CERJET®

KKS060505-4E

Instruction Manual

CMP-T series Nozzles

Thank you for purchasing our CERJET ® Spray Nozzles.
In order to use CERJET ® Spray Nozzles safely and efficiently,
you are requested to read this Instruction Manual and keep it readily available.
H. IKEUCHI & CO., LTD. takes no responsibility for any accidents and/or
injuries resulting from improper handling, installation and/or operation.
Dimensions and design may be changed without notice for product improvement.

"The Fog Engineers"

いけうち H. IKEUCHI & CO., LTD.

1. Safety Precautions

Prior to use, please read these “Safety Precautions” and use the nozzles properly.


WARNING

Do not use nozzles beyond the maximum liquid pressure of 5MPa.
Otherwise nozzles may break and/or be blown off of the pipe,
resulting in injuries.


WARNING

Do not use nozzles beyond the operating temperature range of 5～60℃.
Otherwise nozzles may break and/or be blown off of the pipe,
resulting in injuries.


WARNING

Do not use nozzles in temperatures below freezing.
Otherwise nozzles may break and/or be blown off of the pipe,
resulting in injuries.


WARNING

Connect the nozzles only with the taper pipe thread (R3/8).
Otherwise nozzles may break and/or be blown off of the pipe,
resulting in injuries.


WARNING

To avoid water hammer, do not increase pressure rapidly.
Otherwise nozzles may break and/or be blown off of the pipe,
resulting in injuries.


WARNING

To provide against contingencies, do not stand in front of the nozzles or keep your face away from the nozzles.

2. Before Use (Instructions & Cautions)


CAUTION

Flush the pipes to purge foreign particles before installing the nozzle.


CAUTION

Apply sealing tape on the thread of the nozzle before installation.


CAUTION

Screw the nozzle by hand first (making sure it's screwed in properly), then tighten with a torque wrench (size 17mm).
(Recommended tightening torque: 20N・m)
Tightening it too much may break the nozzle.


CAUTION

When connecting, make sure the nozzle end doesn't intervene in the pipe (refer to page 3 "4. How to Use").


CAUTION

Do not place the nozzle at the immediate rear of a bent pipe or elbow. Turbulence may affect the nozzle performance.


CAUTION

To prevent the nozzles from clogging, apply strainers or use a water treatment system, depending on water quality.


CAUTION

Do not scratch or score the nozzle. Do not apply hard materials such as nails or needles to the ceramic part of the nozzle tip.


CAUTION

The plastic may yield to mechanical shock and must be handled gently.


CAUTION

Store the nozzle in a clean place free from dust.


CAUTION

When spraying liquid other than water, consider the chemical resistance of the nozzle resin to the liquid (refer to P. 4 "Chemical Resistance of CMP-T series Nozzles").

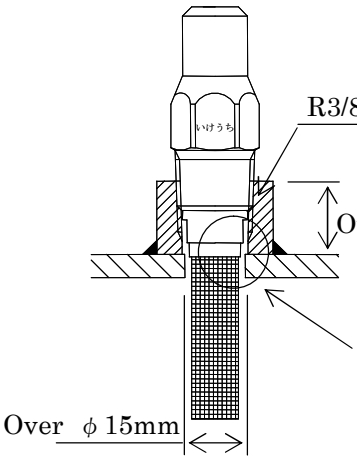
3. Warranty

The warranty period is one year after the date of shipment.
The seller shall be responsible for repair at our designated place and/or replacement of the damaged parts if the damages are due to the seller's fault.

This warranty does not cover such cases as misuse, improper repair, modification, natural disasters, clogging of strainer or nozzle and exhaustion of consumable parts.

4. How to Use

(1) Installation



Recommended tightening torque	20N・m
Wrench	17mm
Length of joint	Over 15mm
Thread part	Sealing tape
Thread diameter of the joint bottom	Over φ15mm

Make sure the nozzle end does not intervene in the pipe.
The joint length should be over 15mm.
The thread diameter of the joint bottom should be over φ15mm, in case joint length is less than 15mm.

(2) How to screw in the nozzle

・Flush the pipes to purge foreign particles before installing the nozzle.

・Apply sealing tape on the thread of the nozzle before installation.

・Screw the nozzle by hand first (making sure it's screwed in properly), then tighten with a torque wrench (size 17mm).
(Recommended tightening torque: 20N・m)

・Increase the liquid pressure gradually from low to high to avoid water-hammer.

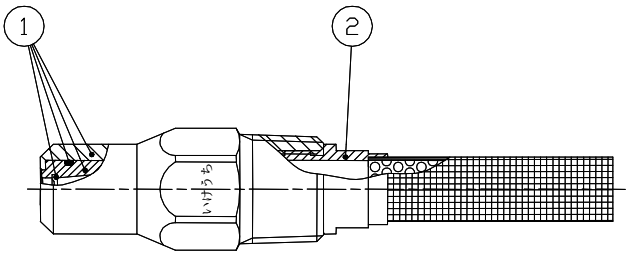
・Screw the strainer by hand first (making sure it's screwed in properly), then tighten with a torque wrench (size 12mm).
(Recommended tightening torque: 20N・m)

5. Troubleshooting

Check the following points in case of trouble.
If the following solutions do not work, please replace the nozzle with a new one.

No.	Trouble	Probable Causes	Solution
1	・No spray.	1. Liquid pressure is too low. 2. Nozzle orifice or strainer is clogged.	1. Check the pressure in the pipe and apply the proper pressure. 2. Clean with a tooth pick and blow off with compressed air. (Ultrasonic cleaning, Air blowing)
2	・Not normally spray.	1. Liquid pressure is too low. 2. Nozzle orifice or strainer is clogged.	1. Check the pressure in the pipe and apply the proper pressure. 2. Clean with a tooth pick and blow off with compressed air. (Ultrasonic cleaning, Air blowing)
3	・Liquid leaking.	1. Deterioration of sealing tape. 2. Some parts are not firmly screwed in.	1. Replace or change the sealing tape. 2. Tighten each part properly. (Recommended tightening torque:20N・m)

6. Structure and Components



No.	Description	Material
①	Nozzzle (Tip, Body, Sleeve, O-ring)	Alumina ceramic + S303 + Polyamide + NBR
②	Strainer	S303 + S304 + S316 (φ0.3～φ0.4)
		S303 + S304 (φ0.5～φ1.0)

・ In our material code, "S" represents "stainless steel".
(Example) S304 represents stainless steel 304.

7. Specifications

Code	φ0.3	φ0.4	φ0.5	φ0.6	φ0.7	φ0.8	φ0.9	φ1.0
Length (mm)	44 (Nozzle), 89 (Nozzle + Strainer)							
External diameter (mm)	HEX. 17							
Thread size	R3/8							
Weight (g)	40 (Nozzle), 47 (Nozzle + Strainer)							
Maximum operating pressure (MPa)	5							
Operating temperature range (℃)	5 ～ 60							
Color of Sleeve								

Chemical Resistance of CMP-T series Nozzles

	Name of chemicals	Temperature (℃) 20	40	60		Name of chemicals	Temperature (℃) 20	40	60
Acidic	Hydrochloric acid (35%)	×	×	×	Organic	Trichloroethylene	△		
	Hydrochloric acid (100%)	×	×	×		Acetone	△		
	Sulfuric acid (60%)	×	×	×		Methyl alcohol	△	△	×
	Sulfuric acid (70%)	×	×	×		Ethyl alcohol	△	△	×
	Sulfuric acid (90%)	×	×	×		Alcohol	△		
	Sulfuric acid (98%)	×	×	×		Ethyl ether	○		
	Fluorinated acid (10%)	×	×	×		Benzene	○		
	Formic acid (50%)	×	×	×		Toluene	○		
	Oxalic acid (100%)	△	×	×		Chloroform	△		
	Phosphoric acid (60%)	×	×	×		Formalin	△		
	Acetic acid(80%)	△	△	×		Phenol	×	×	×
						Gasoline	○		
Alkali	Sodium hydroxide	×	×	×		Glycerol	○		
	Ammonia	×	×	×		Lacquer thinner	○		
	Sodium hypochlorite (bleach)	○	○	△		Mild detergent	○	○	○

Remarks

Symbols
○: Not corrosive
△: Corrosive
×: Unusable