

Instruction Manual  
on  
BIM with N-adaptor

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“The Fog Engineers”  
**H. IKEUCHI & CO., LTD.**

## Preface

Thank you for purchasing our CERJET® Spray Nozzle from H. Ikeuchi & Co., Ltd. This manual gives detailed instructions for the basic handling, maintenance and cautions of the CERJET® Spray Nozzle.

Please take note that due to our continuous efforts to improve our products, the details in this manual may differ slightly from the actual product.

After reading, keep this manual handy for quick reference.

## Safety Precautions

Prior to use, read this manual to familiarize yourself with the proper operation of the nozzle for best performance.

H. Ikeuchi & Co., Ltd. takes no responsibility for any accidents and/or injuries resulting from improper handling, installation and/or operation.



**Wear safety gloves.**

CAUTION

The screw threads or sharp edges and corners may cause injury.



**Ensure that the nozzle is firmly installed.**

CAUTION

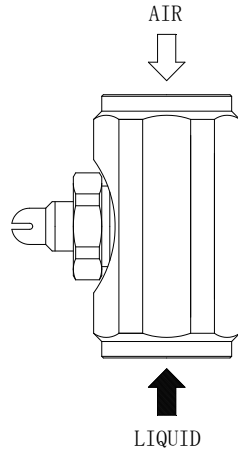
Loose screws may cause the nozzle to come off during operation and lead to serious accidents.

## 1. Suggestions & Cautions

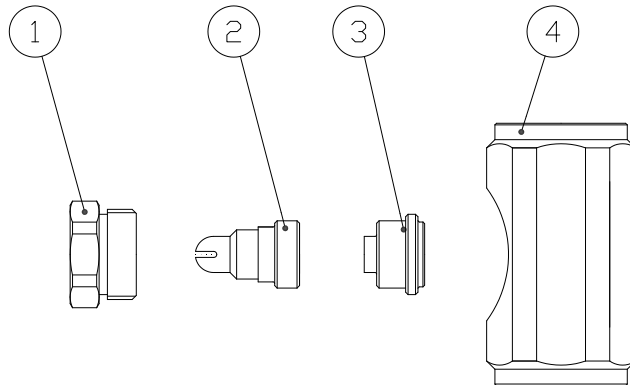
- (1) The screw threads, edges and corners may be sharp.  
Wear safety gloves to protect hands.
- (2) Operate the nozzle under the specified pressures.  
If the pressures are not specified, refer to our flow-rate diagram.
- (3) Do not damage or scratch the nozzles and pipes. When replacing a nozzle tip or disassembling for maintenance, use a spanner and milling vice. Never use a pipe vice, pipe wrench or pliers.
- (4) Cautions for preventing back-flow of liquid  
To start operation: Start the air supply first, then liquid.  
To stop operation: Stop the liquid first, then air.
- (5) Air and liquid piping
  - Use larger size pipes and valves to prevent the pressure drop.
  - Use new stainless steel pipes. Dust and foreign particles in old pipes may clog the nozzles. Never use pipes that may rust.
  - Even new pipes may have chips or seal tapes inside. Before installing the nozzles, clean the air and liquid pipes by flushing the pipes thoroughly to remove any foreign particles inside.
  - Install pressure gauges just before the nozzle to adjust air and liquid pressures appropriately. Installation of valve is also recommended.
  - If a nozzle is clogged, the nozzle performance deteriorates. Install strainers to help prevent nozzle clogging.

## 2. Components of Nozzle

### (1) Nozzle Assembly



### (2) Component Parts and Materials



No.	Component	Material	Remark
1	Cap	S303	
2	Nozzle tip	S303	Consumable
3	Core	S303	Consumable
4	Adaptor	S303	

#### Note: (1) Consumables

Lifetime of a nozzle varies depending on operational conditions.

Replace consumable parts when corrosion or a corroded pit on a nozzle tip or core is found and the nozzle performance deteriorates.

(2) Dimensions and materials may differ depending on part number of the nozzle.

(3) In our material code, "S" represents "stainless steel".

(Example) S303 represents stainless steel 303.

### 3. Disassembly

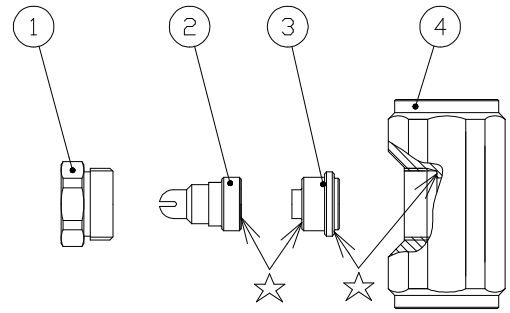
Fix the Adaptor ④ with a milling vice and unscrew the Cap ① with a spanner. Then take out the Nozzle tip ② and Core ③.

Necessary tools:

Milling vice

Spanner 12 mm (for Cap ① of BIM\*\*02, 04, 075)

Spanner 17 mm (for Cap ① of BIM\*\*15, 22)



Note: Be careful not to lose or damage these small parts.

### 4. Cleaning

Impurities most likely adhere to the middle (air orifice) of the Adaptor ④.

Pay special attention to check the condition of this part.

Use a brush, bamboo skewer, or toothpick to remove any foreign particles from the orifices.

Clean the inside of each part completely to maintain maximum nozzle performance.

### 5. Assembly

Assemble in the reverse order of "3. Disassembly".

Note: Before assembly, confirm that the sealing area marked with ☆ and orifice parts are clean and without flaw.

### 6. Maintenance

Check	Item	Check points
Daily	Spray	Have a visual check of the spray pattern. Confirm that the spraying pressure is normal, when spray pattern cannot be seen because nozzles are in equipment.
	Pressure gauges and flow meters	Confirm that the air and liquid pressures and flow rate are correct during operation.
Periodically	Spray	Have a visual check of the spray pattern.
	Appearance	Confirm that there is no corrosion or dust adhesion to the nozzle tip and orifice.
	Connection	Confirm that the cap and adaptor are tightened properly.

## 7. Troubleshooting

Troubles	Probable causes		Solutions	Remarks
No spray is being created	Control	<ul style="list-style-type: none"> <li>• Controller is not switched on.</li> <li>• Valves are not opened.</li> </ul>	<ul style="list-style-type: none"> <li>• Switch it on.</li> <li>• Open the valves.</li> </ul>	
	Nozzle	<ul style="list-style-type: none"> <li>• Nozzle or pipe is clogged.</li> <li>• Nozzle or pipe is clogged due to damage.</li> <li>• Liquid orifice and/or air orifice is clogged.</li> </ul>	<ul style="list-style-type: none"> <li>• Check and clean the nozzle or pipe.</li> <li>• Replace the damaged part.</li> <li>• Clean them.</li> </ul>	
Air leaks Liquid leaks	<ul style="list-style-type: none"> <li>• Some parts are loose or not tightened.</li> </ul>		<ul style="list-style-type: none"> <li>• Tighten the connections.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Nozzle or pipe is cracked.</li> <li>• Nozzle or pipe is corroded.</li> </ul>		<ul style="list-style-type: none"> <li>• Replace the cracked part.</li> <li>• Replace the corroded part.</li> </ul>	
Intermittent spray	<ul style="list-style-type: none"> <li>• Seal failure between the nozzle tip, core, and adaptor (air or liquid leaks due to dust/foreign particles adhered on the sealing surface).</li> <li>• Either air pressure is too high or liquid pressure is too low.</li> </ul>		<ul style="list-style-type: none"> <li>• Clean the sealing surface and replace the part.</li> <li>• Adjust the pressures.</li> </ul>	
Irregular spray pattern	<ul style="list-style-type: none"> <li>• Nozzle or pipe is clogged.</li> <li>• Nozzle tip is deformed.</li> <li>• Nozzle tip is corroded.</li> <li>• Dust or foreign particles adhered on the orifices.</li> </ul>		<ul style="list-style-type: none"> <li>• Clean the nozzle or pipe.</li> <li>• Replace the deformed part.</li> <li>• Replace the corroded part.</li> <li>• Clean the parts.</li> </ul>	

## 8. Disposal

Disposal should be practiced according to the regulations and codes of local authorities, or ask a disposal professional.

## 9. Inquiries

For spare parts or any trouble, contact your supplier or the following:

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

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