9   |
| 0003        | -     | 6003  | 7503  | 1.2          | 0.92                      | 1.3  | 2.0  | 3.4   | 5.6   |
| 0004        | -     | 6004  | 7504  | 1.5          | 1.2                       | 1.7  | 2.6  | 4.4   | 7.3   |
| 0006        | -     | 6006  | 7506  | 1.8          | 1.7                       | 2.4  | 3.7  | 6.2   | 10.3  |
| 0008        | -     | 6008  | 7508  | 2.0          | 2.2                       | 3.1  | 4.8  | 8.1   | 13.4  |
| 0010        | -     | 6010  | 7510  | 2.2          | 2.8                       | 4.0  | 6.2  | 10.4  | 17.2  |
| -           | 3012  | 6012  | 7512  | 2.5          | 3.5                       | 4.9  | 7.5  | 12.6  | 21    |
| -           | 3016  | 6016  | 7516  | 2.8          | 4.5                       | 6.3  | 9.7  | 16.4  | 27    |
| -           | 3020  | 6020  | 7520  | 3.0          | 5.5                       | 7.8  | 11.9 | 20    | 33    |
| -           | 3025  | 6025  | 7525  | 3.5          | 7.2                       | 10.1 | 15.5 | 26    | 43    |
| -           | 3031  | 6031  | 7531  | 4.0          | 8.8                       | 12.4 | 18.9 | 32    | 53    |
| -           | 3040  | 6040  | 7541  | 4.5          | 11.3                      | 15.9 | 24   | 41    | 68    |
| -           | 3049  | 6049  | 7549  | 5.0          | 13.7                      | 19.4 | 30   | 50    | 83    |
| -           | 3078  | 6078  | 7578  | 6.0          | 22                        | 31   | 48   | 81    | 133   |
| -           | 3099  | 6099  | 7599  | 7.0          | 28                        | 39   | 60   | 101   | 167   |
| -           | 30124 | 60124 | 75124 | 8.0          | 35                        | 49   | 75   | 126   | 210   |

· Special size please consult our sales dept!

## Flat fan nozzle

### PC2080



PC20fan nozzle



Nozzle front



Nozzle back

### Design Features

- Spray angle: 25°-90°
- Material: SS
- Features: It is suitable for use when space is limited and the height of spray rod and net is small. Apply to low-pressure fan cleaning and scraper type stream and lubrication.



## Plastic nozzles



## Quick Remove Plastic Nozzle

### Quick-release Full cone Nozzle



### Order Info

|             |   |             |   |               |
|-------------|---|-------------|---|---------------|
| QB1         | — | 1/4         | — | PP            |
|             |   |             |   |               |
| Inlet Conn. |   | Nozzle Type |   | Material Code |

### Performance State

At the stated pressure in bar.

| Nozzle Type | Flow Rate Capacity(L/min) |        |        |      |      |      |      |      |      |       | Spray Angle (°)* |        |      |
|-------------|---------------------------|--------|--------|------|------|------|------|------|------|-------|------------------|--------|------|
|             | 0.5bar                    | 0.7bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 0.5bar           | 1.5bar | 6bar |
| QB1         | 0.25                      | 0.38   | 0.54   | 0.62 | 0.74 | 0.85 | 0.94 | 1    | 1.1  | 1.3   | -                | 58     | 53   |
| QB2         | 0.65                      | 0.76   | 1      | 1.2  | 1.5  | 1.7  | 1.9  | 2    | 2.2  | 2.6   | 43               | 50     | 46   |
| QB3         | 0.98                      | 1.1    | 1.6    | 1.9  | 2.2  | 2.5  | 2.8  | 3.1  | 3.3  | 3.9   | 52               | 65     | 59   |
| QB3.5       | 1.1                       | 1.3    | 1.9    | 2.2  | 2.6  | 3    | 3.3  | 3.6  | 3.9  | 4.5   | 43               | 50     | 46   |
| QB5         | 1.6                       | 1.9    | 2.7    | 3.1  | 3.7  | 4.2  | 4.7  | 5.1  | 5.5  | 6.5   | 52               | 65     | 59   |
| QB6.5       | 2.1                       | 2.5    | 3.5    | 4    | 4.8  | 5.5  | 6.1  | 6.7  | 7.1  | 8.4   | 45               | 50     | 46   |
| QB10        | 3.3                       | 3.8    | 5.4    | 6.2  | 7.4  | 8.5  | 9.4  | 10.2 | 11   | 13    | 58               | 67     | 61   |

### Quick-release Flat Fan Nozzle



### Order Info

|             |   |             |   |               |
|-------------|---|-------------|---|---------------|
| QC5001      | — | 1/4         | — | PP            |
|             |   |             |   |               |
| Inlet Conn. |   | Nozzle Type |   | Material Code |

### Performance State

At the stated pressure in bar.

| Nozzle Type<br>( spray angle at 3 bar ) |        |        |        |         | Flow Rate Capacity (L/min) |      |      |      |      |      |      |      |       |
|-----------------------------------------|--------|--------|--------|---------|----------------------------|------|------|------|------|------|------|------|-------|
| 55°                                     | 65°    | 80°    | 95°    | 110°    | 0.3bar                     | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 14bar |
| QC5001                                  | QC6501 | QC8001 | QC9501 | QC11001 | 0.12                       | 0.23 | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.6  | 0.85  |
| QC5002                                  | QC6502 | QC8002 | QC9502 | QC11002 | 0.25                       | 0.45 | 0.64 | 0.79 | 0.91 | 1    | 1.1  | 1.2  | 1.7   |
| QC5003                                  | QC6503 | QC8003 | QC9503 | QC11003 | 0.37                       | 0.69 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.6   |
| QC5004                                  | QC6504 | QC8004 | QC9504 | QC11004 | 0.5                        | 0.92 | 1.3  | 1.6  | 1.8  | 2    | 2.2  | 2.4  | 3.4   |
| QC5005                                  | QC6505 | QC8005 | QC9505 | QC11005 | 0.62                       | 1.1  | 1.6  | 2    | 2.3  | 2.5  | 2.8  | 3    | 4.3   |
| QC5006                                  | QC6506 | QC8006 | QC9506 | QC11006 | 0.75                       | 1.3  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 5.1   |
| QC5008                                  | QC6508 | QC8008 | QC9508 | QC11008 | 1                          | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 6.8   |
| QC5010                                  | QC6510 | QC8010 | QC9510 | QC11010 | 1.2                        | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6    | 8.5   |
| QC5015                                  | QC6515 | QC8015 | QC9515 | QC11015 | 1.9                        | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9    | 12.8  |
| QC5020                                  | QC6520 | QC8020 | QC9520 | QC11020 | 2.5                        | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 17.1  |
| QC5030                                  | QC6530 | QC8030 | QC9530 | QC11030 | 3.7                        | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 26    |

## Quick Remove Plastic Nozzle

### Quick-release Flat Fan Nozzles



2818-PP

2828-PP

2848-PP

### Design Features

- Spray angle : 25°-110°
- Spray Pattern : Flat spray pattern distributes the liquid as a flat - or sheet-type spray.
- Material : F4/PP/PVC/PVDF/SS(nozzle tip);PVC/PP/PCDF(nozzle body)
- Features : Standard quick connected spray nozzle Assemblies: nozzle body,spray tip,seal,cap.  
Model 2818 offers Φ16mm welded base, access size 1/2", 3/8" BSPT/NPT;  
Lower cost and more choices of materials.Fast and easy installation.

### Performance State

At the stated pressure in bar.

| Outlet Conn. |     | Flat Fan Nozzle Type |      |      |      | Capacity at 1.0-10.0kg pressure |      |      |      |      |      |      |      |       |
|--------------|-----|----------------------|------|------|------|---------------------------------|------|------|------|------|------|------|------|-------|
| 16           | 3/8 | 1/4                  | 65°  | 80°  | 95°  | 110°                            | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar |
|              | ●   |                      | 6502 | 8002 | 9502 | 11002                           | 0.46 | 0.64 | 0.79 | 0.91 | 1    | 1.1  | 1.2  | 1.4   |
|              | ●   |                      | 6504 | 8004 | 9504 | 11004                           | 0.91 | 1.3  | 1.6  | 1.8  | 2    | 2.2  | 2.4  | 2.9   |
|              | ●   |                      | 6506 | 8006 | 9506 | 11006                           | 1.4  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   |
|              | ●   |                      | 6508 | 8008 | 9508 | 11008                           | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   |
|              | ●   |                      | 6510 | 8010 | 9510 | 11010                           | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6    | 7.2   |
|              | ●   |                      | 6515 | 8015 | 9515 | 11015                           | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9    | 10.8  |
|              | ●   |                      | 6520 | 8020 | 9520 | 11020                           | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  |
|              | ●   |                      | 6530 | 8030 | 9530 | 11030                           | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.0 | 22.0  |

### Split Hole Quick Release Nozzle



KC-01  
(11/4inch Pinch)

KC-02  
(1/2inch Pinch)

KC-03  
(3/4inch Pinch)

KC-04  
(3/4inch Pinch)

JK Series  
(3/4inch Pinch)

Metal Clip connector

### Design Features

- Material : SS/BRASS.PP(nozzle tip);SS/PP(nozzle body)
- Features : The tube sizes:3/8", 1/2", 3/4",1",1/2", 3/4"  
Fast and easy installation.

### Performance State

At the stated pressure in bar.

| Body Type | To Clamp On      |                         | Outside Conn.<br>NPT & BSPT |     |     |     | Material |   |   | Maximum Pressure (bar) | Capacity at Maximum Pressure (L/min) | Dimensions |                       |                       |        | Net Weight ( kg ) |
|-----------|------------------|-------------------------|-----------------------------|-----|-----|-----|----------|---|---|------------------------|--------------------------------------|------------|-----------------------|-----------------------|--------|-------------------|
|           | PipeSize ( in. ) | Outside Dia. Tubing(mm) |                             |     |     |     | A        | B | C |                        |                                      | A (mm)     | B DrillHole Dia. (mm) | C BodyInlet Dia. (mm) | D (mm) |                   |
| 7521      | 1/2              | 20-22                   | 1/8                         | 1/4 | -   | -   | ●        | ● | ● | 17                     | 11                                   | 48         | 7.1                   | 4.8                   | 17.5   | 0.06              |
|           | 3/4              | 25-27                   | 1/8                         | 1/4 | -   | -   | ●        | ● | ● |                        |                                      | 54         |                       |                       |        |                   |
|           | 1                | 32-35                   | 1/8                         | 1/4 | -   | -   | ●        | ● | ● |                        |                                      | 57         |                       |                       |        |                   |
| 8370      | 1-1/4            | 39-43                   | -                           | 1/4 | 3/8 | 1/2 | ●        | ● | ● | 9                      | 45                                   | 70         | 17.5                  | 11.1 or 14.3          | 20     | 0.17              |
|           | 1-1/2            | 44-51                   | -                           | 1/4 | 3/8 | 1/2 | ●        | ● | ● |                        |                                      | 81         |                       |                       |        |                   |
|           | 2                | 54-60                   | -                           | 1/4 | 3/8 | 1/2 | ●        | ● | ● |                        |                                      | 88         |                       |                       |        |                   |



## One-Piece Plastic Nozzle

Boyuan Spraying

### One-Piece Plastic Nozzle



### Design Features

- Material : PP/PVC/PTFE/PVDF
- Features : Smooth finished surfaces assure leak-proof connections.  
High hardness and wear resistance  
Lower cost and more choices of materials.

### Applications

- PCB manufacturing
- Gas cooling & scrubbing
- Etching
- Quenching during heat treat process
- Dust control
- Foam break-up, aeration, deaeration
- Ash washing

### BB Full Cone Spray



At the stated pressure in bar.

| Inlet Conn. | Capacity Code | Flow Rate Capacity(L/min) |        |      |      |      |      |      | Spray Angel (°) |        |      |
|-------------|---------------|---------------------------|--------|------|------|------|------|------|-----------------|--------|------|
|             |               | 0.7bar                    | 1.5bar | 2bar | 3bar | 4bar | 6bar | 7bar | 0.7bar          | 1.5bar | 6bar |
| 1/8         | 1.3           | 0.5                       | 0.7    | 0.8  | 0.97 | 1.1  | 1.3  | 1.4  | 52              | 65     | 59   |
|             | 3             | 1.1                       | 1.6    | 1.9  | 2.2  | 2.5  | 3.1  | 3.3  | 52              | 65     | 59   |
|             | 4             | 1.5                       | 2.2    | 2.5  | 3.0  | 3.4  | 4.1  | 4.4  | 52              | 65     | 59   |
|             | 6             | 2.3                       | 3.2    | 3.7  | 4.5  | 5.1  | 6.1  | 6.6  | 67              | 75     | 82   |
| 1/4         | 6             | 2.3                       | 3.2    | 3.7  | 4.5  | 5.1  | 6.8  | 6.6  | 67              | 75     | 82   |
|             | 8             | 3.0                       | 4.3    | 4.9  | 6.0  | 6.8  | 8.2  | 8.8  | 58              | 70     | 64   |
| 3/8         | 6             | 2.3                       | 3.2    | 3.7  | 4.5  | 5.1  | 6.1  | 6.6  | 67              | 75     | 82   |
|             | 8             | 3                         | 4.3    | 4.9  | 6.0  | 6.8  | 8.2  | 8.8  | 58              | 70     | 64   |
|             | 10            | 3.8                       | 5.4    | 6.2  | 7.4  | 8.5  | 10.2 | 11.0 | 58              | 70     | 64   |

### CC Flat Fan Spray



At the stated pressure in bar.

| Inlet Conn. | Spray Angel (°) |      |      |       | Flow Rate Capacity(L/min) |      |      |      |      |      |      |      |       |
|-------------|-----------------|------|------|-------|---------------------------|------|------|------|------|------|------|------|-------|
|             | 65              | 80   | 95   | 120   | 0.3bar                    | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar |
| 1/8         | 6502            | 8002 | 9502 | 12002 | 0.25                      | 0.46 | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.4   |
|             | 6503            | 8003 | 9503 | 12003 | 0.37                      | 0.68 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.2   |
|             | 6504            | 8004 | 9504 | 12004 | 0.5                       | 0.91 | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 2.9   |
|             | 6505            | 8005 | 9505 | 12005 | 0.62                      | 1.1  | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.6   |
|             | 6506            | 8006 | 9506 | 12006 | 0.75                      | 1.4  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 4.3   |
|             | 6508            | 8008 | 9508 | 12008 | 1                         | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 5.8   |
| 1/4         | 6510            | 8010 | 9510 | 12010 | 1.2                       | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 7.2   |
|             | 6515            | 8015 | 9515 | 12015 | 1.9                       | 3.4  | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 10.8  |
|             | 6520            | 8020 | 9520 | 12020 | 2.5                       | 4.6  | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 14.4  |
| 3/8         | 6530            | 8030 | 9530 | 12030 | 3.7                       | 6.8  | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 22    |

### PVDF Ceramic Spray



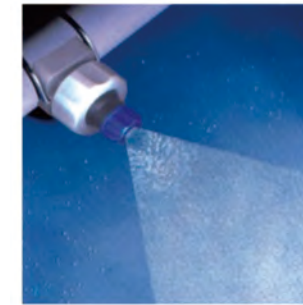
At the stated pressure in bar.

| Nozzle Type<br>( The spray angels<br>have 60°and<br>90°at 0.3 bar ) | Flow Rate Capacity(L/min) |     |     |     |     |     |     |     | Spray<br>Angel<br>(°) |
|---------------------------------------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----------------------|
|                                                                     | 0.05                      | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.8 | 1.0 |                       |
| 1/4 BB-PVDF+SIS 6520                                                | 0.8                       | 1.2 | 1.6 | 2.0 | 2.3 | 2.8 | 3.3 | 3.7 | 65                    |
| 1/4 BB-PVDF+SIS 6530                                                | 1.2                       | 1.7 | 2.4 | 3.0 | 3.5 | 4.2 | 4.9 | 5.5 |                       |
| 1/4 BB-PVDF+SIS 9020                                                | 0.8                       | 1.2 | 1.6 | 2.0 | 2.3 | 2.8 | 3.3 | 3.7 | 90                    |
| 1/4 BB-PVDF+SIS 9030                                                | 1.2                       | 1.7 | 2.4 | 3.0 | 3.5 | 4.2 | 4.9 | 5.5 |                       |



Boyuan Spraying

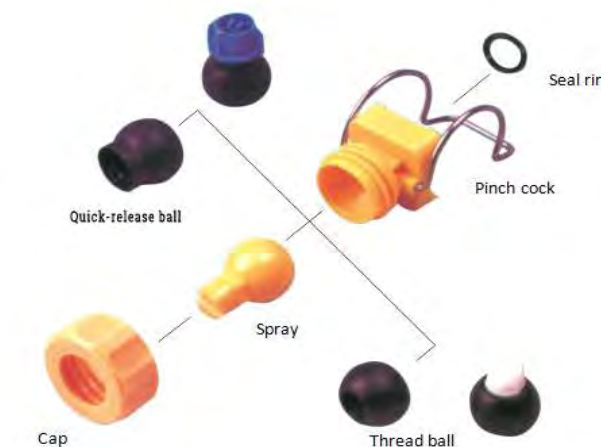
## Adjustable Ball Plastic Nozzle



26988 Series



155 Series

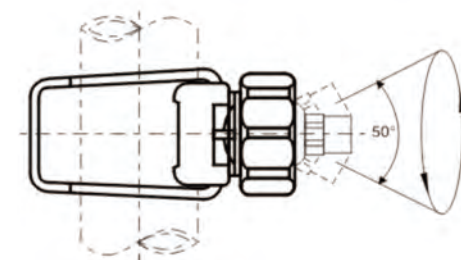


### Design Features

- Two connection types: the clip type (26988, 27988) and the thread type (155 series).
- Hollow cone-shaped spray pattern or solid cone-shaped spray pattern or flat spray pattern.
- Fast and easy installation.

### Applications

- Metal treating
- Degreasing
- Phosphating



### Performance State

#### · Clip-on nozzle

| Type  | Clamp Size ( inch ) | Clamp Outlet Dia. (mm) | Pipe Orifice (mm) |
|-------|---------------------|------------------------|-------------------|
| 26988 | 3/4                 | 25-27                  | 14                |
|       | 1                   | 32-35                  | 14                |
|       | 1-1/4               | 38-43                  | 16                |
|       | 1-1/2               | 44-51                  | 18                |
|       | 2                   | 54-60                  | 20                |

#### · Thread Spray Size

| Type | Thread Size ( inch ) |
|------|----------------------|
| 155  | 1/8                  |
|      | 1/4                  |
|      | 3/8                  |
|      | 1/2                  |





26988-PP



Design Features

- Spray Angle : 0°-144°(based on nozzle type)
- Spray Pattern :Solid cone- shaped spray pattern or hollow cone- shaped spray pattern or flat fan spray pattern or square spray pattern .(Based on nozzle type)
- Drops : Small- to medium-size,uniform distribution over a wide range of flow rates and pressure.
- Material : BRASS/SS/PP/PVC/PTFE
- Features : Combines snap-on installation with quick-connect spray tips for fast and easy maintenance. Available in single or double clamp designs. Adjustable swivel ball provides a quick change direction. Removable caps and vanes for easy inspection and cleaning on most models.

Applications

- Water aerating · Fire prevention · Spray coolingn · Cooling in heat treat process
- Quenching during heat treat process · Dust control · Metal treating · Gas cooling & scrubbing

Performance State

| Type   | Clamp Size (inch) | Clamp Outlet Dia(mm) | Pipe Orifice (mm) | Threaded Ball Type | Thread Size (inch) |
|--------|-------------------|----------------------|-------------------|--------------------|--------------------|
| 26988M | 1                 | 32-35                | 14                | BL1                | 1/8                |
|        | 1-1/4             | 38-43                | 16                | BL2                | 1/4                |
|        | 1-1/2             | 44-51                | 18                | BL3                | 3/8                |
|        | 2                 | 54-60                | 20                |                    |                    |

Hollow cone nozzle

| Nozzle Type | Flow Rate Capacity (L/min) |        |      |        |      |      |      | Spray Angle (°) |        |      |
|-------------|----------------------------|--------|------|--------|------|------|------|-----------------|--------|------|
|             | 0.3bar                     | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 0.5bar          | 1.5bar | 4bar |
| AT15-30.1   | 6.2                        | 8.8    | 10.4 | 12.6   | 14.5 | 17.6 | 20.2 | 46              | 49     | 51   |
| AT25-30.1   | 7.5                        | 10.7   | 12.7 | 15.4   | 17.6 | 21.4 | 24.6 | 45              | 47     | 50   |
| AT55-50.1   | 13.5                       | 19     | 22.7 | 27.8   | 32   | 39.2 | 45.2 | 38              | 46     | 48   |
| AT55-50.3   | 13.5                       | 19     | 22.7 | 27.6   | 31.8 | 38.7 | 44.4 | 75              | 75     | 76   |

Full cone nozzle

| Nozzle Type | Flow Rate Capacity (L/min) |        |      |        |      |      |      | Spray Angle (°) |        |      |
|-------------|----------------------------|--------|------|--------|------|------|------|-----------------|--------|------|
|             | 0.35bar                    | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 0.5bar          | 1.5bar | 4bar |
| BT6         | 1.6                        | 2.3    | 2.6  | 3.2    | 3.7  | 4.5  | 5.1  | 69              | 74     | 68   |
| BT12.5      | 3.4                        | 4.8    | 5.4  | 6.8    | 7.7  | 9.3  | 10.6 | 69              | 74     | 68   |
| BT25        | 6.7                        | 9.5    | 10.9 | 13.5   | 15.4 | 18.6 | 21   | 64              | 67     | 63   |
| BT50        | 13.5                       | 19.1   | 21.9 | 27     | 31   | 37   | 42   | 91              | 94     | 88   |

Flat fan nozzle

| Spray Tip Type (spray angle at 3 bar) |         |         |         |         |         | Flow Rate Capacity (L/min) |        |      |        |      |      |      |
|---------------------------------------|---------|---------|---------|---------|---------|----------------------------|--------|------|--------|------|------|------|
| 15°                                   | 25°     | 40°     | 50°     | 65°     | 80°     | 0.3bar                     | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar |
| -                                     | -       | -       | -       | CT6510  | CT8010  | 1.2                        | 1.9    | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  |
| -                                     | -       | CT4020  | CT5020  | CT6520  | -       | 2.5                        | 3.8    | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  |
| -                                     | CT2530  | CT4030  | CT5030  | CT6530  | -       | 3.7                        | 5.7    | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 |
| -                                     | -       | CT4040  | CT5040  | CT6540  | CT8040  | 5.0                        | 7.6    | 9.1  | 11.2   | 12.9 | 15.8 | 18.2 |
| CT1550                                | -       | CT4050  | CT5050  | CT6550  | -       | 6.2                        | 9.5    | 11.4 | 14     | 16.1 | 19.7 | 23   |
| -                                     | CT2560  | CT4060  | CT5060  | CT6560  | CT8060  | 7.5                        | 11.4   | 13.7 | 16.7   | 19.3 | 24   | 27   |
| CT1570                                | CT2570  | CT4070  | CT5070  | CT6570  | CT8070  | 8.7                        | 13.3   | 16.0 | 19.5   | 23   | 28   | 32   |
| CT15100                               | CT25100 | CT40100 | CT50100 | CT65100 | CT80100 | 12.5                       | 19.1   | 23   | 28     | 32   | 39   | 46   |

Order Info

|                  |            |                   |   |               |   |             |   |        |
|------------------|------------|-------------------|---|---------------|---|-------------|---|--------|
| 26988            | -          | 1-1/4             | - | D14           | - | PP          | + | CT6520 |
|                  |            |                   |   |               |   |             |   |        |
| Body Nozzle Type | Clamp Size | Pipe Opening Size |   | Material Code |   | Nozzle type |   |        |

For NPT threaded connections, add the letter "N" before the nozzle connection size.

Hollow cone Nozzle

| Nozzle Type | Flow Rate Capacity (L/min) |        |      |        |      |      |      | Spray Angle (°) |        |      |
|-------------|----------------------------|--------|------|--------|------|------|------|-----------------|--------|------|
|             | 0.3bar                     | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 0.5bar          | 1.5bar | 4bar |
| AT15-30.1   | 6.2                        | 8.8    | 10.4 | 12.6   | 14.5 | 17.6 | 20.2 | 45              | 49     | 51   |
| AT25-30.1   | 7.5                        | 10.7   | 12.7 | 15.4   | 17.6 | 21.4 | 24.6 | 45              | 47     | 50   |
| AT55-30.1   | 13.5                       | 19.0   | 22.7 | 27.8   | 32.0 | 39.2 | 45.2 | 38              | 46     | 48   |
| AT55-50.3   | 13.5                       | 19.0   | 22.7 | 27.6   | 31.8 | 38.7 | 44.4 | 75              | 75     | 76   |

Full cone Nozzle

| Nozzle Type | Flow Rate Capacity (L/min) |        |      |        |      |      |      | Spray Angle (°) |        |      |
|-------------|----------------------------|--------|------|--------|------|------|------|-----------------|--------|------|
|             | 0.3bar                     | 0.7bar | 1bar | 1.5bar | 2bar | 3bar | 4bar | 0.5bar          | 1.5bar | 4bar |
| BT6         | 1.6                        | 2.3    | 2.6  | 3.2    | 3.7  | 4.5  | 5.1  | 69              | 74     | 68   |
| BT12.5      | 3.4                        | 4.8    | 5.4  | 6.8    | 7.7  | 9.3  | 10.6 | 69              | 74     | 68   |
| BT25        | 6.7                        | 9.5    | 10.9 | 13.5   | 15.4 | 18.6 | 21   | 64              | 67     | 63   |
| BT50        | 13.5                       | 19.1   | 21.9 | 27     | 31   | 37   | 42   | 91              | 94     | 88   |

Flat Fan Nozzle

|  | Nozzle Type (spray angle at 3 bar) |         |         |         |         |         | Flow Rate Capacity (L/min) |      |      |        |      |      |      |
|-------------------------------------------------------------------------------------|------------------------------------|---------|---------|---------|---------|---------|----------------------------|------|------|--------|------|------|------|
|                                                                                     | 15°                                | 25°     | 40°     | 50°     | 65°     | 80°     | 0.3                        | 0.7  | 1bar | 1.5bar | 2bar | 3bar | 4bar |
|                                                                                     | -                                  | -       | -       | -       | CT6510  | CT8010  | 1.2                        | 1.9  | 2.3  | 2.8    | 3.2  | 3.9  | 4.6  |
|                                                                                     | -                                  | -       | CT4020  | CT5020  | CT6520  | -       | 2.5                        | 3.8  | 4.6  | 5.6    | 6.5  | 7.9  | 9.1  |
|                                                                                     | -                                  | CT2530  | CT4030  | CT5030  | CT6530  | -       | 3.7                        | 5.7  | 6.8  | 8.4    | 9.7  | 11.8 | 13.7 |
|                                                                                     | -                                  | -       | CT4040  | CT5040  | CT6540  | CT8040  | 5.0                        | 7.6  | 9.1  | 11.2   | 12.9 | 15.8 | 18.2 |
|                                                                                     | CT1550                             | -       | CT4050  | CT5050  | CT6550  | -       | 6.2                        | 9.5  | 11.4 | 14.0   | 16.1 | 19.7 | 23   |
|                                                                                     | -                                  | CT2560  | CT4060  | CT5060  | CT6560  | CT8060  | 7.5                        | 11.4 | 13.7 | 16.7   | 19.3 | 24   | 27   |
|                                                                                     | CT1570                             | CT1570  | CT4070  | CT5070  | CT6570  | CT8070  | 8.7                        | 13.3 | 16.0 | 19.5   | 23   | 28   | 32   |
|                                                                                     | CT15100                            | CT15100 | CT40100 | CT50100 | CT65100 | CT80100 | 12.5                       | 19.1 | 23   | 28     | 32   | 39   | 46   |

Quick-release Ball

| Type | Connected          |
|------|--------------------|
| BLQ  | Quick-release Type |

Thread Ball

| Thread Ball Type | Thread Size inch |
|------------------|------------------|
| BL1              | 1/8              |
| BL2              | 1/4              |
| BL3              | 3/8              |

Quick-release Flat Fan Nozzle

|  | Nozzle Type ( spray angle at 3 bar) |        |        |         |         | Flow Rate Capacity (L/min) |      |      |      |      |      |      |      |       |
|---------------------------------------------------------------------------------------|-------------------------------------|--------|--------|---------|---------|----------------------------|------|------|------|------|------|------|------|-------|
|                                                                                       | 50°                                 | 65°    | 80°    | 95°     | 110°    | 0.3bar                     | 1bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 14bar |
|                                                                                       | QC5001                              | Qc6501 | Qc8001 | Qc9501  | Qc11001 | 0.12                       | 0.23 | 0.32 | 0.39 | 0.46 | 0.51 | 0.56 | 0.6  | 0.85  |
|                                                                                       | QC5002                              | QC6502 | QC8002 | QC9502  | QC11002 | 0.25                       | 0.45 | 0.64 | 0.79 | 0.91 | 1.0  | 1.1  | 1.2  | 1.7   |
|                                                                                       | QC5003                              | QC6503 | QC8003 | QC9503  | QC11003 | 0.37                       | 0.69 | 0.97 | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.6   |
|                                                                                       | QC5004                              | QC6504 | QC8004 | QC9504  | QC11004 | 0.50                       | 0.92 | 1.3  | 1.6  | 1.8  | 2.0  | 2.2  | 2.4  | 3.4   |
|                                                                                       | QC5005                              | QC6505 | QC8005 | QC9505  | QC11005 | 0.62                       | 1.1  | 1.6  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 4.3   |
|                                                                                       | QC5006                              | QC6506 | QC8006 | QC9506  | QC11006 | 0.75                       | 1.3  | 1.9  | 2.4  | 2.7  | 3.1  | 3.3  | 3.6  | 5.1   |
|                                                                                       | QC5008                              | QC6508 | QC8008 | QC9508  | QC11008 | 1.0                        | 1.8  | 2.6  | 3.2  | 3.6  | 4.1  | 4.5  | 4.8  | 6.8   |
|                                                                                       | QC5010                              | QC6510 | QC8010 | QC9510  | QC11010 | 1.2                        | 2.3  | 3.2  | 3.9  | 4.6  | 5.1  | 5.6  | 6.0  | 8.5   |
| QC5015                                                                                | QC6515                              | QC8015 | QC9515 | QC11015 | 1.9     | 3.4                        | 4.8  | 5.9  | 6.8  | 7.6  | 8.4  | 9.0  | 12.8 |       |
| QC5020                                                                                | QC6520                              | QC8020 | QC9520 | QC11020 | 2.5     | 4.6                        | 6.5  | 7.9  | 9.1  | 10.2 | 11.2 | 12.1 | 17.1 |       |
| QC5030                                                                                | QC6530                              | QC8030 | QC9530 | QC11030 | 3.7     | 6.8                        | 9.7  | 11.8 | 13.7 | 15.3 | 16.7 | 18.1 | 26   |       |

Full Cone Nozzle

|  | Nozzle Type | Flow Rate Capacity (L/min) |        |        |      |      |      |      |      |      |       | Spray Angle (°) |        |      |
|---------------------------------------------------------------------------------------|-------------|----------------------------|--------|--------|------|------|------|------|------|------|-------|-----------------|--------|------|
|                                                                                       |             | 0.5bar                     | 0.7bar | 1.5bar | 2bar | 3bar | 4bar | 5bar | 6bar | 7bar | 10bar | 0.5bar          | 1.5bar | 6bar |
|                                                                                       | Qb1         | 0.25                       | 0.38   | 0.54   | 0.62 | 0.74 | 0.85 | 0.94 | 1.0  | 1.1  | 1.3   | -               | 58     | 53   |
|                                                                                       | QB2         | 0.65                       | 0.76   | 1.0    | 1.2  | 1.5  | 1.7  | 1.9  | 2.0  | 2.2  | 2.6   | 43              | 50     | 46   |
|                                                                                       | QB3         | 0.98                       | 1.1    | 1.6    | 1.9  | 2.2  | 2.5  | 2.8  | 3.1  | 3.3  | 3.9   | 52              | 65     | 59   |
|                                                                                       | QB3.5       | 1.1                        | 1.3    | 1.9    | 2.2  | 2.6  | 3.0  | 3.3  | 3.6  | 3.9  | 4.5   | 43              | 50     | 46   |
|                                                                                       | QB5         | 1.6                        | 1.9    | 2.7    | 3.1  | 3.7  | 4.2  | 4.7  | 5.1  | 5.5  | 6.5   | 52              | 65     | 59   |
|                                                                                       | QB6.5       | 2.1                        | 2.5    | 3.5    | 4.0  | 4.8  | 5.5  | 6.1  | 6.7  | 7.1  | 8.4   | 45              | 50     | 46   |
|                                                                                       | QB10        | 3.3                        | 3.8    | 5.4    | 6.2  | 7.4  | 8.5  | 9.4  | 10.2 | 11.0 | 13.0  | 58              | 67     | 61   |



Nuts



Split-eyelet



Ball Adapter



Joints



90° Internal And  
External Thread Elbow

Elbow With 90°  
External Thread

Male Branch Tee

Internal Thread Tee

Union Tee



Union Tee

Male Connector

Internal Thread  
Ferrule joint

Ferrule Reducing Joint

Cruciform Joint

