

# Project Showcase:

## Ventilation Solution for an Airtight House with Low Roof Space



### RANGIORA



This well-insulated family property located in a new subdivision in Rangiora, Canterbury needed a solution to reduce condensation levels and ensure better quality air.

### EQUIPMENT BREAKDOWN

- Wall Mounted Single Room Lossnay
- Ducted Single Room Lossnay

### The Goal

With no previous ventilation installed in the house, the owners wanted to lower condensation and minimise moisture build-up to allow a better climate within the home.

### The Challenge

Due to the house already being very well-insulated above standard building code, it has a very tight envelope creating a lack of airflow. This resulted in high moisture levels which, by default, means any heating device will have to work harder. For this home, it meant the heat pumps that were already installed took much longer in winter to heat a space to set temperature.

The moisture build-up was the single biggest challenge faced on this property, with running windows in the bedrooms and mould levels ever-increasing.



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The home has very large windows which provide a lot of solar gains, however, heating the moisture created high humidity and moisture build-up on a sunny day.

Due to the large size of the house, the owners needed to find a solution that would ventilate the entire place. The roof pitch design profile is also very low, so a ventilation system that had filters in the ceiling would have been extremely difficult to service. This resulted in two ventilation providers walking away from a consultation saying it could not be done.

### The Solution

To ensure the whole house could be ventilated, two Single Room Lossnay Fresh Air Energy Recovery Ventilation Systems were installed to provide full whole-home coverage.

#### Wall Mounted Energy Recovery Ventilation for the Living Area

A VL100 Wall Mount Fresh Air Energy Recovery Ventilation System was installed in the open plan living, kitchen and dining area. The ductless design made this model ideal as there was no roof space to accommodate the heat exchange and ductwork. The installation was as simple as drilling two 75mm diameter installation holes!

Displayed like a small heat pump on the wall, the VL100 Wall Mount unit blends into the rest of the home's modern interior aesthetic. And starting at 25dBA\*, the owners say the sound is barely audible making it perfect for the living space.

#### Ducted in Ceiling Energy Recovery Ventilation in the Hallway

A VL100 Ducted Ceiling Mount Fresh Air Energy Recovery Ventilation System was installed in the middle of the hallway near the bedrooms. The unit provides energy-efficient ventilation to an area of up to 65m<sup>2</sup>, so being installed in a central location helped to reduce moisture right where it was needed.

Even with the home having a seriously low pitch on the roof, it was still possible to install the unit with its low height of 204mm. Difficulty servicing ventilation filters was a concern, but the Lossnay VL100 Ducted filters are easily accessed by removing the front panel cover and pulling out the filter frame and removing the filter from inside, reducing yearly maintenance costs that can be hundreds of dollars. The VL100 Ducted Ceiling Mount model also starts at 25dBA\* making it ideal for the bedroom area where quiet operation is essential.

\*On low fan speed.



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### The Result

The owners couldn't be happier with the positive effects the Lossnay Fresh Air Energy Recovery Ventilation System has provided. They have noticed a massive shift in the conditions inside the house which they feel has made the environment so much warmer and drier. It has helped to achieve their goal of reduced condensation and has resulted in their heat pumps working more efficiently to create a more comfortable home.

With the Single Room Lossnay Systems exceeding their expectations, they would recommend this ventilation solution to anyone with similar circumstances wanting to achieve a better climate in the home.



### Full Equipment Breakdown

- 1 x Lossnay Single Room VL100 Wall Mount Fresh Air Energy Recovery Ventilation
- 1 x Lossnay Single Room VL100 Ducted Ceiling Mount Fresh Air Energy Recovery Ventilation

Contractor:

