

Semi-Fine Fog, Semi-Coarse Fog Nozzles

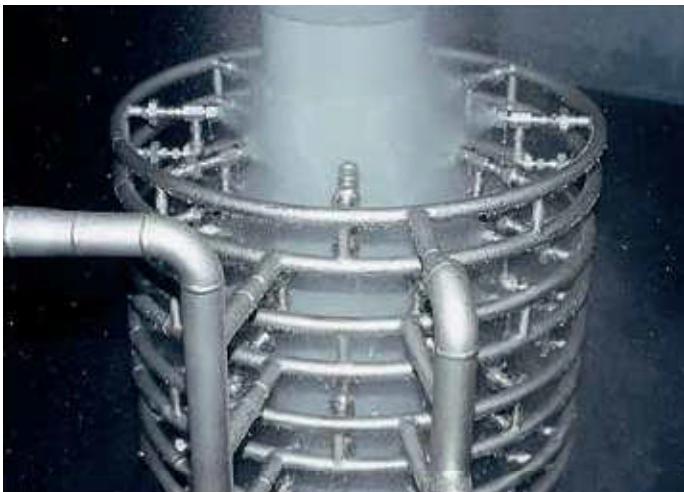
DOVEA / DDA / JJA series Nozzles DOVVA-G / VVEA / PSN



■DOVEA, DDA JJA and DOVVA-G series, developed to satisfy the crucial requirements for spray nozzles in the continuous casting process of steel making, feature stable spray angles and distributions with large turndown ratios, having fine and uniform spray droplet size distributions across the entire spray area. Also, free passage diameters are twice as large as those of hydraulic nozzles to minimize clogging.

With these features, DOVEA, DDA JJA and DOVVA-G series are highly effective nozzles for steel / gas cooling.

■VVEA, PSN series are innovative pneumatic spray nozzles developed for new cleaning method requiring high-velocity and concentrated spraying of fine atomization, which can wash out fine dirt particles that conventional cleaning could not clean.



Contents

DOVEA series Flat Spray
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DDA series Oval Spray
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JJA series Full Cone Spray
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DOVVA-G series Flat Spray
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VVEA series High Impact Flat Spray
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PSN series
Pneumatic Slit Nozzles p.64

High Impact Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles

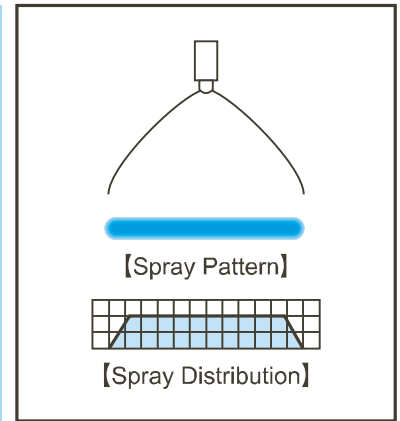
Patented

VVEA

Features

- Flat spray pneumatic nozzle producing semi-fine (and semi-coarse) atomization having a mean droplet diameter of 50 μ m (*1) or more.
- High spray impact with thin flat spray pattern and uniform distribution.
- Large turn-down ratio with stable spray angle.
- Compact design.

*1) Measured by Laser Doppler Method

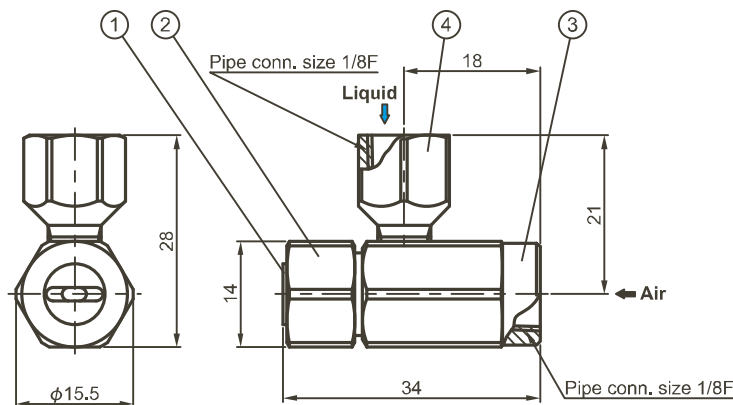


Applications

- Cleaning: Printed circuit boards, liquid crystal, steel plates

Structure & Materials

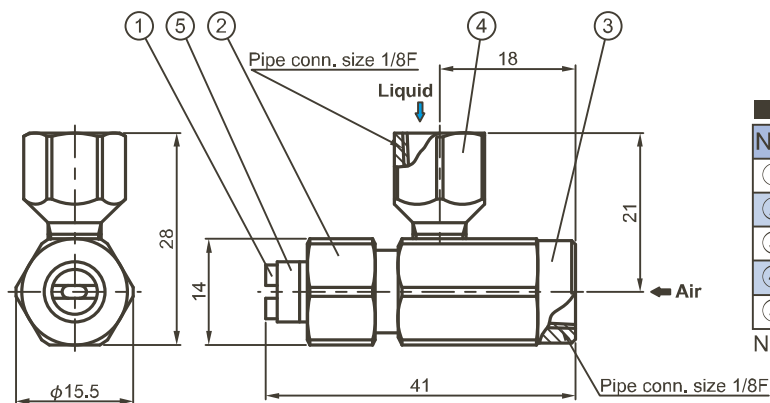
- Spray angle: 60° type



Components and materials

No.	Components	Standard Materials
①	Nozzle Tip	S303
②	Cap	S303
③	Mixing Adaptor	S303
④	Liquid Socket	S303

- Spray angle: 80° type



Components and materials

No.	Components	Standard Materials
①	Nozzle Tip	S303
②	Cap	S303
③	Mixing Adaptor	S303
④	Liquid Socket	S303
⑤	Sleeve	S303

Note: No Sleeve ⑤ for VVEA8005.

Spray Angle Code *2	Spray Capacity Code	Air Pressure (MPa)	Spray Capacity (ℓ/min) & Air Consumption (ℓ/min, Normal)								Mean Droplet Diameter (μm)	Free Passage Diameter (mm)		
			Liquid Pressure (MPa)									Laser Doppler Method	Spray Orifice	Adaptor
			0.2		0.3		0.5		0.7		Liquid			Air
80°	05	0.2	0.31	17	0.45	14	—	—	—	—		20 250	0.8	
		0.3	0.23	24	0.36	22	0.58	18	—	—				
		0.4	—	—	0.29	29	0.50	25	0.70	20				
		0.5	—	—	—	—	0.43	33	0.64	27				
	10	0.2	0.54	36	0.90	24	—	—	—	—	20 250	1.0	1.1	1.3
		0.3	0.30	58	0.60	49	1.28	25	1.78	11				
		0.4	—	—	0.39	74	1.00	50	1.50	32				
		0.5	—	—	—	—	0.81	69	1.28	51				
	20	0.2	0.96	44	1.98	18	—	—	—	—	30 300	1.1	1.6	1.6
		0.3	0.53	81	1.10	59	2.63	19	—	—				
		0.4	—	—	0.53	104	2.00	50	3.50	13				
		0.5	—	—	—	—	1.30	89	2.95	39				
30	0.2	1.34	50	—	—	—	—	—	—	40 400	1.3	1.9	1.9	
	0.3	0.63	100	1.60	64	—	—	—	—					
	0.4	—	—	0.88	128	3.00	50	—	—					
	0.5	—	—	—	—	2.25	85	4.17	33					
60°	05	0.2	0.31	17	0.45	14	—	—	—	—	20 250	1.0	0.8	0.9
		0.3	0.23	24	0.36	22	0.58	18	—	—				
		0.4	—	—	0.29	29	0.50	25	0.70	20				
		0.5	—	—	—	—	0.43	33	0.64	27				
	10	0.2	0.54	36	0.90	24	—	—	—	—	20 250	1.4	1.1	1.3
		0.3	0.30	58	0.60	49	1.28	25	1.78	11				
		0.4	—	—	0.39	74	1.00	50	1.50	32				
		0.5	—	—	—	—	0.81	69	1.28	51				
	20	0.2	0.96	44	1.98	18	—	—	—	—	30 300	1.5	1.6	1.6
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	0.3	0.63	100	1.60	64	—	—	—	—					
	0.4	—	—	0.88	128	3.00	50	—	—					
	0.5	—	—	—	—	2.25	85	4.17	33					

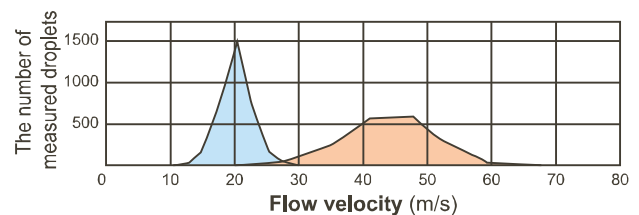
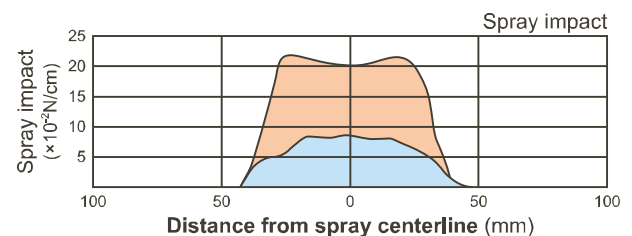
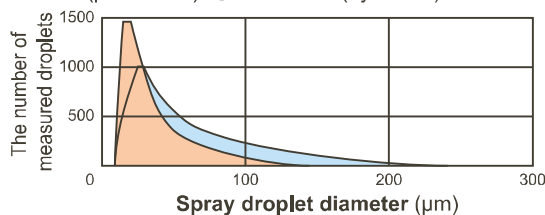
Note: *2) Measured at compressed air pressure of 0.4MPa and liquid pressure of 0.5MPa.

Spray Impact

In comparison to a hydraulic spray nozzle having equal spray capacity at the same pressure, VVEA series achieves the more powerful spray impact (2.5 times higher) with fine droplets (at twice the speed).

- Air pressure: 0.3MPa ■ Air consumption: 59ℓ/min, Normal
 - Liquid pressure: 0.3MPa ■ Spray capacity: 1.1ℓ/min
- (Air pressure, air consumption are only for VVEA)

○=VVEA6020 (pneumatic) ○=VVP6510 (hydraulic)



How to order

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

<Example> 1/8VVEA6010S303

1/8	VVEA	60	10	S303
		Spray Angle Code	Spray Capacity Code	
		■ 80°	■ 05	
		■ 60°	■ 10	
			■ 20	
			■ 30	