No. KKS120986-1E

Instruction Manual

Products: Spray Nozzles

JUP Series

Thank you for purchasing this product.
Prior to use, read this manual carefully and familiarize yourself with the proper operation of the product for best performance.
H. Ikeuchi & Co., Ltd. takes no responsibility for any accidents and/or injuries resulting from improper handling, installation and/or operation.
After reading, keep this manual handy for quick reference.
Please be aware that due to continuing efforts to improve our products, some details in this manual may differ from the actual product.

H. Ikeuchi & Co., Ltd.

1. Precautions

(1) Ceramic Parts

The ceramic parts used in spray nozzles feature high wear resistance, but the following restrictions need to be considered:

- Use of hydrofluoric acid and concentrated alkali will lead to corrosion.
- While the material is hard, it is also brittle which can cause chipping.
- The ceramic will crack if abruptly cooled down from high temperatures (200°C).

(2) Installation Instructions

- Be sure to flush the pipes before installing the nozzle to remove any dirt and foreign matter.
- Apply sealant or sealing tape to the threads of the pipes before installing the nozzles.
- Avoid installing the nozzle immediately on or after a bend in the pipe or an elbow. Turbulence may affect the nozzle performance.
- See Table 1 for recommended tightening torque to install the nozzle.

Table 1. Recommended tightening torque

Pipe Connection Size	Tightening Torque (N-m)
Rc3/8	20
Rc1/2	40
Rc3/4	60
Rc1	100
Rc1 1/2	150

(3) Operation

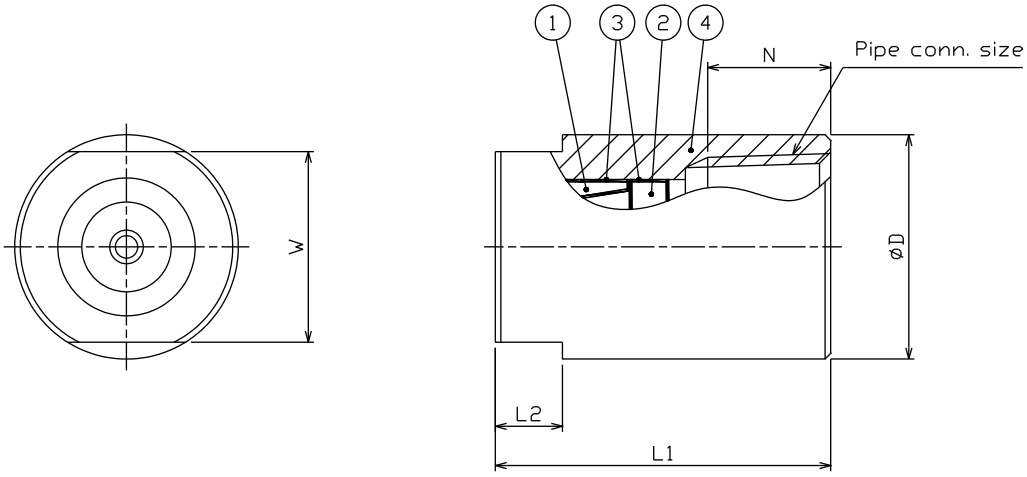
- Start spraying at a water pressure of 0.05–0.1 MPa to avoid water hammer and then gradually increase to operating pressure.
- After spraying chemical solution, spray clean water for a while to clean the nozzle orifice and the inside of the nozzle.
- To prevent the nozzle from clogging, install strainers or use a water treatment system, depending on the water quality.

(4) Handling Instructions

- Do not damage or scratch the nozzle.
- Do not poke the ceramic orifice and whirler with nails, metal pins or other hard objects.
- Do not apply any strong force, shock or vibration to the nozzle.
- The maximum operating pressure for the JUP series is 0.5 MPa. To prevent a water hammer, avoid a sudden increase in liquid pressure.
- Store the nozzle in a clean, dust-free place.

2. Nozzle Components

(1) Components and Materials



Note: Shapes may differ depending on nozzle codes.

No.	Component	Material*1	Remarks
1	Orifice	Ceramic	
2	Whirler	Ceramic	
3	Adhesive	Araldite (epoxy resin)*2	
4	Nozzle Body	S303*3	Sizes Rc3/8 to Rc1
		S316*3	Size Rc1 1/2

*1 In our material code, "S" represents "stainless steel". For example, S303 stands for stainless steel 303.

*2 High-temperature adhesive is used for size Rc1 1/2.

*3 Optional material: S316 (for sizes Rc3/8 to Rc1), S316L

(2) Dimensions

Pipe Conn. Size	Outer Dimensions (mm)				
	L1	L2	W	øD	N
Rc3/8	30	6	17	20	11
Rc1/2	39	8	22	25	14
Rc3/4	49	10	27	32	15
Rc1	59	14	34	40	17
Rc1 1/2	80	20	50	58	19

3. Maintenance

Impurities are most likely to adhere to the orifice of the nozzle tip. Pay special attention to check the condition of this part.
Carefully remove any dust and dirt with a brush, toothpick, or bamboo skewer. Clean each part thoroughly from foreign particles to maintain performance.

4. Troubleshooting

If there is a problem, please check the following items first. If the problem persists, please replace the nozzle.

Problem	Possible Reason	Solution
Nozzle not spraying, or the spray pattern is irregular.	Liquid pressure is too low.	Check the pressure in the pipe and apply the proper pressure
	Nozzle and/or strainer is clogged.	Clean with ultrasonic cleaner and air blower.
Water leakage	Sealant or sealing tape is damaged or worn.	Replace or change the sealant or sealing tape.
	Nozzles are not screwed in tight enough.	Tighten the nozzles properly with a torque wrench.

5. Warranty

There is a one year warranty from the date of our shipment.
Seller shall be responsible for any damage due to design or production and will replace the item free of charge.
Neither this warrant nor any implied warranty applies to damage or harm caused by any or all of the following: 1. Damage due to misapplication and/or misuse, 2. Improper repair and/or modification, 3. Natural disasters, 4. Normal wear-and-tear of consumable parts including clogged nozzles.