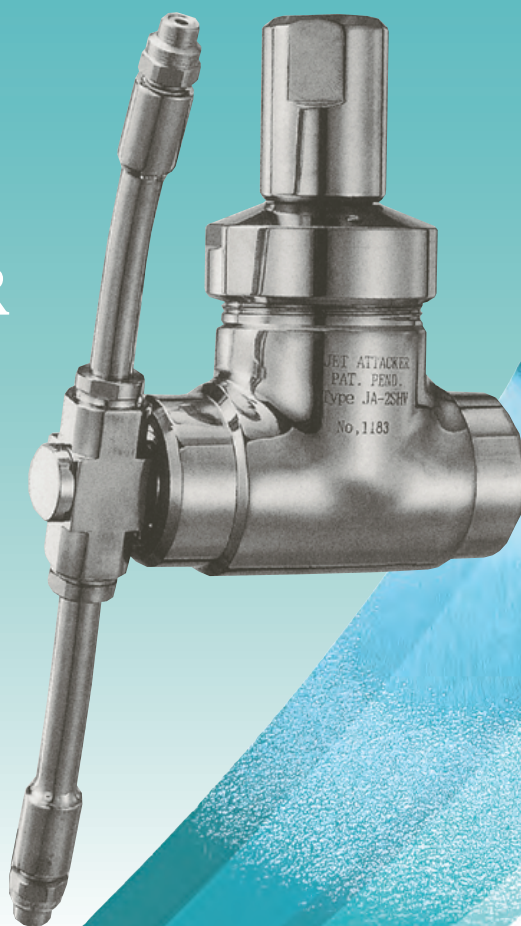


Rotating Nozzles for 3-Dimensional Cleaning

Tank cleaner with
spray-driven
self-rotation:

- JET ATTACKER
- JA3-S type
- JA3-L type





FEATURES of JA series

Automatic cleaning

- Just install JA in a tank and supply water, JA starts cleaning the inside of the tank.

Simple structure, Compact design

- Simple structure, without turbine or reduction gears.
- Stable cleaning performance.
- Compact and lightweight, max. diameter (arm length) is 240mm. Weighs less than 2kg.

2 ranges of cleaning pressures

- Available in low-pressure specification (cleaning with spray flow at 0.3-1.2MPa pressures) or medium-pressure specification (1-3MPa).

No external power needed

- Because rotation is driven solely by the spray reaction force, installation is easy and equipment costs can be cut.

No "waste" water

- All supplied water is used as driving force and cleaning water. Minimal energy loss.

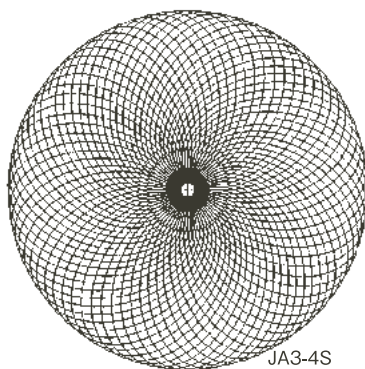
Easy nozzle replacement

- If they become worn or damaged, nozzles can be replaced easily by screwing them.



CLEANING PATTERN

Cleaning pattern image



3-dimensional precision cleaning is possible as both the body and arm rotate separately.
More concentrated cleaning is achieved with the JA3-4S type, which has 4 nozzles.
*The JA3-4S type with 4 nozzles only available as medium-pressure type.



MAIN APPLICATIONS AND EXAMPLE USES

【Food industry】

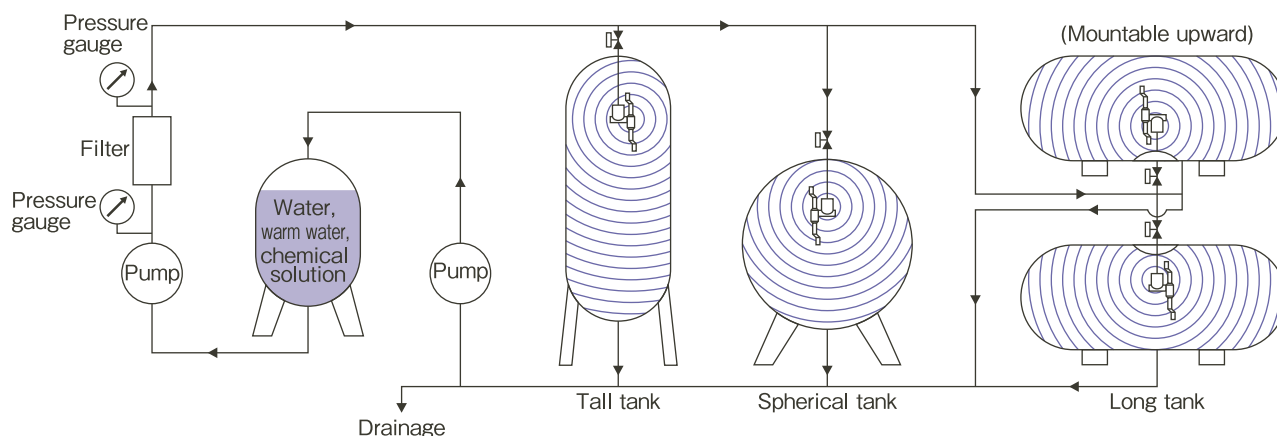
Brew tanks, fermentation tanks, distillation tanks, storage tanks, transport containers, and various other tanks

【Chemical/pharmaceutical industry】

Fermentation tanks, storage tanks, reaction tanks, transfer containers, mixing tanks, chemical tanks

【Other industries】

Paper making, spinning, oil refinery, ocean vessels, ironmaking, and more





APPEARANCE

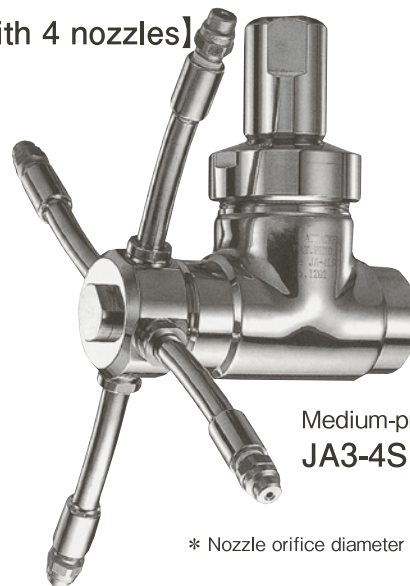


【JA with 2 nozzles】

Medium-pressure specification: **JA3-2S (φ★★)**

Low-pressure specification: **JA3-2L (φ★★)**

* Nozzle orifice diameter is specified in place of ★★.



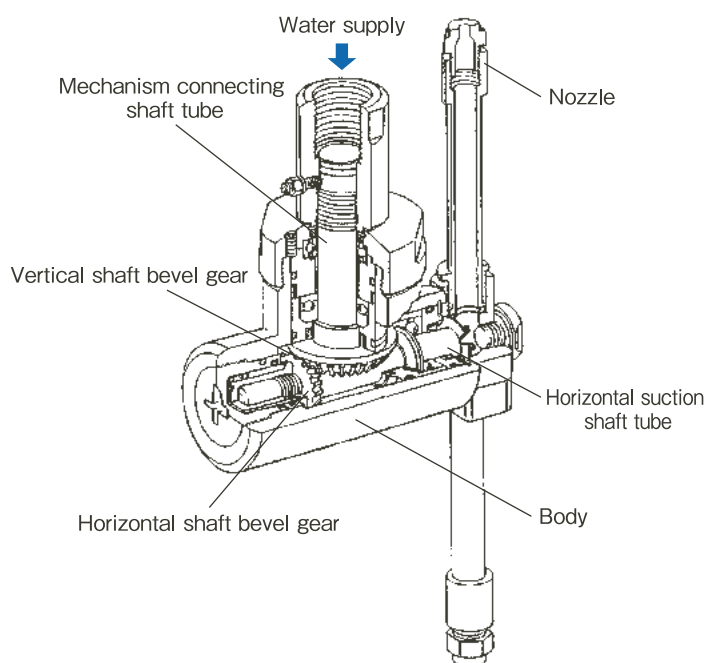
【JA with 4 nozzles】

Medium-pressure specification: **JA3-4S (φ★★)**

* Nozzle orifice diameter is specified in place of ★★.



STRUCTURE AND DRIVE



【Drive principle】

- ① Supply water
- ↓
- ② Water is sprayed from nozzles
- ↓
- ③ Arm rotates by spraying reaction force
- ↓
- ④ Horizontal suction shaft tube rotates
- ↓
- ⑤ Mechanism connecting shaft tube rotates by bevel gears of vertical and horizontal shafts
- ↓
- ⑥ Body rotates



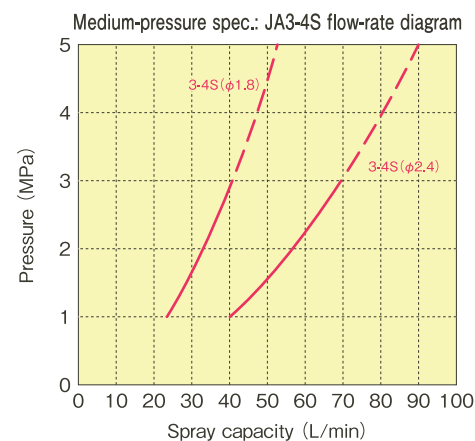
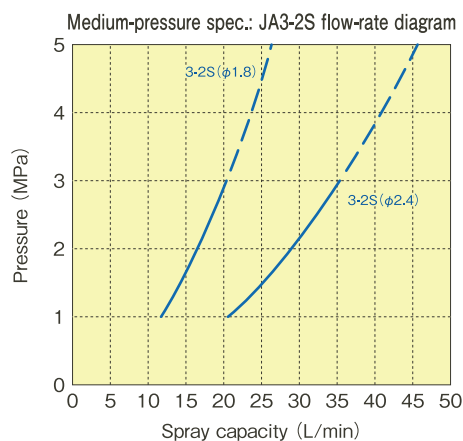
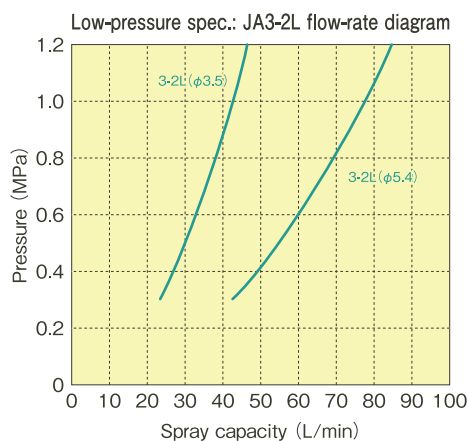
SPRAY CAPACITY

Spraying pressure and flow rate should be set according to your application and purpose.

Available in [JA with 2 nozzles] type or [JA with 4 nozzles] type, each in 2 kinds of nozzle orifice diameters.

Medium-pressure specification JA is recommended for use at 1MPa - 3MPa.

At water pressures higher than this range, rotation speeds become too high and spray gets scattered about.





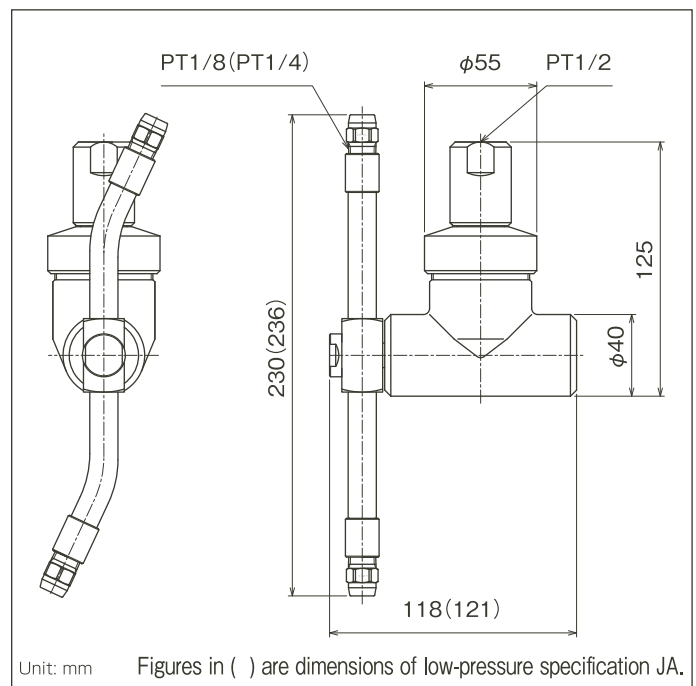
SPECIFICATIONS

Pressure specifications	Low pressure type	Medium pressure type	
Series	JA3-2L (φ★★)	JA3-2S (φ★★)	JA3-4S (φ★★)
Nozzle orifice diameter (mm)	φ3.5, φ5.4	φ1.8, φ2.4	
Number of nozzles equipped	2		4
Maximum pressure (MPa)	6	15	
Allowable temperature (°C)	4~60		
Recommended working pressure (MPa)	0.3~1.2	1~3	
Spray capacity (L/min)	24~82	12~36	24~70
Pipe connection size	1/2" female pipe thread [1/2F(PT)]		
Nozzle thread size	1/4M(PT)	1/8" male pipe thread [1/8M(PT)]	
Main materials	SUS304, Special PTFE, NBR, FKM		
Surface finish	300# buffing		
Drive system	Driven by spray reaction force		
Mass of body (kg)	1.7	1.6	1.95

Note: Specifications are subject to change without prior notice for purposes of product improvement.



DIMENSIONS JA3-2S(φ★★★)



*JA3-4S is equipped with 4 nozzles. (Low-pressure type has only 2 nozzles)



HOW TO ORDER

Please inquire or order for a specific nozzle using this coding system, referring to the above SPECIFICATIONS.

(Example) Low-pressure spec.: 1/2F JA 3-2L(φ3.5) S304

Pipe connection size	Series	Number of nozzles equipped	Nozzle orifice diameter	Main material
1/2F	JA 3-	2	L (φ3.5)	S304
			<div> <div>■ φ3.5</div> <div>■ φ5.4</div> </div>	

(Example) Medium-pressure spec.: 1/2F JA 3-2S(φ1.8) S304

Pipe connection size	Series	Number of nozzles equipped	Nozzle orifice diameter	Main material
1/2F	JA 3-	2	S (φ1.8)	S304
		<div> <div>■ 2</div> <div>■ 4</div> </div>	<div> <div>■ φ1.8</div> <div>■ φ2.4</div> </div>	

*We will be pleased to recommend the optimal nozzle orifice size if given supply pressure and supplied water amount.



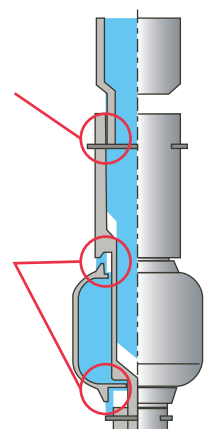
Low-pressure, compact rotating cleaning nozzles - ES series -

RELATED PRODUCTS

Also available is low pressure compact 2D rotating cleaning nozzles "ES series"



- ES-[type P] series is highly sanitary, having no threads in the flow passage, thus, no grooves to collect contaminants.
- Spraying liquid flows from the gaps between the connecting adaptor and nozzle body, and keeps the nozzle surface clean. (Common to both ES [type P] and [type NJ])



For inquiries / information requests / quotations related this product, please contact us



いけうち

“The Fog Engineers”

IKEUCHI EUROPE B.V.

IKEUCHI EUROPE B.V.



Merwedeweg 6,
3621 LR Breukelen
The Netherlands



Tel: 0031-20-820-2175



info@ikeuchi.eu



https://www.ikeuchi.eu



“Taking the path less traveled”

「人の足跡を踏むな」

