

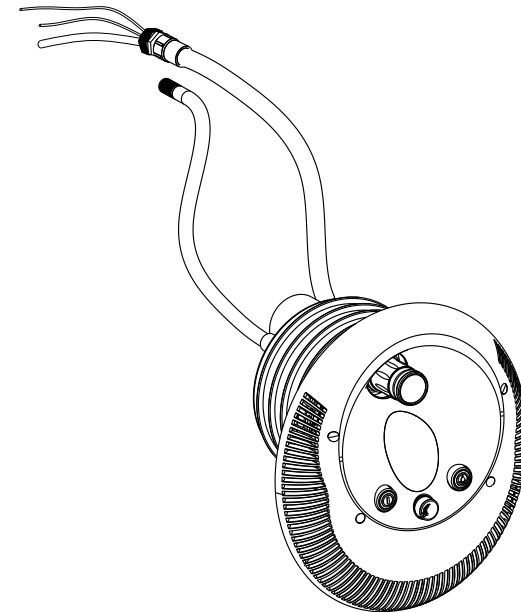


**产品名称:激流喷嘴**

**产品型号: EM0055**

**Product Name: COUNTER CURRENT JET**

**Product Model No.:EM0055**



使用本产品前请仔细阅读本使用手册

阅读后请妥善保管本使用手册以备查阅

Please read this manual carefully before using the product  
please keep this manual for future reference

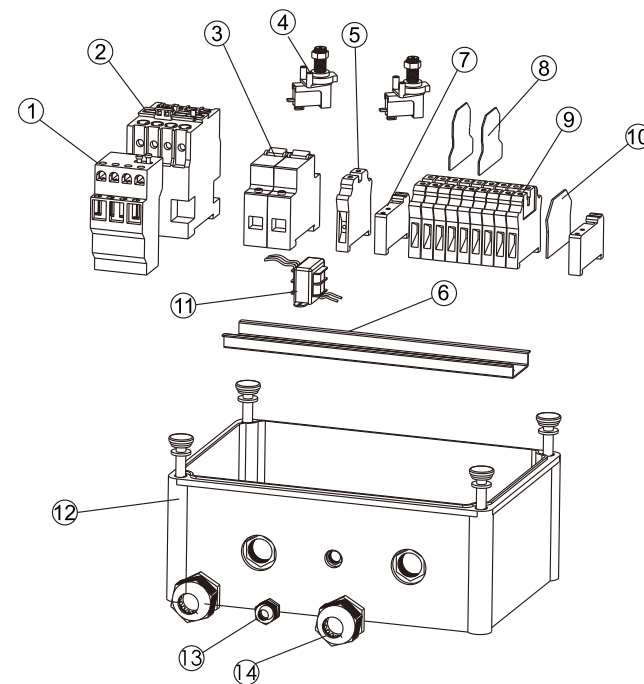
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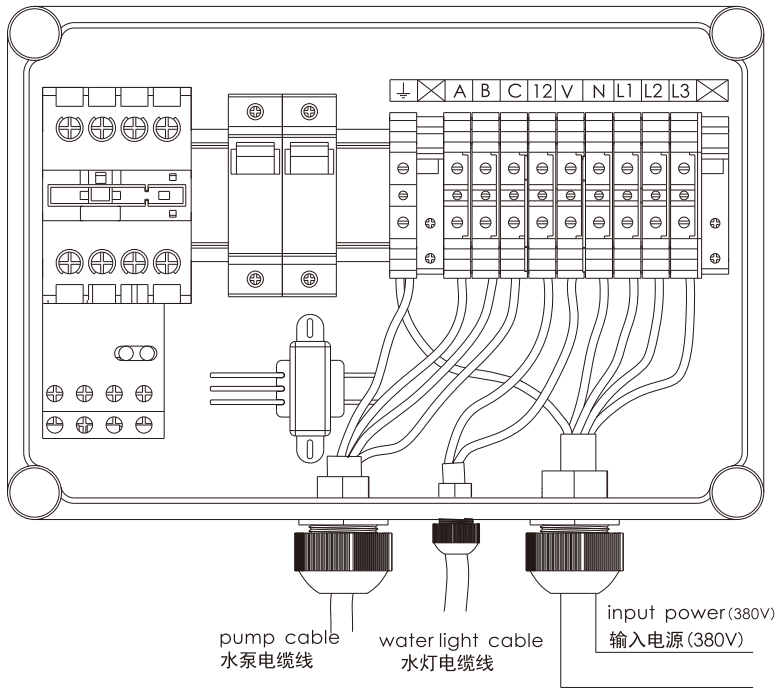
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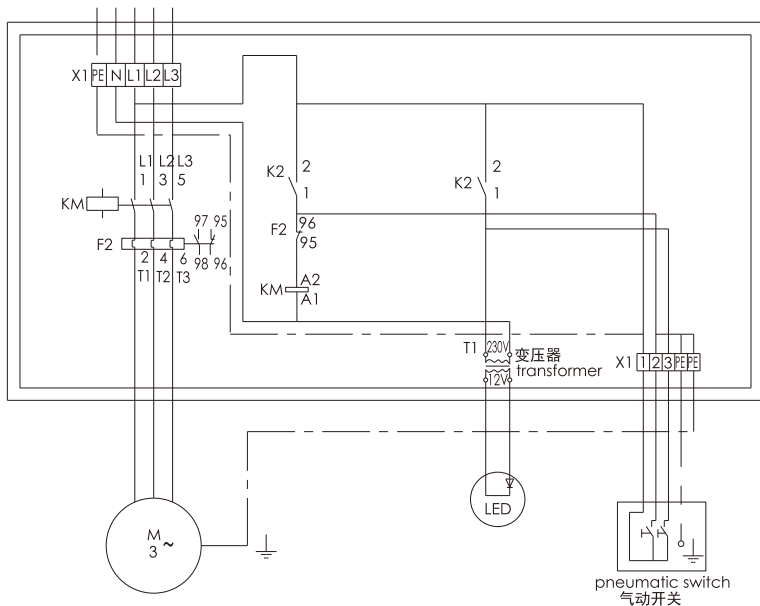
## PART LIST 零部件清单



项目	部件编号	中文	產品資料/說明	数量
Item No.	Part No.	Chinese	Product Description	QTY
1	04014099	热过载继电器	thermal overload relay	1
2	04014100	交流接触器(220V)	AC contactor(220V)	1
	04014121	交流接触器(110V)	AC contactor(110V)	
3	04014101	断路器	breaker	2
4	04014103	气动开关	pneumatic switch	2
5	04014102	接地端子	earth terminal	1
6	04014019	轨道	track	1
7	04014104	终端固定件	terminal fixing parts	2
8	04014107	隔板	clapboard	3
9	04014108	接线端子	wiring terminal	2
10	04014105	端板	head board	2
11	04014109	变压器(220V)	transformer(220V)	1
	04014122	变压器(110V)	transformer(110V)	
12	04014110	控制箱	control box	1
13	04014013	电缆索头	cable gland	1
14	04014085	电缆索头	cable gland	2



380V control box wiring diagram (380V控制箱接线图)



380V/50Hz counter current jet circuit diagram (380V/50Hz激流喷嘴电路图)

一、安全注意事项:

1. 安全操作说明提供了使用者在安装、使用和维护过程应遵循的基本要求,因此至关重要
2. 说明书中的安全说明,说明不清楚或操作者不遵守,可能会危及到人与动物的生命。这些说明报告以特殊的方式与一般危险符号表示出来,其不遵守可能造成危险

注意:



在产品上也有相应的说明,例如-显示电动机旋转方向的箭头必须绝对正确。

3. 持操作资格证与经过培训的人员方可进行操作、维修保养、检查。如果工作人员不具备操作知识,杜绝操作。如有必要,可以由制造商或其它供应商对该设备的操作员进行培训,此外,经营者必须确保该指导手册的理解,由其是工作人员。
4. 不遵守安全说明,会导致对人、环境和设备造成危害。未能遵循安全说明进行操作产生任何事故,由当事人负全部责任,拒绝任何请求损害赔偿。更具体地说,未能遵守指示,例如可以导致以下风险:泵出现故障或安装错误、不正确的维修和维护的方法、机械和化学危险、现象环保有害物质、设备和建筑物损坏漏水
5. 操作说明中的安全要求必须一定遵循,以及对事故的预防和运算符的任何内部指令生效的国家要求。
6. 如果泵或泵部件达到了热或冷的极限,会导致风险,操作员或用户将不得不保护这些组件对意外的防止。覆盖部分(例如接线盒)的意外接触防护设备必须不能删除从泵操作期间。如果泄漏(例如在机械密封)温度高导致的危险材料,如易爆、有毒、腐蚀性或产品流通,如此的产品必须释放没有人的地方、物体或环境的要求。必须遵守相关的法律规定。
7. 安全说明为维修保养、检查和运算符工程须确保性能的维修保养、检查确和安装通过授权的合格技术人员进行工作。负责这项工作的人员需要彻底阅读本手册。工伤事故预防性准则必须得到遵守。只有在停止泵的情况才能进行泵的所有工作。水泵的使用说明书中所述的程序必须得到重视。泵或激流喷嘴携带对健康有害的产品必须进行净化。
8. 为了防止丢失和损坏配件,在运输和中间存储过程中不能打开原包装,原包装必须在立即安装前才能打开。
9. 激流喷嘴是在游泳池中产生逆流设施,可以使用在各种各样的泳池中。

1. safety precautions:

- 1).Important note: the basic requirements of installation, usage and maintenance process of users are included in the safety operating instructions.
- 2). Please follow safety instructions carefully. Failure to adhere to safety instructions could lead to personal injury.



Please pay special attention to wiring of 3 phase motors to ensure shaft rotation is in the direction of arrow.

- 3).Installation must be carried out by qualified persons. Electrical work must be carried out by a qualified electrician.
- 4).Emaux Water Technology is not liable for any damages personal or property if equipment is installed by unauthorized persons or not in line with installation and safety instructions provided.
- 5).Please read instructions and operating instructions thoroughly.
- 6).Please ensure pool water is balanced at all times. Operating equipment above the maximum water temperature will lead to damages.
- 7). The safety instructions for repair and maintenance, inspection and the operation engineering must ensure that the performance of repair and maintenance, checking and installation are approved by qualified technician to work. Staff responsible for the work need read the manual thoroughly. The industrial accident prevention rules must be obeyed. All the work relating to pump only can be done when it is stopped. The procedures mentioned in the operating instructions of the pump must be obeyed. The products harmful to health carried by the pump or COUNTER CURRENT JET must be purified.
- 8).If the box has been opened, please check all components are supplied.
- 9).counter current jet is a countercurrent facility using in any swimming pools.

## 二、规格型号

### 2. Specifications

#### 1) 水泵型号参数

#### 1) Pump model parameters

型号 Model	最大流量 Qmax		最大扬程 Hmax (m)	电压/频率 V/Hz	输入功率 Power	
	m³/h	l/min			KW	HP
UPH400	75	1300	13	380/50	3.0	4.0
UPH500	90	1500	17.5		4.0	5.5
SR30	35	600	20	220/50	2.18	3
SR30X2	70	1200	25		4.36	6

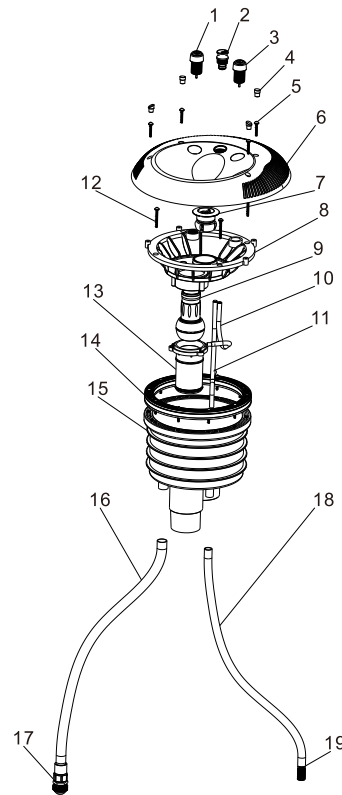
## 三、产品结构及零部件名称

### 3. Product description and parts breakdown

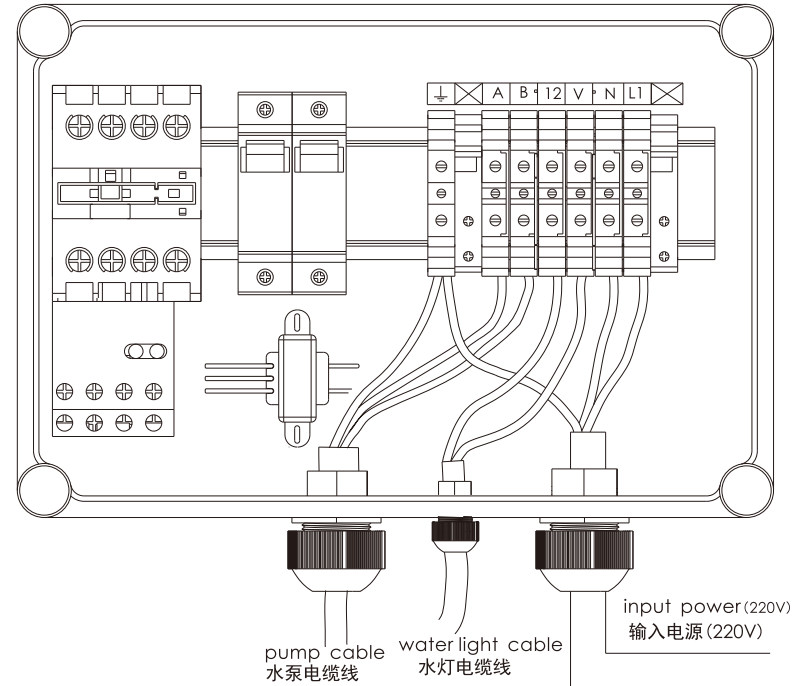
#### 1) 激流喷嘴清单图

#### 1) counter current jet parts list

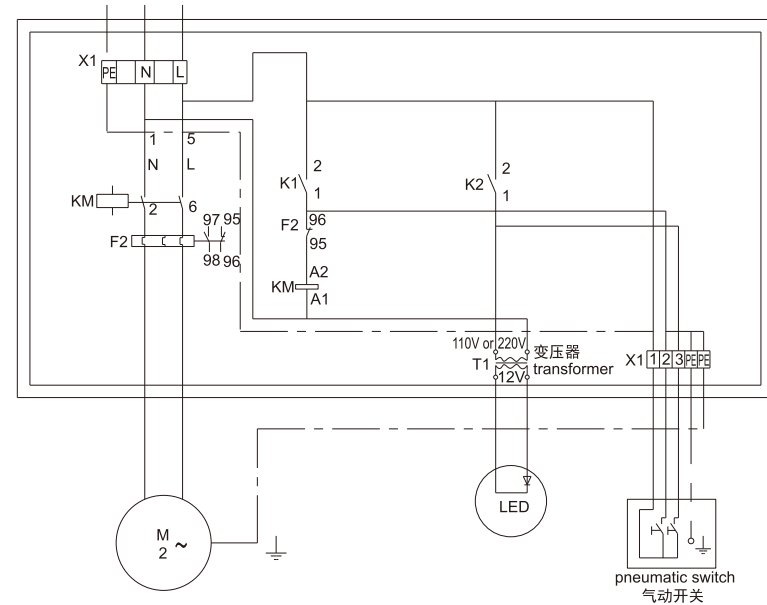
项目	部件编号	中文	产品资料/说明	数量
Key No.	Part No.	Chinese	Product Description	Qty
1	89090104	水泵气动开关	Air switch for water pump	1
2	89090105	调气芯	Air adjusting	1
3	89090106	水灯气动开关	Air switch for water light	1
4	89090107	面盖胶塞	Threaded plug for lid	1
5	03011345	螺丝	M5*20mm screws	4
6	89090108	面盖	Lid	1
7	88041939	LED-P10(彩光)	LED-P10 light(Auto change colour)	1
	88041940	LED-P10(白光)	LED-P10 light(White colour)	1
8	89090110	支撑架	Support frame	1
9	89090111	喷水嘴	Water jet	1
10	01093016	调气管	D12mmXd8mmX40mm air adjusting hose	2
11	01093015	透明管	D5mmXd3mmX3M transparent hose	2
12	03011320	螺丝	M6X20mm screws	4
13	89090112	喷水嘴固定管	Water jet fixed pipe	1
14	89090113	纤维池配件	Vinyl pool fittings	1
15	89090114	外壳	Counter Current Jet body	1
16	89090115	通线软管	Conduit for light cable and air hose	1
17	89090116	电缆索头	Cable grand	1
18	01151380	通气软管	Exhaust hose	1
19	89090117	气塞	Venting plug	1



## CONTROL BOX WIRING DIAGRAM & CIRCUIT DIAGRAM 控制箱接线图和电路图



220V/110V control box wiring diagram (220V/110V控制箱接线图)



220V/50Hz, 110V/60Hz counter current jet circuit diagram (220V/50Hz, 110V/60Hz激流喷嘴电路图)

COUNTER CURRENT JET CONTROL BOX  
 激流喷嘴控制箱  
 Model: SWJ-CB(220V/380V/110V)  
 Code: 08080020/08080021/08080034



APPLICABLE FOR BETWEEN EMAUX COUNTER CURRENT JET AND PUMP CONTROL.  
 适用于意万仕激流喷嘴与水泵之间的控制。

Warning:  
 警告:

This electrical control box must be installed by a licensed or certified electrician or a qualified serviceman in accordance to the requirements of your government standard or local authorities. Improper installation will create electric hazards which could result in serious injury, death as well as damage to the property.

本电子控制箱必须由合格的电工或合格的维护人员安装，并按照合乎当地官方许可的法规安装，不适当的安装，会引起触电导致电子控制箱使用者或安装人员严重伤害及财物损失，甚至死亡。

CUT THE POWER BEFORE SERVICE AND MAINTAINANCE!

保养维修电子控制箱之前必须把连接电箱的电源切断!

INSTALLATION EXPLAIN

安装说明:

1. The control box must be installed in a dry place.

1.控制箱一定要安装在干燥的地方。

2. After the control box is fixed . According to the wiring diagram, the pump and the water light power cord access control box.

2.将控制箱固定好后。按接线图所示，将电源线接入控制箱内，再分别将水泵与水灯电缆线接入控制箱。

3.Connect the two transparent air pipes to the corresponding pneumatic switches.

3.将激流喷嘴上水灯与水泵的透明气管分别接到控制箱上相对应的气动开关上。

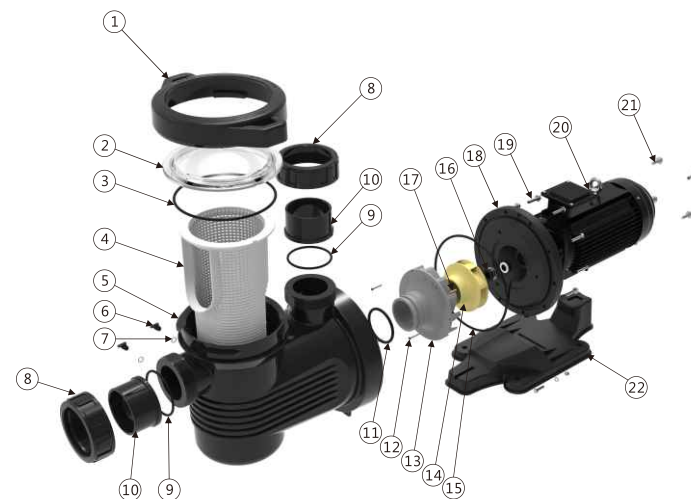
SPECIFICATIONS

性能参数

Input voltage 输入电压	220V/380V/110V
Water light output voltage 水灯输出电压	AC 12V
Pump output voltage 水泵输出电压	220V/380V/110V
Water light power 水灯功率	1W
Pump power 水泵功率	4KW

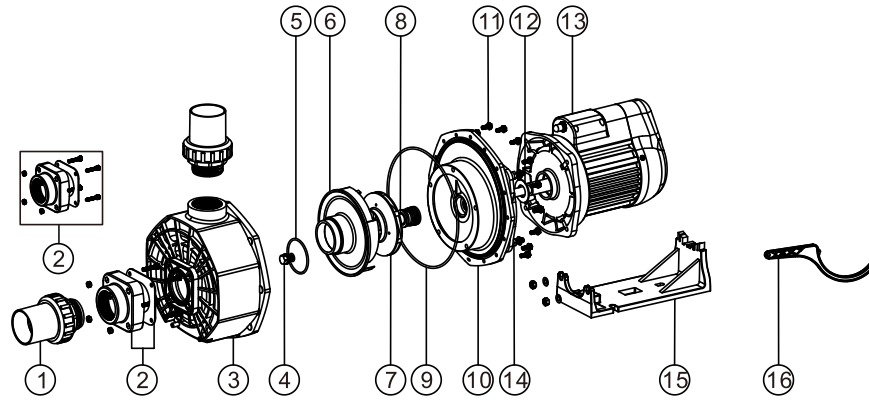
2) UPH400/UPH550清单图

2) UPH400/UPH550 parts list



Key No.	Part No.	Chinese	Description	QTY
序号	编号	中文描述	英文描述	数量
1	420408561	透明盖螺母UPH	Nut For Lid	1
2	420386559	透明盖(APS5.5HP-7.5HP)	Transparent Lid	1
3	111010040	三元乙丙圆形胶圈	O-Ring For Lid	1
4	420236559	过滤篮(APS5.5HP-7.5HP)	Basket	1
5	420058561	泵体UPH	Pump body	1
6	01111017	扭制	Drain Plug	2
7	02020014	扭制胶圈	O-Ring	2
8	420228563	管接头螺母UPH	Nut for Connector	2
9	111002561	丁晴胶O形胶圈d91X6	O-Ring for Union	2
10	430301835	3" 管接头 (英制)	3" Union Adaptor	2
10	430301845	GB90管接头 (公制)	GB90mm Union Adaptor	2
11	111010055	分水轮胶圈UPH	O-Ring for Diffuser	1
12	112010165	316十字B头自攻螺丝M4.2X45	M4.2X45 Screw	3
13	420218561	分水轮UPH	Diffuser	1
14	420369026	水叶UPH4HP 50Hz	Impeller For 4HP(380V 50Hz)	1
14	420369027	水叶UPH5.5HP 50Hz	Impeller For 5.5HP(380V 50Hz)	1
14	420369889	水叶UPH4HP 60Hz	Impeller For 4HP 60Hz	1
14	420369890	水叶UPH5.5HP 60Hz	Impeller For 5.5HP 60Hz	1
15	111010053	UPH法兰胶圈	O-Ring for Flange	1
16	113005935	机械密封	3/4" Mechanical Seal	1
17	112010163	水叶螺丝	Screw for Impeller	1
18	420208561	法兰UPH	Flange	1
19	112000069	外六角带介机丝M8X35	M8X35 Screw	10
20	42059099028	电机YYD-100S	Motor for UPH400 380V	1
20	42059099029	电机YYD-100M	Motor for UPH550 380V	1
20	42059099863	电机YYD-100S-2D	Motor for UPH400 230/460V	1
20	42059099864	电机YYD-100M-2D	Motor for UPH550 230/460V	1
21	112192716	外六角机丝M10X30	M10X30 Screw	4
22	420128561	底座UPH	Base	1

水泵组件图  
Pump parts for SR



项目	部件编号	中文	產品資料?說明	数量
Key No.	Part No.	Chinese	Product Description	Qty
1	89280306	2. 0"过滤活接	2. 0" Union	2
2	89023601	驳接头套件	Connecting	1
3	89021308	SR泵清水盘	SR Pump body	1
4	89021309	水叶螺丝连胶圈	Screw for impeller with O-ring	1
5	02011108	分水轮密封圈	O-Ring for diffuser	1
6	01111015	分水轮	Diffuser	1
7	01311006	水叶	Impeller SR300 (220V/50Hz)	1
8	04015001	3/4"机械密封	3/4"Mechanical seal	1
9	02011093	法兰密封圈	O-Ring for flange	1
10	01021013	SR泵法兰	SR Pump Flange	1
11	03011080	M6×15外六角带介螺丝	M6×15 Hexagonal screw	16
12	02011101	电机止水胶垫	Motor Slinger for	1
13	89021304	电机	Motor SR300 (220V/50Hz)	1
14	89021310	M8×20外六角螺丝连垫片	M8×20 Screw for motor with washer	4
15	01111031	底座(含螺母\垫片) SR300	Base with nut & washer for SR300	1
16	01021021	水泵匙	Opening key	1

## 五、使用说明

1. 泳池里的水是由喷嘴面盖侧面吸入水泵，再通过喷嘴打出。
2. 水泵与水灯的开关都装在喷嘴面盖上；只需用手按动。
3. 喷嘴可以上下左右调节出水的方向，左右旋转可以调节喷水的强度。
4. 如果需要将空气注入水中，可调节面盖上面的调气阀。（注：如一直反向旋转，可以将调气阀拧出）
5. 调试时当是三相交流电，水泵电机旋转方向必须找到在发动机上由风扇盖上的箭头指示的正确旋转方向。

## 六、维护与保养

1. 定时清理喷嘴、水泵、控制箱表面；要定时检查水泵与喷嘴胶圈密封处，如需要，请及时更换。
2. 保持马达的清洁，确保通风位（风扇盖）没有任何障碍物。
3. 拆除水泵时，必需关闭泵开关并断开所有电源。更换必须由一名专业人员进行。分离与泵相连的进水管和出水管的螺母。更换机械密封和组装顺序时请参照使用手册。
4. 维护。维修在冻结的冬天时，有必要降低水位，低于喷嘴外壳下边缘；将进水管与出水管中的水都排空。
5. 当控制箱出现故障时，必须由合格电工或合格的维护人员进行，详细请参照控制箱使用手册。

## 5. Operating Instructions

- 1).the water in the swimming pool is sucked from the side of the nozzle mask to the water pump, and then expelled through the nozzle.
- 2).the on/off switch of the water pump and the water lamp are installed on the cover of the nozzle. It can be operated only by hand press.
- 3).the direction of the water output can be adjusted by moving the nozzle up and down, left and right, while rotating the nozzle can adjust the amount of the water output.
- 4).if air is needed to be injected into the water, the adjustable valve on the mask surface can be regulated. (Note: keeping rotating counter-clockwise can twist off the valve)
- 5).since during testing three-phase alternating current is used, the correct rotating direction of the arrow shown on the fan cover of the engine must be found to indicate the correct rotating direction of the motor of the water pump.

## 6. maintenance and warranty

- 1).clean the nozzle, the pump and the surface of the control box regularly; check the water pump and the area where plastic nozzle ring is sealed regularly. Change if needed.
- 2).keep the motor clean, to ensure ventilation position ( fan cover ) does not have any obstacles.
- 3).when uninstalling the pump, the pump switch must be closed and all power must be disconnected. The replacement must be performed by a professional officer. Please refer to the user manual for the Isolation of screw nuts of the inlet and outlet pipe connected to the pump, replacement of mechanical seals and the order of assembly installation.
- 4).when maintenance / repair in the freezing winter, it is necessary to lower the water level which is lower than that of the nozzle shell. flow out all of the water in both the inlet and outlet water pipes.
- 5).when the control box is out of order, it must be maintained by qualified electricians or qualified maintainance staff. for details please refer to the control box user manual.

序号 No.	型号规格	specification
1	PVC管 2"*70mm	PVC PIPE 2"*70mm
2	2"弯头(45°)	2" PIPE ELBOW (45°)
3	PVC管 2"*70mm	PVC PIPE 2"*70mm
4	2"活接球阀	2" Union Ball Valve
5	PVC管 2"*100mm	PVC PIPE 2"*100mm
6	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
7	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
8	2.5"弯头(45°)	2.5" PIPE ELBOW (45°)
9	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
10	PVC管 2"*170mm	PVC PIPE 2"*170mm
11	2"活接球阀	2" Union Ball Valve
12	PVC管 2"*220mm	PVC PIPE 2"*220mm
13	2"弯头(90°)	2" PIPE ELBOW (90°)
14	PVC管 2"*170mm	PVC PIPE 2"*170mm
注: 接管时请参考以上顺序		remarks: Please take reference from the above piping sequence

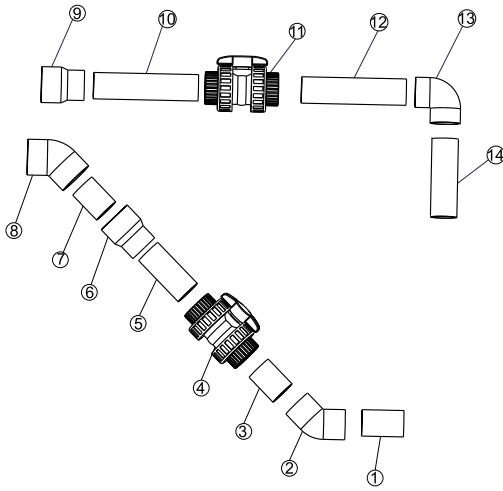


图15 (仅用于SR30水泵)  
Figure15 (only for SR30 water pump)

序号 No.	型号规格	specification
1	2.5"三通	2.5" PIPE TEE
2	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
3	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
4	2.5"弯头(90°)	2.5" PIPE ELBOW (90°)
5	2.5"弯头(90°)	2.5" PIPE ELBOW (90°)
6	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
7	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
8	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
9	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
10	PVC管 2"*95mm	PVC PIPE 2"*95mm
11	PVC管 2"*95mm	PVC PIPE 2"*95mm
12	2"弯头(90°)	2" PIPE ELBOW (90°)
13	2"弯头(90°)	2" PIPE ELBOW (90°)
14	PVC管 2"*125mm	PVC PIPE 2"*125mm
15	PVC管 2"*125mm	PVC PIPE 2"*125mm
16	2"活接球阀	2" Union Ball Valve
17	2"活接球阀	2" Union Ball Valve
18	PVC管 2"*70mm	PVC PIPE 2"*70mm
19	PVC管 2"*70mm	PVC PIPE 2"*70mm
20	2.5"三通	2.5" PIPE TEE
21	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
22	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
23	2.5"弯头(90°)	2.5" PIPE ELBOW (90°)
24	2.5"弯头(90°)	2.5" PIPE ELBOW (90°)
25	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
26	PVC管 2.5"*105mm	PVC PIPE 2.5"*105mm
27	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
28	直通刁士 2.5"*2"	REDUCING PIPE 2.5"*2"
29	PVC管 2"*95mm	PVC PIPE 2"*95mm
30	PVC管 2"*95mm	PVC PIPE 2"*95mm
31	2"活接球阀	2" Union Ball Valve
32	2"活接球阀	2" Union Ball Valve
33	PVC管 2"*70mm	PVC PIPE 2"*70mm
34	PVC管 2"*70mm	PVC PIPE 2"*70mm
35	2"弯头(90°)	2" PIPE ELBOW (90°)
36	2"弯头(90°)	2" PIPE ELBOW (90°)
37	PVC管 2"*150mm	PVC PIPE 2"*150mm
38	PVC管 2"*150mm	PVC PIPE 2"*150mm
注: 接管时请参考以上顺序		remarks: Please take reference from the above piping sequence

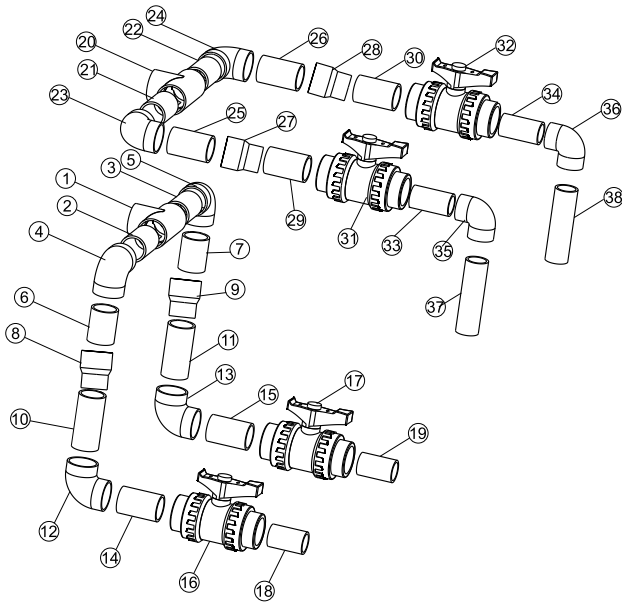


图16 (仅用于2XSR30水泵)  
Figure16 (only for 2XSR30 water pump)

#### 四、安装说明

1、激流喷嘴分别可以用于水泥池、纤维池和结构池。具体安装如下:

1) 水泥池中, 激流喷嘴外壳安装方法:

- 安装水泥池时仅用到喷嘴外壳的4个螺丝 (M6\*20) 孔位 (如图1)
- 将外壳预先埋入游泳墙壁内 (如图2)

#### 4. Installation instructions

1. the counter current jet can be used in Concrete, composite fiberglass and vinyl pools. The installation is as follow:

1) Concrete pool installation:

- Use 4 screws ( M6\*20 ) to fix the counter current jet plate to the pool wall hole. ( Figure 1 )
- Fit counter current jet body into in to concrete wall. ( Figure 2 )

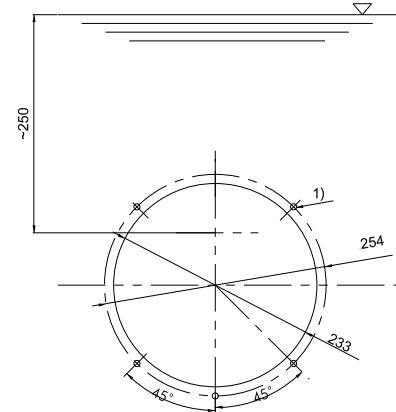


图1  
Figure 1

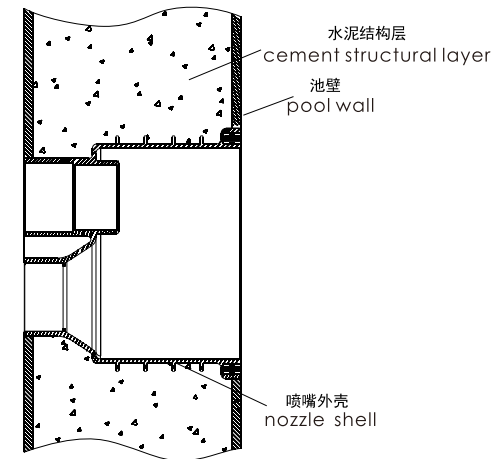


图2  
Figure 2

2) 纤维池中，激流喷嘴外壳安装方法：

- 安装纤维池时仅用到喷嘴外壳的14个孔位，先在纤维池壁上开孔（如图3）
- 将外壳、胶圈、纤维池按装环依次装到纤维池壁上（如图4）
- 用10颗M6\*45螺丝将外壳固定到纤维池（如图3中的孔1）

2) Composite Fibreglass pool installation:

- Using the template drill 14 holes into the fibreglass pool shell. ( Figure 3)
- Install the outer shell, plastic ring, in the correct order on the pool shell wall. ( Figure 4)
- Mount the counter current jet faceplate onto the fiber pool using 10 piece of M6\*45 screws. (Hole 1 in Figure3)

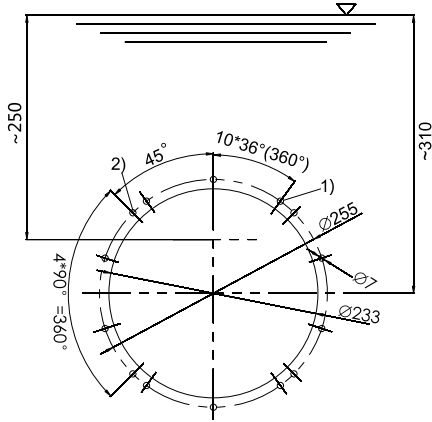


图3  
Figure 3

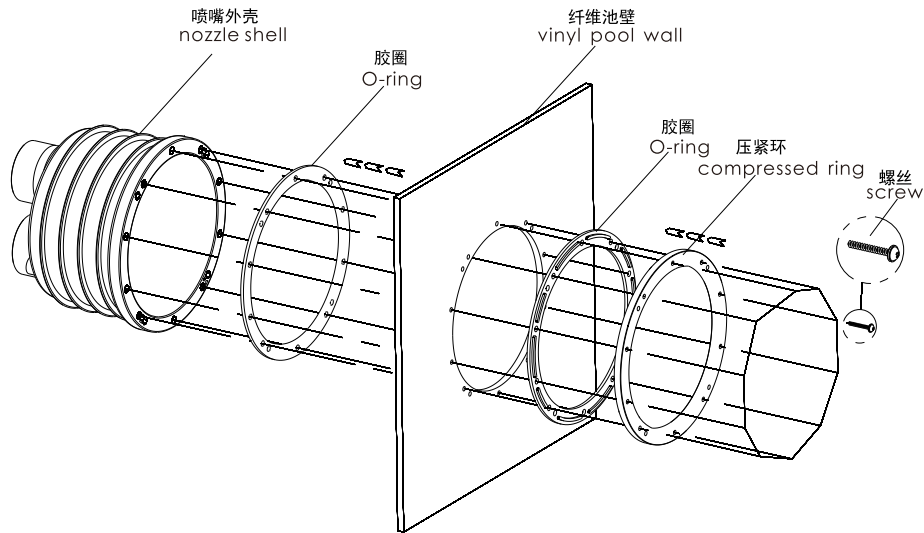


图4  
Figure 4

3. 激流喷嘴整体安装

- 请根据图13所示进行整体安装。
- 每种型号水泵接管请参照图14、15、16。
- 安装水泵和控制箱必须安装在干燥的地方。底部排水是绝对必要的。
- 为确保气动按钮的正常运作，游泳池和控制箱之间的距离不能超过3米。
- 气动管必须安装在有保护的管内，必要时可以进行更换。
- 安装的电气连接必须由合格的电工进行。

III . Installation of counter current jet

- please refer to figure 13 for the whole installation.
- for each model of pump pipe please refer to figure 14, 15, 16.
- pumps and control box must be installed in dry areas. It is absolutely necessary to expel water at the bottom part.
- in order to ensure normal operation of air switch, the distance between the swimming pool and the controller box must not be more than 3 meters.
- the air pipe must be installed in the protective pipe. It can be replaced if necessary.
- the installation of electric connections must be performed by a qualified electrician.

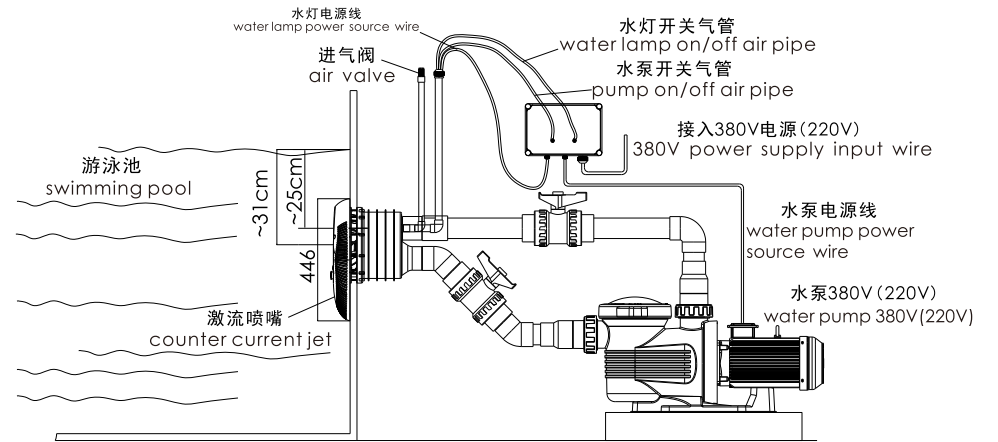
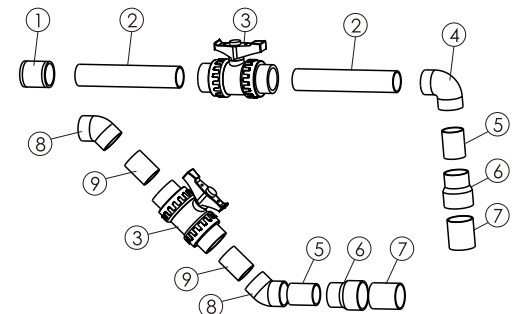


Figure 13

Item	Description	Qty
1	GB75 straight joint	1
2	GB75 PVC pipe (365mm)	2
3	GB75 ball valve	2
4	GB75 pipe elbow (90°)	1
5	GB75 PVC pipe (115mm)	2
6	Reducing pipe GB90×GB75	2
7	GB90 PVC pipe (100mm)	2
8	GB75 pipe elbow (45°)	2
9	GB75 PVC pipe (110mm)	2



(only for UPH400/550 water pump)

Figure 14



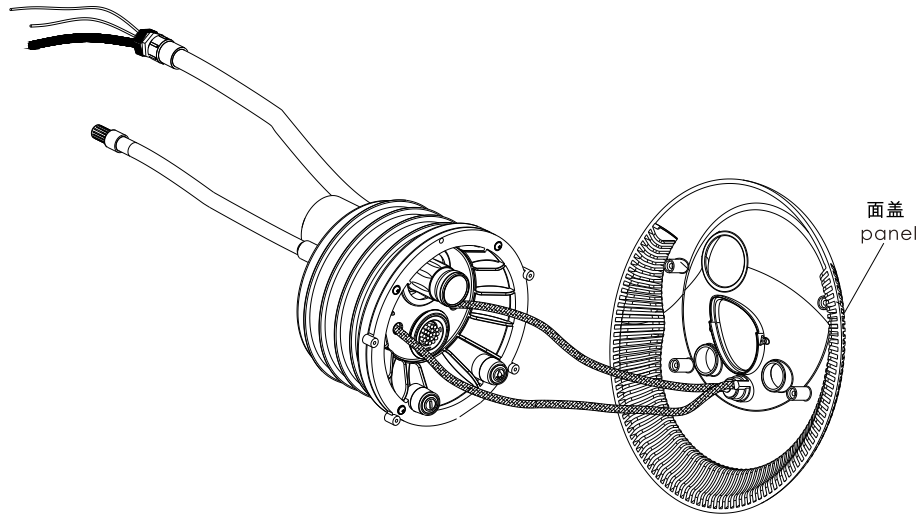


图11  
Figure 11

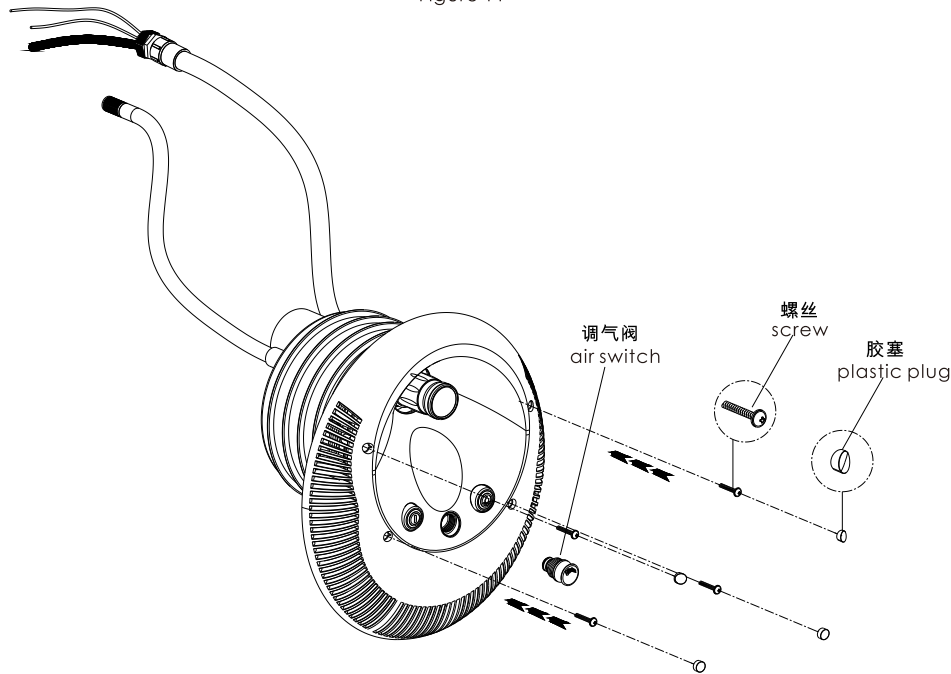


图12  
Figure 12

3) 双层结构池中，激流喷嘴外壳安装方法：

- a) 安装结构池时仅用到喷嘴外壳的16个孔位，先在池壁上开孔（如图5）
- b) 用2颗M6\*20的螺丝将胶圈和外壳固（图5中的孔3），然后用10颗M6\*45的螺丝将胶圈和纤维池安装环固定（如图6）

3) to install a counter current jet shell onto a vinyl pool:

- a) for vinyl pool, according to the 16 holes on the counter current jet shell, first drill holes on the structural wall accordingly. ( Figure 5 )
- b) install the plastic ring and the outer shell with 2 M6\*20 screws ( hole 3 of Figure 5 ), and then install the plastic ring and ring for installing on the fiber pool using 10 M6\*45 screws .( Figure 6 )

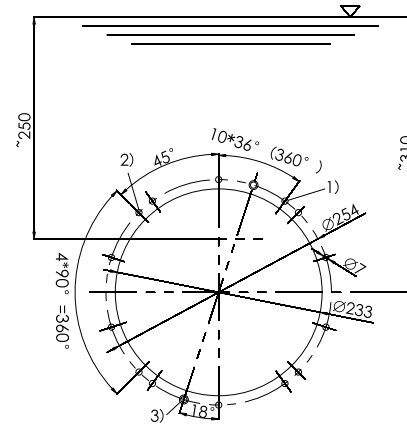


图5  
Figure 5

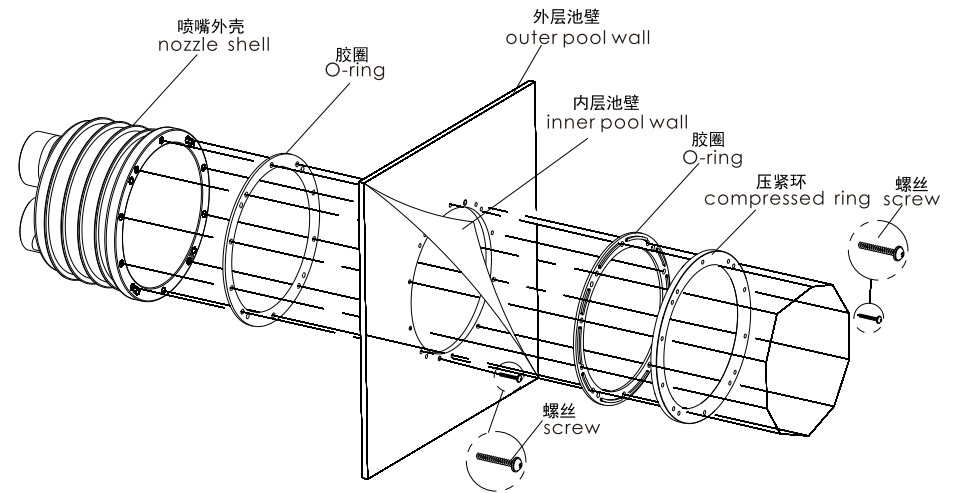


图6  
Figure 6

4) 水泥胶袋结构中，激流喷嘴的外壳安装方法：

- a) 先将激流喷嘴外壳预埋到水泥池壁内，外表面与水泥完成面平齐（如图8）
- b) 在胶袋池壁内开好相对应的孔，孔位与纤维池相同（如图3）
- c) 用10颗M6X30的螺丝将胶圈与安装环固定（如图8）

4) The structure of cement bag from inside of the pool and the outercasing installation methods of counter current jet:

- a) Embedded the counter current jet outer casing inside the cement wall and the surface of the outer case should be completed with the cement surface. (figure 8)
- b) Opened the corresponding holes from inside of the cement bag and the holes should be completed with the fiber pool (figure 3).
- c) Used 10 screws of M6X30 and fixed the rubber ring into the mounting ring. (figure 8)

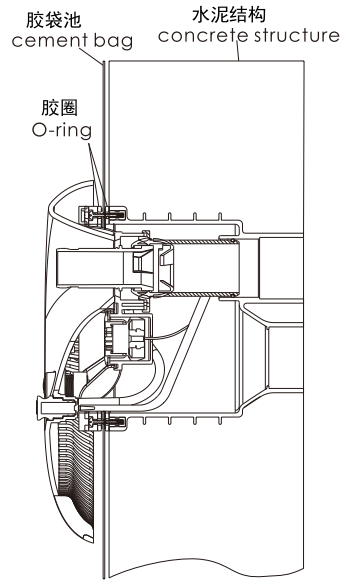


图7  
Figure 7

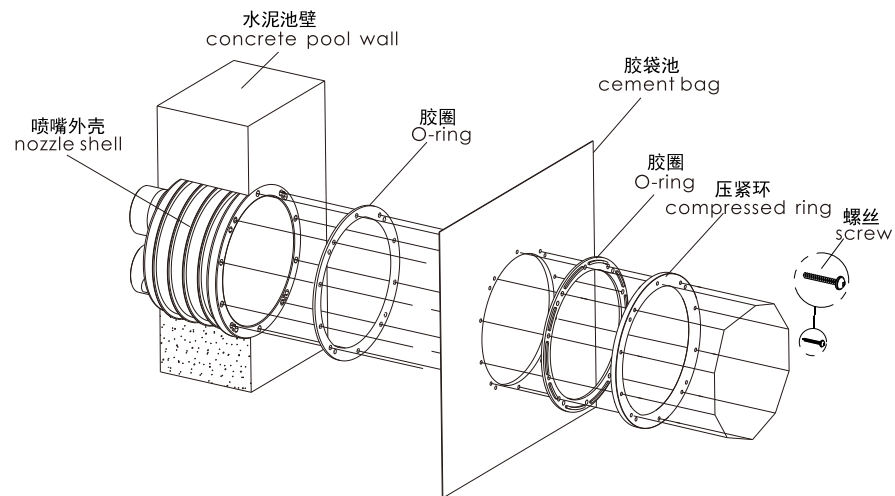


图8  
Figure 8

2. 安装激流喷嘴面盖

- 1) 先将 $\varnothing 5$ 透明气管与LED灯电缆线分别从通线软管内穿出，两条气管分别接水泵与水灯气动开关。（如图9）
- 2) 两条网管分别从支撑架上的两个孔穿出；再用4颗M6的螺丝装支撑架固定到外壳上。（如图10）
- 3) 将外壳的网管接入面盖侧面的气咀上，支撑架上的气咀接入面盖中间的气咀（如图11）（注：一定不可以接反）
- 4) 将面盖装到支撑架上，用4颗M5的螺丝固定，再用胶塞塞住螺丝孔。（如图12）

II. to install counter current jet outer shell

- 1) first use  $\varnothing 5$  transparent air tube and LED light cable respectively to pass through the connecting tube, then connect the two air pipes to the pump switch and pool light air switch respectively. (Figure 9)
- 2) pass through the two pipes respectively from the hole of the support frame; and then use 4 M6 screws to fix the support frame onto the shell. (Figure 10)
- 3) connect the pipes of the shell to the side of the mask of the air button. Connect the gas nozzle of the support frame to the middle of the gas nozzle (Figure 11); (Note: must not be reversed)
- 4) install the outer shell onto the support frame, fixed with 4 M5 screws, and then cork the screw hole using plastic cork. (Figure 12)

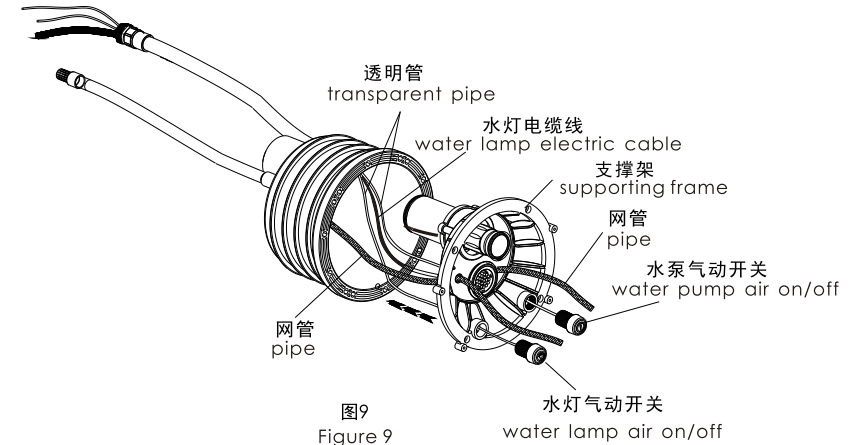


图9  
Figure 9

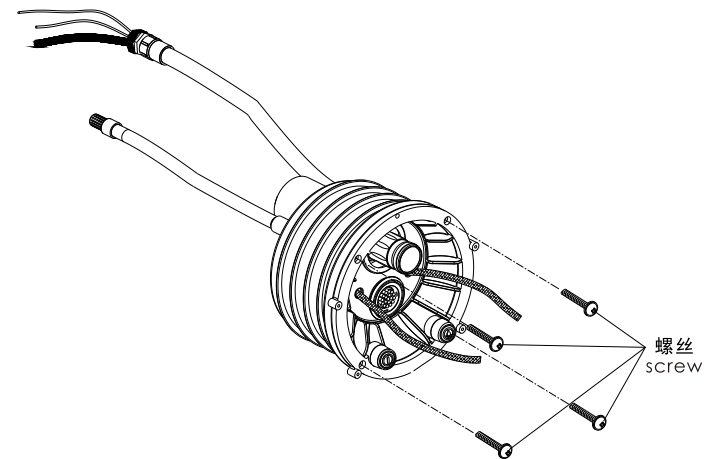


图10  
Figure 10