

## **Mitsubishi Lossnay Ventilator**

MODEL:

**VL-100U5-E** (pull cord Type)

**VL-100EU5-E** (wall switch Type)

## **Installation Manual**

# Mitsubishi Lossnay Ventilator

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## VL-100U5-E (pull cord type)

## VL-100EU5-E (wall switch type)

# Installation Manual

# For Dealer and Contractor

Please ensure that the separate “Operating Instructions” are handed over to the customer. Please ensure that it is delivered to the customer.

- Proper installation is necessary for the Lossnay to perform at full potential and to ensure safety. Before proceeding with the installation work, be sure to read through these instructions.
- The installation work must be done by an authorized dealer or qualified contractor. Errors in installation can lead to breakdowns and accidents.
- Installation by the customer can lead to breakdowns and accidents.
- Electrical work must be done by a qualified and licensed electrician employed by the dealer or contractor.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified persons in order to avoid a hazard. (VL-100U5-E only)

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## Safety precautions

Hazards created by mishandling and their severity are indicated by the following markers.

### **Warning:**

This applies to mishandling or misoperation of the product which could lead to a fatal or serious injury.

### **Caution:**

This applies to mishandling or misoperation of the product which will lead to an injury or damage to your home, household effects, etc.

### **Warning**

 Prohibited

- Do not install the unit and wall switch in a bathroom or other highly humid location.
- Electric shock or short circuits could result.

 Do NOT disassemble.

- Do not disassemble the unit more than necessary or modify it.
- Fire, electric shock or injury could result.

 Connect the grounding wire.

 You must follow the instructions given.

- **Connect the product properly to ground.**
  - Malfunctioning or power leaks can cause electrical shock.
- **Use at the rated voltage.**
  - Fire or electric shock could result.
- **Make sure the outside air intake opening is positioned so that it will not take in combustion gases or other exhaust. Position the unit so that it will not become covered with snow.**
  - If intake air is not fresh, oxygen could become depleted in the room.
- **Install the unit securely to a sufficiently strong wall surface.**
  - Injuries could result if the unit falls.
- **Connect wires securely to terminal block connections so they do not come out.\*1**
  - Poor connections could result in fire.

- **Electrical work must be done by an electrical contractor (a licensed electrician) in accordance with the technical standards of the equipment and local regulations to ensure safety.**
- Bad wiring and mistakes in electrical work could result in electric shocks or fire.
- **Use circuit breakers connected to the power supply to protect against short circuits.\*1**
- Short circuits could result in fire.

### ⚠ Caution



Prohibited

- **Install the unit only on a wall. Do not install it on a ceiling.**
- Injury could result if the unit falls.
- **Do not install the unit in excessively hot areas (40°C or more), near open flames, in areas prone to oily smoke, or where it could come in contact with organic solvents.**
- Fire could result.
- **Always place a cover on the terminal block after construction work is complete.\*1**
- Dust, humidity and the like could cause short circuits or fire.
- **Wear gloves when attaching the unit.**
- Failure to wear gloves could result in injury.



You must follow the instructions given.

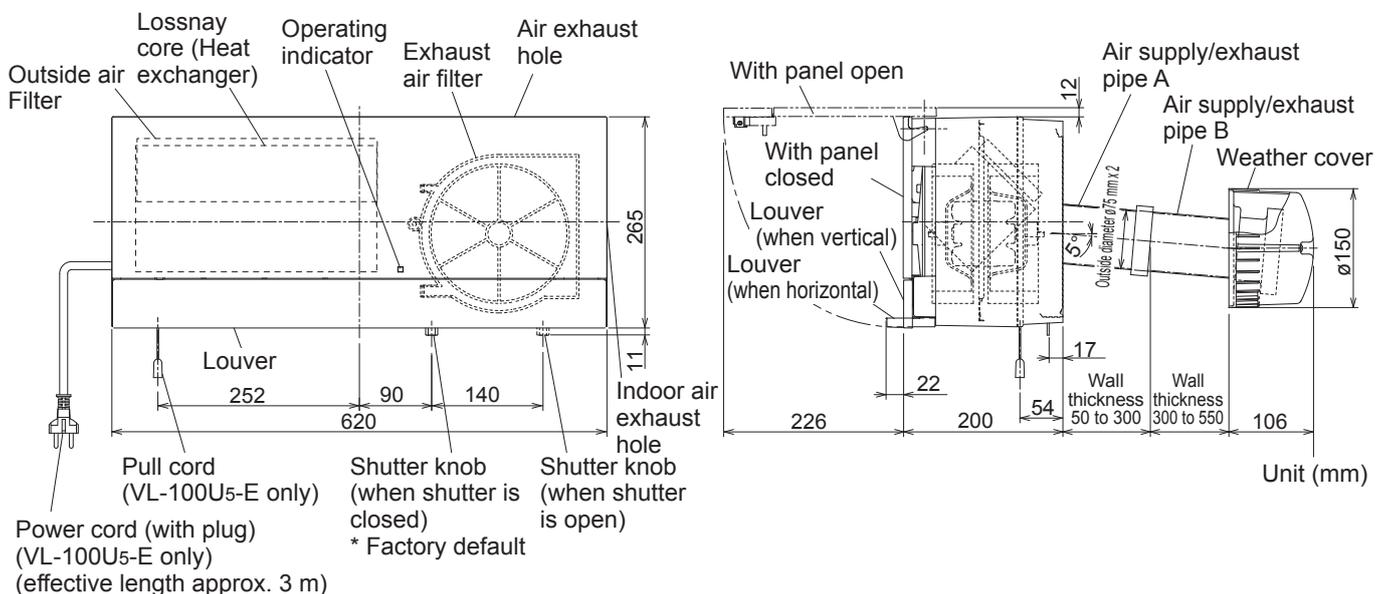
- **Attach the unit so that the air supply/exhaust pipes slope downward toward outdoors.**
- Rainwater entering the unit could result in electric shock, fire or indoor items getting wet.
- **Install the provided weather covers.**
- Rainwater entering the unit could result in electric shock, fire or indoor items getting wet.
- **Be sure to shut off circuit breakers or remove the power plug from the wall outlet if the Lossnay will not be used for a long period after installation.**
- Failure to do so could result in electric shock from deteriorated insulation, or fire from a short circuit.
- **When attaching the main unit on the wall, press the main unit against the wall and secure it firmly with the two screws.**
- The joint gap could cause the wall to become dirty.

\*1: VL-100EU5-E only.

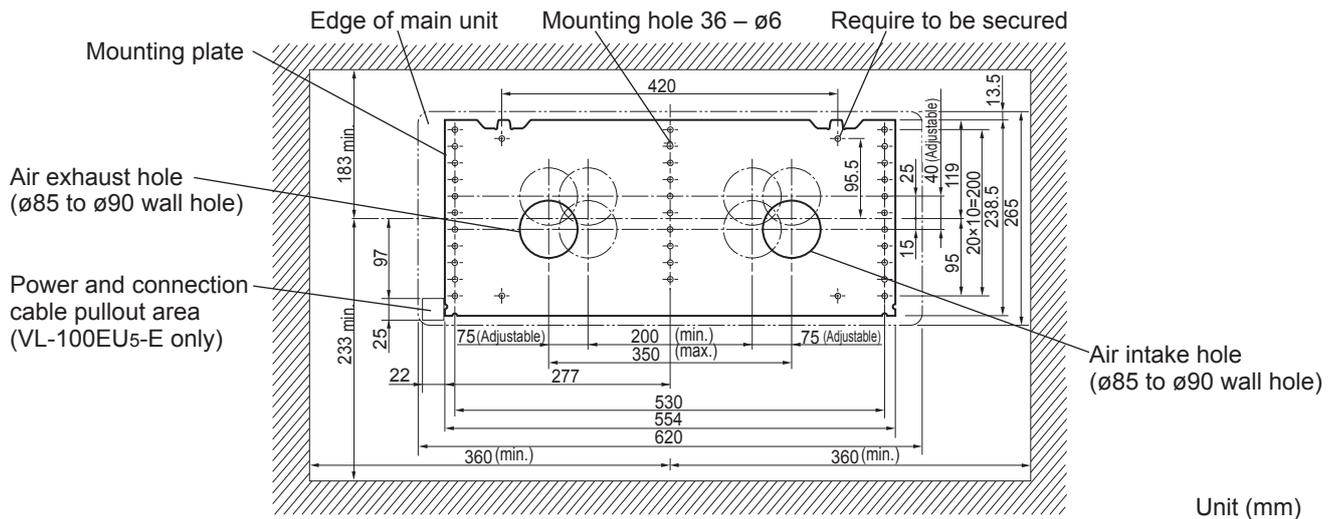
### Note

- **In mid-rise and high-rise buildings or in coastal and other areas prone to strong winds, wind could blow into the unit when it is not operating. Install the Lossnay where it will not be directly subject to wind.**
- **Do not use the Lossnay in areas prone to damage from salt or hot springs.**

## Dimensional outline drawing



## ■ Mounting position diagram (seen from inside)

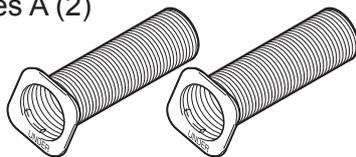


## List of included parts

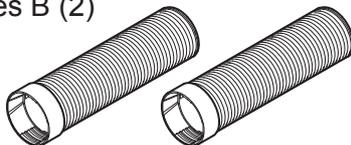
Pipe mounting plates (2)



Air supply/exhaust pipes A (2)



Air supply/exhaust pipes B (2)



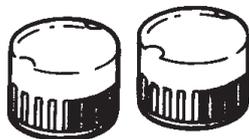
Wood screws (9) (for attaching the mounting plate)



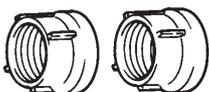
Aluminium tapes (2)



Weather covers (2)



Flange nuts (2)



Weather cover mounting plates (2)



Weather cover mounting screws (4)

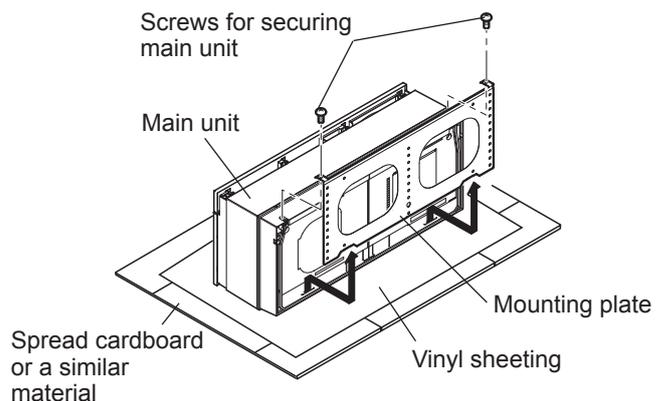


## Before installation

Remove the two screws securing the main unit to remove the mounting plate.

### Note

- Keep the screws for securing the main unit in a safe place. Screws are needed when the main unit is installed.
- Lossnay surfaces are glossy, so be careful not to scratch them. Spread out cardboard or the like, lay the vinyl sheeting used to pack the main unit on top of it, and with the main unit placed upside down as shown in the drawing, remove the mounting plate.
- The shutter of the Lossnay is closed for shipment.

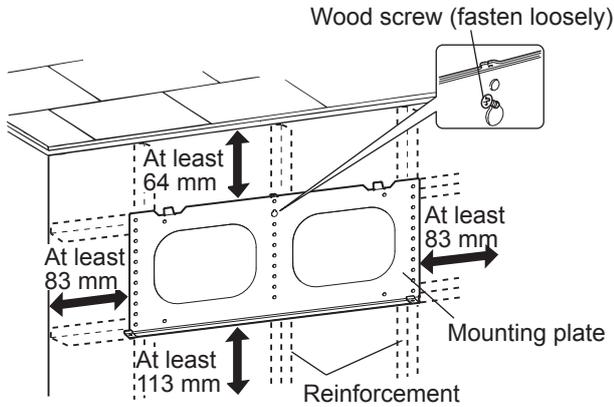


# Mounting instructions

## Wall-hole construction

### 1. Determine the installation position.

- 1) Make sure to allow the required clearances (at least 64 mm on top, 83 mm to left and right, and 113 mm on bottom) around the mounting plate, as shown in the drawing below.



\* Nothing should obstruct the front of the unit. (Do not place anything blocking air flow in front of the Lossnay.)

- 2) Check that the reinforcement (inside wall) is positioned properly to secure the mounting plate. (If there is no reinforcement, build in a supporting structure.)
- 3) Place the mounting plate on the wall.
- 4) Attach the mounting plate loosely (with single wood screw).

### Note

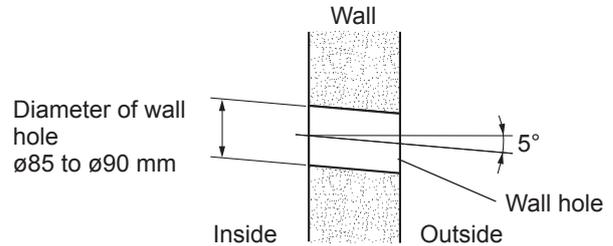
- Make sure that the mounting surface of the mounting plate is flat.
- If it is not, Lossnay operation could generate noise or the shutter could not operate properly.

### 2. Determine the position of the wall holes.

Position the wall holes away from obstructions in the wall, within the ranges shown in the mounting position diagram on page 3.

### 3. Drill the wall holes.

- 1) Remove the loosely fastened mounting plate. (Leave the wood screw loosely fastened in procedure 1 in place.)
- 2) Drill the wall holes of  $\varnothing 85$  to  $\varnothing 90$  mm.



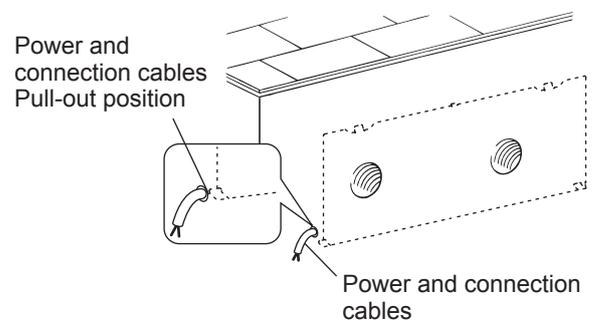
### Note

- Make the holes so they slope down as they exit the outside wall.
- This is necessary to prevent the infiltration of rainwater.

### 4. Pull out the power and connection cables.

#### For VL-100EU5-E only

- 1) Determine the power and connection cable pull-out location and make a hole. (See the mounting position diagram on page 3.)
- 2) Pull out the power and connection cables on the indoor side.

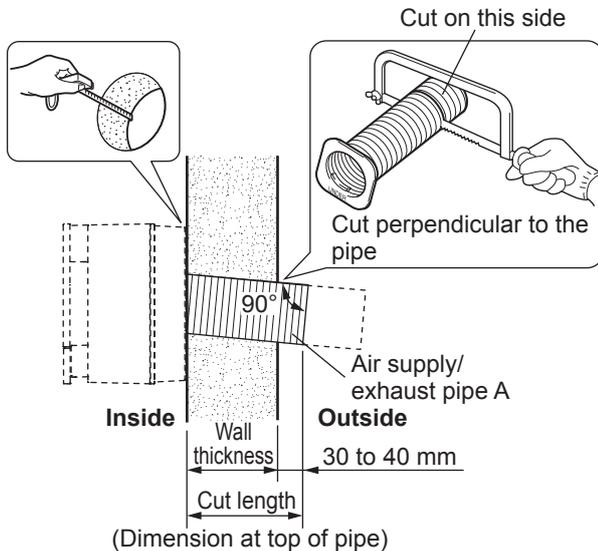


### Note

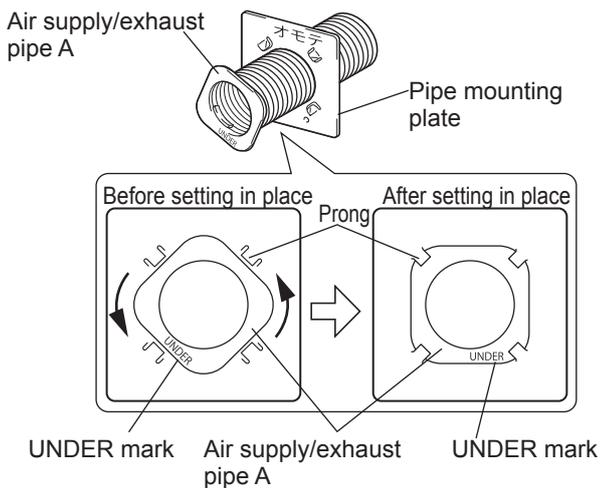
- For VL-100U5-E, install an electrical outlet somewhere that the power cord plug can reach. (The cord has an effective length of 3 m.)

## Cutting air supply/exhaust pipes

- 1) Measure the wall thickness.  
(If the wall is more than 300 mm thick, use the provided air supply/exhaust pipe B). (See page 4, section 4, for mounting instructions.)



- 2) Cut air supply/exhaust pipes A perpendicular to the pipe axis at the length shown in the figure above.
  - If the pipe is longer than it is shown, the weather cover will not fit.
- 3) Prepare the air supply/exhaust pipes.
  - Insert each air supply/exhaust pipe A into a pipe mounting plate and rotate it counterclockwise until the four prongs catch.

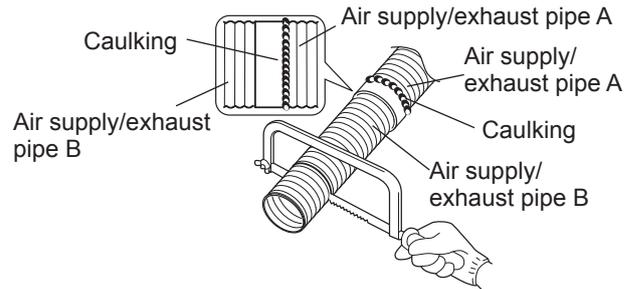


### ⚠ Caution

- Mount air supply/exhaust pipes A so that the UNDER mark is at the bottom. After mounting the pipes, check that they slope downward as they go outside. (If they do not, rainwater may infiltrate the wall and the shutter may not operate properly.)

## Note

- Check that each air supply/exhaust pipe A catches on all four prongs of its pipe mounting plate. (If a prong has not caught, the pipe will press against the back of the Lossnay unit and the shutter may not operate properly.)
- 4) If the wall is more than 300 mm thick  
Cut air supply/exhaust pipes B in keeping with the cutting dimensions of step 2 (wall thickness + 30 to 40 mm).

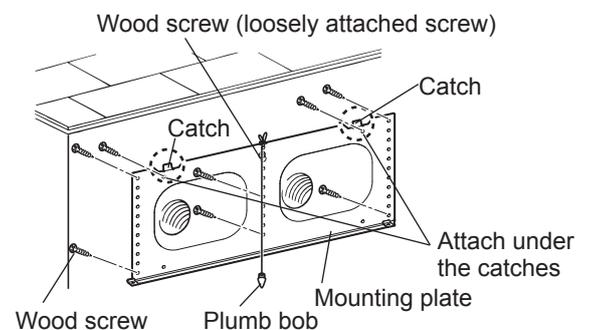


## Note

- Securely screw air supply/exhaust pipes A and B together all the way. (If they are not screwed together tightly, water infiltration may occur.)
- Caulk the connections between air supply/exhaust pipes A and B as shown above.

## Attaching the mounting plate

- 1) Attach the mounting plate to the wall provisionally using a single loosely attached screw.
- 2) Hang a plumb bob to make sure that the loosely attached mounting plate is horizontal (to within 1°).
- 3) Attach eight wood screws at locations where the wall contains reinforcing material.

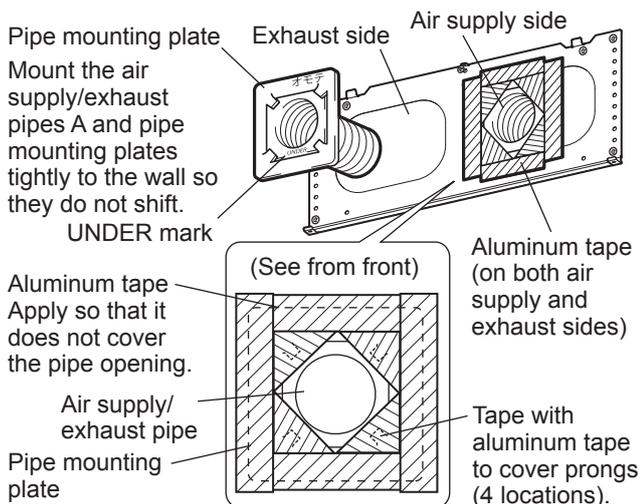


## Note

- Attach the two locations near the catches underneath the catches. (See diagram above.)
- To attach the plate to a concrete wall, use off-the-shelf concrete screws.

## Attaching air supply/exhaust pipes

- 1) Insert the air supply/exhaust pipes, which are attached to the pipe mounting plates, into the wall holes.
- 2) Tape the air supply/exhaust pipes tightly to the wall as shown below using off-the-shelf aluminum tape. (If the seal is not tight, the pipes may shift and the shutter may not operate properly.)



### Note

- Mount the air supply/exhaust pipes A so that the UNDER marker is at the bottom.
- After mounting the pipes, check that they slope downward as they go outside.
- When mounting the weather covers, do not push the air supply/exhaust pipes into the wall. (The shutter may not operate properly.)

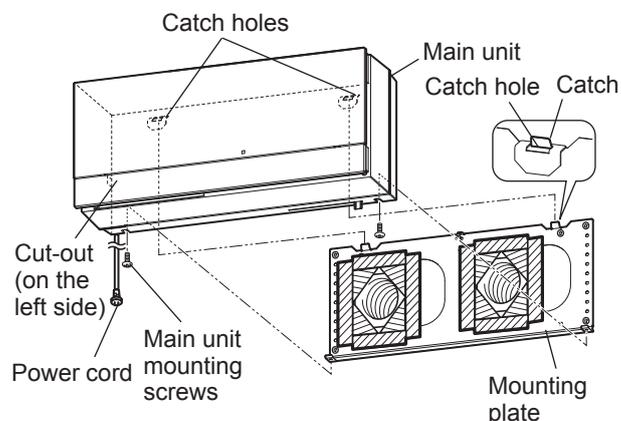
## Attaching the main unit

### For VL-100U5-E

- 1) Hang the catch holes on the main unit onto the catches of the mounting plate as shown below. (Both sides)
- 2) Press the main unit into the wall and secure it with the two screws provided. At this time, firmly press the power cord into the cut-out on the side of the main unit. (The unit will not sit snugly if the cord is not seated in the cut-out.)

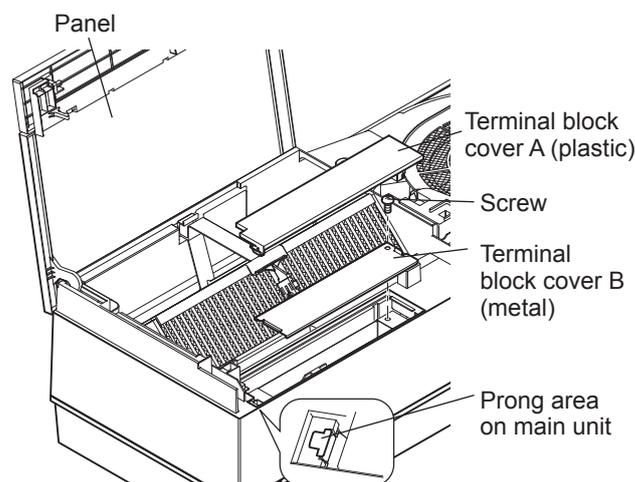
### ⚠ Caution

- Tighten the two screws securely. (The joint gap could cause the wall to become dirty.)
- 3) Insert the power plug into a wall outlet.



### For VL-100EU5-E

- 1) Open the panel. Place your fingers on the centers of the sides of the unit and pull forward and up. When opening and closing the panel, be sure not to stress the panel attachments.
- 2) Remove terminal block cover A from the main unit prongs.
- 3) Remove the screw, and then remove terminal block cover B.



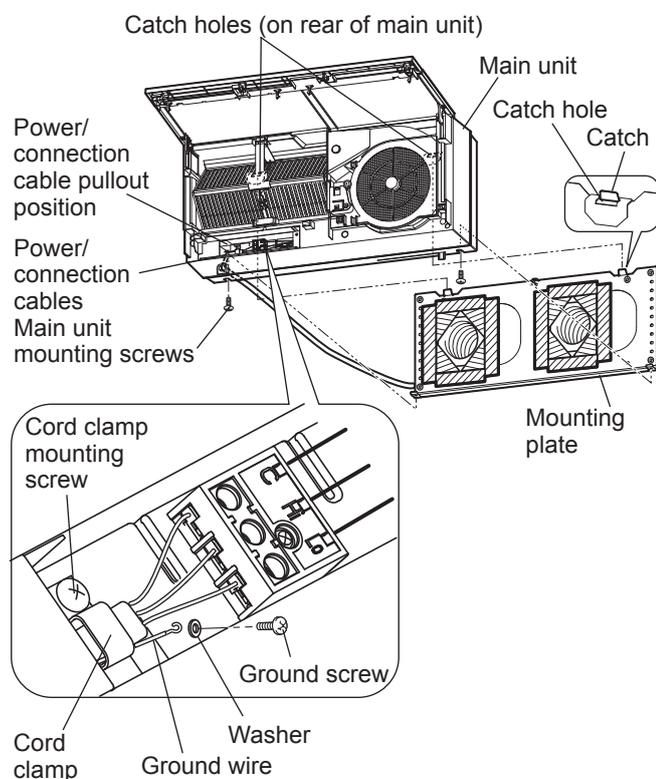
## Note

- Be sure not to misplace the removed terminal block covers and screw.

- 4) Pull the power and connection cables through the hole in the rear of the unit. (The cables enter the room at the power/connection cable pull-out position.)
- 5) Hang the catch holes of the main unit onto the catches of the mounting plate. (Both sides)
- 6) Press the main unit into the wall and attach it with the two screws provided.

## ⚠ Caution

- Tighten the two screws securely. (The joint gap could cause the wall to become dirty.)



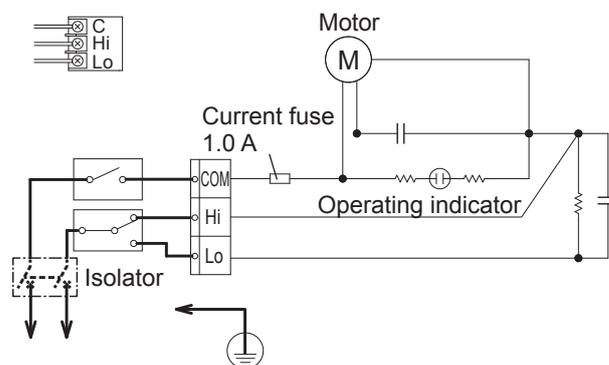
- Use the washer at the positions as illustrated.

- 7) Connect the Lossnay wiring.

**Operation requires a control switch. Have a control switch ready and connect the wiring shown in bold on the connection diagram below.**

Suitable cables:  $\varnothing 0.5$  to  $\varnothing 2.0$  mm diameter

Remove the covering from the final 10 mm of the power and connection cables and screw the ends in place on the terminal block.

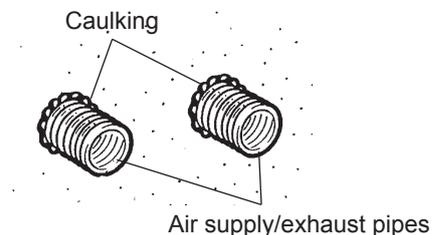


- 8) Attach a ground cable to the terminal block with a ground screw to ensure the unit is grounded.
- 9) Fix the power and grounding wires in place with the cord clamp.
- 10) Make sure that the wires have not come loose from the terminal block.
- 11) Screw on terminal block cover B, and then re-mount terminal block cover A at its original position.
- 12) Lower the panel and close it.
- 13) Turn the circuit breaker on at the distribution board.

## Outdoor construction

### 1. Fill the wall hole.

Fill in any gaps between the air supply/exhaust pipes and the wall holes with off-the-shelf caulking.

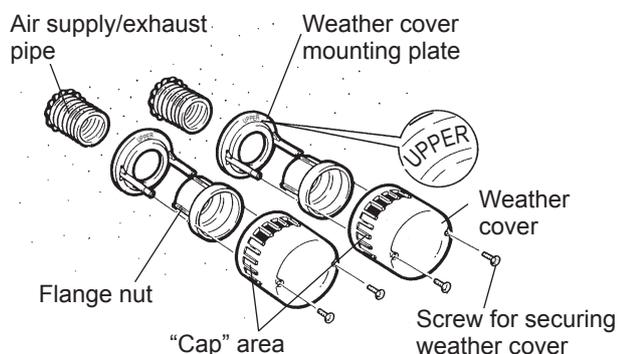


### Note

- Any spaces left unfilled will allow rainwater to enter.

### 2. Installing the weather covers

- 1) Insert the weather cover mounting plates into the air supply/exhaust pipes.
- 2) Tighten the flange nuts. (Be sure that the UPPER marks on the weather cover mounting plates are at the top.)
- 3) Attach the weather covers with the mounting screws.

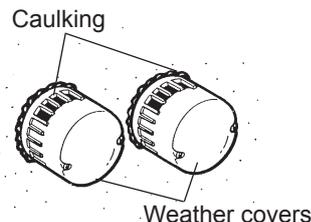


### Note

- The weather covers are blocked in one area to ensure that the air supply and exhaust do not mix. Mount the blocked parts on both the air supply and exhaust sides so that they are on the left, as shown above.
- If the weather covers shift, check that the air supply/exhaust pipes are cut to the correct dimensions. (Pushing the pipes too hard into the wall may cause the pipes to shift or prevent the shutter from operating properly.)
- Weather cover mounting plate have two holes ( $\varnothing 5$  mm) in them. Use these holes to secure the flanges to the wall.

### 3. Preventing infiltration of rainwater

Caulk around the entire perimeter of the weather covers.



## Checks after mounting

- After mounting is complete, check the checklist items before doing a test run.
- Be sure to correct any problems discovered.(Failure to do so will not only prevent features from operating, it will also imperil your safety.)
- Checklist

	Check items	Remedy for problem	Checked?
Installation	Is the main unit mounting strong enough?	Reinforce it.	
	Is the main unit attached securely?	Tighten the mounting screws.	
	Is the panel securely closed?	Close the panel.	
	Did you caulk? (The air supply/exhaust pipe should be caulked outside, as should the outdoor hood.)	Caulk. (Failure to caulk will allow rainwater infiltration.)	
Before operation	Are you using the rated voltage?	Apply the rated voltage. (Using other voltages will damage the unit.)	
Operating checks	Are switch operations consistent with Lossnay operations? (VL-100EU5-E only)	The wiring is incorrect. Re-do the wiring according to the connection diagram.	
	Do you hear the blades hitting anything?	Open the panel, remove the air filter, and take out any debris (only in the areas you can see).	
	Does the unit make any unusual sounds when starting or stopping?	Attach tightly to the wall so the air supply/exhaust pipes and pipe mounting plates do not shift.	
	Does the shutter work smoothly?		

## Test run

### ■ Do the test run with the customer present, if at all possible.

1. Turn the power on.
  - 1) Turn the circuit breaker on at the distribution board.
  - 2) Insert the power plug into the wall outlet. (VL-100U5-E only)
2. Check the operating modes.
 

Consult the Operating Instructions for operating instructions.

Slide the shutter knob to the open position.
3. Check that there is no abnormal vibration or noise. After confirming this, stop the unit.
  - 1) When stopped, move the shutter to the closed position. (This ensures that no dust will get into the unit prior to its use by the customer.)
  - 2) Remove the power plug from the wall outlet. (VL-100U5-E only)
  - 3) Turn the circuit breaker off at the distribution board.

### To be explained to the customer

- Show the customer the location of the distribution board circuit breaker and the electrical outlet or wall switch.
- Tell the customer the results of the checklist.
- Give the customer the "Installation Manual", as well as the separate "Operating Instructions".
- If the customer is not present, explain these items to the ordering party (such as the owner) or manager.