

## 12.2 Warranty Steps 保修步骤

There are 3 steps of warranty:

1. Clients contact with the sales representatives of EMAUX and provide the following materials: Part number of the product or series number; problem description; and corresponding pictures
2. After receiving the complaints, the quality checking department of EMAUX will accept the case and analyse the case according to EMAUX warranty rules
3. After the investigation has been done, EMAUX will inform relative suppliers of the treatment results and methods

保修步骤分为3部分：

1. 客户联系EMAUX销售代表并提供以下材料：产品部件号或序列号；问题描述；以及相应的图片
2. 接到投诉后，EMAUX质检部门会接受案例并根据EMAUX保修条例对案例展开分析
3. 在调查完成后，EMAUX会通知相应的供应商处理结果及方法

## 12.3 Warranty Statement 保修声明

EMAUX provides warranty to the problems of the materials and technics of above mentioned products.

During the period of warranty, if defects occur on clients' products, EMAUX will maintain or change the product. Clients need to comply with EMAUX's steps of warranty to enjoy the warranty.

Under this warranty clause, EMAUX doesn't responsible for the freight of all products.

EMAUX doesn't responsible for any cost happened in the process of communication, including accidental loss, labour charges, material cost or other accidental damages to people or properties.

EMAUX doesn't responsible for any business loss caused by products' defects.

EMAUX对上述产品的材料及工艺问题作出保修保证。

如在保修期内用户的产品发生缺陷，EMAUX会对产品进行维修或更换。用户需要遵照EMAUX保修步骤来享受此保修政策。

在此保修条款下，EMAUX对所有产品的运费不作承担。

EMAUX对在沟通过程中所产生的任何费用，包括意外损失、人工费用、材料费用或其他对人或财物造成的意外损伤不负有责任。

EMAUX对因为产品缺陷所造成的任何商业损失不负责任。

## 12.4 Warranty Responsibilities 保修责任

Neither distributors or any other person have the right to do the warranty or represent EMAUX and its products.

EMAUX won't be responsible for this type of warranty.

没有经销商或其他任何人有权作出保修或代表EMAUX及其产品。

EMAUX将不对此类型的保修负有任何责任。



**SSCmini<sup>®</sup>**  
**SALT CHLORINATOR**  
**USER MANUAL**

**SSCmini<sup>®</sup>**  
**盐氯发生器使用说明书**

# Contents

1. Safety Guide	3
安全指引	
2. Contents of Package	3
包装内容	
3. Specifications	4
技术指标	
4. Introduction	4
简介	
4.1 Electrolytic Cell	4
电解盒	
4.2 Main Engine	5
主机	
5. Safety Guide and Suggestions	5
安全指引及建议	
6. Standard of Water Quality	5-6
水质标准	
6.1 Salinity	6
盐度	
6.2 Types of Salt	7
盐的种类	
6.3 Adding and Reducing Salt in the Water of Swimming Pool	7
泳池水加、减盐	
7. Installation	7
安装	
7.1 The Installation of Main Engine	7
主机安装	
7.2 Installation of Electrolytic Cell	8
电解盒安装	
8. Begin to Use	9
开始使用	
9. Operation Interface	10-11
操作界面	
10. Maintenance	12-13
维护	
10.1 The Maintenance of Electrolytic Cell	13
电解盒维护	
11. Troubleshooting Guide	13-14
排除故障指南	
12. Warranty Policy	15
保修政策	
12.1 Conditions that don't Enjoy Warranty Policy	15
不能享受保修政策的情况	
12.2 Warranty Steps	16
保修步骤	
12.3 Warranty Statement	16
保修声明	
12.4 Warranty Responsibilities	16
保修责任	

## 12. Warranty Policy 保修政策

EMAUX series products are made with the best technics and materials. Our warranty policy to the products is as followed:

EMAUX的产品均以最好的工艺及材料制造。我们对产品提供的保修政策如下：

Time length of the maintenance of the products (Start from the date of sales check)			
产品保养时长（由小票日期开始计起）			
Product	产品	Defects liability period	保修期
Sand filter and filtration system	过滤沙缸及过滤系统	Two years	两年
Water pump	水泵	One year	一年
Underwater light	水底灯	One year (90 days for bulbs)	一年（灯泡90日）
Water stair	水梯	One year	一年
Controlling equipment	控制设备	One year	一年
Heat pump and heat exchanger	热泵及热交换器	One year	一年
Salt chlorinator and UV etc	盐氯发生器及UV等	One year (2 years for the materials of electrolytic cell)	一年 (电解盒材料两年)
Accessories of swimming pool	泳池配件	One year	一年
Cleaning equipment and others	清洁设备及其他	One year	一年

### 12.1 Conditions that don't Enjoy Warranty Policy 不能享受保修政策的情况

1. Damages caused by improper cooperation, improper packaging and transporting
2. Damages caused by failing to install and use the equipment according to the specification
3. Damages caused by misusing or failing to operate and install the equipment in professional qualification range required by similar equipment or installation type
4. Damages caused by unapproved modifying or failing to use the original spare parts of EMAUX
5. Damages caused by failing to do appropriate maintenance according to the instructions in the specification
6. Damages caused by failing to keep the water quality of the swimming pool to the standards of swimming pool industry
7. Damages caused by the freezing of residual water in the equipment
8. Damages caused by disasters out of the controllable range of EMAUX, such as accidental damages, fire or other extreme weather
9. Damages caused by being dismantled or maintained by personnel who haven't been authorized by EMAUX
10. Vulnerable parts and consumptive parts

1. 因为不妥善的操作，不恰当的包装及运输所造成的损坏
2. 因为不按照说明书使用及安装设备而造成设备损坏的
3. 因为误用、滥用或未能在类似的设备或安装类型要求的专业水平范围内操作和安装设备所造成的损坏
4. 因为未经允许的改装或因为没有使用EMAUX原装备用件而造成设备损坏的
5. 因为不按照说明书上的指示进行适当维护而造成设备损坏的
6. 因为不能保持泳池内水质达到泳池行业标准而造成设备损坏的
7. 因为设备内残余的水结冰而造成设备损坏的
8. 因为意外损伤，火灾或其他极端天气状况等不在EMAUX可控范围内的灾害造成的设备损坏
9. 因为设备由未经EMAUX授权的人员拆解或维修过而导致设备损坏的
10. 易损部件及消耗件

Light 4 灯4	The temperature of water is not in normal working range (10-45°C) 水温不在正常工作范围内 (10-45摄氏度)	Test the temperature of water, if it is too low, start heat pump to make it reach the working temperature; if it is too high, turn off heat pump or use other methods to make the temperature of water gradually fall to working temperature 检测水温, 如水温过低则开启热泵使水温达到工作温度; 如水温过高则关闭热泵或采用其他方法使水温逐渐回落至工作温度
Light 5 or Light 6 灯5或灯6	The salinity is lower than 4000ppm and/or the temperature of water is higher than 45°C 盐度<4000ppm及/或水温度超过45摄氏度	Check whether the salinity of the swimming pool has reached the suggested value of 4000-6000ppm; if not, add water into the pool to increase the concentration of salt; if the temperature of water is too high, turn off heat pump or use other methods to make the temperature water gradually fall to working temperature 检查池内盐浓度是否达到建议值4000-6000ppm, 如未达到则往池内加入盐增加盐浓度; 如水温过高则关闭热泵或采用其他方法使水温逐渐回落至工作温度
Light 7 灯7	Unknown (Power off the machine and make it restart; contact with technical center) 未知 (断电让机器重启及联系技术中心)	Disconnect the power supply, after the main engine is completely powered off, connect it again with the power supply; if the fault still exists, contact with after-sale service 断开主机电源, 在主机完全断电之后重新连接至电源; 如故障仍然存在, 联系售后服务
Light 8 灯8	There is accumulation of calcium compounds on the electrolytic pole piece, or the flowing water doesn't completed submerge the electrolytic pole piece, or there are problems of connection between the main engine and the electrolytic cell 电极端片上有钙化物堆积或流动水没有完整没过电极端片或主机与电解盒之间的连接出现问题	Clean the electrolytic core referring to the chapter of the maintenance of electrolytic core; check whether there are impurities in filtration basket of the water pump, which will result in the reduction of water flow; if there are, clean them and make the water flow normal; check whether the connection between the main engine and the electrolytic core is connected properly; if not, connect it again properly. 参考电极端维护章节清洁电极端; 检查水泵过滤篮内是否有杂物导致流量减少, 如果有清洗干净使流量恢复正常; 检查连接主机和电极端接头是否连接好, 如没有则重新接好
Light 9 灯9	Unknown (Power off the machine and make it restart; contact with technical center) 未知 (断电让机器重启及联系技术中心)	Disconnect the power supply, after the main engine is completely powered off, connect it again with the power supply; if the fault still exists, contact with after-sale service 断开主机电源, 在主机完全断电之后重新连接至电源; 如故障仍然存在, 联系售后服务
Light 10 灯10	There are problems of the connection between the main engine and the electrolytic cell 主机与电解盒之间的连接出现问题	Check whether the connection between the main engine and the electrolytic core is corrected properly, if not, connect it again properly. 检查连接主机和电极端接头是否连接好, 如没有则重新接好

## 1. Safety Guide 安全指引

Safety guides in the process of installing and using are included in this manual. Clients should read carefully this manual before installing and using. The manual should still be preserved after the installation has been completed so as to refer to it later.

本说明书内包含安装及使用过程中的安全指引, 用户在安装及使用前必须仔细阅读本说明书。在安装完成后亦应保存本说明书以便日后作参考用。

The following safety rules should be complied with when using electronic products:

- Ensure that all connections are off in the process of installation.
- In order to prevent the hidden danger, children are forbidden to do the operation without the supervision of the guardian.
- The port of ground wire is in the control box and is marked with the green color. In order to reduce the risk of electric shock, clients should use copper line to connect the port with the ground wire of power valve.
- In order to reduce the risk of electric shock, clients should use copper line to connect the equipment with the ground wire of the pool; all metal components (water stair, water outlet etc) within the area 3 meters around the pool should also be connected with the ground wire through copper line.

在使用电子产品时, 需遵循以下的安全准则:

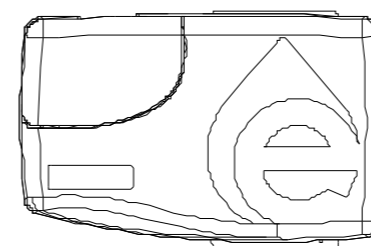
- 在安装过程中保证所有连接断开。
- 为避免安全隐患, 在没有监护人在场的情况下不应允许儿童进行相应的操作。
- 在控制盒内含有地线的端口, 以绿色标记。为降低触电风险, 用户应使用铜线将该端口与电源阀门的地线相连接。
- 为降低触电风险, 使用铜线将设备连接至泳池区域的地线, 在泳池3米范围内所安装的所有金属部件 (水梯, 排水口等) 亦应使用铜线连接至地线。

## 2. Contents of Package 包装内容

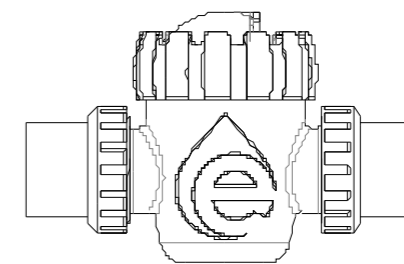
Following components are contained in the package:

包装内包含以下部件:

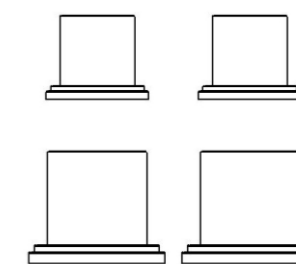
SSCmini 主机 SSCmini Main Engine
电解盒 Electrolytic Cell
1.5" 及 2" 公英制管接头 1.5" and 2" mm/inch union joint



SSCmini Main Engine  
SSCmini 主机



SSCmini Electrolytic Cell  
SSCmini 电解盒



1.5" and 2" Universal Union  
1.5寸&2寸公英制管接头



### 3. Specifications 技术指标

SSCmini Salt Chlorinator SSCmini 盐氯发生器			
Working voltage	工作电压	220-240 V AC – 50/60 Hz	
Chlorine production	产氯量	25g per hour	25 克/小时
Maximum Pool Volume	最大泳池容量	130m³	130 立方米
Salinity Requirement	盐度要求	4-6g per litre	4 – 6 克/升
Working Temperature of Water	工作水温	10°C - 45°C (50°F – 113°F)	
Electrode	电极	Titanium Plate	钛片

### 4. Introduction 简介

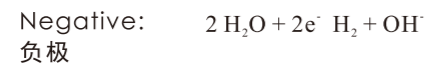
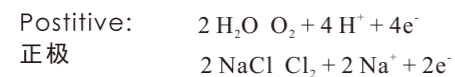
EMAUX SSCmini is a salt chlorinator sanitizing system that contains main engine and electrolytic cell.  
EMAUX SSCmini为包含控制主机及电解盒的盐氯发生器消毒系统。

#### 4.1 Electrolytic Cell 电解盒

The electrolytic cell contains a unit of titanium plates, which are fixed in electrolytic core. The main engine controls the output of electric current to the electrolytic core. One end of the titanium plate is positive while the other end is negative. Adding some salt to the pool to form salt water of certain concentration. Through electrolytic core, the salt water reacts under the electric current to form chlorine.

电解盒内包含有一组钛片，钛片被固定在电解芯内。主机控制电流输出到电解芯。钛片的一端为正极，另一端为负极。加入一定量的盐进入池内，形成一定浓度的盐水。盐水通过电解芯，在电流的作用下发生化学反应产生氯气。

The following are the reactions happened in the electrolytic core:  
电解芯内发生的化学反应如下：



The reaction requires the salt water has the concentration of 4000ppm, under which the taste of salt cannot be felt. Through electrolysis, SSCmini transforms the salt in the water to chlorine ion so as to achieve the purpose of sanitizing.

After killing bacteria, chlorine ion will transform back to sodium chloride, and the above mentioned reactions recycle. Generally, clients needn't increase the concentration of salt in the pool, except under the circumstances of back flushing, draining and splashing, which require increasing the concentration of salt in the pool.

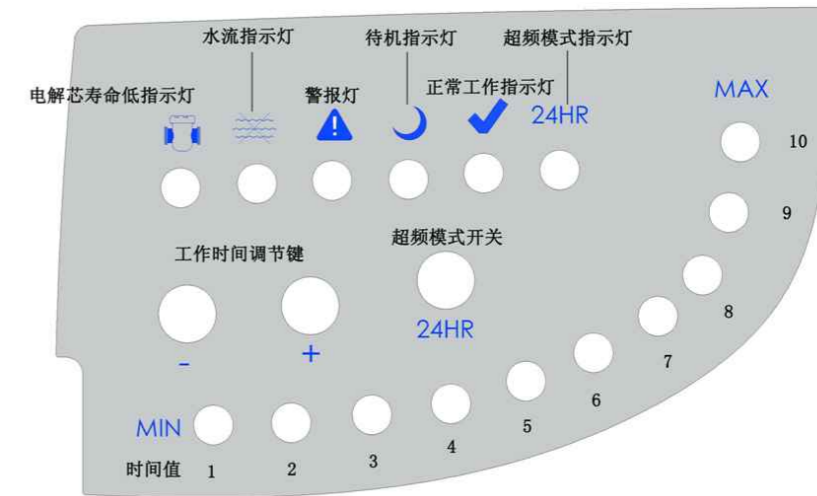
此反应需要4000ppm浓度的盐水。在此浓度下盐的味道不会被察觉。SSCmini通过电解将水内盐成分转换成氯离子以达到消毒的目的。

氯离子会在杀死细菌后转换回氯化钠，上述的化学反应会形成循环。除在反冲洗、排水及泼洒的情况下需要增加池内盐浓度外，一般情况下用户不需要额外增加池内的盐浓度。

当上述步骤不能清洗干净电解极片时，用户应按以下步骤使用酸性溶液进行清洁：

1. 使用水按照10:1（水:酸）的比例稀释盐酸  
注意：切记将酸加入到水中进行稀释，不要将水加入到酸中进行稀释  
注意：要佩戴橡胶手套及眼部保护装置
2. 将电解芯浸入到稀释过的酸性溶液中，时间不能超过10分钟  
注意：电解芯的塑料部分可被浸入到酸性溶液中，注意电解芯的连接部分及线缆不能与酸性溶液有接触
3. 使用高压水冲洗电解极片，如果仍然能看见有钙化物，重复浸泡-冲洗步骤
4. 如果在重复浸泡-冲洗后仍然不能除去表面钙化物，建议替换电解芯

### 11. Troubleshooting Guide 排除故障指南



电解芯寿命低指示灯	Indicator light indicating the low life of electrolytic core
水流指示灯	Indicator light of water flow
警报灯	Alarm light
待机指示灯	Indicator light of suspending
超频模式指示灯	Indicator light of OC mode
正常工作指示灯	Indicator light of normal work
工作时间调节键	Adjustment key of working time
超频模式开关	Switch of OC mode
时间值	Time value

When the alarm light lights, it means that the salt chlorinator is out of order. SSCmini has an error reporting system which can inform clients detailed problems. Clients may see that the indicator light of time value lights at the same time. Corresponding faults of different indicator light of time value are shown in the following chart:

当警报灯亮起时，表示盐氯发生器发生故障。SSCmini带有报错系统能够告知用户具体问题。用户可以观察到时间值指示灯也会同时亮起。不同的时间值指示灯所对应的故障如下图所示：

Indicator light 指示灯	Corresponding faultlight 对应故障	Solutions 解决办法
Light 1 or Light 2 灯1或灯2	There are accumulations of calcium compounds on the electrolytic pole piece; the salinity is not correct; the water doesn't submerge the electrolytic cell 电解极片上有钙化物堆积或盐度不正确或水没有浸过电解片盒	Clean the electrolytic core referring to the chapter of the maintenance of electrolytic core; check whether there are impurities in the filtration basket of the water pump which results in reduction of flow, if there are, clean them to make the flow normal 参考电解芯维护章节清洁电解芯；检查水泵过滤篮内是否有杂物导致流量减少，如果有清洗干净使流量恢复正常
Light 3 灯3	Input power supply is incorrect 输入电源不正确	Check whether the socket power is 220V-240V 50/60Hz; if not, stop using it immediately and connect the main engine with proper socket power 检查插座电源是否为220V-240V 50/60Hz；如果不是则立即停止使用并将主机连接至适合的插座电源上



## 10. Maintenance 维护

### 10.1 The Maintenance of Electrolytic Cell 电解盒维护

Benefiting from pole modulation system, the electrode may effectively avoid the forming of calcium compounds on the surface. In order to ensure the life of the electrolytic cell, clients should ensure that all requirements of water quality are within the suggested value scope, especially salinity, pH value and the solidity of water.

1. Ensure that the salinity of the water in swimming pool is higher than 3000ppm so as to prevent the advanced ageing of the electrodes

This formula can help clients calculate the weight of salt required to supplement when the salinity in the swimming pool reduces:

得益于调极系统，电极片可以有效避免钙化物在表面的形成。为保证电解盒寿命用户应当确保各项水质要求均保持在建议值范围内，尤其是盐度，酸碱值及水的硬度。

1. 确保泳池水盐度高于3000ppm，防止电解极片提前老化

此公式可帮助用户计算出池内盐度下降时需要补充的盐的重量：

$$Q = (4 - S) \times V$$

The weight of salt that required to be added in (Kg)

Q = 需加入的盐重量 (Kg)

Suggested value of salinity (constant)

4 = 盐度建议值 (常数)

Contents of salt in the swimming pool

S = 池内盐含量

Contents of the swimming pool (m<sup>3</sup>.)

V = 泳池容量 (m<sup>3</sup>.)

2. Keep the pH value in the swimming pool within the scope of 7.2 to 7.6. If the pH value is higher than 7.6 for a long time, please check and clean the electrolytic pole pieces.

The steps of cleaning the electrolytic pole pieces:

When calcium compounds form on the surface of electrolytic pole pieces, clients should clean them according to the following steps:

- Switch off the power supply of the main engine and take out the electrolytic core
- Check whether there are formations of white calcium compounds and other impurities
- Using wooden stick or plastic stick to remove the calcium compounds on the surface of electrode slice (Metal tools are forbidden to use! It will ruin the coating and accelerate the ageing of electrolytic pole piece)

2. 保持池内酸碱度在7.2和7.6之间。在酸碱度长时间超过7.6的情况下，检查并清洁电解极片。当电解极片表面有钙化物形成时，用户应按以下步骤清洗电解极片：

- 关闭主机电源，拿出电解芯
- 检查电解极片上是否有白色钙化物形成及是否有任何杂质
- 使用木棒或塑料棒移除掉极片表面的钙化物(不要使用金属工具!金属工具会破坏涂层加快电解极片的老化)

If the electrolytic pole piece cannot be cleaned by following the above mentioned steps, clients should comply with the following steps to clean it through acid solution:

1. Dilute chlorhydric acid through water at the ratio of 10:1 (water: chlorhydric acid)

Note: Be sure to add chlorhydric acid into water when diluting, never add water into chlorhydric acid

Note: Be sure to wear rubber gloves and eye protector

2. Dip the electrolytic core into diluted acid solution and keep it for no more than 10 minutes

Note: The plastic parts of electrolytic core can be dipped into acid solution, be sure that the connection part and cables of the electrolytic core don't contact with acid solution

3. Wash the electrolytic pole piece with high-pressure water. If there are still calcium compounds, the step of dip-wash should be repeated.

4. If the superficial calcium compounds still cannot be removed after the step of dip-water is repeated, it is suggested to replace the electrolytic core

## 4.2 Main Engine 主机

Through the system controlled by microprocessor, SSCmini main engine controls the length of operation time and inform the errors in custom system or problems of installation. The whole system has a self-cleaning procedure, which can effectively avoid the formation of calcification on the surface of electrolytic pole plates, which may affect the efficiency of electrolysis.

SSCmini主机通过由微处理器控制的系统控制运行时长及告知用户系统内的报错或安装问题。整套系统带有自清洁程序，可有效避免电解极片表面形成钙化物影响电解效率。

## 5. Safety Guide and Suggestions 安全指引及建议

The system should be installed by professionals.

Corresponding codes should be complied with when doing the installation, so that accidents can be avoided.

Under any circumstance, manufacturers are not responsible for the installation, assembling and using made by clients, unless he knows it and approves it.

The working voltage of SSCmini is 220-240V, 50/60Hz. It is prohibited to connect SSCmini with power output different from this standard.

Check all connecting terminals and connections to ensure the correct connections between components, so as to prevent overheating caused by bad contact.

Before installing and replacing any component, cut off the connection between the main engine and main power supply; only replacements provided by EMAUX can be used for replacing.

Installation area of main engine must be with good ventilation and keep away from combustible matter. Installation area of main engine should be away from the place which is probably flooded.

When the pool cover closes, the chlorine production should be reduced appropriately. Too much chlorine may degrade the materials of the pool.

此系统应由专业人士进行安装。

安装时需遵守当地相关细则避免发生意外。

除在制造商知情及允许的前提下，在任何情况下制造商对用户的安装组装及使用不负有责任。

SSCmini的工作电压为220-240V，50/60Hz。切勿将SSCmini接入到与此标准不相同的电源输出。

检查所有的接线端子、接头，确保部件间的正确连接避免因接触不良导致过热。

在安装及更换任何部件前，将主机与主电源断开连接，及使用由EMAUX提供的更换部件进行更换。

主机应安装在通风位置，远离可燃物质。

主机不应安装在可能会发生洪水的地方。

当泳池的泳池罩关闭时，应当适当降低氯产量。过多的氯气会降解泳池用料。

## 6. Standard of Water Quality 水质标准

The following table contains various index parameters of water quality when clients using SSCmini salt chlorinator.

Test the water in the pool periodically to ensure that all specifications are within the suggested scope.

下表中标示了用户使用SSCmini盐氯发生器时水质的各项指标参数。

定期对池内水进行检测以确保各项指标均在建议值范围内。

Range of salt concentration	盐浓度范围	4000 – 6000 ppm
Concentration of Chloride ion	氯离子浓度	1.0 – 3.0 ppm
pH Value	pH值	7.2 – 7.6
Cyanuric Acid (stabilizer)	三聚氰酸 (稳定剂)	30 – 50 ppm
Total Alkalinity	总碱度	80 – 120 ppm
Concentration of Calcification	钙化物浓度	200 – 400 ppm
Metal	金属	0 ppm

## 6.1 Salinity 盐度

The running of SSCmini salt chlorinator requires the salinity of 4000-6000ppm. In order to reach this concentration, 4 kilograms salt should be added into per cubic meter water. Low salinity (below 2500ppm) may accelerate the decaying of the life of electrolytic core. High salinity (above 6000ppm) may result in electrooxidation and the erosion of stainless steel swimming pool equipments.

Required salt volume of swimming pool with different volumes:

运行SSCmini盐氯发生器需要保持盐度为4000-6000ppm。

要达到此浓度意味着每立方米的水需要加入4公斤盐。

低盐度（2500ppm以下）会导致电解芯寿命加速衰减。

高盐度（6000ppm以上）会导致电氧化及不锈钢泳池设备的腐蚀。

容量不同的泳池对应所需的盐量：

Volume of swimming pool 泳池容量(M <sup>3</sup> )	Required salt volume 需盐量 (KG)	Volume of swimming pool 泳池容量(GALLONS)	Required salt volume 需盐量 (LB)
10	40	2,642	88
15	60	3,963	132
20	80	5,283	176
25	100	6,604	220
30	120	7,925	264
35	140	9,246	308
40	160	10,567	352
50	200	13,209	440
60	240	15,850	528
70	280	18,492	616
80	320	21,134	704
90	360	23,775	792
100	400	26,417	880
110	440	29,059	968
120	480	31,700	1,056
150	600	39,626	1,320

Note: This table takes the concentration of 4000ppm as standard.

注意:此表以4000ppm浓度作为标准

## 6.2 Types of Salt 盐的种类

The most common salt in the salt chlorinator electrolytic sanitizing system is sodium chloride with the purity of 99.9%

在盐氯电解消毒系统中最常用的盐为纯度达到99.9%的氯化钠。

The following salt cannot be used:

1. Rock salt
2. Salt which the content of sodium ferrocyanide exceeds 1%
3. Salt which the anti agglomeration additive exceeds 1%
4. Iodized salt

不要使用下列几种盐：

1. 岩盐
2. 黄血盐钠含量超过1%的盐
3. 防结块添加剂超过1%的盐
4. 加碘盐

**电解芯寿命低指示灯：**当电解芯到达其设计使用寿命时，此指示灯亮起。用户此时需要更换电解芯。

**水流指示灯：**当电解盒内没有水流或水流较小时，此指示灯亮起。用户此时需要检查水泵是否正常运行。

**警报灯：**当电解芯因为自身或外界因素出现不能正常工作的情况时，此指示灯亮起。用户此时应对照故障排除指南进行相应操作。

**待机指示灯：**当电解盒处于待机状态时，此指示灯亮起。

**正常工作指示灯：**当电解盒处于正常工作周期及正常工作时，此指示灯亮起。

**超频模式指示灯：**当电解盒处于超频模式时，此指示灯亮起。

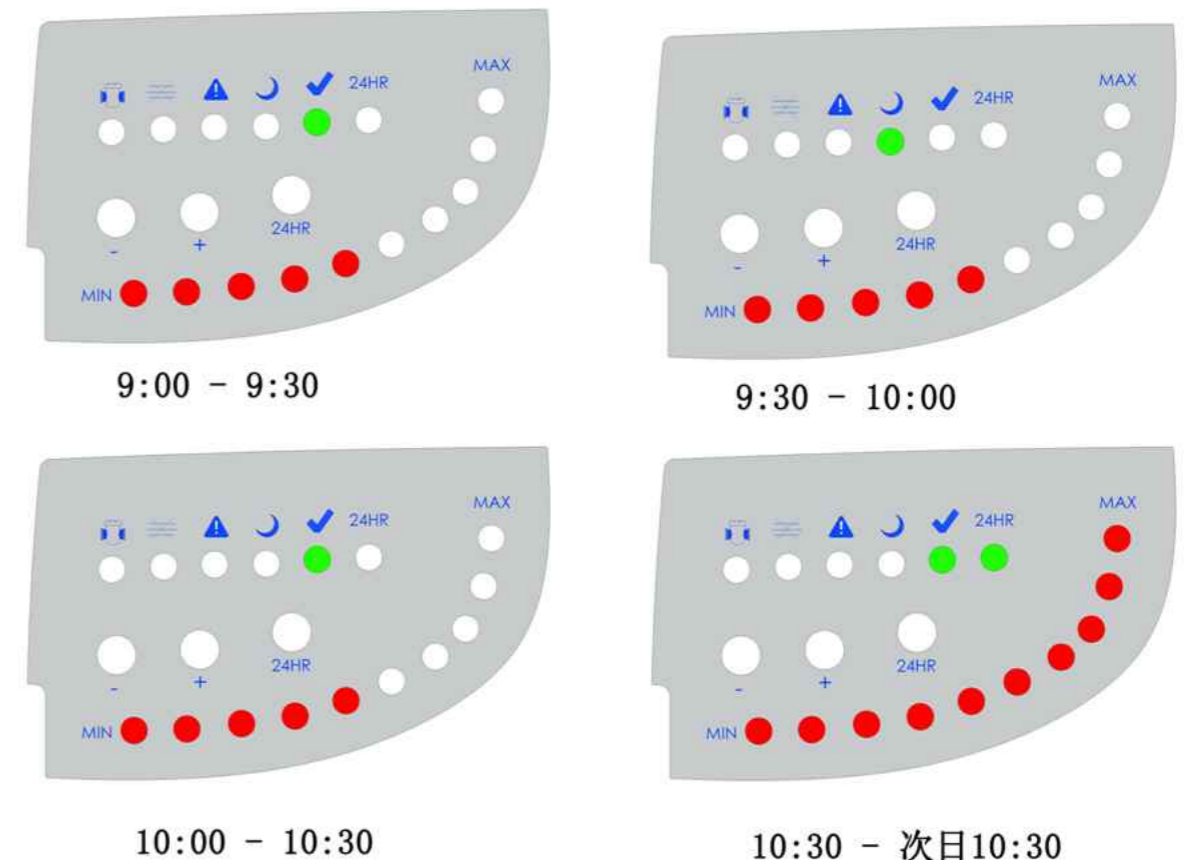
**电解盒工作时间调节键：**用户可以通过控制区域的“+”“-”键来调节电解盒的工作时长，从而调节电解盒的每小时氯产量。共分10个不同的时长，每盏LED代表每小时内工作6分钟。当5盏LED亮起时则代表电解盒每小时工作30分钟。

**超频开关：**一键启动超频功能，在此功能下，电解盒以最大功率连续工作24小时。为用户提供足够的氯离子供池水消毒使用。再次按下开关电解盒将会退出超频模式。

**MIN - MAX电解盒工作指示灯（时间值）：**共包含10盏指示灯。每一盏灯代表电解盒将在每小时的时间内工作6分钟。当10盏灯全亮时，代表电解盒将不间断工作，一直保持最高的产氯量。

If clients start the main engine at 9:00 and set the time value at 5, then SSCmini will be in working status from 9:00 to 9:30; in suspending status from 9:30 to 10:00; a new cycle will start at 10:00 and work until 10:30; so on and so forth. If clients start the OC mode at 10:30, then SSCmini will work until 10:30 next day and automatically exit the OC mode at 10:30 the next day. After exiting OC mode, the setting of time value will be restored as before and a new cycle will start.

当用户在9:00开启主机并设定时间值为5时，SSCmini在9:00至9:30为工作状态；9:30至10:00为待机状态；在10:00时开始一个新的周期，工作至10:30，如此类推。如用户在10:30时启用超频模式，则SSCmini会保持工作至次日10:30并在次日10:30自动退出超频模式。退出超频模式后时间值设置会恢复为用户之前的设置并开始新的周期。

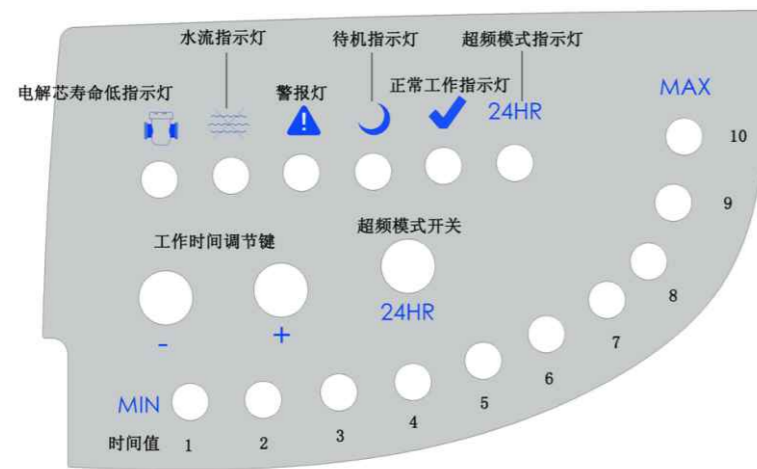




## 9. Operation Interface 操作界面

The operation interface of SSCmini salt chlorinator is shown as followed:

SSCmini盐氯发生器操作界面如下图所示



电解芯寿命低指示灯	Indicator light indicating the low life of electrolytic core
水流指示灯	Indicator light of water flow
警报灯	Alarm light
待机指示灯	Indicator light of suspending
超频模式指示灯	Indicator light of OC mode
正常工作指示灯	Indicator light of normal work
工作时间调节键	Adjustment key of working time
超频模式开关	Switch of OC mode
时间值	Time value

**Indicator light indicating the low life of electrolytic core:** The indicator light lights if the electrolytic core comes to the end of designed service life. Clients then need to change electrolytic core.

**Indicator light of water flow:** The indicator light lights when there is no water or the water flow is relatively small in electrolytic cell. Clients then need to check whether the water pump is running properly or not.

**Alarm light:** The indicator light lights when the electrolytic core couldn't work properly due to its own factor or outside factors. Clients then need to do corresponding operations according to troubleshooting guide.

**Indicator light of suspending:** The indicator light lights when the electrolytic cell is suspending.

**Indicator light of normal work:** The indicator light lights when the electrolytic cell is in normal working period and works normally.

**Indicator light of OC mode:** The indicator light lights when the electrolytic cell is in OC mode.

**Adjustment key of working time of the electrolytic cell:** Clients may use the keys of "+" "-" in control area to adjust the working duration of the electrolytic cell, so as to adjust chlorine production per hour of the electrolytic cell. There are 10 different lengths; every LED light represents 6 minutes of working time per hour. If 5 LED lights light at the same time, it represents that the electrolytic cell works 30 minutes per hour.

**Switch of OC mode:** Start the overclocking function with one button, under which the electrolytic cell can work for 24 hours with the maximum power. Adequate chloride ions are provided to clients for the purpose of sanitizing the water of the swimming pool. Push the switch again, then the electrolytic cell will exit OC mode.

**MIN-MAX indicator light of working of the electrolytic cell (time value):** There are 10 indicator lights. Every light represents the electrolytic cell will work for 6 minutes per hour. When 10 lights all light, it represents that the electrolytic cell will work without stop and will keep the maximum chlorine production.

## 6.3 Adding and Reducing Salt in the Water of Swimming Pool 泳池水加、减盐

- Before adding salt, open filter pump and ensure the filter valve is in the position of "filter"
- Adding salt into the swimming pool, stir it to prevent it from staying at the bottom of swimming pool.
- Keep the water pump run all day long, and use the main water outlet as the main water inlet
- 在加入盐前, 开启过滤水泵并确保过滤阀门处在“过滤”位置
- 将盐加入到泳池内, 搅拌防止盐粒静止在泳池底部
- 保持水泵24小时开启并使用主排水管作为主吸水管

## 7. Installation 安装

### 7.1 The Installation of Main Engine 主机安装

The main engine of SSCmini is sealed outer housing, and the level of protection is IP44. It can be installed outdoor with shelter. The following rules should be complied with when installing the main engine:

1. Use the mounting template provided in the package to position; the installation area of the main engine should be at least 3 meters away from the swimming pool and 1.5 meters above the earth; 2 meters away from the output with protectors and 3 meters away from the installation location of electrolytic cell.
2. Drill a  $\phi 8\text{mm}$  hole on the wall according to the reference of the installation position of screw drill provided by the mounting template; Install expansion bolts and screws to support the main engine.
3. Don't install the main engine in a place with the direct solar radiation
4. The installation area of the main engine should be away from the place storing chemicals
5. The installation area of the main engine should be away from heat resource and equipments that can generate heat
6. The power supply of the main engine should be connected to the switch with power leakage protection
7. Before fixing the main engine, please be sure that the cables of the main engine can connect to the main power supply and electrolytic cell.

SSCmini主机为密封外壳, 防护等级IP44, 可以安装在有遮挡的室外使用。安装主机需遵循以下准则:

1. 使用包装内提供的定位纸进行定位, 主机应当安装在离泳池至少3m远, 离地1.5m高; 离带保护装置的输出2m内, 离电解盒安装位置3m内
2. 按定位纸提供安装螺丝钻孔位置的参考在墙壁位置钻 $\phi 8\text{mm}$ 孔, 安装好膨胀螺栓及螺丝以支撑主机
3. 不要在可受到太阳直射的地方安装主机
4. 主机必须安装在远离储存化学品的地方
5. 主机必须远离热源及产生热的设备
6. 主机电源需连接到带有漏电保护的开关上
7. 在固定主机前, 确认主机线缆能够连接至主电源及电解盒

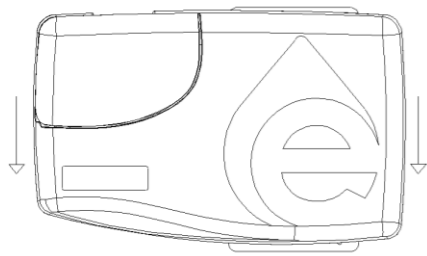
### Diagram 配图



Fix the mounting template on the installation position of SSCmini and drill 4\* $\phi 8\text{mm}$  hold according to the identification. Install expansion bolts and screws to support the main engine.

将定位纸固定至SSCmini的安装位置上, 根据标识钻4\* $\phi 8\text{mm}$ 孔。安装膨胀螺栓及螺丝以支撑主机





Hang the control box of SSCmini on the fixed screw, and be sure that the cables can connect to the output power supply and electrolytic cell.

将SSCmini控制盒挂在安装好的螺丝上，确认线缆能否与输出电源及电解盒连接

Clients may use the accessories of union joint that contained in the package to install the electrolytic cell on 1.5" or 2" cun and inch pipeline; they can also choose to install the electrolytic cell vertically.

用户可使用包装内的管接头配件安装电解盒至1.5寸或2寸公英制管道,用户亦可选择垂直安装电解盒

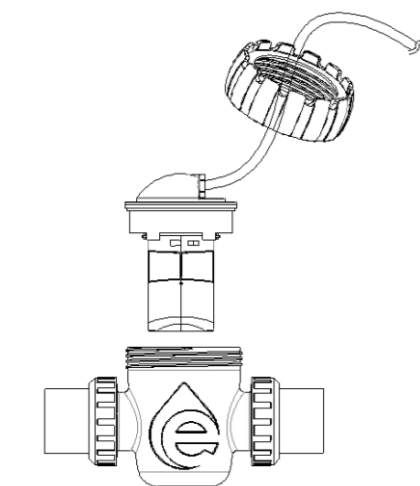
## 7.2 Installation of Electrolytic Cell 电解盒安装

The following items should be paid attention to in order to install the electrolytic cell correctly:

1. The electrolytic cell should be installed after the completion of installation of all other equipments of swimming pool (water pump, sand filter, heater)
2. The electrolytic cell should be laid horizontally and the pipe should be cut off at an appropriate position. The least length of the pipe that has been cut off should be 187mm; the length varies different sizes of the pipe.
3. Connect the union joint to the pipe and have a trial assembly together with the electrolytic cell; adjust those positions that aren't coordinated properly. After confirming the trial assembly, clients may use the adhesive to adhere the union joint with the pipe.
4. Fix the nut which connects the electrolytic cell and the union joint. The open of the electrolytic cell should be upright to facilitate the placing of electrolytic core.
5. Placing the electrolytic core and tighten the nut of electrolytic cell, connect the joint with the main engine; tighten the collar nut to ensure the good contact of joints.

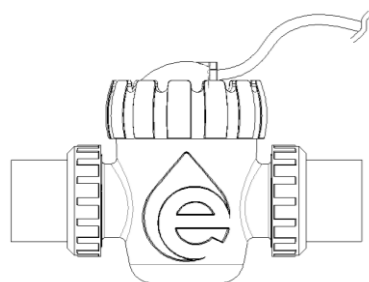
正确安装电解盒需注意以下事项:

1. 电解盒应当安装在其他所有的泳池设备之后(水泵,过滤沙缸,加热器)
2. 电解盒应当水平安置,在适当的位置切开管道。切开管道的长度至少为187mm,配合不同尺寸的管道此长度亦有所不同
3. 将管接头接入到管道上,并与电解盒一起进行试装,对配合不到位的位置进行调整。试装确认后,用户可使用粘合剂将管接头与管道进行粘合
4. 固定好电解盒与管接头连接的螺母。电解盒开口应垂直向上,方便放入电解芯
5. 放入电解芯并拧紧电解盒螺母,将接头接入到主机;锁紧接头螺母确保接头接触良好



Fix the electrolytic cell on the pipe, and place the electrolytic core into the electrolytic cell according to the sequence shown in the diagram; make the nut go through the output line of electrode and fix it above the electrolytic cell.

将电解盒固定好在管道上后,按照图中的顺序将电解芯放入到电解盒内;将螺母穿过电极输出线固定在电解盒上方。



Tighten the nut and connect the output line of electrode with the main engine

将螺母拧紧,将电极输出线与主机连接好

## 8. Begin to Use 开始使用

The following checks should be done by clients before running SSCmini salt chlorinator:

1. Check whether the sand filter is clean or not, and be sure that there is no metal dissolution or algal grown in the swimming pool
2. Ensure that the heater (if there is) allow the working of salt water
3. Ensure that specifications of the water in the swimming pool is within the suggested value scope
4. Run the filtration system for 24 hours before starting salt chlorinator system so that the salt in the swimming pool can be dissolved fully.

At the beginning of the use, adjust from 50% working time. Normally, it will spend 2-3 days to adjust the working time suitable to the swimming pool. Once the proper working time is adjusted, the system will no longer need frequent and great scale adjustment. The output can be adjusted appropriately to compensate the decrease of salinity caused by back flushing, draining and splashing, which will result in the reduction of chlorine production.

开启使用SSCmini盐氯发生器前,用户必须做好以下检查:

1. 检查过滤沙缸是否清洁,并确保泳池内没有任何的金属溶解或藻类生长
2. 确保加热器(如果有)是否能够允许盐水工作
3. 确保泳池内水各项指标是否在建议值范围内
4. 在启用盐氯发生系统前,运行过滤系统24小时使泳池内的盐充分溶解

在开始使用时从50%工作时间开始进行调整。正常情况下需要2-3日来调整到适合泳池使用的工作时间。一旦用户调整至适合的工作时间后,系统便不需要频繁大幅度的进行调整。可适当调节输出以补偿因为反冲洗、排水及泼洒等造成的盐度下降导致产氯量减少。

The water temperature of the swimming pool is another factor that affects chlorine production. When the temperature rises, chlorine will be easily volatilized, this will affect the effect of sanitizing directly. The water temperature should be within the scope of 15-40°C to ensure the effect of sanitizing. If the temperature of water is below 10°C, SSCmini cannot do the electrolysis.

泳池水温也是一个影响氯产量的因素。当温度升高时氯气将会更容易挥发,对消毒效果造成直接影响。应当保持水温在15-40摄氏度的范围内以保证消毒效果。在水温低于10摄氏度的情况下,SSCmini不会进行电解工作。

If the following parameter change, ideal chlorine production should be adjusted according to real conditions:

1. The temperature of water in the swimming pool changes dramatically
2. The load of sanitizing in the swimming pool increases
3. The life of electrolytic core reduces
4. The salt chlorinator isn't been used for a long time

当以下几个参数出现变化时,理想产氯量应该根据实际情况进行调整:

1. 泳池水温出现较大变化
2. 泳池消毒负荷增大
3. 电解芯寿命出现衰减
4. 盐氯发生器长时间没有使用