

## SPASA FACT SHEET No. 11

# SALT CHLORINATORS.....

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Salt Chlorinators, or if you like, chlorine generators, are an alternative means of sanitising your pool with chlorine using the process of electrolysis.

The electrolysis process is achieved by passing the salt water solution through an electrolytic cell which converts sodium chloride (salt) in the water into chlorine gas which, when dissolved in water becomes sodium hypochlorite (liquid chlorine). So you are in fact producing your own chlorine to sanitise the pool.

### THE CELL

The cell usually consists of a clear plastic housing containing the electrodes, made up of an anode, and a cathode made from or coated with exotic metals like platinum, titanium and iridium. The cell and electrodes may differ in size and configuration depending on the brand of chlorinator, however the principals of their operation remain the same.

### CONTROLS

Most chlorinators these days are equipped with controls to regulate the amount of chlorine produced, depending on individual requirements, and are fitted with a gauge to show the set level. Some units come with timeclocks and in-built facilities for pool lights, and other more sophisticated options. Remember, choose the one that best suits your requirements and budget but also consider your lifestyle and how you intend to use the pool.

### SELECTING A SUITABLE UNIT

A number of factors will effect the selection of a salt chlorinator.

- 1. Size of the pool or spa** - larger pools need larger chlorinators.
- 2. Bathing load** - heavy loads consume more chlorine.
- 3. Size of the filtration system** - poor water flow will require longer running time.
- 4. Summer water temperature** - high temperature and strong sunlight cause faster loss of available chlorine.

### HOW MUCH SALT?

The amount of salt needed for the salt chlorinator to produce sufficient chlorine varies, depending on the type of chlorinator. Most models require only weak salt solutions of between 0.3% to 0.7% (3000 ppm to 7000 ppm) to effectively chlorinate a pool. These levels are between one fifth to one tenth the level of salt in sea water.

The manufactures recommendations should be strictly followed to avoid damage to the chlorinator and to insure adequate chlorine production.

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Replacement salt is only required to replace normal consumption, and loss from filter backwashing, splashout and any overflow due to rainfall

## MAINTENANCE

Although there are some maintenance free cells available, most brands of cells will require cleaning periodically, to remove calcium deposits which build up on the electrodes as a result of the electrolysis process. This cleaning is usually accomplished by soaking the electrodes in a weak acid solution. **NB.** The manufacturers instructions should be strictly adhered to regarding cleaning, to avoid damage to the assembly.

## OTHER CHEMICAL REQUIREMENTS

The requirements for chemical balance are the same for electrolytic chlorination, as for traditionally chlorinated pools. Total Alkalinity, pH, Calcium Hardness and chlorine levels should be checked regularly. Chlorine stabiliser (isocyanuric acid) should be added to the pool and maintained at approx 30-50ppm, to reduce chlorine loss due to UV rays.

During periods of high bather load it may be necessary to manually supplement with sodium hypochlorite (liquid chlorine) to maintain correct chlorine levels, and regular superchlorination or shock dosing should be carried out.

**Warning:** When using salt chlorinators with gas or electric heaters and heat pumps, care should be taken to ensure the production of chlorine is adjusted to suit either the spa or pool, as the heaters internal components can be damaged by excessive salt and/or chlorine levels. This is particularly important when operating for extended periods during heat-up.

For more information on pool maintenance see Fact Sheet No 1. WATER BALANCE

For further information on building, renovating or maintaining a pool, contact;

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