Mitsubishi Electric Ventilator Selection Tool

Mitsubishi Electric Ventilator Selection Tool is a software for selecting optimal Mitsubishi Electric ventilation fans. In addition to supporting the selection of a sufficient model, it also provides the necessary technical documents.

1. Model Selection

3. Technical Documents

2. Summary Sheet

*This image is for illustration purpose and actual data may vary.
 Ratings and specifications may change due to product improvements or modifications.
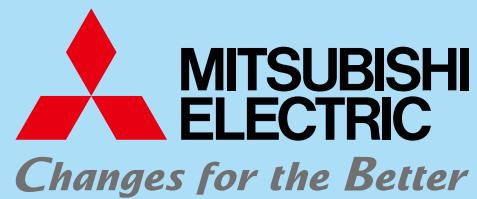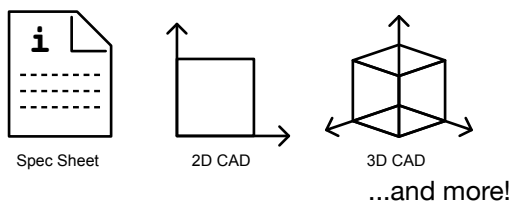
1. Model Selection

An appropriate model can be selected simply by inputting the necessary air volume and static pressure. Optional parts that go with the selected model will also be listed.

2. Summary Sheet

Data for the selected model can be downloaded in PDF format. SFP at duty point, acoustic information, and energy saving calculation can be also downloaded (varies by model).

3. Technical Documents

Other technical data needed for designing ventilation system are also available.

Spec Sheet   2D CAD   3D CAD

...and more!

LOSSNAY YouTube Channel

LOSSNAY YouTube channel provides videos on LOSSNAY features, structures, and more!
Check the 2D Code below for more details.

■ **LOSSNAY Features**　　■ **LOSSNAY Structure**　　■ **How to select a model**
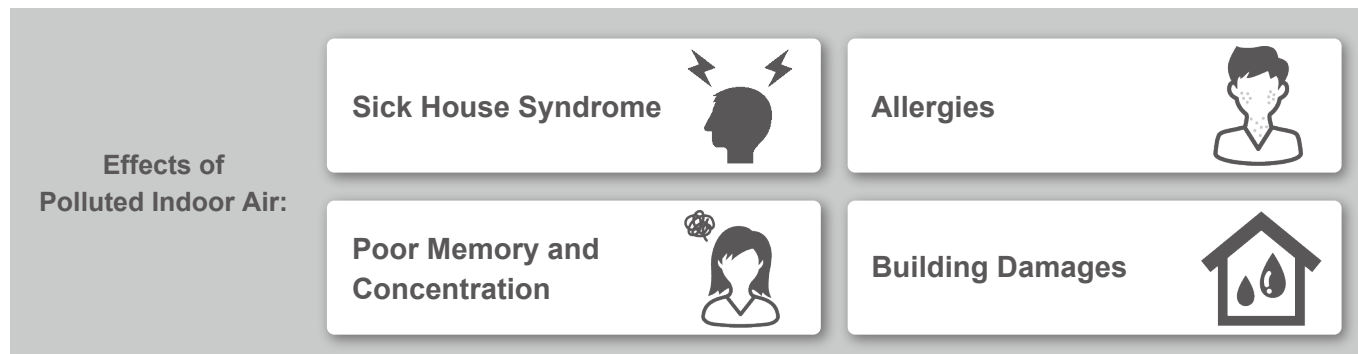

SCAN ME!

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BLDG., 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
www.MitsubishiElectric.com

MITSUBISHI ELECTRIC
Changes for the Better

ENERGY RECOVERY VENTILATORS

Lossnay

RVX3 Series

Offering solutions for better indoor air quality and saves energy by energy recovery ventilation.

Ventilation Solutions

Why is Ventilation Necessary?

Ventilation is necessary to maintain good indoor air quality by letting in fresh air from outside and expelling indoor pollutants.

Indoor Pollutants

CO_2 · Odors · VOCs · Dust · Molds

Effects of Polluted Indoor Air:

- Sick House Syndrome
- Allergies
- Poor Memory and Concentration
- Building Damages
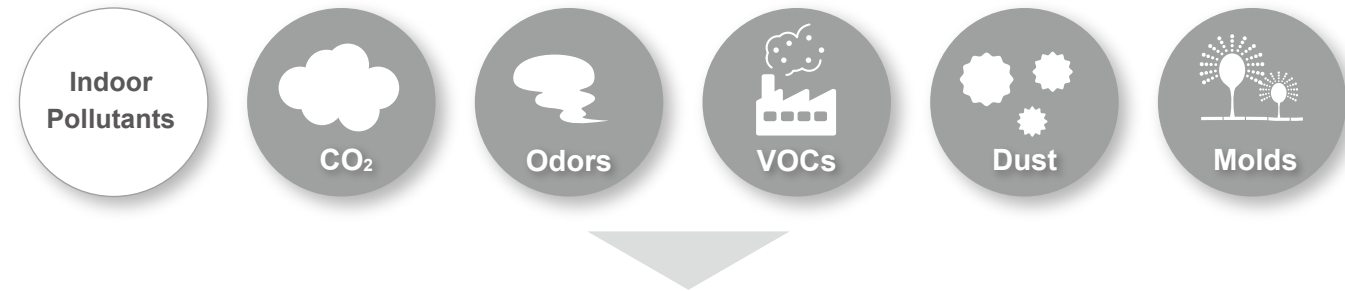
Types of Ventilation

There are 2 types of ventilation: "Natural Ventilation" and "Mechanical Ventilation". With "Mechanical Ventilation", the amount of air that is supplied and exhausted can be controlled without being influenced by the outside environment, to enable stable and sufficient ventilation.
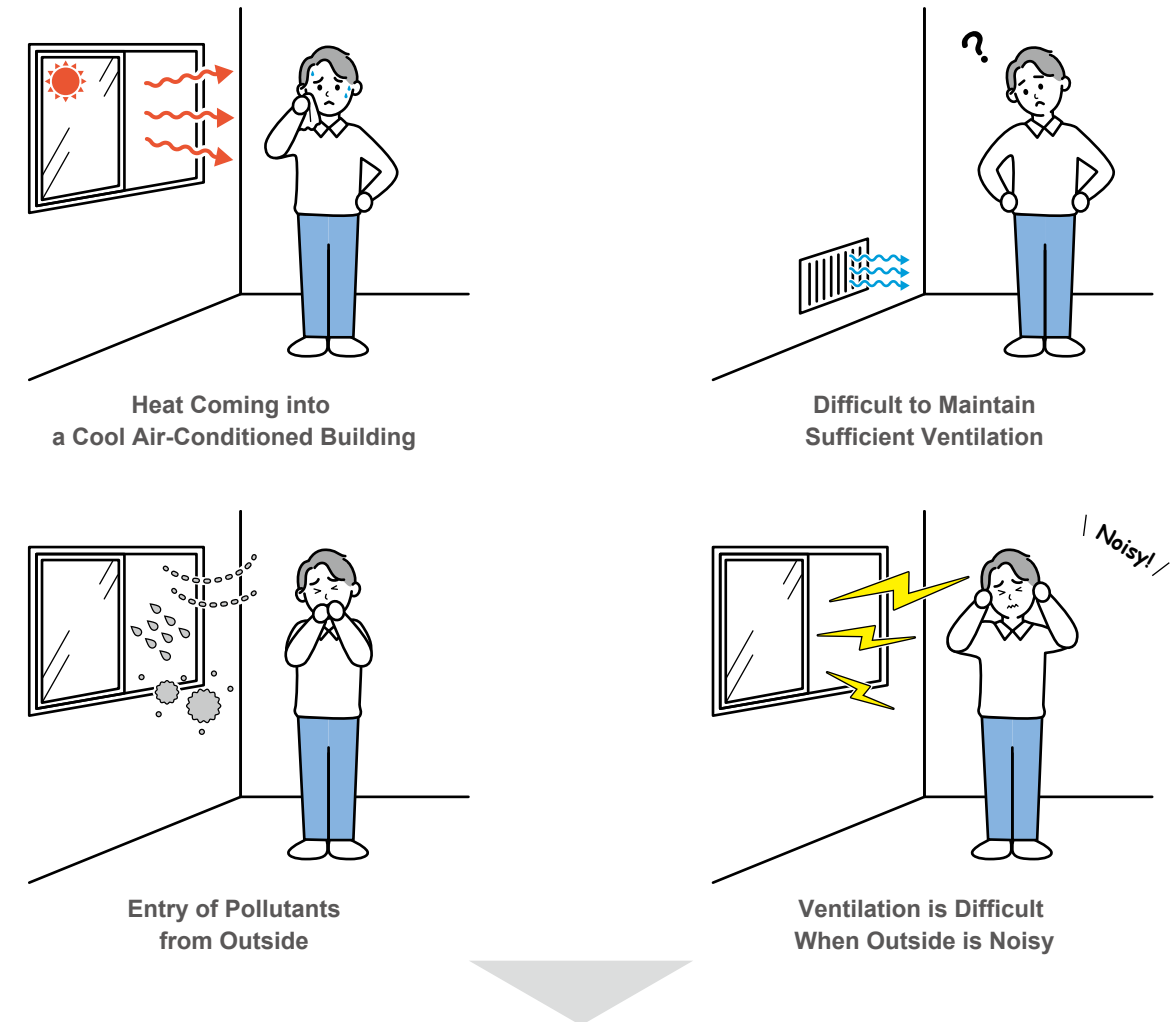
Natural Ventilation

Ventilation through openings, such as windows and doors.

Unstable Ventilation Affected by Air Pressure

Mechanical Ventilation

Ventilation controlled by a mechanical ventilating device.

Stable and Sufficient Ventilation Control

Common Problems with Natural Ventilation

Heat Coming into a Cool Air-Conditioned Building

Difficult to Maintain Sufficient Ventilation

Entry of Pollutants from Outside

Ventilation is Difficult When Outside is Noisy

Noisy!

LOSSNAY is your solution!

LOSSNAY can ventilate the room while maintaining a comfortable temperature without worrying about pollutants and noise coming in from outside.

Keep Comfortable Room Temperature

Filter Outside Pollutants and Keep Indoor Air Clean
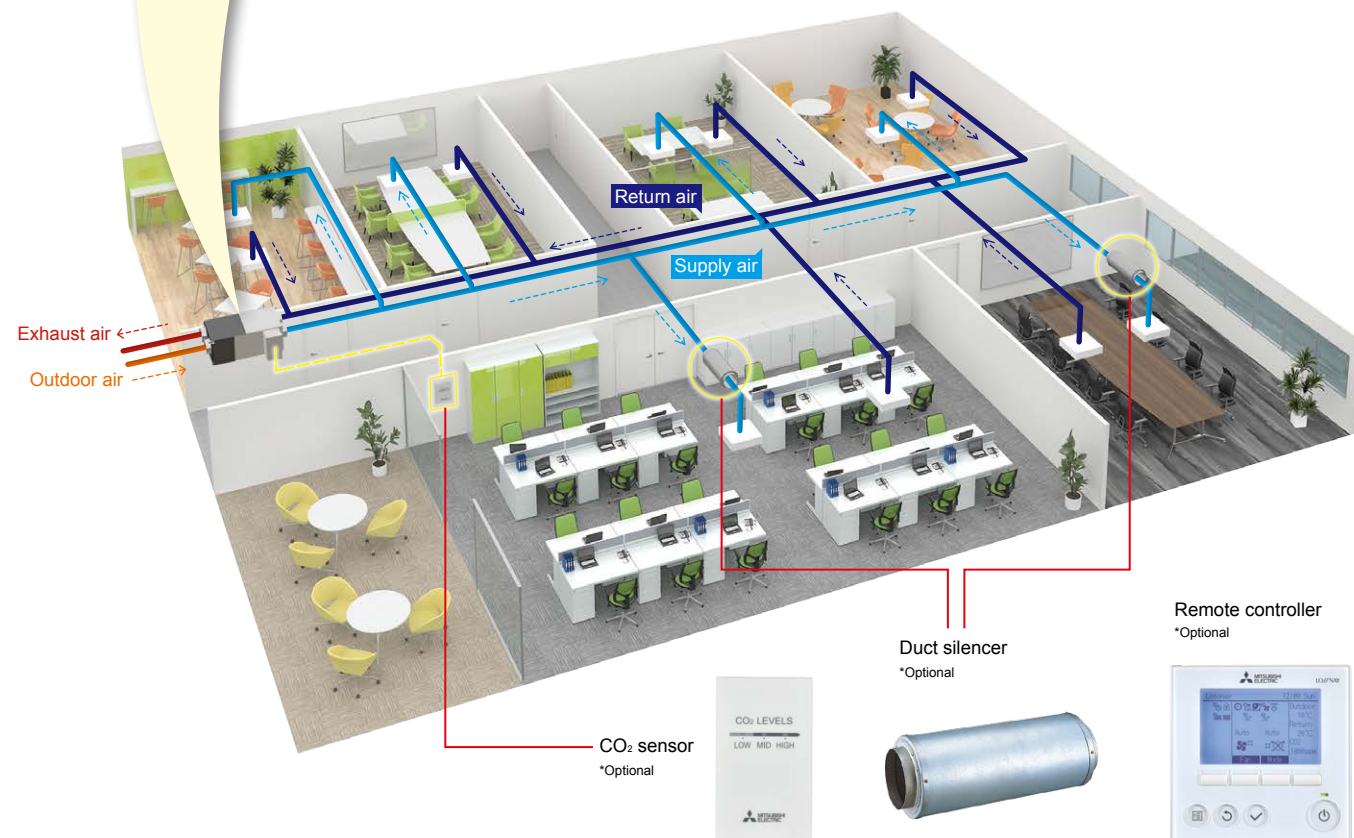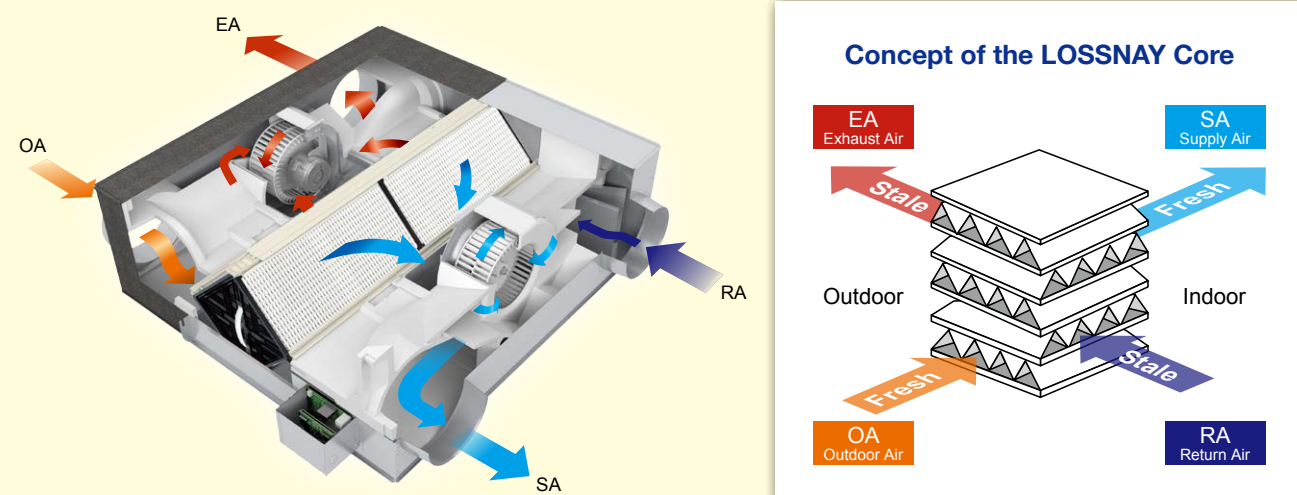
Shut Down Outside Noise

LOSSNAY System

What is LOSSNAY?

LOSSNAY is a total heat exchange ventilation system that uses paper characteristics to perform temperature (sensible heat) and humidity (latent heat) exchange.

■ How does LOSSNAY work?

The LOSSNAY core located at the crosspoint of each airflow transfers heat and humidity while going through each cross-air passage.

Concept of the LOSSNAY Core

EA Exhaust Air	SA Supply Air

Stale | Fresh

Outdoor | Indoor

Fresh | Stale

OA Outdoor Air	RA Return Air

EA
OA
RA
SA

Return air
Supply air
Exhaust air
Outdoor air

CO₂ sensor
*Optional

Duct silencer
*Optional

Remote controller
*Optional

CO2 LEVELS
LOW MID HIGH

Temperature and Humidity Exchange

Without total heat exchange, air-conditioned air inside the building is expelled, and new hot or cold air is directly brought into the building. LOSSNAY can prevent this by total heat exchange so that fresh outdoor air is conditioned before it is brought into the room.

In summer
Air similar to the conditions of cooled (dehumidified) indoor air is supplied.

Supply air

	LOSSNAY	Conventional ventilator
Dry bulb temperature (°C)	28.3	33
Absolute humidity (g/kg'(DA))	15.1	20.1
Relative humidity (%)	62.6	63
Enthalpy (kJ/kg(DA))	67	84.6
Total energy recovery (kW)	5.9	0
Outdoor air load (kW)	4.7	10.6
Outdoor air load ratio (%)	44.3	100

Exhaust air

Return air

Dry bulb temperature 26°C
Absolute humidity 10.5g/kg'(DA)
Relative humidity 50%
Enthalpy 52.8kJ/kg(DA)

Outdoor air

Dry bulb temperature 33°C
Absolute humidity 20.1g/kg'(DA)
Relative humidity 63%
Enthalpy 84.6kJ/kg(DA)

Air conditioner

Heat recovery calculation

$$\text{Indoor supply air temperature (°C)} = \text{Outdoor temperature (°C)} - \left[\text{Outdoor temperature (°C)} - \text{Indoor temperature (°C)} \right] \times \text{Temp. recovery efficiency (%)}$$

Calculation example: 28.3°C = 33°C - (33°C - 26°C) × 67.5%

*The above applies to the case of LGH-100RVX3-E(1000m³/h).

In winter
Air similar to the conditions of heated (humidified) indoor air is supplied.

Supply air

	LOSSNAY	Conventional ventilator
Dry bulb temperature (°C)	15.1	0
Absolute humidity (g/kg'(DA))	4	1.9
Relative humidity (%)	37.3	50
Enthalpy (kJ/kg(DA))	25.2	4.7
Total energy recovery (kW)	6.8	0
Outdoor air load (kW)	4.5	11.3
Outdoor air load ratio (%)	39.8	100

Exhaust air

Return air

Dry bulb temperature 20°C
Absolute humidity 7.3g/kg'(DA)
Relative humidity 50%
Enthalpy 38.5kJ/kg(DA)

Outdoor air

Dry bulb temperature 0°C
Absolute humidity 1.9g/kg'(DA)
Relative humidity 50%
Enthalpy 4.7kJ/kg(DA)

Air conditioner

Heat recovery calculation

$$\text{Indoor supply air temperature (°C)} = \left[\text{Indoor temperature (°C)} - \text{Outdoor temperature (°C)} \right] \times \text{Temp. recovery efficiency (%)} + \text{Outdoor temperature (°C)}$$

Calculation example: 15°C = (20°C - 0°C) × 75.5% + 0°C

*The above applies to the case of LGH-100RVX3-E(1000m³/h).

2 Main Benefits of Heat Exchange Ventilation

Energy Saving

Total heat exchange maintains comfortable room temperature, and thereby conserves energy and reduces the load on the air conditioning system
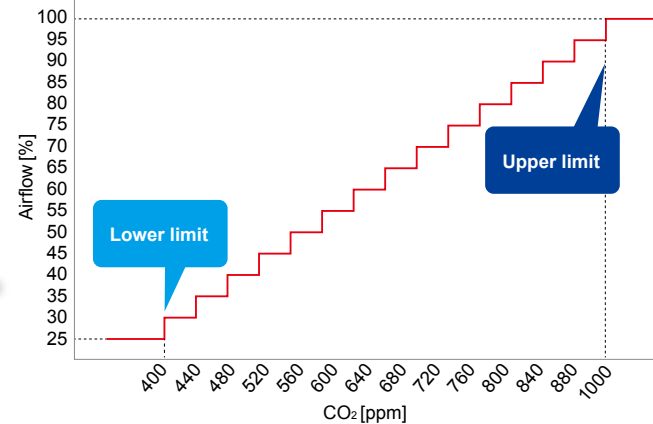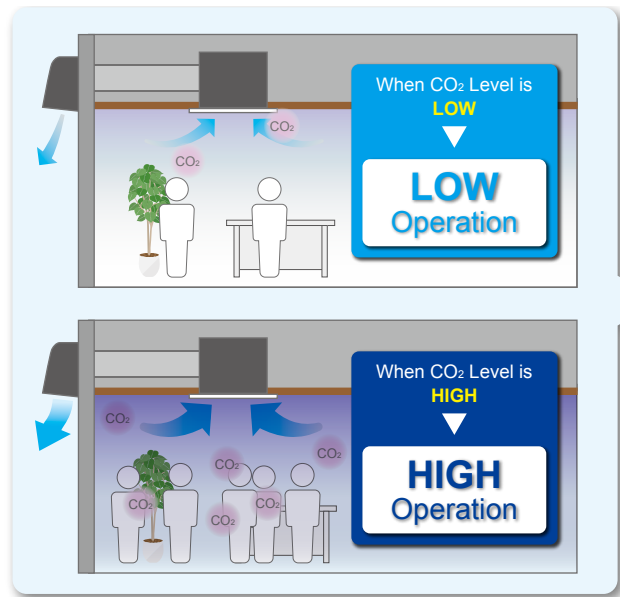
Clean

Outdoor air is filtered to prevent contaminants from coming in, and contaminated indoor air is expelled.

Energy Saving and *Clean* Features of LOSSNAY

"CO_2 Sensor" Clean and Efficient Operation

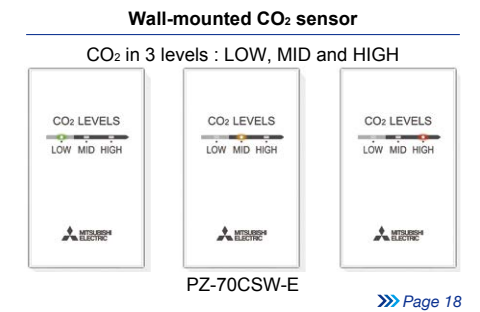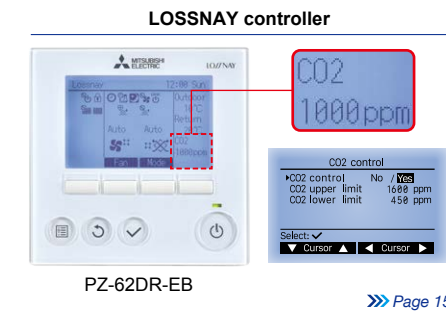### ● 16 Steps of Automatic Airflow Control by CO_2 Level

The CO_2 sensor controls airflow in 16 steps depending on the CO_2 level in the room.
This saves energy by preventing over-ventilation while maintaining high indoor air quality.

When CO_2 Level is **LOW**
▼
LOW Operation

When CO_2 Level is **HIGH**
▼
HIGH Operation

Airflow [%]
Lower limit
Upper limit
CO_2 [ppm]

| Upper Limit	600 to 2000 ppm
Lower Limit	300 to (upper limit - 300) ppm
Increment	50ppm

● 2 Ways to Monitor CO_2 Level

CO_2 level can be monitored with a LOSSNAY remote controller or wall-mounted CO_2 sensor.

LOSSNAY controller

CO2
1000ppm

PZ-62DR-EB

Wall-mounted CO_2 sensor
CO_2 in 3 levels : LOW, MID and HIGH

CO₂ LEVELS LOW MID HIGH

PZ-70CSW-E

● 2 Types of CO_2 Sensors

2 types of CO_2 sensors are available. Power is supplied to both sensors from the LOSSNAY circuit board.

Duct-mounted CO_2 sensor

PZ-70CSD-E

or

Wall-mounted CO_2 sensor

PZ-70CSW-E
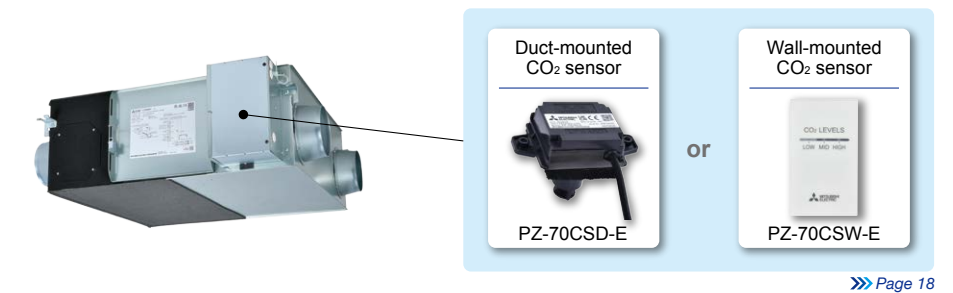
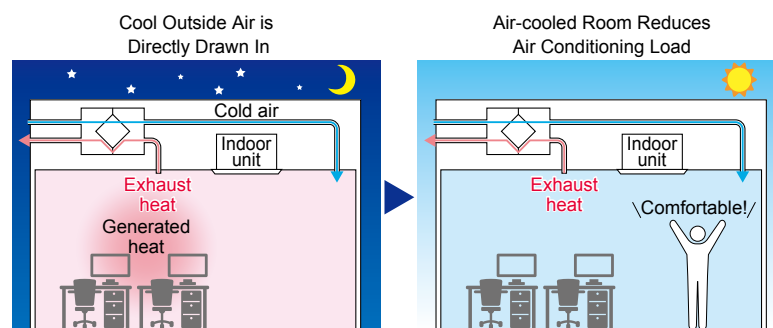## Other *"Energy Saving"* Features

"*Flexible Airflow Setting*" Prevention of Over-Ventilation

Flexible airflow setting saves energy by preventing over-ventilation!
The fan speed of both supply and exhaust air can be flexibly adjusted within the range between 25% and 100% to ensure sufficient air volume. Airflow can be adjusted in 5% increments.

P (Static pressure)
100%
Airflow can be adjusted by 5%
25%
Q (Airflow)
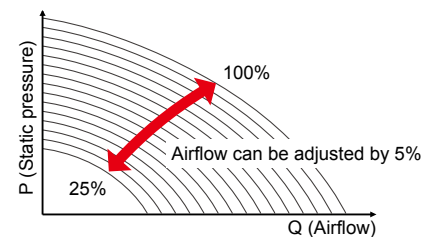
"*Night Purge Mode*" Reduction of Morning Air Conditioning Load

When the air conditioner is off and outside air is cooler at night, the Night Purge Mode draws the cooler air into the room. This mode reduces the load when the air conditioning starts up the next morning.

Cool Outside Air is Directly Drawn In
Cold air
Indoor unit
Exhaust heat
Generated heat

Air-cooled Room Reduces Air Conditioning Load
Indoor unit
Exhaust heat
\Comfortable!/

Other *"Clean"* Features

### "*Advanced High Efficiency Filter*" Removes Outside Pollutants

The new optional filter (PZ-RFP3-E) removes 99.7% of particles larger than 0.5μm. By removing pollutants, fresh and clean air is supplied.

*GB/T 14295-2008: YG class 99.7%
  (Collecting efficiency for particles that are 0.5μm or larger)
*PM2.5 is airborne particulates that are 2.5μm or smaller in size.
*The collecting performance of airborne particulates smaller than 0.3μm has not been confirmed.

PZ-RFP3-E

FILTERS
99.7%
OF PM2.5 PARTICLES

No heat exchange needed? Try the "Bypass Mode"

When air conditioning is off and heat exchange is not necessary, LOSSNAY can automatically switch to Bypass Mode.
This enables simple ventilation while filtering outside pollutants, so indoor air quality is maintained without heat exchanging the outside air.

Damper plate
EA
RA
OA
SA
LOSSNAY core
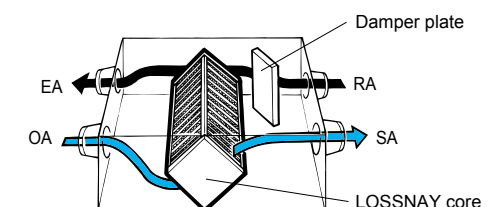
Other New RVX3 Features

"EC Motor" — High Static Pressure and Low Power Consumption

LOSSNAY uses a high efficiency EC motor to realize low power consumption. The RVX3 series is equipped with Mitsubishi Electric's original EC motor, which delivers improved external static pressure compared to the previous RVX model in addition to low power consumption. It also allows flexible duct work.
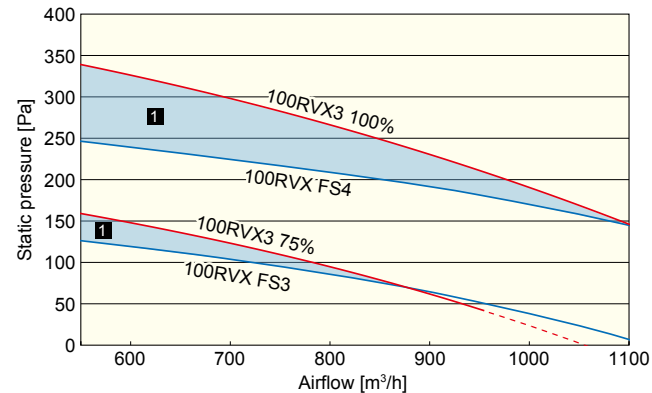
Mitsubishi Electric's EC Motor

- Low Power Consumption
- Long Lifetime

The EC motor used in the RVX3 Series is developed and manufactured by Mitsubishi Electric.

Static Pressure of the RVX and RVX3 Series

Static pressure [Pa] vs Airflow [m³/h]

- 100RVX3 100%
- 100RVX FS4
- 100RVX3 75%
- 100RVX FS3

1 Increased static pressure

*The dotted lines of the fan curve indicate reference values.
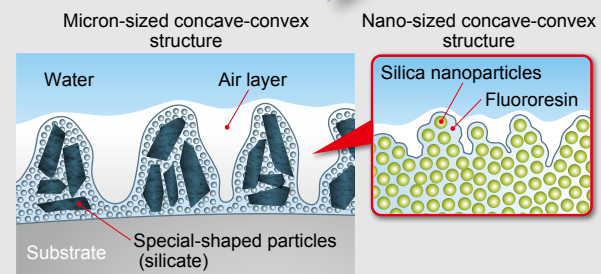
"Dual Barrier Coated Blades" — Reduce Maintenance Frequency

Dual Barrier Coating is applied to the fan blades of LOSSNAY to minimize the adherence of dirt. It keeps the fan in a cleaner state for a longer period of time and thus reduces maintenance frequency.
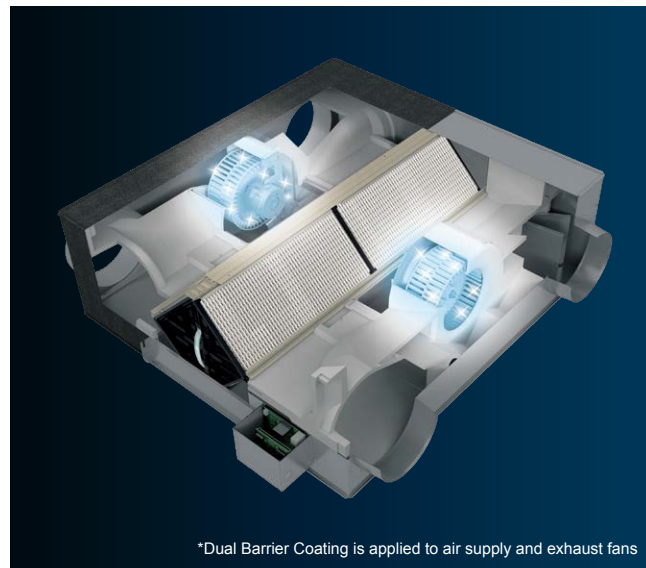
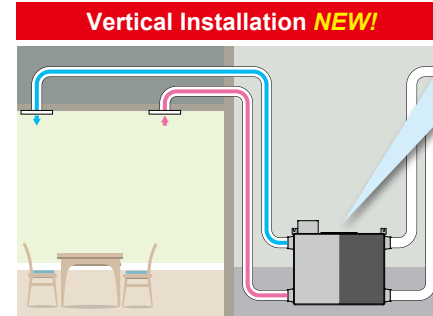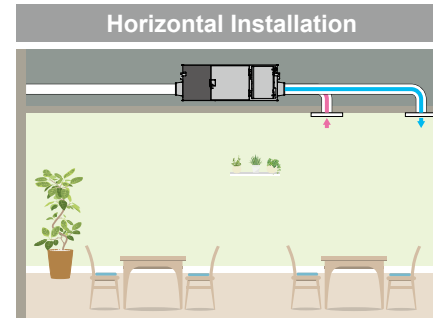*Dual Barrier Coating is applied to air supply and exhaust fans

What Is Dual Barrier Coating?

Micron-sized concave-convex structure — Nano-sized concave-convex structure

Water / Air layer / Silica nanoparticles / Fluororesin / Substrate / Special-shaped particles (silicate)
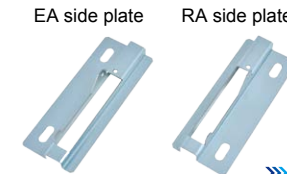
A water-repellent effect is achieved by creating a coating film that has nano-sized concave-convex structures formed by silica nanoparticles made of water-repellent fluororesin and micron-sized concave-convex structures formed by combining micron-sized special-shaped particles (silicate) with the silica nanoparticles. At the same time, the uneven structure forms an air layer that suppresses the adhesion of dust and sand that contain a lot of humidity, reducing the amount of dirt that adheres to the substrate.

"Vertical and Horizontal Installation" — Flexible Installation

The RVX3 Series can be installed vertically for greater flexibility of installing locations. By using optional parts, it can be installed in places such as the machine room where only vertical installation is possible.

Horizontal Installation

■Vertical Installation Plates

Vertical Installation NEW!

EA side plate / RA side plate

Model name	LOSSNAY
PZ-1VS-E	LGH-15RVX3-E
	LGH-25RVX3-E
	LGH-35RVX3-E
	LGH-50RVX3-E
PZ-2VS-E	LGH-65RVX3-E
	LGH-80RVX3-E
	LGH-100RVX3-E

*Not applicable to LGH-160RVX3-E and LGH-200RVX3-E.
*Please follow the installation manual when installing the RVX3 series vertically.

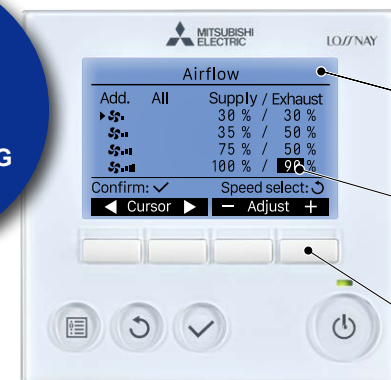## "New Remote Controller" — Short Commissioning Time

New remote controller PZ-62DR-EB allows supply and exhaust air volume to be adjusted from FS1 to FS4 directly on one screen. It can also be operated while the fan motor is sensing the air volume.
By using PZ-62DR-EB, the commissioning time for LGH-RVX3 is reduced by 75%[1] compared to the previous RVX series when using PZ-61DR-E.

REDUCED 75%[1] COMMISSIONING TIME

Airflow
Add.	All	Supply / Exhaust
		30 % / 30 %
		35 % / 50 %
		75 % / 50 %
		100 % / 92 %
Confirm: ✓ Speed select: ↻
◄ Cursor ► — Adjust +

Point 1
One screen for airflow commissioning

Point 2
Direct input of airflow value

Point 3
Can be operated even when the fan motor is sensing the air volume

PZ-62DR-EB

*1: The average reduction rate when our workers actually install LGH-100RVX-E with PZ-61DR-E and LGH-100RVX3-E with PZ-62DR-EB.
Setting work involves changing the air volume of supply/exhaust air. The time that can be reduced varies depending on the operator and work conditions.

RVX3 is tested under International standards!

From the new RVX3 Series, LOSSNAY is tested under the latest ISO and EN international standards in place of the conventional JIS Japanese standard. Testing under the standards of European countries can more widely prove that LOSSNAY is ecological at the global level.

Due to the change in testing standards, the method for testing temperature and enthalpy exchange has also changed, so that values are now shown to be lower than the previous model.

Japanese Standard (JIS B8628) ➤ **GLOBAL**
International/European Standards ISO 16494 / EN 308
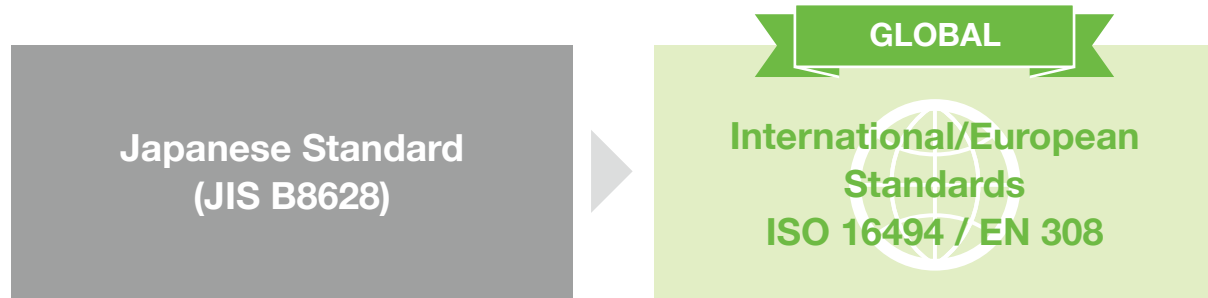
*LGH-15/25/35/50RVX3-E is tested under ISO16494,
LGH-65/80/100/160/200RVX3-E is tested under EN308 standards.

The **LOSSNAY RVX3 Series also complies with the ErP (Energy-related Products) Directive** which is required in the EU.

RVX3 is ErP Compliant!

ErP stands for Energy-related Products and refers to products that have an impact on energy consumption during use.

Being ErP compliant proves that **products meet the regulation set out by the European Commission.** Compliance with ErP indicates that LOSSNAY is a high-efficiency, ecological product.

■ Regulations for compliance with the ErP Directive

Model	Criteria
Small Air Volume Model (15-50RVX3)	1 Air volume can be controlled by 3 or more notches.
	2 Has a bypass mode.
	3 Complies with the required specific energy consumption.
	4 Shows a signal when filter exchange is needed.
Large Air Volume Model (65-200RVX3)	1 Air volume can be controlled by 3 or more notches.
	2 Has a heat recovery function.
	3 Has a bypass mode.
	4 Heat recovery rate for heating is 73% or more.
	5 Complies with the required specific fan power.

Specifications & Dimensions

LGH-15RVX3-E
LGH-25RVX3-E
LGH-35RVX3-E
LGH-50RVX3-E *Pages 10 to 13*

LGH-65RVX3-E
LGH-80RVX3-E
LGH-100RVX3-E

LGH-160RVX3-E
LGH-200RVX3-E *Page 14*

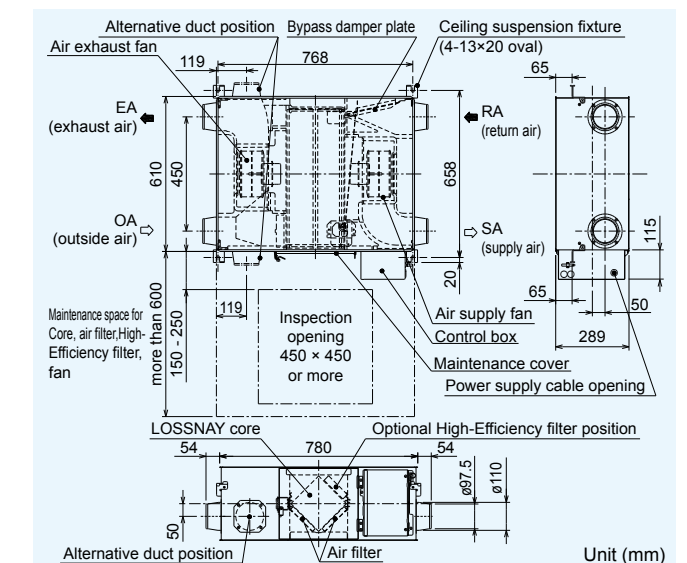| Model	LGH-15RVX3-E			
Electrical power supply	220-240V/50Hz, 220V/60Hz			
Fan speed	4	3	2	1
Default Airflow setting	100%	75%	50%	25%
Input power (W)[*1]	55	30	15	10
Airflow[*1] (m³/h)	150	113	75	38
Airflow[*1] (L/s)	42	31	21	10
Specific fan power [W/(L/s)][*1]	1.32	0.96	0.72	0.96
External static pressure (Pa)[*1]	120	68	30	8
Temperature exchange efficiency (%)[*1] — Heating	73.5	75.5	78.0	81.5
Temperature exchange efficiency (%)[*1] — Cooling	65.5	70.5	73.5	78.0
Enthalpy exchange efficiency (%)[*1] — Heating	70.5	73.5	76.5	80.5
Enthalpy exchange efficiency (%)[*1] — Cooling	58.0	62.0	66.0	73.0
Noise (dB)[*2]	27.0	22.0	18.0	17.0
Exhaust air transfer ratio (%)[*3]	5			
Weight (kg)	20			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to ISO 16494-1: 2022   *2 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*3 : Measured according to EN308: 2022 / FS3

Characteristic Curve of the LGH-15RVX3-E
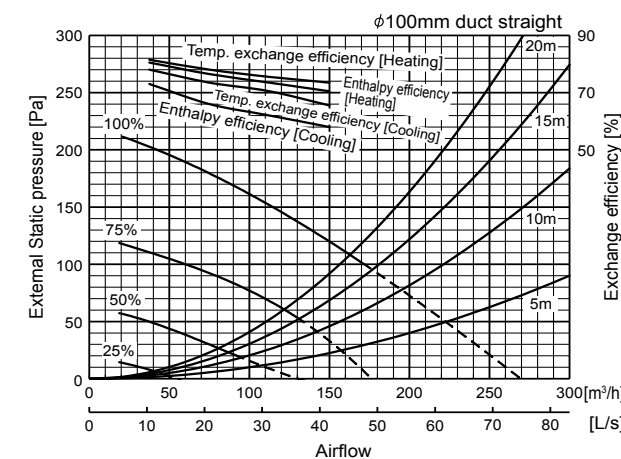
*The dotted lines of the fan curves are reference values.

Dimensions of the LGH-15RVX3-E

Unit (mm)

● Certain ratings and specifications may change due to product improvements or modifications. ● Refer to the product manual for safety precautions.

LGH-25/35RVX3-E

Model		LGH-25RVX3-E				LGH-35RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)[*1]		75	42	21	11	120	61	29	15
Airflow[*1]	(m³/h)	250	188	125	63	350	263	175	88
	(L/s)	69	52	35	17	97	73	49	24
Specific fan power [W/(L/s)][*1]		1.08	0.81	0.60	0.63	1.23	0.84	0.60	0.62
External static pressure (Pa)[*1]		120	68	30	8	160	90	40	10
Temperature exchange efficiency (%)[*1]	Heating	75.5	78.5	81.0	88.0	75.0	77.0	79.0	82.0
	Cooling	70.5	76.5	79.0	85.0	66.5	71.0	74.0	79.0
Enthalpy exchange efficiency (%)[*1]	Heating	69.0	72.0	75.5	84.0	72.0	74.5	77.5	80.0
	Cooling	59.0	63.5	68.0	75.0	60.0	64.5	68.5	74.5
Noise (dB)[*2]		30.5	25.0	19.5	17.0	30.5	24.5	19.0	17.0
Exhaust air transfer ratio (%)[*3]		5				5			
Weight (kg)		22				30			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to ISO 16494-1: 2022
*2 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*3 : Measured according to EN308: 2022 / FS3

Characteristic Curve of the LGH-25RVX3-E

φ150mm duct straight
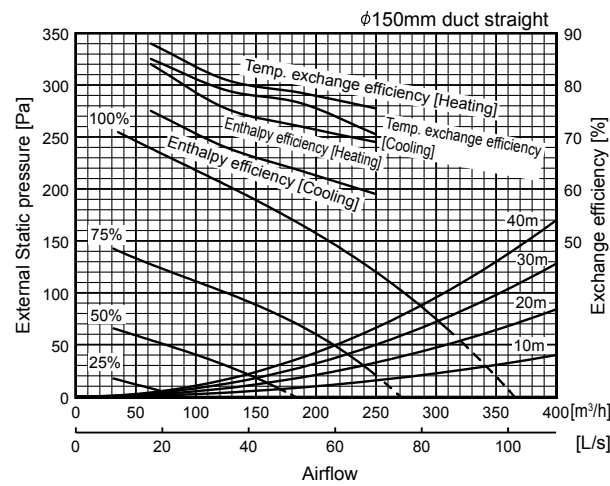
*The dotted lines of the fan curves are reference values.

Characteristic Curve of the LGH-35RVX3-E

φ150mm duct straight

*The dotted lines of the fan curves are reference values.

Dimensions of the LGH-25RVX3-E

Unit (mm)
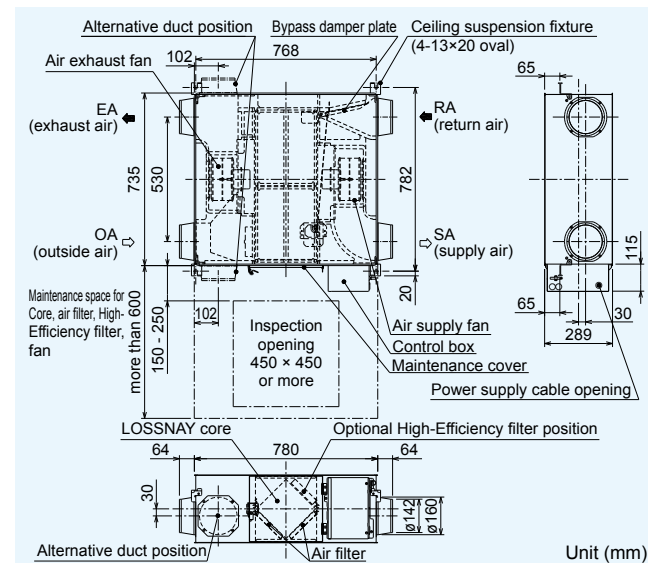
Dimensions of the LGH-35RVX3-E

Unit (mm)

LGH-50/65RVX3-E

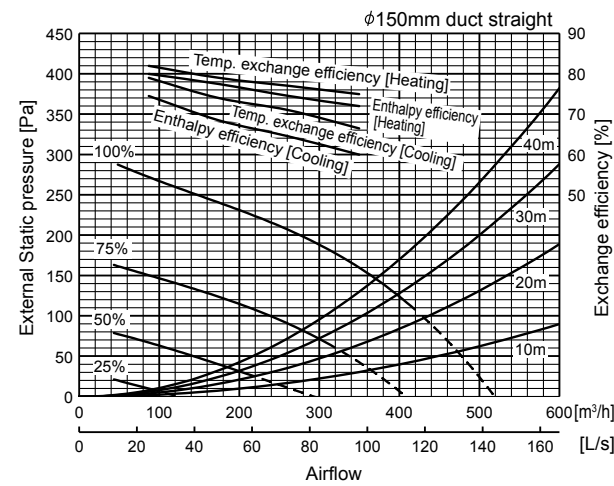| Model		LGH-50RVX3-E				LGH-65RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)[*1]		185	81	34	15	245	120	51	20
Airflow[*1]	(m³/h)	500	375	250	125	650	488	325	163
	(L/s)	139	104	69	35	181	135	90	45
Specific fan power [W/(L/s)][*1]		1.33	0.78	0.49	0.43	1.36	0.89	0.56	0.44
External static pressure (Pa)[*1]		150	85	38	10	150	85	38	10
Temperature exchange efficiency (%)[*2]	Heating	70.5	71.5	73.5	75.0	72.5	75.0	78.5	82.0
	Cooling	63.5	67.0	71.0	73.0	65.0	70.0	74.5	80.0
Enthalpy exchange efficiency (%)[*2]	Heating	68.5	69.5	72.0	73.0	69.5	72.0	76.5	80.0
	Cooling	53.5	58.0	63.0	68.0	55.5	60.0	66.5	74.0
Noise (dB)[*3]		35.0	27.0	21.0	17.0	37.5	31.5	24.0	17.5
Exhaust air transfer ratio (%)[*4]		5				5			
Weight (kg)		33				41			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to ISO 16494-1: 2022
*2 : Measured according to (LGH-50RVX3-E) ISO 16494-1: 2022, (LGH-65RVX3-E) EN13053: 2019
*2 : Measured according to (LGH-50RVX3-E) ISO 16494-1: 2022, (LGH-65RVX3-E) EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3
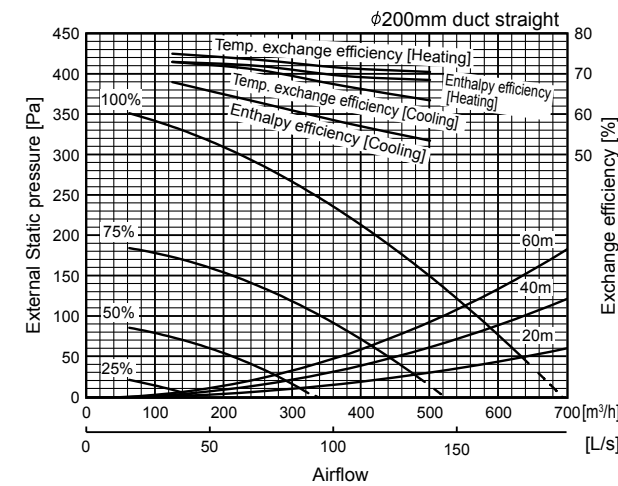
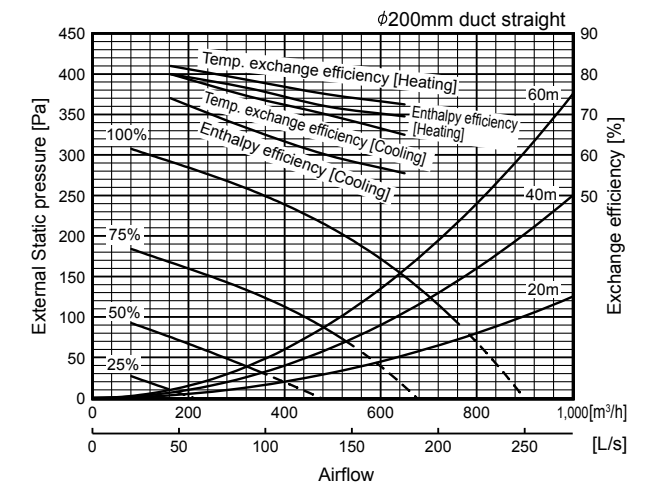## Characteristic Curve of the LGH-50RVX3-E

φ200mm duct straight

*The dotted lines of the fan curves are reference values.

Characteristic Curve of the LGH-65RVX3-E

φ200mm duct straight

*The dotted lines of the fan curves are reference values.

Dimensions of the LGH-50RVX3-E

Unit (mm)

Dimensions of the LGH-65RVX3-E

Unit (mm)

● Certain ratings and specifications may change due to product improvements or modifications.　● Refer to the product manual for safety precautions.

LGH-80/100RVX3-E

Model		LGH-80RVX3-E				LGH-100RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)[1]		343	160	64	23	438	210	83	27
Airflow[1]	(m³/h)	800	600	400	200	1000	750	500	250
	(L/s)	222	167	111	56	278	208	139	69
Specific fan power [W/(L/s)][1]		1.54	0.96	0.58	0.41	1.58	1.01	0.60	0.39
External static pressure (Pa)[1]		170	96	43	11	190	107	48	12
Temperature exchange efficiency (%)[2]	Heating	75.0	76.5	78.0	80.0	75.5	77.0	79.5	83.5
	Cooling	65.0	70.0	75.5	78.0	67.5	72.0	77.0	82.5
Enthalpy exchange efficiency (%)[2]	Heating	62.0	65.0	70.5	73.5	60.5	63.0	68.5	75.5
	Cooling	54.5	58.5	65.0	70.5	55.5	61.0	66.0	73.5
Noise (dB)[3]		39.0	33.5	25.0	18.0	40.0	35.0	27.0	18.5
Exhaust air transfer ratio (%)[4]		5				5			
Weight (kg)		47				53			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to EN13053: 2019
*2 : Measured according to EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3

Characteristic Curve of the LGH-80RVX3-E
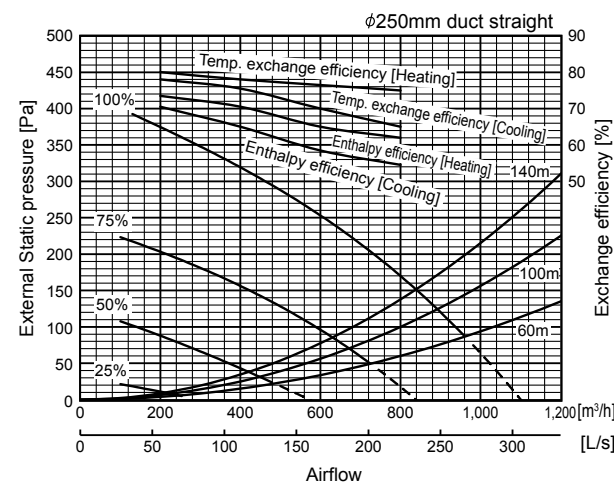
*The dotted lines of the fan curves are reference values.
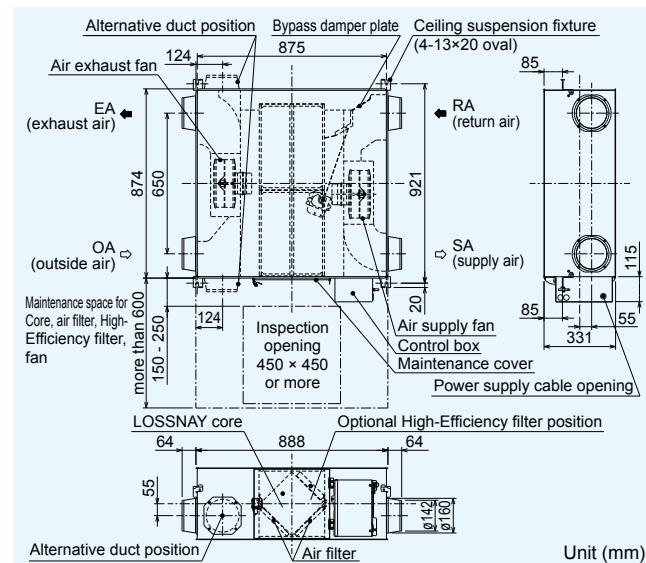
Characteristic Curve of the LGH-100RVX3-E

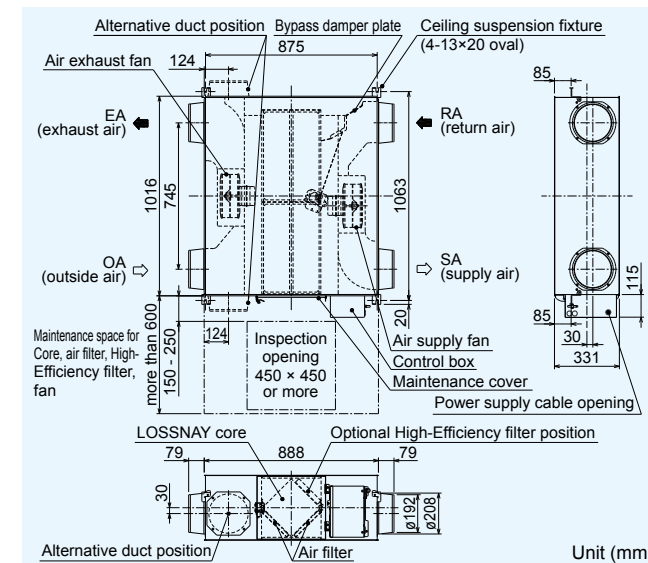*The dotted lines of the fan curves are reference values.
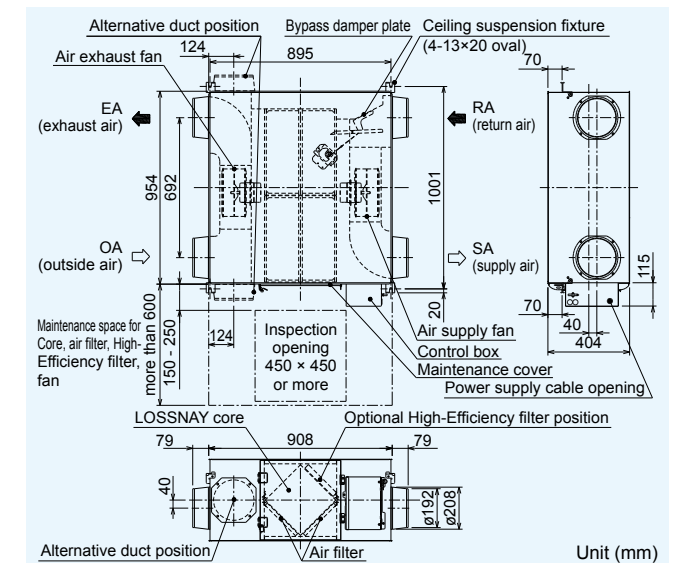
Dimensions of the LGH-80RVX3-E

Unit (mm)

Dimensions of the LGH-100RVX3-E

Unit (mm)

LGH-160/200RVX3-E

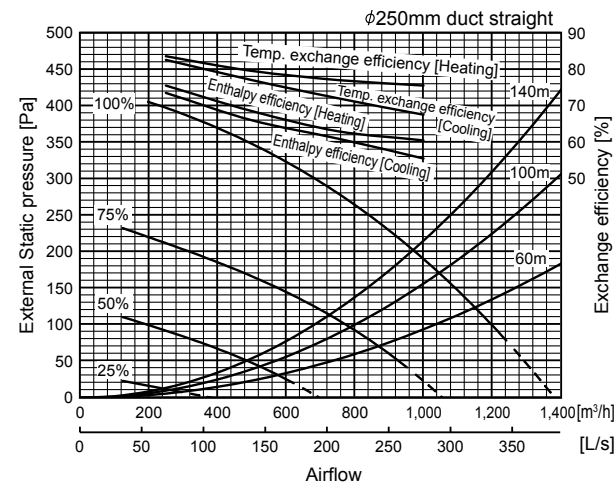| Model		LGH-160RVX3-E				LGH-200RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)[1]		687	324	128	45	855	416	163	57
Airflow[1]	(m³/h)	1600	1200	800	400	2000	1500	1000	500
	(L/s)	444	333	222	111	556	417	278	139
Specific fan power [W/(L/s)][1]		1.55	0.97	0.58	0.41	1.54	1.00	0.59	0.41
External static pressure (Pa)[1]		170	96	43	11	170	96	43	11
Temperature exchange efficiency (%)[2]	Heating	75.0	76.5	78.0	80.0	76.5	77.5	79.5	83.5
	Cooling	65.0	70.0	75.5	78.0	66.5	71.5	76.0	82.5
Enthalpy exchange efficiency (%)[2]	Heating	62.0	65.0	70.5	73.5	60.5	64.0	67.5	76.0
	Cooling	54.5	58.5	65.0	70.5	57.0	60.0	65.0	71.0
Noise (dB)[3]		41.0	35.0	26.0	18.0	41.5	36.0	27.5	18.0
Exhaust air transfer ratio (%)[4]		5				5			
Weight (kg)		96				108			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz.
*1 : Measured according to EN13053: 2019
*2 : Measured according to EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3
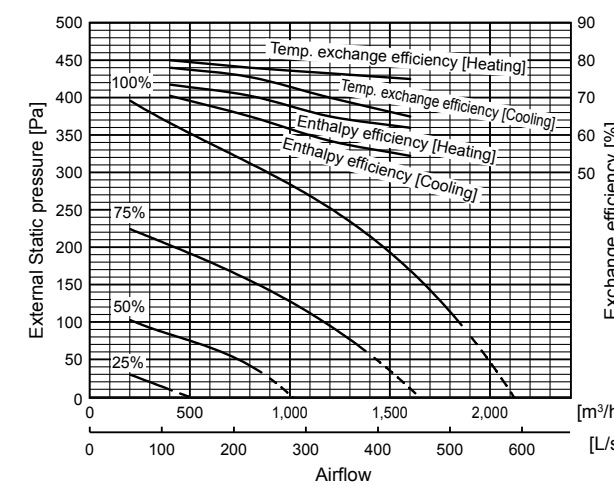
Characteristic Curve of the LGH-160RVX3-E

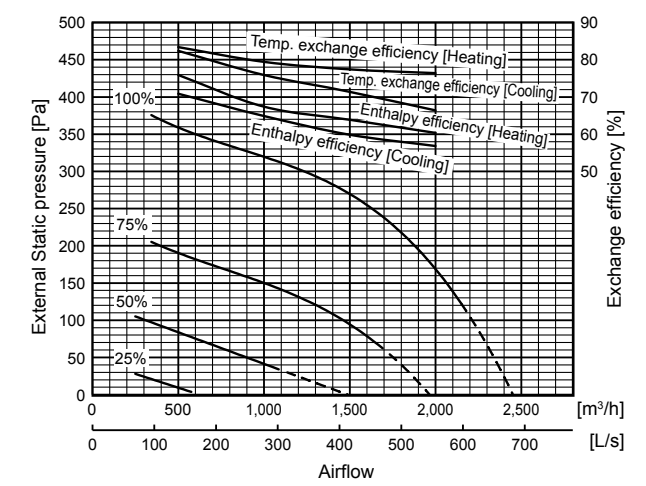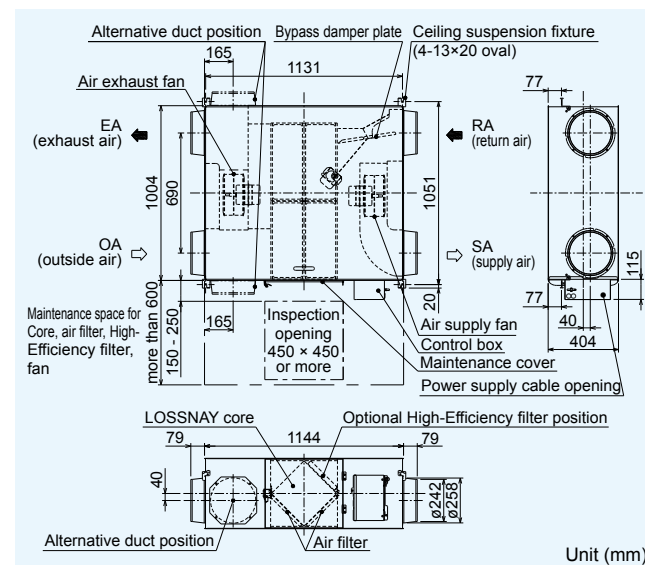*The dotted lines of the fan curves are reference values.

Characteristic Curve of the LGH-200RVX3-E
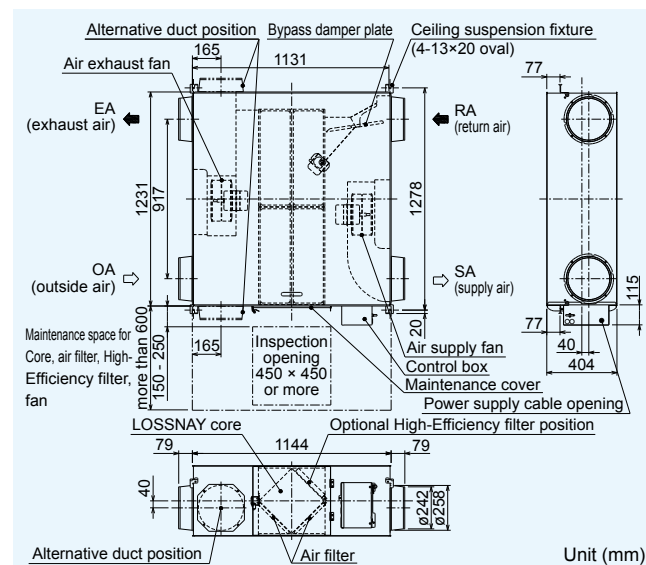

*The dotted lines of the fan curves are reference values.
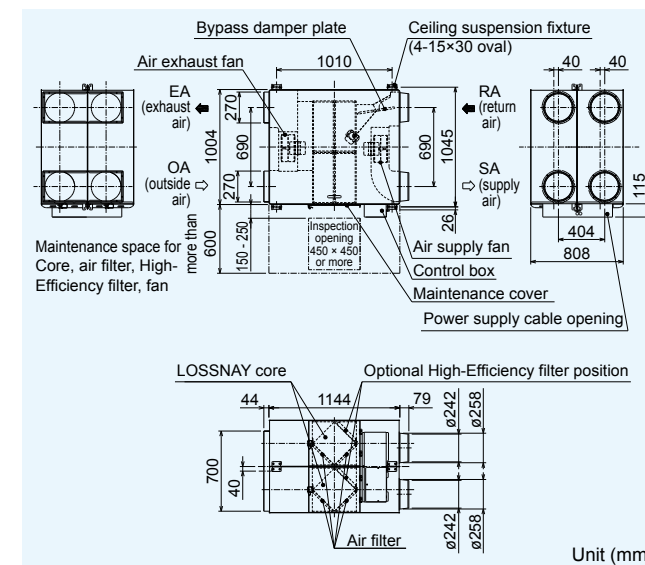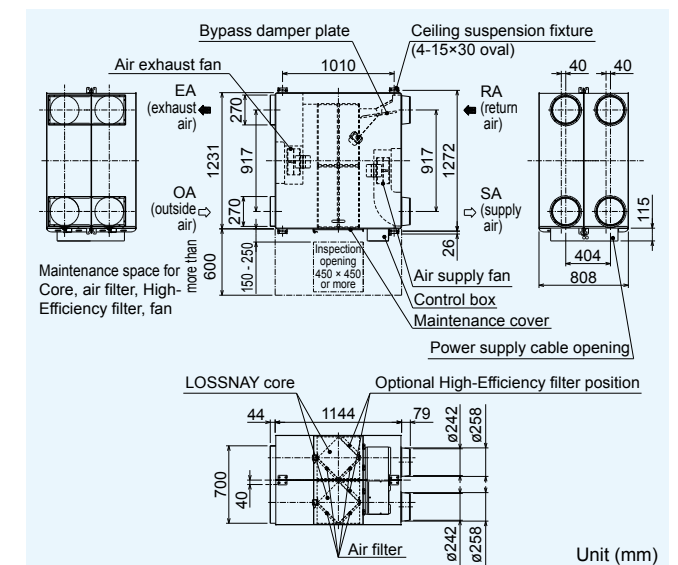
Dimensions of the LGH-160RVX3-E

Unit (mm)

Dimensions of the LGH-200RVX3-E

Unit (mm)

● Certain ratings and specifications may change due to product improvements or modifications. ● Refer to the product manual for safety precautions.
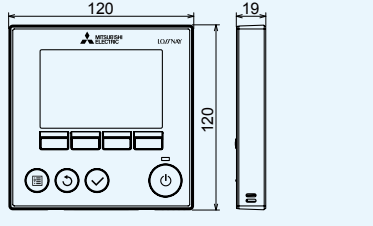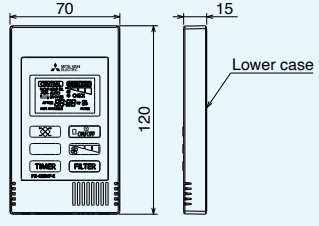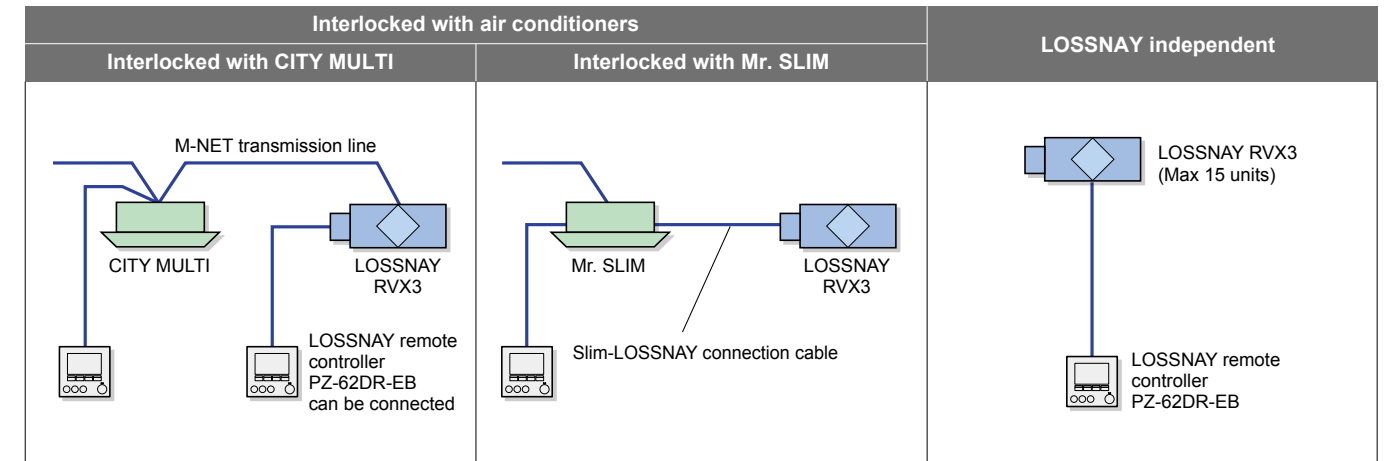
Optional Parts

Remote Controllers

■ Compatibility Table

Model	PZ-62DR-EB	PZ-43SMF-E
Image		
Dimension	120 / 120 / 19 Unit (mm)	70 / 120 / 15 Lower case Unit (mm)
Fan speed selection	4 fan speeds and Auto (Auto is available when using a CO_2 sensor)	2 or 4 fan speeds
Control with a CO_2 sensor (Mitsubishi Electric)	Yes (Fan speed automatically changes from 25% to 100% depending on the CO_2 concentration*)	No
Control with a CO_2 sensor (field supply)	Yes (Fan speed automatically changes from 25% to 100% depending on the CO_2 concentration*)	No
Ventilation mode selection	Energy recovery/Bypass/Auto	Energy recovery/Bypass/Auto
Night-purge	Yes	No
Function setting from remote controller	Yes	No
Bypass temp. free setting	Yes	No
Flexible airflow setting	Yes (Both supply and exhaust fan speeds can be set separately from 25% to 100% in 5% pitches)	No
ON/OFF timer	Yes	Yes
Auto-off timer	Yes	No
Weekly timer	Yes	No
Fan speed timer	Yes	No
Operation restrictions (ON/OFF, ventilation mode, fan speed)	Yes	No
Operation restrictions (fan speed skip setting)	Yes	No
Screen contrast adjustment	Yes	No
Language selection	Yes (10 languages)	No (English only)
CO_2 concentration indication	Yes (Available when using a Mitsubishi Electric CO_2 sensor)	No
Filter cleaning sign	Yes (Maintenance interval can be changed)	Yes
LOSSNAY core cleaning sign	Yes	No
Error indication	Yes (Displays model name, serial number, contact information)	Yes
Error history	Yes	No
OA/RA/SA temp. display	Yes	No

*When using a CO_2 sensor, upper and lower limits may differ.

● Certain ratings and specifications may change due to product improvements or modifications.

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■ Control

The new remote controller PZ-62DR-EB enables simple control setting

Interlocked with air conditioners		LOSSNAY independent
Interlocked with CITY MULTI	Interlocked with Mr. SLIM	

M-NET transmission line

CITY MULTI — LOSSNAY RVX3 — LOSSNAY remote controller PZ-62DR-EB can be connected

Mr. SLIM — LOSSNAY RVX3 — Slim-LOSSNAY connection cable

LOSSNAY RVX3 (Max 15 units) — LOSSNAY remote controller PZ-62DR-EB

Centralized controller system

Outdoor unit

Centralized controller

Interlocked with CITY MULTI indoor units

Indoor unit — LOSSNAY RVX3 — Indoor unit

Network remote controller — LOSSNAY remote controller PZ-62DR-EB — Network remote controller

LOSSNAY units only

LOSSNAY RVX3 — LOSSNAY RVX3

LOSSNAY remote controller PZ-62DR-EB — LOSSNAY remote controller PZ-62DR-EB

Interlocked with external devices

LOSSNAY RVX3 — External signal source

LOSSNAY remote controller PZ-62DR-EB

M-NET adapter — Mr. SLIM outdoor unit — Mr. SLIM indoor unit — LOSSNAY RVX3

Mr. SLIM remote controller

Interlocked with Mr. SLIM indoor units

16

Optional Parts

Filters

Two types of filters are available to ensure optimum indoor air quality. All filters are ISO certified, and can be easily installed in the units.

■ Performance

Model	PZ-RF3-E series	PZ-RFP3-E series
Name	Replacement Filter (Standard)	Advanced High Efficiency Filter **Optional**
Image		
Filter Material	Non-woven fabric	Synthetic fiber
Performance — ISO	Coarse 60% (ISO16890-2016)	ePM1 75%, ePM2.5 80%, ePM10 95% (ISO 16890-2016)
Performance — ASHRAE	-	MERV16 (ASHRAE 52.2-2017)
Performance — GB/T	-	YG class, 99.7% (GB/T 14295-2008) Collecting efficiency for particles 0.5μm or larger at rated airflow.

■ Specifications and Dimensions

■ Dimension

Advanced High Efficiency Filter

EA → SA
OA → RA
Replacement Filter / Replacement Filter

Unit (mm)

Filter					Number of Purchase			Installation	
Model	Dimension(mm)			Number of filters per set	Applicable model	Required set per unit		Total number of filters	
	A	B	C					OA	RA
PZ-15RF3-E	549	125	20	2	LGH-15RVX3-E	1		2	1	1
PZ-25RF3-E	654	151	15	2	LGH-25RVX3-E	1		2	1	1
PZ-35RF3-E	784	178	15	2	LGH-35RVX3-E	1		2	1	1
PZ-50RF3-E	926	178	15	2	LGH-50RVX3-E	1		2	1	1
PZ-65RF3-E	852	213	15	2	LGH-65RVX3-E	1		2	1	1
PZ-80RF3-E	890	238	15	2	LGH-80RVX3-E	1		2	1	1
					LGH-160RVX3-E	2		4	2	2
PZ-100RF3-E	1117	238	15	2	LGH-100RVX3-E	1		2	1	1
					LGH-200RVX3-E	2		4	2	2

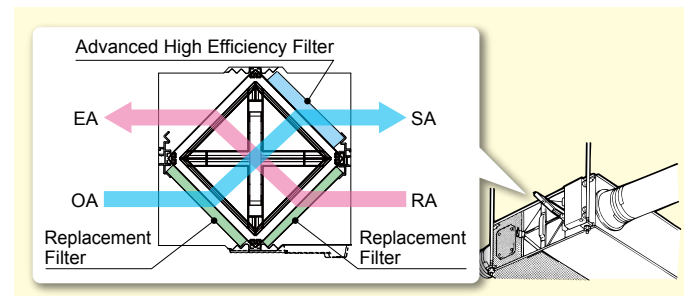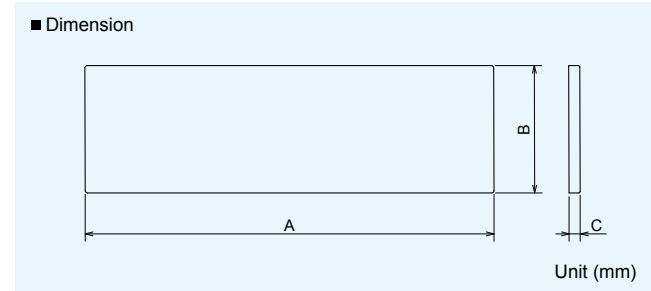| Filter					Number of Purchase		Installation	
Model	Dimension(mm)			Number of filters per set	Applicable model	Required set per unit	Total number of filters	
	A	B	C				SA	
PZ-15RFP3-E	542	104.5	25	1	LGH-15RVX3-E	1	1	1
PZ-25RFP3-E	322	128.5	25	2	LGH-25RVX3-E	1	2	2
PZ-35RFP3-E	390	158.5	25	2	LGH-35RVX3-E	1	2	2
PZ-50RFP3-E	461	158.5	25	2	LGH-50RVX3-E	1	2	2
PZ-65RFP3-E	423	197.5	25	2	LGH-65RVX3-E	1	2	2
PZ-80RFP3-E	442	215.5	25	2	LGH-80RVX3-E	1	2	2
					LGH-160RVX3-E	2	4	4
PZ-100RFP3-E	554	215.5	25	2	LGH-100RVX3-E	1	2	2
					LGH-200RVX3-E	2	4	4

● Certain ratings and specifications may change due to product improvements or modifications.
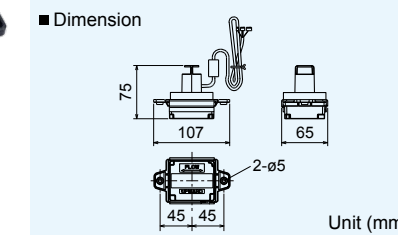

CO₂ Sensors

A CO_2 sensor connected directly to the LOSSNAY RVX3 unit optimizes the fan speed according to the level of CO_2 detected.

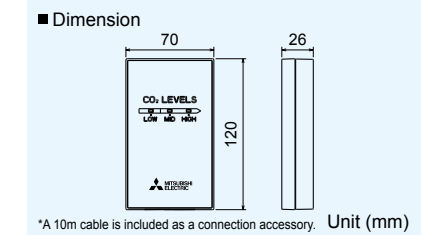### <Duct-mounted type> PZ-70CSD-E

Mounted in the duct with all the wiring hidden in the ceiling.

■ Dimension

75
107 65
45 45 2-ø5
Unit (mm)

<Wall-mounted type> PZ-70CSW-E

Mounted on the wall. CO_2 is monitored in 3 levels.

■ Dimension

CO₂ LEVELS
LOW MID HIGH

70 26
120

*A 10m cable is included as a connection accessory. Unit (mm)
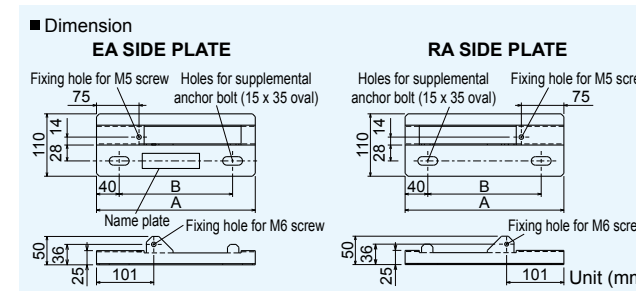
Vertical Installation Plates

PZ-1VS-E, PZ-2VS-E

Parts used to install RVX3 vertically.

EA side plate   RA side plate

■ Dimension

EA SIDE PLATE

Fixing hole for M5 screw   Holes for supplemental anchor bolt (15 x 35 oval)
75
110 28 14
40 B A
50 36 25
Name plate   Fixing hole for M6 screw
101

RA SIDE PLATE

Holes for supplemental anchor bolt (15 x 35 oval)   Fixing hole for M5 screw
75
110 28 14
40 B A
50 36 25
Fixing hole for M6 screw
101 Unit (mm)

■Change dimension table (Unit:mm)

Model	A	B	Weight (kg)	Applicable model
PZ-1VS-E	280	200	1.2	LGH-15 to 50RVX3-E
PZ-2VS-E	380	300	1.6	LGH-65 to 100RVX3-E

*Not applicable to LGH-160/200RVX3-E

Signal Output Terminal

PZ-4GS-E

RVX3's PCB has only 1 output terminal. By using PZ-4GS-E, 4 more output terminals can be added to RVX3.

■ Dimension

53 60
86

Unit (mm)

■ Wiring diagram

Accessory parts
PZ-4GS-E
CN50
LOSSNAY Circuit board

Min. AC220V 0.1A
DC5V 0.1A
Max. AC240V 1A
DC24V 1A
(Common terminal is up to 1.5A)

*Wiring work must be performed by a qualified professional

Duct Silencer

The duct silencer connects to the LOSSNAY unit to reduce airflow noise.

■Specifications

Model	Airflow (m³/h)	Attenuation of sound power level [dB] for center frequency (discharge)							
		62.5Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
PZ-100SS-E	50	0	3	5	7	6	6	6	8
	150	0	3	6	7	7	7	7	9
PZ-150SS-E	250	0	1	5	8	15	21	20	14
	350	0	1	4	8	14	21	21	16
PZ-200SS-E	500	0	1	4	7	13	18	16	9
	650	0	1	3	8	12	17	14	6
PZ-250SS-E	800	0	2	4	12	22	21	14	13
	1000	0	1	4	12	22	20	14	13

1. Figures in the chart above are based on a comparison with a general steel duct of the same length.
2. The silencer is placed just before the outlet during the measurement.
3. When the airflow rate differs, the attenuation will also differ from the chart above.
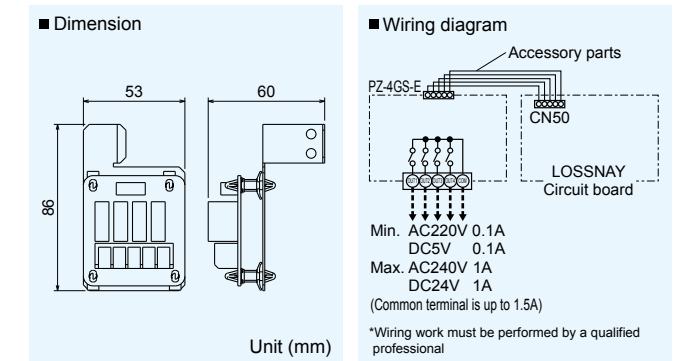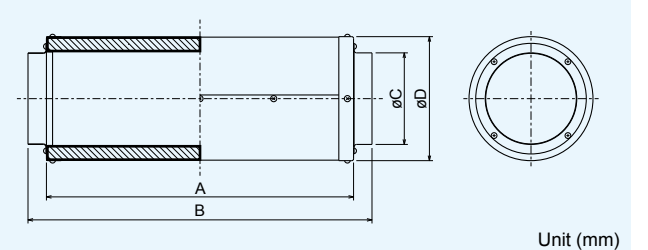4. Figures in the chart above are flat (not-weighted) values.

■ Dimensiosns

øC øD
A
B

Unit (mm)

■Change dimension table (Unit:mm)

Model	A	B	C	D	Connectable Duct	Weight (kg)
PZ-100SS-E	400	450	99	152	ø100	1.9
PZ-150SS-E	500	560	149	202	ø150	3.5
PZ-200SS-E	600	660	199	252	ø200	5.3
PZ-250SS-E	600	660	249	332	ø250	8.9

● Certain ratings and specifications may change due to product improvements or modifications.