

Pool Power

The latest generation of pool equipment products are setting benchmarks when it comes to energy efficiency. But by making sure each piece of pool equipment works together in harmony, pool owners can reach an entirely new level of energy efficiency – which is good news for your household budget and the environment.

BY HEDGIE GUNDRY

OVER THE PAST 10 YEARS, developments in pool equipment technology have followed the wider consumer electronics trend, pushing towards higher levels of energy efficiency. But unlike other market sectors, the swimming pool industry does not have a mandatory star rating or energy labelling scheme in place, so at times, it can be difficult to know where to start.

In order to make the process easier, the large pool equipment manufacturers such as AstralPool and Waterco have launched new, highly efficient sustainable pool product ranges which, when installed holistically, maximise energy savings and reduce operating costs. They can also help you save thousands of litres of precious pool water each year.

“Pool owners are increasingly looking for ways to save energy, water and time when it comes to selecting the right pool equipment,” explains Bryan Goh, group marketing director, Waterco Ltd. “By combining and operating energy efficient products in the right way, the benefits are enormous.”

First things first

According to Bryan, before even considering which energy efficient pump and filter combination to install, you need to ensure that your pool’s recirculation, plumbing and filtration system is as hydraulically efficient as possible. This is because a hydraulically efficient system requires a smaller pump and can be operated at lower, more energy efficient flow rates without affecting the quality of the pool water.

“Your filtration set up needs to be well thought out and fitted with the appropriate connections to minimise restrictions and friction loss. Your pool builder should take care of this, however, at a minimum, you need to make sure that you have adequate intakes and returns, and adequate sized piping with minimum bends,” Bryan says.

Filtration

While granular filters have dominated the Australian pool market for many years, cartridge filters are now often the most popular choice, thanks to their real energy and water saving efficiencies. Cartridge filters operate effectively combined with a low pressure pump because, unlike granular filters, they do not require high pressures for backwashing. Lower, more energy efficient pump speeds mean you use less electricity. And not only that, the lower the pump speed, the quieter the pump – which means you can run your filtration system during the night, without disturbing the neighbours, and make the most of your off peak electricity tariffs.

Other emerging energy efficient filtration technologies include a pipe-less filtration system from French manufacturer Desjoyaux. The patented combined filtration and pump unit can either sit on the edge of the pool or be built-in, provides effective filtration in only two hours and requires no backwashing.

Smart automation

Advances in pool automation



Main pic:

technology mean that you can, quite literally, control your pool’s operation with the touch of a button. And automating your pool is a key consideration when looking to reduce your pool’s operating costs.

Terry Hunter from Pool Controls says that by automating a pool, the running times of equipment can be strictly controlled so that only the minimum amount of energy is needed. Advances in automatic water management controllers, which combine sanitation and pH controllers with versatile timers to control your pool’s filtration system and even lighting, mean that you can now also maintain your pool more quickly and energy efficiently. “Using a modern chemical dosing system such as the Pool Controls Chemigem allows you to limit the filter operation which reduces operating times and therefore running costs,” says Terry.

“A Chemigem can completely sanitise a pool in around 20 minutes. Combined with an efficient filter and cleaning system, good quality water can be achieved with modern equipment in only a few hours each day.” Next generation cleaners

Another big leap forward in terms of swimming pool energy efficiency is the new generation of robotic pool cleaners. Not only do these cleaners use significantly less energy than pressure pool cleaners – up to 90 per cent less in some cases – the latest models act as micro filters, circulating the pool water, reducing filter maintenance and saving precious water and pool chemicals.

TOP TIPS FOR AN ENERGY EFFICIENT POOL

Filters: When building a new pool, connect your filter to an economy tariff and you could save significant dollars. Check with your local pool shop about how long you should be running your filter for. Run time varies according to the pool size, use and other factors like the amount of debris in the water.

Pool pumps: You can save energy and maintain a comfortable swimming pool temperature by using a smaller, higher efficiency pump and by operating it less. A variable speed pump can help you make big savings on your pool running costs.

Pool automation: An intelligent pool controller provides optimum year-round efficiency, ensuring your pool pump and other equipment are only running as much as needed. It helps to install a timer to activate your pump for several short periods each day.

Chemicals: Changing when chemicals are added to the pool can also help increase energy and cost efficiency. Whenever possible, chemicals should be added at night after the sun has gone down. This reduces the amount that evaporates due to heat and sunlight. The pool pump can also be used to distribute the chemicals while it is already on for cleaning. This saves on the amount of time that the filter has to run.

Cleaners: Consider a next generation robotic pool cleaner for maximum water and energy savings.

Heaters: Consider a high-efficiency gas, solar or heat pump solution. Solar heaters provide energy efficiency and reduced operating expenses. Heat pumps will also cut down on energy costs and operation costs.

Covers: Use a pool cover and you could reduce your heating costs by up to 50%

Lights: LED lights have a lifespan of decades and significantly improved energy efficiency over halogen.

Heating efficiency

Advances in solar and heat pump swimming pool heating technology also mean that it is now possible to extend your swim season – or even swim all year round – thanks to the minimal operating costs involved. Even the latest gas pool heaters are considerably more energy efficient than their predecessors. One good energy efficiency heating tip is to also check that the return piping from your pool heater is either insulated or buried in the ground to minimise heat loss. Finally, using a pool cover is also one of the best things you can do to maintain and safeguard the temperature of your pool water during the swim season.

Low cost lighting

LED pool lights have been on the market for a while now and are proving to be the popular choice when it comes to energy efficient pool lighting. LED lights are at least 30 per cent more efficient than the halogen equivalents and have a rated lamp life of 50,000 hours compared to only 2,000 hours. “LED coloured lights such as the Pool Controls AquaDelights do not require plastic filters and instead use a mixture of red, blue and green LEDs,” says Terry from Pool Controls. “And whereas halogen lights act like spotlights with a concentrated beam, LED lights seem to have a dispersed light that is more illuminating.” ~

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