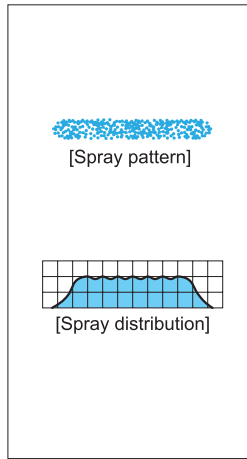


High Pressure Cleaning Even Flat Spray Nozzles

VNP

Flat Spray



[Features]

- Flat spray pattern with uniform distribution throughout pattern area.
- Small R1/4 and R1/8 pipe connection sizes for high pressure cleaning.

[Standard Pressure]

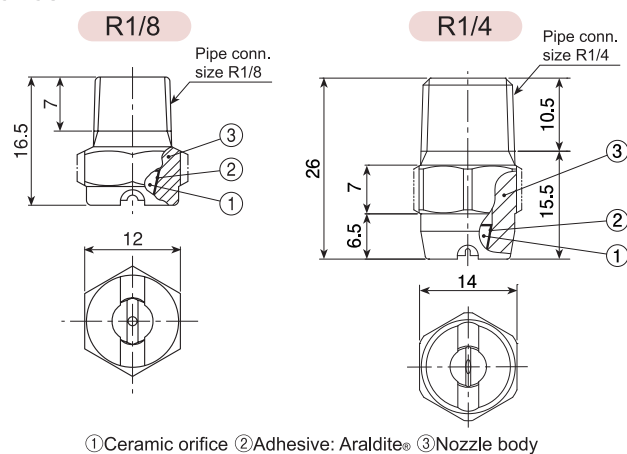
3 MPa

[Applications]

High pressure cleaning:
Automotives, containers, tanks, wire and felt parts of paper making machines, wire cylinders, filter presses, other industrial cleaning and degreasing

VNP series

| VNP series (with ceramic orifice inserted) | |
|--|--|
| Structure | • Ceramic orifice is inserted and adhered into a metal body. |
| Material | • Nozzle orifice: ceramic • Metal parts: S303 or B (brass) • Optional material: S316 |
| Mass | • R1/8...S303: 7 g, B (brass): 7.4 g • R1/4...S303: 20 g, B (brass): 22 g |



[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.

| Spray angle code | Spray capacity code | Pipe conn. size | | Spray angle (°) | | | Spray capacity (ℓ/min) | | | | | | | | | | | Free pass. dia. (mm) | |
|------------------|---------------------|-----------------|------|-----------------|-------|-------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|--------|----------------------|--------|
| | | R1/8 | R1/4 | 1 MPa | 3 MPa | 5 MPa | 1 MPa | 2 MPa | 2.5 MPa | 3 MPa | 3.5 MPa | 4 MPa | 4.5 MPa | 5 MPa | 6.5 MPa | 8 MPa | 10 MPa | | 15 MPa |
| 65 | 43 | ○ | ○ | 60 | 65 | 65 | 2.50 | 3.54 | 3.96 | 4.33 | 4.68 | 5.00 | 5.30 | 5.59 | 6.37 | 7.06 | 7.91 | 9.67 | 0.7 |
| | 49 | ○ | ○ | 60 | 65 | 65 | 2.86 | 4.04 | 4.52 | 4.94 | 5.34 | 5.71 | 6.06 | 6.38 | 7.28 | 8.07 | 9.04 | 11.1 | 0.8 |
| | 56 | ○ | ○ | 60 | 65 | 65 | 3.22 | 4.54 | 5.08 | 5.56 | 6.01 | 6.42 | 6.81 | 7.18 | 8.19 | 9.08 | 10.2 | 12.4 | 0.9 |
| | 62 | ○ | ○ | 60 | 65 | 65 | 3.57 | 5.05 | 5.65 | 6.18 | 6.68 | 7.14 | 7.57 | 7.98 | 9.10 | 10.1 | 11.3 | 13.8 | 0.9 |
| | 68 | ○ | ○ | 60 | 65 | 65 | 3.93 | 5.55 | 6.21 | 6.80 | 7.35 | 7.85 | 8.33 | 8.79 | 10.0 | 11.1 | 12.4 | 15.2 | 1.0 |
| | 74 | ○ | ○ | 60 | 65 | 65 | 4.29 | 6.06 | 6.78 | 7.42 | 8.01 | 8.56 | 9.09 | 9.58 | 10.9 | 12.1 | 13.6 | 16.6 | 1.0 |
| | 80 | ○ | ○ | 60 | 65 | 65 | 4.65 | 6.56 | 7.35 | 8.04 | 8.68 | 9.28 | 9.85 | 10.4 | 11.8 | 13.1 | 14.7 | 18.0 | 1.0 |
| | 87 | ○ | ○ | 60 | 65 | 65 | 5.00 | 7.07 | 7.91 | 8.66 | 9.35 | 10.0 | 10.6 | 11.2 | 12.8 | 14.1 | 15.8 | 19.4 | 1.1 |
| | 99 | ○ | ○ | 60 | 65 | 65 | 5.72 | 8.08 | 9.04 | 9.89 | 10.7 | 11.4 | 12.1 | 12.8 | 14.6 | 16.2 | 18.1 | 22.1 | 1.1 |
| 124 | ○ | ○ | 60 | 65 | 65 | 7.15 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 18.2 | 20.2 | 22.6 | 27.7 | 1.3 | |
| 40 | 25 | ○ | ○ | 35 | 40 | 40 | 1.43 | 2.02 | 2.25 | 2.47 | 2.67 | 2.85 | 3.03 | 3.19 | 3.64 | 4.03 | 4.51 | 5.52 | 0.6 |
| | 31 | ○ | ○ | 35 | 40 | 40 | 1.78 | 2.52 | 2.82 | 3.09 | 3.34 | 3.57 | 3.78 | 3.99 | 4.55 | 5.05 | 5.64 | 6.91 | 0.7 |
| | 37 | ○ | ○ | 35 | 40 | 40 | 2.14 | 3.03 | 3.39 | 3.71 | 4.01 | 4.28 | 4.54 | 4.79 | 5.46 | 6.06 | 6.77 | 8.30 | 0.7 |
| | 43 | ○ | ○ | 35 | 40 | 40 | 2.50 | 3.54 | 3.96 | 4.33 | 4.68 | 5.00 | 5.30 | 5.59 | 6.37 | 7.06 | 7.91 | 9.67 | 0.8 |
| | 49 | ○ | ○ | 35 | 40 | 40 | 2.86 | 4.04 | 4.52 | 4.94 | 5.34 | 5.71 | 6.06 | 6.38 | 7.28 | 8.07 | 9.04 | 11.1 | 1.0 |
| | 56 | ○ | ○ | 35 | 40 | 40 | 3.22 | 4.54 | 5.08 | 5.56 | 6.01 | 6.42 | 6.81 | 7.18 | 8.19 | 9.08 | 10.2 | 12.4 | 1.0 |
| | 62 | ○ | ○ | 35 | 40 | 40 | 3.57 | 5.05 | 5.65 | 6.18 | 6.68 | 7.14 | 7.57 | 7.98 | 9.10 | 10.1 | 11.3 | 13.8 | 1.1 |
| | 68 | ○ | ○ | 35 | 40 | 40 | 3.93 | 5.55 | 6.21 | 6.80 | 7.35 | 7.85 | 8.33 | 8.79 | 10.0 | 11.1 | 12.4 | 15.2 | 1.1 |
| | 74 | ○ | ○ | 35 | 40 | 40 | 4.29 | 6.06 | 6.78 | 7.42 | 8.01 | 8.56 | 9.09 | 9.58 | 10.9 | 12.1 | 13.6 | 16.6 | 1.1 |
| | 80 | ○ | ○ | 35 | 40 | 40 | 4.65 | 6.56 | 7.35 | 8.04 | 8.68 | 9.28 | 9.85 | 10.4 | 11.8 | 13.1 | 14.7 | 18.0 | 1.2 |
| | 87 | ○ | ○ | 35 | 40 | 40 | 5.00 | 7.07 | 7.91 | 8.66 | 9.35 | 10.0 | 10.6 | 11.2 | 12.8 | 14.1 | 15.8 | 19.4 | 1.2 |
| | 99 | ○ | ○ | 35 | 40 | 40 | 5.72 | 8.08 | 9.04 | 9.89 | 10.7 | 11.4 | 12.1 | 12.8 | 14.6 | 16.2 | 18.1 | 22.1 | 1.4 |
| 124 | ○ | ○ | 35 | 40 | 40 | 7.15 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 18.2 | 20.2 | 22.6 | 27.7 | 1.5 | |
| 30 | 25 | ○ | ○ | 26 | 30 | 30 | 1.43 | 2.02 | 2.25 | 2.47 | 2.67 | 2.85 | 3.03 | 3.19 | 3.64 | 4.03 | 4.51 | 5.52 | 0.6 |
| | 31 | ○ | ○ | 26 | 30 | 30 | 1.78 | 2.52 | 2.82 | 3.09 | 3.34 | 3.57 | 3.78 | 3.99 | 4.55 | 5.05 | 5.64 | 6.91 | 0.7 |
| | 37 | ○ | ○ | 26 | 30 | 30 | 2.14 | 3.03 | 3.39 | 3.71 | 4.01 | 4.28 | 4.54 | 4.79 | 5.46 | 6.06 | 6.77 | 8.30 | 0.8 |
| | 43 | ○ | ○ | 26 | 30 | 30 | 2.50 | 3.54 | 3.96 | 4.33 | 4.68 | 5.00 | 5.30 | 5.59 | 6.37 | 7.06 | 7.91 | 9.67 | 0.9 |
| | 49 | ○ | ○ | 26 | 30 | 30 | 2.86 | 4.04 | 4.52 | 4.94 | 5.34 | 5.71 | 6.06 | 6.38 | 7.28 | 8.07 | 9.04 | 11.1 | 1.0 |
| | 56 | ○ | ○ | 26 | 30 | 30 | 3.22 | 4.54 | 5.08 | 5.56 | 6.01 | 6.42 | 6.81 | 7.18 | 8.19 | 9.08 | 10.2 | 12.4 | 1.1 |
| | 62 | ○ | ○ | 26 | 30 | 30 | 3.57 | 5.05 | 5.65 | 6.18 | 6.68 | 7.14 | 7.57 | 7.98 | 9.10 | 10.1 | 11.3 | 13.8 | 1.1 |
| | 68 | ○ | ○ | 26 | 30 | 30 | 3.93 | 5.55 | 6.21 | 6.80 | 7.35 | 7.85 | 8.33 | 8.79 | 10.0 | 11.1 | 12.4 | 15.2 | 1.1 |
| | 74 | ○ | ○ | 26 | 30 | 30 | 4.29 | 6.06 | 6.78 | 7.42 | 8.01 | 8.56 | 9.09 | 9.58 | 10.9 | 12.1 | 13.6 | 16.6 | 1.2 |
| | 80 | ○ | ○ | 26 | 30 | 30 | 4.65 | 6.56 | 7.35 | 8.04 | 8.68 | 9.28 | 9.85 | 10.4 | 11.8 | 13.1 | 14.7 | 18.0 | 1.3 |
| | 87 | ○ | ○ | 26 | 30 | 30 | 5.00 | 7.07 | 7.91 | 8.66 | 9.35 | 10.0 | 10.6 | 11.2 | 12.8 | 14.1 | 15.8 | 19.4 | 1.3 |
| | 99 | ○ | ○ | 26 | 30 | 30 | 5.72 | 8.08 | 9.04 | 9.89 | 10.7 | 11.4 | 12.1 | 12.8 | 14.6 | 16.2 | 18.1 | 22.1 | 1.5 |
| | 124 | ○ | ○ | 26 | 30 | 30 | 7.15 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 18.2 | 20.2 | 22.6 | 27.7 | 1.7 |

| Spray angle code | Spray capacity code | Pipe conn. size | | Spray angle (°) | | | Spray capacity (ℓ/min) | | | | | | | | | | | | Free pass. dia. (mm) |
|------------------|---------------------|-----------------|------|-----------------|-------|-------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|--------|--------|----------------------|
| | | R1/8 | R1/4 | 1 MPa | 3 MPa | 5 MPa | 1 MPa | 2 MPa | 2.5 MPa | 3 MPa | 3.5 MPa | 4 MPa | 4.5 MPa | 5 MPa | 6.5 MPa | 8 MPa | 10 MPa | 15 MPa | |
| 25 | 25 | ○ | ○ | 22 | 25 | 25 | 1.43 | 2.02 | 2.25 | 2.47 | 2.67 | 2.85 | 3.03 | 3.19 | 3.64 | 4.03 | 4.51 | 5.52 | 0.7 |
| | 31 | ○ | ○ | 22 | 25 | 25 | 1.78 | 2.52 | 2.82 | 3.09 | 3.34 | 3.57 | 3.78 | 3.99 | 4.55 | 5.05 | 5.64 | 6.91 | 0.7 |
| | 37 | ○ | ○ | 22 | 25 | 25 | 2.14 | 3.03 | 3.39 | 3.71 | 4.01 | 4.28 | 4.54 | 4.79 | 5.46 | 6.06 | 6.77 | 8.30 | 0.8 |
| | 43 | ○ | ○ | 22 | 25 | 25 | 2.50 | 3.54 | 3.96 | 4.33 | 4.68 | 5.00 | 5.30 | 5.59 | 6.37 | 7.06 | 7.91 | 9.67 | 0.9 |
| | 49 | ○ | ○ | 22 | 25 | 25 | 2.86 | 4.04 | 4.52 | 4.94 | 5.34 | 5.71 | 6.06 | 6.38 | 7.28 | 8.07 | 9.04 | 11.1 | 1.0 |
| | 56 | ○ | ○ | 22 | 25 | 25 | 3.22 | 4.54 | 5.08 | 5.56 | 6.01 | 6.42 | 6.81 | 7.18 | 8.19 | 9.08 | 10.2 | 12.4 | 1.1 |
| | 62 | ○ | ○ | 22 | 25 | 25 | 3.57 | 5.05 | 5.65 | 6.18 | 6.68 | 7.14 | 7.57 | 7.98 | 9.10 | 10.1 | 11.3 | 13.8 | 1.1 |
| | 68 | ○ | ○ | 22 | 25 | 25 | 3.93 | 5.55 | 6.21 | 6.80 | 7.35 | 7.85 | 8.33 | 8.79 | 10.0 | 11.1 | 12.4 | 15.2 | 1.2 |
| | 74 | ○ | ○ | 22 | 25 | 25 | 4.29 | 6.06 | 6.78 | 7.42 | 8.01 | 8.56 | 9.09 | 9.58 | 10.9 | 12.1 | 13.6 | 16.6 | 1.3 |
| | 80 | ○ | ○ | 22 | 25 | 25 | 4.65 | 6.56 | 7.35 | 8.04 | 8.68 | 9.28 | 9.85 | 10.4 | 11.8 | 13.1 | 14.7 | 18.0 | 1.3 |
| | 87 | ○ | ○ | 22 | 25 | 25 | 5.00 | 7.07 | 7.91 | 8.66 | 9.35 | 10.0 | 10.6 | 11.2 | 12.8 | 14.1 | 15.8 | 19.4 | 1.4 |
| | 99 | ○ | ○ | 22 | 25 | 25 | 5.72 | 8.08 | 9.04 | 9.89 | 10.7 | 11.4 | 12.1 | 12.8 | 14.6 | 16.2 | 18.1 | 22.1 | 1.5 |
| | 124 | ○ | ○ | 22 | 25 | 25 | 7.15 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 18.2 | 20.2 | 22.6 | 27.7 | 1.7 |
| | 15 | 25 | ○ | ○ | 12 | 15 | 15 | 1.43 | 2.02 | 2.25 | 2.47 | 2.67 | 2.85 | 3.03 | 3.19 | 3.64 | 4.03 | 4.51 | 5.52 |
| 31 | | ○ | ○ | 12 | 15 | 15 | 1.78 | 2.52 | 2.82 | 3.09 | 3.34 | 3.57 | 3.78 | 3.99 | 4.55 | 5.05 | 5.64 | 6.91 | 0.8 |
| 37 | | ○ | ○ | 12 | 15 | 15 | 2.14 | 3.03 | 3.39 | 3.71 | 4.01 | 4.28 | 4.54 | 4.79 | 5.46 | 6.06 | 6.77 | 8.30 | 0.9 |
| 43 | | ○ | ○ | 12 | 15 | 15 | 2.50 | 3.54 | 3.96 | 4.33 | 4.68 | 5.00 | 5.30 | 5.59 | 6.37 | 7.06 | 7.91 | 9.67 | 1.0 |
| 49 | | ○ | ○ | 12 | 15 | 15 | 2.86 | 4.04 | 4.52 | 4.94 | 5.34 | 5.71 | 6.06 | 6.38 | 7.28 | 8.07 | 9.04 | 11.1 | 1.1 |
| 56 | | ○ | ○ | 12 | 15 | 15 | 3.22 | 4.54 | 5.08 | 5.56 | 6.01 | 6.42 | 6.81 | 7.18 | 8.19 | 9.08 | 10.2 | 12.4 | 1.1 |
| 62 | | ○ | ○ | 12 | 15 | 15 | 3.57 | 5.05 | 5.65 | 6.18 | 6.68 | 7.14 | 7.57 | 7.98 | 9.10 | 10.1 | 11.3 | 13.8 | 1.2 |
| 68 | | ○ | ○ | 12 | 15 | 15 | 3.93 | 5.55 | 6.21 | 6.80 | 7.35 | 7.85 | 8.33 | 8.79 | 10.0 | 11.1 | 12.4 | 15.2 | 1.3 |
| 74 | | ○ | ○ | 12 | 15 | 15 | 4.29 | 6.06 | 6.78 | 7.42 | 8.01 | 8.56 | 9.09 | 9.58 | 10.9 | 12.1 | 13.6 | 16.6 | 1.3 |
| 80 | | ○ | ○ | 12 | 15 | 15 | 4.65 | 6.56 | 7.35 | 8.04 | 8.68 | 9.28 | 9.85 | 10.4 | 11.8 | 13.1 | 14.7 | 18.0 | 1.4 |
| 87 | | ○ | ○ | 12 | 15 | 15 | 5.00 | 7.07 | 7.91 | 8.66 | 9.35 | 10.0 | 10.6 | 11.2 | 12.8 | 14.1 | 15.8 | 19.4 | 1.5 |
| 93 | | ○ | ○ | 12 | 15 | 15 | 5.36 | 7.58 | 8.48 | 9.28 | 10.0 | 10.7 | 11.4 | 12.0 | 13.7 | 15.2 | 17.0 | 20.8 | 1.5 |
| 99 | | ○ | ○ | 12 | 15 | 15 | 5.72 | 8.08 | 9.04 | 9.89 | 10.7 | 11.4 | 12.1 | 12.8 | 14.6 | 16.2 | 18.1 | 22.1 | 1.6 |
| 111 | | ○ | ○ | 12 | 15 | 15 | 6.43 | 9.09 | 10.2 | 11.1 | 12.0 | 12.9 | 13.6 | 14.4 | 16.4 | 18.2 | 20.3 | 24.9 | 1.6 |
| 124 | ○ | ○ | 12 | 15 | 15 | 7.15 | 10.1 | 11.3 | 12.4 | 13.4 | 14.3 | 15.2 | 16.0 | 18.2 | 20.2 | 22.6 | 27.7 | 1.7 | |

How to order

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

〈Example〉 1/8M VNP 65 43 S303

1/8M VNP 65 43 S303

| | | | |
|------------------------------|-------------------------------|---------------------|----------|
| Pipe conn. size ¹ | Spray angle code ² | Spray capacity code | Material |
| ■ 1/8M | ■ 65 | ■ 25 | ■ S303 |
| ■ 1/4x1/8M | ∩ | ∩ | ■ B |
| | ■ 15 | ■ 124 | |

*1) "M" indicates male thread ("R" of the ISO standard) and "F" indicates female thread ("Rc" of the ISO standard), e.g. 1/8M = R1/8. Size R1/4 is indicated as "1/4x1/8M" in VNP series.

*2) Color of ceramic orifice differs depending on nozzle codes.

When spray angle code is 25 or 15 and spray capacity code is in the range of 43–124, "Brown tip" or "Brown" is indicated after material code.

〈Example〉 1/8MVNP2543S303 (Brown)