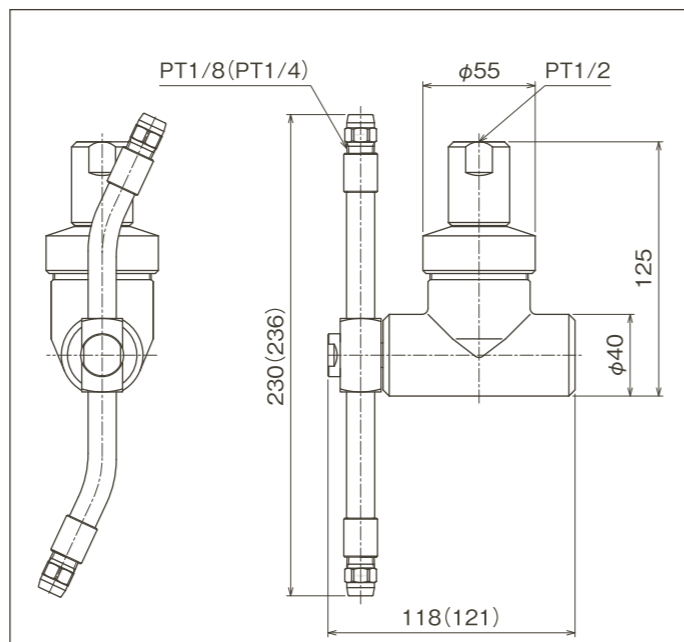


**SPECIFICATIONS**

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★★)**



Unit: mm Figures in ( ) are dimensions of low-pressure specification JA.

\*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
			■ φ3.5 ■ φ5.4	

(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
			■ φ1.8 ■ φ2.4	

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

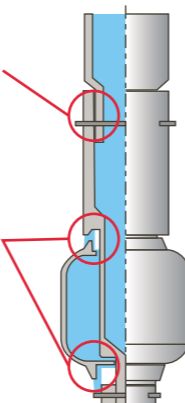
**Related Products** Low-pressure, compact rotating cleaning nozzles - ES series -

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 N])



**H. IKEUCHI & CO., LTD.**

**Headquarters**  
Daiichi Kyogyo Building  
1-15-15 Awaza, Nishi-ku, Osaka 550-0011, Japan  
Tel: +81-6-6538-4015 Fax: +81-6-6538-4022  
E-mail: overseas@kirinoikeuchi.co.jp  
http://www.kirinoikeuchi.co.jp/eng/

**IKEUCHI USA, INC.**  
8110 Beckett Center Drive, West Chester  
Ohio 45069 USA  
Tel: +1-513-942-3060  
Fax: +1-513-942-3064  
E-mail: info@ikeuchiusa.com  
http://www.ikeuchiusa.com

**IKEUCHI (SHANGHAI) CO., LTD.**  
Room 1311, Building A,  
North Region Commercial Plaza, 988  
Da Tong Road, Zha Bei District,  
Shanghai 200070, P.R.China  
Tel: +86-21-6140-9731  
Fax: +86-21-6123-4239  
E-mail: mist@kirinoikeuchi.com  
http://www.kirinoikeuchi.com

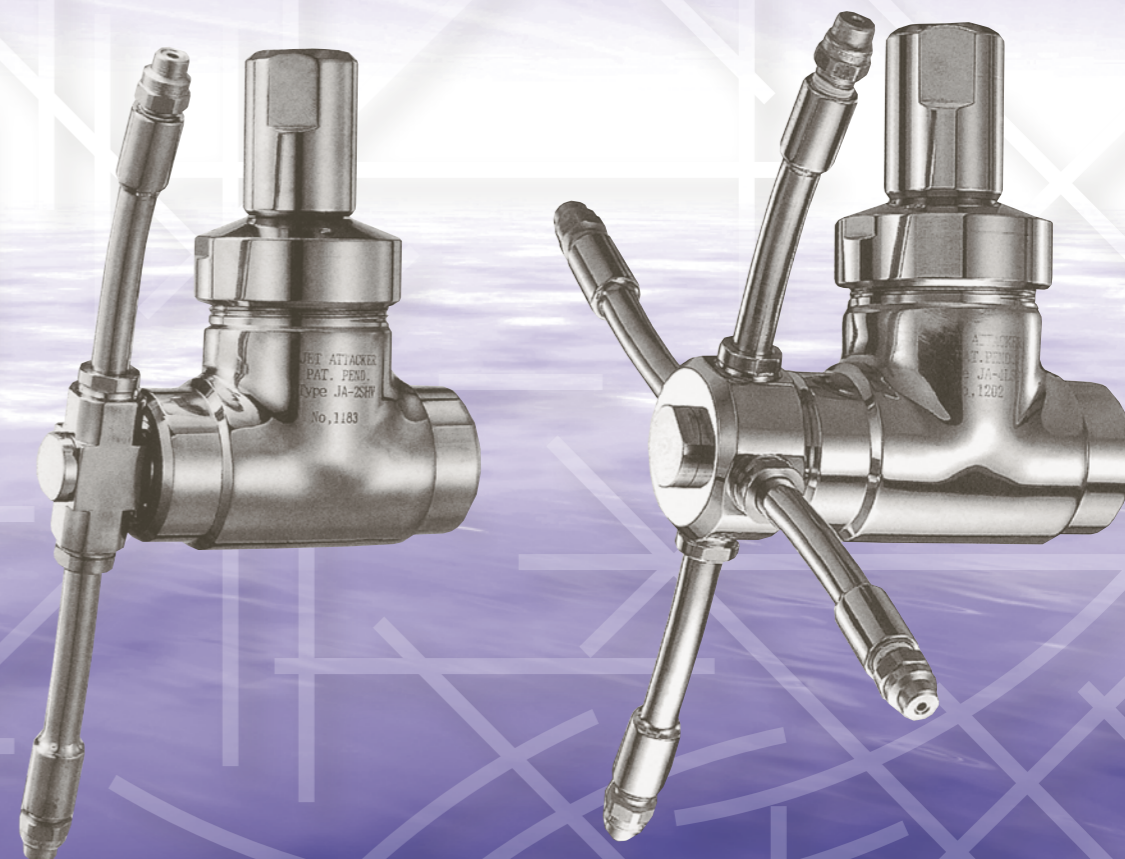
**IKEUCHI EUROPE B.V.**  
Asterweg 17 A6, 1031 HL  
Amsterdam, The Netherlands  
Tel: +31-20-820-2175  
Fax: +31-20-820-2176  
E-mail: info@ikeuchieurope.com  
http://www.ikeuchieurope.com

**Ikeuchi Taiwan Co., Ltd.**  
11F-1, No. 27, Sec. 1, Chung Shan N. Rd.,  
Taipei, Taiwan, R.O.C.  
Tel: +886-2-2511-6289  
Fax: +886-2-2541-6392  
E-mail: sales@ikeuchi.com.tw  
http://www.ikeuchi.com.tw/

Tank cleaner with spray-driven self-rotation

# Rotating Nozzles for 3-Dimensional Cleaning

JET ATTACKER  
JA3-S type  
JA3-L type



**H. IKEUCHI & CO., LTD.**

"The Mist Engineers"

## 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

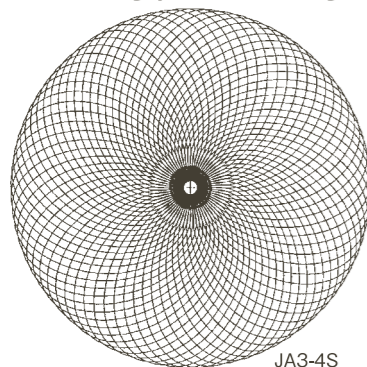
- All supplied water is used as driving force and cleaning water. Minimal energy loss.

### 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】

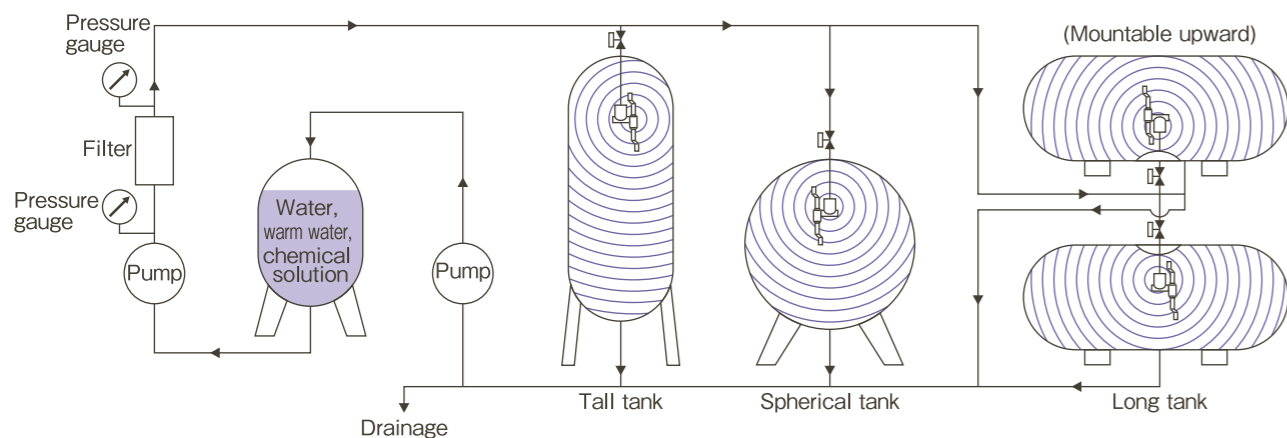
Brew tanks, fermentation tanks, distillation tanks, storage tanks, transport containers, and various other tanks

### 【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

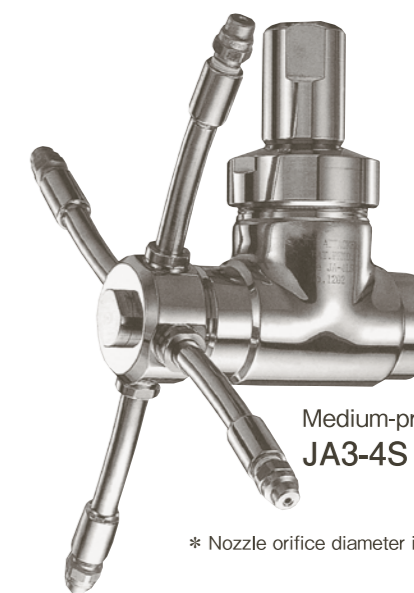
### 【JA with 2 nozzles】



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

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

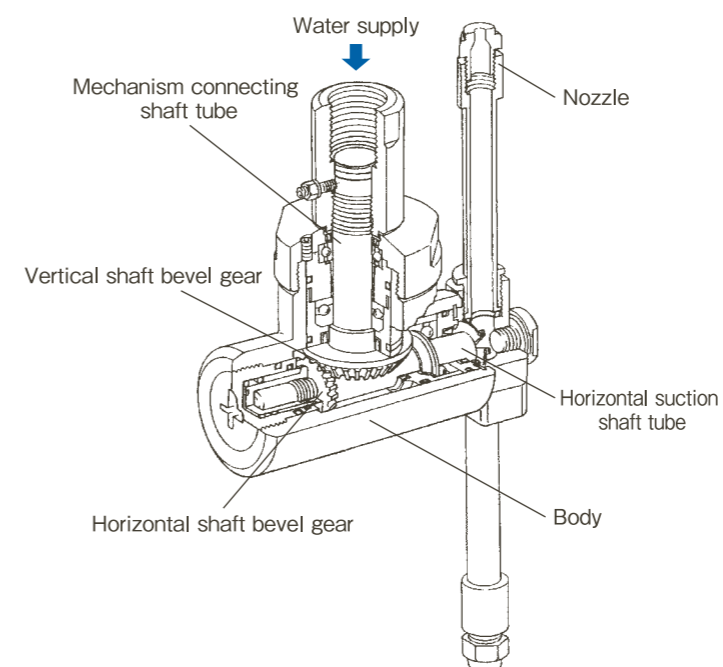
### 【JA with 4 nozzles】



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.

