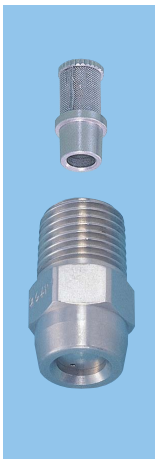
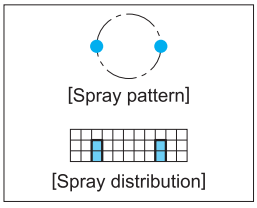
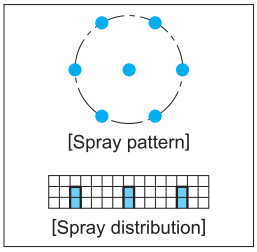
Multiple-orifice Solid Stream Jet Nozzles

2CCP•7CCP / 2CP•7CP







[Features]

- Multiple solid streams with high impact force.
- 2-orifice and 7-orifice types are available.
- Compact design.

[Standard Pressure]

1 MPa

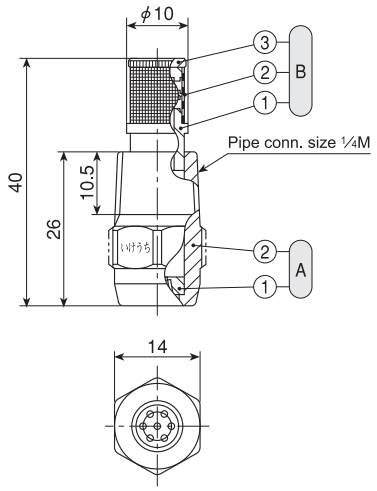
[Applications]

Cleaning: Wire and felt parts of paper making machines, dandy rolls, machine parts, bottles, vehicles, returnable containers

2CCP • 7CCP series

	2CCP • 7CCP series
Structure	● Made of metal, one-piece structure.
Material	● S303 ● Optional material: S420J2 (spray orifice only)
Mass	● 16 g

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



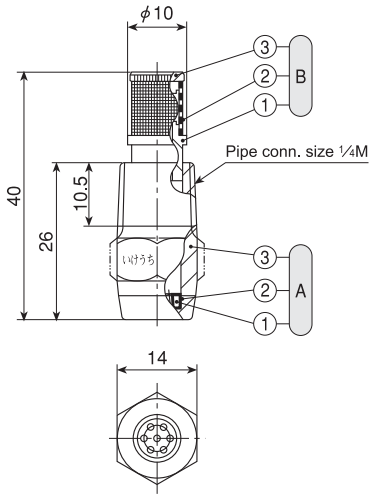
Ⓐ**Nozzle** (①Spray orifice ②Body)
Ⓑ**Strainer** (①Strainer holder ②Strainer screen ③Strainer cap)

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

2CP • 7CP series

	2CP • 7CP series (with ceramic orifice inserted)
Structure	● One-piece structure with ceramic orifice inserted.
Material	● Spray orifice: ceramic ● Metal parts: S303
Mass	● 17 g

(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.

2-orifice type

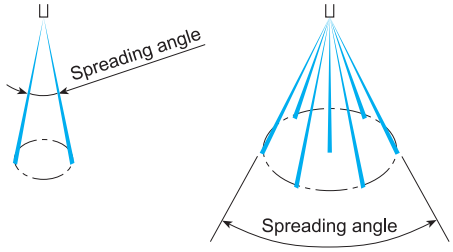
Spreading Angle Code	Spray Capacity Code	2CCP (Metal)	2CP (Ceramic orifice inserted)	Spreading Angle* (°)			Spray Capacity (ℓ/min)							Free Pass. Dia. (mm)	Strainer Mesh Size
				0.5 MPa	1 MPa	2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	1.5 MPa	2 MPa	3 MPa		
25	09		●	25	25	25	0.47	0.61	0.72	0.86	1.05	1.22	1.49	0.5	100
	12		●	25	25	25	0.68	0.88	1.04	1.24	1.52	1.75	2.15	0.6	100
	17	●	●	25	25	25	0.92	1.19	1.41	1.68	2.06	2.38	2.91	0.7	50
	22	●	●	25	25	25	1.19	1.54	1.82	2.18	2.67	3.08	3.78	0.8	50
	34	○	○	25	25	25	1.87	2.42	2.86	3.42	4.19	4.84	5.92	1.0	—
15	09		●	15	15	15	0.47	0.61	0.72	0.86	1.05	1.22	1.49	0.5	100
	12		●	15	15	15	0.68	0.88	1.04	1.24	1.52	1.75	2.15	0.6	100
	17	●	●	15	15	15	0.92	1.19	1.41	1.68	2.06	2.38	2.91	0.7	50
	22	●	●	15	15	15	1.19	1.54	1.82	2.18	2.67	3.08	3.78	0.8	50
	34	○	○	15	15	15	1.87	2.42	2.86	3.42	4.19	4.84	5.92	1.0	—
10	09		●	10	10	10	0.47	0.61	0.72	0.86	1.05	1.22	1.49	0.5	100
	12		●	10	10	10	0.68	0.88	1.04	1.24	1.52	1.75	2.15	0.6	100
	17	●	●	10	10	10	0.92	1.19	1.41	1.68	2.06	2.38	2.91	0.7	50
	22	●	●	10	10	10	1.19	1.54	1.82	2.18	2.67	3.08	3.78	0.8	50
	34	○	○	10	10	10	1.87	2.42	2.86	3.42	4.19	4.84	5.92	1.0	—

7-orifice type

Spreading Angle Code	Spray Capacity Code	7CCP (Metal)	7CP (Ceramic orifice inserted)	Spreading Angle* (°)			Spray Capacity (ℓ/min)							Free Pass. Dia. (mm)	Strainer Mesh Size
				0.5 MPa	1 MPa	2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	1.5 MPa	2 MPa	3 MPa		
15	30		●	15	15	15	1.65	2.13	2.52	3.01	3.69	4.26	5.21	0.5	100
	43		●	15	15	15	2.38	3.07	3.63	4.34	5.32	6.14	7.52	0.6	100
	59	●	●	15	15	15	3.22	4.16	4.92	5.88	7.20	8.32	10.2	0.7	50
	76	●	●	15	15	15	4.18	5.40	6.38	7.63	9.34	10.8	13.2	0.8	50
	119	○	○	15	15	15	6.52	8.41	9.96	11.9	14.6	16.8	20.6	1.0	—

●·····With strainer ○·····Without strainer

*[Note] Spreading angle means the angle between solid streams.



2CCP/2CP 7CCP/7CP

How to order

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

① 2-orifice type (2CCP/2CP series)

〈Example〉···¼M2CCP2517S303W

¼M 2CCP 25 17 S303 W

- 2CCP: Series — 2CCP, 2CP
- 25: Spreading Angle Code — 25, 15, 10
- 17: Spray Capacity Code — 09 ~ 34
- S303: Strainer Mesh Size
- W: Strainer — W (with Strainer), – (without Strainer)

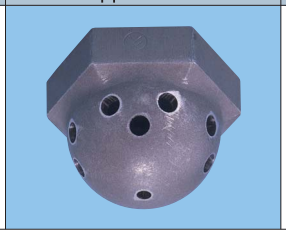
② 7-orifice type (7CCP/7CP series)

〈Example〉···¼M7CCP1559S303W

¼M 7CCP 15 59 S303 W

- 7CCP: Series — 7CCP, 7CP
- 15: Spreading Angle Code
- 59: Spray Capacity Code — 30 ~ 119
- S303: Strainer Mesh Size
- W: Strainer — W (with Strainer), – (without Strainer)

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

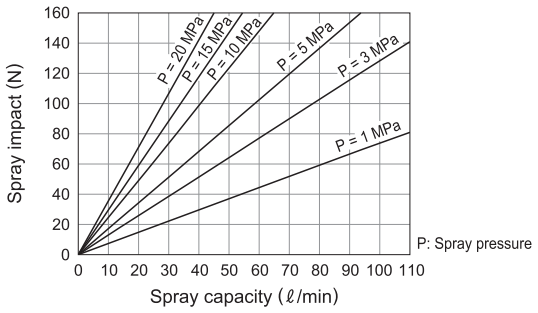
When spraying water under high pressure, the approximate reaction force is calculated by the following formula.

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

- 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)