

Medium / Large Capacity Fine Fog Nozzles

GSIMII series Nozzles

Patented



- GSIMII series fine fog nozzles, developed from a new nozzle engineering concept, have excellent atomization capabilities.
- GSIMII series nozzles produce a large volume of fine atomization with a low consumption of compressed air, having very low air-water ratios.
- Simple structure, easy maintenance.

Contents

GSIMII series
Medium / Large Capacity
Fine Fog Nozzles

p.41

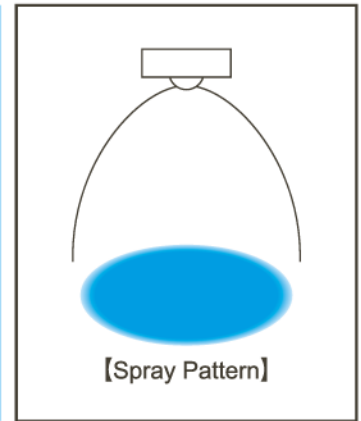
Medium / Large Capacity Fine Fog Nozzles

GSIMII

Features

- Pneumatic spray nozzle producing large amount of "fine fog", spray capacity 30ℓ/hr-1000ℓ/hr.
- Energy-saving design - mean droplet diameter of 50μm and a maximum droplet diameter of 150μm (*1) at an air-water ratio of 130.
- Available in spray angles of 20° and 60°, in 6 spray capacity types - 12 varieties in total. Wide selection.
- Easy maintenance with simple structure and compact body.

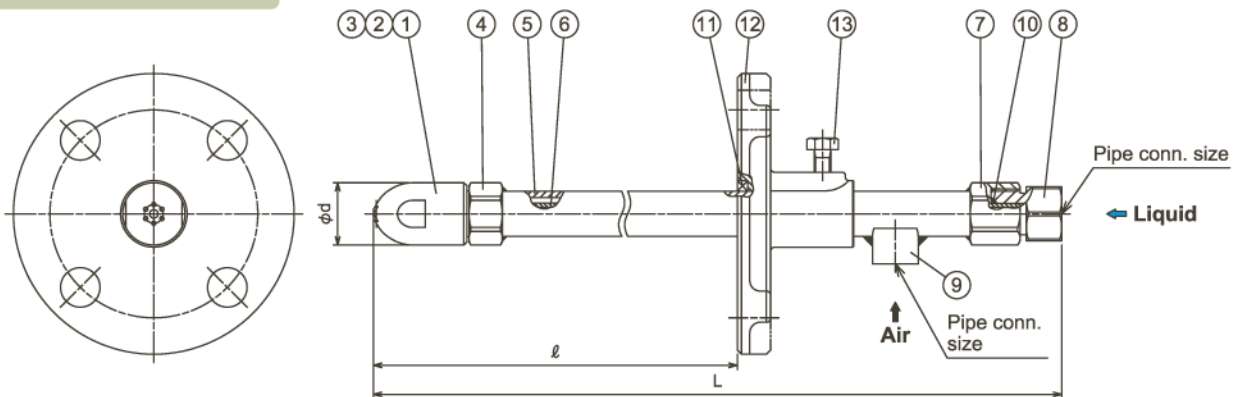
*1) Measured by Laser Doppler Method



Applications

- Cooling: Gas, moldings, refractories
- Moisture control: Gas, concrete
- Combustion: Oil, waste fluid
- Dust suppression: Recycling facilities, material facilities, moldings

Structure & Materials



Components and materials

No.	Component	Standard Material
①	Nozzle Tip	S316L
②	Nozzle Core	S316L
③	Whirler	S316L equivalent
④	Nozzle Adaptor	S316L
⑤	Outer Pipe (for air)	S316L
⑥	Inner Pipe (for liquid)	S304
⑦	Joint	S304
⑧	Liquid Socket	S304
⑨	Air Socket	S304
⑩	O-ring	FKM
⑪	Packing	Ceramic fibre + Stainless steel wire
⑫	Flange	SCS13(S304)
⑬	Bolt	S304

Dimensions

Spray Angle Code	Air Consumption Code	Pipe Conn. Size		Outer Diameter φd (mm)	Free Passage Diameter*2 (mm)	
		Air	Liquid		Liquid	Air
60° (20°)	37	3/8F	3/8F	30	1.8 (2.2)	1.6
	55				2.2 (2.2)	2.0
	75	1/2F	1/2F	38	2.6 (3.2)	2.3
	110				3.2 (3.2)	2.9
	150	3/4F	3/4F	50	3.7 (4.0)	3.3
	220				4.0 (4.0)	4.0

*2) Free passage diameter in () shows that of GSIMII with spray angle of 20°.

Nozzle length

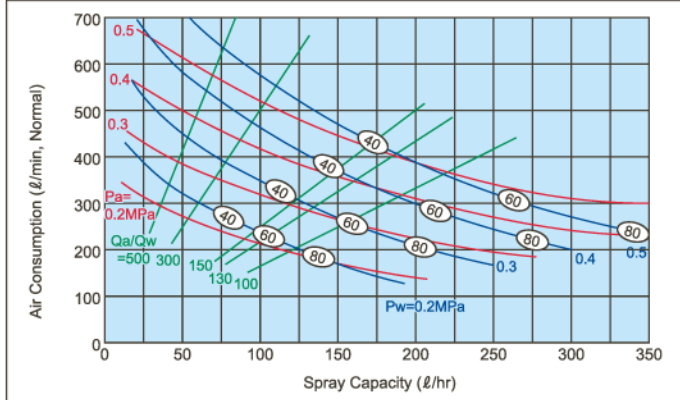
Type	Total Length L (mm)	Length ℓ (mm)
A	560	300~400
B	760	400~600
C	960	600~800
D	1160	800~1000

Flow-rate Diagram (60° type)

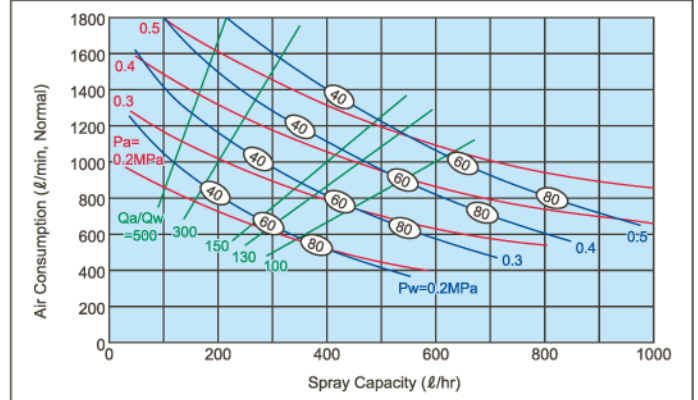
■ How to read the chart

- ① The spray capacity shown is for one nozzle.
- ② Red lines (—) represent compressed air pressures P_a in MPa.
 Blue lines (—) represent liquid pressures P_w in MPa.
 Green lines (—) represent air-water ratio Q_a/Q_w .
- ③ Figures in ovals ○ indicate Sauter mean droplet diameters (μm) measured by the Laser Doppler Method.

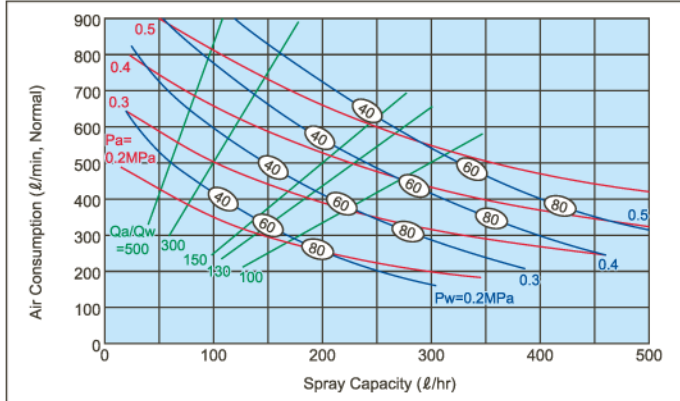
GSIM6037II



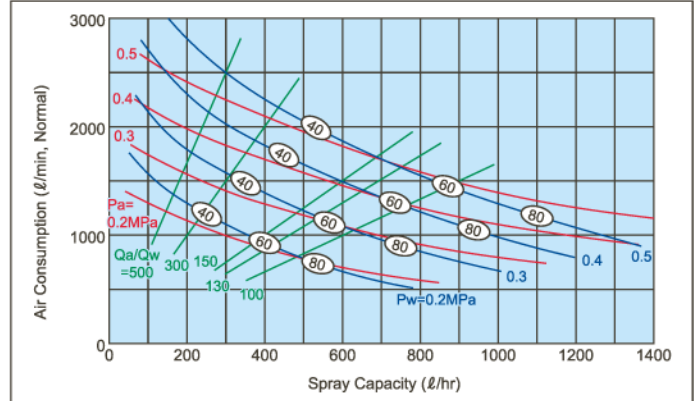
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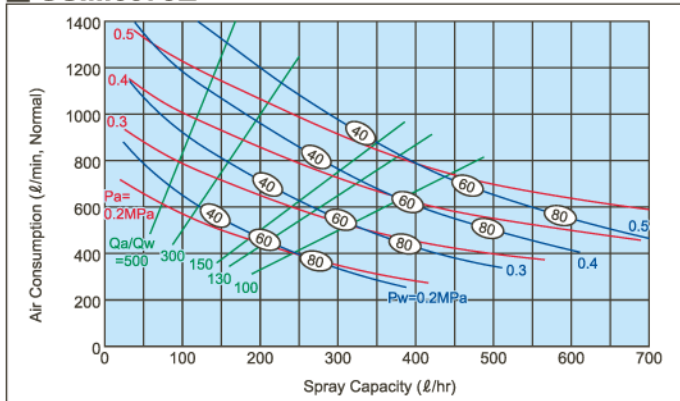
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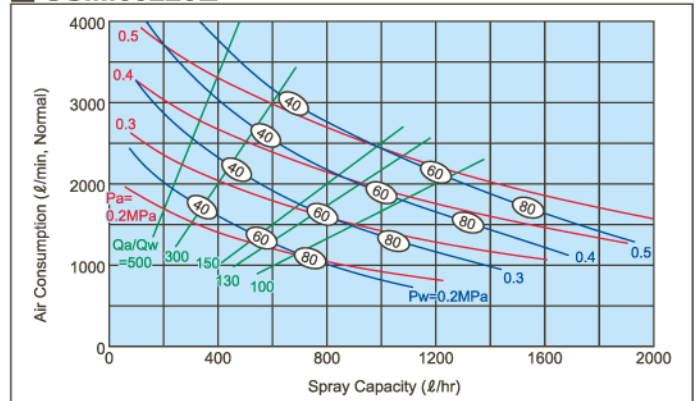
GSIM60150II



GSIM6075II



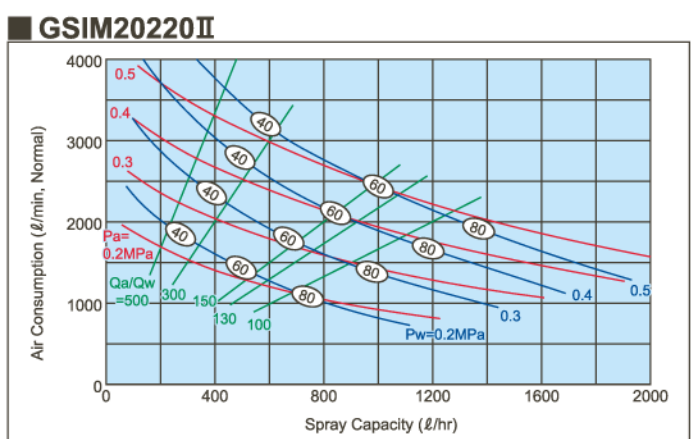
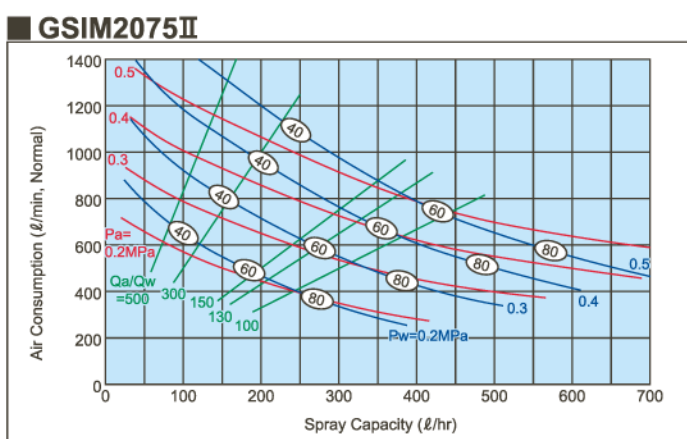
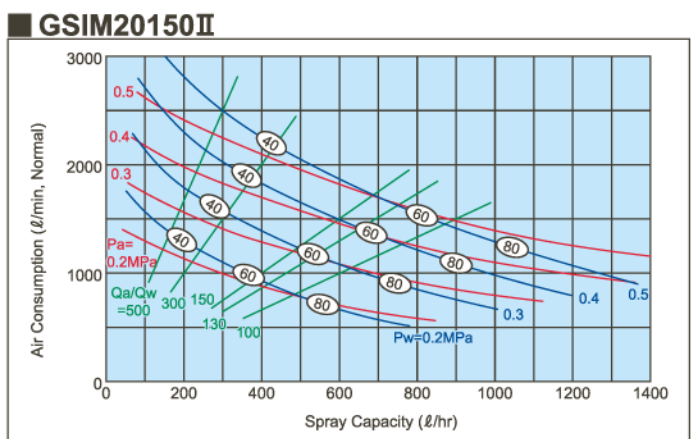
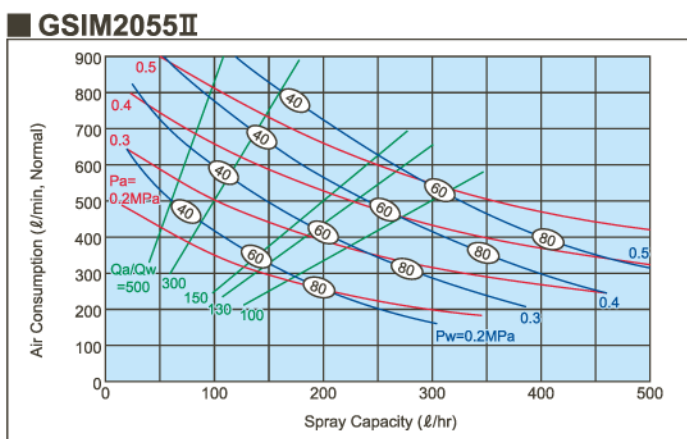
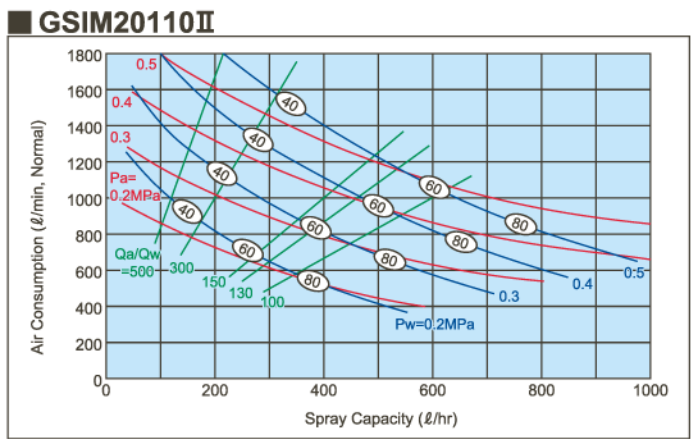
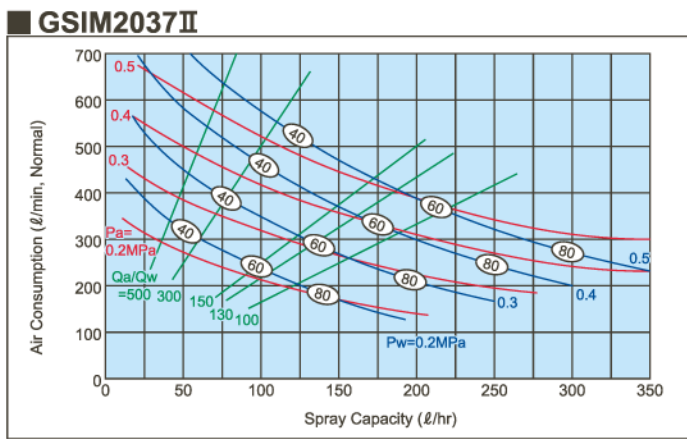
GSIM60220II



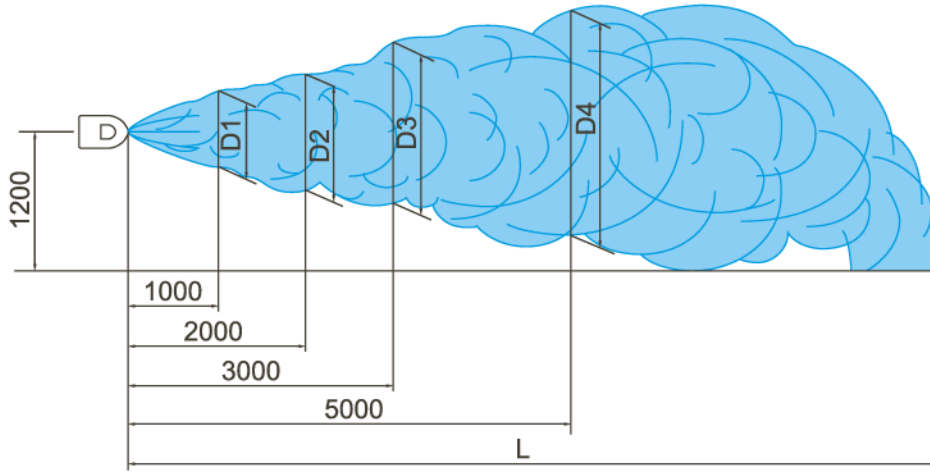
Flow-rate Diagram (20° type)

■ How to read the chart

- ① The spray capacity shown is for one nozzle.
- ② **Red lines** (—) represent compressed air pressures P_a in MPa.
Blue lines (—) represent liquid pressures P_w in MPa.
Green lines (—) represent air-water ratio Q_a/Q_w .
- ③ Figures in ovals \bigcirc indicate Sauter mean droplet diameters (μm) measured by the Laser Doppler Method.



Spray Dimensions



Spray Angle Code	Air Consumption Code	Air Pressure (MPa)	Liquid Pressure (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

Spray Angle Code	Air Consumption Code	Air Pressure (MPa)	Liquid Pressure (MPa)	Spray Dimensions (mm)				
				D1	D2	D3	D4	L
60°	37	0.3	0.25~0.30	600	950	1,200	1,700	8,000
			0.30~0.35	700	1,050	1,350	1,700	8,000
		0.4	0.35~0.40	550	850	1,100	1,700	8,000
			0.40~0.45	650	950	1,250	1,700	8,000
		0.5	0.45~0.50	500	800	1,000	1,700	8,000
			0.50~0.55	600	900	1,150	1,700	8,000
	55	0.3	0.25~0.30	650	1,000	1,250	1,800	9,000
			0.30~0.35	750	1,100	1,400	1,800	9,000
		0.4	0.35~0.40	600	900	1,150	1,800	9,000
			0.40~0.45	650	1,000	1,300	1,800	9,000
		0.5	0.45~0.50	500	850	1,050	1,800	9,000
			0.50~0.55	600	950	1,200	1,800	9,000
	75	0.3	0.25~0.30	700	1,050	1,300	1,900	10,000
			0.30~0.35	800	1,150	1,450	1,900	10,000
		0.4	0.35~0.40	650	950	1,200	1,900	10,000
			0.40~0.45	700	1,050	1,350	1,900	10,000
		0.5	0.45~0.50	550	900	1,100	1,900	10,000
			0.50~0.55	600	1,000	1,250	1,900	10,000
110	0.3	0.25~0.30	750	1,100	1,400	1,900	10,000	
		0.30~0.35	850	1,200	1,500	1,900	10,000	
	0.4	0.35~0.40	700	1,050	1,300	1,900	11,000	
		0.40~0.45	750	1,150	1,450	1,900	11,000	
	0.5	0.45~0.50	600	1,000	1,200	1,900	11,000	
		0.50~0.55	650	1,100	1,350	1,900	11,000	
150	0.3	0.25~0.30	800	1,150	1,500	2,000	11,000	
		0.30~0.35	900	1,250	1,600	2,000	11,000	
	0.4	0.35~0.40	750	1,100	1,400	2,000	12,000	
		0.40~0.45	800	1,200	1,500	2,000	12,000	
	0.5	0.45~0.50	650	1,050	1,300	2,000	12,000	
		0.50~0.55	700	1,150	1,400	2,000	12,000	
220	0.3	0.25~0.30	900	1,200	1,600	2,100	11,000	
		0.30~0.35	950	1,300	1,700	2,100	11,000	
	0.4	0.35~0.40	800	1,150	1,500	2,100	12,000	
		0.40~0.45	850	1,250	1,600	2,100	12,000	
	0.5	0.45~0.50	700	1,100	1,400	2,100	12,000	
		0.50~0.55	750	1,200	1,500	2,100	12,000	

How to order

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

<Example> GSIM6037II B S316L+1*1/4T10SCS13(ℓ)

GSIM	60	37 II	B	S316L +	1*1/4T10	SCS13	<u>(ℓ)</u>
	Spray Angle Code	Air Consumption Code	Nozzle Length		Flange Size		Length between the nozzle head and flange
	■20 ■60	■37 ■110 ■55 ■150 ■75 ■220	■A ■D ■B ■C		■1*1/4T10 ■1*1/2T10 ■2T10		

Applicable flange sizes
 (Air consumption code: Flange size)
 37II, 55II : 1*1/4T10
 75II, 110II : 1*1/2T10
 150II, 220II : 2T10