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Registered in Spain CIF B-73311169

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WHY SHOULD I INSTALL A WATERMAID?

This is a simple question to answer. Watermaid has been designed to use the best of the long-life materials that are available and the most reliable components. It's the best chlorinator on the market and the only one that has been explicitly designed for use in isotonic pool solutions.

Self-Cleaning units:

In other brands of chlorinators, reversing the polarity is detrimental to the life of the electrodes.
We are not reversing the current to the two main electrodes.
We have devised a method of self cleaning that reverses the currents between the two Titanium Electrodes. The main -ve electrode and the gas sensing electrode.
Power is cut to the +ve electrode (that has the Platinum coating and is the one that is destroyed in reversing) and therefore is not damaged during the self cleaning cycle.

Salt Water Pools

A saltwater pool is often the pool of choice
It can be complicated deciding which pool is best for your family.
Many questions revolve around saltwater pools and normally chlorinated pools.
Saltwater pools are NOT chlorine free pools. A salt water pool is simply one that utilises a chlorine generator. Chlorine generators have been around for decades. As technology and materials continue to evolve, Chlorine generators continue to improve in performance. Salt water pools used to be the exception,
but now they are becoming a widely accepted method of water treatment in swimming pools.
A lot of builders are now making Salt water systems standard on their new pools.

Why use saltwater pools?

An important fact is that you save the chemicals you have to add normally. Generally, when people swim in a normally chlorinated pool (a pool with no salt water in it) they feel like their skin dries quicker upon exiting the pool. They may feel and /or see whitish residue, chlorine flaking, on the skin. In a salt-water pool (one with a chlorine generator) the water feels smooth, your skin feels smooth and many people feel more refreshed. Swimming in a mild saline solution is much like taking a shower in soft water. Saltwater pools are often more relaxing than their chlorinated counterpart.

Sea water has a salt content of around 35,000 parts per million ("ppm"). The “Watermaid” chlorine generator require a salt content of between 4000 - 6000 ppm in the pool to operate effectively.

What's the difference between a saltwater pool and a pool maintained with chlorine?

Lower Chlorine Levels
Saltwater Pools - 0.5 to 1.0 ppm chlorine
Traditional Pools - 3.0 - 10.0 ppm chlorine
No "Chemical Bath" Feel
NO packaged chlorine needed.
NO **red** eyes
NO Itchy dry skin
Better Swimmer Comfort

By eliminating the need for the harsh chemicals, you eliminate the source of the irritation that plagues swimmers in most pools.

Controlled Stabiliser Levels

If you are using chlorine tablets, you are adding 1 Kg. of stabilizer for every 2 Kg. of tablets you put into your pool. Your stabilizer level rises to over 100 ppm and your chlorine becomes ineffective and yellow algae and poor sanitization results.

Excessive stabiliser increases the 'Kill time' for bacteria of the sanitiser (Chlorine) from minutes to perhaps as long as 'weeks' depending on stabiliser level and of course pH value.

With a salt system, you add stabilizer as needed and are able to keep the level low. Your chlorine remains VERY effective and you need much less in the water to do the job.

In commercial pools in the USA, state code requires you to drain a pool when the stabilizer level exceeds 100 ppm. The salt system avoids this problem.

Superior Algae Control

Saltwater pool systems can virtually eliminate algae problems. This is because the chlorine in the pool is not inhibited by high stabilizer levels.

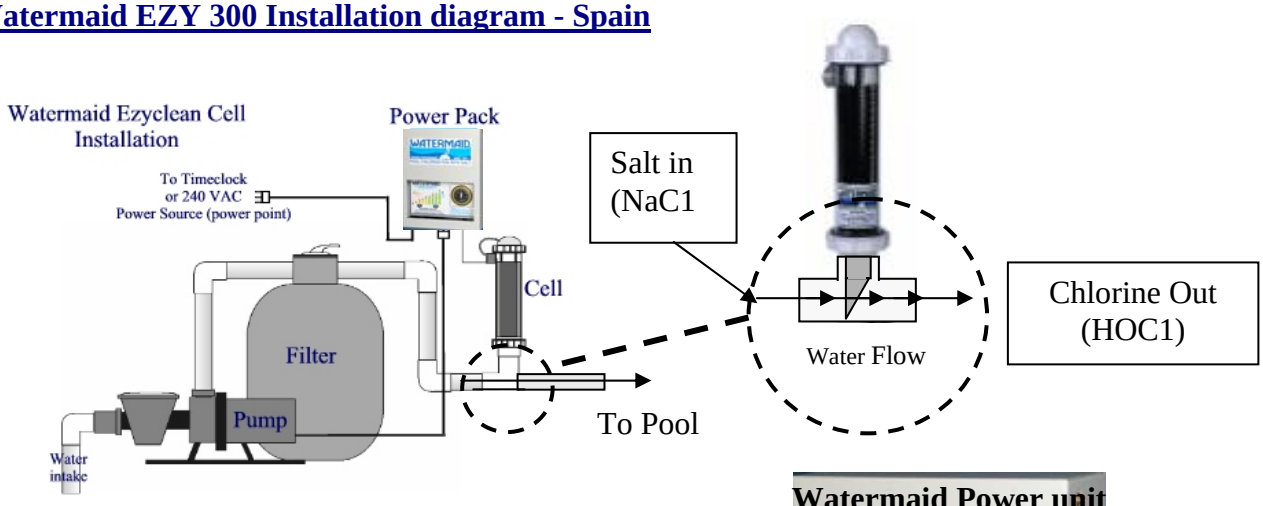
Popularity and cost benefits of salt water pools

Most people who consider themselves "sensitive" or "allergic" to chlorine are not reacting to the chlorine at all. What is creating a problem is the packaged pool chemicals and the additives and carriers in those chemicals. Those same swimmers, who claim allergic reactions to chlorine, typically experience no problems when they are in a saltwater pool. The answer isn't the absence of chlorine; salt systems create their own chlorine. The answer is the absence of all the packaged chemicals and by-products in those chemicals.

In the case of saltwater swimming pool operating costs, most people do not buy a saltwater pool system for the sole purpose of saving money. They buy it for the increased swimmer comfort.

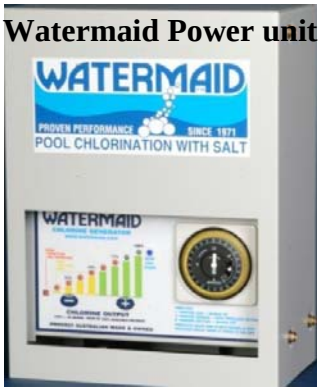
With that said, they do save quite a lot on pool chemicals, but it probably takes a few years before the system pays for itself. In the long run, however, a saltwater system will save on costs!

Watermaid EZY 300 Installation diagram - Spain



Watermaid Cell Installation

Watermaid Power unit



Salt Water

Technically water is not officially considered to be "salt water" until you reach a threshold of 6000 ppm salt. Up to that point it is considered to be "fresh water".

A saltwater pool changes the way you do your water chemistry.

So it is very important to follow directions carefully with regard to water chemistry.

Some pool owners have experienced problems trying to keep the pH down, but it is simply a matter of keeping up with the water chemistry and not letting the pH get too high before trying to adjust it.

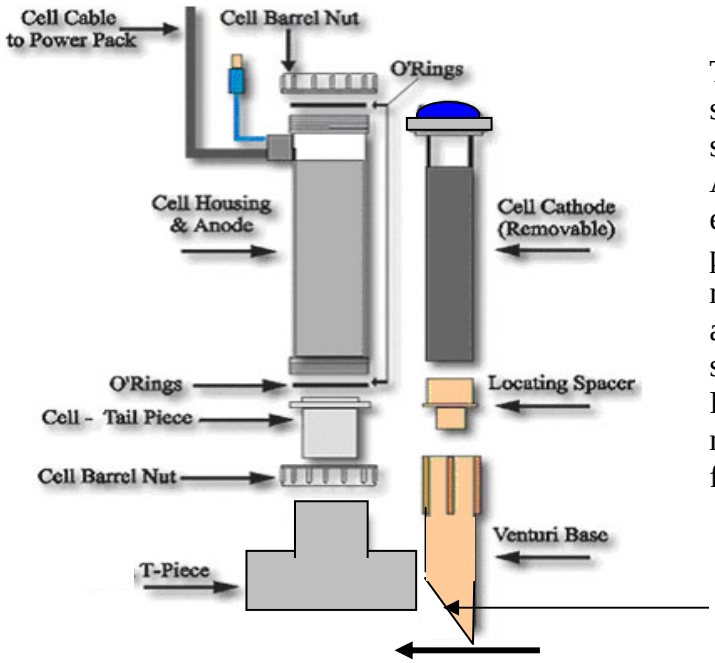
Overall, the water chemistry does get easier, but there is a small learning curve.

Now you can see why we have opted for a saltwater chlorination system and offer these on our website. It is still Chlorine, the best known all round sanitising agent but delivered in a natural way. Salt is added to the pool water, the electro cell changes the salt into Chlorine which kills the bacteria. It is fully adjustable to deal with the most severe contamination - Superchlorinate if required - at the touch of a button. No storage of chemicals, not dangerous to animals or people and the cost of the salt probably being no more than €10 Euros / year, after initial setting up.

Essential for people with sensitive skin, allergies, eczema or psoriasis.

WATERMAID™
PROVEN PERFORMANCE SINCE 1971
POOL CHLORINATION WITH SALT

Watermaid EZY-300 Chlorinator Cell



Direction of water to pool

The patented Watermaid cell occupies much less space in the pool filtration system plumbing than standard 'in-line' systems.
Another advantage of using this design is the ease of cleaning the cell where water is particularly rich in calcium and may require regular monthly cleaning, the clever design allows removal, cleaning and putting back in service in just a few minutes.
Pools where pH is maintained at the recommended levels require cleaning less frequently

Discover The Hidden "Sanitation Problem"

That All Pools And Spas Have!

90% Of The Time Your Pool Or Spa Is Not Healthy!

This is a bold statement but true, and here's why. There is no way that you or your pool service person can manually keep your pool sanitized or chemically safe. You are either swimming in a pool of invisible bacteria and algae or the chemical levels are so high that your body is absorbing chemical toxins. These chemical toxins also destroy your pool surface and equipment. You would literally have to stand beside your pool and check it every hour and make chemical adjustment to make it safe. How do we know this?

Through years of research and Field-testing.

Daily tests and monitoring of 100 pools for just 6 months. They were checked for bacteria and chemical levels and no more than 10 of the pools were in a safe range on either parameter at any given day. What this means is that 90% of the time those pools were not safe to get in. Some pools had professional service, and some were owner maintained. It made no difference.

It was recently reported that in a study of pools in Florida there was a 21% increase in water borne disease caused by public pools in Florida for the summer of 2004. The Tampa Florida area News Media and other national media have reported numerous problems in residential pools, as well. –

Is your pool maintained better?

It's Time To Wake-up And Learn The Facts!

The "Cosmetic Water Trick": Pool service companies and pool supply stores have been selling what is called "Cosmetic Water" for years. Cosmetic water is water that looks good, but is so over loaded with chlorine, bromine, and other chemicals that the water is nearly lethal, or at best, toxic and unhealthy to you and your family.

75% percent of the cost of taking care of your pool is in the "Time and Travel"- not the chemicals - so the less they visit you the more they make. The more chemicals they put in the less they visit. They don't care that the chemical levels are hazardous to your health; their motto must be "just keep the pool from turning green". You see, they know that you are judging your pool or spa simply by how it looks, and not by what kinds of bacteria or chemicals are in it. It should be a crime.

Can this be fixed?

Yes, but we must learn the truth about how a pool functions. There are six parameters that need to be maintained to keep your pool or spa safe, and clean.

The parameters are:

1. **pH control,**
2. **Circulation,**
3. **Filtration,**
4. **Sanitation,**
5. **Oxidation,**
6. **General Cleaning.**

All of these parameters have a degree of importance, but the most important parameter is **pH**.

Proper pH is the foundation that supports the proper sanitation and oxidation of bacteria, algae and other pathogens. Filtration, circulation and general cleaning are mechanical parameters and are easily maintained by observation of equipment. But, no matter what type of sanitizer or oxidizer you use, they are only as good as the pH level of the water you put them in. Chlorine, Bromine, Baquacil, Sustain, Salt, and Copper Ions, are all dependent on proper pH levels to be effective.

Are your pool parameters better controlled?

Here is how it works:

The pH of a pool or spa is affected by many variables, heat, cold, pool surface, backwashing, adding water, draining water, people getting in, adding sanitizer (chemicals), rain, dirt and more. The less volume of water you have, the more significant these variables become. Now, let's see how pH effects the cleanliness of your water.

Let's say your 10,000-gallon pool has a chlorine level of 2.0 PPM *(it should be 1.0 or less)* and the pH is 7.6. At this pH level the effective killing power (" EKP ") of the chlorine is 45%. If a couple of people get in to swim, the pH will go up in just a few minutes. If it just goes up by 1/10 to 7.7 the EKP of the chlorine will go down to just 35%. A 10% drop in killing power. Add a few more people, and the pH will be in the 7.9 - 8.0 range in no time, and the chlorines' EKP goes down to a mere 20% or even less. Just when you need the killing power of chlorine, it's gone. You now have a choice to either add chlorine to (4.0 to 5.0) to compensate for the low killing power, which turns the water into a very unhealthy, toxic chemical soup. Or, you add acid to the pool, which of course you can't do while people are swimming in the pool. So you see, it's the EKP of the chlorine that matters, not how much chlorine is in your pool. At a pH of 7.3, chlorine has an impressive EKP of 75%. So, if you keep the pH at 7.3 you will use up to 80% less chlorine, and have a much safer pool - saving you money and safeguarding your health.

The bottom line is this. No matter what type sanitizer you use, you must **automate** the control of pH levels *(i.e., use an Auto- pH control system)* in your pool or spa in order to keep it bacterially and chemically safe for you to use. If you don't, your health is at a much higher risk.

EQUIPMENT COMPARISONS

There are many different systems available with different features - each should be considered for it's individual merit -

No-one ever complained about paying for quality!

Manufacturers who are competing against one another with prices and others who are competing against one another with equipment are not necessarily going to produce comparable units. This has been demonstrated by the wide range of quality being offered to pool owners as "comparable units". Some manufacturers strive so hard to achieve a "cheaper price" that they've allowed their price competitive spirit to stand in the way of their design excellence. They've taken short cuts and their resulting products are not so good.

For example, some manufacturers have designed a circuit board that can't operate continuously in an overload condition for long periods of time. Certain electronic elements in the control board overheat and fail in these units and this generally occurs when the chlorinators are operated in salt concentrations that are higher than the recommended level.

Other manufacturers use a 240-volt AC electric light dimmer switch to control the 8 V DC output. In a crude way, these controllers chop large sections from the waveform and the DC output is modified to conform more closely to one of the higher frequency harmonics. Ferro-resonant characteristics are excited in the transformer and at lower output; the 8-volt DC output is unstable. Heat is generated in the transformer and this shortens the life of the transformer or limits the concentration of salt that can be used in the pool.

Other manufacturers have designed a 240-volt AC control unit using a simple capacitor and variable resistor. These simple components only manage to regulate chlorine production from 100% down to 80% of full output. A compromise has been designed into these chlorinators by installing a smaller transformer and reducing the maximum output of the chlorinator.

Some manufacturers use more sophisticated control circuits on the 240-volt AC side to gain a wider range of regulation but these units unveil the inherent instability that exists with 240-volt AC controllers at low output. Transformers and other circuit components overheat and fail.

Many manufacturers recommend a salt concentration of 3000-4500 ppm as being the optimum concentration for their system of chlorinating and conditioning pool water. This has occurred when the standard for the industry is 6000 ppm. This salt concentration has been aggressively marketed as a financial advantage for the pool owner and the manufacturers proudly explain that the cost of salt and the cost of delivering it to the pool are reduced by a third or more in pools using their system.

These manufacturers have missed the point. Their system of chlorinating and conditioning the water in the pool doesn't address one of the most important issues.

Some manufacturers have designed special cells that have closely spaced plates for use in pools where price competitive pressures encourage the reduction of salt concentration in the pool. These cells allow a saving in the cost of buying salt and delivering it to the pool but the cells are also taking the salt concentration in the wrong direction for optimum comfort in the pool.

These cells cater more for the interests of competitive tendering than for the interests of the pool owner.

When the pool owner wants to upgrade the quality of the pool and enjoy the benefits of using a higher salt concentration, it's then necessary to purchase and install a different cell.

Some manufacturers do recommend using a salt concentration of 6000 ppm but the equipment supplied by these manufacturers fails in other areas. For example, some rate their chlorinators not to exceed 11 grams per hour. Others set the top limit at 15 grams per hour. Others go a bit higher.

These systems have no spare chlorine manufacturing capacity that can be used to fight sudden emergencies and very quickly extinguish infectious contamination of the pool.

These units fail the most essential of all the tests.

Other manufacturers, who recommend 3000-4500 ppm as the optimum concentration, also claim that their chlorinators can operate in seawater. This may be true. But their units are not continuously rated to operate in seawater. It's an empty statement. These manufacturers have installed a circuit board with components that have a life of only three or four years when operating in their own recommended optimum salt water concentration. These units can't be continuously rated for use in a seawater concentration of 30-35000 ppm. This would place an even larger load on the transformer and circuit board components that are already overloaded when operating in the design load.

Perhaps the best example of the competitive price spirit of some manufacturers is the short cut taken with the size of their transformers. It's not hard to multiply 30 amps by 8 volts to discover that the cell load and heat losses in a chlorinator are 240 watts. At the design load, most chlorinators have a power factor of approximately 0.6. In rough terms, the rating of chlorinator transformers should therefore be 240 watts divided by 0.6 or 400 VA.

Watermaid is one of the few manufacturers that use a 400 VA transformer. Other manufacturers install transformers rated from 150 VA through to 250 VA. The 250 VA transformers are continuously rated to produce only 19 grams of chlorine per hour at a power factor of 0.6 (30x250/400). The 150 VA transformers are continuously rated at only 12 grams per hour.

None of these transformers have sufficient capacity to operate continuously at 30 grams per hour and none of them have sufficient spare chlorine manufacturing capacity to fight sudden emergencies and very quickly extinguish infectious contamination of the pool. There are other examples.

We believe that it's in the interests of the pool owner to purchase a cell that costs a little more up-front but lasts three times as long.

The life of the platinum coating on the terminals of a cell is determined by many factors but two important determinants are the current density flowing across the plates and the quality of the platinum coating.

Watermaid cells are continuously rated at 30 amps when the current density is 500 amps per square metre of terminal. This is the platinum coating manufacturer's recommendation. Some manufacturers use current densities as high as 1200 amps per square metre. These cells don't have a very long life.

There are three main grades of platinum coating available in Australia.

The premium quality and more expensive coating provides a cell life of about 5 - 10 years. Watermaid cells have a life of about 5 - 10 years. The lower quality and less expensive platinum coating provides a life of about 3 years. Some manufacturers get only two or three years life out of their cells.

Watermaid only uses premium quality platinum in its cells. Within this context, it's not necessary for us to provide a five-year pro-rata warranty to supplement the poor performance of a lower grade platinum coating. We don't use a lower grade platinum coating.

But there is another issue. We have been advised by our clients and customers that we are losing a competitive marketing advantage for our cells because we don't have a pro-rata warranty.

For this reason we introduced a five-year defect free warranty, several years ago, that is more advantageous in all respects to that of our competitors.

But we still use premium quality platinum coatings in all our cells, including the platinum coating we use in our 'look-alike' cells - Replacement 'Watermaid quality' cells for other makes.

The third grade of platinum coating is used for reverse polarity cells. We don't produce cells of this kind. They have the advantage that less frequent cell cleaning is required. They have the disadvantage that the continuously reversing polarity of the terminals undermines and detaches the platinum coating. These cells have a life of about two to three years.