Operation Manual
Submersible Pump Model SPT–500(F)

Function and feature:

With features of compact size, light weight, and convenient use. This pump is widely used for farming, breed aquatics, mining, and construction site. The float switch can automatically control on and off with the change of the liquid level. Protector inside the motor can automatically cut off the power when overheating or overloading, to guarantee pump's security and reliability under hard environment .

Condition of usage:

1.maximum operating depth 5 m below water level

2.maximum fluid temperature 40℃

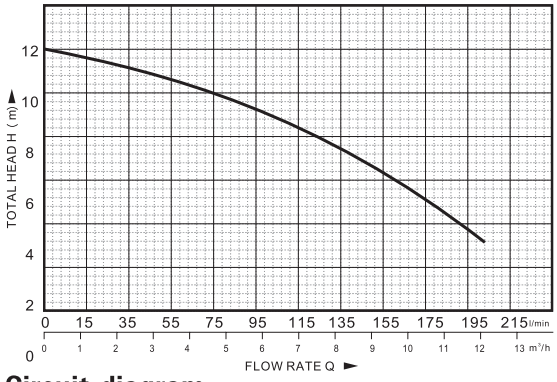
3.PH value in water: 6.5–8.5

4.maximum passage for suspended solids ϕ0.2 mm

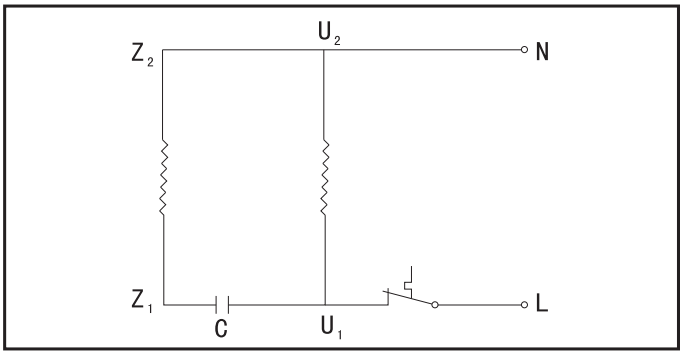
Technical data(the data will be some change under different voltage and frequency)

Model	Power (kw)	Discharge (mm)	Voltage (V/Hz)	Max flow (l/min)	Max head (m)	Weight (kg)	Packing (cm)
SPT–500(F)	0.5	50	220-240/50	210	12	13.5	25.0X22.5X40.5

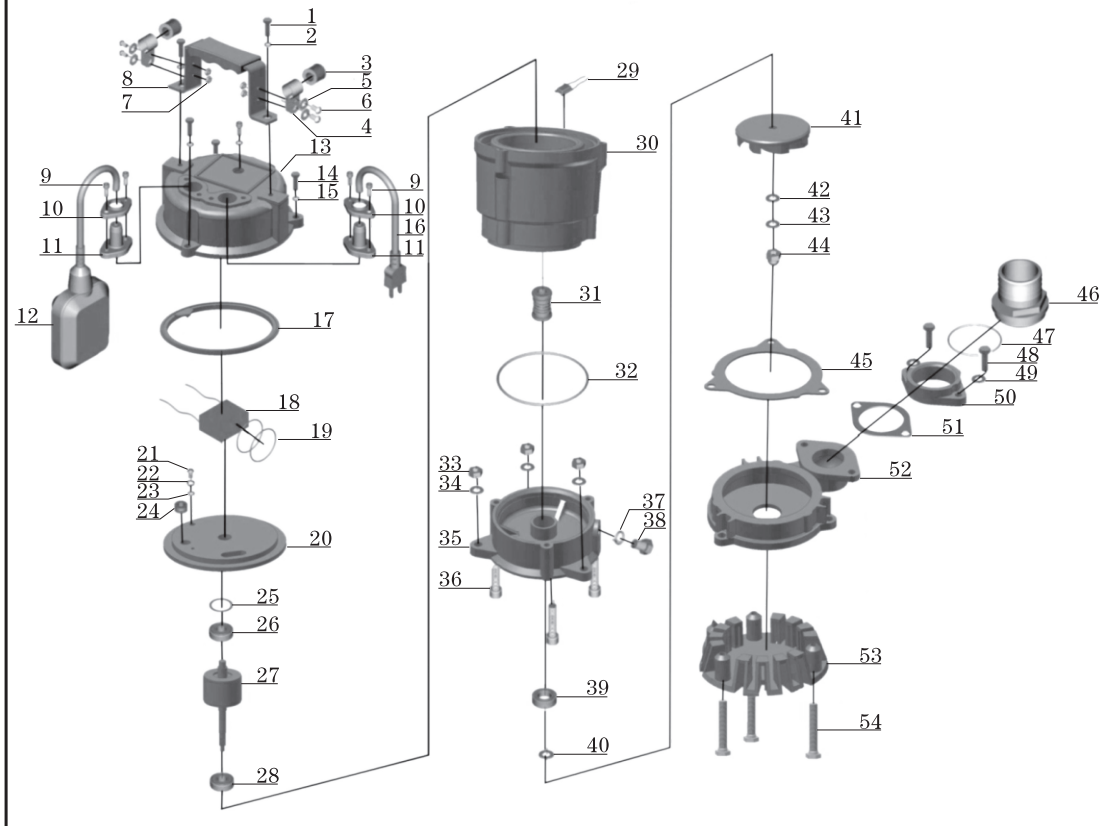
Performance curve



Circuit diagram



Part view:



N0.	CODE	DESCRIPTION
1.	JM18013	Bolt
2.	JM23006	Washer
3.	JM37002	Protector
4.	JM29002	Cable presser
5.	JM23002	Washer
6.	JM20004	Screw
7.	JM21001	Nut
8.	JM02005	Handle
9.	JM19002	Screw
10.	JM28001	Flange
11.	JM30002	Cable protector
12.	JM25001	Float switch
13.	JM02035	Capacitor cover
14.	JM18007	Bolt
15.	JM23005	Washer
16.	JM31002	Cable
17.	JM33043	Gasket
18.	JM17005	Capacitor
19.	JM16009	"O" ring
20.	JM03039	Upper cover
21.	JM20003	Screw
22.	JM22002	Spring washer
23.	JM23003	Washer
24.	JM26001	Line protector
25.	JM27002	Undulated washer
26.	JM34002	Beraing
27.	JM05057	Rotor
28.	JM34003	Bearing
29.	JM35004	Thermal protector
30.	JM04052	Stator
31.	JM14002	Mechanical seal
32.	JM16018	"O" ring
33.	JM21003	Nut
34.	JM23006	Washer
35.	JM06035	Connection part
36.	JM19016	Screw
37.	JM16002	"O" ring
38.	JM18013	Bolt
39.	JM15003	Oil seal
40.	JM23008	Washer
41.	JM09059	Impeller
42.	JM23006	Washer
43.	JM22008	Spring washer
44.	JM21005	Nut
45.	JM33044	Gasket
46.	JM10005	Outlet connector
47.	JM16013	"O" ring
48.	JM18016	Bolt
49.	JM23006	Washer
50.	JM11001	Flange
51.	JM33003	Gasket
52.	JM08056	Pump casing
53.	JM12036	Base plate
54.	JM18052	Bolt

Installation and remark:

1. Before installation, must carefully check whether there are some parts damaged during Transport and stock. For example whether the cable and plug are in good condition, and the insulated resistance is above 0.5MΩ, otherwise must check the fault.
2. Check whether the power supply is conformed to the stipulation of nameplate before installation. Pump must connect with earth to keep safe.
3. Before installation, must check whether the cable and plug is fracted, scratched, broken, etc. If they are faulty, must consult dealer or technician qualified to replace them.
4. Using iron thread or hoop to make the outlet and discharge pipe tight, and then tie a rope on the handle as sling so as to move the pump up and down.
5. Impacting and pressing the cable is absolutely prohibited. Cable cannot be used for sling. Don't discretionarily drag the cable while the pump is running, to avoid creepage.
6. The power supply connected with the pump must be assembled with Electricity-leaking circuit breaker, and the voltage must be controlled within ±15% of the rated to avoid destroying the motor.
7. Don't touch and move the pump before cut-off the power to keep safe.
8. Be sure that the connection part between plug and cable is far from the water.
9. Be sure that the plug and cable are far from the heat, oil and the sharp.

Maintenance

1. Often check cable and duly replace the cable if it is found with fault of fracted, broken etc.
2. After running 2000hrs, please maintenance the pump as per the following steps:

Disassemble pump: carefully check the spare parts easily worn, for example bearing, mechanical seal, oil seal, "O"ring , impeller etc. And duly replace the spare parts damaged.

Chang oil: take the charge plug of oil chamber out, and inject 10# oil to 70%-80% of the capacity of chamber(edible earthnut oil is available if no 10# oil).

Air testing: After maintenance, the pump must be tested by air. Inject high-pressure air into the pump and keep the pressure at 0.2Mpa, it proved to be reliable if no leakage within 5 Minutes.

3. Don't submerge the pump into the water if it isn't started for a long time. Must take the pump out of the water and clean it and then make anti-rust processing.

Fault and solution (shut off the power before operation)

Fault	Possible cause	Remedy
Pump does not start	1. Too low voltage; 2. Impeller blocked; 3. Stator winding burn up; 4. Capacitor damaged; 5. Absent phase (3 phase); 6. Too large resistance of cable.	1. Adjust voltage to ±15% of the rated; 2. Remove obstacles; 3. Repair; 4. Replace capacitor; 5. Check switch and cable connection etc; 6. Use the proper cable ; (Item 3 and 4 must be operated under the guidance of dealer or technician qualified.)
Pump delivers reduced water	1. High delivery head; 2. Filter mesh clogged; 3. Impeller worn off; 4. Too shallow submersible depth; 5. Wrong rotation (3 phase).	1. Lower the head; 2. Clean the filter mesh; 3. Replace impeller; 4. Adjust the submersible depth above 0.5m; 5. Inverse two phase.
Pump stops suddenly	1. Switch cut off or blowout; 2. Impeller blocked; 3. Stator winding burn up.	1. Check power supply, replace fuse; 2. Shut off power, clean obstacles; 3. Repair (must consult the dealer and technician qualified).