

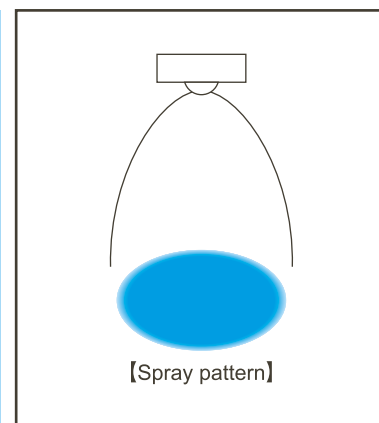
Ultra-Low Pressure Semi-Fine Fog Nozzles

LSIM

Features

- 1/3 to 1/2 of installation cost and running cost is saved due to utilizing blower air for atomizing, compared with nozzles requiring compressed air.
- Produces semi-fine atomization having no large droplets. When the mean droplet diameter is 80 μm, the maximum droplet diameter is 180 μm.*1
- Compact and lightweight design.
- Spray angle of 20°.

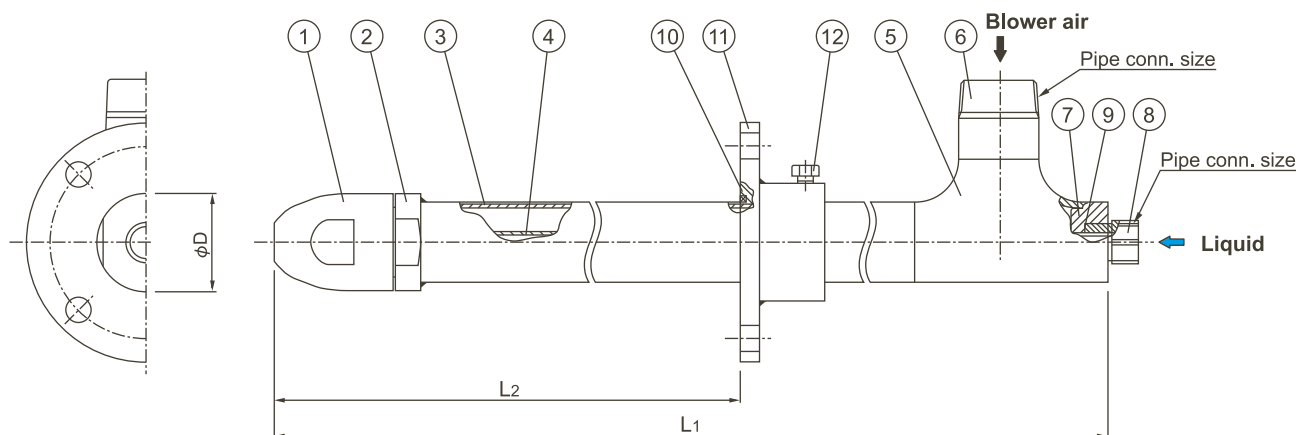
*1) Measured by laser Doppler method under air-water ratio of 250



Applications

- Cooling: Gas, refractories

Structure & Materials



Components and materials

No.	Components	Standard materials	No.	Components	Standard materials
①	Nozzle tip A,B & whirler	S316L	⑦	Joint	S304
②	Nozzle adaptor	S316L	⑧	Liquid socket	S304
③	Outer pipe	S316LTP	⑨	O-ring	FKM
④	Inner pipe	S304TP	⑩	Packing	Metal wire reinforced AES wool
⑤	T-connection	S304	⑪	Flange	S304
⑥	Air nipple	S304	⑫	Bolt	S304

Dimensions & Pipe Connection Sizes

Dimensions

Nozzle code	Pipe connection size		Outer diameter φD (mm)	Free passage diameter (mm)	
	Air (Blower)	Liquid		Air	Liquid
20500	R1*1/2	Rc1/2	60	4.0	1.5
201000	R2	Rc1/2	74	5.9	2.0

Type of length

Type	Total length L1 (mm)	Length L2 (mm)	Mass*2 (kg)	
			20500	201000
A	650	300-400	3.8	5.5
B	850	400-600	4.6	6.5
C	1,050	600-800	5.4	7.5
D	1,250	800-1,000	6.2	8.6

Mass of flange (reference only)

Flanges for Nozzle code 20500

JIS5K 2*1/2B: 2.6 kg

Flanges for Nozzle code 201000

JIS5K 3B: 3.7 kg

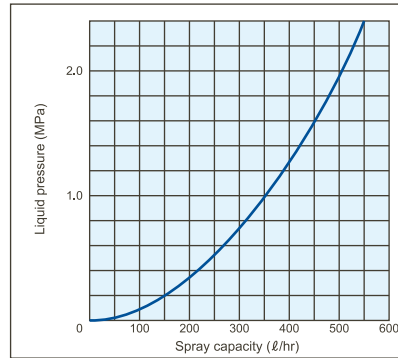
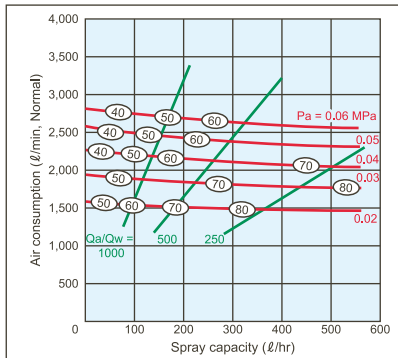
*2) Mass of flange is not included.

Flow-rate Diagrams

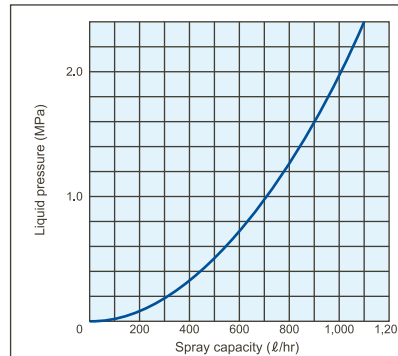
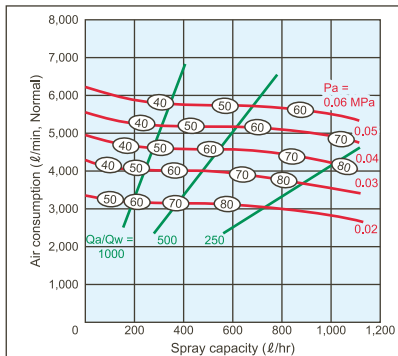
How to read the chart

- The spray capacity shown is for one nozzle.
- Red lines (—) represent (blower) air pressures P_a in MPa.
Green lines (—) represent air-water ratio Q_a/Q_w .
- Figures in ovals ○ indicate Sauter mean droplet diameters (μm) measured by laser Doppler method.
- Relation between liquid pressure and spray capacity of each nozzle is shown (as blue line) in the graphs to the right of flow-rate diagrams.

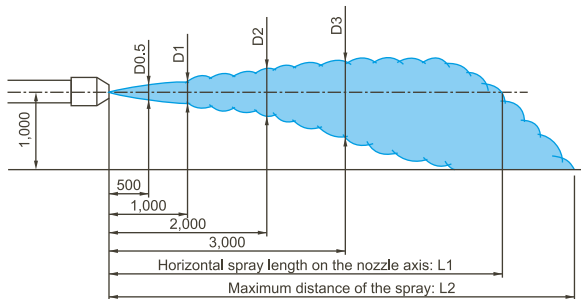
LSIM20500



LSIM201000



Spray Dimensions



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

Nozzle code	Air pressure (MPa)	Liquid pressure (MPa)	Spray dimensions (mm)					
			D0.5	D1	D2	D3	L1	L2
LSIM 20500	0.03	0-0.2	180	350	600	800	4,000	7,000
		0.2-1.0	180	300	550	800	4,000	7,000
		1.0-2.0	180	350	600	800	4,000	7,000
	0.04	0-0.2	180	300	550	800	4,000	7,000
		0.2-1.0	180	300	550	800	5,000	8,000
		1.0-2.0	180	300	550	800	5,000	8,000
0.05	0-0.2	200	350	550	800	5,000	8,000	
	0.2-1.0	200	350	600	850	5,000	8,000	
	1.0-2.0	200	350	600	850	5,000	8,000	
LSIM 201000	0.03	0-0.2	200	350	600	800	5,000	8,000
		0.2-1.0	180	300	600	800	5,000	8,000
		1.0-2.0	200	350	600	800	6,000	9,000
	0.04	0-0.2	200	400	800	1,000	5,000	8,000
		0.2-1.0	180	300	600	900	6,000	9,000
		1.0-2.0	180	350	600	900	6,000	9,000
	0.05	0-0.2	200	400	700	900	6,000	9,000
		0.2-1.0	160	280	600	850	6,000	9,000
		1.0-2.0	160	300	700	850	6,000	9,000

How to order

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

<Example> LSIM20500 C S316L + 2*1/2T5 S304 (L2)

LSIM	20500	C	S316L +	2*1/2T5	S304	<u>(L2)</u>
	Nozzle code	Type of length (Total length)		Flange size		Length between the nozzle head and flange
	■20500 ■201000	■A ■B ■C ■D		■2*1/2T5 ■3T5		

The minimum flange size
2*1/2T5 for nozzle code 20500
3T5 for nozzle code 201000

See the drawing and table on page 86 for length type and L2.
Please send us an inquiry for the different flange sizes.

For details please ask for our inquiry drawing.