

NEW features make the very good now AWESOME: Mobile WaterLink Spin®



Mobile pool service technicians can now work even better with the NEW features of *Mobile WaterLink Spin®*.

NEW

- Apple connectivity
- Cloud-based platform
- Job Scheduling

Not only do you get your poolside water testing done quickly and accurately, you now get your test results into a cloud-based platform. This means that the test results not only get into a central database, but you are also now able to get your work orders from the pool shop.

And, now with Apple connectivity, you can easily work on a smartphone or tablet of your choice—Android or Apple iOS.

Remember, you get to test eight different parameters of pool water quality in just 60 seconds. All done, without the hassle of crushing tables, washing test tubes, or other boring chores. A small pool sample is all you need. The laboratory-grade photometer does the rest.

The upgraded *DataMate Web* is the new cloud-based system that does all the work. A common platform means that the shop gets all your info and keeps a history of each swimming pool you service.

Contact us now for more information: 02 9450 0466 or info@vendart.com.au

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SWIMMING POOLS AND SPAS

PAUL WERE | DONTEK

Inviting Swimming Pools and Spas are one way for Hotels and Motels to entice new patrons or to keep their existing ones. Whilst looking inviting is great, the water temperature must also be set to a level where the experience meets the expectation.

As there are many options available for heating a swimming pool or spa, it is advisable to contact a pool heating specialist and have a heat load evaluation to find the most economical and environmentally friendly system.

GAS

Gas has traditionally been the most common form of pool heating as it is easy to install,

has a low capital outlay and can provide rapid heat up times. Pool water is pumped through a Heat Exchanger which is located close to the gas fired burner; the heat is transferred to the water and returns to the pool. Some systems rely on pool water being pumped through a separate Heat Exchanger which is supplied heat from a gas heater (boiler) in a closed loop. This hot water loop may also heat water for showers, kitchens and other areas where heat is required. Newer style gas heaters utilise fan assistance that aids in the combustion and heat transfer process, which increases efficiencies and reduces operating costs. A gas heater is also a great back up for Solar or Heat Pump systems.



Gas Heater

High Efficiency Solar



Solar Heating



SOLAR

Solar is an economical way of heating and has a relatively low capital cost. Water is pumped from the pool through a heat collector fitted to the roof, which absorbs radiant energy from the sun, and returns it to the pool. This heat collector can be made in many different styles; some are made from extruded polymer strip, moulded poly propylene panels, glazed poly panels and more. When year round heating is required, a backup system such as Gas or Heat Pump is normally added.

HIGH EFFICIENCY SOLAR

High Efficiency Solar uses Glass Evacuated Tubes to collect the heat. Since evacuated glass tube technology was invented, solar energy can be used to heat all year round. Solar exposure can be turned into heat energy regardless of the ambient temperature of the collectors. This heat is absorbed by the tubes and is transferred to special liquid filled heat pipes located inside each tube. The liquid turns to gas and rises up to the tips of the pipes which are inserted into a heat transfer manifold. Water is pumped through the manifold which absorbs the available heat and is then circulated through a Heat Exchanger which transfers heat to the pumped pool water. Excess heat may also be stored in pre-heating tanks for potable water.

A backup system is normally required to guarantee a suitably heated pool.

HEAT PUMP

Heat Pumps have become a great choice for heating pools as capital costs have been reduced, efficiencies increased and have reasonable running costs. Heat Pumps are normally fine

as a stand-alone heating system as long as heat load calculations have been performed properly. Heat Pumps are least efficient during the coldest months and it is common practice to have a gas heater as back up for prolonged cold spells.

Heat Pumps work like a reversed air conditioner. Instead of taking air from a room, removing the heat and returning it, a Heat Pump takes large quantities of air from the atmosphere, removes the heat contained in the air and transfers it to the pool water passing through the unit.

A well designed Heat Pump will output heat at a rate of around 5:1, relative to its energy input under summer conditions. This greatly reduces total energy consumption. This factor is called the Heat Pump's co-efficient of performance or COP.

The capture of solar energy from air means that the Heat Pump's output and efficiency will vary with air temperature. Higher efficiency is gained in more temperate locations but Heat Pumps are capable of maintaining pool temperatures year-round in nearly all areas of Australia and New Zealand.

The latest Heat Pumps incorporate DC inverter technology that will vary or modulate the speed of the compressor – much like most air conditioners. This provides electrical savings and quieter operation.



SMART ELECTRONICS MEANS MAXIMUM EFFICIENCY

As we know, the most economical heating systems for pools and spas can require a backup system and this is where a digital control system is required. The controller must monitor the most economical way of heating and switch between heat sources as required.

When a gas system is utilised, electronics can be used to accurately control run times, set temperatures and heater cool down times. This ensures energy is not wasted from slow switching mechanical thermostats or thermostats that are fitted within the heaters high temperature cabinets. Peak swimming times should also be allowed for.

On Solar Systems, the controller will monitor the pool temperature and when heating is required, it will turn the solar system on if there is solar gain. When auxiliary heating is fitted (Gas or Heat Pump) in conjunction with solar, the controller will determine which heat source is the best to use. If heating is required the controller will check solar conditions and if not available will switch on the auxiliary heater and run till limit, or until there is some solar gain. When there is some solar gain but not enough for the pool to achieve limit both heat sources should run in conjunction. When there is good solar gain to achieve limit the auxiliary heating should be turned off and the more economical solar heat source should only be utilised.

On smaller pools where the filtration is not run 24/7, extended heating run times may be required through the cooler months. If Salt Chlorinators are fitted it is important that they are switched off or monitored to prevent over chlorination in extended heating times.

HOW TO SAVE ON RUNNING COSTS AND THE ENVIRONMENT

When multiple heat sources are utilised it is imperative to set the most economical heat source to a higher set temperature than the auxiliary set temperature. By doing this the cheaper heat source will push the temperature past the auxiliary limit and the heat energy will be stored in the pools mass of water. This will minimise the auxiliary heater run time. The greater the difference the larger the savings will be. What needs to be considered is the minimum temperature that can be tolerated without customer discomfort and the maximum temperature taking into account customer satisfaction. The minimum set temperature will be the Auxiliary heater with the highest energy consumption that can be set at about 26°C and the maximum temperature will be the least expensive to run to a temperature of about 29°C. This will differ from State to State as pool temperature needs to be set relevant to ambient air temperature to achieve a comfort level.

Take control of all your pool & spa heating requirements

- Dontek offer the most diverse range of Heat Pump, Solar and Gas Heater Controllers available in Australia.
- Dontek manufactures smart control systems to reduce heating costs for all types of applications and specialise in multiple heat sources.
- Designed and manufactured in Australia.

Energy Saving and reductions in Greenhouse Emissions are a key focus for today's Hotel Owners and Managers.

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