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WQ/QW无堵塞潜水排污泵

WQ/QW Non Block Submersible Sewage Pump



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使用该产品前，请仔细阅读说明书！

Please read the instructions carefully before using this product!

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■ 概述

WQ型无堵塞潜水排污泵是在引进国外先进技术的基础上，结合国内水泵的使用特点而研制成功的新一代泵类产品，具有节能效果显著、防缠绕、无堵塞、自动安装和自动控制等特点。在排送固体颗粒和长纤维垃圾方面，具有独特效果。

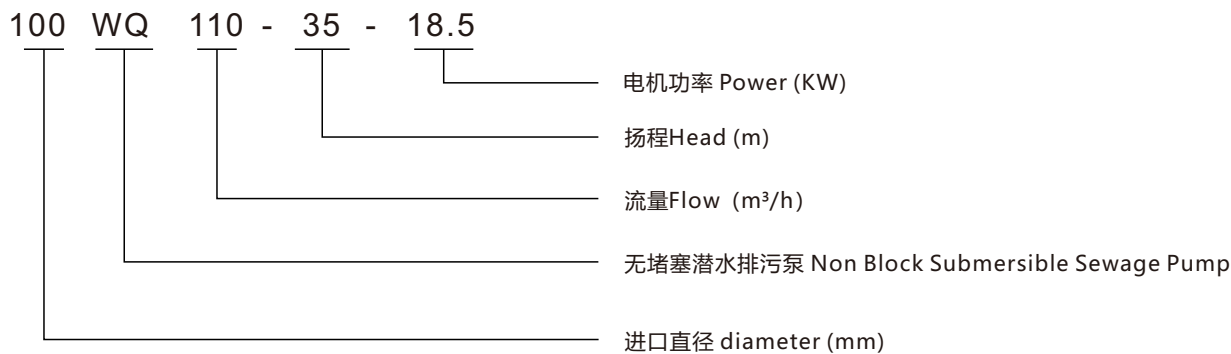
该系列泵采用独特叶轮结构和新型机械密封，能有效地输送含有固体物和长纤维的介质。叶轮与传统叶轮相比，该泵叶轮采用单流道或双流道形式，它类似于一截面大小相同的弯管，具有非常好的过流性，配以合理的蜗室，使得该泵具有效率高、叶轮经动静平衡试验，使泵在运行中无振动。该泵水力性能先进、成熟，产品经测试各项性能指标均达到有关标准规定，产品投放市场后以其独特的功效，可靠的性能，稳定的质量受到广大用户的欢迎和好评。

■ 产品用途

潜水泵广泛应用于排放重污水、含杂质污水、纯净水等。

- 1、工厂和商业区的污染废水
- 2、居民区污水排放站
- 3、城市污水处理厂排水系统
- 4、人防系统排水站
- 5、自来水厂供水设备
- 6、医院、酒店污水排放
- 7、市政工程施工现场、勘探、矿山

■ 型号意义 Model Meaning



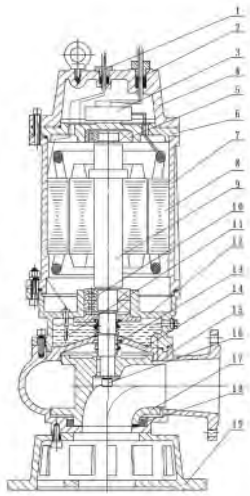
■ Summary

WQ type non-clogging submersible sewage pump is a new generation of pump products successfully developed on the basis of introducing foreign advanced technology and combining the characteristics of domestic pumps. It has the characteristics of remarkable energy saving effect, anti-winding, non-clogging, automatic installation and automatic control. in that aspect of discharge solid particles and long-fiber garbage, the invention has unique effect. This series pump adopts unique impeller structure and new mechanical seal, which can effectively transport the medium containing solid and long fiber. Compared with the traditional impeller, the impeller of the pump adopts the form of single channel or double channel, which is similar to an elbow with the same cross-section size and has non-good flow characteristics. With a reasonable volute chamber, the pump has high efficiency. The impeller has been tested for dynamic and static balance, so that the pump has no vibration during operation. The hydraulic performance of the pump is advanced and mature. The performance indexes of the product have reached the relevant standards after testing. After the product is put on the market, it is welcomed and praised by the majority of users for its unique efficacy, reliable performance and stable quality.

■ Application

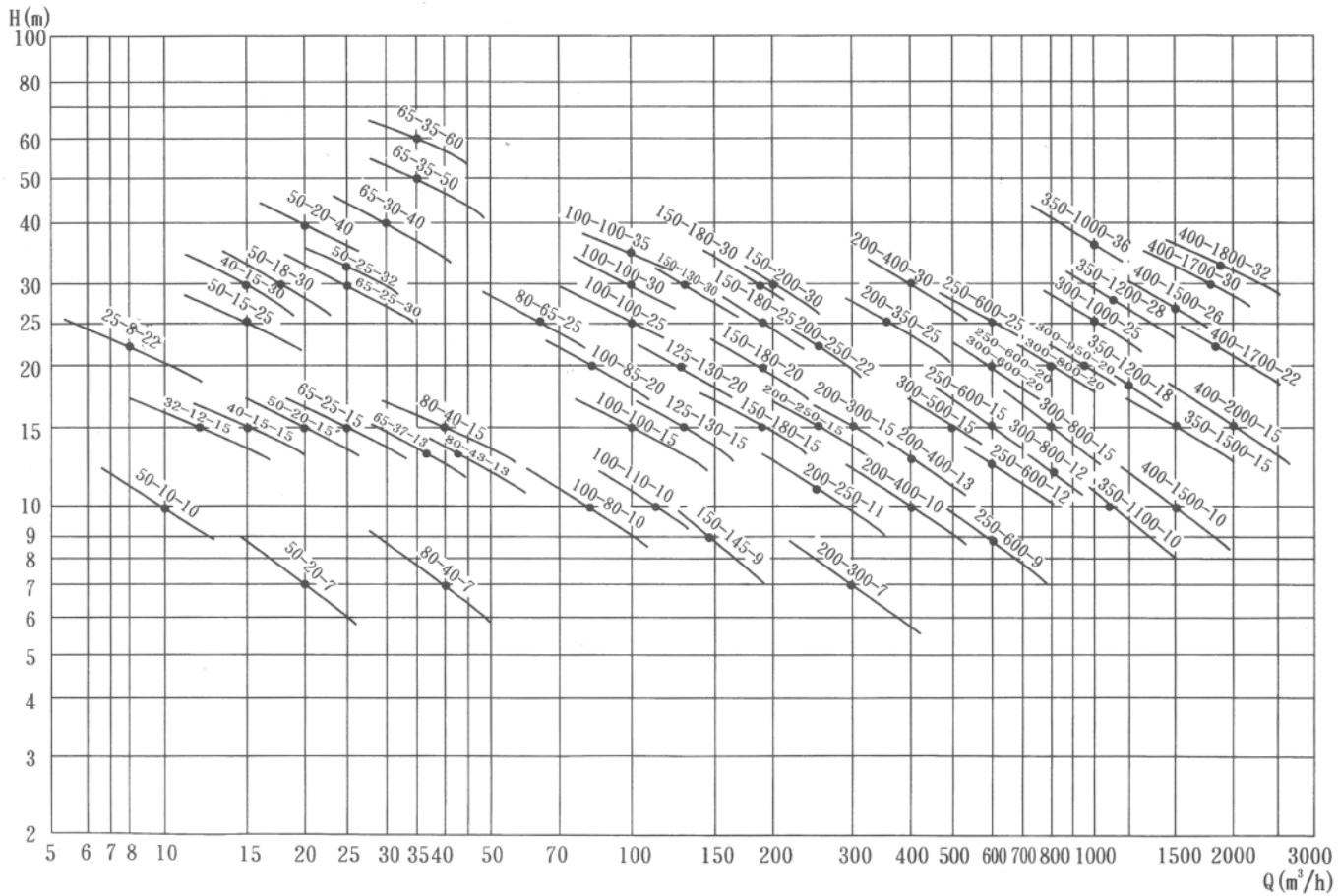
- Submersible pumps are wided used for discharge of seriously sewage, dirty with impurity, purity water, etc.
- polluted wastewater from factories and businesses area
 - sewage discharge stations in residential areas
 - drainage systems of urban sewage treatment plants
 - drainage stations of civil air defense systems
 - water supply devices of waterworks
 - sewage discharge of hospitals and hotels
 - municipal engineering construction sites, exploration, and mine

■ 结构说明 Structure



NO.	名称 Name	NO.	名称 Name
1	信号线 SignalLine	11	油水探头Water leak probe
2	电机连接线Motor Connection	12	油室Oil Chamber
3	接线盒 Connection Case	13	机械密封Mechanical Seal
4	电机盖Motor Cap	14	后盖板Rear cover
5	轴承Bearing	15	泵体 pump body
6	上轴座Up Bearing set	16	叶轮螺栓Impeller Bolt
7	电机壳Motor casing	17	叶轮Impeller
8	定子Stator	18	密封环Seal Ring
9	转子Rotor	19	底盘Base plate
10	轴承Bearing		

■ 性能曲线图 Performance Curve



■ 性能参数表Performance table

序号 NO.	型号 Model	进出口 Inlet/outlet (mm)	流量 Flow (m³/h)	扬程 Heah (m)	功率 Motor (kw)	转速 Speed (r/min)	效率 Eff. (%)	序号 NO.	型号 Model	进出口 Inlet/outlet (mm)	流量 Flow (m³/h)	扬程 Heah (m)	功率 Motor (kw)	转速 Speed (r/min)	效率 Eff. (%)
1	25-8-22-1.1	25	8	22	1.1	2900	38.1	43	150-180-20-22	150	180	20	22	1450	71
2	32-12-15-1.1	32	12	15	1.1	2900	40	44	150-180-30-30	150	180	30	30	1450	75
3	40-15-15-1.5	40	15	15	1.5	2900	45.1	45	150-200-30-37	150	200	30	37	1450	70
4	40-15-30-2.2	40	15	30	2.2	2900	48	46	150-200-35-45	150	200	35	45	1450	74
5	50-10-10-0.75	50	10	10	0.75	2900	54	47	150-180-50-55	150	180	50	55	1450	78
6	50-20-15-1.5	50	20	15	1.5	2900	55	48	150-200-60-75	150	200	60	75	1450	75
7	50-15-25-2.2	50	15	25	2.2	2900	55	49	150-200-70-90	150	200	70	90	1450	73
8	50-18-30-3	50	18	30	3	2900	55	50	200-250-6-7.5	200	250	6	7.5	1450	73
9	50-25-25-4	50	25	25	4	2900	56	51	200-300-7-11	200	300	7	11	1450	76
10	50-25-32-5.5	50	25	32	5.5	2900	56	52	200-250-11-15	200	250	11	15	1450	70
11	50-20-40-7.5	50	20	40	7.5	2900	56	53	200-250-15-18.5	200	250	15	18.5	1450	73
12	65-25-15-2.2	65	25	15	2.2	2900	52	54	200-400-10-22	200	400	10	22	1450	75
13	65-37-13-3	65	37	13	3	2900	55	55	200-400-13-30	200	400	13	30	1450	78
14	65-25-30-4	65	25	30	4	2900	58	56	200-300-15-22	200	300	15	22	1450	80
15	65-30-30-5.5	65	30	30	5.5	2900	56	57	200-250-22-30	200	250	22	30	1450	82
16	65-30-40-7.5	65	30	40	7.5	2900	60	58	200-350-25-37	200	350	25	37	1450	84.5
17	65-35-50-11	65	35	50	11	2900	63	59	200-400-25-45	200	400	25	45	1450	82.5
18	65-35-60-15	65	35	60	15	2900	52	60	200-400-32-55	200	400	32	55	1450	83.1
19	80-40-7-2.2	80	40	7	2.2	2900	50	61	200-350-45-75	200	350	45	75	1450	83.2
20	80-43-13-3	80	43	13	3	2900	57	62	200-300-55-90	200	300	55	90	1450	78.5
21	80-40-15-4	80	40	15	4	2900	56	63	250-400-5-11	250	400	5	11	1450	82.1
22	80-65-25-7.5	80	65	25	7.5	2900	62	64	250-500-5-15	250	500	5	15	1450	85.5
23	80-40-40-11	80	40	40	11	2900	66	65	250-500-7-18.5	250	500	7	18.5	1450	82.1
24	80-40-50-15	80	40	50	15	2900	67	66	250-500-9-22	250	500	9	22	1450	83.5
25	100-65-20-5.5/2	100	65	20	5.5/2	2900	68	67	250-600-9-30	250	600	9	30	1450	74
26	100-70-25-7.5/2	100	70	25	7.5/2	2900	65	68	250-600-12-37	250	600	12	37	1450	76
27	100-80-10-4	100	80	10	4	1450	66	69	250-600-15-45	250	600	15	45	1450	73
28	100-110-10-5.5	100	110	10	5.5	1450	65	70	250-600-20-55	250	600	20	55	1450	72
29	100-100-15-7.5	100	100	15	7.5	1450	62	71	250-600-25-75	250	600	25	75	1450	73
30	100-100-25-11	100	100	25	11	1450	63	72	250-600-30-90	250	600	30	90	1450	71
31	100-100-30-15	100	100	30	15	1450	63	73	300-650-5-18.5	300	650	5	18.5	1450	75
32	100-100-35-18.5	100	100	35	18.5	1450	65	74	300-650-7-22	300	650	7	22	1450	70
33	100-100-35-22	100	100	35	22	1450	76	75	300-800-7-30	300	800	7	30	1450	74
34	100-120-45-30	100	120	45	30	1450	75	76	300-800-9-37	300	800	9	37	1450	78
35	100-120-50-37	100	120	50	37	1450	73	77	300-800-12-45	300	800	12	45	1450	75
36	100-100-57-45	100	100	57	45	1450	70	78	300-800-15-55	300	800	15	55	1450	73
37	100-100-65-55	100	100	65	55	1450	73	79	300-800-20-75	300	800	20	75	1450	73
38	100-120-75-75	100	120	75	75	1450	74	80	300-950-20-90	300	950	20	90	1450	76
39	100-120-85-90	100	120	85	90	1450	76	81	350-1000-15-75	350	1000	15	75	1450	70
40	150-145-9-7.5	150	145	9	7.5	1450	73	82	350-1500-15-90	350	1500	15	90	1450	73
41	150-180-15-15	150	180	15	15	1450	72	83	400-1300-13-75	400	1300	13	75	1450	75
42	150-180-20-18.5	150	180	20	18.5	1450	73	84	400-1500-15-90	400	1500	15	90	1450	78

■ 安装系统说明 Installation System Description

1、自动耦合装置系统

适用于长期固定的使用场合，具有安装快捷，检测、维修方便等优点。

该系统使用特制的底座，固定在污水坑的底部，与出水管联结好，在池顶安装好配套的支承块用导杆使二者相连，水泵与特定支架联结好，沿导杆下滑到达底座，与其自动耦合、密封，而提升时则自动脱落。

2、移动式安装系统

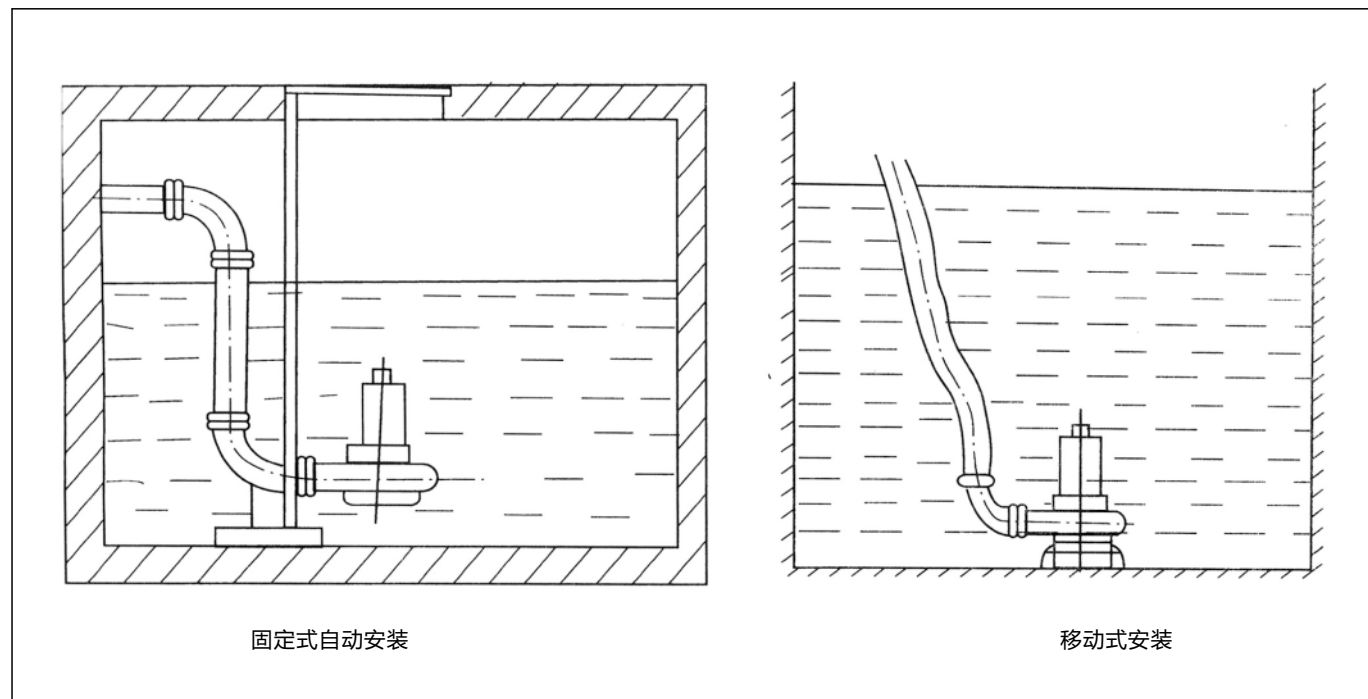
它以支架支承，接上出水软管即可工作，这种方式主要应用于救急或维修施工的需要。

1. Automatic coupling device system

The utility model is suitable for long-term fixed use occasions, and has the advantages of quick installation, convenient detection and maintenance, etc. The system uses a special base, fixed at the bottom of the sewage pit, connected with the water outlet pipe, installed on the top of the pool supporting block with a guide rod to connect the two, a water pump connected with a specific support, along the guide rod down to the base, and its automatic coupling, sealing, and lifting will automatically fall off.

2. mobile installation system

The utility model is supported by a bracket and can work after being connected with a water outlet hose, and the utility model is mainly used for the needs of emergency or maintenance construction.



■ 泵使用方法及注意事项 Pump usage and precautions

- 1、泵使用前应仔细检查电缆有否损坏，紧固件是否松动或脱落，泵在运输、存放、安装过程中有无变形或损坏。
- 2、用500V兆欧表测量电泵电动机相同和相对地间绝缘电阻，其值应不低于2兆，否则应对电机定子绕组进行干燥处理，干燥处理的温度不允许超过120℃

- 1.Before using the pump, carefully check whether the cable is damaged, whether the fasteners are loose or fall off, and whether the pump is damaged. Whether there is deformation or damage during transportation, storage and installation.
- 2.Measure the insulation resistance between the same and relative ground of the electric pump motor with a 500V megger, and the value shall be Not less than 2 trillion, otherwise the motor stator winding shall be dried, and the drying temperature shall not be Allowed to exceed 120

- 3、该系列泵的安装有固定式和移动式两种。当采用固定式自动安装时，应将链索分别穿进(偏离泵出水口，其连线应平行于泵出水口的)两个吊环螺钉或起吊板上上下起吊电泵。均匀缓慢地沿着导轨下滑，直到自动耦合到位。当采用移动式安装时，先将软管套好，用链索穿过两个吊环上下起吊电泵，注意切不能将电缆当作绳索使用，以免发生危险。
- 4、泵接通后的旋转方向从进水口看为逆时针转动，如果电泵反转，只需将电缆线中的任何二根线对调一下接线位置即可。
- 5、电泵的机壳地线必须严格按有关规程接受，为了保证使用时人身安全，在电泵运行时。严禁在附近安装人下水做事或移动，以防万一电泵漏电而发生意外事故。
- 6、电泵在无特殊情况必须配备全自动水泵控制柜，切勿直接挂电网或使用闸刀开关来接通电源、确保电泵正常运行。
- 7、不得将电泵长期处于低扬程状态下运行(一般使用扬程不得低于额定扬程的60%)，最好能控制在建议使用扬程范围以内，以防电泵因超载而烧坏电机。
- 8、无自循环冷却装置的泵严禁整体露出水面长期运行，以防电泵过热损坏。

■ 维护保养

- 1、电泵应有专人管理与使用，并定期检查电泵绕组与机壳之间的绝缘电阻是否正常。
- 2、每次使用特别是用于较稠较粘的浆液后，应将电泵放入清水中运转数分钟，防止泵内留下沉积物，保证电泵的清洁。
- 3、电泵如长时间不用时应将电泵从水中取出，不要长期浸泡在水中，以减少电机定子绕组受潮的机会，增加电泵的使用寿命。
- 4、在常规状态下泵每使用300~500小时后应加注或更换油室中机油(10-30号机油)、使机械密封保持良好的润滑状态，提高机械密封的使用寿命。
- 5.电泵拆卸、维修后，机壳组件必须经0.2MPa气密试验检查，以确保电机密封可靠
- 6、叶轮和泵体之间的密封环具有密封功能，如密封环损坏将直接影响泵的性能，必要时应更换。

3. This series of pumps are available in both fixed and mobile installations. When the fixed automatic installation is adopted, the chain rope shall be respectively threaded into two lifting ring screws or lifting plates (deviated from the pump outlet, and the connecting line shall be parallel to the pump outlet) to lift the electric pump up and down. The uniform hook slowly slides down the guide rail until the automatic coupling is in place. When using mobile installation, the first hose set, with the chain rope through the two rings up and down lifting pump, pay attention to cut the cable can not be used as a rope, so as to avoid danger.
4. Pump connected to the direction of rotation from the inlet to see counterclockwise rotation, if the pump reversal, just the cable in any two lines to swap about the wiring position.
5. Pump casing ground must be strictly in accordance with the relevant procedures properly connected, in order to ensure the use of personal safety, in the pump operation. It is strictly prohibited to install people in the vicinity of the water to do things or move, in case of electric leakage and accidents.
6. The electric pump must be equipped with automatic pump control cabinet without special circumstances. Do not directly connect the power grid or use the knife switch to connect the power supply to ensure the normal operation of the electric pump.
7. The pump shall not be operated in a low-lift state for a long time (the general use of the lift shall not be less than 60% of the rated lift), and it is best to control it within the recommended lift range to prevent the pump from burning out the motor due to overload.
8. No self-circulation cooling device is strictly prohibited from the overall water pump long-term operation, in order to prevent overheating damage pump.

■ Maintenance

- 1, the pump should be managed and used by a special person, and regularly check the insulation resistance between the pump winding and the casing is normal.
- 2, each use, especially for thicker and more viscous slurry, the pump should be placed in clean water for a few minutes to prevent deposits left in the pump to ensure the cleanliness of the pump.
- 3, if the pump is not used for a long time, the pump should be taken out of the water, do not soak in the water for a long time, in order to reduce the chance of the motor stator winding damp, increase the service life of the pump.
- 4, in the normal state of the pump every 300 to 500 hours after the use of oil should be filled or replaced in the oil chamber (10-30 oil), so that the mechanical seal to maintain a good lubrication state, improve the service life of the mechanical seal.
5. Pump disassembly, maintenance, casing components must be 0.2MPa airtight test to ensure that the motor seal reliable
- 6, impeller and pump body between the sealing ring has a sealing function, such as sealing ring damage will directly affect the performance of the pump, if necessary, should be replaced.

■ 常见故障分析其排除方法

故障现象	原因分析	排除方法
流量不足或不出水	1、叶轮旋转错误 2、阀门是否打开和完好 3、管道叶轮被堵 4、转速过低 5、扬程过高 6、抽送介质密度较大 7、介质粘度较高 8、密封圈损坏(口环处)	1、调整叶轮旋转方向 2、检查、维修、排除 3、清理杂物 4、检查电器设备及电路 5、改泵或降低扬程 6、用水冲稀降低浓度 7、降低粘度 8、更换
运行不稳定	1、叶轮不平衡 2、轴承损坏	1、送制造厂调换或校正 2、更换
泵不能启动	1、缺相 2、叶轮卡住 3、绕组、封或粘缆断路 4、定子绕组烧坏 5、电器控制发生故障	1、检查线路进行修复 2、排除杂物 3、用欧姆表检查修复 4、修理、更换绕组 5、修理或调换
电流过大	1、工作电压低 2、管道、叶轮被堵 3、抽送液体的高度或粘度较高 4、使用扬程过低	1、调整工作电压 2、清理管道、叶轮堵物 3、改变密封或粘度 4、减少流量，提高扬程
绝缘电阻低	1、电缆线电源接线端渗漏 2、电缆线破损 3、机械密封磨损产生泄漏 4、各O形密封圈失效 5、机壳被介质腐蚀漏水	1、拧紧压紧螺母 2、更换 3、更换 4、更换 5.修补

■ Failures causes and troubleshooting

Failure	Possible causes	Troubleshooting
Insufficient flow or no water	1. Impeller rotation error 2. Whether the valve is open and intact 3. Pipeline impeller is blocked 4. the speed is too low 5. The lift is too high 6. pumping medium density is large 7. the medium viscosity is high 8. Damage of sealing ring (at mouth ring)	1. Adjust the rotating direction of impeller 2. Inspection, maintenance and elimination 3. Clean up sundries 4. Check electrical equipment and circuits 5. Change the pump or reduce the lift 6. Dilute with water to reduce the concentration 7. Reduce viscosity 8. Replacement
Unstable operation	1. Imbalance of impeller 2. Bearing damage	1. sent to the manufacturer for replacement or correction 2. Replacement
Pump does not start	1. Missing phase 2. Impeller stuck 3. Winding, seal or cable adhesion open circuit 4. Stator winding burned out 5. Failure of electrical control	1. Check the line for repair 2. Remove sundries 3. Check and repair with ohmmeter 4. Repair and replace winding 5. Repair or replacement
Excessive current	1. Low working voltage 2. Pipeline and impeller are blocked 3. The height or viscosity of the pumped liquid is high 4. The lift is too low	1. Adjust the working voltage 2. Clean the pipeline and impeller blockage 3. Change the seal or viscosity 4. Reduce flow and increase lift
Low insulation resistance	1. Leakage of cable power terminal 2. The cable is damaged 3. mechanical seal wear leakage 4. Failure of each O-ring 5. The casing is corroded and leaked by the medium	1. Tighten the compression nut 2. Replacement 3. Replacement 4. Replacement 5. mending