Standard Solid Stream Jet

CCP / CP

[Spray pattern]

[Spray distribution]

[Features]

- Our highest impact solid stream. Interior design featuring minimal pressure drop generates much larger flow of solid stream jet as compared with other solid stream nozzles having the same orifice diameters.

[Standard Pressure]

3 MPa

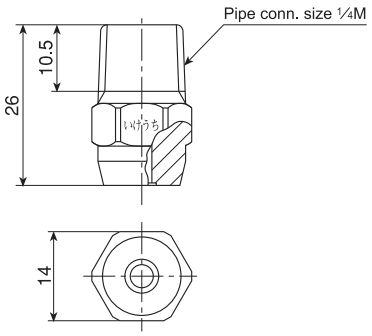
[Applications]

High pressure cleaning:
Wire and felt parts of paper making machines, vehicles, returnable containers, machinery, parts

Trimming: Paper making, asbestos plate

CCP series

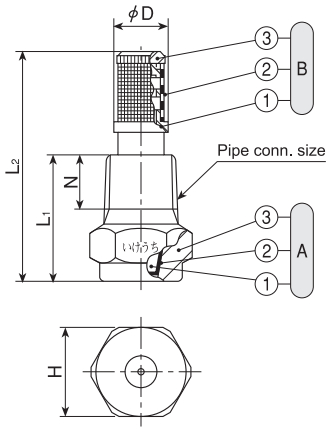
	CCP series
Structure	● Made of metal, one-piece structure.
Material	● S303 [Note] Use CCP series nozzles below the pressure of 3.5 MPa. ● Optional material: S316, B (brass)
Mass	● S303: 20 g



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

CP series

	CP series (with ceramic orifice inserted)
Structure	● One-piece structure with ceramic orifice inserted.
Material	● Spray orifice: ceramic ● Metal parts: S303 or B (brass) ● Optional material: S316



Pipe conn. size	Dimensions (mm)					Mass (g)	
	L_1	L_2	H	ϕD	N	S303	B
⅛M	16.5	30	12	7.5	7	7.1	7.8
¼M	26	—	14	—	10.5	19.5	21
⅜M	30	—	19	—	11	38	40

(When with a strainer, add 2-5 g to the above mass.)

Ⓐ **Nozzle** (①Ceramic orifice ②Adhesive: Araldite® ③Body)
Ⓑ **Strainer** (①Strainer holder ②Strainer screen ③Strainer cap)

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

Spray Capacity Code	CCP (Metal)	CP (Ceramic orifice inserted)			Spray Capacity (ℓ/min)												Free Passage Diameter (mm)	Strainer Mesh Size
	¼M	⅛M	¼M	⅜M	1 MPa	2 MPa	2.5 MPa	3 MPa	3.5 MPa	4 MPa	4.5 MPa	5 MPa	6.5 MPa	8 MPa	10 MPa	15 MPa		
25		●			1.43	2.02	2.25	2.47	2.67	2.85	3.03	3.19	3.64	4.03	4.51	5.52	0.8	50
31		●			1.78	2.52	2.82	3.09	3.34	3.57	3.78	3.99	4.55	5.05	5.64	6.91	0.9	50
37		○			2.14	3.03	3.39	3.71	4.01	4.28	4.54	4.79	5.46	6.06	6.77	8.30	1.0	—
43		○			2.50	3.54	3.96	4.33	4.68	5.00	5.30	5.59	6.37	7.06	7.91	9.67	1.1	—
49		○			2.86	4.04	4.52	4.94	5.34	5.71	6.06	6.38	7.28	8.07	9.04	11.1	1.2	—
56		○			3.22	4.54	5.08	5.56	6.01	6.42	6.81	7.18	8.19	9.08	10.2	12.4	1.2	—
62		○			3.57	5.05	5.65	6.18	6.68	7.14	7.57	7.98	9.10	10.1	11.3	13.8	1.3	—
68		○			3.93	5.55	6.21	6.80	7.35	7.85	8.33	8.79	10.0	11.1	12.4	15.2	1.4	—
74		○			4.29	6.06	6.78	7.42	8.01	8.56	9.09	9.58	10.9	12.1	13.6	16.6	1.4	—
80		○			4.65	6.56	7.35	8.04	8.68	9.28	9.85	10.4	11.8	13.1	14.7	18.0	1.5	—
87		○			5.00	7.07	7.91	8.66	9.35	10.0	10.6	11.2	12.8	14.1	15.8	19.4	1.6	—
93		○			5.36	7.58	8.48	9.28	10.0	10.7	11.4	12.0	13.7	15.2	17.0	20.8	1.6	—
99		○			5.72	8.08	9.04	9.89	10.7	11.4	12.1	12.8	14.6	16.2	18.1	22.1	1.7	—
111		○			6.43	9.09	10.2	11.1	12.0	12.9	13.6	14.4	16.4	18.2	20.3	24.9	1.8	—
124		○			7.15	10.1	11.3	12.4	13.4	14.3	15.1	16.0	18.2	20.2	22.6	27.7	1.9	—
136	○	○			7.85	11.1	12.4	13.6	14.7	15.7	16.7	17.6	20.0	22.2	24.8	30.4	2.0	—
148		○			8.57	12.1	13.6	14.8	16.0	17.1	18.2	19.2	21.8	24.2	27.1	33.2	2.0	—
161		○			9.28	13.1	14.7	16.1	17.4	18.6	19.7	20.8	23.7	26.2	29.3	35.9	2.1	—
173		○			9.99	14.1	15.8	17.3	18.7	20.0	21.2	22.4	25.5	28.3	31.6	38.7	2.2	—
186		○			10.7	15.2	16.9	18.6	20.0	21.4	22.7	24.0	27.3	30.3	33.9	41.5	2.3	—
198		○			11.4	16.2	18.1	19.8	21.4	22.8	24.2	25.5	29.1	32.3	36.1	44.2	2.4	—
210		○			12.1	17.2	19.2	21.0	22.7	24.3	25.7	27.1	30.9	34.3	38.4	47.0	2.4	—
223	○		○		12.9	18.2	20.3	22.3	24.0	25.7	27.3	28.7	32.8	36.3	40.6	49.8	2.5	—
247			○		14.3	20.2	22.6	24.7	26.7	28.6	30.3	31.9	36.4	40.4	45.2	55.3	2.6	—
272			○		15.7	22.2	24.8	27.2	29.4	31.4	33.3	35.1	40.0	44.4	49.7	60.8	2.7	—
297			○		17.1	24.2	27.1	29.7	32.1	34.3	36.3	38.3	43.7	48.5	54.2	66.4	2.9	—
322	○		○		18.6	26.3	29.4	32.2	34.7	37.1	39.4	41.5	47.3	52.5	58.7	71.9	3.0	—
346			○		20.0	28.3	31.6	34.6	37.4	40.0	42.4	44.7	51.0	56.5	63.2	77.4	3.1	—
371			○		21.4	30.3	33.9	37.1	40.1	42.8	45.4	47.9	54.6	60.6	67.7	82.9	3.2	—
396			○		22.8	32.3	36.1	39.6	42.7	45.7	48.5	51.1	58.2	64.6	72.2	88.5	3.3	—
420			○		24.3	34.3	38.4	42.0	45.4	48.5	51.5	54.3	61.9	68.7	76.8	94.0	3.4	—
445	○		○		25.7	36.3	40.6	44.5	48.1	51.4	54.5	57.5	65.5	72.7	81.3	99.5	3.5	—
470			○		27.1	38.4	42.9	47.0	50.7	54.3	57.5	60.7	69.2	76.7	85.8	105	3.6	—
495			○		28.6	40.4	45.1	49.5	53.4	57.1	60.6	63.8	72.8	80.8	90.3	111	3.7	—
519			○		30.0	42.4	47.4	51.9	56.1	60.0	63.6	67.0	76.4	84.8	94.8	116	3.8	—
544			○		31.4	44.4	49.7	54.4	58.8	62.8	66.6	70.2	80.1	88.8	99.3	122	3.9	—
569	○			○	32.8	46.4	51.9	56.9	61.4	65.7	69.7	73.4	83.7	92.9	104	127	4.0	—
594				○	34.3	48.5	54.2	59.4	64.1	68.5	72.7	76.6	87.4	96.9	108	133	4.1	—
717	○			○	41.4	58.6	65.5	71.7	77.5	82.8	87.8	92.6	106	117	131	160	4.5	—
767				○	44.3	62.6	70.0	76.7	82.8	88.5	93.9	99.0	113	125	140	171	4.6	—
890	○			○	51.4	72.7	81.3	89.0	96.2	103	109	115	131	145	163	199	5.0	—
1040	○			○	60.0	84.8	94.8	104	112	120	127	134	153	170	190	232	5.4	—

●……With strainer ○……Without strainer

Related Products

■Small orifice diameter CP series

Orifice Diameter Code	Pipe Conn. Size	Spray Capacity (ℓ/min)												Orifice Diameter (mm)	Strainer Mesh Size
	1/8M	1 MPa	2 MPa	2.5 MPa	3 MPa	3.5 MPa	4 MPa	4.5 MPa	5 MPa	6.5 MPa	8 MPa	10 MPa	15 MPa		
φ0.1	●	0.020	0.028	0.031	0.034	0.037	0.039	0.042	0.044	0.050	0.056	0.062	0.076	0.1	200
φ0.15	●	0.044	0.063	0.070	0.077	0.083	0.089	0.094	0.099	0.113	0.126	0.141	0.172	0.15	200
φ0.2	●	0.08	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.20	0.22	0.25	0.31	0.2	200
φ0.25	●	0.12	0.18	0.20	0.22	0.23	0.25	0.26	0.28	0.32	0.35	0.39	0.48	0.25	200
φ0.3	●	0.18	0.25	0.28	0.31	0.33	0.36	0.38	0.40	0.46	0.51	0.56	0.69	0.3	150
φ0.4	●	0.32	0.45	0.50	0.55	0.59	0.63	0.67	0.71	0.81	0.90	1.00	1.23	0.4	150
φ0.5	●	0.50	0.70	0.79	0.86	0.93	0.99	1.05	1.11	1.27	1.40	1.57	1.92	0.5	100
φ0.6	●	0.72	1.01	1.13	1.24	1.34	1.43	1.52	1.60	1.83	2.02	2.26	2.77	0.6	100
φ0.7	●	0.97	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.47	2.74	3.07	3.76	0.7	50
φ0.8	●	1.27	1.80	2.01	2.20	2.38	2.54	2.69	2.84	3.24	3.59	4.02	4.92	0.8	50

●……With strainer

[Note] The above nozzles are manufactured for specific orifice diameters, therefore spray capacity is not guaranteed.

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

① Standard CP and CCP series

〈Example〉…1/8MCP25S303W

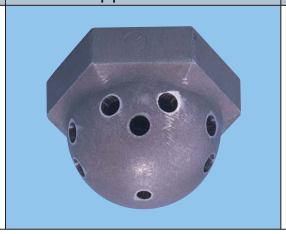
1/8M	CP	25	S303	W
Pipe Conn. Size	Series	Spray Capacity Code	Material	Strainer
1/8M	CCP	25	S303	W (with Strainer)
1/4M	CP	⟆	B* (*CP only)	– (without Strainer)
3/8M		1040		

② Small orifice diameter CP series

〈Example〉…1/8MCPφ0.1S303W

1/8MCP	φ0.1	S303	W
	Orifice Diameter Code	Material	Strainer
	φ0.1	S303	W (with Strainer)
	⟆	B	– (without Strainer)
	φ0.8		

Nozzles for Special Applications

Series	Appearance	Features	Applications
Surface washing nozzles		● Produces solid stream spray from a hemispheric nozzle body in a radial pattern.	● Cleaning sand filter bed at water purification plant.

Effective Use of Solid Stream Jet Nozzles

Tightening Torque

For high-pressure cleaning, the highly wear-resistant CERJET® nozzle with inserted ceramic orifices is most suitable. However, if it is screwed too tight, the nozzle body, especially small ones such as 1/8" size, may be damaged, which results in cracking the ceramic orifice. Please apply the recommended torque. Tightening torque should not exceed the following.

8 N-m for size ⅛M (stainless steel body and brass body)
15 N-m for size ¼M (stainless steel body and brass body)

Precautions for Nozzle Installation

Avoid installing the nozzle at the immediate downstream of a bent pipe or elbow.
Turbulence may affect the nozzle performance.

Nozzle Reaction Force

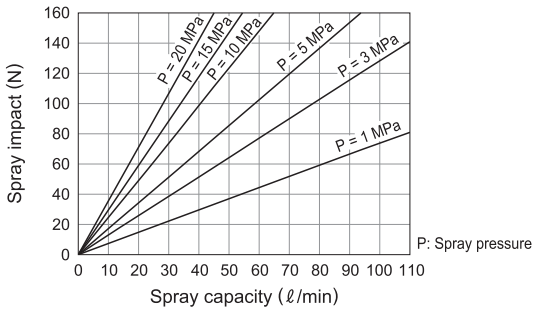
When spraying water under high pressure, the approximate reaction force is calculated by the following formula.

$F = 0.073 \cdot Q \cdot \sqrt{P}$

- F: Reaction force (N)
- Q: Spray capacity (ℓ/min)
- P: Spray pressure (MPa)

Spray Impact

Spray impact means the force of spray droplets hitting the target surface. The stronger spray impact the nozzle has, the better cleaning effect it achieves.



Variation in spray impact of solid stream jet nozzles
(Spray distance: 200 mm)