

LORRIC[®]

paranoid about performance

Nozzle Catalogue



LORRIC

LORRIC is a Taiwanese manufacturer of industrial nozzles and flow meters established in 1991, and since then has dealt in independent research and development, design, production, marketing, and sales. LORRIC's products are 100% made in Taiwan. The philosophy we believe in, as mentioned below, leads us to design and manufacture supreme products while improving and growing with our clients.

Consistently self-challenging, we settle on only producing the highest quality nozzles through our uncompromising attitude.

At LORRIC, we pride ourselves in creating industry-used high-grade nozzles through our meticulous techniques and exclusive knowledge. Through our craftsmen's vast experience and diligence in understanding our customers' requests, our products' high quality ensures that even under the harshest of environments, they will perform as accurate as ever.

LORRIC wishes to stand together with customers and partners who embrace similar values, and together fashion a network of cooperation and mutual-support.

LORRIC takes to heart its clients' demands for performance, and cautiously tackles every challenge presented. Taking inspiration from whales, who deep down in the wide blue ocean sing their songs to call their peers in an extraordinary frequency of 52 hertz, LORRIC too is looking for clients who embrace similar values, and like-minded global partners. Let us together become a community, and share with the world our values and uncompromising spirit.

LORRIC aims to lead the Taiwanese industry, and stand firmly on the world stage of industrial production.

United Benefit Corp.

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Flat Fan Nozzles



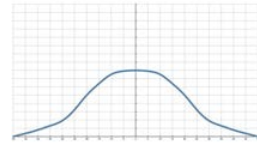
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VH	10
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H Single piece flat fan nozzle



【 Top view of nozzle spray pattern 】

【 Flow distribution 】



- PP material:
- Recommended working pressure: 3.0 kgf/cm²
 - Flowrate tolerance: $\pm 10\%$ @ 3.0 $\pm$ 0.1 kgf/cm²
 - Angle tolerance: $\pm 10^\circ$ @ 3.0 $\pm$ 0.1 kgf/cm²
 - Jet angle tolerance: 3°
- Other materials:
- Recommended working pressure: 3.0 kgf/cm²
 - Flowrate tolerance: $\pm 5\%$ @ 3.0 $\pm$ 0.1 kgf/cm²
 - Angle tolerance: $\pm 5^\circ$ @ 3.0 $\pm$ 0.1 kgf/cm²
 - Jet angle tolerance: 3°

Features

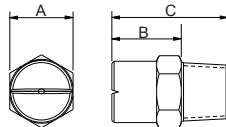
- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- Single-piece design, if there is frequent maintenance or replacement requirements, it is recommended to use quick install with multiple pieces nozzles.
- Fan nozzle angle can be 0°~110°, 0° spray angle spray type

is straight column, spray Fog shape is a single point, providing the best impact in all nozzle types.

- When the fan nozzle is used in high pressure environment, choose HSS material (hardened stainless steel Steel), can operate under 200Kgf/cm² pressure

Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, High Pressure Cleaning, Wet Processing Display Pane, machine tool cleaning, etc.
- Cooling: gas, tank, machinery, metal, roof etc.
- Dispersion: Humidifying, Chemicals (etching solution, lubricants, insect repellent, etc.), water screens (fire, dust, deodorization etc.).



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)				
		A	B	C		S303	S316	Brass	HSS	PP
Metal	1/8H	12	11	19	1/8M	10.8	10.8	12.5	10.8	-
	1/4H	14	15	26	1/4M	11.5	11.5	14	11.5	-
	3/8H	18	15	30	3/8M	39	44.5	48	44.5	-
Plastic	1/8H	11.8	10.3	19	1/8M	-	-	-	-	1.5
	1/4H	13.7	13.7	25	1/4M	-	-	-	-	2.0
	3/8H	18	18	30	3/8M	-	-	-	-	8.0

Material

- Metal: Stainless 303, Stainless 316, BRASS, HSS
- Plastic: PP

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT H 01 90 S316

Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material
1/4	BSPT	H	01	90	S316

※ Standard Pressure: Column in red.
※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm²	1.0 kgf/cm²	2.0 kgf/cm²	3.0 kgf/cm²	4.0 kgf/cm²	6.0 kgf/cm²	8.0 kgf/cm²	10.0 kgf/cm²	15.0 kgf/cm²			
0°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
15°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
25°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
40°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
50°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
65°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	140	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.4	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.6	100
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.7	100
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.8	50
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.9	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	230	0.9	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	1.0	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	1.0	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.1	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.1	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.2	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	370	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	2.0	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.3	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.4	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.5	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	3.1	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.3	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	630	3.9	-
80°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	135	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.6	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	220	0.7	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	0.7	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.9	50
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.9	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.0	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.0	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.1	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	340	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.9	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.1	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.3	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.4	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.1	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	600	3.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm²	1.0 kgf/cm²	2.0 kgf/cm²	3.0 kgf/cm²	4.0 kgf/cm²	6.0 kgf/cm²	8.0 kgf/cm²	10.0 kgf/cm²	15.0 kgf/cm²			
90°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	130	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.5	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.5	100
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	210	0.5	100
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.6	100
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.8	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	330	0.8	50
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	0.8	50
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.0	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.1	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.2	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	1.4	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.6	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	1.8	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.0	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.1	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.3	-
100°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	2.7	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	570	3.3	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
110°	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

VH Single piece high chemical resistance plastic flat fan nozzle

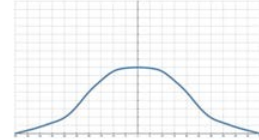
Flat Fan Nozzles



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



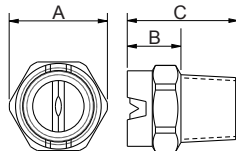
- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: $\pm 5\%$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Angle tolerance: $\pm 5^\circ$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Jet angle tolerance: 3°

Features

- The spraying type is fan type, and the spray shape is single-line and the two sides are tapered (tapered Edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- One-piece design.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Vehicles, containers, filters, dust, gravel, metals, metal parts, mechanical, steel plates, various containers, high pressure cleaning, wet processing, display panel, cleaning process for TFT-LCD manufacturing, machinery washing, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (eg. etching solution, lubricants, insect repellent, etc.), firefighting, dedust, deodorization, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
PVDF	1/8VH	12	11	19	1/8M	2.2
	1/4VH	15	11	21	1/4M	3.7
	3/8VH	17	12	19	3/8M	14

Material

- Plastic: PVDF

How to place an order for LORRIC nozzles?

Example: **1/4** **BSPT** **VH** **03** **80** **PVDF**

Thread Type Thread Size Nozzle Series Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure										Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²				
0°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
15°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
25°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
40°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
50°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
65°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	140	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.4	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.6	100
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.7	100
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.8	50
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.9	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	230	0.9	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	1.0	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	1.0	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.1	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.1	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.2	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	370	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	2.0	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.3	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.4	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.5	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	3.1	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.3	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	630	3.9	-
80°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	135	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.6	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	220	0.7	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	0.7	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.9	50
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.9	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.0	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.0	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.1	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	340	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.9	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.1	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.3	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.4	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.1	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	600	3.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm²	1.0 kgf/cm²	2.0 kgf/cm²	3.0 kgf/cm²	4.0 kgf/cm²	6.0 kgf/cm²	8.0 kgf/cm²	10.0 kgf/cm²	15.0 kgf/cm²			
90°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	130	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.5	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.5	100
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	210	0.5	100
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.6	100
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.8	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	330	0.8	50
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	0.8	50
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.0	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.1	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.2	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	1.4	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.6	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	1.8	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.0	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.1	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.3	-
100°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	2.7	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	570	3.3	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
110°	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

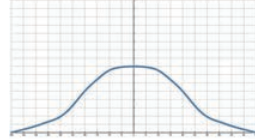
V High chemical resistance plastic flat fan nozzle for small flow rate



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



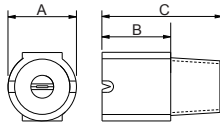
- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 3.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 3.0 ± 0.1 kgf/cm²
- Jet angle tolerance: 3°

Features

- The spraying type is fan type, and the spray shape is single line. Both sides are tapered (tapered Edge), which presents a bell curve shape flow field distribution with weaker ends at the middle.
- One-piece design.
- For 1 kgf/cm² working pressure, customized design needed.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Vehicles, containers, filters, dust, gravel, metals, metal parts, mechanical, steel plates, various containers, high pressure cleaning, wet processing, display panel, cleaning process for TFT-LCD manufacturing, machinery washing, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (eg. etching solution, developer, insect repellent, etc.), firefighting, dedust, deodorization, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
Plastic	1/4V	14	14	25	1/4M	4.0

Material

- Plastic: PVDF

How to place an order for LORRIC nozzles?

Example:	1/4	BSPT	V	2.5	6.5	PVDF
	↑	↑	↑	↑	↑	↑
	Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.
※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm²	1.0 kgf/cm²	2.0 kgf/cm²	3.0 kgf/cm²	4.0 kgf/cm²	6.0 kgf/cm²	8.0 kgf/cm²	10.0 kgf/cm²	15.0 kgf/cm²			
0°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50			V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
15°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
25°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
40°	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
50°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
65°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	140	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.4	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.6	100
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.7	100
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.8	50
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.9	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	230	0.9	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	1.0	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	1.0	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.1	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.1	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.2	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	370	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	2.0	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.3	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.4	-
80°	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.5	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	3.1	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.3	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	630	3.9	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	135	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.6	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	220	0.7	50
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	0.7	50
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.9	50
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.9	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.0	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.0	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.1	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	340	1.6	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.9	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.1	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.3	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.4	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.8	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	3.1	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	600	3.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.5 kgf/cm ²	1.0 kgf/cm ²	2.0 kgf/cm ²	3.0 kgf/cm ²	4.0 kgf/cm ²	6.0 kgf/cm ²	8.0 kgf/cm ²	10.0 kgf/cm ²	15.0 kgf/cm ²			
90°	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	130	0.2	200
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.5	100
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.5	100
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	210	0.5	100
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.6	100
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.8	50
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	330	0.8	50
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	0.8	50
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.0	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.1	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.2	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	1.4	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.6	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	1.8	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	2.0	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	2.1	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	2.3	-
100°	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	2.5	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	2.7	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	570	3.3	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
110°	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-
	1	V	V		0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	V	V		0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	V	V		0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	V	V		0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	V	V		0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	V	V		0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	V	V		0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	V	V		1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	V	V		1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	V	V		1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	V	V		1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	V	V		1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	V	V		2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	V	V		2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	V	V		3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25		V		3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30		V	V	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
	35		V	V	5.59	7.90	11.17	13.69	15.80	19.35	22.35	24.99	30.60	-	-	-
	40		V	V	6.39	9.03	12.77	15.64	18.06	22.12	25.54	28.55	34.97	-	-	-
	50		V	V	7.98	11.29	15.96	19.55	22.57	27.65	31.93	35.69	43.72	-	-	-
	60			V	9.58	13.54	19.16	23.46	27.09	33.18	38.31	42.83	52.46	-	-	-
	80			V	12.77	18.06	25.54	31.38	36.12	44.24	51.08	57.11	69.94	-	-	-
	100			V	15.96	22.57	31.93	39.10	45.15	55.30	63.85	71.39	87.43	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

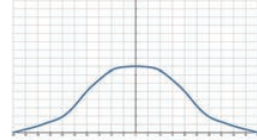
CH Easy maintenance metal flat fan nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



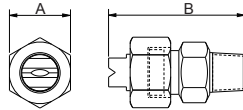
- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 3.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 3.0 ± 0.1 kgf/cm²
- Jet angle tolerance: 3°

Features

- Spray type is fan type, spray shape is single-lined and tapering on both sides (Tapered Edge), which presents a bell curve shape flow field distribution with weaker ends at the middle.
- Three-piece structure facilitates maintenance cleaning and replacement, and can save the cost of replacing the nozzle head. Expenditure filter design, easy maintenance, reduced blocking, and reduced cleaning due to maintenance. When the hole is clogged, it may damage the nozzle hole.
- The fan nozzle angle can be 0°~110°, and the 0° spray angle spray pattern is a straight column type. The spray shape is a single point, which provides the best impact force among all nozzle types.
- When the fan nozzle is used in high pressure environment, HSS material (hardened stainless steel) must be selected. Operable at 200kgf/cm² pressure.

Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, High Pressure cleaning, Wet Processing, Display Pane, machine tool cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (etching solution, Lubrication fluid, insect repellent fluid, etc.), Water Curtain. (fire protection, dust prevention, deodorization, etc.)



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit(mm)		Thread Type	Weight (g)		
		A	B		S303	S316	Brass
Metal	3/8CH	21	43	3/8M	70	71	77.2

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example:	1/4	BSPT	CH	05	90	S316
	↑	↑	↑	↑	↑	↑
	Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.
※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
0°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²			
15°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
25°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
40°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
50°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
65°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	140	0.2	200
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.4	150
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.6	100
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.7	100
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.8	50
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.9	50
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	230	0.9	50
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	1.0	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	1.0	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.1	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.1	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.2	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	370	1.6	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	2.0	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.3	-
80°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	135	0.2	200
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.6	100
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	220	0.7	50
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	0.7	50
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.9	50
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.9	50
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	1.0	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	1.0	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.1	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.3	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.4	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	340	1.6	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.9	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	2.1	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	130	0.2	200
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	0.3	150
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	0.4	150
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	0.4	150
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	0.5	100
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	0.5	100
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	210	0.5	100
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	0.6	100
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	0.8	50
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	330	0.8	50
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	0.8	50
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	1.0	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	1.1	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	1.2	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	1.4	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	1.6	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	1.8	-
100°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-
110°	1	0.16	0.23	0.32	0.39	0.45	0.55	0.64	0.71	0.87	-	-	-
	2	0.32	0.45	0.64	0.78	0.90	1.11	1.28	1.43	1.75	-	-	-
	2.5	0.40	0.56	0.80	0.98	1.13	1.38	1.60	1.78	2.19	-	-	-
	3	0.48	0.68	0.96	1.17	1.35	1.66	1.92	2.14	2.62	-	-	-
	4	0.64	0.90	1.28	1.56	1.81	2.21	2.55	2.86	3.50	-	-	-
	5	0.80	1.13	1.60	1.96	2.26	2.76	3.19	3.57	4.37	-	-	-
	6	0.96	1.35	1.92	2.35	2.71	3.32	3.83	4.28	5.25	-	-	-
	7	1.12	1.58	2.23	2.74	3.16	3.87	4.47	5.00	6.12	-	-	-
	7.5	1.20	1.69	2.39	2.93	3.39	4.15	4.79	5.35	6.56	-	-	-
	8	1.28	1.81	2.55	3.13	3.61	4.42	5.11	5.71	6.99	-	-	-
	9	1.44	2.03	2.87	3.52	4.06	4.98	5.75	6.42	7.87	-	-	-
	10	1.60	2.26	3.19	3.91	4.51	5.53	6.39	7.14	8.74	-	-	-
	12.5	2.00	2.82	3.99	4.89	5.64	6.91	7.98	8.92	10.93	-	-	-
	15	2.39	3.39	4.79	5.87	6.77	8.29	9.58	10.71	13.11	-	-	-
	20	3.19	4.51	6.39	7.82	9.03	11.06	12.77	14.28	17.49	-	-	-
	25	3.99	5.64	7.98	9.78	11.29	13.82	15.96	17.85	21.86	-	-	-
	30	4.79	6.77	9.58	11.73	13.54	16.59	19.16	21.42	26.23	-	-	-

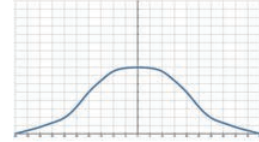
※ For MPa / bar / psi units, please refer to LORRIC.com.

PF Low pressure and wide angle plastic flat fan flood nozzle



【 Top view of nozzle spray pattern 】

【 Flow distribution 】



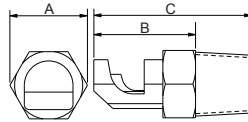
- Recommended working pressure: 1.5 kgf/cm²
- Flowrate tolerance: ± 10% @ 1.5 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 1.5 ± 0.1 kgf/cm²

Features

- The spray pattern is fan type, and the spray shape is single-line.
- Low-pressure wide-angle nozzle realizes a large angle coverage under 1.5kgf/cm² pressure, which is lower than standard fan type 3kgf/cm² operating pressure and is more suitable for low-pressure working environment.
- Spray the nozzle at an angle of 75° with respect to the axis of the nozzle. Check that the environment is suitable.
- The hooked nozzle tip is designed to reflect the water into a fan shape nozzle and greaten particle passage to prevent clogging.
- Operation pressure is greater than 4kgf/cm² may cause the liquid to overflow without fogging.

Applications

- Cleaning: Conveyor belt, film, copper, paper, glass, All kinds of plates, filters, dust and debris, machine tool cleaning.
- Cooling: Conveyor belts, tanks, machinery, metal, roofs, etc.
- Dispersion: Humidifying, Chemicals, Water Curtain (fire, dust, deodorization, etc.), defoaming, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)	
		A	B	C		PVDF	PP
Plastic	1/8PF	10	15	23	1/8M	1.6	0.8
	1/4PF	14	17	28	1/4M	4.8	2.4

Material

- Plastic: PP, PVDF

How to place an order for LORRIC nozzles?

Example: 1/8 BSPT PF 3 145 PVDF

Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material
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※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Thread Size		Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	0.5 kgf/cm ²	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²			
-	0.5	V		0.16	0.19	0.23	0.28	0.32	0.36	0.40	0.46	0.56	150	0.5	100
	0.75	V		0.24	0.29	0.34	0.42	0.48	0.54	0.59	0.69	0.84	-	0.7	50
145°	1	V		0.32	0.38	0.46	0.56	0.65	0.72	0.79	0.91	1.12	-	0.8	50
-	1.25	V		0.40	0.48	0.57	0.70	0.81	0.90	0.99	1.14	1.40	-	0.8	50
	1.5	V		0.48	0.57	0.69	0.84	0.97	1.08	1.19	1.37	1.68	-	0.8	50
160°	1.75	V		0.57	0.67	0.80	0.98	1.13	1.27	1.39	1.60	1.96	-	1	-
-	2	V	V	0.65	0.77	0.91	1.12	1.29	1.45	1.58	1.83	2.24	200	1.1	-
	2.5	V	V	0.81	0.96	1.14	1.40	1.62	1.81	1.98	2.29	2.80	-	1.3	-
145°	3	V	V	0.97	1.15	1.37	1.68	1.94	2.17	2.38	2.74	3.36	-	1.4	-
	4	V	V	1.29	1.53	1.83	2.24	2.59	2.89	3.17	3.66	4.48	-	1.7	-
	5	V	V	1.62	1.91	2.29	2.80	3.23	3.61	3.96	4.57	5.60	-	1.7	-
	6	V	V	1.94	2.30	2.74	3.36	3.88	4.34	4.75	5.49	6.72	-	2	-
	7	V	V	2.26	2.68	3.20	3.92	4.53	5.06	5.54	6.40	7.84	350	2.2	-
	7.5	V	V	2.42	2.87	3.43	4.20	4.85	5.42	5.94	6.86	8.40	-	2.3	-
	8	V	V	2.59	3.06	3.66	4.48	5.17	5.78	6.34	7.32	8.96	-	2.4	-
	9	V	V	2.91	3.44	4.12	5.04	5.82	6.51	7.13	8.23	10.08	-	2.5	-
	10	V	V	3.23	3.83	4.57	5.60	6.47	7.23	7.92	9.14	11.20	-	2.6	-
	12.5	V	V	4.04	4.78	5.72	7.00	8.08	9.04	9.90	11.43	14.00	-	2.9	-
-	15	V	V	4.85	5.74	6.86	8.40	9.70	10.84	11.88	13.72	16.80	-	3.3	-
	20	V	V	6.47	7.65	9.14	11.20	12.93	14.46	15.84	18.29	22.40	410	3.5	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

F Low pressure and wide angle metal flat fan flood nozzle

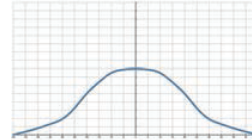


- Recommended working pressure: 1.5 kgf/cm²
- Flowrate tolerance: ± 10% @ 1.5 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 1.5 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】

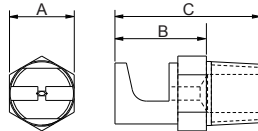


Features

- The spray pattern is fan type and the spray shape is single.
- Low-pressure wide-angle nozzle realizes a large-angle coverage area under 1.5kgf/cm² pressure, which is lower than standard fan type 3kgf/cm² operating pressure, and is more suitable for low-pressure working environment.
- Spray the nozzle at an angle of 75° with respect to the axis of the nozzle. Check that the environment is suitable.
- The hooked nozzle tip is designed to reflect the water into a fan shape nozzle and greaten particle passage to prevent clogging.
- Operation pressure is greater than 4kgf/cm² may cause the liquid to overflow without fogging.

Applications

- Cleaning: Conveyor belt, film, copper thin, paper, glass plate, all kinds of plates, filters, dust and gravel, and machine tool cleaning.
- Cooling: Conveyor belts, tanks, machinery, metal, roofs, etc.
- Dispersion: Humidifying, chemicals, Water Curtain (fire, dust, deodorization), defoaming, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)			
		A	B	C		S303	S316	Brass	PVC
Metal	1/8F	10	15	23	1/8M	7.4	9.2	12.2	-
	1/4F	14	17	28	1/4M	23.8	20.4	21.8	-
	3/8F	17	24	39	3/8M	42.8	43	47	-
Plastic	1/8F	12	18	24	1/8M	-	-	-	1.6
	1/4F	-	-	-	1/4M	-	-	-	3.5
	3/8F	-	-	-	3/8M	-	-	-	8.2

Material

- Metal: Stainless 303, Stainless 316, BRASS
- Plastic: PVC

How to place an order for LORRIC nozzles?

Example: 1/8 BSPT F 3 145 S303

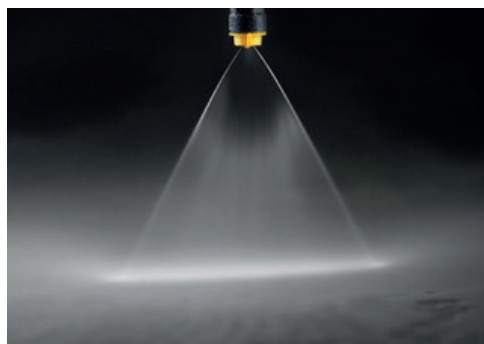
Thread Type Thread Size Nozzle Series Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure								Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²			
125°	0.5	V			0.19	0.23	0.28	0.32	0.36	0.40	0.46	0.56	150	0.5	100
-	0.75	V			0.29	0.34	0.42	0.48	0.54	0.59	0.69	0.84	-	0.7	50
120°	1	V			0.38	0.46	0.56	0.65	0.72	0.79	0.91	1.12	-	0.8	50
-	1.25	V			0.48	0.57	0.70	0.81	0.90	0.99	1.14	1.40	-	0.8	50
	1.5	V			0.57	0.69	0.84	0.97	1.08	1.19	1.37	1.68	-	0.8	50
	1.75	V			0.67	0.80	0.98	1.13	1.27	1.39	1.60	1.96	-	1	-
	2	V	V		0.77	0.91	1.12	1.29	1.45	1.58	1.83	2.24	200	1.1	-
	2.5	V	V		0.96	1.14	1.40	1.62	1.81	1.98	2.29	2.80	-	1.3	-
	3	V	V		1.15	1.37	1.68	1.94	2.17	2.38	2.74	3.36	-	1.4	-
	4	V	V		1.53	1.83	2.24	2.59	2.89	3.17	3.66	4.48	-	1.7	-
170°	5	V	V		1.91	2.29	2.80	3.23	3.61	3.96	4.57	5.60	-	1.7	-
-	6	V	V		2.30	2.74	3.36	3.88	4.34	4.75	5.49	6.72	-	2	-
	7	V	V		2.68	3.20	3.92	4.53	5.06	5.54	6.40	7.84	350	2.2	-
	7.5	V	V		2.87	3.43	4.20	4.85	5.42	5.94	6.86	8.40	-	2.3	-
	8	V	V		3.06	3.66	4.48	5.17	5.78	6.34	7.32	8.96	-	2.4	-
	9	V	V		3.44	4.12	5.04	5.82	6.51	7.13	8.23	10.08	-	2.5	-
160°	10	V	V		3.83	4.57	5.60	6.47	7.23	7.92	9.14	11.20	-	2.6	-
-	12.5	V	V		4.78	5.72	7.00	8.08	9.04	9.90	11.43	14.00	-	2.9	-
	15	V	V		5.74	6.86	8.40	9.70	10.84	11.88	13.72	16.80	-	3.3	-
160°	20	V	V	V	7.65	9.14	11.20	12.93	14.46	15.84	18.29	22.40	410	3.5	-
-	30			V	11.48	13.72	16.80	19.40	21.69	23.76	27.43	33.60	600	4.3	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

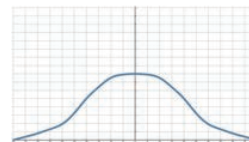
QFH High chemical resistance plastic easy install flat fan nozzle



【 Top view of nozzle spray pattern 】

【 Flow distribution 】

- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 3.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 3.0 ± 0.1 kgf/cm²
- Jet angle tolerance: 3°



Features

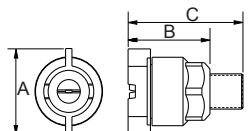
- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle. Products with special flow field distribution can be customized.
- Two-piece quick-release design is divided into two parts: the nozzle and the body. It can be installed and removed without any tools. It is convenient for on-site operation. With three positioning buckle points, the nozzle can be accurately screwed

in and positioned to avoid loose nozzles and to ensure the quality of production.

- The internal gaskets have different options such as EPDM, Viton and Viton-F, which can be adapted to various chemical processes. With a special structural design, the nozzles and the base can be closely fitted to avoid water leakage.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, High Pressure Cleaning, Wet Processing, Display Pane, machine tool cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (etching solution, Lubrication fluid, insect repellent fluid, etc.), Water Curtain (fire protection, dust prevention, deodorization, etc.).



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
Plastic	1/8QFH	32	28	39	1/8M	17.2
	1/4QFH	32	28	43	1/4M	17.6
	3/8QFH	32	28	43	3/8M	19.3

Material

- TIP: PVDF
- Oring: EPDM, VITON
- Base: PVDF, PP, U-PVC (QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/8 BSPT QFH 02 90 PVDF

Thread Type Thread Size Nozzle Series Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.
※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
0°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
15°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
25°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
40°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²	6 kgf/cm²	8 kgf/cm²			
50°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
65°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.4	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.6	100
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.7	100
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.8	50
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.9	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	230	0.9	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	1.0	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	1.0	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.1	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.1	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.2	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	370	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	2.0	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.3	-
80°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.6	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	220	0.7	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	0.7	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.9	50
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.9	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.0	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.0	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.1	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	340	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.9	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.1	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
90°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.5	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.5	100
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	210	0.5	100
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.6	100
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.8	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	330	0.8	50
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	0.8	50
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.0	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.1	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.2	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	1.4	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.6	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	1.8	-
100°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
110°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

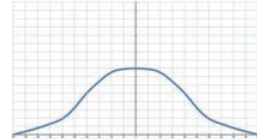
QFYH High chemical resistance plastic easy install flat fan nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 3.0 ± 0.1kgf/cm²
- Angle tolerance: ± 5° @ 3.0 ± 0.1kgf/cm²
- Jet angle tolerance: 3°

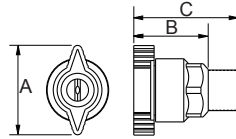
Features

- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle. Products with special flow field distribution can be customized.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening and ensure the performance quality.

- The internal gaskets are available in various options such as EPDM, Viton and Viton-F, which can be adapted to various chemical processes. The special structural design allows the nozzles and the base to fit closely and avoid water leakage.
- Y-shaped rotary handle design leads to easier dismantling.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, etc.
- Cooling: Tank, Machinery, Metal, Roof etc.
- Dispersion: Humidifying, chemicals (eg. etching solution, developer, insect repellent, etc.), firefighting, dedust, deodorization, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)	
		A	B	C		PP	PVDF
Plastic	1/8QFYH	36	28	39	1/8M	9.9	17.7
	1/4QFYH	36	28	43	1/4M	10.1	18.1
	3/8QFYH	36	28	43	3/8M	11.1	19.8

Material

- TIP: PP, PVDF
- Oring: EPDM, VITON
- Base: PP, PVDF, U-PVC (QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT QFYH 4 90 PP

Thread Type Thread Size Nozzle Series Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
0°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
15°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
25°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
40°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
50°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
65°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.4	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.6	100
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.7	100
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.8	50
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.9	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	230	0.9	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	1.0	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	1.0	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.1	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.1	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.2	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	370	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	2.0	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.3	-
80°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.6	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	220	0.7	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	0.7	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.9	50
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.9	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.0	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.0	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.1	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	340	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.9	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.1	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
90°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.5	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.5	100
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	210	0.5	100
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.6	100
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.8	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	330	0.8	50
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	0.8	50
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.0	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.1	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.2	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	1.4	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.6	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	1.8	-
100°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
110°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

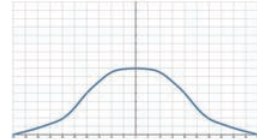
QSH Plastic easy install flat fan nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: $\pm 10\%$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Angle tolerance: $\pm 10^\circ$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Jet angle tolerance: 3°

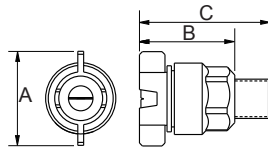
Features

- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening and ensure the performance quality.

- The internal gaskets have different options such as EPDM, Viton and Viton-F, which can be adapted to various chemical processes. With a special structural design, the nozzles and the base can be closely fitted to avoid water leakage.
- These general-purpose nozzles without guaranteed flow and angle tolerance are not recommended for environments with high accuracy requirements.

Applications

- Cleaning: Vehicles, containers, filters, dust, gravel, metals, metal parts, mechanical, steel plates, various containers, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (etching solution, developer, insect repellent, etc.), Water Curtain (fire, dust, deodorisation, etc.)
- Printed circuit board: etching process, developing process, washing process.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
PP	1/4QSH	32	31	44	1/4M	7.9
	3/8QSH	32	31	44	3/8M	12.1

Material

- TIP: PP
- Oring: EPDM, VITON, VITON-F
- Base: PP, C-PVC

How to place an order for LORRIC nozzles?

Example:	1/4	BSPT	QSH	3	80	PP
	↑	↑	↑	↑	↑	↑
	Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 0°, 15° 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
0°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
15°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
25°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
40°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
50°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
65°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.4	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.6	100
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.7	100
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.8	50
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.9	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	230	0.9	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	1.0	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	1.0	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.1	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.1	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.2	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	370	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	2.0	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.3	-
80°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.6	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	220	0.7	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	0.7	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.9	50
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.9	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.0	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.0	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.1	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	340	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.9	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.1	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
90°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.5	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.5	100
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	210	0.5	100
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.6	100
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.8	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	330	0.8	50
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	0.8	50
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.0	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.1	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.2	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	1.4	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.6	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	1.8	-
100°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
110°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

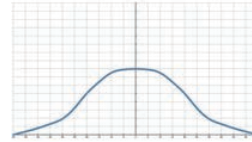
DVEH Easy maintenance plastic flat fan nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



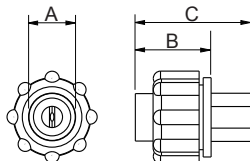
- Flowrate tolerance: $\pm 5\%$ @ $2.0 \pm 0.1 \text{ kgf/cm}^2$
- Angle tolerance: $\pm 5^\circ$ @ $2.0 \pm 0.1 \text{ kgf/cm}^2$
- Jet angle tolerance: 3°

Features

- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- Multi-piece structure, easy maintenance, cleaning and replacement, and can save the cost of replacing the nozzle head.
- The special positioning design of the nozzle and base installation ensures that each nozzle can be replaced and returned to the original position.
- No internal gasket design to avoid possible water leakage or contamination of the gasket.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (eg. etching solution, developer, insect repellent, etc.), firefighting, dedust, deodorization, etc.
- Printed circuit board: etching process, developing process, water washing process.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
Plastic	DVEH	48	20	31	-	28.2

Material

- Tip: PVDF
- Body: U-PVC
- Clap: PP

How to place an order for LORRIC nozzles?

Example: $\frac{1}{8}$ DVEH 026 50 PVDF

Thread Type Nozzle Series Capacity Code Spray Angle Material

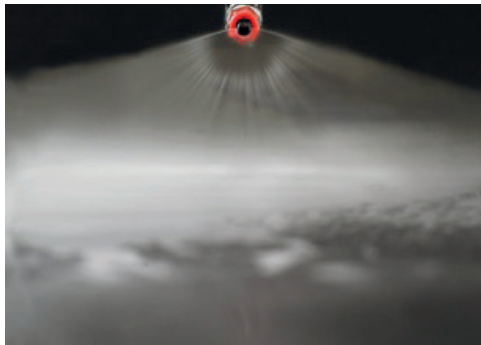
※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Capacity at Pressure								Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²		
50°	15	0.89	1.06	1.30	1.50	1.84	2.12	2.37	2.60	3.00	-	0.9
	26	1.54	1.84	2.25	2.60	3.18	3.68	4.11	4.50	5.20	-	1.1
80°	12	0.71	0.85	1.04	1.20	1.47	1.70	1.90	2.08	2.40	-	0.7
												100

※ For MPa / bar / psi units, please refer to LORRIC.com.

D Clamp

Easy maintenance low pressure and wide angle flat fan nozzle with pipe clamp

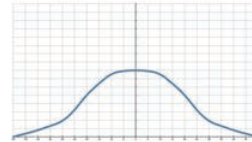


- Recommended working pressure: 1.5 kgf/cm²
- Flowrate tolerance: $\pm 10\%$ @ 1.5 ± 0.1 kgf/cm²
- Angle tolerance: $\pm 10^\circ$ @ 1.5 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】



Features

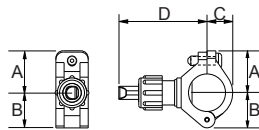
- The spray pattern is fan type, and the spray shape is single-line.
- Low-pressure wide-angle nozzles can achieve large angle coverage under 1.5kgf/cm² pressure. The coverage area is smaller than the standard fan type 3kgf/cm² operating pressure, and is more suitable for low-pressure working environment.
- Spray the nozzle at an angle of 75° with respect to the axis of the nozzle. Check the environment before installation.
- The hooked nozzle tip is designed to reflect the water into a fan shape nozzle and greaten particle passage to prevent clogging.
- Multi-piece structure, easy maintenance, cleaning and

replacement, and can save the cost of replacement nozzle head.

- size:
 - Spec of drilling installation hole: 8.35~9mm
 - Size of Pipe clamp: 3/4"(OD26 +/-0.2mm), 1"(OD34 +/-0.3mm)
- If operation pressure is greater than 4kgf/cm², May cause the liquid to overflow without fogging.

Applications

- Cleaning: Conveyor belt, film, copper thin, paper, glass plate, all kinds of plates, filters, dust and gravel, and machine tool cleaning.
- Cooling: Conveyor belts, gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, firefighting, dedust, deodorization, defoaming, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Pipe Type	Weight (g)
		A	B	C	D		
Plastic	3/4 DClamp	23	28	18	64	3/4M	23.6
	1 DClamp	28.5	33	23.5	64	1M	

Material

- Nozzle: PP
- Clamp: Strengthened Fiberglass PP

How to place an order for LORRIC nozzles?

Example: 3/4	DClamp	01	-	PP
↑	↑	↑	↑	↑
Pipe Type	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Thread Size		Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1	3/4	0.5 kgf/cm²	0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	2.5 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²			
110°	0.5	v	v	0.16	0.19	0.23	0.28	0.32	0.36	0.40	0.46	0.51	150	0.5	100
125°	0.75	v	v	0.24	0.29	0.34	0.42	0.48	0.54	0.59	0.69	0.77	-	0.7	50
120°	1	v	v	0.32	0.38	0.46	0.56	0.65	0.72	0.79	0.91	1.02	-	0.8	50
130°	1.5	v	v	0.48	0.57	0.69	0.84	0.97	1.08	1.19	1.37	1.53	-	0.8	50
145°	2	v	v	0.65	0.77	0.91	1.12	1.29	1.45	1.58	1.83	2.04	200	1.1	-
	3	v	v	0.97	1.15	1.37	1.68	1.94	2.17	2.38	2.74	3.07	-	1.4	-
170°	5	v	v	1.62	1.91	2.29	2.80	3.23	3.61	3.96	4.57	5.11	-	1.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

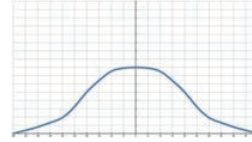
KAD Flat fan nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 3.0 kgf/cm²
- Flowrate tolerance: $\pm 5\%$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Angle tolerance: $\pm 5^\circ$ @ 3.0 $\pm$ 0.1 kgf/cm²
- Jet angle tolerance: 3°

Features

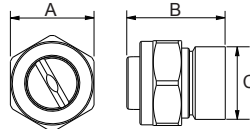
- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- Three-piece structure facilitates maintenance cleaning and replacement, and can save the cost of replacing the nozzle head. The base must be connected to the pipeline by welding.

Please confirm that the installation environment meets the requirements.

- The special positioning design of the nozzle and base installation ensures that each spray replacement can be returned to the original positioning.

Applications

- Cleaning: Vehicles, containers, filters, dust, gravel, metals, metal parts, mechanical, steel plates, various containers, high Pressure cleaning, wet processing, display panel, machinery washing, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (etching solution, developer, insect repellent, etc.), Water Curtain (fire, dust, deodorant, etc.).



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)		Thread Type	Weight (g)		
		A	B		S303	S316	Brass
Metal	KAD	32	38	-	162	165	180

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example: **KAD** **40** **65** **S316**

Thread Type Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
65°	40	7.55	9.03	11.06	12.77	15.64	18.06	20.19	22.12	25.54	-	2.5	-
50°	50	9.44	11.29	13.82	15.96	19.55	22.57	25.24	27.65	31.93	-	2.8	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

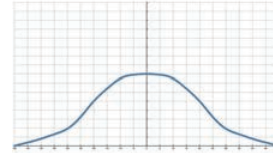
HB Angle adjustable and easy install flat fan nozzle with pipe clamp



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



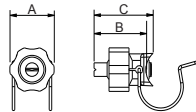
- Recommended working pressure: 1.0 kgf/cm²
- Flowrate tolerance: ± 10% @ 1.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 1.0 ± 0.1 kgf/cm²

Features

- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle.
- Unique pipe clamp design allows to be installed by drilling in the pipeline without any tools.
- Three-piece structure design, divided into nozzle part (HB), base part (EB) and nuts, which facilitates maintenance cleaning and replacement, and can save the cost of replacing the nozzle head.
- Double gasket seal design, between the nozzle and the base, and between the base and the pipeline, are sealed by NBR gasket to ensure no water leakage.
- The nozzle part is designed as a sphere, and the nozzle axis is anisotropically adjusted by 50°.
- Spec of drilling installation hole:
 - Ø 15 (14.3~15mm) - Ø 17 (16.4~17mm)
 - Ø 20 (19.0~20mm) 8.35 ~ 9m/m
- Size of Pipe clamp:
 - 1" (OD34 +/-0.3mm) - 1-1/4" (OD42+/-0.3mm)
 - 1-1/2" (OD48 +/-0.4mm)
- If there is any other spray type or material request, please choose TB adapter (with choices of 1/4" and 3/8" internal threads) and general fan or cone nozzles with optional materials.

Applications

- Cleaning: Pretreatment for painting in automotive and home appliance manufacturing industries.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
Plastic	HB	52	62	70	-	62.5

Material

- Nozzle: PP
- Clamp, nut: fiberglass, Strengthening PP
- Pipe clamp: Stainless 316
- Sealing ring: NBR

How to place an order for LORRIC nozzles?

Example:

1"	EB15	HB	10	65	PP
Pipe Type	Nozzle Series	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	HB Color	Capacity at Pressure								
			0.5 kgf/cm ²	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	3.5 kgf/cm ²	4 kgf/cm ²
65°	10	Sky Blue	1.60	1.89	2.26	2.77	3.20	3.57	3.91	4.23	4.52
	20	Red	3.20	3.78	4.52	5.54	6.39	7.15	7.83	8.46	9.04
	30	Orange	4.79	5.66	6.77	8.29	9.57	10.70	11.73	12.67	13.54
	35	Black	5.59	6.61	7.90	9.68	11.17	12.49	13.68	14.78	15.80
	40	Yellow	6.39	7.56	9.03	11.06	12.77	14.28	15.64	16.89	18.06
	50	Blue	7.98	9.45	11.29	13.83	15.97	17.85	19.55	21.12	22.58
	60	Green	9.58	11.34	13.55	16.60	19.16	21.42	23.47	25.35	27.10
80°	10	Sky Blue	1.60	1.89	2.26	2.77	3.20	3.57	3.91	4.23	4.52
	20	Red	3.20	3.78	4.52	5.54	6.39	7.15	7.83	8.46	9.04
	30	Orange	4.79	5.66	6.77	8.29	9.57	10.70	11.73	12.67	13.54
	35	Black	5.59	6.61	7.90	9.68	11.17	12.49	13.68	14.78	15.80
	40	Yellow	6.39	7.56	9.03	11.06	12.77	14.28	15.64	16.89	18.06
	50	Blue	7.98	9.45	11.29	13.83	15.97	17.85	19.55	21.12	22.58
	60	Green	9.58	11.34	13.55	16.60	19.16	21.42	23.47	25.35	27.10

※ For MPa / bar / psi units, please refer to LORRIC.com.

Full Cone Nozzles



KP M	42
KP P	44
KH	46
QSF	47
QFF.....	48
QFMF	50
QFYF	52
QFYMF	54
QT	56
KDMF	57
KPMF M.....	58
KPMF P	60
KJ	62
KG	63

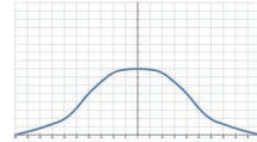
KP M Metal clog-resistant full cone nozzle



【Top view of nozzle spray pattern】



【Flow distribution】



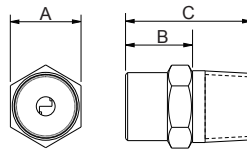
- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: humidifying, chemicals, firefighting, dust suppression, aeration, defoaming, sewage treatment.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight(g)		
		A	B	C		S303	S316	Brass
Metal	1/8KP (M)	12	12	19	1/8M	15	15.5	16.9
	1/4KP (M)	14	11-15	22-26	1/4M	18	18.5	19
	3/8KP (M)	18	15	30	3/8M	28.5	29	32

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example: 1/8 BSPT KP 20 S303

Thread Type	Thread Size	Nozzle Series	Capacity Code	Material
1/8	BSPT	KP	20	S303

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
50°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	1	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	270	1.3	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	270	1.4	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	270	1.5	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	270	1.6	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	270	1.7	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	400	1.7	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	400	1.7	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	400	1.9	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	400	1.9	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	400	2	-
95°	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	400	2.1	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	640	2.5	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

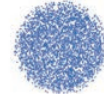
Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-
120°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

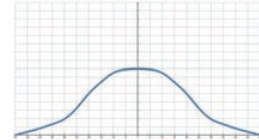
KP P Plastic clog-resistant full cone nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



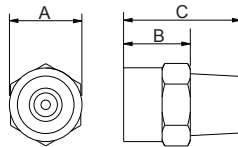
- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: humidifying, chemicals, firefighting, dust suppression, aeration, defoaming, sewage treatment.



Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
Plastic	1/8KP (P)	12	10	19	1/8M	1.0
	1/4KP (P)	15	11	21	1/4M	5.0
	3/8KP (P)	17	13	25	3/8M	5.5

Appearance dimensions may vary depending on model, material. Please ask for details.

Material

- Body: PVDF
- CORE: PP

How to place an order for LORRIC nozzles?

Example: 1/4	BSPT	KP	50	PVDF
↑	↑	↑	↑	↑
Thread Type	Thread Size	Nozzle Series	Capacity Code	Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh	
		1/8	1/4	3/8	0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²				
50°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100	
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	1	-	
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48		1.3	-	
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		1.4	-	
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22			1.5	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59				1.6
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	400	1.7	-	
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		1.7	-	
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43		1.7	-	
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17			1.9	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91				1.9
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	2		-	
95°	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	640	2.1	-	
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34		2.5	-	

※ For MPa / bar / psi units, please refer to LORRIC.com.

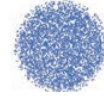
Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-
120°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

KH Plastic clog-resistant full cone nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



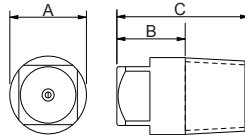
- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 10% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 2.0 ± 0.1 kgf/cm²

Features

- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging.
- One piece body with removable core for easy cleaning and maintenance.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: humidifying, chemicals, firefighting, dust suppression, aeration, defoaming, sewage treatment.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
PP	1/8KH	12	10	19	1/8M	1.0
	1/4KH	15	11	21	1/4M	1.8
	3/8KH	16	13	25	3/8M	3.0

Material

- Body: PP
- CORE: PP

How to place an order for LORRIC nozzles?

Example:	1/4	BSPT	KH	25	PP
	↑	↑	↑	↑	↑
	Thread Type	Thread Size	Nozzle Series	Capacity Code	Material

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

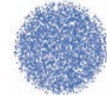
Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh		
		1/8	1/4	3/8	0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²					
50°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100		
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	1	-		
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48		1.3	-		
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		1.4	-		
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22			1.5	-	
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	1.6			-	
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95				1.7	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		400			1.7
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43			1.7		-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	1.9				-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91				2	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39		2.1			-
120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	640			2.5		-
95°	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30		38.34				

※ For MPa / bar / psi units, please refer to LORRIC.com.

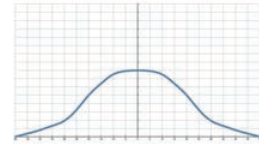
QSF Plastic clog-resistant easy install full cone nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 10% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 2.0 ± 0.1 kgf/cm²

Features

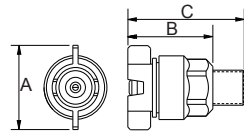
- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging. It is often used in etching and developing processes for semiconductors and printed circuit boards that require extremely high spray uniformity.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening

and ensure the performance quality.

- The internal gaskets are available in various options such as EPDM, Viton and Viton-F, which can be adapted to various types of chemicals. With special structural design, the nozzles can be closely attached to the base to avoid water leakage.
- These general-purpose nozzles without guaranteed flow and angle tolerance are not recommended for environments with high accuracy requirements.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)
		A	B	C		
Plastic	1/4QSF	31	31	44	1/4M	10.4
	3/8QSF	31	31	44	3/8M	14.6

Material

- TIP: PP
- Core: PP
- Oring: EPDM, VITON, VITON F
- Body: PP, C-PVC

How to place an order for LORRIC nozzles?

Example: 1/4	BSPT	QSF	25	PP
↑	↑	↑	↑	↑
Thread Type	Thread Size	Nozzle Series	Capacity Code	Material

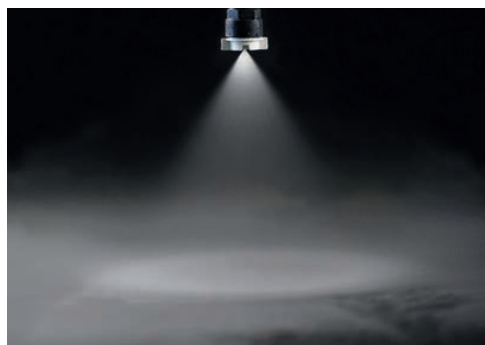
※ Standard Pressure: Column in red.

※ This product for spray angle 90° and 120° is able to be made to order.

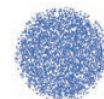
Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²			
50°	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	}	1.4	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.5	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.6	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.7	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	400	1.7	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	}	1.7	-
90°	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

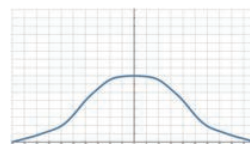
QFF Plastic clog-resistant easy install full cone nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

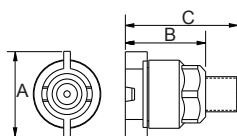
- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging. It is often used in etching and developing processes for semiconductors and printed circuit boards that require high spray uniformity.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening

and ensure the performance quality.

- Internal gaskets are available in various options such as EPDM, Viton, and Viton-F, which can be adapted to various types of chemical processes. The special structural design allows the nozzles to closely contact the base to prevent water leakage.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
Plastic	1/8QFF	32	28	39	1/8M	17.5
	1/4QFF	32	28	43	1/4M	17.9
	3/8QFF	32	28	43	3/8M	19.6

Material

- TIP: PVDF
- Core: PP
- Oring: EPDM, VITON
- Body: PVDF, PP, U-PVC (QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT QFF 30 60 PVDF

Thread Type	Thread Size	Nozzle Series	Capacity Code	Spray Angle	Material
1/4	BSPT	QFF	30	60	PVDF

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

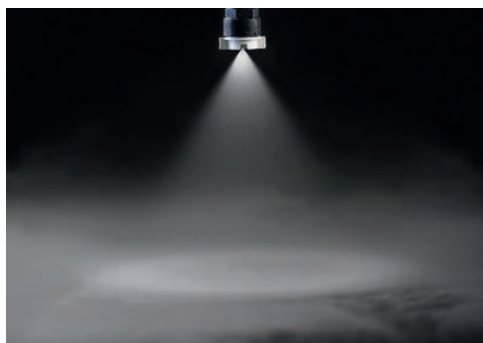
Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
50°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	230	1	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	270	1.3	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	230	1.4	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.5	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.6	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.7	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	400	1.7	-
90°	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	230	1.7	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

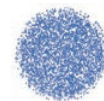
Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-
120°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

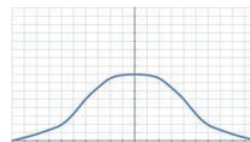
QFMF Plastic easy install full cone nozzle for precise distribution



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

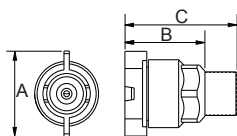
- Full cone spray.
- Adopts a Holeless multi-slotted core, possess a more uniform impact than other standard solid cone nozzles of the same type.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening

and ensure the performance quality.

- The internal gaskets are available in various options such as EPDM, Viton and Viton-F, which can be adapted to various types of chemicals. With special structural design, the nozzles can be closely attached to the base to avoid water leakage.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, Dust Suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
PVDF	1/8QFMF	32	28	39	1/8M	17.2
	1/4QFMF	32	28	43	1/4M	17.6
	3/8QFMF	32	28	43	3/8M	19.3

Material

- TIP: PVDF
- Core: U-PVC, PEEK
- Oring: EPDM, VITON
- Body: PVDF, PP, U-PVC (QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT QFMF 30 PVDF

Thread Type Thread Size Nozzle Series Capacity Code Material

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

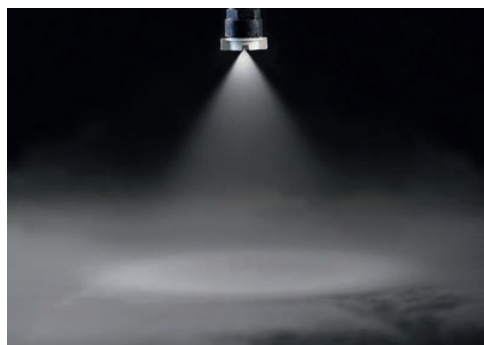
Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
50°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.5	100
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	230	0.8	50
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	270	1.1	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	230	1.2	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.3	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.4	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.5	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	400	1.5	-
90°	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	230	1.5	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.5	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

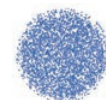
Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-
120°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

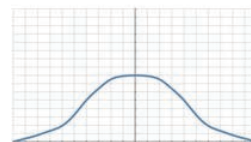
QFYF Plastic clog-resistant easy install full cone nozzle



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

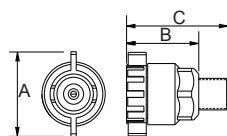
- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging. It is often used in etching and developing processes for semiconductors and printed circuit boards that require extremely high spray uniformity.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening

and ensure the performance quality.

- Internal gaskets are available in various options such as EPDM, Viton, and Viton-F, which can be adapted to various types of chemical processes. The special structural design allows the nozzles to closely contact the base to prevent water leakage.
- Y-shaped rotary handle design leads to easier dismantling.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)	
		A	B	C		PP	PVDF
Plastic	1/8QFYF	35	28	39	1/8M	10.7	18.7
	1/4QFYF	35	28	43	1/4M	10.9	19.1
	3/8QFYF	35	28	43	3/8M	11.9	20.8

Material

- TIP: PP, PVDF
- Core: PP
- Oring: EPDM, VITON
- Body: PVDF, PP, U-PVC (QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT QFYF 30 PP

↑ ↑ ↑ ↑ ↑

Thread Thread Nozzle Capacity Material

Type Size Series Code

※ Standard Pressure: Column in red.

※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh	
		0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²				
50°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100	
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	2	1	-	
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48		270	1.3	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		2	1.4	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22			1.5	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	1.6		-	
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	400	1.7	-	
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32		1.7	-	
90°	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	2	1.7	-	
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.7	-	

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
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120°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
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	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-

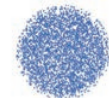
※ For MPa / bar / psi units, please refer to LORRIC.com.

QFYMF

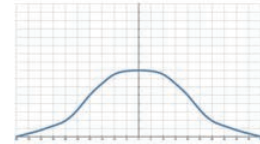
Plastic easy install full cone nozzle for precise distribution



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

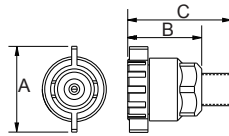
- Full cone spray.
- Adopts a holeless multi-slotted core, possessing a more uniform impact than other standard solid cone nozzles of the same type. It is often used in semiconductor and printed circuit board etching and developing processes where spraying uniformity is extremely demanding.
- Two piece nozzle design which includes nozzle and the body allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the body and fastened by three buckle points to avoid the nozzle tip loosening

and ensure the performance quality.

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- Y-shaped rotary handle design leads to easier dismantling.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)	
		A	B	C		PP	PVDF
Plastic	1/8QFYMF	35	28	39	1/8M	10.7	18.7
	1/4QFYMF	35	28	43	1/4M	10.9	19.1
	3/8QFYMF	35	28	43	3/8M	11.9	20.8

Material

- TIP: PP, PVDF
- Core: U-PVC, PEEK
- Oring: EPDM, VITON
- Body: PVDF, PP, U-PVC(QFSA, QFWG)

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT QFYMF 10 PP

Thread Type Thread Size Nozzle Series Capacity Code Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²			
50°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.5	100
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	0.8	50
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48		1.1	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	400	1.2	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.3	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.4	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.5	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	400	1.5	-
90°	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	400	1.5	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.5	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-
120°	10	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	45	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	-	-	-
	50	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	55	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06	-	-	-

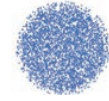
※ For MPa / bar / psi units, please refer to LORRIC.com.

QT Plastic full cone nozzle with pipe clamp

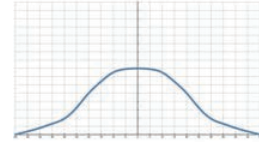


- Recommended working pressure:
2.0 kgf/cm²
- Flowrate tolerance: $\pm 10\%$ @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: $\pm 10^\circ$ @ 2.0 ± 0.1 kgf/cm²
- Size:
Drilling hole size: $\varnothing 20$ (19.0~20mm)
Fits pipe size: 1-1/4, 1-1/2"

【 Top view of nozzle spray pattern 】



【 Flow distribution 】

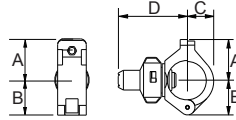


Features

- Full cone spray.
- The two-piece combination design is divided into a nozzle and a body. The nozzle part can be fixed to the body without fixing the nut. The body has a special pipe clamp design. It is only necessary to drill a hole in the water outlet pipe, and then lock it with iron screw. The nozzle is fixed on the pipe. This nozzle is commonly used in the pre-painting and continuous casting machine cooling process.
- Size:
- Drilling hole size for pipe clamp: $\varnothing 20$ (19.0~20mm)
- Fits pipe size: 1-1/4"(OD42 +/-0.3mm),
1-1/2"(OD48 +/-0.4mm)

Applications

- Cleaning: Dust, cleaning device, etc.
- Dispersion: Humidifying, fire fighting, and dust suppression.



Material	Serie	Unit (mm)				Thread Type	Weight (g)
		A	B	C	D		
Plastic	1-1/4QT	42	50	31	85	1-1/4M	105.4
	1-1/2QT	42	50	31	85	1-1/2M	100.5

Appearance dimensions may vary depending on model, material. Please ask for details.

Material

- Nozzle: PP
- QT Body: FRPP
- Oring: NBR

How to place an order for LORRIC nozzles?

Example: 1-1/4 QT 82 FRPP

↑ ↑ ↑ ↑

Pipe Size Nozzle Series Capacity Code Material

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Thread Size		Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1-1/4	1-1/2	0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	3.5 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²			
60°	82	v	v	15.0	21.2	26.0	30.0	33.5	36.7	39.7	42.4	47.4	700	3.2	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

KDMF Plastic full cone nozzle

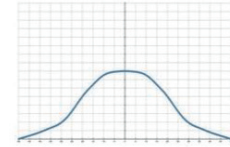


- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】

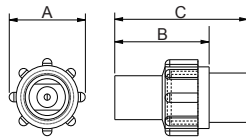


Features

- Full cone spray.
- Adopts a holeless multi-slotted core, possessing a more uniform impact than other standard solid cone nozzles of the same type. It is often used in semiconductor and printed circuit board etching and developing processes where spraying uniformity is extremely demanding.
- Two piece nozzle design allows for quick and accurate installation by hand.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Conveyor belts, gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)					Thread Type	Weight (g)
		A	B	C	D	E		
Plastic	KDMF	31	18	16	55	20	-	25

Material

- Nozzle: PVDF
- Body: UPVC

How to place an order for LORRIC nozzles?

Example: **KDMF** **42** **45** **PVDF**

↑ ↑ ↑ ↑

Nozzle Capacity Spray Material

Series Code Angle

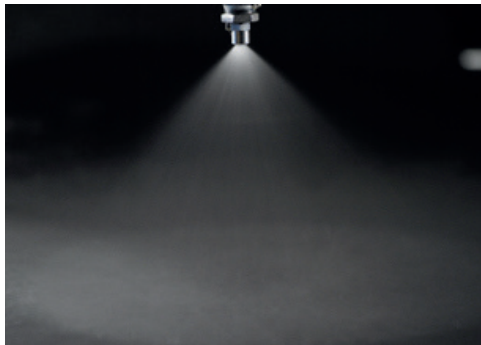
※ Standard Pressure: Column in red.

※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
45°	42	2.48	2.97	3.64	4.20	5.94	7.27	8.40	9.39	11.50	-	1.5	-
58°	13	3.14	3.75	4.59	5.30	7.50	9.18	10.60	11.85	14.51	420	1.5	-
45°	65	3.85	4.60	5.63	6.50	9.19	11.26	13.00	14.53	17.80	-	1.5	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

KPMF M Metal full cone nozzle for precise distribution

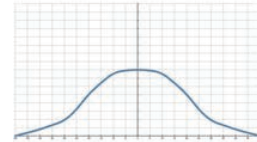


- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

【Top view of nozzle spray pattern】



【Flow distribution】

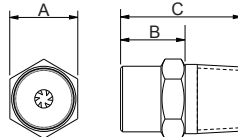


Features

- Full cone spray.
- Adopts a Holeless multi-slotted core, possess a more uniform impact than other standard solid cone nozzles of the same type.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, etc.
- Dispersion: Humidifying, chemicals, firefighting, dust suppression, aeration, defoaming, sewage treatment.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g)		
		A	B	C		S303	S316	Brass
Metal	1/8KPMF(M)	12	12	19	1/8M	10	10.3	11.2
	1/4KPMF(M)	14	15	26	1/4M	20	20	19
	3/8KPMF(M)	18	15	30	3/8M	33	34	37

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT KPMF 30 S316

Thread Type	Thread Size	Nozzle Series	Capacity Code	Material
1/4	BSPT	KPMF	30	S316

※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
60°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.5	100
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	0.8	50
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	400	1.1	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		1.2	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.3	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.4	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	640	1.5	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		1.5	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43		1.7	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17		1.7	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	120°	1.7	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39		1.8	-
90°	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86		1.9	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	640	2.3	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

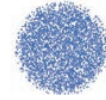
Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-
120°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

KPMF P Plastic full cone nozzle for precise distribution



【 Top view of nozzle spray pattern 】



【 Flow distribution 】



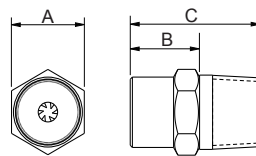
- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

Features

- Full cone spray.
- Adopts a Holeless multi-slotted core, possess a more uniform impact than other standard solid cone nozzles of the same type. Due to the high spray uniformity, chemical dispersion processes commonly used in semiconductors and printed circuit boards, such as etching processes.
- PVDF is resistant to temperature and corrosive chemical solutions.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, etc.
- Dispersion: Humidifying, Chemicals, Firefighting, Dust suppression, Deodorization, Defoaming, Sewage treatment, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
Plastic	1/8KPMF (P)	12	10	19	1/8M	1.5
	1/4KPMF (P)	15	11	21	1/4M	3.8
	3/8KPMF (P)	17	13	25	3/8M	6

Material

- Plastic: PVDF
- CORE: U-PVC, PEEK

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT KPMF 25 PVDF

Thread Type Thread Size Nozzle Series Capacity Code Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 90° and 120° is able to be made to order.

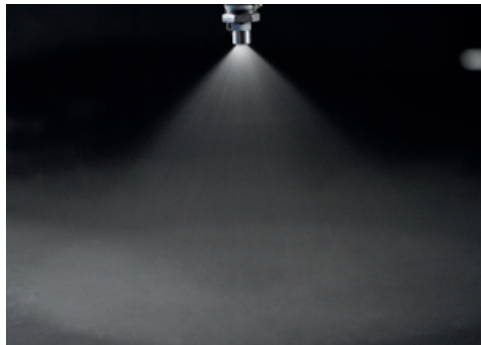
Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
60°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.5	100
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	270	0.8	50
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	400	1.1	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		1.2	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		1.3	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	400	1.4	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.5	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		1.5	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	400	1.5	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17		1.7	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91		1.7	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	400	1.8	-
90°	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86		1.9	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	640	2.3	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Spray Angle	Capacity Code	Thread Size			Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		1/8	1/4	3/8	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
90°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-
120°	10	V	V		0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	-	-	-
	15	V	V		0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11	-	-	-
	20	V	V		1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	-	-	-
	25	V	V		1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85	-	-	-
	30	V	V		1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	-	-	-
	35	V	V		2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59	-	-	-
	40	V	V		2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95	-	-	-
	50		V	V	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69	-	-	-
	60		V	V	3.55	4.24	5.20	6.00	8.49	10.39	12.00	13.42	16.43	-	-	-
	70		V	V	4.14	4.95	6.06	7.00	9.90	12.12	14.00	15.65	19.17	-	-	-
	80		V	V	4.73	5.66	6.93	8.00	11.31	13.86	16.00	17.89	21.91	-	-	-
	100			V	5.92	7.07	8.66	10.00	14.14	17.32	20.00	22.36	27.39	-	-	-
	120			V	7.10	8.49	10.39	12.00	16.97	20.78	24.00	26.83	32.86	-	-	-
	140			V	8.28	9.90	12.12	14.00	19.80	24.25	28.00	31.30	38.34	-	-	-

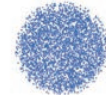
※ For MPa / bar / psi units, please refer to LORRIC.com.

KJ Female thread metal full cone nozzle

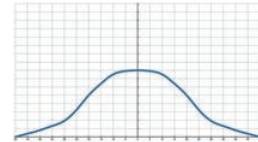


- Recommended working pressure: 2.8 kgf/cm²
- Flowrate tolerance: $\pm 5\%$ @ 2.8 ± 0.1 kgf/cm²
- Angle tolerance: $\pm 5^\circ$ @ 2.8 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】

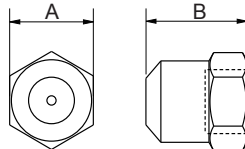


Features

- Full cone spray.
- Adopts a Holeless multi-slotted core, possess a more uniform impact than other standard solid cone nozzles of the same type. It is often used in the iron and steel industry where cooling homogeneity is extremely demanding. e.g. Steel bloom cooling and iron and steel continuous casting process.
- Hexagonal body, convenient installation; single-piece design, the multi-slotted core is embedded and compressed into the body to avoid losing performance from thermal expansion and shrinkage.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaners, etc.
- Cooling: Gas, tank, machinery, metal, etc.
- Dispersion: Humidifying, fire fighting, and dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

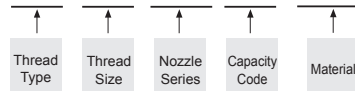
Material	Serie	Unit (mm)		Thread Type	Weight (g)		
		A	B		S303	S316	Brass
Metal	3/8KJ	22	27	3/8F	50.4	50	51.8

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example: 3/8 BSPT KJ 70 BRASS

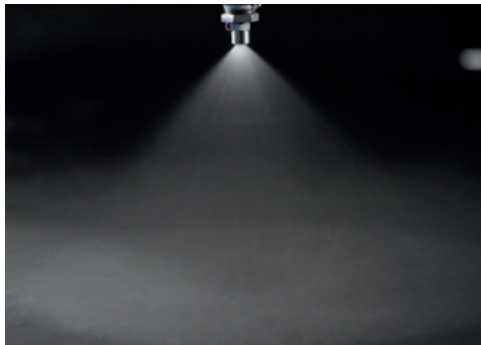


※ Standard Pressure: Column in red.
※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.8 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
68°	70	3.50	4.19	5.13	5.92	7.00	8.37	10.25	13.24	16.21	-	1.9	-

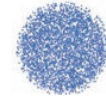
※ For MPa / bar / psi units, please refer to LORRIC.com.

KG Metal full cone nozzle



- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】



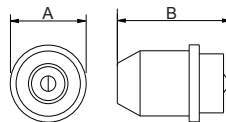
Features

- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging.
- Three-piece structure facilitates maintenance cleaning and replacement, and can save the cost of replacing the nozzle head. Expenditure filter design, easy maintenance, reduced blocking, and reduced cleaning due to maintenance. When the

hole is clogged, it may damage the nozzle hole.

Applications

- Cleaning: Gas, exhaust gas, dust, cleaners, etc.
- Cooling: Gas, tank, machinery, metal, etc.
- Dispersion: Humidifying, fire fighting, and dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)		Thread Type	Weight (g)		
		A	B		S303	S316	Brass
Metal	1/8KG	21	45	1/8M			
	1/4KG	21	47	1/4M	10.4	10.6	11.5
	3/8KG	21	47	3/8M			

Material

- Metal: Stainless 303, Stainless 316, BRASS

How to place an order for LORRIC nozzles?

Example: **1/4** **BSPT** **KG** **10** **70** **BRASS**

↑ ↑ ↑ ↑ ↑ ↑

Thread Thread Nozzle Capacity Spray Material

Type Size Series Code Angle

※ Standard Pressure: Column in red.

※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	5 kgf/cm ²	10 kgf/cm ²			
70°	10	3.10	3.67	4.38	5.37	6.20	6.93	7.59	9.80	13.86	-	1.7	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Hollow Cone Nozzles



ST	66
MWT	67
QSWP	68

ST Plastic hollow cone nozzle for cooling

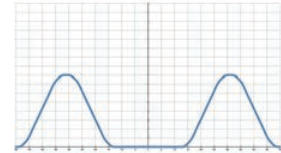


- Recommended working pressure: 0.1 kgf/cm²
- Flowrate tolerance: ± 10% @ 0.1 ± 0.05 kgf/cm²

【Top view of nozzle spray pattern】



【Flow distribution】



Features

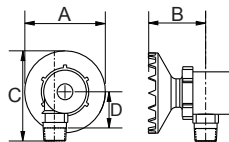
- Spray patterns: Hollow Cone. Spray shape is circular (Circular Impact).
- Shark teeth design provides more liquid surface for better cooling performance. No complicated structure in the nozzle flow path provides the maximum free passage of 40mm which effectively avoids clogging.
- Two piece nozzle design enables easy cleaning and

installation.

- The minimum operating pressure can be reduced to 0.05kgf/cm².

Applications

- Cleaning: Gas, cleaning, etc.
- Cooling: Gas, liquid cooling, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Thread Type	Weight (g) FRPP
		A	B	C	D		
Plastic	1-1/2ST	165	175	119	26	1-1/2M	376

Material

- Strengthened Pipe Fiberglass PP

How to place an order for LORRIC nozzles?

Example: 1-1/2 BSPT ST 120 - FRPP

↑ ↑ ↑ ↑ ↑ ↑

Thread Type Thread Size Capacity Code Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Thread Size	Capacity at Pressure								Average particle size (µm)	Min. Free Passage (mm)	Filter mesh	
		1-1/2	0.05 kgf/cm²	0.07 kgf/cm²	0.1 kgf/cm²	0.2 kgf/cm²	0.3 kgf/cm²	0.5 kgf/cm²	0.7 kgf/cm²	1 kgf/cm²				2 kgf/cm²
-	120	v	84.85	100	120	169	207	268	317	379	536	-	-	-
	122	v	86.3	102	122	172	211	272	322	385	545	-	-	-
	147	v	104	122	147	207	254	328	388	464	657	-	-	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

MWT Metal hollow cone nozzle

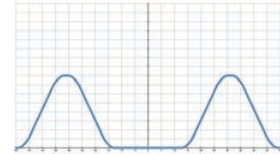


- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 5% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 5° @ 2.0 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】



Features

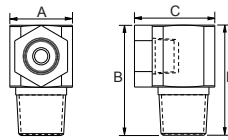
- Spray patterns: Hollow Cone. The shape of the spray is circular (circular Impact).
- The nozzle flow path has no complicated structure and effectively prevents foreign matter from being blocked.
- Two piece nozzle design enables easy clean and installation.
- The direction of the spray is 90 degrees to the mounting direction. Please confirm that the installation environment

meets the requirements.

- Under the same test conditions, the hollow cone spray has the smallest particle size, so it is commonly used in gas scrubbing and dust suppression applications.

Applications

- Cleaning: Gas cleaning etc.
- Cooling: Gas, liquid, air conditioning, machinery, metal, plastic molding cooling process.
- Dispersion: Humidifying, aeration, firefighting, dedusting, deodorization, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Thread Type	Weight (g)	
		A	B	C	D		S303	S316
Plastic	1/8MWT	13	22	15	16	1/8M	-	-
	1/4MWT	16	29	18	21	1/4M	39	39.5
	3/8MWT	19	35	20	24	3/8M	-	-

Material

- Metal: Stainless 303, Stainless 316

How to place an order for LORRIC nozzles?

Example: **1/4** **BSPT** **MWT** **5** **60** **S316**

↑ ↑ ↑ ↑ ↑ ↑

Thread Type Thread Size Capacity Code Capacity Code Spray Angle Material

※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (µm)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	4 kgf/cm²	6 kgf/cm²	8 kgf/cm²	10 kgf/cm²	15 kgf/cm²			
60°	3	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22	230	3	-
	5	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		4	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

QSWP

Plastic hollow cone nozzle with pipe clamp

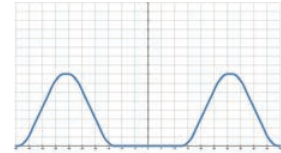


- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: ± 10% @ 2.0 ± 0.1 kgf/cm²
- Angle tolerance: ± 10° @ 2.0 ± 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】



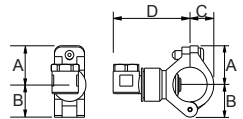
Features

- Spray patterns: Hollow Cone. The shape of the spray is circular.
- The nozzle flow path has no complicated structure which effectively avoids clogging.
- Multi-piece design, the nozzle part adopts a two-piece structure. The nozzle part can be disassembled to facilitate maintenance, cleaning and replacement; the nozzle part and the base buckle are positioned by the clamp, and the installation can be completed with bare hands without tools.
- The internal gaskets have different options such as TPR, Viton and Viton-F. They can be equipped with a variety of chemical product processes, and the special structural design allows the nozzles and the base to fit tightly to avoid water leakage.

- The spray direction is 90 degrees to the installation direction. Please make sure that the installation environment meets the requirements (The base is shared with the QSH and QSF nozzles. If the spray direction is limited, QSH can be used with the QSF nozzle head)
- Under the same test conditions, the hollow cone spray has the smallest particle size, so that it is commonly applicable in gas washing and dust suppression.
- Size:
 - Drilling hole size for pipe clamp: 9.8~10mm
 - Fits pipe size: 3/4"(OD26 +/-0.2mm), 1"(OD34 +/-0.3mm)

Applications

- Cleaning: Gas, cleaning, etc.
- Cooling: Gas, liquid, air conditioning, machinery, metal, plastic molding cooling process.
- Dispersion: Humidifying, aeration, firefighting, dedust, deodorization, etc.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Thread Type	Weight (g)
		A	B	C	D		
Plastic	3/4QSWP	24	27	14	60	3/4M	27
	1 QSWP	28	33	22	62	1	30.5

Material

- Nozzle: PP
- Body: Strengthened Pipe Fiberglass PP

How to place an order for LORRIC nozzles?

Example: 3/4	BSPT	QSWP	6	PP
↑	↑	↑	↑	↑
Pipe Size	Thread Size	Capacity Code	Capacity Code	Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Thread Size		Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		3/4	1	0.5 kgf/cm ²	0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	2.5 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²			
90°	6	v	v	1.00	1.18	1.41	1.73	2.00	2.24	2.45	2.83	3.46	220	2.2	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

Others Nozzles



SPP 70

ED 71

ED MINI 72

BB 73

TB 73

SPP Spiral Nozzle

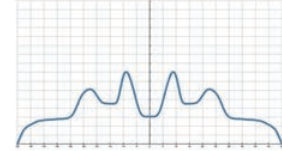


- Recommended working pressure: 2.0 kgf/cm²
- Flowrate tolerance: $\pm 5\%$ @ 2.0 $\pm$ 0.1 kgf/cm²
- Angle tolerance: $\pm 5^\circ$ @ 2.0 $\pm$ 0.1 kgf/cm²

【 Top view of nozzle spray pattern 】



【 Flow distribution 】



Features

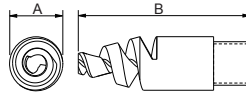
- Spray patterns: Full Cone. Spray shape is multi-layered concentric circles.
- Unibody design with no internal parts. To compare with general full cone nozzles, It has a larger minimum free passage for effectively avoiding clogging.
- The spray angle is from 120° to 170°. This large spray angle design provides larger coverage than general fan and full cone

nozzles.

- It is possible to work when under 0.5kgf/cm².

Applications

- Cleaning: scrubber, off-gas treatment, etc.
- Cooling: cooling tower, etc.
- Dispersion: firefighting.



Appearance dimensions may vary depending on model, material. Please ask for details.

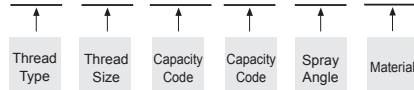
Material	Serie	Unit (mm)		Thread Type	Weight (g)	
		A	B		PVC	PEEK
Plastic	1/4SPP	52	16	1/4M	6.5	6.5
	3/8SPP	61	20	3/8M	16	16
	1/2SPP	77	22	1/2M	13	13
	3/4SPP	90	28	3/4M	30	30

Material

- Body: U-PVC, PEEK

How to place an order for LORRIC nozzles?

Example: 1/4 BSPT SPP 4.5 120 UPVC

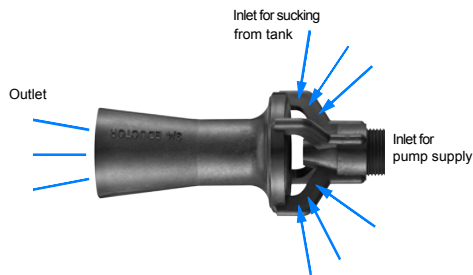


※ Standard Pressure: Column in red.

Spray Angle	Capacity Code	Thread Size				Capacity at Pressure							Min. Free Passage (mm)	Eq. Orifice (mm)	Average particle size (um)	Filter mesh
		1/4	3/8	1/2	3/4	0.5 kgf/cm ²	0.7 kgf/cm ²	1 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²				
120°	4.5	v				2.25	2.66	3.18	4.50	5.51	6.36	7.12	1.55	2.38	228	-
	12.8	v				6.40	7.57	9.05	12.8	15.68	18.10	20.24	2.53	3.97	-	-
170°	52.7		v			26.4	31.2	37.3	52.7	64.5	74.5	83.3	3.00	7.94	380	-
	105			v		52.5	62.1	74.2	105	129	148	166	4.75	11.1	388	-
	134				v	67.0	79.3	94.8	134	164	190	212	4.75	12.7	416	-

※ For MPa / bar / psi units, please refer to LORRIC.com.

ED Educator nozzle for mixing



- Recommended working pressure: 0.5 kgf/cm²
- Flowrate tolerance: ± 10% @ 0.5 ± 0.1 kgf/cm²

Features

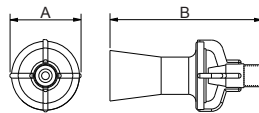
- Used for liquid stirring under the liquid surface. Specially designed nozzle that creates a stirring and circulating effect. This nozzle can mix chemicals, direct the suspended substances to a filter and prevent precipitation.
- Energy-efficiency of liquid stirring: the educator nozzles are designed to suck and spray liquid through the amplified nozzle tube to increase liquid flow rate up to 4 times which provides more efficient stirring than aeration or robot arms

(Quantity supplied+Intake=Total Flow).

- Single piece structure and hand installable without any tools.

Applications

- Cleaning: scrubber, off-gas treatment, etc.
- Cooling: cooling tower, etc.
- Dispersion: firefighting.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)		Thread Type	Weight (g)	
		A	B		S316	FRPP
Metal	3/8ED	116	54	3/8M	274	-
	3/8ED	116	54	3/8M	-	34
	3/4ED	159	74	3/4M	-	84.6

Material

- Strengthened Pipe Fiberglass PP
- Stainless 316 (Only 3/8")

How to place an order for LORRIC nozzles?

Example: 3/8 BSPT ED 152 - FRPP

Thread Type	Thread Size	Capacity Code	Capacity Code	Spray Angle	Material
3/8	BSPT	ED	152	-	FRPP

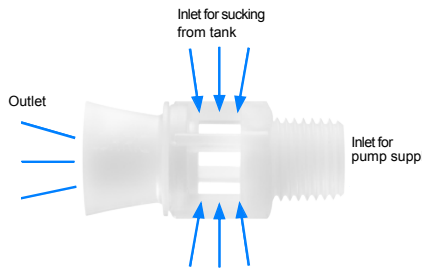
※ Standard Pressure: Column in red.

Thread Size	Capacity Code	Magnification	Definition of flow	Capacity at Pressure								
				0.1 kgf/cm²	0.25 kgf/cm²	0.5 kgf/cm²	0.75 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²
3/8	63	5.0	Quantity supplied	5.59	8.84	12.50	15.31	17.68	21.65	25.00	30.62	35.36
			Intake	22.36	35.36	50.01	61.25	70.72	86.61	100.01	122.49	141.44
			Total Flow	27.95	44.20	62.51	76.56	88.40	108.27	125.02	153.11	176.80
	152		Quantity supplied	10.87	17.18	24.30	29.76	34.36	42.08	48.59	59.51	68.72
			Intake	43.46	68.72	97.18	119.03	137.44	168.33	194.37	238.05	274.88
			Total Flow	54.33	85.90	121.48	148.78	171.80	210.41	242.96	297.57	343.60
3/4	-	5.0	Quantity supplied	19.57	30.94	43.75	53.58	61.87	75.77	87.50	107.16	123.74
			Intake	78.26	123.74	174.99	214.32	247.48	303.10	349.99	428.65	494.96
			Total Flow	97.83	154.68	218.74	267.90	309.35	378.87	437.49	535.81	618.70

※ For MPa / bar / psi units, please refer to LORRIC.com.

Mini ED

Small eductor nozzle for mixing and plating



- Recommended working pressure: 0.5 kgf/cm²
- Flowrate tolerance: ± 10% @ 0.5 ± 0.1 kgf/cm²

Features

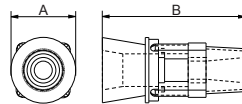
- Used for liquid stirring under the liquid surface. Specially designed nozzle that creates a stirring and circulating effect. This nozzle can mix chemicals, direct the suspended substances to a filter and prevent precipitation.
- Energy-efficiency of liquid stirring: the eductor nozzles are designed to suck and spray liquid through the amplified nozzle tube to increase liquid flow rate up to 4 times which provides more efficient stirring than aeration or robot arms

(Quantity supplied+Intake=Total Flow).

- Single piece structure and hand installable without any tools.

Applications

- Cleaning: scrubber, off-gas treatment, etc.
- Cooling: cooling tower, etc.
- Dispersion: firefighting.



Material	Serie	Unit (mm)				Thread Type	Weight (g)
		A	B	C	D		
Plastic	1/4EDMINI	40	30	18	20	1/4M	3.5

Appearance dimensions may vary depending on model, material. Please ask for details.

Material

- PP

How to place an order for LORRIC nozzles?

Example:	1/4	BSPT	ED	3	-	PP
	↑	↑	↑	↑	↑	↑
	Thread Type	Capacity Code	Capacity Code	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.

Capacity Code	Magnification	Definition of flow	Capacity at Pressure							
			0.1 kgf/cm ²	0.25 kgf/cm ²	0.5 kgf/cm ²	0.75 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²
3	2.4	Quantity supplied	1.36	2.14	3.03	3.71	4.29	5.25	6.06	8.57
		Intake	1.88	2.97	4.20	5.14	5.94	7.27	8.40	11.9
		Total Flow	3.23	5.11	7.23	8.85	10.2	12.5	14.5	20.4
9	1.6	Quantity supplied	4.02	6.36	9.00	11.0	12.7	15.6	18.0	25.5
		Intake	2.41	3.82	5.40	6.61	7.64	9.35	10.8	15.3
		Total Flow	6.44	10.2	14.4	17.6	20.4	24.9	28.8	40.7

※ For MPa / bar / psi units, please refer to LORRIC.com.

BB Angle adjustable and easy install stopper nozzle with pipe clamp

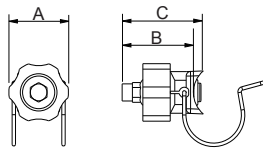


Features

- Female nut for fixing nozzle is easy to loosen for adjusting nozzle angle.
- Amazingly easy to drill a hole instead of threading onto a pipe and fix it on with our exclusive pipe clamp without any tool.
- For stopping spaying, if one or a few of the holes on pipe need to be stopped.
- The size for drilling the installation hole:
 - Ø 15 (14.3~15mm) - Ø 17 (16.4~17mm)
 - Ø 20 (19.0~20mm) 8.35~9m/m
- Size of clamp:
 - 1" (OD34 +/-0.3mm) - 1-1/4" (OD42+/-0.3mm)
 - 1-1/2" (OD48 +/-0.4mm)

Applications

- Coating
- Cleaning



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Pipe Size	Weight (g)
		A	B	C		
Plastic	BB	52	64	72	-	63.2

Material

- Nozzle part: PP
- Nut: fiberglass, Strengthening PP
- Pipe clamp: Stainless 316
- Sealing ring: NBR

TB Angle adjustable and easy install nozzle thread adapter with pipe clamp

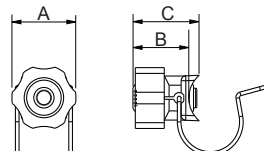


Features

- Female nut for fixing nozzle is easy to loosen for adjusting nozzle angle.
- A mazingly easy to drill a hole instead of threading onto a pipe and fix it on with our exclusive pipe clamp without any tool.
- This accessory is available with a 1/4" or 3/8" PT female thread for flexible use with other kind of nozzles.
- The size for drilling the installation hole:
 - Ø 15 (14.3~15mm) - Ø 17 (16.4~17mm)
 - Ø 20 (19.0~20mm)
- Size of clamp:
 - 1" (OD34 +/-0.3mm) - 1-1/4" (OD42+/-0.3mm)
 - 1-1/2" (OD48 +/-0.4mm)

Applications

- Coating
- Cleaning



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Pipe Size	Weight (g)
		A	B	C		
Plastic	TB	52	48	56	-	64

Material

- Nozzle part: fiberglass, Strengthening PP
- Nut: fiberglass, Strengthening PP
- Pipe clamp: Stainless 316
- Sealing ring: NBR

Nozzle Accessories



QFSA 76

QFWG 76



QFSA QF body for 3/4 inch PVC pipe



Features

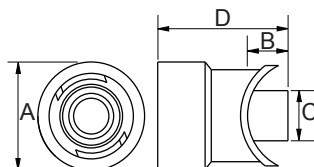
- Joint by PVC welding.
- To save time for repositioning when maintaining nozzles, and this way of installation is stronger than threads.
- Especially well applicable in manufacturing processes with periodical maintenance such as PCB wet process.

Applications

- PCB Wet Processing

Material

- Body: U-PVC
- O-ring: EPDM, VITON, VITON-F



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Thread Type	Weight (g)
		A	B	C	D		
Plastic	QFSA	26	10	12	31	-	8.6

QFWG QF body for welding



Features

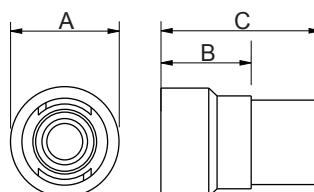
- Joint by PVC welding.
- To save time for repositioning when maintaining nozzles, and this way of installation is stronger than threads.
- Especially well applicable for horizontal installation such as PCB spray plate.

Applications

- Horizontal installation such as PCB spray plate.

Material

- Body: U-PVC
- O-ring: EPDM, VITON, VITON-F



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)				Thread Type	Weight (g)
		A	B	C	D		
Plastic	QFWG	26	17	38	20	-	12

Why LORRIC



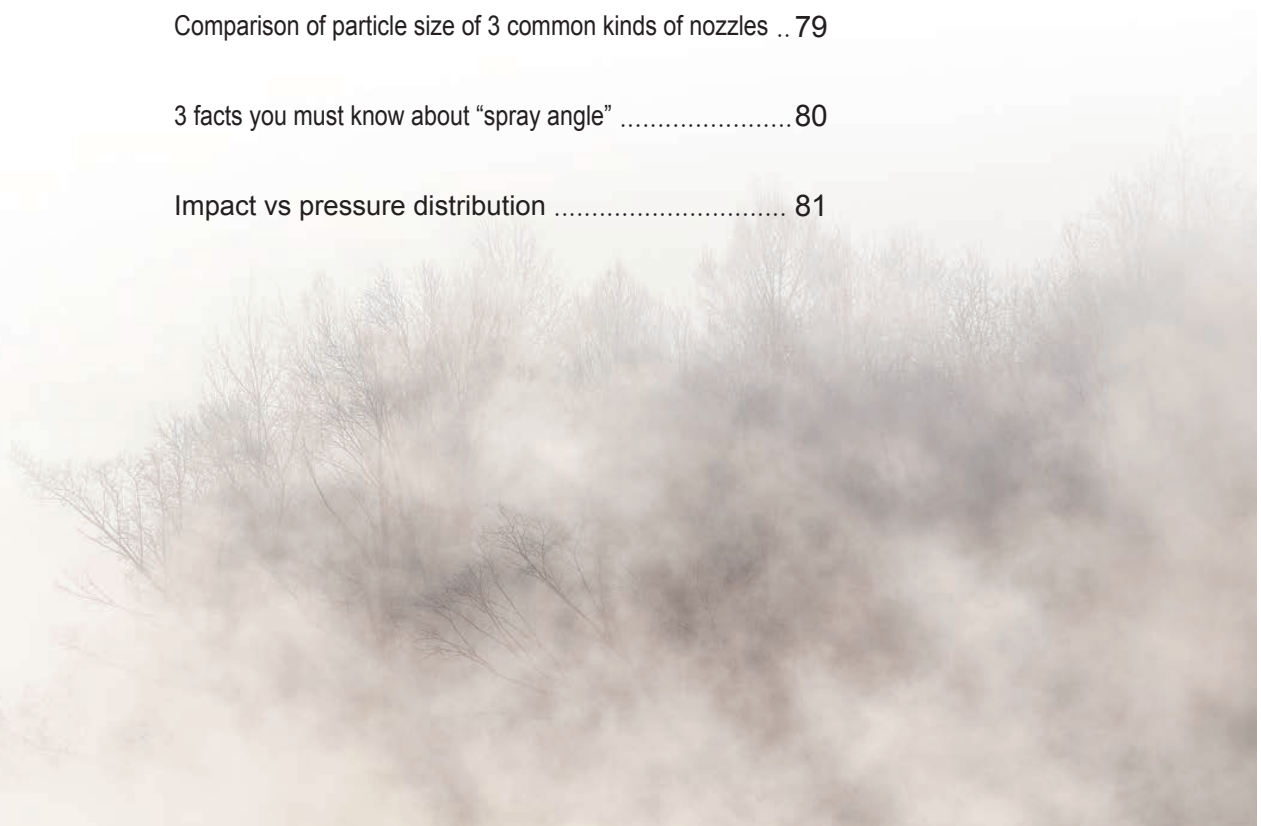
Flat fan nozzle's estimated spray coverage78

Immediately understanding how to read "Flow Rate" .. 79

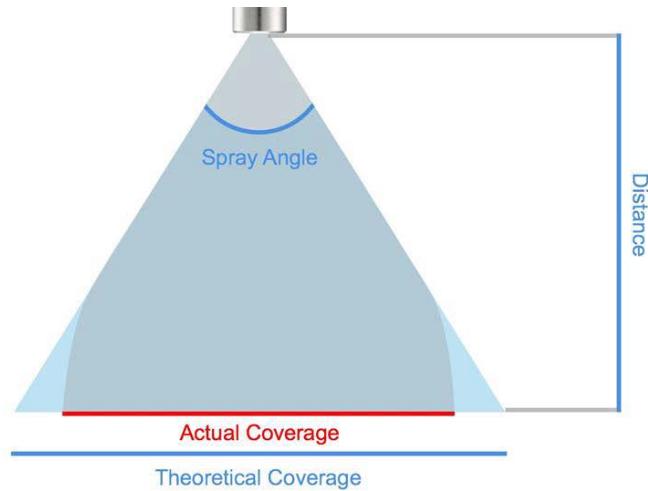
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Impact vs pressure distribution 81



Flat fan nozzle's estimated spray coverage



Flat fan nozzle spray coverage is affected by a myriad of factors, such as gravity, acceleration and air resistance. That combined with the technical specifications of the nozzles themselves which dictate spray pressure and viscosity, thus further influencing spray coverage, all lead to the fact that there's no way to predict nozzle spray coverage in a completely accurate manner. Thus, the following information is a theoretical estimation, prior to the influence of external factors. For further information regarding more practical spray coverage, be sure to contact our sales rep.

Spray Angle (°)		Theoretical Coverage (mm)						
		65	80	90	100	120	170	
Spray Distance(mm)	30	38	50	60	72	104	686	
	40	51	67	80	95	139	914	
	50	64	84	100	119	173	1143	
	60	76	101	120	143	208	1372	
	70	89	117	140	167	242	1600	
	80	102	134	160	191	277	1829	
	90	115	151	180	215	312	2057	
	100	127	168	200	238	346	2286	
	110	140	185	220	262	381	2515	
	120	153	201	240	286	416	2743	
	130	166	218	260	310	450	2972	
	140	178	235	280	334	485	3200	
	150	191	252	300	358	520	3429	
	200	255	336	400	477	693	4572	
	250	319	420	500	596	866	5715	
	300	382	503	600	715	1039	6858	
	350	446	587	700	834	1212	8001	
	400	510	671	800	953	1386	9144	
	450	573	755	900	1073	1559	1028	
	500	637	839	1000	1192	1732	1143	
	550	701	923	1100	1311	1905	1257	
	600	764	1007	1200	1430	2078	1371	
	650	828	1091	1300	1549	2252	1485	
	700	892	1175	1400	1668	2425	1600	
	750	956	1259	1500	1788	2598	1714	
	800	1019	1343	1600	1907	2771	1828	
	850	1083	1426	1700	2026	2944	1943	
	900	1147	1510	1800	2145	3118	2057	
950	1210	1594	1900	2264	3291	2171		
1000	1274	1678	2000	2384	3464	2286		
Measurement in millimeters								
Spray Angle (°)		Theoretical Coverage (inch)						
		40	65	80	90	100	120	170
Spray Distance(inch)	1.0	0.7	1.3	1.7	2.0	2.4	3.5	23
	1.5	1.1	1.9	2.5	3.0	3.6	5.2	34
	2.0	1.5	2.5	4.2	4.0	6.0	8.7	57
	2.5	1.8	3.2	5.0	5.0	7.2	10	69
	3.0	2.2	3.8	5.0	6.0	7.2	10	69
	3.5	2.5	4.5	5.9	7.0	8.3	12	80
	4.0	2.9	5.1	6.7	8.0	10	14	91
	4.5	3.3	5.7	7.6	9.0	11	16	103
	5	3.6	6.4	8.4	10	12	17	114
	6	4.4	7.6	10	12	14	21	137
	7	5.1	8.9	12	14	17	24	160
	8	5.8	10	13	16	19	28	183
	9	6.6	11	15	18	21	31	206
	10	7.3	13	17	20	24	35	229
	11	8.0	14	18	22	26	38	251
	12	8.7	15	20	24	29	42	274
	14	10	18	23	26	33	48	320
	16	12	20	27	28	38	55	366
	18	13	23	30	32	43	62	411
	20	15	25	34	36	48	69	457
	22	16	28	37	40	52	76	503
	24	17	31	40	44	57	83	549
	26	19	33	44	48	62	90	594
	28	20	36	47	52	67	97	640
	30	22	38	50	56	72	104	686
	32	23	41	54	60	76	111	732
	34	25	43	57	64	81	118	777
	36	26	46	60	60	86	125	823
Measurement in inches								

Immediately understanding how to read “Flow Rate”

Immediately understanding how to read “Flow Rate”

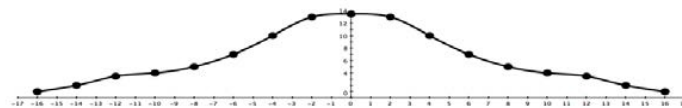
Unit: LPM (L/min)

Features:

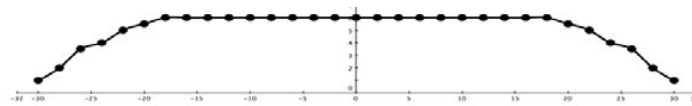
- Greater the pressure, greater the flow rate.
- Flow rate and pressure are not linear relationship.
- For example, the flow rate of a nozzle under 8kg/cm2 pressure is not double when it is under ekg/cm2 pressure.

Distribution

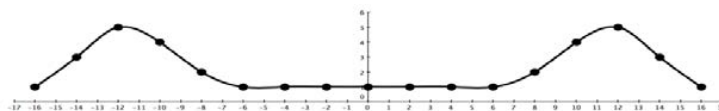
Mountain Shape



Tableland Shape



Donut Shape



What else you must know about flow rate?

1. Distribution of flow rate often varies by variety of pressure.
2. Distribution shapes are for reference, they may be vary during operating.
3. Distribution will be effected by flow angle and flow rate.

Comparison of particle size of 3 common kinds of nozzles

The average particle size of 3 common kinds of spray shape

Following, LORRIC use laser diffraction particle size analyzer to get the particle sizes of 3 different kinds of nozzle which is under 2kg pressure and 2Lpm flow rate.

Various nozzles	Average spray particle size	Comparison of particle size
Cone shape	274um	Coarse
Fan shape	234um	Fine
Hollow Cone	221um	Finest

Features of particle size

- Smaller the flow rate, finer the particle size.
- Greater the pressure, finer the particle size.
- Particle size will be varied by nozzles with different structure.

3 facts you must know about “spray angle”



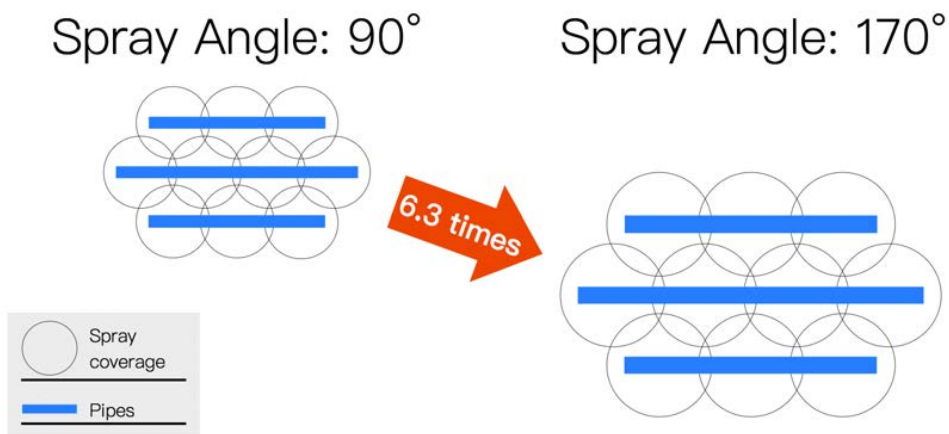
① Easy understanding “spray angle” by 5 sentences

The definition of “Spray angle ” is the angle of spray shape. (please refer to schematic diagram)

We lists following 5 easy sentences for you to quick understand what is “spray angle”

- Unit: degree
- Spray angle is the index for simplifying spray coverage.
- Spray is not able to travel in tangential direction which is caused by the effects of gravitational acceleration and air resistance.
- Spray angle and pressure is inevitable relationship.

② Spray angle and coverage



Theoretical spray coverage under 300mm spray distance

- 90°Spray angle: The spray distance is 60cm, and the spray coverage is 0.28m²/per nozzle.
- 170°Spray angle: The spray distance is 150cm, and the spray coverage is 1.76m²/per nozzle. (about 6.3 times)

③ 3 key "distance" decision making points to choose spray angle of nozzles

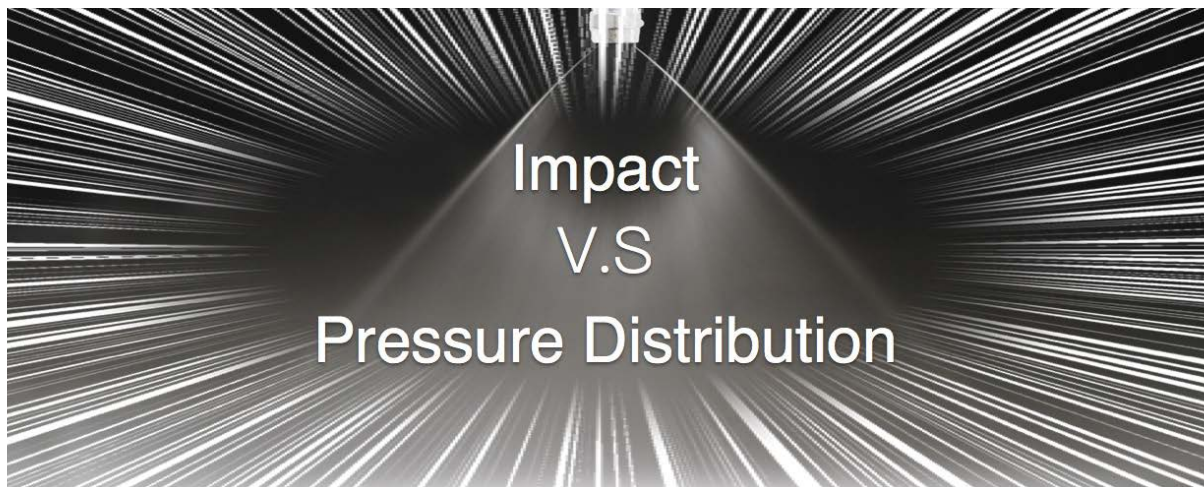
It is able to find out the spray angle you need for choosing nozzles by following 3 kinds of "distance" with 2 charts, The measurement of theoretical coverage by spray distance for flat fan nozzle, The measurement of theoretical coverage by spray distance for full cone nozzle

- Distance between nozzle and spray target



- Distance between beside nozzles
- Distance between pipes: Besides fan nozzles, this is very important factor to choose the spray angle of cone nozzles, hollow cone nozzles, and spiral nozzles.

Impact vs pressure distribution



- **Impact is total force**
 - Which is proportional to flow rate.
 - Which is proportional to the square root of pressure.
- **The definition of pressure distribution is the pressure which is sprayed to every part of workpiece by nozzles.**
 - Variation of impact will effect pressure distribution.
 - The result of pressure distribution will be effected by spray shape and coverage volume.
 - Pressure distribution is related to spray flow rate and effected by the design of flow distribution.
 - As there is so many variables, there is no any simple formula to receive pressure distribution of various nozzles.