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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:

ANZAC DAY traditionally signals the end of the swimming season in Victoria, and apart from the unseasonably warm autumn, this year was no different as the phone stopped ringing on April 24th. You could just about set your watch by it. As mentioned in the previous edition, the pace really picked up about last September and we've had been flat out ever since, a situation brought about to some extent by our undertaking to personally follow up the new owners of Summertime Pools who had chosen a fresh water "New Millennium" ioniser rather than a chlorine gas generator / salt chlorinator - CGG. Talk about busy. By comparison, a one-armed paperhanger would have thought he was on holidays!

For example, one particular day of "follow-ups" had me visiting a customer in Horsham, then a customer west of Dimboola, then north-east to Robinvale-Euston, returning to Bendigo via Swan Hill and Kerang, a tour which logged 1037 kms for the round trip. Fortunately, I thoroughly enjoy country driving – especially when out in "Sunset Country" - and not a kangaroo in sight. My affinity with that part of the world is probably something to do with my parents choosing to live in Ouyen up until the end of WWII.

Victoria's semi-desert Mallee was certainly not a place for the faint-hearted in those days, where the nearest swimming hole was usually some farmer's dam - if it hadn't already gone dry, or had sheep bogged in the mud. How things have changed. Now we find that most of the towns in The Mallee have their own public pools surrounded by lush green lawns and shady trees. I'm pleased to say that having caught up with the backlog, follow-ups with Summertime Pools' customers subsequent to that grand tour have been a little more leisurely.

Winterising your Pool:

And with winter upon us again, it's time to look at what we should be doing with our outdoor pools. (Owners of indoor pools please ignore, but you might like to revisit your running times). The short answer is "as little as possible" as the term "winterising" (I refuse to spell it with a 'z') applies only to chlorine-dependant pools which require relatively high levels of maintenance and lots of power in spite of the fact that they are no longer used for swimming. By default, an ionised pool is "winterised" year round.

The off-season is when ionised pools really come into their own as their owners begin to appreciate just how little maintenance an ionised pool requires to keep the water in good order until the next season. The Old Hands are already very much aware of this feature, but for those of you have yet to experience an off-season, the reasons are as follows:

Firstly:

Unlike the volatile chlorine in pools fitted with a CGG, copper and silver ions are absolutely unaffected by the killing effect of UV and literally go into hibernation until the next season even though the ionising times have been drastically reduced - or in some instances, stopped altogether. This phenomenon, which

is unique to ionisers, is known as “residual” a subject we’ve covered before - and our “*New Millennium*” ionisers have a very strong residual. By comparison, the residual of chlorine is practically non-existent and can be measured in hours or days rather than weeks or months. It is also the reason chlorinated pools require a stabiliser, or “sunscreen” to reduce the chlorine-killing effect of the sun’s UV on the chlorine.

Secondly:

If you were amazed by how much your power bills dropped when you replaced your CGG with an ioniser, you’ll be astounded by what follows. All through the summer months, your neighbours with CGG’s were running their pumps 8 to 10 hours per day – 12 hours is not unknown* - to maintain the effective levels of free chlorine, whereas you’ve been running yours 3 hours per day. Now that the season is over, you can now reset the pump run timer to the absolute minimum - or you might try turning it off altogether.

If you have a “*New Millennium*” Series 1, this can be as little as 20 minutes per day, for a “*New Millennium*” Series II with V1.0 software, this will be 1.0 hour per day, and if your Series II ioniser has V2.0 software, this will be 2.0 hours per day. And if you happen to have a variable speed pump, set it to run on the lowest setting. By way of example, the company’s 500 watt pool pump (65,000 litre pool) is now running 1.0 hour per day with the speed control set to 15% full load, or 0.075 kWh per day!

** We do acknowledge that some owners of CGG run their pumps for as little as 3 hours per day, but we still beat them hands down on power consumption. Their salt cell is pulling up to 25 amps @ 9.0 volts DC whereas our flowcells are pulling 0.25 amps @ 9.0 volts DC - approximately 1.0% of that of a CGG.*

Thirdly:

Keep the cover (if fitted) free from detritus, and keep an eye on the water level. Chances are that with the off-season’s much-reduced rates of evaporation and the odd shower of rain, the water level will rise above the skimmer box opening and you’ll be dumping water to maintain levels rather than topping up, and this can affect the balance. The bottom line is that if it looks OK, and you’re no longer swimming:

“If it ain’t broke, don’t fix it. Leave it alone!”

Electrodes, whilst you’re resetting the pump and ionising run times, have one last look at the condition of your electrodes. If they’ve actually burnt away and disappeared behind the “rubber” seal, or if they’re beginning to drip you’ll need to give some serious thought to replacing them before the next season. If there’s still plenty of ‘meat’ left on them, and they have a light peppermint green or brown coating - or a combination of both they’re fine, but a quick dunk into warm soapy water won’t go astray.

On the other hand, if they’ve acquired a heavy coating which would be more at home on the Barrier Reef, remove them and clean them back to bare metal. If the water had a high mineral content, the “coral” may be very difficult to remove, requiring plenty of elbow grease, a scraper, and a stout wire brush. Warm soapy water and a pair of rubber gloves are recommended.

Have a close look at the round EDPM / rubber seal. It should be OK but if in doubt, drop me a line and we’ll send you some new ones. And also look closely at the two terminal holes in the clear flowcell body. The plastic is pretty rugged stuff, but if a ham-fisted person has over-tightened the terminal nuts there is a chance that the body is cracked. Unlikely, but it can happen. If your flowcell has suffered such a fate, we have plenty of replacements in stock.



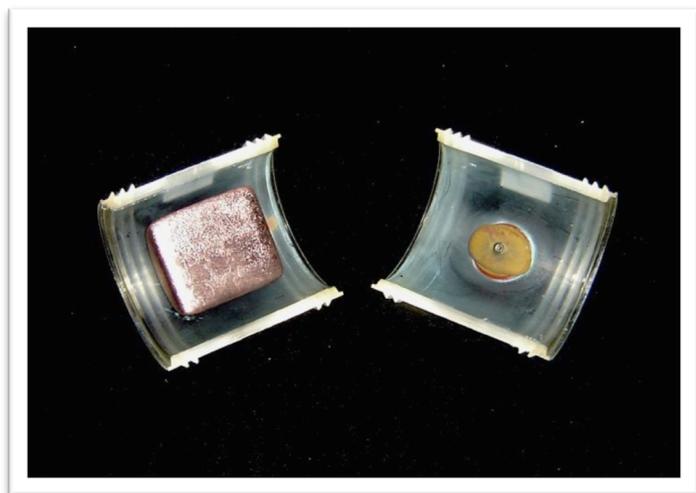
Although a little difficult to see if you've received the hard copy version of this newsletter, the electrodes shown in these two examples above depict electrodes that have been overcome by a severe fouling. If allowed to accumulate, electrolysis tends to concentrate on weak spots in the scale, with the result that some areas are attacked, and others protected, dramatically affecting the release of those all-important copper and silver ions and giving the electrodes an appearance of a moon scape.

A similar condition can occur if the ioniser is allowed to run on "dead" water ie the ioniser runs but the pump doesn't. Although we don't need water at fire-hose velocity rushing through the flowcell, we do need the flushing effect of moving water to distribute those vital copper and silver ions to all parts of the pool.

This can't happen with our Series II ionisers as the two functions are interlocked, but can with our Series 1's if somebody has plugged the pump and the ioniser into separate outlets. If you have a Series 1, check that the pool pump is plugged in to the ioniser's "piggy-back" plug, and not in to a separate power outlet. This configuration ensures that the two are electrically interlocked and therefore must run together,



Pic:1



Pic:2

Pic:1 shows a flowcell cartridge assembly as supplied with your brand new ioniser. Note particularly the sharp edges of the yet-unused electrodes. These edges are the first to disappear in service, and take on the appearance of the electrode shown on the left in Pic:2.

Pic:2 above right shows two electrodes at various stages. The electrode on the left shows a relatively new electrode after several months of in service. Note particularly the rounded edges as mentioned above, and uniform “burning” over the whole surface of the electrode. The electrode on the right shows an electrode that is nearing the end of its useful life and is therefore due for replacement. Note once again that the metal has burnt away uniformly and if allowed to continue would burn right down to the terminal stud which is already visible in the centre. The first indication that all is not well is that one, or both, of the terminals begins to drip.

Semi Auto Dosing Device:

And finally, another little project we’ve been fiddling with is a simple semi-auto dosing device, and pictured below are two of the prototypes. The object of the exercise was to develop a simple, low cost, low maintenance, liquid chemical dispensing device, with a minimum of moving parts. It was to be driven by the pressure difference – *delta P* - created by partial vacuum created on the suction side of the pump, and atmospheric pressure. The prototype underwent a number of minor changes until we achieved our goal of nil moving parts.



Then came the field trials. The first chemical we tried was 15% hydrogen peroxide and although the metering was not an issue, the in-pool results were less than spectacular, as the pool gradually lost clarity until we had to pull the plug on that product. The next was our old arch enemy, liquid chlorine, and this proved to be remarkably successful as the pool soon regained its sparkle – and at the very low dosing rates of 3 drips per minute. In other words it was undetectable by standard DPD #1 tablet testing. A recent pic of the pool is on Facebook. <https://www.facebook.com/AquavicInternational>

Yes, I am aware of the fact that we don’t promote chlorine, but one point that became abundantly clear while I was tripping around Sunset Country, was that, unlike the grain silos that dominate the landscape out there, pool shops are few and far between, but liquid chlorine was readily available at stock and station agents or similar - and it works particularly well with an ioniser. If interested in this little device, give me a call as I’d like to get several installed for further trials. We are yet to run the device with pool acid, but as the component parts are impervious to aggressive chemicals, see no reason why it should not be used as a semi-auto pH controller. Watch this space.



The Director