

# LOSSNAY SYSTEM

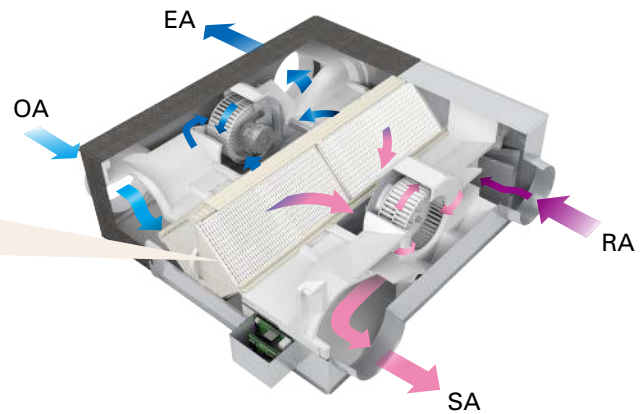
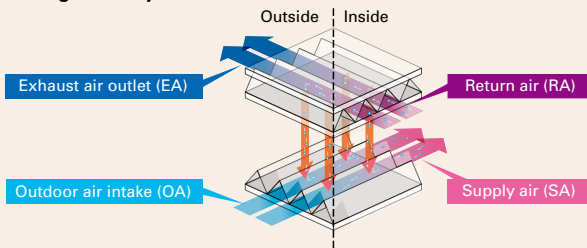
Lossnay ventilation systems are renowned industry-wide for their efficiency. They offer environment-friendly energy recovery and humidity control, and enable air conditioning systems to simultaneously provide optimum room comfort and energy savings.



## 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

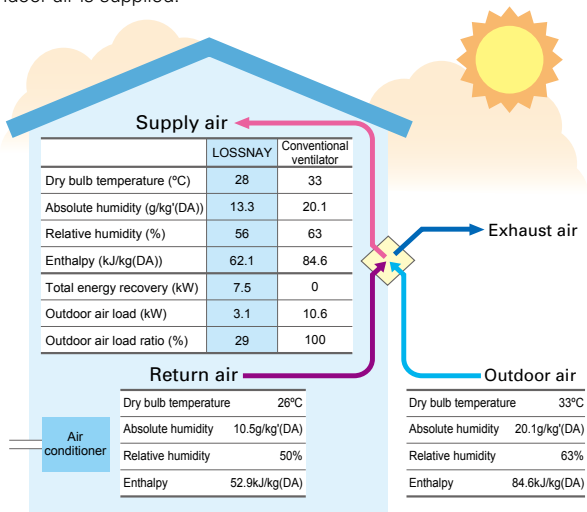


## What Can Be Improved by Introducing Lossnay?

### Ventilation with maximized comfort

#### In summer

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



#### Heat recovery calculation

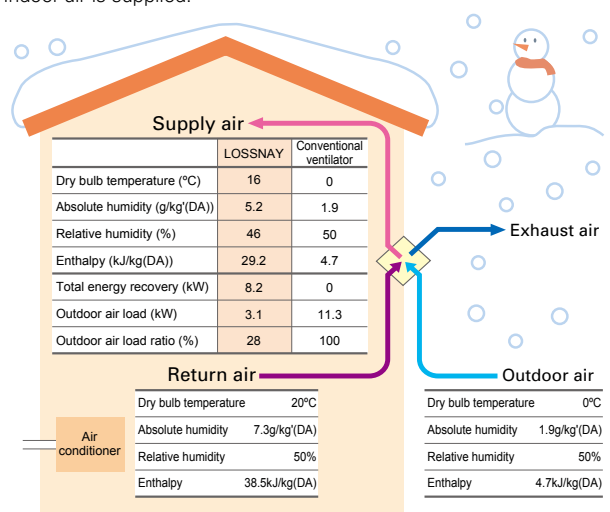
$$\text{Indoor supply-air temperature (°C)} = \left\{ \begin{array}{l} \text{Outdoor} \\ \text{temperature (°C)} \end{array} - \left( \begin{array}{l} \text{Outdoor} \\ \text{temperature (°C)} - \text{Indoor} \\ \text{temperature (°C)} \end{array} \right) \times \text{Temp recovery} \right. \\ \left.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

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

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

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).

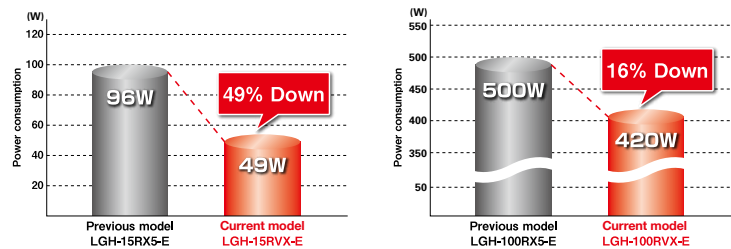
# Commercial Use Lossnay

## 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

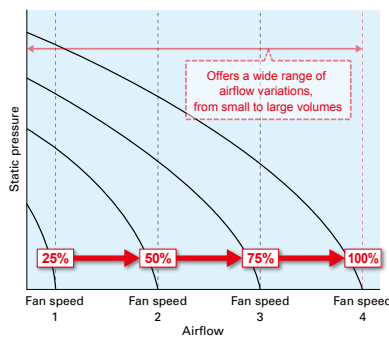
Each fan speed has a range setting of 25, 50, 75 and 100%, allowing much finer airflow control. When used in combination with the CO<sub>2</sub> sensor or timer function, airflow can be controlled according to conditions that realize better performance and reduce power consumption.

#### Fan speed adjustment function

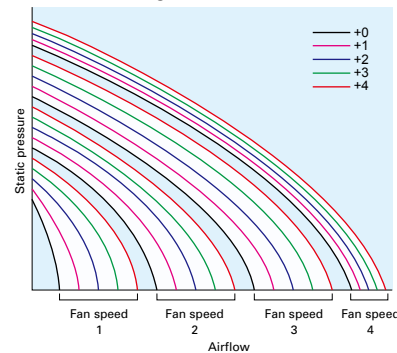
The default fan speed value can be adjusted slightly. Use the PZ-61DR-E remote controller to reset the speed.

- 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

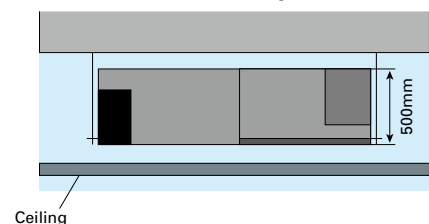
LGH-150/200/250RVXT-E



Height: 500mm

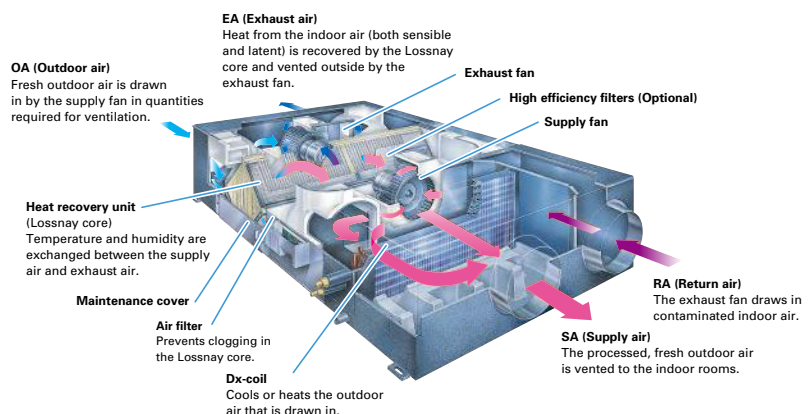
38% Thinner body

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.



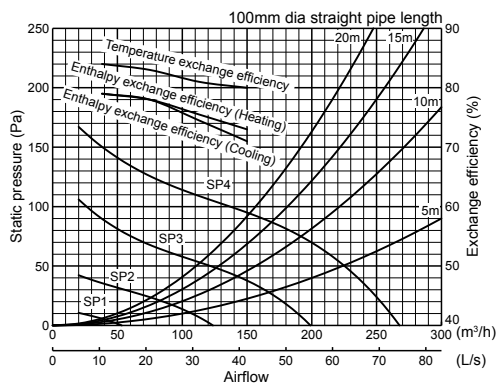
# Commercial Use Lossnay Specifications

## RVX Series

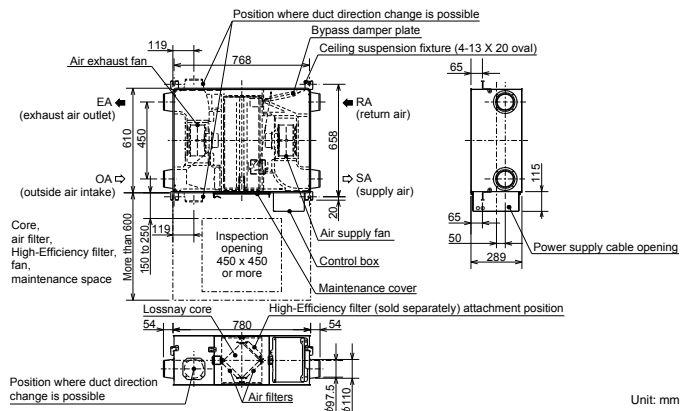
### LGH-15RVX-E

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 <sup>3</sup> /h)		(L/s)		(m <sup>3</sup> /h)		(L/s)	
	150	113	75	38	150	113	75	38
External static pressure (Pa)	42	31	21	10	42	31	21	10
Temperature exchange efficiency (%)	95	54	24	6	95	54	24	6
Enthalpy exchange efficiency (%)	80	81	83	84	-	-	-	-
	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



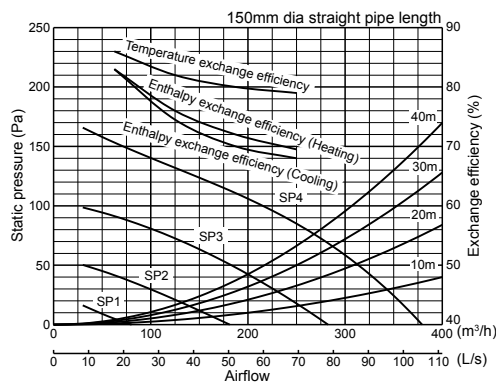
### Dimensions



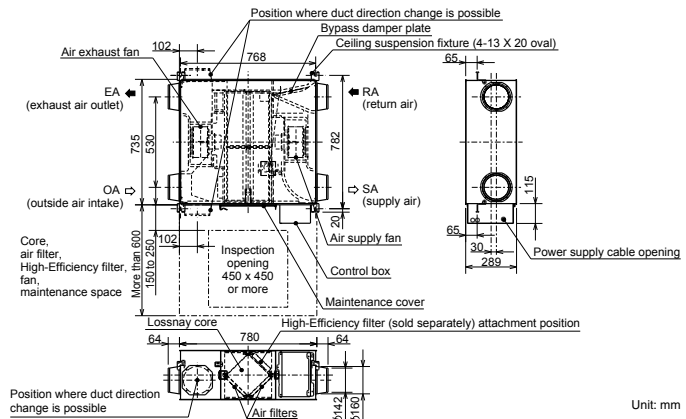
### LGH-25RVX-E

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)		(L/s)		(m <sup>3</sup> /h)		(L/s)	
	250	188	125	63	250	188	125	63
External static pressure (Pa)	69	52	35	17	69	52	35	17
Temperature exchange efficiency (%)	85	48	21	5	85	48	21	5
Enthalpy exchange efficiency (%)	79	80	82	86	-	-	-	-
	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.

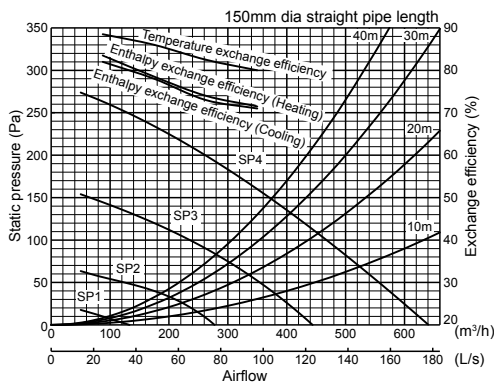
\* Figures in the chart is measured according to Japan Industrial Standard (JIS B 8628). Characteristic Curves are measured by chamber method.

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

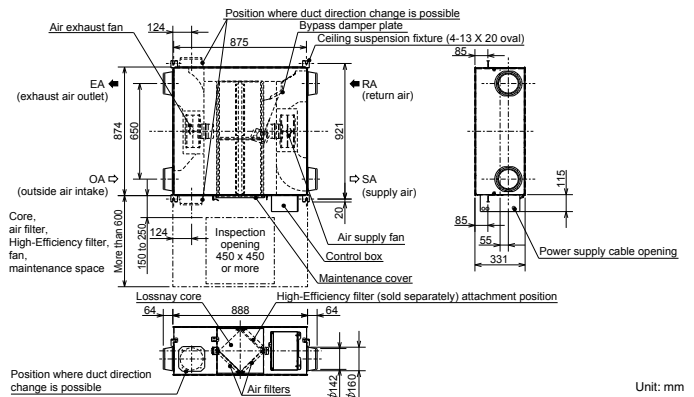
## LGH-35RVX-E

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)		(L/s)		(m <sup>3</sup> /h)		(L/s)	
	350	263	175	88	350	263	175	88
External static pressure (Pa)	97	73	49	24	97	73	49	24
Temperature exchange efficiency (%)	160	90	40	10	160	90	40	10
Enthalpy exchange efficiency (%)	80	82.5	86	88.5	-	-	-	-
	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



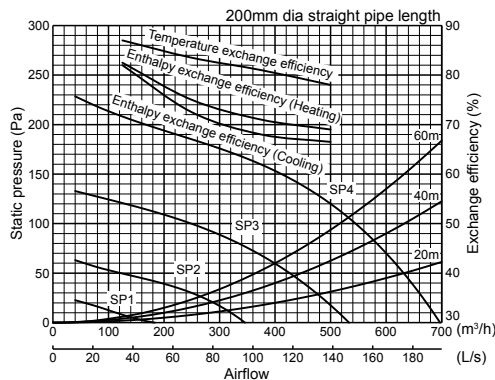
## Dimensions



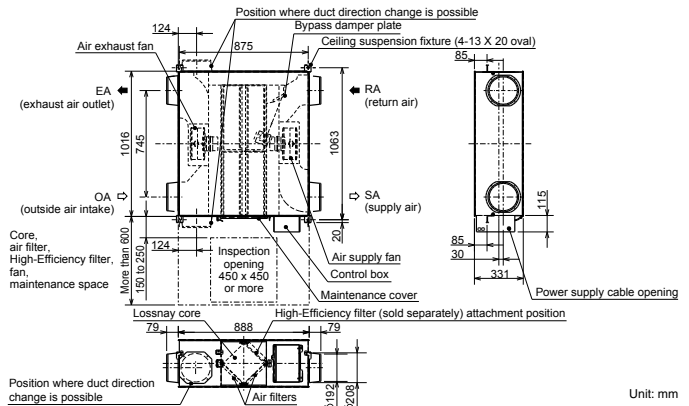
## LGH-50RVX-E

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)		(L/s)		(m <sup>3</sup> /h)		(L/s)	
	500	375	250	125	500	375	250	125
External static pressure (Pa)	139	104	69	35	139	104	69	35
Temperature exchange efficiency (%)	120	68	30	8	120	68	30	8
Enthalpy exchange efficiency (%)	78	81	83.5	87	-	-	-	-
	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



■ 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.

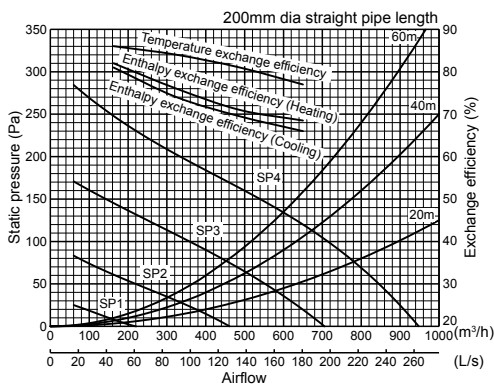
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# Commercial Use Lossnay Specifications

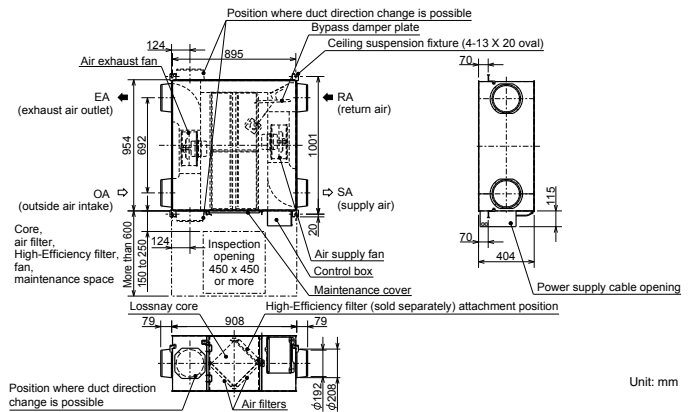
## LGH-65RVX-E

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



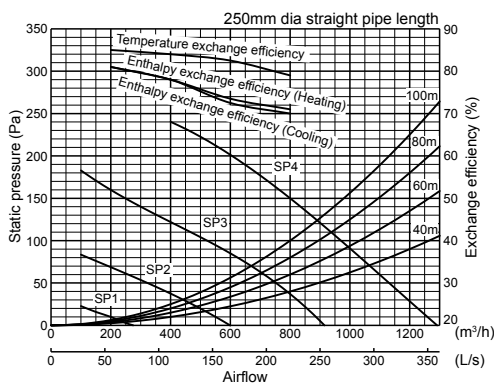
### Dimensions



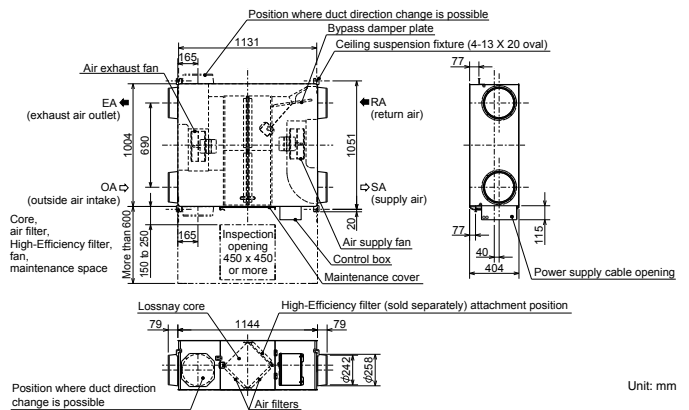
## LGH-80RVX-E

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	347	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-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.

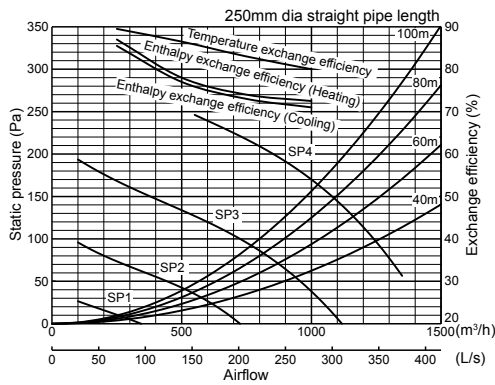
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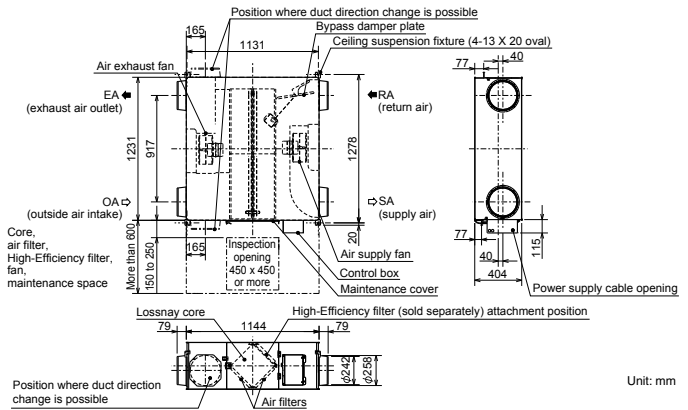
## LGH-100RVX-E

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



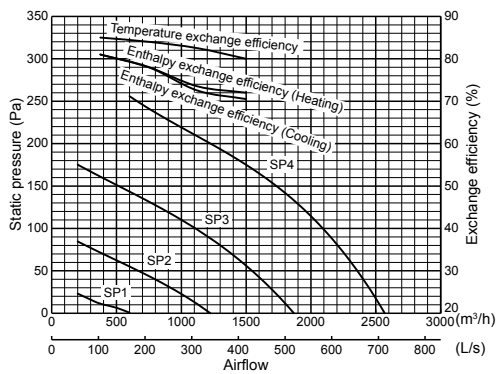
## Dimensions



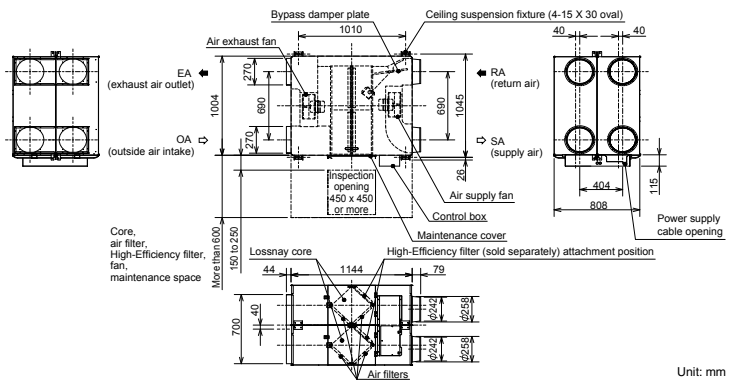
## LGH-150RVX-E

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-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.

