

LSM-KRC式潜水轴流/斜流泵

Large size submersible pump

LSM-KRC型



久保田泵业(安徽)有限公司

KUBOTA PUMP(ANHUI)CO.,LTD

地址: 安徽省和县经济开发区

(Add): He Xian County Economic Development

Zone in Anhui Province

电话(Tel): 0555-5338018

传真(Fax): 0555-5338020

邮编(P.C): 238200

KS 0001-2011-3

久保田泵业(安徽)有限公司

KUBOTA PUMP (ANHUI) CO.,LTD



久保田泵业（安徽）有限公司位于安徽省和县经济开发区，由日本久保田株式会社与安徽三联泵业于2009年12月30日正式签订合资合同，经巢湖市工商局注册成立。总投资1.15亿元人民币。

公司引进久保田先进的流体分析技术，精湛的制造工艺，精细化的管理模式，并依托三联泵业先进的生产设备，完备的检测中心来塑造完美的产品。公司主要生产双吸式蜗壳泵、大型潜水泵以及城市污水处理泵等高新技术产品，产品主要销往东南亚及其它海外市场。

KUBOTA PUMP (ANHUI) CO . , LTD is located at economic development zone of HE County , ANHUI PROVINCE , P . R . C . The Joint Venture Agreement between KUBOTA and SANLIAN PUMP was signed on December 30th 2009 . The company was later registered under Industrial and Commercial Bureau of CHAOZHOU city . the total investment is 115 million RMB .

Introducing the advanced fluid dynamic analysis technics, superior construction technics, precise management mode from KUBOTA to this joint venture company, combined with the very best and advanced machines, equipments , tools as well as the sophisticated testing center at SANLIAN PUMP, the perfect products can be guaranteed to be made. The company mainly produce high technical products like double suction volute pump,large-scale submersible pump and city sewage pump etc,with high technical skills and advanced manufacturing engineering,the products mainly sell to the Southeast Asia and other international market.

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株式会社久保田枚方工厂

地址：日本大阪府枚方市中宫大池1丁目1番1号
占地面积：306084 平方米
主要部门：研究和开发、技术设计、制造、工程

Kubota Corporation Hirakata plant

Location:1-1-1Nakamiya-oike,
Hirakata - shi,Osaka
Site area:306084 m²
Main Division: research and development/engineering and design/Manufacture and construction



现代化新厂区

位于和县经济开发区，占地近500亩，建筑面积150000平方米，是集厂房、办公楼、员工公寓和健身场所为一体的新型花园式现代化工厂。集团金工车间内有高精数控机床、大型机床及检测设备近700多台；总车间内有国内先进的总流水线和全自动喷漆流水线。

Anhui Sanlian pump group located in the He county economic development zone, covers nearly 500 acreages building area150000 square meters,it's a new type of garden modern factory buildings,office building staff apartment and exercise room. the metal processing workshop of group has CNC lathes,large-sized machine tools and detect equipments nearly 700 sets,the fabricate workshop has world-level fabricate flow production line and full automatical painting system.



LSM-KRC式潜水轴流/斜流泵

LSM-KRC

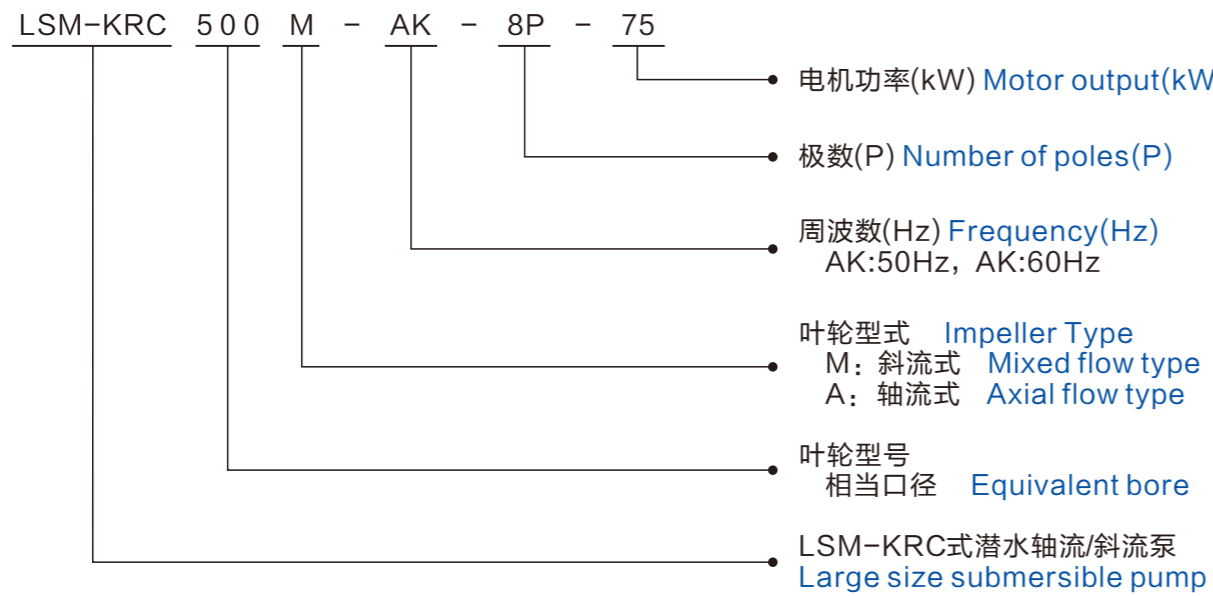
■ 特点

1. 叶轮分为斜流式和轴流式，可以根据扬程和流量选择最适宜的式样。
2. 叶轮安装在电机下方，可以保证水泵低水位运转。
3. 为设置在深水槽和管井中的固定置放式。
4. 轴封部分采用机械密封，防止电机浸水。
5. 设有浸水感知器、过温保护等保护装置，重视安全。

■ 用途

主要用于市政工程、钢铁厂、发电厂、排灌等行业的取水、输水、加压、供水等。

■ 型号意义



■ 适用范围

口径: $\Phi 500\text{mm} \sim \Phi 1200\text{mm}$
 流量: $24\text{m}^3/\text{min} \sim 240\text{m}^3/\text{min}$
 全扬程: 3m~12m
 电机功率: 22kW~710kW
 极数: 4P~16P
 主要材质: 泵壳 (HT250)、
 叶轮 (HT250/ZGoCr18Ni9)

■ Features

1. Suitable type of mixed flow or axial flow impeller can be selected based on the requirement of head and flow capacity.
2. Pump can be operated at wide range of water level since impeller is installed below the motor.
3. Pump can be selected between the two different connecting types corresponding to the installation arrangement with pipes. One is flange fixed type, and the other is easily attached or removed type.
4. Mechanical seal is installed on the pump shaft and prevents water from entering into the motor.
5. High security is achieved with protecting devices such as water leakage detector and bimetallic thermo detective guard for motor.

Description

Water works, sewerage, drainage of rainwater, steel plant, power plant and other industries.

■ Code identification

Specification scope

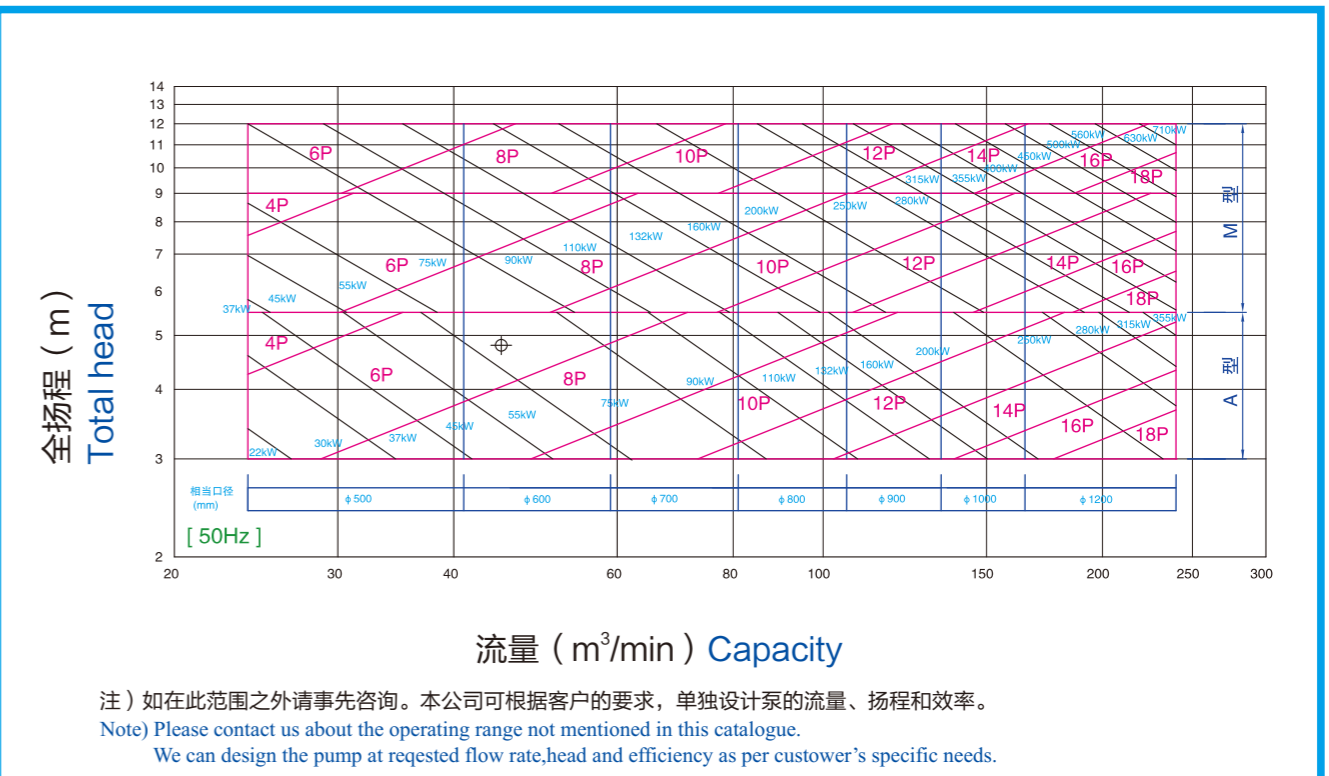
Discharge bore : $\Phi 500\text{mm} \sim \Phi 1200\text{mm}$
 Capacity : $24\text{m}^3/\text{min} \sim 240\text{m}^3/\text{min}$
 Total head : 3m~12m
 Motor output : 22kW~710kW
 Number of poles : 4P~16P
 Main material : Casing(HT250),
 Impeller(HT250/ZGoCr18Ni9)

构造图 Construction drawing

No.	零件名称
1	吸入罩 SUCTION COVER
2	叶轮 IMPELLER
3	机械密封 MECHANICAL SEAL
4	轴承 BEARING
5	泵壳 CASING
6	浸水感知器 WATER LEAKAGE DETECTOR
7	泵轴 SHAFT
8	电机壳 MOTOR FRAME
9	电机 MOTOR
10	电缆盖板 CABLE COVER
11	电缆 CABLE

注) 本构造图为轴流式的示例。
 Note) This construction drawing is one of typical examples for axial flow type pump.

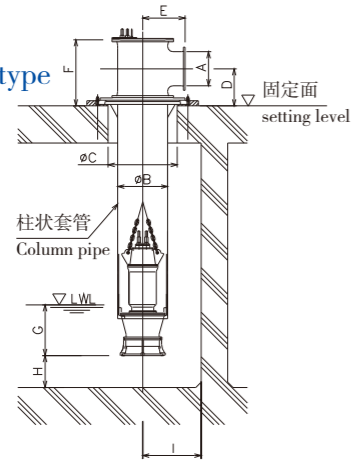
选型表 Selection chart



外型尺寸 Outline dimension

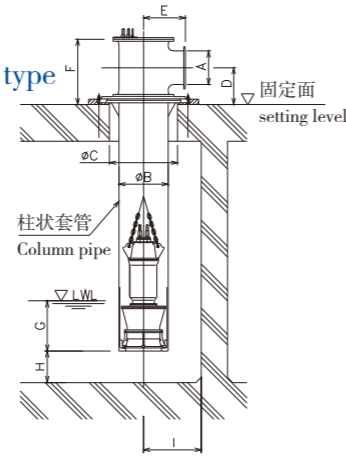
斜流式

Mixed flow type



轴流式

Axial flow type



注) 外形尺寸可能不经预告即行变更。

Note) Outline dimension may be changed without notification.

斜流式 Mixed flow type

型号 Frame No.	口径 Discharge bore	A	B	C	D	E	F	G	H	I
LSM-KRC 500M	500	500	900	1000	450	650	800	1000	500	600
LSM-KRC 600M	600	600	1000	1200	600	800	1100	1100	600	700
LSM-KRC 700M	700	700	1200	1400	700	950	1300	1300	700	800
LSM-KRC 800M	800	800	1350	1500	800	1000	1500	1400	800	900
LSM-KRC 900M	900	900	1500	1700	900	1200	1600	1600	900	1000
LSM-KRC 1000M	1000	1000	1600	1900	1000	1300	1800	1700	1000	1100
LSM-KRC 1200M	1200	1200	1800	2000	1300	1500	2000	2000	1200	1300

轴流式 Axial flow type

型号 Frame No.	口径 Discharge bore	A	B	C	D	E	F	G	H	I
LSM-KRC 500A	500	500	750	1000	450	650	800	1000	500	600
LSM-KRC 600A	600	600	900	1200	600	800	1100	1100	600	700
LSM-KRC 700A	700	700	1100	1400	700	950	1300	1300	700	800
LSM-KRC 800A	800	800	1200	1500	800	1000	1500	1400	800	900
LSM-KRC 900A	900	900	1400	1700	900	1200	1600	1600	900	1000
LSM-KRC 1000A	1000	1000	1500	1900	1000	1300	1800	1700	1000	1100
LSM-KRC 1200A	1200	1200	1600	2000	1300	1500	2000	2000	1200	1300



注意

为了安全使用本水泵，请务必先阅读使用说明书和其他的附属文件。

1. 分解、检查、维修时，必须先切断电源，对充电部放电后再进行作业。
2. 安装、分解、检查、维修时，注意不要损伤线缆。如果忽视这些注意事项，可能会导致触电，引发死亡等事故。

Note

Please read Instruction Manual and other attachments in advance for safe use of this pump.

1. During disassembly, inspection and maintenance, cut off the electricity firstly and then discharge the charged unit.
2. Do not damage the cables during installation, disassembly, inspection and maintenance. Ignorance of these items may result in electric shock, death and other accidents.

3. 运行中不要触摸旋转部。如果忽视这些注意事项，可能会导致发生卷入、夹住事件，引起死亡等事故。
4. 如果在水泵连接状态下不切断电源就进入水槽，可能会导致触电，引发死亡等事故。
5. 水泵的轴承、发动机本体在运行中及刚停止后处于高温状态，请不要随便触摸。可能会引起烧伤等事故的发生。
6. 不要接近或者触摸运行中的水泵的进水口。可能会导致被吸入、夹住等事故的发生。

1. 安装

1. 1、准备安装

准备进行安装时请熟读上述的危险、警告、注意后进行施工。为了搬运方便，在机械密封中没有填入润滑油。请先将附带的润滑油上在水泵之后，进行安装。

1. 2、安装水泵之前

- 1) 请确认铭牌。请确认您所要求的内容和铭牌上记载的内容是否一致。
- 2) 请确认机械密封的润滑油。请确认油室中是否注入了适量的润滑油。
- 3) 请确认保护装置。请确认保护装置是否正确地进行了接线。
- 4) 用手旋转叶轮，确认其是否能够快地旋转。

1. 3、安装

将水泵设置在圆柱形管的下端安装即完成。另外，为了防止启动水泵时产生的旋转力导致水泵本身发生旋转，圆柱形管的最下端设有防止旋转的装置。

- 1) 请打开圆柱形罩。
- 2) 用起重机吊起水泵，缓缓落下。
- 3) 保持起重机吊起的状态，从上方看水泵将其逆时针旋转，使圆柱形管防止旋转装置和水泵防转装置接上。
- 4) 将圆柱形罩装在圆柱形管上。此时，请从电缆支架上的螺栓开始拧紧。
- 5) 请从自动空气阀引出排气管。
- 6) 请将水泵潜水电缆连接到操作盘或中继端子箱上。

3. Do not touch the rotating components during operation. Ignorance of this item may result in entrapment, clamping, death and other accidents.
4. Entering the water channel when pump is connected and powered on may result in electric shock, death and other accidents.
5. The bearing of pump and the motor entity have high temperature during operation and soon after stop, therefore do not touch them, otherwise you may be burned.
6. Do not get close to or touch water inlet of the operating pump, or you may be sucked or stuck.

1. Installation

1. 1、Installation preparation

When installation is to be performed, please read above "danger, warning and caution" items firstly. The mechanical seal is not added with lubrication oil for the purpose of easy handling. Before installation, put the incidental lubrication oil on the pump.

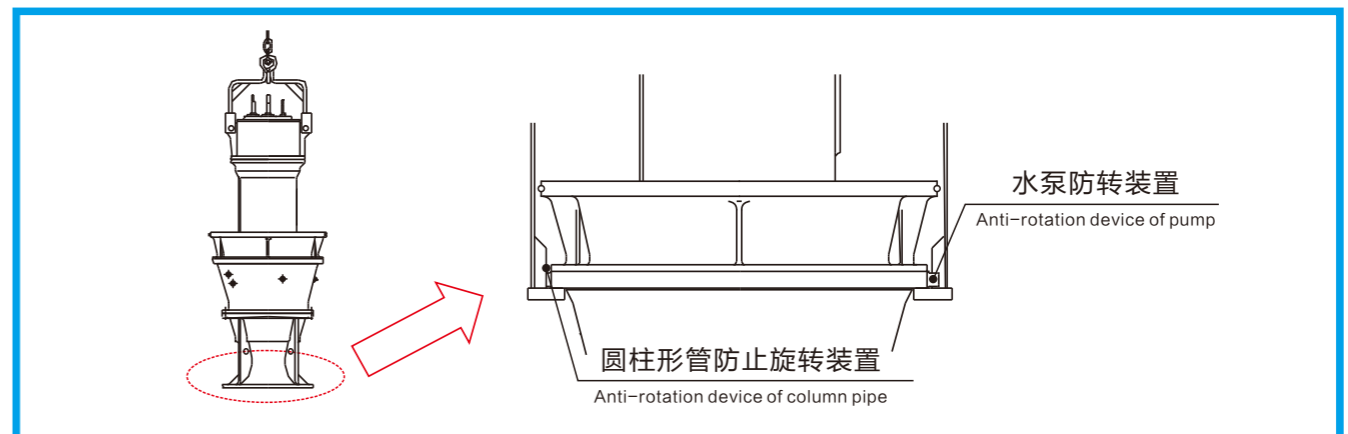
1. 2、Before pump installation

- 1) Confirm the nameplate. Make sure whether the required contents are in accordance with those recorded on the nameplate.
- 2) Confirm the lubrication oil of the mechanical seal. Confirm whether the oil in the oil chamber is sufficient.
- 3) Confirm the protection devices. Make sure whether the protection devices are correctly connected.
- 4) Manually rotate the impeller and make sure it can easily rotate.

1. 3、Installation

Finish installation by setting pump at the lower end of column pipe. In addition, anti-rotation device is arranged at the lowest end of the column pipe to avoid pump entity rotating under turning force generated during pump start-up.

- 1) Please open the column cover.
- 2) Use crane to hoist pump and slowly lower it down.
- 3) Keep hoisting status of the crane, and rotate the pump in an anticlockwise direction (seen from above) to connect anti-rotation device of column pipe and that of pump.
- 4) Install the column cover on the column pipe. At this time, tighten the bolt on cable holder.
- 5) Please lead out the exhaust pipe from the automatic air valve.
- 6) Please connect the submersible cable of pump with the operation panel or the terminal box.



LSM-KRC 式潜水轴流/斜流泵

LSM-KRC

2. 运行

配管安装、配线工程结束之后即可开始运行，请按下述流程进行。

2. 1、启动（安装水泵之后）

- 1) 请确认圆柱形管出水口上的压力表的小配管球阀是关闭状态。
- 2) 确认旋转方向（安装水泵之后，第一次运行时）
请用操作盘进行启动。
运行水泵数秒之后，观察出水的情况。在逆向旋转的情况下，出水较少，或完全不出水。此时需确认潜水电缆的接线，修正接线之后再一次进行运行，确认其是否向着正常方向旋转。请注意，若在无水下启动，或长时间持续逆向旋转，会发生故障。
- 3) 确认电流表等仪表。
电流表的指针发生明显摆动，或在通常状态下数值超过了电机的额定电流时，可能是叶轮中夹入了异物，请进行检查。

2. 2、停机

请用操作盘使水泵停机。另外，在水泵完全停止为止，请不要靠近水泵。

3. 电缆接线图 Cabling Diagram

3. 1、动力回路

以下所示为水泵内部的动力电缆接线图。在进行水泵动力电缆与电源的连接时，请参考下图确认电缆线芯的颜色和根数进行施工。

3. 1、Power circuit

The following diagram is the wiring diagram of power cables inside pump. When connecting the power cable of pump and the power supply, please refer to the following diagram and confirm the color and quantity of cable core.

2. Operation

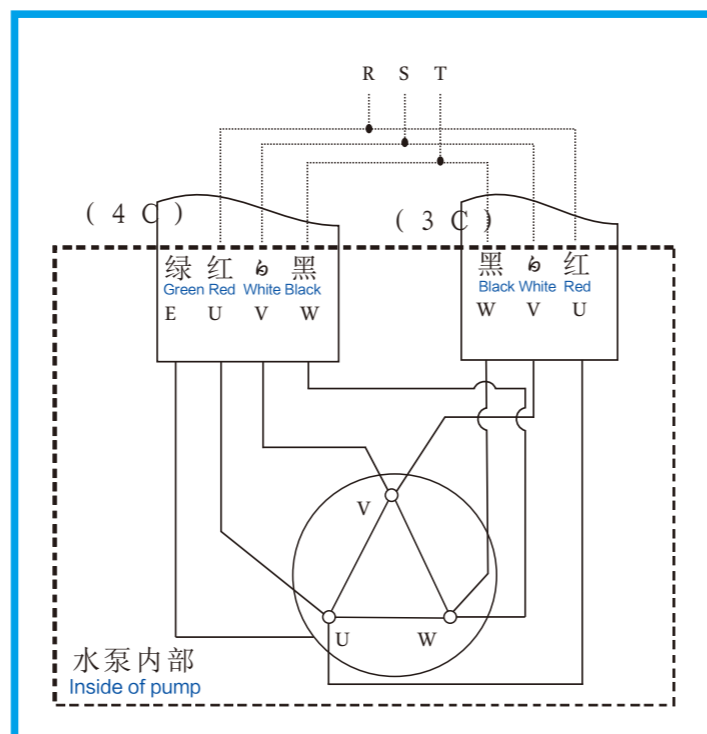
Start operation after pipe installation and wiring according to the following procedure.

2. 1、Start-up (after the pump is installed)

- 1) Please confirm that the small pipe ball valve of pressure gauge on outlet of column pipe is in closed status.
- 2) Confirm the rotation direction (initial operation after pump is installed).
Start the pump by using operation panel.
Observe the water outlet status after pump operates for several seconds. In the event of reverse rotation, the water outlet is little or there is no water outlet. At this time, it is essential to confirm the connection of submersible cables, operate pump again after correcting connection and confirm whether the rotation direction is correct. Please note that start-up without water or long-term continuous reverse rotation will cause failure.
- 3) Confirm ampere meter and other meters.
When points of ampere meter swing obviously, or the value exceeds rated current of motor in normal status, foreign matters may enter the impeller. Please check it.

2. 2、Shutdown

Please stop the pump by using operation panel. In addition, do not get close to the pump before it completely stops.

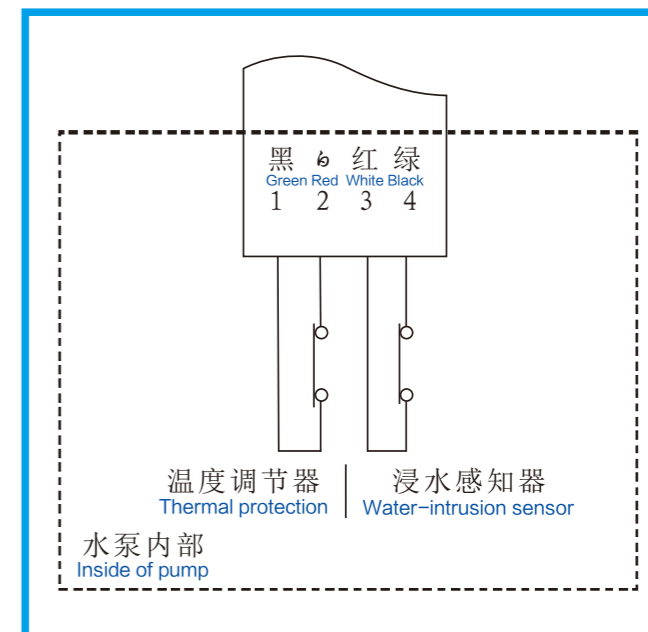


3. 2、保护回路

以下所示为水泵内部的保护电缆接线图。

3. 2、Protection circuit

The following diagram is the wiring diagram of protection cable inside pump.



4. 故障和处理 Troubleshooting

故障 Failure	原因 Reason	处理 Treatment
水泵无法启动 The pump can not be started.	1) 输电受阻 1) Power transmission is blocked.	1) 修理 1) Repair
	2) 启动盘回路接线错误 2) The wire connection of startup swashplate control circuit is wrong.	2) 检修盘内的配线 2) Check wiring inside the plate.
	3) 断路器被切断 3) The breaker is cut off.	3) 调查原因 3) Investigate the reasons.
	4) 单相运行 4) Single phase operation	4) 正确地进行接线 4) Correctly connect wires.
	5) 电缆断线 5) The cables are broken.	5) 调查、更换 5) Investigate and replace
	6) 水泵内部接线不良 6) Wire connection inside pump is poor.	6) 正确地进行接线 6) Correctly connect wires.
不出水或水量小 There is no water outlet, or the water quantity is small.	1) 逆向旋转 1) Reverse rotation	1) 更换接线 1) Replace the connecting wires.
	2) 从配管中漏水 2) The auxiliary pipe leaks water.	2) 调查并修理 2) Investigate and repair
	3) 叶轮旋转部分发生磨损 3) The rotating part of impeller is worn.	3) 调整空隙或进行替换 3) Adjust the clearance or replace
启动水泵之后即停机 Shut down after start-up of pump	1) 旋转部分夹入异物 1) Foreign matters exist in rotating part.	1) 去除异物 1) Remove foreign matters.
	2) 电机或电缆的绝缘电阻老化 2) The insulation resistance of motor or cable is aged.	2) 用500V绝缘电阻表进行调查、修补、更换 2) Use 500V insulation resistance meter for investigation, repair and replacement.
	3) 轴承不良 3) The bearing is poor.	3) 调查、更换 3) Investigate and replace.
浸水感知器运转 Water-intrusion sensor runs.	1) 机械密封不良 1) The mechanical seal is poor.	1) 拔掉浸水室的插头 检修、更换 1) Pull out plug in the submerged chamber for inspection and replacement.
	2) 插头插接不良 2) The plug is not well connected.	2) 将插头充分插接 2) Fully insert the plug.
	3) 浸水感知器不良 3) The water-intrusion sensor fails.	3) 通电试验、更换 3) Perform power-on test and replace it.
热保护运转 Thermal protection runs.	1) 冷却配管堵塞（附带冷却筒时） 1) The cooling auxiliary pipe is clogged (when there is attached cooling dome)	1) 拆开、清扫 1) Disassemble and clean
	2) 液温过高 2) The liquid temperature is excessively high.	2) 咨询制造商如何处理 2) Consult the manufacturer for treatment.
油室浸水 The oil chamber is soaked in water.	1) 插头插接不良 1) The plug is not well connected.	1) 将插头充分插接 1) Fully insert the plug.
	2) 密封带不良 2) The sealing strip is poor.	2) 将密封带正确地卷好 2) Correctly roll up the sealing strip.
	3) 接合面O型密封圈不良 3) The O-ring on the joint face is poor.	3) 拆开、更换 3) Disassemble and replace
	4) 机械密封不良 4) The mechanical seal is poor.	4) 检修、更换 4) Inspect and replace
压力表和电流表指针明显摆动 The points of pressure gauge and ampere meter swing obviously.	1) 轴承不良 1) The bearing is poor.	1) 调查、更换 1) Investigate and replace
	2) 吸入空气 2) The gauge and meter absorbed air.	2) 确认泵坑内的水位 2) Confirm the water level in pump pit.
	3) 叶轮破损 3) The impeller is damaged.	3) 调查、更换 3) Investigate and replace
	4) 夹入异物 4) There are foreign matters.	4) 去除 4) Remove

久保田 水泵

日本国内办公地点和海外办公地点



日本东京总部
1-3, Nihombashi-Muromachi3-chome, Chuo-ku, Tokyo,
103-8310, Japan
Phone: +81-3-3245-3444
Facsimile: +81-3-3245-3454
http: //www.kubota.co.jp

株式会社久保田北京事务所
中国北京首都体育馆南路6号
北京新世纪日航饭店办公楼1056号
电话: 010-6849-2276、2277
传真: 010-6849-2280
邮编: 100044

株式会社久保田泰国事务所
25th Floor, Serm-Mit Tower, 159 Sukhumvit 21 Road,
Wattana, Bangkok 10110, Thailand
Phone: +66-2260-6590
Facsimile: +66-2260-6589

株式会社久保田马来西亚营业所
+903, 9th Floor, Amcorp Tower, Amcorp Trade Center,
No.18, Jalan Persiaran Barat 46050 Petaling Jaya,
Selangor Darul Ehsan, Malaysia
Phone: +60-3-7954-2334
Facsimile: +60-3-7954-1335

株式会社久保田迪拜营业所
Office No. 002, G+3 Office Bldg
Plot No. S10122A1 Jebel Ali Free Zone South
PO. Box 17440, Dubai, UAE
Phone: +971-4-8857033
Facsimile: +971-4-8857032

日本大阪府枚方工厂
1-1-1, Nakamiya-Oike, Hirakata-city,
Osaka 573-8573, Japan
Phone: +81-72-890-2228
Facsimile: +81-72-840-1413

株式会社久保田开罗事务所
15, AboulFeda St. Flat No. 18 (5th)Floor,
Zamalek, Cairo, Egypt
Phone: +20-2-2736-0283
Facsimile: +20-2-2735-0340

株式会社久保田菲律宾事务所
2nd Floor Kuboat Building
155 Panay Avenue, South Triangle,
Quezon Ctiy Philippines Contact No. 410-2428
Phone: +63-2410-2428
Facsimile: +63-2410-2428

株式会社久保田首尔事务所
9F, Kamco Yangjae Tower, 949-3,
Dogok-dong,
Gangnam-gu, Seoul 135-860, KOREA

久保田（中国）投资有限公司
上海市浦东新区银城中路488号太平金融大厦12F
电话: +86-21-61005560*5161
传真: +86-21-61005563
邮编: 200122
邮箱: zhang-x@kubota-sanlian.cn

销售网络示意图 Sales Network Chart



上海办事处
地址: 嘉定区南翔镇田旺路139号
电话: 86-21-59170230
传真: 86-21-59177081

南京办事处
地址: 南京市洪武路359号福鑫
国际大厦2801西
电话: 86-025-57910600
传真: 86-025-57910601

合肥办事处
地址: 合肥市站前路浙江商贸城
C座2602室
电话: 86-0551-4223955
传真: 86-0551-4239155

重庆办事处
地址: 江北区建新东路151号9单元5-4
电话: 86-023-67700575
传真: 86-023-67700575

山西办事处
地址: 太原市新晋祠路长岛国际2号楼
2单元401室
电话: 86-0351-6693190
传真: 86-0351-6693190

陕西办事处
地址: 西安市电子二路万国花园 11号楼
4单元3楼东户
电话: 86-029-88231353
传真: 86-029-88231353

北京办事处
地址: 丰台区城南嘉园益城园16号楼城南
大道1座13层1301室
电话: 86-010-87564973-999
传真: 86-010-83686064

武汉办事处
地址: 武汉市武昌区友谊大道318号
清芷园小区7-3-903
电话: 86-027-88617117
传真: 86-027-88617117

广州办事处
地址: 广州市海珠区东晓路70号滨江花园
金龙阁402室
电话: 86-020-84025575
传真: 86-020-84025857