

# CC NOZZLE

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## BB Series Full Cone Spray Nozzle

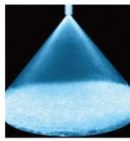
### standard angle series



single type(BB)



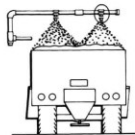
fission type(BBG)



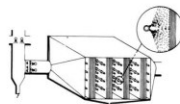
BB-single type external thread  
B-single type internal thread  
BBG-fission type external thread  
BG-fission type internal thread

### common application

- exhaust gas scrubbing
- quenching and cooling
- fire prevention and fire protection
- dust extinguishing control
- defoaming
- spraying applications



dust control



air washer

BB standard angle series spray nozzles feature a full cone spray pattern with a round impact area and spray angles between 43° and 106°.

They produce a uniform distribution of medium to large sized drops over a wide range of flow rates and pressures. Their uniform spray distribution result from a unique vane design, large and easy flow passages and superior spray control design.

Machined critically, BB series metal nozzles insure correct and dependable performance with exact sizes. They are ideal for applications requiring complete coverage to a certain area.

BBG series metal nozzles have removable cap and vane, can be suitably connected with pipe collection and multi-pipe. Under this design way, its working-end (cap and vane) can be removed from the nozzle body to be overhauled and cleaned, without knocking down the nozzle body off the pipe.

### standard angle performance data

\* in the specified pressure(bar)

| Nozzle inlet connect (in.) | Nozzle type   |   |    | Capacity Size | Rated Orifice Dia.(mm) | Max. Hole Dia.(mm) | Capacity(l/min)* |      |      |      |      |      |      |      |      |      | Spray Angle(°)* |     |    |
|----------------------------|---------------|---|----|---------------|------------------------|--------------------|------------------|------|------|------|------|------|------|------|------|------|-----------------|-----|----|
|                            | Standard type | B | BB |               |                        |                    | 0.4              | 0.5  | 0.7  | 1.5  | 2    | 3    | 4    | 6    | 7    | 10   | 0.5             | 1.5 |    |
| 1/8                        | ●             | ● | ●  | 1             | .79                    | .64                | .29              | .33  | .38  | .54  | .62  | .74  | .85  | 1.0  | 1.1  | 1.3  | 58              | 53  |    |
|                            |               |   |    | 1.5           | 1.2                    | .64                | .44              | .49  | .57  | .81  | .93  | 1.1  | 1.3  | 1.5  | 1.6  | 1.9  | 52              | 65  | 59 |
|                            |               |   |    | 2             | 1.2                    | 1.0                | .59              | .65  | .76  | 1.1  | 1.2  | 1.5  | 1.7  | 2.0  | 2.2  | 2.6  | 43              | 50  | 46 |
|                            |               |   |    | 3             | 1.5                    | 1.0                | .88              | .98  | 1.1  | 1.6  | 1.9  | 2.2  | 2.5  | 3.1  | 3.3  | 3.9  | 52              | 65  | 59 |
|                            |               |   |    | 3.5           | 1.6                    | 1.3                | 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                    | 1.0                | 1.1              | 1.3  | 1.5  | 2.1  | 2.4  | 2.9  | 3.3  | 4.0  | 4.3  | 5.1  | 77              | 84  | 79 |
| 1/4                        | ●             | ● | ●  | 5             | 2.0                    | 1.3                | 1.5              | 1.6  | 1.9  | 2.7  | 3.1  | 3.7  | 4.2  | 5.1  | 5.5  | 6.5  | 52              | 65  | 59 |
|                            |               |   |    | 6.1           | 2.3                    | 1.3                | 1.8              | 2.0  | 2.3  | 3.3  | 3.8  | 4.5  | 5.2  | 6.2  | 6.7  | 7.9  | 69              | 74  | 68 |
|                            |               |   |    | 6.5           | 2.4                    | 1.6                | 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                    | 1.6                | 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                    | 1.6                | 3.7              | 4.1  | 4.8  | 6.8  | 7.7  | 9.3  | 10.6 | 12.8 | 13.7 | 16.2 | 69              | 74  | 68 |
|                            |               |   |    | 15            | 3.6                    | 2.4                | 4.4              | 4.9  | 5.7  | 8.1  | 9.3  | 11.2 | 12.7 | 15.4 | 16.5 | 19.4 | 64              | 67  | 61 |
| 3/8                        | ●             | ● | ●  | 20            | 4.0                    | 2.8                | 5.9              | 6.5  | 7.6  | 10.8 | 12.4 | 14.9 | 17.0 | 20   | 22   | 26   | 76              | 80  | 73 |
|                            |               |   |    | 22            | 4.5                    | 2.8                | 6.5              | 7.2  | 8.4  | 11.9 | 13.6 | 16.4 | 18.7 | 23   | 24   | 28   | 87              | 90  | 82 |
|                            |               |   |    | 16            | 3.5                    | 3.2                | 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                    | 3.2                | 7.4              | 8.2  | 9.5  | 13.5 | 15.4 | 18.6 | 21   | 26   | 27   | 32   | 64              | 67  | 61 |
|                            |               |   |    | 32            | 5.2                    | 3.6                | 9.4              | 10.4 | 12.2 | 17.3 | 19.8 | 24   | 27   | 33   | 35   | 41   | 72              | 75  | 68 |
|                            |               |   |    | 40            | 6.2                    | 3.6                | 11.8             | 13.1 | 15.2 | 22   | 25   | 30   | 34   | 41   | 44   | 52   | 88              | 91  | 83 |
| 1/2                        | ●             | ● | ●  | 50            | 6.7                    | 4.0                | 14.7             | 16.3 | 19.1 | 27   | 31   | 37   | 42   | 51   | 55   | 65   | 91              | 94  | 86 |
|                            |               |   |    | 2.5           | 4.9                    | 4.4                | 8.7              | 9.6  | 11.2 | 15.9 | 18.2 | 22   | 25   | 30   | 32   | 38   | 48              | 50  | 46 |
|                            |               |   |    | 4.0           | 6.4                    | 4.4                | 13.9             | 15.4 | 18.0 | 26   | 29   | 35   | 40   | 48   | 52   | 61   | 67              | 70  | 63 |
|                            |               |   |    | 7.0           | 9.5                    | 5.2                | 24               | 27   | 31   | 45   | 51   | 61   | 70   | 84   | 91   | 107  | 89              | 92  | 84 |
|                            |               |   |    | 4.2           | 6.0                    | 5.6                | 14.6             | 16.2 | 18.9 | 27   | 31   | 37   | 42   | 51   | 54   | 64   | 48              | 50  | 46 |
|                            |               |   |    | 7.0           | 8.3                    | 5.6                | 24               | 27   | 31   | 45   | 51   | 61   | 70   | 84   | 91   | 107  | 67              | 68  | 62 |
| 3/4                        | ●             | ● | ●  | 8.0           | 9.5                    | 5.6                | 28               | 31   | 36   | 51   | 58   | 70   | 80   | 97   | 104  | 122  | 72              | 81  | 82 |
|                            |               |   |    | 10            | 11.9                   | 5.6                | 35               | 38   | 45   | 64   | 73   | 88   | 100  | 121  | 130  | 153  | 78              | 90  | 94 |
|                            |               |   |    | 12            | 11.9                   | 6.4                | 42               | 46   | 54   | 77   | 87   | 105  | 120  | 145  | 155  | 183  | 89              | 92  | 84 |
|                            |               |   |    | 6             | 7.4                    | 6.4                | 21               | 23   | 27   | 38   | 44   | 53   | 60   | 72   | 78   | 92   | 48              | 50  | 44 |
|                            |               |   |    | 10            | 9.6                    | 6.4                | 35               | 38   | 45   | 64   | 73   | 88   | 100  | 121  | 130  | 153  | 64              | 67  | 58 |
|                            |               |   |    | 12            | 10.7                   | 6.4                | 42               | 46   | 54   | 77   | 87   | 105  | 120  | 145  | 155  | 183  | 66              | 70  | 60 |
| 1-1/4                      | ●             | ● | ●  | 14            | 12.3                   | 6.4                | 49               | 54   | 63   | 89   | 102  | 123  | 140  | 169  | 181  | 214  | 77              | 80  | 70 |
|                            |               |   |    | 16            | 12.7                   | 7.9                | 56               | 62   | 72   | 102  | 116  | 140  | 160  | 193  | 207  | 244  | 73              | 76  | 66 |
|                            |               |   |    | 20            | 15.1                   | 7.9                | 69               | 77   | 90   | 128  | 146  | 175  | 200  | 241  | 259  | 305  | 90              | 93  | 81 |
|                            |               |   |    | 10            | 9.5                    | 8.7                | 35               | 38   | 45   | 64   | 73   | 88   | 100  | 121  | 130  | 153  | 48              | 50  | 44 |
|                            |               |   |    | 16            | 12.7                   | 8.7                | 56               | 62   | 72   | 102  | 116  | 140  | 160  | 193  | 207  | 244  | 72              | 74  | 64 |
|                            |               |   |    | 20            | 14.3                   | 8.7                | 69               | 77   | 90   | 128  | 146  | 175  | 200  | 241  | 259  | 305  | 74              | 76  | 66 |
| 1-1/2                      | ●             | ● | ●  | 30            | 18.3                   | 10.3               | 104              | 115  | 135  | 191  | 218  | 263  | 300  | 362  | 389  | 458  | 91              | 94  | 82 |
|                            |               |   |    | 17            | 12.7                   | 11.1               | 59               | 65   | 76   | 108  | 124  | 149  | 170  | 205  | 220  | 259  | 49              | 50  | 44 |
|                            |               |   |    | 30            | 17.3                   | 11.1               | 104              | 115  | 135  | 191  | 218  | 263  | 300  | 362  | 389  | 458  | 72              | 74  | 64 |
|                            |               |   |    | 35            | 19.2                   | 11.1               | 122              | 135  | 157  | 223  | 255  | 307  | 350  | 422  | 453  | 534  | 75              | 77  | 68 |
|                            |               |   |    | 40            | 21.0                   | 11.1               | 139              | 154  | 180  | 255  | 291  | 351  | 401  | 483  | 518  | 611  | 78              | 80  | 70 |
|                            |               |   |    | 50            | 23.8                   | 14.3               | 174              | 192  | 225  | 319  | 364  | 439  | 501  | 603  | 648  | 763  | 83              | 85  | 75 |
| 2                          | ●             | ● | ●  | 60            | 28.6                   | 14.3               | 208              | 231  | 269  | 383  | 437  | 526  | 601  | 724  | 777  | 916  | 98              | 100 | 86 |

The Max. Hole Diameter indicated above is the maximum diameter of the particles that can pass through the channel and do not block.

A Series Common Nozzle