

# OPERATION AND MAINTENANCE

## PX, PX-N, PX-F SERIES



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### OPERATION AND MAINTENANCE

#### 1. UNPACKING AND INSPECTION

1. Does the description on the nameplate comply with your order?
2. Are all items delivered?
3. In there any damage from pump or/& during transportation?
4. Are all bolts tightened?

#### 2. PRECAUTION FOR OPERATION

##### **-CAUTION-**

\* DO NOT OPERATE THE PUMP WITHOUT LIQUID

As the abrasion parts are cooling by the self-lubricating system/by pumped liquid, dry running, no positive in the pump inside, erratic operation such as suction valve closed, may give serious damage to the internal parts.

##### **-CAUTION-**

\* INFLUENCE OF LIQUID TEMPERATURE

The pump performance is not affected by any temperature change. But liquid may be changed its viscosity, vapor pressure, and corrosiveness.

##### **-CAUTION-**

\* INFLUENCE OF LIQUID TEMPERATURE

PX series: 0 to 70°C, PX-N series: 0 to 80°C, PX-F series: 0 to 90°C. Allowable environment condition: 0 to 40°C, up to 85%

##### **-CAUTION-**

\* INFLUENCE OF LIQUID TEMPERATURE

Specific gravity: 1.1 kg/L, Viscosity: 20 C.P.

#### 3. PRECUATIONS BEFOR OPERATION



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1. Clean up pipe, tank or equipment.
2. Retighten the flange bolts, hose band base plate bolts.
3. Prime the pump until the pump is filled with liquid
4. Completely close the discharge valve.
5. Turn the motor fan by screw-drive to expel remained air from pump inside
6. Verify the direction of rotation of pump(C.W from front view of pump)

#### **4. PRECAUTION DURING OPERATION**

1. To start up the pump, close discharge value.
2. After the pump is started, gradually open the discharge value as check flow meter/or director and pressure gauge to make sure whether the pump is been operating under normal situation.

#### **5. CEASE OF OPERATION**

1. Gradually closes the discharge valve. Do not the discharge by solenoid valve or any quick way to prevent water hammer.
2. Stop motor. Check whether the motor stops smoothly or not. If not, inspect the internal part and correct abnormal friction.
3. When the pump operation is stopped for long period, be sure to drain liquid from pump completely to prevent freezing, crystallization.
4. When a power failure occurs, the power switch should be turning off immediately.

#### **6. MAINTENANCE AND INSPECTION**

1. Verify that the pump is running without vibration or abnormal noise and also no abnormal cavitation noise is found.
2. Check the discharge pressure, flow rate whether the pump operation condition is normal.
3. If the stand-by pump is installed, operate it from time to time to make sure that can be operated anytime.

#### **7. PREVENTATIVE MAINTENANCE**

<b>PART NAME</b>	<b>INSPECTION ITEM</b>	<b>MEASURES</b>
Magnet Housing	Evidence of rubbing	Identify casue
Rear Casing	Evidence of rubbing or cracking	Replace
Magnet Capsule	Evidence of scrub or cracking	Identify cause and replace
Impeller	Evidence of traces of cavitation	Identify cause and clean up
	Contamination and/or clogging on the blades and/or bearing	



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### 8. DISASSEMBLE PROCEDURE

1. Drain the liquid the pump and flush the pump inside.
2. Remove the bolts from front casing, then pull out front casing from bracket.
3. Pull the impeller/magnet capsule pout forward for removal.
4. Pull out O ring and the rear casing forward.

### 9. RE-ASSEMBLY PROCEDURE

1. Assemble the pump in the reverse procedure of disassembly.
2. Carefully handles magnet capsule to avoid any damage.
3. Always replace new O ring on each re-assemble.
4. Tighten all bolts equally but not over-tightened.

