



**SEWAGE PUMP  
#10273**

**Instruction  
Manual**

Thanks for choosing our products, pls read the manual carefully before operation.

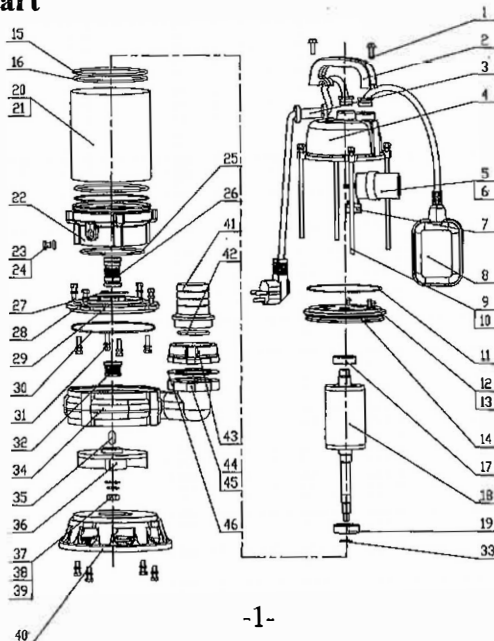
## WARNINGS

1. Please use the pump according to "manual instruction" strictly
  2. Before operation, the pump must be grounded reliably with leakage protection switch assembled
  3. Do not touch the pump when it is running, do not wash, swim or let animals into the pump running area.
  4. Do not run the electric pump without water
  5. Cut off the power and then overhaul whatever trouble happen
- Models WQD, WQD-B, WQD-IG, WQD-OG, Submersible pump (hereinafter referred to as "electric pump")

## 1 Working Conditions

1. Max. Fluid temperature: +40°C.
2. Fluid PH value: 4-10.
3. Max. solid density:  $1.2 \times 10^3 \text{ kg/m}^3$
4. Supply frequency: 50HZ
5. Supply voltage: 220V/380V.  $\pm 10\%$  of the rating voltage fluctuation range.
6. Max. diving depth: 5m

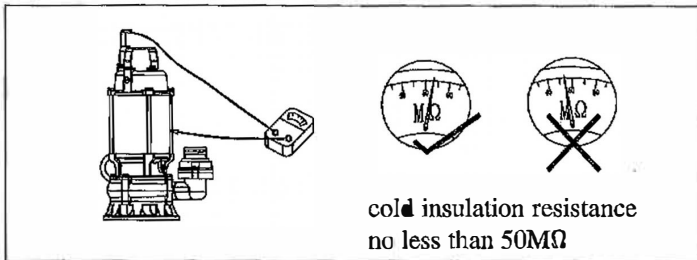
## 2 Structure Chart



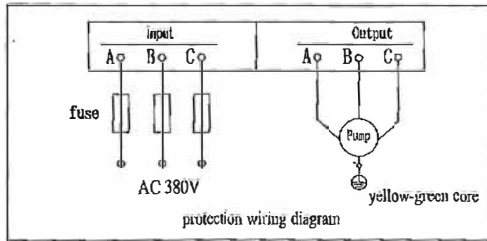
1	hexagon belt screw	17	bearing	33	circlip for shaft
2	handle	18	rotor	34	pump body
3	cable	19	bearing	35	pin
4	top cover	20	motor housing	36	impeller
5	capacitor	21	winding stator	37	flat washer
6	capacitor clamp	22	oil chamber	38	spring washer
7	thermal protector	23	slotted cheese head screw	39	hexagon nut
8	float switch	24	o-ring	40	baseplate
9	hexagon bolt	25	o-ring	41	outlet
10	spring washer	26	double mechanical seal	42	o-ring
11	o-ring	27	stationary ring clamp	43	flange
12	philips small head screw	28	hexagon bolt	44	hexagon bolt
13	Earthing mark	29	oil chamber cover	45	flat washer
14	bearing	30	o-ring	46	rubber gasket
15	o-ring	31	hexagon bolt		
16	o-ring	32	single mechanical seal		

### 3 Installation and Precautions

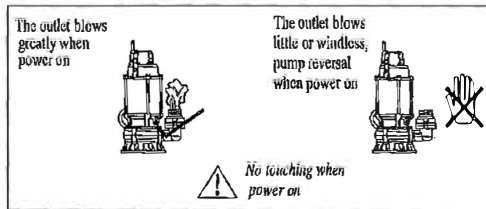
1. Before installation, check whether the electric pump exists any damage during transit or storage e.g. cable, plug, etc. Check whether cold insulation resistance exceed  $50M\Omega$ .



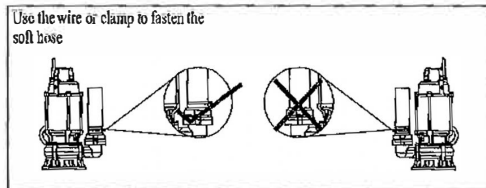
2. The electric pump must equip with creepage protector(users should buy themselves if the factory doesn't equip) and the yellow-green core with grounding mark from the lead-out cable of the three phase electric pump shall be properly grounded. The patch board must be grounded for electric pump with plug when leave the factory. For three-phase electric pump which needs to equip with overload protection device, choose matched one according to current or power marked on the nameplate. Wiring method can be carried out in accordance with the following diagram.



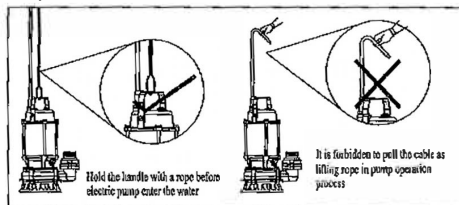
- Before submersion, trail-run test is necessary and should not exceed 10 seconds, meanwhile, check whether the rotation direction is consistent with the direction arrow, if not, turn off the power at once and swap any two cores of the three phase(except the grounding core).



- Connect the hose to the outlet joint. Use the wire or clamp to fasten the soft hose and the screwed joint or welded flange for steel hose and then fasten it with a rope through the handle to carry.

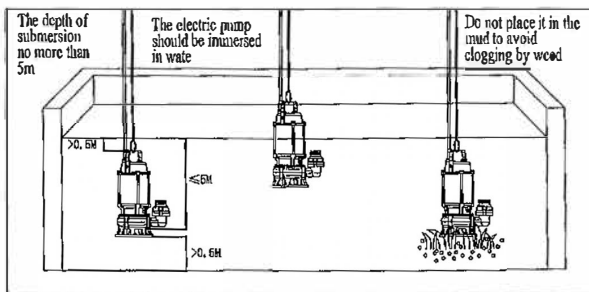


- Do not strike or press the cable and nor shall it be used as hoisting rope. Do not pull the cable while in operation to avoid damage to the cable that may lead to electric shock.

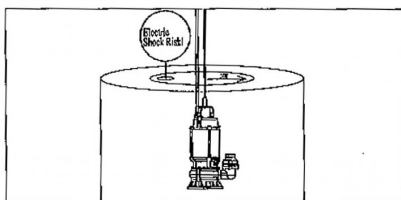


- Cable thread and power panel are strictly prohibited to dive into the water when electric pump is running. As a result of extended wiring and other needs, should be strictly in accordance with the wiring diagram of the sealing head wrap to prevent leakage. If the electric pump is used far away from the power source, thicken the cable according to distance(thicker than the pump cable)
- The depth of submersion should not exceed 5m and over 0.5m away from the water bottom. Do not place it in the mud to avoid clogging by weed and other matter that would possibly put the

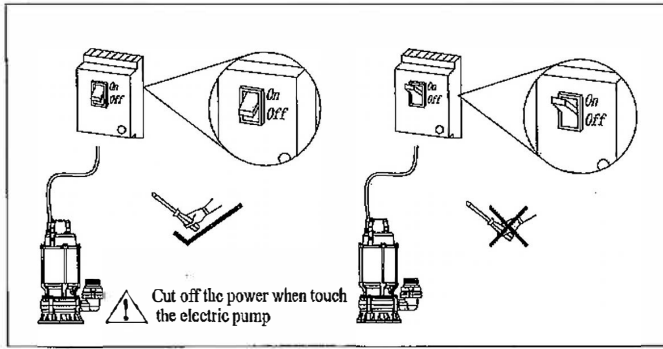
pump out of action. Check the water level frequently, while in operation, to see whether it is lowering and the electric pump shall not be out of water while running.



8. While in operation, set up safety warning sign of "Danger! Electric Shock Risk! Human beings and animals are forbidden nearby the operation area" to avoid accidents.



9. Normal operation won't activate the built-in protector, once protector stops and turns on frequently, turn off the power and find out the reasons for removing, do not use before removing trouble.
10. For electric pump which is not available in full head range, must use it between head range in case of pump damage from overloading. For full head electric pump, the pipe diameter should be same as requested, can't exceed specified diameter to avoid overloading.
11. The motor is of dry type, do not fill oil or water inside.
12. The oil chamber and motor chamber is filled with mechanical oil, which ensures the mechanical seal is effectively lubricated and cooled. The mechanical oil may possibly leak out if the pump is damaged or malfunctioned. When the pump applies to planting, animal breeding, potable water or food transportation and processing, the leakage of the mechanical oil may be harmful to plants growth and animals, or pollute potable water or food.
13. Cut off the power before adjusting the position of the electric pump or touching it to avoid accidents.



14. After the power cut-off, lift the pump out of water only after the motor cool off to keep safety.

## 4 Maintenance

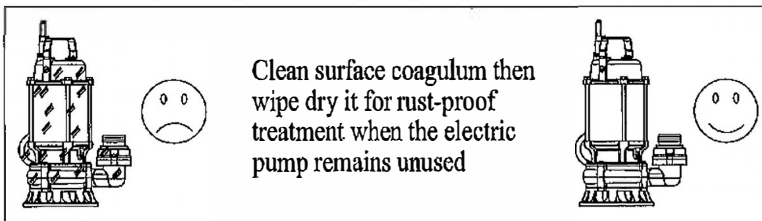
1. Check regularly the insulation resistance between stator winding and motor casing. It shall be lower than  $1\text{ M}\Omega$  when it's close to operation temperature. Otherwise, the corresponding measures must be taken. It could not allow to reused until it meet requirement.
2. After 2500 hours of normal operation, maintenance job should be taken according to the following steps:

**Dismantlement:** Check all vulnerable parts, such as mechanical seal, bearing and impeller, etc. Replace them if damages occurred.

**Oil:** Remove the oil-filled screw and fill 10# mechanical oil to about 80-90% capacity of oil chamber.

**Pressure test:** Pressure test must be taken after dismantlement for repair or seal replacement. The pressure shall be  $0.2\text{Mpa}$  and last 3 minutes with no leakage.

3. If the electric pump remains unused for a long period of time, it shall not be soaked in the water and shall run in clean water for several minutes to clean coagulum inside and outside the pump then wipe dry it for rust-proof treatment and put it in draughty place. For long-time used pump, repaint with lacquer and rust-resisting paint according to its erosion.



## 5 Fault Cause and Remedy

Trouble	Main reasons	Solution
Start difficulty	<ol style="list-style-type: none"> <li>1. Power voltage too low</li> <li>2. Cable parted</li> <li>3. Impeller clogged</li> <li>4. Big loss of cable voltage</li> <li>5. Stator winding burnt out</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust voltage to 0.9-1.1 times of the rated value</li> <li>2. Check the switch, cable and terminal</li> <li>3. Adjust clogged part</li> <li>4. Choose proper cable</li> <li>5. Rewind and overhaul</li> </ol>
Suck water difficulty	<ol style="list-style-type: none"> <li>1. Air exist in pump chamber</li> <li>2. Inlet pipe leakage</li> <li>3. Foot value closed or clogged seriously</li> <li>4. Water level is lower than the pump head</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill water to exhaust the air</li> <li>2. Check joints and pipeline to ensure seal completely</li> <li>3. Check whether foot valve keep flexible, remove blockage</li> <li>4. Check the water level</li> </ol>
Insufficient flow	<ol style="list-style-type: none"> <li>1. Head too high, pipeline too long or bend too much</li> <li>2. Partial blockage of foot valve, filter and impeller</li> <li>3. Severe wear of impeller.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shorten pipeline, use according to head application or make bend gentle</li> <li>2. Remove debris</li> <li>3. Replace impeller</li> </ol>
Stop suddenly	<ol style="list-style-type: none"> <li>1. Switch disconnected or fuse burnt out</li> <li>2. Impeller clogged</li> <li>3. Stator winding burnt out</li> <li>4. Motor overloading, thermal protector jump off</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the head in use and supply voltage is in compliance with requirements and adjust accordingly.</li> <li>2. Remove debris</li> <li>3. Rewind and overhaul</li> <li>4. Protector will reset automatically after motor cool down, check the overloading reason and get rid of it</li> </ol>
Stator winding burnt out	<ol style="list-style-type: none"> <li>1. Power voltage too low</li> <li>2. Winding turn-to-turn short circuit or short circuit between phases due to mechanical seal leakage</li> <li>3. Impeller clogged</li> <li>4. Electric pump starts and stops frequently</li> <li>5. Electric pump overload operation</li> </ol>	Remove the trouble and disassemble the winding and rewind accordingly, soak it in the insulating lacquer and bake or send it to service agency for repair.

**Remarks:**

1. The graphics in this manual are schematic, you can buy the electric pump and its accessories may do not agree with this manual here, please understand.
2. The performance of this product is in the continuous improvement, all products (including appearance and color, etc.) will be subject to physical, if have change, without prior notice.