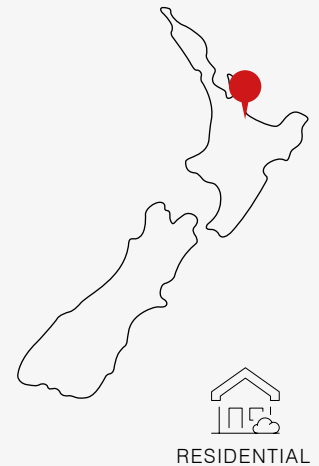


# Project Showcase:

## An Outdoor Pool Kept to the Perfect Temperature Year-Round



### TAURANGA



When a Tauranga couple decided to completely transform their family home to reflect their love of entertaining, a heated outdoor pool became a key feature of their new outdoor living space. Choosing an Ecodan Hot Water Heat Pump to heat the pool over four seasons means it can be regularly enjoyed by the family all year-round.

#### EQUIPMENT BREAKDOWN

- Ecodan Hot Water Heat Pump
- Vaportec HXTI Heat Exchanger
- PAC-IF061B-E Controller

### The Challenge

The owners decided to incorporate a swimming pool into their backyard and wanted it to be heated to use beyond the summer months and on colder evenings. But heating a 23,000 litre pool throughout the seasons meant they needed a water heating system that could be as energy efficient as possible.

### Evaluating the Options

When presented with heating options available in the market, a solar pool cover was immediately discounted as they wanted an automatic deck cover to hide the pool away when not in use and while Tauranga is known for sunshine, New Zealand weather wouldn't guarantee heat would always be generated.



## Project Showcase: Tauranga Transformation

The family love to swim and intended on using it almost every day, so were not comfortable with gas heating due to the amount they would require to meet their heating needs and the carbon footprint this would leave behind. With the remaining options being direct element heating or the use of a more energy efficient air-to-water hot water heat pump, it was hard to look pass energy efficient heat pump technology when considering future power bills.

The efficiency of a heat pump is known as the Coefficient of Performance or COP and is a ratio of the heat delivered to power consumed. The Mitsubishi Electric Ecodan Packaged Heat Exchanger System best suited for the size of their pool, the Ecodan PUHZ-SW120VHA, has an estimated COP of 4.1, so for every 3.9kW of power used, the Ecodan PUHZ-SW120VHA outdoor unit is estimated to produce up to an impressive 16kW of heating output for the homeowners\*.

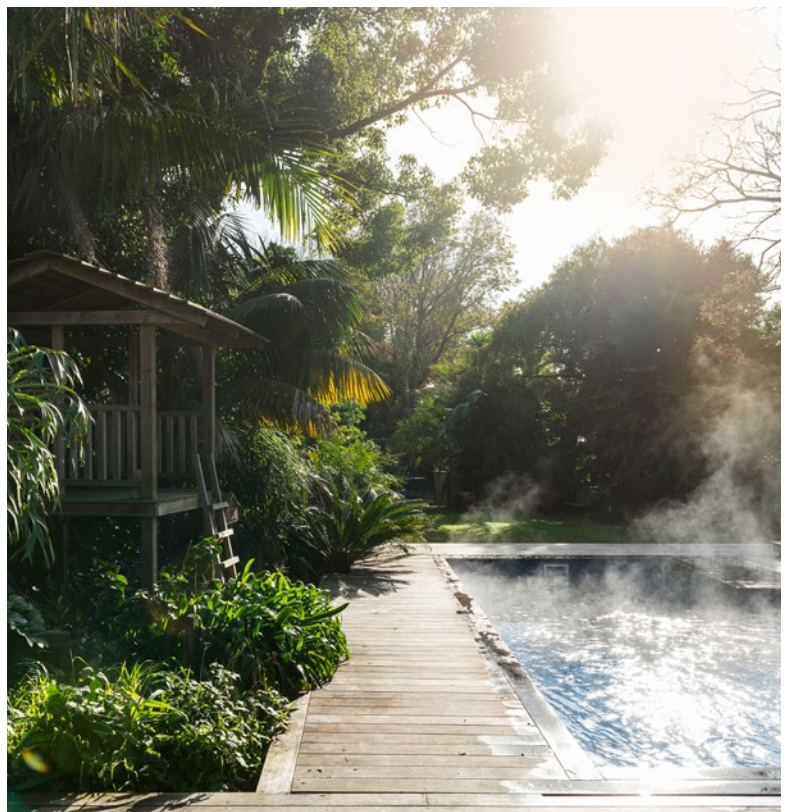
### The Mitsubishi Electric Hot Water Heat Pump Solution – Ecodan Packaged Heat Exchanger System

Having been an advocate for Mitsubishi Electric heat pump technology for the heating and cooling inside their home, the Mitsubishi Electric Ecodan Hot Water Heat Pump system was the perfect match to quickly and efficiently heat the pool.

Knowing they could rely on the renowned quality and technical support for the Mitsubishi Electric outdoor air-to-water heat pump unit, they were also impressed by the included third party Vaportec HXTi heat exchanger and the advanced Mitsubishi Electric controller that are included in the package. The controls and heat exchanger were able to be placed separate from the outdoor unit in their pool shed hidden behind the treehouse in the garden.



PUHZ-SW120



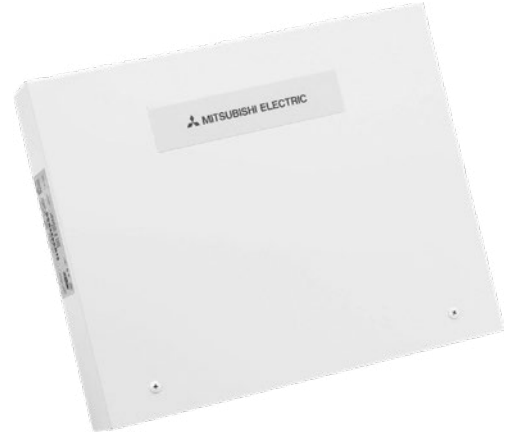
\*Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30 as tested to BS EN14511.

## Project Showcase: Tauranga Transformation

### Advanced Controls to Maximise Efficiencies

The PAC-IF061B-E Advanced Controller, allows the owners to easily set their desired temperature and set a timer to reflect their weekly use if they wish, for example if they find they do not use the pool on Mondays and Tuesdays it can be set at a lower temperature or off on those days each week to reflect this and conserve energy. However, thinking more long term the owners can also set two schedules for the full year, setting a temperature and operation to match the seasons.

The Holiday Mode function means the family can switch this on to avoid wasted energy use when going away. This mode conserves energy without completely switching off so that defrost cycles can occur, avoiding freezing of pipes on any cold days.

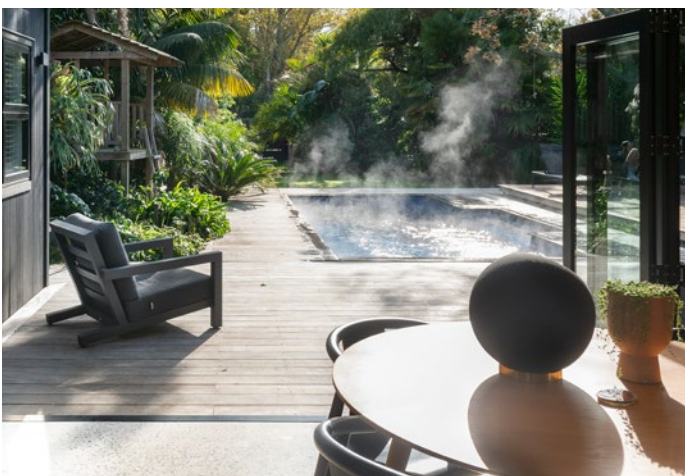


### The Results: 34°C Water Means the Pool is Well Used Throughout the Year

In order to trap in the heat generated and make use of decking when not in use, the owners installed a mechanical deck cover. When it's time to swim, they simply press a button so the cover slides overtop another deck to reveal the hidden pool underneath – not only taking away the hassle of pool covers but successfully retaining the heat generated from the Ecodan unit.

When setting up the system, their pool installer from Statement Pools was impressed by the power of the Ecodan system to heat the pool up a further degree or 2, every 1.5 hours and noted that alternative systems can take 4 days to reach even 32°C, something the Ecodan achieved in 24 hours.

This luxury pool area is reminiscent of a tropical oasis, with the surrounding greenery and steam rising from the pool. Kept at 34°C all year round, the family swims 4-5 days a week, even during winter!



# Project Showcase: Tauranga Transformation

## Full Equipment Breakdown

### Swimming Pool Heating

1x PUHZ-SW120VHA Ecodan Hot Water Heat Pump  
1x Vaportec HXTi Heat Exchanger

### Controllers

1x PAC-IF061B-E Controller

Contractor:



Pool Installer:

