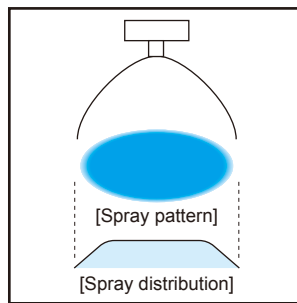


Full Cone Spray Semi-Fine, Semi-Coarse Fog Nozzles

JJA



APPLICATIONS

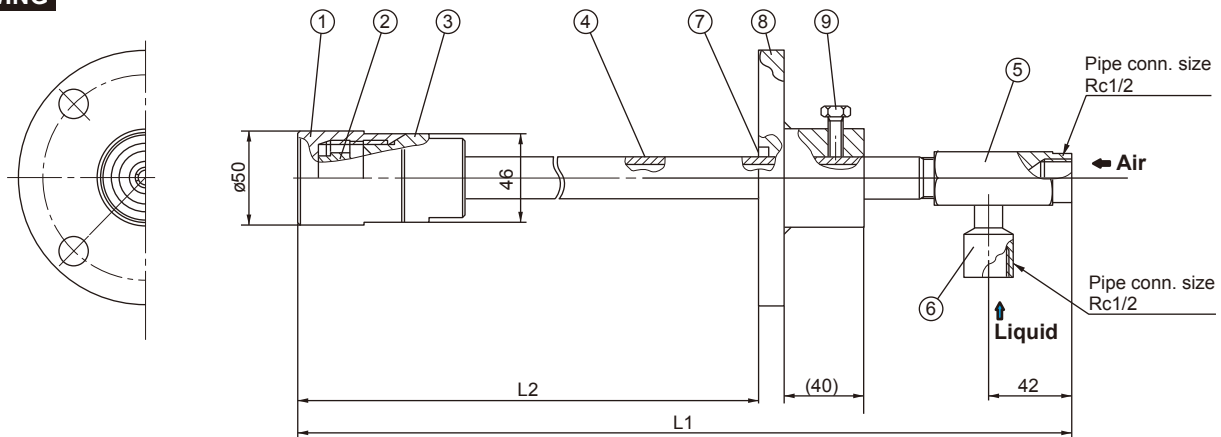
- Cooling: Gas, castings
- Combustion: Waste water



- Full cone spray pneumatic nozzle producing a large volume of semi-fine to semi-coarse atomization with a mean droplet diameter of 130 μm or more.*1
- Large turn-down ratio.
- Uniform spray droplet size distribution across the entire spray area.
- Large free passage diameter minimizes clogging. Ideal for spraying liquid containing foreign particles and for combustion of waste liquid at waste incinerators.

*1) Droplet diameter measured by the immersion sampling method. Please see pages 7–8 for comparison with laser Doppler method.

DRAWING



COMPONENTS AND MATERIALS

No.	Components	Standard materials	No.	Components	Standard materials
1	Nozzle body	S316L	6	Liquid socket	S304
2	Mixing core	S316L	7	Packing	Metal wire reinforced AES wool
3	Nozzle adaptor	S316L	8	Flange	S304
4	Pipe	S316L	9	Bolt	S304 equivalent
5	Mixing adaptor	S304			

Unit: mm

DIMENSIONS

Type	Total length L1 (mm)	Length L2 (mm)	Weight*2 (kg)
A	440	200–300	1.8
B	540	300–400	2.0
C	740	400–600	2.3
D	940	600–800	2.6
E	1,140	800–1,000	2.9

*2) Weight of flange is not included.

PERFORMANCE DATA

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)											Immersion sampling method	Tip orifice	Mixing adaptor
		0.05		0.1		0.3		0.5		0.7		Liquid			Air
12	0.2 0.3 0.4	1.7 1.1 —	205 285 —	2.8 2.1 1.5	200 285 360	7.0 6.1 5.2	170 265 350	10.3 9.3 8.4	110 215 305	12.9 12.0 10.9	70 150 255	150–450	3.7	2.9	3.0

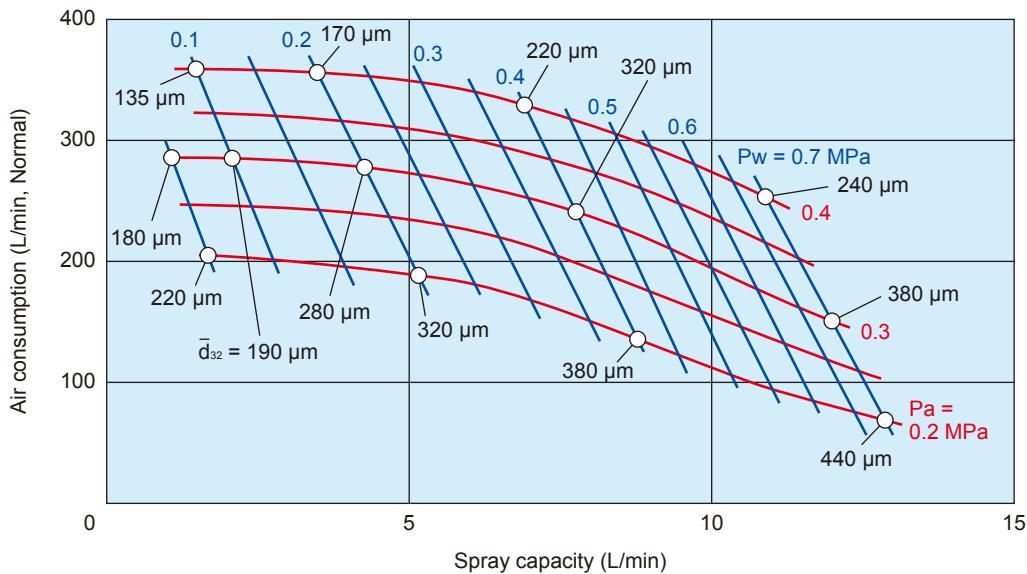
Spray capacity code	Air pressure (MPa)	Spray capacity (L/min) & Air consumption (L/min, Normal)										Mean droplet diameter (μm)	Free passage diameter (mm)		
		Liquid pressure (MPa)											Immersion sampling method	Tip orifice	Mixing adaptor
		0.05		0.1		0.2		0.3		0.35		Liquid			Air
24-6	0.2 0.3 0.4	3.8 2.5 1.5	395 560 720	7.1 5.0 3.5	390 550 715	16.3 11.4 8.1	235 480 690	23.8 19.0 14.5	170 350 590	— 24.0 18.0	— 240 515	200–650	5.2	6.0	4.2

FLOW-RATE DIAGRAM

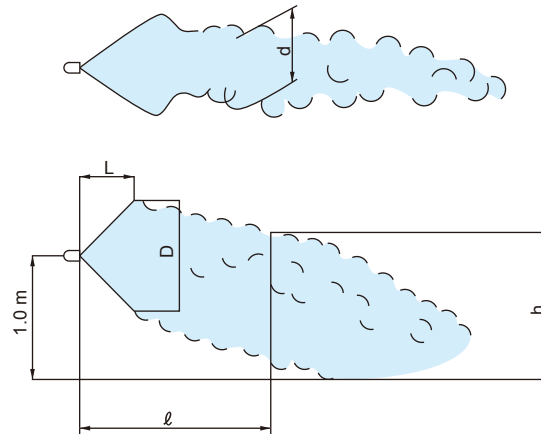
Nozzle No.: JJA12

■ How to read the chart

1. The spray capacity shown is for one nozzle.
2. **Red lines (—)** represent compressed air pressures Pa in MPa.
Blue lines (—) represent liquid pressures Pw in MPa.
3. Droplet diameter \bar{d}_{32} is Sauter mean diameter measured by the immersion sampling method.



SPRAY DIMENSIONS



■ Spray capacity code: 12

Pressure (MPa)		Spray dimensions (m)					
		L	D	h/d			
Air	Liquid			ℓ = 2.0	ℓ = 3.0	ℓ = 4.0	ℓ = 5.0
0.2	0.05	0.6	0.6	0.6/1.1	—	—	—
	0.1	1.4	1.1	0.9/1.2	—	—	—
	0.2	1.5	1.2	1.2/1.5	0.7/1.2	—	—
	0.4	1.8	1.5	1.5/1.8	0.7/1.3	—	—
	0.7	1.9	1.7	1.5/1.8	1.0/1.6	0.6/1.1	—
0.3	0.05	1.1	0.8	0.9/1.0	0.5/1.4	—	—
	0.1	1.4	1.0	1.0/1.2	0.6/1.4	—	—
	0.2	1.5	1.3	1.2/1.3	0.9/1.5	0.5/1.0	—
	0.4	2.0	1.5	1.5/1.4	1.2/1.5	0.6/1.1	—
	0.7	2.1	1.8	1.7/1.6	1.5/1.7	1.0/1.3	0.7/1.0
0.4	0.1	1.9	1.1	1.1/1.1	0.9/1.5	0.5/1.0	—
	0.2	2.0	1.5	1.5/1.4	1.3/1.4	1.0/1.5	0.5/1.5
	0.4	2.1	1.5	1.5/1.4	1.4/1.5	1.3/1.5	0.6/1.5
	0.7	2.3	1.8	1.7/1.9	1.8/2.0	1.8/1.9	1.0/2.0

■ Spray capacity code: 24-6

Pressure (MPa)		Spray dimensions (m)					
		L	D	h/d			
Air	Liquid			ℓ = 2.0	ℓ = 3.0	ℓ = 4.0	ℓ = 5.0
0.15	0.05	0.6	0.8	0.7/0.8	—	—	—
	0.1	1.1	1.7	1.2/1.3	0.7/1.2	—	—
	0.2	1.3	1.8	1.5/2.8	1.3/3.0	0.7/2.0	—
0.2	0.05	0.7	0.8	0.8/0.9	—	—	—
	0.1	1.3	1.4	1.3/0.9	0.8/0.7	—	—
	0.2	1.6	1.7	1.5/2.2	1.2/1.9	0.8/1.1	—
0.25	0.05	1.8	1.8	1.8/2.8	1.3/2.0	0.9/1.4	—
	0.1	1.2	1.0	1.0/1.2	0.8/1.0	—	—
	0.1	1.5	1.3	1.2/1.5	0.8/1.8	0.6/1.0	—
0.3	0.2	1.5	1.4	1.3/1.5	1.1/2.0	0.7/1.3	—
	0.3	1.9	1.5	1.5/2.0	1.3/2.1	0.9/1.7	0.6/1.2
	0.35	2.1	2.0	2.0/2.3	1.5/2.3	1.2/1.8	0.9/1.4
0.4	0.05	1.4	1.1	1.0/1.2	0.8/1.0	0.4/0.9	—
	0.1	1.9	1.2	1.1/1.0	0.9/1.5	0.7/1.3	—
	0.2	2.0	1.4	1.4/1.1	1.1/1.5	0.8/1.4	0.5/0.9
	0.3	2.1	1.5	1.5/1.6	1.2/2.4	1.0/1.6	0.5/1.6
	0.35	2.2	1.6	1.5/2.5	1.3/2.9	1.2/2.4	0.9/1.8

Note: The above data were measured with tap water in a laboratory, in windless conditions.

HOW TO ORDER

When selecting a nozzle product, various factors must be considered, such as distance to target, number of nozzles required, and installation layout including air and liquid piping.

To ensure the best nozzle selection for your needs, consult our sales representatives during the design phase. Our engineering services are essential for efficient performance.

Inquiry forms with outline drawings are available to confirm dimensions and pipe connections. Contact us for more details.