



MITSUBISHI ELECTRIC LOSSNAY ENERGY RECOVERY VENTILATOR
MODEL

VL-100ZSKRT-E (Remote Controller Model)

Operating Instructions

For Customer

Contents	Page
Safety precautions	2
Features	4
When using the unit	4
Names of parts.....	5
Before you start the Lossnay	6
Operation	7
Maintenance	8
Troubleshooting	10
After-sales servicing.....	11
Specifications.....	12



Please read these instructions thoroughly to ensure safe and proper use. After reading, store the manual in a handy location for easy access.

Before proceeding with operation, please be sure to read "Safety precautions", as it will tell you how to operate the Lossnay ventilator properly and safely.








Do not install the unit yourself. (The safety and performance of customer-installed units is not guaranteed.)

Safety precautions







The following symbols indicate the degree of danger caused by incorrect handling of the product.


	Warning		Caution
Incorrect handling may result in death or serious injury.		Incorrect handling may result in minor injury or physical damage to the house or household goods.	

Symbols used in the text and on the main unit have the following meanings.




	Prohibited		Do not install in bathroom
	Do not touch		Be sure to ground
	Do not disassemble		Follow instructions
	Do not wet		

Warning

 Prohibited	<p>Do not turn the Lossnay controller on or off when flammable gas has leaked. Sparks from electric contact may cause explosion.</p> <p>Open windows to ventilate.</p> <p>Do not use in a place where will be exposed to high temperatures, naked flames, heavy oil smoke, or organic solvents. Doing so may cause fire.</p>
 Do not disassemble	<p>Do not modify or disassemble with tools. Doing so may cause fire, electric shock, or injury.</p>
 Do not wet	<p>Do not immerse in water or spray with water. Doing so may cause fire or electric shock.</p>
 Do not install in bathroom	<p>Make sure that the main unit is not installed in a place with high humidity such as in a bathroom. Doing so may cause electric shock or injury.</p>
 Be sure to ground	<p>Make sure that the ground wire is connected properly. An electric shock may occur in the event of failure or electric leakage.</p> <p>Ask an electrical contractor to connect the ground wire.</p>
 Follow instructions	<p>Use the specified voltage. Failure to do so may cause fire or electric shock.</p> <p>Stop operation and make sure that the power supply isolator is turned off before starting maintenance. Electric shock or injury may occur when power is supplied.</p> <p>If you notice any abnormalities (burning smell, etc.), stop operation and turn off the power supply isolator. Continuing operation under an abnormal condition may cause failure, electric shock, fire, etc.</p> <p>Make sure that the outside air intake duct is located where exhaust or combustion gases are not sucked in. Fresh air may not be taken in and the room may run out of oxygen.</p> <p>When not using for a long period of time, turn off the power supply isolator. Insulation deterioration may cause electric shock or fire due to an electrical fault.</p> <p>When the air supply/exhaust holes on the wall are exposed to rainwater, make sure that a hood is attached. The entry of rain water may cause electric shock, fire, damage to household goods, etc.</p> <p>When thunder sounds, stop operation and turn off the circuit breaker. Failure to do so may cause damage on electrical parts.</p>

 <p>Follow instructions</p>	<p>If an abnormality or failure occurs, immediately stop use and turn off the power supply isolator. Continuing use may result in smoke, fire, electric shock, or injury. <Examples of abnormalities/failures></p> <ul style="list-style-type: none"> - Pressing the switch does not start the rotation of rotors. - There is unusual noise or vibration during rotation. - Rotation is slow or irregular. (The motor is a part that requires maintenance) - There is a burning smell. - There is corrosion, damage, etc. in the installation base of the main unit. <p>* Turn off the power supply isolator immediately and ask your dealer for inspection and repair.</p> <p>If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.</p>
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 **Caution**

 <p>Prohibited</p>	<p>Do not place a burning appliance in a place exposed to air flow from Lossnay. Incomplete combustion may result in an accident.</p> <p>Do not stand on an unstable surface during maintenance. You may fall off and get injured.</p>
 <p>Do not touch</p>	<p>Do not place your fingers or any other object into the main unit during operation since the rotors are rotating. Doing so may cause injury.</p>
 <p>Follow instructions</p>	<p>Make sure that the main unit is not mounted on a wall (it must be mounted on a ceiling). It may fall and cause injury.</p> <p>Wear gloves during maintenance. Failure to do so may cause injury.</p> <p>Securely attach parts after maintenance. They may fall and cause injury.</p> <p>Stop operation when the outside temperature is low, wind and rain are strong. Water penetrates inside together with supply air, causing water droplets to form.</p> <p>Stop operation when there is fog. Water penetrates inside together with supply air, causing water droplets to form.</p> <p>This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.</p>

Safety precautions

Handling the remote controller battery

Observe the following instructions to ensure safe use of the remote controller and correct use of the remote controller lithium battery.



Caution

 Prohibited	<p>Do not leave the battery and remote controller in a location that is accessible by small children. Accidental swallowing may cause chemical burns. If the battery is swallowed, consult with your doctor immediately.</p>
	<p>Do not short circuit, disassemble, modify, heat, or charge the remote controller battery, or throw it into fire. Doing so may cause heat generation, liquid leakage, rupture, fire, electric shock, or injury.</p>
 Follow instructions	<p>Insert the plus [+] and minus [-] of the remote controller battery correctly. Immediately remove a battery that has run out of power from the remote controller. Incorrect use of the battery may result in liquid leakage, rupture, heat generation, injury, or failure.</p>

Features

What is Lossnay?

A ventilator that exhausts stale air from the room (air exhaust) and cleans outside air and supplies it to the room. (Air supply) The outside air is supplied after its temperature is brought close to room temperature. (Heat-exchange ventilation)

* Lossnay is not an air-conditioner. It is a ventilating fan that exchanges heat as it ventilates.

Filters

This unit has a total of two filters, an air supply filter and an air exhaust filter.

- These filters remove about 80% (by the mass method) of particles bigger than 10 microns (0.01 mm), such as dust, sand, and pollen.

* Small particles and insects may pass through. To enhance trapping efficiency, you can replace the air supply filter with a separately sold high performance dust filter. Contact your dealer for purchase.

Type	Model	Approximate service life	Remark
Replacement filter	P-100ZF-E	Replace when damaged Cleaning approx. every 6 months	Can be used to replace both air supply and exhaust filters
High performance air supply filter	P-100ZHF-E	Replace every year Cleaning approx. every 6 months	Can be used to replace the air supply filter

When using the unit

- Stop operation in any of the following cases.**

When the wind and rain are strong

When there is thick fog (water penetrates inside together with the supply air, causing water droplets to form)

When cleaning or inspecting

- Obey the following cautions when using the Lossnay.**

Do not use aerosol sprays (such as insect sprays, hair sprays or cleaners) directly on the unit.

The panel may warp, weaken, or become damaged.

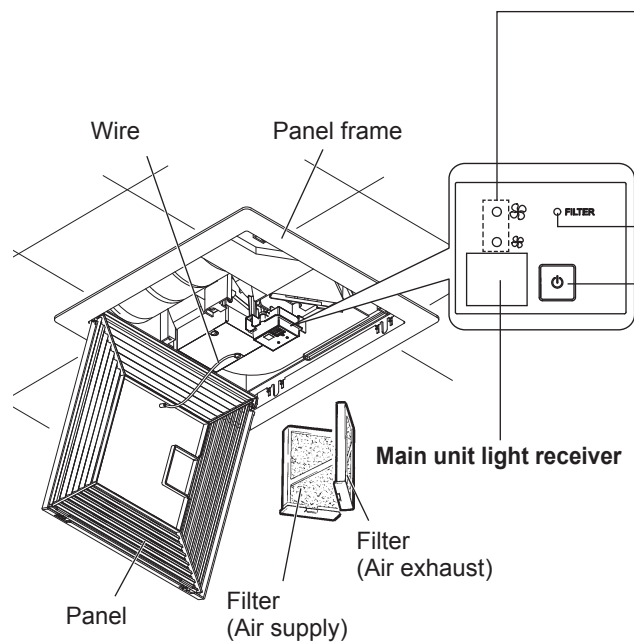
Do not obstruct the panel.

Proper ventilation may be impeded.

- Since Lossnay takes in outside air into the room, outside air smells (e.g., exhaust gas smell) may also be taken in.**

- When the outside temperature is 0 °C or lower, the moisture of the indoor air can condense, resulting in the water dropping from the main unit. To prevent this to happen, stop operation when the outside temperature is 0 °C or lower. (If condensation is formed, wipe it off with a soft cloth.)**

Names of parts



■ Main unit controller

Operation lamps: Green

- * The operation lamps are off immediately after power is supplied to the unit. The lamps turn on only when the button on the remote controller is set to ON during operation.
- * When the button on the remote controller is set to ON, the lamps turn on as shown in the figure below.

High operation

(The two lamps turn on at the same time)



Low operation

(Only the lower lamp turns on)



- * To turn off the operation lamps, set the button on the remote controller to OFF again.
- * If you press the button on the remote controller to turn off the power supply while the operation lamps are on, operation will start with the lamps on when you press the button on the remote controller next time. (Operation starts with the settings for when the power supply was turned off last time retained.)

Filter maintenance notification lamp: Red

- * The lamp turns on after the cumulative total of about 1,500 operating hours (about 6 months when operating 8 hours per day). When the lamp turns on, clean the filter. (See page 8)

[Turning off the filter maintenance notification lamp]

- * The filter maintenance notification lamp turns on, regardless of whether the button on the remote controller is set to ON or OFF. To turn off the lamp, press and hold down the operation selector switch on the main unit for at least 3 seconds.
- * The filter maintenance notification lamp does not automatically turn off after cleaning the filter. Turn it off by pressing and holding down the operation selector switch on the main unit for at least 3 seconds. (If you do not turn off the filter maintenance notification lamp after cleaning the filter, you will not know the timing for cleaning next time)
- * The filter maintenance notification lamp does not turn off even if you press the button on the remote controller.

Operation selector switch (Each press of the switch changes the operating mode in the order of Stop → High → Low → Stop.)
Press and hold down the switch (for at least 3 seconds) to turn off the filter maintenance notification lamp.

Supplied parts



Remote controller



Remote controller holder



Remote controller lithium battery



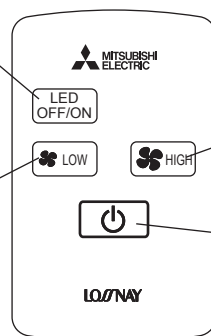
Remote controller holder mounting screws

■ Remote controller

Operation lamp ON/OFF button

The operation lamps are off immediately after power is supplied to the unit. Press this button to turn on the operation lamps.

Air volume "LOW" operation switch button



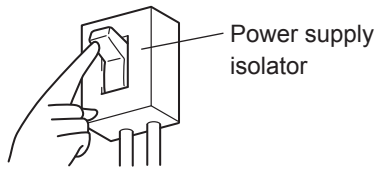
Air volume "HIGH" operation switch button

Operation start/stop button

Before you start the Lossnay

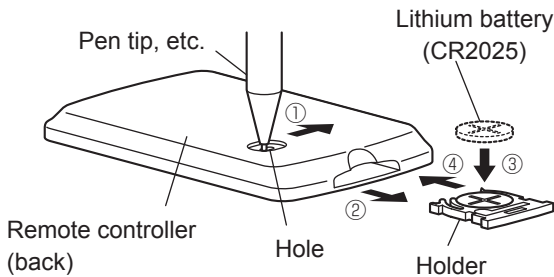
1. Preparing to turn the power on

Turn the power supply isolator on at the distribution board.



2. Insert the supplied lithium battery (CR2025) into the remote controller.

- 1 Insert a pen tip, etc. into the hole on the back of the remote controller, and slide it in the arrow direction.
- 2 Draw out the holder.
- 3 Place the lithium battery in the holder with the plus sign (+) facing upward.
- 4 Push the holder in firmly with the lithium battery in it.



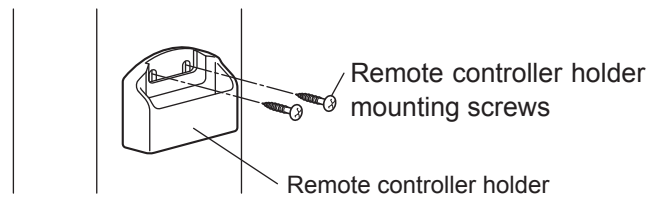
Note

- Be sure to place the battery in the holder before inserting the holder.
- Do not insert a battery other than specified.
- To prevent small children from accidentally swallowing the battery, the holder is not easily detached.
- Do not disassemble and modify the remote controller.
- Do not apply a strong impact to the remote controller or drop it.
- Do not place anything on the remote controller or step on it.
- Do not pour water on the remote controller or place anything wet on it.
- Do not leave the remote controller in places exposed to direct sunlight or with high temperatures and humidity.
- The battery is a consumable part.
- Replace the battery about once a year.
- The life of the battery varies depending on the operating frequency of the remote controller and the type of battery used.
- Battery power is consumed even when the remote controller is not used.
- Dispose of the battery according to the local rules. Apply insulation tape, etc. to the plus [+] and [-] terminals to insulate them before disposal.

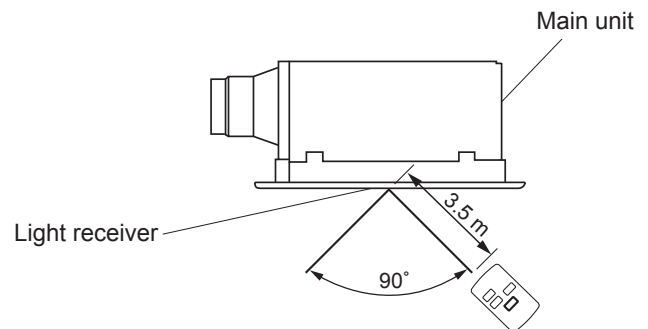
3. Installing the remote controller holder

Secure the remote controller holder with the supplied mounting screws.

- We do not recommend that you operate the unit with the remote controller placed in the remote controller holder, since the reception sensitivity decreases.
- If you wish to operate the unit with the remote controller placed in the remote controller holder, check the position where you can operate the unit with the remote controller and then install the remote controller holder.



<Remote controller operation range>



Note

- The remote controller operation range above shows the case where you operate the unit with the remote controller pointed toward the light receiver of the main unit.
- If the sensitivity has decreased, replace the battery.
- It may not be possible to use the remote controller in the following locations:
 - Location where an obstacle exists between the main unit light receiver and remote controller
 - Location where exposed to strong light from inverter lighting equipment
 - Location where strong light such as direct sunlight shines on the main unit light receiver
 - Location where exposed to electromagnetic radiation, such as near a television
- When placing a bed, we recommend placing it within the operation range of the remote controller.

Operation

Press the buttons to operate.

Turning on or off the operation lamps on the main unit

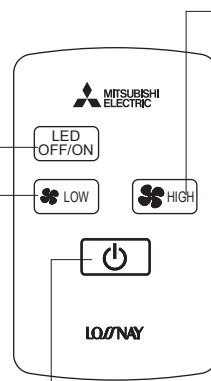
Press the  button.

- Each press of the button switches the operation lamps on the unit controller in the order of "On" → "Off" → "On."
- The operation lamps turn on only when you press this button.
- * The operation lamps are off immediately after power is supplied to the unit.

Switching the air volume to "LOW"

Press the  button.

- The main unit switches to the LOW operation.
- A beep sound comes from inside the main unit.



Starting/stopping operation

Press the  button.

- Each time you press the button, the mode toggles in the sequence: "Start" → "Stop" → "Start." (A beep sounds every time the mode switches)
- Selecting "Start" starts the operation in "HIGH" mode first.
- Selecting "Stop" stops the operation. Selecting "Start" again starts the operation in the mode before stopping. However, when the operation is started after turning off the power supply isolator or after a power failure, the operation starts in "HIGH" mode.

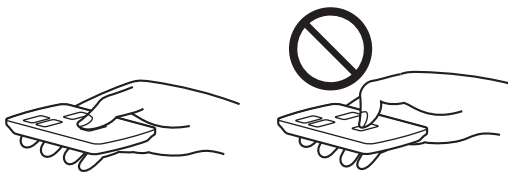
Switching the air volume to "HIGH"

Press the  button.

- The main unit switches to the HIGH operation.
- A beep sound comes from inside the main unit.

Note

- When operating the unit with the remote controller, point its transmitter toward the receiver of the main unit.
- Gently press the center of buttons. Pressing an edge or pressing with a finger tip may not work. The buttons may also be damaged.



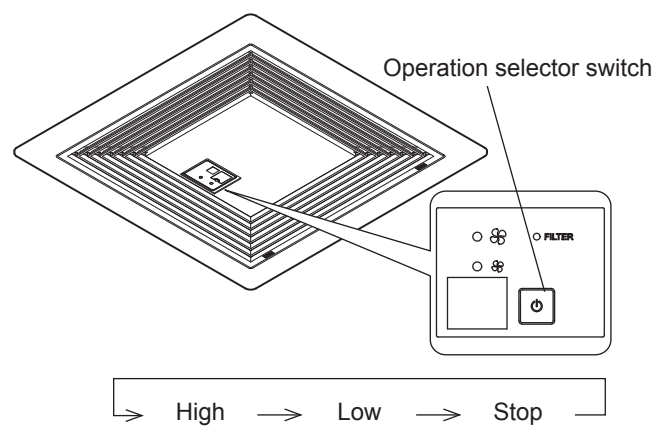
- If multiple units are mounted, they may operate simultaneously when operating with the remote controller. If you want to operate them individually, operate the remote controller near the light receiver of the main unit you want to operate.
- The battery is a consumable part. When the sensitivity has decreased, replace the battery with a new one (CR2025: commercially available).
- If you cannot operate the unit with the remote controller, see "When the remote controller cannot be used" or see "Troubleshooting" on page 10.
- When you select "HIGH" or "LOW" for the air volume, a "click" sound may come from inside the unit. It is not an abnormality since it is a relay switch sound.

When the remote controller cannot be used

When the battery runs out of power and the remote controller cannot be used, operate the unit with the operation selector switch on the main unit.

Each time you press the operation selector switch, the operating mode switches as shown in the figure below. (A beep sounds every time the mode switches)

- * The operation lamps do not turn on. (The operation lamps turn on only when you operate the unit with the remote controller)



Maintenance

To maintain the Lossnay function for a long period of time, clean the filter to remove the adhered dirt and dust when the filter maintenance notification lamp on the main unit turns on or at least every 6 months.

Warning

Stop operation and make sure that the power supply isolator is turned off before starting maintenance.

Electric shock or injury may occur when power is supplied.

Caution

Do not stand on an unstable surface during maintenance.

You may fall off and get injured.

Wear gloves during maintenance.

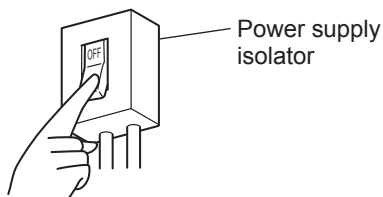
Failure to do so may cause injury.

Securely attach parts after maintenance.

They may fall and cause injury.

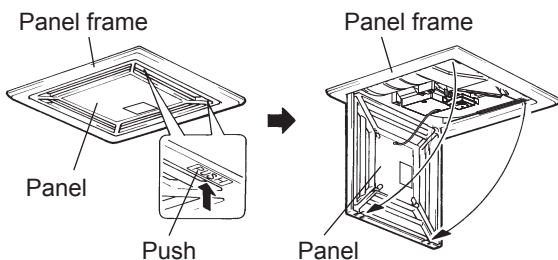
1. Turning off the power

Turn off the power supply isolator.



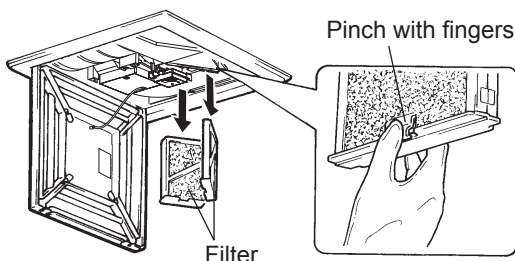
2. Opening the panel

- (1) Press **PUSH** (2 locations) on the panel with fingers.
- (2) Open the panel.



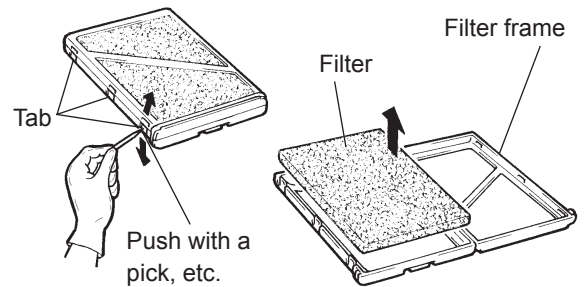
3. Taking out the filter

Draw out the filter downward while holding it with fingers as shown in the figure below.



4. Removing the filter from the frame

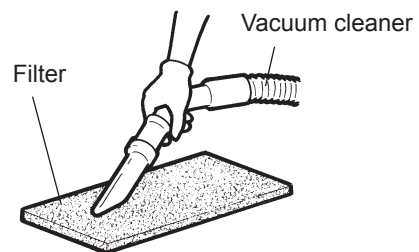
- (1) Push the tabs in three locations on the side of the filter frame with a pick, etc.
- (2) Open the filter frame and take out the filter.



5. Cleaning the filter

Cleaning:

Remove dust with a vacuum cleaner.



If the stains are persistent:

Wash the filter using neutral detergent diluted with cold water or lukewarm water (40°C or less) according to the instructions.

Replacement:

Replace the filter with a special system part (P-100ZF-E) after it has been washed about 5 or 6 times with water.

* For replacement filters, see page 4.

Note

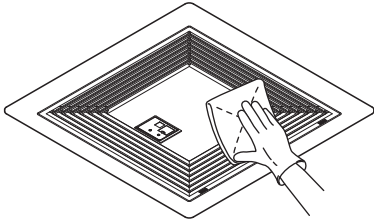
- Washing with hot water or scrubbing may damage the filter.
- Wipe off moisture thoroughly after washing with water.
- Do not forget to insert a filter.
- Do not use undiluted detergent.

6. Turning off the filter maintenance notification lamp

Press and hold down the operation selector switch on the main unit controller (for at least 3 seconds) to turn off the filter maintenance notification lamp. For details about the filter maintenance notification lamp, see "Names of parts" on page 5.

Cleaning the panel and panel frame

When the panel and panel frame are getting dirty, wipe off the dirt with a cloth soaked in kitchen neutral detergent diluted with lukewarm water (40°C or less) and then wipe them with a dry cloth to remove the detergent residue.



Note

- Do not use the following solvents, detergents, or cleaning implements during maintenance.

They may cause damage, discoloration, or cracking of the surface.

Solvents such as paint thinner, alcohol, or benzine; gasoline; kerosene; mold remover; citrus and other plant detergents; sprays; acidic detergents; alkaline detergents; chlorine-based detergents; chemicals for microfiber cloths; cleansers and other detergents containing abrasives; fungicides; and disinfectants (These may cause abnormal noise, deterioration, discoloration, paint peeling, or malfunction)

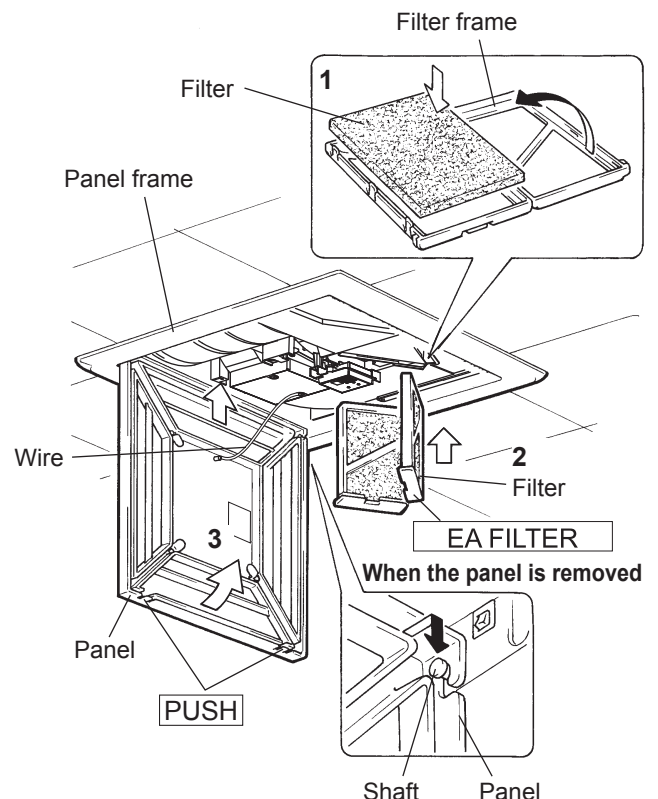
Assembling and checking after maintenance

Caution

Securely attach parts after maintenance.


They may fall and cause injury.

- 1 Insert the filter into the filter frame and close the frame.
- 2 Push the filter into the main unit firmly.
 - Do not confuse the air supply filter case and air exhaust filter case. There is an "EA FILTER" mark on the air exhaust filter case.
- 3 Close the panel.
 - Push **PUSH** in 2 locations with a finger.
- 4 Turn on the power supply isolator.
- 5 Check the following.
 - (1) Is the panel securely attached?
 - (2) Is there any abnormal noise?
 - (3) Is air blown out normally?(Be sure to check by operating the unit)



Troubleshooting

Perform an inspection if any of the following symptoms occur. If the problem is not solved by an inspection or if the symptom is not in the table below, turn off the power supply isolator and ask the dealer or contractor for inspection and repair.

Phenomenon	Cause	Inspect	Page
The unit does not operate.	Is power supplied to the main unit?	- Inspect the power supply isolator. - Is there a power failure?	—
There is an unusual noise.	Are the panel and filters securely attached?	Reattach.	9
	Are the filters clogged?	Clean.	8
The air volume is smaller.	Are the filters clogged?	Clean.	8
The panel does not close.	Are the filters securely inserted?	Reinsert properly.	9
The unit cannot be operated with the remote controller.	Is the battery old?	Replace with a new battery.	6
	Is the distance too far?	Move into the reception range.	6
	Are the plus [+] and minus [-] of the battery reversed?	Reinsert the battery correctly.	6
	Is the main unit or remote controller affected by fluorescent lighting or sunlight?	Move into the reception range. Avoid direct exposure of the main unit to light.	6
A click sound comes from inside the unit when operating the unit with the remote controller.	This is an operation sound (relay sound) of the unit.	It is normal.	—
Multiple units operate simultaneously with a single remote controller.	All units in the light reception range react to a signal from a single remote controller.	Operate the remote controller near the main unit light receiver.	6
There is a gap between the panel frame and ceiling.	The gap is provided according to the product specification.	It is normal.	—
The filter maintenance notification lamp turned on.	The lamp turns on after the cumulative total of about 1,500 operating hours (about 6 months when operating 8 hours per day). Clean the filter and turn off the filter maintenance notification lamp.	It is normal.	5, 8
The operation lamps on the main unit do not turn on.	The operation lamps are off immediately after power is supplied to the unit. The lamps turn on only when the  button on the remote controller is set to ON.	It is normal.	5

After-sales servicing

Consult with your dealer about the after-sales services provided for this Lossnay product.

If you hear strange sounds, if no air is blown out or if some other trouble occurs, switch off the power and contact your dealer. Consult with your dealer concerning the cost of inspection or repair work.

■ Retention period of functional repair parts

- We will retain the functional repair parts for six years after terminating production of the product.
- The functional repair part means a part which is necessary to maintain the function of the product.

■ Recommended inspection and maintenance

After several years of use, the following might occur. We recommend inspection and maintenance by a professional.

- Entry of dust due to deterioration of filters
- Abnormal noise or vibration due to the motor reaching the end of its service life
- Air leakage due to the heat exchanger Lossnay core reaching the end of its service life

The following are consumables:

- Motor
- Supply air filter
- Exhaust air filter
- Lossnay core
- Remote controller

■ Repair costs include technical fee, cost of parts, (and business trip charges), etc.

Specifications

Model	Frequency (Hz)	Voltage (V)	Notch	Power consumption (W)	Air volume (m ³ /h)		Temperature exchange efficiency (%)		Noise (dB)	Weight (kg)
					Air exhaust	Air supply	Cooling	Heating		
VL-100ZSKRT-E	50	220	High	29	80	72	54	50	38.5	6
			Low	13.5	43	40	66	63	24	
		230	High	32	86	78	52	49	40	
			Low	15	45	42	64	62	25.5	
		240	High	35	92	84	50	48	41.5	
			Low	16.5	49	44	62	61	27	

* The noise values may be greater than those above depending on the room structure.

mitsubishi **ELECTRIC CORPORATION**

Manufactured by: MITSUBISHI ELECTRIC CORPORATION

TOKYO BLDG. 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO, 100-8310 JAPAN