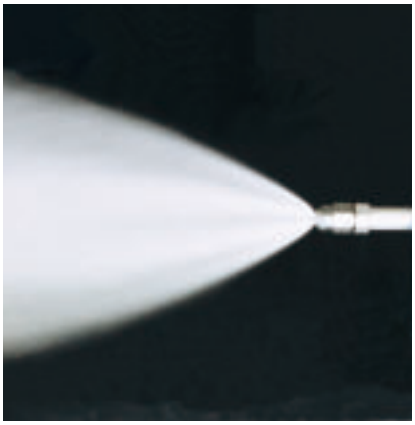
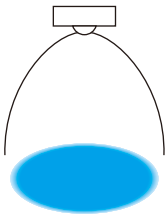
Large Capacity Fine Fog Nozzles GSIM II





[Spray pattern]

■Pneumatic spray nozzle producing fine atomization with a mean droplet diameter of 50 μm and a max. droplet diameter of 150 μm at an air-water ratio of 130.*1

■The low air-water ratio nozzle that provides a large amount of "fine fog" while using minimal compressed air.

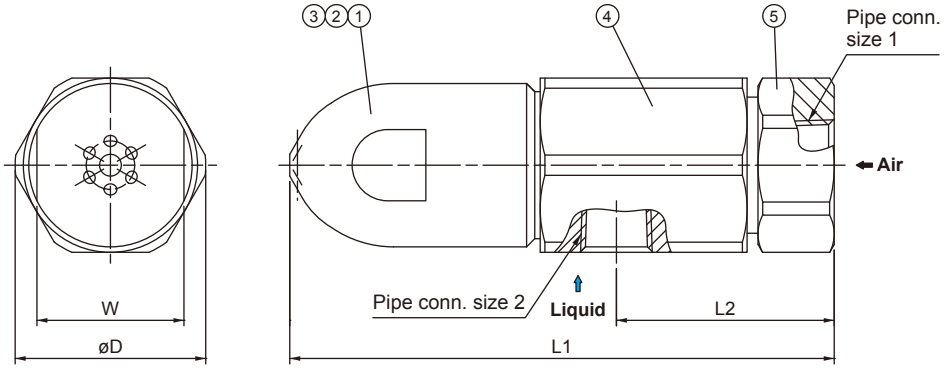
*1) GSIMII with spray angle code 60 and air consumption code 37–110, measured by laser Doppler method.

APPLICATIONS

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

GSIM II with T-type Adaptor

DRAWING



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

■COMPONENTS AND MATERIALS

No.	Components	Standard materials
1	Nozzle tip	S316L
2	Nozzle core	S316L
3	Whirler	S316L equivalent

No.	Components	Standard materials
4	Adaptor	S303
5	Air socket	S303

DIMENSIONS

Spray angle code	Air consumption code	Pipe connection size		Outer dimensions (mm)				Free passage diameter*2 (mm)			Weight (g)
		1 (Air)	2 (Liquid)	L1	L2	W	øD	Tip orifice	Air	Liquid	
60 20	37	Rc3/8	Rc1/4	100	40	27	35	1.8 (4.4)	1.6	1.8 (2.2)	500
	55							2.2 (5.3)	2.0	2.2 (2.2)	
	75	Rc1/2	Rc3/8	120	42	32	45	2.6 (6.3)	2.3	2.6 (3.2)	900
	110							3.2 (7.5)	2.9	3.2 (3.2)	
	150	Rc3/4	Rc1/2	140	44	46	50	3.7 (8.9)	3.3	3.7 (4.0)	1,200
	220							4.5 (10.8)	4.0	4.0 (4.0)	

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

HOW TO ORDER

To inquire about or order a specific product please refer to this coding system.

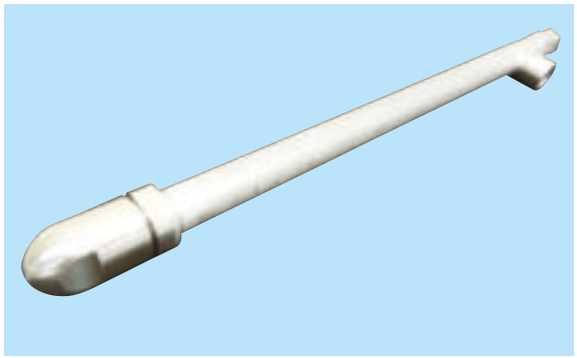
<Example> GSIM6037II S316L + T S303

GSIM [60] [37] II S316L + T S303

- 60: Spray angle code (■60 ■20)
- 37: Air consumption code (■37 ■55 ■75 ■110 ■150 ■220)
- S316L: Material of nozzle tip
- T: Type of adaptor
- S303: Material of adaptor

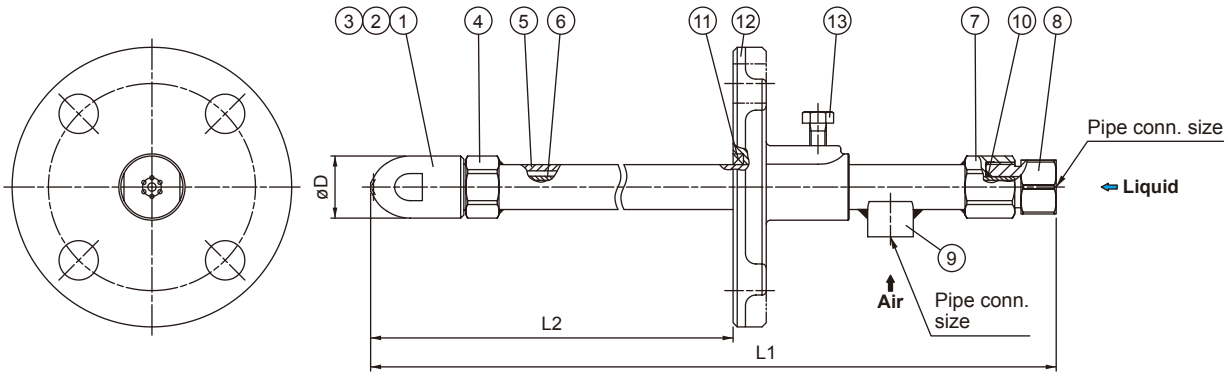
Flange Type

DRAWING



■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
7	Joint	S304
8	Liquid socket	S304
9	Air socket	S304 equivalent
10	O-ring	FKM
11	Packing	Metal wire reinforced AES wool
12	Flange	SCS13 (S304)
13	Bolt	S304 equivalent



DIMENSIONS

Spray angle code	Air consumption code	Pipe connection size		Outer diameter øD (mm)	Free passage diameter*2 (mm)		
		Air	Liquid		Tip orifice	Air	Liquid
60 20	37	Rc3/8	Rc3/8	30	1.8 (4.4)	1.6	1.8 (2.2)
	55				2.2 (5.3)	2.0	2.2 (2.2)
	75	Rc1/2	Rc1/2	38	2.6 (6.3)	2.3	2.6 (3.2)
	110				3.2 (7.5)	2.9	3.2 (3.2)
	150	Rc3/4		50	3.7 (8.9)	3.3	3.7 (4.0)
	220				4.5 (10.8)	4.0	4.0 (4.0)

*2) Free passage diameter in ( ) shows that of GSIM II 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

WEIGHT

Air consumption code	Type of length	Weight*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 weight shown is when the total length is the standard length L1 and excludes a weight of flange. For longer lengths, add the corresponding weight for each 100 mm of L1 length as below.
(Air consumption code: Weight per 100 mm)
37/55: 180 g, 75/110: 260 g, 150/220: 300 g

HOW TO ORDER

When selecting a nozzle product, various factors must be considered, such as distance to target, number of nozzles required, and installation layout including air and liquid piping.
To ensure the best nozzle selection for your needs, consult our sales representatives during the design phase. Our engineering services are essential for efficient performance.

Inquiry forms with outline drawings are available to confirm dimensions and pipe connections.
Contact us for more details.

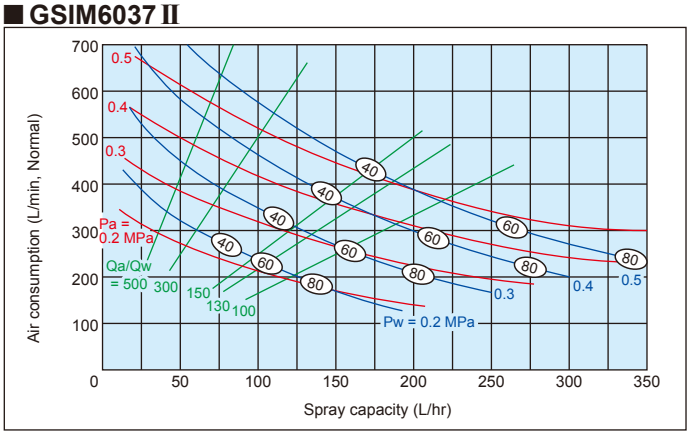
GSIM II with T-type Adaptor　Flange Type

FLOW-RATE DIAGRAMS　SPRAY ANGLE 60° TYPE

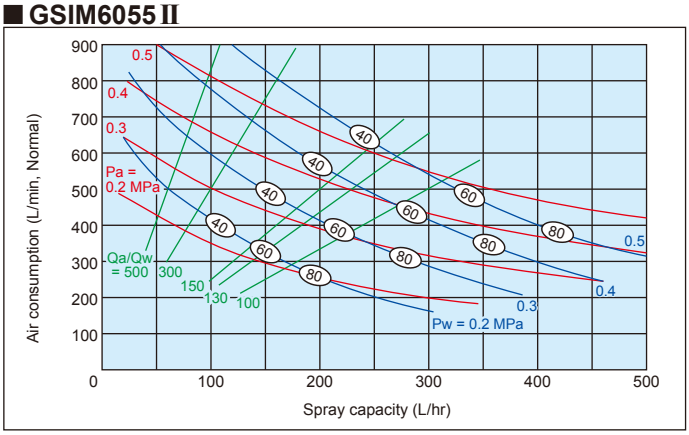
■How to read the chart

1. The spray capacity shown is for one nozzle.
2. Red lines (—) represent compressed air pressures Pa in MPa.
   Blue lines (—) represent liquid pressures Pw in MPa.
   Green lines (—) represent air-water ratio Qa/Qw.
3. Numbers in ovals ⬭ indicate Sauter mean diameters (μm) measured by laser Doppler method.

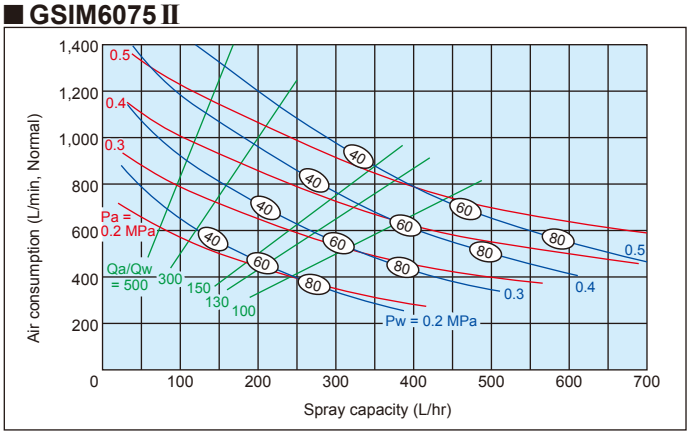
■ GSIM6037 II



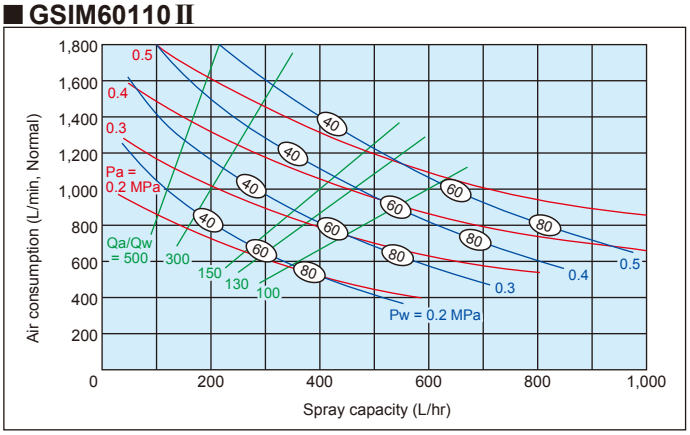
■ GSIM6055 II



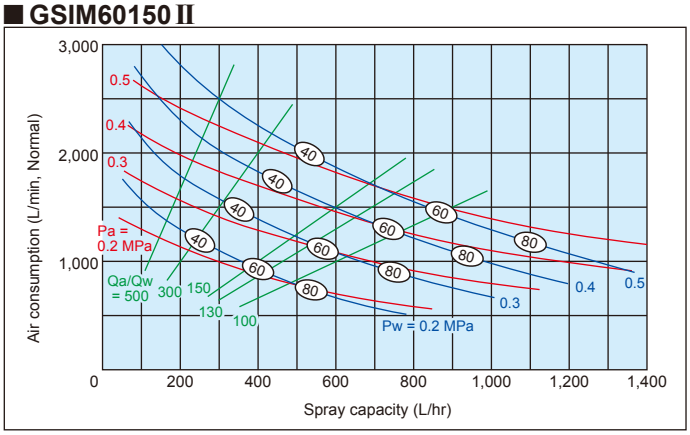
■ GSIM6075 II



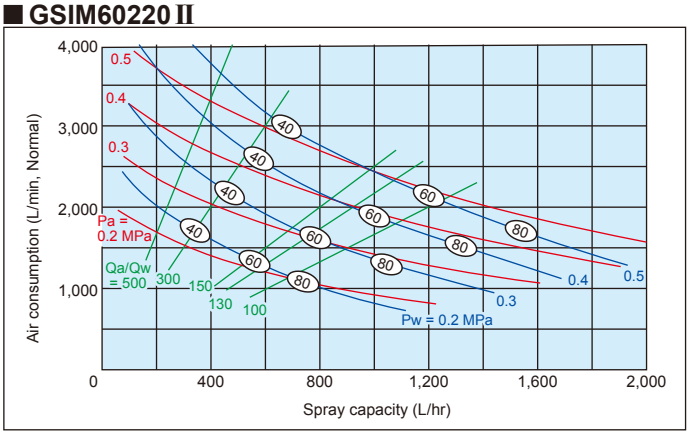
■ GSIM60110 II



■ GSIM60150 II



■ GSIM60220 II



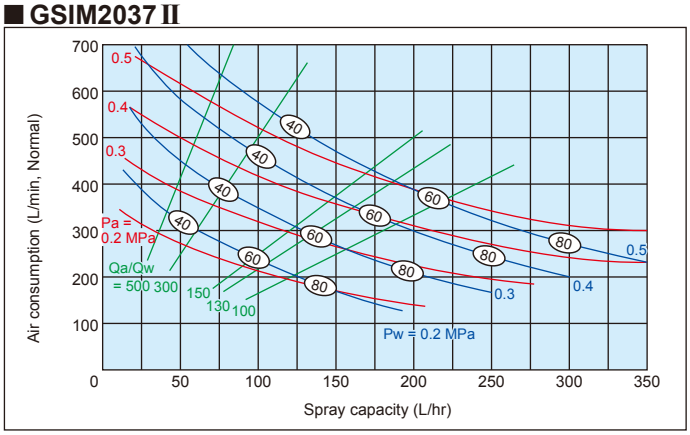
GSIM II with T-type Adaptor Flange Type

FLOW-RATE DIAGRAMS **SPRAY ANGLE 20° TYPE**

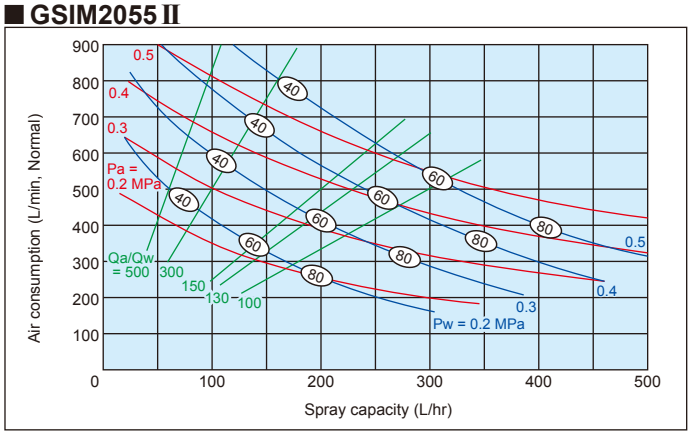
■How to read the chart

1. The spray capacity shown is for one nozzle.
2. Red lines (—) represent compressed air pressures Pa in MPa.
   Blue lines (—) represent liquid pressures Pw in MPa.
   Green lines (—) represent air-water ratio Qa/Qw.
3. Numbers in ovals ⬭ indicate Sauter mean diameters (μm) measured by laser Doppler method.

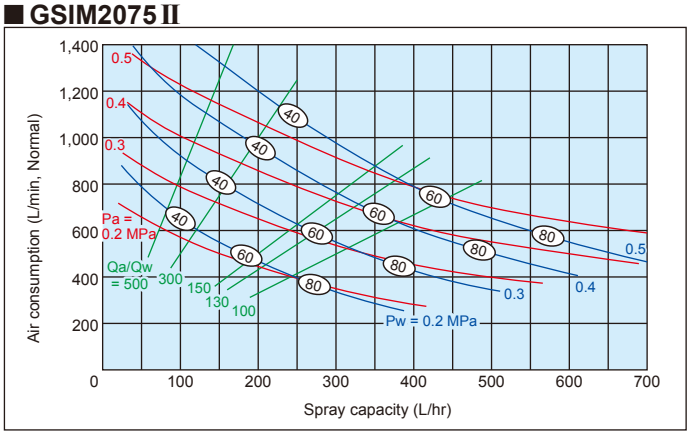
■ GSIM2037 II



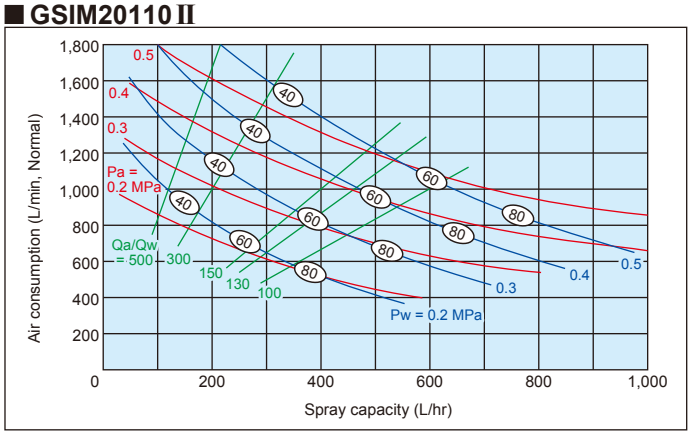
■ GSIM2055 II



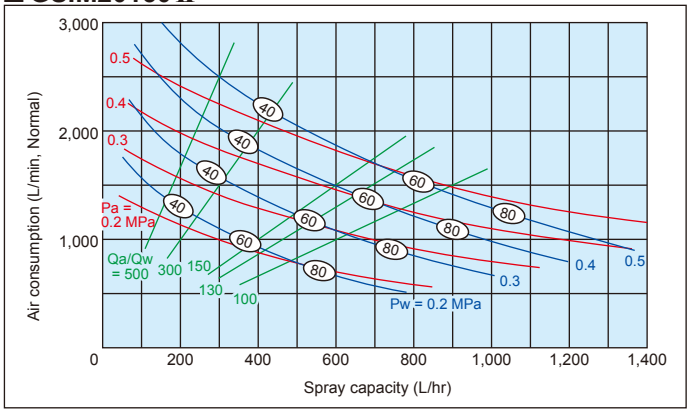
■ GSIM2075 II



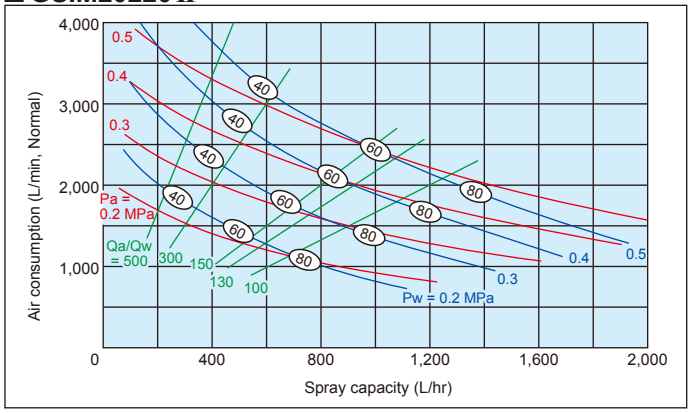
■ GSIM20110 II



■ GSIM20150 II



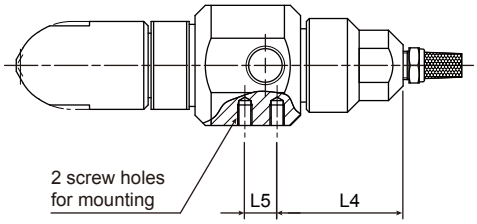
■ GSIM20220 II

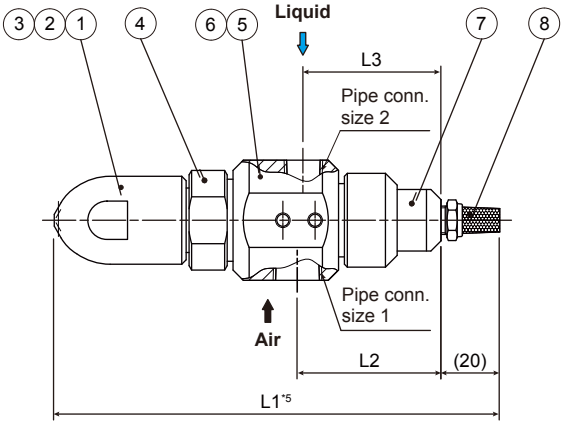


GSIM II with SN-type Adaptor

The SN-adaptor type, newly added to the large capacity pneumatic nozzle GSIM II Series, turns the spray on-off without dripping by only controlling the air supply.

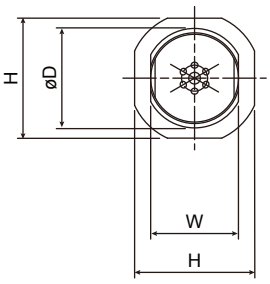
DRAWING





■COMPONENTS AND MATERIALS

No.	Components	Standard materials
1	Nozzle tip	S316L
2	Nozzle core	S316L
3	Whirler	S316L equiv.
4	Nozzle adaptor	S303
5	Adaptor	S303
6	O-ring	FKM
7	Spring cap	S303
8	Silencer	Brass, etc.



Note: The above drawing is for GSIM6037IIS316L+SNS303.
Configurations of nozzle slightly differ depending on air consumption codes.

DIMENSIONS

Spray angle code	Air consumption code	Pipe connection size		Mounting screw hole size	Outer dimensions (mm)								Free passage diameter*6 (mm)			Weight (g)
		1 (Air)	2 (Liquid)		L1*5	L2	L3	L4	L5	H	W	øD	Tip orifice	Air	Liquid	
60 20	37	Rc3/8	Rc1/4	M5 depth 7	152	49	47	43	11	41	30	34	1.8 (4.4)	1.6	1.8 (2.2)	750
	55												2.2 (5.3)	2.0	2.2 (2.2)	
	75	Rc1/2	Rc3/8	M8 depth 10	192	64.5	60	55	17	50	41	45	2.6 (6.3)	2.3	2.6 (3.2)	1,500
	110												3.2 (7.5)	2.9	3.2 (3.2)	
	150	Rc3/4	Rc1/2	M8 depth 10	230	80	75	69	17	65	50	55	3.7 (8.9)	3.3	3.7 (4.0)	3,100
	220												4.5 (10.8)	4.0	4.0 (4.0)	

*5) The total length L1 may vary slightly depending on the tightness of the silencer.
*6) Free passage diameter in ( ) shows that of GSIM II with spray angle code of 20.

HOW TO ORDER

To inquire about or order a specific product please refer to this coding system.

<Example> GSIM 6037II S316L + SN S303

GSIM [60] [37] II S316L + SN S303

- 60: Spray angle code — ■60 ■20
- 37: Air consumption code — ■37 ■55 ■75 ■110 ■150 ■220
- S316L: Material of nozzle tip
- SN: Type of adaptor
- S303: Material of adaptor

Adaptor type SN is used in the same way as SNB. See page 28 for details.

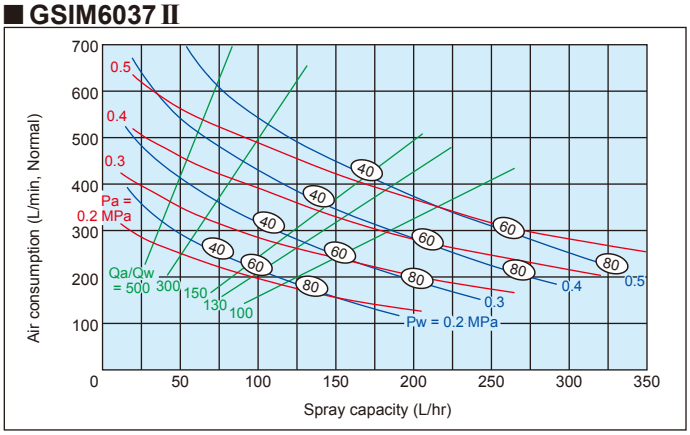
GSIM II with SN-type Adaptor

FLOW-RATE DIAGRAMS | **SPRAY ANGLE 60° TYPE**

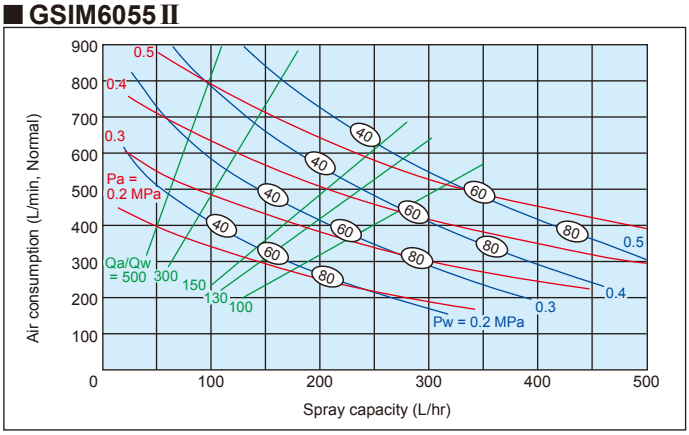
■How to read the chart

1. The spray capacity shown is for one nozzle.
2. Red lines (—) represent compressed air pressures Pa in MPa.
   Blue lines (—) represent liquid pressures Pw in MPa.
   Green lines (—) represent air-water ratio Qa/Qw.
3. Numbers in ovals ⬭ indicate Sauter mean diameters (μm) measured by laser Doppler method.

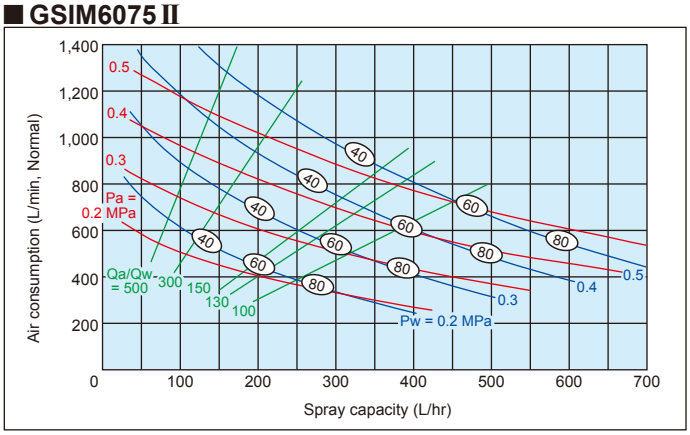
■ GSIM6037 II



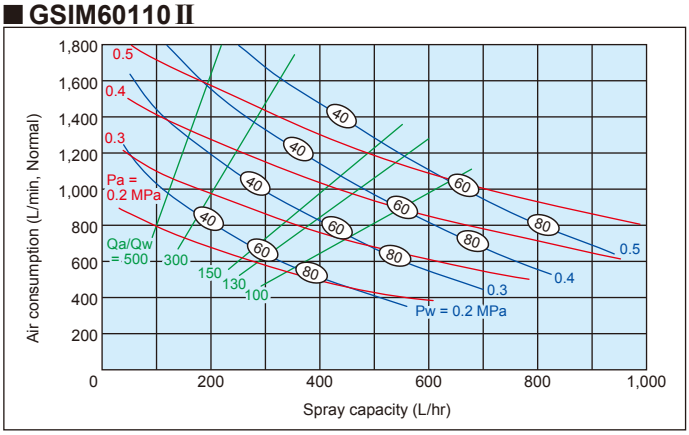
■ GSIM6055 II



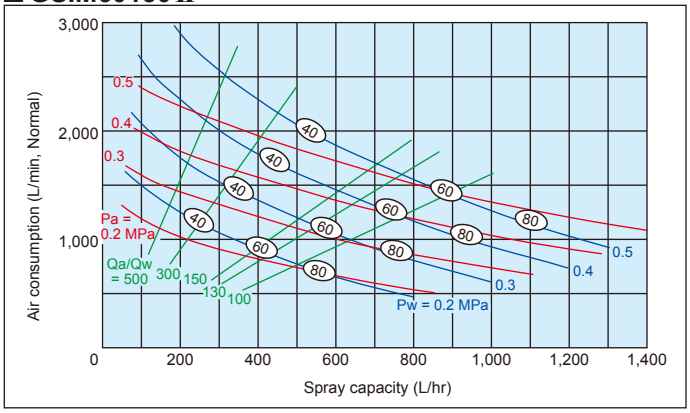
■ GSIM6075 II



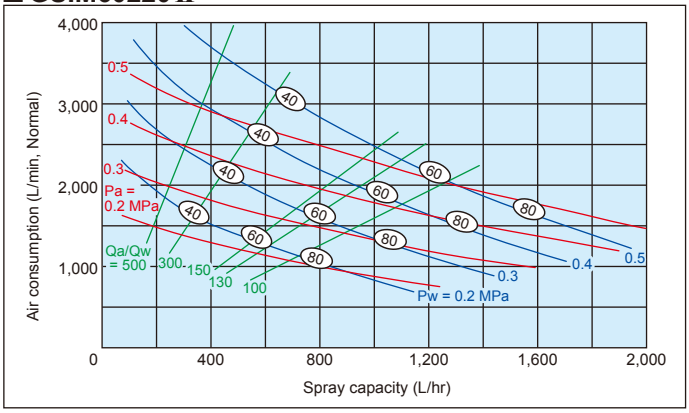
■ GSIM60110 II



■ GSIM60150 II



■ GSIM60220 II



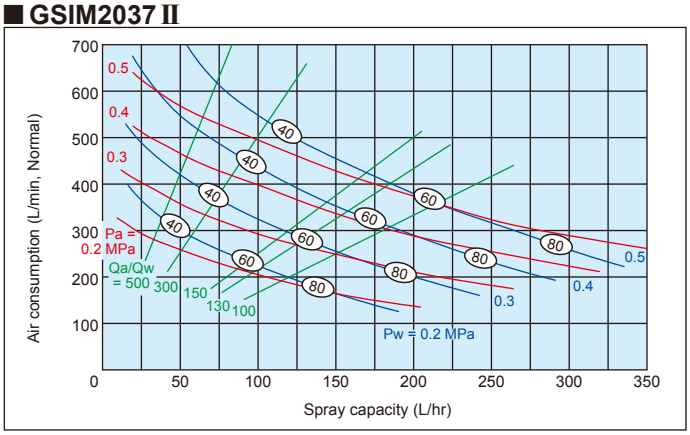
GSIM II with SN-type Adaptor

FLOW-RATE DIAGRAMS | **SPRAY ANGLE 20° TYPE**

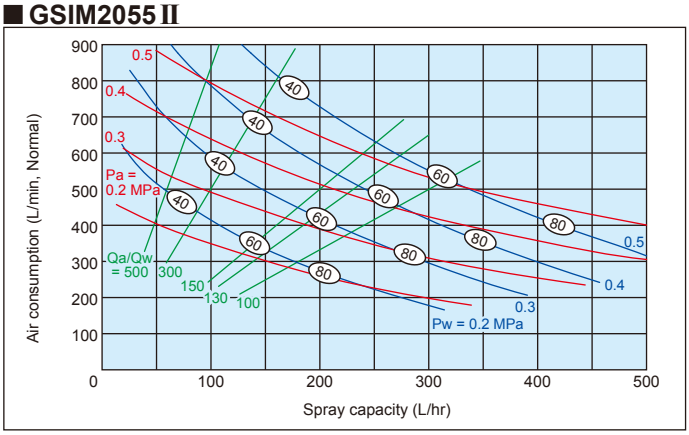
■How to read the chart

1. The spray capacity shown is for one nozzle.
2. Red lines (—) represent compressed air pressures Pa in MPa.
   Blue lines (—) represent liquid pressures Pw in MPa.
   Green lines (—) represent air-water ratio Qa/Qw.
3. Numbers in ovals ⬭ indicate Sauter mean diameters (μm) measured by laser Doppler method.

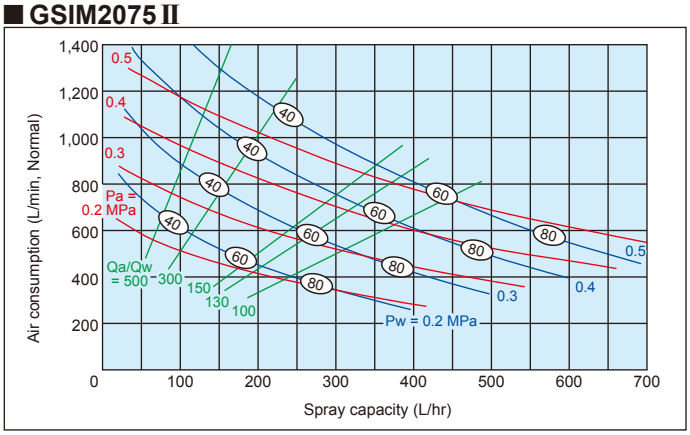
■ GSIM2037 II



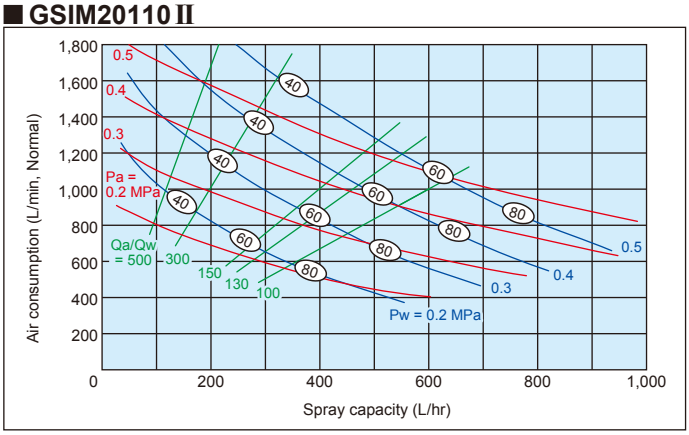
■ GSIM2055 II



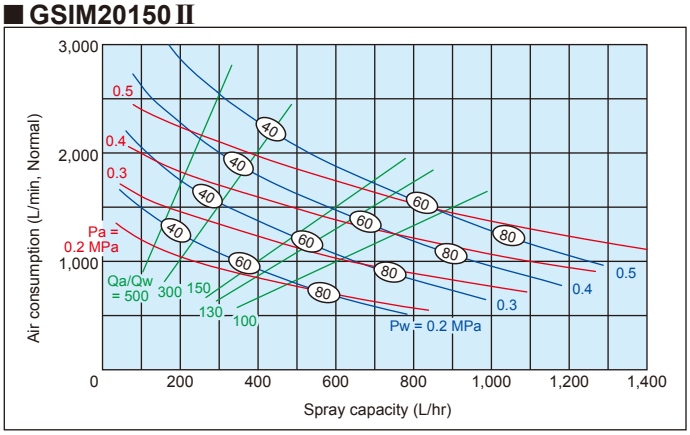
■ GSIM2075 II



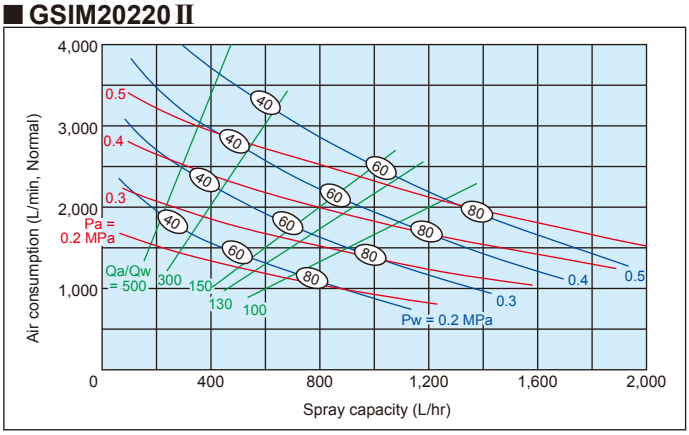
■ GSIM20110 II



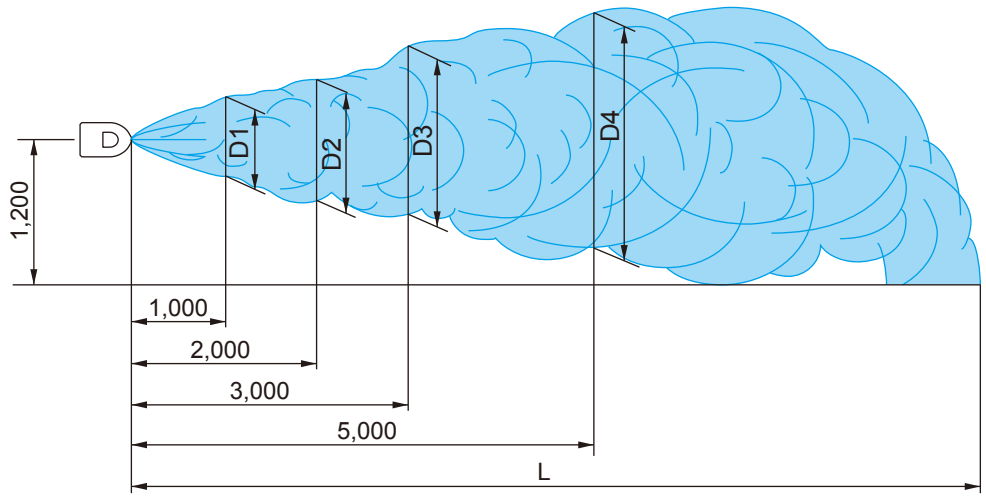
■ GSIM20150 II



■ GSIM20220 II



SPRAY DIMENSIONS (for GSIM II Series all types)



Unit: mm

■Spray angle code: 60

Air consumption code	Air pressure (MPa)	Liquid pressure (MPa)	Spray dimensions (mm)				
			D1	D2	D3	D4	L
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: 20

Air consumption code	Air pressure (MPa)	Liquid pressure (MPa)	Spray dimensions (mm)				
			D1	D2	D3	D4	L
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.