

Medium / Large Capacity Fine Mist Nozzles

GSIM_s series Nozzles

Patent pending



- GSIM_s series fine mist nozzles, developed out of a new nozzle engineering concept, have excellent capability of atomization.
- GSIM_s series nozzles generate a large volume of fine mist with a low consumption of compressed air, applying very low air-water ratio.
- Simple structure, easy maintenance.

Contents

GSIM_s series
Medium / Large Capacity
Fine Mist Nozzles

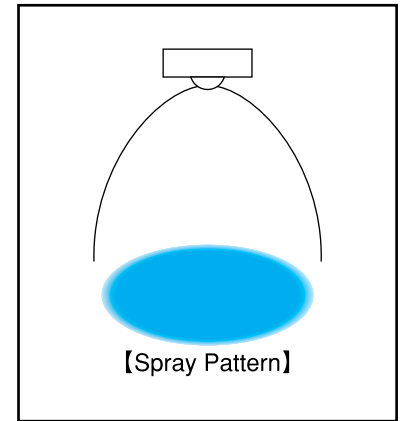
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Medium / Large Capacity Fine Mist Nozzles

GSIM_s

Features

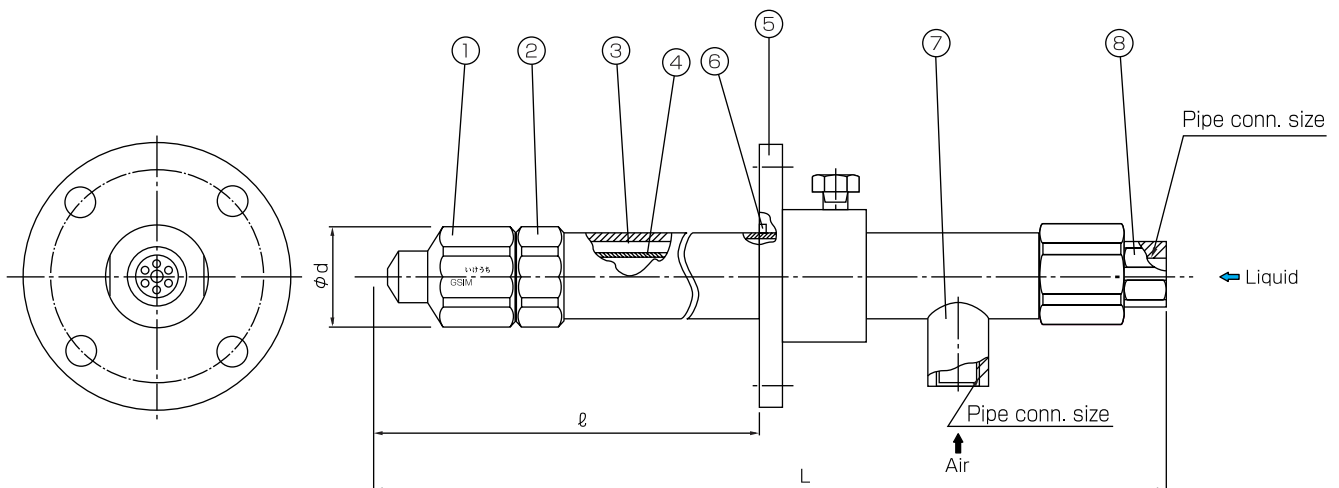
- Produce fine atomization having mean droplet diameter of $50\mu\text{m}$ and the maximum droplet diameter of $150\mu\text{m}$, with spray capacity $1000\ell/\text{hr}$ under air-water ratio 150 (measured by Laser Doppler Method).
- Two spray angles of 20° and 60° are available.



Applications

- Cooling: Gas, moldings, refractories
- Moisture control: Gas, concrete
- Combustion: Oil

Structure, Dimensions, Materials and Pipe Connection Sizes



Components and materials

No.	Component	Standard Material
①	Nozzle Tip	SUS316L
②	Adaptor	SUS316L
③	Outer Pipe(for air)	SUS316LTP
④	Inner Pipe(for liquid)	SUS304
⑤	Flange	SUS304
⑥	Packing	Ceramic fibre + stainless steel wire
⑦	Air Connection	SUS304
⑧	Liquid Connection	SUS304

Dimensions

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size		Outer Dia. ϕd	Free Pass. Dia. (mm)
		Air	Liquid		
20,60	37	PT3/8	PT3/8	35	1.7 (1.9)
	55				2.0 (2.2)
	75	PT1/2	PT1/2	45	2.4 (2.7)
	110				3.2 (3.2)
	150				3.7 (3.8)
220	PT3/4	PT3/4	50	4.4 (4.5)	

*Free Pass. Dia. in () shows that of GSIM_s with spray angle of 20°

Nozzle length

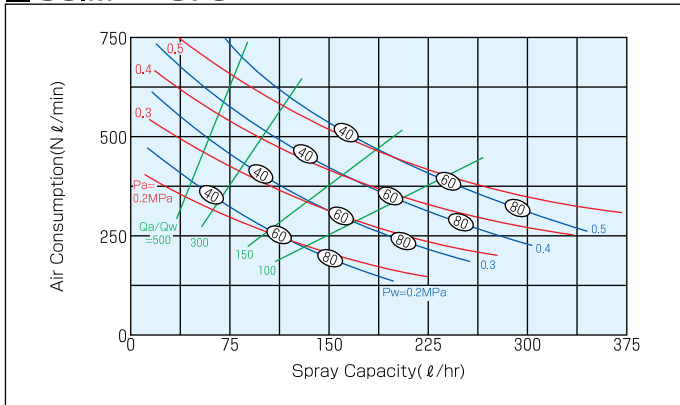
Type	Total Length L (mm)	Length ℓ (mm)
A	560	300~380
B	760	400~580
C	960	600~780
D	1160	800~980

Flow-rate Diagram

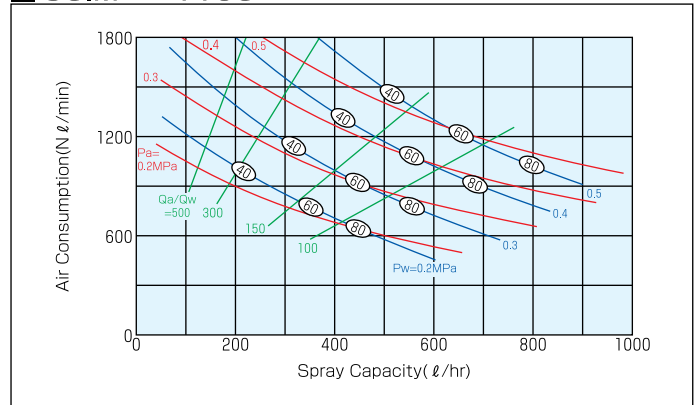
How to read chart

- ① The spray capacity shown is for one nozzle.
- ② Red line (—) represents air pressure in MPa.
Blue line (—) represents liquid pressure in MPa.
Green line (—) represents air-water ratio Q_a/Q_w .
- ③ Figure in oval (○) indicates Sauter mean droplet diameter (μm) measured by Laser Doppler Method.
- ④ ** is to be filled by spray angle code No. 20 or 60.

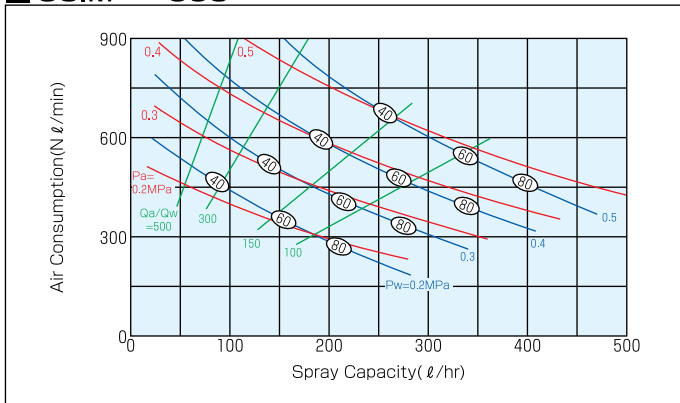
GSIM**37S



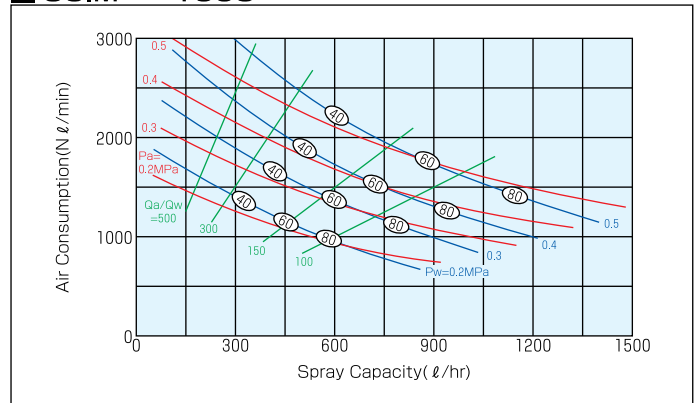
GSIM**110S



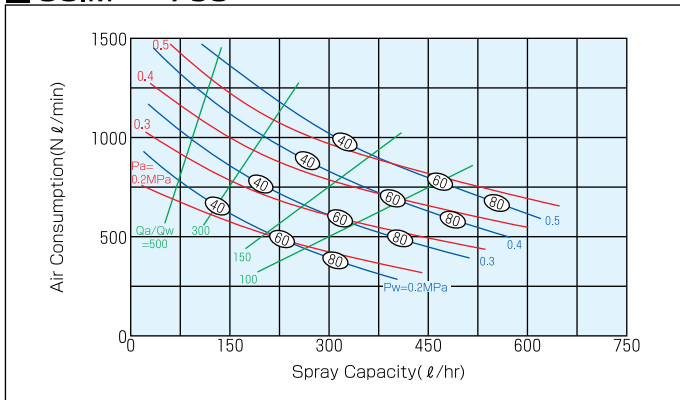
GSIM**55S



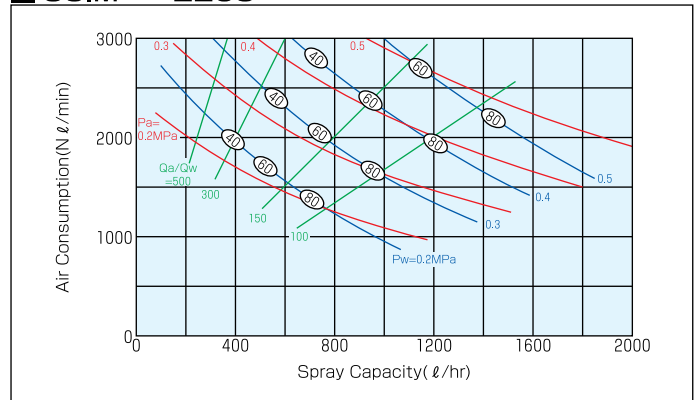
GSIM**150S



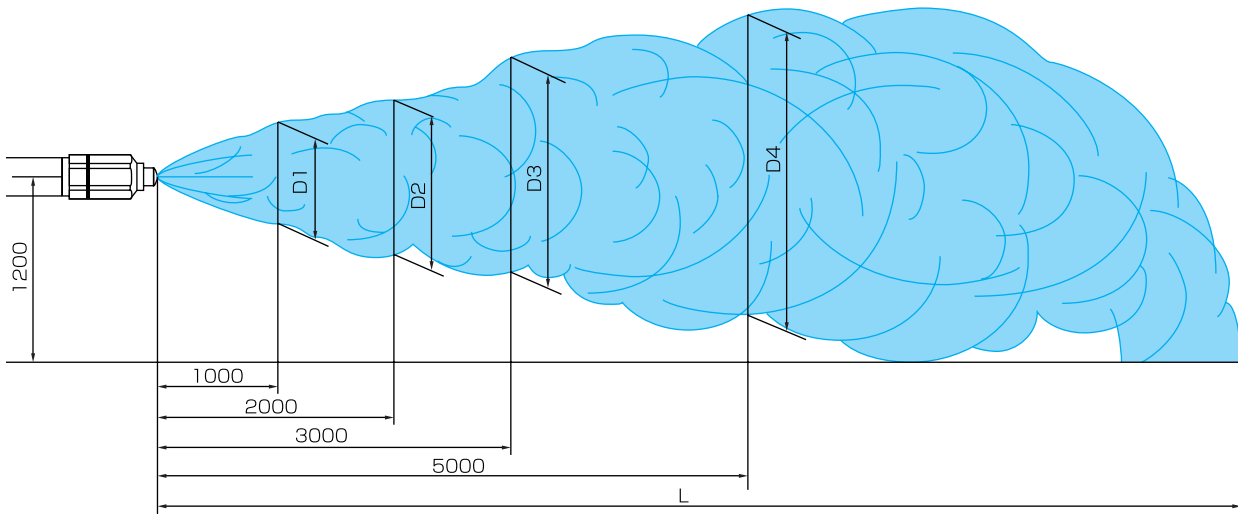
GSIM**75S



GSIM**220S



Spray Dimensions



Spray Angle Code	Spray Capacity Code	Air Pressure (MPa)	Liquid Pres. (MPa)	Spray Dimensions (mm)					
				D1	D2	D3	D4	L	
20	37	0.3	0.25~0.35	200	450	750	1,100	9,000	
		0.4	0.35~0.45	250	500	850	1,200	10,000	
		0.5	0.45~0.55	300	550	900	1,300	10,000	
	55	0.3	0.25~0.35	250	500	800	1,200	10,000	
		0.4	0.35~0.45	300	550	900	1,300	11,000	
		0.5	0.45~0.55	350	600	1,000	1,400	11,000	
	75	0.3	0.25~0.35	300	550	900	1,300	12,000	
		0.4	0.35~0.45	350	650	1,000	1,400	13,000	
		0.5	0.45~0.55	400	750	1,100	1,500	13,000	
	110	0.3	0.25~0.35	350	600	1,000	1,400	12,000	
		0.4	0.35~0.45	400	700	1,100	1,500	13,000	
		0.5	0.45~0.55	450	800	1,200	1,600	13,000	
	150	0.3	0.25~0.35	400	750	1,100	1,500	13,000	
		0.4	0.35~0.45	450	800	1,200	1,600	14,000	
		0.5	0.45~0.55	500	850	1,300	1,700	14,000	
	220	0.3	0.25~0.35	450	800	1,200	1,500	13,000	
		0.4	0.35~0.45	500	850	1,250	1,600	14,000	
		0.5	0.45~0.55	550	900	1,300	1,700	14,000	
	60	37	0.3	0.25~0.35	600	900	1,200	1,700	8,000
			0.4	0.35~0.45	550	850	1,100	1,700	8,000
			0.5	0.45~0.55	500	800	1,000	1,700	8,000
		55	0.3	0.25~0.35	650	950	1,300	1,800	9,000
			0.4	0.35~0.45	600	900	1,200	1,800	9,000
			0.5	0.45~0.55	550	850	1,100	1,800	9,000
75		0.3	0.25~0.35	700	1,000	1,400	1,900	10,000	
		0.4	0.35~0.45	650	950	1,300	1,900	10,000	
		0.5	0.45~0.55	600	900	1,200	1,900	10,000	
110		0.3	0.25~0.35	700	1,000	1,400	1,900	10,000	
		0.4	0.35~0.45	650	950	1,300	1,900	11,000	
		0.5	0.45~0.55	600	900	1,200	1,900	11,000	
150		0.3	0.25~0.35	800	1,200	1,500	2,000	11,000	
		0.4	0.35~0.45	700	1,100	1,400	2,000	12,000	
		0.5	0.45~0.55	600	1,000	1,300	2,000	12,000	
220		0.3	0.25~0.35	900	1,300	1,600	2,100	11,000	
		0.4	0.35~0.45	800	1,200	1,500	2,100	12,000	
		0.5	0.45~0.55	700	1,100	1,400	2,100	12,000	

How to inquire / order

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

<Example>

GSIM60110SBS316L+3T5S304 (ℓ)

GSIM

60 **110** **S** **B**

Spray Angle Code Spray Capacity Code Nozzle Length

■ 20 ■ 37 ■ A
 ■ 60 ■ 55 ■ B
 ■ 75 ■ C
 ■ 110 ■ D
 ■ 150
 ■ 220

(See P.39)

S316L +

Material of Nozzle

3T5

Flange Size

S304 **(ℓ)**

Material of Flange Length between the nozzle head and flange

Flange size : Refer to the table of dimensions of flange on page 69.