

## 12.Trouble shooting

Problem	Possible reasons	Solution
start difficultly	<ul style="list-style-type: none"> <li>-Low voltage.</li> <li>-Lack of phases .</li> <li>-Impeller is blocked .</li> <li>-Voltage drop too much.</li> <li>-Stator winding burn out.</li> </ul>	<ul style="list-style-type: none"> <li>-To adjust the voltage to rated value about <math>\pm 10\%</math> tolerance.</li> <li>-To clean sundries.</li> <li>- To choose right cable.</li> <li>- To change the stator winding.</li> </ul>
Insufficient water	<ul style="list-style-type: none"> <li>-pump lift too high</li> <li>-Net cover is blocked</li> <li>-Impeller abrasion</li> <li>-The immersed depth is too low. Some air is absorbed.</li> <li>-Impeller rotation is not correct</li> </ul>	<ul style="list-style-type: none"> <li>- To make sure the lift within operation condition.</li> <li>- To clean the water grass etc.</li> <li>-To replace the impeller.</li> <li>- To change the immersed depth , not less than 5 meters.</li> <li>- To exchange the connection of any two phase power cords.</li> </ul>
Suddenly not working	<ul style="list-style-type: none"> <li>-Switch is off or fuse is burned down.</li> <li>-Impeller is blocked .</li> <li>-Windings of stator are burned .</li> </ul>	<ul style="list-style-type: none"> <li>- To check if the voltage of power meet to the operation standards. And adjust it if not.Replace the fuse.</li> <li>- To clean sundries.</li> <li>-To replace the windings of stator .</li> </ul>
Stator winding burn out	<ul style="list-style-type: none"> <li>- Lack of phase. Running long time.</li> <li>-Mechanic seal is damaged to leak water. Which causes current shorten.</li> <li>-Impeller is blocked.</li> <li>-Pump start very frequently or running pump is long time when no water.</li> <li>-Running pump is under overload.</li> </ul>	<p>To eliminate the fault listed. Remove the winding and replace with new winding, then take insulation varnished treatment and dry it or send the pump to after sale service department.</p>



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. children should be supervised to ensure that they do not play with the appliance.

Type y attachment damaged supply cords to be replaced by the manufacturer, service agent or similarly qualified person to avoid hazard.

# SUBMERSIBLE PUMP SERIES INSTRUCTION MANUAL



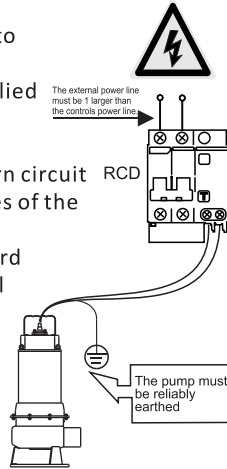
\* Picture is for reference only, please prevail in kind

※ Electric pump is equipped with float switch to realize Automatic level control of electric pump.

Please read the instructions carefully before installation, and keep it for reference.

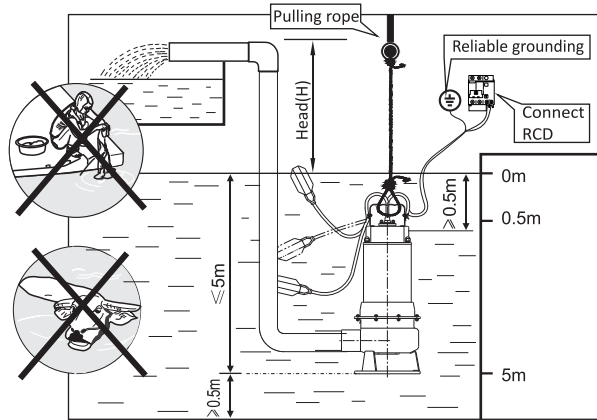
## 1.Warning

- Read and follow all instructions.
- Warning Risk of Electric Shock , the pump must be connected to grounding type receptacle protected.
- The pump is to be supplied by an isolating transformer or supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- A suitable fuse ( fuse protector) must be installed on the return circuit of pumps, the current of the fuse selected should be 1.5 times of the current marked on the name plate.
- All the wiring should be installed according to the local standard or low by professional electrician who hold the Electrician Skill Certificate. Pump must be reliably earthed.
- To reduce the risk of electrical shock, do not permit children to use this product.
- Power connection can not be buried in the ground, wire positioning is necessary as to avoid damage from mowing or other machine.
- To reduce the risk of electrical shock, once damaged cable is found and must be changed immediately.
- To reduce to risk of electrical shock, any cable extension is not permitted.
- No pumping flammable, explosive liquid.



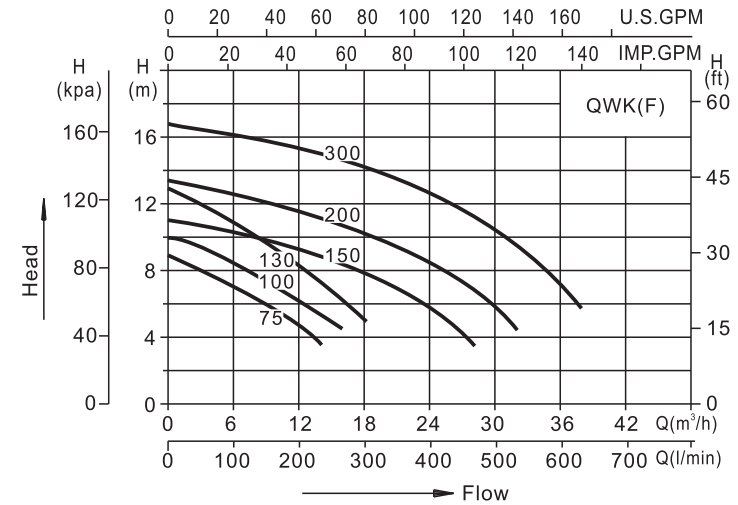
## 2.Installation diagram

Attention: when this product operation, it is prohibited in the water to wash, grazing, swimming, children are prohibited in the vicinity of the water to play and so on.

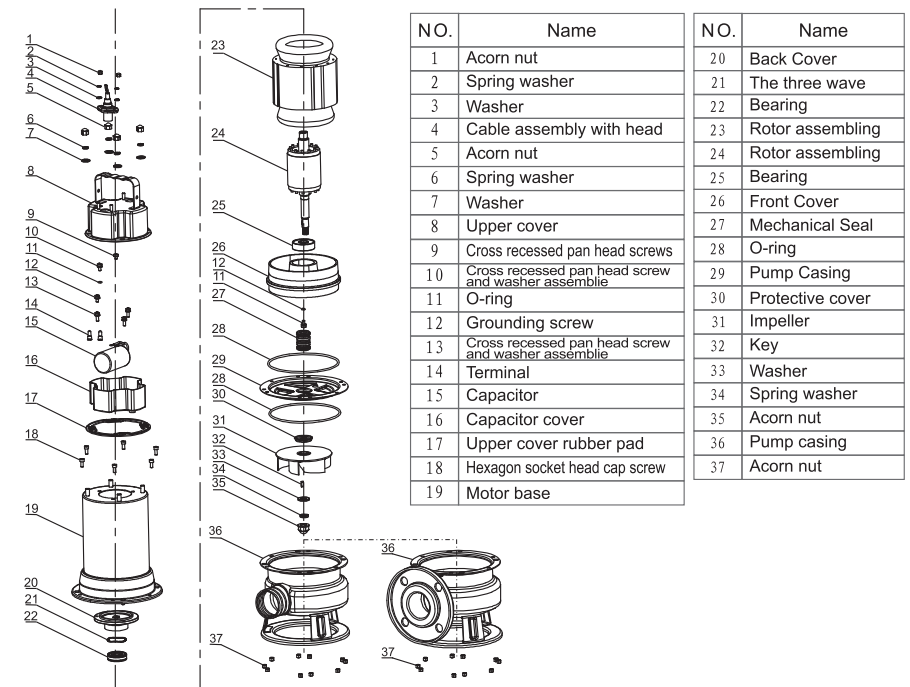


Drawing 1

## 10. Performance curves



## 11.Exploded drawing

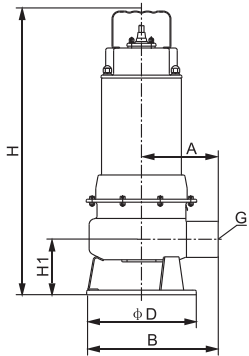


## 8. Maintenance

- Regularly check the insulation resistance between winding and pump casing; it should be bigger than  $1M\Omega$ .
- When pump works reach 2500 hours, check the under follow maintenance method  
Disassembly the pump and check the wearing parts like mechanical seal, bearing, impeller etc., replace a new part when damage parts is found. Do leakage test under 0.2MPa for 3 minutes after replace the seals, no leakage should be found. Replace with new #7 machine oil (Fill 95% of the oil cavity).
- Don't let the pump froze in winter. Pump is not suitable in water when it is unused for long time, it should be storage in dry and ventilated place. If the pump has serviced for long time, run the pump with clean water and clear the obstacles, dry the pump and repaint if needed before storage.

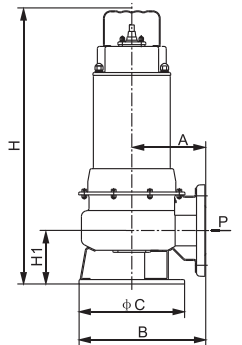
## 9. Dimension Drawing

### Threaded joint

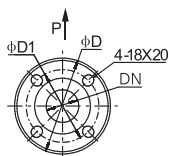


Model	Dimensions(mm)					
	A	B	D	H	H1	G
QWK75M(A)	124	209	φ170	429	85	G1.5
QWK75	124	209	φ170	429	85	G1.5
QWK100M(A)	124	209	φ170	445	85	G1.5
QWK100	124	209	φ170	445	85	G1.5
QWK130M(A)	124	209	φ170	462	85	G1.5
QWK130	124	209	φ170	462	85	G1.5
QWK150M(A)	133	228	φ190	487	96	G2
QWK150	133	228	φ190	487	96	G2
QWK200M(A)	133	228	φ190	505	96	G2
QWK200	133	228	φ190	487	96	G2
QWK300M(A)	133	228	φ190	537	96	G2
QWK300	133	228	φ190	505	96	G2

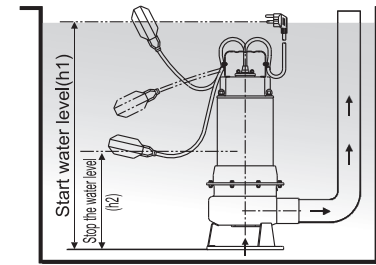
### Flange interface



Model	Dimensions(mm)							
	A	B	C	H	H1	D	D1	DN
QWK(F)75M(A)	124	209	φ170	429	85	φ150	φ110	40
QWK(F)75	124	209	φ170	429	85	φ150	φ110	40
QWK(F)100M(A)	124	209	φ170	445	85	φ150	φ110	40
QWK(F)100	124	209	φ170	445	85	φ150	φ110	40
QWK(F)130M(A)	124	209	φ170	462	85	φ150	φ110	40
QWK(F)130	124	209	φ170	462	85	φ150	φ110	40
QWK(F)150M(A)	133	228	φ190	487	96	φ165	φ125	50
QWK(F)150	133	228	φ190	487	96	φ165	φ125	50
QWK(F)200M(A)	133	228	φ190	505	96	φ165	φ125	50
QWK(F)200	133	228	φ190	487	96	φ165	φ125	50
QWK(F)300M(A)	133	228	φ190	537	96	φ165	φ125	50
QWK(F)300	133	228	φ190	505	96	φ165	φ125	50



Automatic float working principle: when water level rise to the fixed height, the automatic float is connected and operate, the pump begin operation; when water level goes down and lower than the fixed height, the automatic float is cut off power and pump stop operation.



Pump start and shut off Schematic diagram of water level

Model	h1	h2
QWK(F)75MA	480	230
QWK(F)100MA	495	230
QWK(F)130MA	510	230
QWK(F)150MA	535	260
QWK(F)200MA	555	260
QWK(F)300MA	585	270

## 3. Product description

QWK (F) series stainless steel stamping sewage submersible pump is composed of water pump, seal and motor. The pump is located at the lower part of the electric pump and is of centrifugal impeller and volute structure; The motor is located on the upper part of the electric pump and is a single-phase or three-phase asynchronous motor; Double-face mechanical seal is used between the pump and the motor, and "O" type oil-resistant rubber sealing ring is used as the static seal at each fixed end seal to ensure the reliability of the electric pump.

## 4. Application

- This pump is completely sealed by water proof, IP68 protection, class F insulation, single-phase motor built-in thermal protector.
- It's used for fish pool, waterfall, filtering, drainage, agriculture, etc.
- Liquid: clean water, sea water and sewage.

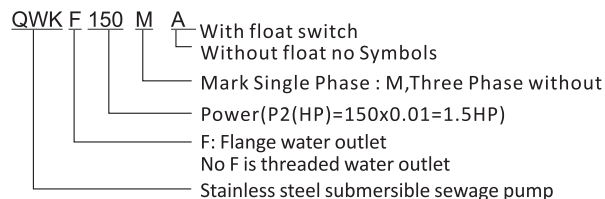
## 5. Operation Condition

Pump can be continuous running under below condition:

- Liquid temp is less than  $+50^{\circ}\text{C}$
- non corrosive liquid with less sand and sludge;
- Diameter of soft solid that can pass through:  
 $0.55\sim 1.0\text{kW}\leq 30\text{mm}$ ,  $1.1\sim 2.2\text{kW}\leq 50\text{mm}$ .
- The power frequency is 50Hz (60Hz is available as required), The voltage is single-phase AC 220V, three-phase AC 380V, The voltage fluctuation range is  $\pm 10\%$ ; See pump name-plate for details.
- Immersed depth is not more than 5m.

## 6. Symbols and parameter

### 1. Model Description

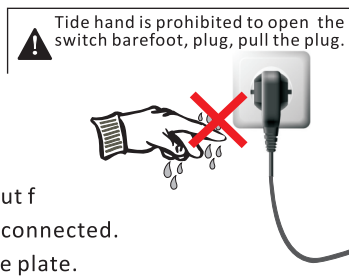


### 2. Specification

Model	Power (P2) (kW)	Max Head (m)	Rated Head (m)	Max Flow (m <sup>3</sup> /h)	Rated Flow (m <sup>3</sup> /h)	Outlet
QWK75(MA)	0.55	9	7	14	7	G1.5
QWK100(MA)	0.75	10	7	16	10	G1.5
QWK130(MA)	1.0	13	9	18	10	G1.5
QWK150(MA)	1.1	11	7	28	20	G2
QWK200(MA)	1.5	13.5	8	32	25	G2
QWK300(MA)	2.2	16.5	10	38	30	G2
QWK75(MA)	0.55	9	7	14	7	DN40
QWK100(MA)	0.75	10	7	16	10	DN40
QWK130(MA)	1.0	13	9	18	10	DN40
QWK150(MA)	1.1	11	7	28	20	DN50
QWK200(MA)	1.5	13.5	8	32	25	DN50
QWK300(MA)	2.2	16.5	10	38	30	DN50

## 7. INSTRUCTION MANUAL AND WARNING

- Don't pull the cable or hang the pump with the cable. Use the sling to put the pump down into water.
  - Make sure the cable and the plug is in good condition before starting the Pump. Check the bolts not loose and not oil oozes out from the pump and make sure the water pipe is well connected.
  - Check power supply is in conform to the pump name plate.
  - Power must have the leakage protection switch, pump must ground connected and the insulation resistance should not be less than 50MΩ.
  - Use a bigger power cord (not smaller than the pump power cord) if the power supply is in long distance.
  - When the electric pump is working underwater, the diving depth should be less than 5 meters .It should be placed vertically and not trapped in the mud.
- When using an electric pump, it should be set to "preventA clear sign of electric shock. Do not wash or graze on nearby water surfaces, and do not move until the power is cut offElectric pump.



- Before using this product, the use environment and the consequences of using this product should be evaluated to confirm its suitability. Joint use, relevant professionals should be invited for confirmation if necessary. If mechanical oil leakage occurs, it should be stopped immediately. Discontinue use and dispose of properly.
  - When using an electric pump, if you want to adjust the position of the pump or if there is any movement that touches the pump, you must first cut off the power supply to prevent accidents from happening.
  - When the electric pump is working, it is strictly prohibited to immerse the cable head or socket into the water. If it is necessary to extend the wiring, it should be strictly sealed. Seal and wrap the wiring head to prevent water and electricity leakage.
  - After turning off the power, the electric pump can only be lifted off the water surface when the motor has cooled to room temperature to ensure safety.
  - Before using a three-phase electric pump, users must confirm that the direction of rotation of the pump is correct and must not reverse to avoid increasing the Power and current increase, which may lead to machine burnout; You can also wire according to the phase sequence color, as shown in Fig.2.
  - Before using the pump under water, test run the pump for about 10 seconds. The electric pump rotate direction should be the same director as the arrow mark. If not, turn off the pump and exchange any two phase connection.
- \* Turning requirements: From the water inlet of the pump casing, the impeller rotates counterclockwise to be correct.

