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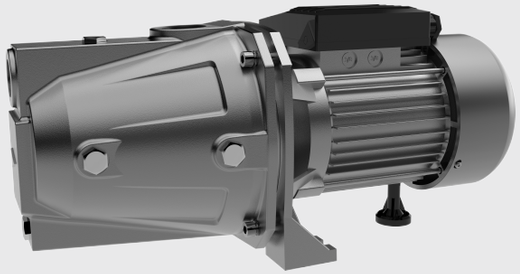


3/4HP Jet Pump (Shallow)

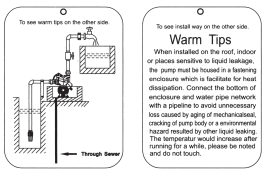
LM75X

Made in China/Fabriqué en Chine
Lotus Tool Group (Philippines)
www.lotustools.ph

Thank you for choosing our company's products, please read this manual carefully and keep it properly before use

WARNINGS

- Before operation, make sure that the electric pump is properly grounded.
- Dont touch the electric pump while it is running.
- Dont make the electric pump run dry.
- The maximum working pressure is no more than 0.6Mpa for jet pump series in the whole
- The pressure tank should be inflated every three months
- Tips: the installation of water pumps is showed at right



1. PRODUCTS OVERVIEW

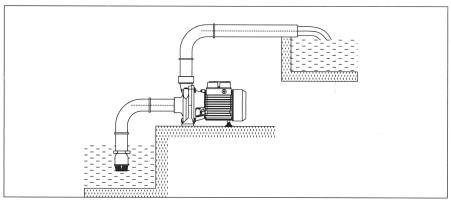
Clean Water Pumps (hereafter referred to as simply "electric pump") include peripheral pumps of models, QB, WSB,AWZB PW, and centrifugal pumps of models SHF(m), CP(m), 2SGP(m), SGT, PUM and jet pumps of models JET, JSW.. The electric pump is made up of motor, water pump and seal. Motor adopts asynchronous one. Incorporating vortex impeller, the peripheral pumps enjoy high head among which models WZB, AWZB, PW are capable of self-priming, but models QB can not. Model AWZB, PW is equipped with automatic control system which mean the electric pump can pump water when the valve in outlet is opened whereas stop work when it is closed. Thus this model can work automatically without switching power off by manual operation. Adopting centrifugal impeller and volute-casing, the models SH(m), SGA(m), CP(m), SGT (m), 2SGP(m) are characterized by large outflow, stable operation and low noise. Jet pumps of models JET, JSW adopt unique structure and have function of self-priming. Between the water pump and the motor, single end mechanical seal is applied, whereas O-rings are used for static seal at all fixed spigot joints.

2. CONDITION FOR USE

The electric pumps shall keep normal and continuous working under the following conditions:

- Maximum ambient temperature: +40^{0}C
- Maximum medium temperature: +40^{0}C
- Medium ph value: 6.5-8.5
- Maximum volumetric ratio of solid impurities content in the medium: 0.1%. Maximum size of solid particles: 0.2mm
- Power voltage and power frequency must be in accordance with the nominal value indicated on the name plate.

3. NOTICE ON INSTALLATION AND APPLICATION



Drawing of Installation

a) Check the electirc pump includes the cable, terminal or plug (if equipped) before the installation to see whether is any damage in transit or storage. Check whether the cold insulation resistance exceeds 50MΩ

b. Fix the electric pump properly when installation. Use steel or hose to connect the foot valve (if equipped) and electric pump inlet. Do not allow to use soft hose to avoid being flat. For self-priming pump, it only needs fill up with water in the housing of pump instead of fill of water in the intake pipe. In order to keep pump reliable operation, The strainer shall be installed availably and make sure the foot valve and strainer to be installed at least 30cm above the water bottom to avoid foreign matters (i.e sand & mud) being sucked into electric pump chamber resulting in operation failure (See drawing of installation). Make sure that foot valve at intake pipe and the one end of strainer are submerged in water after completing connection between the upper end of intake pipe and the inlet end of electric pump. The pipeline shall be shortened as much as possible and avoid too many joints. Besides, the suction height shall not exceed value of requirement.

c. Move the fan blade by screw driver, check whether electric pump rotates freely and whether the three phase electric pump rotational direction is correct. As viewed from the side of fan, clockwise rotation. indicates electric pump rotational direction is correct. If rotational direction is wrong, firstly cut off the power immediately. then swap over any two of the three-phase of the electric pump.

d. Make sure the intake pipe and ist joint are sealed compltely to avoid air leakage.

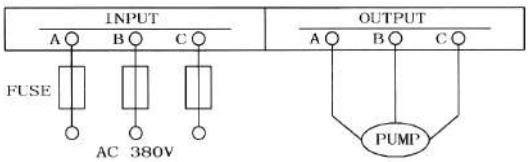
e. Fix the outlet pipe securely in order to prevent water from splashing the motor that may lead to electric leakage.

f. Set bracket to support the intake pipe and outlet pipe and these pipes shall not depend solely on the pump body for support.

g. If users want to change the electric pump into automatic control mode, The proper pressure control device shall be fitted on the outlet pipe.

h. On use of electric pump, neither place it horizontally in water nor put it submerged in water in order to prevent the motor from rain or spraying, nor shall it be sprayed by a powerful jet of water in order to avoid destroying winding insulation due to moisture by motor.

i. Creepage protection device shall be installed correctly and ensure its reliably, grounded at the position of grounding mark of the electric pump or the cable (except for electric pump equipped with three-pin plug. Meanwhile the power socket should be also be reliably grounded. If the three-phase electric pump needs equip with overload protection device. It is necessary to choose the matched one according to the current or power.



Wiring Diagram of Protection Device

j. For peripheral pumps, they should not reach the maximum head when in use to avoid overload

k. For centrifugal impeller pumps, They should be used in range of the prescribed head (except for electric pump with full head coverage) to prevent them from damage due to overload.

l. Check the water level to see whether it is lowering and do not allow to let the foot valve or the lower end of intake pipe out of water.

m. During the operation, if user want to adjust the electric pump position or touch it, firstly cut off the power supply to avoid accident.

n. In order to avoid accidents, swimming, washing, herding nearby the working space of electric pump are forbidden.

4. MAINTENANCE

1. Regularly check the insulation resistance between the electric pump winding and motor casing. The cold insulation resistance shall not be lower than 50mΩ. Otherwise corresponding measures shall be taken. The electric pump could not be reused until it meets the operation requirement
2. The maintenance job should be taken according to the next step.

Dismantlement: Check various vulnerable components including roller bearings, mechanical seal impeller, foot valve etc. Replace them timely if damage is found.
Air Tightness Test: Conduct hydraulic (or pnuematic) pressure test for components used to pass flow through their passages according to maximum hydraulic (or pnuematic) actuating pressure after disassembling pump for repair or replacing various airtight packing. The test should last for 5 minutes. If no leakage or sweat occur during the time. pass the test
3. Drain off residual water inside pump when ambient temperature is lower than 4^{0}C to avoid crack occurence for pump body due to frost.
4. If the electric pump is to remain unused for a long period of time, firstly disassemble the pipeline and drain off the residual water, then rinse the main components for rust-proof treatment, finally, keep it in the dry and well-ventilated place and store it properly.

5. ILLUSTRATION ON INSTALLATION AND MAINTENANCE

1. The electric pump must be installed in a dry well-ventilated place with an ambient temperature of no more than 40^{0}C. Fix the pump in place on a solid flat surface using suitable bolts to avoid vibration.
2. The intake pipe must be slightly angled up towards the intake mouth to avoid the formation of air locks.
3. The pipes must always be fitted using the related brackets to avoid transmitting stress to the pump body.
4. The specifications on the electric pump nameplate and rated line valuesare the same
5. Check that three-phase electric pumps rotate clockwise when looking at the pump from motor fan side, swapping over two of the phase connections if they do not.
6. Fill the electric pump completely with clean water before switching it on. The water should be poured in through the priming plug.
7. When there is risk of freezing empty the electric pump through the drain plug on the bottom of pump body, making sure you prime it when subsequently starting it again. Check that the foot valve is clean at regular intervals; if the electric pump is to remain unused for along period of time (e.g. in the winter), it is advisable to empty it completely, rinse it with clean water and store it in a dry place.
8. If the shaft does not run freely, release it using a screwdriver inserting in the special slot. If this is not sufficient to solve the problem, remove the pump body, undoing the relevant mounting bolts and clean it throughly to remove any encrustation.

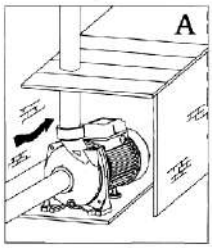


Figure. A

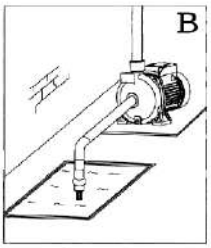


Figure. B

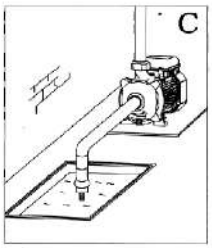


Figure. C

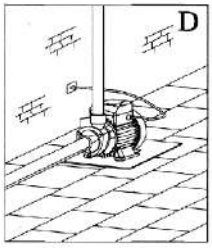


Figure. D

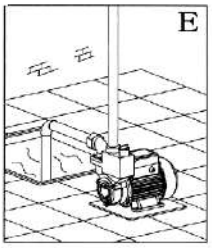


Figure. E

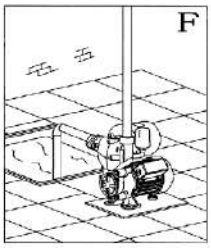


Figure. F

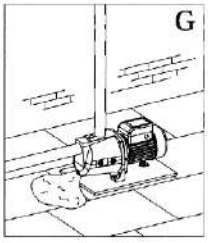


Figure. G

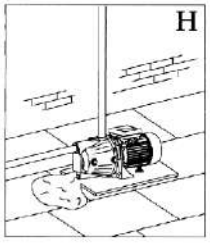


Figure. H

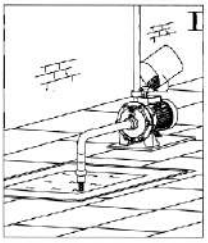


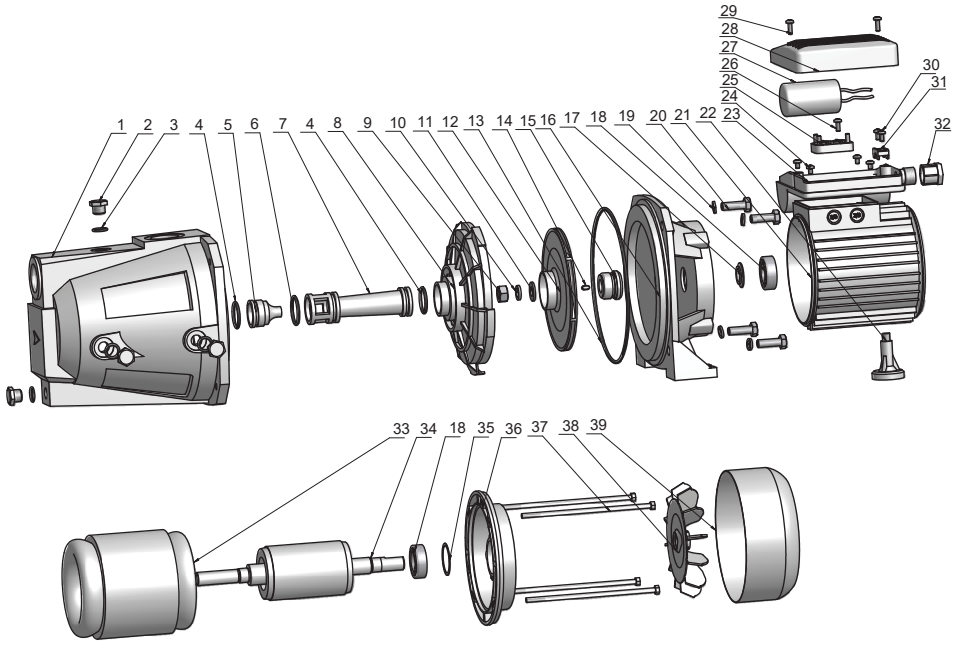
Figure. I

6. TROUBLESHOOTING

MALFUNCTION	MAIN REASONS	SOLUTIONS
Electric pump starts difficulty	1. Low power voltage. 2. Lost phase or cable broken. 3. Impeller clogged 4. Excessive cable voltage drop 5. Capacitor damaged 6. Stator winding burnt.	1. Adjust voltage into 0.9-1.1 times of the rated value 2. Check switch terminal and cable 3. Correct clogged position or clean off the foreign matters. 4. Thicker cable properly 5. Replace capacitor 6. Rewind and overhaul
Water priming failure	1. Air reside in pump chamber 2. Air leakage occur inside intake pipe 3. Foot valve not opened or clogged severely, large resistance occur inside pipe, high suction height. 4. Air leakage for airtight packing occur inside pump.	1. Prime enough water into pump chamber to exhaust air. 2. Check joints, pipes etc. to ensure seal property 3. Check foot valve, remove obstruction, shorten intake pipe, reduce the suction height. 4. Adjust or replace airtight packing
Insufficient flow	1. Excessive long pipe or excessive high head or pipe bent severely. 2. Foot valve, strainer or impeller partially clogged. 3. Impeller worn out severely	1. Cut pipe down, or adjust head in the range of rated value or make pipeline bending to be flat 2. Clean off obstruction 3. Replace impeller
Electric pump stops operation suddenly	1. Switch broken off or fuse burnt 2. Impeller clogged 3. Stator winding burnt out	1. Check whether head or power voltage conform to requirements, if not adjust accordingly 2. Remove foreign matters 3. Rewinding and overhaul
Stator winding burnt	1. Excessive low power voltage 2. Winding short circuit due to water left in motor 3. Impeller clogged 4. Electric pump starts frequently 5. Electric pump overload 6. Phase lost for three-phase electric pump	Rewinding according to original technical requirements after dismantlement, then soak and dry the electric pump in the insulating lacquer, or send it to the service agency for repair.

7. TECHNICAL DATA

SKU: LM75X
Power: 3/4HP
Rated Voltage/Frequency: 220V / 60Hz
Speed: 3450rpm
Max. Flow Rate: 2.5m³/h
Max. Height: 30m
Inlet x Outlet: 1”x1”
Cable Length: 35cm



NO.	DESCRIPTION	NO.	DESCRIPTION
1	Pump body	21	Housing
2	Charge plug	22	Stand
3	“O” ring	23	Terminal box
4	“O” ring	24	Screw
5	Nozzle	25	Terminal board
6	O ring	26	Screw
7	Venturi pipe	27	Capacitor
8	Diffuser	28	Terminal cover
9	Nut	29	Screw
10	Snap ring	30	Screw
11	Washer	31	Cable presser
12	Impeller	32	Nut
13	“O” ring	33	Wound stator
14	Key	34	Rotor
15	Mechanical Seal	35	Split ring
16	Pump support	36	Back cover
17	Drops guard	37	Bolt
18	Bearing	38	Fan
19	Snap ring	39	Fan cover
20	Bolt		