



Lossnay Heat Recovery Ventilation

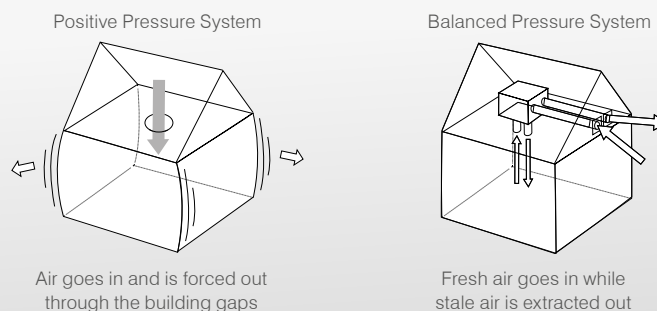
Frequently Asked Questions

Q1

What is the difference between Mitsubishi Electric Lossnay and other Ventilation systems in the NZ Market?

Mitsubishi Electric has been supplying the NZ industry for almost 30 years with “balanced pressure” Lossnay Heat Recovery Ventilation Systems. While most ventilation systems are no better than opening a window letting valuable heat escape, Lossnay brings fresh filtered air in and recovers heat energy from the outgoing stale air which is then used to pre-warm or cool the incoming fresh air. The end result is a healthier, drier and warmer home whilst maximising energy efficiencies. The secret to Lossnay Heat Recovery Ventilation is its unique and highly efficient core, capable of temperature exchange efficiencies of up to 93%* which can significantly reduce the energy and cost to maintain the desired indoor temperature.

Many other ventilation systems are “positive pressure” systems which can only introduce air into the home but not extract stale air, relying instead on the home to be sufficiently draughty in order to force the air out through cracks in windows and doors. As a result, this type of system is not capable of recovering usable heat from the outgoing air which is subsequently lost. With New Zealand homes becoming more and more airtight, positive pressure ventilation is no longer a viable solution.



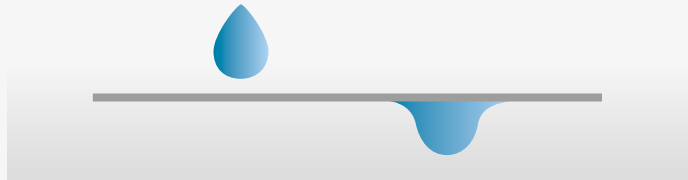
*LGH-50RVS on lowest fan speed.

Q2

Energy Recovery (ERV) vs. Heat Recovery (HRV) – What is the difference?

ERV systems feature The Diamond Core Classic – a permeable core which recovers sensible (temp) and latent energy (relative humidity). Whereas the HRV core is a treated non permeable resin core (Diamond Core Plus) which is capable of recovering sensible heat only, making it viable to use for extracting from wet areas.

Lossnay Heat Recovery units are therefore ideal for applications where air is being extracted from wet areas* including laundries or bathrooms.



*When extracting from a bathroom or wet area, other room(s) must also be connected to the return air ducting network.

Q3

Is Lossnay suitable for retrofit in residential dwellings?

Yes – Mitsubishi Electric offer a wide range of Lossnay types suitable for all installations.

In-ceiling units such as the LGH, VL-220 and VL-100ZSKR are generally suitable for older homes or dwellings which have sufficient ceiling space to accommodate the unit and associated ducting.

Q4

What if I don't have ceiling space?

In cases where the ceiling access hatch is too small to allow access or there is insufficient ceiling space, Mitsubishi Electric offer a range of Vertical Lossnay Systems which can be installed in the garage or cupboard and still have duct distribution run throughout the ceiling cavity. An added advantage of the Vertical Lossnay Series is that the units are easily accessible for filter maintenance by the installer or end user.

If the ceiling cavity doesn't allow for ducting runs, we recommend using the wall mounted single room Lossnay VL-100EU for rooms throughout the dwelling or in individual areas within the home where indoor air quality is a concern.

Q5

What type of cores are equipped within the Lossnay units?

Lossnay Ventilation units are fitted with a core that is either:

- Specially treated paper and permeable for energy recovery (VL-100, LGH-RVX).
- Water resistant or resin coated paper core, non-permeable for heat recovery, also suitable for wet rooms (VL-220).
- Plastic counter-flow heat exchanger, non-permeable for heat recovery, also suitable for wet rooms (LGH-RVS & Vertical Lossnay).

Ongoing development by Mitsubishi Electric has seen Lossnay evolve into a wider range of versatile and highly efficient ventilation solutions.

Q6

Will Lossnay heat or cool the house?

The primary function of Lossnay is to introduce fresh, filtered air into the home and extract stale air as a balanced pressure system, working in conjunction with heating and cooling devices but not replacing them. Lossnay recovers usable warm or cool air from the outgoing air, transferring this via a heat exchange system to the fresh air being introduced, reducing the amount of energy required to maintain the desired indoor temperature, so your heating system isn't required to work as hard. In some instances, Lossnay is capable of heat exchange efficiencies of up to 93%*.

*LGH-50RVS on lowest fan speed.

Q7

I'm building a new home - at what stage should I plan and consider ventilation requirements?

Earlier is always better when considering the appropriate ventilation system for your home to ensure enough room is allowed in the ceiling to run the ducts and accommodate an in-ceiling system if that is the preference. Initial planning also helps project utilities required (power and plumbing, condensate drain requirements) and allows enough room to mount and access the unit for the purpose of future maintenance.

Q8

Can I incorporate ducted air conditioning with a Lossnay system and what controls are available to run the system?

Yes, Lossnay is the ultimate solution to complement ducted air conditioning systems for a total heating, cooling and whole home ventilation system.

Having Lossnay integrated to ducted air conditioning allows for several control options that the installer/end user can choose from, depending on the application and user preference:

Option 1- Control both the Lossnay and ducted air conditioning via the same controller, a wall mounted PAR-40MAA. This provides greater convenience to the end user, however this configuration will limit some of the additional functionality of the Lossnay system which is restricted to on/off and low/high fan speed control.

Option 2- Individual separate controls for the Lossnay and ducted air conditioner. In this configuration the Lossnay connects to its own PZ-62DR controller and retains all of its additional functionality, including bypass, 4 fan speeds, boost and weekly timer. The air conditioning system connects to the PAR-40MAA controller.

Please note: Irrespective of what above options are used, they will still require the ducted system to always operate on fan mode even when not cooling or heating.

Q9

How quiet are Lossnay Heat Recovery units?

Mitsubishi Electric prides itself in supplying the quietest and highly efficient systems and Lossnay is no exception to that. Some of the models can perform as low as 14dBA[†], at the same time being highly efficient, delivering up to 93% sensible heat exchange*.

[†] VL-220CZGV on lowest fan speed.

*LGH-50RVS on lowest fan speed.

Q10

What tools are available to assist in the design/selection process?

Mitsubishi Electric has a wide range of dealers across the nation with the majority of them being accredited installers for the Lossnay product range, having installed them over the years and attended the training courses conducted by BDT (Mitsubishi Electric NZ).

BDT has generated various tools to support the installers and designers network to best assist in selecting the right solutions towards their applications, of which some of them are:

- Training courses on balance pressurised ventilation solutions & ducted air conditioning systems.
- Access to a sizing tool on Mitsubishi Electric NZ's web portal.
- Proprietary software (MELVEST) to visualise the performance of the selected model based on application and geographical location.
- Design team to advise and assist on complexed projects across the nation.
- Technical Services with 30 years of experience around the product range to assist on any trouble shooting issues on site.

We also have a range of Service Centres throughout the country to help assist with any faults that may arise. Find your closest Service Centre [here](#).

Q11**What is the warranty period for Mitsubishi Electric's Lossnay Ventilation product range?**

BDT offers a 5 year warranty for the entire Lossnay Heat Recovery Ventilation product range.

Q12**What maintenance is required for Lossnay systems?**

Most Lossnay Heat Recovery Ventilation units are equipped with standard G3 filters which can be cleaned on a regular maintenance cycle (approximately 1 per year, but the frequency of maintenance can be increased based on how dirty they get), the filters can be vacuumed or washed with mild warm water. For higher levels of filtration, BDT also offer high efficiency filters if required. Please contact your territory representative for pricing and availability.

The core can be easily removed for cleaning, and we recommend this be done once every two years. For Lossnay units with energy recovery, you should only vacuum or wipe the core with a dry cloth, whereas the heat recovery core can be washed.

Q13**Does Lossnay have a bypass function and how does it work?**

Most Lossnay Systems have an integrated bypass damper equipped within the unit, except for the VL-220 model where it is an option only, requiring a separate bypass damper (available separately). Using on-board temperature sensors, the Lossnay unit will automatically enter bypass mode when it detects a space is hotter than desired and the outside air is cooler. To reduce the risk of overheating the home, fresh air is introduced, bypassing the Lossnay Core. This is ideal for cooling down a dwelling that may have overheated during the day once the outside temperature has dropped in the evening. This allows for free cooling/night purge by either setting it to bypass mode manually or left on auto for the unit to sense and function intelligently.

*Not applicable to single room Lossnay.

Q14**Do Lossnay units have a boost function?**

A boost function is available on the Vertical Lossnay range, which has been specifically designed to cater for the residential market. This function is available via wiring to a light switch in the bathroom, giving a signal to the unit to run on boost mode (100% speed) for a pre-set time (default 30mins). This allows the designer to design the entire system to run efficiently on low speed and boost only when required.

Q15**Do Mitsubishi Electric provide any other ventilation solutions besides Lossnay?**

Absolutely yes, in fact Mitsubishi Electric also produce ventilation systems that can perform from 400 m³/hr to 3800 m³/hr. Available from our MEHITS factory in Italy, the HRD2 HRV range is currently available, and our factories are also working on similar sized new ranges for ERV models as well.



Q16**Can Lossnay be used for schools & educational facilities?**

The commercial Lossnay range LGH-RVX3 & LGH-RVS models are designed to cater specifically to these types of applications. Additionally, having plug and play type compatible CO₂ sensors makes it even more special as an one stop solution with many benefits as follows:

- The Lossnay System runs on demand control based on tailored threshold CO₂ ppm levels, making the entire system run efficiently, reducing carbon emissions.
- The Lossnay System runs extremely quietly, even when running on variable speeds, ensuring minimal to no disturbance is created in the learning environments.
- Improves indoor air quality without sacrificing comfort or increasing the heating/cooling demands. Lossnay is designed to bring in pre-warmed/pre-cooled fresh filtered air at a recovery rate of up to 93%*.
- Flexible options on controllability of the Lossnay either using single room (wall mounted) CO₂ sensor or multi room (duct mounted) CO₂ sensor.
- Tailored monitoring and control of CO₂ ppm levels with visuals showcasing high (red), mid (orange) and low (green)**.
- Balanced pressurised ventilation options at all speeds to eliminate pressurisation issues in the confined space.
- CO₂ sensors as powered and controlled by the unit, eliminates the need on providing additional power input as well as commissioning time.
- The Lossnay unit along with CO₂ sensors can also be integrated to the ducted air conditioning system for optimized control.

*Sensible heat recovery rate of LGH-50RVS on lowest fan speed

**Limited to Wall mounted Co2 sensor (PZ-70CSW-E)

