



SUBMERSIBLE PUMP



ISO9001 CE

1. INSTALLATION, USE AND POINTS FOR ATTENTION

1. Check nameplate and confirm if actual use conditions conform to specification and properties specified in the nameplate.

2. Before using pump, please completely check if cable, plug and pump body is in sound condition, if bolts in all parts loose and if oil oozes out of pump shell. If find broken or damaged parts, you should replace them to avoid work in spite of fault.

3. Test and measure if the fluctuation scope of voltage is within $\pm 5\%$ of the rated voltage. Otherwise, it will decrease service life of motor or even spoil motor. If the place where pump is used is far away from electric source, you should use suitable thicker conveyer wire (please see to it that diameter of conveyer wire should be thicker than source lead-in wire of pump). When voltage of power source is too low, it may cause the results that pump draws no water out or draw water out very slowly after pump is plunged into water and switched on. At the moment, no-load start is suggested, you can sink pump into water when it has operated well.

4. At the beginning of installation, fasten pump well first, then install electroshock protection apparatus at one end of source conveyer wire; pay attention to earth signal for every pump, and put to earth reliably; the plug attached to pump must insert an earthed socket. In case of electrical leakage, earthing wire may supply leakage current loop to avoid electroshock accident. Measure insulation resistance of motor winding, and the result should be bigger than 50 megohm. Otherwise, should examine the reason. It can be used again only after moisture is eliminated.

5. Switch on pump and let it run freely for several seconds, and check the situations of start, running and rotation direction (for three-phase pump, if find wrong rotation direction, should exchange the link of any two wires of power exit). Then switch it on, if find no or very little water drawn out, it means the rotation direction is wrong, you have to exchange wiring.

6. Connect well conveyer pipe, which should match the size of water

outlet, and fasten it firm with lock ring. Then, string at the handle for carrying pump, and remember not to carry pump with cable itself. The diving depth of electrical pump should be within 5m and should be at least 50cm above water bottom. In order to prevent water plants from blocking up filter web and affecting the running of pump, bamboo basket or wire netting should wrap the pump.

7. When electrical pump is running, you have to notice the fall of water level (especially working in a well of small capacity). Pump is prohibited to work under the circumstance of its leaving from water level. If it runs without water for long time, electric motor would heat and burn up winding.

8. During the running period of pump, pay attention not to clean, swim or put domestic animals out around water surface of work to avoid accidents. If find abnormal phenomena during working, such as unusual sound, little output of water and discontinuous water flow, you should immediately switch off the power source and make an inspection to fix breakdown. When pump is electrified and damp, don't touch pump body.

9. Heat protection apparatus is fixed inside electrical pump (over-heat protection apparatus), which has temperature protection property. Under the situation of normal running of pump, the protection apparatus won't work. In the event than it comes to work, the pump will stop. At the moment, need to look into its cause and can't be put into work before repair.

10. After using electrical pump, it there is a certain period not to use it, should not let it stay in water. It should be electrified to work for several minutes in clear water first, then clean mud both inside and outside pump, and wipe it dry, coat slushing oil on it and place it in airy and dry place.

11. When choose the specification of diving pump listed in this manual, must consider that the actual service delivery lift (namely the height from water surface to destination) should be not lower than 80% of specified delivery lift (namely lift stipulated on nameplate). Otherwise, it may result in over-load running and affect the normal work of pump.

II. SUBMERSIBLE PUMP

1. Usage

For water supply of hotel, dining room and high building; for irrigation of farmland; for water supply and drainage in agriculture; for garden watering, etc.

2. Service condition

The source water should be clean at normal atmospheric temperature; the content of insoluble solid impurities should be less than 0.1% and granule should be 0.2mm Max.; the value of PH should be 6.5-8.5, such as river water, lake water and well water, etc. The electric pump should be used within proper scope near rated delivery lift. The service delivery lift should not be too low. If it's lower than 80% of the specified delivery lift, it's easy to result in the work of heat protection apparatus. Thus, pump will stop running and even damage electric motor.

3. Technical Parameters

Model	Max.Flow (m ³ /h)	Max.Head (m)	Power (kw)	Voltage (v)	Frequency (Hz)	Outlet Dia. (mm)
V250F	167	9	0.25	220	50	25
V450F	217	10	0.45	220	50	50
V750F	333	12	0.75	220	50	50
V1100F	367	15	1.1	220	50	50
V1500F	333	23	1.5	220	50	50
V2200F	767	20	2.2	220	50	80
V750DF	250	8	0.75	220	50	50
V1100DF	333	12	1.1	220	50	50
V1300DF	350	15	1.3	220	50	50
V1800DF	633	15	1.8	220	50	80

III. Causes of breakdown and trouble shooting

Breakdown	Main cause	Trouble shooting
Can't start pump	1. Too low voltage of power source 2. power cut-off 3. locked impeller 4. broken cable 5. one phase of cable not wired well 6. stator winding destroyed	1. adjust voltage to $\pm 5\%$ of rated one 2. look in cause of power cut-off 3. unload and clear away rubbish 4. exchange cable 5. check terminal box and cable 6. send to repair unit to change winding coil
Little output of water	1. too high delivery lift 2. filter netting blocked 3. wrong rotation direction of impeller 4. impeller wears out 5. squirrel-cage rotor bar broke 6. mechanical seal destroyed	1. select pump according to required lift scope 2. clear away water plants and rubbish 3. exchange two-phase touch position 4. send to repair unit to change impeller 5. send to repair unit to change rotor 6. send to repair unit to change mechanical seal.
Stator winding burn up	1. wrong earthing or phase broken phase of power 2. damaged seal box and leakage make short circuit between interturn or interphase 3. pump runs with leaving water too long 4. overload running 5. impeller locked 6. broken cable and leakage, windings get damp 7. frequent switch on-off 8. pump is struck by lightning.	Send to repair unit; fix a breakdown; unload winding, and make coil inserting again; submerge and bake insulation paint