

ALCHERINGA AGED CARE

SWAN HILL, VICTORIA

CASE STUDY

PROJECT DESCRIPTION

Nestled between the edge of Swan Hill and the banks of the Murray River, Alcheringa is a warm, compassionate retirement home for older residents, amid a picturesque setting.

Owned by the 'Respect' Group, the Alcheringa aged care home in Victoria features 75 rooms and offers a full spectrum of aged care services including residential aged care, palliative care, secure dementia and respite care. Sunnyside Lodge, a three wing residence area, anchors one end of Alcheringa. Located on the opposite end is our secure, specially designed 30 room memory support unit, Honeybee Lodge.

PROJECT REQUIREMENTS & CHALLENGES

The project required a reliable hot water solution to service the aged care home's 75 rooms, including an additional ring-main for the kitchen and laundry areas.

The hot water solution would need to be efficient, easy to control and would replace the existing Edson LPG hot water system which was becoming unreliable and expensive to run and maintain. Due this, it was important an immediate solution was found and installed.

Given the location of the facility, which is on the New South Wales and Victorian border, temperatures are seen to reach -5oC overnight, the solution would need to function at fully capacity in low temperatures, 24hrs a day. Logistics to the project were also a consideration and challenge.

PROJECT DETAILS

Alcheringa Aged Care Home
Swan Hill Victoria

COMPLETION DATE

December 2021

PRODUCTS INSTALLED


1 x Q-ton air-to-water heat pump
4 x 1000L Storage tanks

MHIAA REPRESENTATIVE

Jason Parsons - 0477 660 987



HOT WATER SOLUTIONS



***Expected cost saving
of \$23,000 a year***

MHIAA'S SOLUTION CONT.

After lengthy discussions with contractors MHIAA's high efficiency, Q-ton air-to-water domestic hot water system was selected for the project.

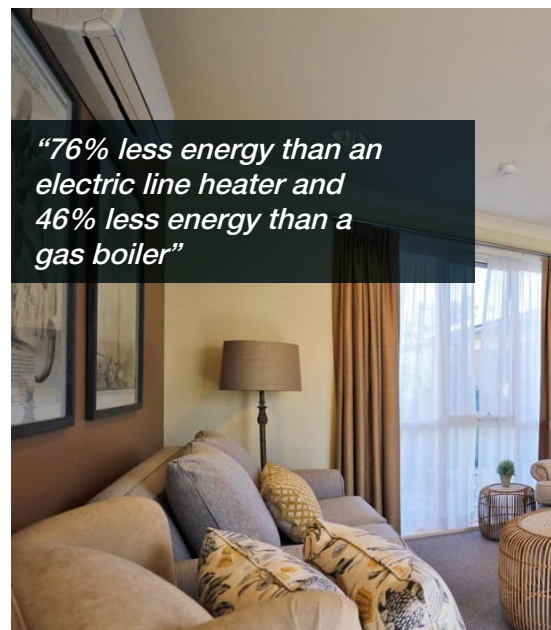
The Q-ton is an industry leading air to water heat pump that utilises natural refrigerant CO₂ to store and deliver 70oC+ hot water in even the coldest temperatures. The Q-ton heat pump draws air through an evaporator that contains CO₂ Refrigerant, which absorbs the heat in the air. The two-stage compressor compresses the refrigerant under high pressure to raise its temperature, while an on-board heat exchanger uses heat from the refrigerant to generate hot water, which is then stored in cylinders for sanitary use.

The Q-ton is highly efficient, achieving an industry leading COP of 4.3, and has the ability to deliver 30kW of output power while only requiring 7 kW input at nominal conditions¹. Given this, the Q-ton will offer delivering huge reductions in both running costs with the Aged Care Home anticipated to save approx.. \$23,000 per year on their energy bills.

As well as being much more efficient than an electric or gas heater, Q-ton produces 74% less CO₂ emissions (47 tonnes) than an electric heater and 48% less emissions (23 tonnes) than a gas boiler making it much more environmentally friendly²

In addition to this, with the Q-ton's remote-control scheduling functions, the Q-ton can produce hot water during off peak electricity periods and stored in cylinders for use later, offering even further cost savings.

By working closing with trusted contractor Enviro Heating Solutions, a suitable solution, comprised of a single Q-ton system paired with 4 x 1000L Wilson Industries Hydralux 2205 Stainless Steel Storage tanks was successfully retro-fitted into the facility, which will reliably deliver hot water to the entire facility for years to come.



***"76% less energy than an
electric line heater and
46% less energy than a
gas boiler"***

¹Intermediate season Air on at 16°C, Water on at 17°C, Water off at 65°C. ²Operation conditions: senior care home, 80 persons, 8000L/day, 60°C conversion. The above figures have not been issued from a real site and should be considered as an indication only.



HOT WATER SOLUTIONS