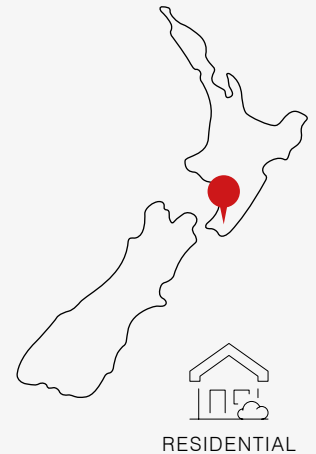


Project Showcase:

Vertical Lossnay Ventilation for a Carterton New Build



WAIRARAPA



In the Wairarapa township of Carterton, a newly built home is now drier, healthier and easier to heat with a Mitsubishi Electric Vertical Lossnay Heat Recovery Ventilation System.

EQUIPMENT BREAKDOWN

- Lossnay Fresh Air Heat Recovery Ventilation

The Goal

After completing their new home, this Carterton family were excited to move into what would be a healthier, warmer home with full insulation, double glazing and concrete foundation. However, when the temperatures dropped outside and through living, cooking and washing inside, they started to notice high moisture levels and condensation build up on their windows – leading to mould and mildew.

The owners wanted to quickly and effectively manage moisture levels in order to protect their investment long into the future and to ensure walls and furnishings would stand the test of time. As a young family, the development of mould was a concern for their health and that of their home. The task of wiping windows each morning was not what they had in mind for this new build, and the alternative of leaving windows open during the day was a security risk they were not prepared to take.

As a result, Tararua Refrigeration was brought on board for their expertise to find a mechanical ventilation solution to best suit this 3 bedroom family home.



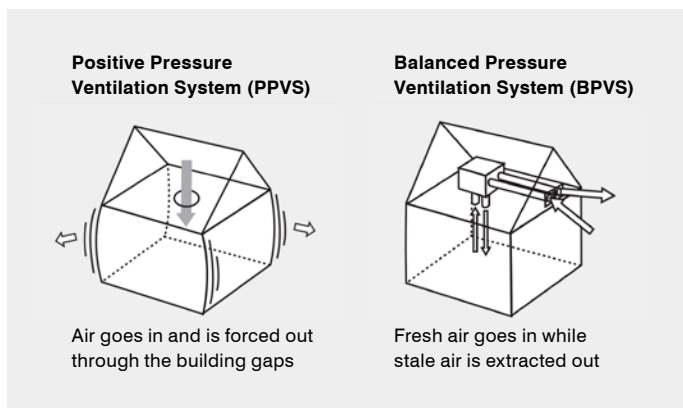
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The Challenge

Introducing Fresh Air to an Airtight Build

As an airtight home built to modern standards, Tararua Refrigeration knew a balanced pressure ventilation system (BPVS) was required - this is because it extracts an equal amount of stale indoor air as the fresh outdoor air it supplies, creating healthy air circulation. With a positive pressure ventilation system (PPVS), air which is often supplied from the roof space and relies on building gaps to be expelled from the home, isn't effective in tighter building envelopes.

By choosing a balanced pressure ventilation system, it would also provide better air quality as it draws fresh outdoor air and filters this before supplying the home, whereas positive pressure systems utilise air from the attic space, often contaminated with dust and debris.



Small Access to Roof Space

As a retrofit project, the ventilation solution needed to either fit through the small entrance to the roof space or be installed outside of the roof cavity.

The Mitsubishi Electric Solution – Vertical Lossnay Fresh Air Heat Recovery Ventilation

A VL-250 Vertical Lossnay Fresh Air Heat Recovery unit was chosen and due to its slim and upright design was able to be installed below the ceiling, in the double garage. Servicing the whole home, two supply grilles and a suction grille were placed in the main living area, with supply air grilles in each of the three bedrooms.

Fresh Filtered Air with No Opening of Windows

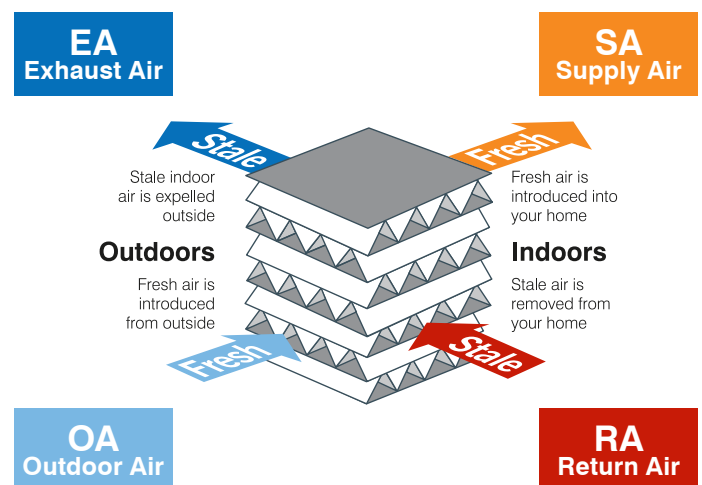
With a Vertical Lossnay system, the airtight home can now breathe. Fresh, filtered air is introduced and consistently circulated throughout the home, while stale, damp air in living spaces is extracted to help manage moisture levels and the build-up of condensation on windows.

The owners no longer have to air out their home by introducing cold, pollen-laden air through windows, and can rest assured when they return to a locked up home the inside air smells and feels fresh.

Opportunity to Save on Heating Costs with Unique Lossnay Heat Recovery Technology

Knowing that a mechanical ventilation system was a solution to this damp home with crying windows, it presented an opportunity to choose a heat recovery system for added energy-saving benefits. Tararua Refrigeration recommended the Vertical Lossnay as, Lossnay's unique Heat Recovery Technology collects up to 90%* of the heat energy in outgoing air which is then used to pre-warm or cool the fresh air vented in. In doing so, moisture build up is minimised while healthy humidity levels are maintained and managed in the most energy efficient way possible. As the incoming air can be pre-warmed and moisture is reduced, the house moving forward will be much easier to heat, making the existing heat pump more efficient too.

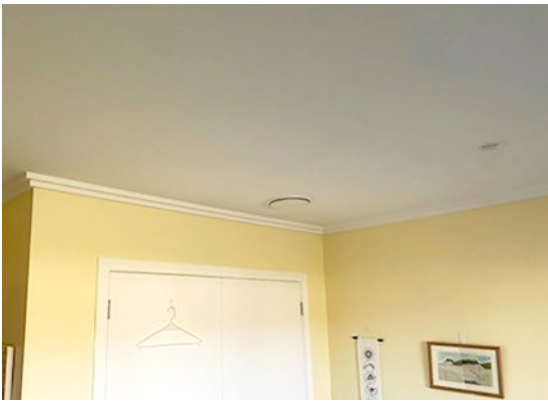
* VL-250 on lowest fan speed.



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The Result

The family can now breathe easier and no longer suffer from moisture build-up on windows when they wake in the morning. As a result, living spaces have optimum humidity levels and they have even noticed strong cooking smells no longer linger in the open plan kitchen and lounge area. The homeowners no longer have to be vigilant about cleaning window sills to prevent mould or worry about furnishings. Furthermore, they can lock up the home while away during the day and return to a fresh home that is easier to heat or cool.



Full Equipment Breakdown

1x VL-250 Vertical Lossnay Fresh Air Heat Recovery Ventilation Unit

Installer:

