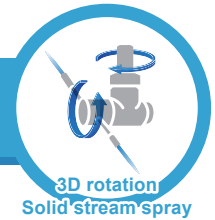


For cleaning hard to remove dirt

JET ATTACKER

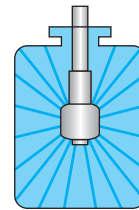
**JA3 SERIES** / Powerful 3D Rotational Cleaning



Cleaning hard to remove dirt



### Spray Coverage



360° spray

### Features

- Three-dimensional rotating solid stream jets powerfully clean the inside of a tank.
- No external power is needed as rotation is driven solely by the flow of the cleaning liquid.
- Simple structure, no turbine or reduction gears.
- Compact and lightweight, at less than 2 kg, with a maximum arm diameter of 240 mm, ensuring reliable cleaning.
- Available for low- and medium-pressure use. The JA3-2L series uses 0.3–1.2 MPa to clean with spray flow volume and the JA3-2S/4S series uses 1.0–3.0 MPa to clean with spray pressure.
- The JA3-2L/2S series is equipped with two nozzles, and the JA3-4S series with four nozzles.
- Easy to install, reducing equipment costs.

### Applications

- Removing tough, sticky and stubborn dirt
- Cleaning of tanks for brewing, fermentation, distillation and storage, cleaning of transport containers

### Basic Specifications

■ Operating Pressure Range  
JA3-2L (low-pressure use): 0.3–1.2 MPa (45–170 psi)  
JA3-2S/4S (medium-pressure use): 1.0–3.0 MPa (150–430 psi)

■ Spray Capacity<sup>2</sup>  
JA3-2L: 24–82 L/min  
JA3-2S: 12–36 L/min  
JA3-4S: 24–70 L/min

■ Reach Distance of Spray (Diameter)  
JA3-2L: approx. 2–7 m  
JA3-2S/4S: approx. 6–9 m

■ Max. Temperature  
60°C (140°F)

■ Number of Nozzles Attached  
JA3-2L/2S with two nozzles  
JA3-4S with four nozzles

■ Main Material<sup>1</sup>  
S304, SCS14, S303, PTFE, FKM, S440C

■ Weight<sup>3</sup>  
1.70–1.95 kg

■ Rotation Speed<sup>4</sup>  
30–60 rpm

■ Outer Surface Finish  
#320 buffing

▼ Watch rotating & spraying nozzle on YouTube

JA3-2L



JA3-4S



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<sup>1</sup>In the material code, "S" represents "stainless steel". SCS14 is cast stainless steel equivalent to S316.

<sup>2</sup>Spray flow rate in the above operating pressure range is for reference only. See the flow-rate diagram and chart for more details.

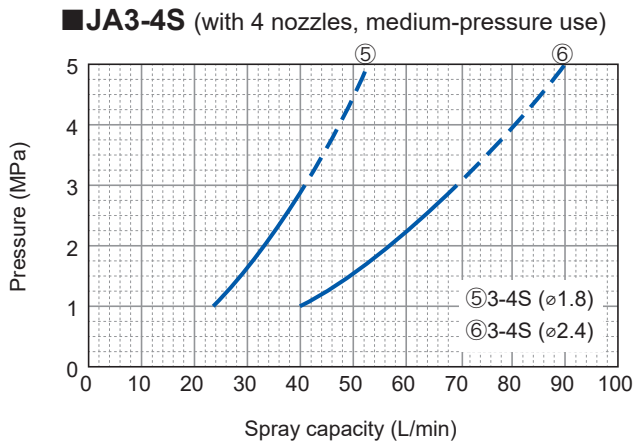
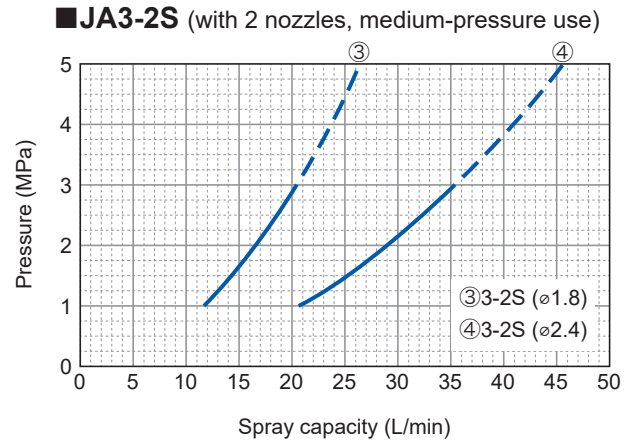
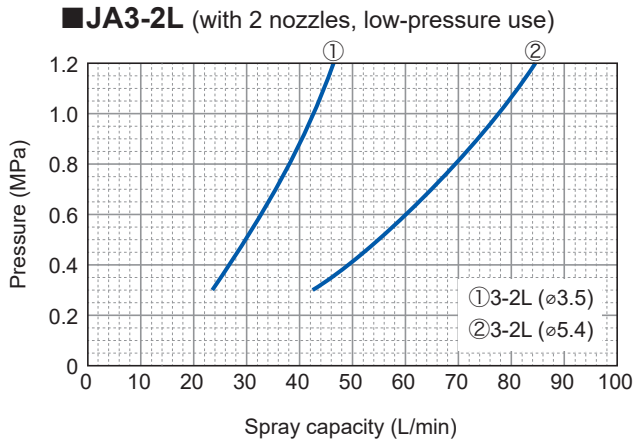
<sup>3</sup>See the table in the drawing section.

<sup>4</sup>Set to this range of rotation speed at a pressure specified prior to shipping. The rotation speed varies depending on the applied pressure.

# JA3 SERIES / JET ATTACKER / Powerful 3D Rotational Cleaning

- The liquid pressure and spray flow rate should be set based on your specific applications and requirements.
- Two- and four-nozzle models are available, each with two options for the nozzle orifice diameter.
- The JA3-2S/4S models with their medium-pressure specifications are recommended for use at pressures of 1.0–3.0 MPa. When used at higher pressure, the rotation speed will become too high and the spray will become erratic.

## Flow-rate Diagram



## Flow-rate Chart

Model No. (JA...)	Number of nozzles	Nozzle orifice diameter (mm)	Pipe conn. size	Spray capacity (L/min) [for reference only]										
				0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	1.0 MPa	1.2 MPa	1.5 MPa	2.0 MPa	2.5 MPa	3.0 MPa
3-2L (ø3.5)	2	3.5	Rc1/2	23.4	27.0	30.2	33.1	35.7	42.7	46.8	—	—	—	—
3-2L (ø5.4)	2	5.4	Rc1/2	42.4	49.0	54.7	60.0	64.8	77.4	84.8	—	—	—	—
3-2S (ø1.8)	2	1.8	Rc1/2	—	—	—	—	—	11.8	—	14.5	16.7	18.7	20.4
3-2S (ø2.4)	2	2.4	Rc1/2	—	—	—	—	—	20.4	—	25.0	28.8	32.3	35.3
3-4S (ø1.8)	4	1.8	Rc1/2	—	—	—	—	—	23.6	—	28.9	33.4	37.3	40.9
3-4S (ø2.4)	4	2.4	Rc1/2	—	—	—	—	—	40	—	49.0	56.6	63.2	69.3

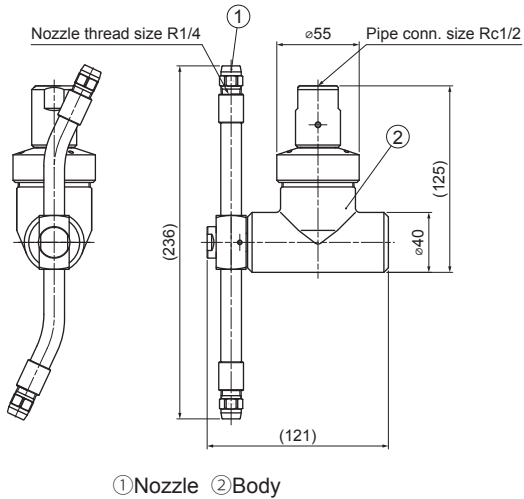
Cleaning hard  
to remove dirt

# JA3 SERIES / JET ATTACKER / Powerful 3D Rotational Cleaning

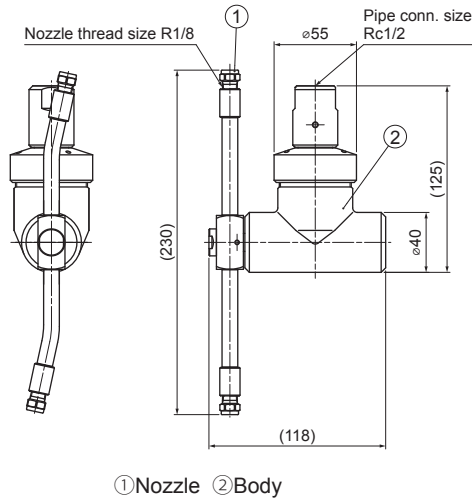
Cleaning hard to remove dirt

## Drawing

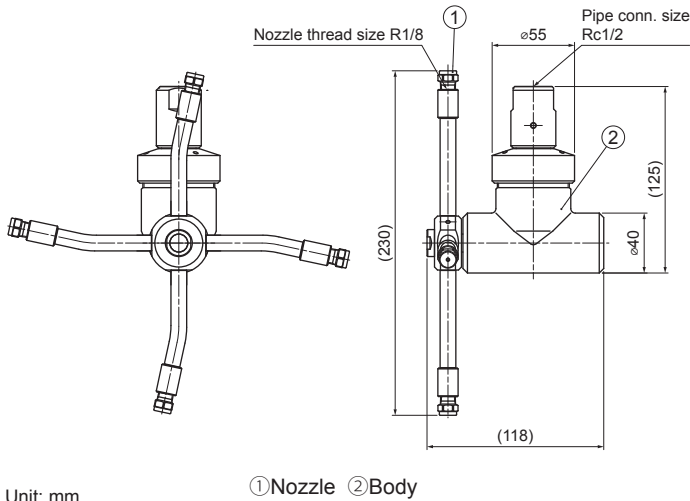
**JA3-2L**  
(with 2 nozzles, low-pressure use)



**JA3-2S**  
(with 2 nozzles, medium-pressure use)



**JA3-4S**  
(with 4 nozzles, medium-pressure use)



Unit: mm

①Nozzle ②Body



Download 3D/2D  
CAD file

### ■ Dimensions and weight

Series	Nozzle orifice diameter (mm)	Pipe conn. size	Nozzle thread size	Weight (kg)
JA3-2L	3.5	Rc1/2	R1/4	1.70
	5.4			
JA3-2S	1.8	Rc1/2	R1/8	1.60
	2.4			
JA3-4S	1.8	Rc1/2	R1/8	1.95
	2.4			

### Note:

For the insertion, the JA3-2L/2S requires a 125A hole or larger and the JA3-4S requires a 200A hole or larger.

## HOW TO ORDER

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

**JA3-2L** for low-pressure use

Example: 1/2F JA 3-2L (φ3.5) S304

1/2F<sup>\*5</sup> JA 3 - 2L (φ3.5) S304

Nozzle Orifice Diameter

- φ3.5
- φ5.4

**JA3-2S/4S** for medium-pressure use

Example: 1/2F JA 3-2S (φ1.8) S304

1/2F<sup>\*5</sup> JA 3 - 2 S (φ1.8) S304

Number of Nozzles

- 2
- 4

Nozzle Orifice Diameter

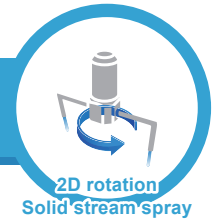
- φ1.8
- φ2.4

\*5 "F" indicates female tapered pipe thread ("Rc" of the ISO standard), e.g. 1/2F = Rc1/2.

For cleaning hard to remove dirt

## JET ATTACKER

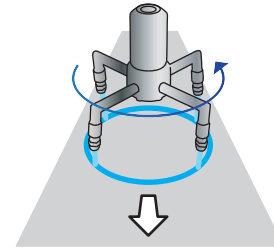
# JA2 SERIES / Powerful 2D Rotational Cleaning



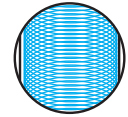
Cleaning hard to remove dirt



### Spray Coverage



Spray downward



Cleaning pattern  
(Patterns differ by line speeds)

### Features

- The solid stream jet provides excellent cleaning performance. To achieve a wider spray coverage, a flat spray nozzle can be installed.
- No external power is needed as rotation is driven solely by the flow of the cleaning liquid.
- A variety of arm configurations are available as special order to fit specific cleaning needs, i.e. spot cleaning or full coverage cleaning.
- The JA2-2 series is equipped with two nozzles, and the JA2-4 series with four nozzles.
- Arm length can be tailored to your needs, in addition to the standard length of 200 or 300 mm.

### Applications

- Cleaning of conveyor belts
- Cleaning of tanks and containers

### Basic Specifications

Operating Pressure Range  
0.3–2.0 MPa (45–290 psi)

Spray Capacity<sup>2</sup>  
JA2-2: 14–136.8 L/min  
JA2-4: 28–253.0 L/min

Max. Temperature  
60°C (140°F)

Number of Nozzles Attached  
JA2-2 with two nozzles  
JA2-4 with four nozzles

Main Material<sup>1</sup>  
S304, S303, PTFE, FKM, S440C

Weight  
JA2-2: 1.9 kg  
JA2-4: 2.0 kg

Rotation Speed<sup>3</sup>  
30–60 rpm

Outer Surface Finish  
#320 buffing is optional and available upon request for an additional charge.

<sup>1</sup> In the material code, "S" represents "stainless steel".

<sup>2</sup> Estimated spray flow rate for JA2 series having solid stream nozzles with an orifice diameter of 2.5 mm, 3.5 mm, or 5.4 mm at the above range of operating pressure. See the flow-rate diagram and chart for details.

<sup>3</sup> Set to this range of rotation speed at a pressure specified prior to shipping. The rotation speed varies depending on the applied pressure.

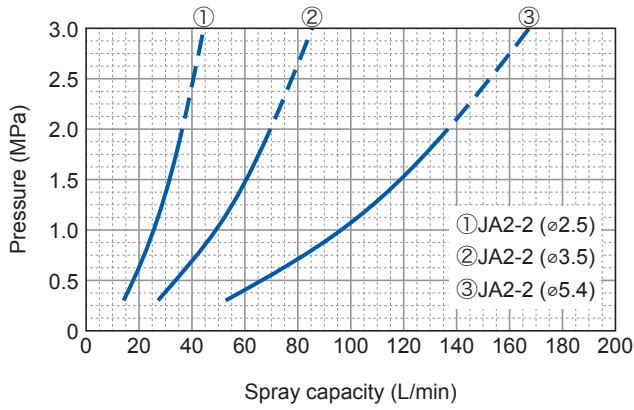
▼ Watch rotating & spraying nozzle on YouTube



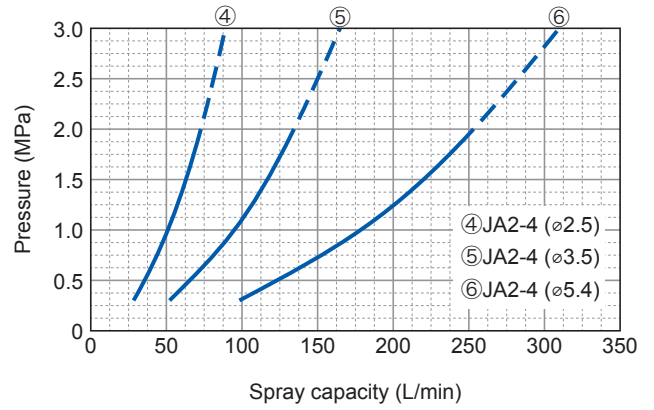
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## Flow-rate Diagram

### ■ JA2-2 Series with 2 nozzles



### ■ JA2-4 Series with 4 nozzles



## Flow-rate Chart

Model No.	Number of nozzles	Nozzle orifice diameter (mm)	Pipe conn. size	Spray capacity (L/min) [for reference only]								
				0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	1.0 MPa	1.2 MPa	1.5 MPa	2.0 MPa
JA2-2 (ø2.5)	2	2.5	Rc1/2	14	16.2	18.1	19.8	21.4	25.6	28.0	31.3	36.1
JA2-2 (ø3.5)	2	3.5	Rc1/2	27	31.2	34.9	38.2	41.2	49.3	54.0	60.4	69.7
JA2-2 (ø5.4)	2	5.4	Rc1/2	53	61.2	68.4	75.0	81.0	96.8	106.0	118.5	136.8
JA2-4 (ø2.5)	4	2.5	Rc1/2	28	32.3	36.1	39.6	42.8	51.1	56.0	62.6	72.3
JA2-4 (ø3.5)	4	3.5	Rc1/2	52	60.0	67.1	73.5	79.4	94.9	104.0	116.3	134.3
JA2-4 (ø5.4)	4	5.4	Rc1/2	98	113.2	126.5	138.6	149.7	178.9	196.0	219.1	253.0

Cleaning hard to remove dirt

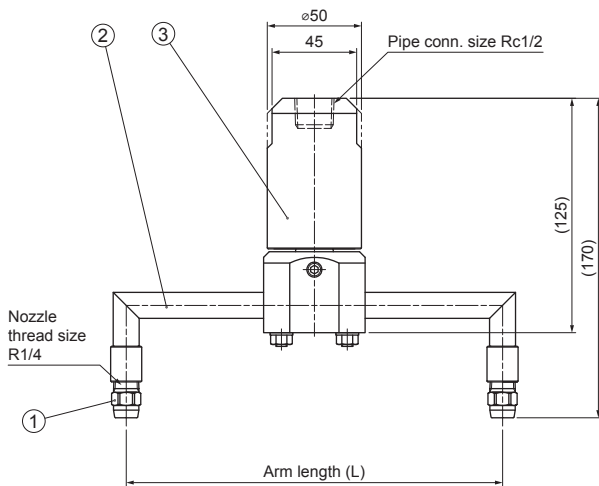
# JA2 SERIES / JET ATTACKER / Powerful 2D Rotational Cleaning

Cleaning hard to remove dirt

## Drawing

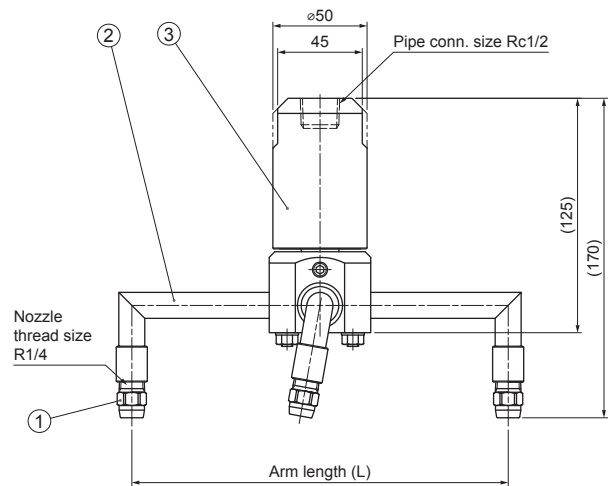


**JA2-2**  
(with 2 nozzles)



① Nozzle ② Arm ③ Body

**JA2-4**  
(with 4 nozzles)



① Nozzle ② Arm ③ Body

Unit: mm

■ Dimensions and weight

Series	Nozzle orifice diameter (mm)	Pipe conn. size	Nozzle thread size	Arm length <sup>*4</sup> L (mm)
JA2-2	2.5	Rc1/2	R1/4	200
	3.5			300
	5.4			
JA2-4	2.5	Rc1/2	R1/4	200
	3.5			300
	5.4			

<sup>\*4</sup> Standard arm length is 200 mm or 300 mm. Customizable arm length from 200 mm to 1,500 mm. Contact us for details.

## HOW TO ORDER

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

Example: 1/2F JA 2-2 (ø2.5) S304 (L = 200)

1/2F<sup>\*5</sup> JA 2 - 2 (ø2.5) S304 (L = 200)

Number of Nozzles

■ 2

■ 4

Nozzle Orifice Diameter

■ ø2.5

■ ø3.5

■ ø5.4

Arm Length<sup>\*4</sup>

■ 200

■ 300

■ Desired length (up to 1,500 mm)

<sup>\*5</sup> "F" indicates female tapered pipe thread ("Rc" of the ISO standard), e.g. 1/2F = Rc1/2.