

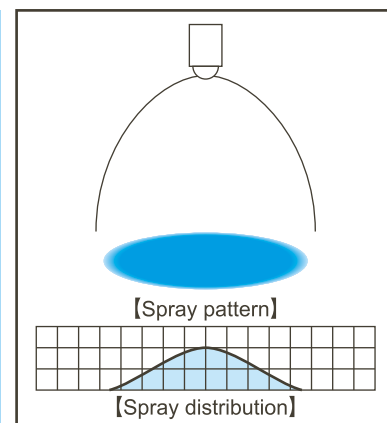
Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles

DOVVA-G

Features

- Flat spray pneumatic nozzle producing semi-fine atomization with a mean droplet diameter of 80 μm or more.*1
- Clog-resistant design due to large free passage diameter is suitable for spraying factory effluents and waste water.
- Simple structure, easy maintenance.

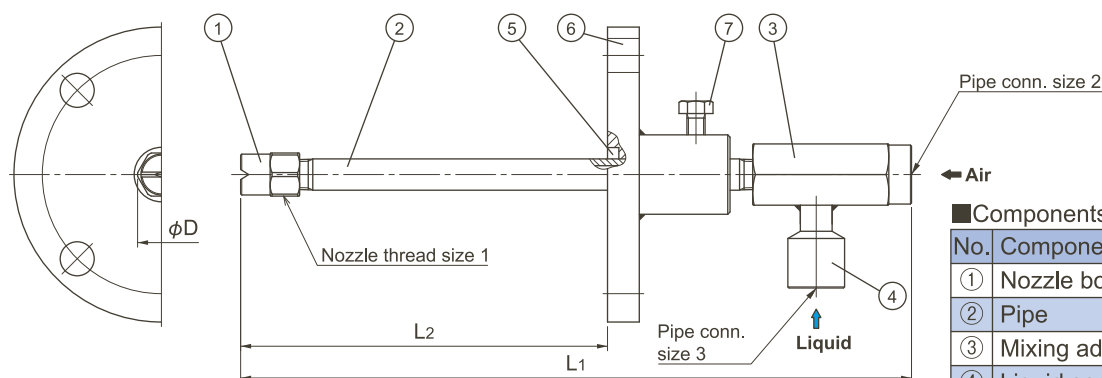
*1) Droplet diameter measured by laser Doppler method



Applications

- Denitration: Gas cooling
- Moisture control: Flue gas
- Combustion: Waste water

Structure, Materials, Dimensions & Pipe Connection Sizes



Components and materials

No.	Components	Standard materials
①	Nozzle body	S316L
②	Pipe	S316LTP
③	Mixing adaptor	S304
④	Liquid socket	S304
⑤	Packing	Metal wire reinforced AES wool
⑥	Flange	S304
⑦	Bolt	S304

Dimensions

Spray angle code	Spray capacity code	Nozzle thread size 1	Pipe connection sizes 2 & 3		Outer dimensions φD (mm)	Free passage diameter (mm)			
			Air	Liquid		Spray orifice		Adaptor	
						70	55	Air	Liquid
70 55	82	Rc1/4	Rc1/2	21	2.5	2.8	3.4	2.4	
	110				2.9	3.3	3.9	2.7	
	180	Rc3/8			3.6	4.1	4.9	3.4	
	230				4.1	4.9	5.7	3.8	
	300	Rc1/2			29	5.2	5.6	6.5	4.4
	400				5.9	6.3	7.4	5.0	
500	Rc3/4	Rc3/4	35	6.1	7.4	8.3	5.9		
600				7.5	8.3	9.1	6.2		

Mass

Nozzle thread size 1	Type of length	Mass*3 (g)
Rc1/4	A	750
	B	900
	C	1,100
	D	1,250
Rc3/8	A	900
	B	1,100
	C	1,350
	D	1,550
Rc1/2	A	1,350
	B	1,700
	C	2,000
	D	2,350
Rc3/4	A	2,050
	B	2,500
	C	2,950
	D	3,400

Type of length

Type	Total length L1*2 (mm)	Length L2 (mm)
A	560	300-400
B	760	400-600
C	960	600-800
D	1,160	800-1,000

*2) L1: Standard length

*3) 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 (listed below) for each 100 mm of L1 length, according to the Nozzle thread size 1.

Nozzle thread size 1	Mass per 100 mm
Rc1/4	80 g
Rc3/8	110 g
Rc1/2	170 g
Rc3/4	220 g

Flow-rate Diagrams

How to read the chart

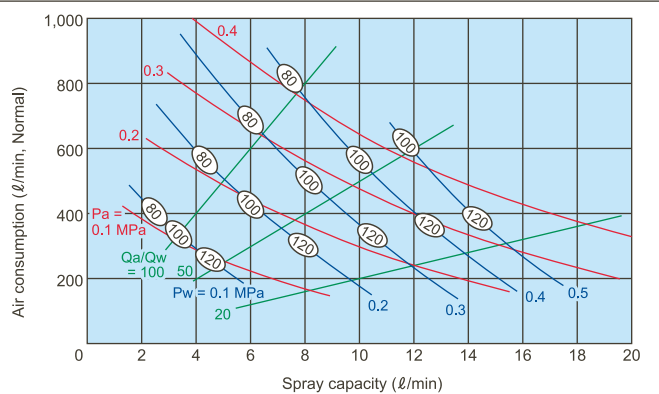
- ① The spray capacity shown is for one nozzle.
- ② Red lines (—) represent compressed air pressures P_a in MPa.
Blue lines (—) represent liquid pressures P_w in MPa.
Green lines (—) represent air-water ratio Q_a/Q_w .
- ③ Figures in ovals \bigcirc indicate Sauter mean droplet diameters (μm) measured by laser Doppler method.
- ④ ** to be filled by spray angle code of 70 or 55.

Note:

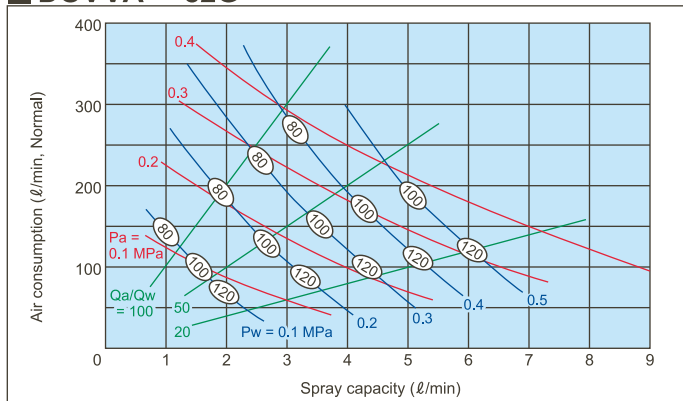
The flow-rate diagrams below are those of DOVVA-G with total length of 560 mm (length type: A).

For nozzles with a longer total length (type B–D), the original air and liquid pressures need to be increased by about 0.03 MPa in order to obtain numerical values in the diagram (due to pressure loss).

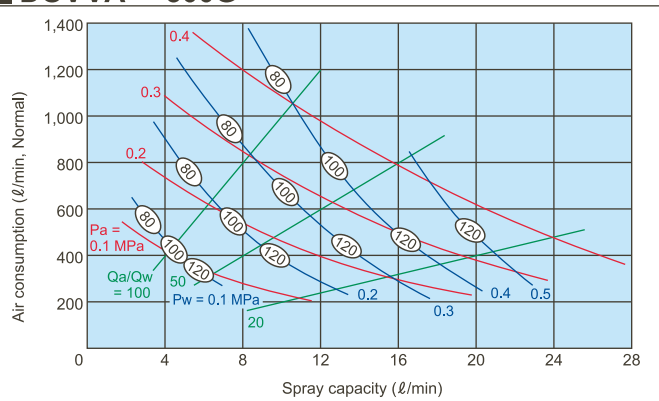
DOVVA**230G



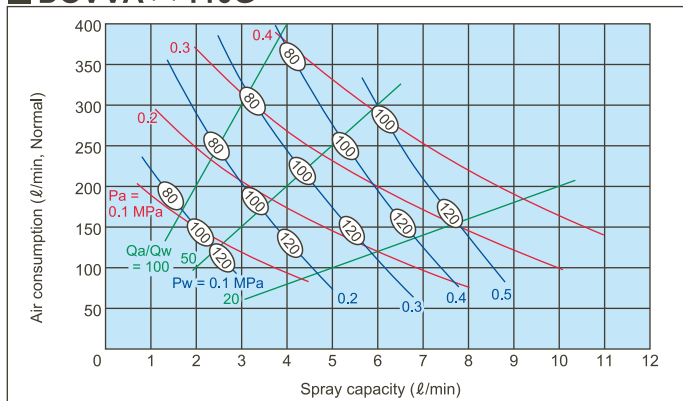
DOVVA**82G



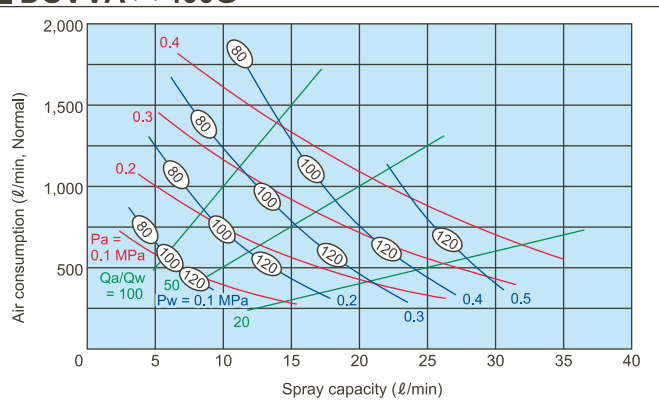
DOVVA**300G



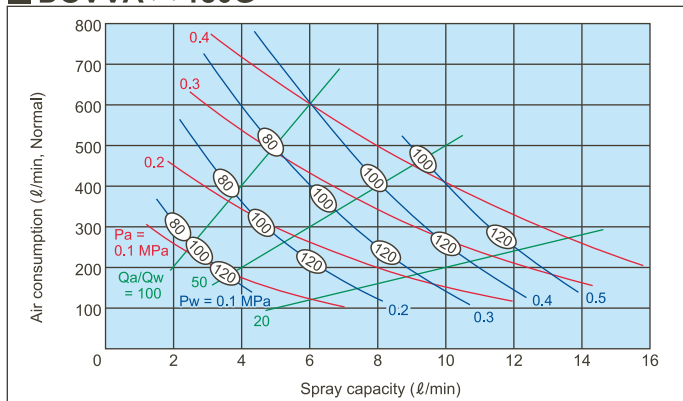
DOVVA**110G



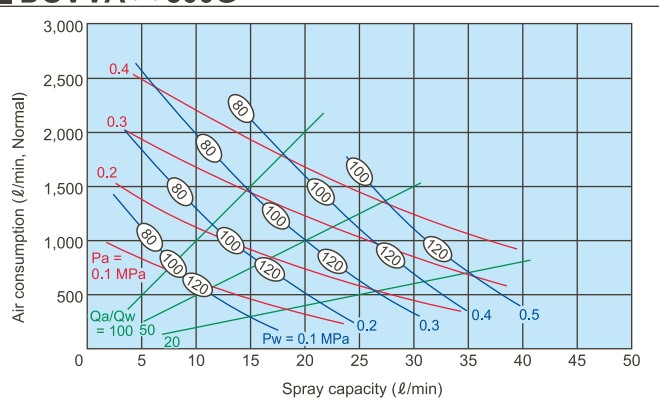
DOVVA**400G



DOVVA**180G

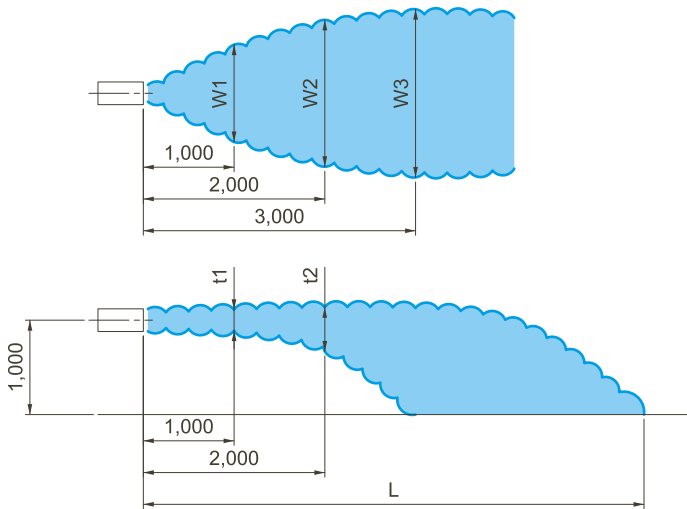
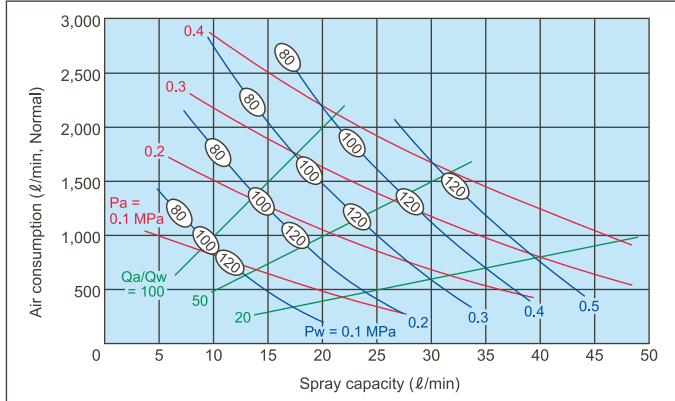


DOVVA**500G



Spray Dimensions

DOVVA**600G



Spray angle code	Spray capacity code	Air pressure (MPa)	Liquid pressure (MPa)	Spray dimensions (mm)					
				W1	W2	W3	t1	t2	L
70	82	0.2	0.2	500	700	900	400	600	4,000
		0.3	0.3	600	800	1,000	400	700	5,000
		0.4	0.4	700	1,000	1,200	400	700	5,000
		0.4	0.5	600	900	1,100	400	800	6,000
	110	0.2	0.2	500	700	900	400	600	5,000
		0.3	0.3	600	800	1,000	400	700	6,000
		0.4	0.4	700	1,000	1,200	400	700	6,000
		0.4	0.5	600	900	1,100	400	800	7,000
	180	0.2	0.2	600	850	1,050	400	600	6,000
		0.3	0.3	650	900	1,150	400	700	7,000
		0.4	0.4	800	1,150	1,450	400	700	7,000
		0.4	0.5	700	1,050	1,350	400	800	8,000
230	0.2	0.2	800	1,200	1,600	400	800	8,000	
	0.3	0.3	700	1,000	1,300	400	700	8,000	
	0.4	0.4	900	1,300	1,700	400	700	8,000	
	0.4	0.5	800	1,200	1,600	400	800	9,000	
55	82	0.2	0.2	400	550	700	450	700	5,000
		0.3	0.3	500	650	800	450	800	6,000
		0.4	0.4	600	900	1,100	450	800	6,000
		0.4	0.5	500	750	900	450	900	7,000
	110	0.2	0.2	400	600	800	450	700	6,000
		0.3	0.3	500	700	900	450	800	7,000
		0.4	0.4	600	900	1,100	450	800	7,000
		0.4	0.5	500	800	1,000	450	900	8,000
	180	0.2	0.2	500	700	900	450	700	7,000
		0.3	0.3	550	800	1,000	450	800	8,000
		0.4	0.4	700	1,000	1,250	450	800	8,000
		0.4	0.5	600	900	1,150	450	900	9,000
230	0.2	0.2	550	800	1,000	450	700	8,000	
	0.3	0.3	600	900	1,100	450	800	9,000	
	0.4	0.4	750	1,100	1,400	450	800	9,000	
	0.4	0.5	650	1,000	1,300	450	900	10,000	

Note:
The above data were measured with tap water in a laboratory, in windless conditions.
Please contact us for spray dimensions of DOVVA-G with other spray capacity codes.

How to order

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

<Example> 1/4 DOVVA 5582G D S316L + 1T10S304 (L2)

1/4	DOVVA	55	82	G	D	S316L	+	1T10	S304	(L2)
Nozzle thread size 1		Spray angle code	Spray capacity code		Type of length (Total length)			Flange size		Length between the nozzle head and flange
■ 1/4		■ 70	■ 82 ■ 300		■ A			■ 1T10		
■ 3/8		■ 55	■ 110 ■ 400		■ B			■ 1*1/4T10		
■ 1/2			■ 180 ■ 500		■ C			■ 1*1/2T10		
■ 3/4			■ 230 ■ 600		■ D					

See the drawing and table on page 60 for length type and L2.
Please send us an inquiry for the different flange sizes.

For details please ask for our inquiry drawing.

The minimum flange sizes
(Spray capacity code: Flange size)
82G-230G: 1T10
300G, 400G: 1*1/4T10
500G, 600G: 1*1/2T10