

# Small Capacity Fine Fog Nozzles Hollow Cone Spray—Liquid Pressure Type—

# BIMK

## Features

- Hollow cone spray pneumatic nozzle producing fine atomization with a mean droplet diameter of 100  $\mu\text{m}$  or less.\*1
- Features a large turn-down ratio under the liquid pressures of 0.1–0.3 MPa.
- Spray angle of 60°.

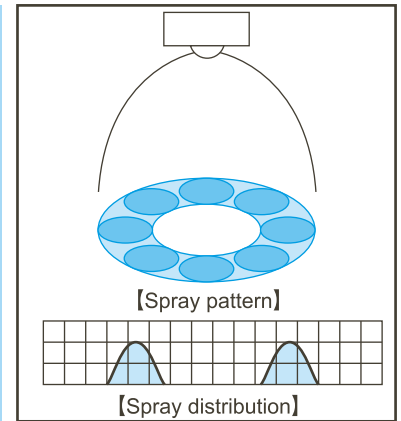
\*1) Droplet diameter measured by laser Doppler method

## Applications

- Spraying: Mold release agent, lubricant, deodorant, oil, surface treatment agent, rust preventive, honey, insecticide, aqueous urea
- Cooling: Dies, gas, glass, steel plates, steel pieces, moldings, automobile bodies, plastic products
- Moisture control: Paper, flue gas, ceramics, concrete



BIMK with T-type adaptor



## Structure & Materials

- Comprising four parts: Spray tip, core, cap, and adaptor. (Details of adaptors are shown on [pages 23 and 24.](#))
- Materials: S303 (Optional material: S316L)

## Dimensions & Pipe Conn. Sizes

- Dimensions and pipe connection sizes are shown on [page 24.](#)

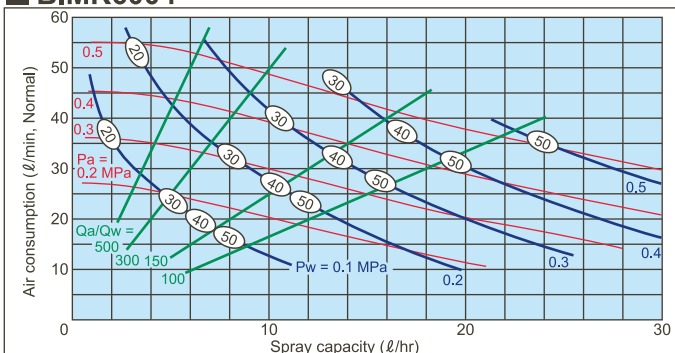
## Accessories

- Mounting bracket for easy installation is shown on [page 26.](#)

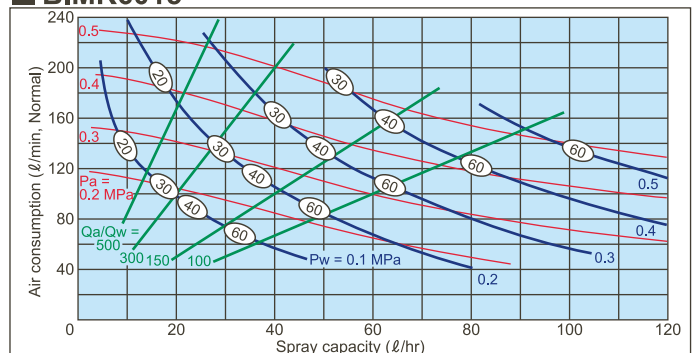
## Flow-rate Diagrams

- How to read the chart
  - ① The spray capacity shown is for one nozzle.
  - ② **Red lines** (—) represent compressed air pressures  $P_a$  in MPa.
  - Blue lines** (—) represent liquid pressures  $P_w$  in MPa.
  - Green lines** (—) represent air-water ratio  $Q_a/Q_w$ .
  - ③ Figures in ovals  $\bigcirc$  indicate Sauter mean droplet diameters ( $\mu\text{m}$ ) measured by laser Doppler method.
  - ④ These flow-rate diagrams are applicable to adaptors type T and N only.

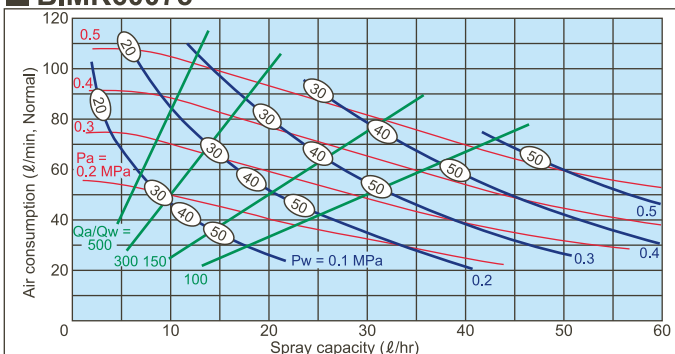
### BIMK6004



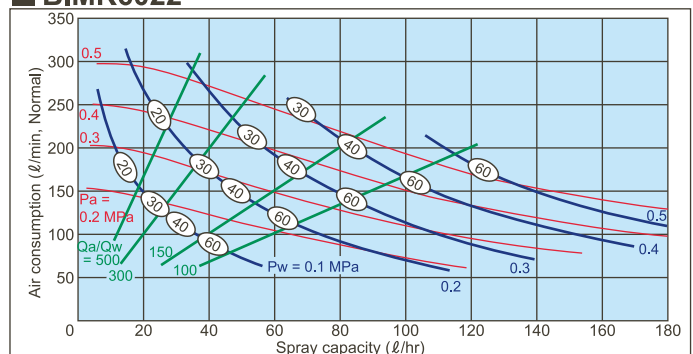
### BIMK6015



### BIMK60075



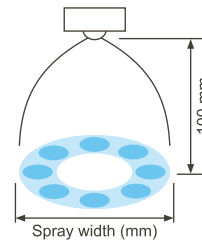
### BIMK6022



| Spray angle code *2 | Air consumption code | Air pressure (MPa) | Spray capacity (ℓ/hr) & Air consumption (ℓ/min, Normal) |     |        |     |        |     |        |     |        |     | Spray width*3 (mm)  |      |      | Mean droplet diameter (μm) | Free passage diameter (mm) |               |         |     |
|---------------------|----------------------|--------------------|---|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------------------|------|------|----------------------------|----------------------------|---------------|---------|-----|
|                     |                      |                    | Liquid pressure (MPa)                                   |     |        |     |        |     |        |     |        |     |                     |      |      |                            |                            |               |         |     |
|                     |                      |                    | 0.1   |     | 0.15   |     | 0.2    |     | 0.25   |     | 0.3    |     | Liquid press. (MPa) |      |      |                            | Laser Doppler method       | Spray orifice | Adaptor |     |
|                     |                      |                    | Liquid  | Air | Liquid | Air | Liquid | Air | Liquid | Air | Liquid | Air | 0.1                 | 0.15 | 0.25 |                            |                            |               | Liquid  | Air |
| 60                  | 04                   | 0.2                | 4.5   | 25  | 9.5    | 20  | 17.0   | 13  | —      | —   | —      | —   | 140                 | 160  | —    | 20–100                     | 0.5                        | 0.9           | 0.9     |     |
|                     |                      | 0.3                | 2.0   | 36  | 4.7    | 35  | 8.5    | 31  | 13.1   | 27  | 19.6   | 20  | 130                 | 160  | 170  |                            |                            |               |         |     |
|                     |                      | 0.4                | —   | —   | 2.8    | 45  | 4.8    | 44  | 7.7    | 41  | 11.4   | 37  | —                   | 150  | 170  |                            |                            |               |         |     |
|                     | 075                  | 0.2                | 8.7   | 51  | 18.4   | 42  | 33.3   | 29  | —      | —   | —      | —   | 140                 | 170  | —    | 20–100                     | 0.7                        | 1.2           | 1.4     |     |
|                     |                      | 0.3                | 4.0   | 74  | 8.8    | 71  | 15.5   | 64  | 24.3   | 54  | 38.5   | 40  | 130                 | 160  | 180  |                            |                            |               |         |     |
|                     |                      | 0.4                | —   | —   | 5.6    | 91  | 9.1    | 89  | 14.8   | 82  | 21.8   | 74  | —                   | 150  | 170  |                            |                            |               |         |     |
|                     | 15                   | 0.2                | 16.8  | 107 | 34.8   | 90  | 64.4   | 60  | —      | —   | —      | —   | 150                 | 170  | —    | 20–100                     | 0.9                        | 1.8           | 1.9     |     |
|                     |                      | 0.3                | 8.0   | 150 | 17.7   | 144 | 30.8   | 130 | 50.0   | 108 | 74.5   | 87  | 140                 | 170  | 180  |                            |                            |               |         |     |
|                     |                      | 0.4                | —   | —   | 11.2   | 190 | 18.3   | 183 | 29.1   | 172 | 42.9   | 154 | —                   | 160  | 180  |                            |                            |               |         |     |
|                     | 22                   | 0.2                | 22.3  | 140 | 45.6   | 116 | 92.1   | 77  | —      | —   | —      | —   | 160                 | 180  | —    | 20–100                     | 1.1                        | 2.1           | 2.2     |     |
|                     |                      | 0.3                | 11.5  | 200 | 23.9   | 189 | 41.3   | 169 | 68.5   | 138 | 107    | 103 | 140                 | 170  | 190  |                            |                            |               |         |     |
|                     |                      | 0.4                | —   | —   | 15.3   | 245 | 24.5   | 238 | 39.1   | 220 | 57.7   | 198 | —                   | 160  | 180  |                            |                            |               |         |     |

\*2) Spray angle measured at compressed air pressure of 0.3 MPa and liquid pressure of 0.1 MPa.

\*3) Measured at 100 mm from nozzle.



### How to order

Please inquire or order for a specific nozzle using this coding system.

<Example> BIMK 6004 S303 + N S303

|      |    |                      |      |   |                 |       |
|------|----|----------------------|------|---|-----------------|-------|
| BIMK | 60 | 04                   | S303 | + | N               | S303  |
|      |    | Air consumption code |      |   | Type of adaptor |       |
|      |    | ■04                  |      |   | ■N              | ■SPB  |
|      |    | ■075                 |      |   | ■T              | ■USPB |
|      |    | ■15                  |      |   | ■NDB            | ■SNB  |
|      |    | ■22                  |      |   | ■UNDB           | ■USNB |

Details of adaptors are shown on pages 23 and 24.