



A C I D E

AQUAVIC MADE IN AUSTRALIA
QUERCUS MAGNAE A GLANDIBUS CRESCANT



THE OFFICIAL MOUTHPIECE OF THE AQUAVIC IONISER USER'S GROUP

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From the Director:

"Time flies when you're having fun." How true, and with the lengthening of the days after a long and colder-than-usual winter, we're having lots of fun. No sooner had we reopened our doors after our short break in FNQ than the sun reappeared and orders and the number of enquiries gathered pace. And whilst touring and beginning to think about our coming season, we couldn't help but notice the number of pristine beaches with fine white sand stretching as far as the eye could see. But apart from the odd beachcomber (see LH pic below) they were deserted! Shortly after, whilst cruising on the Daintree River, the reason for the absence of bathers and surfers was obvious. The size and number of salt water crocodiles basking on the banks - and the number of signs warning swimmers of the presence of 'stingers' - the reason became crystal clear. Ignore the many signs and venture into the water at your peril. The free vinegar supplied might be an antidote for being stung by stingers, but it's not too effective at replacing an arm or a leg - or worse! Give me an ionised, croc free, fresh water pool anytime.



Deserted beach – Cape Tribulation FNQ.



Salt Water Croc. Daintree River FNQ.

Shortly after our return, it was reported on the National News that a Vietnamese fishing boat, which had successfully evaded detection by Border Force for many days, had 'run aground' at the mouth of the Daintree River, and the crew of 17 abandoned ship and swam ashore. With huge saltwater crocodiles (see RH pic above) in great abundance, how lucky were they to make it to the beach?

Electrodes. Check them now:

Having now come back to earth after a short reality check, it's time to come out of hibernation and concentrate on fresh water matters rather than salt. No sooner had we reopened the metaphorical door, than the phone and email began to arc up, and, as usually happens at the start of any season, the items most sought after were electrodes. Fortunately we had restocked after the winter break and had plenty on the shelf. If you haven't already done so, I'd suggest that you give your flowcells the once-over, and if

your electrodes have all but disappeared, give us a call or send an email. As a rule of thumb, if they're about the size of the round black, terminal sealing washer, you need another pair.

Fuses:

Our Aussie designed and built “*New Millennium*” ionisers were launched around 10 years ago, and their performance and reliability far exceeded our expectations - and continue to do so. We don't claim them as bullet-proof, but by golly, it takes a lot to stop them. With the numbers “out there” now exceeding 4 figures, the exception to the rule appears to be the odd fuse failure due to “dirty” or contaminated incoming power ie lightning strikes, cars running into power poles etc. In other words, the fuse is doing exactly what it's supposed to do – protect the control unit's motherboard.

The odd blown fuse is not an issue, and easily rectified, but we've had examples where fuses failed in rapid succession. The cause of second and most recent example was not a faulty control unit, but rather the over-voltage power supplied to the whole of the residential area. When tested, it was found to be 15 to 20 volts above the regulation* with spikes occasionally exceeding 260 VAC. However, in the 10 years we've been making our “*New Millennium*” ionisers, we've only had the two areas that caused us any grief, the first was in Sorrento on the Mornington Peninsula, and the second in the ACT – and both were identified as ‘*variations*’ in the incoming power, and very definitely not a design fault.

* Here, in Victoria, the norm is 230VAC.

“*Aqua Soleil*” Reborn:

4 or 5 years ago, we released an ioniser which was designed specifically for off-the-grid low voltage, solar powered systems. The target was specifically spas, water features, ornamental ponds and fountains, and were also offered as an alternative to our basic “*New Millennium*” Series 1. Although their performance was more than satisfactory, they were slow to move, with potential customers, surprisingly, favouring its bigger and far more expensive sibling, the “*New Millennium*” Series II. Just why they favoured the more expensive unit for relatively small volumes of water is a mystery, but we believe that the built-in timers for pump and ioniser run times may have figured in the decision.

As the time approaches for the renewal of (electrical safety) registration of our basic “entry level” Series 1, we have decided to allow the renewal to lapse, and to replace it with a relaunch of the “*Aqua Soleil*”. It is hoped that the lower price and the presence of a battery-backed, 24 hr. 7 day time clock will enhance its marketability. And as per company policy, it is very definitely made right here in Australia.



A typical “*Aqua Soleil*” ioniser package with C-40 Flowcell & Electrodes.

Note the plug-in low voltage power pack and the battery-backed time clock.

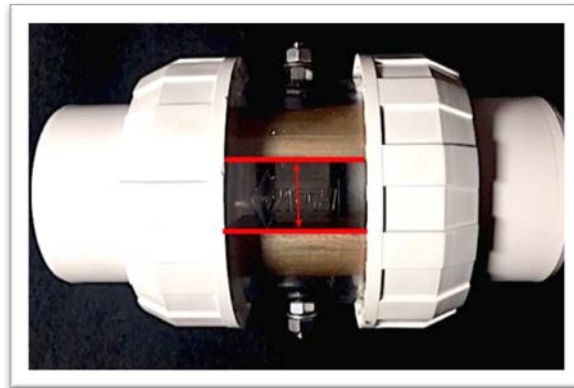
The control unit can also be run directly from any 12VDC source such as solar – or even battery.

For further details revisit Vol. 13.2 of our newsletters http://www.aquavic.com.au/latest_news.htm

TDS / Conductivity* explained - again:

Although already discussed several times in earlier editions, the old chestnut of the importance of the pool water's TDS/conductivity just keeps cropping up - so here we go again. In a nutshell, it goes like this. For an ioniser to be effective, the low voltage DC current that is applied to each of the electrodes must travel through the water, from one electrode to the other. The pic below clearly shows the two electrodes and the gap that separates them, and the **double-ended red arrow** is that vital gap through which the current must travel.

* Conductivity is given as mS/cm. TDS as ppm. $TDS \times 2 = \text{conductivity}$.



The water supply of most large towns and regional centres is usually very low in TDS/conductivity, which means that a freshly filled pool usually requires a one-off dose of several kilos of salt to 'kick-start' the system. On the other hand, if the pool water is saline, or fresh water that has never been changed, the TDS/conductivity is quite often exceeds the maximum allowable, and effectively short-circuits the electrodes. Unless you'd prefer to be swimming in an increasingly complex chemical soup, this is why we strongly recommend that the whole of the water - or at least a fair percentage - be dumped every 5 years and replaced or diluted with fresh.

Of some relevance here is that, contrary to popular belief, heavy rain events make very little difference to the TDS/conductivity. Why so? Assume your pool is 10 x 4 x 1.4 average depth, 56,000 litres + what's in the pipework, filter, heating etc. If you have a rain event of 100 mm - *and that's one helluva lot of rain* - that will only dilute you pool by approx. 5% reducing a pre-existing TDS of 2000 ppm to only 1900 ppm - and still far too high for a fresh water ionised pool. Also, frequent backwashing also has very little effect on the resident TDS/conductivity. Contrary to popular belief, losses to evaporation do not reduce it - *it actually increases!* Recommendations by others NOT to dump and replace the water, may be related to a vested interest in supplying the multiplicity and complexity of chemicals required to maintain the aesthetics of the water in spite of its age. Remember: **Never confuse water clarity with water quality!**

Agents:

As the popularity of our products increases, so does the need to increase the number of agents who understand and appreciate the benefits of swimming in a pool which is conditioned by our Australian-made pool algacide and sanitising system. Of recent times, we've added two more agent's to our list and are pleased to announce the appointment of:

Greater Brisbane

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Perth

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Auto Oxidising:

We're frequently asked "what chemicals do I need to add to my ionised pool?" The short answer is as few and as possible. But because you need to maintain the *balance* of the pool water (as does every other pool owner) you'll probably need sodium bicarbonate to lift the Total Alkalinity, and either hydrochloric or "Brickie's acid" (or sodium bisulphate) to reduce the pH, and, in season, an oxidiser to burn out organics. An oxidiser is required to burn out those unwanted organics such as body fats and oils, sunscreen, cosmetics, perspiration etc., in fact anything organic that has no place in a pool, and usually presents as cloudy water.

Historically, the oxidiser was always one of the chlorine variants, but because chlorine in any form is very nasty stuff by anybody's measure, an ever-increasing groundswell of unease with its use was the catalyst for seeking a safer and more user-friendly alternative. A number of variants have been tried over the years, but we finally settled on an oxygen-rich persulphate.

A decade ago, it was almost impossible to find a chlorine free oxidiser in a pool shop, but as ionisers began to make an impact in the recreational waters industry, more and more versions became available, all easily identified by having the word "Oxy" in the title. Eg *Oxy Fresh*, *Oxy Boost*, *Oxy Impact*, to name but a few. Being a fine white highly soluble powder, it is usually broadcast a kilo or two over the surface of the pool. In peak season, a well used pool with a heavy bather load may need a kilo every 7 to 10 days, but more likely than not, none at all in the off-season.

Because these products are highly soluble, some of our customers have gone the extra mile and dissolve a season's worth in a drum of water, then use a small peristaltic pump to inject the required dose automatically directly into the pipework. And as the dosing pump is electrically interlocked with the main pool pump, the dose is thoroughly mixed before it enters the main body of water. Our final pic (below) is one such example of an auto-dosed ionised pool, and the results speak for themselves.

If you'd like to know a little more about adding an **auto oxidiser dosing system** to your pool, contact our office by phone or email – the details are on the masthead of this newsletter.



Pic of a pool with "New Millennium" Series II and automatic (non chlorine) oxidising pump.



The 2nd outlet is designated "AUX" is specifically designed for dosing pump.



The Director