







#### **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\*2
  - JA3-2L: 23.4-84.8 L/min
- JA3-2S: 11.8-35.3 L/min
- JA3-4S: 23.6-69.3 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\*3
  1.70–1.95 kg
- Rotation Speed\*4
  30–60 rpm
- Outer Surface Finish #320 buffing



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

<sup>&</sup>lt;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.

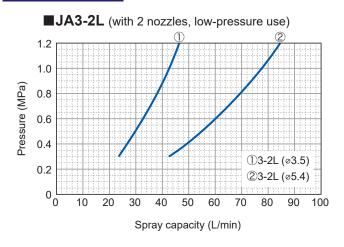
<sup>&</sup>lt;sup>\*3</sup> See the table in the drawing section.

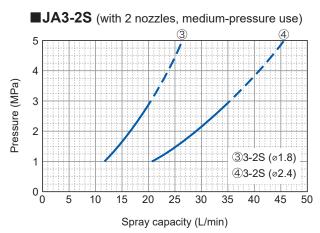
<sup>4</sup> Set to this range of rotation speed at a pressure specified prior to shipping. The rotation speed varies depending on the applied pressure.

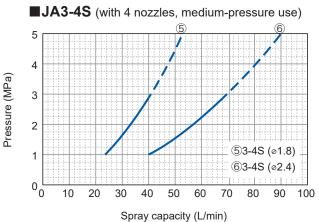
# JA3 SERIES / JET ATTACKER / Powerful 3D Rotational Cleaning

- •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



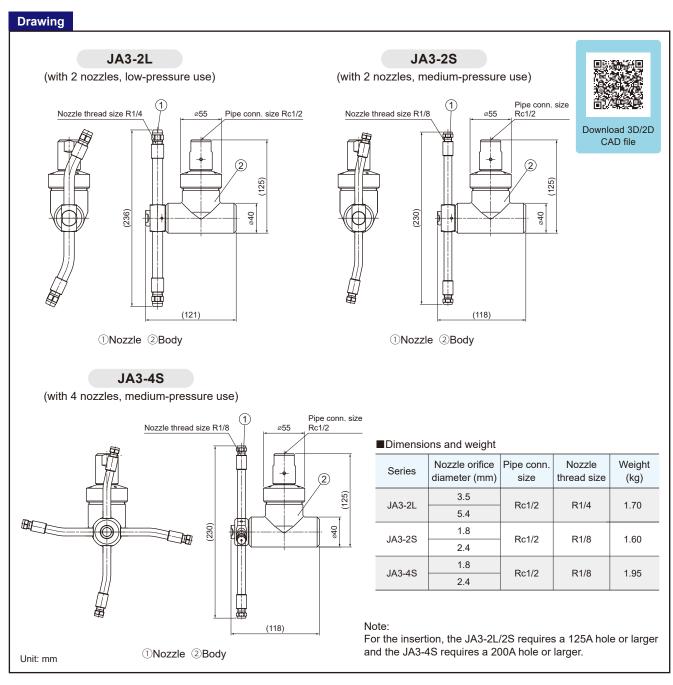




## Flow-rate Chart

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 (∅5.4)	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

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



Upon ordering, please indicate your operating pressure from the range shown on page 25 for our pre-shipment rotation test and adjustment.

HOW TO ORDER	To inquire about or order a specific product please refer to this coding system.								
JA3-2L for lo	w-pressure use	JA3-2S/4S for medium-pressure use							
Example: 1/2F	JA 3-2L (Ø3.5) S304	Example: 1/2F JA 3-2S (Ø1.8) S304							
1/2F*5 JA	3 - 2L (Ø3.5) S304	1/2F <sup>*5</sup> JA 3 - 2 S (Ø1.8) S304							
	Nozzle Orifice Diameter	Number of Nozzle Orifice Nozzles Diameter							
	■ø3.5 ■ø5.4	■2 ■Ø1.8 ■4 ■Ø2.4							
	*5 "F"	indicates female tapered pipe thread ("Rc" of the ISO standard), e.g. 1/2F = Rc1/2.							