

12-06 039088101

High Performance Submersible Pump

PONSTAR

OPERATION MANUAL

- 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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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.

⚠ CAUTION

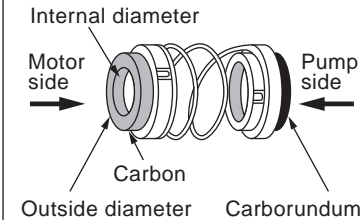
1. Leak Current Breaker
For home use, attach a leak current breaker, GFCI (offered separately) to ensure safety.
2. Connect the power source
Absolutely refrain from connecting this pump to any other power source than 220V AC, 50Hz.
3. Water to use
Absolutely refrain from using the pump for any oil, strong 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
 - a. Never lift or move pump by power cord.
 - b. 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



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 parafin should be checked periodically.
Use 250cc of Liquid paraffin for the sealing.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
No start at all or stops immediately after start	Not properly connected to power circuit	Correct the connection
	The GFCI, leakage circuit breaker is actuated	Check the power circuit
	The impeller is caught by foreign substance	Overhauling
	Motor is burnt	Repair or replace
	Voltage drop	Raise the voltage to the rating
Failure during operation	The protector is actuated	Remove foreign substance if the impeller is clogged
		Lower the liquid temperature if it is too high
No pumping or poor performance	Voltage drop	Raise the voltage to the rating
	High delivery head	Lower the head
	Discharge pipe is clogged	Overhauling
	Impeller wear	Replacement
	Clogging of foreign matter in strainer pump	Overhauling

SPECIFICATIONS

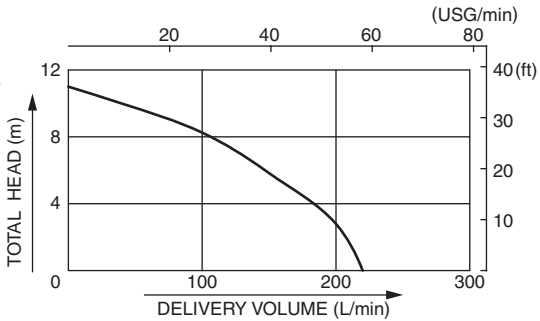
MODEL		PQ-55022
PUMP	Connection Dia	50 mm (2")
	Total Head	11 m (36 ft)
	Delivery Volume	220 L/min (58GPM)
MOTOR	Voltage	AC-220V
	Frequency	50 Hz
	Rated Current	2.7 A
	Revolution	2800 rpm
	Model	Induction Motor
	Power Cord	5 m (16.0 ft)
Standard Accessories		1 Hose Band / 1 Rope (5m)
Net Weight		11.5 kg

*Starting current is three times higher than rated current.

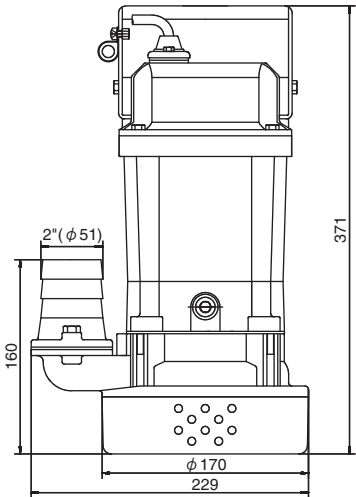
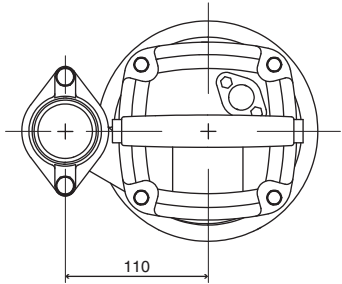
PERFORMANCE CURVE

*Performance ratings are guaranteed minimum, not inflated maximum.

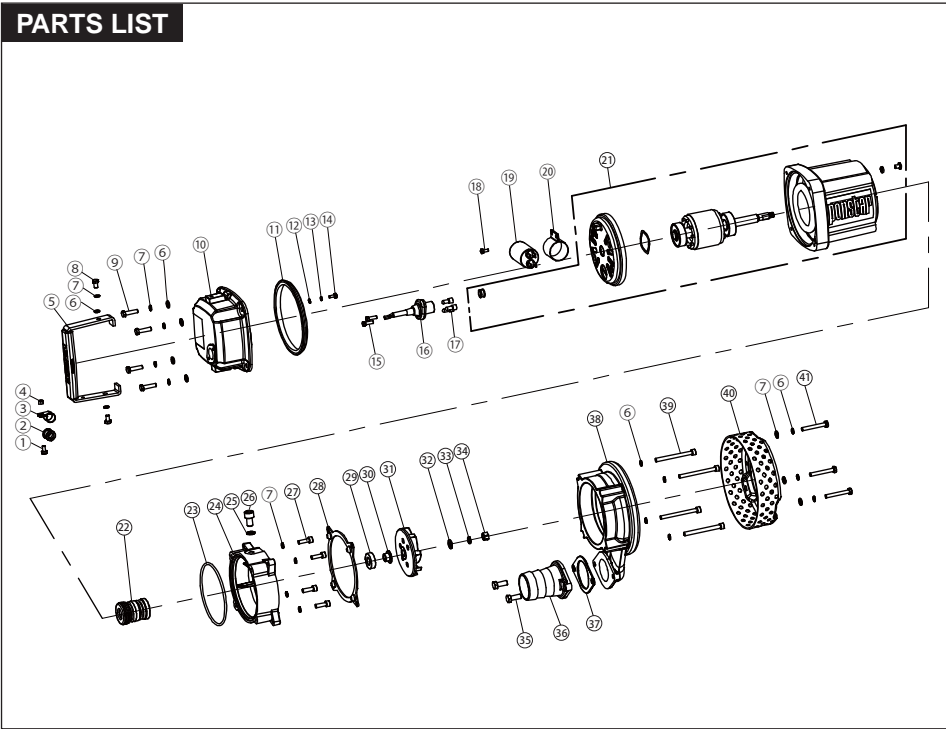
**Starting current is three times higher than rated current.



DEMENSION



PARTS LIST



PQ-50022-BAA-0									
No.	PARTS CODE	PARTS NAME	STANDARD, MATERIAL	QTY	No.	PARTS CODE	PARTS NAME	STANDARD, MATERIAL	QTY
1	0390860	⊕Screws	SUS M5x12	1	22	0390878	Mechanical Seal	Carbon/Ceramic/Silicon Carbide	1
2	0390859	Cord supporter	NBR	1	23	0390852	O-Ring	NBR	1
3	0390836	Cord band	SUS	1	24	0390791	Mecha Box	ADC	1
4	0390861	Nut	SUS	1	25	0390879	Seal Washer	SUS+NBR	1
5	0390795	Handle	A3+NBR	1	26	0390850	Socket Bolt	SUS M10x16	1
6	0390857	Washer	SUS φ 6	9	27	0390875	Bolt	SUS M6x20	4
7	0390858	Spring Washer	SUS φ 6	17	28	0390801	Casing Packing	NBR	1
8	0390856	⊕Screw	SUS M6x10	2	29	0390871	Oil Seal	14x28x8	1
9	0390869	⊕Screw	SUS M6x20	4	30	0390894	Wear sleeve		1
10	0390794	Head Cover	ADC	1	31	0390789	Impeller	TPU+SUS	1
11	0390799	Head Packing	NBR	1	32	0390898	Washer	SUS φ 8	1
12	0390865	Washer	SUS φ 4	1	33	0390899	Sping Washer	SUS φ 8	1
13	0390866	Spring Washer	SUS φ 4	1	34	0390897	Nut	SUS M8	1
14	0390864	⊕Screw	SUS M4x10	1	35	0390849	Hexagon bolt	SUS M8x20	1
15	0390863	Hexagon Bolt	SUS M5x16	2	36	0390797	Flange	ADC	1
16	0430583	Power Cord	VTC	1	37	0390800	Flange Packing	NBR	1
17	0390900	Terminal	φ 5	1	38	0390790	Casing		1
18	0390855	⊕Screw	M4x10	1	39	0390895	Bolt	SUS M6x70	4
19	0390807	Capacitor	10uF/450V	1	40	0390788	Strainer		1
20	0390862	Capacitor clip		1	41	0390892	Bolt	SUS M6x45	3
21	0398193	Motor Set	19,23-30	1					