



## Chlorine Generator

## INSTALLATION & OPERATION MANUAL

MC20  
MC25  
MC30

### Foreword

Congratulations on purchasing a Minderchlor Chlorine Generator for your swimming pool. This system is designed for robust reliability and easy operation to give you many years of trouble free service.

Please read the instructions thoroughly before operating your unit. If you have any concerns or require any further assistance, then please do not hesitate to contact our friendly staff or any of our Minder distributors.

### Chemicals

It is important to note that the Minderchlor chlorinator does not maintain the water chemistry of your swimming pool water; it simply produces chlorine from a mild salt solution. To ensure that your chemical balances are within the guidelines listed below you should also have your water tested regularly at your local pool shop to encourage a sparkling clean healthy pool.

<b>PH</b>	7.2 – 7.4
<b>Total Alkalinity</b>	90ppm – 150ppm
<b>Cyanuric Acid</b>	40ppm – 65ppm
<b>Salt</b>	4000ppm
<b>Chlorine</b>	1.5ppm – 2.0ppm

For the best chlorine results in a balanced pool a salt level of 4000 parts per million (ppm) is required. This is easily achieved by using the formula below or approximately **20kg of salt per every 5000 litres**.

For example:

<b>Pool volume</b>	= Length x Width x Average Depth x 1000 = 9m x 4m x 1.5m x 1000 = 54000 litres
<b>Salt required</b>	= Pool Volume x 4 (salt level required, 4000ppm)  1000  = 54000 x 4 / 1000 = 216kg Or 11 x 20kg bags of pool salt

**NB:** Before adding salt to your swimming pool, please make sure your Minderchlor Chlorinator is switched off to avoid overload damage. **THIS WILL VOID ALL WARRANTY.**

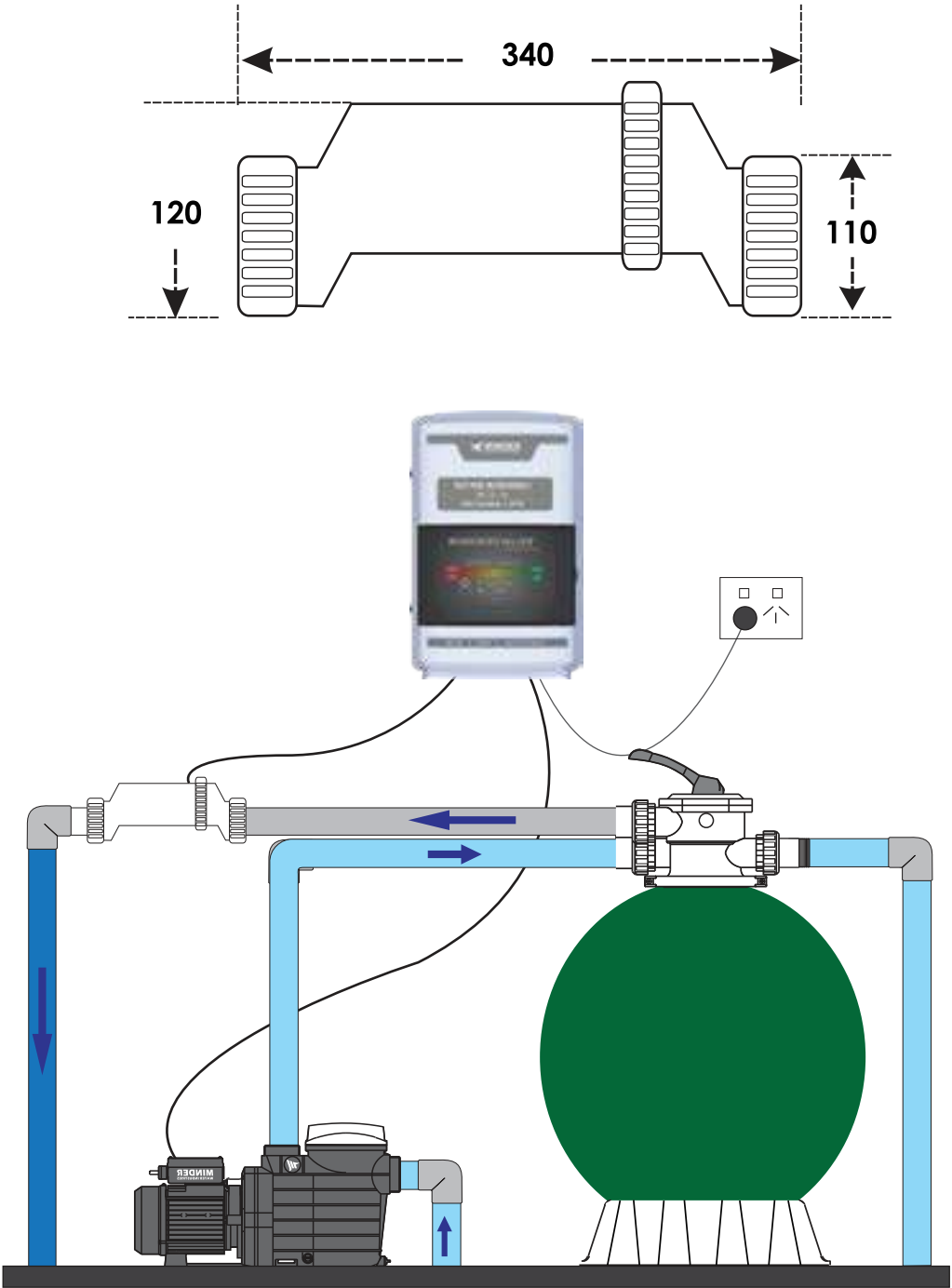
It is recommended to manually add chlorine to your swimming pool on initial startup as a saltwater chlorinator is designed to maintain Chlorine levels and not run for unnecessary long hours to try to build an acceptable chlorine level. The manual addition of chlorine may also be required for unforeseen situations where your swimming pool has required a high chlorine demand, for example after large bather load.

Cell Housing Installation

The electrolytic cell housing must be plumbed into the return line after the filter. Please see the installation diagram, fig.1, below for the preferred method. If a heater is plumbed into the system then the cell housing must be installed after the heater in the return line to protect the elements or heat exchanger. If a solar heating system is installed then the cell housing should be fitted after the line going up to the roof and after the return line coming back from the roof if it rejoins the main swimming pool return.

The cell housing has allocations for either 40mm PVC pipe or 50mm PVC pipe with the use of the supplied PVC reducing bushes

-- Please note the installation position of the electrolytic cell for water probe positioning --



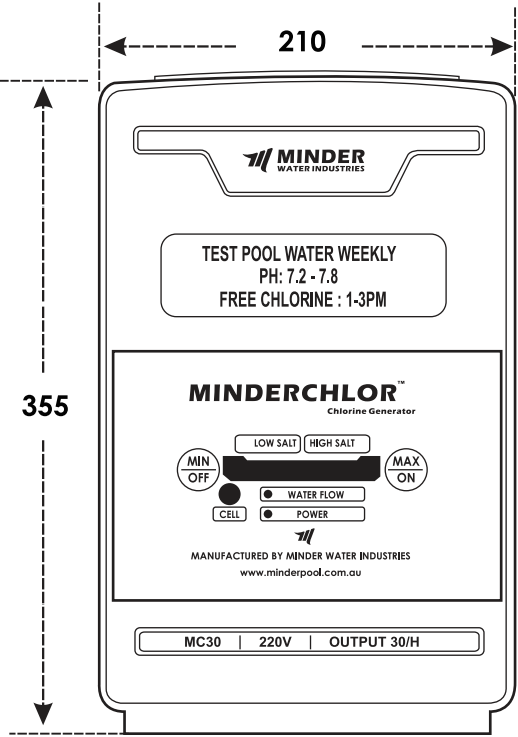
Power Pack Installation

Mounting the Minderchlor chlorinator power pack is done by either using the supplied mounting bracket or directly hanging on the wall with screws. If mounting directly on the wall, use the guide notches on the top vents to position the holes for installation. The chlorinator power pack is to be mounted at least 800mm above ground level.

It is strongly recommended that the unit be installed where it is protected from the elements. Rain and sunlight will prematurely age your unit. It should also be mounted in a position where it is away from accidental water spray. The unit should be installed so that adequate air flow can circulate freely around the power pack to allow the chimney drafting effect to perform efficiently.

Functions

All Minderchlor chlorinators are fitted with a 240v 10A power socket located on the right hand underside of the power pack. Your pool pump should be plugged into this socket so that the chlorinator and pump activate together and is controlled by the on/off switch. 6 in fig 2. Failure to plug the pool pump into this socket could lead to the chlorinator staying on with no water circulation. In case of water probe failure, over heating and a possible gas build up may occur. Please see fig.2 below in regards to function control



1. Chlorine Output LEDs – Fig.2

If the correct salt level is in the pool then all 10 lights will illuminate. Each light represents 10% chlorine output. If all lights are not illuminated then a higher salt level will be required. Make sure all salt is dissolved properly before adding more. The chlorine control, 2 in fig. 2, will increase or decrease the chlorine output to suit your chlorine demand. If all of the indicator lights flash then there is a water fault problem.

2. Chlorine Control – Fig. 2

The chlorine controller determines the amount of chlorine production. By simply turning the control clockwise you increase the chlorine output and by turning the control anti-clockwise you decrease the chlorine output. Do not force the control past its stop as this will damage the unit and void warranty.

**3. High Salt Light – Fig 2**

This light is a red warning indicator and will only illuminate when the salt level in the swimming pool is higher than 4500 parts per million. If this light is on, decrease the output by turning the chlorine control,2 in fig.2., anticlockwise until the high salt (red light) goes off and the 10 chlorine output LEDs are on. 1 in fig 2. If this light is the only one illuminated then the unit has gone into over temperature cutout and will reset once back to normal running temperature.

**4. Polarity Light – Fig 2**

The polarity light is the first indicator light, 10% in the chlorine output array, 4 in fig.2. This light will alternate between orange and green every reversing cycle, 4-12 hours. Factory setting is a 12 hour cycle.

**5. Circuit Breaker**

A circuit breaker is mounted on the front of the Minderchlor chlorinator and is designed to activate in the event of power surge or overload. When activated the yellow centre button will pop out turning off the unit. To reset, press the yellow centre button back in to resume normal function.Important note, turn off the chlorinator at the power point before attempting to reset the circuit breaker. Should the circuit breaker continually activate then you should contact your local Minder distributor.

**6. Off /On Switch**

The On selection, switched to the right, allows the chlorinator and pump to work continuously. The Off position switched to the left will turn the power off to the chlorinator and circulation pump.

**Maintenance**

Correct pool water chemistry is important and regular testing should be carried out. In areas where pool water quality is poor some calcium build up may occur on the cell plates. This may require periodical cleaning in a mild hydrochloric acid solution. For more details contact your local pool shop or pool maintenance technician.

**When cleaning the cell you must turn the chlorinator off or it will damage your unit and void warranty. Do not use any utensils or harsh chemical cleaners to remove any calcium buildup from the cell as it will damage the cell's semi-precious coating and void warranty.**

The chlorinator power pack should only be serviced by qualified electrical technicians. For your nearest Minder recommended service technician, please contact us:

National Customer Service Phone: +617 3299 2626  
Email: sales@minderpool.com.au

**WARRANTY**

Your Minderchlor Chlorinator is covered by a 3 year full warranty on the power pack and a 5 year pro-rata warranty on the cell from the date of purchase. The power pack controller and electrolytic cell are covered against defects in materials and assembly from the date of purchase in a domestic application. All electrical or mechanical failure due to faulty components will be repaired or replaced at no cost to the owner, including labour. Warranty will not be given without proof of purchase, so keep your original purchase invoice in a safe place.

Unfavourable environments and operating conditions beyond the control of the manufacturer such as incorrect power supply (Must be 230V 50 Hz), the Pentair Onga FREEFLO chlorinator plugged into an ancillary device such as a Variable Frequency Drive, wear and tear, water and insect damage, extreme ambient temperatures or any other adverse situation that affects the Pentair FreeFlo Chlorinator will void warranty. All warranties only apply if the equipment is installed and operated in complete compliance with the installation and operating instructions.

Minderchlor Chlorinator and electrolytic cells installed in a commercial situation are covered by a 1 year warranty. Commercial situations meaning motels/hotels, health spas, apartment/town house complexes and any situation with an unusually high bather load or abnormal conditions.

Minderchlor will not accept liability for any consequential loss or damage of any kind.

**FOR ALL WARRANTY ENQUIRIES PLEASE DO NOT HESITATE TO CALL**

National Customer Service Phone:+61 7 3299 2626

**OR EAMIL**

sales@minderpool.com.au

前言

感谢您购买了雷达牌盐氯电解机（以下简称盐机）。  
该系统为您提供安全可靠、简单便捷的操作。

操作本機之前，請仔細閱讀說明書。如果您有任何問題或需要任何進一步的幫助，那麼請不要猶豫，聯繫我們友好的工作人員或我們的任何Minder公司的分銷商。

化學製品

使用者需注意，为了对泳池进行適當的消毒，用户應除了使用盐机对泳池进行加氯外，还需要借助其它有关水质平衡的化学药品对泳池水进行水质平衡操作。

最佳制氯方程式：每1000升水投放4kg盐，按此比例，能将制氯效果发挥到极致。

例如：

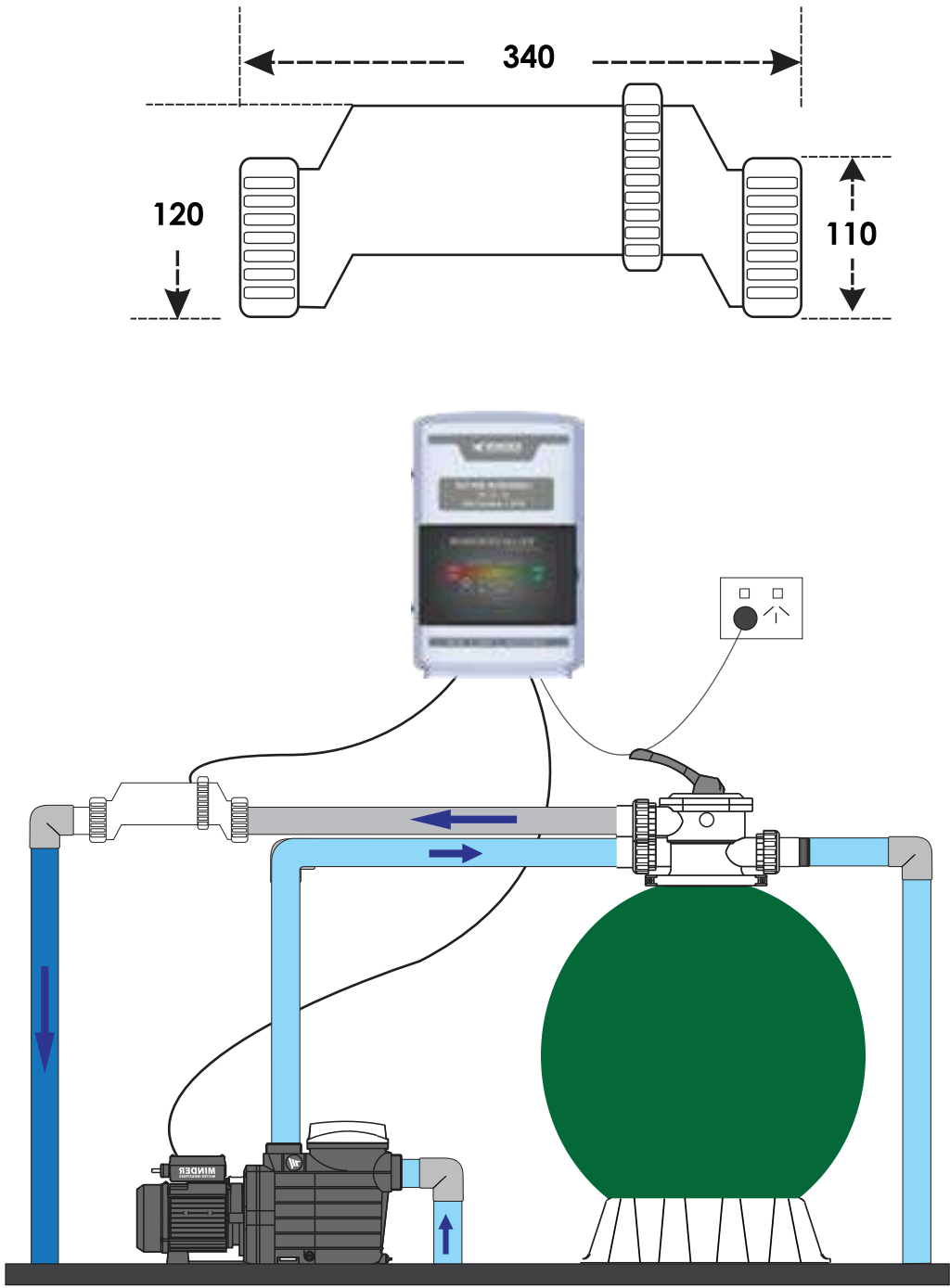
池體積  
= 長 × 寬 × 平均深度 × 1000  
= 9米x 4米x 1.5米 × 1000  
= 54000升

鹽需求量  
= 池體積 × 4 x 0.001  
= 54000升x 4 x 0.001 = 216公斤

注：对泳池进行加当前，请确保盐机处于关机状态，然后，待盐充分溶解后，再开启盐机，此操作是为了避免盐机初次启动时过载损坏。初次使用盐机前，建议用户先对泳池进行手动添加氯，并且要求投氯量要高于正常标准的3倍，再开启盐机进行工作。

盐机安裝

钛金属电解盒 (以下简称电解盒) 必須安裝於过滤器後之回水管導。请参照以下安装图（如下圖）  
电解盒有兩種接管口径，分别为：1.5寸PVC管或2寸PVC管供用户挑选



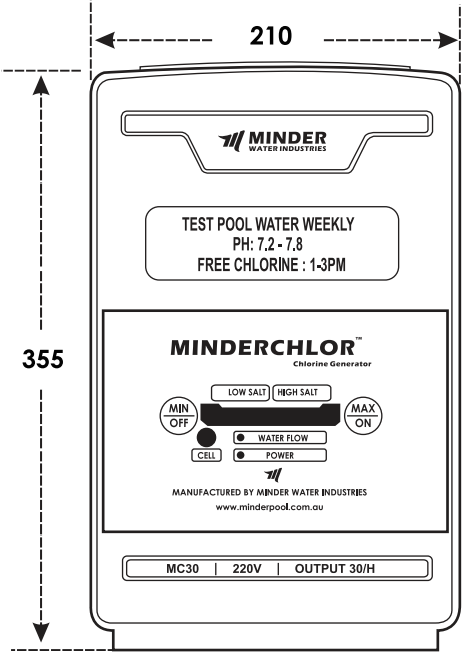
電源包安裝

盐机可通過使用附帶的支架进行安裝，或者可直接挂在已装螺丝钉的牆上。如果直接在牆壁上安裝，請使用頂部通風口旁邊的導向安裝孔為主機進行定位安裝。盐机安装高度限制：盐机必须安装在离地平线0.8米之上。  
若于户外安装盐机，请注意雨水和阳光会令机器提早老化，建议用户需对盐机进行适当的保护。例如加装遮挡阳光和雨水的遮挡板等。让盐机在干爽、空气流通的环境下有效地发挥其功能。



# 功能

所有雷达牌盐氯电解机都配有220V-240V,10A電源插座給予水泵插入。當水泵與盐機連接後，按下盐机控制面板开关键“ON”，此时盐机和水泵會同时启动工作。开启盐机前，必须确保水泵的进/出水口处于开启状态，使得水循环系统能正常运作。反之，会导致水泵过热和盐机的电解盒氯气积聚。



1.氯气输出 LED - （如图中第1点）  
如图，每个LED指示灯代表10%的氯输出量。当盐含量达到理想状态时, 10个指示灯會全部亮起。如果所有指示灯都熄灭，此时用户应按照1000升水中加入4KG盐的比例，对泳池进行人工投盐，或可致电你的泳池经销商询问。

2.氯的输出调节开关 - （如图中第2点）  
氯的输出调节开关可以调节氯的产生量。当顺时针转动开关时，盐机将会为你降低氯气输出。而逆时针转动开关时，盐机将会提高氯气输出。当扭动调节开关到尽头时请不要强行扭动，否则会损坏机器。如人为操作不当导致设备损坏将不属于质保范围内。

3.高盐指示灯 - （如图中第3点）  
红色警告指示灯为高盐指示灯。1：当高盐灯亮和氯气输出 LED指示灯同時亮起时，表示泳池水中盐含量已超出4500ppm，此时用户可通过顺时针旋转氯的调节开关，减少氯的输出，直到高盐灯熄灭。2：當只有高盐灯亮起，而氯气输出指示灯熄灭时，代表盐机温度过高，热保护装置已自动开启。此时用户需对盐机进行关机，待温度降低后再开启。如降温后再重启盐机，仍然只有高盐灯亮起，请致电泳池经销商进行询问。

1.极性指示灯 - （如图中第4点）  
极性指示灯是位于10个LED指示灯的第一个LED灯（氯输出量10%）。极性指示灯分为橙色和绿色2种不同颜色。顏色之转换即盐机正在发挥自动清洗功能。出厂设置的交替时间：12小时为一个周期。

2.复位按钮-（如图中第5点）  
当盐机电压过载的情况下，盐机会自动启动电流过载保护功能，设备此时处于待机状态。當遇到電流过载，用户必需先关闭电源开关，再按下复位键的黄色按钮，最后对盐机进行重新开机，使之恢复正常运行。

3.盐机开关按钮-（如图中第6点）  
ON键: 开启（开启盐机和水泵）  
OFF键：关闭（关闭盐机和水泵）

# 保養

- 1.盐机只是代替定期加氯功能，而用户应对泳池进行定期检测，要适当添加化学物质来维持你的泳池水质平衡。
- 2.在水质差的泳池，电解盒中的钛金属片表面会积聚较多的钙，如在此情况下继续运行，会导致电解盒的工作效能大大减弱。这时候用户需购买特效的清洗液进行清洗（泳池经销商有售）欲了解更多详情，请联系您的泳池经销商或泳池维护技师。
- 3.用户在清洁电解盒的钛金属片表面的钙时，除了使用特效的清洁剂外，不要随便使用其他清洁化学物品对电解盒进行清理，否则会破坏钛金属片表面的涂层或缩短电解盒的使用寿命。
- 4.盐机只能够由有资格的技术员进行安装及维护。

全國客服電話：020 3995 6651

電子郵件：service@minder.cn

Fault/ Problem	Possible Cause	Remedy
NO FLOW All chlorine output LED's flashing as per Page 4, note 1.	Pump Turned Off Closed Valve Air in System Dirty Filter Low Water level Calcium Build-up on water probe Sensor	Ensure Pump Open Valve Check All O-Rings & Grease Clean or Backwash filter Fill up Pool Clean Probe in a mild hydrochloric Acid – ref: Page 5
HIGH SALT Red LED illuminated	Salt Level to high, above 4500ppm	Turn Chlorine Control anticlockwise as per page 3 note 4. until salt levels reduce.
NO LIGHTS	Circuit Breaker tripped. Page 3. Fig. 6  Mains power failure	Reset Circuit Breaker as per Page 5, note 6. If this continues call a service technician. Check switches and switchboard circuit breaker.
LOW / NO CHLORINE PRODUCTION	Chlorine output too low  Salt level too low  PH too high Timer period too short High phosphate levels Cell connection.	Increase chlorine production as per Page 4, note 2. Increase salt level to 4000ppm and check stabilizer (Cyanuric) levels Adjust Ph between 7.2 – 7.4 Increase running time Add Starver Check connection at the junction box on the underside of the unit.
ABNORMAL CALCIUM BUILD UP ON CELL	Calcium levels in swimming pool water extremely high or water chemistry	Get your water tested and are balanced as per the Langelier is not balanced Saturation Index Unit not reversing, call a technician.
OVER TEMPERATURE RED LED ONLY	Salt too high, above 4500ppm  Installed in an area where the ambient temperature is extremely high	Turn chlorine control anticlockwise as per Page 4, note 3. until salt levels (no other lights) reduce Supply adequate cooling. Install outside of the extreme temperature area.



www.minderpool.com.au  
www.minder.hk  
www.minder.cn

迈达水行业版权所有