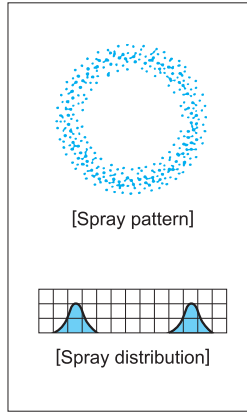


# Flange-type, Large Capacity Hollow Cone Spray Nozzles

TAA

Hollow Cone



### [Features]

- Stable spray pattern under low pressures owing to the involute vortex chamber design.
- Made of highly wear-resistant SiC (silicon nitride bonded silicon carbide).
- Flanged connection.
- Lightweight as made in all SiC (less than half of metal nozzle).

### [Standard Pressure]

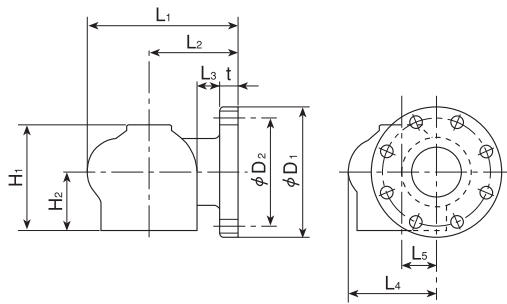
0.07 MPa

### [Applications]

- Absorption tower of flue gas desulfurization equipment
- Spraying slurry

## TAA series

TAA series														
Structure	<ul style="list-style-type: none"> <li>• One-piece cast-molded ceramics.</li> <li>• Flanged connection.</li> </ul>													
Material	<ul style="list-style-type: none"> <li>• SiC (silicon nitride bonded silicon carbide)</li> <li>• Optimal material: SiSiC (sintered reaction-bonded silicon carbide)</li> </ul>													
Flange Size	Spray capacity code	Dimensions (mm)										Flange (JIS 10k)	Mass (g)	
		L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	H <sub>1</sub>	H <sub>2</sub>	φD <sub>1</sub>	φD <sub>2</sub>	t			Qty. of bolt holes
2T	200	151	99	37	74	28	102	57	155	120	22	4	19	1,800
	300	169	106	37	90	35	112	62	155	120	22	4	19	2,000
3T	400	184	114	37	100	38	129	71	185	150	24	8	19	3,100
	500	202	122	37	116	45	145	82	185	150	24	8	19	3,700
	650	210	125	36	124	49	150	85	185	150	24	8	19	4,000
	800	210	125	36	124	49	150	85	185	150	24	8	19	4,000
4T	1000	253	154	55	143	56	177	100	210	175	24	8	19	6,000
	1200	271	161	55	159	63	187	105	210	175	24	8	19	6,800



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

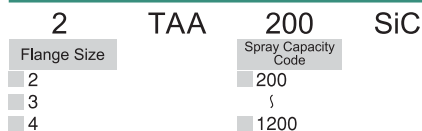
Spray Capacity Code	Flange Size			Spray Angle (°)			Spray Capacity (ℓ/min)					Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)
	2T	3T	4T	0.03 MPa	0.07 MPa	0.1 MPa	0.03 MPa	0.05 MPa	0.07 MPa	0.1 MPa	0.15 MPa		
200	○			62	67	69	133	170	200	237	288	1,800	28
300	○			62	67	69	199	255	300	356	432	2,100	33
400		○		62	67	69	266	340	400	474	576	2,100	38
500		○		62	67	69	332	425	500	592	720	2,100	41
650		○		62	67	69	432	552	650	770	936	3,600	50
800		○		75	80	82	532	680	800	950	1,154	3,600	57
1000			○	75	80	82	665	850	1,000	1,187	1,442	3,600	63
1200			○	75	80	82	798	1,020	1,200	1,424	1,731	3,800	68

[Note] 1. Since TAA of SiC series nozzles are die-cast molded, the spray capacity is guaranteed within ±10% and the spray angle within ±7° under standard pressure.  
2. Bolt tightening torque for connecting the flange must not exceed 30 N-m per bolt.

### How to order

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

<Example>...2TAA200SiC



### Related Products

Also available are TWAA series nozzles for two-direction spray and TAA series nozzles made of chemical-resistant PP.

Series	Appearance	Structure	Features	Series	Appearance	Structure	Features
TWAA-SiC			<ul style="list-style-type: none"> <li>• Two-direction (180° opposite direction) jet type made of SiC Ceramic.</li> </ul>	TAA-PP			<ul style="list-style-type: none"> <li>• Hollow cone spray nozzle made of PP.</li> <li>• Chemical-resistant and lightweight.</li> </ul>

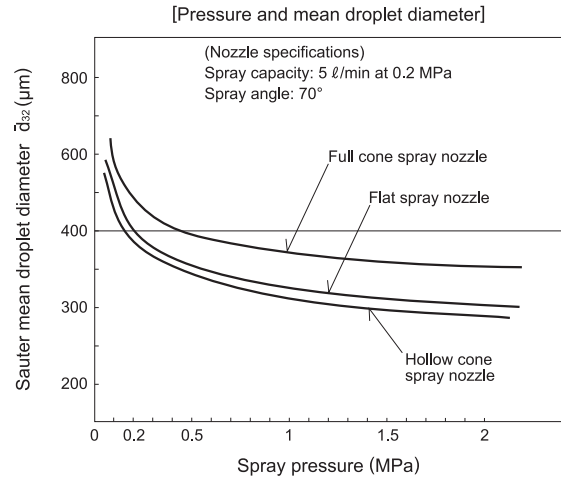
# Effective Use of Hollow Cone Spray Nozzles

## 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.



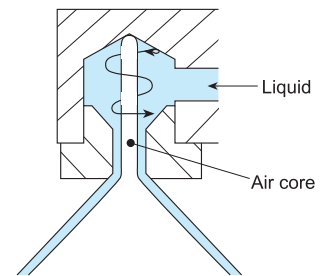
## Free Passage Diameter

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.

