

Clog-resistant Fine Fog Nozzles

SETOJet / SETOJet-R / SETOJet-PTFE series Nozzles SETO-SD / YYA



■SETOJet, SETO-SD, YYA series are the clog-resistant pneumatic nozzles specially designed for spraying viscous liquid.

■External mixing type nozzle (compressed air and liquid are mixed outside the nozzle) featuring minimal clogging.

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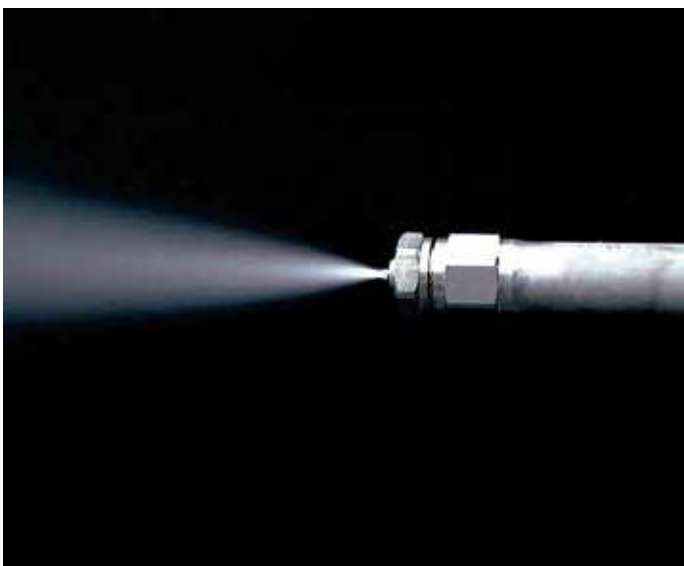
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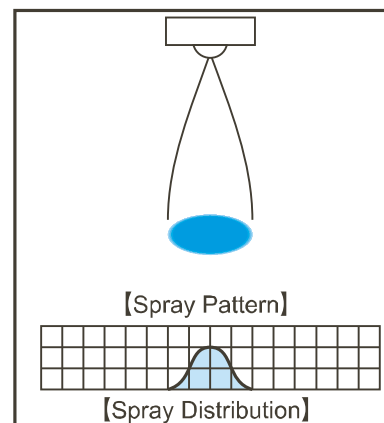
Clog-resistant Fine Fog Nozzles / Full Cone Spray

SETOJet

Features

- Full cone spray pneumatic nozzle producing fine atomization with a mean droplet diameter of 50µm or less (*1).
- Clog-resistant design - Liquid passage is straight without curve, and circular in cross-section.
- External mixing type (designed to mix air and liquid outside the nozzle).

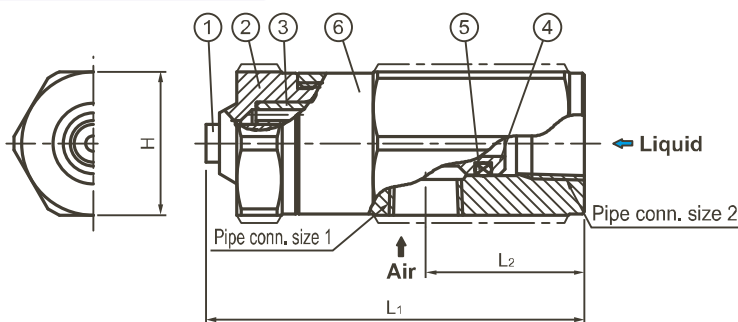
*1) Measured by the Fraunhofer Diffraction method.
Please refer to pages 6-7 for comparison with Laser Doppler Method.



Applications

- Spraying: Oil, lubricant, mold release agent, honey, aqueous urea, rust preventive, glaze and other viscous liquid or slurry

Structure & Materials



Components and materials

No.	Components	Standard Materials
①	Nozzle Tip	S303
②	Nozzle Body	S303
③	Air Balancer	S303
④	Stem	S303
⑤	O-ring	FKM
⑥	Adaptor	S303

*Components ① and ③ are combined for SETO#04 and 075.

Dimensions & Pipe Connection Sizes

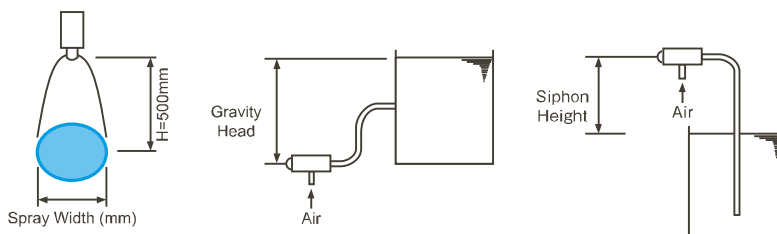
Dimensions

Air Consumption Code	Spray Capacity Code	Pipe Connection Size		L1 (mm)	L2 (mm)	H (mm)	Mass (g)
		1 (Air)	2 (Liquid)				
04	05	1/8F	1/8F	49.5	21	19	85
	07			49.5			
	10			49.5			
075	07			49.5			
	10			49.5			
15	10			50.0			
	20	50.0					
22	10	50.0					
	20	50.0					

Air Consumption Code	Spray Capacity Code	Air Pressure (MPa)	Air Consumption (ℓ/min, Normal)	Spray Capacity (ℓ/hr)		Spray Width*2 (mm) H=500mm	Mean Droplet Diameter*2 (µm) Laser Doppler Method	Free Passage Diameter (mm)		
				Liquid Press. 0MPa (Siphon)*3	Liquid Press. 0.05MPa			Air	Liquid	
				04	05			0.3	38	2.0
04	07	0.3	38	4.0	12.3	130	20	80	0.1	0.7
	10		38	7.0	27.7	130			0.1	1.0
	075		07	80	5.0	13.9			160	0.2
10			80	8.0	27.9	160			0.2	1.0
15	10		220	8.0	27.7	170			0.3	1.0
	20		220	25.0	111	170			0.3	2.0
22	10	290	8.0	26.4	180	0.5	1.0			
	20	290	26.0	111	180	0.5	2.0			

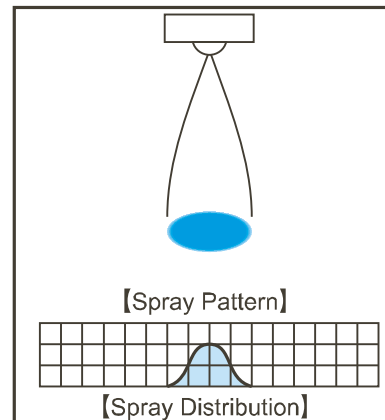
Note: *2) Measured at compressed air pressure of 0.3MPa and liquid pressure of 0MPa (Liquid siphon feed).

*3) Siphon height; 100mm.



Features

- Clog-resistant full cone spray pneumatic nozzles producing fine atomization.
- Eddies from air makes further fine atomization.
- Optimal for spraying viscous liquids.



Dimensions & Pipe Connection Sizes

Dimensions

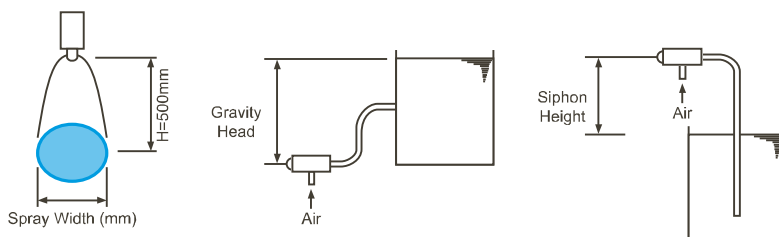
Air Consumption Code	Pipe Connection Size		L1 (mm)	L2 (mm)	H (mm)	Mass (g)
	1 (Air)	2 (Liquid)				
04	1/8F	1/8F	49	21	19	85
075						
15						
22						

*Please refer to page 67 for structure and materials.

Air Consumption Code	Spray Capacity Code	Air Pressure (MPa)	Air Consumption (ℓ/min, Normal)	Spray Capacity (ℓ/hr)		Spray Width*1 (mm) H=500mm	Mean Droplet Diameter*1 (μm) Laser Doppler Method	Free Passage Diameter (mm)	
				Liquid Press. 0MPa (Siphon)*2	Liquid Pressure 0.05MPa			Air	Liquid
				04	05R	0.3	36	2.0	6.5
	07R	36	4.0	12.3	0.1		0.7		
	10R	36	8.0	27.7	0.1		1.0		
075	07R	71	5.0	13.9	60		0.2	0.7	
	10R	71	9.0	27.9			0.2	1.0	
15	10R	150	10.0	27.7			0.3	1.0	
22	10R	200	11.0	26.4	180	0.5	1.0		

Note: *1) Measured at compressed air pressure of 0.3MPa and liquid pressure of 0MPa (Liquid siphon feed).

*2) Siphon height; 100mm.



How to order

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

<Example> SETO0405S303+TS303

SETO	04	05	S303	+	T	S303
	Air Consumption Code	Spray Capacity Code				
	■04	■05 ■05R				
	┆	┆				
	■22	■20 ■10R				

<Example> If SETO 0405 is required with optional S316L nozzle tip and adaptor, product code is SETO0405S303S316L + TS316L. (Specify the nozzle tip material after nozzle body material)

Material of Nozzle Tip

Note: Configuration and dimensions may differ with material of nozzle tip.

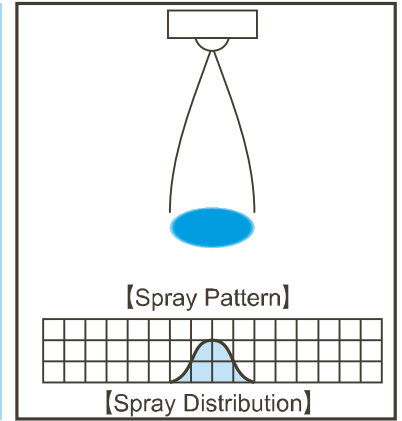
Clog-resistant Fine Fog Nozzles / Full Cone Spray – for Wafer Cleaning –

Patented

SETOJet-PTFE

Features

- Pneumatic spray nozzle made of PTFE. Capable of spraying chemical solutions.
- External mixing type preventing contamination.

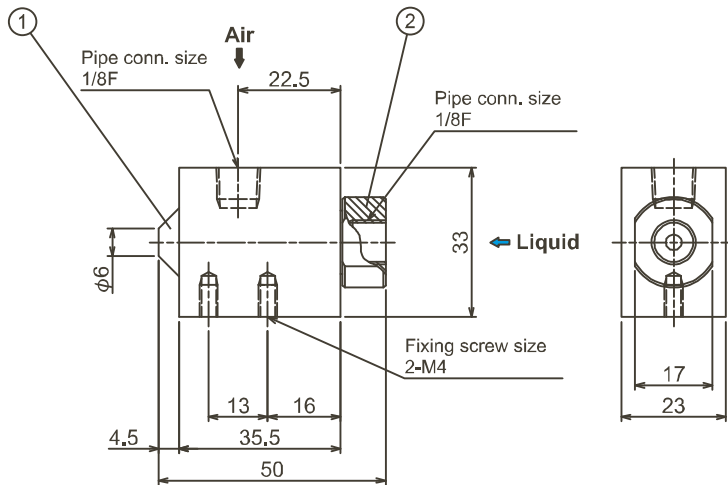


Applications

- Cleaning: Precise cleaning for semiconductor wafers

Structure & Materials

- Structure: External mixing type
- Material: PTFE (polytetrafluoroethylene)



Components and materials

No.	Components	Standard Materials
①	Nozzle Body	PTFE
②	Nozzle Tip	PTFE

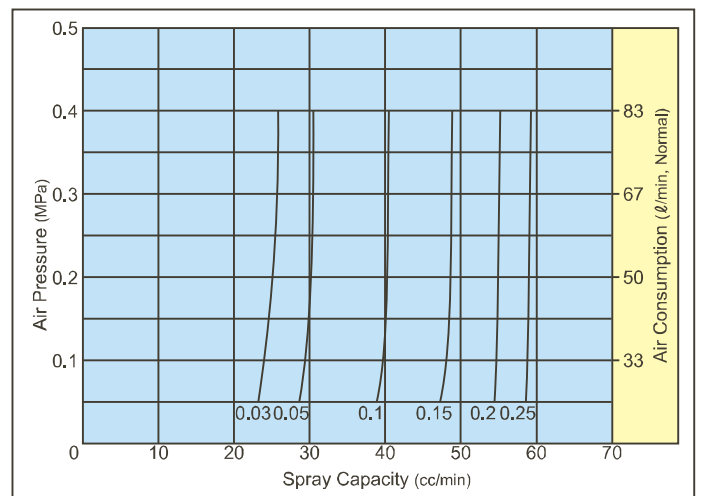
Flow-rate Diagram

How to read the chart

- ① The spray capacity shown is for one nozzle.
- ② Figures at the foot of each curve indicate liquid pressures in MPa.

Note:

This chart is a single example. We can design an optimal nozzle according to your application and purpose.



[Made-to-order product]

Please contact our sales office for details and other specifications.