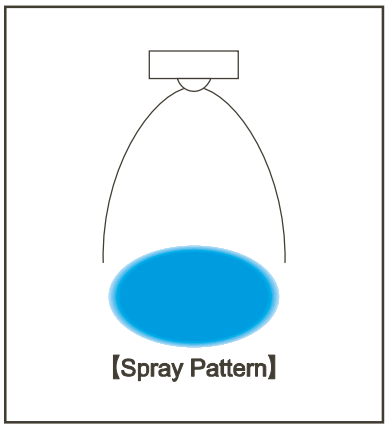
Ultra-Low Pressure Semi-Fine Fog Nozzles

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 80μm, the maximum droplet diameter is 180μm (*1).
■Compact and lightweight design.
■Spray angle is 20°.

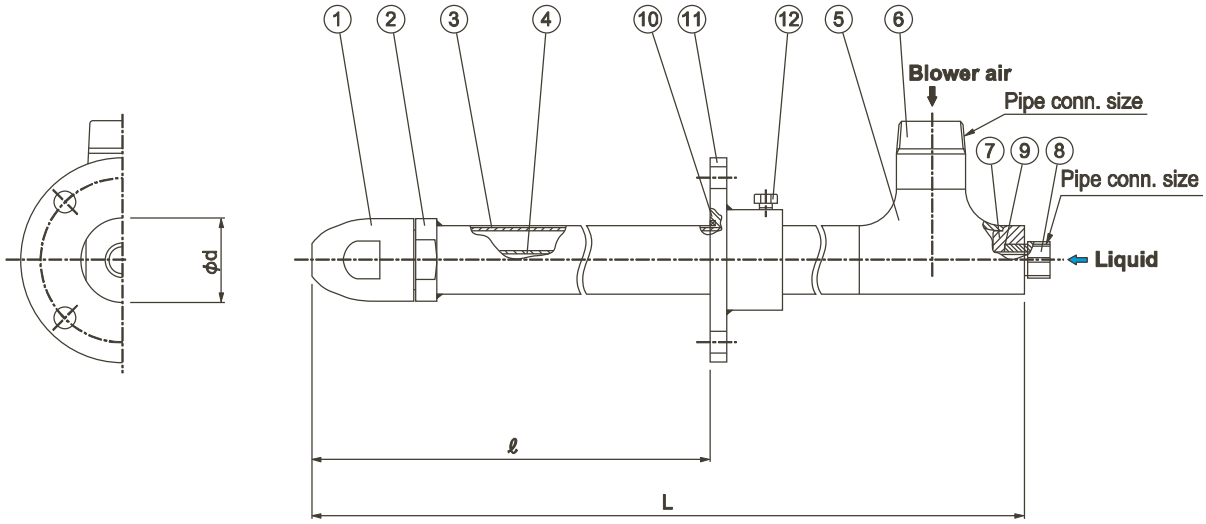
*1) Measured by Laser Doppler Method under air-water ratio of 250



Applications

■Cooling: Gas, refractories

Structure & Materials



■Components and materials

No.	Component	Standard Material
①	Nozzle Tip A,B & whirler	S316L
②	Nozzle Adaptor	S316L
③	Outer Pipe	S316LTP
④	Inner Pipe	S304TP
⑤	T-connection	S304
⑥	Air Nipple	S304
⑦	Joint	S304
⑧	Liquid Socket	S304
⑨	O-ring	FKM
⑩	Packing	Ceramic fiber + Stainless steel wire
⑪	Flange	S304
⑫	Bolt	S304

■Dimensions

Nozzle Code	Pipe Conn. Size		Outer Diameter ϕd (mm)	Free Passage Diameter (mm)	
	Air (Blower)	Liquid		Liquid	Air
20500	1 1/2M	1/2F	60	1.5	4.0
201000	2M	1/2F	74	2.0	5.9

■Nozzle length

Type	Total Length L (mm)	Length ℓ (mm)	Mass (kg)*	
			20500	201000
A	650	300~400	3.8	5.5
B	850	400~600	4.6	6.5
C	1050	600~800	5.4	7.5
D	1250	800~1000	6.2	8.6

*Mass of flange is not included.

Reference only;

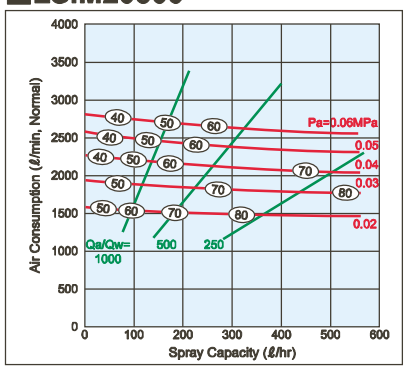
Nozzle	Size of flange	Mass of flange
20500	JIS5K 2*1/2B	2.6 kg
20500	JIS10K 2*1/2B	3.8 kg
201000	JIS5K 3B	3.7 kg
201000	JIS10K 3B	4.5 kg

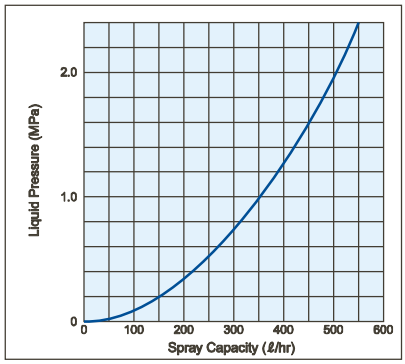
Flow-rate Diagram

■How to read the chart

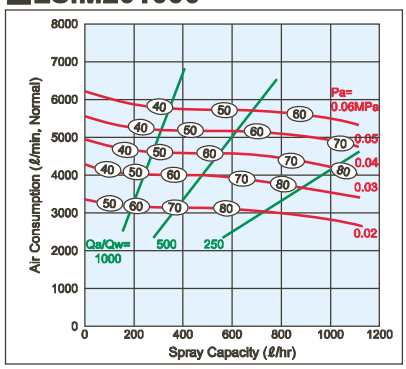
①The spray capacity shown is for one nozzle.
②Red lines (—) represent (blower) air pressures Pa in MPa.
③Green lines (—) represent air-water ratio Qa/Qw.
④Figures in ovals ⬭ indicate Sauter mean droplet diameters (μm) measured by the Laser Doppler Method.
⑤Relation between liquid pressure and spray capacity of each nozzle is shown in the graphs to the right of flow-rate diagrams.

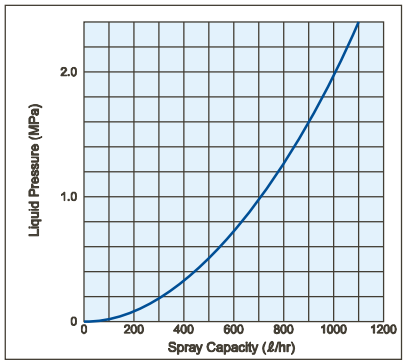
■LSIM20500



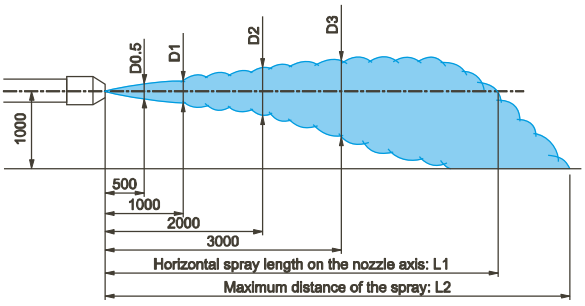


■LSIM201000





Spray Dimensions



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+3T10S304(ℓ)

LSIM	20500	C	S316L	+	3T10	S304	(ℓ)
	Nozzle Code ■20500 ■201000	Nozzle Length ■A ■B ■C ■D (See p.82)			Flange Size		Length between the nozzle head and flange