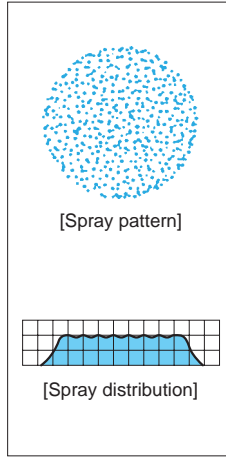


# Clog-resistant Vaneless Full Cone Spray Nozzles

## AJP/AJP-PPS



- Full cone spray pattern with a round impact area and uniform distribution.
- Without using a whirler, the liquid is atomized by collision inflow inside the nozzle.
- No-whirler design with a large free passage diameter minimizes clogging.
- Nozzle sprays at a 90° angle to the nozzle inlet.
- Highly chemical and wear resistant AJP-PPS series is available for spraying hydrochloric acid and other chemicals.

[STANDARD PRESSURE] 0.2 MPa

### [APPLICATIONS]

- Cleaning: Pre-paint 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

Full Cone

## AJP SERIES

Structure	<ul style="list-style-type: none"> <li>• Includes a nozzle body and orifice cap.</li> <li>• Orifice cap for sizes R1/8, R3/8, and R1/2 is pressed into the nozzle body. Orifice cap for the other sizes are screwed in.</li> <li>• No obstructions in the nozzle interior.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle body: S304, S303, or SCS13, depending on the spray capacity code.</li> <li>• Orifice cap: S303</li> </ul> <p>SPECIAL ORDER MATERIAL: S316</p>

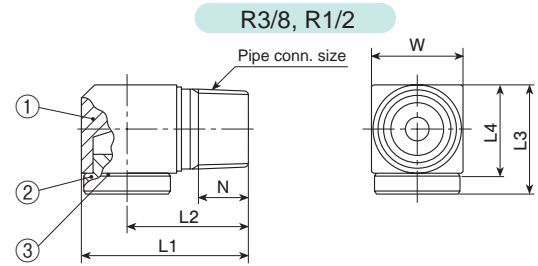
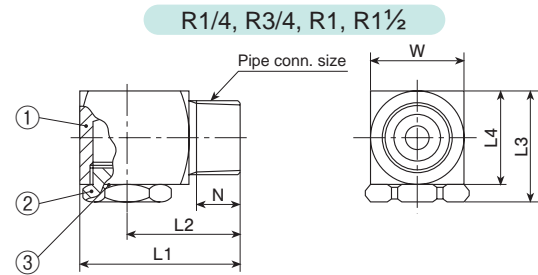
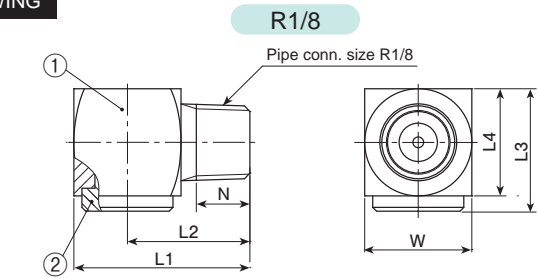
Pipe conn. size	Dimensions (mm)						Weight (g)
	L1	L2	L3	L4	W	N	
R1/8	23	16	16	14	14	7	25
R1/4	32	23	20.5	16	16	10.5	55
R3/8	36	26	23.5	19	20	11	70
R1/2	46	33.5	31	25	25	14	180
R3/4	55	39	38	32	32	15	340
R1	70	50	48	40	40	18	670
R1 1/2	100	70	72	58.5	58.5	20	2,400

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

### ⚠ Cautions for use (sizes R1/8, R3/8, and R1/2)

- In extreme temperatures, high or low, the AJP press-fitted orifice cap for sizes R1/8, R3/8 and R1/2 may come off.
- For these conditions, order the AJP nozzles in S316 with the screw-in orifice caps.
  - Do not use AJP size R1/8 in these conditions, the screw-in orifice cap is not available for size R1/8.

### DRAWING



① Nozzle body ② Orifice cap ③ Adhesive

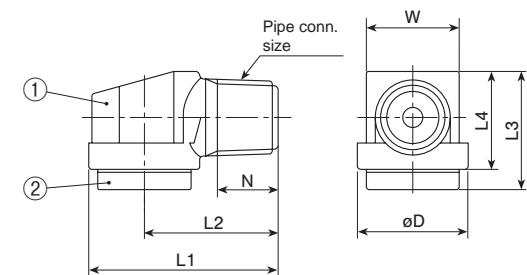
## AJP-PPS SERIES

Structure	<ul style="list-style-type: none"> <li>• Includes a nozzle body and orifice cap.</li> <li>• Orifice cap and nozzle body are ultrasonically welded together.</li> <li>• No obstructions in the nozzle interior.</li> </ul>
Material	• PPS

Pipe conn. size	Dimensions (mm)							Weight (g)
	L1	L2	L3	L4	W	N	øD	
R1/4	32.5	23	20.5	17	16	19	10.5	6.8
R3/8	37	26	23	20	19	22	11	10.3

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

### DRAWING



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			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
	R1/8	R1/4	R3/8	R1/2	R3/4	R1	R1 1/2	R1/4	R3/8												
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	}	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	740	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	}	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	820	4.8
18				○						76	85	79	7.17	9.18	12.9	15.7	18.0	21.6	27.1		}
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	}	5.7
26				○						76	85	79	10.4	13.3	18.6	22.6	26.0	31.1	39.1		}
30				○						76	85	79	11.9	15.3	21.4	26.1	30.0	35.9	45.1	900	
35				○						83	90	85	13.9	17.9	25.0	30.4	35.0	41.9	52.6		}
40				○						83	90	85	15.9	20.4	28.6	34.8	40.0	47.9	60.1	}	
45				○						83	90	85	17.9	23.0	32.1	39.1	45.0	53.9	67.6		}
50				○						83	90	85	19.9	25.5	35.7	43.5	50.0	59.9	75.1	}	
55					○					83	90	85	21.9	28.1	39.3	47.8	55.0	65.9	82.6		1,000
60					○					83	90	85	23.9	30.6	42.9	52.2	60.0	71.8	90.2	}	
70					○					83	90	85	27.9	35.7	50.0	60.9	70.0	83.8	105		}
80					○					83	90	85	31.9	40.8	57.1	69.6	80.0	95.8	120	}	
90					○					83	90	85	35.8	45.9	64.3	78.3	90.0	108	135		}
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		}
150						○				83	90	85	59.7	76.5	107	130	150	180	225	}	
180							○			83	90	85	71.7	91.8	129	157	180	216	270		1,280
200							○			83	90	85	79.6	102	143	174	200	239	301	}	
250							○			83	90	85	99.5	128	179	217	250	299	376		1,350

### HOW TO ORDER

To inquire about or order a specific nozzle please refer to this coding system.

#### AJP (metal)

Example: 1/4M AJP 04 S303

<b>1/4M</b>	<b>AJP</b>	<b>04</b>	<b>S303</b>
Pipe conn. size*1		Spray capacity code	Material of orifice cap*2
■ 1/8M		■ 02	
∩		∩	
■ 1*1/2M		■ 250	

#### AJP-PPS

Example: 3/8M AJP 08 PPS

<b>3/8M</b>	<b>AJP</b>	<b>08</b>	<b>PPS</b>
Pipe conn. size*1		Spray capacity code	Material
■ 1/4M		■ 04	
■ 3/8M		∩	
		■ 16	

\*1) "M" indicates male thread ("R" of the ISO standard), e.g. 1/8M = R1/8, 1\*1/2M = R1 1/2.

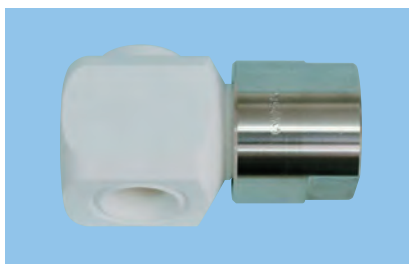
\*2) The material of nozzle body is S304, S303, or SCS13, depending on the spray capacity code.

# Clog-resistant Alumina Ceramic Full Cone Spray Nozzles

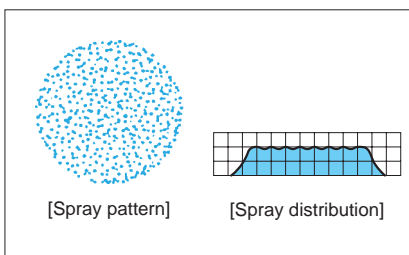
Made-to-Order

## AJP-AL92

Clog-resistant full cone nozzle made of highly wear- and chemical-resistant alumina ceramic.



- Full cone spray pattern with a round impact area and uniform distribution.
- Without using a whirler, the liquid is atomized by collision inflow inside the nozzle.
- No-whirler design with a large free passage diameter minimizes clogging.
- Nozzle sprays at a 90° angle to the nozzle inlet. This right angle nozzle is suitable for installation in small spaces.



**[STANDARD PRESSURE]**

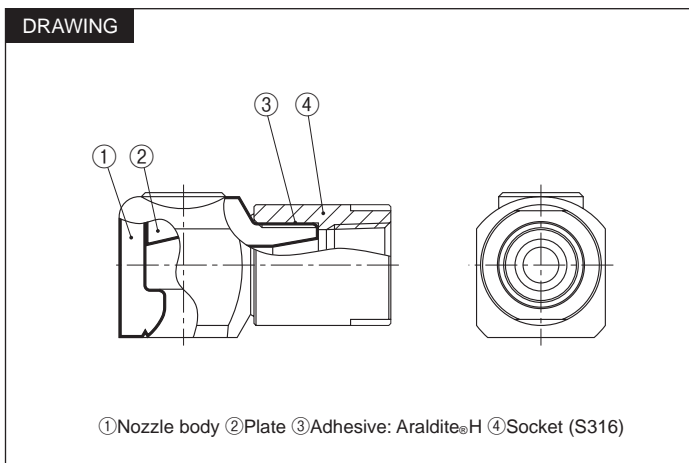
0.2 MPa

**[APPLICATIONS]**

- Spraying slurry
- Absorption tower of flue gas desulfurization equipment
- Spraying water in cooling tower
- Applications where re-circulated water is being used or clogging is a concern

Structure	<ul style="list-style-type: none"> <li>• Alumina ceramic one-piece structure.</li> <li>• No obstructions in the nozzle interior.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle body: 92% Alumina</li> <li>• Socket: S316</li> </ul>

The AJP-AL92 series is available with a socket made of S316 to prevent damage to the delicate alumina threads. The S316 socket is female threaded turning the male nozzle thread into a female connection.



Nozzle thread size	Spray angle (°) at 0.2 MPa	Spray capacity (L/min) at 0.2 MPa	Mean droplet diameter (µm)	Free passage diameter (mm)
R1/2	85 or 90	18.0-50.0	800-1,400	5.1-9.5
R3/4	90	55.0-90.0		9.6-12.9
R1	90	100-150		13.3-16.1
R1½	90	180-250		17.2-21.3

**HOW TO ORDER**

IKEUCHI will help select the best model for the specific applications and requirements of each customer. Contact us for more details.

Full Cone