

Wide-angle Flat Spray Nozzles  
YYP-series

YYP-series

Spray Capacity Code	Pipe Conn. Size						Spray Angle			Spray Capacity (ℓ/min)						Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)	Strainer Mesh Size	
	1/8M	1/4M	3/8M	1/2M	3/4M	1M	0.05 MPa	0.15 MPa	0.4 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa				0.5 MPa
70							125°	140°	149°	3.13	4.04	5.72	7.00	8.08	9.90	12.8	480	3.1	—
100		○					128°	140°	148°	4.47	5.77	8.16	10.0	11.5	14.1	18.3	5	3.6	—
140		○					130°	140°	147°	6.26	8.08	11.4	14.0	16.2	19.8	25.6	610	4.3	—
180		○					131°	140°	146°	8.05	10.4	14.7	18.0	20.8	25.5	32.9	5	4.8	—
230			○				133°	140°	146°	10.3	13.3	18.8	23.0	26.6	32.5	42.0	650	5.3	—
320			○	○			134°	140°	145°	14.3	18.5	26.1	32.0	37.0	45.3	58.4	5	6.4	—
450				○			135°	140°	144°	20.1	26.0	36.7	45.0	52.0	63.6	82.2	850	7.6	—
620					○		135°	140°	144°	27.7	35.8	50.6	62.0	71.6	87.7	113	5	9.0	—
1000					○		135°	140°	143°	44.7	57.7	81.6	100	115	141	183	1,150	11.4	—
1500						○	136°	140°	142°	67.1	86.6	122	150	173	212	274	1,100	14.5	—
2500						○	136°	140°	142°	112	155	204	250	289	354	456	1,550	18.5	—

●.....With strainer ○.....Without strainer

YYP-PVC series (Injection molded)

Spray Capacity Code	Pipe Conn. Size	Spray Angle		Spray Capacity (ℓ/min)						Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)		
		0.05 MPa	0.15 MPa	0.4 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa			0.3 MPa	0.5 MPa
03		—	115°	135°	—	—	0.25	0.30	0.35	0.42	0.55	190	0.6
04		—	120°	137°	—	—	0.33	0.40	0.46	0.56	0.73		0.7
05		—	130°	146°	—	—	0.41	0.50	0.58	0.71	0.91		0.8
07		—	130°	145°	—	—	0.57	0.70	0.81	0.99	1.28	5	1.0
10		103°	130°	144°	—	0.58	0.82	1.00	1.15	1.41	1.83		1.1
13	1/8M	108°	130°	144°	—	0.75	1.06	1.30	1.50	1.84	2.37		1.3
16		110°	130°	143°	—	0.92	1.31	1.60	1.85	2.26	2.92	280	1.5
20		116°	135°	147°	0.89	1.15	1.63	2.00	2.31	2.83	3.65	5	1.7
25		117°	135°	146°	1.12	1.44	2.04	2.50	2.89	3.54	4.56	5	1.8
30		118°	135°	146°	1.34	1.73	2.45	3.00	3.46	4.24	5.48	380	2.0

\* No strainers for injection-molded YYP-PVC series.

How to order

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

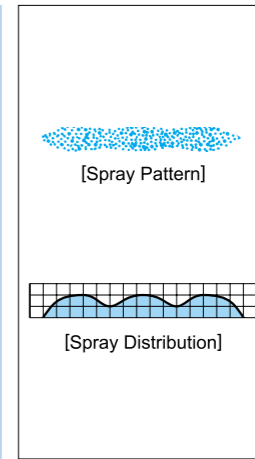
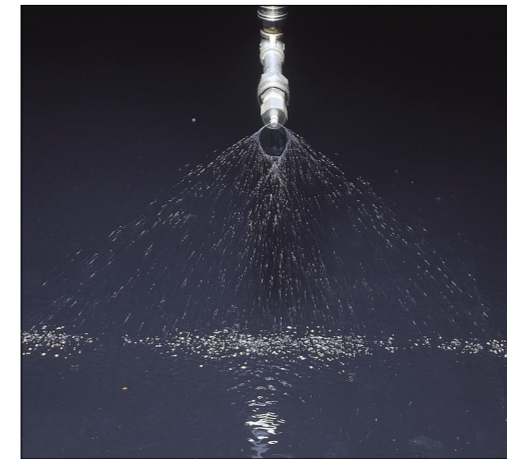
(Example) ... 1/8MYYP03BW

1/8M	YYP	03	B	W
<small>Pipe Conn. Size</small>	<small>Material</small>	<small>Spray Capacity Code</small>	<small>Material</small>	<small>Strainer</small>
1/8M	B	03	B	W (with Strainer)
5	S303	5	S303	5 (without Strainer)
1M	PVC (Injection molded)	2500	PVC (Injection molded)	

Wide-angle Flat Spray Nozzles  
for Ultra-low Pressure Spraying

Patented

LYYP



[Features]

- Wide-angle flat spray with uniform distribution.
- Capable of low operating pressures (0.015MPa).
- Low volume spray has such a low impact force that no bubbles nor foam will appear on the spray surface. All LYYP products are treated oil-free.

[Standard Pressure]

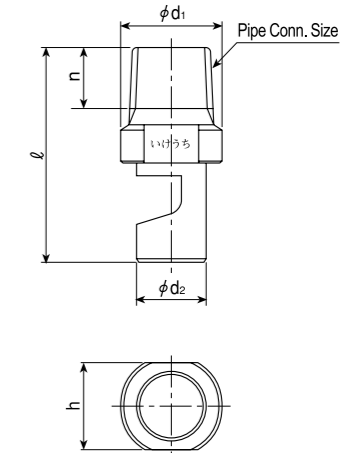
0.015MPa

[Applications]

Spraying : Developing solution for semi-conductor manufacturing processes, ultra-low volume spray for pharmaceutical manufacturing processes, chemical spraying to surface treated steel plates, etc.

LYYP-series

LYYP-series	
Structure	• Made of plastic, one-piece structure.
Material	• PVC (polyvinyl chloride) • Optional material : S316 or PCTFE



Series	Pipe Conn. Size	Dimensions(mm)					Mass (g)
		ℓ	h	n	φ d <sub>1</sub>	φ d <sub>2</sub>	
LYYP	1/8M	23	10	7	12	8	1.5

[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ/min)						Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)	
		0.01 MPa	0.015 MPa	0.02 MPa	0.008 MPa	0.01 MPa	0.012 MPa	0.015 MPa	0.02 MPa	0.03 MPa			0.04 MPa
02		—	70°	77°	—	—	0.18	0.20	0.23	0.28	0.33	850	0.9
025		67°	80°	87°	—	0.20	0.22	0.25	0.29	0.35	0.41		1.0
03		77°	90°	97°	0.22	0.24	0.27	0.30	0.35	0.42	0.49		1.0
035		87°	100°	107°	0.26	0.29	0.31	0.35	0.40	0.49	0.57		1.1
04	1/8M	88°	100°	108°	0.29	0.33	0.36	0.40	0.46	0.57	0.65	5	1.2
05		97°	110°	117°	0.37	0.41	0.45	0.50	0.58	0.71	0.82		1.3
06		107°	120°	127°	0.44	0.49	0.54	0.60	0.69	0.85	0.98		1.4
07		107°	120°	127°	0.51	0.57	0.63	0.70	0.81	0.99	1.14		1.6
08		108°	120°	128°	0.58	0.65	0.72	0.80	0.92	1.13	1.31		1.7
10		108°	120°	128°	0.73	0.82	0.89	1.00	1.15	1.41	1.63	1,350	1.9

How to order

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

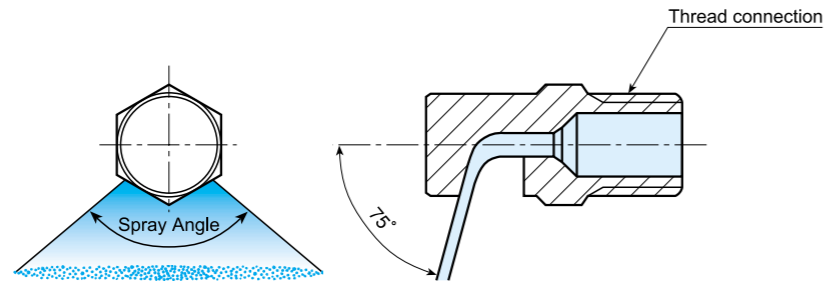
(Example) ... 1/8MLYYP02PVC

1/8M	LYYP	02	PVC
<small>Pipe Conn. Size</small>	<small>Material</small>	<small>Spray Capacity Code</small>	<small>Material</small>
1/8M	PVC	02	PVC
5		5	
1M		10	

# For Effective Use of Wide-angle Flat Spray Nozzles

## Spray Angle and Inclination Angle

Wide-angle flat spray nozzles spray at an angle of 75° to the axis of the nozzle. For installation, the inclination angle of 75° must be taken into consideration.

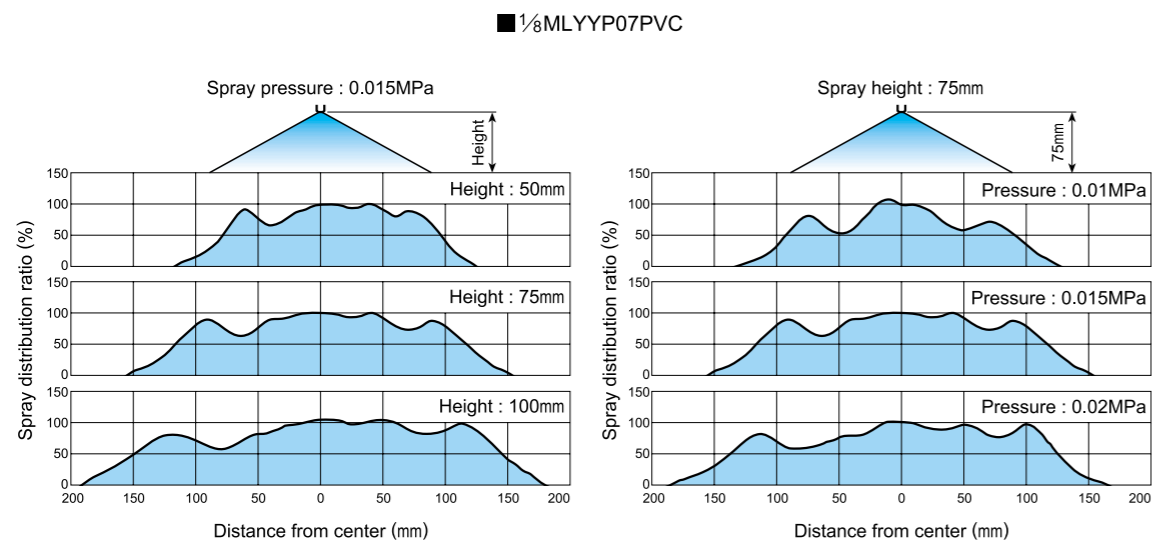


## Free Passage Diameter

The free passage diameter shows the approximate diameter of the spray orifice. Wide-angle flat spray nozzles have the largest free passage diameters among all the flat spray nozzles having the same spray capacity and are more suitable for spraying when water quality is a problem.

## Spray Distribution of Wide-angle Flat Spray Nozzle for Ultra-low Pressure Spraying

The variation in spray distribution is minimal despite changes in the spray height and spray pressure.

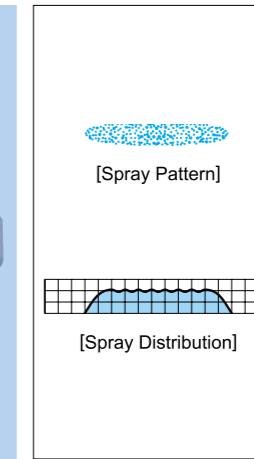
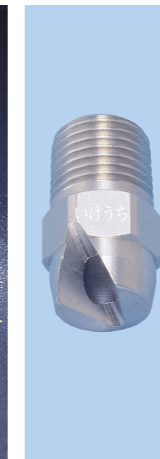


Relation between spray height and spray distribution

Relation between spray pressure and spray distribution

# Off-center Even Flat Spray Nozzles

# OVVEP



### [Features]

- Off-center flat spray with uniform distribution throughout entire spray pattern solves the problem of accumulation of spray fluid in multiple-nozzle arrangements.
- No need for oblique installation, as the angle is built-in.

### [Standard Pressure]

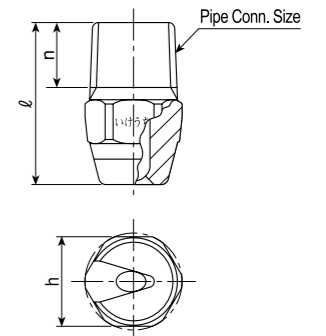
0.3MPa

### [Applications]

- Cooling : Steel plates, steel pieces, etc.
- Spraying : Etchants, oils, lubricants, glues, acids, insecticides, herbicides, etc.
- Cleaning : Steel plates, steel pieces, filters, felts, screens, etc.

## OVVEP-series

OVVEP-series	
Structure	• Made of metal, one-piece structure.
Material	• B (brass) or S303 (stainless steel 303) • Optional material : S316 or others



Series	Pipe Conn. Size	Dimensions(mm)			Mass(g)	
		ℓ	h	n	B	S303
OVVEP	1/4M	26	14	10.5	18	17

[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ/min)										Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)	
			0.05 MPa	0.3 MPa	0.7 MPa	0.05 MPa	0.07 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	1.5 MPa			2 MPa
60°	200	1/4M	56°	60°	62°	8.2	9.7	11.5	14.1	16.3	20.0	25.8	30.6	36.5	44.7	51.6	540	2.4
	250		57°	60°	61°	10.2	12.1	14.4	17.7	20.4	25.0	32.3	38.2	45.6	55.9	64.5	5	2.7
	300		57°	60°	61°	12.2	14.5	17.3	21.2	24.5	30.0	38.7	45.8	54.8	67.1	77.5	670	3.0
45°	200	1/4M	41°	45°	48°	8.2	9.7	11.5	14.1	16.3	20.0	25.8	30.6	36.5	44.7	51.6	600	3.2
	250		42°	45°	47°	10.2	12.1	14.4	17.7	20.4	25.0	32.3	38.2	45.6	55.9	64.5	5	3.6
	300		42°	45°	47°	12.2	14.5	17.3	21.2	24.5	30.0	38.7	45.8	54.8	67.1	77.5	750	4.0

## How to order

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

<Example>...1/4MOVVEP60200B

1/4 M	OVVEP	60	200	B
	Spray Angle Code	Spray Capacity Code	Material	
	60°	200	B	
	45°	250	S303	
		300		