

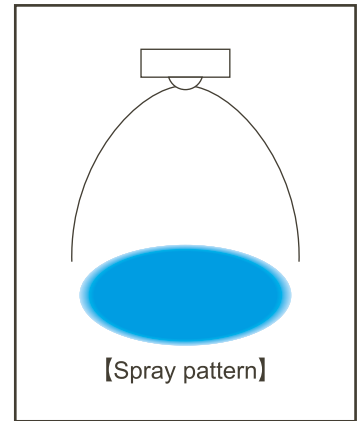
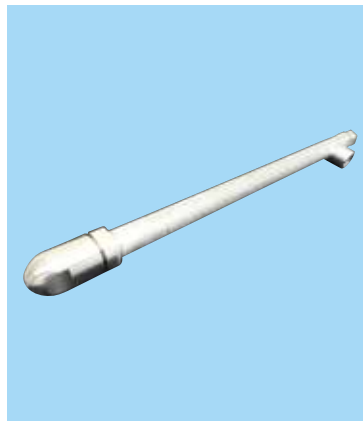
Medium/Large Capacity Fine Fog Nozzles

GSIMII

Features

- Pneumatic spray nozzle producing large amount of "fine fog", spray capacity 30–1,000 ℓ/hr.
- Energy-saving design—mean droplet diameter of 50 μm and a maximum droplet diameter of 150 μm*1 at an air-water ratio of 130.
- Available in spray angles of 60° and 20°, in 6 spray capacity types—12 varieties in total. Wide selection.
- Easy maintenance with simple structure and compact body.

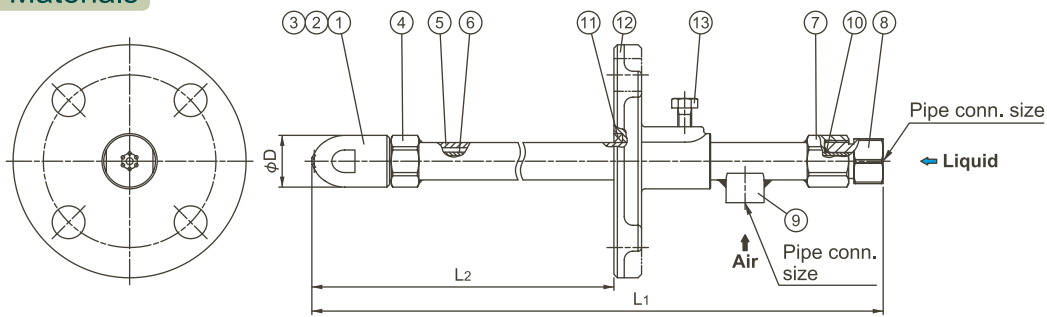
*1) Droplet diameter measured by laser Doppler method



Applications

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

Structure & Materials



Components and materials

No.	Components	Standard materials
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

No.	Components	Standard materials
⑦	Joint	S304
⑧	Liquid socket	S304
⑨	Air socket	S304
⑩	O-ring	FKM
⑪	Packing	Metal wire reinforced AES wool
⑫	Flange	SCS13 (S304)
⑬	Bolt	S304

Dimensions & Pipe Connection Sizes

Dimensions

Spray angle code	Air consumption code	Pipe connection size		Outer diameter φD (mm)	Free passage diameter (mm)	
		Air	Liquid		Air	Liquid*2
60 20	37	Rc3/8	Rc3/8	30	1.6	1.8 (2.2)
	55				2.0	2.2 (2.2)
	75	Rc1/2	Rc1/2	38	2.3	2.6 (3.2)
	110				2.9	3.2 (3.2)
	150	Rc3/4	Rc3/4	50	3.3	3.7 (4.0)
	220				4.0	4.0 (4.0)

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

Type of length

Type	Total length L1*3 (mm)	Length L2 (mm)
A	560	300–400
B	760	400–600
C	960	600–800
D	1,160	800–1,000

*3) L1: Standard length

Mass

Air consumption code	Type of length	Mass*4 (g)
37, 55	A	1,300
	B	1,600
	C	2,000
	D	2,400
75, 110	A	1,800
	B	2,300
	C	2,800
	D	3,300
150, 220	A	2,500
	B	3,100
	C	3,700
	D	4,300

*4) The mass shown is when the total length is the standard length L1 and excludes a mass of flange. For longer lengths, add the corresponding mass for each 100 mm of L1 length as below.

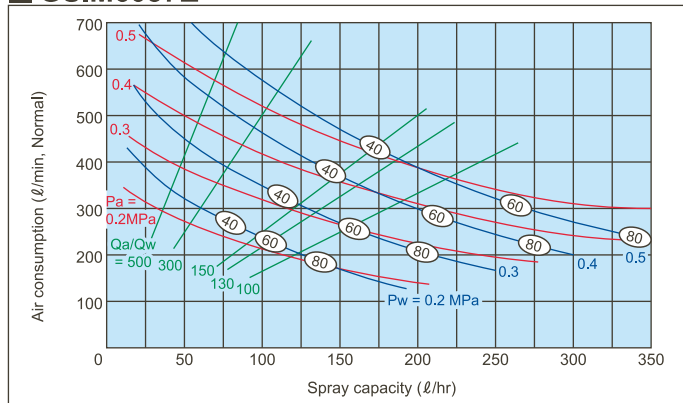
(Air consumption code: Mass per 100 mm)
37/55: 180 g, 75/110: 260 g, 150/220: 300 g

Flow-rate Diagrams (Spray angle 60° type)

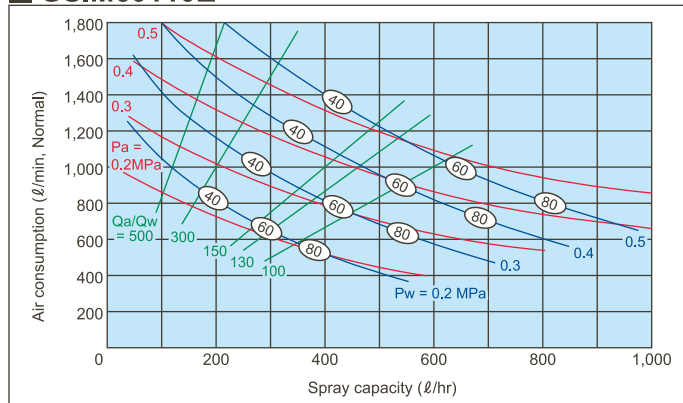
■ How to read the chart

- 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 laser Doppler method.

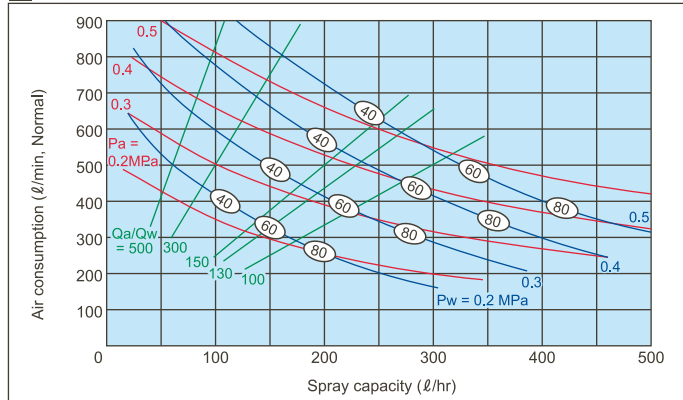
GSIM6037II



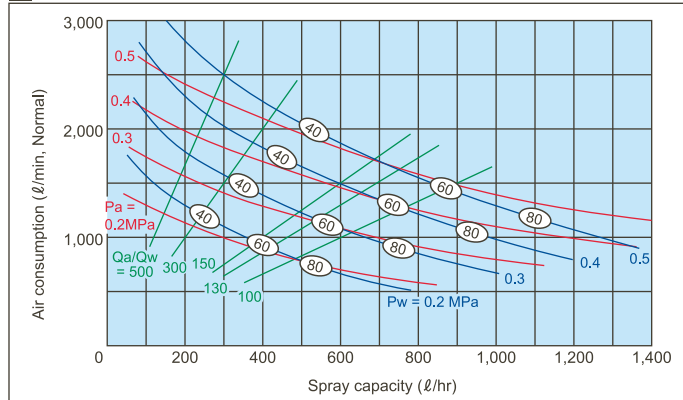
GSIM60110II



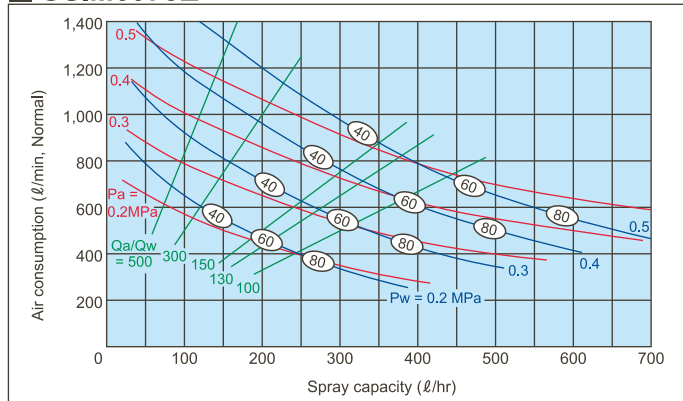
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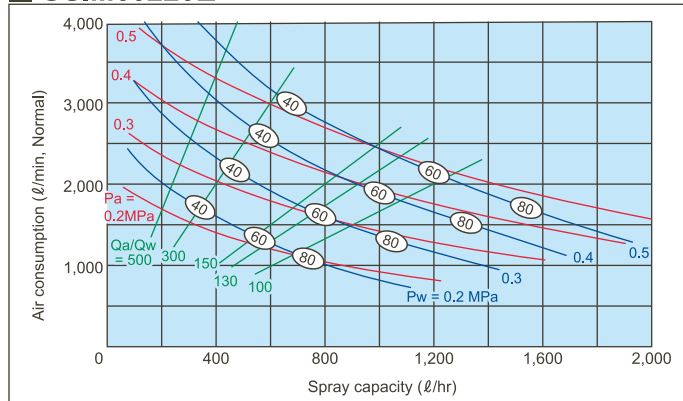
GSIM60150II



GSIM6075II



GSIM60220II

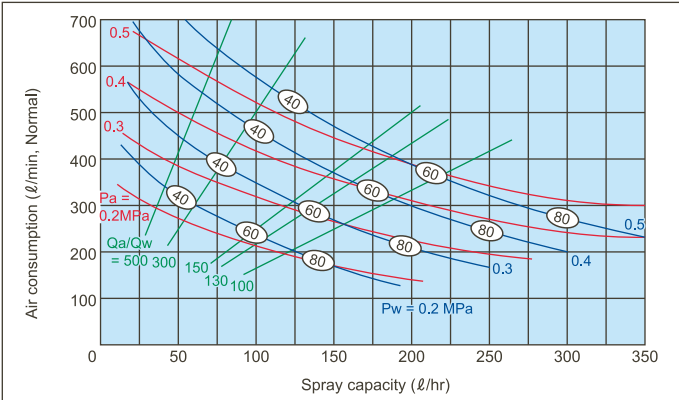


Flow-rate Diagrams (Spray angle 20° type)

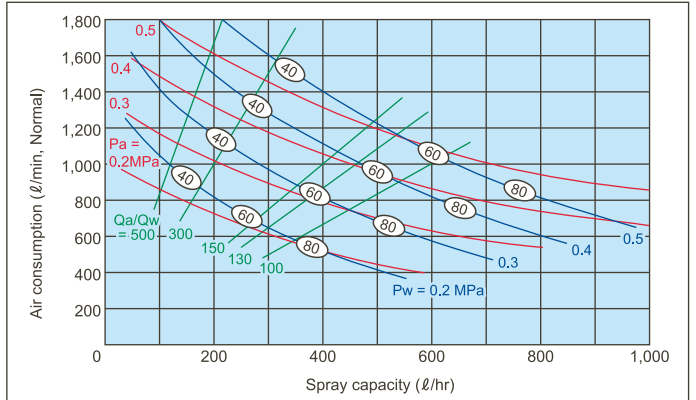
■ How to read the chart

- 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 laser Doppler method.

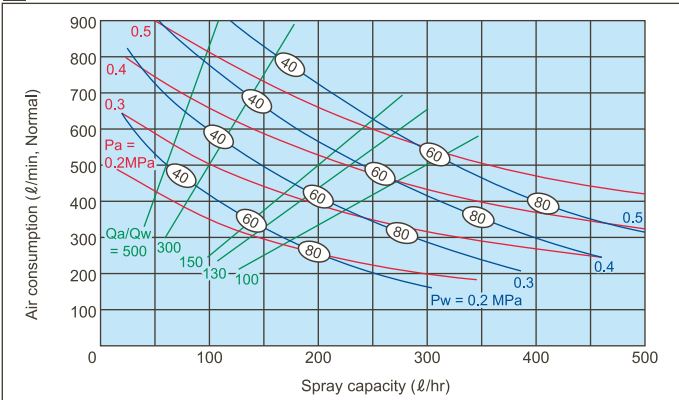
■ GSIM2037II



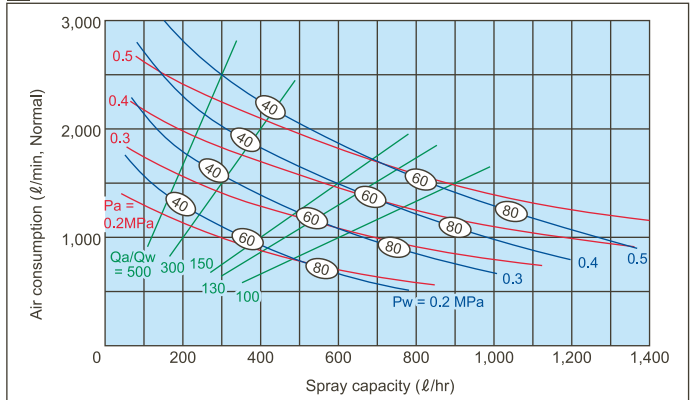
■ GSIM20110II



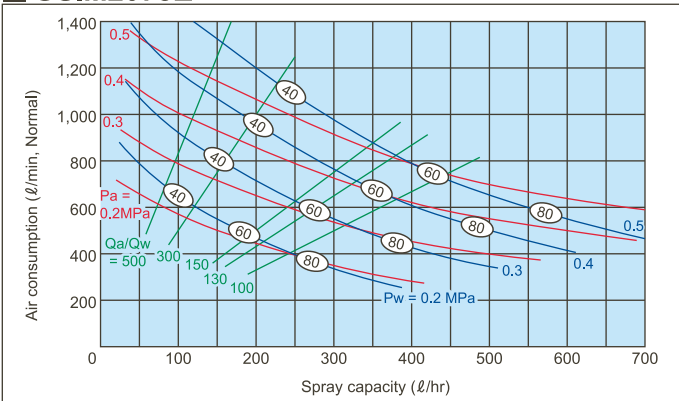
■ GSIM2055II



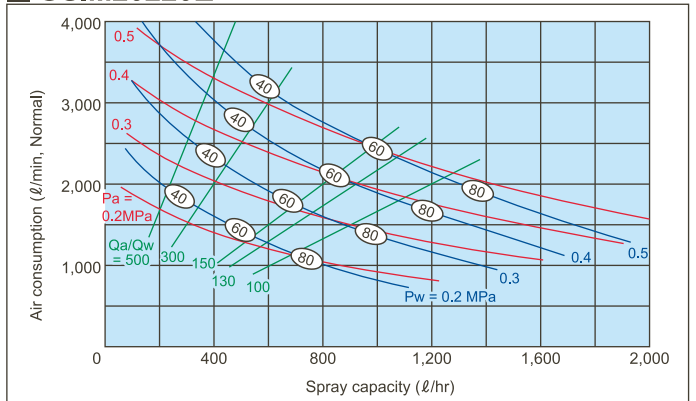
■ GSIM20150II



■ GSIM2075II

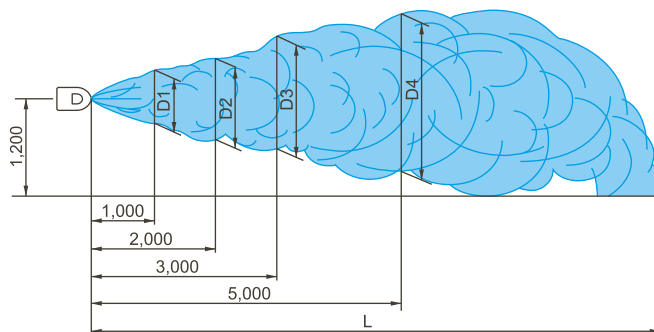


■ GSIM20220II



Spray Dimensions

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	



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	

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

How to order

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

<Example> GSIM6037II B S316L + 1*1/4T10 SCS13 (L2)

GSIM	60	37 II	B	S316L +	1*1/4T10	SCS13	(L2)
	Spray angle code	Air consumption code	Type of length (Total length)		Flange size		Length between the nozzle head and flange
	■60	■37	■A		■1*1/4T10		
	■20	■55	■B		■1*1/2T10		
		■75	■C		■2T10		
		■110	■D				
		■150					
		■220					

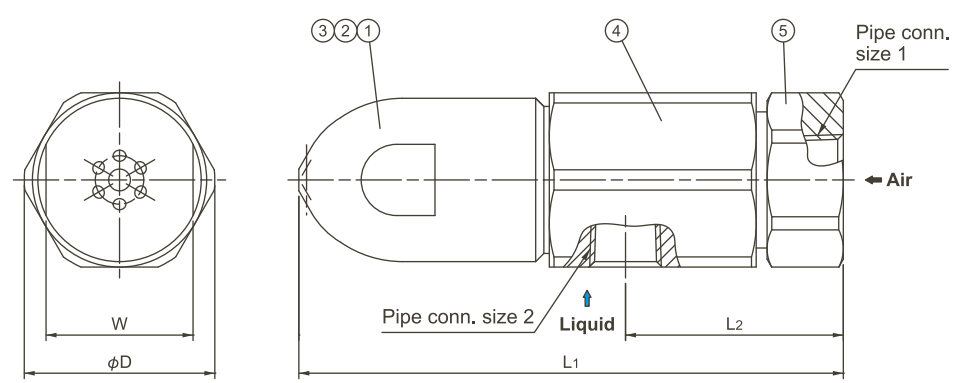
The minimum flange sizes
(Air consumption code: Flange size)
37II, 55II: 1*1/4T10
75II, 110II: 1*1/2T10
150II, 220II: 2T10

See the drawing and table on page 43 for length type and L2.
For details please ask for our inquiry drawing.

Please send us an inquiry for the different flange sizes.

GSIMII Nozzle with T-type Adaptor

Structure & Materials



Note: The above drawing is for GSIM6037IIS316L+TS303.
 Configurations of nozzle tip slightly differ depending on air consumption codes.

Dimension and materials

No.	Components	Standard materials
①	Nozzle tip	S316L
②	Nozzle core	S316L
③	Whirler	S316L equivalent
④	Adaptor	S303
⑤	Air socket	S303

Dimensions & Pipe Connection Sizes

Spray angle code	Air consumption code	Pipe connection size		Outer dimensions (mm)				Free passage diameter* (mm)		Mass (g)
		1 (Air)	2 (Liquid)	L1	L2	W	φD	Air	Liquid	
60 20	37	Rc3/8	Rc1/4	100	40	27	35	1.6	1.8 (2.2)	500
	55							2.0	2.2 (2.2)	
	75	Rc1/2	Rc3/8	120	42	32	45	2.3	2.6 (3.2)	900
	110							2.9	3.2 (3.2)	
	150	Rc3/4	Rc1/2	140	44	46	50	3.3	3.7 (4.0)	1,200
220	4.0							4.0 (4.0)		

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

How to order

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

<Example> GSIM6037II S316L + T S303

GSIM 60 37 II S316L + T S303

Spray angle code Air consumption code

- 60 ■ 37
- 20 ■ 55
- 75
- 110
- 150
- 220