

PREMIUM AGED CARE PROVIDER IN PALMERSTON NORTH, NEW ZEALAND



OUR PRODUCTS SUPPORT THE ENERGY TRANSITION

WORKSITE

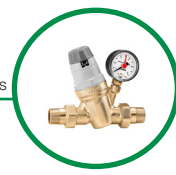
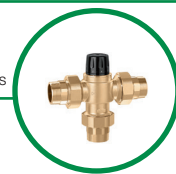
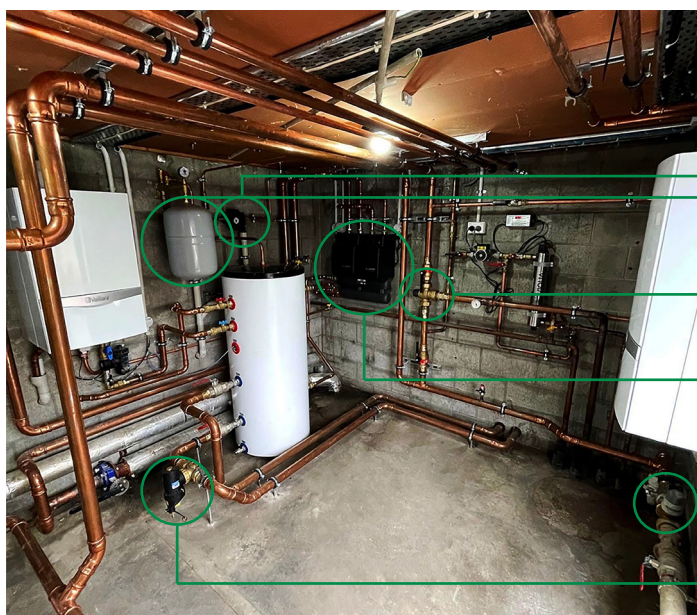
The customer had a dated system featuring an old gas-fired plant which was ready to be replaced. Mindful of their environmental responsibility, they chose to replace the existing system with a hybrid gas and heat pump solution which has allowed them to guarantee improved performance while drastically reducing their carbon footprint.

Waterware, the project handler and a Caleffi partner in the New Zealand market for over 30 years, chose to fit our products in the new system because they offer a comprehensive, safe and reliable heating and domestic water solution.

LOCATION: Palmerston North, New Zealand

CUSTOMER: Aged care provider

PROJECT HANDLER: Waterware



INSTALLATION DETAILS

Waterware implemented two new independent generation systems: one for underfloor heating and cooling and one dedicated to domestic hot water production.

Hybrid generators, consisting of R290 heat pumps in cascade with condensing boilers as backup, were used. The scalability of heat pumps (HPs) makes it possible to maintain efficiency in all operating conditions, while the boilers only start running when necessary. To maximise the efficiency of this installation, various Caleffi products were used to optimise flow distribution and to guarantee optimum performance by eliminating the impurities contained within the system.

The following components were installed for the heating and cooling (HVAC) system:

- CALEFFI XF 577 series semi-automatic self-cleaning magnetic filter
- 165 series direct supply unit for heating systems
- 550 series manifold for heating and cooling systems
- 556 series welded expansion vessels
- 336 series assembled instrument holder for heating systems
- 580 series automatic compact charging unit with BA-type backflow preventer

For domestic hot water management we also added:

- 5231 series adjustable thermostatic mixing valve
- 5350 series pressure reducing valve with self-contained replaceable cartridge

PRODUCT FOCUS

To maximise system operation, various Caleffi products were installed, including the CALEFFI XF 577 series and the thermostatic mixing valve 5231 series.

The **CALEFFI XF 577 series** is a semi-automatic self-cleaning magnetic filter which protects the heat pump system by removing impurities and ferrous particles from the very first passage, thanks to the dual filter mesh (mesh size just 160µm) and the internal magnet. Maintaining its efficiency over time, it protects the generator and the devices while optimising their operation and guaranteeing an additional energy saving of up to 15 %.

Domestic hot water management comes courtesy of the **thermostatic mixing valve 5231 series**, specifically created for systems that require high flow rates (such as the customer's system), which ensures the right proportion of hot and cold water at the inlet while keeping the temperature of the mixed water constant at the set value. It guarantees optimum comfort and safety for the end user because it stabilises the temperature in the event of fluctuations in the pressure of the hot and cold water supply at the inlet or if the flow rate of the water consumed changes.