



# OSSNAY SYSTEM



## LOSSNAY LINEUP

Application		Model	Airflow	50 CMH	100 CMH	150 CMH	250 CMH	350 CMH	500 CMH	650 CMH	800 CMH	1000 CMH	1500 CMH	2000 CMH	2500 CMH
Commercial Use	Centralized Ventilation	LGH-RVX Series				●	●	●	●	●	●	●	●	●	
		LGH-RVXT Series											●	●	●
		GUF Series						●			●				
		Dx-coil unit for Lossnay LGH-RVX/RVXT Series GUG Series						●	●	●	●	●	●	●	●
Residential Use	Centralized Ventilation	VL-220CZGV-E					●								
	Decentralized Ventilation	VL-100(E)U5-E			●										
		VL-50(E)S2-E VL-50SR2-E		●											

### LGH-RVX Series

A commercially oriented system that can be used to deliver high performance and functions virtually anywhere.

### LGH-RVXT Series

Thin, large airflow models of the LGH series that deliver high performance and functions.

### Dx-coil unit (GUG Series)

Temperature control equipment that works with Lossnay units and Mr. Slim outdoor units.

### GUF Series

Heat recovery units with a heating and cooling system that uses the City Multi outdoor unit as a heat source.

### VL-220CZGV-E

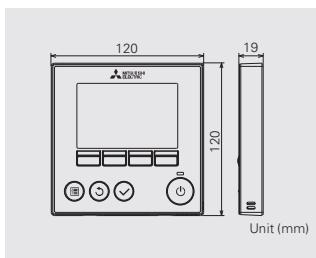
Centralized ventilation with sensible heat exchange, for residential use.

### VL-100(E)U5-E, VL-50(E)S2-E, VL-50SR2-E

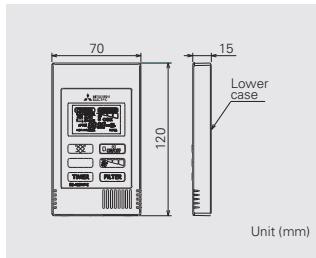
Wall-mounted models. Particularly suitable for houses and small offices.

## REMOTE CONTROLLER

PZ-61DR-E



PZ-43SMF-E



Function (Communicating mode)	PZ-61DR-E		PZ-43SMF-E	
	LGH-RVX/RVXT	VL-220CZGV-E	LGH-RVX/RVXT	VL-220CZGV-E
Fan speed selection	4 fan speeds	4 fan speeds	2 of 4 fan speeds	2 of 4 fan speeds
Ventilation mode selection	Energy recovery / Bypass / Auto	Energy recovery / Bypass / Auto (available with optional part P-133DUE-E)	Energy recovery / Bypass / Auto	Energy recovery / Bypass / Auto (available with optional part P-133DUE-E)
Night-purge setting (time and fan speed)	Yes	No	No	No
Function setting from RC	Yes	Yes	No	No
Bypass temp. free setting	Yes	Yes (available with optional part P-133DUE-E)	No	No
Heater-On temp. free setting	Yes	No	No	No
Fan power change after installation	Yes	Yes	No	No
ON/OFF timer	Yes	Yes	Yes	Yes
Auto-Off timer	Yes	Yes	No	No
Weekly timer	Yes	Yes	No	No
Operation restrictions (ON/OFF, ventilation mode, fan speed)	Yes	Yes (ventilation mode is available with optional part P-133DUE-E)	No	No
Operation restrictions (fan speed skip setting)	Yes	Yes	No	No
Screen contrast adjustment	Yes	Yes	No	No
Language selection	Yes (8 languages)	Yes (8 languages)	No (English only)	No (English only)
Initializing	Yes	Yes	No	No
Filter cleaning sign	Yes	Yes	Yes	Yes
Lossnay core cleaning sign	Yes	No	No	No
Error indication	Yes	Yes	Yes	Yes
Error history	Yes	Yes	No	No

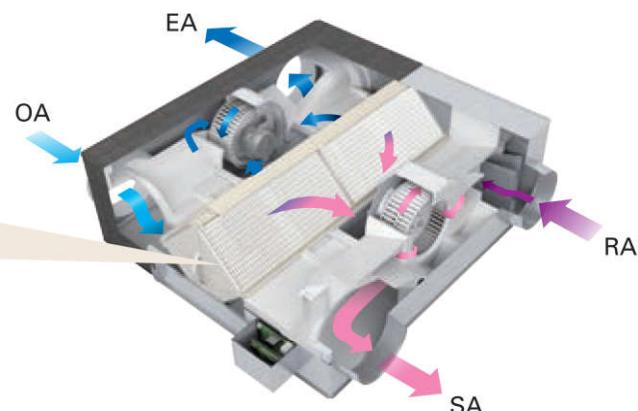
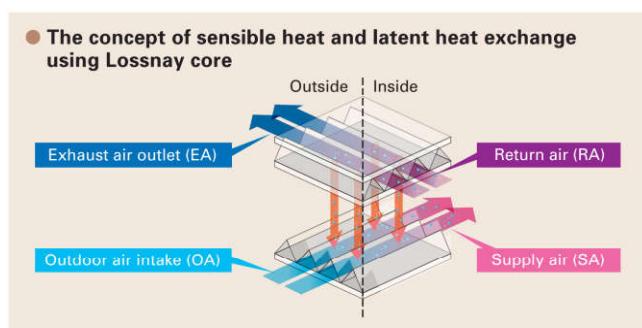
# LOSSNAY SYSTEM

Lossnay ventilation systems are renowned industry-wide for their efficiency. They offer environment-friendly energy recovery and humidity control, and enable air conditioning systems to simultaneously provide optimum room comfort and energy savings.



## Indoor Air Quality Inside a Building is Optimized Through Temperature and Humidity Exchange by Lossnay

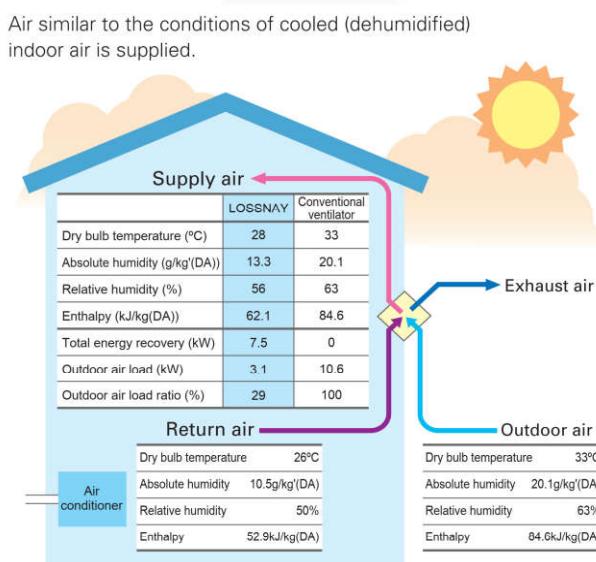
Lossnay is a total heat exchange ventilation system that uses paper characteristics to perform temperature (sensible heat) and humidity (latent heat) exchange.



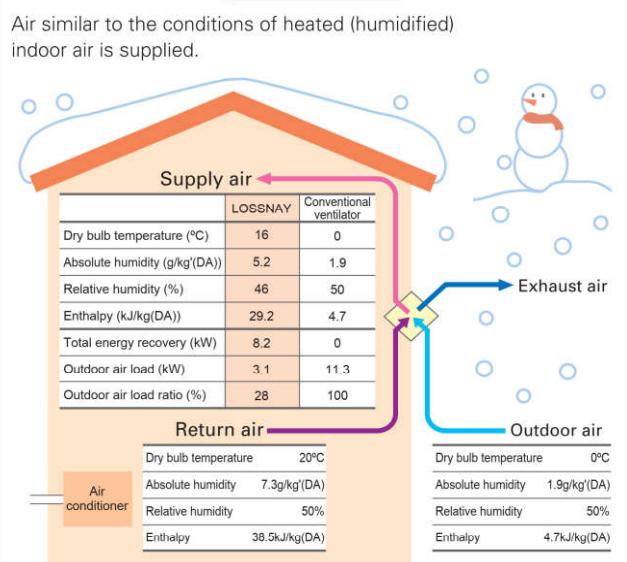
## What Can Be Improved by Introducing Lossnay?

### ● Ventilation with maximized comfort

#### In summer



#### In winter



#### Heat recovery calculation

$$\text{Indoor supply-air} = \frac{\text{Outdoor temperature (°C)} - \text{Indoor temperature (°C)}}{\text{Outdoor temperature (°C)} - \text{Indoor temperature (°C)}} \times \text{Temp recovery efficiency (\%)} \times \text{Indoor air volume}$$

Calculation example:  $28^\circ\text{C} = 33^\circ\text{C} - (33^\circ\text{C} - 26^\circ\text{C}) \times 71.5\%$

\*The above applies to the case of LGH-100RVX (fan speed 4).

#### Heat recovery calculation

$$\text{Indoor supply-air} = \frac{\text{Indoor temperature (°C)} - \text{Outdoor temperature (°C)}}{\text{Indoor temperature (°C)} - \text{Outdoor temperature (°C)}} \times \text{Temp recovery efficiency (\%)} + \text{Outdoor temperature (°C)} \times \text{Indoor air volume}$$

Calculation example:  $16^\circ\text{C} = (20^\circ\text{C} - 0^\circ\text{C}) \times 80\% + 0^\circ\text{C}$

\*The above applies to the case of LGH-100RVX (fan speed 4).

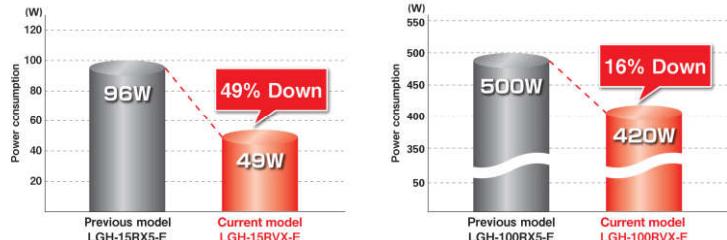
# Commercial Use Lossnay

## LGH-RVX Series (Standard model)

### Power consumption reduced further with the introduction of a DC motor

Low power consumption is realised with the introduction of a high efficiency brushless DC motor. Compared to models with an AC motor, power consumption is reduced.

Comparison between current and previous power consumption  
(Current model: Fan speed 4 at 230V 50Hz, Previous model: Extra-High at 220V 50Hz)



### Improved airflow range

#### Wide airflow range

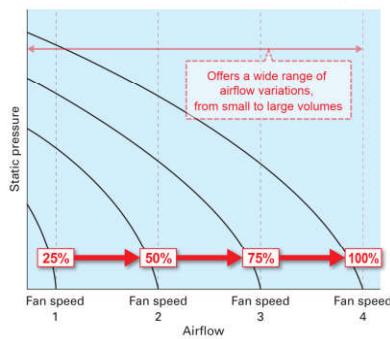
Each fan speed has a range setting of 25, 50, 75 and 100%, allowing much finer airflow control. When used in combination with the CO<sub>2</sub> sensor or timer function, airflow can be controlled according to conditions that realize better performance and reduce power consumption.

### Fan speed adjustment function

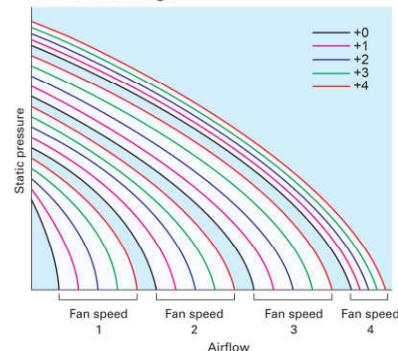
The default fan speed value can be adjusted slightly. Use the PZ-61DR-E remote controller to reset the speed.

- 1) Considering the total hours of Lossnay operation (filter clogging), fan power can be adjusted automatically after a given period of time.
- 2) After the unit is installed, fine adjustments can be made if the airflow is slightly lower than the desired airflow.

■ Characteristic curves of the LGH-RVX/RVXT Series



■ P-Q curve image



## LGH-RVXT Series (Thin body type)

The LGH-RVXT series has a large airflow of 1500 - 2500 CMH but a thin body of approximately 500mm. Therefore, installing the unit in the ceiling is easy.

■ LGH-150/200RVX-E



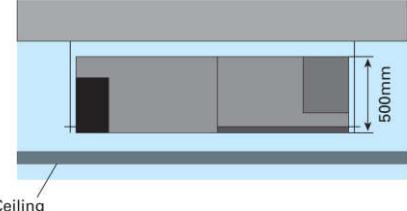
Height: 808mm

■ LGH-150/200/250RVXT-E



Height: 500mm

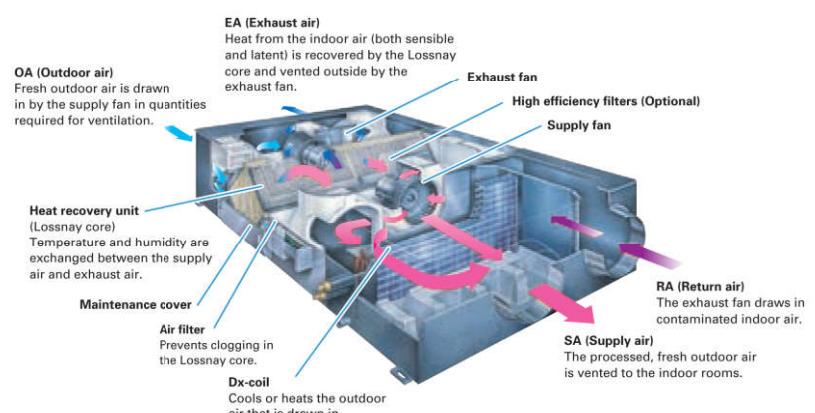
■ LGH-RVXT installation image



38%  
Thinner  
body

## GUF Series (Lossnay with Dx-coil unit)

Along with Lossnay ventilation, the OA processing unit is really two units in one, functioning as the main air conditioner when the load is light and adding supplemental air conditioning when the load is heavy.



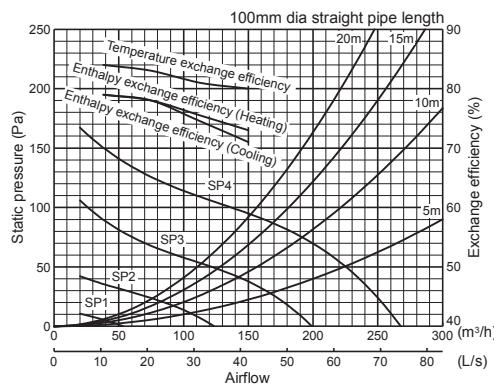
# Commercial Use Lossnay Specifications

## RVX Series

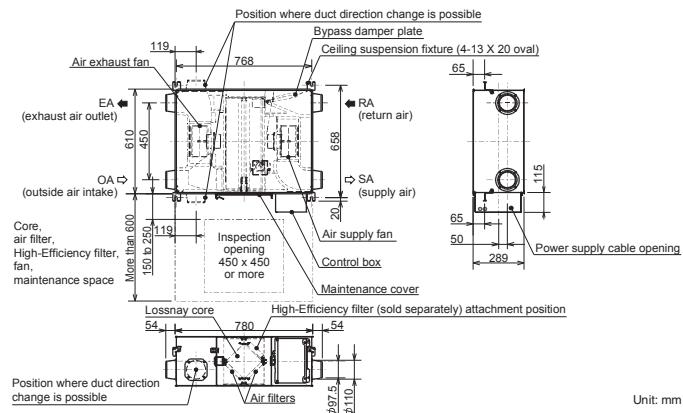
### LGH-15RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1	
Running current (A)	0.40	0.24	0.15	0.10	0.41	0.25	0.15	0.10	
Input power (W)	49	28	14	7	52	28	14	8	
Airflow	(m <sup>3</sup> /h)	150	113	75	38	150	113	75	38
	(L/s)	42	31	21	10	42	31	21	10
External static pressure (Pa)	95	54	24	6	95	54	24	6	
Temperature exchange efficiency (%)	80	81	83	84	—	—	—	—	
Enthalpy exchange efficiency (%)	Heating	73	75.5	78	79	—	—	—	
Cooling		71	74.5	78	79	—	—	—	
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)	28	24	19	17	29	24	19	18	
Weight (kg)					20				
Specific energy consumption class					A				

### Characteristic Curves



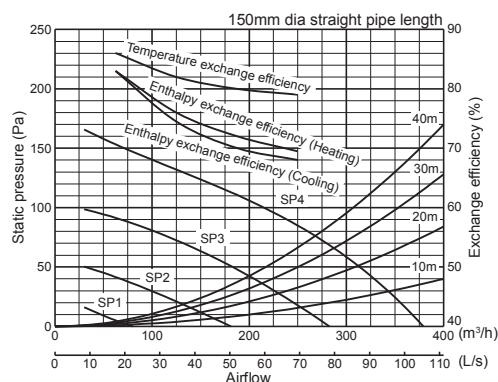
### Dimensions



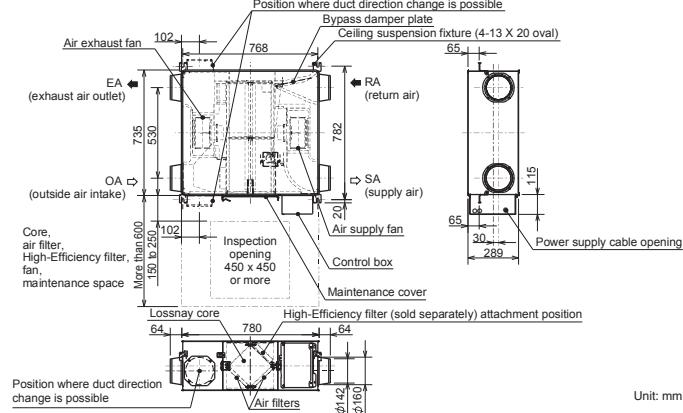
### LGH-25RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1	
Running current (A)	0.48	0.28	0.16	0.10	0.48	0.29	0.16	0.11	
Input power (W)	62	33	16	7.5	63	35	17	9	
Airflow	(m <sup>3</sup> /h)	250	188	125	63	250	188	125	63
	(L/s)	69	52	35	17	69	52	35	17
External static pressure (Pa)	85	48	21	5	85	48	21	5	
Temperature exchange efficiency (%)	79	80	82	86	—	—	—	—	
Enthalpy exchange efficiency (%)	Heating	69.5	72	76	83	—	—	—	
Cooling		68	70	74.5	83	—	—	—	
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)	27	22	20	17	27.5	23	20	17	
Weight (kg)					23				
Specific energy consumption class					A				

### Characteristic Curves



### Dimensions



■For LGH-RVX and LGH-RVX-E series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

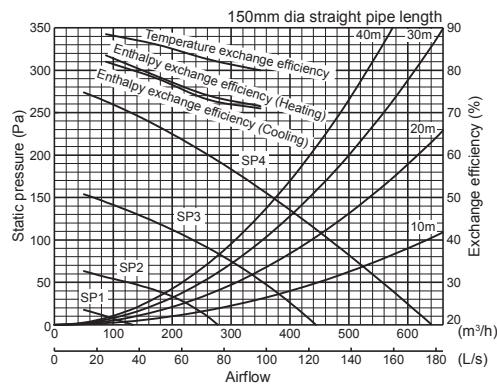
\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

\*For specifications at other frequencies, contact your dealer.

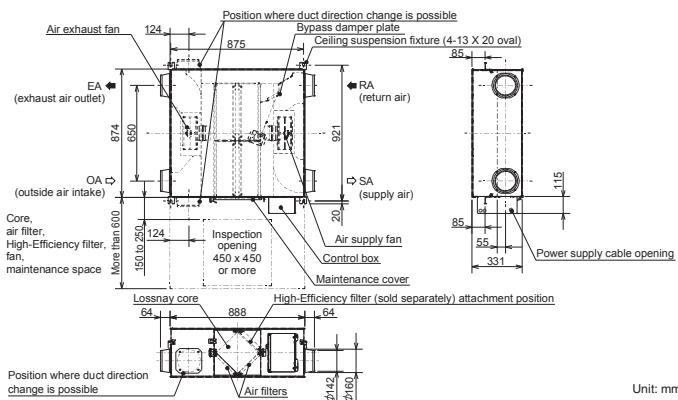
## LGH-35RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1	
Running current (A)	0.98	0.54	0.26	0.12	0.98	0.56	0.28	0.13	
Input power (W)	140	70	31	11	145	72	35	13	
Airflow	(m <sup>3</sup> /h)	350	263	175	88	350	263	175	88
	(L/s)	97	73	49	24	97	73	49	24
External static pressure (Pa)	160	90	40	10	160	90	40	10	
Temperature exchange efficiency (%)	80	82.5	86	88.5	—	—	—	—	
Enthalpy exchange efficiency (%)	Heating	71.5	74	78.5	83.5	—	—	—	—
	Cooling	71	73	78	82	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)	32	28	20	17	32.5	28	20	18	
Weight (kg)					30				

## Characteristic Curves



## Dimensions

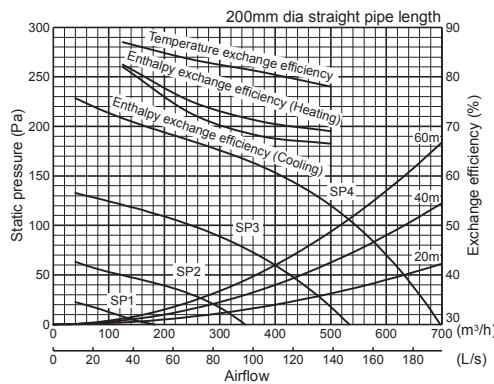


Unit: mm

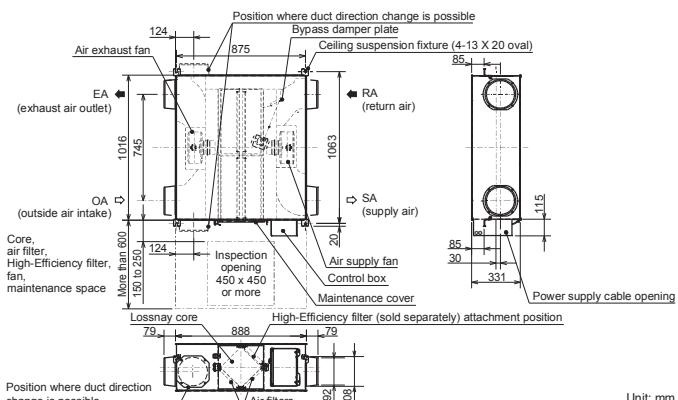
## LGH-50RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1	
Running current (A)	1.15	0.59	0.26	0.13	1.15	0.59	0.27	0.13	
Input power (W)	165	78	32	12	173	81	35	14	
Airflow	(m <sup>3</sup> /h)	500	375	250	125	500	375	250	125
	(L/s)	139	104	69	35	139	104	69	35
External static pressure (Pa)	120	68	30	8	120	68	30	8	
Temperature exchange efficiency (%)	78	81	83.5	87	—	—	—	—	
Enthalpy exchange efficiency (%)	Heating	69	71	75	82.5	—	—	—	—
	Cooling	66.5	68	72.5	82	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)	34	28	19	18	35	29	20	18	
Weight (kg)					33				

## Characteristic Curves



## Dimensions



Unit: mm

■For LGH-RVX and LGH-RVX-E series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

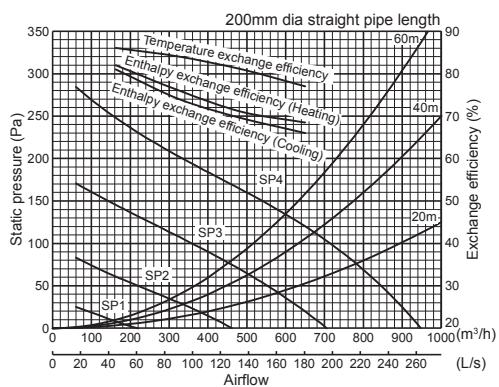
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# Commercial Use Lossnay Specifications

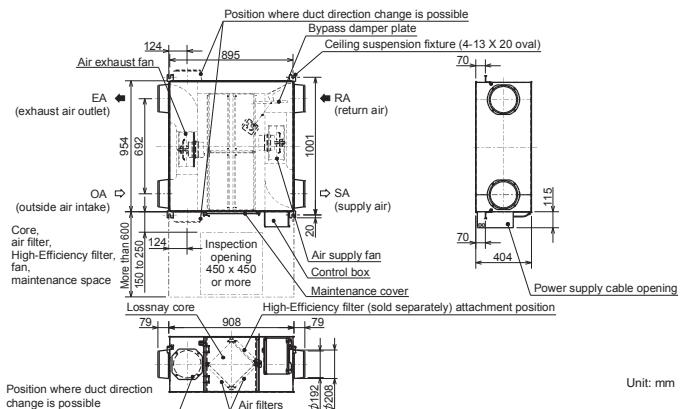
## LGH-65RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		1.65	0.90	0.39	0.15	1.72	0.86	0.38	0.16
Input power (W)		252	131	49	15	262	131	47	17
Airflow	(m <sup>3</sup> /h)	650	488	325	163	650	488	325	163
	(L/s)	181	135	90	45	181	135	90	45
External static pressure (Pa)		120	68	30	8	120	68	30	8
Temperature exchange efficiency (%)		77	81	84	86	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	68.5	71	76	82	—	—	—	—
	Cooling	66	69.5	74	81	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		34.5	29	22	18	35.5	29	22	18
Weight (kg)		38							

## Characteristic Curves



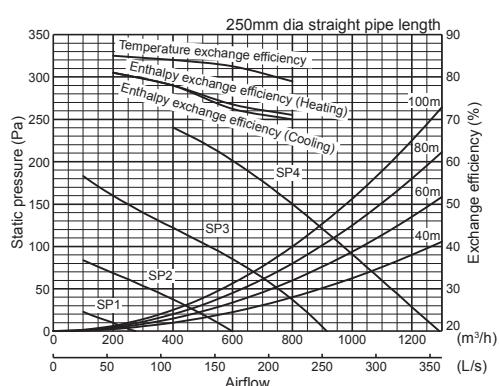
## Dimensions



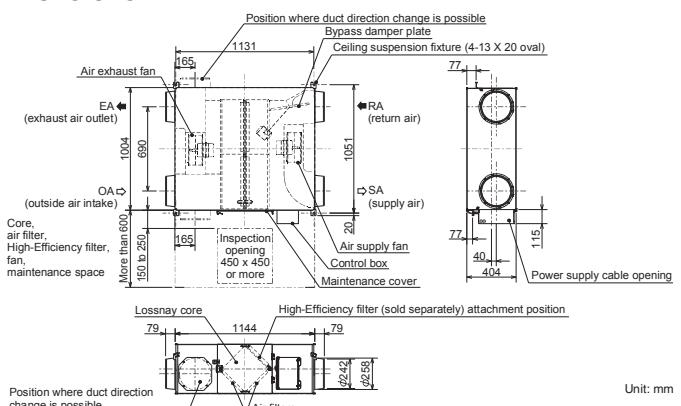
## LGH-80RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		1.82	0.83	0.36	0.15	1.97	0.86	0.40	0.15
Input power (W)		335	151	60	18	340	151	64	20
Airflow	(m <sup>3</sup> /h)	800	600	400	200	800	600	400	200
	(L/s)	222	167	111	56	222	167	111	56
External static pressure (Pa)		150	85	38	10	150	85	38	10
Temperature exchange efficiency (%)		79	82.5	84	85	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	71	73.5	78	81	—	—	—	—
	Cooling	70	72.5	78	81	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		34.5	30	23	18	36	30	23	18
Weight (kg)		48							

## Characteristic Curves



## Dimensions



■For LGH-RVX and LGH-RVX-E series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

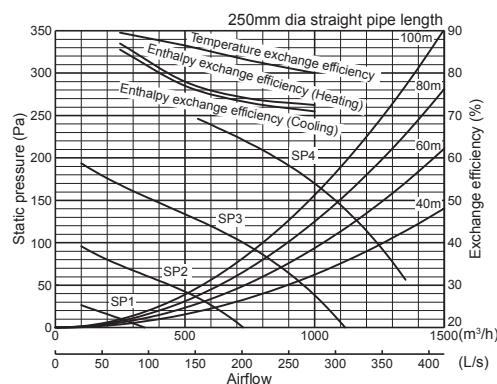
\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

\*For specifications at other frequencies, contact your dealer.

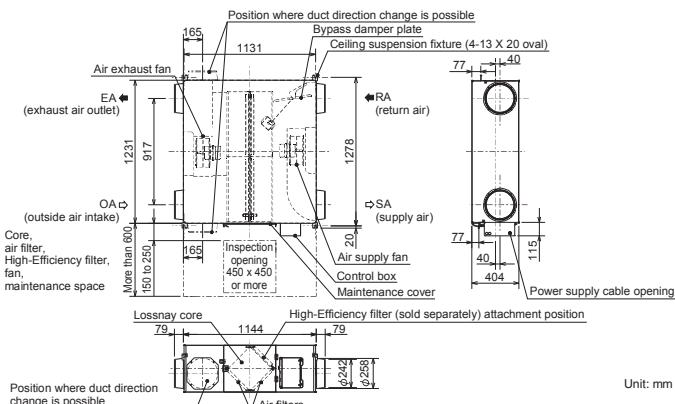
## LGH-100RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		2.50	1.20	0.50	0.17	2.50	1.20	0.51	0.19
Input power (W)		420	200	75	21	420	200	75	23
Airflow	(m <sup>3</sup> /h)	1000	750	500	250	1000	750	500	250
	(L/s)	278	208	139	69	278	208	139	69
External static pressure (Pa)		170	96	43	11	170	96	43	11
Temperature exchange efficiency (%)		80	83	86.5	89.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.5	74	78	87	—	—	—	—
	Cooling	71	73	77	85.5	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		37	31	23	18	38	32	24	18
Weight (kg)		54							

## Characteristic Curves



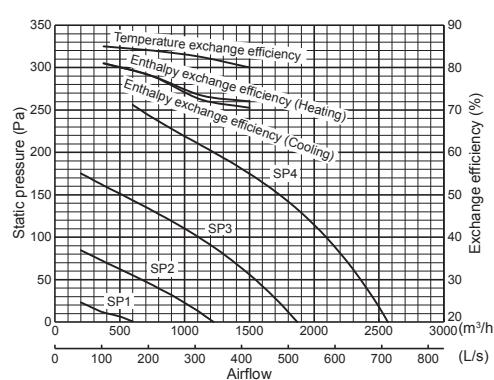
## Dimensions



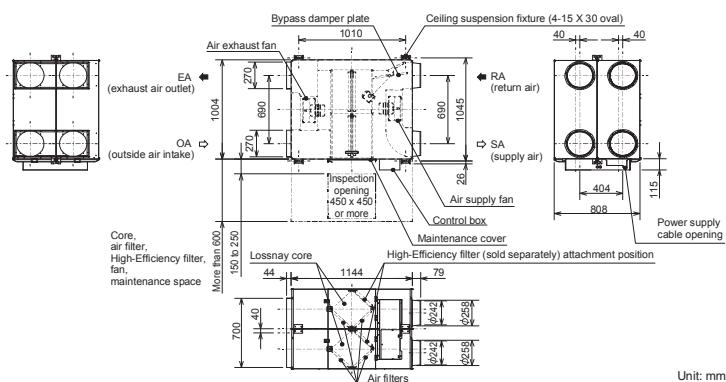
## LGH-150RVX-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		3.71	1.75	0.70	0.29	3.85	1.78	0.78	0.30
Input power (W)		670	311	123	38	698	311	124	44
Airflow	(m <sup>3</sup> /h)	1500	1125	750	375	1500	1125	750	375
	(L/s)	417	313	208	104	417	313	208	104
External static pressure (Pa)		175	98	44	11	175	98	44	11
Temperature exchange efficiency (%)		80	82.5	84	85	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	72	73.5	78	81	—	—	—	—
	Cooling	70.5	72.5	78	81	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		39	32	24	18	40.5	33	26	18
Weight (kg)		98							

## Characteristic Curves



## Dimensions



■For LGH-RVX and LGH-RVX-E series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

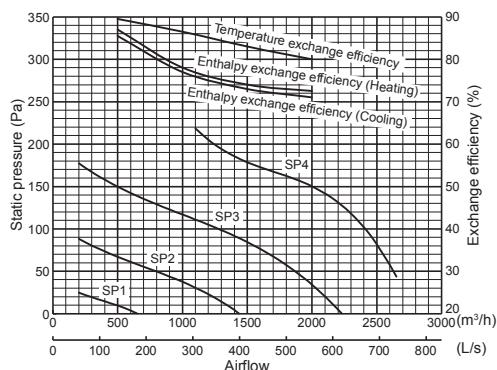
\*For specifications at other frequencies, contact your dealer.

# Commercial Use Lossnay Specifications

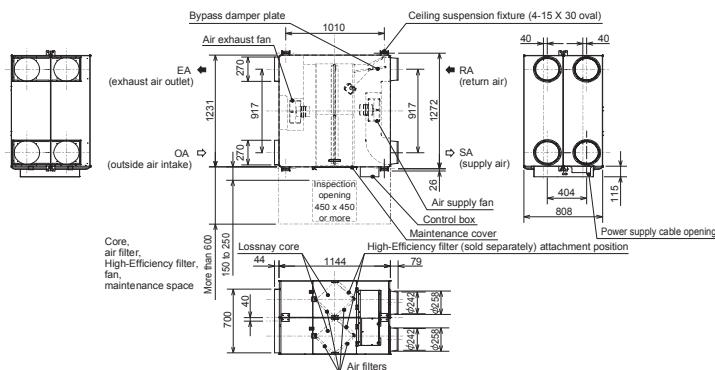
## LGH-200RVX-E

		220-240V/50Hz, 220V/60Hz							
		Heat recovery mode				Bypass mode			
Ventilation mode	Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		4.88	2.20	0.88	0.33	4.54	2.06	0.87	0.35
Input power (W)		850	400	153	42	853	372	150	49
Airflow	(m <sup>3</sup> /h)	2000	1500	1000	500	2000	1500	1000	500
	(L/s)	556	417	278	139	556	417	278	139
External static pressure (Pa)		150	84	38	10	150	84	38	10
Temperature exchange efficiency (%)		80	83	86.5	89.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.5	74	78	87	—	—	—	—
	Cooling	71	73	77	85.5	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		40	36	28	18	41	36	27	19
Weight (kg)									110

## Characteristic Curves



## Dimensions



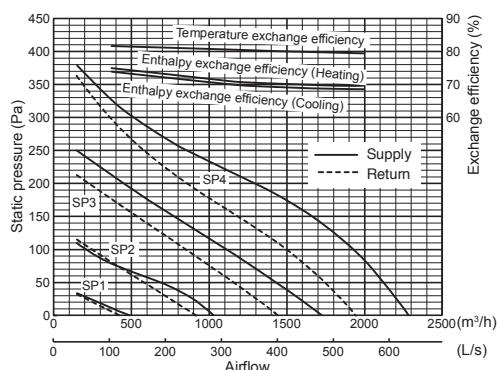
Unit: mm

## RVXT Series

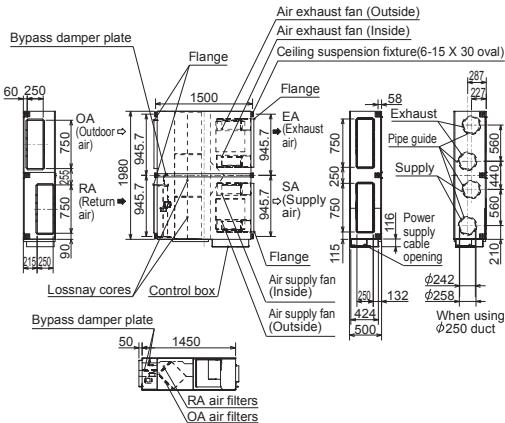
## LGH-150RVXT-E

		220-240V/50Hz, 220V/60Hz							
		Heat recovery mode				Bypass mode			
Ventilation mode	Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		4.30	2.40	1.10	0.36	3.40	1.80	0.77	0.31
Input power (W)		792	421	176	48	625	334	134	37
Airflow	(m <sup>3</sup> /h)	1500	1125	750	375	1500	1125	750	375
	(L/s)	417	313	208	104	417	313	208	104
External static pressure (Pa)	Supply	175	98	44	11	175	98	44	11
	Return	100	56	25	6	100	56	25	6
Temperature exchange efficiency (%)		80	80.5	81	81.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	70	71	73	75	—	—	—	—
	Cooling	69	70	72	74	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		39.5	35.5	29.5	22	39	33	26.5	20.5
Weight (kg)									156

## Characteristic Curves



## Dimensions



Unit: mm

■For LGH-RVX and LGH-RVXT series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

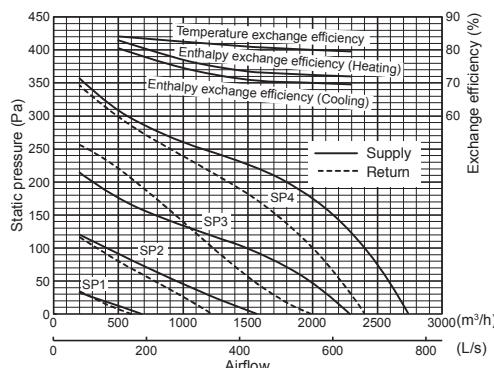
\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

\*For specifications at other frequencies, contact your dealer.

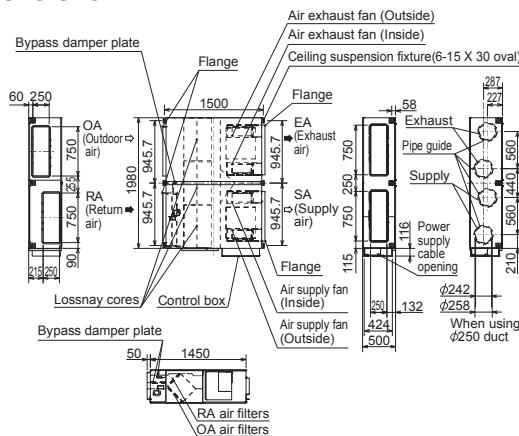
## LGH-200RVXT-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		5.40	2.70	1.10	0.39	5.00	2.20	0.85	0.34
Input power (W)		1000	494	197	56	916	407	150	45
Airflow	(m <sup>3</sup> /h)	2000	1500	1000	500	2000	1500	1000	500
	(L/s)	556	417	278	139	556	417	278	139
External static pressure (Pa)	Supply	175	98	44	11	175	98	44	11
	Return	100	56	25	6	100	56	25	6
Temperature exchange efficiency (%)		80	81	82.5	84	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.5	73.5	77	83	—	—	—	—
	Cooling	70	71	74.5	80.5	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		39.5	35.5	28	22	40.5	34.5	27	20.5
Weight (kg)		159							

## Characteristic Curves



## Dimensions

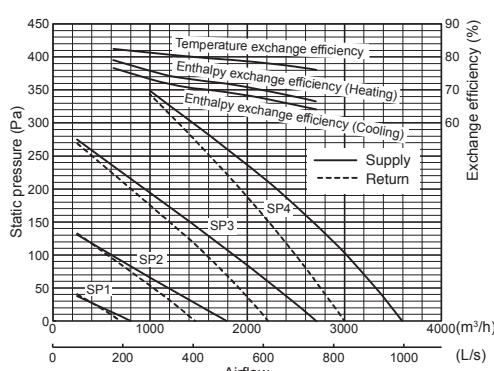


Unit: mm

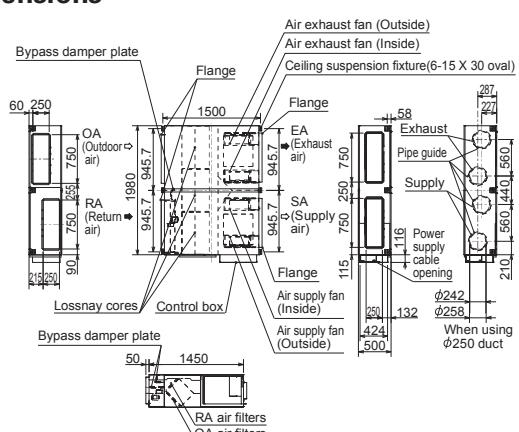
## LGH-250RVXT-E

Electrical power supply		220-240V/50Hz, 220V/60Hz							
Ventilation mode		Heat recovery mode				Bypass mode			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Running current (A)		7.60	3.60	1.40	0.57	6.90	3.10	1.30	0.49
Input power (W)		1446	687	244	82	1298	587	212	69
Airflow	(m <sup>3</sup> /h)	2500	1875	1250	625	2500	1875	1250	625
	(L/s)	694	521	347	174	694	521	347	174
External static pressure (Pa)	Supply	175	98	44	11	175	98	44	11
	Return	100	56	25	6	100	56	25	6
Temperature exchange efficiency (%)		77	79	80.5	82.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	68	71.5	74	79	—	—	—	—
	Cooling	65.5	69	71.5	76.5	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		43	39	32	24	44	38.5	31	22.5
Weight (kg)		198							

## Characteristic Curves



## Dimensions



Unit: mm

■For LGH-RVX and LGH-RVXT series

\*The running current, the input power, the efficiency and the noise are based on the rated airflow, 230V/50Hz, and 220V/60Hz.

\*Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

\*For specifications at other frequencies, contact your dealer.

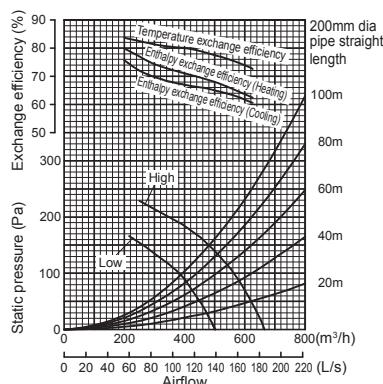
# Commercial Use Lossnay Specifications

## GUF Series

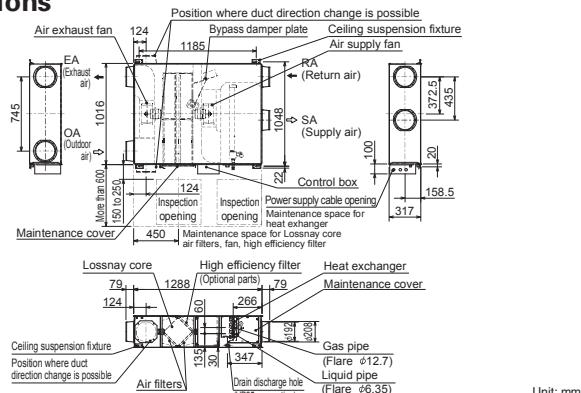
### GUF-50RD4

Electrical power supply		220-240V/50Hz			
Ventilation mode		Heat recovery mode		Bypass mode	
Fan speed		High	Low	High	Low
Running current (A)		1.15	0.70	1.15	0.70
Input power (W)		235-265	150-165	235-265	150-165
Airflow	(m <sup>3</sup> /h) (L/s)	500 139	400 111	500 139	400 111
External static pressure (Pa)		140	90	140	90
Temperature exchange efficiency (%)		77.5	80	—	—
Enthalpy exchange efficiency (%)	Heating Cooling	68 65	71 67	—	—
Cooling capacity (kW)		5.57 (1.94)			
Heating capacity (kW)		6.21 (2.04)			
Capacity equivalent to the indoor unit		P32			
Humidifier	Humidifying	—			
Humidifying capacity (kg/h)		—			
Water supply pressure		—			
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		33.5-34.5	29.5-30.5	35-36	29.5-30.5
Weight (kg)		48			

### Characteristic Curves



### Dimensions

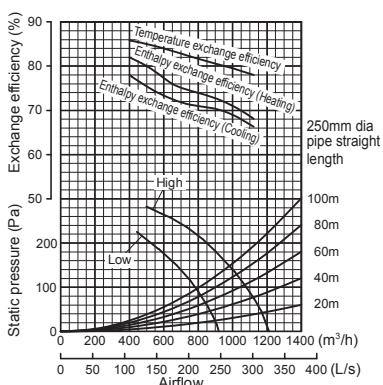


Unit: mm

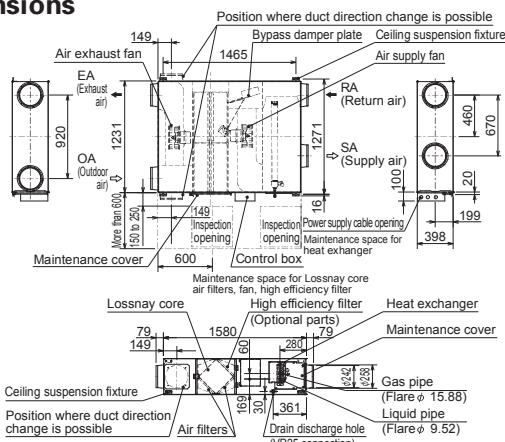
### GUF-100RD4

Electrical power supply		220-240V/50Hz			
Ventilation mode		Heat recovery mode		Bypass mode	
Fan speed		High	Low	High	Low
Running current (A)		2.20	1.73	2.25	1.77
Input power (W)		480-505	370-395	490-515	385-410
Airflow	(m <sup>3</sup> /h) (L/s)	1000 278	800 222	1000 278	800 222
External static pressure (Pa)		140	90	140	90
Temperature exchange efficiency (%)		79.5	81.5	—	—
Enthalpy exchange efficiency (%)	Heating Cooling	71 69	74 71	—	—
Cooling capacity (kW)		11.44 (4.12)			
Heating capacity (kW)		12.56 (4.26)			
Capacity equivalent to the indoor unit		P63			
Humidifier	Humidifying	—			
Humidifying capacity (kg/h)		—			
Water supply pressure		—			
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		38-39	34-35	38-39	35-36
Weight (kg)		82			

### Characteristic Curves



### Dimensions



Unit: mm

■For GUF series

\*Cooling/Heating capacity indicates the maximum value at operation under the following condition.

Cooling: Indoor: 27°C DB/19°C WB      Outdoor: 35°C DB/24°C WB

Heating: Indoor: 20°C DB/13.8°C WB      Outdoor: 7°C DB/6°C WB

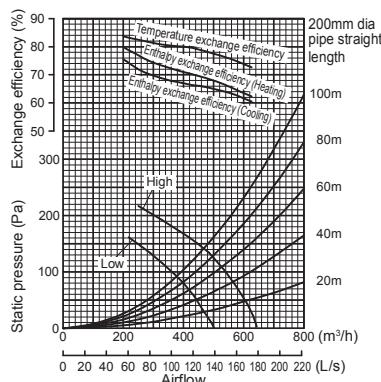
\*The figures in ( ) indicates heat recovering capacity of heat exchange core.

\*Figures in the chart are measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

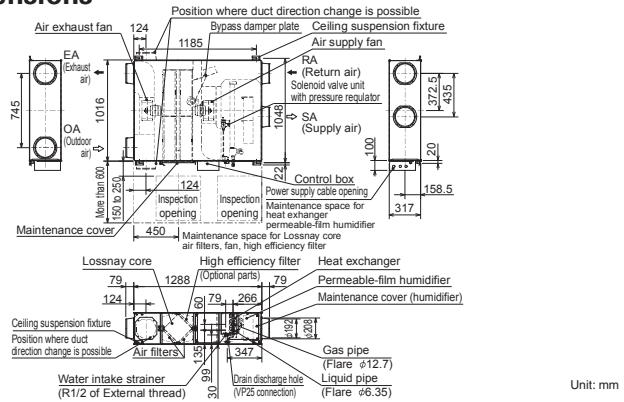
## GUF-50RDH4

		220-240V/50Hz			
Ventilation mode		Heat recovery mode		Bypass mode	
Fan speed		High	Low	High	Low
Running current (A)		1.15	0.70	1.15	0.70
Input power (W)		235-265	150-165	235-265	150-165
Airflow	(m³/h) (L/s)	500 139	400 111	500 139	400 111
External static pressure (Pa)		125	80	125	80
Temperature exchange efficiency (%)		77.5	80	—	—
Enthalpy exchange efficiency (%)	Heating Cooling	68 65	71 67	—	—
Cooling capacity (kW)		5.57 (1.94)			
Heating capacity (kW)		6.21 (2.04)			
Capacity equivalent to the indoor unit		P32			
Humidifier	Humidifying	Permeable film humidifier			
	Humidifying capacity (kg/h)	2.7 (heating)			
	Water supply pressure	Minimum pressure : $2.0 \times 10^4$ Pa			
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		33.5-34.5	29.5-30.5	35-36	29.5-30.5
Weight (kg)		51 (filled with water 55)			

## Characteristic Curves



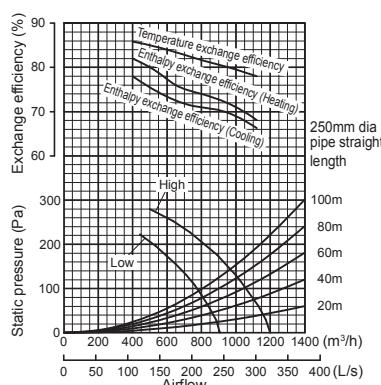
## Dimensions



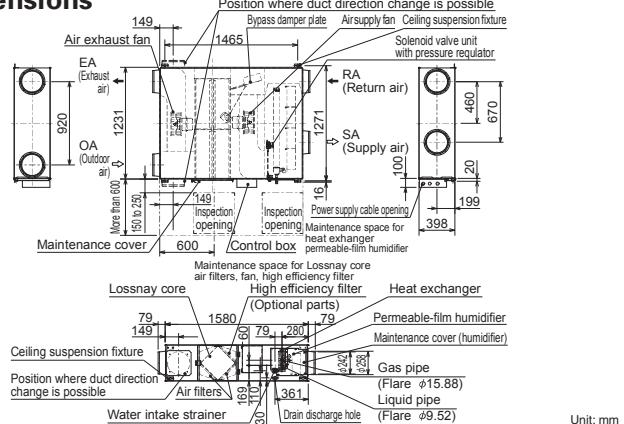
## GUF-100RDH4

		220-240V/50Hz			
Ventilation mode		Heat recovery mode		Bypass mode	
Fan speed		High	Low	High	Low
Running current (A)		2.20	1.76	2.25	1.77
Input power (W)		480-505	385-400	490-515	385-410
Airflow	(m³/h) (L/s)	1000 278	800 222	1000 278	800 222
External static pressure (Pa)		135	86	135	86
Temperature exchange efficiency (%)		79.5	81.5	—	—
Enthalpy exchange efficiency (%)	Heating Cooling	71 69	74 71	—	—
Cooling capacity (kW)		11.44 (4.12)			
Heating capacity (kW)		12.56 (4.26)			
Capacity equivalent to the indoor unit		P63			
Humidifier	Humidifying	Permeable film humidifier			
	Humidifying capacity (kg/h)	5.4 (heating)			
	Water supply pressure	Minimum pressure : $2.0 \times 10^4$ Pa			
Noise (dB) (Measured at 1.5m under the center of the unit in an anechoic chamber)		38-39	34-35	38-39	35-36
Weight (kg)		88 (filled with water 96)			

## Characteristic Curves



## Dimensions



■For GUF series

\*Cooling/Heating capacity indicates the maximum value at operation under the following condition.

Cooling: Indoor: 27°C DB/19°C WB      Outdoor: 35°C DB/24°C WB

Heating: Indoor: 20°C DB/13.8°C WB      Outdoor: 7°C DB/6°C WB

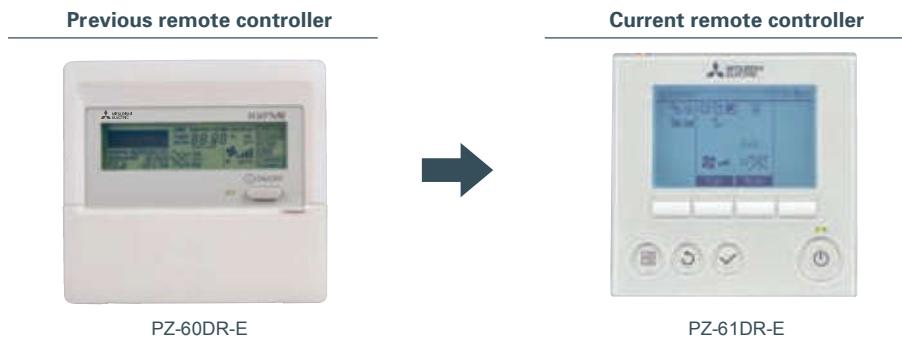
\*The figures in ( ) indicates heat recovering capacity of heat exchange core.

\*Figures in the chart are measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

## Optimized System Integration

### Improved Installation Appearance

Full-dot backlit LCD makes it easy to see and control the unit.



### List of Remote Controller Settings and Functions

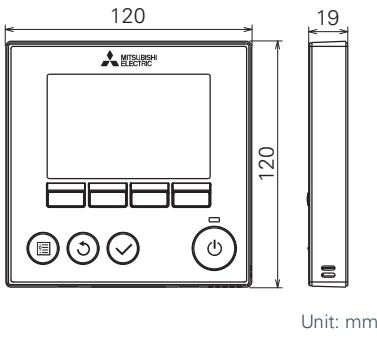
The remote controller provides a wide range of functions and features in addition to the main functions described below, such as sophisticated energy saving control and easy user interface.

Function (Communicating mode)	PZ-61DR-E	PZ-43SMF-E
Fan speed selection	4 fan speeds	2 of 4 fan speeds
Ventilation mode selection	Energy recovery / Bypass / Auto	Energy recovery / Bypass / Auto
Night-purge setting (time and fan speed)	Yes	No
Function setting from RC	Yes	No
Bypass temp. free setting	Yes	No
Heater-On temp. free setting	Yes	No
Fan power up after installation	Yes	No
0 - 10VDC external input	Yes	Yes
ON/OFF timer	Yes	Yes
Auto-Off timer	Yes	No
Weekly 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 (8 languages)*	No (English only)
Initializing	Yes	No
Filter cleaning sign	Yes	Yes
Lossnay core cleaning sign	Yes	No
Error indication	Yes	Yes
Error history	Yes	No
OA/RA/SA temp. display	Yes	No

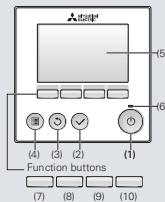
\*The 8 languages are English, German, French, Spanish, Italian, Portuguese, Russian and Swedish.

## Controllers

### Lossnay Remote Controller (PZ-61DR-E)



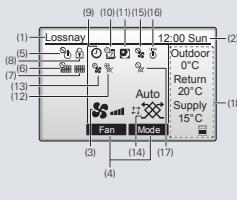
#### Operation section



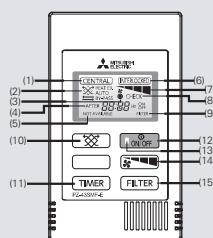
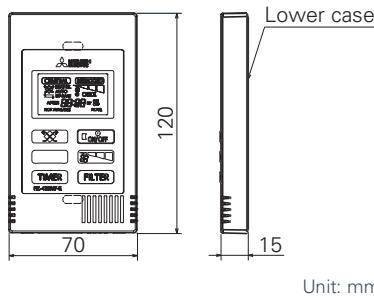
When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.

- (6) This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.  
(7) Main menu: Press to move the cursor down.  
(8) Main display: Press to change the fan speed.  
Main menu: Press to move the cursor up.  
(9) Main display: Press to change the ventilation mode.  
Main menu: Press to go to the previous page.  
(10) Main menu: Press to go to the next page.

#### Display section



### Lossnay Remote Controller (PZ-43SMF-E)



Heat exchange  
By-pass  
Automatic (HEAT EX/BY-PASS)

HEAT EX  
BY-PASS  
HEAT EX or AUTO  
AUTO  
BY-PASS

- (3) Displayed while the Lossnay remote controller is powered on.  
(4) Displays on-timer or off-timer duration.  
(5) When a button is pressed for a function which the Lossnay unit cannot perform, this display flashes concurrently with the display of the function.  
(6) Displayed when the Lossnay starts off by interlocked indoor unit or external signal.  
(7) Displays the selected fan speed.  
(8) Displayed together with the malfunctioning unit (3 digits) and an error code (4 digits).  
(9) Displayed when the accumulated operating time reaches the time set for filter maintenance.  
(10) Used to select the ventilation mode among heat exchange, by-pass or automatic.  
(11) Increasing 0:30 by pressing it once. Keep pressing the button for fast-forwarding.  
(12) Switch for start and stop.  
(13) On during operation. Flashes when a malfunction occurs.  
(14) Used to select the fan speed either "Low" or "High".

Low → High

- (15) Press twice to reset the filter sign display.

## Filters

### Standard Filters

Replacements for the standard filter supplied with the Lossnay main unit.



Model	Number of filters per set		Applicable model	Filter material	Classification	
	Supply	Exhaust			EN779(2012)	ISO 16890
PZ-15RF8-E	1	1	LGH-15RVX-E	Non-woven fabrics filter	G3	Coarse 35%
PZ-25RF8-E	2	2	LGH-25RVX-E			
PZ-35RF8-E	2	2	LGH-35RVX-E			
PZ-50RF8-E	2	2	LGH-50RVX-E, GUF-50RD4, GUF-50RDH4			
PZ-65RF8-E	2	2	LGH-65RVX-E			
PZ-80RF8-E	2	2	LGH-80RVX-E, LGH-150RVX-E (2 sets)			
PZ-100RF8-E	2	2	LGH-100RVX-E, LGH-200RVX-E (2 sets), GUF-100RD4, GUF-100RDH4			
PZ-150RTF-E	2	2	LGH-150RVXT-E			
PZ-250RTF-E	2	2	LGH-200RVXT-E, LGH-250RVXT-E			Coarse 50%

### High-efficiency Filters [Optional]

These high-efficiency filters can be easily inserted in the Lossnay unit without the need to attach external parts.



Model	Number of filters per set		Applicable model	Filter material	Classification	
	Supply	Exhaust			EN779(2012)	ISO 16890
PZ-15RFM-E	1	1	LGH-15RVX-E	Noncombustible fiber (polyester, polyolefin)	M6	ePM10 75%
PZ-25RFM-E	2	2	LGH-25RVX-E			
PZ-35RFM-E	2	2	LGH-35RVX-E			
PZ-50RFM-E	2	2	LGH-50RVX-E, GUF-50RD4, GUF-50RDH4			
PZ-65RFM-E	2	2	LGH-65RVX-E			
PZ-80RFM-E	2	2	LGH-80RVX-E, LGH-150RVX-E (2 sets)			
PZ-100RFM-E	2	2	LGH-100RVX-E, LGH-200RVX-E (2 sets), GUF-100RD4, GUF-100RDH4			

### Advanced High-efficiency Filters (For the LGH-RVX and GUF Series) Optional

These advanced high-efficiency filters are designed to remove approx. 95% of airborne particulates that are 2.0 $\mu\text{m}$  or larger.



Model	Number of filters per set	Applicable model	Filter material	Classification	
				EN779(2012)	ISO 16890
PZ-15RFP-E	1	LGH-15RVX-E	Noncombustible fiber (polyester, polyolefin)	–	ePM10 70%
PZ-25RFP-E	2	LGH-25RVX-E			
PZ-35RFP-E	2	LGH-35RVX-E			
PZ-50RFP-E	2	LGH-50RVX-E, GUF-50RD4, GUF-50RDH4			
PZ-65RFP-E	2	LGH-65RVX-E			
PZ-80RFP-E	2	LGH-80RVX-E, LGH-150RVX-E (2 sets)			
PZ-100RFP-E	2	LGH-100RVX-E, LGH-200RVX-E (2 sets), GUF-100RD4, GUF-100RDH4			

### Advanced High-efficiency Filters (For the LGH-RVXT Series) Optional

These advanced high-efficiency filters can be easily inserted in the Lossnay unit without the need to attach external parts.



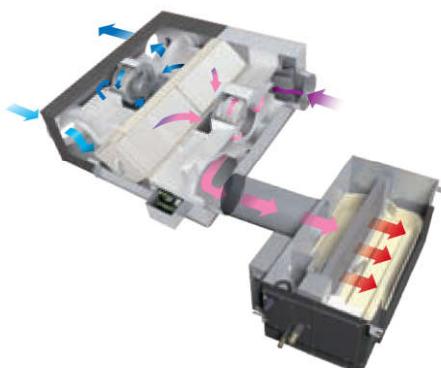
Model	Number of filters per set	Applicable model	Filter material	Classification	
				EN779(2012)	ISO 16890
PZ-M6RTFM-E	3	LGH-150RVXT-E, LGH-200RVXT-E, LGH-250RVXT-E	Non-woven fabrics filter	M6	ePM10 75%
PZ-F8RTFM-E				F8	ePM1 65%

## Optional Dx-coil Unit for Lossnay

### Supply Comfortable Control

#### Product Features

- Lossnay return air and supply air temperature control are possible by connecting the Dx-coil unit to Mr. Slim (power inverter series).
- Connecting the Dx-coil unit will expand Lossnay's temperature control range (500-2,500 CMH).
- Suitable for various applications such as offices, shops and schools etc.



#### ■ Target Applications



#### Application Examples

**Supplemental Air-conditioning System (Return Air Temperature Control)**

It may be possible to reduce one air-conditioning unit by adopting return air temperature control.

Setting temp.  
Dx-coil unit remote controller

A/C outdoor unit

EA ← OA → Lossnay  
Dx-coil unit  
SA RA  
Target temp.

RA Temperature Control  
Temperature setting range  
Heating: 17-28°C / Cooling: 19-30°C / Auto: 19-28°C

A/C indoor unit  
Good for: Offices, Small shops, Hotels

**Main Air-conditioning System (Return Air Temperature Control)**

Setting temp.  
Dx-coil unit remote controller

A/C outdoor unit

EA ← OA → Lossnay  
Dx-coil unit  
SA RA  
Target temp.

RA Temperature Control  
Temperature setting range  
Heating: 17-28°C / Cooling: 19-30°C / Auto: 19-28°C

Lossnay + Dx-coil unit may be used as the main air-conditioning system and a ventilation system for lower air-conditioning load applications.

Good for: Schools, Factories, Restaurants

**Outdoor Air Treatment System (Supply Air Temperature Control)**

Setting temp.  
Dx-coil unit remote controller

A/C outdoor unit

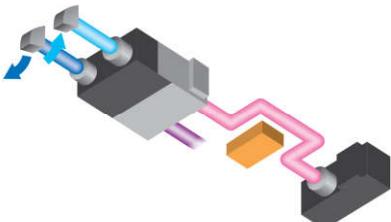
EA ← OA → Lossnay  
Dx-coil unit  
SA RA  
Target temp.

SA Temperature Control  
Temperature setting range  
Heating: 17-28°C / Cooling: 12-30°C

A/C indoor unit  
Good for: Offices, Small shops, Hotels

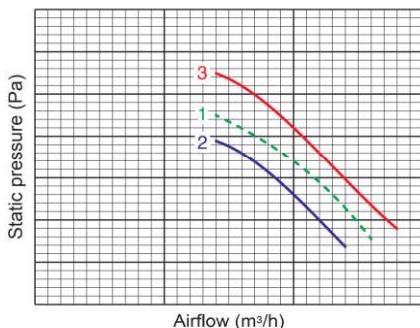
\*The above images of using the LGH-RVXT Series are simply examples for reference.

## Flexible Installation



### Flexible Connection to Lossnay

The length of the connection cable (accessory) between the Lossnay and Dx-coil unit is about 6m, so flexible installation is possible (two units can be installed close together or far apart with straight or bent ducting).



### To Keep High Static Pressure

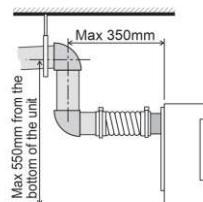
P-Q curve image

1. Lossnay unit
2. Lossnay unit + Dx-coil unit
3. Lossnay unit (fan power-up +4) + Dx-coil unit

Dx-coil unit static pressure loss is kept to a minimum, making it possible to maintain high static pressure using the fan power-up function of the Lossnay. The fan power-up function is only available when used with the PZ-61DR-E Lossnay remote controller.

## Drain Pump Equipment

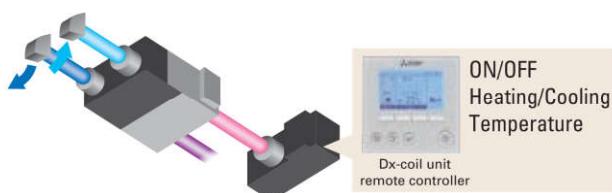
A built-in drain pump makes attaching the drain hose in the ceiling cavity easy, resulting in simple and fast installation.



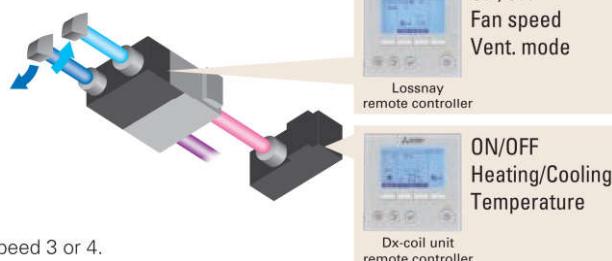
## User-friendly System Control

### Flexible Remote Controller Selection

#### (A) One remote controller



#### (B) Two remote controllers



When using only one remote controller, Lossnay fan speed is fixed at fan speed 3 or 4.

When using two remote controllers, all Lossnay functions are available.

\*1: Lossnay unit and Dx-coil unit both will synchronously switch on and off.

\*2: When one of the two remote controllers is turned ON, the other remote controller turns ON synchronously.

## Priority Mode Selection

Temperature priority mode (factory setting) or Fan speed priority mode are selectable when Lossnay unit fan speed is controlled by a CO<sub>2</sub>-sensor or a BMS (analog input (0 - 10 VDC) or a volt-free input).

\*During fan speed 1 or 2, the Dx-coil unit is always set to thermo-OFF

Operation mode	Fan speed order from external input	Actual fan speed	
		Temp. priority	Fan speed priority
Heating or Cooling	FS4	FS4	FS4
	FS3	FS3	FS3
	FS2	FS3	FS2
	FS1	FS3	FS1
Fan	FS4	FS4	FS4
	FS3	FS3	FS3
	FS2	FS2	FS2
	FS1	FS1	FS1

## Specifications

### GUG-01SL-E (Connection to LGH-50RVX-E or LGH-65RVX-E)

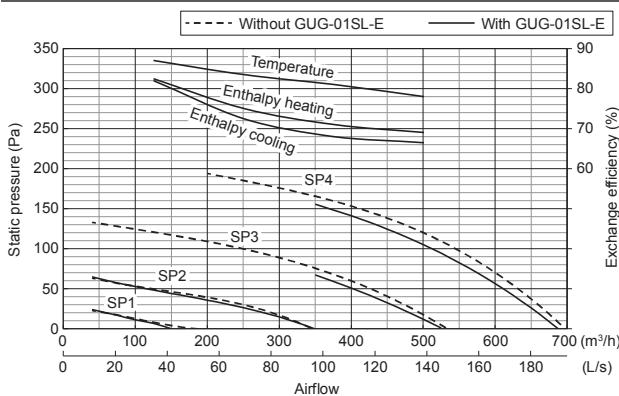


GUG-01SL-E

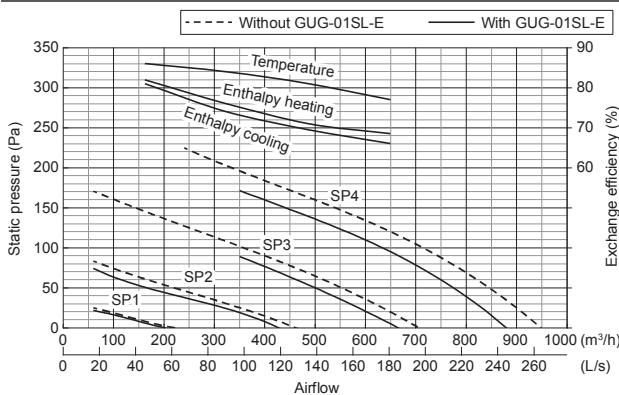
Refrigerant	R410A									
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)									
Input power	Heating / Fan: 2.5W, Cooling: 12.4W									
Running current	Less than 0.1A									
Weight	21kg *Accessories: Approx. 1kg									
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control									
RA (Return Air) temperature control										
Connectable Lossnay unit	LGH-50RVX-E			LGH-65RVX-E						
Capacity [kW]	Heating	6.5 ( 2.4 + 4.1 )			7.7 ( 3.2 + 4.5 )					
	Cooling	5.6 ( 2.0 + 3.6 )			6.6 ( 2.6 + 4.0 )					
SHF	0.66			0.69						
Performance index	Heating	4.09			4.72					
	Cooling	4.69			5.03					
Airflow range at SP3 and SP4	350 - 695 m <sup>3</sup> /h			350 - 900 m <sup>3</sup> /h						
Connectable outdoor unit	PUHZ-ZRP35			PUHZ-ZRP35						
Ext. piping	Diameter	Liquid / Gas: 6.35 / 12.7			Diameter	Liquid / Gas: 6.35 / 12.7				
	Maximum length: 50m, Maximum height: 30m			Maximum length: 50m, Maximum height: 30m						
Ventilation specifications										
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2			
Airflow	[m <sup>3</sup> /h]	500	375	250	125	650	488			
	[L/s]	139	104	69	35	181	135			
External static pressure [Pa]	105	59	26	7	95	53	24			
							6			

### Characteristic Curves

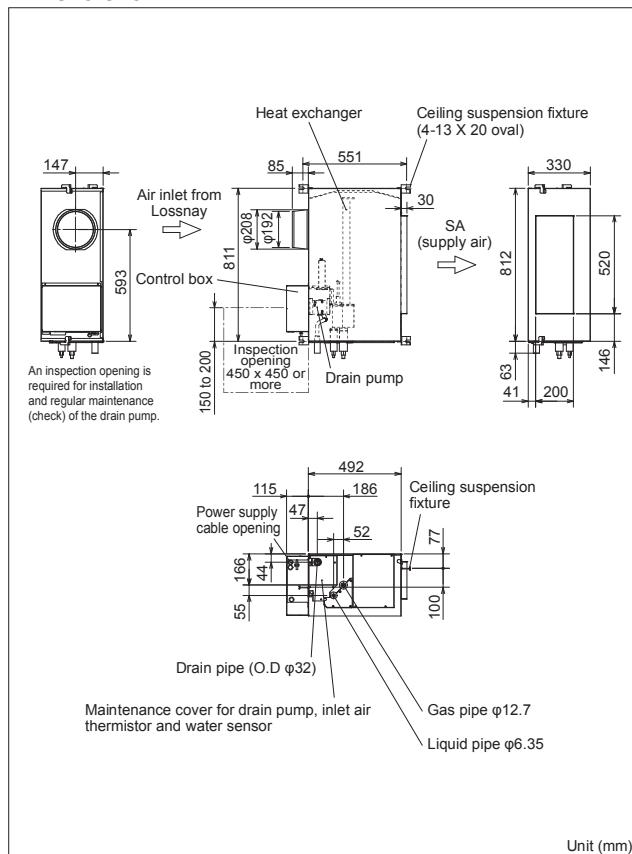
LGH-50RVX-E



LGH-65RVX-E



### Dimensions



## GUG-02SL-E (Connection to LGH-80RVX-E or LGH-100RVX-E)

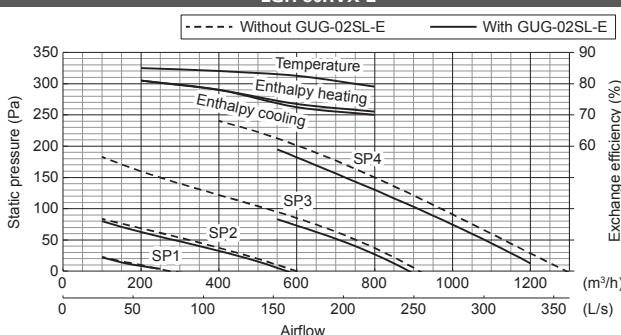


GUG-02SL-E

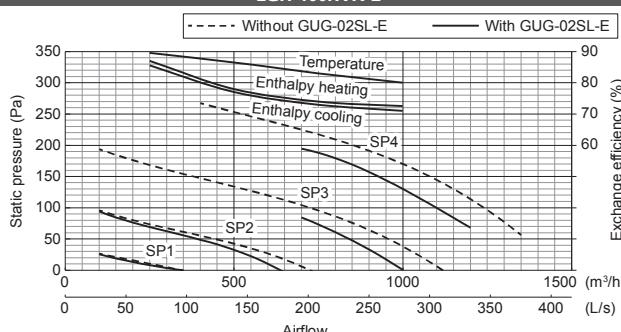
Refrigerant	R410A
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)
Input power	Heating / Fan: 2.5W, Cooling: 12.4W
Running current	Less than 0.1A
Weight	26kg *Accessories: Approx. 1kg
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]
RA (Return Air) temperature control	
Connectable Lossnay unit	LGH-80RVX-E
Capacity [kW]	Heating 10.0 ( 4.0 + 6.0 ) Cooling 8.3 ( 3.3 + 5.0 )
SHF	0.69
Performance index	Heating 4.62 Cooling 4.76
Airflow range at SP3 and SP4	560 - 1200 m³/h
Connectable outdoor unit	PUHZ-ZRP50
Ext. piping	Diameter Liquid / Gas: 6.35 / 12.7 Maximum length: 50m, Maximum height: 30m
Required optional parts	PAC-SH30RJ-E and PAC-SH50RJ-E
SA (Supply Air) temperature control	
Connectable Lossnay unit	LGH-80RVX-E
Capacity [kW]	Heating 10.0 ( 4.0 + 6.0 ) Cooling 8.3 ( 3.3 + 5.0 )
SHF	0.69
Performance index	Heating 4.62 Cooling 4.76
Airflow range at SP3 and SP4	560 - 1200 m³/h
Connectable outdoor unit	PUHZ-ZRP50
Ext. piping	Diameter Liquid / Gas: 6.35 / 12.7 Maximum length: 50m, Maximum height: 30m
Required optional parts	PAC-SH30RJ-E and PAC-SH50RJ-E
Ventilation specifications	
Connectable Lossnay unit	LGH-80RVX-E
Fan speed	SP4 SP3 SP2 SP1 SP4 SP3 SP2 SP1
Airflow	[m³/h] 800 600 400 200 1,000 750 500 250 [L/s] 222 167 111 56 278 208 139 69
External static pressure [Pa]	130 73 33 8 130 73 33 8

### Characteristic Curves

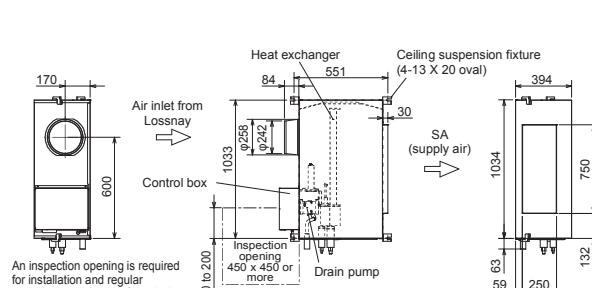
LGH-80RVX-E



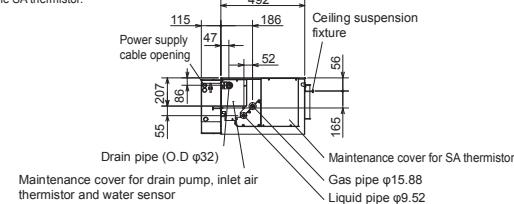
LGH-100RVX-E



### Dimensions



An inspection opening is required for installation and regular maintenance (check of the drain pump). When SA temp. control is selected, another inspection opening may be required in front of the unit for SA thermistor replacement only when an error occurred on the SA thermistor.



Unit (mm)

## Specifications

### GUG-03SL-E (Connection to LGH-150RVX-E or LGH-200RVX-E)

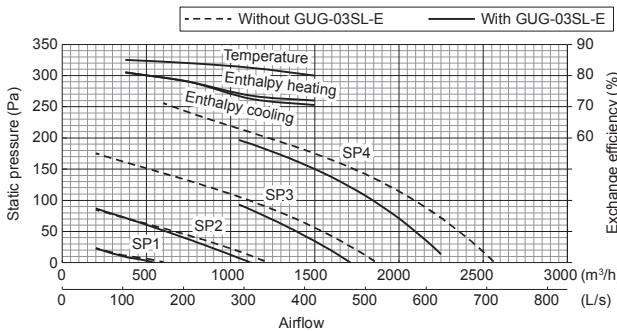


GUG-03SL-E

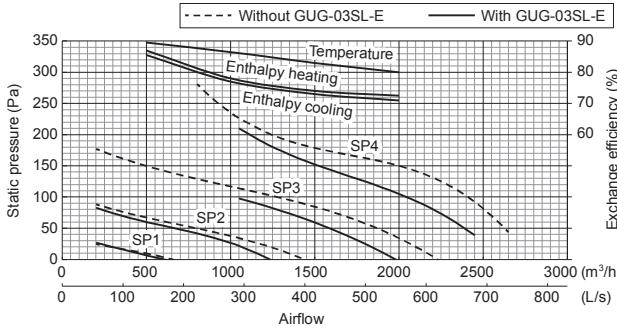
Refrigerant	R410A										
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)										
Input power	Heating / Fan: 2.5W, Cooling: 12.4W										
Running current	Less than 0.1A										
Weight	28kg *Accessories: Approx. 1kg										
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]										
RA (Return Air) temperature control											
Connectable Lossnay unit	LGH-150RVX-E										
Capacity [kW]	Heating	20.7 ( 7.7 + 13.0 )									
	Cooling	15.8 ( 6.3 + 9.5 )									
SHF	0.68										
Performance index	Heating	4.24									
	Cooling	5.27									
Airflow range at SP3 and SP4	1050 - 2250 m³/h										
Connectable outdoor unit	PUHZ-ZRP100										
Ext. piping	Diameter	Liquid / Gas: 9.52 / 15.88	Diameter	Liquid / Gas: 9.52 / 15.88							
	Maximum length: 75m, Maximum height: 30m										
SA (Supply Air) temperature control											
Connectable Lossnay unit	LGH-150RVX-E										
Capacity [kW]	Heating	16.6 ( 7.7 + 8.9 )									
	Cooling	13.4 ( 6.3 + 7.1 )									
SHF	0.85										
Performance index	Heating	5.46									
	Cooling	5.32									
Airflow range at SP3 and SP4	1050 - 2250 m³/h										
Connectable outdoor unit	PUHZ-ZRP71										
Ext. piping	Diameter	Liquid / Gas: 9.52 / 15.88	Diameter	Liquid / Gas: 9.52 / 15.88							
	Maximum length: 50m, Maximum height: 30m										
Ventilation specifications											
Connectable Lossnay unit	LGH-150RVX-E										
Fan speed	SP4	SP3	SP2	SP1	SP4	SP3	SP2				
Airflow	[m³/h]	1,500	1,125	750	375	2,000	1,500	1,000			
	[L/s]	417	313	208	104	556	417	278			
External static pressure [Pa]	150										
	84										
	38										
	9										
	105										
	59										
	26										
	7										

### Characteristic Curves

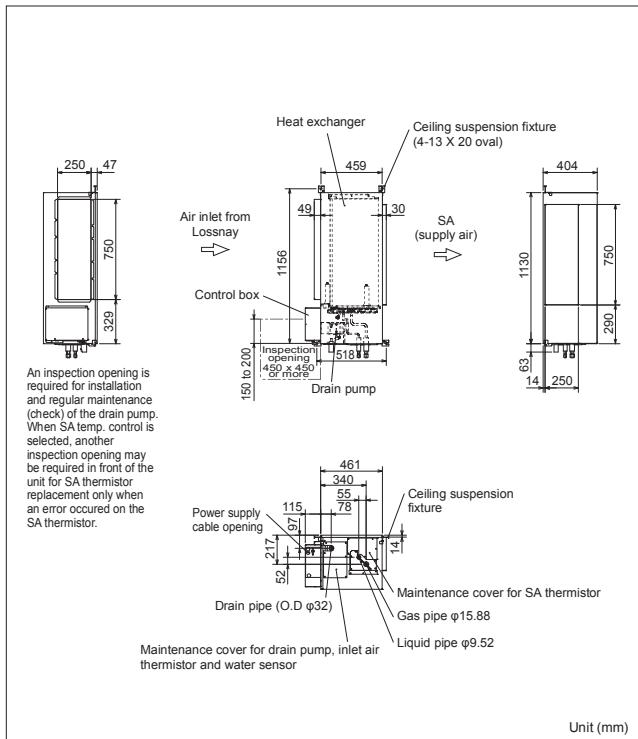
LGH-150RVX-E



LGH-200RVX-E



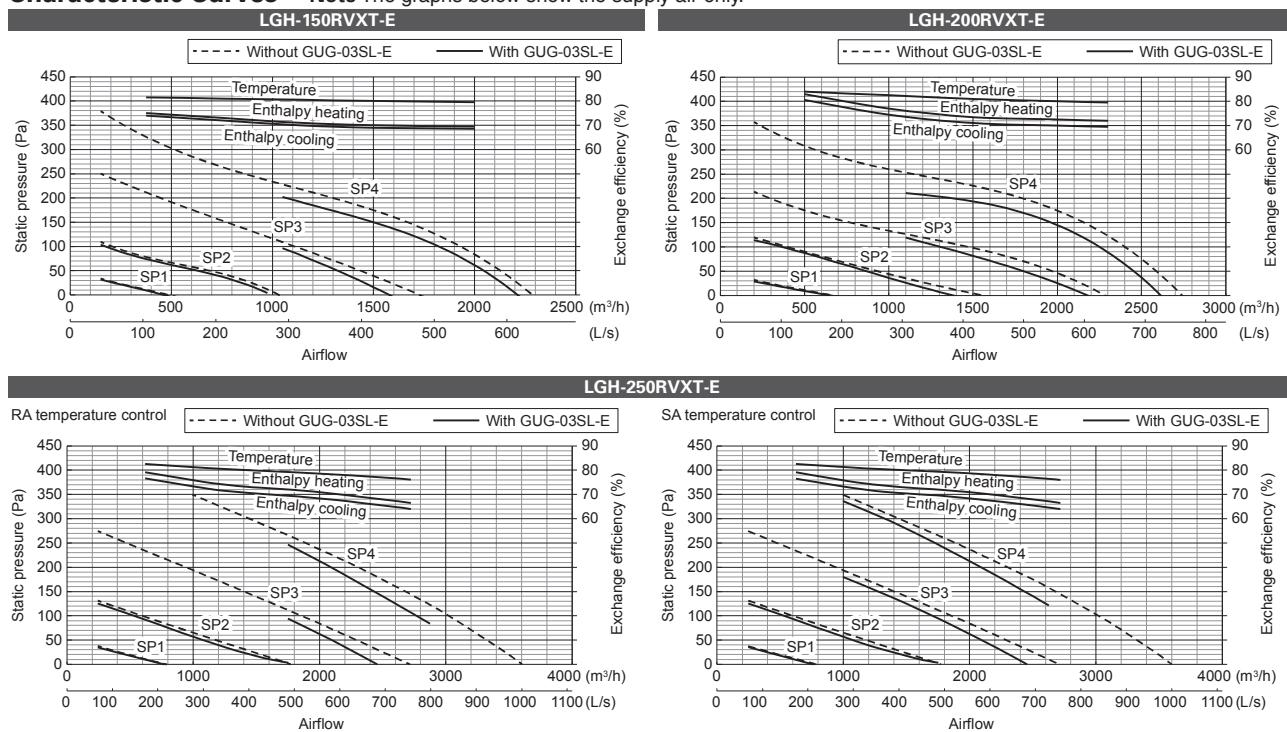
### Dimensions



## GUG-03SL-E (Connection to LGH-150RVXT-E, LGH-200RVXT-E or LGH-250RVXT-E)

Refrigerant	R410A		
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)		
Input power	Heating / Fan: 2.5W, Cooling: 12.4W		
Running current	Less than 0.1A		
Weight	28kg *Accessories: Approx. 1kg		
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]		
RA (Return Air) temperature control			
Connectable Lossnay unit	LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Capacity [kW]	Heating 20.4 ( 7.4 + 13.0 ) Cooling 15.7 ( 6.2 + 9.5 )	23.8 ( 10.3 + 13.5 ) 18.4 ( 8.4 + 10.0 )	26.1 ( 12.1 + 14.0 ) 22.3 ( 9.8 + 12.5 )
SHF	0.68	0.76	0.87
Performance index	Heating 4.07 Cooling 5.03	4.86 5.59	4.75 4.59
Airflow range at SP3 and SP4	1050 - 2250 m³/h	1050 - 2600 m³/h	1750 - 2880 m³/h
Connectable outdoor unit	PUHZ-ZRP100	PUHZ-ZRP100	PUHZ-ZRP125
Ext. piping	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 75m, Maximum height: 30m	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 75m, Maximum height: 30m	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 75m, Maximum height: 30m
SA (Supply Air) temperature control			
Connectable Lossnay unit	LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Capacity [kW]	Heating 16.3 ( 7.4 + 8.9 ) Cooling 13.3 ( 6.2 + 7.1 )	19.5 ( 10.3 + 9.2 ) 15.9 ( 8.5 + 7.4 )	21.6 ( 12.1 + 9.5 ) 17.6 ( 9.8 + 7.8 )
SHF	0.86	0.90	0.95
Performance index	Heating 5.16 Cooling 5.03	6.01 5.54	5.97 5.31
Airflow range at SP3 and SP4	1050 - 2250 m³/h	1050 - 2600 m³/h	1000 - 2600 m³/h
Connectable outdoor unit	PUHZ-ZRP71	PUHZ-ZRP71	PUHZ-ZRP71
Ext. piping	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 50m, Maximum height: 30m	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 50m, Maximum height: 30m	Diameter Liquid / Gas: 9.52 / 15.88 Maximum length: 50m, Maximum height: 30m
Ventilation specifications			
Connectable Lossnay unit	LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Fan speed	SP4 SP3 SP2 SP1	SP4 SP3 SP2 SP1	SP4 SP3 SP2 SP1
Airflow	[m³/h] 1,500 1,125 750 375	2,000 1,500 1,000 500	2,500 1,875 1,250 625
External static pressure [Pa]	417 313 208 104	556 417 278 139	694 521 347 174
	External static pressure [Pa]	82 36 9 145	9 140 79 35
			9

**Characteristic Curves** Note The graphs below show the supply air only.



### Attention

- The running current and input power are based on 230V/50Hz.
- The cooling and heating capacities are based on the air conditions listed below and the rated airflow of fan speed 4.  
Cooling Indoor: 27°CDB/19°CWB, Outdoor: 35°CDB/24°CWB  
Heating Indoor: 20°CDB/15°CWB, Outdoor: 7°CDB/6°CWB
- The first figure in ( ) of the capacity specification is the heat recovery energy of the Lossnay unit. The second figure is the capacity specification for the Dx-coil connected to the outdoor unit.
- "Performance index" is the calculated value at the temperature conditions above, and is for reference purpose only.  
Performance index = Total capacity ÷ total power consumption of outdoor unit and Lossnay unit
- The external static pressure listed in the tables includes the static pressure loss of the Dx-coil unit when using a 50cm straight duct between the Lossnay and Dx-coil units. When the duct work between the Lossnay and Dx-coil units is longer and/or bent, the pressure loss of the duct work should be included in the pressure loss calculation.
- The designed airflow of the system (Lossnay, Dx-coil and duct work) at fan speed 3 and 4 should be kept within "Airflow range at SP3 and SP4" listed in the tables. This range is shown as the solid line in graphs of the characteristic curves. If the Lossnay airflow is out of this range, the compressor of the outdoor unit may stop for self-protection purposes.
- By installing the Dx-coil unit with a Lossnay unit, the air blow noise level is quieter at fan speed 4. Please refer to the "Direct Expansion coil unit for Lossnay" catalog.
- Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit or disassemble the product yourself and always ask a professional.

# Residential Use Lossnay

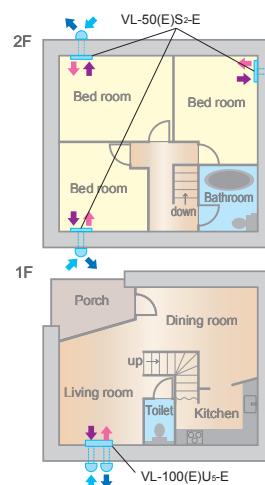
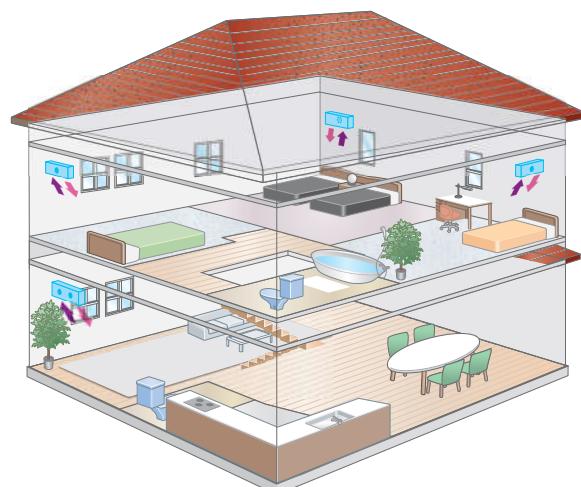
Mitsubishi Electric offers decentralized and centralized ventilation solutions for optimizing your indoor air quality by Lossnay.

## Decentralized Ventilation Solution

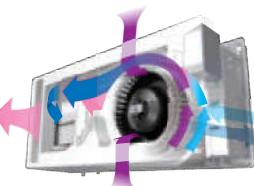
Install a wall-mounted Lossnay in each room.

The heat recovery system provides fresh air at a comfortable air temperature.

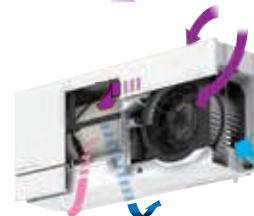
Total heat exchangers effectively reduce heat loss.



**2F**  
Model:  
**VL-50(E)S<sub>2</sub>-E**  
**VL-50SR<sub>2</sub>-E**

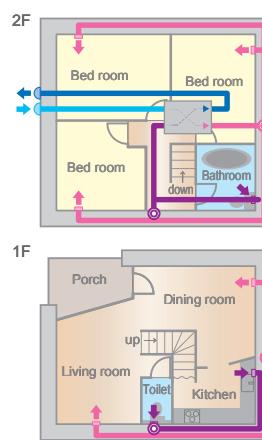
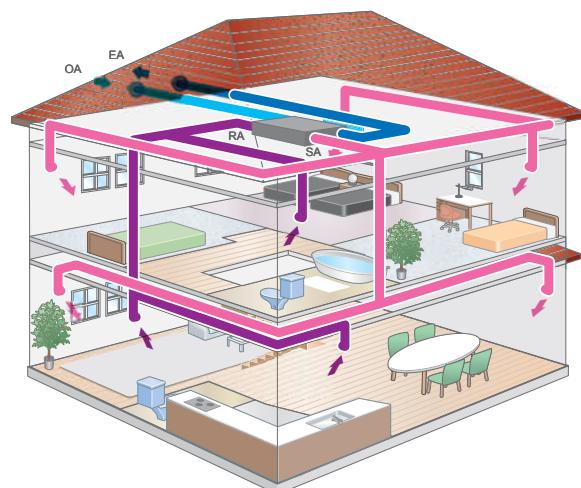


**1F**  
Model:  
**VL-100(E)U<sub>5</sub>-E**



## Centralized Ventilation Solution

One Lossnay unit provides 24-hour ventilation for the entire house, from living room and bedrooms to the bathroom. The heat recovery system provides fresh air at a comfortable air temperature. A sensible heat exchanger effectively reduces excess humidity in the winter.



**Model:**  
**VL-220CZGV-E**

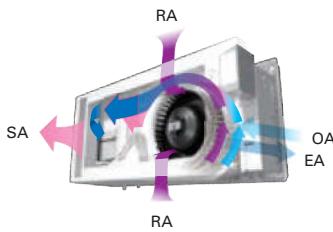


## Decentralized ventilation: VL-50(E)S2-E, VL-50SR2-E and VL-100(E)U5-E

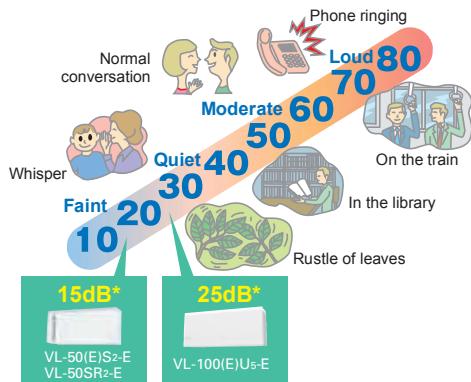
### Product Advantages

#### Simultaneous Air Supply and Exhaust

Air is supplied and exhausted simultaneously while transferring the heat.



The low noise level is good for bedrooms and children's rooms.



\*Condition: 50Hz, 230V, low fan speed

#### Energy Efficient

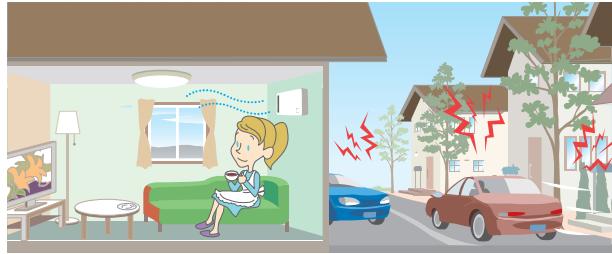
- Total heat exchanger minimizes heat loss.
- A temperature efficiency of over 80% \* is achieved.

\*VL-100(E)U5-E at low fan speed at 230V 50Hz

\*VL-50(E)S2-E and VL-50SR2-E at low fan speed at 230V 50Hz

#### Sound Insulation

A sound insulation effect reduces noise generated outside.



Sound Insulation Effect	Average sound pressure on ~ side (dB)	Average sound pressure on ~ side (dB)	Difference
	103.4	63.2	40.2

\*Tested using VL-08S2-AE

\*Measured at an average sound pressure level of more than 30dB at 500Hz according to JIS A1416.

VL-08S2-AE is a dedicated Japanese model equivalent to VL-50(E)S2-E

### Product Features

#### Stylish Design

Matches any interior decor to create a comfortable room.



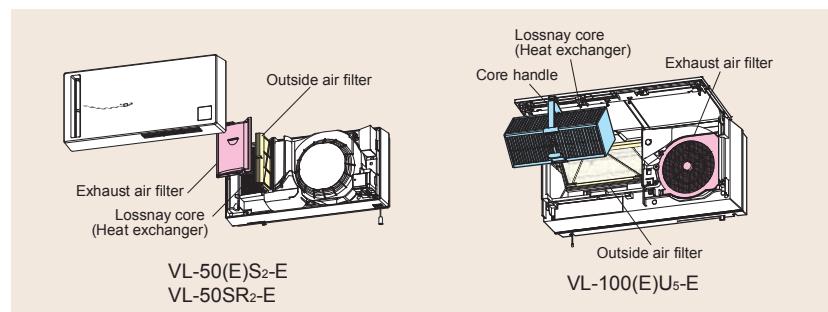
VL-50(E)S2-E  
VL-50SR2-E



VL-100(E)U5-E

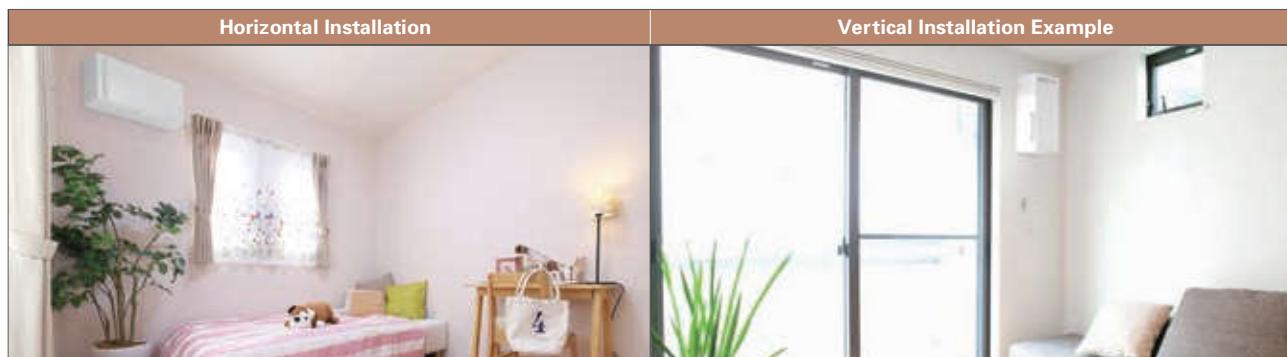
#### Easy Maintenance

The only maintenance that is required is cleaning the outside and exhaust air filters. The filters are easily accessible for quick and thorough cleaning.



#### Flexible Installation (For VL-50(E)S2-E and VL-50SR2-E)

The VL-50(E)S2-E and VL-50SR2-E can be installed not only horizontally but also vertically. Their flexible installation makes them a perfect fit in various types of rooms.



## Centralized ventilation: VL-220CZGV-E

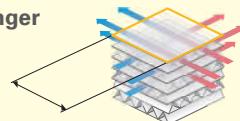
### Product Advantages

#### Newly Developed Heat Exchanger

- During ventilation, Lossnay recovers warmth in the winter and keeps air cool in the summer.
- Reduces heating and cooling loads with a maximum exchange efficiency of 86%\*.

#### Normal Square Heat Exchanger

Simple structure contributes to minimising pressure loss and reducing power consumption.



#### Energy Efficient

- The highest energy-saving performance in its class. (8.5W\* minimum input power)
- Saves heating and cooling costs by minimising energy loss that occurs during ventilation.



#### Diamond Heat Exchanger

The diamond design allows for longer air passages and helps realise higher exchange efficiency.



#### Quiet

- At an ultra quiet 14dB\*, it is the quietest product in its class.
- Blocks outside noise for a more comfortable environment.



\*Fan speed 1

### Product Features

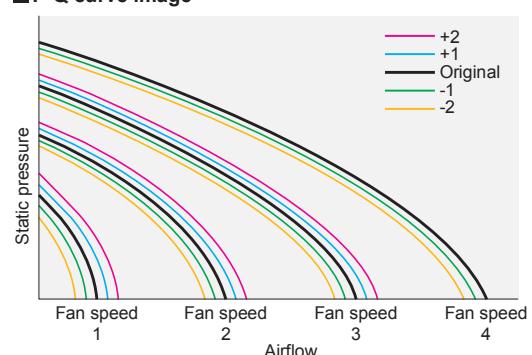
#### Precise Fan Speed Adjustment Function

Each main fan speed value can be further adjusted slightly.

Use the PZ-61DR-E remote controller to adjust the speed.

- 1) Considering the total hours of Lossnay operation (filter clogging), fan power can be adjusted automatically after a given period of time.
- 2) After the unit is installed, fine adjustments can be made if the airflow is slightly lower or higher than the desired airflow. (Fan speed 4 can only be adjusted 1 or 2 steps down.)

#### P-Q curve image



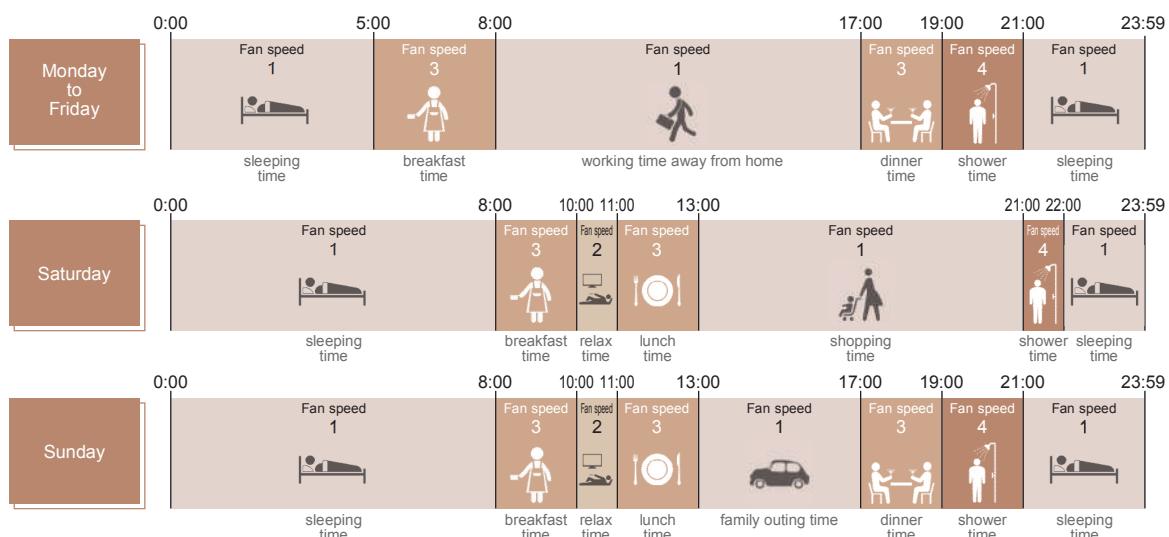
#### Multi Ventilation (Power Supply and Exhaust) Mode

This mode allows the air supply/exhaust balance to be varied dynamically. The supply/exhaust balance can be selected to suit the usage environment.

Normal Mode	Power Supply Mode	Power Exhaust Mode
Relax time 	Adjust the indoor pressure balance in case a separate exhaust is installed 	Increase indoor pressure to prevent unfiltered drafts from coming in 

#### Weekly Timer

Operation patterns for each day of the week. ON/OFF and airflow can be set using the weekly timer function (up to eight zones per day). This function contributes to enhanced energy-saving operation.



\*Example for reference only.

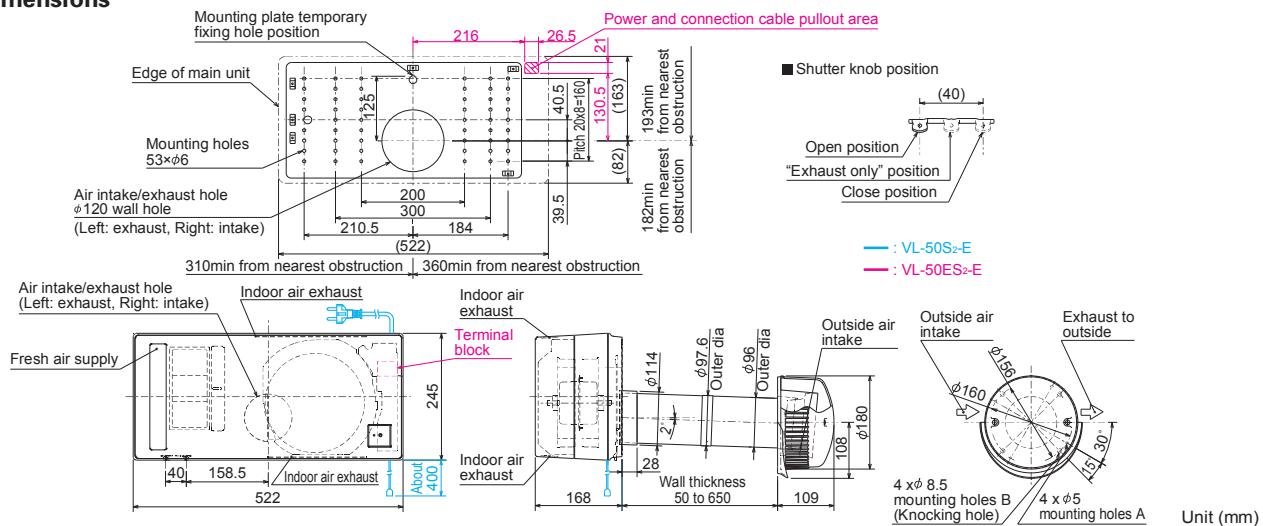
## Residential Lossnay Specifications

### Model: VL-50S2-E (Pull-Switch Model) and VL-50ES2-E (Wall-Switch Model)

Model	VL-50(E)S <sub>2</sub> -E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m <sup>3</sup> /h)	51	15	52.5	16	54	17	54	17
Power consumption (W)	19	4	20	4.5	21	5	21	5.5
Temperature exchange efficiency (%)	70	86	69	85	68	84	68	84
Noise level (dB)	36.5	14	37	15	37.5	15.5	37.5	15.5
Weight (kg)	6.2							
Specific energy consumption class	C							

\*Figures in the chart were measured according to Japan Industrial Standard (JIS B 8628) with the shutter knob in open position.

### Dimensions

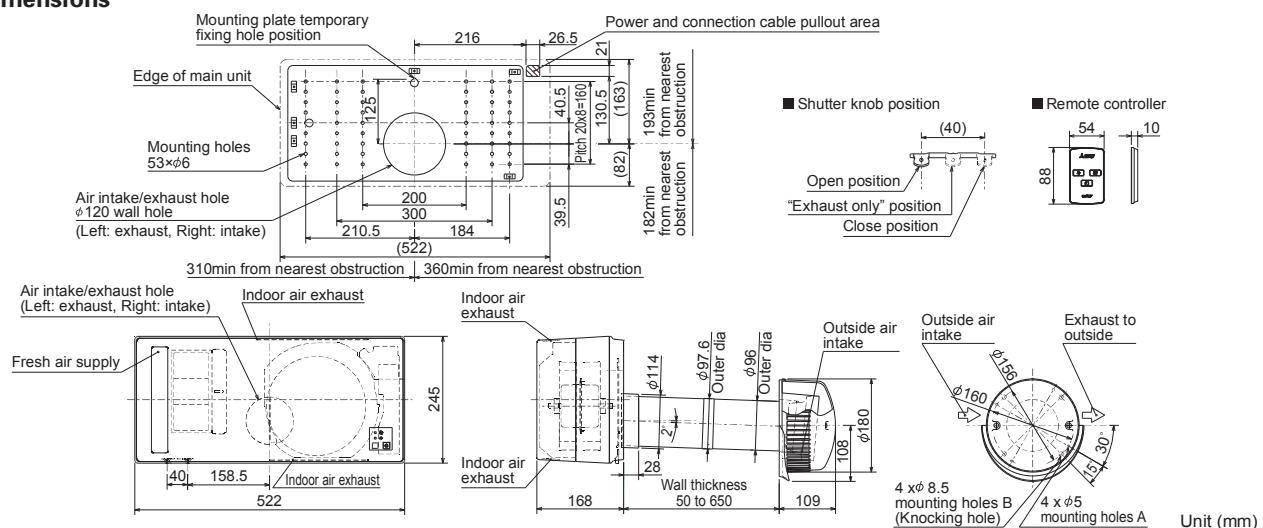


### Model: VL-50SR2-E (Remote Controller Model)

Model	VL-50SR <sub>2</sub> -E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m <sup>3</sup> /h)	51	15	52.5	16	54	17	54	17
Power consumption (W)	19	4.5	20	5	21	5.5	21	6
Temperature exchange efficiency (%)	70	86	69	85	68	84	68	84
Noise level (dB)	36.5	14	37	15	37.5	15.5	37.5	15.5
Weight (kg)	6.2							
Specific energy consumption class	C							

\*Figures in the chart were measured according to Japan Industrial Standard (JIS B 8628) with the shutter knob in open position.

### Dimensions

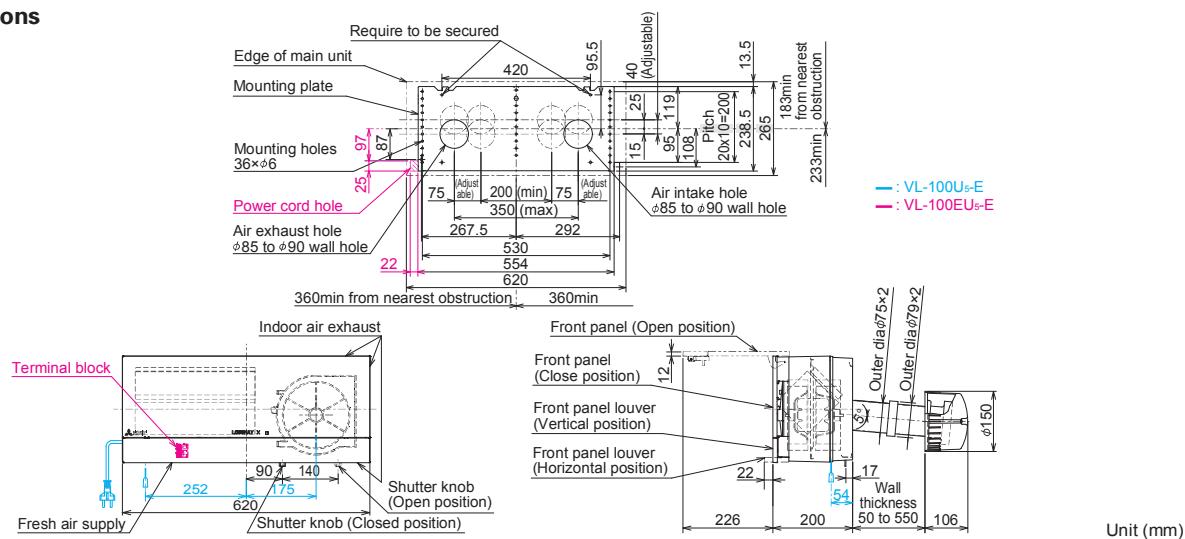


## Model: VL-100U5-E (Pull-Switch Model) and VL-100EU5-E (Wall-Switch Model)

Model	VL-100(E)U <sub>5</sub> -E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m <sup>3</sup> /h)	100	55	105	60	106	61	103	57
Power consumption (W)	30	13	31	15	34	17	34	17
Temperature exchange efficiency (%)	73	80	73	80	72	79	73	80
Noise level (dB)	36.5	24	37	25	38	27	38	25
Weight (kg)	7.5							
Specific energy consumption class	B							

\*Figures in the chart were measured according to Japan Industrial Standard (JIS B 8628) with the shutter knob in open position.

### Dimensions

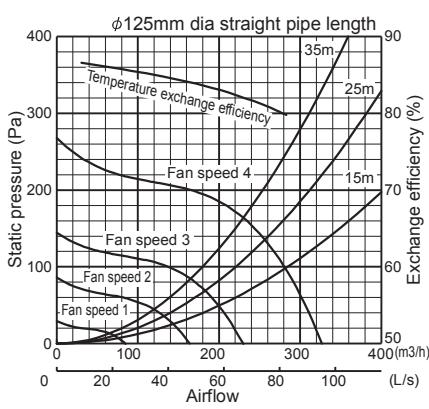


## Model: VL-220CZGV-E

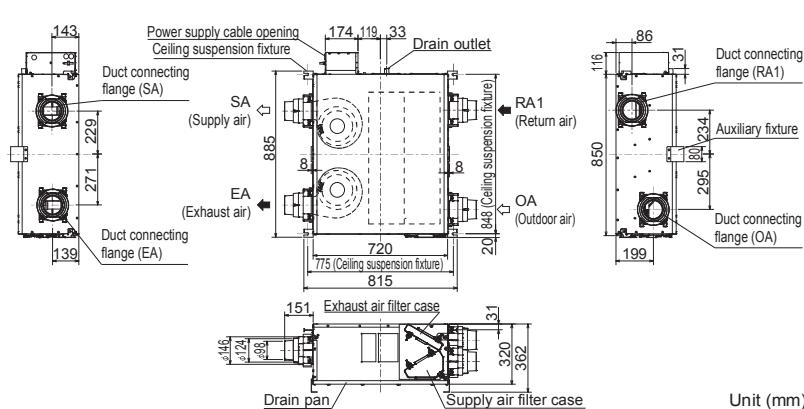
Model	VL-220CZGV-E			
Electrical power supply	220-240V/50Hz 220V/60Hz			
Ventilation mode	Heat recovery mode			
Fan speed	Fan speed 4	Fan speed 3	Fan speed 2	Fan speed 1
Running current	0.60	0.29	0.18	0.11
Input power (W)	80	35	18.5	8.5
Airflow (m <sup>3</sup> /h) (L/s)	230 64	165 46	120 33	65 18
External static pressure (Pa)	164	84	44	13
Temperature exchange efficiency (%)	82	84	85	86
Noise level (dB)	31	25	19	14
Weight (kg)	31			
Specific energy consumption class	A			

\*Figures in the chart were measured according to Japan Industrial Standard (JIS B 8628). Characteristic curves were measured by chamber method.

### Characteristic Curve



### Dimensions



## Accessories

### Parts for VL-50(E)S<sub>2</sub>-E and VL-50SR<sub>2</sub>-E

Filters, Extension Pipe and Stainless Hood

Type	Replacement Filter	High Efficiency Filter	Extension Pipe	Joint	Stainless Hood
Design		 <small>Optional</small>	 <small>Optional</small>	 <small>Optional</small>	 <small>Optional</small>
Model	P-50F <sub>2</sub> -E	P-50HF <sub>2</sub> -E	P-50P-E	P-50PJ-E	P-50VSQ <sub>5</sub> -E
Feature	–	–	Total length when connected to the joint is 350mm.	Joint for extension pipe	Stylish stainless hood
Classification (EN779:2012)	G3	–	–	–	–
Classification (ISO16890)	Coarse 35%	ePM10 75%	–	–	–

### Parts for VL-100(E)U<sub>5</sub>-E

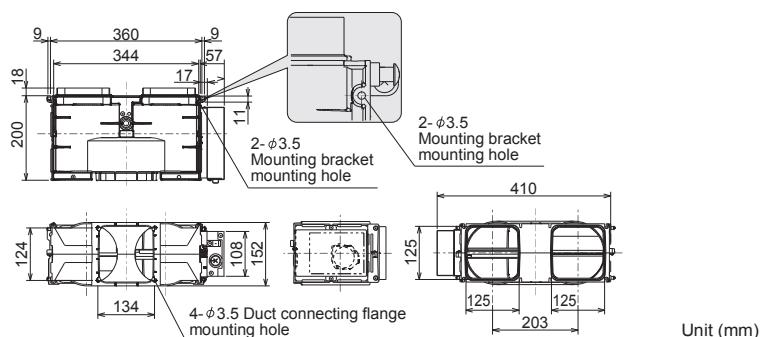
Filters and Extension Pipe

Type	Replacement Filter	High Efficiency Filter	Extension Pipe	Joint
Design		 <small>Optional</small>	 <small>Optional</small>	 <small>Optional</small>
Model	P-100F <sub>5</sub> -E	P-100HF <sub>5</sub> -E	P-100P-E	P-100PJ-E
Feature	–	–	Total length when connected to the joint is 300mm.	• Joint for extension pipe • Screw-in method
Classification (EN779:2012)	G3	M6	–	–
Classification (ISO16890)	Coarse 35%	ePM10 70%	–	–

### Parts for VL-220CZGV-E

Bypass Damper

Model: P-133DUE-E



Filters

Type	Standard Replacement Filter	Medium Efficiency Exhaust Air Filter	High Efficiency Supply Air Filter
Design		 <small>Optional</small>	 <small>Optional</small>
Model	P-220F-E	P-220EMF-E	P-220SHF-E
Classification (EN779:2012)	G3	G4	M6
Classification (ISO16890)	Coarse 35%	ePM10 50%	ePM10 70%