

Operation Manual

Submersible Sewage Pump Model QW-1500BF



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Function and feature:

QW series are the advanced and perfect sewage drainages at present time. Compared with traditional sewage submersible pumps, QW series is re-designed the passage of flow and enjoys wider high efficiency areas, can be used whole head without over-loading, and can safely run under large flow rate with high efficiency; anti-clogging impeller with big passage designed can transfer sewage with big suspend solid and ling fibre; adopted vortex suction structure and particular casting technique, so with the better draining and anti-corrosiveness performance; widely used for transferring sewage in hotel, cloaca, construction industry, agriculture, family, etc. It can be automatically on-off if it is assembled with float switch. Thermal protector inside pump can automatically shut off the pump when overheating and overload, to guarantee safe and reliable operating under hard condition, and for emptying collection traps containing partial up to a maximum of $\Phi 15\text{mm}$.

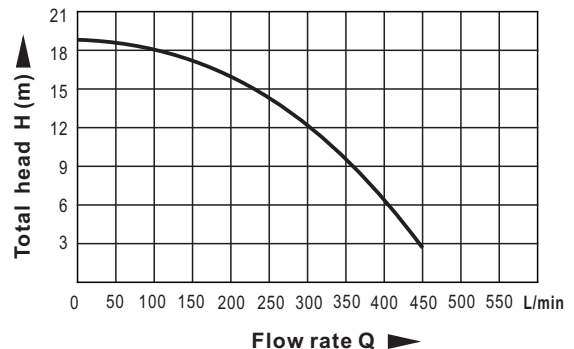
Condition of usage:

1. Maximum operating depth 5m below water lever;
2. Continuous duty when fluid temperature under $+40^{\circ}\text{C}$;
3. Value of PH in fluid 5~9;
4. Maximum kinematic viscosity: $7 \times 10^{-7} \sim 23 \times 10^{-6} \text{m}^2/\text{s}$;
5. Maximum density: $1.2 \times 10^3 \text{kg}/\text{m}^3$

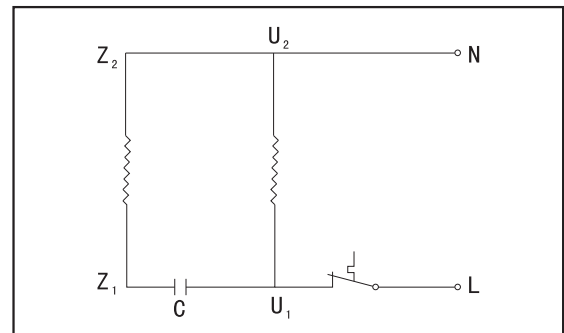
Technical data (the data will be some change under different voltage and frequency)

Model	Power (kw)	Outlet Diameter (mm)	Voltage/Frequency (V/Hz)	Max. Flow (l/min)	Max. Head (m)	G.W. (kg)	Dimensions (cm)
QW-1500BF	1.5	50	220-240/50	450	18.5	23	51.0X27.0X19.0

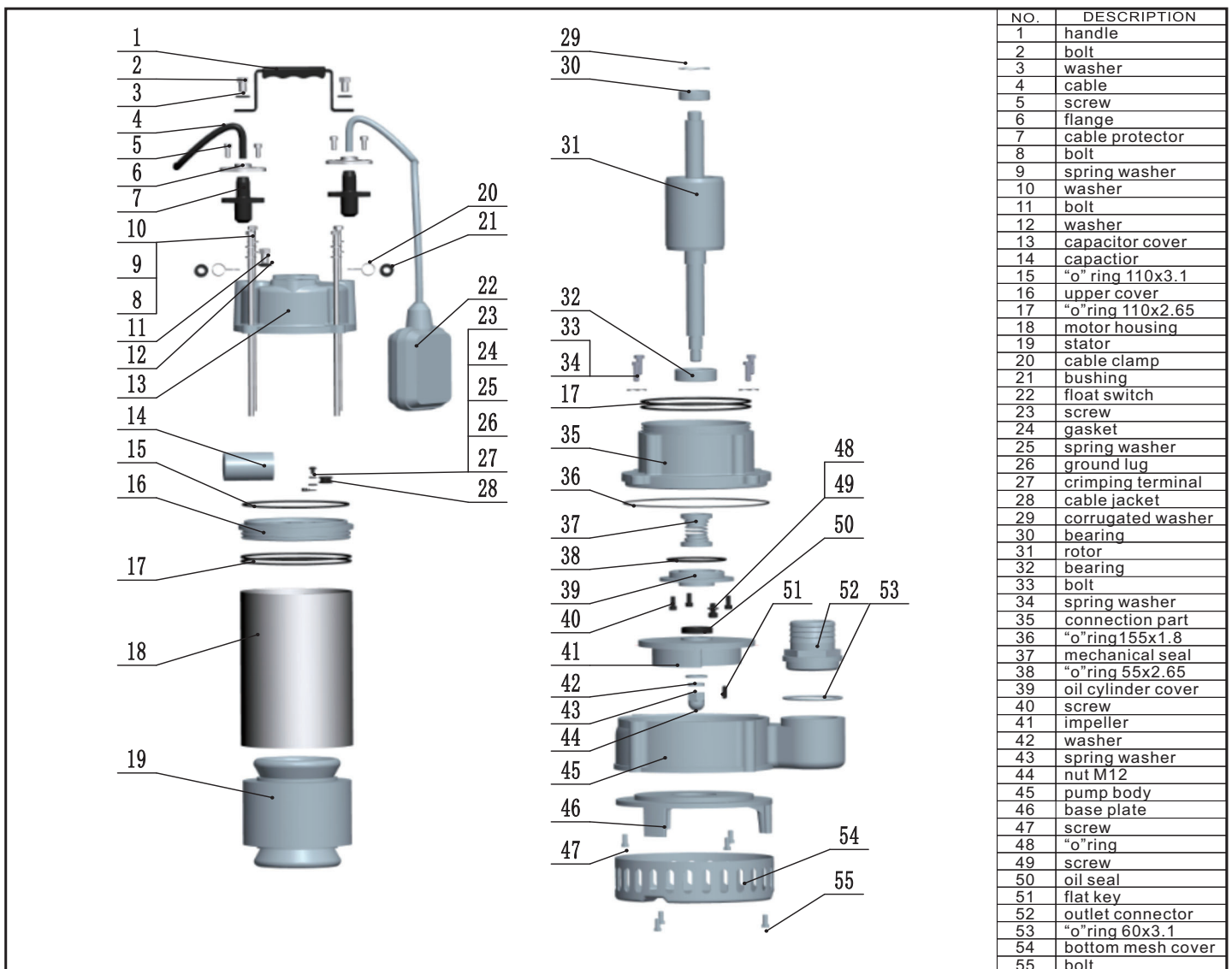
Performance curve



Circuit diagram



Part view:



● 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 $0.5M\Omega$, 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 fractured, 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 $\pm 15\%$ 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 fractured, 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 $\pm 15\%$ 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).