HOME VENTILATION SERIES · PART 4 OF 4

Choosing, Costing & Caring for Your System

A practical guide to selecting, budgeting, and maintaining MVHR in New Zealand

IN THIS SERIES

You've understood why indoor air quality matters, how humidity works, and what the ventilation options are. Now comes the practical part: choosing the right system for your home, understanding what it will cost, and knowing how to keep it performing well for years to come.

This final guide in our four-part series focuses on Mechanical Ventilation with Heat Recovery (MVHR) — the most complete solution available for New Zealand homes. We walk through system selection, installation considerations, real cost ranges, maintenance requirements, and the financing options available to help you get started.

SYSTEM TYPES

Centralised vs. Decentralised: Which Approach Suits Your Home?

The first decision is whether to install a centralised MVHR system — a single unit serving the whole home through ductwork — or a decentralised system using individual through-wall units in each room.

- **Centralised MVHR:** a single unit, typically installed in a roof space, subfloor, laundry, or plant room, connected to every room via a duct network. Extraction points in wet rooms; supply points in bedrooms and living areas. The most complete solution, with the highest heat recovery and best filtration options. Ideal for new builds and homes with accessible ceiling or floor cavities.
- **Decentralised through-wall units:** individual units installed through external walls, each serving a single room. No ductwork required — making them considerably easier and cheaper to retrofit. Suitable for older homes, apartments, or specific problem rooms. Lower airflow capacity than centralised MVHR; bathrooms still require separate extraction fans.

> *"The best time to install a centralised MVHR system is during the design stage of a new build — it costs a fraction of what a retrofit will require."*

For new builds, a centralised MVHR system integrated early in the architectural design process is almost always the preferred solution. The ductwork can be routed cleanly within the building envelope, the unit positioned centrally, and the system sized precisely for the house. Retrofitting the same system into an existing home is more complex and expensive — though perfectly achievable in single-level homes with accessible roof or subfloor space.

UNIT SELECTION

How to Choose the Right MVHR Unit

Once you've determined whether a centralised or decentralised approach suits your home, selecting the right unit comes down to three considerations:

- **Performance (airflow and pressure):** the unit must provide sufficient airflow to overcome the resistance of your ductwork and the back-pressure of a high-grade filter, as well as any larger and tighter ductwork. Size conservatively and you'll risk underperformance; select a unit slightly larger than calculated requirements and it will run quieter, last longer, and have capacity in reserve.

- **Heat exchanger efficiency:** look for a unit achieving 75–90% heat recovery efficiency at the airflow rates you actually need — not just at low-speed test conditions. PHI-certified units (Passive House Institute) have been independently verified and their performance data integrates directly into passive house energy calculations.
- **Location and orientation:** units come in vertical (top-connected or top/bottom-connected) and horizontal configurations. Choose based on where the unit will be installed — plant room, laundry, roof cavity, or subfloor. Position the unit as centrally as possible to keep duct runs even and minimise pressure imbalances.

75%+

minimum heat recovery

For Passive House certification, an MVHR unit must achieve at least 75% heat recovery efficiency. PHI-certified units are independently tested and their performance is accepted directly in passive house calculations — simplifying the certification process.

F E A T U R E S & O P T I O N S

What Features Are Worth Paying For?

Modern MVHR units offer a range of additional features. Some are genuinely valuable; others add cost without meaningful benefit for most homes. Here's how to think about each:

- **Filters:** MVHR units can use anything from basic G4 dust filters to high-grade PM2.5 or HEPA filtration. For households with allergies, asthma, or sensitivity to pollen or fine particles, upgrading the filter grade is worth the investment. Homes near motorways or in areas with significant wood-smoke pollution particularly benefit. Note that higher-grade filters require stronger fans to overcome the additional resistance, and they are not always necessary, as also a G4 filter removes most dust and pollen.
- **Summer bypass:** allows the unit to bypass the heat exchanger in warm weather, drawing in cooler night air directly. Standard on most modern units and worth considering — it can improve summer comfort without complex add-ons.
- **Sensors (CO_2, humidity, PM2.5, VOC):** built-in or room-mounted sensors allow the system to adjust fan speeds automatically in response to actual conditions — boosting ventilation when it's needed and reducing it (and noise) when it's not. A worthwhile investment for families with specific health concerns or energy-conscious homeowners.
- **Control systems:** options range from a simple three-speed wall switch to Wi-Fi-connected apps with full scheduling and monitoring. A simple, reliable wall panel is often the best choice — easy for all occupants to use and nothing to go wrong.

COST GUIDE

What Does a System Cost in New Zealand?

Costs vary significantly depending on system type, house size, layout complexity, and installation conditions. The figures below are indicative ranges for New Zealand in 2025:

KEY FACTS AT A GLANCE	
Centralised MVHR — small to medium home (up to 200m²)	$8,000 – $14,000 installed
Centralised MVHR — large or complex home	$14,000 – $20,000+ installed
Cost split (rough guide)	Approx. 1/3 unit, 1/3 ducting, 1/3 installation labour
Decentralised through-wall unit (per room)	$1,500 – $3,000 installed
Decentralised — whole home (e.g. 4 units)	$6,000 – $12,000 installed
New build premium vs. retrofit	Significant — early design integration can halve the ducting and labour cost

A key principle applies: the earlier a centralised MVHR system is incorporated into the architectural design, the lower the total cost. Every meter of ductwork running within the thermal envelope — rather than through an uninsulated roof cavity or subfloor — improves efficiency and reduces heat loss. For architects and designers, specifying MVHR at concept stage is the single most impactful decision for long-term system performance and cost.

MAINTENANCE

Keeping Your System Performing Well

MVHR systems are low-maintenance by design — but they do require some regular attention to perform as intended. Most maintenance tasks can be carried out by a confident homeowner; professional servicing is required every few years.

- **Filter checks (every 3–12 months):** filters should be inspected regularly and replaced when clogged. A blocked filter reduces airflow, increases energy use, and compromises air quality. Basic G4 fleece filters can sometimes be washed and reused; high-grade PM2.5 or pollen filter sets typically cost $100–$300 per replacement set.

- **Annual system check:** inspect ductwork connections, the condensate drain, heat exchanger, and fans. Check that supply and extract grilles are unobstructed. This can typically be done by the homeowner if the unit is easily accessible.
- **Professional service (every 2–3 years):** a trained HVAC technician should inspect and clean internal components, verify airflow balance across all supply and extract points, and confirm overall system function. A routine service normally takes less than an hour if no issues are found.

Always follow the manufacturer's servicing recommendations. This maintains system longevity and ensures manufacturer support remains available if needed.

FINANCING IN NEW ZEALAND

Making the Investment More Manageable

No government subsidies are currently available for MVHR systems in New Zealand. However, several major banks offer low-interest or interest-free 'green home loans' — top-up loans specifically designed for energy-efficient home improvements, including ventilation systems.

- **How they work:** green loans are typically added to an existing mortgage. You provide a quote from a qualified installer; the bank approves the amount; funds are released after installation is complete.
- **Interest rates:** most green home loan products offer rates significantly below standard personal loan rates — some banks offer interest-free periods of up to 12 months. Rates and terms change frequently; check directly with your bank for current offers.
- **Who offers them:** as of late 2025, green home loan products are available from several major NZ banks including ANZ, ASB, BNZ, and Westpac. Each has specific eligibility criteria and approved upgrade categories — confirm that MVHR installation qualifies before applying.

> *"Ask your bank about a green home loan — the interest savings alone can offset a significant portion of your installation cost."*

KEY FACTS AT A GLANCE	
Best time to install	During new build design stage — can halve ducting and labour costs versus retrofit
Centralised MVHR cost	$8,000–$20,000+ installed depending on home size and complexity
Decentralised cost	$1,500–$3,000 per room; $6,000–$12,000 for a whole home
Heat recovery minimum	75% efficiency required for Passive House certification (PHI standard)
Filter replacement	Every 3–12 months; cost $30–$300 depending on filter grade
Green home loans	Available from major NZ banks — check ANZ, ASB, BNZ, Westpac for current terms

THANK YOU FOR READING

This is the final guide in the SolutionAir Home Ventilation Series.

If you have questions about ventilation for your home or project, our team is here to help. We offer consultation, system design, thermal modelling, and supply — whether you are building new or retrofitting an existing home. Reach out via the contact details below.

solutionair PROJECTS

ADDRESS
1/27 Toiawaka Road, Drury 2579, Auckland

PHONE
0800 484 3269

EMAIL
enquiries@solutionair.co.nz

WEB
solutionair.co.nz