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# Installation, Operation and Maintenance Manual



## Stancor LX Series Pumps



**STANCOR**

*Pump & Control Solutions*




# STANCOR PUMPS




## Model LX 60HZ

### Submersible Sewage Pumps

### Instruction Manual

 This operational instruction manual shall be handed to the user.

 **Caution**

Thank you for selecting the Stancor submersible sewage pumps Model LX. Stancor takes very caution in manufacturing the product for safe use by the customer. However unsuitable handling may reduce the performance and result in accident. Please read this instruction manual before starting operation. We ask for appropriate utilization in accordance with this manual. Therefore keep this one in safe place where it can be consulted by pump operator any time.

To installation personnel



Be sure to hand over this manual to the customer's operation, maintenance and inspection personnel.

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## (1) Warnings

Warnings in this manual provide information required for safe operation of the pump, and instructions for preventing danger or injury to you or other people. So that you will know the degree and imminence of danger that warnings signify, they are divided into two grades, WARNING and CAUTION, according to the seriousness of what will happen if their instructions are not heeded. Both grades of warning contain important safety information; carry out all the instructions that they give, without fail.











Warning grade	Meaning
 <b>Warning</b>	Potentially hazardous situation. Failure to follow the instructions could result in death or serious injury.
 <b>Caution</b>	Failure to follow the instructions could result in minor injury or damage to the pump.


<b>Note</b>	Used to emphasize important information.
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### Meanings of symbols accompanying WARNINGS and CAUTIONS.

	Indicates prohibition (that something must NOT be done). Precisely what must not be done is indicated by pictures or words either inside the circle of the symbol or close to it.
	Indicates an imperative (that something MUST be done). Precisely what must be done is indicated by pictures or words close to the symbol.

## (2) Safety Cautions


 Warning	Before lifting the pump, confirm the mass on catalogue or outline drawing. Use appropriate crane (or hoist) and check position and tightness of lift system so that mass of the pump is not unbalanced. Failure to observe this precaution can result in serious accidents.	
	On the condition of suspended pump, do not attach a part and use. It is very dangerous.	
	Do not hurt, break, bend, tug, wrest and bundle power supply cable excessively. Do not put something weighty on the cable. Otherwise it could result in electric shock and fires.	
	All wiring work should be performed correctly by a qualified electrician and all national and local electrical codes must be observed.	
	Install and ground an earth cable. Electric shock could occur during accidents of electric leakage.	
	To prevent danger of electric shock, use short circuit breakers as exclusive use.	
	Disassembly and repair of the pump should only be performed by specialist maintenance technicians. Otherwise, error by personnel could result in electric shock, and the pump catching fire or operating abnormally and causing injury.	
	Always turn the power switch OFF before inspecting or repairing the pump. Otherwise it could result in the pump starting up suddenly in auto operation, exposing personnel to danger.	
	Always turn the power switch OFF if the pump is to be out of use for a long time. If the power is left ON and insulation deteriorates, then electric leakage and electric shock could occur.	

 <b>Caution</b>	Do not operate the pump with 50 Hz specifications at 60 Hz. Otherwise motor should be burnt out. Do not operate the pump with 60 Hz specifications at 50 Hz. It will cause the pump to perform poorly.	⊘
	If you have purchased a standard pump, refer to Section (4) "Specification". The optional specifications pump is made to meet the needs of some customers. Be sure not to operate your pump outside of the ranges shown in the applicable specifications.	⊘
	Do not use this pump for food processing and drinking water applications.	⊘
	Do not use this pump for living things for example fish farm, crawl, aquarium etc. When the pump breaks down, the facilities fall into oxygen deficiency.	⊘
	Do not use this pump for important equipment (computer cooling equipment and refrigerator cooling equipment etc.)	⊘
	Do not use this pump in handling oil, seawater, organic solvent, liquid except for water. The pump breaks down, then electric leakage and electric shock could occur.	⊘
	Do not insert hands, foot and so on into the suction inlet during operation. Otherwise, pump could cause injuries by the rotating parts.	⊘
	Do not use this pump when anyone is in the water. Electric shock could occur during electric leakage.	⊘
	Do not operate in the air. Otherwise, insulation deteriorates. Then electric leakage and electric shock could occur.	⊘
	In the insulation resistance under 1MΩ, electric shock could occur. Turn the power switch OFF as soon as possible. Contact the agency where you purchased the pump, or to perform an inspection and maintenance on the pump.	⚠
	To prevent an accident if the pump stops running or an abnormality occurs, immediately turn off the power switch. Contact the agency where you purchased the pump, or to perform an inspection and maintenance on the pump.	⚠

### (3) Delivery Checks

When your pump is delivered, check the followings immediately.

1. The pump and accessories
  - a) Confirm that no damage has occurred during transportation.
  - b) Confirm that all accessories have been delivered.  
(Refer to section (9) "Construction")
2. Nameplate
  - a) The basic specifications of the pump are listed on the nameplate. Read the data on the nameplate to check that this pump was the product that you ordered.

 <b>Caution</b>	<ul style="list-style-type: none"> <li>● Do not operate the pump with 50 Hz specifications at 60 Hz. It will overload the pump causing the motor to burn out.</li> <li>● Do not operate the pump with 60 Hz specifications at 50 Hz. It cause the pump to perform poorly.</li> </ul>	⊘
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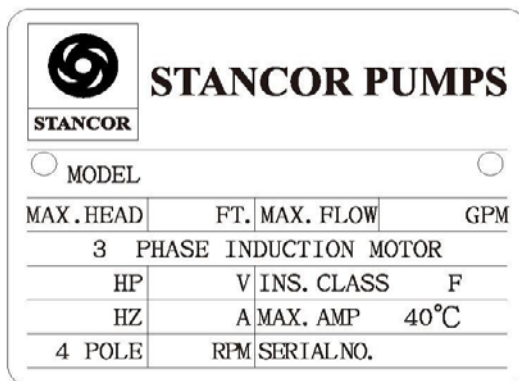


Fig. 1 -Data of pump nameplate

## (4) Specifications

For the head, capacity, speed and other major specification of your pump, see the nameplate. The standard specifications and optional specifications are given in the tables below.

If you have purchased a standard pump, refer to the standard specifications shown below. The optional specifications pump is made meet the needs of some customers. Be sure not to operate your pump outside of the ranges shown in the applicable specifications.	⊘
Do not use this pump for food processing and drinking water applications.	⊘
Do not use this pump for living things for example fish farm, crawl, aquarium etc. When the pump breaks down, the facilities fall into oxygen deficiency.	⊘
Do not use this pump for important equipment (computer cooling equipment and refrigerator cooling equipment etc.)	⊘
Do not use this pump in handling oil, seawater, organic solvent, liquid except for water. The pump breaks down, then electric leakage and electric shock could occur.	⊘

### ● Standard specification

Liquid handled		Sewage, waste water
Temperature		0~40°C
Foreign substance		Discharge size of pump (inch)      3", 4", 6"
		Diameter of spherical body (inch)      3"
		Fibriform length (inch)      20"
Material	Impeller	Cast iron;FC200 (Except for 50 Hz -25HP, 30HP) Ductile iron; FCD400 (For 50 Hz -25HP, 30HP)
Motor	Phase	3-phase
	Voltage(*1)	50Hz:380V, 400V, 415V 60Hz:380V, 440V, 460V, 480V
	Starting Method	3~10HP: Direct start 15~30HP: Star-Delta start (Or Direct start)
	Protector	3HP: Auto-Cut 5~30HP: Thermal Protector
Lubricants of Mechanical seal		Turbine oil ISO VG32
Maximum water depth		8m
Installation		With Quick Discharge Connector or Floor mounted





(\*1): Allowable voltage fluctuation

Motor rating output: 3HP; -10 to 6%

5HP to 30HP; ±10%

Allowable combined fluctuation of voltage and frequency: the sum of each absolute value shall be less than 10%.

## (5) Installation

 <b>Warning</b>	Before lifting the pump, confirm the mass on catalogue or outline drawing. Use appropriate crane (or hoist) and check position and tightness of lift system so that mass of the pump is not unbalanced. Failure to observe this precaution can result in serious accidents.	
	On the condition of suspended pump, do not attach a part and use. It is very dangerous.	
	Do not hurt, break, bend, tug, wrest and bundle power supply cable excessively. Do not put something weighty on the cable. Otherwise it could result in electric shock and fires.	

### 1. Before installation

Insulation resistance measurement: With the motor and cable (disconnecting the power supply) immersed in water, use a megger to measure the insulation resistance between the ground wire and each phase of the motor. Keep the power cable off the ground during measurement.

The value should be more than 20 meg-ohms.

### 2. Installation

- a) Under no circumstances should the cable be pulled while the pump is being transported or installed. Attach a chain or rope to the grip and install the pump.
- b) This pump must not be installed horizontally. Ensure that it is installed upright on a secure base.
- c) Install the pump at a location in the tank where there is the least turbulence.
- d) If there is a flow of liquid inside the tank, support the piping to prevent abnormal vibration. (See Fig.2)
- e) Install piping so that air will not stagnate
- f) Do not permit end of discharge piping to be submerged, a backflow will result when the pump is stopped.
- g) Manual type pumps do not have an automatic operating system based on built-in floats. Do not operate the pump above ten minutes with the water level near the minimum operating level as the automatic cut-off switch incorporated inside the motor will be activated. To avoid dry operation, install an automatic operating system, as shown in Fig.3. Water levels H1 and H2 are shown in the following table.
- h) When using electrodes for automatic operating system, incorrect actuation may occur caused by scum and oil attached on the electrodes.

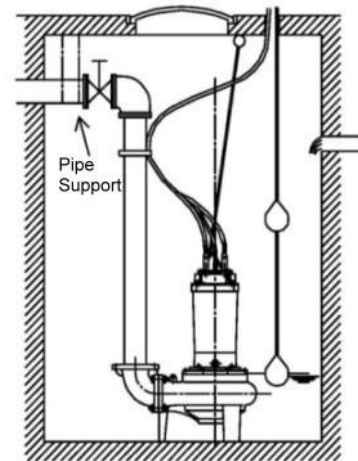


Fig.2

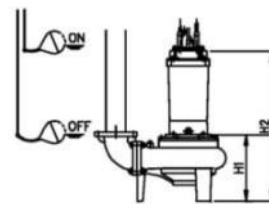



Fig.3

Frequency		3HP	5HP	7.5HP	10HP	15HP	20HP	30HP
60Hz	H2(inch)	21.5	24.7	27.8	27.8	30.4	30.4	32.6
	H1(inch)	11.0	11.0	11.6	11.6	12.7	12.7	13.0

**NOTE** Packing scraps should be processed properly according to the local rules.

- i) Installation of the pump with quick discharge connector shall be performed according to the manual "Quick Discharge Connector"

### 3. Electrical Wiring

 <b>Warning</b>	All wiring work should be performed correctly by a qualified electrician. And all national and local electrical codes must be observed.	⚠
	Install and ground an earth cable. Electric shock could occur during accidents or electric leakage.	⚠
	To prevent danger of electric shock, use short circuit breakers as exclusive use.	⚠

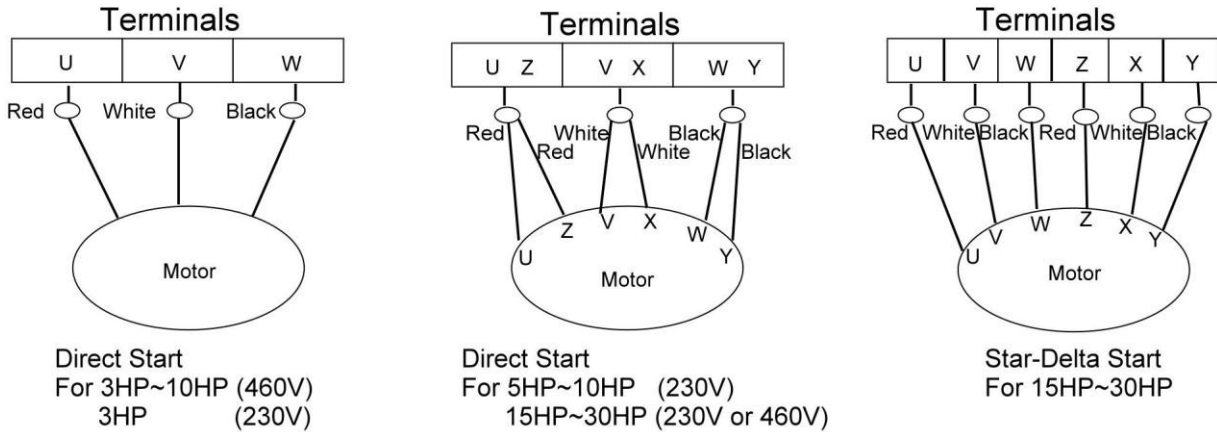


Fig.4

**3PH/60HZ LX pump Full Load AMP Chart**

All electrical wiring work should be performed correctly by a qualified electrician. And all national and local electrical codes must be observed. Incorrect wiring could result in electric shock and fires.

Install and ground an earth cable. Electric shock could occur during accidents or electric leakage.

Model	HP	230V FLA	460V FLA
80 LX62.2	3	9.8A	4.9A
80/100 LX63.7	5	15.4A	7.7A
80/100/150 LX65.5	7.5	23.0A	11.5A
80/100/150 LX67.5	10	29.8A	14.9A
80/100/150 LX611	15	41.2A	20.6A
80/100/150 LX615	20	54.6A	27.3A
80/100/150 LX622	30	73.2A	36.6A

#### 1).Wiring

Wiring should be performed as indicated for the appropriate start system as shown in Fig.4.

#### 2).Cable

- a) Never let the end of the cable contact water.
- b) If the cable is extended, do not immerse the splice in water.
- c) Fasten the cable to the discharge piping with tape or polyvinyl chloride strips.
- d) Install the cable so that it will not overheat. Overheating is caused by coiling the cable and exposing it to direct sunlight.
- e) The signal cable on pumps over 5hp consist of four wires P1(red) and P2(white) are the thermal protection wires. P3(black) and P4(green) are the seal leak detector wires. All signal wires should be connected to a relay or contactor, as applicable in the pump controller in order to properly safeguard the pump. The seal leak detector requires a normally open contact which closes when water is detected in the seal chamber.

#### 3).Grounding

Install and ground an earth cable. (The earth cable is the green wire that is one of the 4 cores in power cable) Under no circumstances should the green wire be connected to the power supply.

#### 4).Motor protection

- a) Auto-cut (Built-in in 3HP motor)  
Auto-cut will be activated when motor is operated in abnormal conditions such as locked rotor or single phase that result in excess overheating.
- b) Thermal protector (Built-in in 5HP to 30HP motor)

When temperature of the winding raises and reaches the thermal protector acting point, the motor protection circuit is activated to protect motor from over heat.

Connect to the control panel in accordance with the following specifications.


Be sure to install a thermal relay on the control panel, since the thermal protector is not capable of detecting sudden temperature rises caused by single phase or locked rotor.

Contact rating: AC230V, 13A (Max.)

Contact type: Break contact (Normal close)

Cable: 2 cores polyvinyl chloride cable -1.25mm<sup>2</sup> (Non-polarity)

## (6) Operation

 <b>Caution</b>	Do not insert hands, foot etc. into the suction inlet during operating. Otherwise, pump could cause injuries by the rotating parts.	⊘
	Do not operate in the air. Otherwise, insulation deteriorates. Then electric leakage and electric shock could occur.	⊘
	Do not use this pump when anyone is in the water. Electric shock could occur during electric leakage.	⊘

### 1. Before starting the pump

a) After completing installation, measure the insulation resistances again as described in section (5) "Installation".

b) Check water level

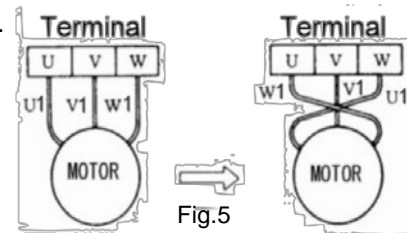
If the pump is operated continuously for an extended period of time in a dry condition or at the lowest water level, the motor protector will be activated.

The repetition of this condition will shorten pump service life. Do not start the pump again in such a situation until after the motor has completely cooled.

### 2. Test operation

a) Turn the operating switch on and off a couple of times to check for normal pump start.

b) Check the direction of rotation. If discharge volume is low or unusual sounds are heard when the pump is operating, rotation has been reversed. When this happens, reverse two of three wires (see Fig.5).



c) After confirming the direction of rotation, open gradually the discharge valve and let the pump run in continuous operation. Check current, voltage, and discharge pressure. (Refer section (8) "Troubleshooting")

When amperage exceed the rated ampere without discharge valve. The plan should be reviewed.

### 3. Operation

a) After test operation, pump could be operated immediately.

b) Do not repeat starting and stop frequently.

The number of starting times per hour is shown in the following table.










Output	The number of starting times per hour
Up to 10HP	10
From 15 to 30HP	7

c) Do not operate a pump in the outside of the specified range.

<b>NOTE</b>	Run the pump at a discharge capacity that is suitable for the equipment. (Capacity that is too large or small will cause noise and vibration, and vibration, and also waste power.)
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## (7) Maintenance

 <b>Warning</b>	Disassembly and repair of the pump should be performed by a maintenance specialist. Otherwise, error by personnel could result in electric shock, and the pump catching fire or operating abnormally and causing injury.	
	Always turn the power switch OFF before inspecting or repairing the pump. Otherwise it could result in the pump starting up suddenly in auto operation, exposing personnel to danger.	
	Always turn the power switch OFF if the pump is to be out of use for a long time. If the power is left ON and insulation deteriorates, then electric leakage and electric shock could occur.	
 <b>Caution</b>	In the insulation resistance under 1MΩ, electric shock could occur. Turn the power switch OFF as soon as possible. Contact the shop from where you ordered the pump to perform an inspection and maintenance on the pump.	
	To prevent an accident if the pump stops running or an abnormality occurs, immediately turn off the power switch. Contact the shop from where you ordered the pump to perform an inspection and maintenance on the pump.	

Check for abnormality in pressure, discharge capacity, voltage, current, vibration and noise. If any of these is different from normal, trouble of some kind is probably going to occur and you should take prompt corrective action. Refer to section (8) "Troubleshooting" for diagnosis and corrective action.

You are advised to post a Daily Operation Condition Check Sheet to facilitate such checking.

<b>Note</b>	A standard pump performance curves are available from your nearest sales office or dealer.
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### 1. Daily inspections

- Check current value and its fluctuation daily. If ammeter fluctuation is great, even though within the limits of pump rating, foreign matter may be clogging the pump.
- If the quantity of liquid discharged falls suddenly, foreign matter may be blocking the suction inlet.

### 2. Regular inspections

#### a) Every month

Measure the insulation resistance. If the insulation resistance is 1MΩ or more, there occurs no problem on operating the pump. If, however, a sudden drop appeared in the insulation resistance even if the value is at or above 1MΩ, the phenomenon is abnormal, and repair of the pump is required.

#### b) Every 6 months

Replace oil in the mechanical seal chamber at every six months. If water enters the oil to give significant cloudiness, replace the mechanical seal. As illustrated in Fig. 6 oiling shall be done at a specified quantity while the oiling plug faces upright and the pump is positioned horizontally. After the oiling, fully tighten the plug with a seal washer.

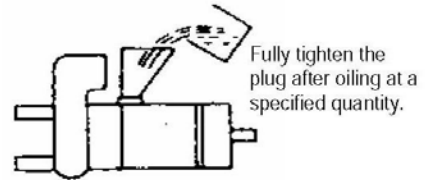


Fig.6

- c) Once a year  
Replace mechanical seal at an interval of one year or 6000 hours of total operating hours, either shorter one. By the replacement, the pump life extends.
- d) Once every two to five years  
Overhaul of the pump assures safe and long period of operation. For the case of high frequency of operations, early overhaul is requested.
- e) Check that there is no leakage from the joint of pump and piping. When there is leakage, tighten the connection bolts.
- f) In order to avoid the fire accident by the contact failure caused by the slack of wiring, check whether motor connections and panel connections are not loosened.

### 3. Cautions when the pump is out of use for long period.

- a) When you leave the pump submerged and out of use for long period, periodically measure the insulation resistance. If the resistance values are greater than 1meg-ohms, operate the pump for a while to prevent rotating parts from fastening by rust. Before starting the operation again, refer to section (6)"operation"
- b) When the pump is pulled up and stored.  
Clean up the pump. And keep it at dry place. Before using the pump again, refer to sections (5)"Installation" and (6)"Operation".

### 4. When motor protection is activated

Check causes that motor protection is activated. After removing the causes, start the operation again.

### 5. Consumable parts

Replace the parts according to the conditions shown in the following table.

Parts name	Mechanical seal	Seal washer	Lubrication oil	O-ring	Bearing
Replacement condition	When oil in mechanical seal chamber is clouded	When oil is exchanged or inspected	When clouded or dirty	When pump is overhauled	—
Replacement interval	Every once a year or every 6000 hours on continuous operation.	—	Every 6 months	—	Every 6000 hours

The above-given replacement time is a standard under normal operation.

Parts name	OUTPUT						
	3HP	5HP	7.5HP	10HP	15HP	20HP	30HP
Mechanical seal < mm >	Φ30		Φ40		Φ45		
Seal washer (W12 SUS) < mm >	Φ22×Φ11.8×1.2( Outer diameter × Inner diameter × thickness)						
Lubrication oil < m L > (Turbine oil ISO VG32)	50Hz	1100		1600		2900	3000
	60Hz	1100		1600		3000	3000
O-ring < mm >	φ 170×φ 3.1		φ 180×φ 3.1		φ 220×φ 3.1		

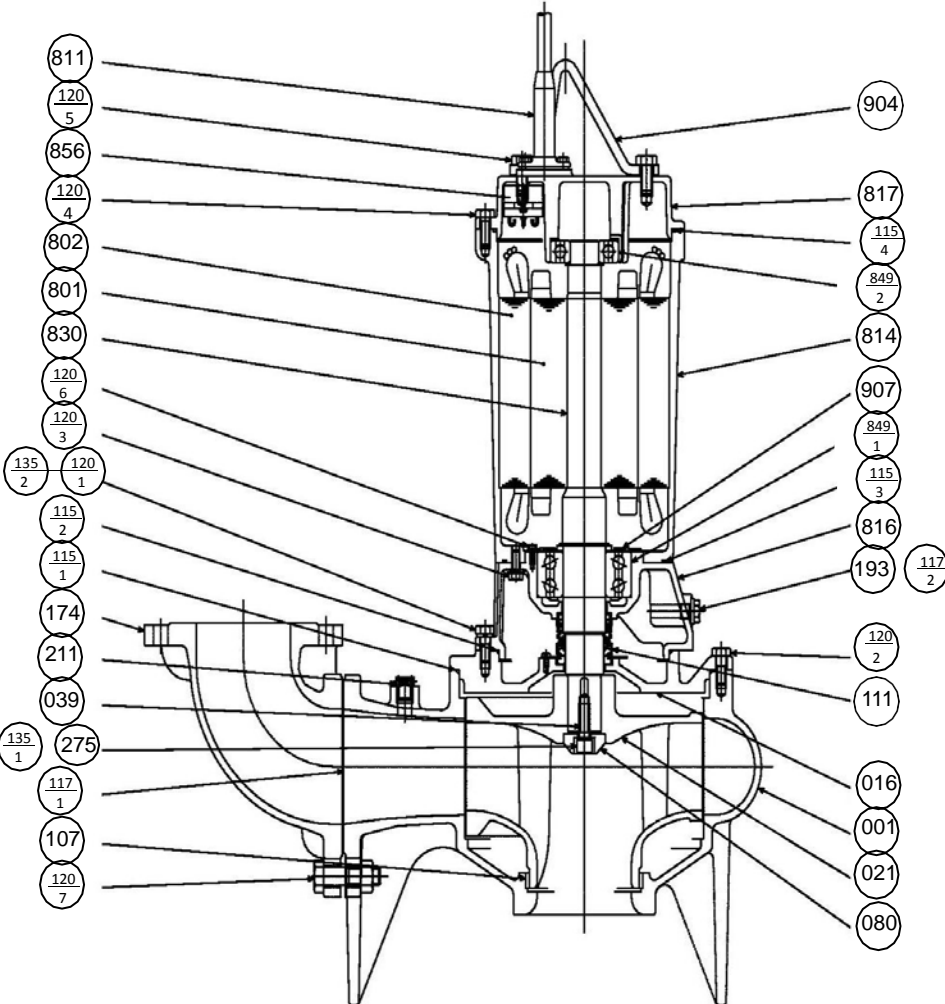
## (8) Trouble shooting

Trouble	Cause	Remedy
The pump does not start. The pump starts, but it immediately stops.	<ul style="list-style-type: none"> <li>● Obstacle inhibits the float movement.</li> <li>● Power is failed.</li> <li>● Large fluctuation of power voltage.</li> <li>● Large drop in voltage.</li> <li>● Phase is lost.</li> <li>● Insufficient connection of power source circuit.</li> <li>● Wrong wiring of control circuit.</li> <li>● Fuse is blown.</li> <li>● Defective magnet switch.</li> <li>● Mal-functioning or defects of float switch, etc.</li> <li>● Actuation of ground fault breaker.</li> <li>● Pump catches foreign matter.</li> <li>● Motor is burnt out.</li> <li>● Break of motor bearing.</li> <li>● Mechanical seal stuck.</li> </ul>	<ul style="list-style-type: none"> <li>● Remove the obstacle.</li> <li>● Request the electric power company for action.</li> <li>● Request the electric power company for action.</li> <li>● Request the electric power company for action.</li> <li>● Inspect the connection section and the magnet switch.</li> <li>● Inspect the power source circuit.</li> <li>● Wire in correct state.</li> <li>● Replace with adequate fuse.</li> <li>● Replace with adequate magnet.</li> <li>● Repair or replace the level switch, etc.</li> <li>● Repair the electric-leak section.</li> <li>● Remove the foreign matter.</li> <li>● Repair or replace the motor.</li> <li>● Repair or replace the bearing.</li> <li>● Repair or replace the mechanical seal.</li> </ul>
The pump can be operated, but it stops after a while.	<ul style="list-style-type: none"> <li>● Prolonged dry operation induced the functioning of Auto-cut.</li> <li>● High liquid temperature induced the functioning of Auto-cut.</li> </ul>	<ul style="list-style-type: none"> <li>● Raise the water level.</li> <li>● Lower the water level.</li> </ul>
Thermal protector is actuated.	<ul style="list-style-type: none"> <li>● Reverse rotation.</li> <li>● Broken gate valve.</li> <li>● Large voltage drop.</li> <li>● Operating the 60Hz pump at 50Hz.</li> <li>● High discharge head.</li> <li>● Large piping loss.</li> <li>● Low operating water level causes air suction.</li> <li>● Liquid leaking from discharge pipe.</li> <li>● Clogging of discharge pipe.</li> <li>● Adhesion of foreign matter in suction opening.</li> <li>● Foreign matter clogs the pump.</li> <li>● Worn impeller.</li> </ul>	<ul style="list-style-type: none"> <li>● Establish correct rotational direction, (refer to (6)-2-b)</li> <li>● Repair or replace the gate valve.</li> <li>● Request the electric power company for action.</li> <li>● Check the nameplate.</li> <li>● Review the plan.</li> <li>● Review the plan.</li> <li>● Raise the water level or lower the pump position.</li> <li>● Inspect and repair the discharge pipe.</li> <li>● Remove the foreign matter.</li> <li>● Remove the foreign matter.</li> <li>● Disassemble the pump to remove the foreign matter.</li> <li>● Replace the impeller.</li> </ul>
Over current	<ul style="list-style-type: none"> <li>● Large fluctuations of power source voltage.</li> <li>● Significant voltage drop.</li> <li>● Phase is lost.</li> <li>● Operating the 50Hz pump at 60H.</li> <li>● Operating the pump in reverse rotation state.</li> <li>● Low head resulting in excess flow rate.</li> <li>● Pump catches foreign matter.</li> <li>● Motor bearing is broken.</li> </ul>	<ul style="list-style-type: none"> <li>● Request the electric power company for action.</li> <li>● Request the electric power company for action.</li> <li>● Inspect the connection section and the magnet switch.</li> <li>● Check the nameplate.</li> <li>● Establish the correct rotational direction, (refer to (6)-2-b)</li> <li>● Narrow the opening of the gate valve. If no gate valve is used, replace the pump with the one having lower head.</li> <li>● Disassemble the pump to remove the foreign matter.</li> <li>● Repair or replace the bearing.</li> </ul>
Pump vibrates, generating large noise.	<ul style="list-style-type: none"> <li>● Pump is in reverse rotational direction.</li> <li>● Pump catches foreign matter.</li> <li>● Piping is in resonance mode.</li> </ul>	<ul style="list-style-type: none"> <li>● Establish the correct rotational direction, (refer to (6)-2-b)</li> <li>● Disassemble the pump to remove the foreign matter.</li> <li>● Modify the piping.</li> </ul>

## (9) Construction

### 1. Section drawing

Typical Model: 100LX67.5



No.	Name	Quantity
907	BEARING COVER	1
904	LIFTING HANGER	1
856	THERMAL PROTECTOR	2※3
849-2	BALL BEARING	1
849-1	BALL BEARING	1
830	SHAFT	1
817	OPPOSITE SIDE BRACKET	1
816	POWER SIDE BRACKET	1
814	MOTOR FRAME	1
811-2	SUBMERSIBLE CABLE	1※2
811-1	SUBMERSIBLE CABLE	2※1
802	STATOR	1
801	ROTOR	1
275	IMPELLER BOLT	1
211	AIR VENT VALVE	1
193	OIL PLUG	1
174	DISCHARGE PIPE	1
135-2	WASHER	4
135-1	WASHER	1
120-7	BOLT	4
120-6	BOLT	3
120-5	BOLT	2
120-4	BOLT	4 or 6
120-3	BOLT	4
120-2	BOLT	8
120-1	BOLT	4
117-2	SEAL WASHER	1
117-1	FLANGE GASKET	1
115-4	O-RING	1
115-3	O-RING	1
115-2	O-RING	1
115-1	O-RING	1
111	MECHANICAL SEAL	1
107	WEARING RING	1
080	BUSHING	1
039	KEY	1
021	IMPELLER	1
016	MECHANICAL SEAL COVER	1
001	CASING	1

※1 3HP:1

※2 3HP:0

※3 3HP Auto-Cut:1

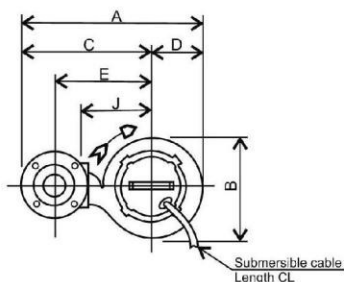
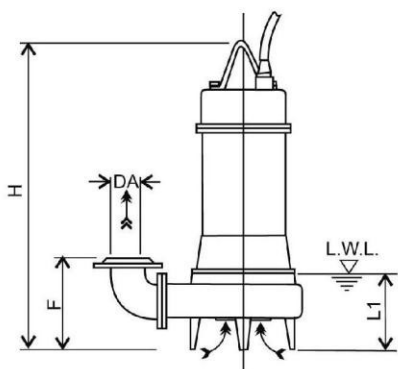
### 2. Accessory

- Nameplate for ground installation: 1
- Discharge pipe: 1 set
- Companion flange: 1 set

Pump might be performed design change for improvement without prior notice.

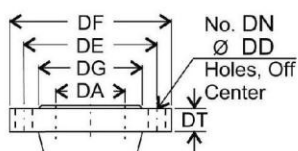
## (10) Dimensions

### Freestanding Type of 80(100) (150) LX Dimensions



- Note:
- 1/. L.W.L (Low Water Level) Is limited to 10 minutes operation at low water level.
  - 2/. Is limited to 30 minutes operation with water level below top of motor.

**Discharge Flange Dimensions**  
(JIS 10kgf/cm<sup>2</sup>)

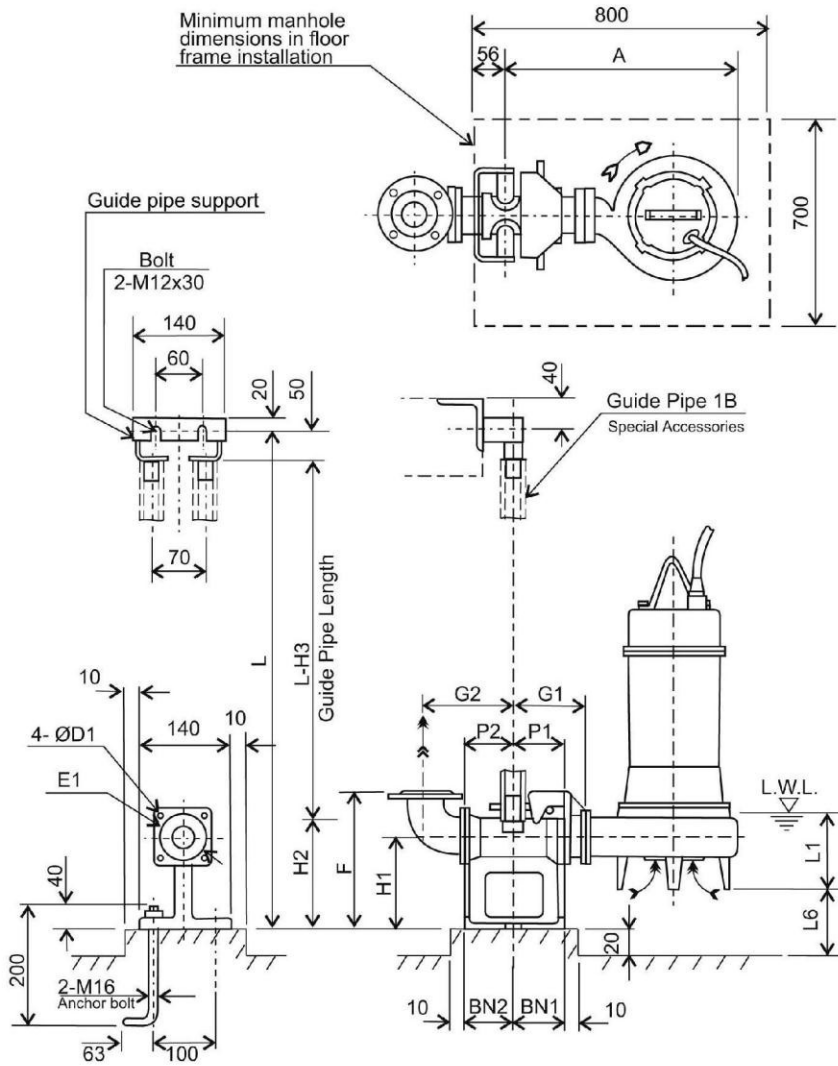


DA	DE	DF	DG	DT	DN	DD
80	150	185	126	18	8	15
100	175	210	151	20	8	15
150	240	280	212	22	8	19

Size	Model	Output		A	B	C	D	E	F	H	J	L1	CL	Weight
		HP	KW											
80	80 LX 62.2	3	2.2	534	320	378	157	285	298	668	210	279	10 m	80 kg
	80 LX 63.7	5	3.7	534	320	378	157	285	298	727	210	279	10 m	87 kg
	80 LX 65.5	7.5	5.5	640	381	453	188	360	334	824	255	310	10 m	118 kg
	80 LX 67.5	10	7.5	640	381	453	188	360	334	824	255	310	10 m	123 kg
	80 LX 611	15	11	734	455	513	221	420	350	938	315	329	10 m	157 kg
	80 LX 615	20	15	734	455	513	221	420	350	938	315	329	10 m	163 kg
	80 LX 622	30	22	777	497	533	245	440	363	1021	335	332	10 m	223 kg
100	100 LX 63.7	5	3.7	577	320	420	157	315	313	727	210	279	10 m	89 kg
	100 LX 65.5	7.5	5.5	653	381	465	188	360	334	824	255	310	10 m	121 kg
	100 LX 67.5	10	7.5	653	381	465	188	360	334	824	255	310	10 m	125 kg
	100 LX 611	15	11	746	455	525	221	420	350	938	315	329	10 m	160 kg
	100 LX 615	20	15	746	455	525	221	420	350	938	315	329	10 m	166 kg
	100 LX 622	30	22	790	497	545	245	440	363	1021	335	332	10 m	226 kg
	150	150 LX 65.5	7.5	5.5	713	381	525	188	385	369	824	255	310	10 m
150	150 LX 67.5	10	7.5	713	381	525	188	385	369	824	255	310	10 m	132 kg
150	150 LX 611	15	11	806	455	585	221	445	385	938	315	329	10 m	166 kg
150	150 LX 615	20	15	806	455	585	221	445	385	938	315	329	10 m	172 kg
150	150 LX 622	30	22	850	497	605	245	465	398	1021	335	332	10 m	232 kg

Units: mm unless otherwise specified

## Guiderial Type of 80LX62.2 and 80LX63.7 Dimensions



Note:

1/. For detailed dimensions of the pumps, refer to separate dimension data sheets.

2/. The discharge bend and companion flange supplied with the pump are used with the QDC.

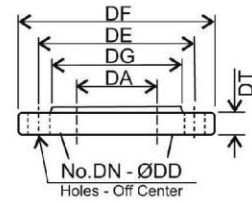
3/. The weight in dimension tables refers only to the weight of the QDC.

4/. Standard accessories supplied with QDC include:-

- Connector body with foundation bolts.
- Guide pipe support
- Sliding Glide
- Adaptor Flange

Guide Pipe is not supplied.

Discharge Flange  
(JIS 10kgf/cm<sup>2</sup>)

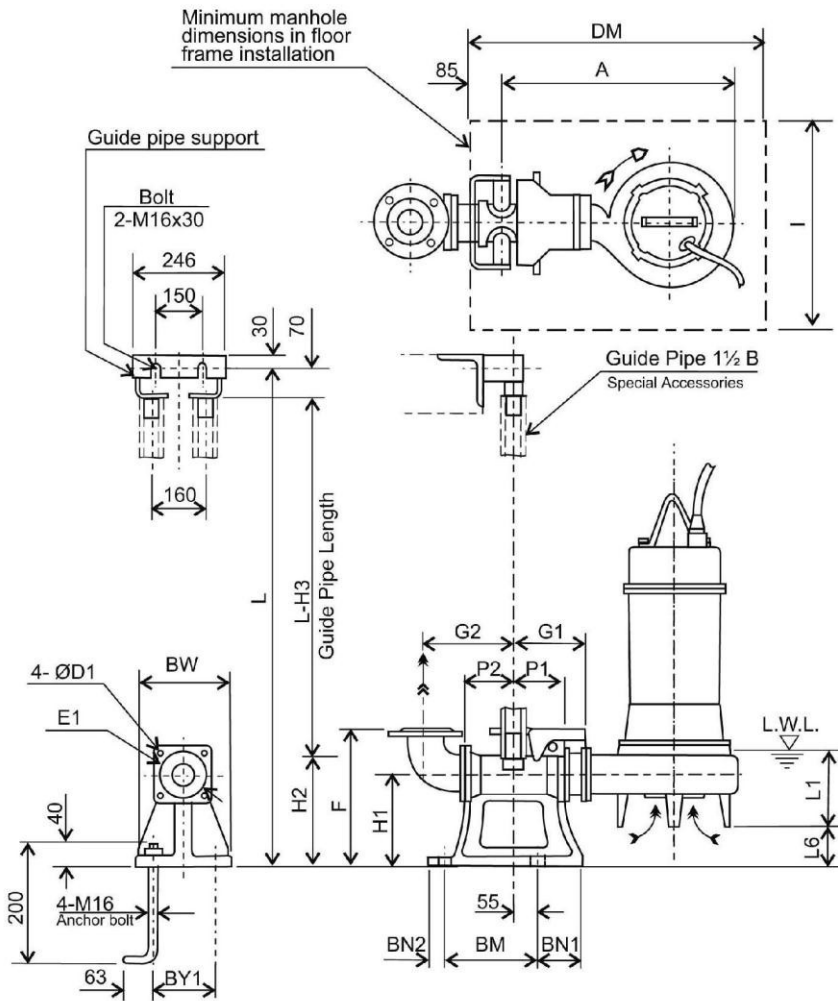


DA	DE	DF	DG	DT	DN	DD
80	150	185	126	18	8	15

Pump Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	D1	E1	QDC Model	Weight
80 LX 62.2	492	75	90	125	165	285	175	230	280	279	7	75	90	15	155	LM80	17 kg
80 LX 63.7	492	75	90	125	165	285	175	230	280	279	7	75	90	15	155	LM80	17 kg

Units: mm unless otherwise specified

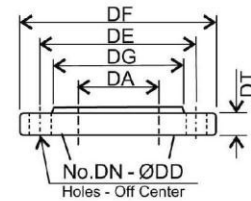
# Guiderial Type of 80LX65.5~150LX622 Dimensions



Note:

- 1/. For detailed dimensions of the pumps, refer to separate dimension data sheets.
- 2/. The discharge bend and companion flange supplied with the pump are used with the QDC.
- 3/. The weight in dimension tables refers only to the weight of the QDC.
- 4/. Standard accessories supplied with QDC include:-
  - Connector body with foundation bolts.
  - Guide pipe support
  - Sliding Glide
  - Adaptor Flange
 Guide Pipe is not supplied.

### Discharge Flange (JIS 10kgf/cm<sup>2</sup>)



DA	DE	DF	DG	DT	DN	DD
80	150	185	126	18	8	15
100	175	210	151	20	8	15
150	240	280	212	22	8	19

Pump Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC Model	Weight
80 LX 65.5	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
80 LX 67.5	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
80 LX 611	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
80 LX 615	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
80 LX 622	765	105	105	185	210	365	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46 kg
100 LX 63.7	552	105	120	185	225	365	240	255	325	279	52	100	40	220	180	230	800	700	15	155	LL80	44 kg
100 LX 65.5	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
100 LX 67.5	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
100 LX 611	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
100 LX 615	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
100 LX 622	765	105	105	185	210	365	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46 kg
150 LX 65.5	628	105	105	185	235	400	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
150 LX 67.5	628	105	105	185	235	400	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46 kg
150 LX 611	721	105	105	185	235	400	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
150 LX 615	721	105	105	185	235	400	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46 kg
150 LX 622	765	105	105	185	235	400	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46 kg

Units: mm unless otherwise specified

## (11) Disassembly and reassembly

Refer to the cross sectional drawing.

### 1. Disassembly

- a) Unscrew and remove the bolts (120-2), and lift up the motor part. Then lay it down carefully.
- b) Unscrew and remove the impeller bolt (275), Pull the impeller (021) out.
- c) Unscrew and remove the oil plug (193), Withdraw oil
- d) Unscrew and remove the bolts (120-1), and remove the mechanical seal cover (016) carefully.  
(Care for flowing out oil remainder.)
- e) Detach the mechanical seal with care lest the seal surfaces and shaft should be hurt.

### 2. Reassembly

Perform reassembly in a reverse order. Then exchange gasket, seal washer, O-ring for new ones.

(Note 1) Screw adhesive (LOCKTITE #638) shall be applied to bolt (120-1) to prevent loosening, after degreasing a screw hole and screw part of bolts enough.

(Note 2) After reassembly procedure (2), turn the impeller by hand to check that it rotates smoothly. When the rotating condition is not smooth, do over again according to the procedure (3) to (5).

(Note 3) Apply the adhesive (LOCKTITE #262) to the impeller bolt in the following way for looseness prevention.

- a) Install the motor so that the shaft end serves as facing up from the level a little. After degreasing a screw hole enough, pour out the adhesive (LOCKTITE #262) until it is full of a screw hole.
- b) An impeller bolt (275) should also degrease enough and should apply the adhesives (LOCKTITE #262) for screws to the whole screw part.

(Note 4) After reassembly is completed, turn the impeller by hand through suction inlet to check that it rotates smoothly without rubbing against wearing ring.



## (12) Limited warranty

The warrants to the original retail purchaser ("Customer") the followings.

1. This warranty valid for a period of twelve months from the date of delivery.
2. During the said period, STANCOR will repair the pump free of charge provided that:  
The trouble is due to shortcomings in design, workmanship, etc., that can be attributed to STANCOR, and that the pump was being operated correctly and in a normal manner in accordance with the Instruction Manual when the trouble occurred.  
Stancor takes full responsibility to repair the pump including parts necessary for replacement, however, STANCOR do not take any other damages caused by the trouble.
3. Fees will be charged for repair and consumable items in the following circumstances:
  - (a) If the trouble occurs after the warranty has expired.
  - (b) If the trouble is caused by mal-operation, and/or caused during storage.
  - (c) If the trouble is caused by fire, flood, earthquake or other circumstances beyond STANCOR's control.
  - (d) If the trouble is caused by use of parts other than those recommended by STANCOR.
  - (e) If the trouble is caused by repair or remodeling of the pump carried out by a party other than STANCOR or agent specified by STANCOR.
  - (f) "Consumable items" refer to lubrication oil, gasket, seal washer, O-ring, mechanical seal, and other parts that will eventually require replacement.
4. STANCOR's liability shall not extend to any other costs beyond the above.
5. The storage period of consumable items is 7 years after manufacturing stop.

## (13) Repairing and after-service

If some failures are found, please contact STANCOR Corporation or an authorized Agent/Distributor, starting the data on the identification nameplate and detail of the trouble. (Refer to section (8) "Troubleshooting")

<b>Note</b>	Packing scraps, unnecessary components and oil after inspection and repair should be processed properly according to the local rules.
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If you have any enquires about the pump, please contact Stancor.

## (14) Appendices

### Technical Data:

80LX62.2	DS-A15-001
80LX63.7	DS-A15-006
80LX65.5	DS-A15-011
80LX67.5	DS-A15-016
80LX611	DS-A15-021
80LX615	DS-A15-026
80LX622	DS-A15-031
100LX63.7	DS-A15-036
100LX65.5	DS-A15-041
100LX67.5	DS-A15-046
100LX611	DS-A15-051
100LX615	DS-A15-056
100LX622	DS-A15-061
150LX65.5	DS-A15-066
150LX67.5	DS-A15-071
150LX611	DS-A15-076
150LX615	DS-A15-081
150LX622	DS-A15-086

### Specification:

80LX62.2	DS-A15-002
80LX63.7	DS-A15-007
80LX65.5	DS-A15-012
80LX67.5	DS-A15-017
80LX611	DS-A15-022
80LX615	DS-A15-027
80LX622	DS-A15-032
100LX63.7	DS-A15-037
100LX65.5	DS-A15-042
100LX67.5	DS-A15-047
100LX611	DS-A15-052
100LX615	DS-A15-057
100LX622	DS-A15-062
150LX65.5	DS-A15-067
150LX67.5	DS-A15-072
150LX611	DS-A15-077
150LX615	DS-A15-082
150LX622	DS-A15-087