

Accuracy guarantee on spray nozzles

All IKEUCHI's precision-made hydraulic nozzles are guaranteed for the initial spray capacities and spray angles.

■ SPRAY CAPACITY $\pm 5\%$

Spray capacities shown in this catalog are based on city water of room temperature and all spray nozzles are guaranteed for the initial spray capacity within $\pm 5\%$ under the standard pressure.

■ SPRAY ANGLE $\pm 5^\circ$

Based on city water of room temperature, all spray nozzles are guaranteed for the initial spray angle within $\pm 5^\circ$ under the standard pressure.

[Note]

The standard pressure is defined as a design pressure based on usual liquid pressure in common use. The nozzles are designed to provide the specified spray angle, spray capacity, optimum spray pattern and spray distribution at each standard pressure. The standard pressure is indicated in each table.

*The figures in this catalog are based on city water of room temperature and the liquid pressure is the one at the immediate upstream of the nozzle.

Materials of spray nozzles

As "The Mist Engineers", we, IKEUCHI, have been developing the nozzles in a variety of materials to meet the desires and applications of our customers. We had developed ceramic orifice-inserted spray nozzles and succeeded in marketing them for the first time in the world. The materials of nozzles and parts are shown as follows.

Materials Items		Plastics										Ceramics	Rubbers		
		PVDF	PTFE	PP (FRPP)	HTPVC	PVC	PPS	ABS	PA	Polyester elastomer	Soft fluororesin	CERJET® Ceramics	NBR	EPDM	FEPM
Chemical resistance	Hydrochloric acid	○	○	○	○	○	○	△	×	×	○	○	×	○	○
	Concentrated hydrochloric acid	○	○	△	○	○	○	△	×	×	×	○	×	△	○
	Sulfuric acid (35%)	○	○	○	○	○	○	△	×	×	○	○	×	○	○
	Concentrated sulfuric acid	○	○	×	○	○	△	×	×	×	○	○	×	△	○
	Nitric acid (35%)	○	○	×	○	○	△	×	△	×	○	○	×	×	○
	Concentrated nitric acid	○	○	×	×	×	×	×	△	×	○	○	×	×	○
	Acetic acid	○	○	○	○	○	○	×	△	○	○	○	○	○	○
	Sodium hydroxide (caustic soda)	△	○	○	○	○	○	△	○	△	○	×	○	○	○
	Aqueous ammonia	○	○	○	○	○	○	○	○	×	○	○	○	○	×
	Acetone	×	○	○	×	×	○	×	○	△	○	○	×	○	×
	Trichloroethylene	○	○	△	×	×	○	×	○	△	△	○	△	×	○
	Ethyl alcohol	○	○	○	○	○	○	△	△	○	○	○	○	○	○
Heat resistance (°C)		80	100	80	50	40	170	80	130	100	100	700	90	90	150

○...Suitable △...Possible in short term ×...Unusable

Plastics

PVDF: Polyvinylidene fluoride

PTFE: Polytetrafluoroethylene

PP: Polypropylene

FRPP: Glass-fiber reinforced polypropylene

HTPVC: Heat-treated polyvinyl chloride

PVC: Polyvinyl chloride

PPS: Polyphenylene sulfide

ABS: Acrylonitrile butadiene styrene

PA: Polyamide

Polyester elastomer

Soft fluororesin

Ceramics

CERJET® Ceramics

Rubbers

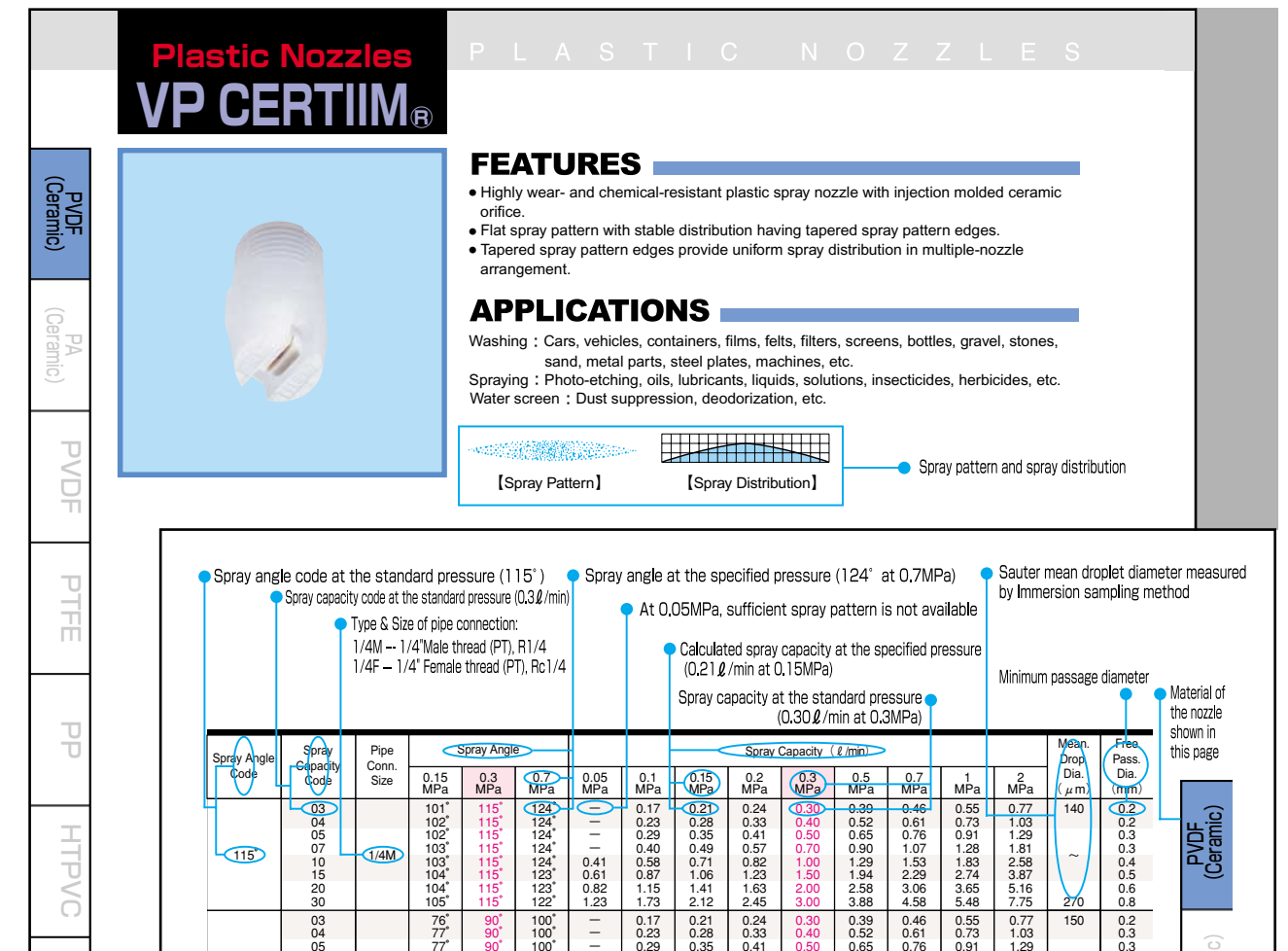
NBR: Nitrile rubber

EPDM: Ethylene-propylene rubber

FEPM: Tetrafluoroethylene-

propylene rubber

How to Read the Chart



*Spray pattern means the cross sectional shape of spray and spray distribution means the spray flow distribution in the direction of spray width.

Contents

Materials	Series	Page
PA (with ceramic orifice)	KBN CERTIIM®	Minimal clogging & highly wear-resistant hollow cone spray nozzles
PVDF	VP CERTIIM®	Highly chemical & wear-resistant flat spray nozzles
(with ceramic orifice)	VEP CERTIIM®	Highly chemical & wear-resistant even flat spray nozzles
PVDF	JJRP-PVDF	Precision-molded full cone spray nozzles, small capacity
	JJXP-PVDF	Precision-molded full cone spray nozzles
	BBXP-PVDF	Precision-molded wide angle full cone spray nozzles
PTFE	JJRP-PTFE	Highly chemical-resistant full cone spray nozzles, small capacity
	ISVV-PP	Quick-detachable flat spray nozzles
	ISJJX-PP	Quick-detachable full cone spray nozzles
	ISJJX-Y-PP	Quick-detachable full cone spray nozzles specialized for etching
	BIM-PP	Pneumatic fine mist spray nozzles
	EJX-PP	Ejector nozzle for solution agitation
	JJXP-PP	Precision-molded full cone spray nozzles, medium capacity
	VVP-PP	Precision-molded flat spray nozzles
PVC	LYYP-PVC	Wide-angle flat spray nozzles for ultra-low pressure spraying
	YY-PVC	Precision-molded wide-angle flat spray nozzles
	JJXP-PVC	Precision-molded full cone spray nozzles
HTPVC	JJXP-HTPVC	Precision-molded full cone spray nozzles
	SSXP-HTPVC	Precision-molded square full cone spray nozzles
PPS	AJP-PPS	Minimal clogging type full cone spray nozzles
ABS	SNAPJet	Quick-detachable full cone spray nozzles
FRPP	TAIFUJet®	Air nozzles amplifying air flow
	QB	Quick installation flat spray nozzles
	UT Ball Joint	Ball joint for adjusting spray angle while spraying

Spray nozzles made of metal are available in a wide variety. Please refer to our catalog on hydraulic spray nozzles.

Plastic Nozzles KBN CERTIIM®

Patent pending

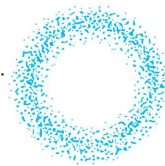


FEATURES

- Hollow cone spray nozzles with extremely fine spray and ultra small capacity. It sprays the finest atomizing in hydraulic spray nozzles.
- Less clogging structure because free passage diameter is 1.3~2.6 times bigger than that of conventional product.
- Adopt high purity alumina ceramic to keep finest atomizing for long period even if under high pressure conditions.

APPLICATIONS

Humidification: Air handling units, greenhouses, foods, etc.
Cooling: Poultry farms, pigpens, etc.
Spraying: Alcohol and other chemicals.
Others: Dust suppression, deodorization, etc.



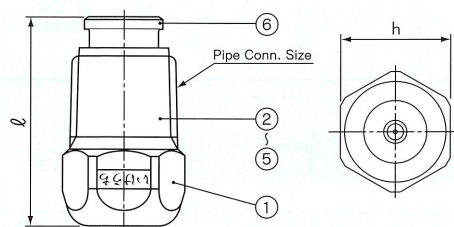
【Spray Pattern】



【Spray Distribution】

KBN CERTIIM®

Series	Pipe Conn. Size	Dimensions (mm)		Mass(g)
		ℓ	h	
KBN	1/4M	27	14	4



- ① Body ② Closer ③ Spring (SUS304)
④ Poppet (NBR) ⑤ Strainer (SUS304) ⑥ Strainer holder (PP)

STRUCTURE

- One-piece structure with one-shot injection molded ceramic orifice
- Thread is 1/4PT male (R1/4)
- Strainer and check valve is equipped as standard

MATERIALS

- Body : PA (Polyamide)
- Spray orifice : Ceramics
- Closer : Polyester elastomer

Spray Angle Code	Spray Capacity Code	Spray Angle			Spray Capacity (ℓ/hr)										Mean Drop Dia. (μm)	Free Pass. Dia. (mm)	Strainer Mesh	Color
		0.5 MPa	1 MPa	2 MPa	0.5 MPa	0.6 MPa	0.8 MPa	1 MPa	1.5 MPa	2 MPa	3.5 MPa	5 MPa	7 MPa	10 MPa				
80	063	50°	80°	80°	1.07	1.31	1.69	2.00	2.62	3.12	4.28	5.18	6.19	7.45	35	0.2	200	Red
	125	60°	80°	80°	2.19	2.68	3.47	4.10	5.37	6.39	8.77	10.6	12.7	15.3	5	0.3	100	Green
	22	65°	80°	80°	3.88	4.75	6.13	7.25	9.49	11.3	15.5	18.8	22.4	27.0	60	0.4	100	Purple

Check valve which closes and opens at 0.3MPa is built in the nozzle.

HOW TO ORDER

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

1/4M KBN80 125 TPA CV W

Spray Capacity Code
063
125
22

Check Valve

Actual application

KBN is suitable to following applications



Outside cooling



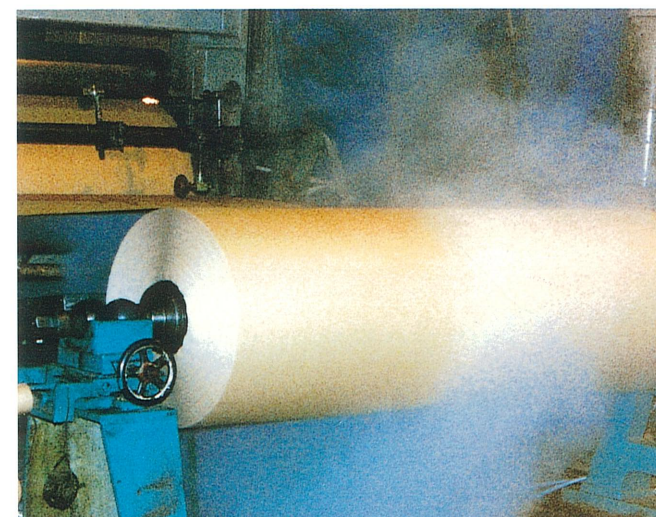
Dust suppression



Mist cooling and disinfections for cattle shed



Irrigation for green house



Humidification and Moisture control



Mist sculpture

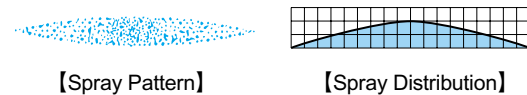


FEATURES

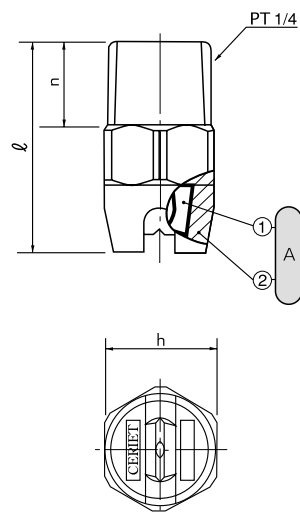
- Highly wear- and chemical-resistant plastic spray nozzle with injection molded ceramic orifice.
- Flat spray pattern with stable distribution having tapered spray pattern edges.
- Tapered spray pattern edges provide uniform spray distribution in multiple-nozzle arrangement.

APPLICATIONS

Washing : Cars, vehicles, containers, films, felts, filters, screens, bottles, gravel, stones, sand, metal parts, steel plates, machines, etc.
Spraying : Photo-etching, oils, lubricants, liquids, solutions, insecticides, herbicides, etc.
Water screen : Dust suppression, deodorization, etc.



VP CERTIIM®



Ⓐ Nozzle (① Ceramic orifice ② Body)

Series	Pipe Conn. Size	Dimensions (mm)			Mass (g)
		ℓ	h	n	
VP CERTIIM®	1/4M	26	14	10.5	6

STRUCTURE • One-piece structure with one-shot injection molded ceramic orifice

MATERIALS • Body : PVDF (Polyvinylidene fluoride)
• Spray orifice : Ceramics

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ /min)								Mean. Drop. Dia. (μ m)	Free Pass. Dia. (mm)	
			0.15 MPa	0.3 MPa	0.7 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa			2 MPa
115°	03	1/4M	101°	115°	124°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	140	0.2
	04		102°	115°	124°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.2
	05		102°	115°	124°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29		0.3
	07		103°	115°	124°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.3
	10		103°	115°	124°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.4
	15		104°	115°	123°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.5
	20		104°	115°	123°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.6
	30		105°	115°	122°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	270	0.8
90°	03	1/4M	76°	90°	100°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	150	0.2
	04		77°	90°	100°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.3
	05		77°	90°	100°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29		0.3
	07		78°	90°	100°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.4
	10		78°	90°	99°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.5
	15		79°	90°	99°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.6
	20		79°	90°	98°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.7
	30		80°	90°	97°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		0.9
80°	03	1/4M	67°	80°	90°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	150	0.3
	04		67°	80°	90°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.3
	05		67°	80°	90°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29		0.3
	07		68°	80°	89°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.4
	10		68°	80°	89°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.5
	15		69°	80°	88°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.7
	20		69°	80°	88°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.8
	30		70°	80°	87°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.0
65°	03	1/4M	52°	65°	75°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	160	0.3
	04		52°	65°	75°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.3
	05		52°	65°	74°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29		0.4
	07		53°	65°	74°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.5
	10		54°	65°	73°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58		0.6
	15		54°	65°	73°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	∫	0.8
	20		55°	65°	72°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.9
	30		56°	65°	72°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.1
50°	03	1/4M	37°	50°	60°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	180	0.3
	04		37°	50°	60°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.4
	05		38°	50°	59°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29		0.4
	07		38°	50°	58°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.5
	10		40°	50°	58°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.6
	15		40°	50°	57°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.8
	20		41°	50°	57°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		1.0
	30		42°	50°	56°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.2
	03		42°	50°	56°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		1.4
	04		43°	50°	55°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9		1.6
	05		43°	50°	55°	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5		1.7
	07		43°	50°	55°	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	490	2.0
	10		43°	50°	55°	—	—	—	—	—	—	—	—	—		—
	15		43°	50°	55°	—	—	—	—	—	—	—	—	—		—
	20		43°	50°	55°	—	—	—	—	—	—	—	—	—		—
	30		43°	50°	55°	—	—	—	—	—	—	—	—	—		—

HOW TO ORDER

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

1/4MVP 115 03 TPVDF
Spray Angle Code Spray Capacity Code
115° 03
∫ 03
50° 80

Plastic Nozzles
VEP CERTIIM®

P L A S T I C N O Z Z L E S

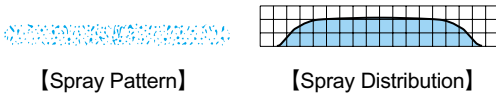


FEATURES

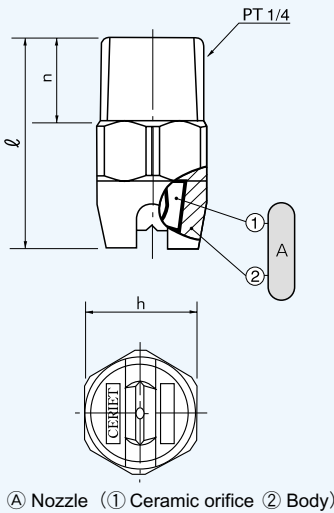
- Highly wear- and chemical-resistant plastic spray nozzle with injection molded ceramic orifice.
- Even flat spray pattern with uniform distribution across the entire spray area.
- Even spray impulse across the entire spray area.

APPLICATIONS

Washing : Cars, vehicles, containers, films, felts, filters, screens, bottles, gravel, stones, sand, metal parts, steel plates, machines, etc.
Spraying : Photo-etching, oils, lubricants, liquids, solutions, insecticides, herbicides, etc.
Water screen : Dust suppression, deodorization, etc.



VEP CERTIIM®



Series	Pipe Conn. Size	Dimensions (mm)			Mass (g)
		ℓ	h	n	
VEP CERTIIM®	1/4M	26	14	10.5	6

STRUCTURE • One-piece structure with one-shot injection molded ceramic orifice

MATERIALS • Body : PVDF (Polyvinylidene fluoride)
• Spray orifice : Ceramics

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ /min)									Mean. Drop. Dia. (μ.m)	Free Pass. Dia. (mm)
			0.15 MPa	0.3 MPa	0.7 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	2 MPa		
115°	19	1/4M	104°	115°	122°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	240	0.5
	23		105°	115°	122°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94		0.6
	31		105°	115°	122°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	8.00		0.6
	36		105°	115°	122°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		0.7
	39		105°	115°	122°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1	}	0.7
	59		105°	115°	122°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		0.9
	78		106°	115°	121°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1		1.0
	117		106°	115°	120°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2		1.2
157	106°	115°	120°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	480	1.4		
90°	19	1/4M	82°	90°	98°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	250	0.7
	23		82°	90°	98°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94		0.7
	31		83°	90°	97°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	8.00		0.9
	36		83°	90°	97°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		1.0
	39		83°	90°	97°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1	}	1.0
	59		83°	90°	97°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		1.2
	78		84°	90°	97°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1		1.4
	117		84°	90°	96°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2		1.7
157	84°	90°	96°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	510	2.0		
80°	19	1/4M	72°	80°	84°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	260	0.7
	23		72°	80°	84°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94		0.8
	31		72°	80°	84°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	8.00		0.9
	36		72°	80°	84°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		1.0
	39		73°	80°	84°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1	}	1.0
	59		74°	80°	84°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		1.3
	78		74°	80°	84°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1		1.6
	117		75°	80°	84°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2		1.9
157	76°	80°	84°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	520	2.4		
65°	19	1/4M	57°	65°	73°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	270	0.8
	23		57°	65°	73°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94		0.9
	31		57°	65°	73°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	8.00		1.1
	36		57°	65°	73°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		1.2
	39		57°	65°	73°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1	}	1.3
	59		58°	65°	72°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		1.4
	78		58°	65°	72°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1		1.8
	117		58°	65°	69°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2		2.3
157	58°	65°	69°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	550	2.7		
50°	19	1/4M	43°	50°	55°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	300	0.9
	31		43°	50°	55°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	8.00		1.2
	36		43°	50°	55°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1		1.4
	39		43°	50°	55°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		}
	59		43°	50°	55°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1	2.0	
	78		43°	50°	54°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2	2.4	
	117		43°	50°	54°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	600	
	157		43°	50°	54°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	600	2.9
40°	23	1/4M	31°	40°	46°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94	340	1.1
	36		32°	40°	45°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		1.4
	59		32°	40°	45°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		}
	78		33°	40°	45°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1	2.1	
	117		33°	40°	44°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2	2.6	
	157		33°	40°	44°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	670	3.0
25°	19	1/4M	18°	25°	32°	0.78	1.10	1.34	1.55	1.90	2.45	2.90	3.47	4.91	390	1.1
	31		19°	25°	32°	1.26	1.79	2.19	2.53	3.10	4.00	4.74	5.66	6.00		1.4
	36		20°	25°	32°	1.59	2.25	2.76	3.18	3.90	5.03	5.96	7.12	10.1		1.5
	39		21°	25°	32°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2	}	1.9
	59		21°	25°	32°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1		2.3
	78		21°	25°	32°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2		2.7
117	21°	25°	32°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	800	3.4		
15°	23	1/4M	10°	15°	19°	0.94	1.33	1.63	1.88	2.30	2.97	3.51	4.20	5.94	460	1.3
	36		10°	15°	19°	1.47	2.08	2.55	2.94	3.60	4.65	5.50	6.57	9.30		1.6
	59		10°	15°	19°	2.40	3.41	4.17	4.82	5.90	7.62	9.01	10.8	15.2		}
	78		10°	15°	19°	3.18	4.50	5.52	6.37	7.80	10.1	11.9	14.2	20.1	2.4	
	117		10°	15°	19°	4.78	6.75	8.27	9.55	11.7	15.1	17.8	21.4	30.2	3.0	
	157		10°	15°	19°	6.41	9.06	11.1	12.8	15.7	20.3	24.0	28.0	40.5	950	3.5

HOW TO ORDER

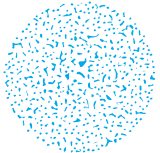
Please inquire or order for a specific nozzle on this coding system.

1/4M	VEP	115	19	TP	VEP
Spray Angle Code		Spray Capacity Code			
115°		19			
∅		∅			
15°		157			

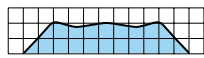
Plastic Nozzles

JJRP-PVDF JJXP-PVDF

P L A S T I C N O Z Z L E S



【Spray Pattern】



【Spray Distribution】

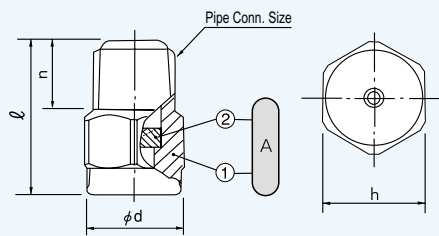
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- Disc whirler is designed to provide uniform distribution at small capacity.

APPLICATIONS

Washing : applications where pure water is being used
Spraying : Photo-etching, acid liquids, etc.

JJRP-PVDF

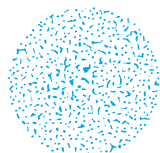


① Nozzle ② Body ③ Whirler

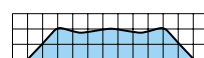
Series	Pipe Conn. Size	Dimensions (mm)				Mass (g)
		l	h	n	phi d	
JJRP-PVDF	1/8M	18	12	8	11.5	2
	1/4M	22	14	11.5	12	4.1

STRUCTURE • One-piece structure with press-fit disc whirler

MATERIAL • PVDF (Polyvinylidene fluoride)



【Spray Pattern】



【Spray Distribution】

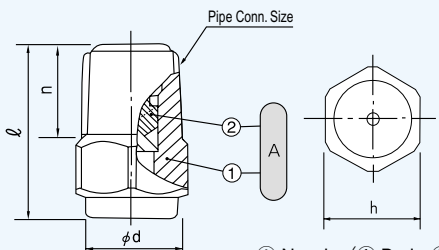
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- X-shaped whirler provides largest free passage diameter for minimal clogging.

APPLICATIONS

Washing : applications where pure water is being used
Spraying : Photo-etching, acid liquids, etc.

JJXP-PVDF



① Nozzle ② Body ③ Whirler

Series	Pipe Conn. Size	Dimensions (mm)				Mass (g)
		l	h	n	phi d	
JJXP-PVDF	1/8M	18	12	8	11.5	2
	1/4M	22	14	11.5	12	4.1

STRUCTURE • One-piece structure with press-fit X-shaped whirler

MATERIAL • PVDF (Polyvinylidene fluoride)

Series	Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (ℓ/min)								Mean. Drop. Dia. (μm)	Free Pass. Dia. (mm)
		1/8M	1/4M	0.05 MPa	0.2 MPa	0.5 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa		
JJRP-PVDF	005	○	○	—	60°	60°	—	0.36	0.44	0.50	0.59	0.74	0.85	0.99	260	0.4
	007	○	○	—	65°	62°	—	0.51	0.61	0.70	0.83	1.03	1.19	1.39	280	0.6
	010	○	○	60°	65°	55°	0.53	0.73	0.88	1.00	1.18	1.45	1.67	1.93	290	0.8
JJXP-PVDF	015	○	○	60°	65°	55°	0.79	1.09	1.32	1.50	1.77	2.18	2.50	2.89	1.0	1.0
	020	○	○	60°	65°	55°	1.06	1.46	1.75	2.00	2.36	2.91	3.34	3.86	1.5	1.5
	025	○	○	60°	65°	55°	1.32	1.82	2.20	2.50	2.95	3.62	4.17	4.82	1.5	1.5
	030	○	○	60°	65°	55°	1.59	2.18	2.63	3.00	3.54	4.36	5.00	5.79	410	1.5

■ JJRP-PVDF ■

1/8M JJRP	005 PVDF
Pipe Conn. Size	Spray Capacity Code
1/8M	005
1/4M	007

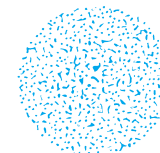
■ JJXP-PVDF ■

1/8M JJXP	010 PVDF
Pipe Conn. Size	Spray Capacity Code
1/8M	010
1/4M	030

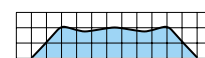
Plastic Nozzles

BBXP-PVDF JJRP-PTFE

P L A S T I C N O Z Z L E S



【Spray Pattern】



【Spray Distribution】

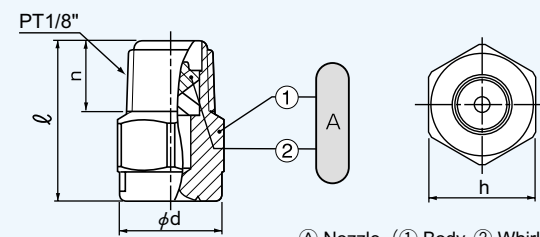
FEATURES

- Wide spray angle full cone spray nozzle with uniform spray distribution.
- Spray angle of 120° allows to cover large spray area than any other nozzles.
- X-shaped whirler provides largest free passage diameter for minimal clogging.

APPLICATIONS

Washing : applications where pure water is being used.
Spraying : Photo-etching, acid liquids, etc.
Cooling : Cooling heat exchanger of air conditioner.

BBXP-PVDF



① Nozzle ② Body ③ Whirler

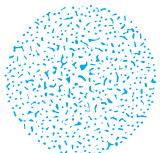
Series	Pipe Conn. Size	Dimensions (mm)				Mass (g)
		l	h	n	phi d	
BBXP	1/8M	18	12	8	11.5	2
	1/4M	22	14	11.5	11.5	4.1

STRUCTURE • One-piece structure with press-fit X-shaped whirler

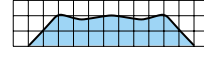
MATERIAL • PVDF (Polyvinylidene fluoride)

Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (ℓ /min)									Mean. Drop. Dia. (μ m)	Free Pass. Dia. (mm)
	1/8M	1/4M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.35 MPa	0.5 MPa	0.7 MPa	1 MPa		
015	○	○	—	120°	112°	—	—	1.09	1.32	1.50	1.88	2.18	2.50	2.89	310	0.8
020	○	○	110°	120°	113°	—	1.06	1.46	1.75	2.00	2.51	2.91	3.34	3.86	340	1.2

※Each nozzle has different color. 1/8MBBXP015: gray, 1/4MBBXP015: white, 1/8MBBXP020: black



【Spray Pattern】



【Spray Distribution】

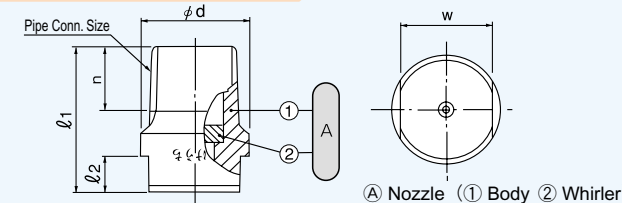
FEATURES

- Made of excellent wear-resistant PTFE (Polytetrafluoroethylene).
- Full cone spray pattern with a round impact area and uniform distribution.
- Compact design, small spray capacity.

APPLICATIONS

Washing : applications where pure water is being used
Spraying : Photo-etching, acid liquids, etc.

JJRP-PTFE



① Nozzle ② Body ③ Whirler

Series	Pipe Conn. Size	Dimensions (mm)					Mass (g)
		l1	l2	w	n	phi d	
JJRP-PTFE	1/8M	16	4	10	7	12	2
	1/4M	21	5	14	10.5	16	5

STRUCTURE • One-piece structure with press-fit disc whirler

MATERIAL • PTFE (Polytetrafluoroethylene)

Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (ℓ/min)								Mean. Drop. Dia. (μm)	Free Pass. Dia. (mm)
	1/8M	1/4M	0.15 MPa	0.2 MPa	0.5 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa		
005	○	○	56°	60°	60°	—	0.36	0.44	0.50	0.59	0.74	0.85	0.99	270	0.5
007	○	○	60°	65°	62°	—	0.51	0.61	0.70	0.83	1.03	1.19	1.39	280	0.7
010	○	○	63°	65°	62°	—	0.73	0.88	1.00	1.19	1.48	1.70	1.98	290	0.8
015	○	○	64°	70°	72°	0.79	1.09	1.31	1.50	1.78	2.22	2.58	2.98	300	1.0
020	○	○	64°	70°	72°	1.06	1.45	1.75	2.00	2.38	2.95	3.41	3.97	310	1.2
030	○	○	75°	80°	78°	1.58	2.18	2.63	3.00	3.56	4.43	5.11	5.95	410	1.3
040	○	○	67°	70°	65°	2.11	2.91	3.50	4.00	4.75	5.91	6.82	7.93	380	1.4
050	○	○	76°	80°	70°	2.64	3.63	4.38	5.00	5.94	7.38	8.52	9.92	520	1.6
060	○	○	88°	90°	80°	3.17	4.36	5.26	6.00	7.13	8.86	10.2	11.9	520	1.6

HOW TO ORDER

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

■ BBXP-PVDF ■

1/8M BBXP-PVDF	015 PVDF (GRA)
Pipe Conn. Size	Nozzle Color Code
1/8M	GRA for 1/8MBBXP015
1/4M	BLA for 1/4MBBXP020
	— for 1/4MBBXP015

■ JJRP-PTFE ■

1/8M JJRP	005 PTFE
Pipe Conn. Size	Spray Capacity Code
1/8M	005
1/4M	060

HOW TO ORDER

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

*The code of 1/4" thread JJRP is 1/4×1/8 MJJRP XX PVDF

Plastic Nozzles

Quick-detachable

ISVV-PP

Patent pending

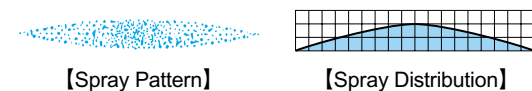


FEATURES

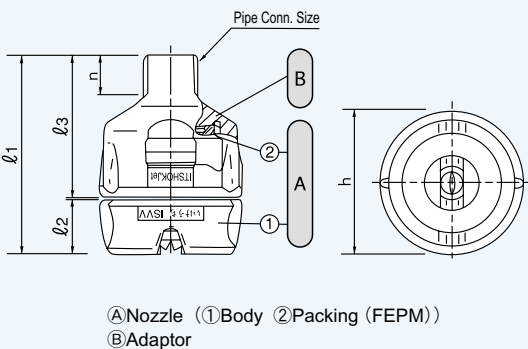
- Flat spray pattern with uniform distribution having tapered spray pattern edges.
- Quick installation and removal by just turning a nozzle 90° by hand.
- Ideal for saving maintenance time and applications requiring accurate reproducible alignment of nozzles.
- Nozzle bodies are color-coded by spray capacity for easy identification.

APPLICATIONS

Washing
Etching, stripping, chemical treatment, etc.



ISVV-PP



Series	Pipe Conn. Size	Dimensions (mm)					Mass (g)
		ℓ ₁	ℓ ₂	ℓ ₃	n	h	
ISVV	1/8M	37	10	26.5	7	26	6
	1/4M	40	10	29.5	10.5	26	7
	3/8M	40	10	29.5	11	26	8

STRUCTURE

- Two-piece structure comprised of adaptor and quick detachable nozzle

MATERIALS

- Nozzle body : PP (Polypropylene)
- Packing : FEPM (Tetrafluoroethylene-propylene)
- Adaptor : FRPP (Glass-fiber reinforced polypropylene)

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size			Spray Angle		Spray Capacity (ℓ/min)							Free Pass. Dia. (mm)	Color of Nozzle Body
		1/8M	1/4M	3/8M	0.15 MPa	0.3 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa		
115°	05	○	○	○	102°	115°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.3	Red
	07	○	○	○	103°	115°	—	0.40	0.49	0.57	0.70	0.90	1.07	0.3	Orange
	10	○	○	○	103°	115°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	0.4	Yellow
	15	○	○	○	104°	115°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	0.5	Green
	20	○	○	○	104°	115°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	0.6	Light Green
	30	○	○	○	105°	115°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	0.8	Dark Green
	40	○	○	○	106°	115°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	0.8	Blue
	50	○	○	○	106°	115°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	0.9	Light Blue
	05	○	○	○	77°	90°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.3	Red
	07	○	○	○	78°	90°	—	0.40	0.49	0.57	0.70	0.90	1.07	0.4	Orange
90°	10	○	○	○	78°	90°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	0.5	Yellow
	15	○	○	○	79°	90°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	0.6	Green
	20	○	○	○	79°	90°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	0.7	Light Green
	30	○	○	○	80°	90°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	0.9	Dark Green
	40	○	○	○	81°	90°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	1.1	Blue
	50	○	○	○	81°	90°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	1.2	Light Blue
	05	○	○	○	52°	65°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.4	Red
	07	○	○	○	53°	65°	—	0.40	0.49	0.57	0.70	0.90	1.07	0.5	Orange
	10	○	○	○	54°	65°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	0.6	Yellow
	15	○	○	○	54°	65°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	0.8	Green
65°	20	○	○	○	55°	65°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	0.9	Light Green
	30	○	○	○	56°	65°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	1.1	Dark Green
	40	○	○	○	56°	65°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	1.3	Blue
	50	○	○	○	57°	65°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	1.5	Light Blue
	05	○	○	○	38°	50°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.4	Red
	07	○	○	○	38°	50°	—	0.40	0.49	0.57	0.70	0.90	1.07	0.5	Orange
	10	○	○	○	40°	50°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	0.6	Yellow
	15	○	○	○	40°	50°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	0.8	Green
	20	○	○	○	41°	50°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	1.0	Light Green
	30	○	○	○	42°	50°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	1.2	Dark Green
50°	40	○	○	○	42°	50°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	1.4	Blue
	50	○	○	○	43°	50°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	1.6	Light Blue

① Complete unit

Pipe Conn. Size	Spray Angle Code	Spray Capacity Code	Series	Pipe Conn. Size	Spray Angle Code	Spray Capacity Code	Series
1/8M	90	30	ISVV (FEPM)FRPP	1/8M	90	30	ISVV PP(FEPM)
1/4M	115°	05		1/4M	115°	05	
3/8M	50°	50		3/8M	50°	50	

② Nozzle only

Pipe Conn. Size	Spray Angle Code	Spray Capacity Code	Series
1/8M	90	30	ISVV (FEPM)FRPP
1/4M	115°	05	
3/8M	50°	50	

HOW TO ORDER

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

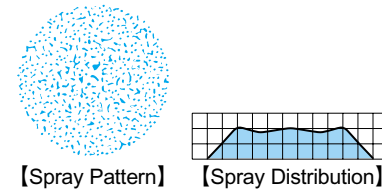
Plastic Nozzles

Quick-detachable

Specialized for etching

ISJJX-PP ISJJX-Y-PP

Patent pending



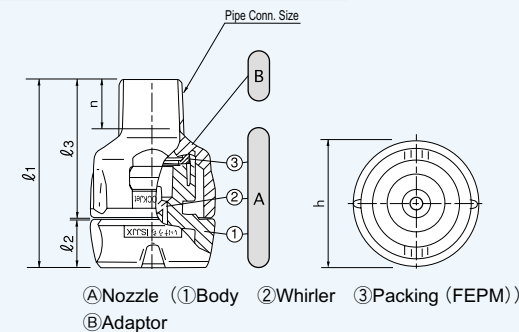
FEATURES

- Full cone spray nozzle with a removable whirler.
- Quick installation and removal by just turning a nozzle 90° by hand.
- Quick-detachable design saves maintenance time drastically.
- Nozzle bodies are color-coded by spray capacity for easy identification.

APPLICATIONS

Etching, stripping, chemical treatment, etc.

ISJJX-PP











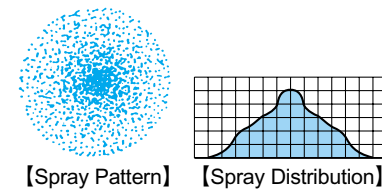
STRUCTURE

- Two-piece structure comprised of adaptor and quick detachable nozzle with whirler

MATERIALS

- Nozzle body and whirler : PP (Polypropylene)
- Packing : FEPM
- Adaptor : FRPP (Glass-fiber reinforced polypropylene)

Spray Capacity Code	Pipe Conn. Size			Spray Angle			Spray Capacity (ℓ/min)								Free Pass. Dia. (mm)	Color of Nozzle Body
	1/8M	1/4M	3/8M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa		
010	○	○	○	60°	65°	55°	—	0.53	0.73	0.88	1.00	1.18	1.45	1.67	0.8	
015	○	○	○	60°	65°	55°	—	0.79	1.09	1.32	1.50	1.77	2.18	2.50	1.0	
020	○	○	○	60°	65°	55°	—	1.06	1.46	1.75	2.00	2.36	2.91	3.34	1.5	
025	○	○	○	60°	65°	55°	—	1.32	1.82	2.20	2.50	2.95	3.62	4.17	1.5	
030	○	○	○	60°	65°	55°	—	1.59	2.18	2.63	3.00	3.54	4.36	5.00	1.5	
040	○	○	○	60°	65°	55°	—	2.12	2.91	3.51	4.00	4.72	5.81	6.67	1.8	
050	○	○	○	65°	70°	60°	—	2.65	3.64	4.38	5.00	5.90	7.27	8.34	1.8	
060	○	○	○	70°	75°	65°	2.51	3.18	4.37	5.26	6.00	7.08	8.72	10.00	1.8	



※Drawing, Dimension, Structure,Material: Refer to ISJJX








FEATURES

- Full cone spray nozzle with strong spray impact at center.
- Minimized distortion of spray distribution even if spray pressure is modulated.

APPLICATIONS

Specialized for high efficient etching for such as PCB and TAB.

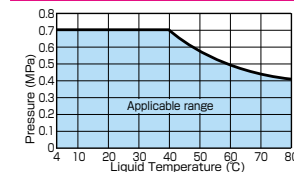
ISJJX-Y-PP

Spray Capacity Code	Pipe Conn. Size			Spray Angle			Spray Capacity (ℓ /min)								Free Pass. Dia. (mm)	Color of Nozzle Body
	1/8M	1/4M	3/8M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa		
010Y	○	○	○	54°	65°	64°	—	0.53	0.73	0.88	1.00	1.18	1.45	1.67	0.8	
015Y	○	○	○	54°	65°	64°	—	0.79	1.09	1.32	1.50	1.77	2.18	2.50	1.0	
020Y	○	○	○	54°	65°	64°	—	1.06	1.46	1.75	2.00	2.36	2.91	3.34	1.5	
025Y	○	○	○	54°	65°	64°	—	1.32	1.82	2.20	2.50	2.95	3.62	4.17	1.5	
030Y	○	○	○	54°	65°	64°	—	1.59	2.18	2.63	3.00	3.54	4.36	5.00	1.5	
040Y	○	○	○	54°	65°	64°	—	2.10	2.90	3.50	4.00	4.79	6.01	6.98	1.6	
050Y	○	○	○	54°	65°	64°	—	2.62	3.62	4.37	5.00	5.99	7.51	8.73	2.0	

HOW TO ORDER

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

Chart of working pressure for ISVV and ISJJX nozzles with FRPP adaptor



* Use under the applicable pressure indicated in the above chart.

① Complete unit

Pipe Conn. Size	Spray Capacity Code	Series
1/4M	040	ISJJX (FEPM)PP+FRPP
1/8M	010	
1/4M	015	
3/8M	060	
1/4M	040Y	ISJJX (FEPM)FRPP+FRPP
1/8M	010Y	
1/4M	015Y	
3/8M	050Y	

② Nozzle only

Pipe Conn. Size	Spray Capacity Code	Series
1/4M	040	ISJJX PP(FEPM)
1/8M	010	
1/4M	015	
3/8M	060	
1/4M	040Y	ISJJX FRPP(FEPM)
1/8M	010Y	
1/4M	015Y	
3/8M	050Y	

Plastic Nozzles

Pneumatic fine mist spray nozzles

BIM-PP

Patent registered



FEATURES

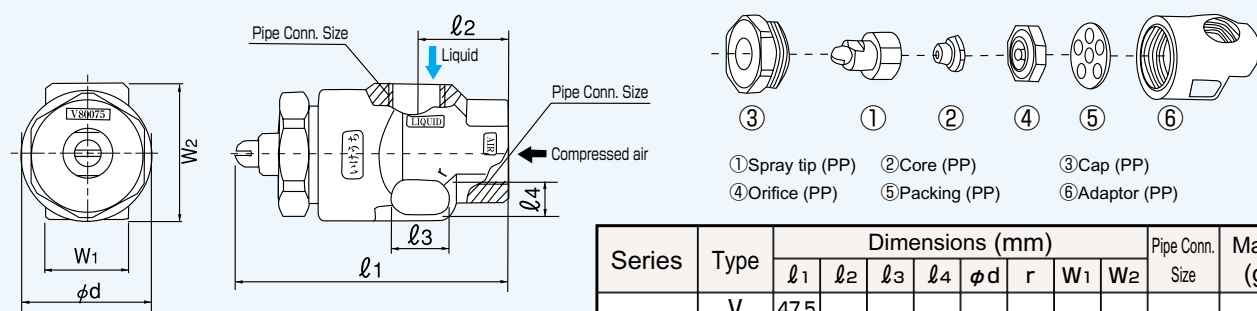
- Pneumatic spray nozzle producing fine mist whose mean droplet diameter is 20~100 μ m.
- Unique design minimizes clogging.
- Available in flat spray pattern (BIMV nozzle) or full cone spray pattern (BIMJ nozzle).

APPLICATIONS

Washing : Electric & electronic machine parts, etc.
Spraying : Etching, developing, etc.
Others : Sterilization, disinfection, moisture control, etc.

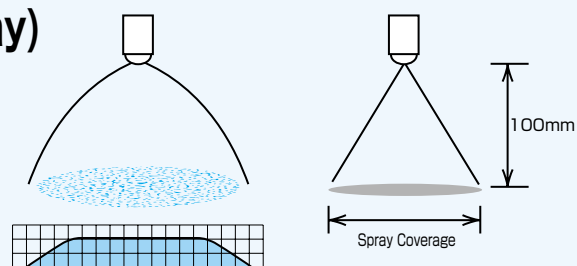
BIM-PP

STRUCTURE & MATERIAL



Series	Type	Dimensions (mm)								Pipe Conn. Size	Mass (g)
		l1	l2	l3	l4	phi d	r	W1	W2		
BIM-PP	V	47.5	16	10	5	22	2.5	14	23	PT1/8	10
	J	46.7									

BIMV (Flat Spray)

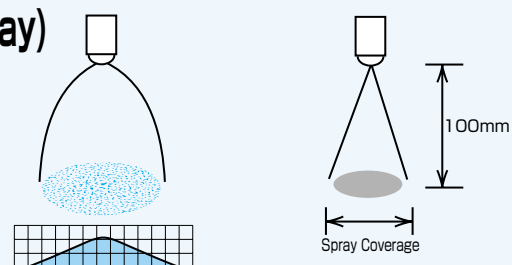


● Spray Coverage

Air Pressure (MPa)	Spray Coverage (mm)		
	0.1	0.15	0.25
0.2	200	270	—
0.3	170	210	310
0.4	—	200	260

Nozzle Code	Spray Angle Code	Air Consumption Code	Air Pressure (MPa)	Air Consumption (N l/min)	Spray Capacity (l/hr)				Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)		
					0.1	0.15	0.2	0.25		Spray Tip	Adaptor Liquid	Air
BIMV80075	80°	075	0.2	54	9.5	19.0	30.0	—	20~100	0.7	1.3	1.6
			0.3	74	4.0	9.0	17.0	27.0				
			0.4	94	—	4.4	9.0	16.0				

BIMJ (Full Cone Spray)



● Spray Coverage

Air Pressure (MPa)	Spray Coverage (mm)		
	0.1	0.15	0.25
0.2	30	25	—
0.3	35	35	30
0.4	—	35	35

Nozzle Code	Spray Angle Code	Air Consumption Code	Air Pressure (MPa)	Air Consumption (N l/min)	Spray Capacity (l/hr)				Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)		
					0.1	0.15	0.2	0.25		Spray Tip	Adaptor Liquid	Air
BIMJ2004	20°	04	0.2	27	4.7	9.5	15.0	—	30~100	1.6	0.9	1.1
			0.3	36	2.0	4.5	8.5	13.5				
			0.4	46	—	2.2	4.5	8.0				

HOW TO ORDER

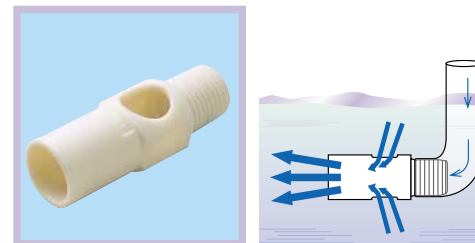
Please inquire or order for a specific nozzle on this coding system.

Flat Spray → BIMV80075PP+TPP-IN
Full Cone Spray → BIMJ2004PP+TPP-IN

Plastic Nozzles

for Solution Agitation

EJX-PP JJXP-PP



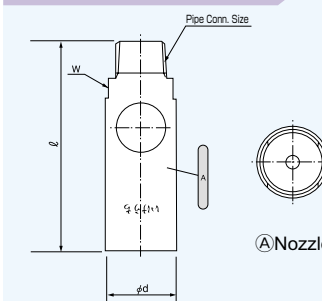
FEATURES

- Taking in surrounding liquid, EJX nozzles spout out 3-4 times larger volume of the amount supplied.
- Small size and simple structure suitable for multiple-nozzle arrangement.

APPLICATIONS

Solution agitation for PCB, CMP, Liquid crystal, etc.
Washing, etching, etc.

EJX-PP



Series	Pipe Conn. Size	Dimensions (mm)			Mass (g)
		l	phi d	w	
EJX-PP	1/8M	30	11	11	1.3
	1/4M	48	16	16	3.2
	3/8M	72	24	22	10
	1/2M	93	31	27	20
	3/4M	126	42	34	48
	1M	172	80	60	260
	1 1/2M	212	90	80	380

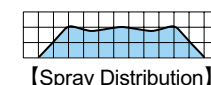
* Sizes 1/8M and 1/4M are injection molded.
* Sizes 1M and 1 1/2M are made of PVC.

- STRUCTURE** ● One-piece structure
MATERIALS ● PP (Polypropylene) for sizes 1/8M to 3/4M
● PVC (Polyvinyl chloride) for sizes 1M and 1 1/2M

Spray Capacity Code	Pipe Conn. Size	Supplied Water Volume (l/min)						Sprayed Water Volume (l/min) (Reference value)						Free Pass. Dia. (mm)
		0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	
1	1/8M	0.85	1.10	1.56	1.91	2.20	2.69	2.2	3.1	5.0	6.6	9.2	10	1.5
4	1/4M	3.10	4.00	5.66	6.93	8.00	9.80	8.1	11	18	24	34	38	2.8
9	3/8M	6.97	9.00	12.7	15.6	18.0	22.0	18	26	41	54	75	85	4.2
16	1/2M	12.4	16.0	22.6	27.7	32.0	39.2	33	46	72	95	134	151	5.7
30	3/4M	23.2	30.0	42.4	52.0	60.0	73.5	61	86	140	180	250	280	7.7
90	1M	69.7	90.0	127	156	180	220	180	260	410	540	760	850	13.3
160	1 1/2M	124	160	226	277	320	392	330	460	720	950	1340	1510	17.5



[Spray Pattern]



[Spray Distribution]

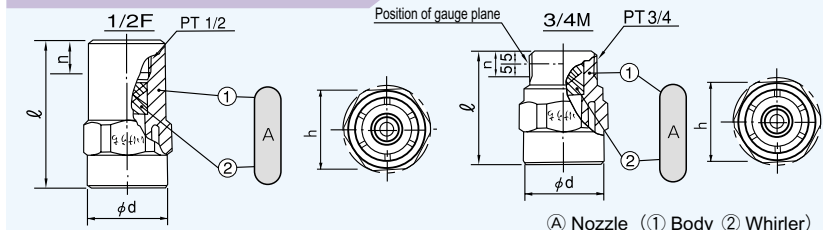
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- X-shaped whirler provides largest free passage diameter for minimal clogging.

APPLICATIONS

Washing : Machineries, screens, tanks, gravel, stones, sand, etc.
Cooling : Machineries, tanks, etc.
Spraying : Waste water treatment, aeration, foam breaking, dust suppression, etc.

JJXP-PP



Series	Pipe Conn. Size	Dimensions (mm)				Mass (g)
		l	h	n	phi d	
JJXP-PP	1/2F	56	32	13	31	25.3
	3/4M	44	32	10	31	17.9

- STRUCTURE** ● One-piece structure with press-fit X-shaped whirler
MATERIAL ● PP (Polypropylene)

Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (l/min)										Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)
	1/2F	3/4M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa			
2 ¹⁰⁰ / ₁₂	○	●	96°	100°	92°	5.03	6.35	8.73	10.5	12.0	14.2	17.4	20.0	23.1	570	3.1	3.1
2 ¹⁰⁰ / ₁₃	○	●	96°	100°	92°	5.44	6.88	9.46	11.4	13.0	15.3	18.9	21.7	25.1		3.1	3.1
2 ¹⁰⁰ / ₁₄	○	●	96°	100°	92°	5.86	7.41	10.2	12.3	14.0	16.5	20.3	23.3	27.0		3.5	3.5
2 ¹⁰⁰ / ₁₅	○	●	96°	100°	92°	6.28	7.94	10.9	13.1	15.0	17.7	21.8	25.0	28.9		3.5	3.5
2 ¹⁰⁰ / ₁₆	○	●	96°	100°	92°	6.70	8.47	11.6	14.0	16.0	18.9	23.3	26.7	30.9		3.5	3.5
2 ¹⁰⁰ / ₁₈	○	●	96°	100°	92°	7.54	9.53	13.1	15.8	18.0	21.2	26.2	30.0	34.7		3.5	3.5
2 ¹⁰⁰ / ₂₀	○	●	96°	100°	92°	8.38	10.6	14.6	17.5	20.0	23.6	29.1	33.4	38.6	740	3.5	3.5

* The nozzles with black dot "●" are available.
* Note: Position of gauge plane for male thread type has been changed.

HOW TO ORDER

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

■ EJX-PP ■

3/8M	EJX	1-	9	PP
1/8M				
1/4M				
1 1/2M				
Pipe Conn. Size				
1				
160				
Spray Capacity Code				
PP				
PP				
PP-IN for 1/8M and 1/4M				
PVC for 1M and 1 1/2M				

■ JJXP-PP ■

1/2F	JJXP	2 ¹⁰⁰ / ₁₂	PP
1/2F			
3/4M			
Pipe Conn. Size			
1/2F			
3/4M			
Spray Capacity Code			
2 ¹⁰⁰ / ₁₂			
2 ¹⁰⁰ / ₁₂			
2 ¹⁰⁰ / ₂₀			

Plastic Nozzles

VVP-PP

P L A S T I C N O Z Z L E S



FEATURES

- Flat spray pattern with stable distribution having tapered spray pattern edges.
- Tapered spray pattern edges provide uniform spray distribution in multiple-nozzle arrangement.

APPLICATIONS

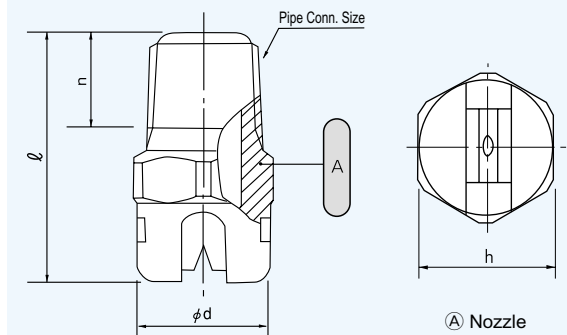
Washing : Cars, vehicles, containers, films, felts, filters, screens, bottles, gravel, stones, sand, metal parts, steel plates, machines, etc.

Spraying : Photo-etching, oils, lubricants, liquids, solutions, insecticides, herbicides, etc.

Water screen : Dust suppression, deodorization, etc.



VVP-PP



Series	Pipe Conn. Size	Dimensions (mm)				Mass (g)
		ℓ	h	n	φd	
VVP-PP	1/8M	22	12	8.5	11.5	1.1
	1/4M	27	14	11.5	11.5	2.2

STRUCTURE • PP Injection-molded nozzle

MATERIAL • PP (Polypropylene)

Optional Material • PVDF (Polyvinylidene fluoride)

Spray Angle Code	Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (ℓ /min)										Free Pass. Dia. (mm)
		1/8M	1/4M	0.15 MPa	0.3 MPa	0.7 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	2 MPa		
115°	03	○	○	101°	115°	124°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	0.2	
	04	○	○	102°	115°	124°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.2	
	05	○	○	102°	115°	124°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.3	
	07	○	○	103°	115°	124°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.3	
	10	○	○	103°	115°	124°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	0.4	
	15	○	○	104°	115°	123°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	0.5	
	20	○	○	104°	115°	123°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	0.6	
	30	○	○	105°	115°	122°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	0.8	
40	○	○	106°	115°	122°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	0.8		
90°	03	○	○	76°	90°	100°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	0.2	
	04	○	○	77°	90°	100°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.3	
	05	○	○	77°	90°	100°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.3	
	07	○	○	78°	90°	100°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.4	
	10	○	○	78°	90°	99°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	0.5	
	15	○	○	79°	90°	99°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	0.6	
	20	○	○	79°	90°	98°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	0.7	
	30	○	○	80°	90°	97°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	0.9	
40	○	○	81°	90°	97°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	1.1		
50	○	○	81°	90°	97°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9	1.2		
80°	05	○	○	67°	80°	90°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.3	
	10	○	○	68°	80°	89°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	0.5	
	40	○	○	71°	80°	87°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	1.2	
65°	03	○	○	52°	65°	75°	—	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	0.3	
	04	○	○	52°	65°	75°	—	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.3	
	05	○	○	52°	65°	74°	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.4	
	07	○	○	53°	65°	74°	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.5	
	10	○	○	54°	65°	73°	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	0.6	
	15	○	○	54°	65°	73°	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	0.8	
	20	○	○	55°	65°	72°	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	0.9	
	30	○	○	56°	65°	72°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	1.1	
40	○	○	56°	65°	71°	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	1.3		
50	○	○	57°	65°	71°	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9	1.5		
80	○	○	58°	65°	71°	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	1.9		
50°	30	○	○	42°	50°	56°	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	1.2	

Plastic Nozzles

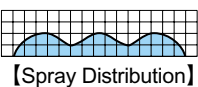
LYYP-PVC YYP-PVC

P L A S T I C N O Z Z L E S



Patent pending

【Spray Pattern】



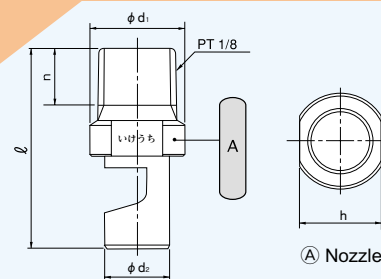
FEATURES

- Wide-angle flat spray with uniform spray distribution.
- Capable of low operating pressure (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 for oil free.

APPLICATIONS

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

LYYP-PVC



Series	Pipe Conn. Size	Dimensions (mm)					Mass(g)
		ℓ	h	n	φd ₁	φd ₂	
LYYP	1/8M	18	12	7	12	8	1.5

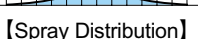
STRUCTURE • One-piece structure of all plastic.

MATERIAL • PVC (Polyvinyl chloride)

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ /min)							Mean. Drop. Dia. (μ m)	Free Pass. Dia. (mm)
		0.01MPa	0.015MPa	0.02MPa	0.008MPa	0.01MPa	0.012MPa	0.015MPa	0.02MPa	0.03MPa	0.04MPa		
02	1/8M	—	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		
03		77°	90°	97°	0.22	0.24	0.27	0.30	0.35	0.42	0.49		
035		87°	100°	107°	0.26	0.29	0.31	0.35	0.40	0.49	0.57		
04		88°	100°	108°	0.29	0.33	0.36	0.40	0.46	0.57	0.65	{	1.2
05		97°	110°	117°	0.37	0.41	0.45	0.50	0.58	0.71	0.82		
06		107°	120°	127°	0.44	0.49	0.54	0.60	0.69	0.85	0.98		
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	1,350	1.7
10		108°	120°	128°	0.73	0.82	0.89	1.00	1.15	1.41	1.63		1.9



【Spray Pattern】



FEATURES

- Capable of generating wide-angle flat spray at low liquid pressure.
- Features minimal clogging while atomization performance, spray pattern and distribution are rough and spray impulse is low compared with other flat spray nozzles.
- Spraying at an angle of 75° to the axis of the nozzle.

APPLICATIONS

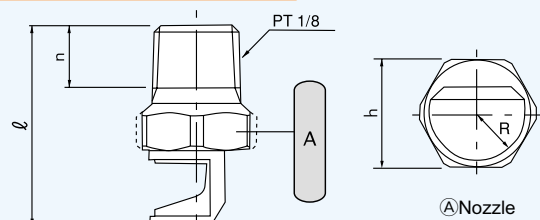
Washing : Eliminator plates, plate glass, planks, etc.

Deforming : Waste water treatment, paper manufactures, etc.

Cooling : Conveyor belts, roofs, tanks, etc.

Applications requiring wide-angle flat spray at low pressure.

YYP-PVC



Series	Pipe Conn. Size	Spray Capacity Code	Dimensions (mm)				Mass(g)
			ℓ	h	n	R	
YYP-PVC	1/8M	03~13	21.5	12	7	4.5	1.8
		16~30	22.5	12	7	4.5	1.8

STRUCTURE • PVC Injection-molded nozzle

MATERIAL • PVC (Polyvinyl chloride)

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ/min)							Mean.	Free Pass.
		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	Drop. Dia. (μm)	Dia. (mm)
03	1/8M	—	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	1.0	
10		103°	130°	144°	—	0.58	0.82	1.00	1.15	1.41	1.83	{	1.1
13		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	1.5	
20		116°	135°	147°	0.89	1.15	1.63	2.00	2.31	2.83	3.65	1.7	
25		117°	135°	146°	1.12	1.44	2.04	2.50	2.89	3.54	4.56	1.8	
30		118°	135°	146°	1.34	1.73	2.45	3.00	3.46	4.24	5.48	400	2.0

HOW TO ORDER

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

■ LYYP-PVC ■

1/8MLYYP 02 PVC

Spray Capacity Code
02
1
10

■ YYP-PVC ■

1/8MYYP 03 PVC

Spray Capacity Code
03
1
30

HOW TO ORDER

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

1/8M VVP 90 04 PP-IN

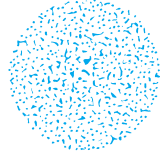
Pipe Conn. Size
1/8M
1/4M

Spray Angle Code
115°
1
50°

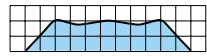
Spray Capacity Code
03
1
80

Plastic Nozzles

JJXP-PVC JJXP-HTPVC



【Spray Pattern】



【Spray Distribution】

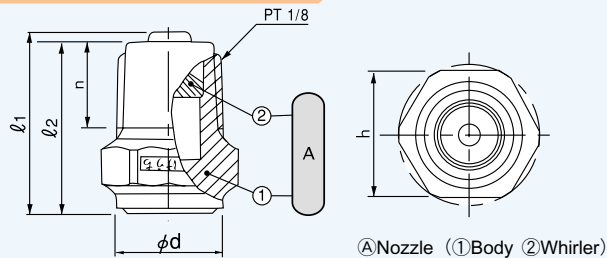
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- X-shaped whirler provides largest free passage diameter for minimal clogging.

APPLICATIONS

Washing : Machineries, screens, tanks, gravel, stones, sand, etc.
Cooling : Machineries, tanks, etc.
Spraying : Waste water treatment, aeration, foam breaking, dust suppression, etc.

JJXP-PVC



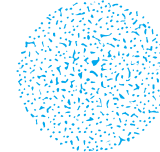
①Nozzle (①Body ②Whirler)

Series	Pipe Conn. Size	Dimensions (mm)					Mass(g)
		ℓ1	ℓ2	h	n	φd	
JJXP-PVC	1/8M	16.9	16	12	8	10	1.4

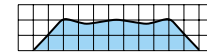
STRUCTURE • One-piece structure with removable X-shaped whirler

MATERIAL • PVC (Polyvinyl chloride)

Spray Capacity Code	Spray Angle			Spray Capacity (ℓ /min)									Mean. Drop. Dia. (μ m)	Free Pass. Dia. (mm)
	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa		
2 75°	70°	75°	66°	—	1.06	1.46	1.75	2.00	2.36	2.91	3.34	3.86	350	1.5
2 120°	115°	120°	110°	—	1.59	2.18	2.63	3.00	3.54	4.36	5.00	5.79	350	1.5



【Spray Pattern】



【Spray Distribution】

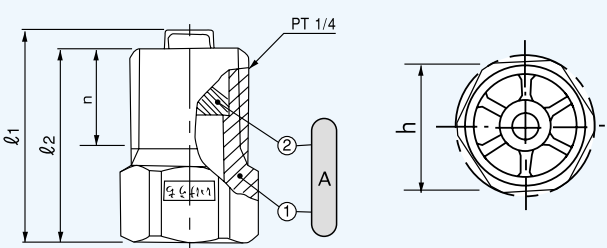
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- X-shaped whirler provides largest free passage diameter for minimal clogging.
- X-shaped whirler is removable for easy maintenance.

APPLICATIONS

Washing : Printed circuit boards, etc.
Spraying : Photo-etching, chemicals, etc.

JJXP-HTPVC



①Nozzle (①Body ②Whirler)

Series	Pipe Conn. Size	Dimensions (mm)					Mass(g)
		ℓ1	ℓ2	h	n		
JJXP-HTPVC	1/4M	23	21	14	10.5		2.5

STRUCTURE • One-piece structure with removable X-shaped whirler

MATERIAL • HTPVC (Heat-treated polyvinyl chloride)

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ /min)									Mean. Drop. Dia. (μm)	Free Pass. Dia. (mm)
		0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa		
040	1/4M	60°	65°	55°	—	2.12	2.91	3.51	4.00	4.72	5.81	6.67	7.72	380	2.2
050		65°	70°	60°	—	2.65	3.64	4.38	5.00	5.90	7.27	8.34	9.64	400	2.2
060		70°	75°	65°	2.51	3.18	4.37	5.26	6.00	7.08	8.72	10.0	11.6	520	2.2

HOW TO ORDER

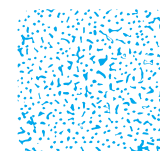
Please inquire or order for a specific nozzle on this coding system.

■ ■ JJXP-PVC ■ ■
1/8MJJXP2 75/2 PVC
1/8MJJXP2 120/3 PVC

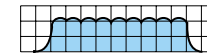
■ ■ JJXP-HTPVC ■ ■
1/4MJJXP 040 HTPVC
Spray Capacity Code
040
050
060

Plastic Nozzles

SSXP-HTPVC AJP-PPS



【Spray Pattern】



【Spray Distribution】

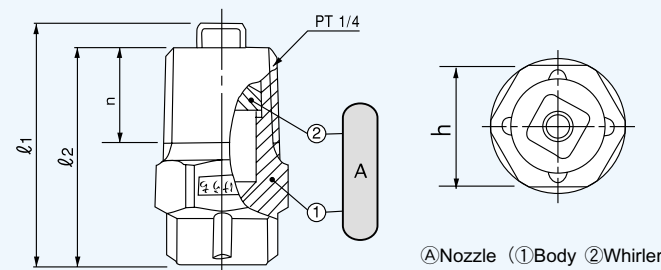
FEATURES

- Full cone spray pattern with a square impact area and uniform distribution.
- X-shaped whirler provides largest free passage diameter for minimal clogging.
- Square full cone spray pattern gives no gap in multiple-nozzle arrangement.

APPLICATIONS

Washing : Printed circuit boards, etc.
Spraying : Photo-etching, chemicals, etc.

SSXP-HTPVC



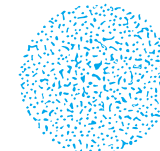
①Nozzle (①Body ②Whirler)

Series	Pipe Conn. Size	Dimensions (mm)					Mass(g)
		ℓ1	ℓ2	h	n		
SSXP-HTPVC	1/4M	26.5	24	14	10.5		3.1

STRUCTURE • One-piece structure with removable X-shaped whirler

MATERIAL • HTPVC (Heat-treated polyvinyl chloride)

Spray Capacity Code	Pipe Conn. Size	Spray Angle			Spray Capacity (ℓ /min)								Mean. Drop.	Free Pass.
		0.05 MPa	0.15 MPa	0.5 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	Dia. (μm)	Dia. (mm)
1.5°4.5	1/4M	56°	65°	65°	2.72	3.74	4.50	5.14	6.06	7.46	8.56	9.90	450	1.8



【Spray Pattern】



【Spray Distribution】

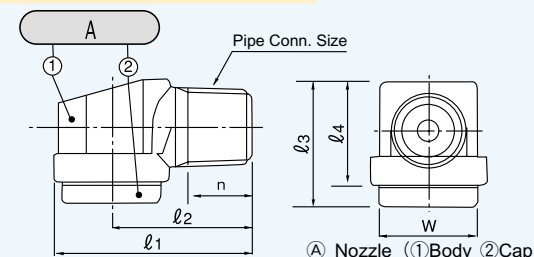
FEATURES

- Full cone spray pattern with a round impact area and uniform distribution.
- Simple structure without a whirler achieves maximum free passage and clogging is minimized.
- Spraying axis 90° from the axis of the nozzle inlet.

APPLICATIONS

Washing : Pre-painting treatment, degreasing of printed circuit board, etc.
Spraying : Pasteurizers, flue gas desulfurization cooling towers, foam breaking, aeration, etc.
Applications where re-circulated liquid is being used or clogging is a concern.

AJP-PPS



① Nozzle (①Body ②Cap)

Series	Pipe Conn. Size	Dimensions (mm)						Mass(g)
		ℓ1	ℓ2	ℓ3	ℓ4	W	n	
AJP-PPS	1/4M	32.5	23	20.5	17	16	10.5	6.8
	3/8M	37	26	23	20	20	11.0	10.3

STRUCTURE • One-piece structure with orifice cap electrodeposited to body. No obstacle inside.

MATERIAL • PPS (Polyphenylene sulfide)

Spray Capacity Code	Pipe Conn. Size		Spray Angle			Spray Capacity (ℓ /min)							Mean. Drop. Dia. (μm)	Free Pass. Dia. (mm)
	1/4M	3/8M	0.05 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa		
04	○		65°	75°	68°	1.59	2.04	2.86	3.48	4.00	4.70	5.77	640	2.2
05	○		65°	75°	68°	1.99	2.55	3.57	4.35	5.00	5.88	7.21	720	2.5
06	○		70°	80°	73°	2.39	3.06	4.26	5.22	6.00	7.06	8.66	800	2.8
07	○		70°	80°	73°	2.79	3.57	5.00	6.09	7.00	8.35	10.4	800	3.1
08		○	70°	80°	73°	3.18	4.06	5.71	6.96	8.00	9.54	11.9	680	3.2
10		○	70°	80°	73°	3.96	5.10	7.14	8.70	10.00	11.9	14.9	720	3.7
12		○	75°	85°	78°	4.78	6.12	8.57	10.4	12.00	14.3	17.9	800	4.1
14		○	75°	85°	78°	5.57	7.14	10.0	12.2	14.00	16.7	20.8	800	4.5
16		○	75°	85°	78°	8.37	8.16	11.4	13.9	16.00	19.1	23.8	1000	5.0

HOW TO ORDER

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

■ ■ SSXP-HTPVC ■ ■
1/4MSSXP1.5 65/4.5 HTPVC

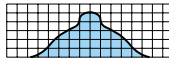
■ ■ AJP-PPS ■ ■
1/4M AJP 04 PPS
Pipe Conn. Size
1/4M
3/8M
Spray Capacity Code
04
05
06
16

Plastic Nozzles SNAPJet

P L A S T I C N O Z Z L E S



【Spray Pattern】



【Spray Distribution】

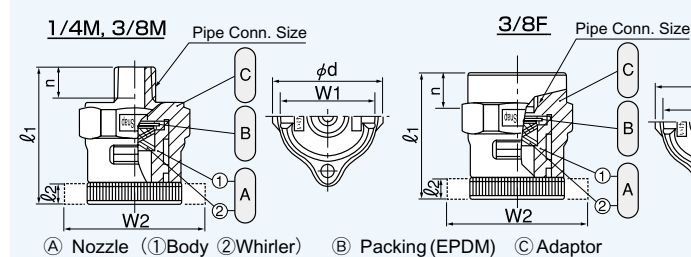
FEATURES

- Full cone spray pattern with a round impact area and strong spray distribution at center.
- Quick-detachable design makes periodical maintenance easy. Whirler inside the nozzles is also removable.
- Uniform etching effect is achieved in any production lines because the distortion of spray distribution is minimized even if spray pressure is modulated.

APPLICATIONS

Shadow mask etching, Lead frame etching
High-efficient etching for PCB and TAB

SNAPJet



Series	Pipe Conn. Size	Dimensions (mm)							Mass(g)
		ℓ ₁	ℓ ₂	φd	W ₁	W ₂	n		
SNAPJet	1/4M	44	6.5	35	30	45	10		30
	3/8M	44	6.5	35	30	45	10		35
	3/8F	44	6.5	35	30	45	11		40

STRUCTURE

- Two-piece structure comprised of adaptor and nozzle with whirler. Nozzle is removable only by turning 90°.

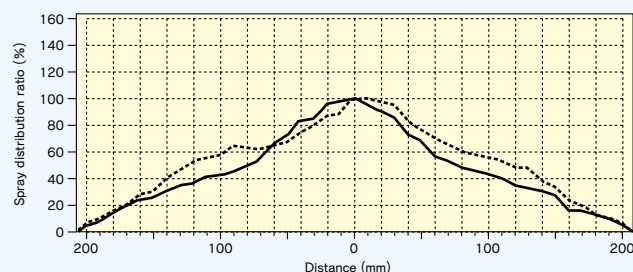
MATERIALS

- Nozzle body, adaptor and whirler : PPS (Polyphenylene sulfide)
- Packing : EPDM

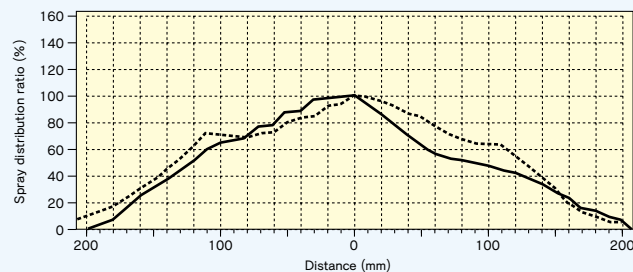
Spray Capacity Code	Pipe Conn. Size			Spray Angle		Spray Capacity (ℓ/min)								Mean Drop Dia. (μm)	Free Pass Dia. (mm)
	1/4M	3/8F	3/8M	0.05 MPa	0.2 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa			
040	○	○	○	54°	65°	64°	2.10	2.90	3.50	4.00	4.79	6.01	6.93	380	1.5
050	○	○	○	54°	65°	64°	2.62	3.62	4.37	5.00	5.99	7.51	8.73		2.0
060	○	○	○	59°	70°	69°	3.15	4.35	5.25	6.00	7.18	9.02	10.5		2.4
070	○	○	○	64°	75°	74°	3.67	5.07	6.12	7.00	8.38	10.5	12.2	520	2.4

Data of spraying ferric chloride by SNAPJet

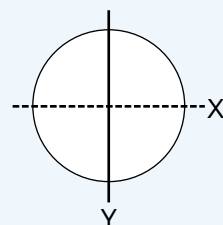
- 【Spray Condition】
- Spray pressure0.2MPa
 - Spray angle76°
 - Spray capacity7.25 ℓ/min



- 【Spray Condition】
- Spray pressure0.5MPa
 - Spray angle77°
 - Spray capacity11.0 ℓ/min



Nozzle	1/4M SNAP JJX
Liquid	FeCl ₃
Temperature	12℃
Density	1.44g/cm ³
Spray height	200mm



Solid line (—) and dotted line (---) show distributions at each direction X and Y.

HOW TO ORDER

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

■ SNAPJet ■

1/4M SNAPJJX	040 PPS+PPS
Pipe Conn. Size	Spray Capacity Code
1/4M	040
3/8F	
3/8M	070

Plastic Nozzles TAIFUJet®

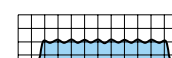
P L A S T I C N O Z Z L E S

Patent pending



Uniform distribution throughout the blow-off area

【Spray Pattern】



【Spray Distribution】

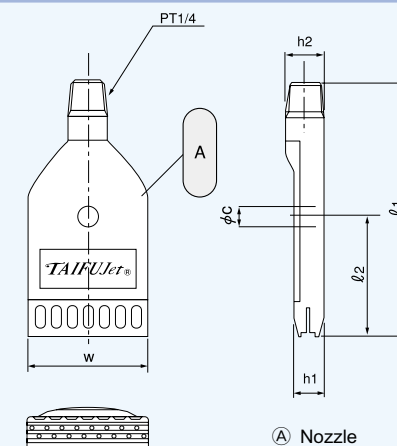
FEATURES

- Taking in surrounding air through holes around nozzle edge, TAIFUJet nozzles blow double volume of air supplied.
- Uniform distribution resulting from unique design achieves an efficient air blow and saves air consumption.
- Designed to reduce a noise level for improving working environments.

APPLICATIONS

Cooling
Blow-off drying
Blowing off dust, transporting, air curtain

TAIFUJet® Flat type



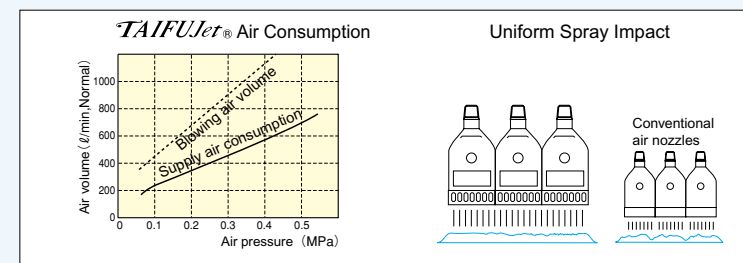
Series	Pipe Conn. Size	Dimensions (mm)							Mass(g)
		ℓ ₁	ℓ ₂	w	h ₁	h ₂	φc	ABS	
1/4MTF-F42-16-010ABS	1/4M	90	42	42	11	14	7	20	

MATERIAL

- ABS (Acrylonitrile butadiene styrene)

Optional Material

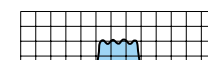
- PPS (Polyphenylene sulfide)



Affiliated Product



【Spray Pattern】



【Spray Distribution】

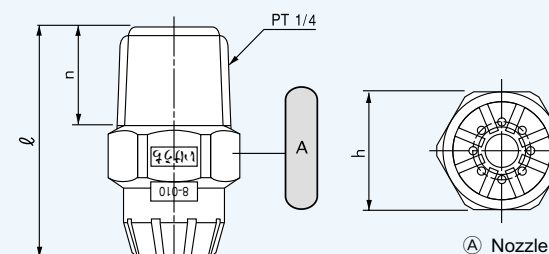
FEATURES

- High impact solid stream of air blown from eight holes.
- Compact 27mm long, weighs only 2g.
- Noise level reduced by more than 10dB compared to conventional one hole air nozzle.

APPLICATIONS

Applications which require high spray impact air blow into a narrow space (pipe, etc.)
Blow-off drying, blow-off dust, cooling, cleaning, stripping, air curtain, transporting.

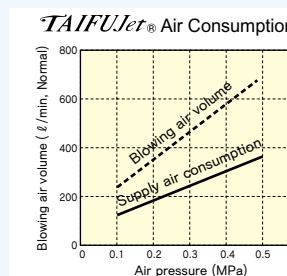
TAIFUJet® Round type



Series	Pipe Conn. Size	Dimensions (mm)			Mass (g)
		ℓ	h	n	
1/4MTF-R 8-010PP-IN	1/4M	27	14	11.5	2

MATERIAL

- PP (Polypropylene)



HOW TO ORDER

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

■ Flat type-ABS ■

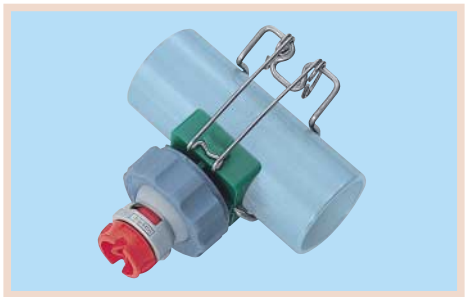
1/4M TF-F42-16-010 ABS

■ Round type-PP ■

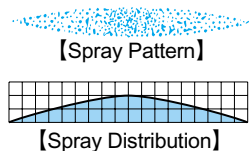
1/4M TF-R8-010 PP-IN

Plastic Nozzles QB

P L A S T I C N O Z Z L E S



* Installation image on pipe



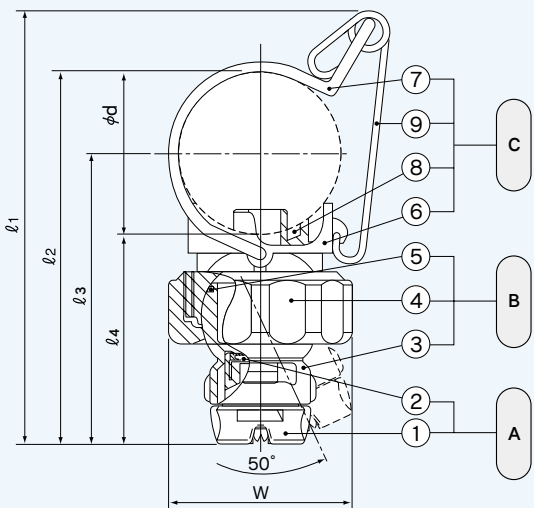
FEATURES

- Flat spray pattern with stable distribution having tapered spray pattern edges. Easy to change to full cone spray pattern.
- Quick installation. Drill a ϕ 14.3mm hole on a pipe and insert a nozzle into it.
- Adaptors, color-coded by size, are available in 1", 1 1/4", 1 1/2" and 2".
- O-ring seals between pipe and adaptor for pressure up to 0.4MPa.
- Adjust spray direction within 50degrees as you like.
- Spray tips are color-coded by spray capacity.
- Caps are shared by all size.
- Easy maintenance by quick detachable nozzle.
- Double locked by fitting spring lock (option).

APPLICATIONS

Pre-treatment for painting: Car, home electric appliances.
Washing, water rinsing after acid treatment of metal sheets, water rinsing process in food factory.

QB



①Nozzle ②Packing-FEPM
③Ball ④Cap ⑤O-ring-NBR
⑥Adaptor ⑦Spring clip ⑧ O-ring-NBR ⑨Spring lock (option))

Series	Pipe Conn. Size	Color of Adaptor	Dimensions (mm)						Mass (g)
			l ₁	l ₂	l ₃	l ₄	ϕ d	W	
QB	1		105	89	72	55	34	ϕ 48	61
	1 1/4		114	97.7	76.4	55	42.7	ϕ 48	61
	1 1/2		120	103.6	79.3	55	48.7	ϕ 48	61
	2		132	115.5	85.3	55	60.5	ϕ 48	61

STRUCTURE

- Comprises three parts : Nozzle, ball and adaptor
- Worn-out nozzle can be replaced separately

MATERIALS

- Nozzle, Ball, Cap and Adaptor : FRPP(Glass-fiber reinforced polypropylene)
- Paking : FEPM
- O-ring : NBR
- Spring clip and Spring lock : S304(Stainless steel 304)

Nozzle	Spray Angle Code	Spray Capacity Code	Color of Nozzle	Pipe Size (inch)	Spray Capacity (ℓ /min)			
					0.1MPa	0.2MPa	0.3MPa	0.4MPa
ISVV	40°	80		1	4.62	6.53	8.00	9.24
		100			5.77	8.16	10.0	11.5
		120		1 1/4	6.93	9.80	12.0	13.9
		160			9.24	13.1	16.0	18.5
	65°	180		1 1/2	10.4	14.7	18.0	20.8
		200			11.5	16.3	20.0	23.1
		240		2	13.9	19.6	24.0	27.7
		280			16.2	22.9	28.0	32.3
	80°	390			22.5	31.8	39.0	45

* ISVV-series and ISJJX-series nozzles can be attached to QB series.



Maximum operating pressure is 0.4MPa.

Do not use under conditions where water hammer or sudden change of water pressure could occur.

Plastic Nozzles UT Ball Joint

P L A S T I C N O Z Z L E S



* UT Ball Joint with a spray nozzle

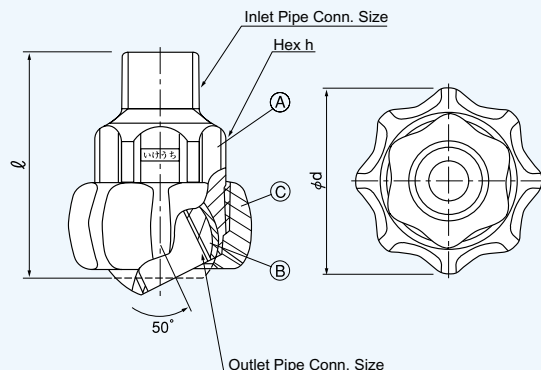
FEATURES

- Plastic ball joints capable of adjusting spray direction of nozzle within 50° while spraying up to 0.3MPa.
- No O-rings and tools are required. Quick installation by hand.
- Light weight, as half as metal joints.

APPLICATIONS

- Applications requiring correct positioning of spray nozzles.

UT Ball Joint



Series	Inlet Pipe Conn. Size	Outlet Pipe Conn. Size	Dimensions (mm)			Mass(g)
			l	ϕ d	h	
UT $\frac{1}{8}$ M \times $\frac{1}{8}$ F	1/8M(PT)	1/8F(PT)	38	32	21	15
UT $\frac{1}{4}$ M \times $\frac{1}{8}$ F	1/4M(PT)	1/8F(PT)	40	32	21	16
UT $\frac{1}{4}$ M \times $\frac{1}{4}$ F	1/4M(PT)	1/4F(PT)	40	32	21	15
UT $\frac{3}{8}$ M \times $\frac{1}{8}$ F	3/8M(PT)	1/8F(PT)	41	32	21	16
UT $\frac{3}{8}$ M \times $\frac{1}{4}$ F	3/8M(PT)	1/4F(PT)	41	32	21	15

STRUCTURE

- ① : Adaptor
- ② : Ball
- ③ : Cap

MATERIALS

- Adaptor and Cap : FRPP (Glass-fiber reinforced polypropylene)
- Ball : FRPP (Glass-fiber reinforced polypropylene) + PP(Polypropylene) + EPDM resin



Maximum operating pressure is 1MPa.

Do not use under conditions where water hammer or sudden change of water pressure could occur.

HOW TO ORDER

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

UT Ball Joint

UT Inlet Pipe Conn. Size M \times Outlet Pipe Conn. Size F FRPP-IN

HOW TO ORDER

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

ISVV NOZZLE PART 65 280 FRPP + ISB + BALL PART 1 1/4 ADAPTOR PART QB FRPP + L SPRING LOCK (OPTION)

PLASTIC NOZZLES CATALOG 2007-2008

Catalog on Plastic Nozzles

2007-2008



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