



LOSSNAY HEAT RECOVERY VENTILATOR (RESIDENTIAL USE) MODEL:

VL-220CZGV-E

**Installation Manual** 



# LOSSNAY HEAT RECOVERY VENTILATOR (RESIDENTIAL USE)

# VL-220CZGV-E

# **Installation Manual**



# For dealer/contractor

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- This product is for residential use.
- This product must be correctly installed to ensure that its performance and functions are properly demonstrated and to ensure its safe use and operation. Before installation, read this installation manual thoroughly. Before using exclusive system components, read the installation manual for the system components thoroughly.
- For installation parts, be sure to use accessories and designated parts. Use of non-designated parts may be a cause of malfunction.
- Installation must be performed by dealers and electrical contractors. Incorrect installation or installation by the customer may be a cause of equipment malfunction or an accident.
- Electrical work must be performed by a properly qualified electrician of the dealer or electrical contractor.
- Please note a clear working space is required around the installed product to allow the cover to be removed and provide sufficient access for maintenance such as filter change.
- The product must be installed indoors.

# **1. Safety Precautions**

The following symbols denote the type and degree of danger resulting from incorrect handling.

	VARNING	Incorrect ha	ndling of the product may result in serious injury or death.							
Prohibited	Do not install the product in hot places, in the direct sunlight and in smoky places. Failure to heed this warning may result in fire.		Use 220 to 240 V AC power. Do not apply a different voltage to this product. Failure to head this warning may result in fire, electric shock or damage to the circuit boards. For the outside air intake vent, choose a position where combustion gas or other similar exhaust air is not sucked in and the vent is not buried by snow. Inability to bring in fresh air may result in lack of oxygen in the room. Select a place which is strong enough to support the product, and install the product securely.							
No water exposure	Refrain from immersing in water or splashing the product with water. Failure to heed this warning could result in short circuit or electric shock.		Injury could result if parts fall. Electrical work must be carried out safely and reliably by a professional electrical contractor (properly qualified electrician) in accordance with internal wiring provisions and electrical-equipment technical standards. Poor connection and faulty electrical work could result in electric shock or fire. Install an all-pole power supply isolator at the power supply side as per local electrical regulations. All supply circuits must be disconnected before obtaining access to the terminal devices. Use the expedience and							
No disassembly	<b>Do not modify or disassemble the</b> <b>product beyond that is necessary.</b> Failure to heed this warning may result in fire, electric shock or injury.	Follow	<b>P</b> Follow	Follow	Follow	Follow Instructions	Follow	Follow Instructions	Follow instructions	Connect the cables securely to prevent disconnection when they are pulled. If there is a defect in the connection, there is a possibility of fire. Use the designated electric wires, and connect them securely so that they do not come loose. Defective connections may result in fire. When metal ducts penetrate through metal-sheeted wooden buildings or conversioned in the product on that there is no electrical context.
Cannot be installed in a bathroom	Do not install the Lossnay unit or the remote controller in a bathroom or other humid location. Failure to heed this warning may result in electric shock or electric leakage.EquationBe sure to install the ground wire. Device failure and electric leakage may cause electric shock.		between the metal ducts and the metal sheeting. Electric leakage may cause ignition. Be sure to cover with the terminal block cover after electrical work. Failure to heed this warning may cause dust, humidity, etc. to enter, resulting in electric leakage or fire. Secure duct piping with commercially available fixing bands, aluminum tape, etc. to prevent piping from coming loose. Install outdoor piping from the product so that it is tilted at a downward pitch of at least 1/30 towards the outside.							
Check grounding		-	Failure to heed this warning may cause rain penetration, resulting in electric shock/fire or water damage to household property. If the product will not be operated for a long period of time after installation, be sure to turn off the circuit breaker. It could cause electrical shock by deteriorated insulation or fire by the electric leakage. For installation work parts, be sure to use only accessories and designated parts. Use of non-designated parts may result in equipment damage or accidents.							
			Eng-1							

# 1. Safety Precautions (continued)

$\triangle$	CAUTION	Incorrect ha	ndling of the product may result in injury or damage to property or offects.
Prohibited	The product is exclusively for horizontal installation. Do not install the product on walls. Injury could result if parts fall. Do not install the product at regions or locations that exceed the following operating conditions. If these operating conditions are exceeded, dew condensation water might drip. Outdoor air temperature: -15 to 40°C Area around the product and ambient temperature and humidity: 0 to 40°C 80%RH or less and at absolute humidity or less where the dew point temperature of 12°C (20°C 60%RH or equivalent) is reached under the above minimum outdoor air temperature conditions		<duct piping=""> Be sure to insulate ducts down to the base of the duct connecting flanges. Exposed parts get cold in winter, which may result in dew condensation forming due to moisture in the room. Do not allow duct piping to contact the inspection opening, ceiling hanging bolts, beams, pillars, and other duct piping. Failure to heed this warning may result in abnormal noise and vibration. Use an outdoor hood, that makes it less likely for rain water, snow or small animals (e.g. bats) from entering the ends of the supply air and exhaust air ducts. To prevent the entry of small animals, install an outdoor hood having louvers 2 cm or less wide.</duct>
Follow	When installing the product, do not drop or throw the product, or subject the product to impact. Damage to structures inside the product may result in air or water leakage. <lossnay unit=""> Install the product and the duct piping on the indoor side of the insulation layer/airtight layer. The temperature of the air after heat is collected on the indoor side of the insulation layer may drop, or drain or dew condensation might result in the ceiling getting wet. Install the product (on the ceiling) in the direction of the duct connecting flange so that it is horizontal (within ± 1°). Water leakage may result in water damage to the ceiling. Be sure to install the product (on the ceiling) tilted at a downward pitch of 0 to 1° towards the side where the drain hose is installed. Water leakage from reverse pitch may result in water damage to the ceiling. Failure to heed this warning may result in injury. Securely install parts so that they are not twisted or deformed. Injury could result if parts fall.</lossnay>	Follow	<ul> <li><urain piping=""></urain></li> <li>Be sure to connect drain piping by the following procedure to prevent freezing and dew condensation forming on the surface of the piping</li> <li>Connect the drain piping on the indoor side of the insulation layer</li> <li>Insulate the drain piping up to the end of the piping</li> <li>Do not let the end of drain piping be immersed in the rain gutter, etc.</li> <li>(At times of heavy snow, the rain gutter freezes and drain water is not discharged, which results in water leaking from the Lossnay unit.)</li> <li>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. (This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge physical, sensory or mental capabilities or lack of experience and knowledge physical, sensory or mental capabilities or lack of experience and knowledge physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance. (This appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.)</li> </ul>

#### Note

- Do not install the product at locations where toxic gas or gas containing corrosive components such as acids, alkaline, organic solvents, or paints is generated. (Failure to heed this warning may result in malfunction.) - For ceiling material, use material that is less likely to resonate. - Do not install the product near bedrooms. (Failure to heed this warning may cause complaints about noise.)
- For living rooms (e.g. bed rooms) where it is anticipated that building ambient noise will be below 30 dB(A), use commercially available ducts that have sound deadening qualities on the supply air side. (Sound from the product resonates inside the ducts and may result in abnormal noise being emitted from the air vent.)
- Install supply air and exhaust air grills at locations where they are less likely to reverberate. (Failure to heed this warning may cause complaints about noise.)
- In cold regions or regions with strong winds, wind outside sometimes gets inside when operation of the product is stopped. So, we
- recommend providing a motorized shutter midway along the supply air and exhaust air ducts.
- Install the product so that discharged gas or exhaust air from burning appliances and equipment does not flow back inside the product. - At regions where salt damage is a concern, use an exclusive outdoor hood.
- At regions where salt damage is a concern, parts may have to be replaced sooner because of the deterioration of materials that are used.
- At the outdoor hood installation position, allow at least 3x the diameter of the duct through holes between the outdoor hood and the ducts so that exhaust air is not mixed in with supply air. (Preferably a distance of 450 mm or more should be ensured between the outdoor hood and the ducts.)
- Do not connect duct pipes in the ways shown below. (Failure to heed this warning may cause the air flow to decrease or result in abnormal noise.) - Extremely sharp bends - Many bends - Extreme narrowing of the



- Bending right next to the
- duct diameter



Provide an inspection opening at least 745 x 530 mm in size at the designated position.

- Use an exhaust air filter that has a net or a non-woven fabric type filter.
- Be sure to connect the drain piping by the following procedure to prevent the noise of the drain discharge water from occurring Make the opening at the end of the drain piping face down so that water drains well
- Ensure that the drain piping is at least 5 m long
- Ensure that the number of bends in the drain piping and drain piping downward pitch are as indicated in the following table

Piping length	Number of bends in pipe	Piping downward pitch	Drain water that occurs inside the ventilation unit builds up due to
5 m or more, less than 6 m	2 locations or more	3° or more	the intake air pressure of the exhaust fan. This sometimes causes
6 m or more	1 location or more	1° or more	a knocking noise and the sound of water discharge.

# 2. Outside Dimensions



#### Lossnay unit with damper





#### Accessories



#### [For European Countries] Obligatory accessory (Separate supply)

Air duct switching damper (P-133DUE-E)



\* Before installation, read thoroughly the installation manual for damper.

# 3. Standard Installation Examples

#### **Piping example**

- When connecting the RA (return air) to a bathroom, be sure to branch into two lines and return air from two locations, the bathroom and living room.



(							
Name of Connection Point		Connection Location					
	RA1	For intake from living room, toilet, wash basin, bathroom, etc.					
RA (return air)	RA2*	For optional motorized damper (P-133DUE-E)					
	RA3*	basin, bathroom, etc.					
EA (exhaust	air)	For exhaust air of inside air					
OA (outside	OA Dutside air						
SA (supply a	air)	For air supply opening to living room					

\* When RA2 and RA3 are used, use grills equipped with filter.

## Working space (required space around Lossnay unit)



OA

295



## Connecting drain piping to the drain outlet

234

If drain piping is not connected, drain water that builds up inside the Lossnay unit cannot be discharged, which may result in water leakage. Please understand that expenses incurred in recovery work shall be borne by the contractor.

#### ■ Provide an inspection opening at least 745 x 530 mm in size

Locate the inspection opening at a position that allows the Lossnay unit to be carried to its installation site to perform installation work and that allows the worker to go to the installation site to perform maintenance.

If the inspection opening is too small, additional work may unavoidably arise, such as widening of the inspection opening because Electrical work or other work cannot be carried out. Please understand that expenses incurred in additional work shall be borne by the contractor.

## Do not install as follows:

Do not install Lossnay unit vertically or on an incline.



Do not install the Lossnay unit upside down



# Installing the Lossnay unit

## 1. Installing the duct connecting flange

Install the four duct connecting flanges (supplied) to the Lossnay unit using the duct connecting flange mounting screws (4-25 mm) (supplied). (4 pcs x 4 locations)

When installing the duct connecting flange (RA1, EA), fill in any gaps between the duct connecting flange openings and the openings (RA1, EA) of the duct connecting flange with caulking compound. (entire circumference of opening) (commercially available)



#### Note:

- Mounting screws must be tightened at a torque of 1.0 to 1.5 N  $\cdot$  m.
- Install the product on packaging material or the like to prevent the floor from being scratched or damaged.

## 2. Installing the ceiling suspension fixture

Install the ceiling suspension fixtures L and R (2 of each) (supplied) at the positions shown in the figure below with the Ceiling suspension fixture mounting screw (thin) (5-10 mm) and Ceiling suspension fixture mounting screw (fat) (6-12 mm) (both supplied).



## 3. Installing the Lossnay unit

- Install commercially available hanging bolts (M8) while referring to the ceiling suspension fixture mounting positions in the outside dimension drawings.
- (2) Hook the ceiling suspension fixtures onto the commercially available hanging bolts, and secure the brackets in place using rubber cushions and washers (supplied) and commercially available nuts. When securing the ceiling suspension fixtures in place, install the Lossnay unit tilted as shown in <Tilt of Lossnay unit at installation> below.



#### <Tilt of Lossnay unit at installation> Drain outlet direction

Duct connecting flange direction Horizontal (within ±1°)





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Install the product and the duct piping on the indoor side of the insulation layer/airtight layer.

The temperature of the air after heat is collected on the indoor side of the insulation layer may drop and cause dew condensation, which, in turn, might result in household property getting wet.

Install the Lossnay unit so that it is horizontal with respect to the direction of the Duct connecting flange (within  $\pm 1^{\circ}$ ).

Be sure to install the Lossnay unit tilted at a downward pitch of 0 to 1° towards the side where the drain hose is installed. (Reverse pitch results in water leakage.)

# 4. Installing the auxiliary fixture

Install the two auxiliary fixtures (supplied) with the auxiliary fixture mounting screws (4-8 mm). (2 pcs x 2 locations) (Screw tightening torque: 1.0 to  $1.5 \text{ N} \cdot \text{m}$ )



# Duct piping

## 1. Duct piping

(1) Choose the connection duct

Use the ducts shown in the table below.

		Piping duct locations								
		OA	EA	SA	RA1					
		(outside air)	(exhaust air)	(supply air)	(return air)					
		φ 100	φ 100	φ 100	φ 100					
	Nominal dia.	φ 125	φ 125	φ 125	φ 125					
		φ 150	φ 150	φ 150	φ 150					

#### Note:

- When discharging air from a bathroom, use ducts made of a material that does not allow water to pass to RA (return air).
- When using PVC piping or metal ducts for SA side ducts, be sure to connect ducts having sound deadening qualities before the air diffusion grill.
- Although the duct connecting flange of the Lossnay unit can accommodate 100, 125 and 150 mm dia. ducts, the connection position differs. Refer to the figure below and work.



- (2) Install the ducts to the Lossnay unit
  - Securely insert ducts into duct connecting flanges, wrap the ports with commercially available aluminum tape to prevent air leakage, and then securely fasten the ducts with commercially available bands.
    - \* Aluminum tape and duct supporting members are prepared by the contractor.
  - 2) Hang the ducts from the ceiling in such a way that force is not applied to the Lossnay unit.
  - Calk the duct connecting flanges that discharge air from the bathroom with calking compound. When using calking compound, take care to prevent it from oozing from the ducts. (Otherwise, it could cause aluminum tape to peel off.)



Calking compound

#### Note:

 Make sure that there are no metal chips or other foreign matter (e.g. paper or vinyl) inside the ducts or the Lossnay unit before connecting the ducts.

#### 2. Insulating

Insulate the ducts and duct connecting flanges with (glass wool 25 mm or equivalent) to prevent dew condensation.

RA ducts also must be insulated when the Lossnay unit is anticipated to be stopped for a long time (i.e. not operated for 24 hours).



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Install the outdoor side duct with a downside pitch of 1/30 or more towards the outside to prevent rain water from entering.

Be sure to insulate the supply air and exhaust air ducts facing the Lossnay unit from the outside and the supply air duct facing the room down to their bases.

Install the Lossnay unit and the duct piping on the indoor side of the insulation layer/airtight layer. (Otherwise, dew condensation could result.)

# **Connecting drain pipe**

## Connecting the drain hose

- Firmly insert the drain hose (supplied) down to the base of the drain outlet. Securely tighten the hose band (supplied) using a flathead screwdriver to secure in place. (Poor tightening may result in water leakage.)
- (2) Connect the other end of the drain hose to a commercially available drain pipe (building side drain pipe: VP16 (outside diameter: φ22 mm) hard PVC pipe). Securely tighten the hose band (supplied) using a screwdriver to secure in place.



#### Note:

- Connect the drain hose so that it is lower than the Lossnay unit. (If the drain hose is higher than the Lossnay unit, water leakage will occur.)
- Do not apply adhesive to the drain hose and drain outlet. (Otherwise, maintenance can no longer be performed.)
- Be sure to connect the drain piping by the following procedure to prevent the noise of the drain discharge water from occurring.
  - Make the opening at the end of the drain piping face down so that water drains well.
  - Ensure that the drain piping is at least 5 m long.
  - Ensure that the number of bends in the drain piping and drain piping downward pitch are as indicated in the following table.

Piping length	Number of bends in pipe	Piping downward pitch		
5 m or more, less than 6 m	2 locations or more	3° or more		
6 m or more	1 location or more	1° or more		

In winter, drain water that occurs inside the ventilation unit builds up due to the intake air pressure of the exhaust fan. This sometimes causes a knocking noise and the sound of water discharge.

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#### Be sure to connect drain piping by the following procedure to prevent freezing and dew condensation forming on the surface of the piping.

- Connect the drain piping on the indoor side of the insulation layer
- Insulate the drain piping up to the end of the piping
- Do not let the end of drain piping be immersed in the rain gutter, etc. (At times of heavy snow, the rain gutter freezes and drain water is not discharged, which results in water leaking from the Lossnay unit.)

# 5. Electrical Work

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Electrical work must be carried out safely and reliably by a professional electrical contractor (properly qualified electrician) in accordance with internal wiring provisions and electrical-equipment technical standards.

Poor connection and faulty electrical work could result in electric shock or fire.

#### Use 220 to 240 V AC power.

Failure to head this warning may result in fire, electric shock or damage to the circuit boards.

Use the designated electric wires, and connect them securely so that they do not come loose.

Defective connections may result in fire.

#### Be sure to install the ground wire.

Device failure and electric leakage may cause electric shock.

#### Note:

- Limit the total wiring length between the Lossnay unit and the remote controller to 50 m.
   Micro current flowing between wirings may result in
- malfunction.
- Always use double insulated PVC cable for the transmission cables.
- All supply circuits must be disconnected before obtaining access to the terminal devices.

Please understand that expenses incurred in recovery work to deal with the above malfunction shall be borne by the contractor.

#### Names of components in control box



#### Wire connection diagram

- \* TM1, TM4 shown in dotted lines are field work.
- \* CN7 (DAMPER) is optional.
- \* Be sure to connect the ground wire.
- \* A power supply isolator must be installed.

\* Always use an isolator for the main switch power connection.

\* Select proper circuit breaker according to the electrical current information in the chart below.

Inrush current after power supply ON [A]	10 ms	6.1
	100 ms	3.6



	Definition of symbols								
M1:	Motor for exhaust fan	TB5:	Not in use	CN19:	Connector				
M2:	Motor for supply fan	TAB1, TAB2,	(TAB5): Connector (Power supply)	CN119:	Connector				
GM:	Motor for By-pass damper	TAB3,TAB4:	Connector (Reactor)	CN22:	Connector (Thermistor OA)				
TH1:	Thermistor for outside air	CN7:	Connector (Motor for By-pass damper)(Option)	LED1 to LED3:	Inspection indicator lamp				
SW2,5:	Switch (Function selection)	CN9:	Connector (Fan motor)	LED4, LED6:	Power supply indicator lamp				
SW6:	Switch (Motorized damper (option) selector)	CN10:	Connector (Fan motor)	SYMBOL 🔘 🗖	: Terminal block				
TM1:	Terminal block (Power supply)	CN18:	Connector	Φ	: Connector on PCB				
TM2:	Not in use	CN118:	Connector						
TM3:	Not in use								
TM4:	Terminal block (Transmission cable)								

#### **Connecting the wires**

(1) Remove the terminal block cover. (3 screws)



(2) Connecting the power supply cable and transmission cable. Pass the Power supply cable through the bush\* and connect to the TM1 terminal block using the round terminals. Connect the ground wire to the ground terminal and secure tightening the bush. (\* Use an item that can firmly secure the cable such as a PG connector.)



#### Note:

 Always separate the power supply cable and transmission cable by 5 cm or more to prevent malfunctioning of the unit.
 If the length of the stripped Power supply cable is too long, the conductors may touch and short out.

Power supply cable size : 1.5 mm<sup>2</sup> (ø9) or more.

- 1) Tighten the ground wire and transmission cables to the terminal block.
- 2) Secure the transmission cables using the cord clips.

Upon completion of the wiring connections, replace the control box cover.

(3) Connect the remote controller. (PZ-61DR-E, PZ-43SMF-E) Securely connect the transmission cable from the remote controller to 1 and 2 of the input terminal block (TM4). (No polarity)

Wire type: two-core sheathed cable Wire diameter:  $0.3 \text{ mm}^2$ 

- Keep the overall length of the transmission cable between Lossnay and the remote controller within 50 m.

#### Note:

- Do not tighten screws of terminal block with a torque larger than 0.5 N  $\cdot$  m. It could damage the PCB.
- Take care not to connect the power supply cable.
- Single wires such as PVC wires cannot be connected.
- Only one remote controller can be connected to the Lossnay unit. Two or more remote controllers cannot be connected.
- PZ-61DR-E and PZ-43SMF-E cannot be used together.



(4) When operating two Lossnay units by one remote controller Connect from Lossnay Unit 1 to Lossnay Unit 2 using a transmission cable.

Wire type: two-core sheathed cable Wire diameter: 0.3 mm<sup>2</sup>



#### Note:

- Do not tighten screws of terminal block with a torque larger than 0.5 N · m. It could damage the PCB.
- Single wires such as PVC wires cannot be connected.
- Connect the power supply cable to each Lossnay unit.
- Up to two Lossnay units can be connected.
- When using optional dampers (P-133DUE-E) and operating two Lossnay units with a remote controller, be sure to mount the damper on each Lossnay unit. Otherwise, the Lossnay units cannot operate properly.
- PZ-61DR-E and PZ-43SMF-E cannot be used together.

# 6. Initial Settings

# Settings when the motorized damper (option) is installed

When the optional motorized damper (P-133DUE-E) is installed, change the SW6-1 setting to OFF.

Motorized damper selection	SW6-1	SW6-2	SW6-3	SW6-4	Remarks
Without the damper	ON	ON	ON	ON	Factory default
With the damper	OFF	ON	ON	ON	



# Changing the function selection switches (SW-2 and 5)

Set the selection switches (SW-2 and 5) to perform the appropriate function.

\* All function except "Trial operation" and "Main unit setting" can be set also from the remote controller (PZ-61DR-E). If the function is switched later using the remote controller, it operates according to the setting on the remote controller.

	(SW2)	
	OFF ON	
1		Trial operation
2		Not in use
3		Not in use
4		No. 6 Indoor negative pressure setting
5		No. 7 Indoor positive pressure setting
6		Not in use
7		No. 51 Automatic ventilation mode setting
8		Not in use
9		No. 61 Fan speed for air volume "High" input (when using PZ-43SMF-E)
10		No. 62 Fan speed for air volume "Low" input (when using PZ-43SMF-E)
	(0)	
	(SW5) OFF ON	
1		Not in use
2		Not in use
3		No. 14 Exhaust fan setting
4		No. 5 Automatic recovery setting after power interruption
5		No. 1 Filter maintenance and fan power up setting against filter choking
6		Not in use
7		Not in use
8		Not in use
9		No. 14 Exhaust fan setting at OA temperature lower than -5°C
10		Not in use

# 6. Initial Settings (continued)

## Language selection

#### Function description

The desired language can be set. The language options are English, French, German, Spanish, Italian, Portuguese, Swedish, and Russian.

#### Button operation

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Français Español Deutsch Italiano Português Svenska Changes saved Main menu: া

Select "Initial setting" from the Main menu, and press the SELECT button.

Enter maintenance password "0000" is displayed. Enter the initial password "9999" and press the SELECT button. \* For details on how to change the password, refer to the PZ-61DR-E Instruction Manual.

Move the cursor to the "Language selection" with the F1 or F2 button, and press the SELECT button.

Move the cursor to the language you desire with the F1 through F4 buttons, and press the SELECT button to save the setting.

. . . . . . . . . . . . . . . . . . . .

When the power is on for the first time, the Language selection screen will be displayed. Select a desired language. The system will not start-up without language selection.

A screen will appear that indicates the setting has been saved.

- Navigating through the screens
- MENU button To go back to the Main menu ......
- To return to the previous screen ...... RETURN button



English



# Change the function settings from the remote controller PZ-61DR-E.

# Function description

Make the Lossnay units' function settings from the remote controller as necessary.

- Please refer to the Instruction book of PZ-61DR-E for how to set the function settings.
- When changing the Lossnay units' function settings, record all the changes made to keep track of the settings.





# 6. Initial Settings (continued)

Func-	E			S	Setting Data	(PZ-61DR-E	:)			Factory	DIP-SW
No		0	1	2	3	4	5	6	7	setting	No.
1	Filter maintenance and fan power up setting against filter choking	Dip-SW priority	Indicator available Fan power up N/A	Indicator N/A Fan power up N/A	Indicator available Fan power up available	-	-	-	-	0	5-5
5	Automatic recovery setting after power interruption	Dip-SW priority	Stop when the power is On	Start when the power is On	Return to the state before interruption	-	-	-	-	0	5-4
6	Indoor negative pressure setting	Dip-SW priority	N/A	Supply 1 down	Supply 2 down	-	-	-	-	0	2-4
7	Indoor positive pressure setting	Dip-SW priority	N/A	Exhaust 1 down	Exhaust 2 down	-	-	-	-	0	2-5
14	Exhaust fan setting at OA temperature lower than -5 $^\circ\text{C}$	Dip-SW priority	Stop	Fan speed 1 or 2	No change	-	-	-	-	0	5-3 5-9
51	Automatic ventilation mode setting	Dip-SW priority	Pattern A	Pattern B	Free setting	-	-	-	-	0	2-7
52	Automatic ventilation mode setting 1) Outdoor and indoor temperature gap	Setting Dat	a 0 to 7> <sup>-</sup>	Temperature	gap 23 °C t	o 30 °C				5	N/A
53	Automatic ventilation mode setting 2) The lowest outdoor temperature setting	Setting Dat	a 0 to 15>	Lowest out	door temper	ature 10 °C	to 25 °C			12	N/A
55	Supply fan power up setting	2 level down	1 level down	N/A	1 level up	2 level up	-	-	-	2	N/A
56	Exhaust fan power up setting	2 level down	1 level down	N/A	1 level up	2 level up	-	-	-	2	N/A
61	Fan speed for air volume "High" input		When PZ-	61DR-E is u	used, the set	ting does no	ot need to be	e changed		0	2-9
62	Fan speed for air volume "Low" input		When PZ-	61DR-E is ι	used, the set	ting does no	ot need to be	e changed		0	2-10
100	Initialization	-	Initialize	-	-	-	-	-	-	0	N/A

This table shows the summary of function settings. Please refer to the following pages for more details. The functions indicated with "N/A" in the "DIP-SW No." column are available only when using with remote controller PZ-61DR-E.

# No. 1 Filter maintenance and fan power up setting against filter choking

Set the schedule for filter cleaning based on the estimated concentration of dust in the air.

When fan power up is available, exhaust and supply fans power up at 2,200 hrs and 4,400 hrs gradually .

If function No. 55 or No. 56 is already worked, fan power up function may not available.

Estimated hour differs by actual operated fan speed.

DI	P-SW	Setting	PZ-6	1DR-E	Setting	Filter maintenance	Fan power
SW No.	Setting	check	Function No.	Setting Data	check	indicator	UP
	-	-		O (Factory setting)		DIP-SW priority	
	-	-		1		Indicate at estimated 4,400 hrs	N/A
5005-5	OFF (Factory setting)			2		N/A	N/A
	ON			3		Indicate at estimated 4,400 hrs	Available

#### Note:

When the setting for the cumulative operation time of the Lossnay is exceeded, the filter cleaning icon will appear on the indoor unit remote controller or the Lossnay remote controller. After cleaning the filter, the filter cleaning icon can be reset. Refer to the Instruction book for the remote controller.

# No.5 Automatic recovery setting after power interruption

Sets for automatic recovery following power interruption.

DI	P-SW	Setting PZ-6		1DR-E	Setting	Automotio recovery
SW No.	Setting	check	Function No.	Setting Data	check	Automatic recovery
	-	-		O (Factory setting)		DIP-SW priority
SW5-4	OFF (Factory setting)		5	1		Stop when the power is on
	-	-		2		Start when the power is on
	ON			3		Lossnay returns to the state before interruption

# NO. 6 Indoor negative pressure setting

Exhaust fan speed becomes bigger than supply fan speed. Remote controller indicates fan speed of exhaust fan.

Fan speed	Exhaust	Supp	ly fan
Display	fan	1 down	2 down
4	4	3	2
3	3	2	1
2	2	1	1
1	1	1	1

DI	P-SW	Setting PZ-61		1DR-E	Setting	Down level of supply fan
SW No.	Setting	check	Function No.	Setting Data	check	speed
	-	-		O (Factory setting)		DIP-SW priority
0.4/0.4	OFF (Factory setting)			1		N/A
SVV2-4	ON		6	2		Supply fan speed is 1 down to exhaust fan speed
	-	-		3		Supply fan speed is 2 down to exhaust fan speed

# No.7 Indoor positive pressure setting

Supply fan speed becomes bigger than exhaust fan speed. Remote controller indicates fan

speed of supply fan.

an speed	Supply	Exhaust fan			
Display	fan	1 down	2 down		
4	4	3	2		
3	3	2	1		
2	2	1	1		
1	1	1	1		

DIP-SW		Setting	PZ-61DR-E		Setting	Down level of exhaust	
SW No.	Setting	check	Function No.	Setting Data	check	fan speed	
	-	-		O (Factory setting)		DIP-SW priority	
014/0 5	OFF (Factory setting)		_	1		N/A	
5002-5	ON		/	2		Exhaust fan speed is 1 down to supply fan speed	
	-	-		3		Exhaust fan speed is 2 down to supply fan speed	

F

# No.14 Exhaust fan setting at OA temperature lower than -5 °C

Sets the operation of the exhaust fan when the outdoor air is lower than -5  $^\circ C$  (when supply fan stop).

DI	P-SW	Setting	PZ-6	1DR-E	Setting	Exhaust fan operation at
SW No.	Setting	check	Function No.	Setting Data	check	outdoor temp5 °C or less
	-	-		O (Factory setting)		DIP-SW priority
1	5-3 OFF 5-9 ON			1		Stop
SW5-3	5-3 ON 5-9 OFF		14	2		Forced to fan speed 2 or less*
300-9	5-3 OFF 5-9 OFF (Factory setting) 5-3 ON			3		No change
	5-9 ON					

\* When Lossnay is operating fan speed 1, exhaust fan keeps fan speed 1. Function No. 14 is included in DIP-SW 5-3, then it is impossible to set independently without PZ-61DR-E.

# No.51 Automatic ventilation mode setting

Set the pattern of conditions to go into By-pass mode in automatic ventilation operation.

When setting Data is set "3" by PZ-61DR-E, function No. 52 and No. 53 are available.

DI	P-SW	Setting	PZ-6	1DR-E	Setting	Conditions to go into
SW No.	Setting	check	Function No.	Setting Data	check	By-pass mode
	-	-		O (Factory setting)		DIP-SW priority
SW2-7	OFF (Factory setting)		51	1		Pattern A Outdoor air temperature 22 °C to 28 °C
	ON		01	2		Pattern B Outdoor air temperature 16 °C to 28 °C
	-	-		3		Free setting

\* Pattern A is more likely to become By-pass mode than pattern B.

#### No.52 Automatic ventilation mode setting 1) Outdoor air temperature upper limit

Set one of conditions for By-pass mode in auto ventilation operation, outdoor air temperature upper limit.

This function is N/A from Lossnay unit DIP-SW.

This function is available when setting Data 3 is selected at function No. 51.

DIP-SW		Setting	PZ-61DR-E		Setting	Indoor temperature -
SW No.	Setting	check	Function No.	Setting Data	check	outdoor temperature
	-	-		0		23 °C or more
	-	-		1		24 °C or more
	-	-		2		25 °C or more
	-	-		3		26 °C or more
N/A	-	-	52	4		27 °C or more
	-	-		5 (Factory setting)		28 °C or more
	-	-		6		29 °C or more
	-	-		7		30 °C or more

#### No.53 Automatic ventilation mode setting 2) The lowest outdoor temperature

Set one of conditions for By-pass mode in auto ventilation operation, minimum outdoor temperature.

This function is N/A from Lossnay unit DIP-SW.

This function is available when setting Data 3 is selected at function No. 51.

DI	DIP-SW		PZ-6	1DR-E	Setting	
SW No.	Setting	check	Function No.	Setting Data	check	Outdoor temperature
	-	-		0		10 °C or more
	-	-	]	1		11 °C or more
	-	-		2		12 °C or more
	-	-		3		13 °C or more
	-	-		4		14 °C or more
	-	-		5		15 °C or more
	-	-		6		16 °C or more
	-	-		7		17 °C or more
N/A	-	-	53	8		18 °C or more
	-	-		9		19 °C or more
	-	-		10		20 °C or more
	-	-		11		21 °C or more
	-	-		12 (Factory setting)		22 °C or more
	-	-		13		23 °C or more
	-	-	]	14		24 °C or more
	-	-		15		25 °C or more

Free By-pass setting

User can set conditions to go into By-pass mode in automatic ventilation mode by function  $\boxed{\text{No. 52}}$  and  $\boxed{\text{No. 53}}$ . Setting examples are shown below.

#### Example\*

By-pass/Heat recovery ventilation map in automatic ventilation mode



Function No.	Setting Data
52	2 (25 °C)
53	5 (15 °C)

#### No.55, 56 Supply fan power up setting Exhaust fan power up setting

Use these functions when the air volume is needed to be up after installation.

Function No. 55 is for supply fan power up and function No. 56 is for exhaust fan power up.

When function No. 1 is on and fan speed already reached the maximum power, this function is N/A.

These functions are N/A from Lossnay unit DIP-SW.

DI	DIP-SW Setting PZ-		PZ-6	PZ-61DR-E		Supply for newer up
SW No.	Setting	check	Function No.	Setting Data	check	Supply lan power up
	-	-		0		2 level down
	-	-		1		1 level down
N/A	-	-	55	2 (Factory setting)		N/A
	-	-		3		1 level up
	-	-		4		2 level up

DIP-SW		Setting	PZ-61DR-E		Setting	Euler and fear a surgery and
SW No.	Setting	check	Function No.	Setting Data	check	Exhaust fan power up
N/A	-	-	56	0		2 level down
	-	-		1		1 level down
	-	-		2 (Factory setting)		N/A
	-	-		3		1 level up
	-	-		4		2 level up

# NO.61 Fan speed for air volume "High" input

Set the fan speed setting when receiving "High" signal from remote controllers(e.g. PZ-43SMF-E) which have High/Low air volume. When PZ-61DR-E is used, this setting does not need to be changed.

DI	P-SW	Setting	Operating for around	
SW No.	Setting	check	Operating ran speed	
SW2-9	-	-	DIP-SW priority	
	OFF (Factory setting)		Fan speed 4	
	ON		Fan speed 3	

# NO.62 Fan speed for air volume "Low" input

Set the fan speed setting when receiving "Low" signal from remote controllers(e.g. PZ-43SMF-E) which have High/Low.

When PZ-61DR-E is used, this setting does not need to be changed.

DI	P-SW	Setting	Operating fan speed	
SW No.	Setting	check		
	-	-	DIP-SW priority	
SW2-10	OFF (Factory setting)		Fan speed 2	
	ON		Fan speed 1	

# No.100 Initialization

Set to initialize the remote PZ-61DR-E setting. All settings which are changed by users are cancelled.

DIP-SW		Setting	PZ-61DR-E		Setting	Initialization
SW No.	Setting	check	Function No.	Setting Data	check	Initialization
	-	-	100	0		N/A
N/A	-	-	100	1		Available

# 7. Post-installation Checks

When you have finished installation work, inspect the following items according to the following check list before turning the power on.

Be sure to correct any malfunctions that are found. (The functions is not being demonstrated or safety can not be ensured)

	Check Item	Remedy for Malfunction	Check
	Are the Lossnay unit and the duct piping installed on the indoor side of the insulation layer/airtight layer?	Install them on the indoor side of the insulation layer/airtight layer.	
	Is the Lossnay unit installed within ±1° of the horizontal?	Install within ±1° of the horizontal	
Installation of	Is the Lossnay unit installed at a downward pitch of 0 to 1° in the direction where drain piping is installed?	Install at a pitch of 0 to 1°	
Lossnay unit	Provide an inspection opening of the designated size installed at the designated position?	Provide an inspection opening at least 745 x 530 mm in size at the designated position	
	Is sufficient work space ensured? *See "Working space (required space around Lossnay unit)" at "3. Standard Installation Examples."	Ensure the required work space	
	Is the outdoor side duct installed tilted 1/30 or more towards the outside to prevent rain water from entering?	Install the duct tilted	
Duct	Are there metal chips or other foreign matter (e.g. paper or vinyl) inside the Lossnay unit or the ducts?	Remove any foreign matter.	
connections	Are ducts insulated down to their base? *See "Duct piping/ 2. Insulating" at "4. Installation Procedure".	Insulate	
	Are ducts connected to the Lossnay unit? (Air leakage causes dew condensation.)	Securely connect the ducts	
	Is the drain piping connected on the indoor side of the insulation layer?	Connect the drain piping on the indoor side of the insulation layer	
	Is the drain piping insulated up to its end?	Insulate up to the end of the drain piping	
	Is the end of the drain piping inside the rain gutter?	It is not inside the rain gutter	
Drain piping	Is the end opening facing down vertically in a condition to drain water well?	Make the opening face down so that water drains well	
	Is the piping 5 meters or longer?	Ensure that the piping is at least 5 m	
	Is the drain piping connected with the correct number of pipe bends and downward pitch?	Connect the drain piping so that the number of pipe bends and downward pitch are as indicated in the table on page 7	
	Is the power supply voltage correct?	Use 220 to 240 V power supply.	
	Is the wiring work the same as wiring diagram?	Wire as shown in the wiring diagram	
Wiring	Is the power supply cable connected to the terminal (TM1) certainly?	Connect to TM1 on the terminal block	
	Is the ground wire connected to the screw certainly?	Securely connect the ground wire	
	Are the cables properly secured using the cord clip and the PG connector?	Use a cord clip and PG connector	

# 8. Trial operation

After the system has been installed, make sure that wires are properly connected, then test the system's operation, referring to the operation manual for the remote controller.

#### Perform trial operation with the user in attendance.

- Noise sometimes increases for several minutes after the power to the Lossnay unit is turned off. This is operation to maintain the ventilation air volume at the appropriate volume, and is not a malfunction.
- It is difficult to tell the ventilation state when there is wind outside or during operation of a range hood fan, etc. When turning on the power, stop operation of the range hood fan or other noise sources.

#### 1. When performing trial operation without using the remote controller

This function can be used following situations.

- · When there is no remote controller installed for operating the Lossnay.
- When the outdoor temperature is 8 °C or lower. (To check By-pass damper operation)
- (1) Supply power to the Lossnay unit.
- (2) Turn the trial operation switch (DIP-SW SW2-1) "On."

Cancel trial operation at this point here

Terminal	DIP-SW	Setting	Minutes	0	1		2	2	3	4	5
			Seconds	0 10 20 30 4	40 50 0	10 20 3	0 40 50 0	0 10 20	30 40 50 0 10 20	30 40 50 0 10 20 30	40 50 0 10
-	-	-	Fan Speed						4		
-	SW6-1	OFF	Ventilation mode	Bypass		Lossnay	,				

• The ventilation mode operates only when the optional motorized damper is installed.

- (3) Check each function operating normally.
- (4) Turn the trial operation switch (DIP-SW SW2-1) "Off."
- When operation is started by the remote controller with DIP-SW SW2-1 still "On", error code "0900" is displayed on the remote controller.

## 2. Trial operation using the remote controllers (PZ-61DR-E or PZ-43SMF-E)

(1) When using the PZ-61DR-E

Press each of the buttons by following the procedure below to check that operation is normal.

"4. Selecting the ventilation mode" is displayed on the remote controller only when the optional motorized damper is installed to indicate that the mode can be switched.

Operation Item	Operation Pad	Display	Step
1. Powering on		Please Wait 10%	Turn the power on
2. Starting operation	ON/OFF lamp	Lossnay 12:00 Sun Auto Fan Mode	Press the "ON/OFF" button (operation LED lights)
3. Selecting air volume	F2	► \$\$. +\$\$+\$\$+\$\$	Press the F2 button The fan speed is switched
4. Selecting the ventilation mode	F3		Press the F3 button The ventilation mode switches in order "Automatic" $\rightarrow$ "Heat exchanger" $\rightarrow$ "By-pass"
5. Stopping operation	ON/OFF lamp	Lossnay 12:00 Sun	Press the "ON/OFF" button (operation LED goes out)

\* When the backlight is off, pressing any button turns the backlight on and does not perform its function. (Except "ON/OFF" button)

# 8. Trial operation (continued)

#### (2) When using the PZ-43SMF-E

Press each of the buttons by following the procedure below to check that operation is normal.

"3. Selecting the ventilation mode" is displayed on the remote controller only when the optional motorized damper is installed to indicate that the mode can be switched.

	Relevant button	Relevant display items	Sequence
1			Initiate the supply of power to the Lossnay unit. (The [HO] display will blink for approximately 45 seconds)
2	N OFF	AUTO	Press the "ON/OFF" button and check that the operation lamp turns on.
3	×		Press the "Ventilation mode" button: Each time it is pressed, the corresponding display will change in accordance with the sequence [HEAT EX.] (non-automatic)> [BY-PASS] (non-automatic)> [AUTO]. If [AUTO] is selected, the display will change to indicate the current mode after three seconds have passed.
4		AUTO	Press the "Fan Speed" button to select either Low or High fan speed.
5	Operation lamp	•	Press the "ON/OFF" button. (and check the operation lamp turns off.)

\* Note that when the "Ventilation mode" button is pressed, it will take up to 40 seconds before the operation of the damper changes accordingly.

 $^{\ast}$  When a button that is not preset with a function is pressed, "Invalid button" is displayed.

\* When the backlight is off, pressing any button turns the backlight on and does not perform its function. (Except "ON/OFF" button)

## 3. If trouble occurs during trial operation

Symptom	Remedy					
Will not operate even when the operation switch for the remote controller (PZ-61DR-E, PZ- 43SMF-E) is pressed.	<ul> <li>Check the power supply. (The specified power supply is single-phase 220-240 V / 50 Hz, 220 / 60 Hz)</li> <li>Check for a short circuit or disconnection in the transmission cable. (Check that the voltage between terminals in the transmission cables is 10 to 13 V DC for the controller.)</li> <li>Check that the there is 5 cm or more separating the transmission cable from the power supplicable and any other transmission cables.</li> <li>Run the Lossnay independently using the trial operation switch (SW2-1) and check if it runs. Lossnay runs&gt; Check the signal lines Lossnay doesn't run&gt; Check the power supply</li> <li>Check if there are two or more remote controller connected. (The maximum is one.)</li> <li>Check that the wing between the Lossnay unit and the remote controller is within 50 m.</li> </ul>					
Lossnay does not stop.	Check that the trial operation switch (SW2-1) is set to off.					
The inspection indicator lamp (LED 1 Green) in the control box flashes.	1 flashFault on supply fan motor2 flashesFault on exhaust fan motor4 flashesFault on OA thermistor5 flashesNot used on this model6 flashesNot used on this model7 flashesNot used on this model8 flashesNot used on this model9 flashesFault on remote controller communication10 flashesFault on function setting11 flashesFault on power supply to remote controller	Turn the power off and consult your dealer.				
Abnormal vibration or abnormal noise	<ul> <li>Check for loose Ceiling suspension fixture or ceiling hanging bolts.</li> <li>Check for ducts out of position.</li> <li>Check for loose or damaged parts.</li> <li>Check for vane contact. (sound of foreign matter getting inside)</li> </ul>					
<ul> <li>Air is not supplied or discharged from grills</li> <li>Check for foreign matter inside piping.</li> <li>Check for ducts out of position.</li> <li>Check piping to see if it is connected in such a way that it might cause air volume to drop cause abnormal noise.</li> <li>Check the ducts to see if they are bent excessively.</li> </ul>						

When an inspection number blinks on the remote controller, follow the procedures shown in the installation and operating manuals provided with the remote controller.

# **Explaining to the User**

- Explain to the user where the circuit breaker and remote controller are located and how to clean the filters.
- Tell the user the results of checks performed using the check list.
- Explain correct use by following the descriptions in the "Instruction Manual." In particular, "Safety Precautions" describe important notices and warnings relating to safety. Explain to users that they should observe these.

# Manufactured by: MITSUBISHI ELECTRIC CORPORATION

TOKYO BLDG. 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO, 100-8310 JAPAN Importer in EU: MITSUBISHI ELECTRIC EUROPE B.V. HARMAN HOUSE, 1 GEORGE STREET, UXBRIDGE, MIDDLESEX, UB8 1QQ, U.K.

## Information on Disposal



Note: This symbol mark is for EU countries only.

This symbol mark is according to the directive 2012/19/EU Article 14 Information for users and Annex IX, and/or to the directive 2006/66/EC Article 20 Information for end-users and Annex II.

# English

Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and/or reused.

This symbol means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste.

If a chemical symbol is printed beneath the symbol shown above, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows:

Hg: mercury (0,0005%), Cd: cadmium (0,002%),

Pb: lead (0,004%)

In the European Union there are separate collection systems for used electrical and electronic products, batteries and accumulators.

Please, dispose of this equipment, batteries and accumulators correctly at your local community waste collection/recycling centre.

Please, help us to conserve the environment we live in!

# Deutsch

Ihr MITSUBISHI ELECTRIC-Produkt wurde unter Einsatz von qualitativ hochwertigen Materialien und Komponenten konstruiert und gefertigt, die für Recycling und/oder Wiederverwendung geeignet sind.

Dieses Symbol bedeutet, dass elektrische und elektronische Geräte sowie Batterien und Akkus am Ende ihrer Nutzungsdauer von Hausmüll getrennt zu entsorgen sind.

Wenn ein chemisches Symbol unterhalb des oben abgebildeten Symbols erscheint, bedeutet dies, dass die Batterie bzw. der Akku ein Schwermetall in einer bestimmten Konzentration enthält. Dies wird wie folgt angegeben:

Hg: Quecksilber (0,0005 %), Cd: Cadmium (0,002 %),

Pb: Blei (0,004 %)

In der Europäischen Union gibt es unterschiedliche Sammelsysteme für gebrauchte Elektrik- und Elektronikgeräte einerseits sowie Batterien und Akkus andererseits.

Bitte entsorgen Sie dieses Gerät, Batterien und Akkus vorschriftsmäßig bei Ihrer kommunalen Sammelstelle oder im örtlichen Recycling-Zentrum.

Bitte helfen Sie uns, die Umwelt zu erhalten, in der wir leben!

# Italiano

Questo prodotto MITSUBISHI ELECTRIC è stato progettato e fabbricato con materiali e componenti di alta gualità, che possono essere riciclati e/o riutilizzati.

Questo simbolo significa che i prodotti elettrici ed elettronici, le batterie e gli accumulatori, devono essere smaltiti separatamente dai rifiuti casalinghi alla fine della loro vita di servizio.

Se sotto il simbolo mostrato sopra è stampato un simbolo chimico, il simbolo chimico significa che la batteria o l'accumulatore contiene un metallo pesante con una certa concentrazione. Ciò viene indicato come segue:

Hg: mercurio (0,0005%), Cd: cadmio (0,002%),

Pb: piombo (0,004%)

Nell'Unione Europea ci sono sistemi di raccolta differenziata per i prodotti elettrici ed elettronici, le batterie e gli accumulatori usati. Per disfarsi di questo prodotto, delle batterie e degli accumulatori, portarli al centro locale di raccolta/riciclaggio dei rifiuti.

Aiutateci a conservare l'ambiente in cui viviamo!

# Français

Votre produit Mitsubishi Electric est conçu et fabriqué avec des matériels et des composants de qualité supérieure qui peuvent être recyclés et/ou réutilisés.

Ce symbole signifie que les équipements électriques et électroniques, les batteries et les accumulateurs, à la fin de leur durée de service, doivent être éliminés séparément des ordures ménagères.

Si un symbole chimique est imprimé sous le symbole illustré ci-dessus, il signifie que la batterie ou l'accumulateur contient une certaine concentration de métal lourd. Elle sera indiquée comme suit :

Hg : mercure (0,0005%), Cd : cadmium (0,002%),

Pb : plomb (0,004%)

Dans l'Union Européenne, il existe des systèmes sélectifs de collecte pour les produits électriques et électroniques, les batteries et les accumulateurs usagés.

Nous vous prions donc de confier cet équipement, ces batteries et ces accumulateurs à votre centre local de collecte/recyclage.

Aidez-nous à conserver l'environnement dans leguel nous vivons !

Les machines ou appareils électriques et électroniques contiennent souvent des matières qui, si elles sont traitées ou éliminées de manière inappropriée, peuvent s'avérer potentiellement dangereuses pour la santé humaine et pour l'environnement.

Cependant, ces matières sont nécessaires au bon fonctionnement de votre appareil ou de votre machine.

Pour cette raison, il vous est demandé de ne pas vous débarrasser de votre appareil ou machine usagé avec vos ordures ménagères.

#### Español

Su producto MITSUBISHI ELECTRIC está diseñado y fabricado con materiales y componentes de alta calidad que pueden ser reciclados y/o reutilizados.

Este símbolo significa que el aparato eléctrico y electrónico, las pilas, baterías y los acumuladores, al final de su ciclo de vida, se deben tirar separadamente del resto de sus residuos domésticos.

Si hay un símbolo químico impreso debajo del símbolo mostrado arriba, este símbolo químico significa que la pila, batería o el acumulador contienen un metal pesado con cierta concentración. Esto se indicará de la forma siguiente:

Hg: mercurio (0,0005%), Cd: cadmio (0,002%),

Pb: plomo (0,004%)

En la Unión Europea existen sistemas de recogida específicos para productos eléctricos y electrónicos, pilas, baterías y acumuladores usados.

Por favor, deposite los aparatos mencionados, las pilas, baterías y acumuladores en el centro de recogida/reciclado de residuos de su lugar de residencia local cuando quiera tirarlos. i Ayúdenos a conservar el medio ambiente!

# Português

O seu produto MITSUBISHI ELECTRIC foi concebido e produzido com materiais e componentes de alta qualidade que podem ser reciclados e/ou reutilizados.

Este símbolo significa que o equipamento eléctrico e electrónico, as baterias e os acumuladores, no final da sua vida útil, devem ser deitados fora separadamente do lixo doméstico.

Se houver um símbolo químico impresso por baixo do símbolo mostrado acima, o símbolo químico indica que a bateria ou acumulador contém metais pesados numa determinada concentração. Isto aparecerá indicado da maneira seguinte:

Hg: mercúrio (0,0005%), Cd: cádmio (0,002%),

Pb: chumbo (0,004%)

Na União Europeia existem sistemas de recolha separados para produtos eléctricos e electrónicos, baterias e acumuladores usados. Por favor, entregue este equipamento, as baterias e os acumuladores correctamente, no seu ponto local de recolha/ reciclagem.

Por favor, ajude-nos a conservar o ambiente em que vivemos!



# **Svenska**

Denna produkt från MITSUBISHI ELECTRIC är designad och tillverkad av material och komponenter med hög kvalitet som kan återvinnas och/eller återanvändas.

Denna symbol betyder att förbrukade elektriska och elektroniska produkter, batterier och ackumulatorer skall sorteras och hanteras separat från hushållsavfall.

Om det finns en kemisk beteckning tryckt under ovanstående symbol betyder det att batteriet eller ackumulatorn innehåller en tungmetall med en viss koncentration. Detta anges på följande sätt:

Hg: kvicksilver (0,0005%), Cd: kadmium (0,002%),

Pb: bly (0,004%)

Inom den Europeiska Unionen finns det separata insamlingssystem för begagnade elektriska och elektroniska produkter, batterier och ackumulatorer.

Var vänlig lämna denna produkt, batterier och ackumulatorer hos din lokala mottagningsstation för avfall och återvinning. Var snäll och hjälp oss att bevara miljön vi lever i!

# Dansk

Dit produkt fra MITSUBISHI ELECTRIC er designet og fremstillet med kvalitetsmaterialer og komponenter, der kan genindvindes og/ eller genbruges.

Dette symbol viser, at elektrisk eller elektronisk udstyr, batterier og akkumulatorer ikke må bortskaffes sammen med almindeligt husholdningsaffald efter endt levetid.

Hvis der er trykt et kemisk symbol under symbolet ovenfor, betyder det, at batteriet eller akkumulatoren indeholder en bestemt koncentration af et tungmetal. Dette angives som følger:

Hg: kviksølv (0,0005 %), Cd: cadmium (0,002 %),

Pb: bly (0,004 %)

I EU er der særlige indsamlingsordninger for brugte elektriske og elektroniske produkter, batterier og akkumulatorer.

Bortskaf udstyret, batterier og akkumulatorer korrekt på en lokal affalds-/genbrugsplads.

Hjælp os med at bevare det miljø, vi lever i!

# Norsk

For norske brukere:

Dette produktet fra MITSUBISHI ELECTRIC er konstruert og produsert med materialer og komponenter av høy kvalitet, som kan resirkuleres og/eller brukes om igjen.

Dette symbolet betyr at elektrisk og elektronisk utstyr, batterier og akkumulatorer, ikke bør kasseres sammen med husholdningsavfallet når de har nådd slutten av sin levetid.

Hvis det er trykt et kiemisk symbol under det symbolet som er vist over, betyr det kjemiske symbolet at batteriet eller akkumulatoren inneholder et tungmetall i en viss konsentrasjon. Dette vil vises som følger:

Hg: kvikksølv (0,0005 %), Cd: kadmium (0,002 %),

Pb: bly (0,004 %)

I Norge finnes det egne innsamlingssystemer for brukte elektriske og elektroniske produkter, batterier og akkumulatorer. Kasser dette utstyret, batteriene og akkumulatorene ved den lokale gjenbruks- eller resirkuleringsstasjonen.

Hjelp oss å bevare det miljøet vi lever i!

# Suomi

Tämä MITSUBISHI ELECTRIC -tuote on suunniteltu ja valmistettu korkealuokkaisista materiaaleista ja/tai osista, jotka voidaan kierrättää ja käyttää uudelleen.

Tämä symboli tarkoittaa, että sähkö- ja elektroniikkalaitteet, paristot ja akut täytyy niiden käyttöiän jälkeen hävittää erillään talousjätteistä.

Jos yllä olevan symbolin alapuolelle on painettu kemiallinen symboli, se tarkoittaa, että paristolla tai akulla on tietty raskasmetallipitoisuus. Se ilmoitetaan seuraavasti:

Hg: elohopea (0,0005 %), Cd: kadmium (0,002 %),

Pb: lyijy (0,004 %)

Käytetyillä sähkö- ja elektroniikkalaitteilla, paristoilla ja akuilla on Euroopan Yhteisössä omat keräysjärjestelmänsä.

Toimita tämä laite, paristot ja akut paikalliseen jätehuolto-/ kierrätyskeskukseen.

Auta meitä suojelemaan ympäristöä, jossa elämme!

# **Nederlands**

Mitsubishi Electric producten zijn ontwikkeld en gefabriceerd uit eerste kwaliteit materialen. De onderdelen kunnen worden gerecycled en/of worden hergebruikt.

Het symbool betekent dat de elektrische en elektronische onderdelen, batterijen en accu's op het einde van de gebruiksduur gescheiden van het huishoudelijk afval moeten worden ingezameld. Wanneer er onder het bovenstaande symbool een chemisch symbool staat gedrukt, betekent dit dat de batterij of accu zware metalen in een bepaalde concentratie bevat. Dit wordt als volgt aangeduid:

Hg: kwik (0,0005%), Cd: cadmium (0,002%),

Pb: lood (0.004%)

In de Europese Unie worden elektrische en elektronische producten, batterijen en accu's afzonderlijk ingezameld. Breng deze apparatuur, batterijen en accu's dan naar het

gemeentelijke afvalinzamelingspunt.

Help ons mee het milieu te beschermen!

# Ελληνικά

Το προϊόν MITSUBISHI ELECTRIC που διαθέτετε είναι σχεδιασμένο και κατασκευασμένο από υλικά και εξαρτήματα υψηλής ποιότητας, τα οποία μπορούν να ανακυκλωθούν ή/και να χρησιμοποιηθούν ξανά.

Το σύμβολο αυτό σημαίνει ότι ο ηλεκτρικός και ηλεκτρονικός εξοπλισμός, οι μπαταρίες και οι συσσωρευτές, στο τέλος της διάρκειας ζωής τους, θα πρέπει να απορριφτούν ξεχωριστά από τα υπόλοιπα οικιακά απορρίμματά σας.

Αν έχει εκτυπωθεί ένα χημικό σύμβολο κάτω από το σύμβολο που απεικονίζεται ανωτέρω, αυτό το χημικό σύμβολο σημαίνει ότι η μπαταρία ή ο συσσωρευτής περιέχει ένα βαρύ μέταλλο σε ορισμένη συγκέντρωση. Αυτό θα υποδεικνύεται ως ακολούθως:

. Hg: υδράργυρος (0,0005%), Cd: κάδμιο (0,002%),

Pb: μόλυβδος (0,004%)

Στην Ευρωπαϊκή Ένωση υπάρχουν ξεχωριστά συστήματα συλλογής για τα χρησιμοποιημένα ηλεκτρικά και ηλεκτρονικά προϊόντα, τις μπαταρίες και τους συσσωρευτές.

Παρακαλούμε διαθέστε αυτόν τον εξοπλισμό, τις μπαταρίες και τους συσσωρευτές στο τοπικό σας κοινοτικό κέντρο συλλογής/ ανακύκλωσης απορριμμάτων.

Βοηθήστε μας να προστατεύσουμε το περιβάλλον στο οποίο ζούμε!



# Polski

Niniejszy wyrób MITSUBISHI ELECTRIC został zaprojektowany i wykonany z wysokiej jakości materiałów i części, które można poddać recyklingowi i/lub ponownie wykorzystać.

Symbol ten oznacza, że po zakończeniu okresu eksploatacji urządzeń elektrycznych i elektronicznych, baterii oraz akumulatorów nie należy ich utylizować razem z odpadami gospodarczymi.

Symbol chemiczny poniżej przedstawionego powyżej znaku sygnalizuje obecność w baterii bądź akumulatorze pewnego stężenia metali ciężkich. Informacja o tym podawana jest w następujący sposób:

Hg: rtęć (0,0005%), Cd: kadm (0,002%),

Pb: ołów (0,004%)

W krajach Unii Europejskiej działają odrębne systemy odbioru zużytych urządzeń elektrycznych i elektronicznych, baterii oraz akumulatorów.

Wspomniany sprzęt, baterie i akumulatory należy przekazać do utylizacji w miejscowym punkcie odbioru/recyklingu odpadów komunalnych.

Pomóż nam chronić środowisko, w którym żyjemy!

# Český

Tento produkt společnosti MITSUBISHI ELECTRIC byl zkonstruován a vyroben z vysoce kvalitních materiálů a komponentů, které mohou být recyklovány nebo opakovaně použity.

Tento symbol znamená, že elektrické a elektronické zařízení, baterie a akumulátory musí být po skončení životnosti likvidovány odděleně od běžného komunálního odpadu.

Pokud je pod výše zobrazeným symbolem vytištěna chemická značka, znamená to, že baterie nebo akumulátor obsahuje v určité koncentraci těžký kov. Indikace bude provedena následujícím způsobem:

Hg: rtuť (0,0005 %), Cd: kadmium (0,002 %),

Pb: olovo (0,004 %)

V Evropské unii existují dva samostatné systémy sběru použitých elektrických a elektronických výrobků, baterií a akumulátorů.

Toto zařízení, baterie a akumulátory zlikvidujte prostřednictvím vašeho místního střediska sběru/recyklace odpadů.

Pomozte nám prosím zachovat životní prostředí, ve kterém žijeme!

# Slovenský

Váš výrobok MITSUBISHI ELECTRIC je navrhnutý a vyrobený s použitím vysokokvalitných materiálov a komponentov, ktoré je možné recyklovať a/alebo opätovne použiť.

Tento symbol znamená, že elektrické a elektronické zariadenia, batérie a akumulátory je potrebné po ukončení ich životnosti zlikvidovať oddelene od komunálneho odpadu.

Ak je pod symbolom znázorneným vyššie vytlačený chemický symbol, tento chemický symbol znamená, že batéria alebo akumulátor obsahuje určitú koncentráciu ťažkého kovu. Koncentrácia sa uvádza nasledujúcim spôsobom:

Hg: ortuť (0,0005 %), Cd: kadmium (0,002 %),

Pb: olovo (0,004 %)

V Európskej únii existujú zvláštne systémy na zber použitých elektrických a elektronických výrobkov, batérií a akumulátorov. Takéto zariadenia, batérie a akumulátory zlikvidujte správne v miestnom komunálnom centre zberu a recyklácie odpadu. Pomôžte nám, prosím, zachovať prostredie, v ktorom žijeme!

# Slovenščina

Izdelek MITSUBISHI ELECTRIC je načrtovan in izdelan iz materialov visoke kakovosti ter komponent, ki jih je mogoče reciklirati in/ali znova uporabiti.

Znak opozarja na to, da je treba električno in elektronsko opremo, baterije in akumulatorje, ki se jim je iztekla življenjska doba, ločiti od drugih gospodinjskih odpadkov, kadar jih želite zavreči.

Če je kemijski znak natisnjen pod zgoraj prikazanim znakom, kemijski znak pomeni, da je v bateriji ali akumulatorju določena koncentracija težke kovine. To je označeno tako:

Hg: živo srebro (0,0005 %), Cd: kadmij (0,002 %),

Pb: svinec (0,004 %)

Evropska unija je pripravila posebne skupne sisteme zbiranja uporabljenih električnih in elektronskih izdelkov, baterij in akumulatorjev.

Poskrbite za pravilno odlaganje takšne opreme, baterij in akumulatorjev v centru za zbiranje/recikliranje odpadkov lokalne skupnosti.

Pomagajte nam ohraniti naše okolje.

# български

Продуктът на MITSUBISHI ELECTRIC е създаден и произведен с висококачествени материали и компоненти, които могат да бъдат рециклирани и/или повторно използвани.

Този символ означава, че електрическото или електронно оборудване, батерии или акумулатори в края на експлоатациония си живот трябва да бъдат изхвърляни отделно от останалите домакински отпадъци.

Ако под показания по-горе символ бъде отпечатан символ за химикал, означава че батерията или акумулатора съдържа тежък метал в определена концентрация. Това се указва както следва:

Hg: живак (0,0005%), Cd: кадмий (0,002%),

Pb: олово (0,004%)

В Европейския съюз има отделни системи за събиране на използвани електрически и електронни продукти, батерии и акумулатори.

Моля, изхвърляйте това оборудване, батерии и акумулатори, правилно в центъра за събиране/рециклиране на вашата община.

Помогнете да запазим средата, в която живеем!

# Română

Produsul dvs. MITSUBISHI ELECTRIC este conceput și fabricat din materiale și componente de înaltă calitate, care pot fi reciclate și / sau reutilizate.

Acest simbol arată că, la sfârșitul duratei de viaţă, echipamentele electrice și electronice, bateriile și acumulatorii trebuie aruncate separat de deșeurile menajere obișnuite.

Dacă sub simbolul de mai sus este imprimat un simbol chimic, acesta arată că bateria sau acumulatorul conține metale grele într-o anumită concentrație. Prezența metalelor grele va fi indicată după cum urmează:

Hg: mercur (0,0005%), Cd: cadmiu (0,002%),

Pb: plumb (0,004%)

În Uniunea Europeană există sisteme de colectare separată a produselor electrice și electronice uzate, a bateriilor epuizate și a acumulatorilor uzați.

Vă rugăm să aruncați acest echipament, bateriile și acumulatorii în maniera corectă, prin intermediul centrului local de colectare / reciclare a deșeurilor.

Contribuiți la protejarea mediului în care trăim!



## Magyar

MITSUBISHI ELECTRIC termékének tervezéséhez és gyártásához kiváló minőségű anyagok és alkatrészek kerültek felhasználásra. Ezek az anyagok újrahasznosíthatók és/vagy újrafelhasználhatók.

A szimbólum arra figyelmeztet, hogy az elektromos és elektronikus berendezéseket, elemeket és akkumulátorokat élettartamuk végén a háztartási hulladéktól különválasztva kell ártalmatlanítani.

Amennyiben a fenti szimbólum után vegyjel áll, az elem vagy az akkumulátor bizonyos koncentrációban nehézfémet tartalmaz. A jelölések jelentése a következő:

Hg: higany (0,0005%), Cd: kadmium (0,002%),

Pb: ólom (0,004%)

Az Európai Unióban külön gyűjtőrendszerek működnek a használt elektromos és elektronikai cikkek, elemek és akkumulátorok ártalmatlanítására.

Kérjük, hogy a berendezést, az elemeket és az akkumulátorokat megfelelő módon a helyi hulladékgyűjtő/feldolgozó központban ártalmatlanítsa.

Kérjük, segítsen környezetünk megóvásában!

# Русский

Ваш продукт MITSUBISHI ELECTRIC спроектирован и создан с использованием высококачественных материалов и компонентов, которые могут быть переработаны и/или использованы повторно.

Данный символ означает, что электрическое и электронное оборудование, батареи и аккумуляторы в конце срока службы должны утилизироваться отдельно от бытовых отходов.

Если под указанным выше символом напечатан химический символ, это означает, что батарея или аккумулятор содержит тяжелые металлы в определенной концентрации. Обозначения:

Hg: ртуть (0,0005%), Cd: кадмий (0,002%),

Рb: свинец (0,004%)

В Европейском Союзе предусмотрены отдельные системы сбора для отработавшего электрического и электронного оборудования, батарей и аккумуляторов.

Утилизируйте данное оборудование, батареи и аккумуляторы должным образом в местном центре сбора/ переработки отходов.

Помогите нам защитить нашу окружающую среду!

# Türkçe

MITSUBISHI ELECTRIC ürününüz, geri dönüştürülebilen ve/ veya yeniden kullanılabilen yüksek kaliteli malzeme ve parçalarla tasarlanmış ve üretilmiştir.

Bu sembol, elektrikli ve elektronik cihazlar ile pil ve akülerin kullanım ömürlerinin sonunda evsel atıklarınızdan ayrı olarak atılması gerektiği anlamına gelir.

Yukarıda gösterilen sembolün altında bir kimyasal sembol varsa, bu kimyasal sembol pilin ya da akünün belirli bir yoğunlukta ağır metal içerdiği anlamına gelir. Bu gösterim aşağıdaki gibi olacaktır:

Hg: cıva (%0,0005), Cd: kadmiyum (%0,002),

Pb: kurşun (%0,004)

Avrupa Birliği bünyesinde kullanılmış elektrikli ve elektronik ürünler, pil ve aküler için ayrı toplama sistemleri bulunmaktadır.

Lütfen bu cihazı, pilleri ve aküleri bulunduğunuz bölgedeki belediyenin atık toplama/geri dönüşüm merkezinde doğru bir şekilde imha edin.

Lütfen içinde yaşadığımız çevreyi korumamız konusunda bize yardımcı olun!

# Hrvatski

Vaš MITSUBISHI ELECTRIC proizvod projektiran je i proizveden od visokokvalitetnih materijala i dijelova koje je moguće reciklirati i/ili oporabiti.

Ovaj simbol ukazuje kako je nakon radnog vijeka električnu i elektroničku opremu, baterije i akumulatore potrebno odlagati odvojeno od kućnog otpada.

Ako je ispod gore navedenog simbola tiskan kemijski simbol, on ukazuje kako baterija ili akumulator sadrži određenu koncentraciju teških metala. To će biti prikazano na primjer:

Hg: živa (0,0005%), Cd: kadmij (0,002%),

Pb: olovo (0,004%)

U Europskoj Uniji postoje zasebni sustavi prikupljanja iskorištenih električnih i elektroničkih proizvoda, baterija i akumulatora.

Ovu opremu, baterije i akumulatore pravilno odložite u odgovarajućem lokalnom centru za prikupljanje i recikliranje otpada.

Pomozite nam u čuvanju okoliša u kojem živimo!

# Lietuvių

Jūsų MITSUBISHI ELECTRIC gaminys suprojektuotas ir pagamintas naudojant aukštos kokybės medžiagas ir komponentus, kuriuos galima perdirbti ir (arba) naudoti pakartotinai.

Šis simbolis rodo, kad baigta naudoti elektrinė ir elektroninė įranga, baterijos ir akumuliatoriai turi būti šalinami ne su namų ūkio atliekomis.

Jei cheminis simbolis išspausdintas po prieš tai parodytu simboliu, jis nurodo, kad baterijoje arba akumuliatoriuje yra tam tikra koncentracija sunkiojo metalo. Tai gali būti nurodyta taip:

Hg: gyvsidabris (0,0005 %), Cd: kadmis (0,002 %),

Pb: švinas (0,004 %)

Europos Sąjungoje naudoti elektros ir elektroniniai gaminiai, baterijos ir akumuliatoriai šalinami atskiruose surinkimo punktuose. Šią įrangą, baterijas ir akumuliatorius šalinkite tinkamai vietinės bendruomenės atliekų surinkimo / perdirbimo centre. Padėkite mums saugoti aplinką, kurioje gyvename!

# Latviski

Šīs "MITSUBISHI ELECTRIC" iekārtas ražošanā izmantoti kvalitatīvi materiāli un detaļas, ko var pārstrādāt un/vai izmantot atkārtoti. Šis simbols nozīmē, ka no elektriskajiem un elektroniskajiem komponentiem, baterijām un akumulatoriem to darbmūža beigās nedrīkst atbrīvoties kā no parastiem mājsaimniecības atkritumiem. Ja zem iepriekš redzamā simbola ir norādīts ķīmiskā elementa simbols, tas nozīmē, ka baterijā vai akumulatorā noteiktā koncentrācijā ir smagais metāls. Koncentrācija tiek norādīta šādi:

Hg: dzīvsudrabs (0,0005%), Cd: kadmijs (0,002%),

Pb: svins (0,004%)

Eiropas Savienībā ir atsevišķas atkritumu savākšanas sistēmas elektroniskajiem un elektriskajiem izstrādājumiem un izlietotām baterijām un akumulatoriem.

Atbrīvojieties no šīs iekārtas, baterijas un akumulatora pareizi, nododot tos vietējā atkritumu savākšanas/pārstrādes centrā. Palīdziet saudzēt apkārtējo vidi, kurā mēs visi dzīvojam!



# Eesti

Ettevõtte MITSUBISHI ELECTRIC seade on kavandatud ja valmistatud kvaliteetsetest materjalidest ning osadest, mida on võimalik ringlusse võtta ja/või taaskasutada.

See sümbol tähendab, et elektri- ja elektroonikaseadmed, patareid ja akud tuleb kõrvaldada pärast kasutusaja lõppu olmejäätmetest eraldi.

Kui ülaltoodud sümboli all on trükitud keemiline sümbol, siis see tähendab, et patarei või aku sisaldab teatud kontsentratsioonis raskemetalli. See märgitakse järgmiselt:

Hg: elavhõbe (0,0005%), Cd: kaadmium (0,002%),

Pb: plii (0,004%)

Euroopa Liidus kasutatakse kasutatud elektri- ja elektroonikaseadmete, patareide ning akude eraldi kogumise süsteeme.

Kõrvaldage see seade, patareid ja akud õigesti, viies need kohalikku jäätmekogumis- või ringlussevõtukeskusesse. Aidake meil hoida keskkonda, kus me elame!

## Українська мова

Ваш продукт MITSUBISHI ELECTRIC розроблено та виготовлено з високоякісних матеріалів та компонентів, які можна переробити та/або повторно використати.

Цей символ означає, що електричне й електронне обладнання, батареї та акумулятори після закінчення строку служби потрібно утилізовувати окремо від побутових відходів.

Якщо хімічний символ надруковано під символом, показаним вище, цей хімічний символ означає, що батарея або акумулятор містить важкий метал у певній концентрації. Це буде позначено таким чином:

Hg: ртуть (0,0005%), Cd: кадмій (0,002%),

Pb: свинець (0,004%)

У Євросоюзі існують окремі системи збирання для використаних електричних та електронних виробів, батарей й акумуляторів. Правильно утилізуйте це обладнання, батареї та акумулятори у своєму місцевому центрі збирання/переробки відходів.

Будь ласка, допоможіть нам зберегти природне довкілля, у якому живемо!