

Project Showcase: Award Winning Residence in Khandallah



WELLINGTON

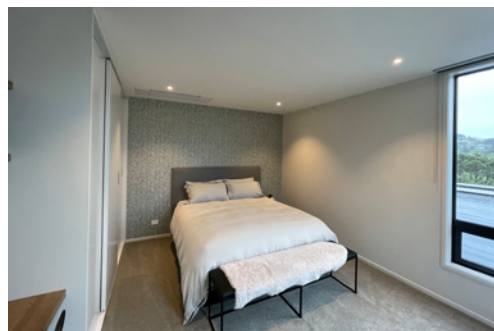


This contemporary, three level apartment style home located in Khandallah, Wellington required an unobtrusive whole home heating and cooling solution, that complemented it's modern architectural style while overcoming the installation challenges that were presented.

The Challenge

When embarking on the design process for their new build, the homeowners knew they wanted a discreet ducted air conditioning system that heated and cooled the whole home, without imposing on the sleek and modern design of the residence.

It was essential to the homeowners that the system could not only heat their home but due to choosing double glazed, floor to ceiling windows with no eaves to block the sun, they needed a system that could keep the home cool during the sunny summer months. Having had central gas heating in the past, selecting the more energy efficient heat pump technology that could cool as well as heat, was key.



EQUIPMENT BREAKDOWN

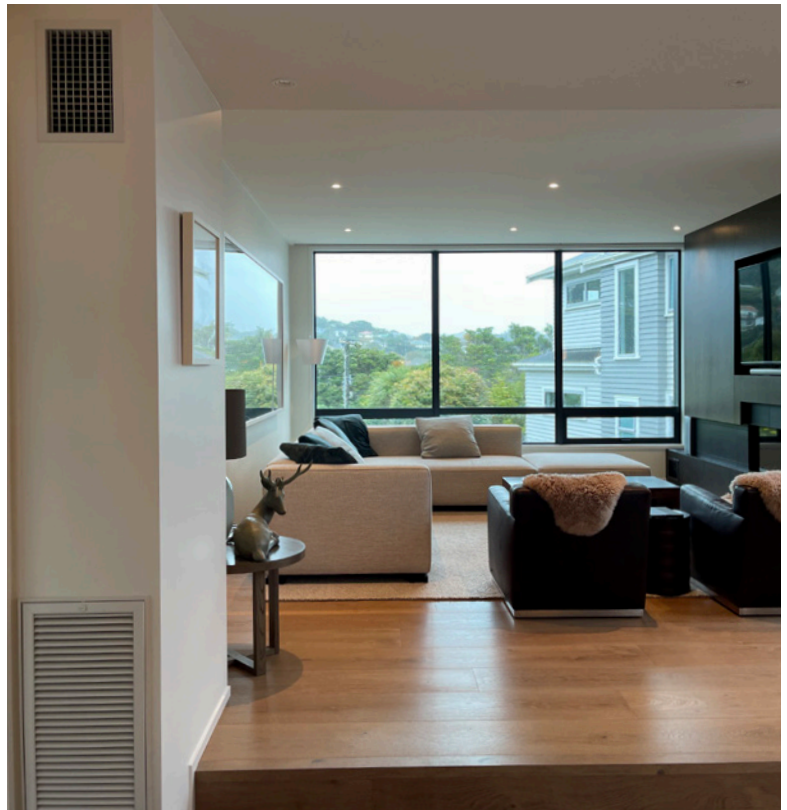
- OmniCore Multi Room System
- One-way Cassette Heat Pumps
- Ducted Split System

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When bringing in the advice of the installer, it quickly became clear the limited roof cavity space, the direction of joists and the multi-level nature of the residence were going to present an installation challenge for a full ducted system.

In addition, the tight 288sqm subdivision is cleverly designed to incorporate an outdoor entertainment area that flows seamlessly into the indoor living space. The thought of having multiple individual split-system outdoor units clutter the limited outdoor space and interrupt the design was not an option for the owners.

Fortunately, the installer could recommend an OmniCore Multi Room Solution that not only catered to their needs, but also provided unforeseen benefits without any compromise on aesthetics.



The Mitsubishi Electric Total Home Solution

By electing an OmniCore Multi Room Heat Pump System for the bedrooms, three MLZ One-Way Ceiling Cassettes were able to be installed in each room, all connected by just one OmniCore outdoor unit. Therefore the exterior clutter that would have come with having a split-system for each room installed was successfully avoided.

At just 185mm in height, the MLZ Series is an ideal a solution to the low ceiling cavity, whilst the flat, pure white finish provides a sleek and discreet installation.

In the large open plan living, dining and entertaining area, a single-split PEAD Ducted Heat Pump System was chosen. With the indoor unit measuring 250mm high, concealed installation was possible in the lower level ceiling that had minimal clearance space.

Featuring variable airflow settings, the PEAD model ensures the best operation to match various room layouts, with only its grilles visible.

With both models specifically designed for installations where ceiling space is minimal, the owners were able to achieve the perfect hidden comfort throughout their residence without compromising on design.

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Architectural Aesthetics Take Centre Stage

The MLZ One-Way Ceiling Cassette Series was selected due to its streamline design and the ability to recess flush into the ceiling. While a ducted system was not possible in the bedrooms, a similar effect to subtle grilles was achieved with the cassettes.

With a ducted system possible in the main living, dining and entertaining areas of the home, the PEAD System's supply and return grilles were able to be concealed within joinery, columns and colour matched to suit resulting in a discreet system that blended into its surrounding aesthetic.

The MLZ Series Helps Provide the Perfect Night's Sleep

The MLZ Series features the ability to adjust airflow according to ceiling height and direction, ensuring uncomfortable draughts are prevented. Starting from just 26dBA*, the MLZ Series offers quiet comfort in spaces where air conditioning needs to be felt and not heard.

Furthermore, the cooling and dehumidifying functions available provide a much needed relief for guests on hot nights. As the homeowner says, "a comfortable bed, nice pillows and the bedroom set at a desired temperature leads to a better sleep and visiting experience".

* MLZ-KP25 indoor sound level on the lowest fan setting in Heating Mode.

Customisable Temperature Control Increasing both Energy Savings and Personalised Comfort

As empty nesters, ensuring the guest bedrooms upstairs could be independently controlled from the main living area and master bedroom situated on the first floor, was a key benefit with choosing an OmniCore Multi Room System.*²

By turning off units in the upper-level bedrooms when unused, unnecessary energy consumption on heating or cooling empty rooms was prevented.

When reflecting on their choice of air conditioning systems, customisable temperature control for each space in the home was an unintentional gain. Each bedroom could be tailored to meet the temperature preferences of each individual staying, maximising comfort.

*² All units connected to the OmniCore Multi Room System must be in the same mode when operating simultaneously, i.e. all in Heating Mode or all in Cooling Mode.



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Unmatched Energy Efficiency

Mitsubishi Electric Inverter Technology provides superior energy efficiency with high COPs (Coefficient of Performance). The PEAD 71 Ducted Heat Pump System used in the living and dining area features a COP of 4.14 and the OmniCore Classic Multi Outdoor Unit used to connect the three bedroom MLZ Cassettes features an impressive COP of 4.35! That means for every 1kW of power, the homeowners are getting over 4kW of heat energy output per system for their heating.



The Results

The solution resulted in a whole home heating and cooling system that could be seamlessly integrated into a contemporary new build, letting the architectural design flourish. While also offering all occupants the ability to control their preferred temperature, in the most energy efficient way possible.

The homeowners were more than pleased with the results;

“Heat pumps may not be the prettiest of things but we love the clean lines of the cassettes which suit the contemporary design of our new home. They are very quiet and efficient for both heating and cooling. We love the product and are very satisfied with the results”, adding “it would be very hard to go back to a home without a heat pump”.

Master Builders awarded the home the ‘Wellington and Wairarapa Master Builders Supreme New House of the Year’ alongside 7 other prestigious accolades.



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Full Equipment Breakdown

OmniCore Heat Pump Systems

2x One-Way MLZ-25 Cassette for Multi-Split Connection
(MLZ-KP25VF-A1)

1x One-Way MLZ-35 Cassette for Multi-Split Connection
(MLZ-KP35VF-A1)

1x OmniCore Classic Multi Series (MXZ-4E71VAD2-A1)

Single Split-System:

1x Ducted PEAD 71 Heat Pump System (PEAD-M71JAA)