

## **DATA SHEET**

# Salt Water Chlorinators







**EcoSalt Max** 



**EcoMatic** 

Saltwater chlorination is the best solution to ensure a sparkling clean swimming pool. Benefits offered include:-

- Improved water quality! Due to the consistent chlorine dosage and lack of residue, water quality is much better than that achieved by using conventional dry chlorine compounds.
- Simple Operation! Once installed there is nothing to do simply switch on and forget about pool chlorination.
- Free Chlorine! No more chlorine bills the unit will pay for itself in about a year.
- Improved swimming pleasure! Saltwater chlorinated water puts an end to sore, red eyes and smelly, itchy skin.

**Davey** Chlorinators are of exceptional design combining high flow, long life electrodes with a robust heavy duty power supply to provide many years of trouble free operation. All models also feature reverse polarity self cleaning cells as well as cell production, low salt, low flow and overload indication. Three types are available:-

**EcoSalt** 

Economic, simple and compact units for smaller pools that also feature a timer with battery back up for automatic operation.

**EcoMatic** 

High specification, low maintenance, reverse polarity salt water chlorinator with extra features including digital LED display, flow detector for auto shutoff in no flow conditions, overload protection and large electrode surface area cell plates for high rate chlorine production.

**EcoMatic Commercial** - For large pools, the specification including LED display and heavy duty cells for enhanced chlorine production.

Combining the benefits of the saltwater chlorination process with outstanding design, ease of operation and exceptional reliability a Davey Chlorinator is simply the best chlorinator available. Once installed no pool owner will ever be without one again!

#### **POOL CHLORINATION**

All swimming pools collect algae and bacteria during use and for reasons of both hygiene and water quality regular sanitisation is necessary. There are various methods available, though the most widely used is the addition of chlorine, which is available in different forms including gas, liquid and various dry compounds. Gas is the most effective, but in bulk quantities is difficult to handle and potentially hazardous. There are a number of dry compounds available, all of which are combined with an inert carrier, the different chemical formulations providing different chlorine concentration levels. These are all effective, but have the disadvantages of depositing residue and, like gas, are also potentially hazardous.

#### SALT WATER CHLORINATION

The most common source of chlorine is common salt or sodium chloride. When dissolved in water the sodium and chlorine ions separate to form free sodium and chlorine. If an electric charge is passed through the solution in a process called electrolysis chlorine gas forms at the anode and hydrogen gas at the cathode, free chlorine gas being recovered in the process.

Salt water chlorination uses this simple process, the pool water being passed through an electrolysis cell where chlorine gas is produced. Due to the very low quantities it is totally safe and very effective as the gas being produced is of 100% concentration. The electrolysis process also has the benefit of producing small quantities of ozone as a by-product which improves the sanitising effect. In order for the process to occur salt is dissolved in the pool and thereafter there is constant production of chlorine whenever the pool pump is working. It really couldn't be simpler!

#### **CHLORINATOR OPERATION**

Davey Chlorinators include two components, the control unit and the electrolysis cell. The control unit is wall mounted close to the filter and provides DC power to the electrolysis cell. The pump is connected through the control unit so chlorine production only occurs when the pump is operating, the standard sizing basis being dosage levels of 1.5gms/m<sup>3</sup> of pool volume every 24 hours.

The electrolysis cell is mounted in-line with the pool circulation piping after the pool filter. It has no moving parts, but does scale up with use, the self cleaning process removing this scale by reversing the electrical polarity. Periodically the cells should also be manually cleaned.

Salt is added at the pool at a concentration of about 4,000ppm, a typical 100m³ pool requiring about 400kgs. After the initial dose concentration levels need to be periodically topped up, though top up levels are small, usually in amounts of 50kgs.

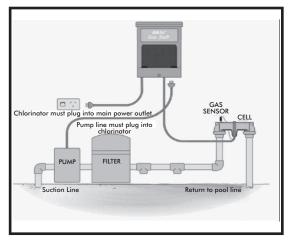
When operating a Chlorinator it is very important that pH is regularly monitored and controlled and also if the water becomes exceptionally dirty additional manual chlorination may be necessary to temporarily boost chlorine levels.

#### **EQUIPMENT DATA**

Model	Power	Chlorine Production	Pool Volume (8hr operation)
EcoSalt MES20CE	120W	20gm/hr	62m³
EcoSalt MES26CE	160W	26gm/hr	81m³
EcoMatic MEMS36CE	300W	36gm/hr	100m³
EcoMatic MEMS50CE	322W	50gm/hr	140m³
EcoMatic M4920	570W	50gm/hr	600m³
EcoMatic M4921	1150W	100gm/hr	1170m³

NOTE: Recommended pool volumes are based upon 1.5ppm chlorine dosage in eight hours of pump operation. Dosage should be increased by +50% for pools with heavy bathing loads or in hot climates and a larger chlorinator specified accordingly.

#### SYSTEM LAYOUT FEATURES



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