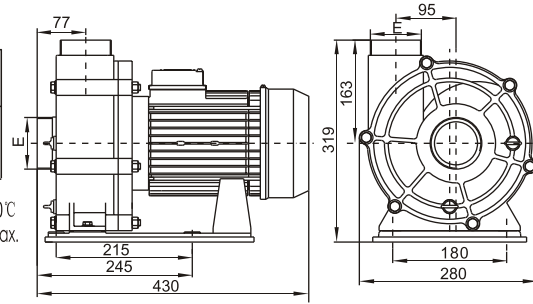


Installation diagram
安装示意图

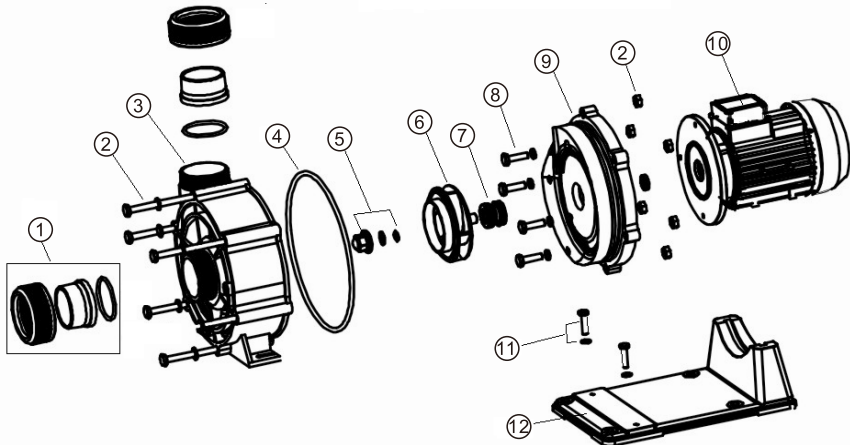
| Model | Qmax (m³/h) | Hmax (m) | Power P1 (kW) | E |
|-------|-------------|----------|---------------|-------------|
| AFS40 | 78 | 13 | 3.0 | G2½ or 4FBT |
| AFS55 | 90 | 17.5 | 4.0 | |

V / Hz esp: See pump nameplate. Liquid temperature: 4°C ~ 50°C
Storage temperature: -10°C ~ +50°C. Relative Air Humidity: 95% Max.
V / Hz esp: 参见水泵铭牌. 液体温度: 4°C~50°C
储存温度: -10°C ~ +50°C. 相对空气湿度: 最大95%



Pump parts for AFS
AFS水泵零部件

| Key No. | 图示编号 | Part No. | 零件编码 | Product Description | 产品描述 | QTY | 数量 |
|---------|------|----------|------|---------------------|---------|-----|----|
| 1 | | 89023501 | | union | 接头 | 2 | |
| 2 | | 89023502 | | screw with nut | 带螺帽的螺栓 | 6 | |
| 3 | | 01112094 | | Pump Body | 泵体 | 1 | |
| 4 | | 02010251 | | O-Ring for Flange | 法兰盘密封圈 | 1 | |
| 5 | | 89023503 | | nut for Impeller | 泵轮螺母 | 1 | |
| 6 | | 01271049 | | Impeller AFS40 | 泵轮AFS40 | 1 | |
| | | 01271050 | | Impeller AFS55 | 泵轮AFS55 | 1 | |
| 7 | | 04015054 | | Mechanical seal | 机械密封 | 1 | |
| 8 | | 89023504 | | Screw | 螺栓 | 4 | |
| 9 | | 01112095 | | Pump Flange | 水泵法兰盘 | 1 | |
| 10 | | 89023506 | | Motor AFS40 | 电机AFS40 | 1 | |
| | | 89023507 | | Motor AFS55 | 电机AFS55 | 1 | |
| 11 | | 89023505 | | Screw | 螺栓 | 2 | |
| 12 | | 01112096 | | Base | 底座 | 1 | |



SWIMMING TRAINING PUMP
INSTRUCTION MANUAL
AFS SERIES PUMPS

AFS系列游泳训练泵
使用说明书



IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

- 1. READ AND FOLLOW ALL INSTRUCTIONS.**
- 2. WARNING** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- 3. WARNING** Risk of Electrical Shock. Connected only to grounding type receptacle protected by a ground fault circuit interrupter if you cannot verify that the receptacle is protected by GFCI.
- 4. CAUTION** Do not bury cord. Locate cord to minimize abuse from lawnmowers, hedge trimmers, and other equipment.
- 5. CAUTION** In case the running parts will injure people, don't make the electric pump running before then pipeline have been connected.
- 6. WARNING** To reduce the risk of electrical shock, replace damaged cord immediately.
- 7. WARNING** To reduce the risk of electrical shock, do not use extension cord to connect unit electric supply; provide a properly located outlet.
- 8. CAUTION** Jet pump for jetted bathtubs, spas, pools, swimming pools, massage stations, cleaning system.
- Do not install within an outer enclosure or beneath the skirt of a hot tub unless so marked.
- This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely.
- Young children should be supervised to ensure that they do not play with the appliance.
- 12. SAVE THESE INSTRUCTIONS**

重要安全指引

安装和使用本电气设备时应遵循基本的安全预防条例，包括下列事项：

- 阅读并执行所有的操作指引。
- 警告 为了降低受伤的危险，不得允许儿童使用本产品，除非他们使用时全程受到密切的监管。
- 警告 电击危险。只能连接到有接地故障断路器（GFCI）保护的接地插座。如果不能确定插座是否有GFCI保护，请联系符合资格的电工。
- 警告 不要埋线。安置电源线时要考虑减少修剪机、绿篱修剪器和其它设备对电源线的侵犯。
- 警告 在运行的零件会伤害人的情况下，不要启动电动机，在此之前管道已经连接。
- 警告 为了减少电击危险，要立即更换已损坏的电源线。
- 警告 为了减少电击危险，不要使用延长线来连接设备的电力供应；电源插座要安装在正确的位置。
- 警告 在喷射式浴缸、温泉、泳池、按摩站和清洁系统上，要使用喷射泵。
- 未经标注，不要安装在热水浴池的外包围上或边沿之下。
- 此设备不宜让儿童或老弱人士使用，除非他们能在负责人员的监督下能安全地使用此设备。
- 应监督儿童不要把设备当玩具玩耍。
- 保存好本使用说明书。

1. General

These instructions are for correct installation, and optimum performance of the Bath pumps, so they should be read carefully. These are single-stage centrifugal pumps designed to operate with compact hydro massage equipment. They are equipped with a total-emptying system to prevent the discharge of residual liquid in each stopping. These units are designed to operate with clean water at a maximum water temperature of 50°C. Built of top quality materials, they are subjected to strict hydraulic and electrical controls and are carefully verified. Correct installation is ensured by following these instructions and those of the wiring diagram; otherwise, over loads may be produced in the motor. We decline responsibility for any damage caused by not following these instructions.

1. 概括
此说明书旨在指导如何正确安装浴缸泵并获得水泵的最佳性能，所以要认真阅读。这些水泵是设计用于紧凑型水疗按摩设备的单级离心泵的。为了防止每次停止时有剩余液体流出，它们配备了全排空装置。这些设备设计用于水温最高不超过50°C的洁净水。它们用高质量的材料建造而成，受到严格的液压和电气控制，并经过认真验证。按照以下指引和接线图可保证水泵的正确安装；否则可能会造成电机内的过载。不按此说明书操作而造成的任何损坏本公司概不负责。

2. Installation

The pumps should be installed horizontally, securing them with screws through the holes in the supports to prevent undesirable noise and vibration. The suction, pipe of the pump should be as short as possible.

The rating Label must be visible after installation. Parts containing live parts, supplied with safety extra low voltage <12, must be inaccessible to a person in the bath. Class I appliances must be permanently connected to fixed wiring. Part including electrical components except remote control devices must be located or fixed so that they cannot into bath.

3. Pipe Assembly

The suction and discharge pipes should have a diameter equal to or greater than that of the intake tapping of the pump.

Avoid traps as, in addition to affecting efficiency, they impede total overall emptying. The suction and discharge pipes should not rest on pump in any case. Seal all the connectors and unions well. Avoid any dripping on the motor, which would unfailingly damage it.

4. Electrical connection

The electrical installation should have a multiple separation system with contacts opening at least 3mm.

For continued protection against possible electric shock this unit is to be mounted to the base in accordance with the installation instructions. The protection of the system should be based on a residual current device (RCD) with a rated tripping current not exceeding 30mA. The supply cable should comply with EMC standards (2). Single-phase motors have built-in thermal protection. The electric connection must be carried out by qualified staff following strictly the "EN60335-2-41" standard. Be sure that the earth cable connection is correctly made. Be sure that the equipotential connection between the bath and the pump is correctly made. Wires serving as equipotential bonding conductors shall have a cross sectional area between 2.5 and 6mm² and shall be equipped with the terminal suitable receptacle.

5. Controls prior to Initial Start-up

Verify that the pump shaft turns freely.

Check that the mains voltage and frequency are according to the name plate.

The hydromassage assembly should be equipped with a system to prevent the pump from starting up if a minimum water level is not present.

Check the rotating direction of the motor, which should concur with that indicated on the fan cover.

If the motor does not start up, try to locate the problem in the tabel of most common faults and their possible solutions that is provided further on.

THE PUMP SHOULD NEVER OPERATE DRY.

6. Start-up

Start electrically the pump only when the suction and discharge pipes are connected to the corresponding inlets and outlets. Check that there is no obstacle in the pipes.

Apply voltage to the motor and suitably adjust the jets to obtain the desired flow.

2. 安装

水泵应该水平安装，用螺栓穿过支架上的孔固定水泵，以避免产生不良的噪音和振动。

水泵的抽水管应该尽可能地短。

安装后必须能看到铭牌。置身于浴缸里的人不得接触到含有带电零件的部件，特低安全供电电压小于12V的零件除外。1级设备必须永久地连接到固定的线缆上。含有电器元件的零部件，除了遥控设备外，不得安放和固定到浴缸里。

3. 管道安装

进排水管的直径应等于或大于水泵的进水口直径。

避免使用曲颈管，因为曲颈管既影响工作效率又妨碍液体的整体全排空。任何情况下进排水管都不应安装在水泵上。密封好所有连接管和管接头。避免水珠滴到电机上，否则一定会对电机造成损害。

4. 电气连接

电气安装操作时应该有一个多重分离系统，触点打开至少3mm。

为了持续地防护可能发生的电击危险，必须按照安装说明书把本设备安装到底座上。

设备的防护以一个额定跳闸电流不超过30mA漏电保护装置(RCD)为基础。电源线应符合EMC标准(2)。单相电动机配备有内置的过热保护装置。电气连接必须由合格的人员严格按照“EN60335-2-41”标准实施。确保接地线已正确连接。确保浴缸与水泵之间的等电位连接已连接正确。作为等电位连接导线的电源线，其横截面面积应在2.5-6mm²之间，并配备适用于端子的插座。

5. 初次启动前的控制

确定泵轴转动自由。

检查电源电压和频率是否与铭牌一致。

水疗按摩设备应配置一个保护装置，在水位没有达到最低要求时防止水泵启动。

检查电机的转动方向，电机的转动方向应该与风扇罩上所标的一致。

如果电机不启动，尝试根据下文的“常见故障及可能的解决方案”一表确定问题所在。

水泵决不可干运转。

6. 启动

只有在进排水管道已连接到相应的入口和出口后才能启动水泵的电源。检查管道

里没有障碍物。

给电机施加电压，适当调整喷嘴以获得最佳流量。

7. Maintenance and clean 维护及清洁

Our pumps for hydromassage facilities do not require any special maintenance or programming. If the pump will be idle for a long period of time, it is recommended to disassemble, clean and store it in a dry, well-ventilated place. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person to a hazard. Pump can be automotive empty water after correct installation.

When the pump needs to clean (1) filling with water up to level position of bathtub's nozzle, (2) operating 2-3 minute, (3) exhausting water of bathtub after engine stop.

我们的用于水疗按摩设施的水泵无需任何特别的维护或编程。如果长期不使用水泵，建议把水泵拆开、清洁、存放在干燥、通风良好的地方。如果电源线损坏，必须由制造商或其服务代理或同样合格的人士更换，以免发生危险。正确安装的情况下水泵能自动排空水。需要清洁对水泵时，(1) 充水至浴缸喷嘴位，(2) 运转2-3分钟，(3) 停机后排出浴缸里的水。

8. Trouble Shooting Guide 故障排除指南

| SYMPTOM 故障征兆 | POSSIBLE CAUSE 可能的原因 | CHECK 检查 |
|---------------------------------------|------------------------------------|---|
| PUMP DOES NOT TURN 水泵不转动 | NO POWER TO PUMP 水泵没电 | - incoming power to the pump? - Is circuit breaker on? - Is GFCI operating properly? - Is the air switch plugged in? - 有外来电源通到水泵吗? - 断路器开启了吗? - GFCI操作正确吗? - 空气开关插好了吗? |
| | AIR SWITCH DISCONNECTED 空气开关没连通 | - Is the air switch hose connected to the pump? - Is the air switch hose connected to the actuator button on the tub deck? - 空气开关软管连接到水泵了吗? - 空气开关软管连接到浴缸甲板上的制动器按钮了吗? |
| PUMP NOT PUMPING PROPERLY 水泵不能正确抽水 | BLOCKAGE OR LEAK 堵塞或漏水 | - Jets should be pointed away from the suction inlet so air is not forced into pump suction - Is the in-tub suction inlet blocked or covered? - Is there any debris in the pump housing? - Is there a leak in the piping or the pump? - 喷射的水流不应该朝向抽水进口，以免水泵强行抽入空气。 - 浴缸内的抽水进口堵塞或被物体覆盖了吗? - 水泵外壳里有杂物吗? - 管道或水泵有漏泄吗? |
| | LOW VOLTAGE 电压低 | - Is the proper voltage applied to the pump? - Is there an extension cord being used? - 供给水泵的电压正确吗? - 是否使用了延长电源线? |

Performance curves 性能曲线

