

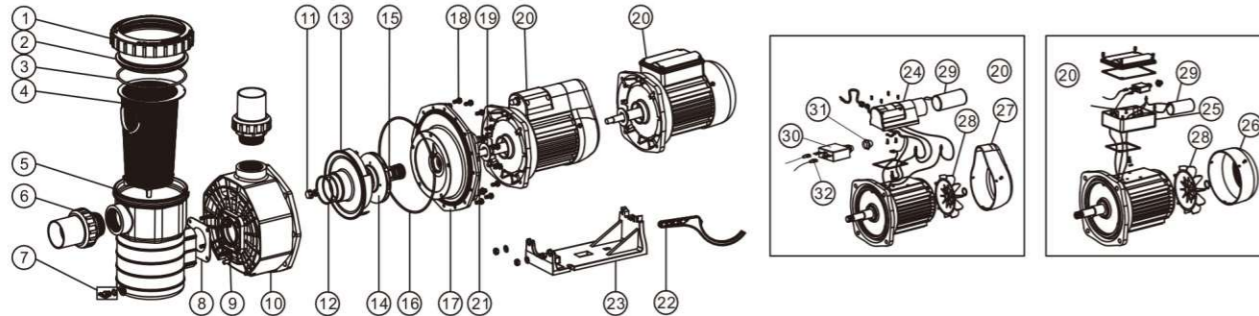
**Pump parts for SB SB水泵组件图**

SUCTION PORT FROM POOL  
OR VACUUM FILTER  
进水口

DISCHARGE PORT TO FILTER OR POOL  
出水口

PUMP MAY BE BOLTED TO LEVER  
FOUNDATION OR MOUNTING BRACKET  
水泵固定底架

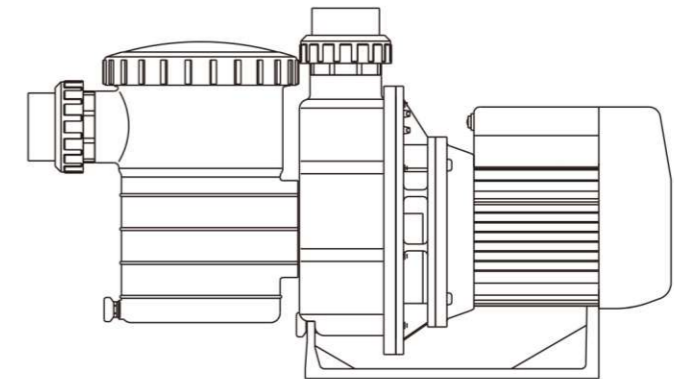
SCREWS OF PUMP BODY  
螺丝



Key No.	Part No.	Description English	Description Chinese	Qty	Key No.	Part No.	Description English	Description Chinese	Qty
项目	部件编号	英文描述	中文描述	数量	项目	部件编号	英文描述	中文描述	数量
1	01021008	Nut for Lid	大螺母	1	20	89021601	Motor SB10 (380V/50Hz)	电机 SB10 (380V/50Hz)	1
2	01041022	Transparent Lid	透明盖	1	20	89021602	Motor SB15 (380V/50Hz)	电机 SB15 (380V/50Hz)	1
3	02010248	O-Ring for Lid	透明盖密封圈	1	20	89021603	Motor SB20 (380V/50Hz)	电机 SB20 (380V/50Hz)	1
4	01111030	Basket	过滤篮	1	20	89021604	Motor SB30 (380V/50Hz)	电机 SB30 (380V/50Hz)	1
5	89021305	Pre-Filter Body	过滤桶	1	20	89021501	Motor SB10 (110V/60Hz)	电机 SB10 (110V/60Hz)	1
6	89280103	2.0" Union	2.0"过滤活接	2	20	89021502	Motor SB15 (110V/60Hz)	电机 SB15 (110V/60Hz)	1
7	89021307	Drain Plug with O-ring	扭制连胶圈	1	20	89021503	Motor SB20 (110V/60Hz)	电机 SB20 (110V/60Hz)	1
8	02011115	Square Gasket	密封垫	1	20	89021504	Motor SB30 (110V/60Hz)	电机 SB30 (110V/60Hz)	1
9	03011083	M6 x 30 Screw for Pump Body	M6x30内六角螺丝	4	21	89021310	Bolt for Motor with Washer	M8x20外六角螺丝连垫片	4
10	89021308	Pump Body	SB泵清水盘	1	22	01021021	Opening key	水泵匙	1
11	89021309	Screw for Impeller with O-Ring	水叶螺丝连胶圈	1	23	01111032	Base with Nut & Washer for SB10/ SB15	SB10,SB15底座(含螺母/垫片)	1
12	02011108	O-Ring for Diffuser	分水轮密封圈	1	23	01111031	Base with Nut & Washer for SB20/ SB30	SB20,SB30底座(含螺母/垫片)	1
13	01111015	Diffuser	分水轮	1	24	89021312	Cable Box for SB Pump 220V/50Hz; 220V/60Hz; 380V/50Hz.	接线盒(含螺丝,垫片)	1
14	01311001	Impeller SB10 (110V/60Hz) and (220V/60Hz)	水叶 SB10(110V/60Hz), (220V/60Hz)	1	25	89021505	Cable Box for SB Pump 110V/60Hz	接线盒(含螺丝,垫片)	1
14	01311002	Impeller SB20 (110V/60Hz) and (220V/60Hz)	水叶 SB20 (110V/60Hz), (220V/60Hz)	1	26	01031001	Fan Cover for SB20/ SB30	SB20, SB30水泵电机尾罩(大)	1
14	01311003	Impeller SB20 (220V/50Hz) and (380V/50Hz)	水叶 SB20 (220V/50Hz), (380V/50Hz)	1	26	01031002	Fan Cover for SB10/ SB15	SB10, SB15水泵电机尾罩(小)	1
14	01311004	Impeller SB10 (220V/50Hz) and (380V/50Hz) / SB15 (110V/60Hz) and (220V/60Hz)	水叶 SB10 (220V/50Hz), (380V/50Hz) / SB15 (110V/60Hz), (220V/60Hz)	1	27	01031008	Fan Cover for SB20/ SB30	SB20, SB30水泵电机尾罩(大)	1
14	01311005	Impeller SB15 (220V/50Hz) and (380V/50Hz) / SB30 (110V/60Hz) and (220V/60Hz)	水叶 SB15 (220V/50Hz), (380V/50Hz) / SB30 (110V/60Hz), (220V/60Hz)	1	27	01031009	Fan Cover for SB10/ SB15	SB10, SB15水泵电机尾罩(小)	1
14	01311006	Impeller SB30 (220V/50Hz) and (380V/50Hz)	水叶 SB30 (220V/50Hz), (380V/50Hz)	1	28	01031007	Cooling Fan for SB10/ SB15	SB10, SB15电机风叶	1
15	04015046	3/4" Mechanical seal	3/4" 机械密封	1	28	01031006	Cooling Fan for SB20/ SB30	SB20, SB30电机风叶	1
16	02011093	O-Ring for Flange	法兰密封圈	1	29	04016014	Capacitor for SB10/ SB15 (220V/50Hz) (220V/60Hz)	SB10, SB15水泵电容	1
17	01021013	Pump Flange	SB泵法兰	1	29	04016015	Capacitor for SB20 (220V/50Hz) (220V/60Hz)	SB20水泵电容	1
18	03011080	M6x15 Hexagonal Bolt	M6x15外六角带介螺丝	16	29	04016016	Capacitor for SB30 (220V/50Hz) (220V/60Hz)	SB30水泵电容	1
19	02011096	Motor Slinger	电机止水胶垫	1	29	04016022	Capacitor for SB10/ SB15 (110V/60Hz)	SB10, SB15水泵电容	1
20	89021301	Motor SB10 (220V/50Hz)	电机 SB10 (220V/50Hz)	1	29	04016023	Capacitor for SB20/ SB30 (110V/60Hz)	SB20, SB30水泵电容	1
20	89021302	Motor SB15 (220V/50Hz)	电机 SB15 (220V/50Hz)	1	30	04015042	Overload Switch PE77-6A/250VAC for SB10	SB10过流保护器	1
20	89021303	Motor SB20 (220V/50Hz)	电机 SB20 (220V/50Hz)	1	30	04015015	Overload Switch PE77-8A/250VAC for SB15	SB15过流保护器	1
20	89021304	Motor SB30 (220V/50Hz)	电机 SB30 (220V/50Hz)	1	30	04015012	Overload Switch PE77-10A/250VAC for SB20	SB20过流保护器	1
20	89021401	Motor SB10 (220V/60Hz)	电机 SB10 (220V/60Hz)	1	30	04016037	Overload Switch PE77-13A/250VAC for SB30	SB30过流保护器	1
20	89021402	Motor SB15 (220V/60Hz)	电机 SB15 (220V/60Hz)	1	31	02021039	Cover for Overload Switch	过流保护器胶套	1
20	89021403	Motor SB20 (220V/60Hz)	电机 SB20 (220V/60Hz)	1	32	04014018	Insulation Fitting for Overload Switch	母全绝缘接头	1
20	89021404	Motor SB30 (220V/60Hz)	电机 SB30 (220V/60Hz)	1					

**SB Series Centrifugal Pump  
Installation & Operating Instructions**

**SB系列离心式水泵安装及操作说明**



**INSTALLATION 安装说明**

Only qualified, licensed personnel should install pump and wiring.

只有经过培训鉴定合格的电工人员才能对水泵进行安装和配线。

**IMPORTANT ELECTRICAL**

Electrical Contractors Please Note: EMAUX pumps must be wired to the main power supply through an approved and correctly rated contactor.

**电源安装提示**

施工单位请注意:意万仕水泵电源布线必须通过专业的电力安装单位认可。

**Pump Mount Must:**

- ❖ Be solid Level Rigid Vibration Free.
- ❖ Allow use of short, direct suction pipe. (To reduce friction losses & don't install the pump at more than 3M geometrical height from water level)
- ❖ Allow for gate valves in suction and discharge piping.
- ❖ Have adequate floor drainage to prevent flooding.
- ❖ Be protected from excess moisture.
- ❖ All adequate access for servicing pump and piping.

**NOTICE:**

Pump suction and discharge connections have moulded in thread stops, **DO NOT** try to screw pipe in beyond these stops.

**安装水泵注意事项:**

- ❖ 必须在一块坚硬平坦的表面位置安装。
  - ❖ 使用一个简短而直接管道系统(减少水流量的损失), 水泵安装的位置不能高于水面3米。
  - ❖ 在进水口和出水口各安装一个阀门。
  - ❖ 机房位置的排水系统良好。
  - ❖ 防止机房过于潮湿。
  - ❖ 为便于检修水泵和管道, 机房必须预留足够的空间。
- 注意: 水泵的进水口及出水口与水管相连接的接头扭紧即可, 不能扭太紧。



## OPERATION 操作简介

- ⚠ **NEVER** run pump dry! Running pump dry may damage seals, causing leakage and flooding! Fill pump with water before starting motor.
- ⚠ Before removing lid:  
STOP PUMP before proceeding.  
CLOSE GATE VALVES in suction and discharge pipes.  
RELEASE ALL PRESSURE from pump and piping system.  
NEVER tighten or loosen screws while pump is operation.
- ⚠ Do not block pump suction! To do so with body may cause severe or fatal injury. Children using pool must **ALWAYS** have close adult Supervision!
- ⚠ 水泵内没有水, 请勿启动。否则会损坏轴密封, 导致水泵漏水或水浸。在启动电机前, 确保泵内的水已注满。
- ⚠ 打开螺母面盖前, 应该注意:
  - ❖ 关闭水泵的电源。
  - ❖ 关闭进水口和出水口的阀门。
  - ❖ 排出水泵和水管内的气压。
  - ❖ 当水泵运行时, 不能松紧水泵的螺丝。
- ⚠ 游泳者不要阻塞泳池的排水口, 这会导致伤害或死亡。小孩游泳时必须由成人监管。

### Priming Pump:

- ❖ Release all air from filter and piping system: see filter owner manual.
- ❖ In a flooded suction system (water source higher than pump), pump will prime itself when suction and discharge valves are opened.
- ❖ If pump is not in a flooded suction system, unscrew and remove trap cover; fill trap and pump with water.
- ❖ Clean and inspect Ring; re-install on trap cover.
- ❖ Replace trap cover on trap; turn clockwise to tighten cover.

**NOTICE:** Tighten trap cover by hand only.

Pump should prime now. Priming time will depend on vertical length of suction lift and horizontal length of suction piping.

### 启动水泵:

- ❖ 排放所有来自过滤器和管道系统内的空气, 参阅过滤器的用户手册。
  - ❖ 当泳池的水位高于水泵的位置时, 打开进水口和出水口的阀门, 启动水泵。
  - ❖ 如果泳池的水位低于水泵的位置时, 打开面盖, 注满泵内的水后才再启动。
  - ❖ 清洁和检查密封圈, 再放回面盖。
  - ❖ 放上面盖后, 顺时针方向旋转拧紧面盖。
- 注意: 扭紧螺母面盖只能用手(或扳手), 必要时才用扳手。

## ROUTINE MAINTENANCE 保养程序

The only routine maintenance needed is inspection/cleaning of trap basket. Debris or trash that collects in basket, will choke off water flow through the pump. Follow instructions below to clean trap:

- 1) Stop pump, close gate valve in suction and discharge, and release all pressure from system before proceeding.
- 2) Unscrew trap lid (turn counterclockwise).
- 3) Remove strainer basket and clean. Be sure all holes in basket are clear, flush basket with water and replace in trap with large opening at pipe connection port (between ribs provided). If basket is replaced backwards cover will not fit on trap body.
- 4) Clean and inspect lid Ring; reinstall on trap cover.
- 5) Clean Ring groove on trap body and Replace lid. To help keep lid from sticking, tighten hand tight only.
- 6) Prime pump (see priming instructions above)

常规的保养就是检查和清洁隔水器。垃圾或碎屑聚积于隔水器的滤水篮, 会堵塞流入水泵的水。清理步骤如下:

- 1) 关闭水泵的电源和进水口、出水前的阀门, 排出各系统内的气压。
- 2) 扭开面盖
- 3) 取出隔水器的滤水篮清洗干净, 保证滤水篮的每个空隙都是清洁的, 再将滤水篮放进桶内并注满水, 这个桶在进水处有一个极大的开口, 如果滤水篮放置不当, 和桶身就不能吻合。
- 4) 清洁和检查透明盖的密封圈, 再装上桶盖。
- 5) 清洁密封圈的周边后装回原处。
- 6) 启动水泵(参阅水泵的启动程序)。

**CAUTION**  
**危险**



**Hazardous suction.**  
**Can trap hair or body part, causing severe injury or death. Do not block suction.**

请勿阻塞进水口, 避免发生意外。

## SERVICE & REPAIR PARTS 维修和配件的更换

Refer all service to your local agent or dealer as his knowledge of your equipment makes him the best qualified source of information. Order all repair parts through your dealer. Give the following information when ordering repair parts:

- 1) Unit nameplate data or serial number on label.
- 2) Description of part.

向当地代理商或经销商索取设备的技术资料, 这些资料能证明授权资格的真实性。向代理商订购所需的维修配件, 订购配件时需提供下面的资料:

- 1) 设备标示牌的数据或产品编号。
- 2) 部件名称。

## TROUBLE SHOOTING 故障分析

### MOTOR DOES NOT START

- 1) Disconnect switch or circuit breaker in off position
- 2) Fuses blown or thermal overload open
- 3) Locked motor shaft
- 4) Motor windings burned out
- 5) Defective starting switch inside single phase motor
- 6) Disconnected or defective wiring
- 7) Low voltage

### 马达不能启动

- 1) 电源断开或断路器。
- 2) 保险丝熔断或机件过热。
- 3) 轴承卡死。
- 4) 马达线圈烧坏。
- 5) 过流保护或热保护。
- 6) 电线连接不好或损坏。
- 7) 电压不足。

### PUMP DOES NOT REACH FULL SPEED

- 1) Low voltage
- 2) Pump connected for wrong voltage

### 水泵未达到最佳状态

- 1) 电压不足。
- 2) 电源与水泵电压不符。

### MOTOR OVERHEATS (protector trips)

- 1) Low voltage
- 2) Motor windings connected for wrong voltage on dual voltage model
- 3) Inadequate ventilation

### 马达过热

- 1) 电压不足。
- 2) 工作电压与电机电压不符。
- 3) 通风环境不佳。

### PUMP DELIVERS NO WATER

- 1) Pump is not primed
- 2) Closed valve in suction or discharge line
- 3) Leakage or air into suction system
- 4) Impeller clogged

### 水泵不能抽水

- 1) 水泵没有启动。
- 2) 进水或出水阀门关闭。
- 3) 管道系统无水或空气进入。
- 4) 水叶损坏。

### LEAKAGE OF WATER AT SHAFT

- 1) Shaft seal requires replacement
- 漏水**  
1) 更换密封圈。

### LOW PUMP CAPACITY

- 1) Valve in suction or discharge line partly closed
  - 2) Suction or discharge line partly plugged
  - 3) Suction or discharge line too small
  - 4) Plugged basket in skimmer or hair and lint strainer
  - 5) Dirty filter
  - 6) Impeller clogged
- 水泵在低性能下运行**  
1) 进水或出水管的阀门未完全开启。  
2) 进水或出水管部分堵塞。  
3) 进水管或出水管太细。  
4) 头发或杂物淤积于滤水篮。  
5) 过滤器沉积物太多。  
6) 水叶被阻塞。

### HIGH PUMP PRESSURE

- 1) Discharge valve or inlet fittings closed too much
  - 2) Return lines too small
  - 3) Dirty filters
- 水泵压力过大**  
1) 进水管或出水管的阀门未完全开启。  
2) 回水管太细。  
3) 过滤器沉积物太多。

### NOISY PUMP AND MOTOR

- 1) Plugged basket in skimmer or hair in lint strainer
- 2) Worn motor bearings
- 3) Valve in suction line partly closed
- 4) Suction line partly plugged
- 5) Vacuum hose plugged or too small
- 6) Pump not supported properly

### 水泵和马达噪音

- 1) 头发或杂物淤积于滤水篮。
- 2) 电机轴承损坏。
- 3) 进水管阀门未完全开启。
- 4) 进水管部分堵塞。
- 5) 吸污口堵塞或太细。
- 6) 水泵工作不正常。

### AIR BUBBLES AT INLET FITTINGS

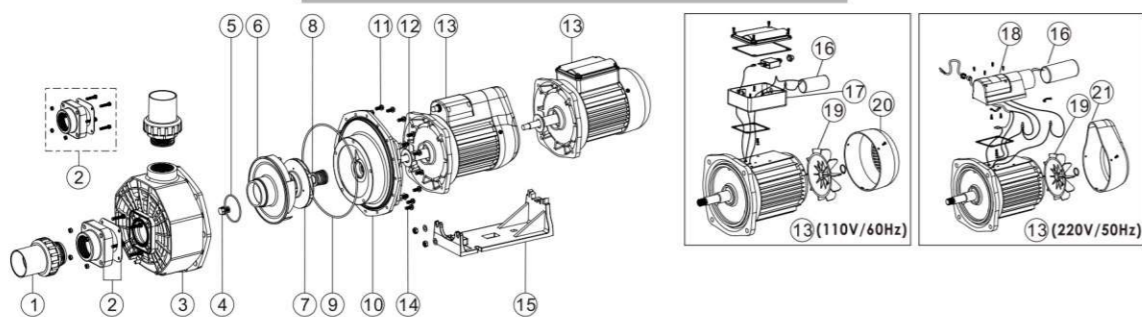
- 1) Leakage of air into suction line at connections or valve stem
  - 2) Cover gasket of hair and lint strainer needs cleaning
  - 3) Low water level in pool
- 空气进入管道**  
1) 空气通过接合部位或阀门进入进水管。  
2) 须清理滤水篮内的头发及杂物。  
3) 泳池的水位低。

**NOTE:** If the recommendations in the trouble shooting portion of this manual do not solve your particular problem(s), please contact your local dealer for service.

备注: 如果说明书中的故障分析仍不能解决您产品的问题, 请与当地经销商联系。



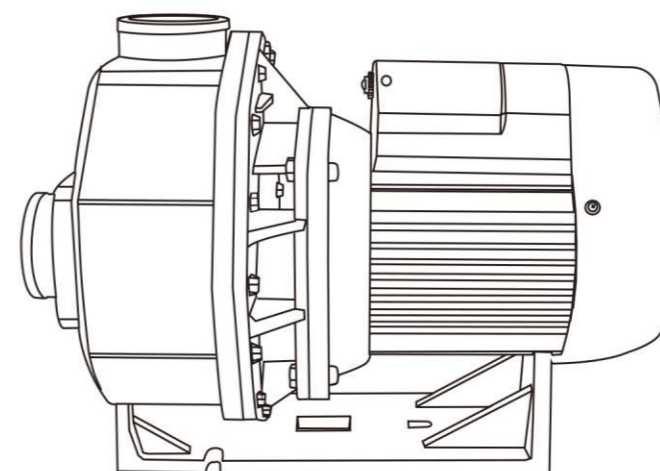
**Pump parts for SR SR水泵组件图**



Key No. 项目	Part No. 部件编号	Description English	中文描述	Qty 数量
1*	89280103	2.0" Union	2.0"过滤活接	2
2	89023601	Connecting Fitting	联接头套件	1
3	89021308	Pump body for SB,SR	SR泵清水盘	1
4	89021309	Screw for Impeller with O-Ring	水叶螺丝连胶圈	1
5	02011108	O-Ring for Diffuser	分水轮密封胶圈	1
6	01111015	Diffuser	分水轮	1
7	01311001	Impeller SR10 (110V/60Hz) / (220V/60Hz)	水叶SR10 (110V/60Hz) / (220V/60Hz)	1
7	01311002	Impeller SR20 (110V/60Hz) / (220V/60Hz)	水叶SR20 (110V/60Hz) / (220V/60Hz)	1
7	01311003	Impeller SR20 (220V/50Hz) / (380V/50Hz)	水叶SR20 (220V/50Hz) / (380V/50Hz)	1
7	01311004	Impeller SR10 (220V/50Hz) and (380V/50Hz) / SR15 (110V/60Hz) and (220V/60Hz)	水叶SR10 (220V/50Hz) and (380V/50Hz) / SR15 (110V/60Hz) and (220V/60Hz)	1
7	01311005	Impeller SR15 (220V/50Hz) and (380V/50Hz) / SR30 (110V/60Hz) and (220V/60Hz)	水叶SR15 (220V/50Hz) and (380V/50Hz) / SR30 (110V/60Hz) and (220V/60Hz)	1
7	01311006	Impeller SR30 (220V/50Hz) and (380V/50Hz)	水叶SR30 (220V/50Hz) and (380V/50Hz)	1
8	04015046	3/4" Mechanical Seal	3/4" 机械密封	1
9	02011093	O-Ring for Flange	法兰密封胶圈	1
10	01021013	Pump Flange for SB,SR	SR泵法兰	1
11	03011080	M6 x 15 Hexagonal Bolt	M6 x 15外六角带介螺丝	16
12	02011096	Motor Slinger	电机止水胶垫	1
13	89021301	Motor SB10 or SR10 (220V/50Hz)	电机SB10或SR10 (220V/50Hz)	1
13	89021302	Motor SB15 or SR15 (220V/50Hz)	电机SB15或SR15 (220V/50Hz)	1
13	89021303	Motor SB20 or SR20 (220V/50Hz)	电机SB20或SR20 (220V/50Hz)	1
13	89021304	Motor SB30 or SR30 (220V/50Hz)	电机SB30或SR30 (220V/50Hz)	1
13	89021401	Motor SB10 or SR10 (220V/60Hz)	电机SB10或SR10 (220V/60Hz)	1
13	89021402	Motor SB15 or SR15 (220V/60Hz)	电机SB15或SR15 (220V/60Hz)	1
13	89021403	Motor SB20 or SR20 (220V/60Hz)	电机SB20或SR20 (220V/60Hz)	1
13	89021404	Motor SB30 or SR30 (220V/60Hz)	电机SB30或SR30 (220V/60Hz)	1
13	89021601	Motor SB10 or SR10 (380V/50Hz)	电机SB10或SR10 (380V/50Hz)	1
13	89021602	Motor SB15 or SR15 (380V/50Hz)	电机SB15或SR15 (380V/50Hz)	1
13	89021603	Motor SB20 or SR20 (380V/50Hz)	电机SB20或SR20 (380V/50Hz)	1
13	89021604	Motor SB30 or SR30 (380V/50Hz)	电机SB30或SR30 (380V/50Hz)	1
13	89021501	Motor SB10 or SR10 (110V/60Hz)	电机SB10或SR10 (110V/60Hz)	1
13	89021502	Motor SB15 or SR15 (110V/60Hz)	电机SB15或SR15 (110V/60Hz)	1
13	89021503	Motor SB20 or SR20 (110V/60Hz)	电机SB20或SR20 (110V/60Hz)	1
13	89021504	Motor SB30 or SR30 (110V/60Hz)	电机SB30或SR30 (110V/60Hz)	1
14	89021310	Screw for Motor with Washer	M8 x 20外六角螺丝连垫片	4
15	01111032	Base with Nut & Washer for SB/SR10 / SB/SR15	底座(含螺母/垫片) SB/SR10 / SB/SR15	1
15	01111031	Base with Nut & Washer for SB/SR20 / SB/SR30	底座(含螺母/垫片) SB/SR20 / SB/SR30	1
16	04016014	Capacitor for SR10/ SR15 Pump (220V/50Hz) (220V/60Hz)	水泵电容SR10/ SR15(220V/50Hz) (220V/60Hz)	1
16	04016015	Capacitor for SR20 Pump (220V/50Hz) (220V/60Hz)	水泵电容SR20(220V/50Hz) (220V/60Hz)	1
16	04016016	Capacitor for SR30 Pump (220V/50Hz) (220V/60Hz)	水泵电容SR30(220V/50Hz) (220V/60Hz)	1
16	04016022	Capacitor for SR10,SR15 Pump (110V/60Hz)	水泵电容SR10,SR15(110V/60Hz)	1
16	04016023	Capacitor for SR20,SR30 Pump (110V/60Hz)	水泵电容SR20,SR30(110V/60Hz)	1
17	89021505	Cable Box for SR Pump 110V/60Hz	SR接线盒(110V/60Hz)	1
18	89021312	Cable Box for SR Pump 220V/50Hz / 220V/60Hz / 380V/50Hz	SR接线盒(220V/50Hz / 220V/60Hz / 380V/50Hz)	1
19	01031007	Cooling fan for SC SB/SR10 / SB/SR15	SC SB/SR10 / SB/SR15电机风叶	1
19	01031006	Cooling fan for EPH SB/SR20 / SB/SR30	EPH SB/SR20 / SB/SR30电机风叶	1
20	01031001	Fan Cover for EPH SB/SR20 / SB/SR30	EPH SB/SR20 / SB/SR30水泵电机尾罩	1
20	01031002	Fan Cover for SB/SR10 / SB/SR15 Pump	SB/SR10 / SB/SR15水泵电机尾罩	1
21	01031008	Fan Cover for SB/SR20 / SB/SR30 Pump	SB/SR20 / SB/SR30水泵电机尾罩	1
21	01031009	Fan Cover for SB/SR10 / SB/SR15 Pump	SB/SR10 / SB/SR15水泵电机尾罩	1

Notes: 1\* 89280103B is 2" Union in Black Colour  
1\* 89280103W is 2" Union in White Colour

**SR Series Pump  
SR 系列说明书**



Before installation, be sure to read all instructions and warnings carefully.  
Refer to product data plate(s) for additional operating instructions and specifications.  
安装前请仔细阅读以下规则。  
查阅产品资料袋内的附加安装说明。

**INSPECTION 产品的验收**

Examine the equipment when received. Notify your dealer or carrier of any damage or missing parts. Verify that equipment is of size and model specified.

收货时请查验清楚, 如有任何产品破损或配件遗失, 请立即通知供应商或货运公司。核实产品是否合乎型号和规格。

**IMPORTANT SAFETY INSTRUCTIONS 安全使用说明**

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 risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. WARNING — (For cord & plug connected units) risk of electric shock. Connect only to a grounding type receptacle protected by a ground-fault circuit-interrupter(GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
4. WARNING — (For cord & plug connected units). To reduce the risk of electric shock, replace damaged cord immediately.
5. WARNING — (For cord & plug connected units). To reduce the risk of electric shock do not use an extension cord to connect unit to electric supply; Provide a properly located outlet.
6. WARNING — (For hot tub and spa pumps). Do not install within an outer enclosure or beneath the skirt of the hot tub or spa, unless so marked.
7. SAVE THESE INSTRUCTIONS

当安装设备时, 应采取基本的安全预防措施, 具体如下:

- 1、阅读和遵循所有的规则。
- 2、警告: 为避免伤害, 儿童在无成人监管的情况下, 不得使用该产品。
- 3、警告: 为避免触电。配电线路应连接一个漏电保护器。如果不能确定用何种漏电保护器, 请向有资格证的电工咨询。
- 4、警告: (适用电线和插座) 为避免触电, 必须立刻更换破损的电线。
- 5、警告: (适用电线和插座) 为避免触电, 不要使用破旧的电线与电源连接, 应提供一个合适的固定插座。
- 6、警告: 水泵不能安装于浴缸或按摩池的底部或裙边的外围地方。
- 7、请妥善保存这份手册。



## INSTALLATION LOCATION 安装位置

Locate pump as close to pool/spa as possible, preferably in a dry, well ventilated area away from direct sunlight. It should be on a hard, level surface. Give consideration to:

1. Drainage — away from pump
2. Ventilation of pump motor
3. Access for future servicing and winterizing
4. Protection from the elements

Pumps without strainer bodies are designed for flooded suction (all suction fittings and suction piping below water level) and will not self-prime. Consequently, the pump must be installed at an elevation that is below water level when pool or spa is filled.

水泵的安装位置应尽可能靠近浴缸和按摩池，保持干爽、通风和避免阳光直接照射，并放在坚固而平坦的位置上。建议如下：

1. 排水位置远离水泵。
2. 马达通风环境良好。
3. 预留位置方便维修。
4. 防止浸水。

没有隔发器的水泵是为喷射系统设计的（所有系统的装置和水管在水平线以下），不能自行启动。当水泵安装的位置必须在水平线以下，同时注满浴缸和按摩池的水，才能启动。

## GENERAL PLUMBING 管道安装

### FOR SOLVENT WELD CONNECTION 溶剂接合指引

Rigid or flexible PVC pipe can be used. Pipe ends should be clean and free of any flash caused by the cutting operation. Be sure that the proper solvent is used on type of pipe specified.

PVC材料的硬管和软管都可使用，在剪裁管道时，管的切割面应是光洁的，并要使用适合的溶剂接合。

Caution: We recommend that consider climatic conditions when applying adhesives, make the adhesive action of certain glues less effective. Check the manufacturer's instructions.

提示：我们建议在使用胶水接合时，注意温度变化对胶水的影响，确定选用的胶水受温度变化的影响，也可根据生产商的说明书选择。

### PUMP PLUMBING 水泵管道

Suction pipe should be as large or larger than discharge pipe avoid using a suction pipe smaller than pump connection. Keep the piping as straight and short as possible, and of suitable size. Avoid connecting an elbow directly into the pump inlet (use a length of straight pipe to allow a proper entry for the water). arrange horizontal runs to slope upward to the pump to prevent high spots that could form air pockets. Support the piping independently so that it places no strain on the pump. Keep as much of the suction line as possible below the water level to reduce priming time.

选择合适的水管，水管要尽可能简短直接，并且合乎尺寸。为缩短水泵的启动时间，进水管与水泵的接头位置尽可能低于水位。

### ELECTRICAL DATA 马达数据

Refer to information on motor nameplate for electrical service data. All motors should have fused disconnect switch or circuit breaker. Be sure wire size is sufficient for pump hp and distance from power source. Wiring should be done in accordance with applicable codes by a competent electrician.

参考马达资料牌上提供的数据，所有马达都有保险丝熔断和断路装置。保证电线的规格适合水泵的功率和长度。布线应由电工根据有关规定来完成。

### PUMP START UP 水泵的启动

Do not operate pump until it has been primed as water acts to cool and lubricate the seal. For pumps without strainer bodies and located above water, close suction line valve and fill pump with water in order to prime. If no flow is observed in five minutes, stop the motor and re-prime. If the pump fails to operate, check for air leaks. Refer to trouble shooting section.

直到水进入水泵内，密封部位被冷却和润滑时，才能启动水泵。如果水泵没有隔发器和位于水位之上，应关闭进水管的阀门，注满泵内的水后才能启动。如果在5分钟之内还没有看见水流出，就要关掉马达重新启动。如果水泵仍不能启动，须检查是否有空气进入。（参照故障分析部分）

## PUMP MAINTENANCE 水泵的保养

1. Motors are self-lubricating no lubrication required.
2. Shaft seals may become worn and must be replaced if leakage is observed.

1. 马达可自行润滑，不用加润滑剂。
2. 如果发现漏水现象，轴密封损坏，必须更换轴密封。

## SERVICE & REPAIR PARTS 维修和更换配件

Refer all service to your local dealer as his knowledge of your equipment makes him the best qualified source of information. Order all repair parts through your dealer. Give the following information when ordering repair parts:

1. Unit nameplate data.
2. Description of part.

向当地的代理或经销商索取设备的技术资料，这些资料能证明授权资格的真实性。向代理商订购所需的维修配件，订购配件时需提供下面的资料：

1. 设备标示牌的数据资料。
2. 部件名称。

## TROUBLE SHOOTING 故障分析

### MOTOR DOES NOT START 马达不能启动

1. Disconnect switch or circuit breaker in off position
  2. Fuses blown or thermal overload open
  3. Locked motor shaft
  4. Motor windings burned out
  5. Defective starting switch inside single phase motor
  6. Disconnected or defective wiring
  7. Low voltage
1. 电源断开或断路。
  2. 保险丝熔断或机件过热。
  3. 转轴卡死。
  4. 叶轮损坏卡死。
  5. 轴承损坏。
  6. 电线连接不好或损坏。
  7. 电压不足。

### NOISY PUMP AND MOTOR 水泵和马达噪音

1. Worn motor bearings
  2. Suction line partly plugged
1. 电机轴承损坏。
  2. 进水管部分堵塞。

### MOTOR OVERHEATS 马达过热

1. Low voltage
  2. Inadequate ventilation
1. 电压不足。
  2. 通风环境不佳。

### AIR BUBBLES AT INLET FITTINGS 空气进入管道

1. Leakage of air into suction line at connections or valve stem
  2. Low water level in drain of bath
1. 空气通过接合部位或阀门进入进水管。
  2. 浴缸的水位低于回水口。

### LOW PUMP CAPACITY 水泵低性能运行

1. Suction or discharge line partly plugged
  2. Suction or discharge line too small
  3. Pump running at reduced speed
  4. Impeller clogged
1. 进水管或出水管的阀门未完全开启。
  2. 进水管或出水管部分堵塞。
  3. 进水管或出水管太细。
  4. 水叶被阻塞。

### HIGH PUMP PRESSURE 水泵压力过大

Return lines too small  
回水管道太细。

### PUMP DOES NOT REACH FULL SPEED 水泵未达到最佳状态

1. Low voltage.
  2. Pump connected for wrong voltage.
1. 电压不足。
  2. 电源与水泵电压不符。

### PUMP DELIVERS NO WATER 水泵不能抽水

1. Pump is not primed
  2. Leakage or air into suction system
  3. Impeller clogged
1. 水泵没有启动。
  2. 漏水或有空气进入管道。
  3. 水叶损坏。

### LEAKAGE OF WATER AT SHAFT 密封位置漏水

Shaft seal requires replacement  
更换密封圈。

**NOTE: If the recommendations in the trouble shooting portion of this manual do not solve your particular problem(s), please contact your local dealer for service.**

备注：如果说明书中的故障分析仍不能解决您产品的问题，请与当地经销商联系。