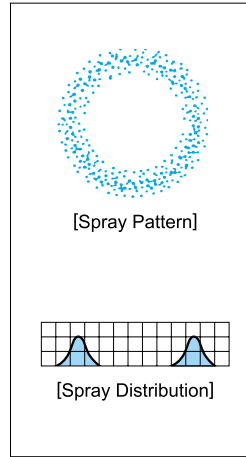


# Small Capacity Hollow Cone Spray Nozzles

KD



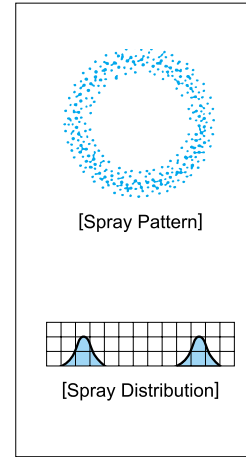
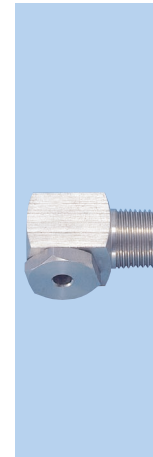
- [Features]**
- Small capacity 3-piece structure hollow cone spray nozzle.
  - Combines compact design and semi-fine atomization capability.
  - The whirl chamber is formed by a ceramic orifice and closer, which provides excellent wear-resistance.

**[Standard Pressure]**  
0.3MPa

- [Applications]**
- Cooling : Gases, etc.  
Spraying : Chemicals, dust suppression, etc.

# Medium Capacity Hollow Cone Spray Nozzles

AAP



- [Features]**
- Hollow cone spray nozzles producing stable spray pattern with relatively fine atomization.
  - No-whirler design minimizes clogging.
  - Spraying axis 90° from the axis of the nozzle inlet.

**[Standard Pressure]**  
0.2MPa

- [Applications]**
- Cleaning : Gases, air, machines, pre-painting treatment, etc.  
Cooling : Gases, air handling unit, roofs, machineries, foods, warm water, etc.  
Spraying : Aeration, humidification, etc.

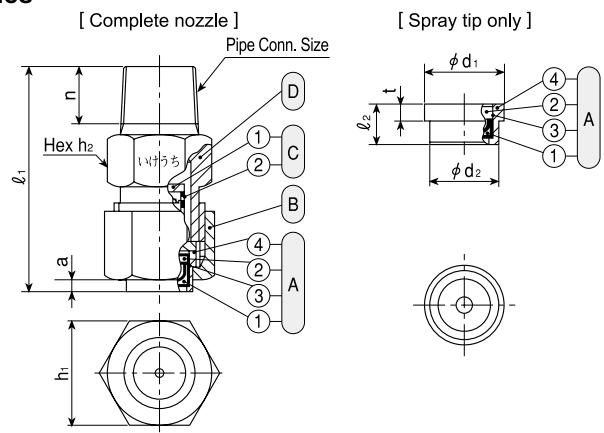
## KD-series

KD-series (with ceramic orifice inserted)	
<b>Structure</b>	• Spray orifice and whirler are made of ceramics. • Comprises three parts : Spray tip, cap and adaptor. • Worn-out tip can be replaced separately. • Removable strainer is fitted and supplied as standard part with small capacity nozzle (KD03, KD033).
<b>Material</b>	• Spray orifice & whirler : ceramic • Metal parts : B (brass) or S303 (stainless steel 303) • Optional material : S316 or others

[Complete nozzle]		Dimensions(mm)					Mass(g)	
Series	Pipe Conn. Size	l <sub>1</sub>	h <sub>1</sub>	h <sub>2</sub>	a	n	B	S303
KD	1/4 M	39.2	19	17	2.2	10.5	49	46

\*For KD with strainer, add 2-5g to the above mass and 2mm to the above l<sub>1</sub> length.

[Spray tip]		Dimensions(mm)					Mass(g)	
Series	Pipe Conn. Size of Complete Nozzle	l <sub>2</sub>	φ d <sub>1</sub>	φ d <sub>2</sub>	t	B	S303	
KD	1/4 M	7.2	14.5	12.5	3	3	3	



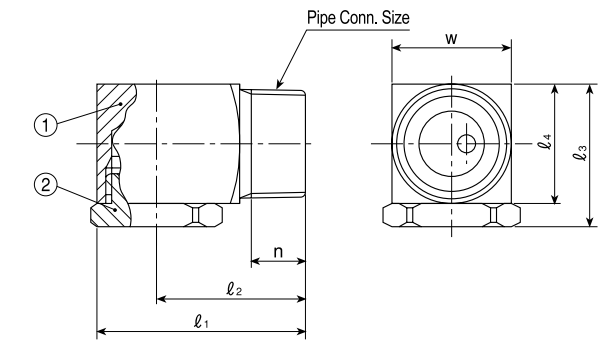
- ① Spray tip (① Ceramic orifice ② Ceramic whirler ③ Adhesive : Araldite® ④ Retainer)  
⑤ Cap ⑥ Strainer (① Strainer holder ② Strainer screen) ⑦ Adaptor

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

## AAP-series

AAP-series	
<b>Structure</b>	• Comprised of nozzle body and orifice cap. • Orifice cap is screwed into nozzle body and removable.
<b>Material</b>	• Orifice cap : S303 (stainless steel 303) • Body : S304 (stainless steel 304) • Optional material : B (brass), S316, S316L

Series	Pipe Conn. Size	Dimensions(mm)						Mass(g)
		l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	w	n	
AAP	1/4 M	32	23	20.5	16	16	10.5	49
	3/8 M	36	26	23.5	19	19	11.0	72
	1/2 M	46	33.5	31	25	25	14.0	160



- ① Body (S304) ② Orifice cap (S303)

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

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ/min)								Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)	Strainer Mesh Size	
		0.15 MPa	0.3 MPa	0.7 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	1.5 MPa				2 MPa
03	●	—	80°	85°	—	—	0.25	0.30	0.38	0.44	0.52	0.63	0.72	130	0.7	50
033	●	—	80°	88°	—	—	0.27	0.33	0.42	0.49	0.58	0.69	0.79	130	0.7	50
037	○	—	70°	75°	—	—	0.31	0.37	0.47	0.55	0.64	0.77	0.88	130	1.0	—
042	○	90°	93°	97°	—	0.30	0.35	0.42	0.53	0.62	0.73	0.88	1.00	130	0.7	—
057	○	78°	85°	90°	—	0.41	0.47	0.57	0.72	0.84	0.99	1.19	1.36	130	1.1	—
068	○	90°	95°	99°	—	0.49	0.56	0.68	0.86	1.01	1.18	1.42	1.62	200	1.1	—
084	○	90°	95°	103°	0.50	0.61	0.70	0.84	1.05	1.21	1.42	1.69	1.92	130	1.1	—
116	○	66°	70°	72°	0.70	0.84	0.96	1.16	1.45	1.68	1.96	2.34	2.65	260	1.3	—
146	○	74°	78°	80°	0.88	1.06	1.21	1.46	1.85	2.16	2.54	3.05	3.49	310	1.8	—
176	○	71°	73°	75°	1.06	1.27	1.46	1.76	2.22	2.60	3.06	3.68	4.20	130	1.7	—
182	○	81°	87°	91°	1.10	1.32	1.51	1.82	2.30	2.69	3.17	3.81	4.34	130	1.8	—
211	○	83°	88°	92°	1.27	1.53	1.75	2.11	2.67	3.12	3.67	4.41	5.04	130	1.8	—
224	○	75°	80°	82°	1.34	1.62	1.85	2.24	2.83	3.31	3.90	4.69	5.35	130	1.7	—
262	○	75°	80°	83°	1.57	1.90	2.17	2.62	3.31	3.87	4.56	5.48	6.25	130	1.7	—
316	○	93°	97°	97°	1.90	2.29	2.62	3.16	3.99	4.67	5.50	6.61	7.54	130	1.8	—
394	○	83°	87°	91°	2.36	2.85	3.26	3.94	4.98	5.82	6.86	8.24	9.40	420	1.7	—

●.....With strainer ○.....Without strainer

## How to order

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

### ① Complete nozzle

Example: 1/4 MKD03BW

1/4 MKD	03	B	W
Spray Capacity Code	Material	Material	Strainer
03	B	W (with Strainer)	— (without Strainer)
394	S303		

### ② Spray tip only

Example: 1/4 KD03B

1/4 KD	03	B
Spray Capacity Code	Material	
03	B	
394	S303	

## How to order

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

Example: 1/4 MAAP01S303

1/4 M	AAP	01	S303
Pipe Conn. Size		Spray Capacity Code	Material
1/4 M		01	S303
3/8 M		23	
1/2 M			