



PremiSys®



Premier Ventilation Solutions

A high-angle, wide shot of a modern office interior. The space is characterized by large glass walls and partitions, creating a bright and open atmosphere. In the foreground, there's a light-colored armchair with a patterned cushion and a large potted plant. To the right, a person is seated at a wooden table, working on a laptop. The background shows a staircase and more office furniture. The overall design is clean, minimalist, and emphasizes natural light and greenery.

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Designed for life,

A woman with curly hair, wearing a light blue blazer and trousers, is seated at a round wooden table in a modern office. She is looking out a large window at a lush green courtyard with various plants and a person walking in the distance. The office has light wood flooring and a modern chair. The text "inside and out." is written vertically in white on the left side of the image.

inside and out.

Premier Ventilation Solutions

Mitsubishi Electric Premier Ventilation Solutions provide energy-efficient air delivery for commercial buildings. Our advanced systems extract stale indoor air and replace it with pre-conditioned, filtered outside air, reducing airborne contaminants and reclaiming heat from exhaust air to maximize comfort and minimize energy use. Quiet operation, advanced controls, and seamless integration with existing HVAC infrastructure make our solutions ideal for modern commercial environments.



Lossnay energy recovery ventilators (ERV) recover both sensible (temperature) and latent (humidity) heat from exhaust air, using a patented paper core to pre-condition incoming air without direct contact. This process reduces heating and cooling loads and supports decarbonization goals.

Choosing the right Lossnay ERV - RVX2 vs. RVXT2

Mitsubishi Electric offers two advanced Lossnay ERV solutions for commercial applications:

RVX2: A proven, flexible workhorse for standalone or VRF-compatible projects, ideal where efficiency and quiet operation are priorities.

Model Numbers: LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E, LGH-F940RVX2-E, LGH-F1200RVX2-E



RVX2
CFM, 300, 380,
470, 600

RVXT2: The next-generation solution, designed for high CFM requirements in restricted spaces. It features a slimmer chassis, expanded airflow (up to 6,000 CFM), three-phase power, and simplified ductwork for easier installation in tight commercial environments.

Model Numbers: LGH-F940RVXT2-E, LGH-F1200RVXT2-E, LGH-F1500RVXT2-E



RVX2
CFM 940, 1200

Application Guidance

RVX2: Best for standard commercial spaces needing reliable, efficient ventilation.

RVXT2: Recommended for large, high-occupancy spaces or retrofit projects with limited ceiling height or demanding airflow needs.



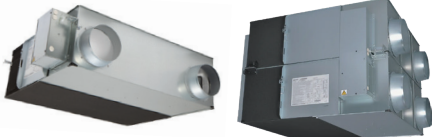
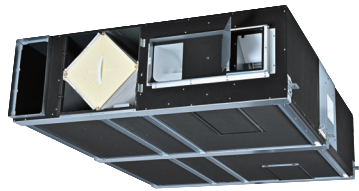
RVXT2
CFM 940,
1200, 1500



How RVXT2 Stands Out

Compared to leading competitors, RVXT2 offers the thinnest chassis (just 19.7"), among the highest static pressure ratings at comparable airflow in its class, built-in bypass operation (no extra accessories required), lower power consumption, and more granular airflow control with 16-step fan speed settings. M-NET compatibility ensures seamless integration with Mitsubishi Electric systems.

Features and details

		
Features	RVX2 – Proven Workhorse	NEW RVXT2 – Next-Gen Solution
Airflow Range	300 – 1,200 CFM	940 – 1,500 CFM (expanded capacity)
External Static Pressure	Up to 1 in.WG	Up to 0.72 in.WG
Bypass Operation	Built-in bypass no extra parts	Built-in bypass (70% airflow max) no extra parts
Ductwork Design	Separate SA/RA ducts. The 940 and 1200 RVX2 models feature two supply ducts and two return ducts, but still only one OSA intake and one exhaust.	For the RVXT2 series, the standard configuration includes one supply duct, one return duct, one outside air (OSA) intake, and one exhaust. While the supply and return ducts remain separate, there is only a single connection for each.
Chassis Height	Up to 31.8"	Slim 19.7-in. chassis – for an easier fit above ceiling
Installation Flexibility	Flexible orientation	Left/Right reversible install for tight spaces
Power Supply	1-phase	3-phase only for commercial loads
Interlock	Control multiple RVX2 with one command	Network up to 4 units with PZ-62DR/TZ-62DR controller
Optional CO ₂ -Demand Control	Sensor-ready (25–100% fan speed)	Sensor-ready (25–100% fan speed)
Independent SA/EA Airflow Control	---	Set supply & exhaust separately (25 in steps) – enables pressurization
Temperature Exchange Efficiency ¹	65.0% – 69.0% at highest fan speed (depending on model)	76.5% – 81.5% at highest fan speed (depending on model)
M-NET Compatibility	Yes	Yes – designed for synchronized multiple-unit control
Patented Lossnay core	Specially processed paper core enables sensible and latent heat recovery	Specially processed paper core enables sensible and latent heat recovery
Noise and Vibration Levels	35–46 dB(A)	35–46 dB(A)
Dual Barrier Coating on Fans	No	Yes

¹Temperature exchange efficiency calculated in accordance with ISO 16494-1 (2022)



Design with confidence

Interlock

Networking systems with Mitsubishi Electric air conditioners has never been easier. The M-NET protocol comes standard for easy integration with Mitsubishi Electric systems, and there is no need to purchase additional parts. Systems can be assembled simply and logically, reducing construction times and keeping initial costs low.

Bypass ventilation standard

Lossnay models offer three ventilation modes:

- Energy Recovery : Heat Exchange
- Bypass : No Exchange
- Automatic : Heat Exchange/Bypass

With conventional ERV's, bypass ventilation was impossible without attaching additional dampers and adapters. With Mitsubishi Electric's Lossnay series, however this mode is available without additional components. An automatic mode allows the system to select recovery or bypass as required. Mode selection is easy when interlocked with M-NET systems using the PZ-62DR remote controller.



Controls and system compatibility

Wired controller



PZ-62DR-EA Wired Controller

- 7-day programmable timer, high-visibility LCD, intuitive operation
- Optional CO₂ sensors for demand control and energy savings
- High-visibility LCD display with large characters.
- Large and easy-to-press buttons – Frequently used buttons are grouped for intuitive operation. They are also larger than other buttons to prevent unintended pressing.
- Products functions include:
 - Fan speed selection
 - Ventilation mode selection
 - Night-purge – “Bypass” ventilation can be used to release hot air that has accumulated inside the building during the hot summer season.
 - ON/OFF timer
 - Auto-Off timer
 - Weekly timer

Advanced and centralized controllers



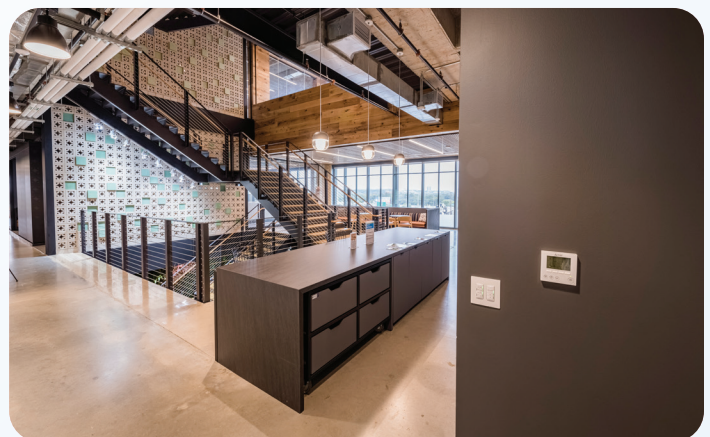
AE-C400A Centralized and Web Controller

- Can operate and monitor up to 50 indoor units
- Expansion Controllers can expand an AE-C400A to operate and monitor up to 50 additional indoor units through the touchscreen or web browser
- Network up to seven EW-C50A to one AE-C400A to allow the AE-C400A to manage up to 400 indoor units



kumo Station™ Controller

- A more advanced system for controlling multiple units from a single location.





Advanced filtration made simple

Lossnay RVX2 and RVXT2 supports high-efficiency filtration with optional MERV 7, MERV 14 and MERV 16 filters. When installing advanced filters, be sure to open the filter curtain as shown in the installation guide. This ensures optimal airflow and filtration performance.

Thoughtfully designed for hassle-free upkeep

Lossnay ERV maintenance is straightforward and efficient. Filters can be accessed easily from the side or bottom panel without the need for specialized tools, making routine inspections and replacements quick for facility staff. The integrated controller provides timely reminders for filter changes and alerts users to any maintenance needs. Key components such as fans and the Lossnay core are modular and simple to remove, minimizing downtime during service. Comprehensive installation and maintenance documentation is available on MitsubishiPro.com.

Part	Model Number	Detail
Remote Control	PZ-62DR-EA	Mitsubishi Electric Brand
CO₂ Sensor	PZ-70CSW-E	Wall-mounted
	PZ-70CSD-E	Duct-mounted
Signal Output	PZ-4GS-E	Integration Made Easy: The optional PZ-4GS-E signal output accessory allows Lossnay RVX2 and RVXT2 units to interface with building management systems or external controls, providing real-time status and operational feedback for advanced automation

Lossnay® Filter Model Numbers

Part	Model Number	Detail
LGH-F300RVX2-E	PZ-50RF9-E	MERV 7 (included)
	PZ-50RFP-E	MERV 14
	PZ-50RFP2-E	MERV 16
LGH-F380RVX2-E	PZ-65RF9-E	MERV 7 (included)
	PZ-65RFP-E	MERV 14
	PZ-65RFP2-E	MERV 16
LGH-F470RVX2-E	PZ-80RF9-E	MERV 7 (included)
	PZ-80RFP-E	MERV 14
	PZ-80RFP2-E	MERV 16
LGH-F600RVX2-E	PZ-100RF9-E	MERV 7 (included)
	PZ-100RFP-E	MERV 14
	PZ-100RFP2-E	MERV 16
LGH-F940RVX2-E	PZ-80RF9-E (two pieces are required)	MERV 7 (included)
	PZ-80RFP-E (two pieces are required)	MERV 14
	PZ-80RFP2-E (two pieces are required)	MERV 16
LGH-F1200RVX2-E	PZ-100RF9-E (two pieces are required)	MERV 7 (included)
	PZ-100RFP-E (two pieces are required)	MERV 14
	PZ-100RFP2-E (two pieces are required)	MERV 16
LGH-F940RVXT2-E	PZ-250TRFA-E	MERV 7 (included)
	PZ-250TPF-E	MERV 16
LGH-F1200RVXT2-E	PZ-250TRFA-E	MERV 7 (included)
	PZ-250TPF-E	MERV 16
LGH-F1500RVXT2-E	PZ-250TRFA-E	MERV 7 (included)
	PZ-250TPF-E	MERV 16

PremiSys®

Dedicated Outdoor Air System (DOAS)

PremiSys® is an advanced solution for total control of your building's indoor environment. Designed specifically for demanding commercial applications, PremiSys brings in 100% outdoor air and conditions it for optimal comfort, code compliance, and energy efficiency. It combines heating, cooling, dehumidification, and energy recovery in a single, factory-assembled package—eliminating the complexity of piecing together multiple systems.



With flexible airflow options, advanced controls, and seamless integration with VRF and building automation systems, PremiSys adapts to the unique needs of schools, offices, healthcare facilities, and more. This robust system is designed for the decarbonization goals of today, and the challenges of tomorrow. PremiSys isn't just a rooftop unit—it's the smart, future-ready choice for commercial ventilation.

This fully packaged heating and air conditioning solution is perfect for commercial buildings, featuring:

- Direct-drive plenum fans with factory-mounted variable frequency drives (VFD) to handle up to 18,000 CFM and 3in.WG external static pressure
- 2-inch double-wall construction with R13 foam insulation on entire casing (little to no thermal bridging)
- Demand control strategies such as Occupied/Unoccupied modes using integrated time clock, CO2 control, or static pressure control
- High turndown burner of up to 16:1 on a single furnace for seamless modulation
- Standard DDC controls for standalone operation or M-NET communication option to integrate with VRF controls
- Inverter compressors that meet the latest AHRI 920 standard
- Fully modulating hot gas reheat for dehumidification
- Packaged air-sourced heat pump with ERV and integrated back-up heat to meet the latest decarbonization standards (back-up heat options: gas heat, electric coil, or hot water coil)
- Energy recovery wheel or static core options available
- Low sound condenser fans with EC motor on lead condenser fan
- Standard Permator™ coating on outer casing. This coating is compliant with ASTM B117 Non-Scribe Rated for 2500 Hours



Performance Verification

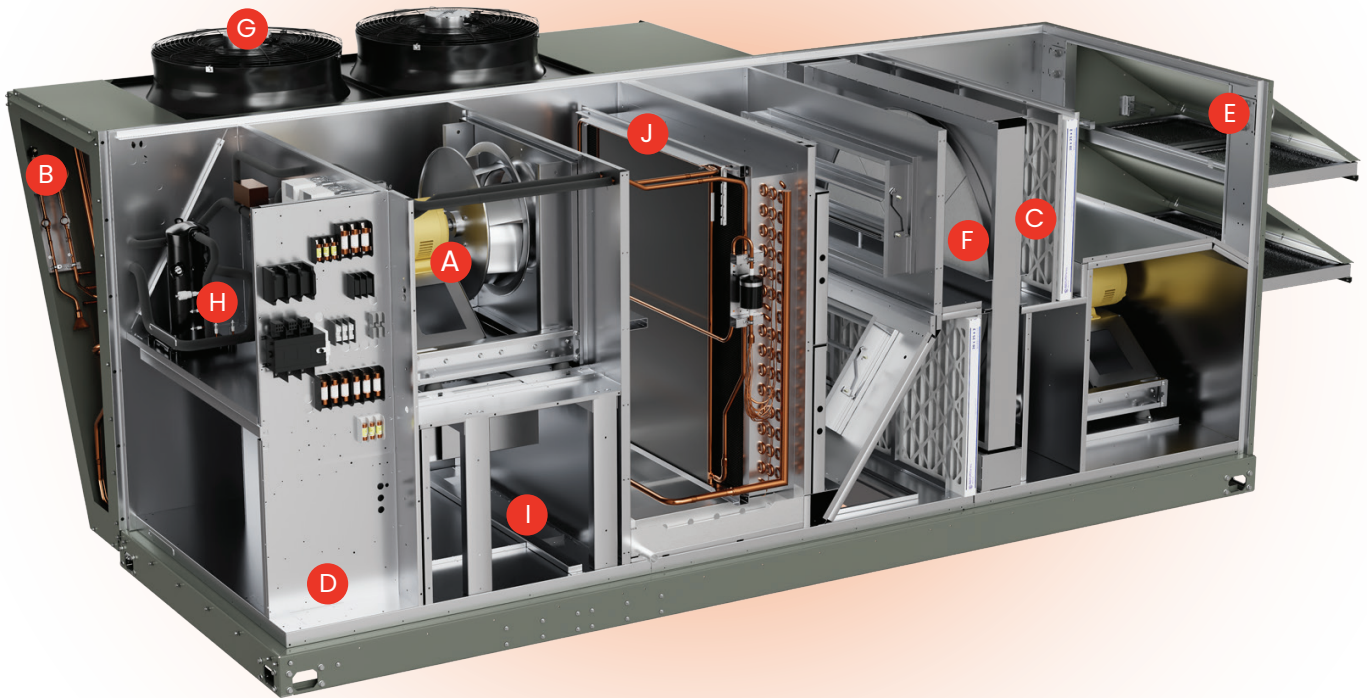
Engineered for Easy Service and Long-term Reliability

All major components—including filters, fans, and heat exchangers—are accessible through hinged front and side service panels, streamlining routine maintenance and inspections. The standard DDC controls can monitor filter status and notify building staff when replacements are needed, while high-capacity filters help extend service intervals and reduce operational costs. Major components are mounted for quick removal, ensuring that maintenance tasks can be completed efficiently. Detailed service guides and technical support resources are available on MitsubishiPro.com.

DOAS Product Line Summary of FY26 Updates

	MP-0 3-7 tons Up to 2,500 CFM	MP/E/C-1 5-15 tons Up to 6,500 CFM	MP/E/C-2 15-30 tons Up to 10,000 CFM	MP/E-4 25-70 tons Up to 18,000 CFM	MP-6 50-100 tons Up to 29,200 CFM
Aug. '24	ER Wheel Add 454B Orders 410A Obsolescence	ASHP Updates 454B Orders 410A Obsolescence	ASHP Updates 454B Orders 410A Obsolescence	Expansion 454B Orders 410A Obsolescence	Old Housing Obsolete
Dec. '24	T-CAPS	T-CAPS	T-CAPS	T-CAPS	
April '25			More Heat/ More Air - Phase 1		
Aug. '25					New Housing - Phase 1 (No PE, No ER)





PremiSys® MP(E) Features

A - Plenum Supply/Exhaust Fan

- Airfoil plenum blower
- Direct drive
- Neoprene isolation
- 12-bladed design for quiet operation
- Factory provided variable frequency drive (VFD)

B - Construction

- 2-inch double-wall construction
- R13 foam insulation thermally broken
- Easy lift-off removable access doors with stainless steel hinges and quarter turn latches

C - Filters

- 2-inch MERV 8 supply and exhaust filters (pre-wheel)
- 2-inch MERV 8 or MERV 13 or MERV 8 and 13 supply final filters (pre-coil)

D - Control Center

- 24 VAC control voltage
- Control transformer
- Disconnect switch
- UL Listed, Recognized, or Classified electrical components
- Factory prewired for single point power connection
- Phase and brownout protection (PDX)

E - Weatherhood

- 2-inch aluminum mesh filters (mist eliminating)
- Downturn intake
- Wind-driven rain prevention

F - Total Energy Wheel (MPE)

- Sensible and latent energy recovery
- Lightweight, segmented wheel for easy cleaning
- L10 rated bearing life in excess of 400,000 hours
- Permanently bonded, silica gel desiccant for long-term latent transfer durability
- Stainless steel housing

G - Cooling Options

- Packaged direct expansion (PDX)
- Optional hot gas reheat
- All coils with copper tubes and permanently expanded aluminum fins
- Mounted on a stainless steel insulated drain pan

H - Compressors

- Standard hermetic, scroll-type
- 5 to 30 tons of mechanical cooling
- 1 circuit up to 10 tons
- 2 circuits 10 tons and over

I - Heating Options

- Indirect gas-fired furnace
- Stainless steel heat exchanger
- Optional 5 or 10 year extended warranty
- Electric heater
- SCR control
- Hot water coil
- Modulating hot gas reheat
- 6 inch separation between DX and reheat coil components

J - Outdoor Air Dampers

- Insulated, low leakage
- Modulating actuator

Proof of Performance

Lossnay and PremiSys solutions have been successfully deployed in schools, offices, and high-performance buildings worldwide. Notable projects include:

1. Australian schools utilize CO₂-controlled Lossnay ERVs for improved air circulation and energy savings

In Australia, where older schools rely heavily on natural ventilation via windows that are closed in cold weather, clear links have been identified between poor air ventilation and cognitive impairment and increased likelihood of contaminant transmission.

Despite the lack of government-mandated standards, several schools have selected Lossnay systems for new construction and retrofits to improve classroom ventilation.

2. New Zealand business parks achieve Green Star ratings with integrated Lossnay/VRF systems

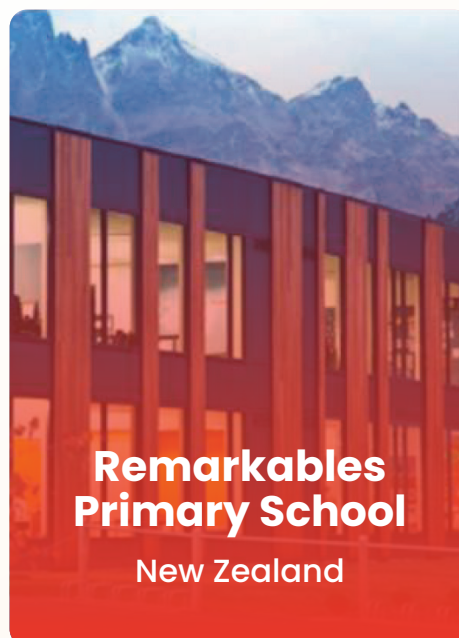
Developers of the new Hazeldean Business Park targeted a 4-star Green Star rating for the largest of three buildings in the new development. Designers recommended Lossnay heat and enthalpy recovery systems to ensure efficient and economic delivery of outside air to the building. The 2-pipe architecture of the Mitsubishi Electric VRF system allows simultaneous heating and cooling with heat recovery while also reducing labor and material costs compared to other systems.

3. LEED-certified office towers in Asia using Lossnay with MERV 16 filtration for PM2.5 control

Two new commercial office buildings in the Philippines have been granted LEED certification, in part due to utilization of highly efficient Lossnay ERVs and high-grade MERV 16 filters:

- One Triumtower – Manila
 - 20 story office/retail
 - LEED certified for adopting energy saving equipment
- Cebu Exchange – Cebu
 - Largest office in the Philippines (>108k m²)
 - World's first Edge Zero Carbon certified building
 - Also certified for LEED Platinum and BERDE 5 star.

Contact your Mitsubishi Electric representative for a selection guide or project consultation





PremiSys®



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