

Catalog Correction Notice

On pages 82 and 84 of the Hydraulic Spray Nozzle Catalog 18H, the free passage diameters listed for **AJP/AJP-PPS** and **AJP-AL92** series are incorrect.

We apologize for the error.

The tables below show the correct free passage diameters.

Clog-resistant Vaneless Full Cone Spray Nozzles **AJP/AJP-PPS** series

Spray capacity code	Pipe connection size								Spray angle (°)			Spray capacity (ℓ/min)						Mean drop. dia. (μm)	Free pass. dia. (mm)		
	AJP (metal)					AJP-PPS															
	R1/8	R1/4	R3/8	R1/2	R3/4	R1	R 1*1/2	R1/4	R3/8	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
02	○									64	75	69	—	1.02	1.43	1.74	2.00	2.35	2.89	640	1.5
03	○									65	75	69	—	1.53	2.14	2.61	3.00	3.53	4.33		1.9
04		○							○	65	75	68	1.59	2.04	2.86	3.48	4.00	4.70	5.77	740	2.2
05		○							○	65	75	68	1.99	2.55	3.57	4.35	5.00	5.88	7.21		2.5
06		○							○	70	80	73	2.39	3.06	4.29	5.22	6.00	7.06	8.66	820	2.8
07		○							○	70	80	73	2.79	3.57	5.00	6.09	7.00	8.23	10.1		3.1
08			○						○	70	80	73	3.19	4.08	5.71	6.96	8.00	9.54	11.9	900	3.1
10			○						○	70	80	73	3.98	5.10	7.14	8.70	10.0	11.9	14.9		3.5
12			○						○	75	85	78	4.78	6.12	8.57	10.4	12.0	14.3	17.9	1,000	4.0
14			○						○	75	85	78	5.57	7.14	10.0	12.2	14.0	16.7	20.9		4.4
16			○						○	75	85	78	6.37	8.16	11.4	13.9	16.0	19.1	23.8	4.8	
18				○						76	85	79	7.17	9.18	12.9	15.7	18.0	21.6	27.1	1,120	5.0
20				○						76	85	79	7.96	10.2	14.3	17.4	20.0	23.9	30.1		5.4
23				○						76	85	79	9.16	11.7	16.4	20.0	23.0	27.5	34.6	5.7	
26				○						76	85	79	10.4	13.3	18.6	22.6	26.0	31.1	39.1	6.0	
30				○						76	85	79	11.9	15.3	21.4	26.1	30.0	35.9	45.1	6.4	
35				○						83	90	85	13.9	17.9	25.0	30.4	35.0	41.9	52.6	7.1	
40				○						83	90	85	15.9	20.4	28.6	34.8	40.0	47.9	60.1	7.7	
45				○						83	90	85	17.9	23.0	32.1	39.1	45.0	53.9	67.6	8.5	
50				○						83	90	85	19.9	25.5	35.7	43.5	50.0	59.9	75.1	9.0	
55					○					83	90	85	21.9	28.1	39.3	47.8	55.0	65.9	82.6	1,280	9.0
60					○					83	90	85	23.9	30.6	42.9	52.2	60.0	71.8	90.2		9.4
70					○					83	90	85	27.9	35.7	50.0	60.9	70.0	83.8	105	10.2	
80					○					83	90	85	31.9	40.8	57.1	69.6	80.0	95.8	120	11.1	
90					○					83	90	85	35.8	45.9	64.3	78.3	90.0	108	135	11.4	
100						○				83	90	85	39.8	51.0	71.4	87.0	100	120	150	1,400	12.2
120						○				83	90	85	47.8	61.2	85.7	104	120	144	180		13.0
150						○				83	90	85	59.7	76.5	107	130	150	180	225	15.0	
180							○			83	90	85	71.7	91.8	129	157	180	216	270	1,400	15.5
200							○			83	90	85	79.6	102	143	174	200	239	301		17.9
250							○			83	90	85	99.5	128	179	217	250	299	376	19.8	

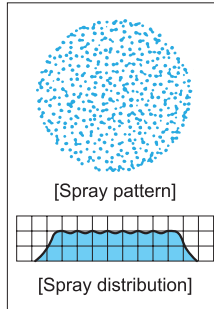
Clog-resistant Alumina Ceramic Full Cone Spray Nozzles **AJP-AL92** series

Spray capacity code	Nozzle thread size				Spray angle (°)			Spray capacity (ℓ/min)						Mean droplet diameter (μm)	Free passage diameter (mm)	
	R1/2	R3/4	R1	R 1*1/2												
18	○				76	85	79	7.16	9.18	12.9	15.7	18.0	21.5	27.1	800	5.0
20	○				76	85	79	7.96	10.2	14.3	17.4	20.0	23.9	30.1		5.4
23	○				76	85	79	9.15	11.7	16.4	20.0	23.0	27.5	34.6	5.7	
26	○				76	85	79	10.3	13.3	18.6	22.6	26.0	31.1	39.1	6.0	
30	○				76	85	79	11.9	15.3	21.4	26.1	30.0	35.9	45.1	6.4	
35	○				83	90	85	13.9	17.9	25.0	30.5	35.0	41.9	52.6	7.1	
40	○				83	90	85	15.9	20.4	28.6	34.8	40.0	47.9	60.1	7.7	
45	○				83	90	85	17.9	23.0	32.1	39.2	45.0	53.9	67.6	8.5	
50	○				83	90	85	19.9	25.5	35.7	43.5	50.0	59.9	75.2	9.0	
55		○			83	90	85	21.9	28.1	39.3	47.9	55.0	65.8	82.7	1,250	9.0
60		○			83	90	85	23.9	30.6	42.8	52.2	60.0	71.8	90.2		9.4
70		○			83	90	85	27.9	35.7	50.0	60.9	70.0	83.8	105	10.2	
80		○			83	90	85	31.4	40.8	57.1	69.6	80.0	95.8	120	11.1	
90		○			83	90	85	35.8	45.9	64.3	78.3	90.0	108	135	11.4	
100			○		83	90	85	39.8	51.0	71.4	87.0	100	120	150	1,400	12.2
120			○		83	90	85	47.8	61.2	85.7	104	120	144	180		13.0
150			○		83	90	85	59.7	76.5	107	131	150	180	226	15.0	
180				○	83	90	85	71.6	91.8	129	157	180	216	271	1,400	15.5
200				○	83	90	85	79.6	102	143	174	200	240	300		17.9
250				○	83	90	85	99.5	128	179	217	250	299	376	19.8	

Clog-resistant Vaneless Full Cone Spray Nozzles

AJP/AJP-PPS

Full Cone



[Features]

- Full cone spray pattern with a round impact area and uniform distribution.
- Unique design to produce fine atomization by liquid impinging inside chamber without a whirler.
- No-whirler design with large free passage diameter minimizes clogging.
- Spraying axis 90° from the axis of the nozzle inlet.
- High chemical and wear resistant AJP-PPS series is available for spraying hydrochloric acid and other chemicals.

[Standard pressure] 0.2 MPa

[Applications]

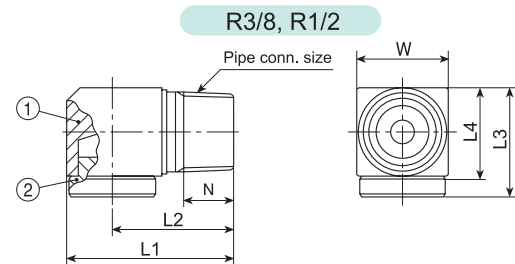
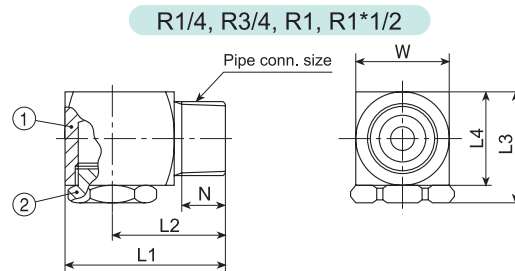
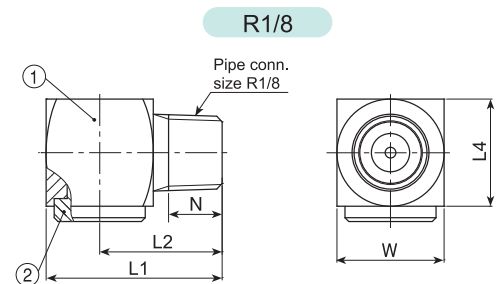
Cleaning: Pre-painting treatment, washing booths, machine parts, gas, incinerator fumes
 Cooling: Steel plates, copper pieces, gas
 Spraying: Aeration, foam breaking
 Others: Applications where re-circulated water is being used or clogging is a concern

AJP series

AJP series	
Structure	<ul style="list-style-type: none"> • Comprises a nozzle body and orifice cap. • Orifice cap for sizes R1/8, R3/8, and R1/2 is pressed into the nozzle body. Orifice cap for the other sizes are screw-in type. • No obstructions in nozzle interior.
Material	<ul style="list-style-type: none"> • Body: S304, S303, or SCS13 (vary by the spray capacity code) • Orifice cap: S303 • Optional material: S316

Pipe conn. size	Dimensions (mm)						Mass (g)
	L1	L2	L3	L4	W	N	
R1/8	23	16	14	—	14	7	25
R1/4	32	23	20.5	16	16	10.5	55
R3/8	36	26	23.5	19	20	11	70
R1/2	46	33.5	31	25	25	14	180
R3/4	55	39	38	32	32	15	340
R1	70	50	48	40	40	18	670
R1*1/2	100	70	72	58.5	58.5	20	2,400

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



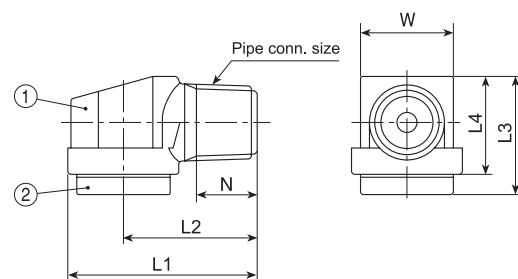
① Nozzle body ② Orifice cap

AJP-PPS series

AJP-PPS series	
Structure	<ul style="list-style-type: none"> • Comprises an injection-molded nozzle body and orifice cap. • Orifice cap is ultrasonically welded to the nozzle body. • No obstructions in nozzle interior.
Material	• PPS

Pipe conn. size	Dimensions (mm)						Mass (g)
	L1	L2	L3	L4	W	N	
R1/4	32.5	23	20.5	17	16	10.5	6.8
R3/8	37	26	23	20	19	11	10.3

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



① Nozzle body ② Orifice cap

Clog-resistant Vaneless Full Cone Spray Nozzles AJP/AJP-PPS series

Full Cone

Spray capacity code	Pipe connection size									Spray angle (°)			Spray capacity (ℓ/min)						Mean drop. dia. (μm)	Free pass. dia. (mm)	
	AJP (metal)						AJP-PPS														
	R1/8	R1/4	R3/8	R1/2	R3/4	R1	R1*1/2	R1/4	R3/8	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
02	○									64	75	69	—	1.02	1.43	1.74	2.00	2.35	2.89	640	1.6
03	○									65	75	69	—	1.53	2.14	2.61	3.00	3.53	4.33		1.9
04		○								65	75	68	1.59	2.04	2.86	3.48	4.00	4.70	5.77	}	2.2
05		○								65	75	68	1.99	2.55	3.57	4.35	5.00	5.88	7.21		2.5
06		○								70	80	73	2.39	3.06	4.29	5.22	6.00	7.06	8.66	}	2.8
07		○								70	80	73	2.79	3.57	5.00	6.09	7.00	8.23	10.1		3.1
08			○							70	80	73	3.19	4.08	5.71	6.96	8.00	9.54	11.9	}	3.2
10			○							70	80	73	3.98	5.10	7.14	8.70	10.0	11.9	14.9		3.7
12			○							75	85	78	4.78	6.12	8.57	10.4	12.0	14.3	17.9	}	4.1
14			○							75	85	78	5.57	7.14	10.0	12.2	14.0	16.7	20.9		4.5
16			○							75	85	78	6.37	8.16	11.4	13.9	16.0	19.1	23.8	}	5.0
18				○						76	85	79	7.17	9.18	12.9	15.7	18.0	21.6	27.1		5.1
20				○						76	85	79	7.96	10.2	14.3	17.4	20.0	23.9	30.1	}	5.4
23				○						76	85	79	9.16	11.7	16.4	20.0	23.0	27.5	34.6		6.0
26				○						76	85	79	10.4	13.3	18.6	22.6	26.0	31.1	39.1	}	6.5
30				○						76	85	79	11.9	15.3	21.4	26.1	30.0	35.9	45.1		7.1
35				○						83	90	85	13.9	17.9	25.0	30.4	35.0	41.9	52.6	}	7.8
40				○						83	90	85	15.9	20.4	28.6	34.8	40.0	47.9	60.1		8.5
45				○						83	90	85	17.9	23.0	32.1	39.1	45.0	53.9	67.6	}	9.2
50				○						83	90	85	19.9	25.5	35.7	43.5	50.0	59.9	75.1		9.8
55					○					83	90	85	21.9	28.1	39.3	47.8	55.0	65.9	82.6	}	9.6
60					○					83	90	85	23.9	30.6	42.9	52.2	60.0	71.8	90.2		10.1
70					○					83	90	85	27.9	35.7	50.0	60.9	70.0	83.8	105	}	11.2
80					○					83	90	85	31.9	40.8	57.1	69.6	80.0	95.8	120		12.2
90					○					83	90	85	35.8	45.9	64.3	78.3	90.0	108	135	}	13.0
100						○				83	90	85	39.8	51.0	71.4	87.0	100	120	150		1,120
120						○				83	90	85	47.8	61.2	85.7	104	120	144	180	}	14.8
150						○				83	90	85	59.7	76.5	107	130	150	180	225		1,120
180							○			83	90	85	71.7	91.8	129	157	180	216	270	}	17.8
200							○			83	90	85	79.6	102	143	174	200	239	301		1,280
250							○			83	90	85	99.5	128	179	217	250	299	376	1,350	22.3

How to order

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

① AJP series (Metal)

〈Example〉 1/4M AJP 04 S303

1/4M AJP 04 S303

Pipe conn. size*	Spray capacity code
■ 1/8M	■ 02
}	}
■ 1*1/2M	■ 250

② AJP-PPS series (Plastic)

〈Example〉 3/8M AJP 08 PPS

3/8M AJP 08 PPS

Pipe conn. size*	Spray capacity code
■ 1/4M	■ 04
■ 3/8M	}
	■ 16

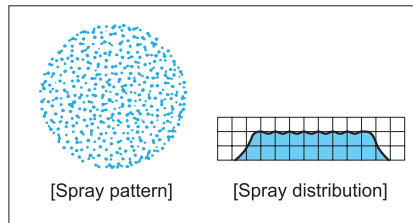
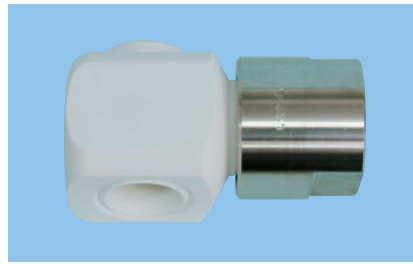
*"M" indicates male thread ("R" of the ISO standard) and "F" indicates female thread ("Rc" of the ISO standard), e.g. 1/8M = R1/8.

Clog-resistant Alumina Ceramic Full Cone Spray Nozzles

AJP-AL92

Clog-resistant full cone nozzle made of high wear-resistant and chemical-resistant alumina ceramics.

Full Cone



[Features]

- Full cone spray pattern with a round impact area and uniform distribution.
- Unique design to produce fine atomization by liquid impinging inside chamber without a whirler.
- No-whirler design with large free passage diameter minimizes clogging.
- Spraying axis 90° from the axis of the nozzle inlet.
- Right angle nozzle suitable for installation in narrow space.

[Standard pressure]

0.2 MPa

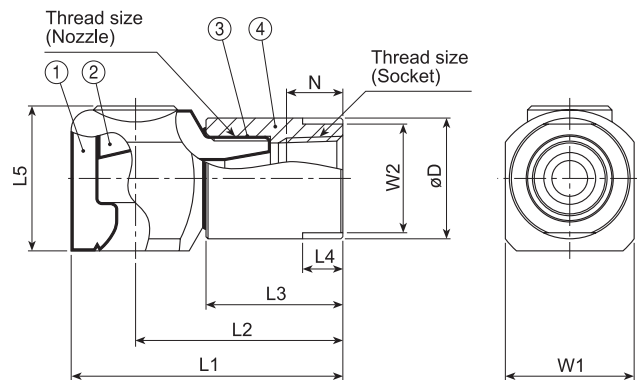
[Applications]

- Spraying slurry
- Absorption tower of flue gas desulfurization equipment
- Spraying water in cooling tower

AJP-AL92 series

AJP-AL92 series	
Structure	<ul style="list-style-type: none"> • Whole nozzle fired as one piece. • No obstructions in nozzle interior.
Material	<ul style="list-style-type: none"> • Nozzle body: 92% Alumina • Socket: S316

We offer AJP-AL92 series with a socket made of S316 to prevent thread damage, as the nozzle's alumina threads get easily chipped. Our S316 socket is female threaded.



① Nozzle body ② Ceramic plate ③ Adhesive: Araldite®H ④ Socket (S316)

Thread sizes		Dimensions (mm)									Mass (g)
Nozzle	Socket	L1	L2	L3	L4	L5	W1	W2	øD	N	
R1/2	Rc1/2	68	52	34	10	36	32	27	30	14	240
R3/4	Rc3/4	80	60	39	14	44	41	35	40	15	450
R1	Rc3/4	97	71	41	18	54	50	41	50	15	650
R1	Rc1	99	73	43	18	54	50	41	50	17	850
R1*1/2	Rc1	130	94	47	24	80.5	75	60	70	17	2,160
R1*1/2	Rc1*1/2	133	97	50	24	80.5	75	60	70	19	2,440

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

Position of the machined flat surfaces (L4 in the drawing) of the socket is not always the same as shown in the above photo and drawing.

Clog-resistant Alumina Ceramic Full Cone Spray Nozzles AJP-AL92 series

Spray capacity code	Nozzle thread size				Spray angle (°)			Spray capacity (ℓ/min)							Mean droplet diameter (μm)	Free passage diameter (mm)
	R1/2	R3/4	R1	R 1*1/2	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		
18	○				76	85	79	7.16	9.18	12.9	15.7	18.0	21.5	27.1	800	5.1
20	○				76	85	79	7.96	10.2	14.3	17.4	20.0	23.9	30.1		5.4
23	○				76	85	79	9.15	11.7	16.4	20.0	23.0	27.5	34.6		6.0
26	○				76	85	79	10.3	13.3	18.6	22.6	26.0	31.1	39.1		6.5
30	○				76	85	79	11.9	15.3	21.4	26.1	30.0	35.9	45.1		7.1
35	○				83	90	85	13.9	17.9	25.0	30.5	35.0	41.9	52.6		7.8
40	○				83	90	85	15.9	20.4	28.6	34.8	40.0	47.9	60.1		8.5
45	○				83	90	85	17.9	23.0	32.1	39.2	45.0	53.9	67.6		9.2
50	○				83	90	85	19.9	25.5	35.7	43.5	50.0	59.9	75.2		9.8
55		○			83	90	85	21.9	28.1	39.3	47.9	55.0	65.8	82.7		9.6
60		○			83	90	85	23.9	30.6	42.8	52.2	60.0	71.8	90.2	10.1	
70		○			83	90	85	27.9	35.7	50.0	60.9	70.0	83.8	105	11.2	
80		○			83	90	85	31.4	40.8	57.1	69.6	80.0	95.8	120	12.2	
90		○			83	90	85	35.8	45.9	64.3	78.3	90.0	108	135	13.0	
100			○		83	90	85	39.8	51.0	71.4	87.0	100	120	150	1,250	13.0
120			○		83	90	85	47.8	61.2	85.7	104	120	144	180		14.8
150			○		83	90	85	59.7	76.5	107	131	150	180	226		17.4
180				○	83	90	85	71.6	91.8	129	157	180	216	271	1,400	17.8
200				○	83	90	85	79.6	102	143	174	200	240	300		18.8
250				○	83	90	85	99.5	128	179	217	250	299	376		22.3

Full Cone

How to order

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

〈Example〉 1/2M AJP 18 AL92 + 1/2F x 1/2 F SOC S316

1/2M	AJP	18	AL92 +	1/2F	x	1/2	F SOC S316
Nozzle thread size*		Spray capacity code		Socket thread size* (Pipe conn. size)		Nozzle thread size (without "R")	
■ 1/2M		■ 18		■ 1/2F		■ 1/2	
∫		∫		∫		∫	
■ 1*1/2M		■ 250		■ 1*1/2F		■ 1*1/2	

**"M" indicates male thread ("R" of the ISO standard) and "F" indicates female thread ("Rc" of the ISO standard), e.g. 1/2M = R1/2, 1/2F = Rc1/2.