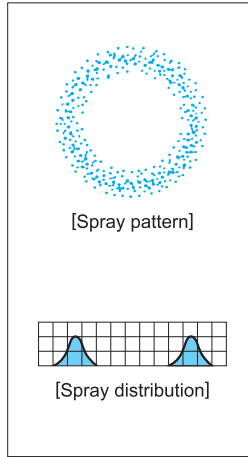
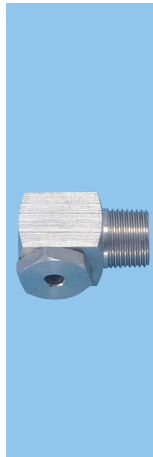


Medium Capacity Hollow Cone Spray Nozzles

AAP



[Features]

- Hollow cone spray nozzle with relatively fine atomization. Stable spray pattern at both low and high pressure.
- No-whirler design minimizes clogging.
- Spraying axis 90° from the axis of the nozzle inlet.

[Standard Pressure]

0.2 MPa

[Applications]

- Cleaning: Gas, air, machines, pre-painting treatment
- Cooling: Gas, air handling unit, roofs, machineries, foods, warm water
- Spraying: Aeration, humidification

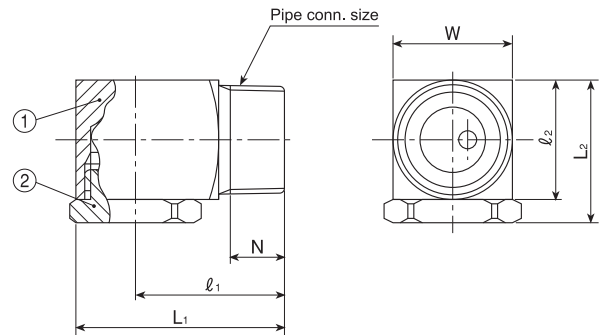
Hollow Cone

AAP series

AAP series	
Structure	<ul style="list-style-type: none"> • Comprises nozzle body and orifice cap. • Orifice cap is screwed into nozzle body.
Material	<ul style="list-style-type: none"> • Body: S304 • Orifice cap: S303 • Optional material: S316, S316L, B (brass)

Pipe conn. size	Dimensions (mm)						Mass (g)
	L ₁	L ₂	ℓ ₁	ℓ ₂	W	N	
¼ M	32	20.5	23	16	16	10.5	49
⅜ M	36	23.5	26	19	19	11	72
½ M	46	31	33.5	25	25	14	160

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



① Body (S304) ② Orifice cap (S303)

Spray Capacity Code	Pipe Conn. Size			Spray Angle (°)			Spray Capacity (ℓ/min)						Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)			
	¼ M	⅜ M	½ M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa			0.5 MPa		
01	○			71	75	77	0.40	0.51	0.72	0.87	1.00	1.22	1.55	260	2.0		
02	○			71	75	77	0.80	1.03	1.43	1.74	2.00	2.43	3.11				
03	○			71	75	77	1.21	1.54	2.15	2.61	3.00	3.65	4.66			∩	3.2
04	○			76	80	82	1.61	2.05	2.87	3.48	4.00	4.86	6.21				
05	○			76	80	82	2.01	2.57	3.58	4.35	5.00	6.08	7.77			500	4.3
06		○		76	80	82	2.41	3.08	4.30	5.22	6.00	7.29	9.32	470	4.8		
07		○		76	80	82	2.81	3.59	5.02	6.10	7.00	8.51	10.9	∩	5.0		
08		○		76	80	82	3.21	4.11	5.73	6.97	8.00	9.72	12.4				
10		○		76	80	83	4.02	5.14	7.17	8.71	10.0	12.2	15.5	∩	5.8		
12		○		76	80	83	4.82	6.16	8.60	10.4	12.0	14.6	18.6			650	6.2
14			○	76	80	83	5.62	7.19	10.0	12.2	14.0	17.0	21.7	∩	6.8		
18			○	76	80	83	7.23	9.24	12.9	15.7	18.0	21.9	28.0			7.5	
23			○	76	80	83	9.24	11.8	16.5	20.0	23.0	28.0	35.7	800	8.0		

How to order

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

〈Example〉...¼MAAP01S303

¼ M	AAP	01	S303
<small>Pipe Conn. Size</small>		<small>Spray Capacity Code</small>	<small>Material</small>
■ ¼ M		■ 01	■ S303
■ ⅜ M		∩	
■ ½ M		■ 23	

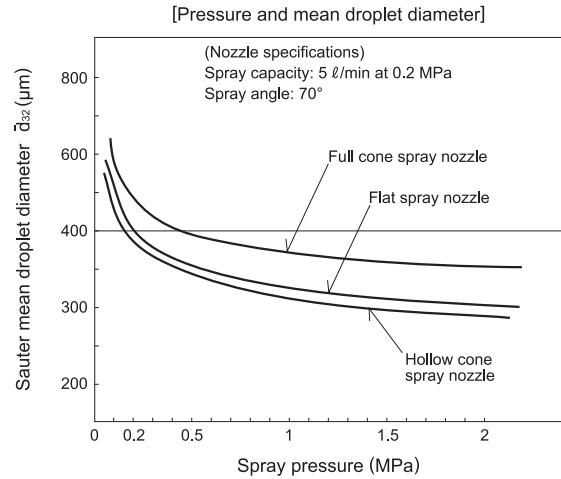
Effective Use of Hollow Cone Spray Nozzles

Mean Droplet Diameter

If spray pressure, spray capacity and spray angle are kept the same, the mean droplet diameter of a hollow cone spray nozzle is the smallest among all hydraulic nozzles.

Reducing the mean droplet diameter increases the total surface area of the spray liquid which has a great effect on transport phenomena of materials, such as chemical reaction, absorption, adsorption, etc.

Hollow cone spray nozzles are suitable for cooling and washing gases, humidifying and chemical reactions.



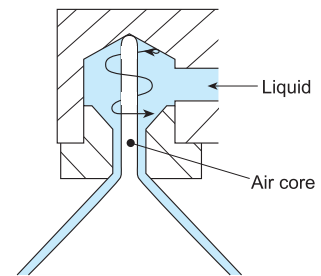
Free Passage Diameter

Free passage diameter shows the approximate value of the smallest dimension of liquid passage in the nozzle. Among hollow cone spray nozzles, **AAP** and **TAA series** nozzles have no obstructions inside and minimize clogging problems.

Wear Resistance

In the tangential hollow cone spray nozzles an air core is generated in the center of the vortex current, which causes wear at the end of the air core when the spraying liquid contains slurry.

In order to maintain optimum nozzle performance, the nozzle material is very important. That is why IKEUCHI's hollow cone spray nozzles are made of highly wear-resistant ceramics and SiC, etc.



Viscosity

As the viscosity of liquid increases, the spray capacity of hollow cone spray nozzles increases but the spray angle decreases. Also, the mean droplet diameter becomes larger. Because viscous liquid increases the resistance inside the pipe, the liquid pressure drop must be also taken into consideration.

