

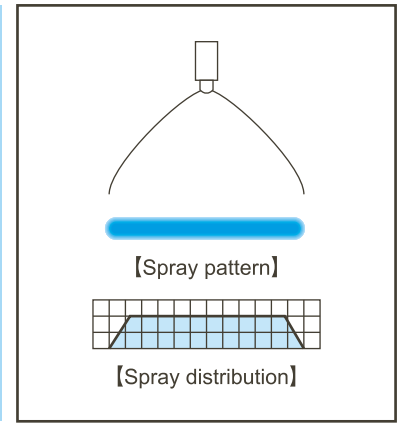
# High Impact Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles

VVEA

## Features

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

\*1) Droplet diameter measured by laser Doppler method



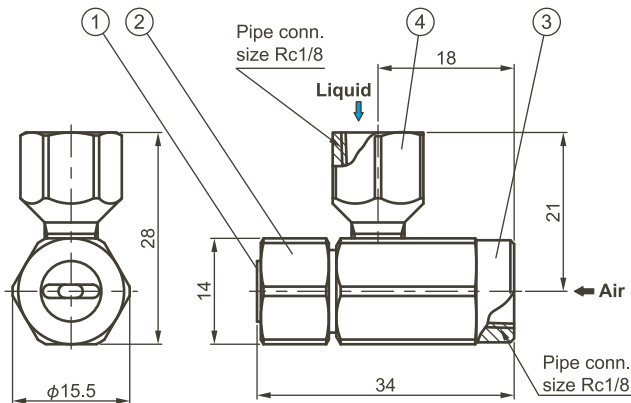
## Applications

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

## Structure & Materials

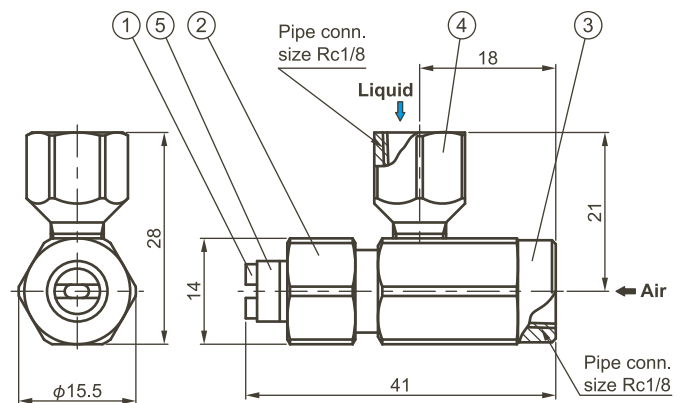
### ■ Spray angle 60° type

Mass: 50 g



### ■ Spray angle 80° type

Mass: 50 g



#### ■ Components and materials

No.	Components	Standard materials
①	Nozzle tip	S303
②	Cap	S303
③	Mixing adaptor	S303
④	Liquid socket	S303

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No.	Components	Standard materials
①	Nozzle tip	S303
②	Cap	S303
③	Mixing adaptor	S303
④	Liquid socket	S303
⑤	Sleeve	S303

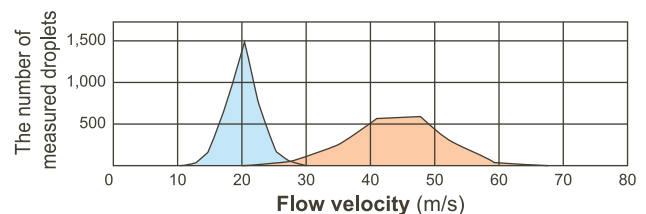
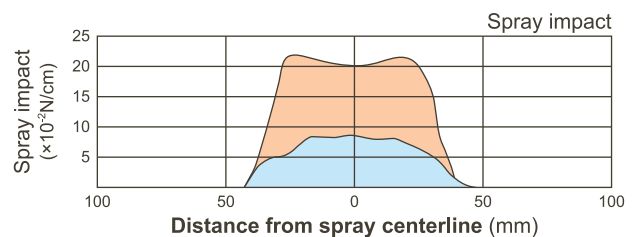
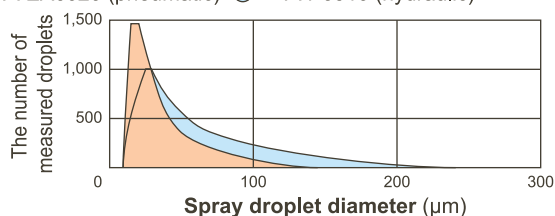
Note: No Sleeve⑤ for VVEA8005.

## Spray Impact

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

- Air pressure: 0.3 MPa    ■ Air consumption: 59  $\ell/\text{min}$ , Normal
  - Liquid pressure: 0.3 MPa    ■ Spray capacity: 1.1  $\ell/\text{min}$
- (Air pressure, air consumption are only for VVEA)

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



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		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				
		0.5	—	—	—	—	0.43	33				
	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				
		0.4	—	—	0.39	74	1.00	50				
		0.5	—	—	—	—	0.81	69				
	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				
		0.5	—	—	—	—	1.30	89				
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					
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				
		0.5	—	—	—	—	0.43	33				
	10	0.2	0.54	36	0.90	24	—	—	20–250	1.4	1.1	1.3
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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					

\*2) Spray angle measured at compressed air pressure of 0.4 MPa and liquid pressure of 0.5 MPa.

### How to order

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

<Example> 1/8 VVEA 6010 S303

1/8 VVEA 60 10 S303

Spray angle code      Spray capacity code

- 80
- 60
- 05
- 10
- 20
- 30

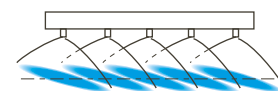
## Integrated Spray Header with VVEA series nozzles

## VVEA Header

### Features

- Spray header equipped with VVEA series nozzles producing semi-fine (and semi-coarse) atomization with a mean droplet diameter of 50 μm or more.\*1
- Combines two pipes for air and liquid into one rectangular spray header. Compact and easy to install and maintain.
- Uniform spray distribution across the entire spray area.

\*1) Droplet diameter measured by laser Doppler method



【Spray pattern】



【Spray distribution】

### Applications

- Cleaning: Liquid crystal glass substrate, printed circuit boards, steel plates