

- Thank you for choosing Koshin Submersible Pump.
- This manual is prepared for your safety when operating pump.
- Please read carefully and comprehend fully before use.
(Wrong usage could cause injury or death.)
- Please keep this manual handy for future reference.

PLEASE READ THIS MANUAL BEFORE OPERATION.

"ACCEPTABLE FOR INDOOR OR OUTDOOR USE" "SUBMERSIBLE PUMP"

▲ CAUTION ▲

Before use, please make sure to read the instruction manual.
Do not operate the pump out of water or insufficient water.

▲ WARNING ▲

Risk of electric shock. This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce risk of electrical shock, connect only to a properly grounded, grounding-type receptacle.
TO REDUCE THE RISK OF ELECTRIC SHOCK, INSTALL ONLY ON A CIRCUIT PROTECTED BY A GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI).

▲ NOTE ▲

This pump has not been investigated for use in swimming pool or marine areas.
This pump has been evaluated for use with water only.

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▲CAUTION

1. Leak Current Breaker

For home use, attach a leak current breaker, GFCI (offered separately) to ensure safety.

2. Connect the power source

Absolutely refrain from connecting this pump to any other power source than 220V AC, 50Hz.

3. Water to use

Absolutely refrain from using the pump for any oil, strong alkaline or strong acidic solution, or any agricultural chemicals.

4. Do not run dry!

Idling can cause trouble, to prevent short-circuit, place pump at deepest position as possible.

5. Handling of power cord

- Never lift or move pump by power cord.
- Select and use proper size extension cord.
Do not run extension cord in water.

6. Using in bath, etc.

Do not enter the water when pump is being used.

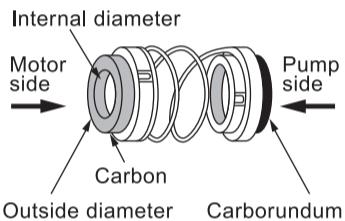
▲CAUTION

The pump is used a double mechanical seal.
(See figure)

Consulting the following table assemble it.

Mechanical seal	Motor side (Carbon)	Pump side (Carborundum)
Outside diameter	22.5mm	20.5mm
Internal diameter	18.5mm	15.0mm

Double mechanical



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INSTRUCTIONS FOR USE

1. Please check the type, aperture, output, frequency, and voltage indicated on the name plate attached to the upper part of the pump.
Pay close attention, in particular, to frequency and voltage as inadequate frequency and voltage can cause lower pump performance and troubles.

2. Place to use

The pump can be used at almost all places but avoid continuous short-water operation at a sandy place, as such may accelerate wear of the pump.
Try to install the pump at a position where water can be collected most easily.
When the pump is installed on soft muddy or sandy ground, lay wooden board or block under the body to prevent setting down.
Strictly refrain from putting into any pond bath, or swimming pool in which anybody is staying.

3. Hose piping

When any hose is used for connection, keep the hose as straight as possible as excessively bent hose reduces delivery volume.
Refrain from placing the discharge port under water. Inverse flow may sometimes be resulted due to siphon effect when the operation is stopped.

4. Cabtire cable

If the cabtire cable is pulled instead of the rope, the core wires may sometimes be cut off. To extend the cable, use a cable of the same or larger size than the one attached to the pump.

5. Earth leakage breaker

Be sure to ground the earthing wire before connecting the cabtire cable to the power source. The green wire is for earthing. Be sure to attach the leakage breaker to prevent any possible leakage trouble.

6. Thermal protector

The pump incorporates a thermal protector to protect the motor, and the motor is stopped automatically at a over-load operation due to any reason.
When the motor stops automatically, be sure to check after turning off the power source.

AFTER USING PUMP

1. In cold climates, do not allow pump to be freezed.
Remove pump from water to prevent damage due to freezing.
2. Completely drain and dry pump of water before storing.

MAINTENANCE AND INSPECTION

1. Periodically check the insulated condition with a megger tester.
The resistance between the earthing wire and the power cord should be 100Meg ohm and higher
2. The shaft of the water-tight mechanism as the most critical part of the pump is sealed with liquid paraffin. The life time of product changes greatly depending on the operating condition but the quantity of paraffin should be checked periodically.
Use 250cc of Liquid paraffin for the sealing.