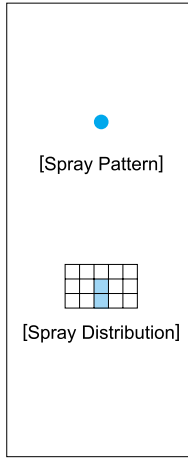
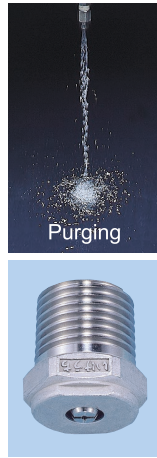


# Self-cleaning Solid Stream Jet

# MOMOJet® "C"

Solid Stream



### [Features]

- High impact solid stream.
- If clogged, by reducing the pressure to 0.03MPa, the spray tip is retracted and purges foreign particles. By increasing the pressure to 0.2MPa or above, normal spraying is restored.
- Straight-through orifice is suitable for multiple-nozzle arrangement.

### [Standard Pressure]

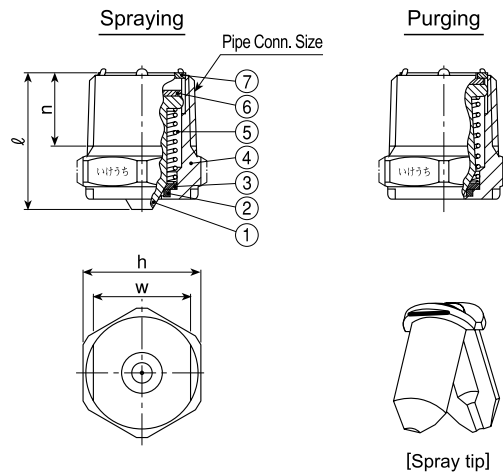
1MPa

### [Applications]

- Cleaning : Wire, felt parts and rollers of paper making machines, steel plates, PCB, etc.  
 Cooling : Steel plates, etc.  
 Foam breaking : Waste water treatment, etc.  
 Others : Applications where recirculated water is being used.

## MOMOJet® "C"-series

MOMOJet® "C"-series	
Structure	• By changing the liquid pressure, a built-in spring moves the split spray tip up and down and opens the orifice for purging.
Material	• S303 (Stainless steel 303)



Series	Pipe Conn. Size	Dimensions(mm)				Mass (g)
		ℓ <sub>1</sub>	h	W	n	
MOMOJet® "C"	½M	27	23	19	14	52

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

- ① Spray Tip ② Packing (EPDM) ③ Plate ④ Body  
 ⑤ Spring ⑥ Packing (EPDM) ⑦ Ring

Spray Capacity Code	Pipe Conn. Size	Spray Capacity (ℓ/min)					Orifice Diameter (mm)	
		0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	2 MPa	Spraying	Purging
10	½M	0.55	0.71	0.84	1.0	1.41	0.7	1.8
16		0.88	1.13	1.34	1.6	2.26	0.9	1.9
23		1.26	1.63	1.93	2.3	3.25	1.1	2.0
32		1.75	2.26	2.68	3.2	4.53	1.2	2.0
47		2.58	3.32	3.93	4.7	6.65	1.5	2.2
65		3.56	4.60	5.44	6.5	9.19	1.8	2.4

### [Note]

1. At start of spraying, a flow rate of about 9ℓ/min at 0.05MPa is required because the spray tip opens wide. Select an appropriate pump.
2. MOMOJet® is designed to start spraying at 0.1MPa, use at 0.2MPa or higher is recommended.
3. As these nozzles have active spray tips, under the standard pressure there is only a guarantee of spray capacity within +/-10%.

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

⟨Example⟩...½MOMOC10S303

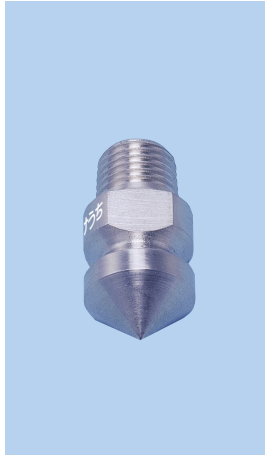
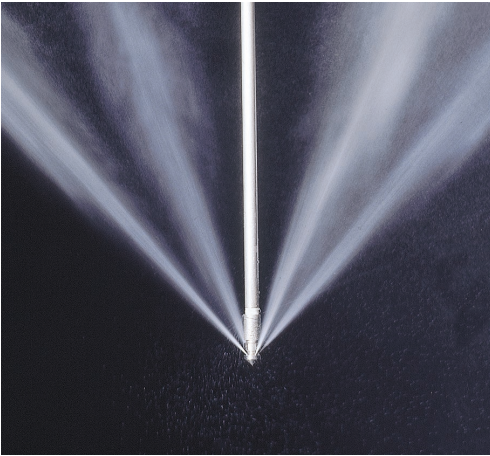
½ MOMOC 10 S303

Spray Capacity Code  
10  
 }  
65

**ALSO AVAILABLE!**

Self-cleaning  
 Flat Spray Nozzle  
**MOMOJet®**

See p.37 of this catalog.



### [Features]

- Cleaning inside pipes and tubes, moving itself by means of spraying solid stream jets in different directions as driving force.
- High impact jets effectively remove scale and dirt inside pipes.

### [Standard Pressure]

Not specified (RSP is a made-to-order nozzle)

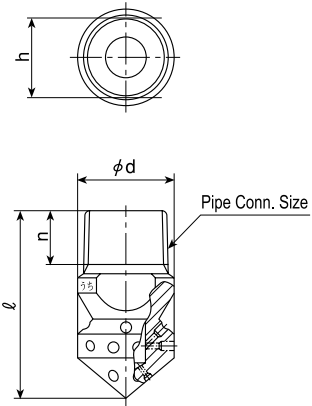
### [Applications]

Cleaning inside pipes (drains, distribution pipes, etc.),  
Removing scale and dirt inside tubes of heat exchangers and cooling machines

## RSP-series

RSP-series	
Structure	• Made of metal, one-piece structure.
Material	• S303 (stainless steel 303) • Optional material : S420J2

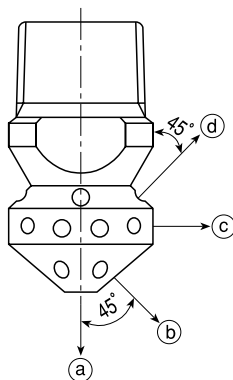
Series	Pipe Conn. Size	Dimensions(mm)				Mass (g)
		ℓ	n	φd	h	
RSP	1/8M	26	7	12	10.5	14
	1/4M	34	9	17	14	30
	3/8M	38	11	19	16	48
	1/2M	42	14	25	22	88



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

## How to order

RSP is a made-to-order product. Please select pipe connection size, orifice diameter, and the number of orifices in each direction according to the following "HOW TO SELECT RSP".



$$\langle \text{Example} \rangle \dots 1/8\text{MRSP}(0.6) \frac{(0.6)^3}{(0.6)^3} (0.6)^3 \text{S303}$$

$$1/8\text{M RSP} \left( \textcircled{\text{a}} \right) \frac{\left( \textcircled{\text{b}} \right)^{\square}}{\left( \textcircled{\text{c}} \right)^{\square}} \left( \textcircled{\text{d}} \right)^{\square} \text{S303}$$

- Pipe Conn. Size
- 1/8M
  - 1/4M
  - 3/8M
  - 1/2M

- ( ) : Orifice diameter for directions Ⓐ through Ⓓ.  
□ : Number of orifices for directions Ⓑ through Ⓓ.

[Note] To indicate no orifices in a direction, use "0" as orifice diameter.

## HOW TO SELECT RSP

### ① Pipe Connection Size

Refer to the table, select the pipe connection size suitable for the spray capacity you require.

Pipe Conn. Size	Max. spray capacity by pipe connection size (ℓ/min)							
	3 MPa	5 MPa	7 MPa	10 MPa	15 MPa	20 MPa	25 MPa	30 MPa
1/8M	24	31	37	44	54	62	70	76
1/4M	96	124	147	176	216	249	278	305
3/8M	96	124	147	176	216	249	278	305
1/2M	105	135	160	191	234	270	302	331

### ② Orifice diameter and the number of orifices

Refer to the table, select the orifice diameter and the number of orifices.

Orifice Dia. (φ mm)	Spray capacity per one orifice (ℓ/min)							
	3 MPa	5 MPa	7 MPa	10 MPa	15 MPa	20 MPa	25 MPa	30 MPa
0.6	0.7	0.9	1.1	1.3	1.6	1.9	2.1	2.3
0.7	1.0	1.3	1.5	1.8	2.2	2.5	2.8	3.1
0.8	1.3	1.7	2.0	2.3	2.9	3.3	3.7	4.1
0.9	1.6	2.1	2.5	3.0	3.6	4.2	4.7	5.1
1.0	2.0	2.6	3.1	3.7	4.5	5.2	5.8	6.4
1.2	2.9	3.7	4.4	5.3	6.5	7.5	8.3	9.1
1.5	4.5	5.8	6.9	8.2	10.1	11.7	13.0	14.3
2.0	8.0	10.4	12.3	14.7	18.0	20.7	23.2	25.4

### ③ Spray direction and the number of orifices in each direction

Refer to the table, specify the number of orifices in each direction ㊦, ㊧ and ㊨.

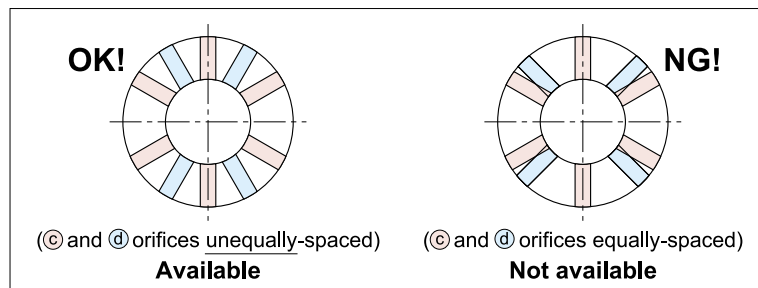
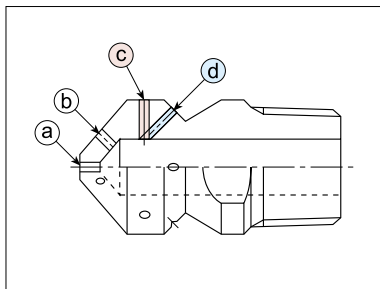
Pipe Conn. Size	Max. number of orifices in the direction of ㊦, [㊧+㊨] (see Remarks)						
	φ 0.6	φ 0.7	φ 0.8	φ 1.0	φ 1.2	φ 1.5	φ 2.0
1/8M	6	6	6	6	4	—	—
1/4M	10	10	10	10	8	8	—
3/8M	10	10	10	10	8	8	6
1/2M	12	10	10	10	8	8	6

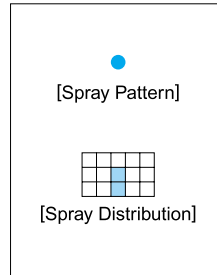
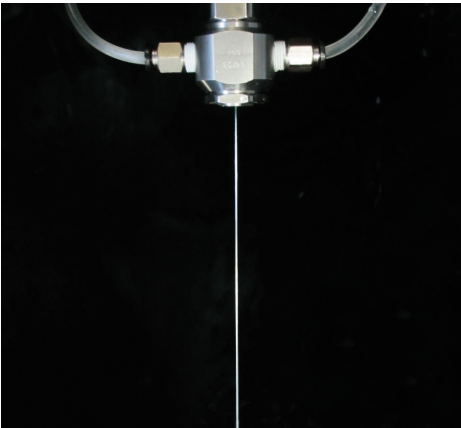
#### Remarks

- The number of orifices in direction ㊦ must not exceed the value in the above table.
- The total number of orifices in directions ㊧ and ㊨, [㊧+㊨] must not exceed the value in the above table.
- Odd numbers, except three (3), are not recommended. Seven (7) is not acceptable.
- The numbers of orifices for ㊧ and ㊨ should be the same or one should be a multiple number of the other. For the other combinations, please inquire with us.

#### Note

In case the numbers for ㊧ and ㊨ have to be 6 and 4, it can be made but only with orifices for ㊧ and ㊨ unequally-spaced as shown in the sketch below.





### [Features]

- Solid stream nozzles with high spray impact.
- Prevents dripping after spraying stops.
- Quick response ON/OFF spray within 1 second.
- Spray ON/OFF can be regulated by pilot air ON/OFF.

### [Standard Pressure]

0.3MPa

### [Applications]

- Trimming : Paper making, asbestos plate, etc.
- Cutting : Timber, food
- Others : Marking, cleaning of precision machine parts, injection of chemicals, deburring, foaming of beer (jet foamer), etc.

### SO-CM series

SO-CM series	
Structure	Spray ON/OFF can be regulated by switching the pilot air ON/OFF. The pilot air actuates an internal piston to regulate the spray.
Material	<ul style="list-style-type: none"> <li>• Spray orifice : ceramic</li> <li>• Metal parts : S303 (stainless steel 303)</li> </ul>
Mass	150g
Pipe Conn. Size	1/8F (for both air and liquid inlets)

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

#### Fixing support (Optional)

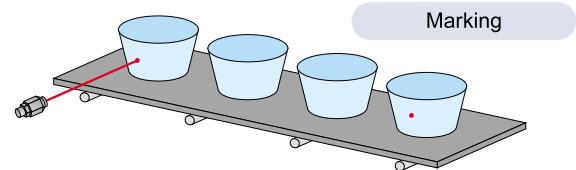
Fixing support is available for fixing SO-CM nozzles on a pole at spray direction as desired. Please specify "(with  $\phi 10$  fixing support)" at the end of product code to order.

\* Hole  $\phi 1$  is for air relief.

①Ceramic orifice ②Adhesive : Araldite® ③Retainer ④Cap  
⑤Packing (PTFE) ⑥Adaptor ⑦Spring cap ⑧O-ring (FKM)  
⑨Lock nut ⑩Y-packing (NBR) ⑪Piston ⑫Sleeve ⑬Spring (S304)

Orifice Diameter Code	Pipe Conn. Size	Spray Capacity (ℓ/min)	
		0.3 MPa	0.5 MPa
$\phi 0.3$	1/8F (Air / Liquid)	0.08	0.10
$\phi 0.4$		0.14	0.17
$\phi 0.5$		0.20	0.25
$\phi 0.6$		0.29	0.36
$\phi 0.7$		0.39	0.49
$\phi 0.8$		0.51	0.65
$\phi 0.9$		0.61	0.78
$\phi 1.0$		0.75	0.97

[Note] SO-CM nozzles are manufactured for designated orifice diameters, therefore spray capacity is not guaranteed.



### Operation time chart

Liquid	Stop	Spray	Stop	Spray	Stop
Pilot air	OFF	ON	OFF	ON	OFF

#### How to order

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

(Example) ...1/8SO-CM $\phi 0.3$ S303 (with  $\phi 10$  fixing support)

1/8 SO-CM  $\phi 0.3$  S303 (with  $\phi 10$  fixing support)

Orifice Diameter Code  
  $\phi 0.3$   
  $\phi 1.0$

(Option)

#### ALSO AVAILABLE!

Flat Spray Nozzles with ON/OFF Control

## SO-V series

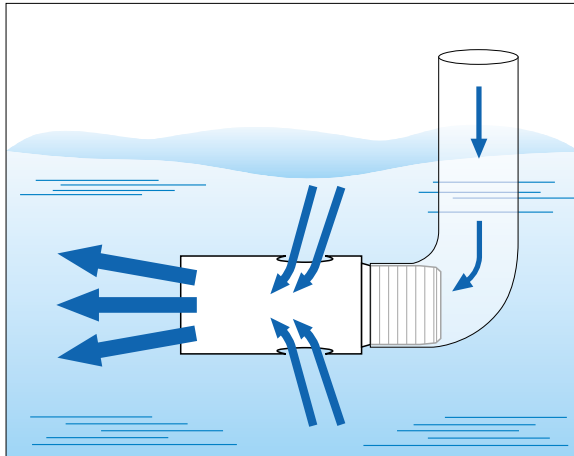
See p.41 of this catalog.

### CAUTIONS

- Supply liquid pressure at 0.5MPa or less.
- Supply pilot air pressure at between 0.2-0.5MPa.
- Pilot air ON/OFF regulates spray ON/OFF.
- Recommend use with a 3-way solenoid valve to purge the air inside/between the solenoid valve and SO-CM nozzle at OFF time, for better shut-off and preventing dripping.

# Ejector Nozzle for Solution Agitation

# EJX



### [Features]

- Taking in surrounding liquid, the EJX solution agitation nozzle spouts out 3-4 times more volume than the amount supplied.
- Small size and simple structure suitable for multiple-nozzle arrangement.

### [Standard Pressure]

0.05MPa

### [Applications]

- Solution agitation, Preventing deposition, Uniformizing concentration and pH
- Cleaning in liquids
- Submerged etching, Plating

Solid Stream

## EJX-series

EJX-series	
Structure	• One-piece structure.
Material	<ul style="list-style-type: none"> <li>• S303 (stainless steel 303), PP (polypropylene)</li> <li>• S304 (stainless steel 304) for sizes 1M and 1½M</li> <li>• PVC (polyvinyl chloride) for sizes 1M and 1½M</li> </ul>

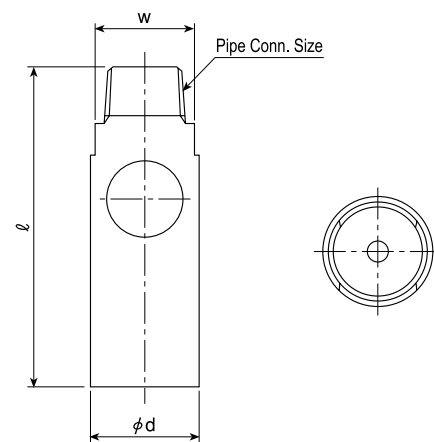
Series	Pipe Conn. Size	Dimensions(mm)			Mass(g)	
		ℓ	φd	w	PP	S303 (S304)
EJX	1/8M	30	11	11	1.3 *1	11
	1/4M	48	16	16	3.2 *1	26
	3/8M	72	24	22	10	80
	1/2M	93	31	27	20	170
	3/4M	126	42	34	48	420
	1M	172	80	60	260 *2	2,200 *3
	1½M	212	90	80	380 *2	3,200 *3

\*1) Sizes 1/8M and 1/4M made of PP are injection molded.

\*2) Sizes 1M and 1½M are made of PVC, not PP.

\*3) Sizes 1M and 1½M are made of S304, not S303.

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



Supplied Volume Code	Pipe Conn. Size	Supplied Water Volume (ℓ/min)						Outlet 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	1½M	124	160	226	277	320	392	330	460	720	950	1340	1510	17.5

### How to order

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

<Example>... 3/8MEJX1-9PP

<b>3/8M</b>	<b>EJX</b>	<b>1-</b>	<b>9</b>	<b>PP</b>
Pipe Conn. Size			Supplied Volume Code	Material
1/8M			1	S303
1/4M			4	*S304 for 1M and 1½M
3/8M			9	PP
1/2M			16	*PP-IN for 1/8M and 1/4M
3/4M				*PVC for 1M and 1½M
1M				
1½M				