








L OSSNAY SYSTEM



LOSSNAY LINEUP

Application		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 										●	●	●
		GUG Series 						●			●			
	Optional Unit	Dx-coil unit for Lossnay LGH-RVX/RVXT Series GUG Series 						●	●	●	●	●	●	●
Residential Use	Centralized Ventilation	VL-220CZGV-E 				●								
	Decentralized Ventilation	VL-100(E)U ₅ -E 		●										
		VL-50(E)S ₂ -E VL-50SR ₂ -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.

GUG Series

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

VL-220CZGV-E

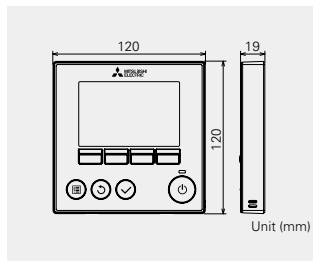
Centralized ventilation with sensible heat exchange, for residential use.

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

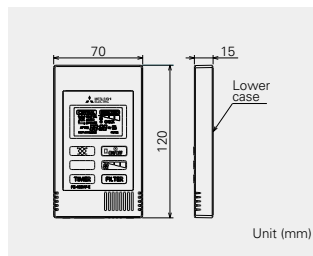
Wall-mounted models. Particularly suitable for houses and small offices.

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	Heat recovery / Bypass / Auto (available with optional part P-133DUE-E)	Energy recovery / Bypass / Auto	Heat 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

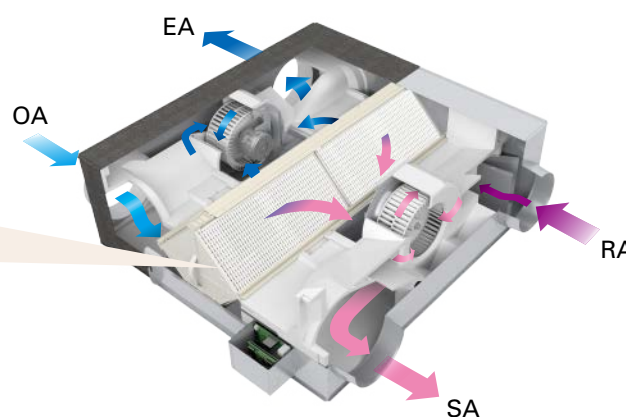
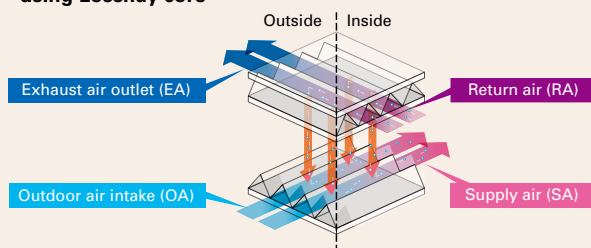
Lossnay ventilation systems are renowned industry-wide for their efficiency. They offer environment-friendly energy recovery and humidity control, and enable air conditioning systems to simultaneously provide optimum room comfort and energy savings.



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.

● The concept of sensible heat and latent heat exchange using Lossnay core

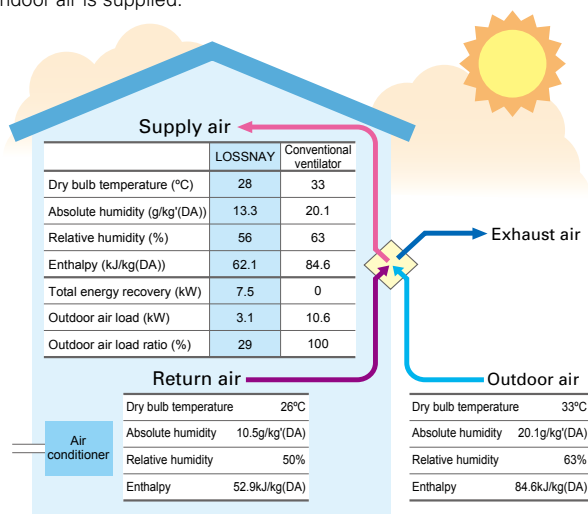


What Can Be Improved by Introducing Lossnay?

● Ventilation with maximized comfort

In summer

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



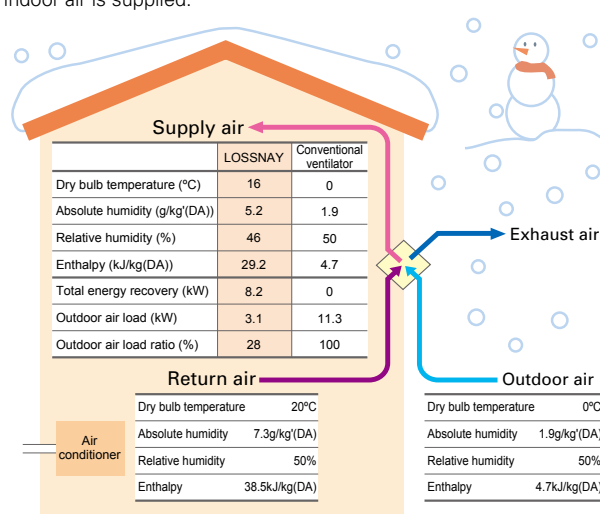
Heat recovery calculation

$$\text{Indoor supply-air temperature (°C)} = \text{Outdoor temperature (°C)} - \left\{ \text{Outdoor temperature (°C)} - \text{Indoor temperature (°C)} \right\} \times \text{Temp recovery efficiency (\%)} \\ \text{Calculation example: } 28^{\circ}\text{C} = 33^{\circ}\text{C} - (33^{\circ}\text{C} - 26^{\circ}\text{C}) \times 71.5\%$$

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

In winter

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



Heat recovery calculation

$$\text{Indoor supply-air temperature (°C)} = \left\{ \text{Indoor temperature (°C)} - \text{Outdoor temperature (°C)} \right\} \times \text{Temp recovery efficiency (\%)} + \text{Outdoor temperature (°C)} \\ \text{Calculation example: } 16^{\circ}\text{C} = (20^{\circ}\text{C} - 0^{\circ}\text{C}) \times 80\% + 0^{\circ}\text{C}$$

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

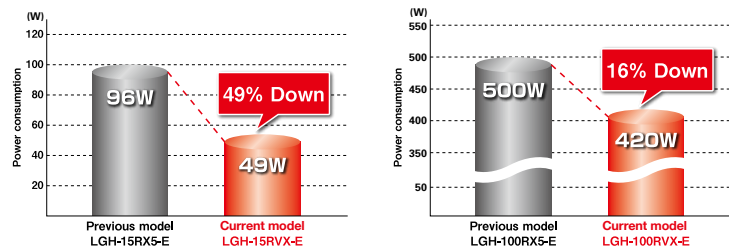
Commercial Use Lossnay

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

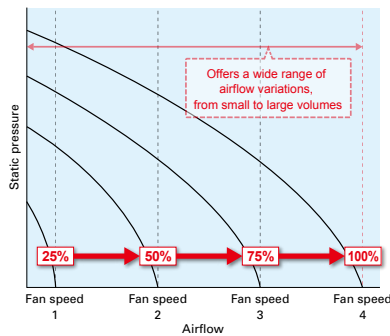
Each fan speed has a range setting of 25, 50, 75 and 100%, allowing much finer airflow control. When used in combination with the CO₂ sensor or timer function, airflow can be controlled according to conditions that realize better performance and reduce power consumption.

Fan speed adjustment function

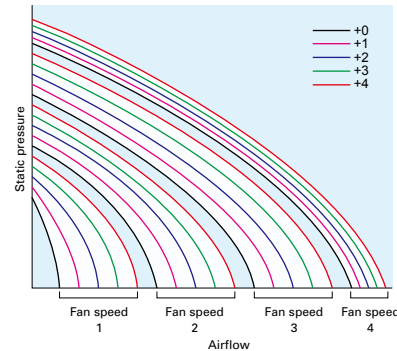
The default fan speed value can be adjusted slightly. Use the PZ-61DR-E remote controller to reset the speed.

- 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

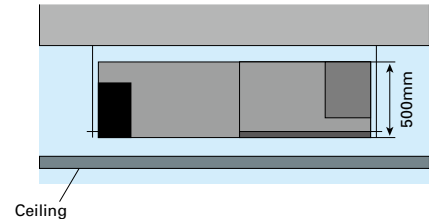
■ LGH-150/200/250RVXT-E



Height: 500mm

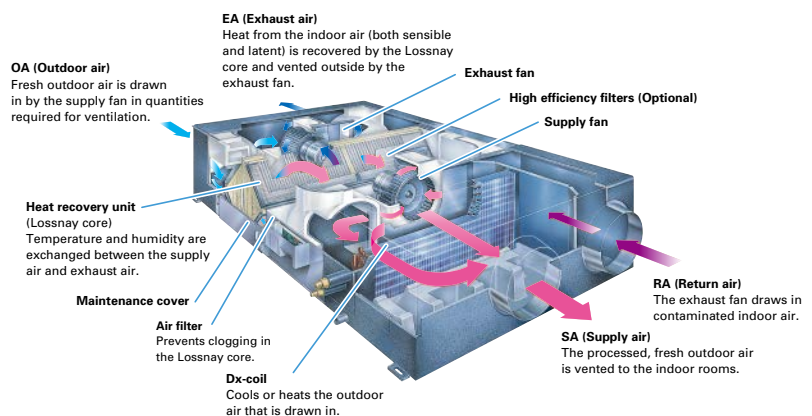
38%
Thinner
body

■ LGH-RVXT installation image



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.



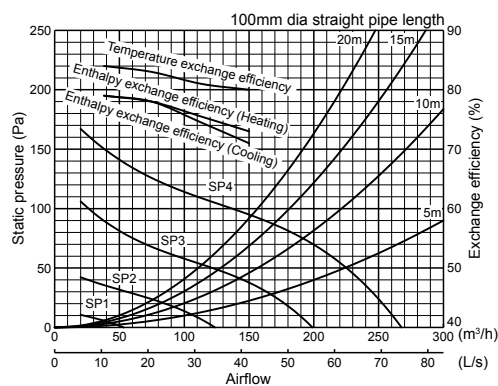
Commercial Use Lossnay Specifications

RVX Series

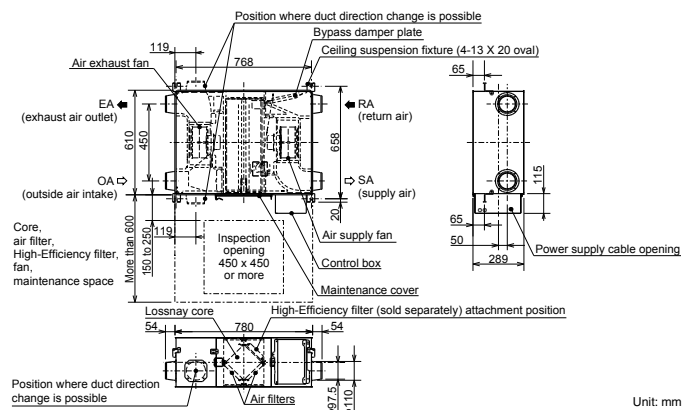
LGH-15RVX-E

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 ³ /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



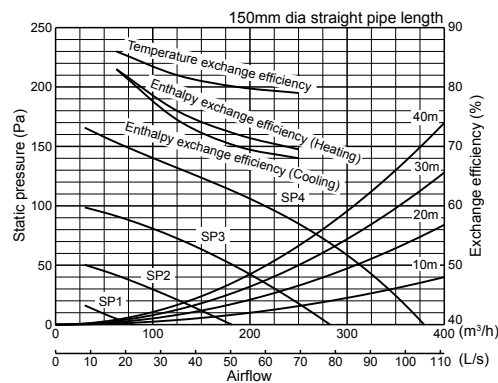
Dimensions



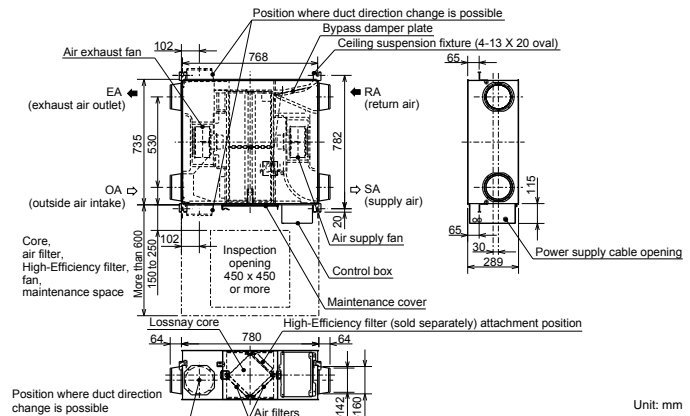
LGH-25RVX-E

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 ³ /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-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.

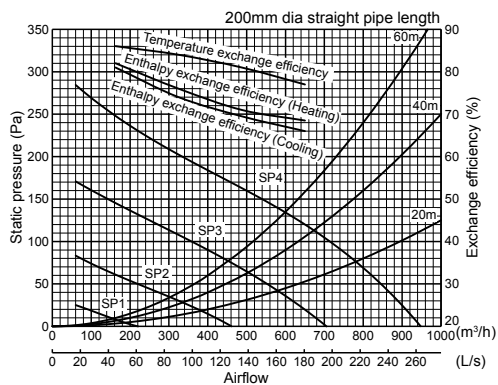
* For specifications at other frequencies, contact your dealer.

Commercial Use Lossnay Specifications

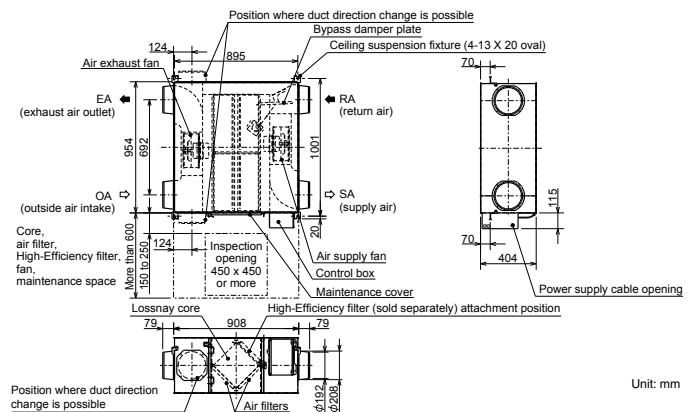
LGH-65RVX-E

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 ³ /h)	650	488	325	163	650	488	325
	(L/s)	181	135	90	45	181	135	90
External static pressure (Pa)		120	68	30	8	120	68	30
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
Weight (kg)	38							

Characteristic Curves



Dimensions

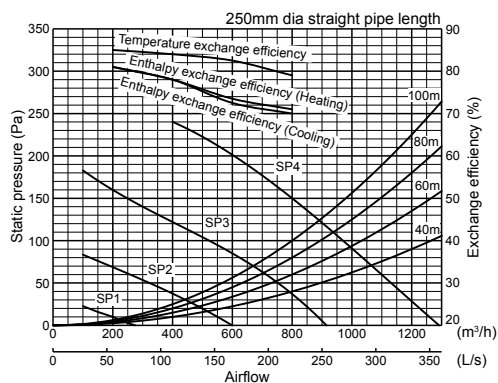


Unit: mm

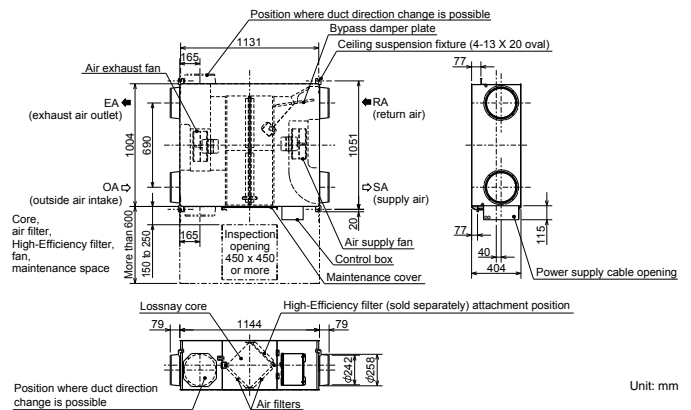
LGH-80RVX-E

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 ³ /h)	800	600	400	200	800	600	400
	(L/s)	222	167	111	56	222	167	111
External static pressure (Pa)		150	85	38	10	150	85	38
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
Weight (kg)	48							

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.

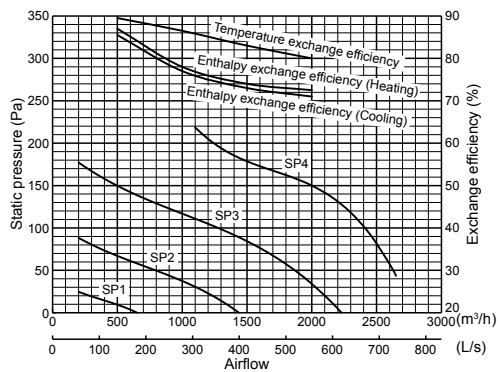
* For specifications at other frequencies, contact your dealer.

Commercial Use Lossnay Specifications

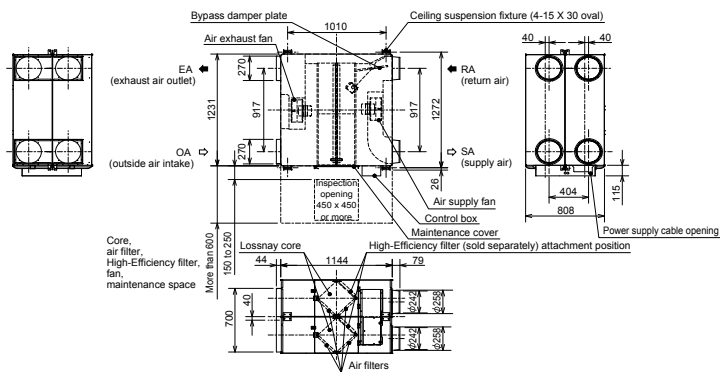
LGH-200RVX-E

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)		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	(m³/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



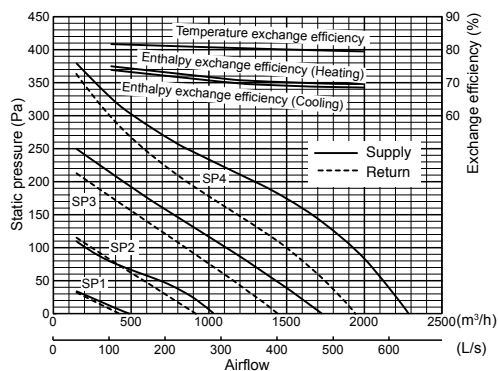
Unit: mm

RVXT Series

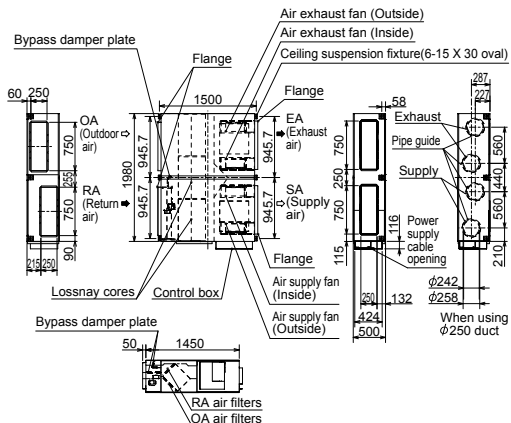
LGH-150RVXT-E

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)		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	(m³/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.

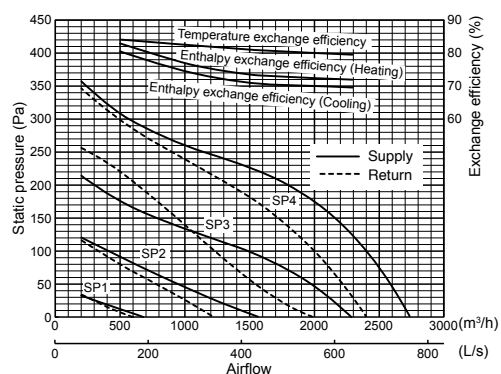
* Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

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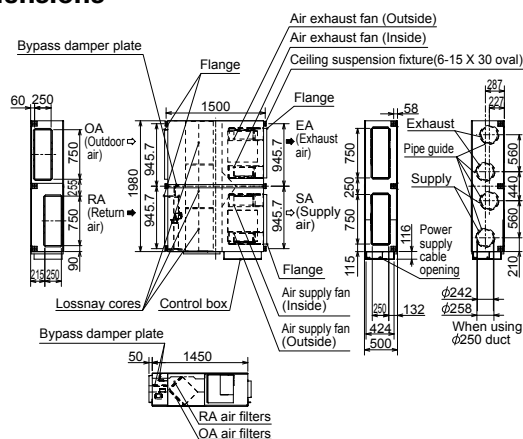
LGH-200RVXT-E

Electrical power supply	220-240V/50Hz, 220V/60Hz							
Ventilation mode	Heat recovery 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	(m³/h)	2000	1500	1000	500	2000	1500	1000
	(L/s)	556	417	278	139	556	417	278
External static pressure (Pa)	Supply	175	98	44	11	175	98	44
	Return	100	56	25	6	100	56	25
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
Weight (kg)	159							

Characteristic Curves



Dimensions

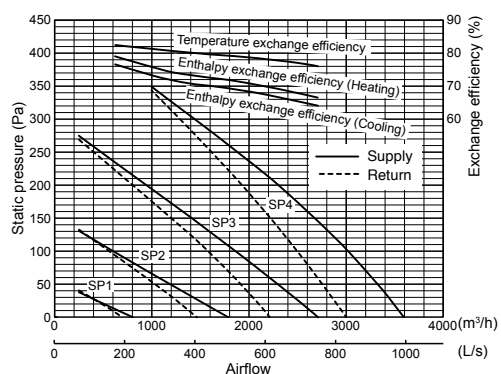


Unit: mm

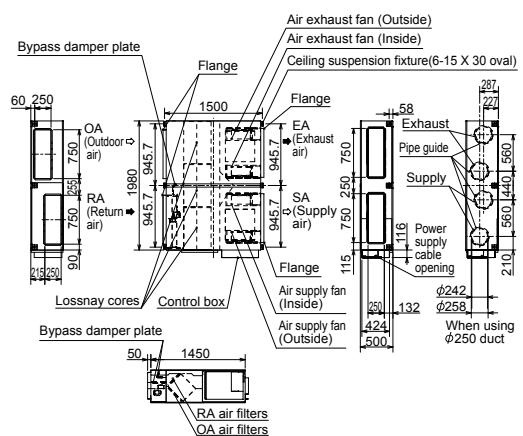
LGH-250RVXT-E

Electrical power supply	220-240V/50Hz, 220V/60Hz							
Ventilation mode	Heat recovery 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	(m³/h)	2500	1875	1250	625	2500	1875	1250
	(L/s)	694	521	347	174	694	521	347
External static pressure (Pa)	Supply	175	98	44	11	175	98	44
	Return	100	56	25	6	100	56	25
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
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.

GUF Series

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	(m³/h)	500	400	500	400
	(L/s)	139	111	139	111
External static pressure (Pa)		140	90	140	90
Temperature exchange efficiency (%)		77.5	80	—	—
Enthalpy exchange efficiency (%)	Heating	68	71	—	—
	Cooling	65	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 (ka)		48			

[illegible]

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	(m³/h)	1000	800	1000	800
	(L/s)	278	222	278	222
External static pressure (Pa)		140	90	140	90
Temperature exchange efficiency (%)		79.5	81.5	—	—
Enthalpy exchange efficiency (%)	Heating	71	74	—	—
	Cooling	69	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			

[illegible]

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

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	(m³/h)	500	400	500	400
	(L/s)	139	111	139	111
External static pressure (Pa)		125	80	125	80
Temperature exchange efficiency (%)		77.5	80	—	—
Enthalpy exchange efficiency (%)	Heating	68	71	—	—
	Cooling	65	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 × 10⁴Pa		Maximum pressure : 49.0 × 10⁴Pa	
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)			

Figure 10 is a performance characteristics graph for a 200mm diameter pipe straight length. The graph has two y-axes: the left axis represents 'Exchange efficiency (%)' ranging from 0 to 90, and the right axis represents 'Static pressure (Pa)' ranging from 0 to 300. The x-axis has two scales: 'Airflow (L/s)' ranging from 0 to 220 and 'Airflow (m³/h)' ranging from 0 to 800. There are four main curves plotted:

- 'Temperature exchange efficiency': The uppermost curve, starting at approximately 85% efficiency at 0 airflow and decreasing to about 75% at 800 m³/h.
- 'Enthalpy exchange efficiency (Heating)': A curve starting at approximately 75% efficiency at 0 airflow and decreasing to about 65% at 800 m³/h.
- 'Enthalpy exchange efficiency (Cooling)': A curve starting at approximately 70% efficiency at 0 airflow and decreasing to about 60% at 800 m³/h.
- 'Static pressure': A series of curves starting from the origin (0,0) and increasing with airflow. The curves are labeled 'High' and 'Low' with arrows pointing to different pressure levels. The 'High' pressure curve reaches approximately 300 Pa at 800 m³/h, while the 'Low' pressure curve reaches approximately 100 Pa at 800 m³/h.

 The graph also includes a label '200mm dia pipe straight length' in the top right corner.

Position where duct direction change is possible

Air exhaust fan
EA (Exhaust air)
OA (Outdoor air)

745
1016
More than 80
159.2/250
124
1185
1048
1016
100
372.3
459
20
158.5
317

Bypass damper plate
Ceiling suspension fixture
Air supply fan
RA (Return air)
Solenoid valve unit with pressure regulator
SA (Supply air)

Control box
Power supply cable opening
Maintenance space for heat exchanger permeable-film humidifier
Inspection opening (height max. 1.2m)

Maintenance cover for Lössnary core
air filters, fan, high efficiency filter

Lössnary core
High efficiency filter (Optional parts)
Heat exchanger
Permeable-film humidifier
Maintenance cover (humidifier)

Ceiling suspension fixture
Position where duct direction change is possible

Water intake strainer (R1/2 of External thread)
Air filters
Gas pipe (Flare φ12.7)
Liquid pipe (Flare φ6.35)
Drain discharge hole (VP25 connection)

79
1288
79
266
124
30
336
347
124
124
308
30

Electrical power supply		220-240V/50Hz			
Ventilation mode		Heat recovery mode		Bypass mode	
Fan speed		High	Low	High	Low
Running current (A)		2.20	1.76	2.25	1.77
Input power (W)		480-505	385-400	490-515	385-410
Airflow	(m³/h)	1000	800	1000	800
	(L/s)	278	222	278	222
External static pressure (Pa)		135	86	135	86
Temperature exchange efficiency (%)		79.5	81.5	—	—
Enthalpy exchange efficiency (%)	Heating	71	74	—	—
	Cooling	69	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 × 10⁴Pa Maximum pressure : 49.0 × 10⁴Pa			
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)			

The figure consists of two vertically aligned graphs sharing a common x-axis representing Airflow in m^3/h (0 to 1400) and L/s (0 to 400).

Top Graph: Exchange efficiency (%) vs. Airflow

- Y-axis:** Exchange efficiency (%), ranging from 60 to 90.
- Curves:**
 - Temperature exchange efficiency:** Starts at ~88% at 0 m^3/h and decreases to ~82% at 1400 m^3/h .
 - Enthalpy exchange efficiency (heating):** Starts at ~82% at 0 m^3/h and decreases to ~72% at 1400 m^3/h .
 - Enthalpy exchange efficiency (cooling):** Starts at ~78% at 0 m^3/h and decreases to ~68% at 1400 m^3/h .

Bottom Graph: Static pressure (Pa) vs. Airflow

- Y-axis:** Static pressure (Pa), ranging from 0 to 300.
- Curves:** Represent different pipe lengths (250mm dia pipe straight length):
 - High:** A curve starting at (0,0) and rising to ~220 Pa at 400 m^3/h .
 - Low:** A curve starting at (0,0) and rising to ~100 Pa at 400 m^3/h .
 - Other lengths:** Curves for 60m, 80m, 100m, 120m, and 140m, all showing an increase in static pressure with increasing airflow.

Dimensions:

- Overall width: 149
- Overall height: 920
- Top section height: 1231
- Right side height: 460, 670, 100, 199, 398
- Bottom section height: 150 to 250
- Core width: 600
- Core height: 149
- Core width (bottom): 79, 1580, 79, 280, 163, 361, 163, 280, 79, 149
- Core height (bottom): 149, 150, 163, 361, 163, 280, 79, 149

Labels:

- EA (Exhaust air)
- OA (Outdoor air)
- Air exhaust fan
- Position where duct direction change is possible
- Bypass damper plate
- Air supply fan
- Ceiling suspension fixture
- Solenoid valve unit with pressure regulator
- RA (Return air)
- SA (Supply air)
- Inspection opening
- Control box
- Maintenance cover
- Maintenance space for Losnays core
- High efficiency filter (Optional parts)
- Heat exchanger
- Permeable-film humidifier
- Maintenance cover (humidifier)
- Gas pipe (Flare $\phi 15.88$)
- Liquid pipe (Flare $\phi 9.52$)
- Drain discharge hole
- Water intake strainer
- Air filters
- Ceiling suspension fixture
- Position where duct direction change is possible

*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.

Previous remote controller



PZ-60DR-E



Current remote controller



PZ-61DR-E

List of Remote Controller Settings and Functions

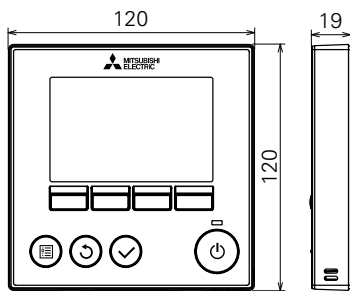
The remote controller provides a wide range of functions and features in addition to the main functions described below, such as sophisticated energy saving control and easy user interface.

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.

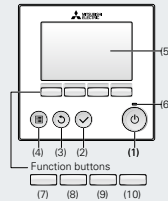
Controllers

Lossnay Remote Controller (PZ-61DR-E)

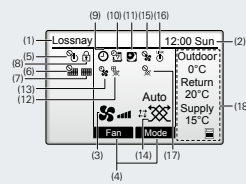


Unit: mm

Operation section

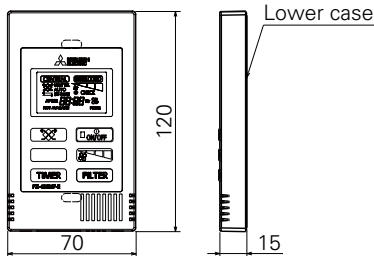


Display section

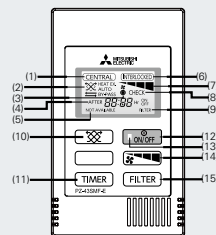


- (1) Press to turn ON/OFF the Lossnay unit.
- (2) Press to save the setting.
- (3) Press to return to the previous screen.
- (4) Press to bring up the Main menu.
- (5) Operation settings will appear.
When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain 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.
- (11) Lossnay is always displayed.
- (12) Current time appears here.
- (13) Fan speed setting appears here.
- (14) Functions of the corresponding buttons appear here.
- (15) Appears when the ON/OFF operation is centrally controlled.
- (16) Appears when the filter reset function is centrally controlled.
- (17) Indicates when the filter and/or Lossnay core needs maintenance.
- (18) Appears when the buttons are locked and/or a fan speed is skipped.
- (19) Appears when the On/Off timer or Auto-off timer function is enabled.
- (20) Appears when the Weekly timer is enabled.
- (21) Appears when the night-purge function is available.
- (22) Appears when performing operation to protect the equipment.
- (23) Appears when performing the power supply/exhaust function or the delay operation at the start of operation.
- (24) Indicates the ventilation mode setting.
- (25) Appears when external fan speed operation.
- (26) Appears when operation is interlocked with the external unit.
- (27) Appears when external ventilation mode operation.
- (28) Displays the outdoor temperature, return temperature, and supply temperature (calculated value).

Lossnay Remote Controller (PZ-43SMF-E)



Unit: mm



- (1) Displayed during remote operation is prohibited by the centralized control unit, etc.
- (2) Displays the ventilation mode status.
Heat exchange: HEAT EX
By-pass: BY-PASS
Automatic (HEAT EX/BY-PASS): HEAT EX or BY-PASS
AUTO: AUTO
- (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".
- (15) Press twice to reset the filter sign display.

Low → High

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-15RF ₈ -E	1	1	LGH-15RVX-E	Non-woven fabrics filter	G3	Coarse 35%
PZ-25RF ₈ -E	2	2	LGH-25RVX-E			
PZ-35RF ₈ -E	2	2	LGH-35RVX-E			
PZ-50RF ₈ -E	2	2	LGH-50RVX-E, GUF-50RD4, GUF-50RDH4			
PZ-65RF ₈ -E	2	2	LGH-65RVX-E			
PZ-80RF ₈ -E	2	2	LGH-80RVX-E, LGH-150RVX-E (2 sets)			
PZ-100RF ₈ -E	2	2	LGH-100RVX-E, LGH-200RVX-E (2 sets), GUF-100RD4, GUF-100RDH4			Coarse 50%
PZ-150RTF-E	2	2	LGH-150RVXT-E			
PZ-250RTF-E	2	2	LGH-200RVXT-E, LGH-250RVXT-E			

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			EN779(2012)	ISO 16890
PZ-15RFM-E	1	LGH-15RVX-E	Noncombustible fiber (polyester, polyolefin)	M6	ePM10 75%
PZ-25RFM-E	2	LGH-25RVX-E			
PZ-35RFM-E	2	LGH-35RVX-E			
PZ-50RFM-E	2	LGH-50RVX-E, GUF-50RD4, GUF-50RDH4			
PZ-65RFM-E	2	LGH-65RVX-E			
PZ-80RFM-E	2	LGH-80RVX-E, LGH-150RVX-E (2 sets)			
PZ-100RFM-E	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 2.0µm or larger.



Model	Number of filters per set	Applicable model	Filter material	Classification	
	Supply			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.



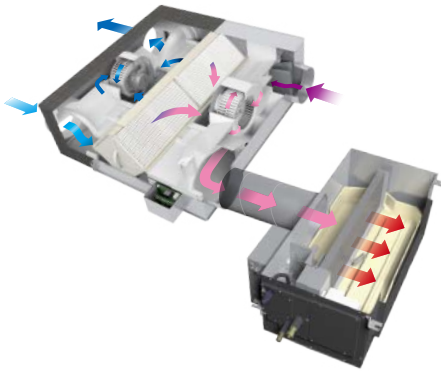
Model	Number of filters per set	Applicable model	Filter material	Classification	
				EN779(2012)	ISO 16890
PZ-M6RTFM-E	3	LGH-150RVXT-E, LGH-200RVXT-E, LGH-250RVXT-E	Non-woven fabrics filter	M6	ePM10 75%
PZ-F8RTFM-E				F8	ePM1 65%

Optional Dx-coil Unit for Lossnay

Supply Comfortable Control

Product Features

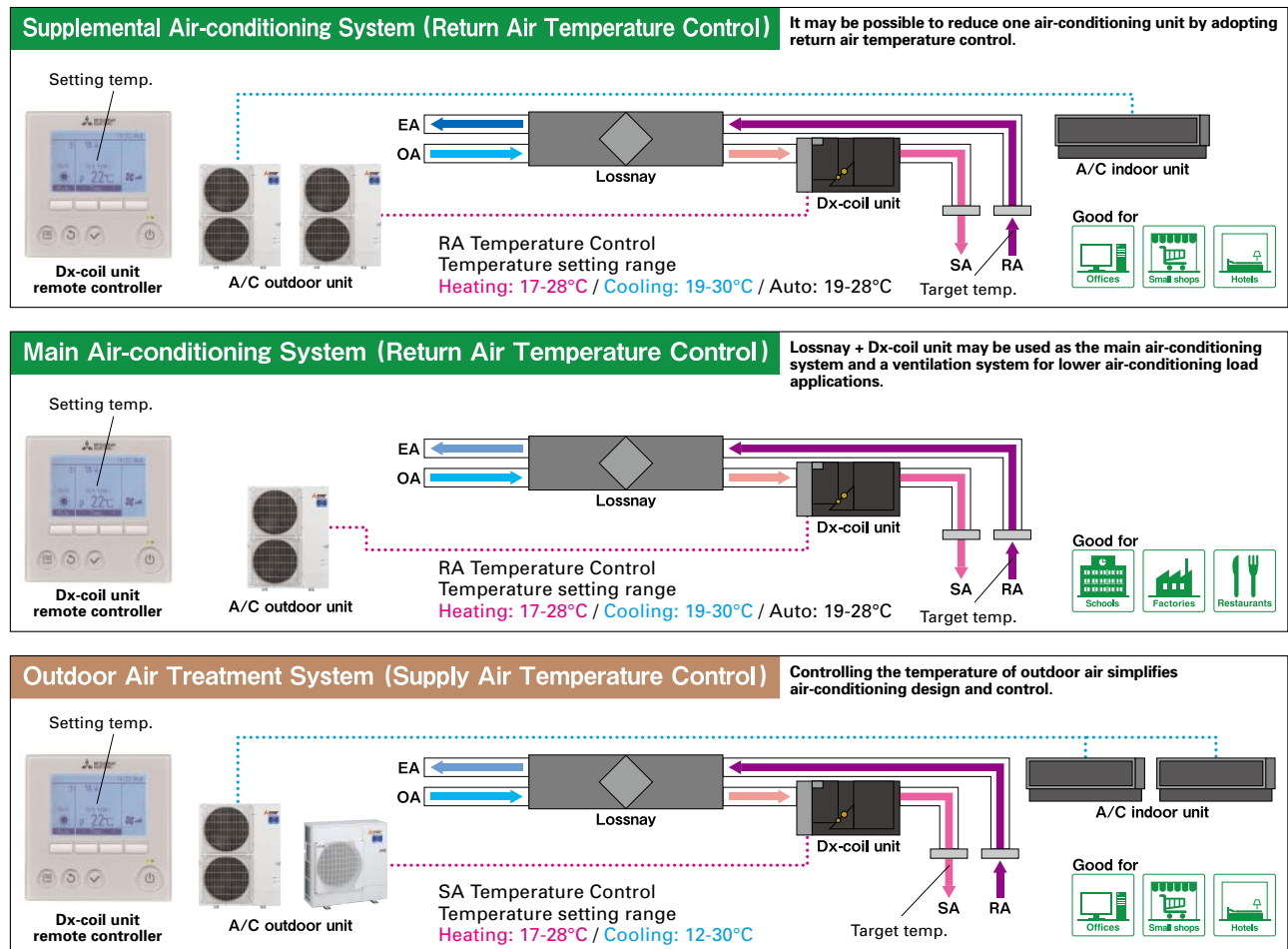
- Lossnay return air and supply air temperature control are possible by connecting the Dx-coil unit to Mr. Slim (power inverter series).
- Connecting the Dx-coil unit will expand Lossnay's temperature control range (500-2,500 CMH).
Suitable for various applications such as offices, shops and schools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



■ Target Applications

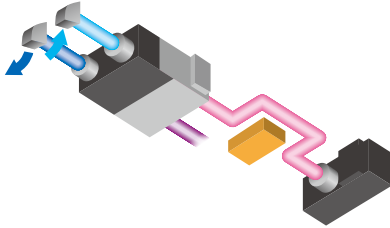


Application Examples



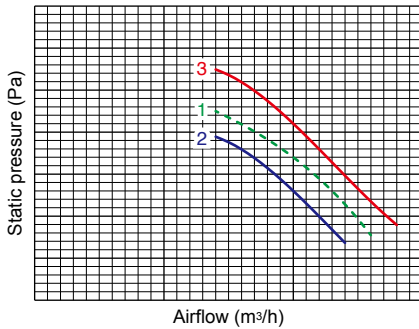
*The above images of using the LGH-RVXT Series are simply examples for reference.

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

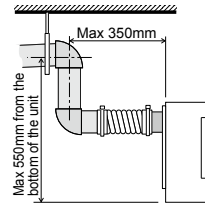
P-Q curve image

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

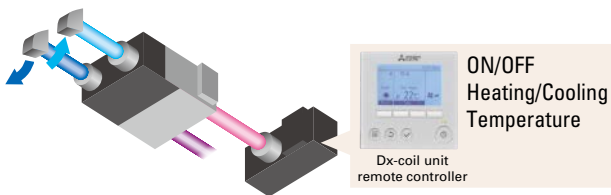
A built-in drain pump makes attaching the drain hose in the ceiling cavity easy, resulting in simple and fast installation.



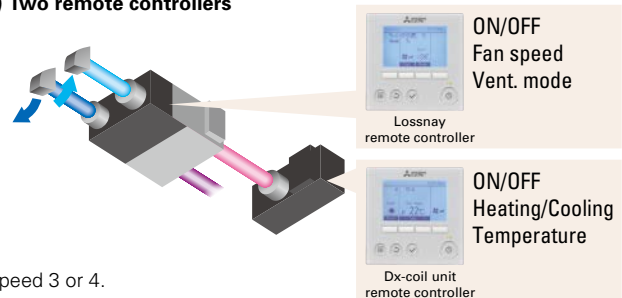
User-friendly System Control

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 CO₂-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

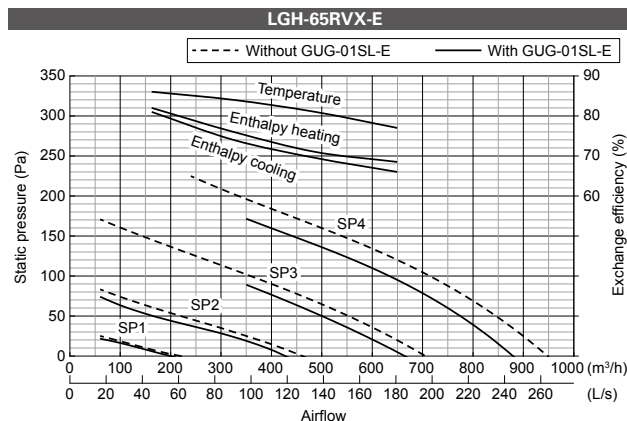
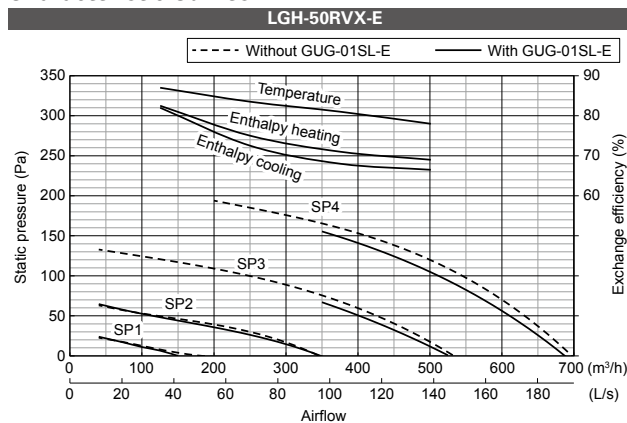
GUG-01SL-E (Connection to LGH-50RVX-E or LGH-65RVX-E)



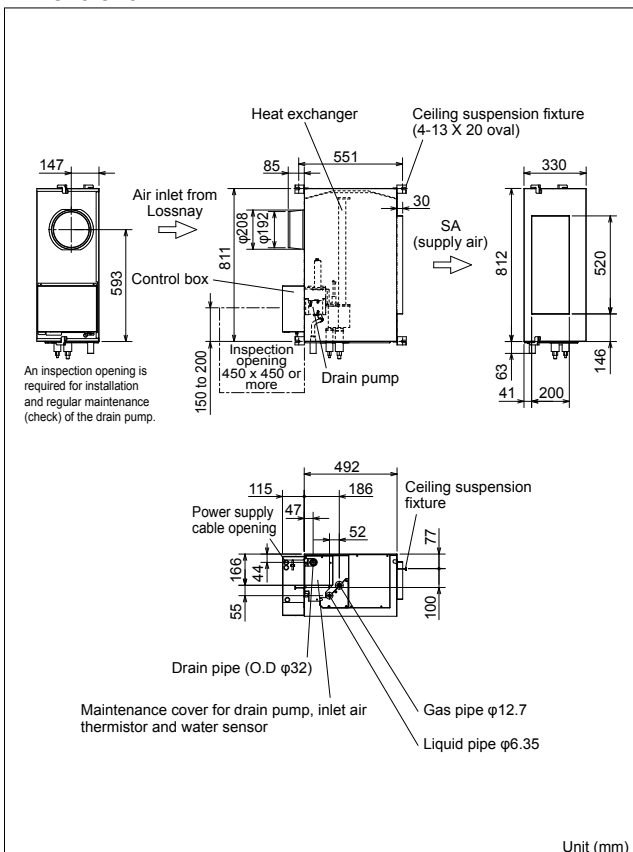
GUG-01SL-E

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								
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 m³/h				350 - 900 m³/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	SP1
Airflow	[m³/h]	500	375	250	125	650	488	325	163
	[L/s]	139	104	69	35	181	135	90	45
External static pressure [Pa]		105	59	26	7	95	53	24	6

Characteristic Curves



Dimensions



Unit (mm)

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

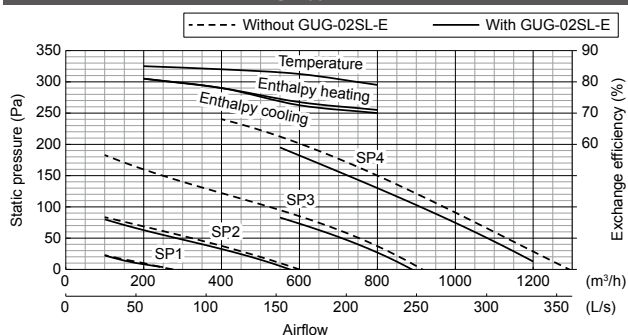


GUG-02SL-E

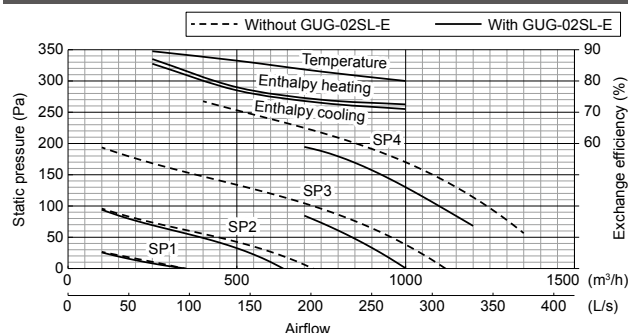
Refrigerant	R410A								
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)								
Input power	Heating / Fan: 2.5W, Cooling: 12.4W								
Running current	Less than 0.1A								
Weight	26kg *Accessories: Approx. 1kg								
Function	Heating / Cooling / Auto / Fan *Auto 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		LGH-100RVX-E						
Capacity [kW]	Heating	10.0 (4.0 + 6.0)	13.2 (5.1 + 8.1)						
	Cooling	8.3 (3.3 + 5.0)	11.3 (4.2 + 7.1)						
SHF		0.69	0.66						
Performance index	Heating	4.62	4.42						
	Cooling	4.76	4.98						
Airflow range at SP3 and SP4	560 - 1200 m³/h		700 - 1200 m³/h						
Connectable outdoor unit	PUHZ-ZRP50		PUHZ-ZRP71						
Ext. piping	Diameter Liquid / Gas: 6.35 / 12.7		Diameter Liquid / Gas: 9.52 / 15.88						
	Maximum length: 50m, Maximum height: 30m		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		LGH-100RVX-E						
Capacity [kW]	Heating	10.0 (4.0 + 6.0)	11.4 (5.1 + 6.3)						
	Cooling	8.3 (3.3 + 5.0)	9.5 (4.2 + 5.3)						
SHF		0.69	0.73						
Performance index	Heating	4.62	5.09						
	Cooling	4.76	5.43						
Airflow range at SP3 and SP4	560 - 1200 m³/h		700 - 1200 m³/h						
Connectable outdoor unit	PUHZ-ZRP50		PUHZ-ZRP50						
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						
Required optional parts	PAC-SH30RJ-E and PAC-SH50RJ-E		PAC-SH30RJ-E and PAC-SH50RJ-E						
Ventilation specifications									
Connectable Lossnay unit	LGH-80RVX-E				LGH-100RVX-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

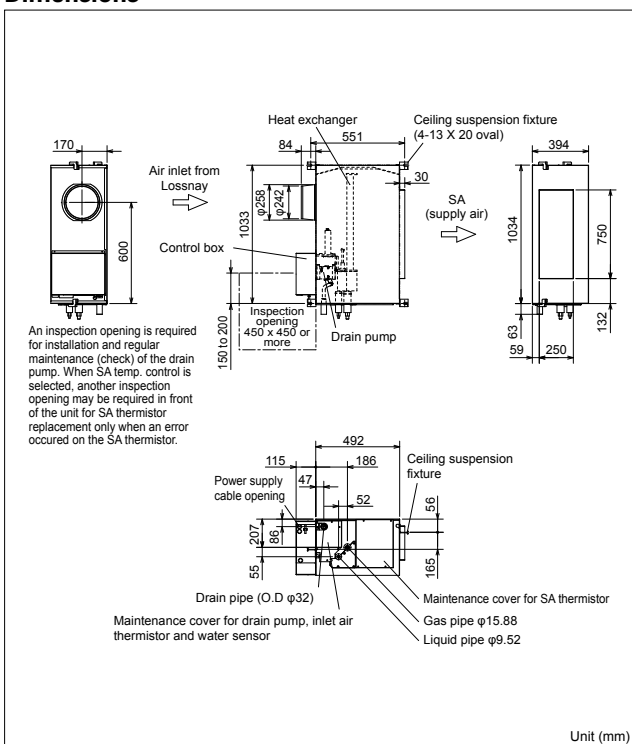
LGH-80RVX-E



LGH-100RVX-E



Dimensions



Specifications

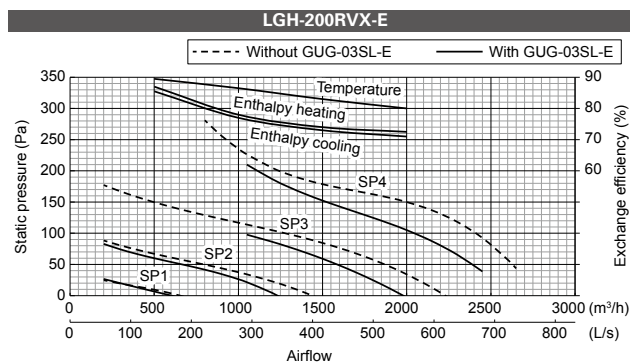
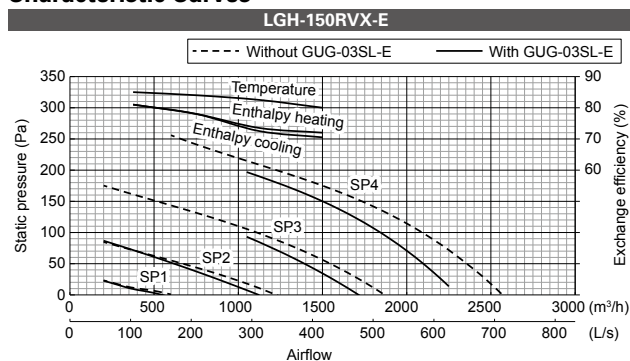
GUG-03SL-E (Connection to LGH-150RVX-E or LGH-200RVX-E)



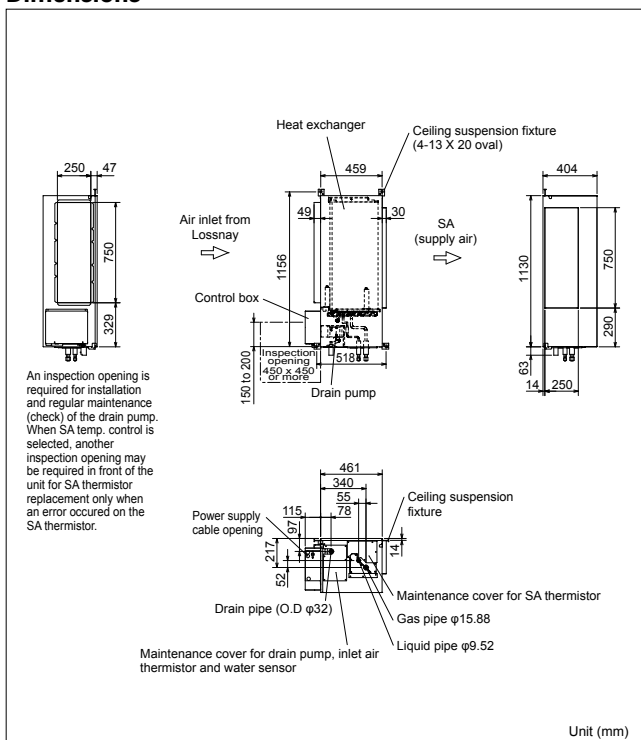
GUG-03SL-E

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					LGH-200RVX-E				
Capacity [kW]	Heating	20.7 (7.7 + 13.0)					23.8 (10.3 + 13.5)				
	Cooling	15.8 (6.3 + 9.5)					18.4 (8.4 + 10.0)				
SHF		0.68					0.76				
Performance index	Heating	4.24					5.02				
	Cooling	5.27					5.86				
Airflow range at SP3 and SP4		1050 - 2250 m³/h					1050 - 2600 m³/h				
Connectable outdoor unit		PUHZ-ZRP100					PUHZ-ZRP100				
Ext. piping		Diameter		Liquid / Gas: 9.52 / 15.88			Diameter		Liquid / Gas: 9.52 / 15.88		
		Maximum length: 75m, Maximum height: 30m					Maximum length: 75m, Maximum height: 30m				
SA (Supply Air) temperature control											
Connectable Lossnay unit		LGH-150RVX-E					LGH-200RVX-E				
Capacity [kW]	Heating	16.6 (7.7 + 8.9)					19.5 (10.3 + 9.2)				
	Cooling	13.4 (6.3 + 7.1)					15.9 (8.5 + 7.4)				
SHF		0.85					0.90				
Performance index	Heating	5.46					6.30				
	Cooling	5.32					5.85				
Airflow range at SP3 and SP4		1050 - 2250 m³/h					1050 - 2600 m³/h				
Connectable outdoor unit		PUHZ-ZRP71					PUHZ-ZRP71				
Ext. piping		Diameter		Liquid / Gas: 9.52 / 15.88			Diameter		Liquid / Gas: 9.52 / 15.88		
		Maximum length: 50m, Maximum height: 30m					Maximum length: 50m, Maximum height: 30m				
Ventilation specifications											
Connectable Lossnay unit		LGH-150RVX-E					LGH-200RVX-E				
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1		
Airflow	[m³/h]	1,500	1,125	750	375	2,000	1,500	1,000	500		
	[L/s]	417	313	208	104	556	417	278	139		
External static pressure [Pa]		150	84	38	9	105	59	26	7		

Characteristic Curves



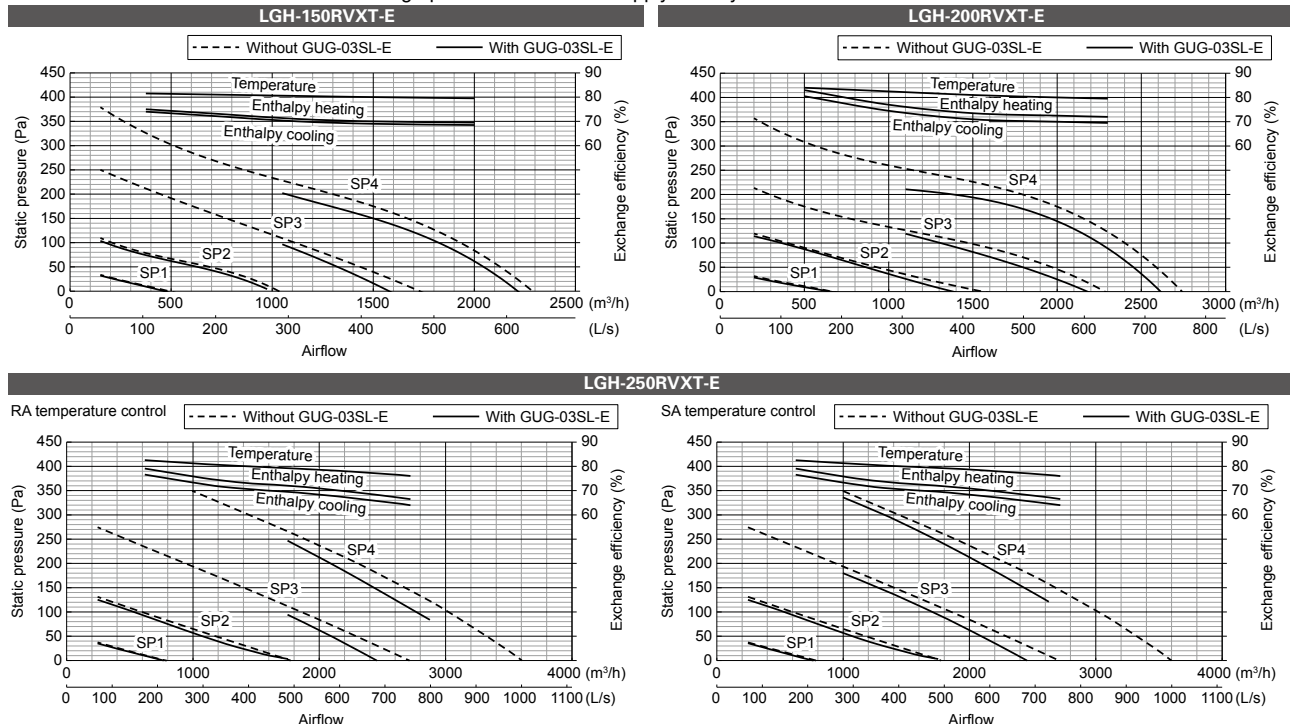
Dimensions



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)				23.8 (10.3 + 13.5)				26.1 (12.1 + 14.0)					
	Cooling	15.7 (6.2 + 9.5)				18.4 (8.4 + 10.0)				22.3 (9.8 + 12.5)					
SHF		0.68				0.76				0.87					
Performance index	Heating	4.07				4.86				4.75					
	Cooling	5.03				5.59				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				Diameter	Liquid / Gas: 9.52 / 15.88				Diameter	Liquid / Gas: 9.52 / 15.88			
	Maximum length: 75m, Maximum height: 30m				Maximum length: 75m, Maximum height: 30m				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)				19.5 (10.3 + 9.2)				21.6 (12.1 + 9.5)					
	Cooling	13.3 (6.2 + 7.1)				15.9 (8.5 + 7.4)				17.6 (9.8 + 7.8)					
SHF		0.86				0.90				0.95					
Performance index	Heating	5.16				6.01				5.97					
	Cooling	5.03				5.54				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				Diameter	Liquid / Gas: 9.52 / 15.88				Diameter	Liquid / Gas: 9.52 / 15.88			
	Maximum length: 50m, Maximum height: 30m				Maximum length: 50m, Maximum height: 30m				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		
	[L/s]	417	313	208	104	556	417	278	139	694	521	347	174		
External static pressure [Pa]		150	84	38	9	145	82	36	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 CO₂, 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

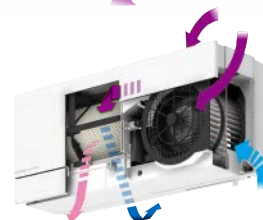
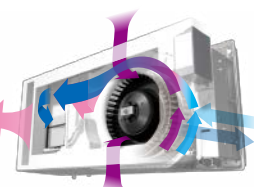
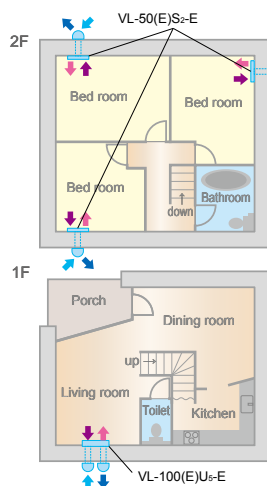
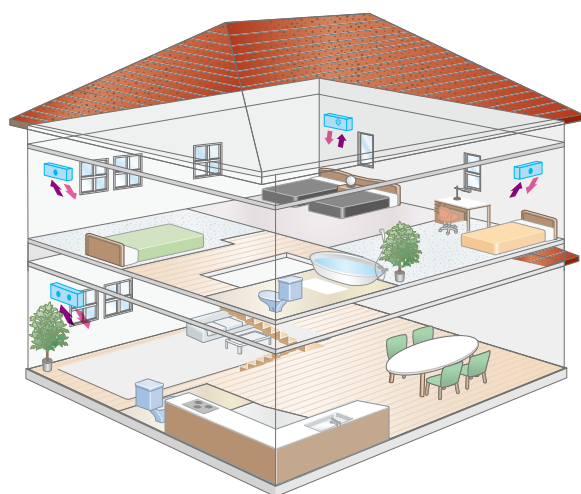
Mitsubishi Electric offers decentralized and centralized ventilation solutions for optimizing your indoor air quality by Lossnay.

Decentralized Ventilation Solution

Install a wall-mounted Lossnay in each room.

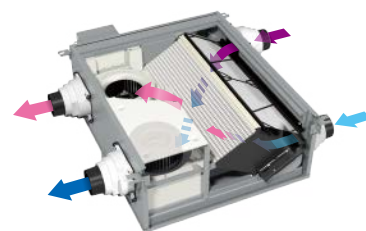
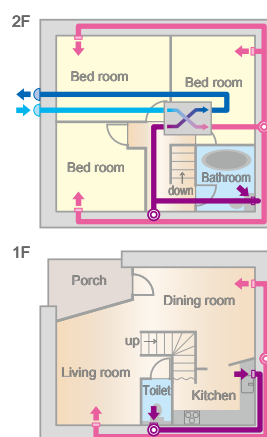
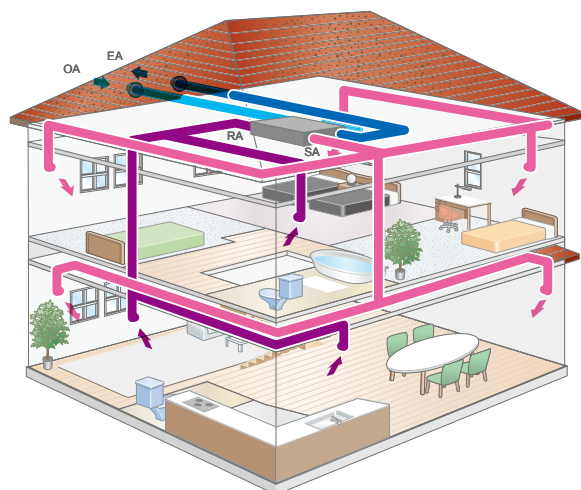
The heat recovery system provides fresh air at a comfortable air temperature.

Total heat exchangers effectively reduce heat loss.



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.



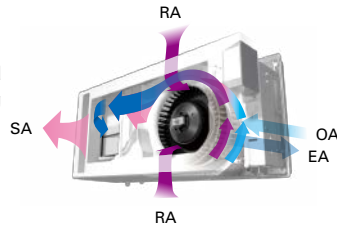
Model:
VL-220CZGV-E

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

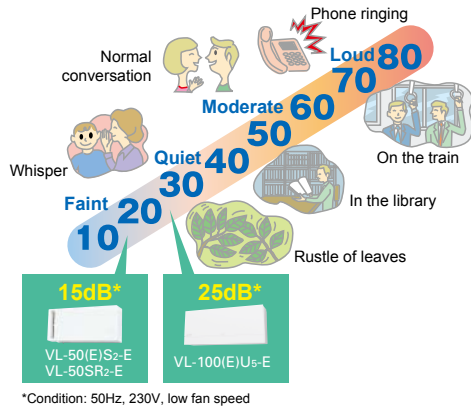
Product Advantages

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.



Energy Efficient

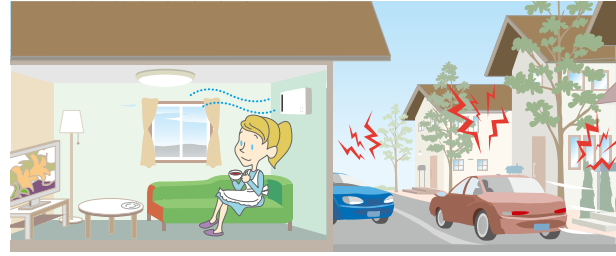
- Total heat exchanger minimizes heat loss.
- A temperature efficiency of over 80%* is achieved.

*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.



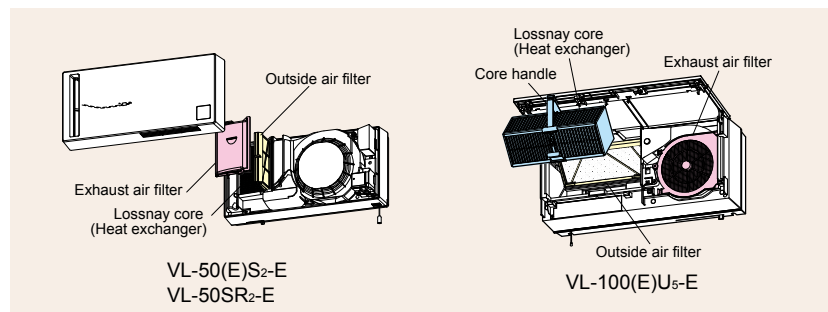
VL-50(E)S2-E
VL-50SR2-E



VL-100(E)U5-E

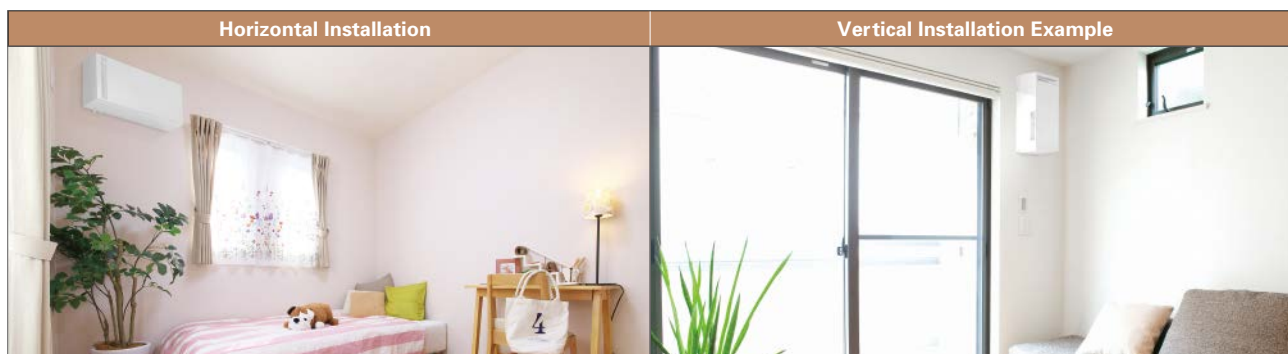
Easy Maintenance

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

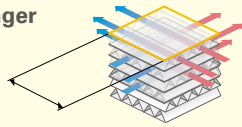
Product Advantages

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%*.

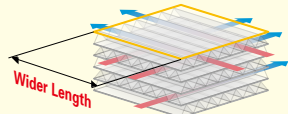
Normal Square Heat Exchanger

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



Diamond Heat Exchanger

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



*Fan speed 1

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.



Quiet

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



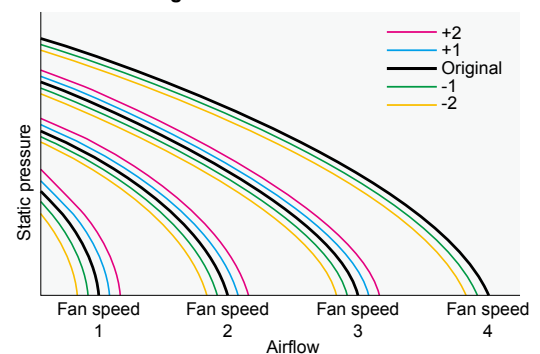
Product Features

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



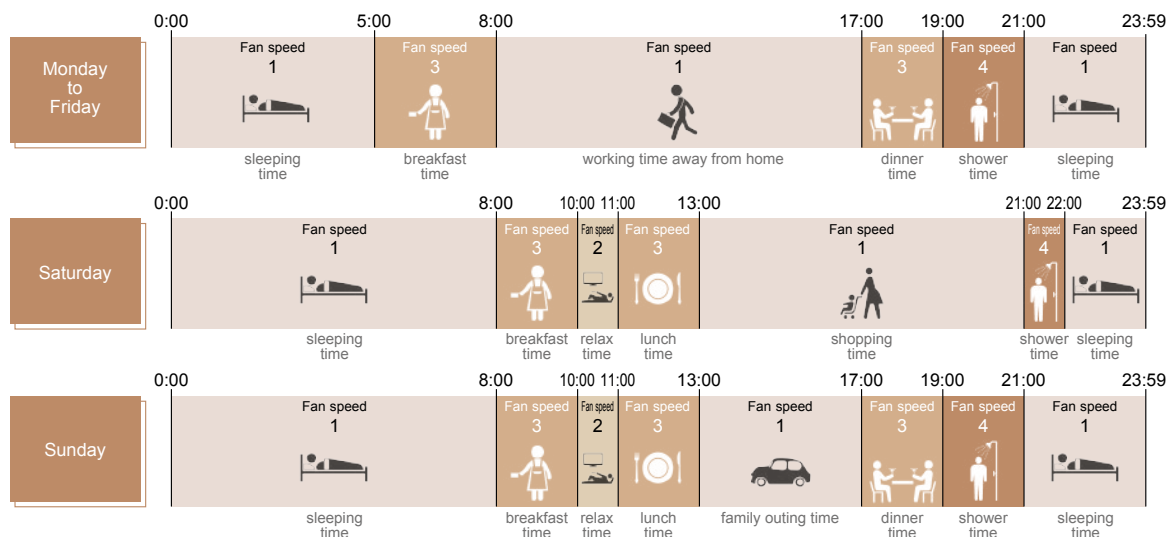
Multi Ventilation (Power Supply and Exhaust) Mode

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 	Keep steam inside of the shower room 	Prevent odors from spreading

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.

100

Model	VL-50(E)S ₂ -E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m³/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							

Dimensions



Model	VL-50SR ₂ -E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m³/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							

Dimensions

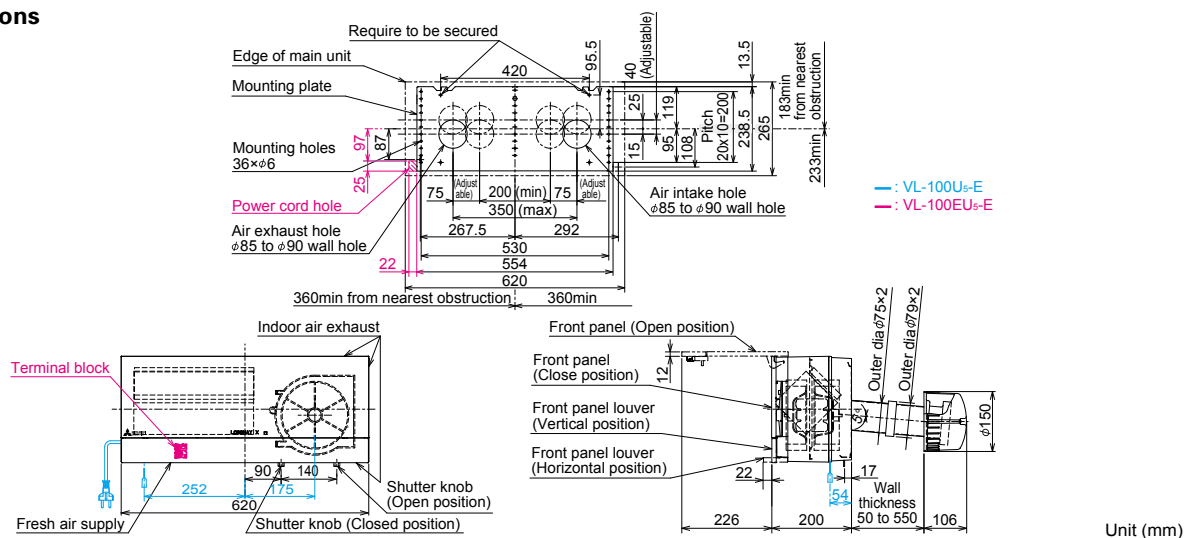


Model: VL-100U5-E (Pull-Switch Model) and VL-100EU5-E (Wall-Switch Model)

Model	VL-100(E)U5-E							
Electrical power supply	220V/50Hz		230V/50Hz		240V/50Hz		220V/60Hz	
Fan speed	High	Low	High	Low	High	Low	High	Low
Airflow (m³/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

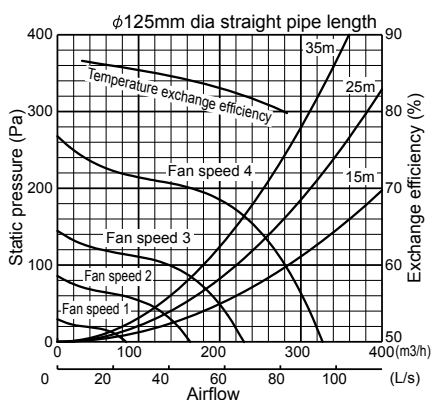


Model: VL-220CZGV-E

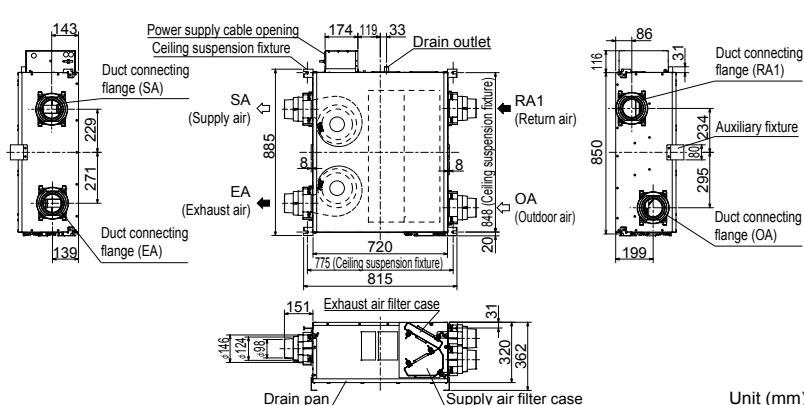
Model	VL-220CZGV-E			
Electrical power supply	220-240V/50Hz 220V/60Hz			
Ventilation mode	Heat recovery mode			
Fan speed	Fan speed 4	Fan speed 3	Fan speed 2	Fan speed 1
Running current	0.60	0.29	0.18	0.11
Input power (W)	80	35	18.5	8.5
Airflow	(m³/h)	230	165	120
	(L/s)	64	46	33
External static pressure (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)S2-E and VL-50SR2-E

Filters, Extension Pipe and Stainless Hood

Type	Replacement Filter	High Efficiency Filter	Extension Pipe	Joint	Stainless Hood
Design		 Optional	 Optional	 Optional	 Optional
Model	P-50F2-E	P-50HF2-E	P-50P-E	P-50PJ-E	P-50VSQ5-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)U5-E

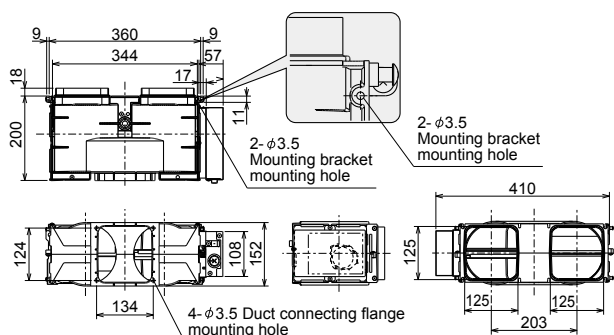
Filters and Extension Pipe

Type	Replacement Filter	High Efficiency Filter	Extension Pipe	Joint
Design		 Optional	 Optional	 Optional
Model	P-100F5-E	P-100HF5-E	P-100P-E	P-100PJ-E
Feature	–	–	Total length when connected to the joint is 300mm.	<ul style="list-style-type: none"> • 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



Unit (mm)

Filters

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