

Mitsubishi Lossnay Ventilator

MODELS:

VL-80U5-E (Pull cord Type)

VL-80EU5-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.
- The VL-80U5-E has a built-in plug and requires only a simple plug-in to an electrical outlet. Accordingly, no electrical work by a qualified and licensed electrician is necessary.
- 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-80U5-E only)

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1. Safety precautions

The following signs indicate that death or serious injury may be caused by failure to heed the precautions described below.

 WARNING	Incorrect handling could cause serious injury or death.
 Prohibited	<p>Do not install the unit and wall switch in a bathroom or other highly humid location. Electric shock or short circuits could result.</p>
 Do not disassemble	<p>Do not disassemble the unit more than necessary or modify it. Fire, electric shock or injury could result.</p>
 Connect the grounding wire.	<p>Connect the product properly to ground. Malfunctioning or power leaks can cause electrical shock.</p>
 You must follow the instructions given.	<p>Use at the rated voltage. Fire or electric shock could result.</p>
	<p>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.</p>
	<p>Install the unit securely to a sufficiently strong wall surface. Injuries could result if the unit falls.</p>
	<p>Connect wires securely to terminal block connections so they do not come out.*1 Poor connections could result in fire.</p>
	<p>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.</p>
	<p>Use circuit breakers connected to the power supply to protect against short circuits.*1 Short circuits could result in fire.</p>

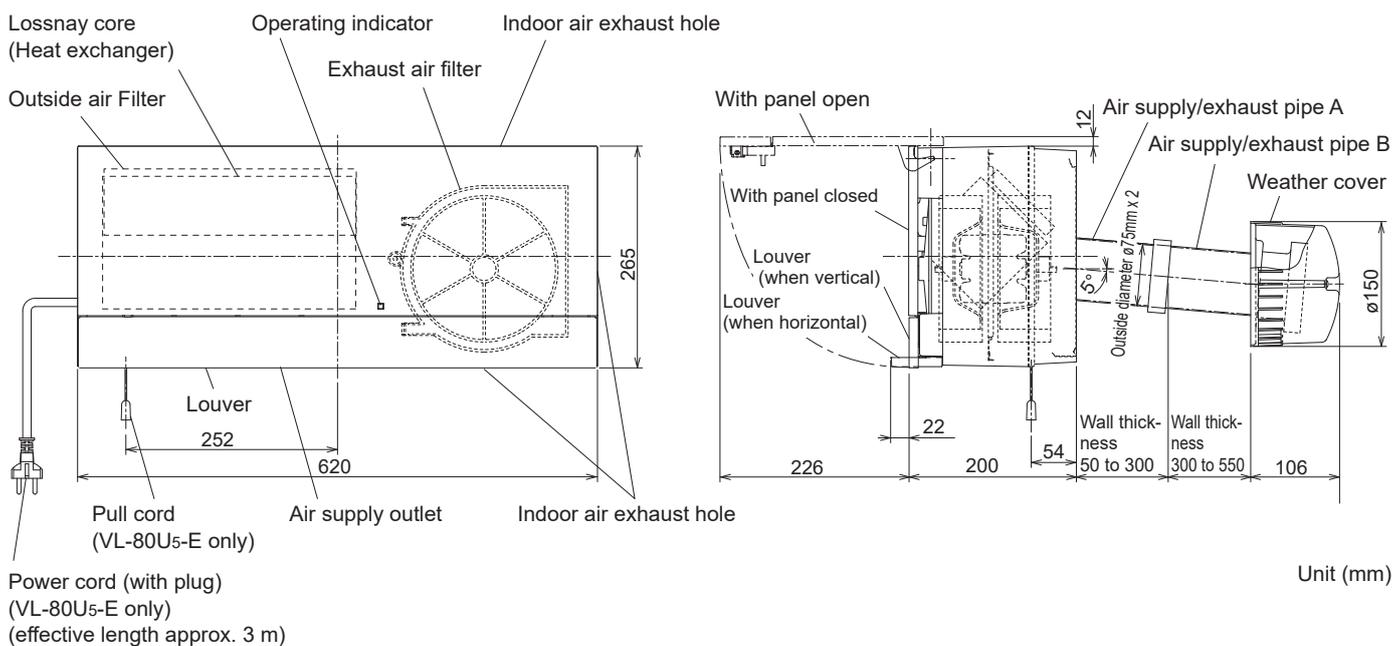
	CAUTION	Incorrect handling could cause injury or damage to property or household effects.
	Prohibited	<p>Install the unit only on a wall. Do not install it on a ceiling. Injury could result if the unit falls.</p> <p>Do not install the unit in excessively hot areas (40°C or more), near open flames, in areas prone to oily smoke, or where it could come in contact with organic solvents. Fire could result.</p>
	You must follow the instructions given.	<p>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.</p> <p>Wear gloves when attaching the unit. Failure to wear gloves could result in injury.</p> <p>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.</p> <p>Install the provided weather covers. Rainwater entering the unit could result in electric shock, fire or indoor items getting wet.</p> <p>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.</p> <p>When attaching the main unit on the wall, press the main unit against the wall and secure it firmly with the five screws. The joint gap could cause the wall to become dirty.</p>

*1 VL-80EU5-E only.

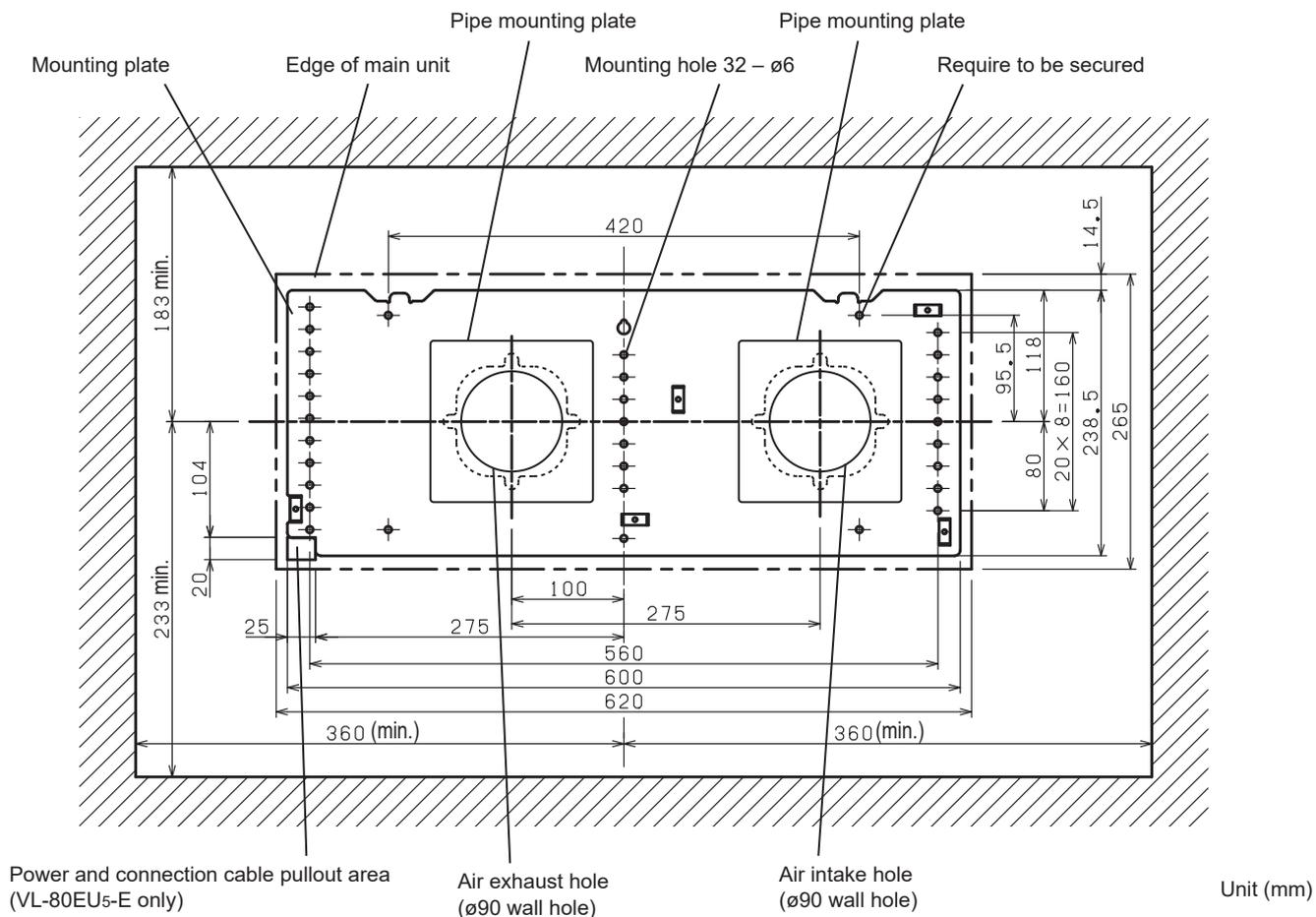
Note

- 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.

2. Dimensional outline drawing



■ Mounting position diagram (seen from inside)



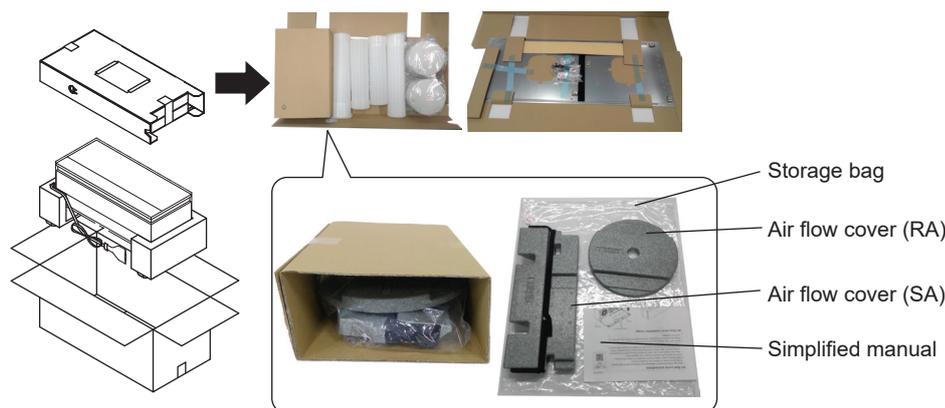
3. List of included parts

Mounting plate (1) 	Air flow cover (SA) (1) 	Air flow cover (RA) (1) 	Pipe mounting plates (2) 
Air supply/exhaust pipes A (2) 	Air supply/exhaust pipes B (2) 	Aluminium tapes (2) 	Weather covers (2) 
Flange nuts (2) 	Weather cover mounting plates (2) 	Weather cover mounting screws (4) 	Mounting screws (silver) (5) 
Wood screws (black) (17) (for attaching the mounting plate and pipe mounting plates)			

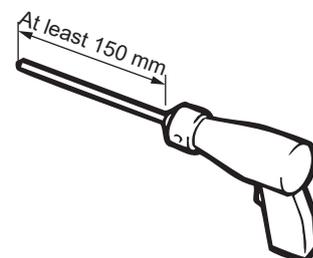
4. Before installation

Note

- Lossnay surfaces are glossy, so be careful not to scratch them.
- The packaged air flow covers are supplied parts. Make sure you do not throw them away by mistake.



- When using an electric screwdriver for installation, avoid using an impact screwdriver (impact mode). It may damage the screw holes.
- Installation requires a screwdriver with a bit length of at least 150 mm as shown in the figure to the right. If the bit length is too short, the screwdriver interferes with the main unit and the screws cannot be tightened.

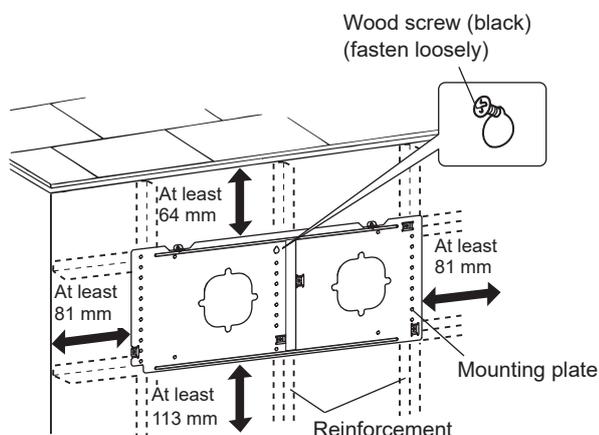


5. Mounting instructions

5.1 Wall-hole construction

5.1.1 Determine the installation position.

- 1) Make sure to allow the required clearances (at least 64 mm on top, 81 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 (black) included).

Note

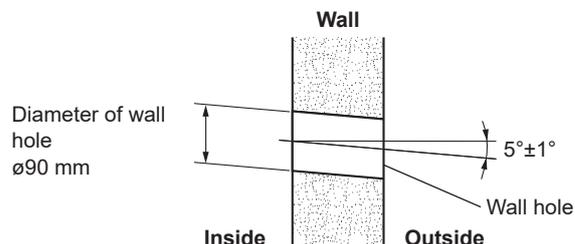
- Make sure that the mounting surface of the mounting plate is flat.
- Failing to do so may generate abnormal noise.
- Be sure to use the wood screws provided with the product.

5.1.2 Determine the position of the wall holes.

Referring to the *Mounting position diagram* (page 4), mark the center of the hole in the wall.

5.1.3 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 $\varnothing 90$ mm.



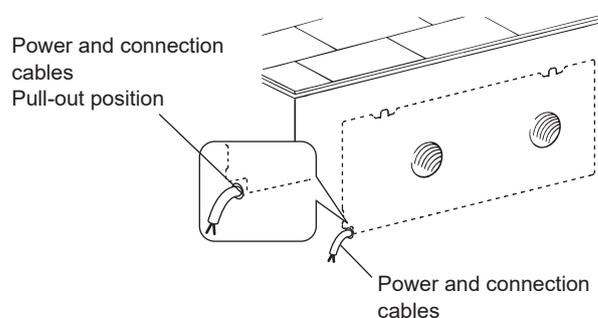
Note

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

5.1.4 Pull out the power and connection cables.

For VL-80EU5-E only

- 1) Determine the power and connection cable pull-out location and make a hole. (See the *Mounting position diagram*. (page 4))
- 2) Pull out the power and connection cables on the indoor side.

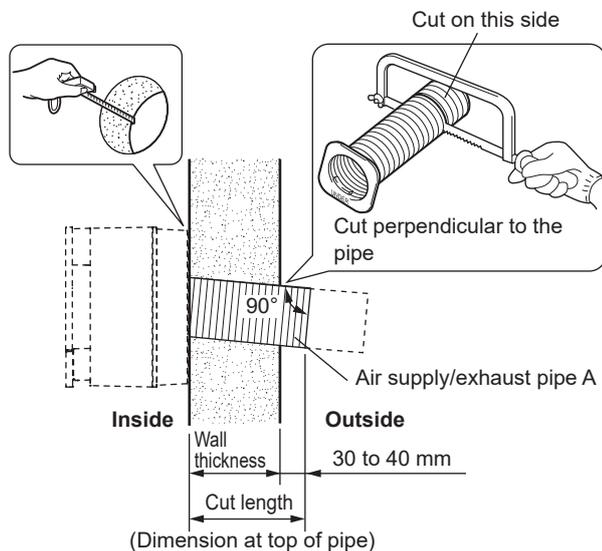


Note

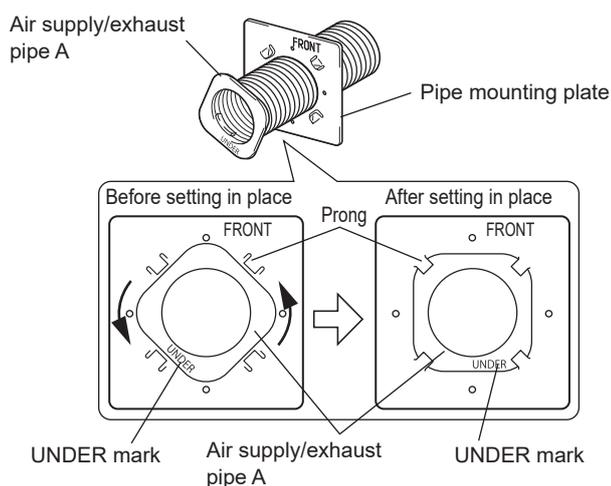
- For VL-80U5-E, install an electrical outlet somewhere that the power cord plug can reach. (The cord has an effective length of 3 m.)

5.2 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 the **2. Dimensional outline drawing**.)



- 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 counter-clockwise until the four prongs catch.



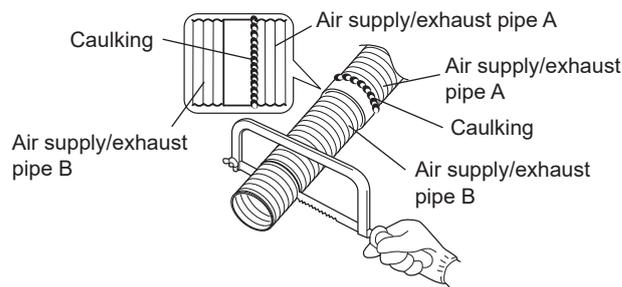
⚠ Caution

- Install air supply/exhaust pipe A onto the face with "FRONT" indicated of the pipe mounting plate.

Note

- Check that each air supply/exhaust pipe A catches on all four prongs of its pipe mounting plate.

- 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).

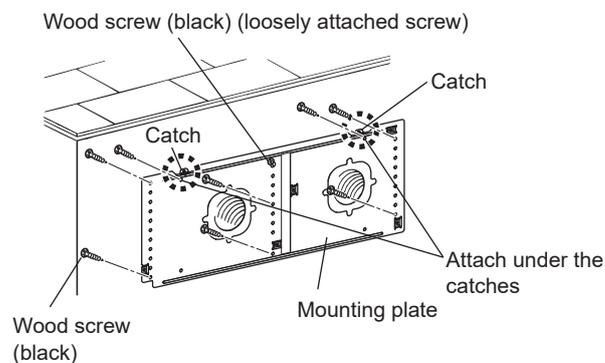


Note

- 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.

5.3 Attaching the mounting plate

- 1) Attach the mounting plate to the wall provisionally using the included loosely attached wood screw.
- 2) Make adjustments to make the mounting plate level (within 1°).
- 3) Attach the included eight wood screws at locations where the wall contains reinforcing material.



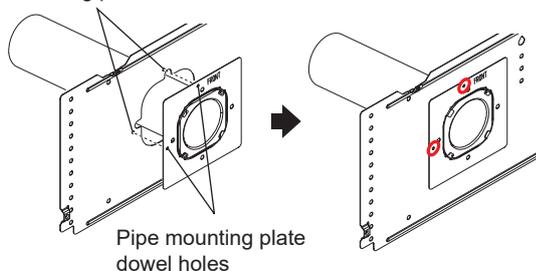
Note

- Be sure to use the wood screws provided with the product.
- Attach the two locations underneath the catches. (See diagram above.)
- To attach the plate to a concrete wall, use off-the-shelf concrete screws.

5.4 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) Align the two dowel holes on the pipe mounting plate with the dowels on the mounting plate, and fix the pipe mounting plate with four provided wood screws.

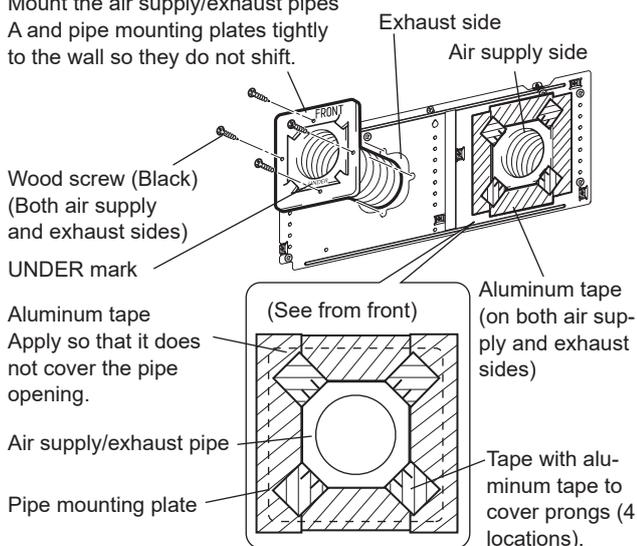
Mounting plate dowels



- 3) Tape the air supply/exhaust pipes tightly to the wall as shown below using off-the-shelf aluminum tape. (If they are not tightly attached, the air supply/exhaust pipes may displace, causing wind leaks.)

Pipe mounting plate

Mount the air supply/exhaust pipes A and pipe mounting plates tightly to the wall so they do not shift.



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. (If they do not slope downward, rainwater may enter.)
- When mounting the weather covers, do not push the air supply/exhaust pipes into the wall.
- Be sure to use the wood screws provided with the product.
- Use the provided aluminum tape while paying attention to its length. (Using too much may mean you do not have enough in later steps.)
- Before affixing the aluminum tape, check that the two dowel positions on the pipe mounting plate and on the mounting plate are properly aligned.

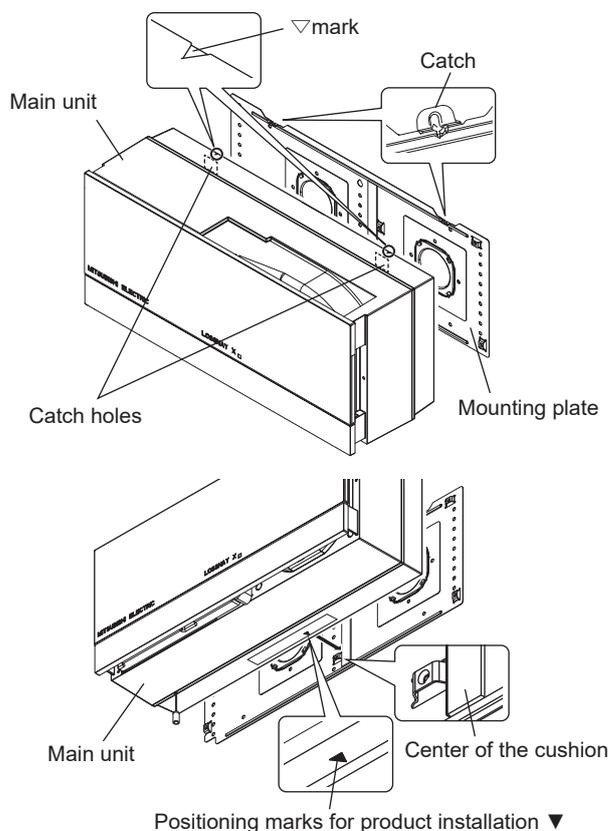
5.5 Attaching the main unit

For VL-80U5-E

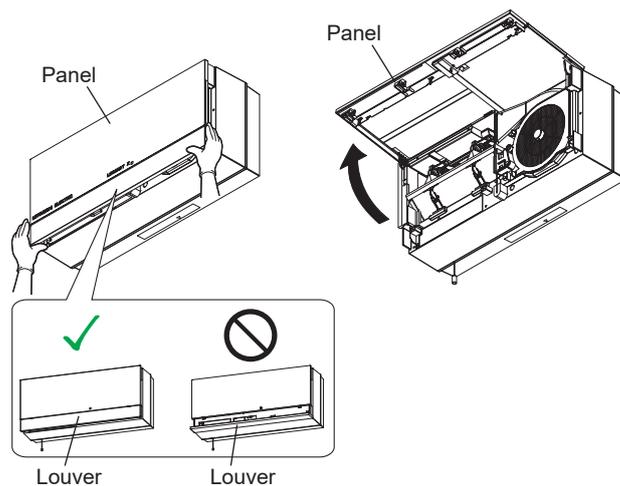
- 1) Hook the catch holes on the rear face of the main unit on the catch of the mounting plate. (On both the left and right sides)

Note

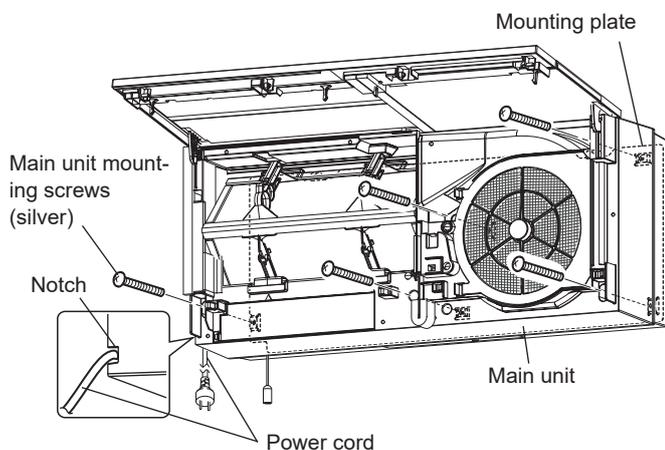
- When hooking them, as shown in the figure below, align the position marked with ▽ on the top face of the main unit with the catch of the mounting plate in the upper part. Then, align ▼ at the bottom face of the main unit with the center of the cushion of the mounting plate in the lower part. Doing so serves as a guide to align the left and right pitches.



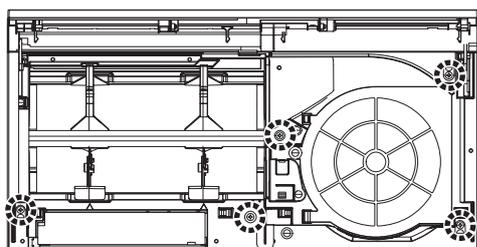
- 2) Check that the louver is closed, hook your fingers on both sides of the panel, and pull it upward. (If the louver is open, the panel may get damaged.) When opening and closing the panel, be sure not to stress the panel attachments.



- 3) Push the main unit against the wall, align the holes of the main unit and the mounting plate, and secure it firmly using the provided five screws. (Tightening torque: 1.5 to 1.9 N·m) During this process, push the power cord into the notch on the side face of the main unit properly. (If the cord does not fit the notch, the main unit does not fit flush.)



[Installation hole positions]

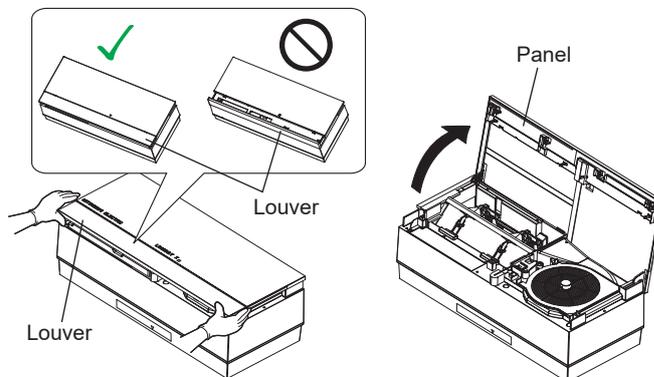


⚠ Caution

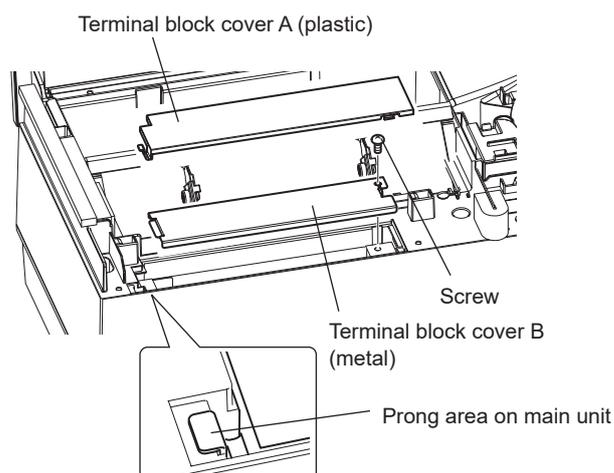
- Do not use an impact screwdriver (impact mode). (It may damage the screw holes.)
 - Use a screwdriver with a bit length of at least 150 mm. (If not, the screwdriver interferes with the main unit and the screws cannot be tightened.)
 - Be sure to use the provided screws.
 - Tighten the five screws securely. (The joint gap could cause the wall to become dirty.)
 - After tightening the screws, check that all screws have been tightened and the product is secured properly. (If it is not secured properly, wind leaks may occur.)
- 4) Check that the louver is closed and close the panel. (If the louver is open, the panel may get damaged.)
- 5) Insert the power plug into a wall outlet.

For VL-80EU5-E

- 1) Check that the louver is closed, hook your fingers on both sides of the panel, and pull it upward. (If the louver is open, the panel may get damaged.) When opening and closing the panel, be sure not to stress the panel attachments.

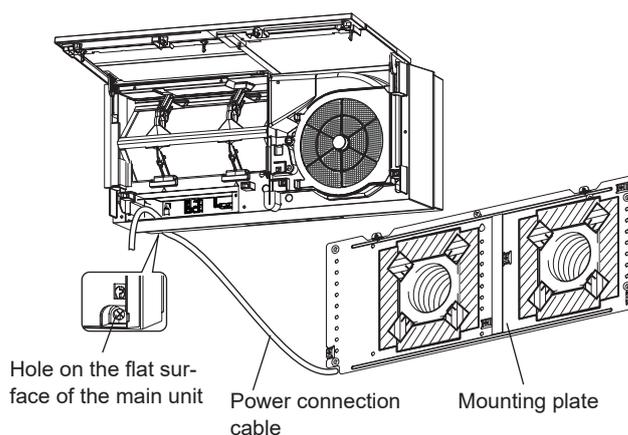


- 2) Remove terminal block cover A from the main unit prongs.
- 3) Remove the screw, and then remove terminal block cover B.



Note

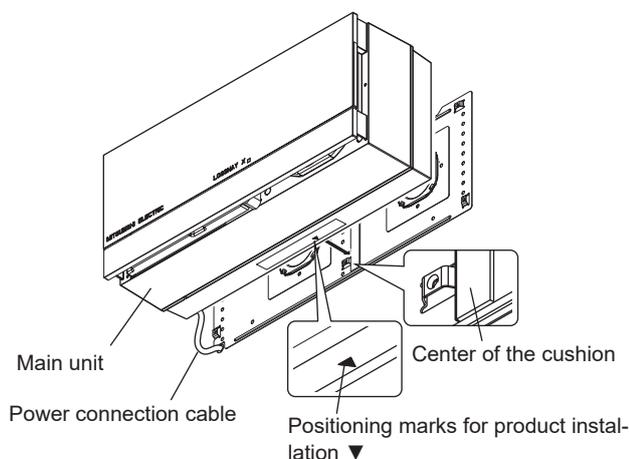
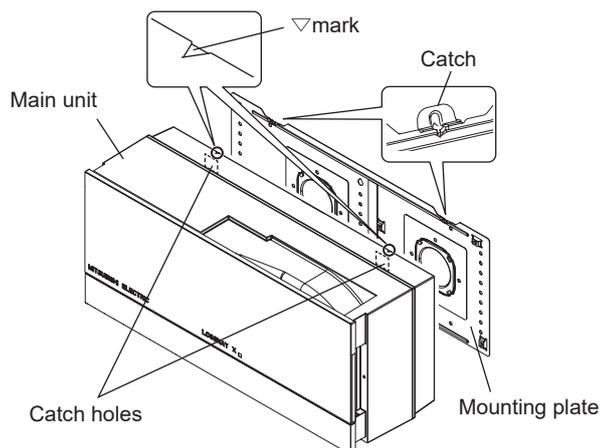
- Be sure not to misplace the removed terminal block covers and screw.
- 4) Pass the power cable and connection cable through the hole on the back of the main unit then close the panel temporarily. (The cables enter the room from the position in which the power supply and connection cables are pulled.)



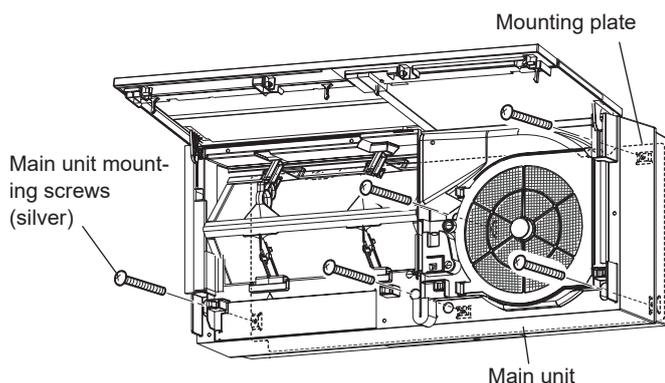
- 5) Hook the catch holes on the rear face of the main unit on the catch of the mounting plate. (On both the left and right sides)

Note

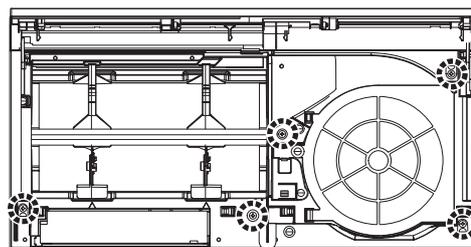
- When hooking them, as shown in the figure below, align the position marked with ▽ on the top face of the main unit with the catch of the mounting plate in the upper part. Then, align ▽ at the bottom face of the main unit with the center of the cushion of the mounting plate in the lower part. Doing so serves as a guide to align the left and right pitches.



- 6) Open the panel as shown in 1), push the main unit against the wall, align the hole positions of the main unit and mounting plate, then fix the main unit with the five provided screws. (Tightening torque: 1.5 to 1.9 N·m)



[Installation hole positions]



⚠ Caution

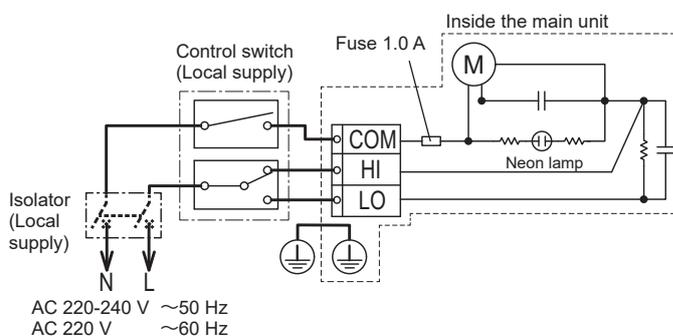
- Do not use an impact screwdriver (impact mode). (It may damage the screw holes.)
- Use a screwdriver with a bit length of at least 150 mm. (If not, the screwdriver interferes with the main unit and the screws cannot be tightened.)
- Be sure to use the provided screws.
- Tighten the five screws securely. (The joint gap could cause the wall to become dirty.)
- After tightening the screws, check that all screws have been tightened and the product is fixed securely. (Improper fixation may cause wind leaks.)

- 7) Connect the Lossnay wiring.

⚠ Warning

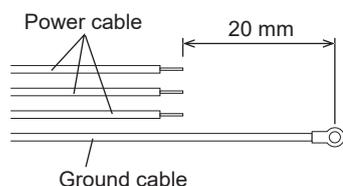
- Use at the rated voltage.
 - Fire or electric shock could result.
 - Connect wires securely to terminal block connections so they do not come out.*1
 - Poor connections could result in fire.
 - Electrical work must be done by an electrical contractor (a licensed electrician) in accordance with the 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.
- *1: VL-80EU5-E only.

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



Install the ground cable and power cable in the dimensional relationship shown in the figure below then peel off the coating at the tip of the power/connection cables by 10 mm. Attach a round crimp terminal referring to the figure below and fix it to the terminal block using a screw.

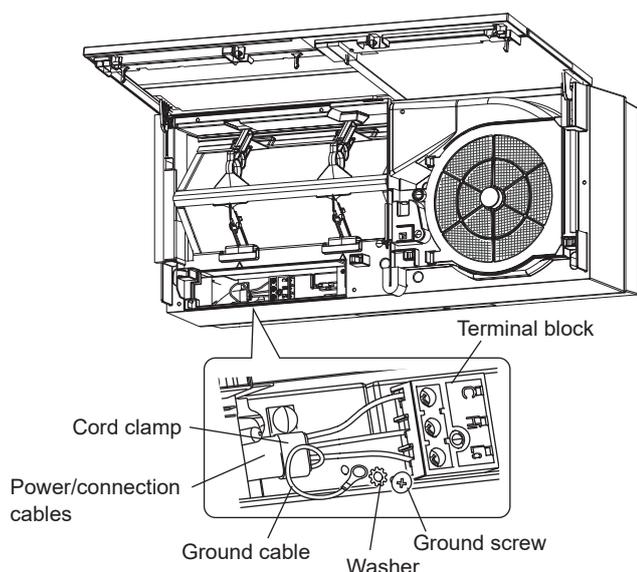
- Use a power cable whose diameter is 0.5 to 2.0 mm.
- When tightening a screw onto the terminal block, manually do so without using any power tools. (It may break the terminal block.)
- Strength with which to tighten screws onto the terminal block: Upper limit 1.2 N·m
- Use a round crimp terminal that is suitable for the wire diameter and crimp it correctly and securely using an appropriate tool.



- 8) Attach a ground cable to the terminal block with a ground screw to ensure the unit is grounded.

Note

- Use the washer at the positions as illustrated.
 - Pay attention that the ground cable does not get caught during the installation of the cover.
- 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.

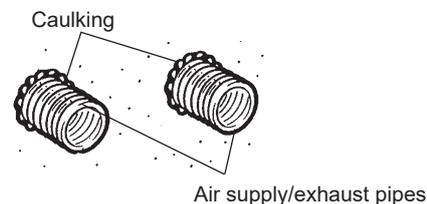


- 11) Screw on terminal block cover B, and then re-mount terminal block cover A at its original position.
- 12) Check that the louver is closed and close the panel. (If the louver is open, the panel may get damaged.)
- 13) Turn the circuit breaker on at the distribution board.

5.6 Outdoor construction

5.6.1 Fill the wall hole.

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

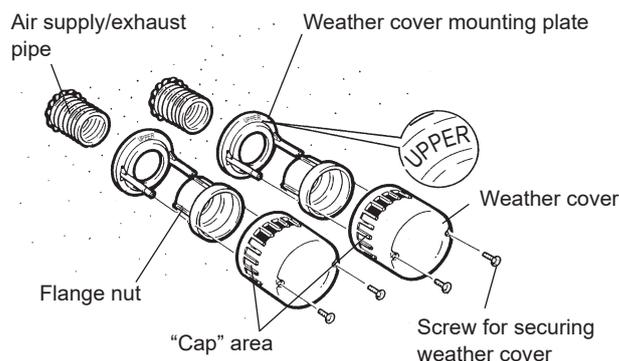


Note

- Any spaces left unfilled will allow rainwater to enter.

5.6.2 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.

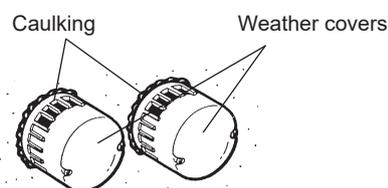


Note

- 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.
- Weather cover mounting plate have two holes ($\varnothing 5$ mm) in them. Use these holes to secure the flanges to the wall.

5.6.3 Preventing infiltration of rainwater

Caulk around the entire perimeter of the weather covers.



6. 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-80EU ₅ -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.	

7. 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-80U₅-E only)
2. Check the operating modes.
Consult the Operating Instructions for operating instructions.
3. Check that there is no abnormal vibration or noise. After confirming this, stop the unit.
 - 1) Stop the operation.
 - 2) Remove the power plug from the wall outlet. (VL-80U₅-E only)
 - 3) Turn the circuit breaker off at the distribution board.

8. 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.
- Please pass the “Installation Manual”, separate “Operating Instructions”, as well as the “Air flow cover set (in a bag)” to the customer.
- If the customer is not present, explain these items to the ordering party (such as the owner) or manager.

Manufactured by: **MITSUBISHI ELECTRIC CORPORATION**

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