



# PONSTAR

High Performance Submersible Pump

## OPERATION MANUAL

### 《PX-55011 • PX-55022》

- Thank you for purchasing 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.**

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## USE

Water feeding and discharging for construction and civil works; Water supply and sewage works; Various kinds of industrial facilities; Housing and building facilities, Flower gardening; Irrigation of seeds and nursery stock fields; Horticultural facilities; Water sprinkling, feeding and discharging for fish farm (fresh water); Watering in gardens; Feeding and discharging for fountains

## 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 water quantity. 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

To transfer the pump or to install, hold the pump on the handle or a rope tied to the handle.

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. Strictly refrain from placing the joint between the main line and the extension in water.

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. Rotary direction of 3-phase pump

Turn on the switch while hanging the pump by one hand. If the reaction at turning-on of the switch is in the same direction as indicated on the body by an arrow, the pump rotates in the correct direction. (The arrow indicates the direction of reaction.)

If the reaction is in the opposite direction, replace any two wires each other.

7. After use

If the pump is left as it is after used for water of high sand content or other special substances, the sand is accumulated in the pump and will affect the next operation. Before stopping operation, therefore, be sure to keep pumping supernatant water or clean water for some time to clean out the inside.

8. 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.

## MAINTENANCE AND INSPECTION

1. Periodically check the insulated condition with a megger tester. To be acceptable, the resistance between the earthing wire and the power cord should be 100M 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 changes greatly depending on the operating condition but the quantity should be checked periodically. Use 230cc of Kyoseki No. 2 or equivalent for the sealing. The liquid paraffin can be checked easily by removing the hexagon socket head bolt at a lower side of the pump body.

## TROUBLE-SHOOTING

No start at all or stops immediately after start.	Malconnection of power circuit	Correct the connection. Check the power circuit.
	The leakage circuit breaker is actuated.	Repair the point of leakage.
	The impeller is caught by foreign substance.	Remove the foreign substance.
	Motor is burnt.	Repair or replace.
	Voltage drop.	Raise the voltage to the rating.

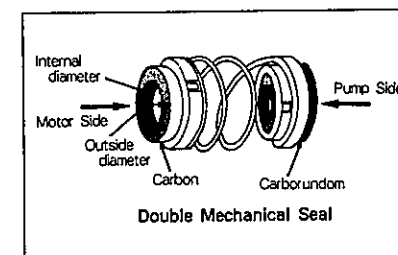
Stops during operation	The protector is actuated.	Remove foreign substance if the impeller is clogged.
		Lower the liquid temperature if it is too high.

No pumping or lowered performance	Voltage drop	Raise the voltage to the rating.
	Inverse rotation	Correct to forward rotation.
	High delivery head	Lower the head.
	Discharge pipe is clogged.	Overhauling
	Impeller wear	Replacement
	Clogging of foreign matter in strainer pump	Overhauling.

## CAUTION

The pump is used a double mechanical seal.(See Fig.)  
Consulting the following table, assemble it.

MECHANICAL SEAL	MOTOR SIDE (Carbon)	PUMP SIDE (Carborundom)
Outside diameter	22.5mm	20.5mm
Internal diameter	18.5mm	15.0mm

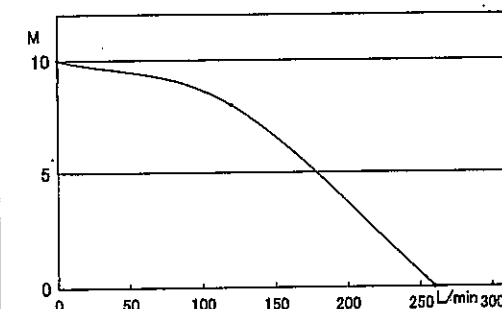


## SPECIFICATION

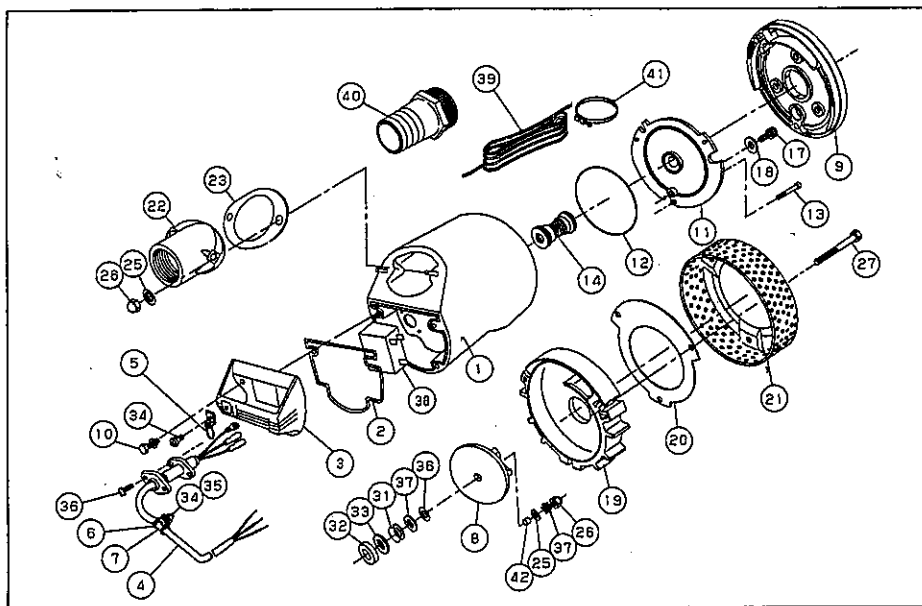
Model		PX-55011	PX-55022
PUMP	Connection Dia	50m/m (2")	
	Total Head	10m	
	Delivery Volume	260ℓ/min	
MOTOR	Voltage	Single 110V	Single 220V
	Frequency	50Hz	
	Read Current	6.5A	3.2A
	Consumption of Electric Power	580W	620W
	Revolution	3400rpm	
	Power Cord	5m	
Net Weight		11kg	
Standard Accessory		5m Rope Nipple φ 60mm Hose Band	

※Motive current sends about three times as much as rated current.

## PERFORMANCE CURVE



## PARTS LIST



No.	PARTS No.	PARTS NAME	QTY
1	0438074	PX-5011 400W Motor	1
1	0438071	PX-5022 400W Motor	1
2	0430284	PX-50 Head Packing	1
3	0430268	PX-50 Handle	1
4	0430289	PX-55011/55022-BAA Power Cord	1
	0438105	PX-55011/55022-BAB Power Cord	1
	0438142	PX-55022-BAC Power Cord	1
5	0438066	PX-50 Chain	1
6	0390031	PS-40 Cord Supporter	1
7	0260018	BL-3224 Cord Band	1
8	0430285	PX-50 50Hz Impeller	1
9	0430273	PX-50 Back Liner	1
10	743605031	Bolt	4
11	0430271	PX-50 Front Cover	1
12	889955125	O-ring	1
13	734505037	Socket Bolt	3
14	0390003	PS-40 Mechanical Seal	1
15	0430300	PX-50 Impeller Washer	1
16	0390025	PS-40 Impeller Adjusting Washer	2
17	0390037	PS-40 Socket Bolt	1
18	854255010	Seal Washer	1
19	0430274	PX-50 Casing	1
20	0430269	PX-50 Suction	1

No.	PARTS No.	PARTS NAME	QTY
21	0430270	PX-50 Strainer	1
22	0430305	PX-50 Delivery Flange	1
23	0430283	PX-50 Delivery Packing	1
24	0430290	PX-50 Stud Bolt	2
25	846205008	Washer	2
26	835305008	Nut	3
27	735705162	Bolt	3
28	0340142	SM Seal Ring	1
29	0340153	SM + Screw	1
30	0430301	PX-50 Thrust Washer	1
31	895154014	Oil Seal	1
32	0430299	PX-50 Thrust Packing	1
33	707820074	+ Screw	1
34	703305100	+ Screw	2
35	827305005	Nut	1
36	703305104	+ Screw	2
37	845305008	Toothed Washer	1
38	0430320	Condenser 110V	1
	0430347	Condenser 220V	1
39	0398020	5m Rope	1
40	0390213	Nipple	1
41	940019060	φ 60 Hose Band	1
42	0430441	PX-50 Impeller Bush	1

## DIMENSION

UNIT : mm

