



# OWNER'S MANUAL

## NMB SERIES



**NMB Manual V2.0.doc**

# 1. PARTS IDENTIFICATION LIST

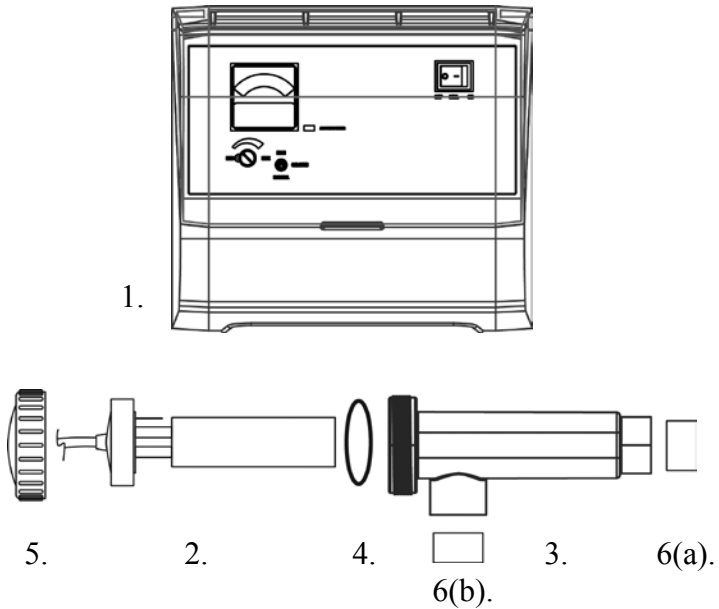


Figure 1.1

1. Powerpack with timer option (x1)
2. Cell (x1)
3. Cell Housing (x1)
4. O-ring (x1)
5. Cap (x1)
6. Reducing Bushes (x2),  
from 50mm to 40mm(Australia)  
from 60mm to 50mm (Europe)
7. Pool Cover Switch connector (x1, if option included)

## 2. PRECAUTIONS TO BE TAKEN BEFORE INSTALLATION

### ATTENTION!!!

*BEFORE CARRYING OUT THE INSTALLATION OR MAINTENANCE OF THIS PRODUCT, **DISCONNECT THE POWER SUPPLY***

*NON-COMPLIANCE TO ANY OF THE DISPOSITIONS HEREBY CONTAINED MAY CAUSE DAMAGE TO PERSONS OR THINGS OR THE INCORRECT FUNCTIONING AND DAMAGE TO PARTS OF THE EQUIPMENT.*

### WARNINGS

During the phase of installation of this product verify that:

- The power supply corresponds to what is indicated on the label situated on the base of the unit;

**N.B:** Verify the presence of all parts in the packing and carefully read all of the Instructions Manual before beginning installation of this product.

### 3. INSTALLATION INSTRUCTIONS

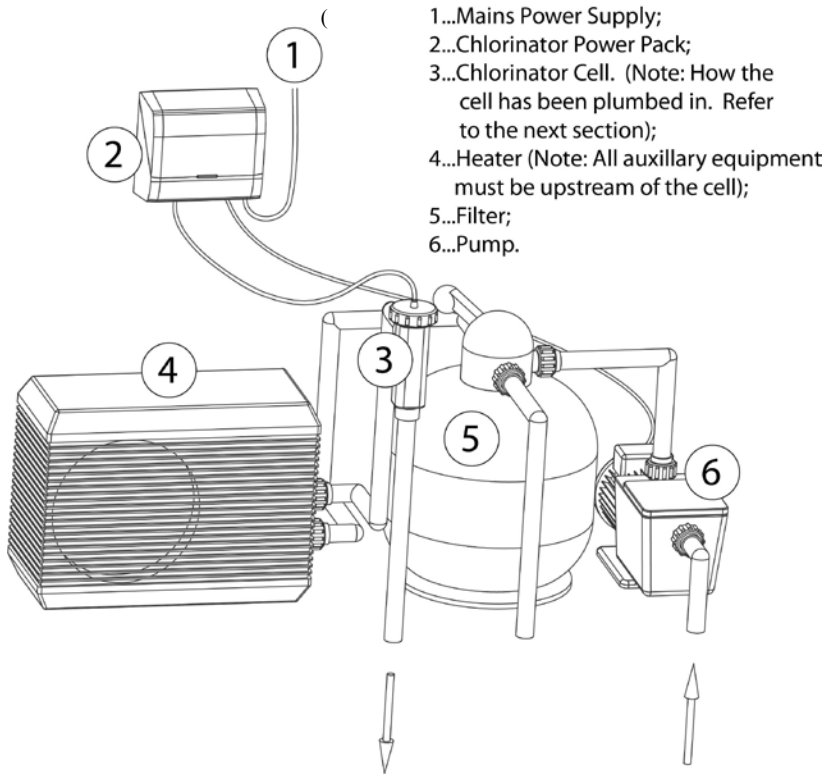


Figure 3.1

#### **3.1 Chlorinator Cell (3)**

Please refer to Figure 3.1 and Figure 3.2, it is recommended to install the electrolytic cell within 1.5 metres of a vertical wall or fence to allow the power pack to be easily mounted. The Cell must be installed such that a localized air pocket will form in the event that no water is flowing (See Figure 3.2). Any heaters or other equipment **MUST** be installed before the cell.

Also note that the flow sensor must always be positioned above the cell (7) to function effectively.

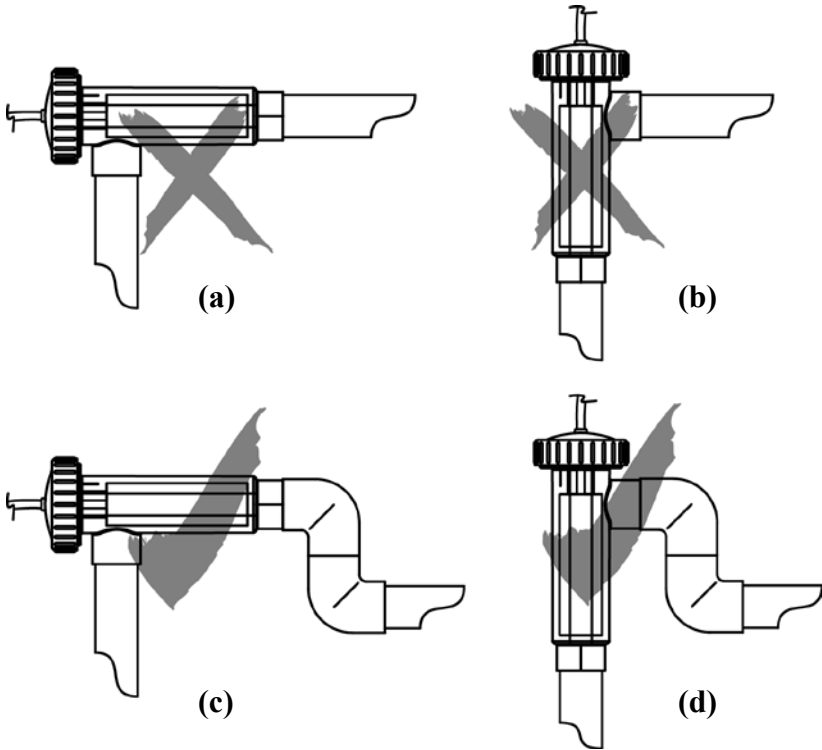


Figure 3.2

**WARRANTY WILL BE VOID IF THE CELL IS NOT  
INSTALLED AS SPECIFIED.**

### **3.2 Chlorinator Power Pack (2)**

While the chlorinator power pack has a UV resistant cover, for optimum performance & lifespan, the chlorinator should be installed out of direct sun light & if installed within an enclosure, should have reasonable ventilation. The power pack

must be mounted on a vertical wall or fence within 1.5 metres of the cell and at least 1 metre above the ground.

When connecting the cell, there are 3 connections Anode (RED), Cathode (BLACK) & the Sensor (WHITE). (Refer to following diagram in Figure 3.3).

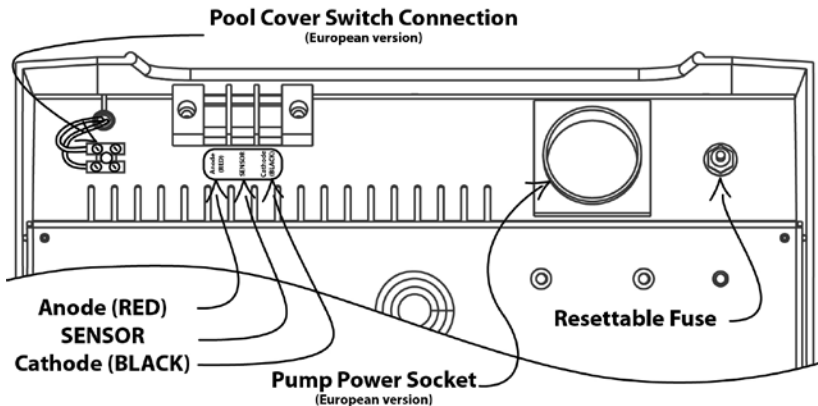


Figure 3.3

**WARNING: THE CHLORINATOR MUST BE RUN IN CONJUNCTION WITH THE FILTER/PUMP AT ALL TIMES.**

To ensure that the pump is always running while the chlorinator is operating, the user has the option of plugging the pump into the base of the chlorinator. If filtration is required beyond the chlorinator operation, please refer to sections 5.1(D) & 5.2(B).

Once everything is securely plugged to the cell & to the chlorinator, only then plug the power lead into the 220-240 VAC power.

## 4. POOL PREPARATION WITH SALT & STABILISER

### 4.1 Calculating Salt Requirement

The Salt-water Chlorinator will produce chlorine with salt concentrations as low as 3,000 parts per million (PPM) & can operate up levels of 35,000 PPM (Seawater levels).

Operating your pool at 3,000 – 4,000 PPM is ideal and will reduce the running time of your pump, filter and also extend cell life.

Note that a salt concentration of 3000 PPM is equivalent to **3 grams per litre**. When adding the salt, disperse around the deep sections of the pool. **DO NOT** attempt to add salt via the skimmer as this can cause damage to the filtration system and the chlorinator & **DO NOT** have any automatic suction type pool cleaners operating until the salt has completely dissolved. **Allow the salt to dissolve for 24 hours before powering the chlorinator.**

### 4.2 Stabilizer

It is also recommended to add cynuric acid stabiliser. This prevents Chlorine from breaking down too quickly, especially during the summer months. Recommended dose of Stabiliser (Cynuric Acid) is 30-60PPM (i.e. 30-60mg per litre).

## 5. STARTING THE CHLORINATOR

**WARNING: THE CHLORINATOR MUST BE RUN IN CONJUNCTION WITH THE FILTER/PUMP AT ALL TIMES.**

Before switching ON the chlorinator, making sure the pump and Chlorinator are plugged into the power outlet. Once the chlorinator is switched ON, the Chlorine Production Output Display will show the chlorine production setting. By default, the unit should be set to 100% & should not be changed during the initial setup period. At this point, your Chlorinator will now generate Chlorine.

This chlorinator range comes with a number of display & control variations. There are 2 main display & control panel types... The first displays the production output via a panel meter, & the second, using LEDs.

### 5.1 Panel Meter Variation

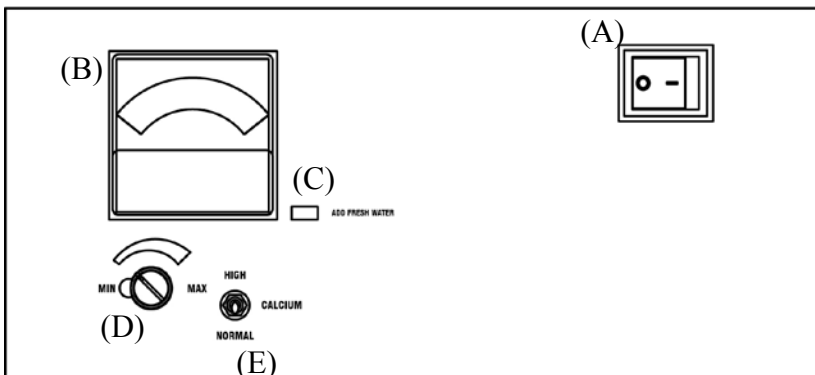


Figure 5.1



(A) ON/OFF Switch - Main switch for the chlorinator.

(B) Panel Meter - Displays the production output of the chlorinator. For standard chlorinator systems, the panel meter scale displays from left to right for NO output to Maximum, respectively. Self-Cleaning chlorinator systems, the panel meter displays No output in the center & deflects either left or right towards Maximum depending on polarity. A basic legend is provided for the panel meter (C).

(D) Output Control - A simple knob increases production output by turning it clockwise. During initial setup, the knob should be turned completely clockwise & best performance can be achieved for the chlorinator if the salt level is adjusted such that the production output just reaches 100% without turning the knob back. The output level should only be reduced if an excess of chlorine is being produced for the required filtration time

(E) Calcium Switch - A function only available on self-cleaning chlorinator, allows the user to control how frequently the chlorinator cleans the cell. In pools, which are high in calcium, the switch should be set to HIGH.

## 5.2 LED Variation

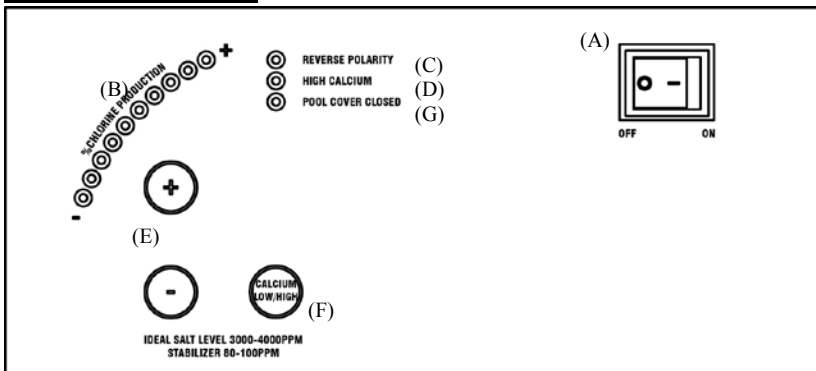


Figure 5.2

(A) ON/OFF Switch - Main switch for the chlorinator.

(B) Output Display - A series of 10 LEDs, which indicates the output production level of the chlorinator. Each LED represents 10% of the maximum output level the unit has been calibrated to. Adjustment of the output level is performed using the + / - buttons (E). The output level should only be reduced if an excess of chlorine is being produced for the required filtration time.

(C) “POLARITY” LED - Indicates when the chlorinator is in reverse polarity. This LED will show that the chlorinator changes polarity periodically every 4 or 6 hours, depending on the HIGH CALCIUM setting.

(D) “HIGH CALCIUM” LED - Indicates when the chlorinator is set to operate in a HIGH calcium environment. Pressing the “CALCIUM HIGH/LOW” button (F) changes this setting.

(G) “POOL COVER CLOSED” LED - A function only available in some models, indicates when an external switch has been switched on by closing the pool cover. In this condition, the chlorinator reduces production by 50%. The external switch is connected to the chlorinator via a DC power socket shown in figure 3.3. The DC power connector is also supplied with these models.

**NOTE: NO power is supplied from this socket & warranty will be voided if found that the socket has been used for anything other than its designed purpose.**

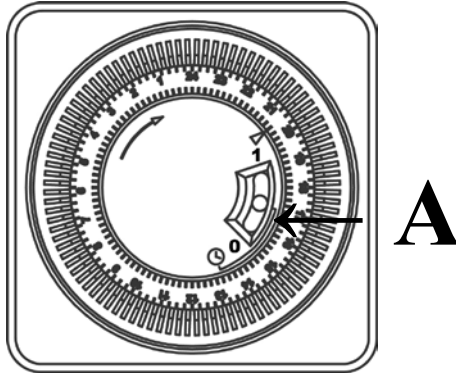


Figure 5.3

### **5.4 Timer**

A simple to use timer is used to control the operating time of the chlorinator & pump for the filtration system. The outer edge of the face of the timer can be turned clockwise to set the time. One revolution of the outer edge of the timer face represents 24 hours & each tag represents a 15 minute interval. Toggling the tags outwards will activate the chlorinator & pump for that time period.

The timer can be overridden by changing switch (A) from either OFF(0) to AUTO(⊕) to ON(1).

Note: The timer is shown is designed to run with 50 Hz Mains frequency. For Australia, as in most countries, this should be OK. 60Hz is also available for chlorinators sold in the USA.

## 6. MAINTAINING THE POOL

### 6.1 Chlorine Level

Using a 4 in 1 test kit, test the pool water at least once a week to ensure a sufficient chlorine level is being maintained. A chlorine reading of 1.5mg/l (1.5 PPM) and above is adequate when taken near the skimmer box. Should the level fall below 1.5mg/l, check the salt level to ensure it is correct; increase the production level if not 100%; & if this isn't sufficient, increase the daily running time for the chlorinator, pump & filter.

### 6.2 pH Level

The correct pH is within the range of 6.8 to 7.2 for fibreglass pools and 7.2 to 7.6 for other pools.

### 6.3 Total Alkalinity

TA should be checked at least once every month and should be maintained between 120 to 150mg/l (120PPM to 150PPM) for correct pool water balance. **Have the water checked for Cynuric Acid Stabiliser.**

## 7. CELL INFORMATION

The cell should be periodically inspected for accumulations of any foreign deposits. Common Causes of Premature Cell Failure:-

- Operating the cell with too little salt in the water.
- Excessive accumulation of calcium deposits on the cell.
- Low water through cell.
- Damage to electrode coating caused by scraping with sharp object.
- Cleaning the cell in too strong an acid solution.
- Acid washing the cell for too long and too often.

**Note: Warranty is voided if any of the above is found to be case.**

## 8. GENERAL QUESTIONS & TROUBLE-SHOOTING

### **8.1 How does a Chlorinator work?**

The Chlorinator works by utilising the salt in the water which is made up of Sodium & Chlorine. The chlorinator supplies current to the cell which, in the presences of the catalyst coating, promotes specific reactions those results in Sodium Hypochlorite. This kills bacteria & in doing so, brakes down back to salt.

### **8.2 How does the Self-Cleaning Chlorinator work?**

In principle, the Chlorinators operation is the same as the standard Chlorinator. The Chlorinator Cell cleans itself when the polarity is reversed. In the Standard Cell, Calcium builds up over a period of time depending on how much calcium the pool contains. White Cement pool finishes are known to have

a calcium problem and a Self-Cleaning Chlorinator is an option to eliminate frequent cleaning of the chlorinator cell. Note: Chlorine is produced in both polarities.

### **8.3 Fuse**

This model of chlorinator comes with a resettable fuse, located as shown in figure 3.3. Pressing the red button can reset the fuse. If the fuse is unable to be reset, turn off the power to the unit, unplug it & call an authorized service technician.

### **8.4 Low chlorine production**

Please refer to section “6.1 Chlorine Level”. One possible reason for low chlorine production is low salt levels. If this occurs, the display will show a level lower than that set and the user will also be unable to raise the level. Salt will need to be added, following the procedure set out in section 4.1 Calculating Salt Requirement.

It should be noted that generally pool will not normally lose salt. Warm weather generally makes the water evaporate, raising the salt level. But high rain fall can dilute the pool water reducing the salt concentration.

Another possible reason for this problem is that the chlorinator is under-capacity. Generally, chlorinator’s capacity is specified by pool sizes for warm & cool climates. But this assumes a concentration of people per day & this can take a chlorinator beyond its limit, if exceeded.

**WARNING: THERE ARE NO USER-SERVICEABLE PARTS  
INSIDE CHLORINATOR HOUSING. TO PREVENT  
ELECTRIC SHOCK, DO NOT REMOVE COVER.**

## **9. CUSTOMER RESPONSIBILITIES**

Before you call for service please read the Operating Instructions carefully and check through the following points regarding your responsibilities as customer.

A service fee will be charged should service be required as a result of any of the following:

1. Power point not turned ON.
2. Faulty Power-point.
3. Time Clock set incorrectly.
4. Unit incorrectly installed.
5. Switches and controls incorrectly set.
6. Poor water chemistry (Salt, pH etc).
7. Cell not maintained.
8. Water flow too low.
9. Unit having been tampered with by unauthorized persons.





# WARRANTY

This product has been produced & thoroughly tested to the highest standard & therefore carries the following warranty.

Both power Pack & cell have 24-month full warranty, from date of purchase, entitling the purchaser to have the product repaired, or replaced, if shown to have failed due to workmanship or materials. Further 36 months pro-rata for the cell, entitling the purchaser to have the product repaired, or replaced at a pro-rata cost.

WARRANTY IS IMMEDIATELY VOIDED UNDER THE FOLLOWING CIRCUMSTANCE....

- Installation performed in-correctly by an un-authorized person;
- Power Pack, or cell, serviced by an un-authorized person;
- Correct Salt level not maintained at all times;
- Power Pack not protected from the elements, or not operated with adequate ventilation;
- Cell not correctly maintained, or water flow too low.

This warranty is only applicable to material & workmanship only. It is non-transferable & doesn't cover freight cost. UNDER NO CIRCUMSTANCE will we take responsibility for loss, damage to property or, injury to person(s) due to a failure of this equipment or installation. This warranty shall not extent to any cost otherwise incurred.

**NOTE: This section must be filled out on purchase to validate warranty.**

Purchaser's Name  
Address  
Purchased From  
Date of Purchase  
MODEL

Serial No.

