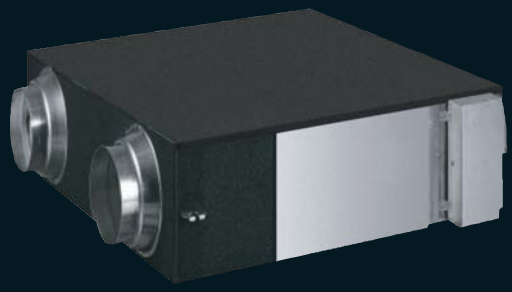
ecoV™

Heat Recovery Ventilator
0CEE0-01D(Replaces: 0CEE0-01C)

LG TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK



LG
Life's Good

P/No. : MFL63726401

ecoV™

General Description

Ventilation is a process by which one can exchange indoor air to outdoor air in order to improve the air quality and to maintain environmental temperature conditions.

LG's heat recovery ventilation system, ecoV™ , modulates the temperature and humidity of incoming fresh air to match indoor conditions. A balance is thus achieved between indoor and outdoor ambients, enabling the cooling or heating load placed on the air conditioning system to be reduced significantly. ecoV™ can be controlled individually or integral with the air conditioning system.

ecoV™ provides efficiency, cost savings, superior performance, compact & light design, BLDC Motor ensuring vaious design of duct system and easy maintenance. Units are ideal for hotels, dormitories, restaurants, hospitals, retail establishments, theaters, schools, and office buildings.

A lot of information regarding the design & installation of this system is provided in this publication. The new products series contains data on the same pattern. Please utilize all the information for conducting your business efficiently. Make sure the specification, dimension or others technical data are same as provided in engineering data book before you start the project.

We look forward to your continuing support.

LG Electronics Inc.

Air Conditioning & Energy Solution Company

ecoV™

Heat Recovery Ventilator

1. Models List
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1. Models List

1.1 Total Heat Recovery Ventilator

Nominal Capacity CMH(CFM)	Model Name	Power Supply Phase,V,Hz
150(88)	LZ-H015GBA2	1 ph, 220-240 V, 50 Hz 1 ph, 220 V, 60 Hz
250(147)	LZ-H025GBA2	
350(206)	LZ-H035GBA2	
500(294)	LZ-H050GBA2	
800(471)	LZ-H080GBA2	
1,000(589)	LZ-H100GBA2	
1,500(883)	LZ-H150GBA2	
2,000(1,177)	LZ-H200GBA2	

2. Model Number Nomenclature

Development Sequence

Function
A : Basic

Model Type
B : Ceiling Concealed Type

Electrical Standard (Volts, Freq., Phase)
220-240 V, 50 Hz, 1 ph / 220 V, 60 Hz, 1 ph

Capacity
Ex) 080 -> 800 CMH 100 -> 1,000 CMH

Heat Exchange Type
H : Total Heat Recovery

Indicates that this is LG's ecoV system

ecoV™
3. Features & Benefits

The LG heat recovery ventilation system, ecoV™ , is the solution for improving your indoor air quality.

Ventilation is a process by which one can exchange indoor air to outdoor air in order to improve the air quality and to maintain environmental temperature conditions.

With today's concern for a healthy indoor environment, ecoV™ is an integral component of HVAC system. Using ecoV™ in the HVAC system allows contaminants to be removed quickly and effectively from the air-conditioned space. A balance is thus achieved between indoor and outdoor ambients, enabling the cooling or heating load on the air conditioning system to be reduced significantly.

Energy Savings

The indoor air is passed through the heat exchanger to prewarm or precool the incoming outside air, saving energy and money.

Low-noise Design

ecoV™ is accoustically engineered and tested for quiet operation. (ensuring comfort to be felt, not heard.)

Air Purifying

Removing common pollutants from home which create an unhealthy environment.

Easy Maintenance

The briefcase-style latches allows easy filter replacement and heat exchanger cleaning.

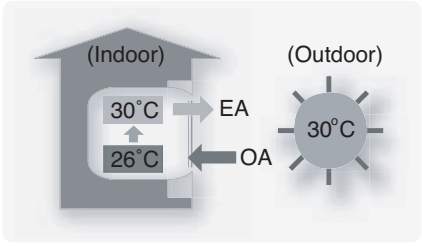
Efficiency & Comfort

ecoV™ exhaust the polluted indoor air to outdoor and supply the fresh outdoor air to indoor in order to maintain the resident's healthy and comfortable indoor environment.

3. Features & Benefits

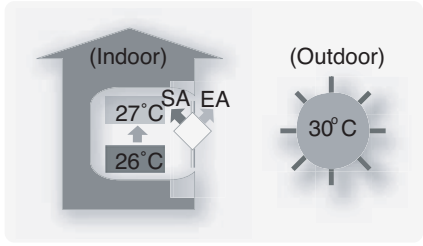
Healthy and Fresh Indoor Environmental Maintenance :

Case of the window ventilation



In order to ventilate the indoor air is to open the window in summer. While opening the window, the conditioned indoor air goes out. Indoor air has to be cooling again.

Case of Enthalpy heat exchange ventilation



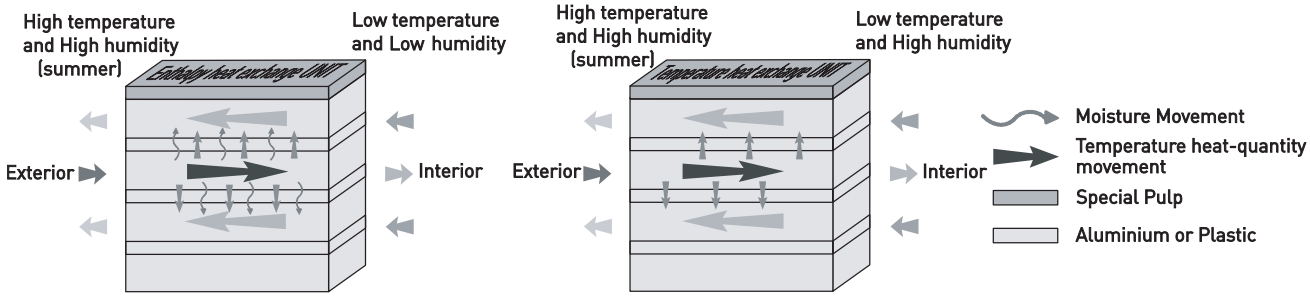
When using the enthalpy heat exchanger,it maintains the temperature and humidity of the indoor and changes the polluted indoor air to the fresh outdoor air.

• Comparing to Enthalpy heat exchange ventilation with the window ventilation,Enthalpy heat exchange enables to economize a electric bill.It also helps the environmental protection due to saving energy.

Enthalpy Heat and Sensible Heat Exchangers Comparisons :

• **Enthalpy Heat Exchanger**
= Temperature heat (temperatures) + Latentheat (humidity)

• **Sensible Heat Exchanger**
= Temperature heat (temperatures)



• The Enthalpy Heat Exchanger consists of Mechanism which is exchanged to the temperature heat (temperatures)as well as the latent heat (moisture heat capacity).When it calculates at the electric heat frequency quantity,it has an energy recovery effect above 3 times than the temperature heat.

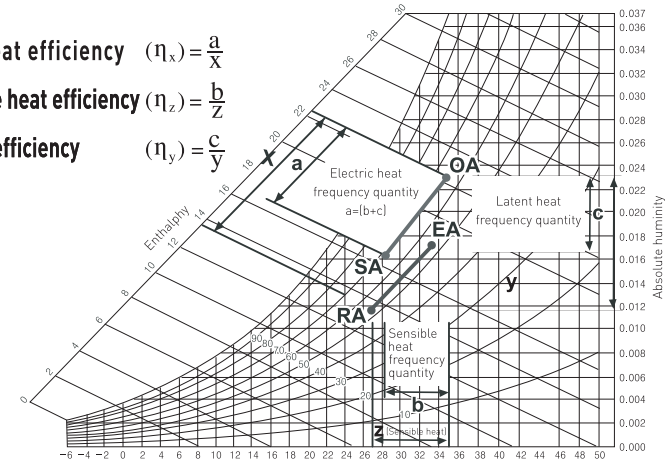
Reclaimed Energy Comparisons in Psychrometric Chart :

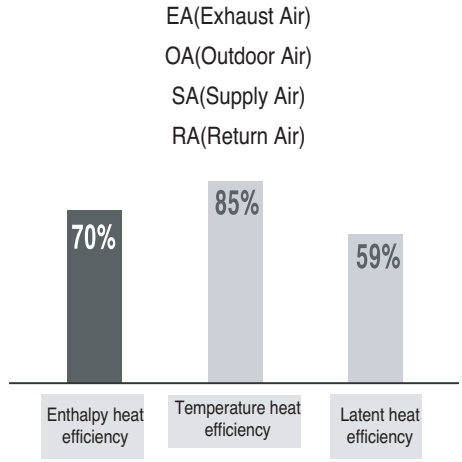
Enthalpy heat exchanger

Enthalpy heat efficiency $(\eta_x) = \frac{a}{x}$

Temperature heat efficiency $(\eta_z) = \frac{b}{z}$

Latent heat efficiency $(\eta_y) = \frac{c}{y}$

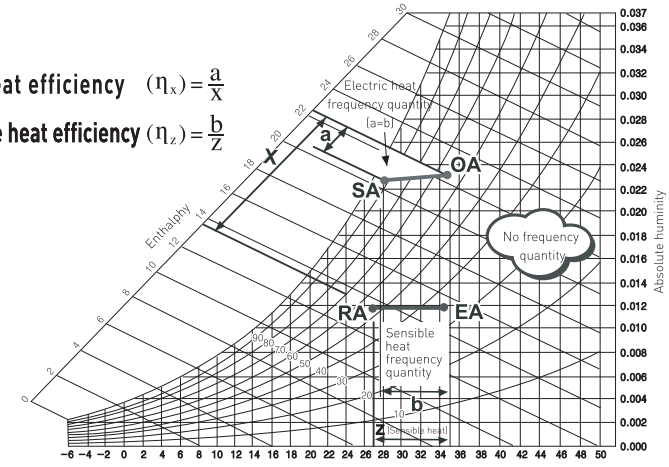


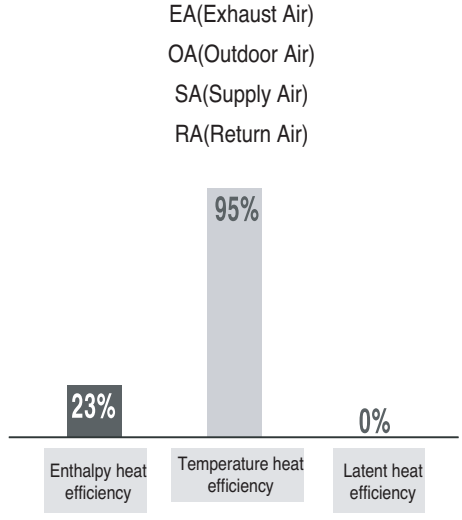


Temperature heat exchanger

Enthalpy heat efficiency $(\eta_x) = \frac{a}{x}$

Temperature heat efficiency $(\eta_z) = \frac{b}{z}$

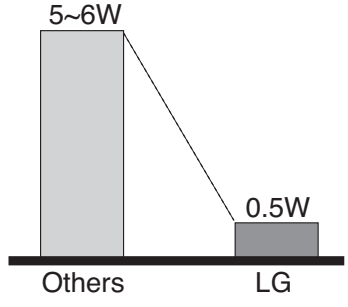




• Like appearing from the picture of the case only of the temperature heat exchange,the efficiency is high. But when it calculates at enthalpy heat frequency quantity,it has a difference above 3 times.

Zero Standby Power Consumption :

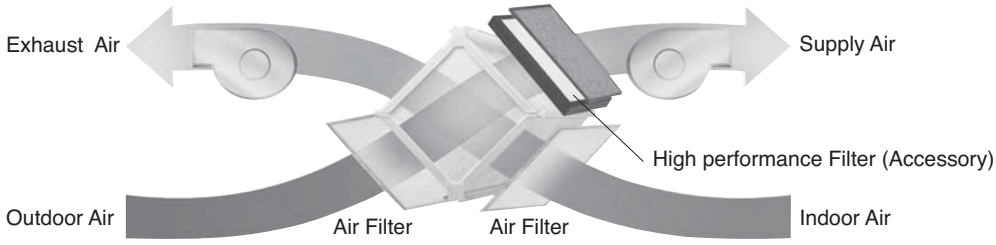
- Due to SMPS (Switching Modulation Power Supply) technology, there is almost zero power consumption in the standby mode.
  It saves energy and cost.



3. Features & Benefits

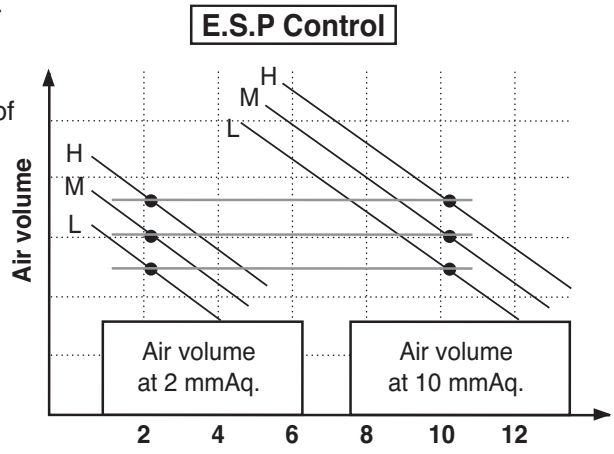
High Efficiency Heat Exchanger :

- Cross flow heat exchanger ensure no mixing of the stale air with the fresh air. Efficiency and comfort is ensured by the high-efficiency energy recovery central core which recovers energy from the indoor air and transfers it to the fresh incoming air without mixing airstreams.The heat exchanger also helps to remove unwanted humidity from air inside your home during winter, and removes the humidity from the outside air before it enters your home in the summer.



EZTuning *:(External Static Pressure Control)*

- Individual air volume control (Supply&Exhaust).
  Generally, when External Static Pressure increases air volume decreases. But by controlling the RPM of BLDC Motor E.S.P is changeable. E.S.P. control provides required constant air volume irrespective of E.S.P. change. Desired E.S.P. can also be set through LCD wired remote. Setting of the desired E.S.P. gives required combination of ESP and airflow.
  So, air volume is kept constant for various duct work system. All ecoV™ units feature BLDC Motor.

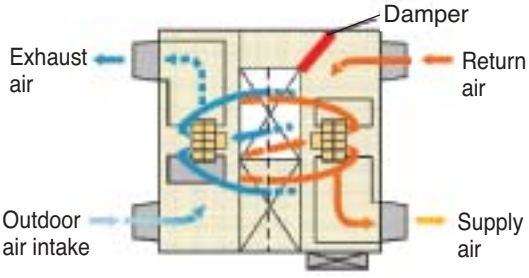


3. Features & Benefits

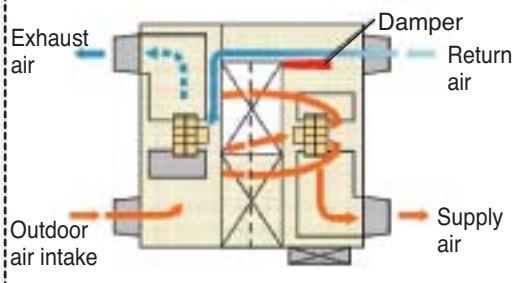
Auto Operation :

- Automatically switches the ventilation mode (Total Heat Exchange Mode/Bypass Mode) according to the operating status of the air conditioner.

• **Total Heat Exchange Mode**
(Cooling operation in summer/ heating operation in winter)



• **Bypass Mode**
(Intermediate season)

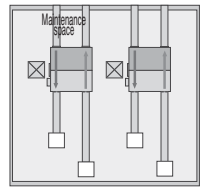


Flexibility of Installation :

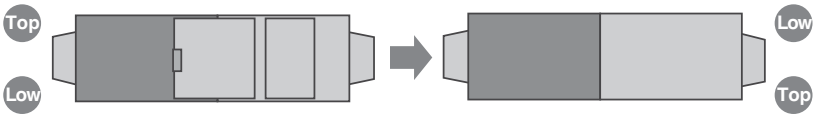
- Possibility of opposite installation of up and lower part

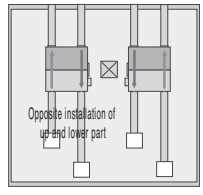
Case of the installation of 2 units, generally it is necessary to two maintenance spaces. If it is installed opposite one unit of up and lower part, it is necessary to one maintencnce space.

(1,500 / 2,000 CMH models are not available)



Installation of 2 units





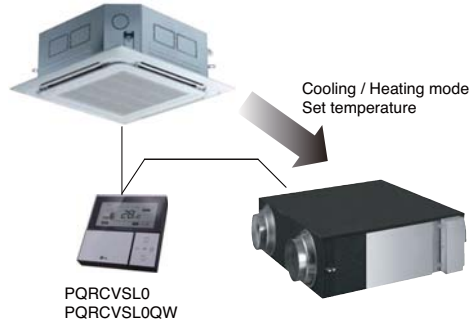
Opposite Installation of up and lower part of one unit

Auto Restart Operation :

- When there's Electricity failure to the unit. After resumption of the Power, It starts in the same mode as prior to the power failure. This is as per the memorized condition. Any change will be memorized automatically to the MICOM & it takes about 2 secs to keep it.

Interlocking with Air Conditioning System :

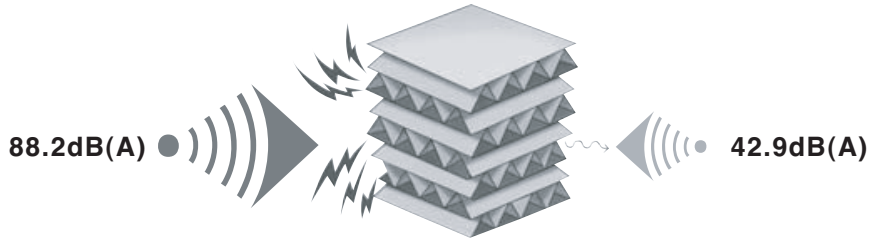
- It is able to install the ventilation system being interlocking with the air conditioner.
  It can be also controlled individually or integral with the air condition.
- This function can be operated when connecting with specified Remote controller



3. Features & Benefits

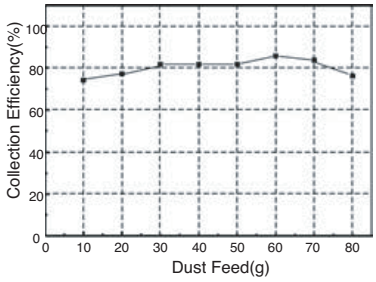
Excellent Sound Arresting Blocking Effect :

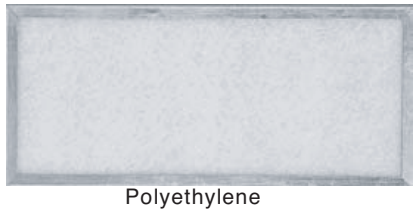
- The enthalpy heat exchanger element is difficult to convey the vibration of air with structure and it has a function of absorbing sounds.if it is installed a building in a serious noise place,it will be much more effective.



(45.3dB(A) Sound arresting blocking effect)

Air Filter :





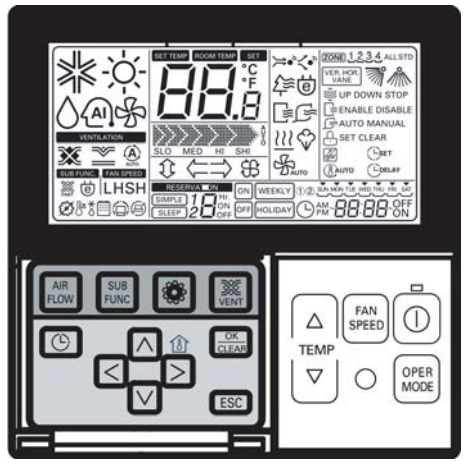
Polyethylene

- Air filter has sufficient effects with collection efficiency above 80%, which is 0.3μm sample particle smaller than tobacco of smoke. It is even against floating particle from yellow sand.
- Few pressure loss in the static pressure plan.
- Excellent washing characteristic and durability.

3. Features & Benefits

LCD Wired Remote Control : (Accessory)

- It can control all the functions of the unit. You can check and change operation mode, set timer & also diagnose the error of the unit. It also has the option of weekly program.
- Built-in battery keeps user's operating setup information for 2 hours when the main power line to the wired remote controller is disconnected due to power outage as well.
- It can be installed with air conditioner remote controller, and each controller can control Ventilation and Air conditioner simultaneously.

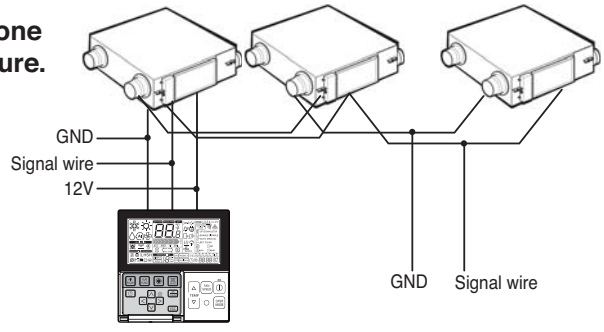


PQRCVSL0 / PQRCVSL0QW

Group Control :

1. When installing more than 2 units of air conditioner to one wired remote controller, please connect as the right figure.

- If it is not event communication indoor unit, set the unit as slave.
- Check for event communication through the product manual.



When controlling multiple ventilation units with event communication function with one remote controller, you must change the master/slave setting from the indoor unit.

- Change the switch setting of the ventilation unit PCB.

#1 switch OFF: Master
(Factory default setting)

#1 switch ON: Slave

3. Features & Benefits

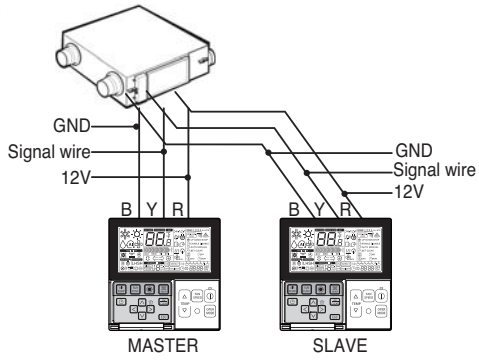
❊ When installing 2 remote controllers to one indoor unit with event communication function, set the master/slave of the remote controller. (Refer to remote controller master/slave selection)

When controlling the group, some functions excluding basic operation setting, fan level Min/Mid/Max, remote controller lock setting and time setting may be limited.

2. When installing more than 2 wired remote controllers to one ventilation unit, please connect as the right picture.

- When installing more than 2 units of wired remote controller to one ventilation unit, set one wired remote controller as master and the others all as slaves, as shown in the right picture.
- You cannot control the group as shown i n the right for some products.
- Refer to the product manual for more detail.

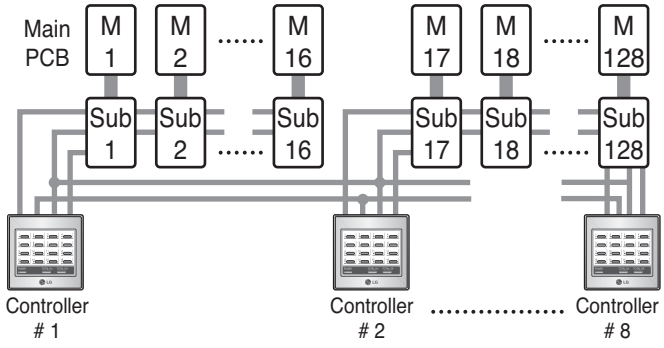
- When controlling in groups, set the master/slave of the remote controller. Refer to installer setting section on how to set master/slave for more detail.



<When simultaneously connecting 2 sets of wired remote controller>

Central Control : (Accessory)

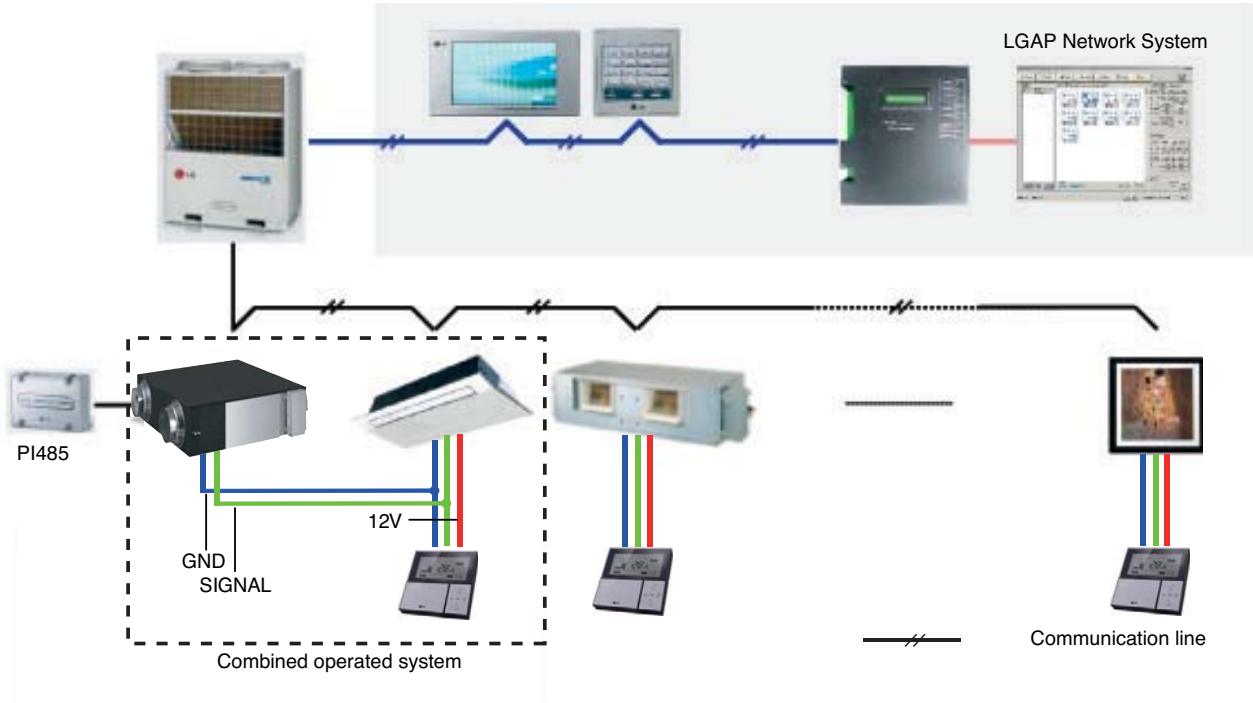
- It enables to control 16 x 8 = 128 units with the help of 8 controllers. All units can be put on and off from one Central Room. For Setting Temperature, Fan speed and other sub functions, access the LCD wired remote controller of each unit.



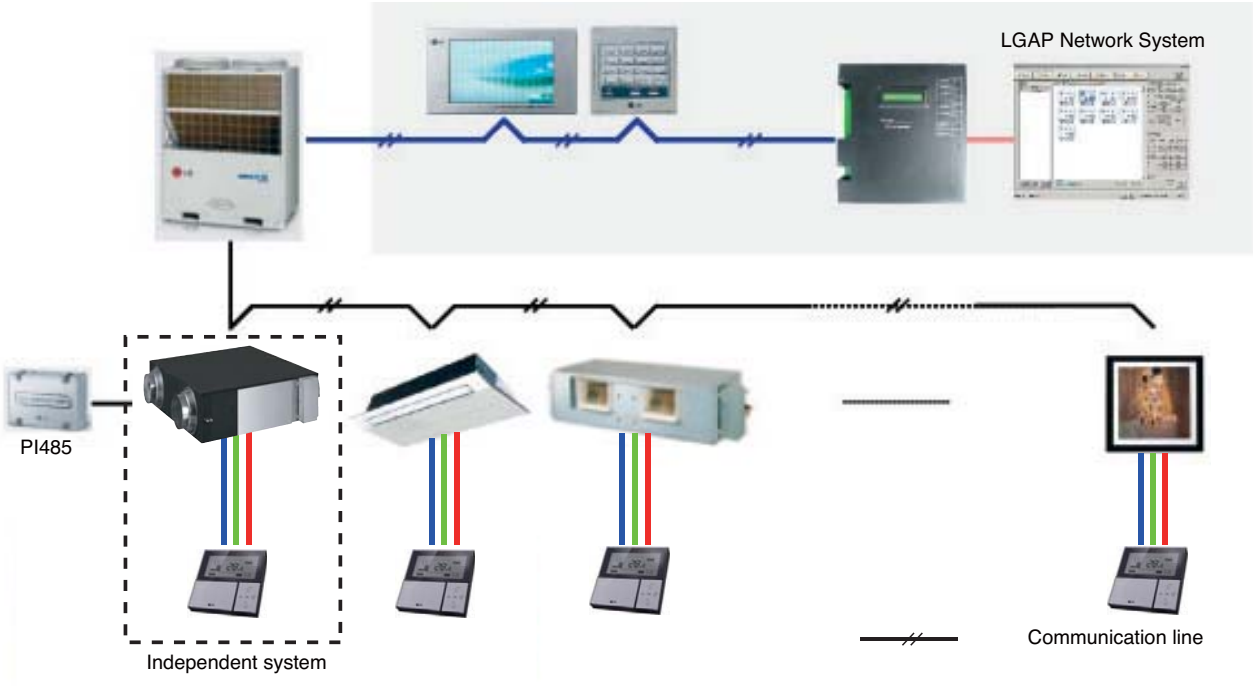
3. Features & Benefits

• This unit can be used as part of the combined operation system used together with indoor units (Multi-V system air conditioners), or as an independent system for processing outside air.

<Combined operation system with Multi-V system(connected with ventilation units and standard indoor units in a single refrigerant circuit)>



<Independent system (connected only with a ventilation unit in a single refrigerant circuit)>



4. Specifications

Item			Unit	LZ-H015GBA2	LZ-H025GBA2	LZ-H035GBA2
Nominal Capacity			CMH(CFM)	150(88)	250(147)	350(206)
Power Supply		Phase		1	1	1
		Frequency	Hz	50 / 60	50 / 60	50 / 60
		Voltage	V	220-240 / 220		
eco-V Mode	Step		-	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW
	Current	SH / H / L	Amps	0.84 / 0.76 / 0.45	1.04 / 0.97 / 0.70	1.73 / 1.58 / 0.77
	Power Input	SH / H / L	W	100 / 90 / 55	110 / 105 / 75	200 / 180 / 80
	Air Flow	SH / H / L	CMH(CFM)	150 / 150 / 100(88 / 88 / 59)	250 / 250 / 150(147 / 147 / 88)	350 / 350 / 210(206 / 206 / 124)
	External Static Pressure	SH / H / L	Pa(inWTR)	130 / 100 / 50(0.52 / 0.40 / 0.20)	150 / 130 / 110(0.60 / 0.52 / 0.44)	170 / 150 / 100(0.68 / 0.60 / 0.40)
	Temperature Exchange Efficiency	SH / H / L	%	75 / 75 / 79	80 /80 / 85	83 / 83 / 87
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	62 / 62 / 69	70 / 70 / 78	80 / 80 / 85
		Cooling(SH / H / L)	%	55 / 55 / 59	64 / 64 / 68	78 / 78 / 83
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	32 / 31 / 22	32 / 28 / 21	33 / 28 / 23
Bypass Mode	Step		-	- / - / -	- / - / -	- / - / -
	Current	SH / H / L	Amps	- / - / -	- / - / -	- / - / -
	Power Input	SH / H / L	W	- / - / -	- / - / -	- / - / -
	Air Flow	SH / H / L	CMH(CFM)	- / - / -	- / - / -	- / - / -
	External Static Pressure	SH / H / L	Pa(inWTR)	- / - / -	- / - / -	- / - / -
	Temperature Exchange Efficiency	SH / H / L	%	- / - / -	- / - / -	- / - / -
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	- / - / -	- / - / -	- / - / -
		Cooling(SH / H / L)	%	- / - / -	- / - / -	- / - / -
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	- / - / -	- / - / -	- / - / -
Heat Exchanger		Type	-	Crossflow	Crossflow	Crossflow
Weight			kg(lb)	22(48.5)	32(70.5)	32(70.5)
Dimension		W x H x D	mm(inch)	605 x 185 x 570(23.82 x 7.28 x 22.44)	750 x 250 x 680(29.52 x 9.84 x 26.77)	750 x 250 x 680(29.52 x 9.84 x 26.77)
Duct work*		Qty	EA	4	4	4
		Size(Ø)	mm(inch)	Ø100(Ø3.94)	Ø150(Ø5.91)	Ø150(Ø5.91)
Supply Air Fan		Qty	EA	1	1	1
		Type	-	Direct-Drive	Direct-Drive	Direct-Drive
Exhaust Air Fan		Qty	EA	1	1	1
		Type	-	Direct-Drive	Direct-Drive	Direct-Drive
Filters		Qty	EA	2	2	2
		Type	-	Cleanable	Cleanable	Cleanable
		Size(W x H x D)	mm(inch)	450 x 10 x 97(17.71 x 0.39 x 3.82)	600 x 10 x 150(23.62 x 0.39 x 5.91)	600 x 10 x 150(23.62 x 0.39 x 5.91)

Notes:

1. eco-V mode : Total Heat Recovery Ventilation mode
2. * : Refer to dimensional drawings.
3. Noise level : - The operating conditions are assumed to be standard.
   - Sound measured at 1.5m below the center the body.
   - Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
   - The sound level at the air discharge port is about 8 dB(A) higher than the unit's operating sound.

4. Specifications

Item			Unit	LZ-H050GBA2	LZ-H080GBA2	LZ-H100GBA2
Nominal Capacity			CMH(CFM)	500(294)	800(471)	1,000(589)
Power Supply		Phase		1	1	1
		Frequency	Hz	50 / 60	50 / 60	50 / 60
		Voltage	V	220-240 / 220		
eco-V Mode	Step		-	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW
	Current	SH / H / L	Amps	1.92 / 1.58 / 0.79	2.77 / 2.16 / 1.44	3.41 / 2.91 / 1.76
	Power Input	SH / H / L	W	230 / 220 / 85	360 / 270 / 165	470 / 385 / 210
	Air Flow	SH / H / L	CMH(CFM)	500 / 500 / 320(294 / 294 / 124)	800 / 800 / 660(471 / 471 / 388)	1,000 / 1,000 / 800(589 / 589 / 471)
	External Static Pressure	SH / H / L	Pa(inWTR)	150 / 100 / 50(0.60 / 0.40 / 0.20)	200 / 110 / 60(0.80 / 0.44 / 0.24)	160 / 90 / 50(0.64 / 0.36 / 0.20)
	Temperature Exchange Efficiency	SH / H / L	%	75 / 75 / 79	79 / 79 / 82	75 / 75 / 78
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	72 / 72 / 77	70 / 70 / 75	66 / 66 / 71
		Cooling(SH / H / L)	%	70 / 70 / 75	65 / 65 / 70	61 / 61 / 66
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	34 / 32 / 25	36 / 34 / 30	37 / 35 / 31
Bypass Mode	Step		-	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW
	Current	SH / H / L	Amps	1.92 / 1.58 / 0.79	2.77 / 2.16 / 1.44	3.41 / 2.91 / 1.76
	Power Input	SH / H / L	W	230 / 220 / 85	360 / 370 / 165	470 / 385 / 210
	Air Flow	SH / H / L	CMH(CFM)	500 / 500 / 320(294 / 294 / 124)	800 / 800 / 660(471 / 471 / 388)	1,000 / 1,000 / 800(589 / 589 / 471)
	External Static Pressure	SH / H / L	Pa(inWTR)	150 / 100 / 50(0.60 / 0.40 / 0.20)	200 / 110 / 60(0.80 / 0.44 / 0.24)	160 / 90 / 50(0.64 / 0.36 / 0.20)
	Temperature Exchange Efficiency	SH / H / L	%	- / - / -	- / - / -	- / - / -
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	- / - / -	- / - / -	- / - / -
		Cooling(SH / H / L)	%	- / - / -	- / - / -	- / - / -
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	34 / 32 / 25	36 / 34 / 30	37 / 35 / 31
Heat Exchanger		Type	-	Crossflow	Crossflow	Crossflow
Weight			kg(lb)	44(97)	60(132)	60(132)
Dimension		W x H x D	mm(inch)	988 x 273 x 1,014(38.9 x 10.75 x 39.92)	1,062 x 365 x 1,140(41.9 x 14.4 x 44.9)	1,062 x 365 x 1,140(41.9 x 14.4 x 44.9)
Duct work*		Qty	EA	4	4	4
		Size(Ø)	mm(inch)	Ø200(Ø7.87)	Ø250(Ø9.84)	Ø250(Ø9.84)
Supply Air Fan		Qty	EA	1	1	1
		Type	-	Direct-Drive	Direct-Drive	Direct-Drive
Exhaust Air Fan		Qty	EA	1	1	1
		Type	-	Direct-Drive	Direct-Drive	Direct-Drive
Filters		Qty	EA	2	2	2
		Type	-	Cleanable	Cleanable	Cleanable
		Size(W x H x D)	mm(inch)	855 x 10 x 166(33.66 x 0.39 x 6.54)	1,056 x 10 x 212.5(41.57 x 0.39 x 8.37)	1,056 x 10 x 212.5(41.57 x 0.39 x 8.37)

Notes:

1. eco-V mode : Total Heat Recovery Ventilation mode
2. * : Refer to dimensional drawings.
3. Noise level : - The operating conditions are assumed to be standard.
   - Sound measured at 1.5m below the center the body.
   - Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
   - The sound level at the air discharge port is about 8 dB(A) higher than the unit's operating sound.

4. Specifications

Item			Unit	LZ-H150GBA2	LZ-H200GBA2
Nominal Capacity			CMH(CFM)	1,500(883)	2,000(1,177)
Power Supply		Phase		1	1
		Frequency	Hz	50 / 60	50 / 60
		Voltage	V	220-240 / 220	
eco-V Mode	Step		-	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW
	Current	SH / H / L	Amps	5.60 / 5.40 / 2.90	6.80 / 5.90 / 3.60
	Power Input	SH / H / L	W	720 / 540 / 340	930 / 770 / 420
	Air Flow	SH / H / L	CMH(CFM)	1,500 / 1,500 / 1,200(883 / 883 / 706)	2,000 / 2,000 / 1,600(1,777 / 1,777 / 942)
	External Static Pressure	SH / H / L	Pa(inWTR)	200 / 110 / 60(0.80 / 0.44 / 0.24)	160 / 90 / 50(0.64 / 0.36 / 0.20)
	Temperature Exchange Efficiency	SH / H / L	%	79 / 79 / 82	75 / 75 / 78
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	70 / 70 / 75	66 / 66 / 71
		Cooling(SH / H / L)	%	65 / 65 / 70	61 / 61 / 66
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	39 / 37 / 33	39 / 37 / 33
Bypass Mode	Step		-	SUPER-HIGH / HIGH / LOW	SUPER-HIGH / HIGH / LOW
	Current	SH / H / L	Amps	5.60 / 5.40 / 2.90	6.80 / 5.90 / 3.60
	Power Input	SH / H / L	W	720 / 540 / 340	930 / 770 / 420
	Air Flow	SH / H / L	CMH(CFM)	1,500 / 1,500 / 1,200(883 / 883 / 706)	2,000 / 2,000 / 1, 600(1,177 / 1,177 / 942)
	External Static Pressure	SH / H / L	Pa(inWTR)	200 / 110 / 60(0.80 / 0.44 / 0.24)	160 / 90 / 50(0.64 / 0.36 / 0.20)
	Temperature Exchange Efficiency	SH / H / L	%	- / - / -	- / - / -
	Enthalpy Exchange Efficiency	Heating(SH / H / L)	%	- / - / -	- / - / -
		Cooling(SH / H / L)	%	- / - / -	- / - / -
	Noise Level(Sound Level, 1.5m)	SH / H / L	dB(A)	37 / 35 / 31	37 / 35 / 31
Heat Exchanger		Type	-	Crossflow	Crossflow
Weight			kg(lb)	140(308)	140(308)
Dimension		W x H x D	mm(inch)	1,313 x 738 x 1,140(51.7 x 29.0 x 44.9)	1,313 x 738 x 1,140(51.7 x 29.0 x 44.9)
Duct work*		Qty	EA	4 + 2	4 + 2
		Size(Ø)	mm(inch)	Ø250(Ø9.84) + Ø350(Ø13.77)	Ø250(Ø9.84) + Ø350(Ø13.77)
Supply Air Fan		Qty	EA	2	2
		Type	-	Direct-Drive	Direct-Drive
Exhaust Air Fan		Qty	EA	2	2
		Type	-	Direct-Drive	Direct-Drive
Filters		Qty	EA	4	4
		Type	-	Cleanable	Cleanable
		Size(W x H x D)	mm(inch)	1,056 x 10 x 212.5(41.57 x 0.39 x 8.37)	1,056 x 10 x 212.5(41.57 x 0.39 x 8.37)

Notes:

1. eco-V mode : Total Heat Recovery Ventilation mode
2. * : Refer to dimensional drawings.
3. Noise level : - The operating conditions are assumed to be standard.
   - Sound measured at 1.5m below the center the body.
   - Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
   - The sound level at the air discharge port is about 8 dB(A) higher than the unit's operating sound.

4. Specifications

Guide Specification

General

Units shall be completely factory assembled including fan motors, filters, heat exchanger element(s) and controls in a sheet metal casing.

Casing

Unit casing shall be constructed of zinc coated, heavy gauge galvanized steel. All panels in the casing shall be cleaned with permanent, fire retardant, odorless material. Knockouts shall be provided for unit electrical power. Panels shall be fastened by screws.

Heat Exchanger Element

The heat exchanger element shall be assembled without moving parts for higher durability and reliability. The material is flame-retardant for safety. The supply air passage and the exhaust air passage are arranged in right angle the prevent the supply and exhaust air from getting mixed.

Fan Motor

The fan motors shall be of permanently lubricated type with internal thermal protection as standard. The shaft shall be protected against rusting. The fan motors shall be resilient mounted to minimize vibration and noise. All fans shall be statically and dynamically balanced for quiet operation.

Filters

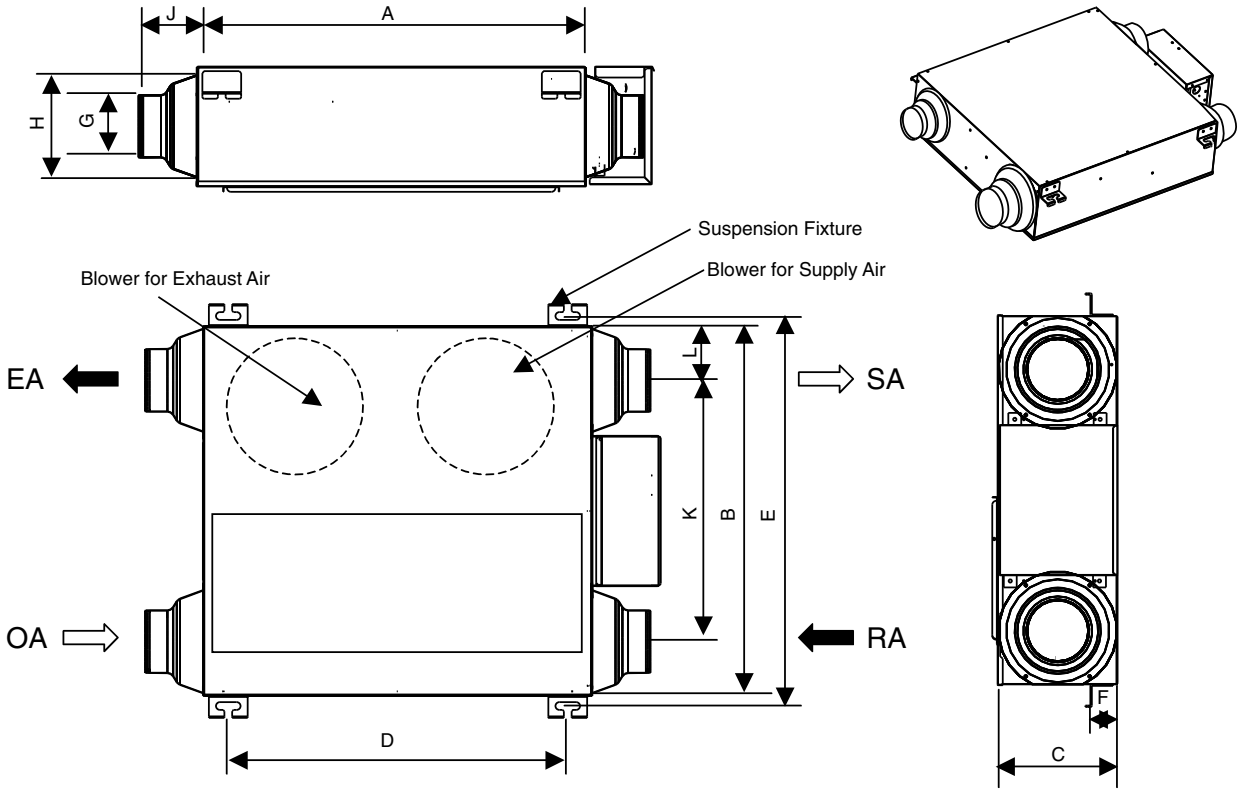
Filters shall be easily accessible from the side of the unit. Filters shall be fabricated from synthetic media and shall be of washable type.

Controls

Wired control shall be available as standard. The controls shall be microprocessor based and provide for a user interface.

5. Dimensional Drawings

Model No. : LZ-H015GBA2

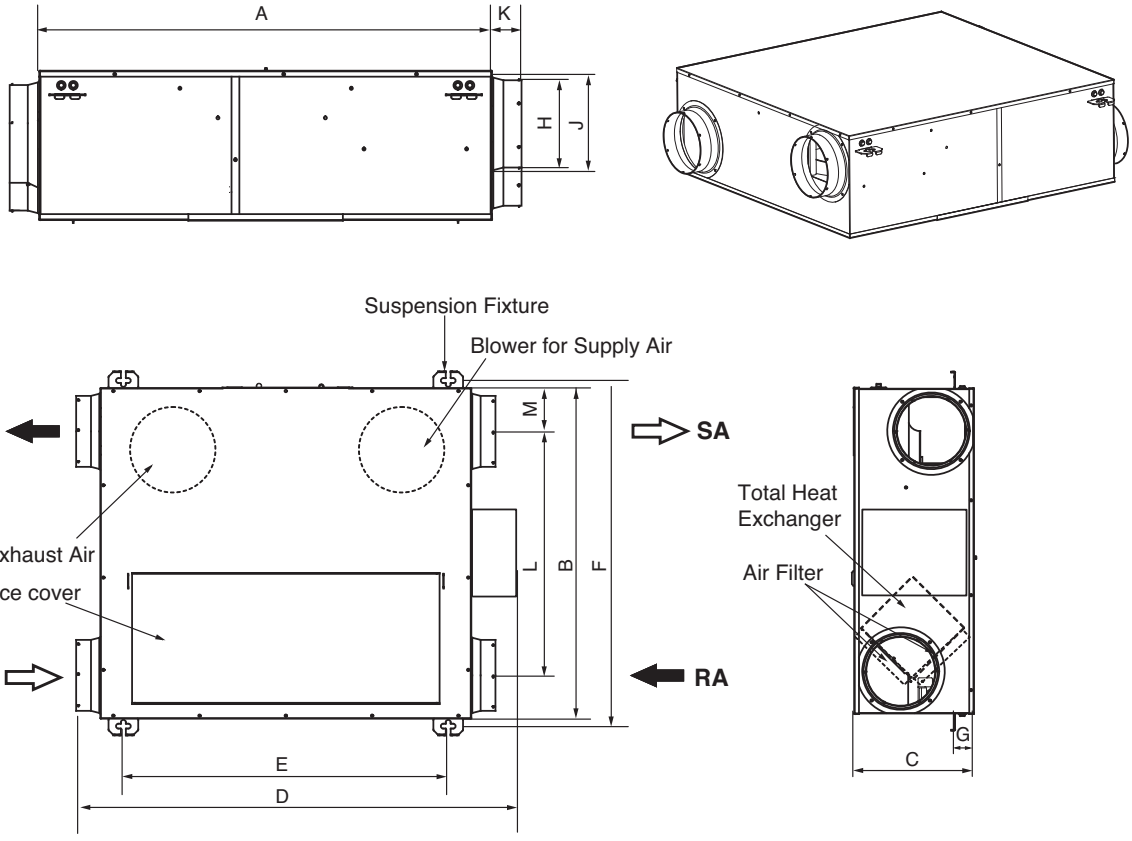


Unit: mm

Model	Figure			Pitch of Suspension Fixture			Nominal Diameter	Duct Connection Flange			Duct Pitch		Weight
	A	B	C	D	E	F		G	H	J	K	L	(kg)
LZ-H015GBA2	605	570	185	525	603	40	100	97	184	90	394	100	22

5. Dimensional Drawings

Model No. : LZ-H025GBA2 / LZ-H035GBA2

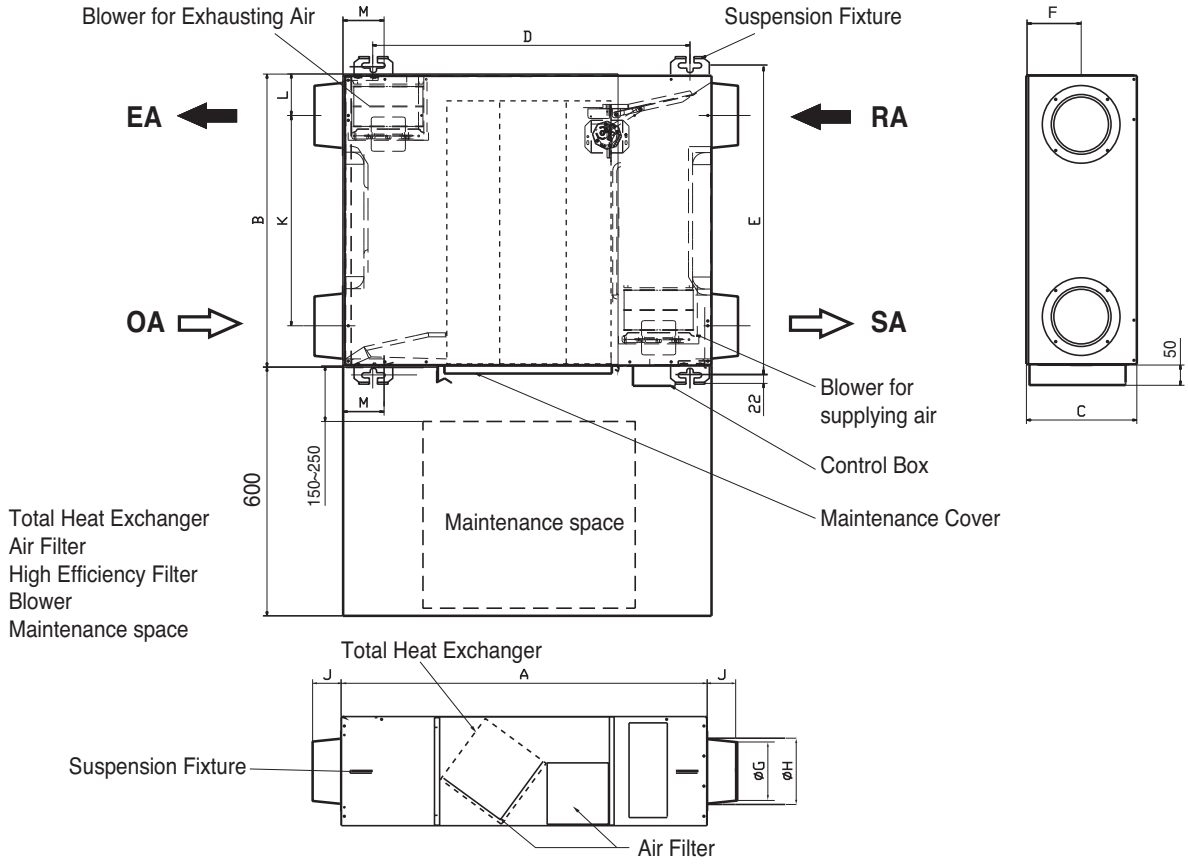


Unit: mm

Model	Figure				Pitch of Suspensio Fixture			Nominal Diameter	Duct Connection Flange			Duct Pitch		Weight
	A	B	C	D	E	F	G		H	J	K	L	M	(kg)
LZ-H025GBA2 LZ-H035GBA2	750	680	250	850	657	711	40	150	146	155	50	502	89.2	32

5. Dimensional Drawings

Model No. : LZ-H050GBA2

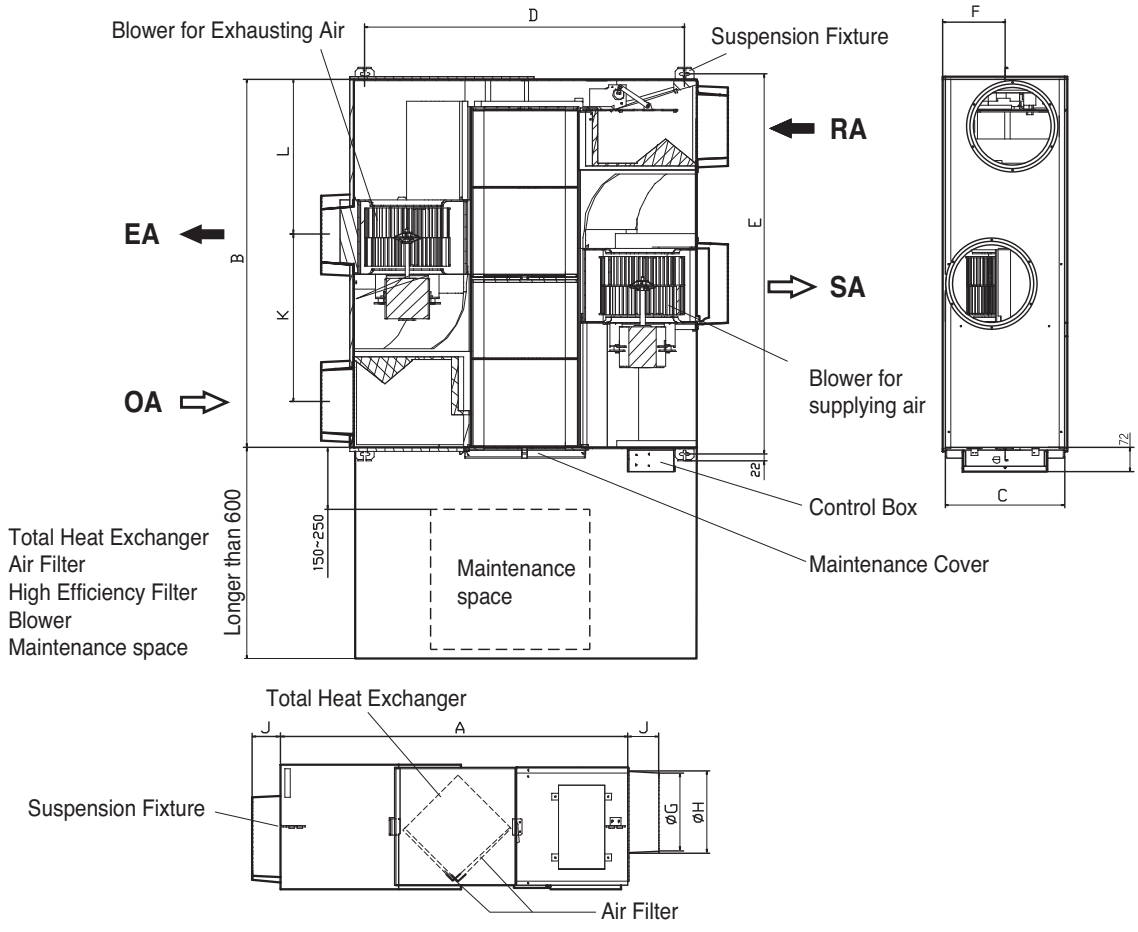


Unit: mm

Model	Figure			Pitch of Suspension Fixture			Nominal Diameter	Duct Connection Flange			Duct Pitch		Weight
	A	B	C	D	E	F		G	H	J	K	L	(kg)
LZ-H050GBA2	1,014	988	273	939	1,025	135	200	194	252	96	590	198	44

5. Dimensional Drawings

Model No. : LZ-H080GBA2 / LZ-H100GBA2

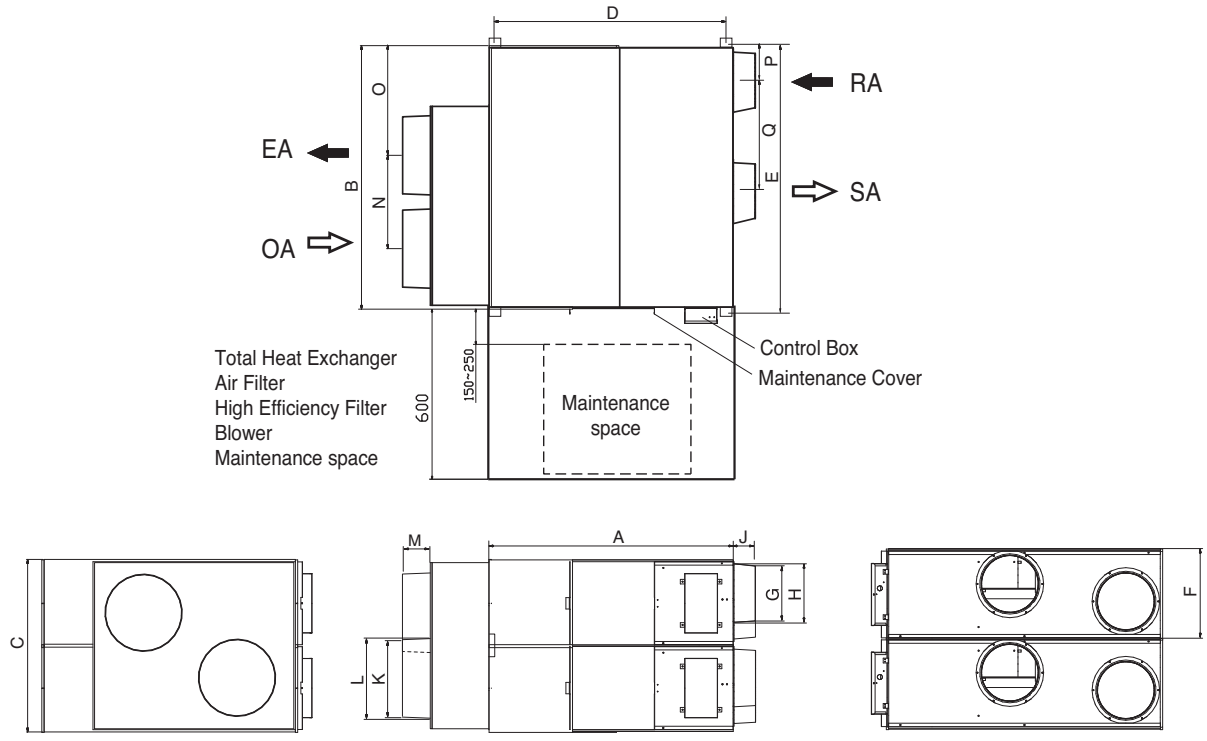


Unit: mm

Model	Figure			Pitch of Suspension Fixture			Nominal Diameter	Duct Connection Flange			Duct Pitch		Weight
	A	B	C	D	E	F		G	H	J	K	L	(kg)
LZ-H080GBA2 LZ-H100GBA2	1,062	1,140	365	987	1,176	180	250	242	253	98	513	481	60

5. Dimensional Drawings

Model No. : LZ-H150GBA2 / LZ-H200GBA2

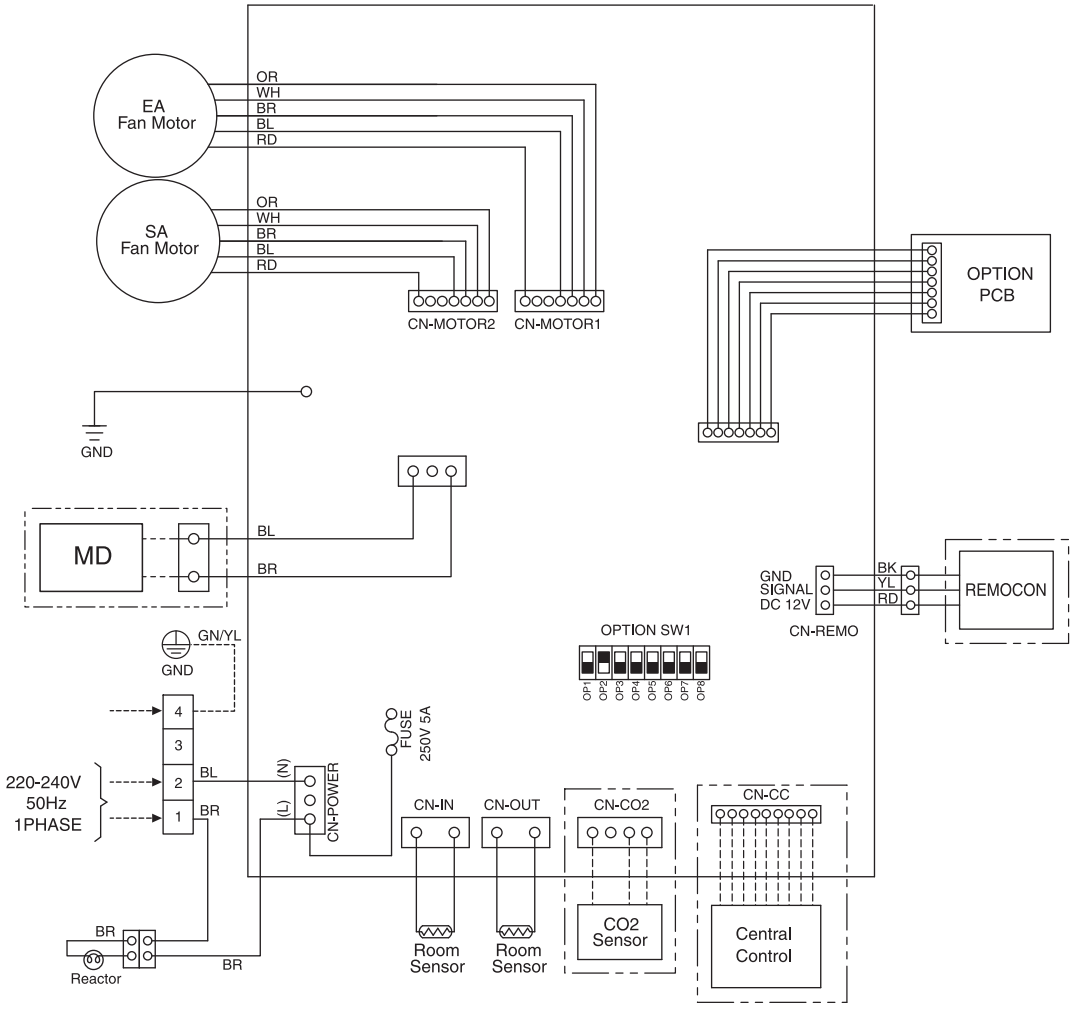


Unit: mm

Model	Figure			Pitch of Suspension Fixture			Duct Connection Flange						Nominal Diameter		Duct Pitch				Weight
	A	B	C	D	E	F	G	H	J	K	L	M	EA	SA	N	O	P	Q	(kg)
LZ-H150GBA2 LZ-H200GBA2	1,313	1,140	738	987	1,176	150	242	253	98	340	350	130	350	250	410	482	146	512	140

6. Wiring Diagrams

Model No. : LZ-H015GBA2 / LZ-H025GBA2 / LZ-H035GBA2



⚠ WARNING

- There is risk of electric shock due to failure or electric leakage.
- Always ground the product.
- You can install the product by refering to owner's manual.

INFORMATION

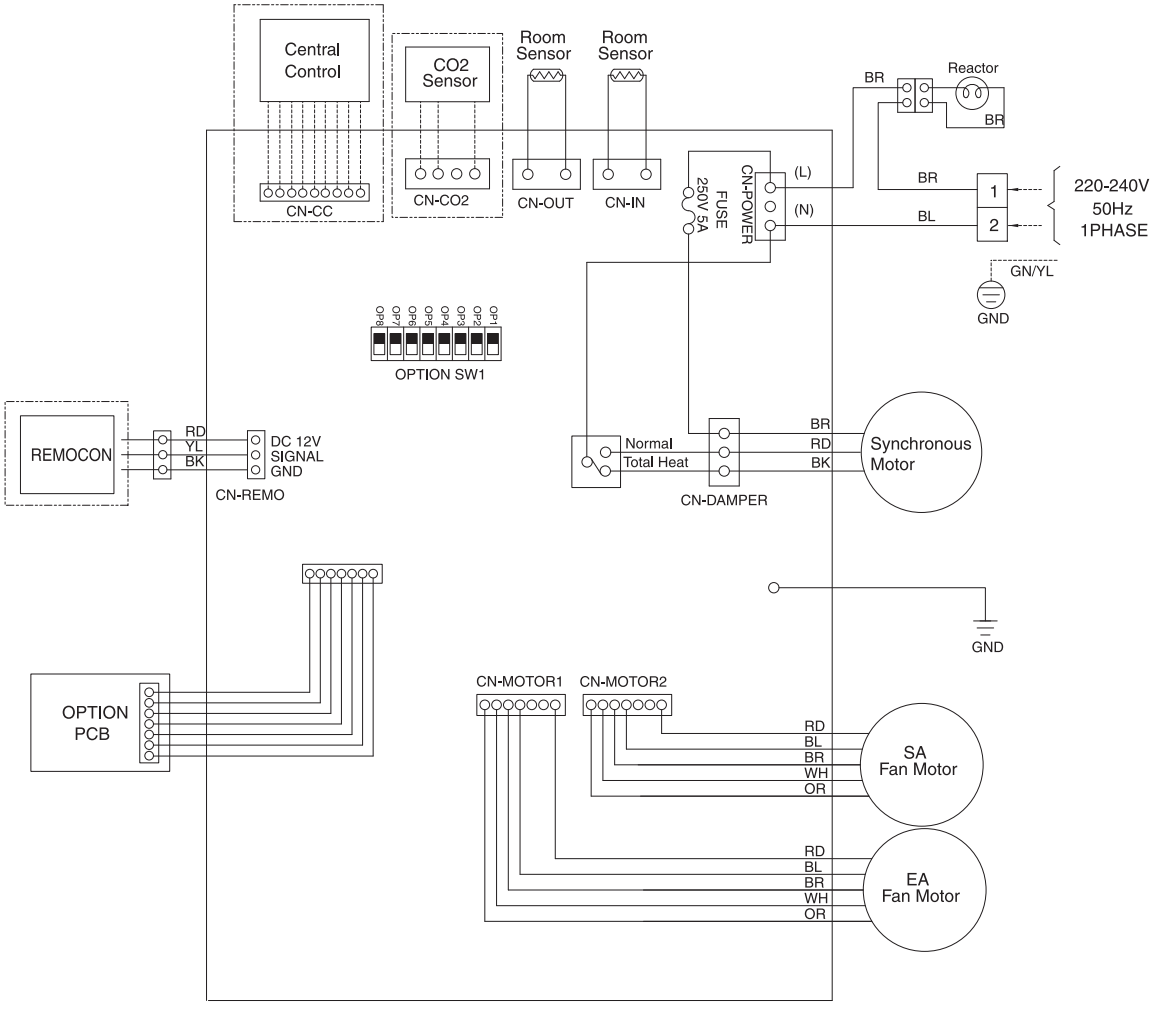
* You need to buy a dedicated circuit separately.
* ——— Field Wiring
* - - - - Accessory

Note
RD : RED
BR : BROWN
BL : BLUE
BK : BLACK
OR : ORANGE
YL : YELLOW
WH : WHITE
GN/YL : GREEN/YELLOW

P/No.: MEZ42256711

6. Wiring Diagrams

Model No. : LZ-H050GBA2



⚠ WARNING

- There is risk of electric shock due to failure or electric leakage.
- Always ground the product.
- You can install the product by refering to owner's manual.

INFORMATION

* You need to buy a dedicated circuit separately.
* ——— Field Wiring
* - - - - Accessory

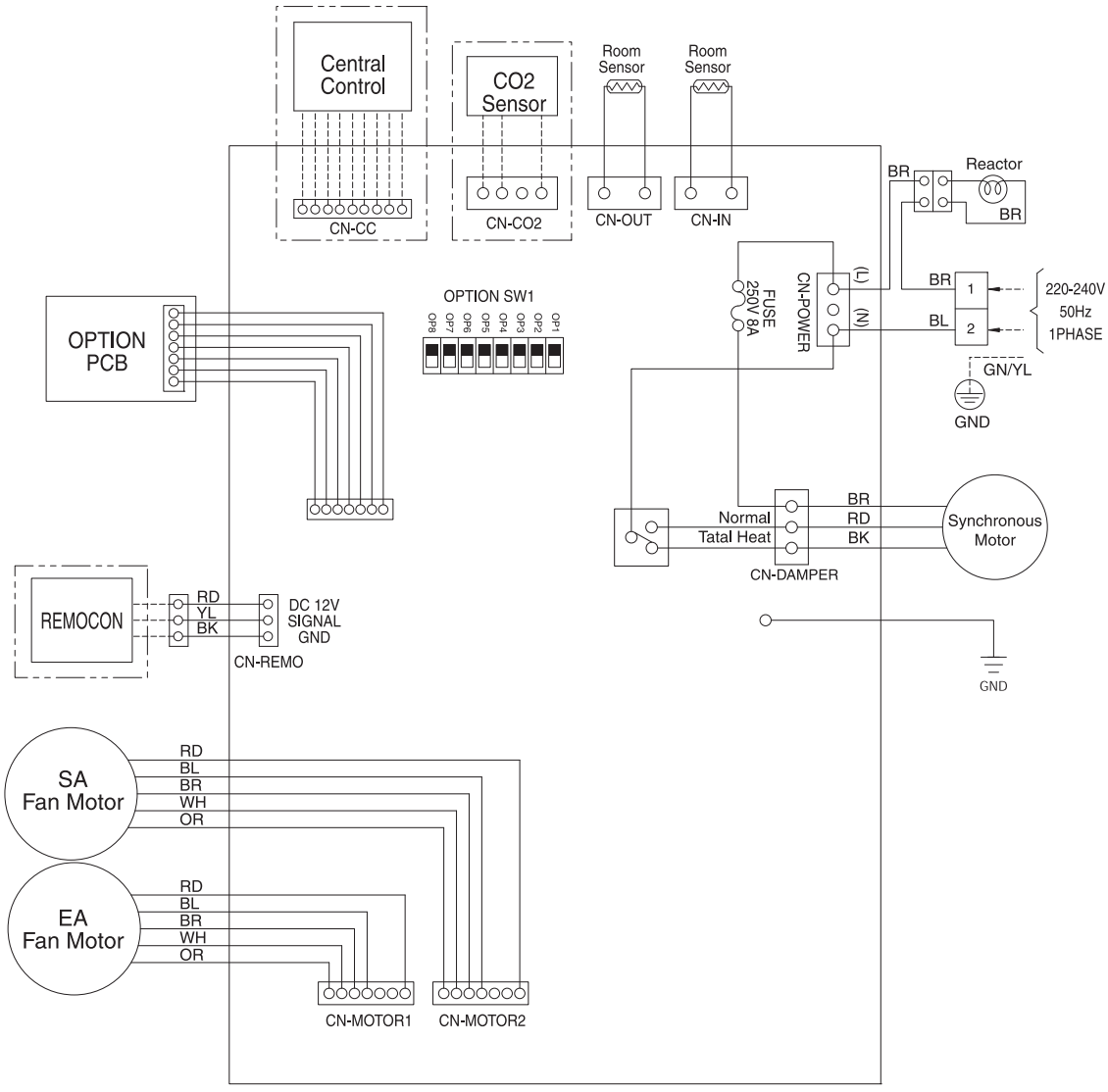
Note

RD : RED
BR : BROWN
BL : BLUE
BK : BLACK
OR : ORANGE
YL : YELLOW
WH : WHITE
GN/YL : GREEN/YELLOW

P/No : MEZ42256709

6. Wiring Diagrams

Model No. : LZ-H080GBA2 / LZ-H100GBA2



⚠ WARNING

- There is risk of electric shock due to failure or electric leakage.
- Always ground the product.
- You can install the product by refering to owner's manual.

INFORMATION

* You need to buy a dedicated circuit separately.

* — — — — — — Field Wiring

* [ ] Accessory

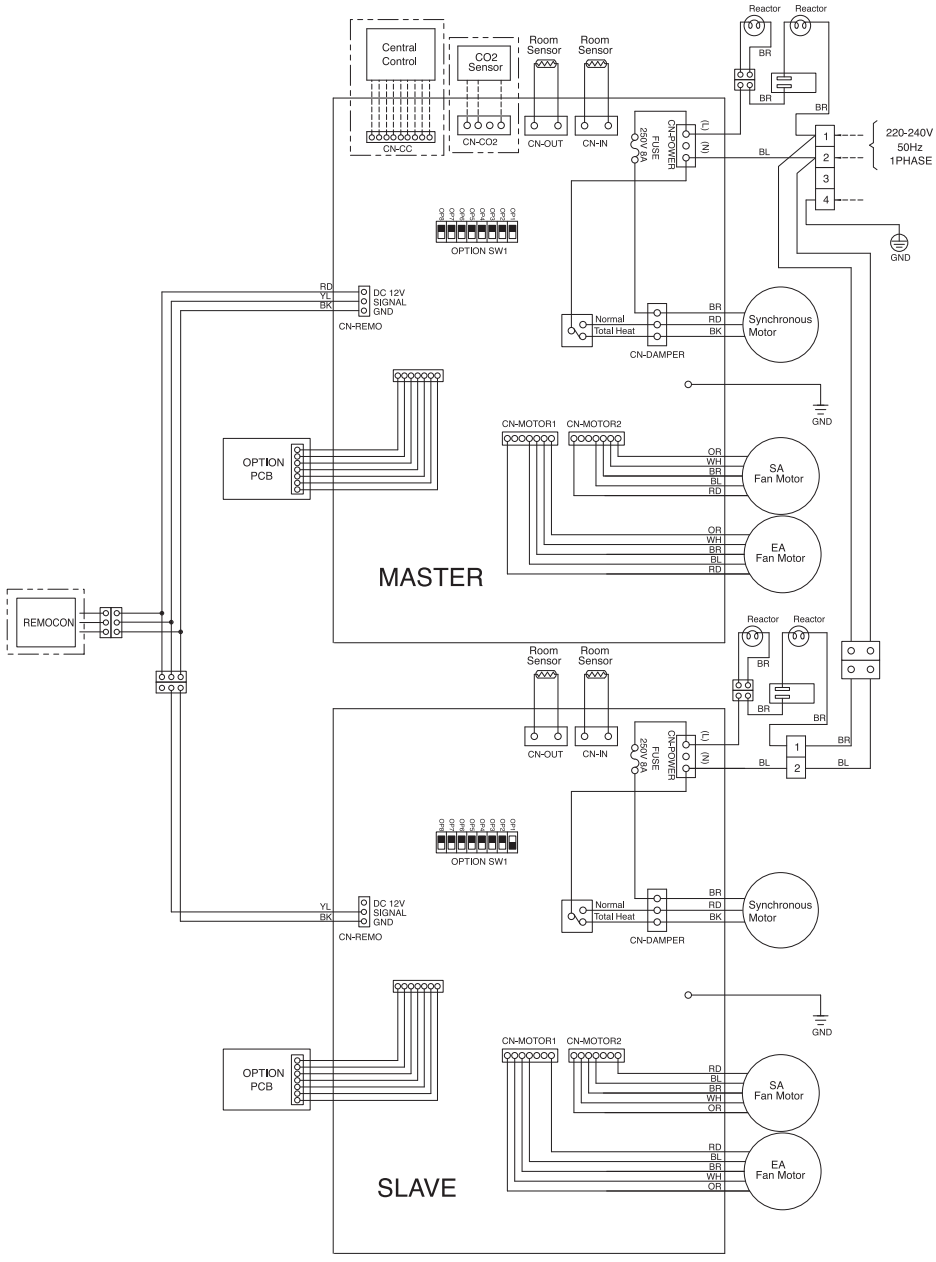
Note

RD : RED
BR : BROWN
BL : BLUE
BK : BLACK
OR : ORANGE
YL : YELLOW
WH : WHITE
GN/YL : GREEN/YELLOW

P/No : MEZ42256714

6. Wiring Diagrams

Model No. : LZ-H150GBA2 / LZ-H200GBA2



⚠ WARNING	INFORMATION
• There is risk of electric shock due to failure or electric leakage. • Always ground the product. • You can install the product by refering to owner's manual.	* You need to buy a dedicated circuit separately. * — — — — — — Field Wiring * ▭ Accessory

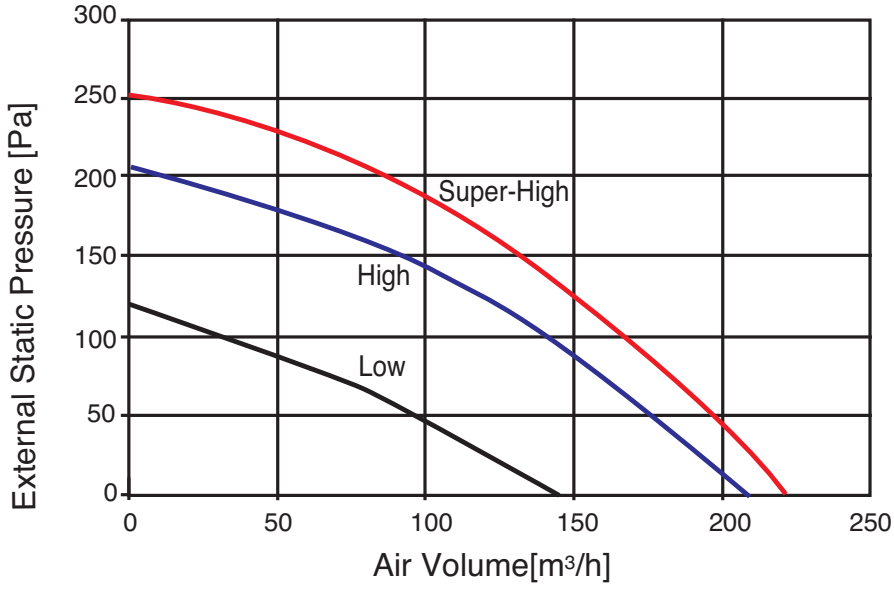
Note
RD : RED
BR : BROWN
BL : BLUE
BK : BLACK
OR : ORANGE
YL : YELLOW
WH : WHITE
GN/YL : GREEN/YELLOW

P/No : MEZ42256710

7. Characteristic Curve

Model No. : LZ-H015GBA2

[Ventilation]



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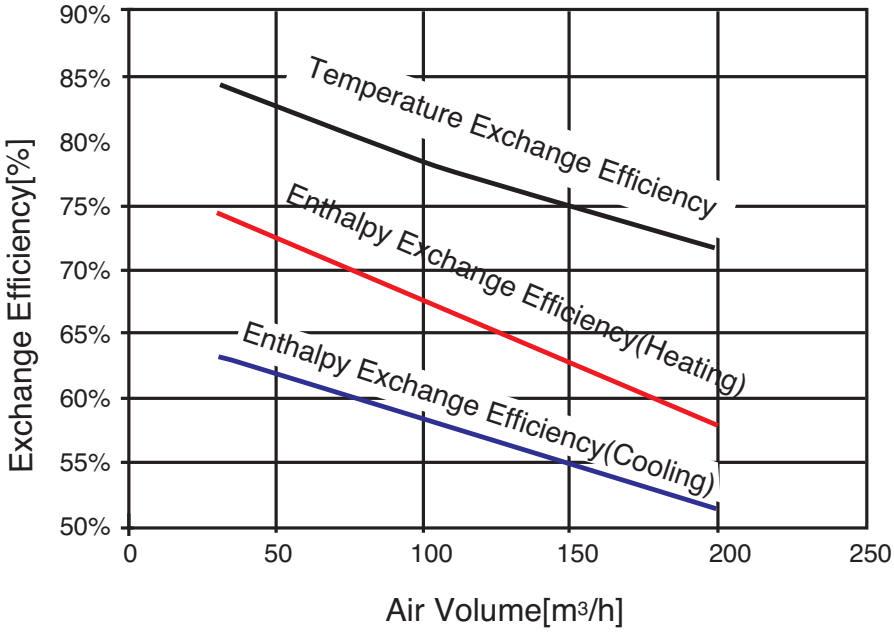
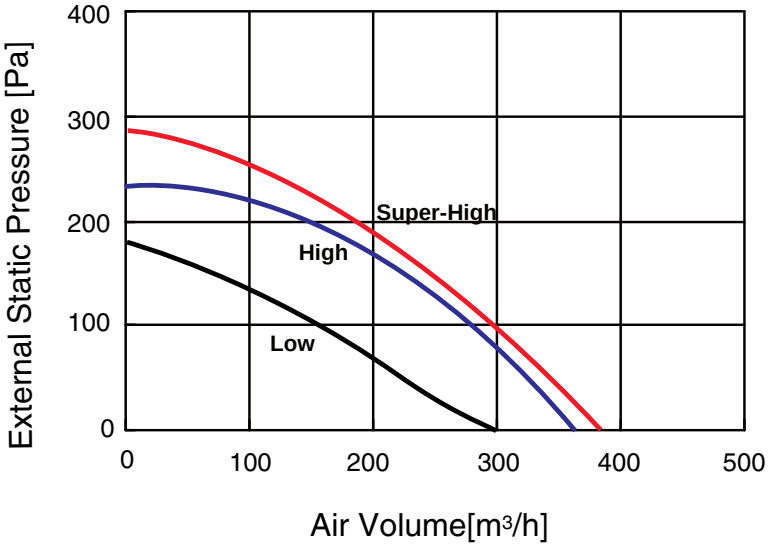


7. Characteristic Curve

Model No. : LZ-H025GBA2

[Ventilation]



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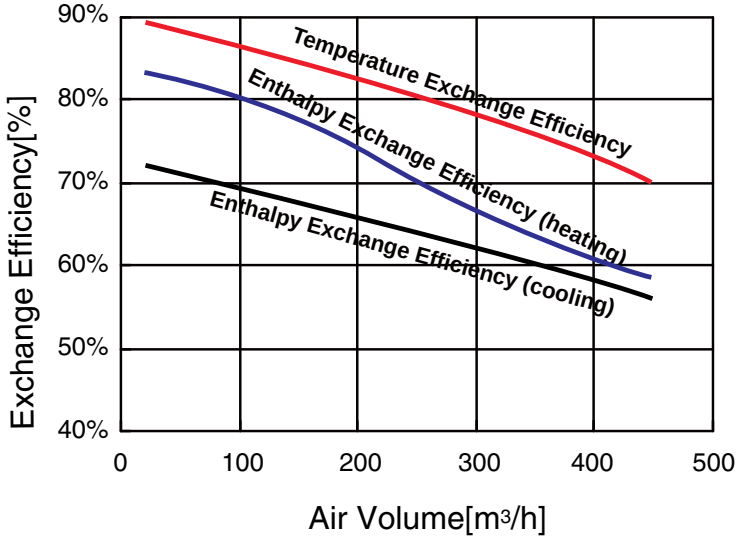
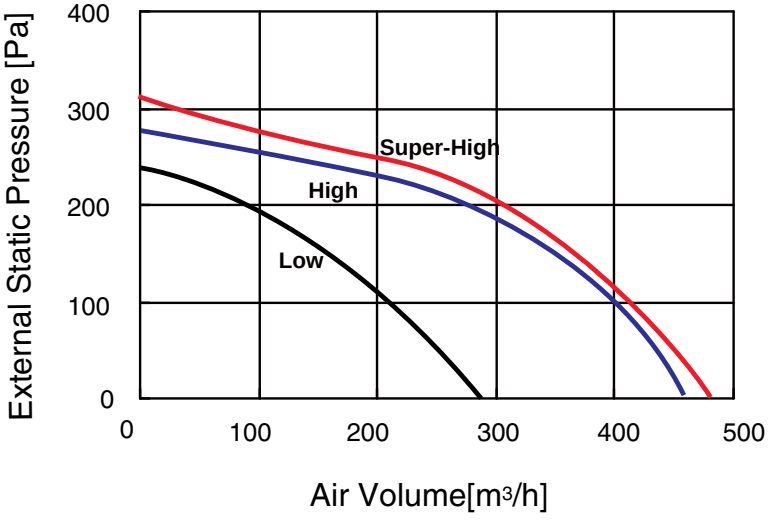


7. Characteristic Curve

Model No. : LZ-H035GBA2

[Ventilation]



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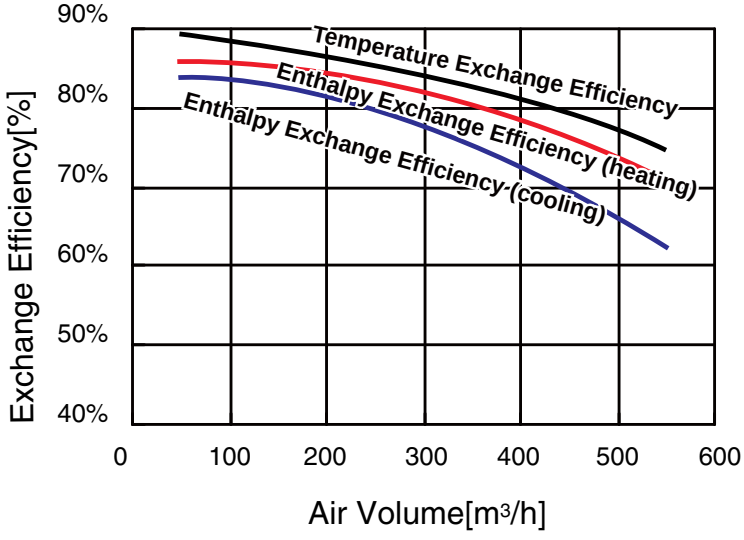
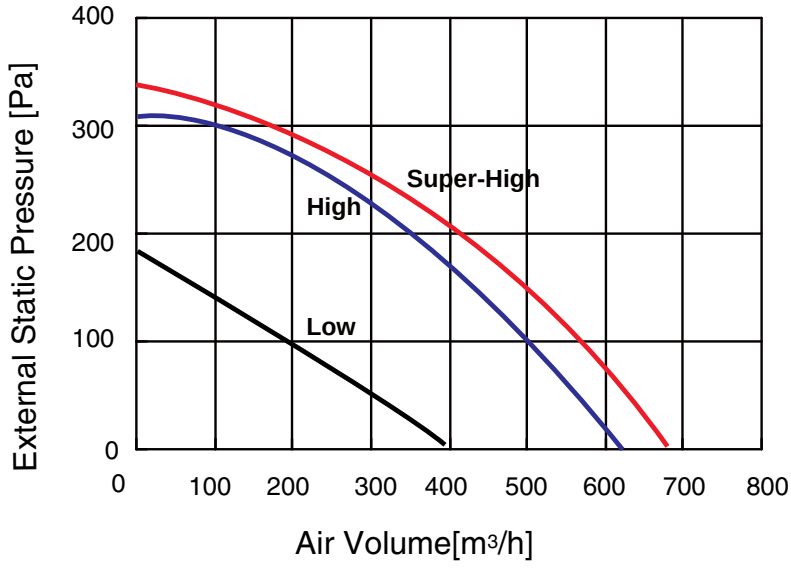


7. Characteristic Curve

Model No. : LZ-H050GBA2

[Ventilation]



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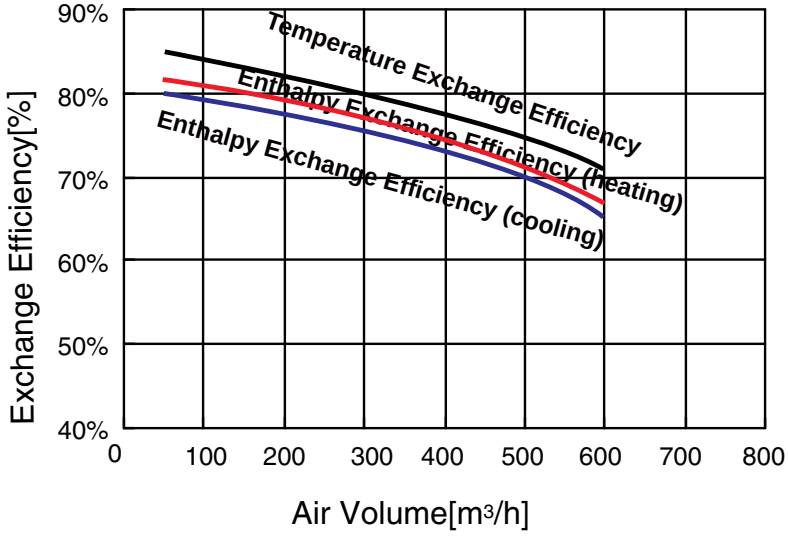
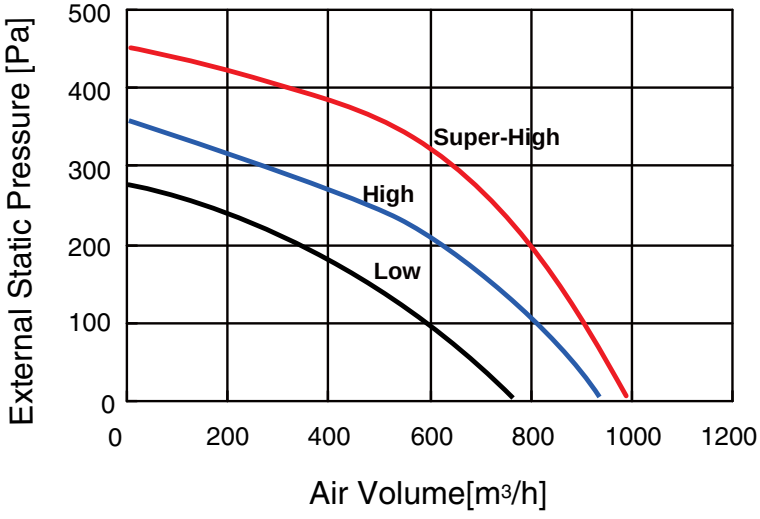


7. Characteristic Curve

Model No. : LZ-H080GBA2

[Ventilation]



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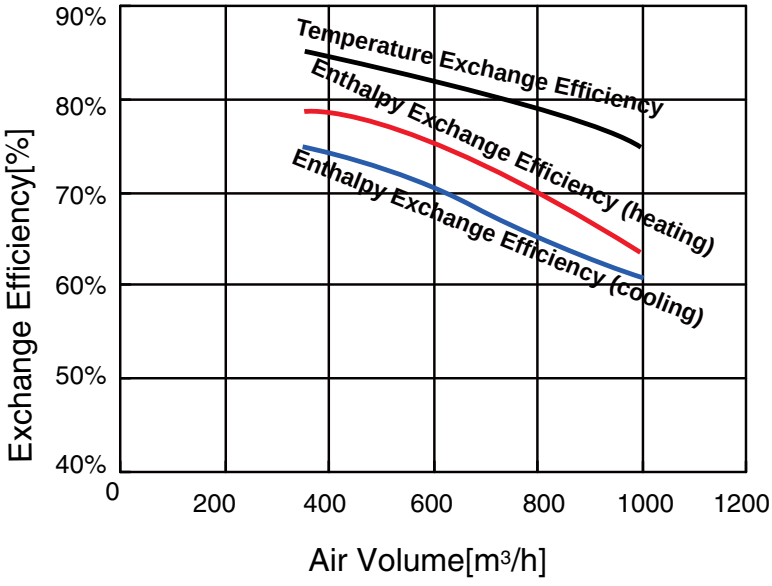
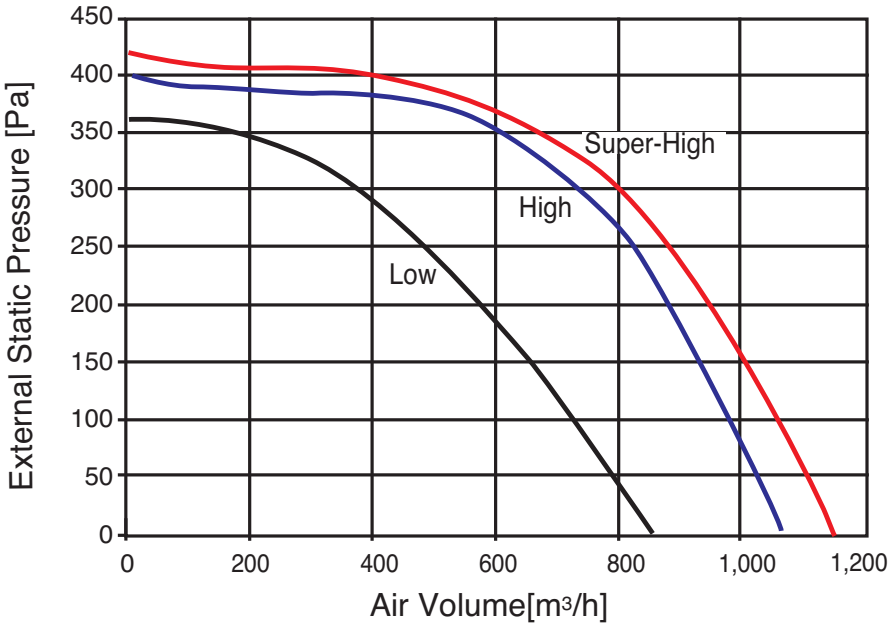


7. Characteristic Curve

Model No. : LZ-H100GBA2

[Ventilation]



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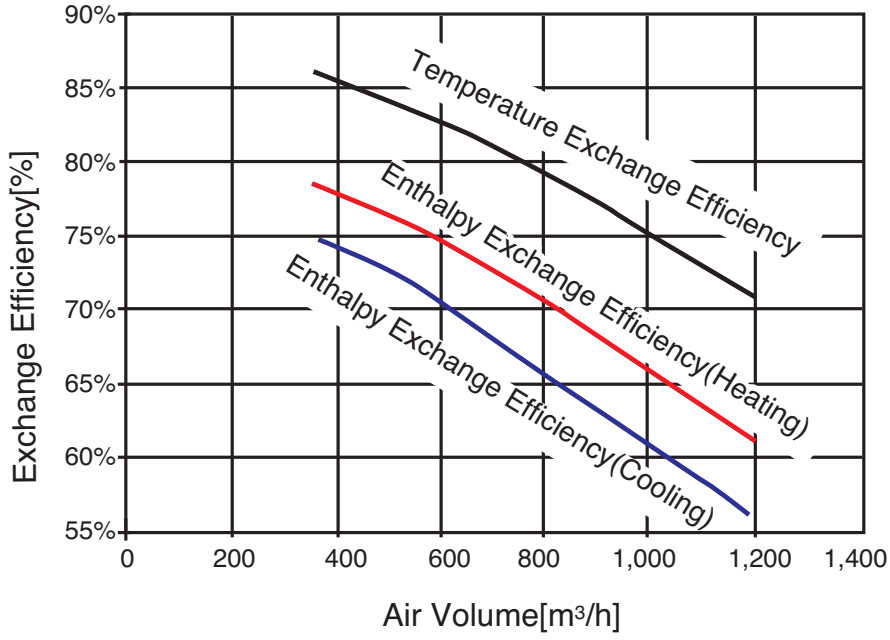
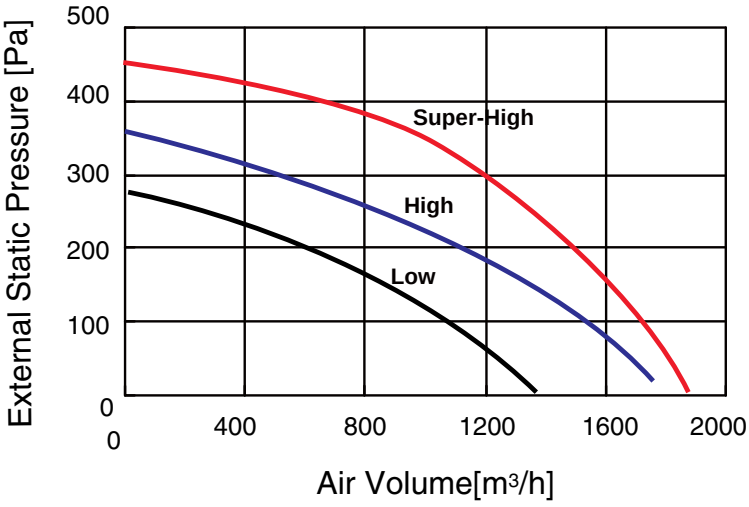


7. Characteristic Curve

Model No. : LZ-H150GBA2

[Ventilation]



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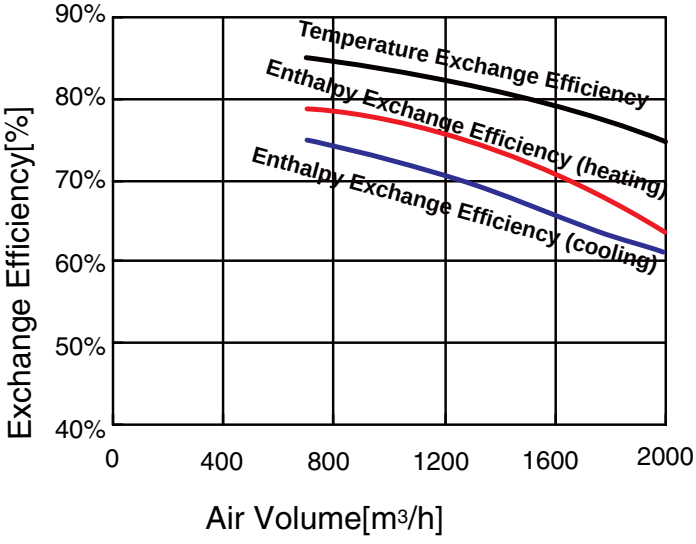
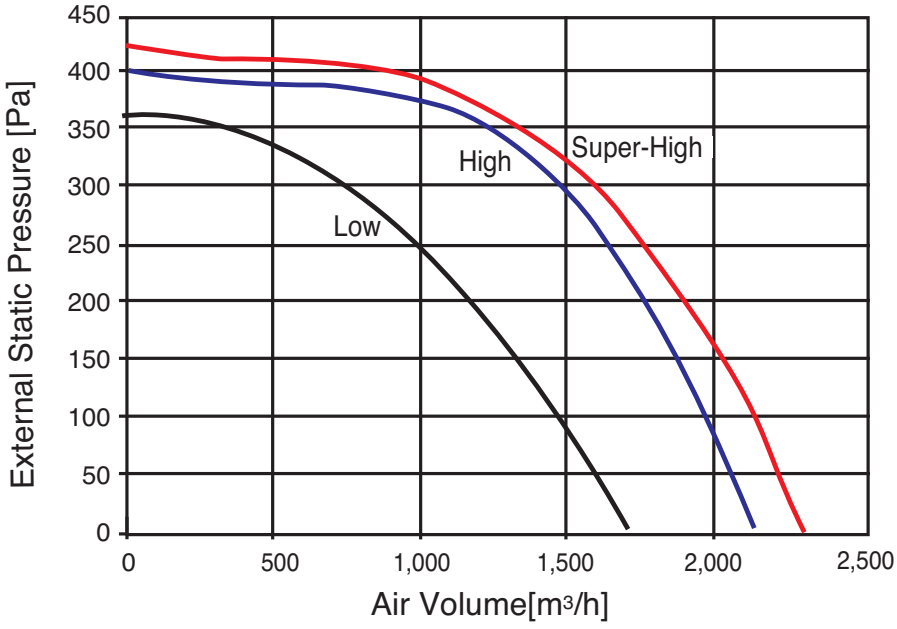


7. Characteristic Curve

Model No. : LZ-H200GBA2

[Ventilation]



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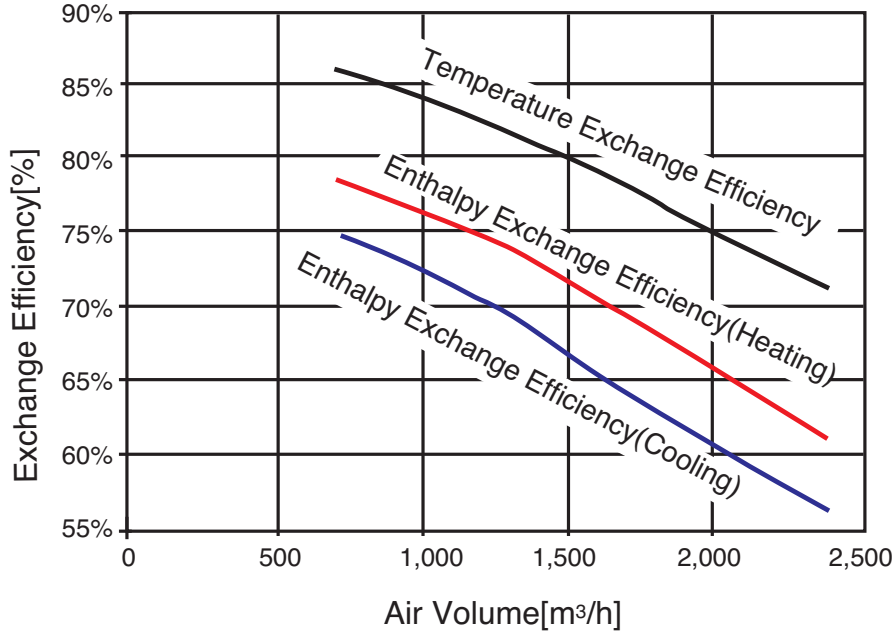
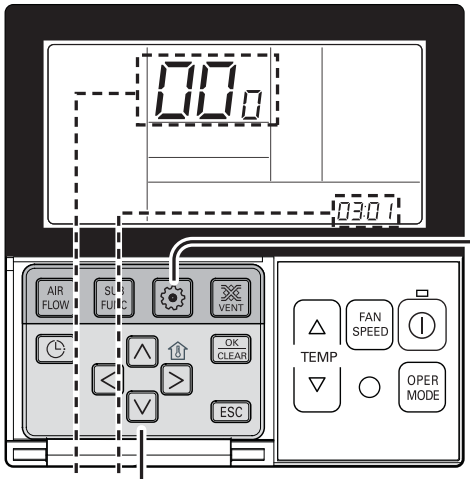


8. External Static Pressure Settings

Installer Setting -E.S.P. (PQRCVSL0/PQRCVSL0QW)

This is the function that decides the strength of the wind for each wind level and because this function is to make the installation easier.

- **If you set ESP incorrectly, the ventilation unit may malfunction.**
- **This setting must be carried out by a certificated-technician.**



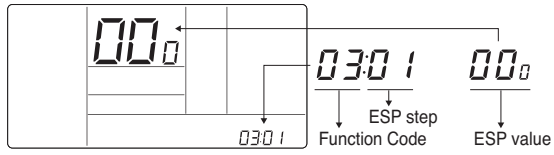
Function code,
ESP code

ESP value

1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.

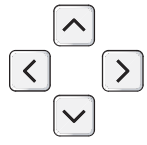
2 If entering into ESP setup mode by using ⚙ button, it indicates as the picture below.

* Function code 03 : Supply fan
04 : Exhaust fan



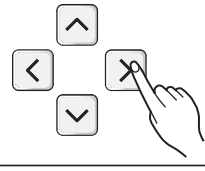
3 Select ESP fan step by pressing ∧ ∨ button. (01:low, 02:high, 03:super-high)

0301



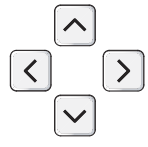
4 Move to ESP value setting by pressing › button.
(It is 000 when delivering from the warehouse.)

0301 000



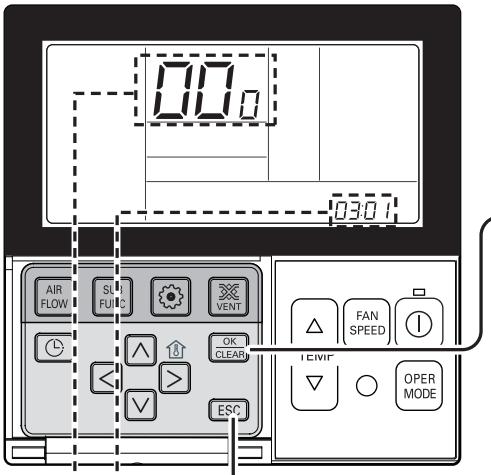
5 Press ∧ ∨ button to setup ESP value.

(It is possible to setup ESP value from 1 to 255, and 1 is the smallest and 255 is the biggest.)



- **When setting ESP value on the product without very weak wind or power wind function, it may not work.**

8. External Static Pressure Settings



Function code,
ESP code

ESP value

6 Select ESP fan step again by using < > button and setup ESP value, as No. 4 and 5, that corresponds each wind flow.

7 Press OK CLEAR button to save.

8 Press ESC button to exit.

❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❉ When exiting without pressing set button, the manipulated value is not reflected.

- **Please be careful not to change the ESP value for each fan step.**
- **ESP value is available for specific range belongs to the product.**

8. External Static Pressure Settings

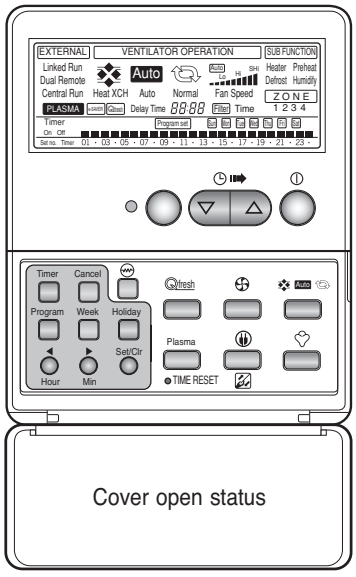
RPM Table

Model	Mode	External Static Pressure Pa (in.wg)			
		50 (0.2)	100 (0.4)	150 (0.6)	200 (0.8)
LZ-H015GBA2	Super high	180	195	200	205
	High	180	195	200	205
	Low	147	162	174	194
LZ-H025GBA2	Super high	112	124	127	136
	High	112	124	127	136
	Low	92	103	108	114
LZ-H035GBA2	Super high	132	140	144	150
	High	132	140	144	150
	Low	102	110	120	128
LZ-H050GBA2	Super high	148	160	168	-
	High	148	160	168	-
	Low	112	124	132	-
LZ-H080GBA2	Super high	100	110	120	129
	High	100	110	120	129
	Low	92	98	105	115
LZ-H100GBA2	Super high	112	123	132	142
	High	112	123	132	142
	Low	100	110	120	129
LZ-H150GBA2	Super high	100	110	120	129
	High	100	110	120	129
	Low	92	98	105	115
LZ-H200GBA2	Super high	112	123	132	142
	High	112	123	132	142
	Low	100	110	120	129

8. External Static Pressure Settings

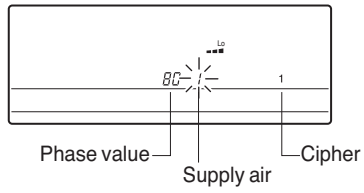
Installer Setting -E.S.P. (PZRCUSB0)

By setting a phase value of motor, you can control the air volume.



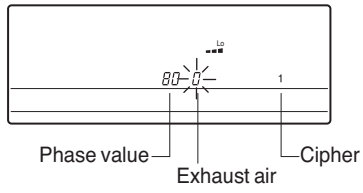
Setting up the air volume of SA

1. If you simultaneously press [timer, ⊛] button for more than 3 seconds, the current phase value is displayed at the display window as right Figure shows.
2. Select the Air volume mode which you want by pressing [⊛] button.
3. Set up the phase value by pressing [△▽] button until it comes to the target value.
4. If you simultaneously press [timer, ⊛] button for more than 3 seconds again, setting up completes.



Setting up the air volume of EA

1. If you simultaneously press [timer, ⊛] button for more than 3 seconds, the current phase mvalue is displayed at the display window as right Figure shows.
2. Select the Air volume mode which you want by pressing [⊛] button.
3. Set up the phase value by pressing [△▽] button until it comes to the target value.
4. If you simultaneously press [timer, ⊛] button for more than 3 seconds again, setting up completes.



You can set up the air volume at all air volume mode according to installation circumstances.

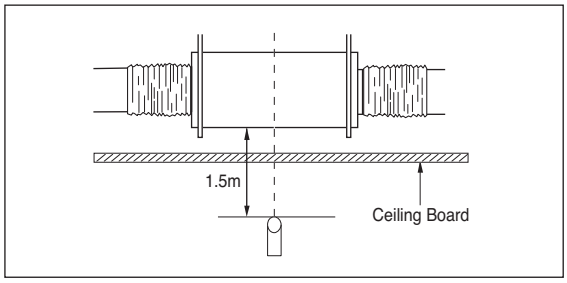
The phase value can range from 00 to 254. As the value is low, the air volume increases.

As making a shipment from the factory, the initial setting up value is “00”.

* For more information of setting up the phase value, refer to the external static pressure value table.

9. Sound Pressure Level

Overall

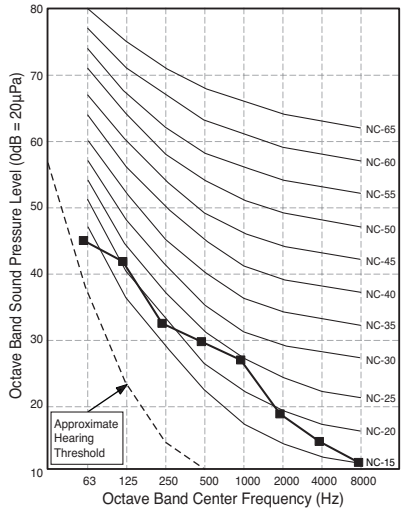


Notes:
- Sound measured at 1.5m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

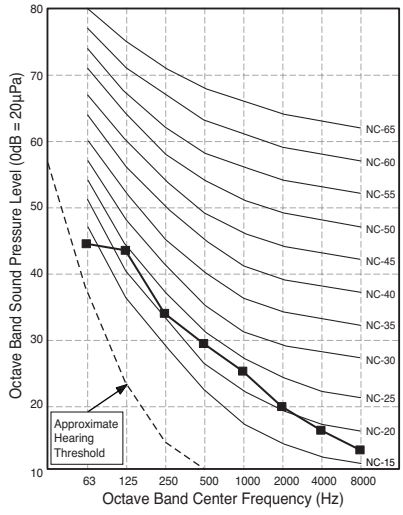
Model	Sound levels[dB(A)]		
	S/H	H	L
LZ-H015GBA2	32	31	22
LZ-H025GBA2	32	28	21
LZ-H035GBA2	33	28	23
LZ-H050GBA2	34	32	25
LZ-H080GBA2	36	34	30
LZ-H100GBA2	37	35	31
LZ-H150GBA2	39	37	33
LZ-H200GBA2	39	37	33

Sound pressure level

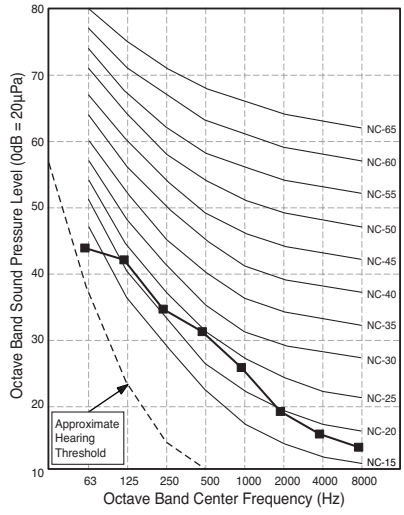
LZ-H015GBA2



LZ-H025GBA2

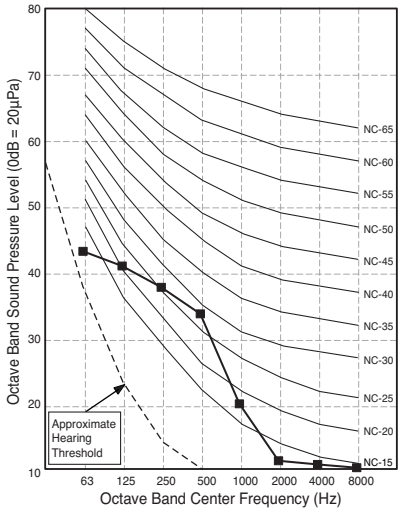


LZ-H035GBA2

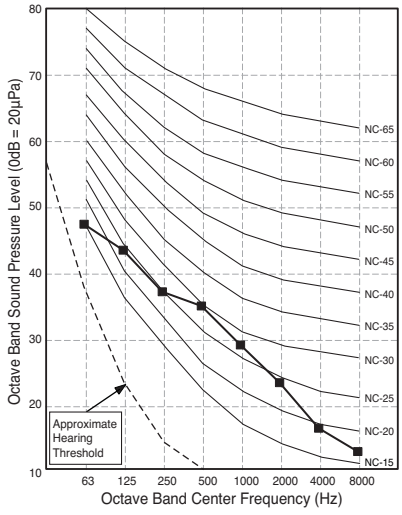


9. Sound Pressure Level

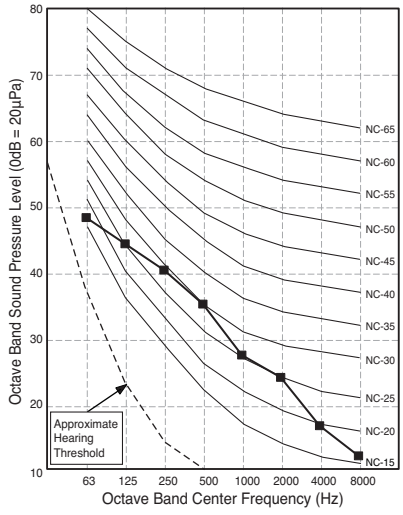
LZ-H050GBA2



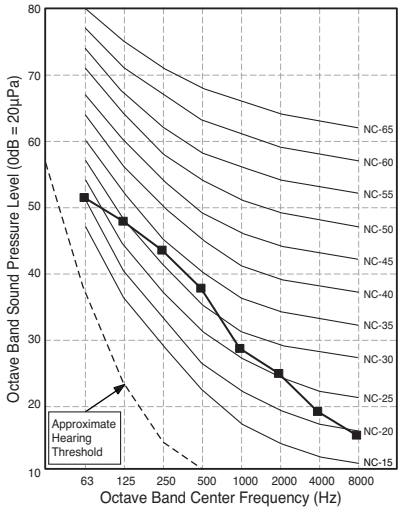
LZ-H080GBA2



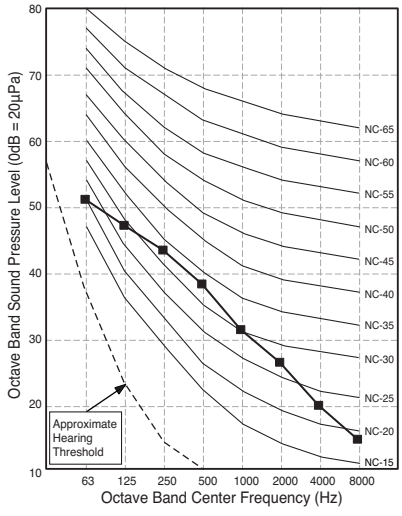
LZ-H100GBA2



LZ-H150GBA2



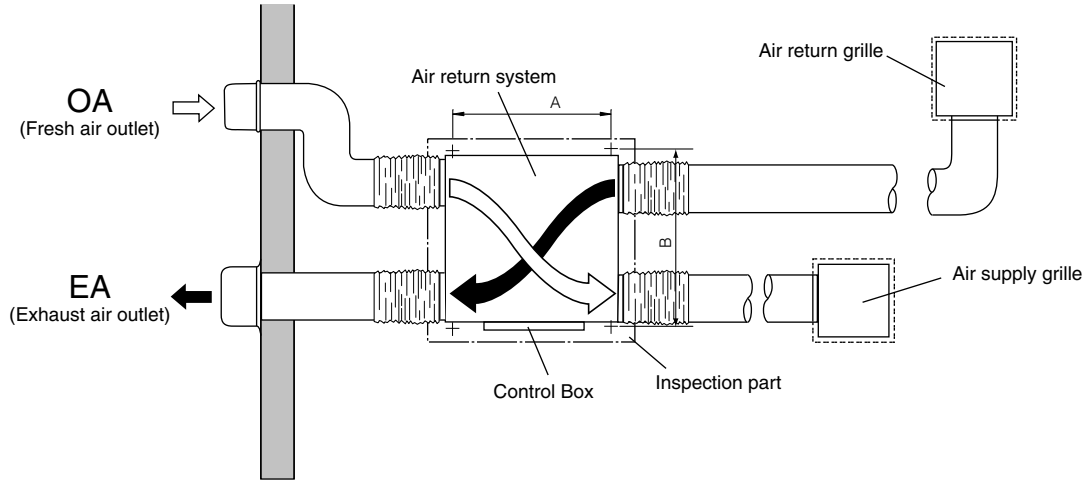
LZ-H200GBA2

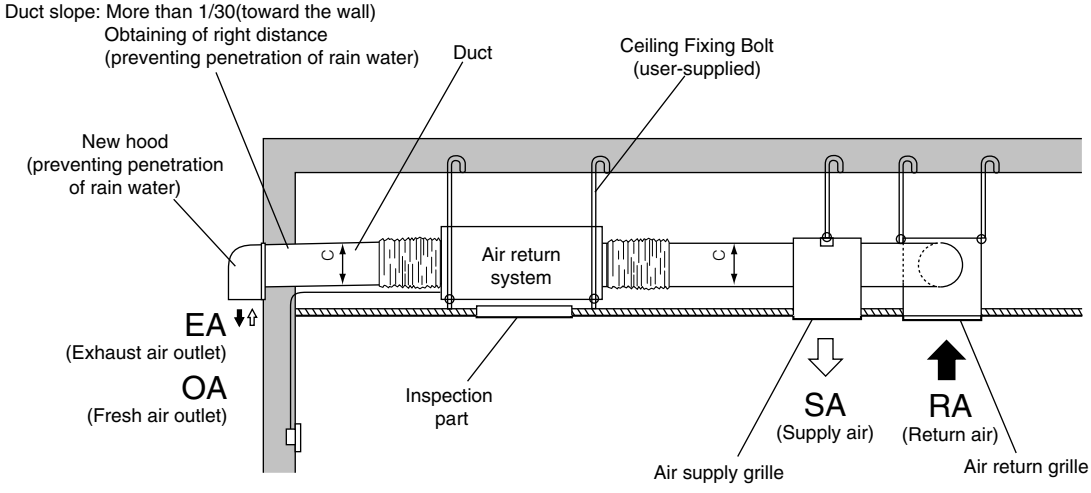


10. Installation

10.1 Typical Installation Map

Model No.: LZ-H015GBA2 / LZ-H025GBA2 / LZ-H035GBA2



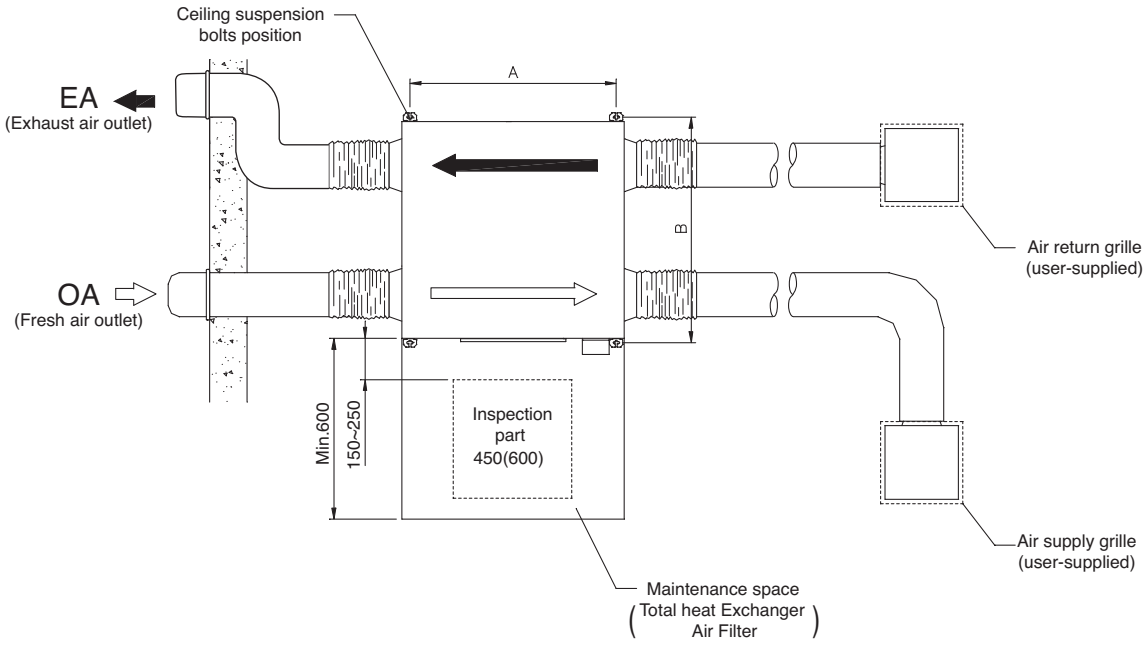


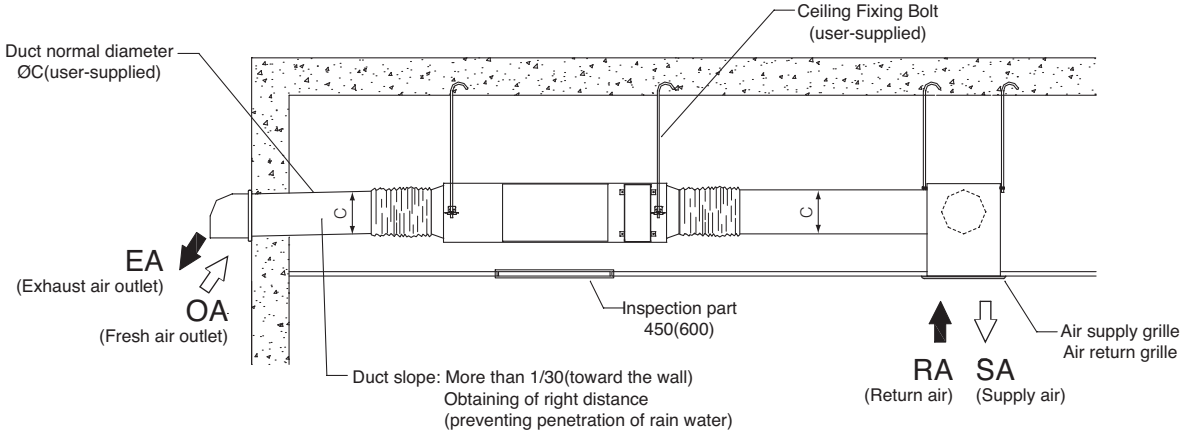
[Unit : mm]

Model	A	B	C
LZ-H015GBA2	525	603	100
LZ-H025GBA2 LZ-H035GBA2	657	711	150

10. Installation

Model No.: LZ-H050GBA2

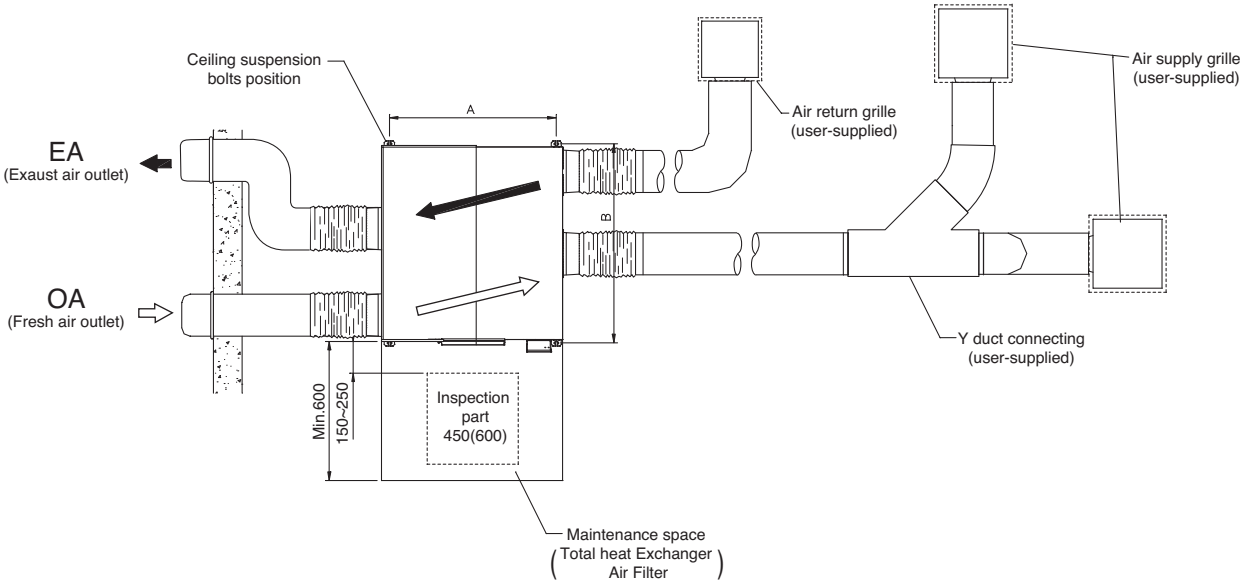


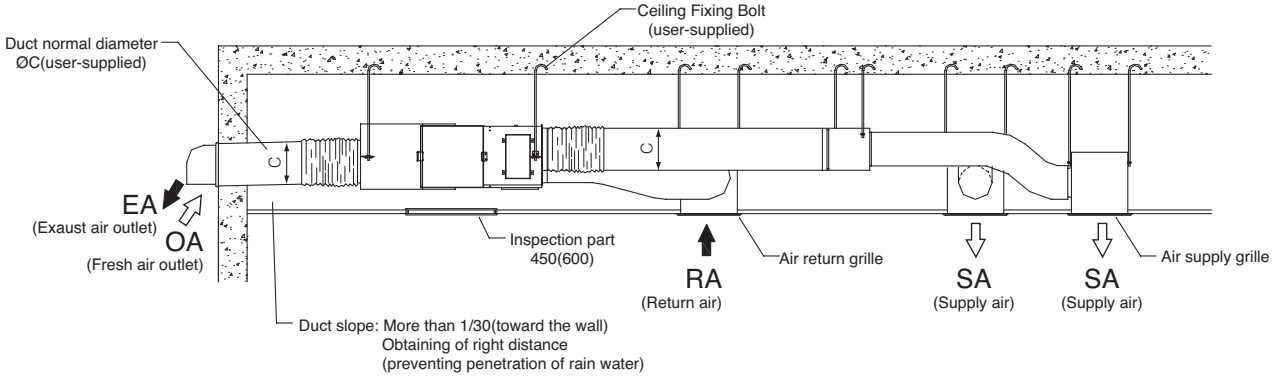


[Unit : mm]

Mode	A	B	C
LZ-H050GBA2	939	1,025	200

Model No.: LZ-H080GBA2 / LZ-H100GBA2



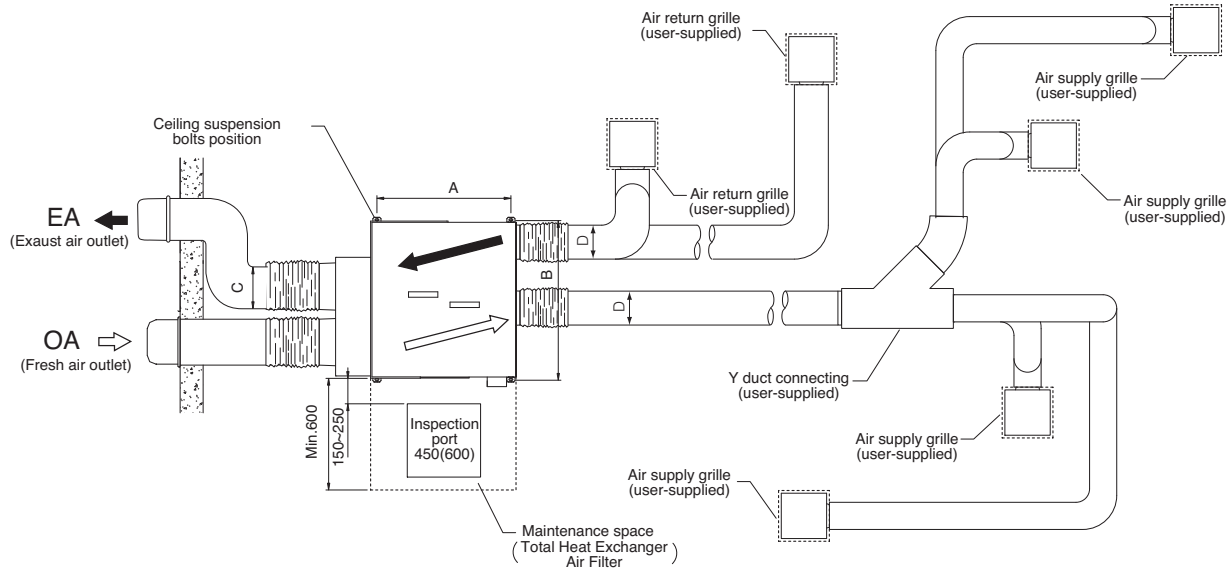


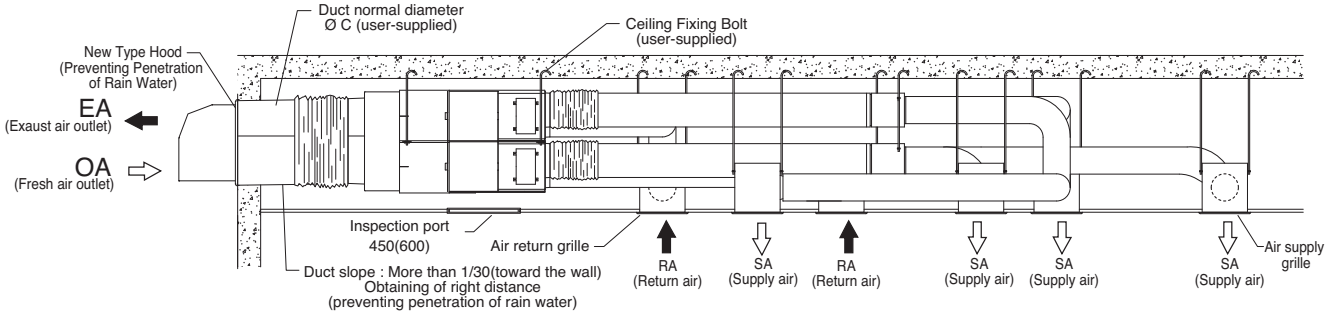
[Unit : mm]

Model	A	B	C
LZ-H080GBA2 LZ-H100GBA2	987	1,176	250

10. Installation

Model No.: LZ-H150GBA2 / LZ-H200GBA2





[Unit : mm]

Model	A	B	C	D
LZ-H150GBA2 LZ-H200GBA2	987	1,176	350	250

10. Installation

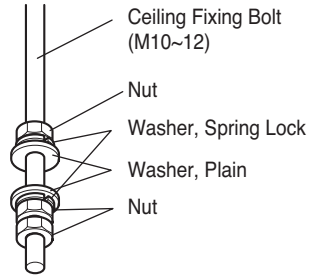
10.1 Installation

Installation of Main Body

Assembly of Washer, Nut

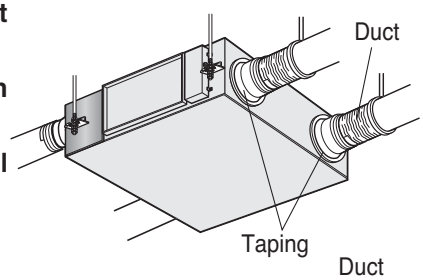
Tighten the commercial washer nut (more than 21mm for the outside diameter of M10, to the commercial ceiling fixing bolt (M10) as shown in the left figure.

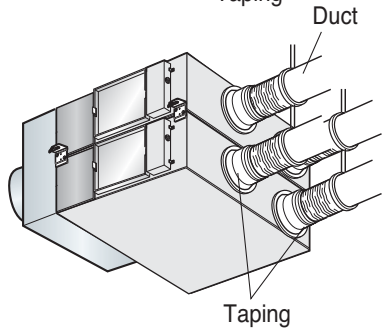
- For the ceiling fixing bolt, perform work less than 50mm under the ceil fixing bracket.



Connection of Duct

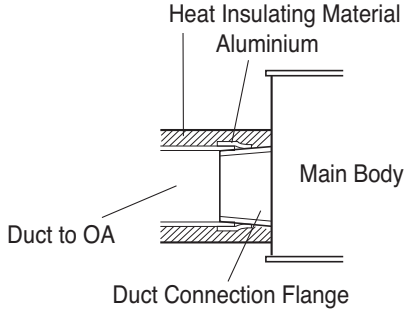
1. **After securely connect the duct with the duct connection flange, wrap it with a commercial aluminium tape so that air cannot be leaked.**
2. **Adjust the duct from the ceiling so that no force is applied to the main body of the ventilation system.**
3. **Always use two ducts at the outdoor with the heat insulating material for prevention of dewing.**





CAUTION:

- **Check that there are no foreign materials (paper, vinyl, etc) or cutoff powders in the duct before connecting the duct.**
- **Take care so that shock may not be applied to the damper plate within the main body when performing the duct connection work.**
- **It is recommended to perform adiabatic treatment even to the duct pipe at the indoor side where ambient temperature is expected when the main body of the ventilation system for cooling in summer.**
- **Take care so that work may not be performed as in the left figure. Otherwise, it may cause reduction of air volume or abnormal noise.**



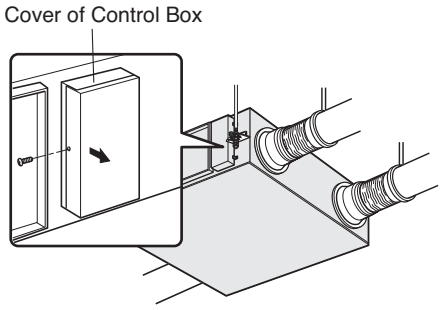
Rapid Bending | **Excessive Bending** | **Too Close Bending to Outlet** | **Rapid Reduction of Duct Diameter**

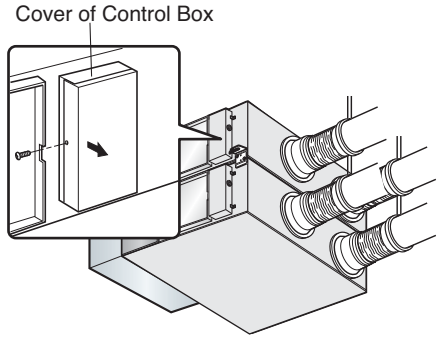
10.2 Wiring Connection

Method to Connect Power Cord

1. Release two screws and then open the cover of the control box.

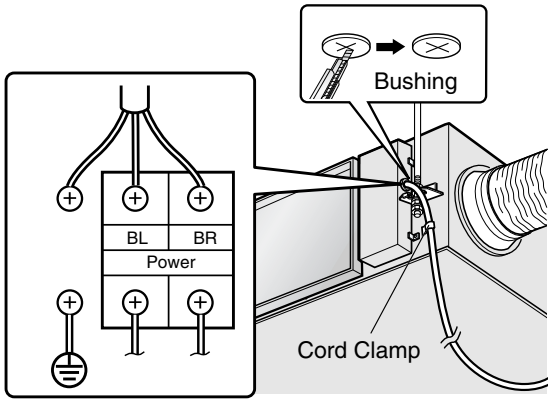
• With reference to the above wiring diagram, accurately connect the main power cords into the terminal block.

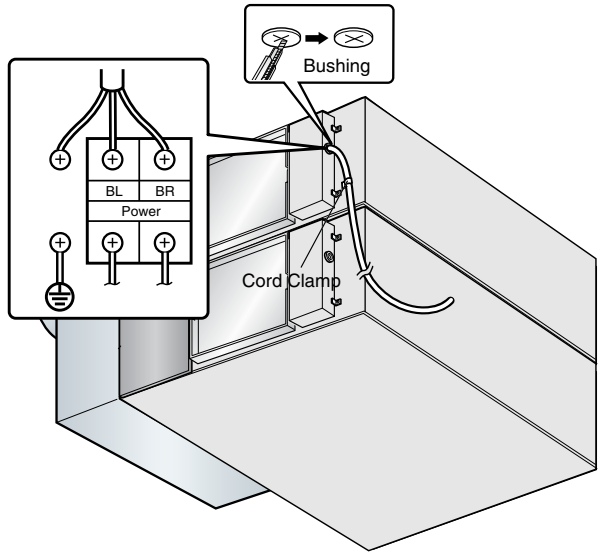




2. After inserting the power cord into the bushing, fully insert it into the terminal block for connection.

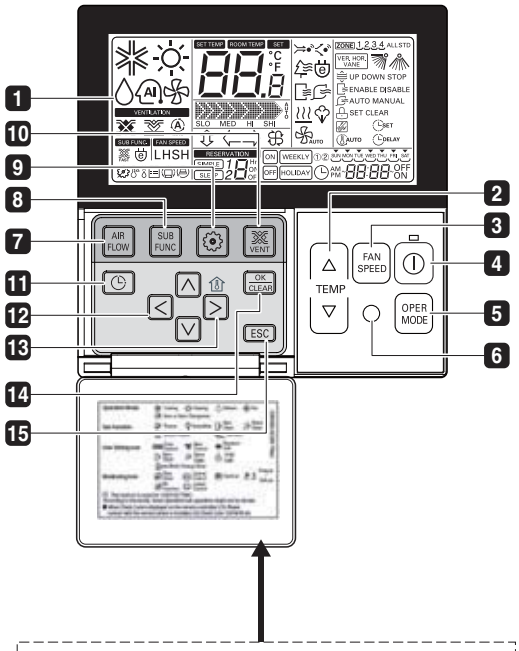
• Fix the power cords with the clamp.
• Make sure that the power cords may not be removed by pulling them.





11. LCD Wired Remote Control

LCD Remote Control (PQRCVSL0 / PQRCVSL0QW)



Please attach the inform label inside of the door.
Please choose proper language depend on your country.

1 OPERATION INDICATION SCREEN

2 SET TEMPERATURE BUTTON

3 FAN SPEED BUTTON

4 ON/OFF BUTTON

5 OPERATION MODE SELECTION BUTTON

6 WIRELESS REMOTE CONTROLLER RECEIVER

- Some products don't receive the wireless signals.

7 AIR FLOW BUTTON

8 SUBFUNCTION BUTTON

9 FUNCTION SETTING BUTTON

10 VENTILATION BUTTON

11 RESERVATION

12 UP,DOWN,LEFT,RIGHT BUTTON

- To check the indoor temperature, press button.

13 ROOM TEMPERATURE BUTTON

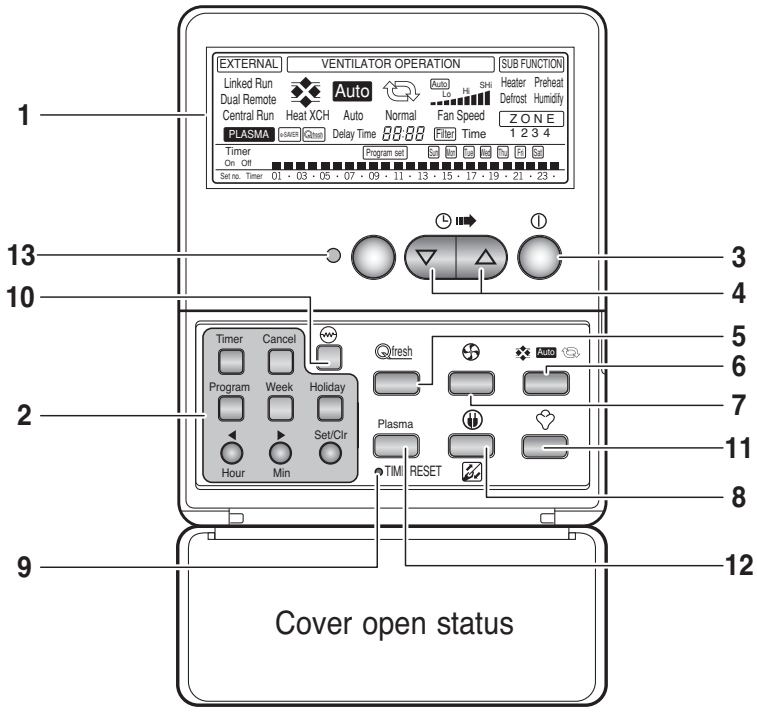
14 SETTING/CANCEL BUTTON

15 EXIT BUTTON

※ Some functions may not be operated and displayed depending on the product type.

11. LCD Wired Remote Control

LCD Remote Control (Ventilation System Remote Control PZRCUSB0)

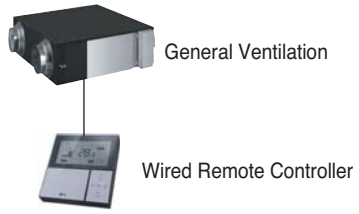
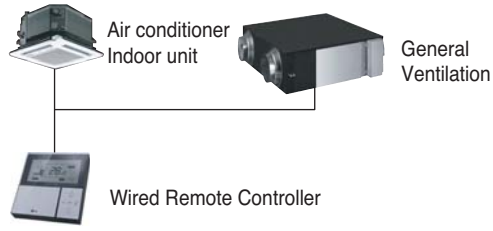


1. Display Window
2. Execute/Cancel of Time Reservation,Weekly Reservation/Weed Day Select/Holiday Select Button
3. Operation/Stop Button
4. Delay Time Button
5. Rapid Ventilation Button
6. Ventilation Mode Button
7. Air volume Select Button
8. Power Saving/Filter Cleaning Button
9. Time Reset Button
10. Heater Button
11. Humidification Button
12. Plasma Button
13. Operation Lamp

11. LCD Wired Remote Control

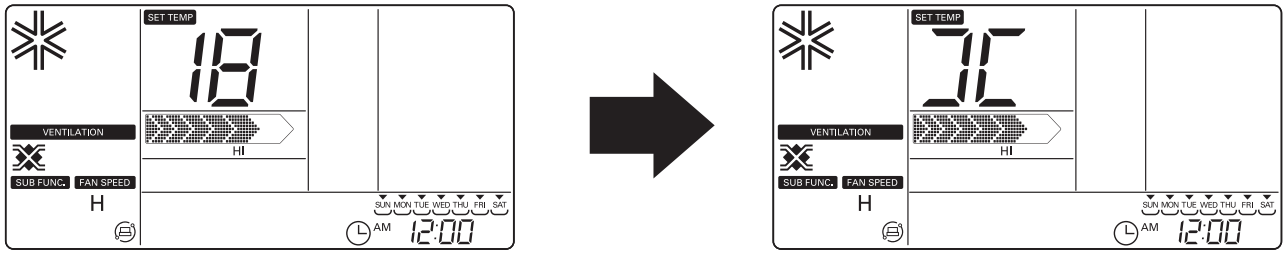
11.1 Ventilation operating scene and ventilation operation method

1. Control using remote controller where air conditioner indoor unit and the ventilation product is installed at the same time.

Single Operation	Interlinked Operation
	

❉ Connecting wires is the same as air conditioner user manual. (Refer to page about Group control)

2. Press 'Ventilation' button on the wired remote controller and enter Ventilation control mode to check the operation of ventilation product.



3. To convert back to air conditioner mode, press 'Ventilation' button at the ventilation mode.

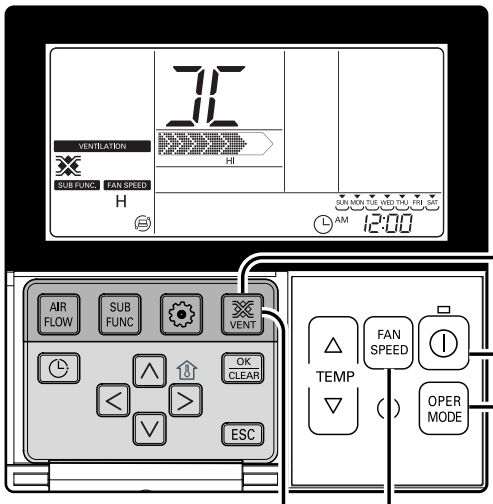
- If no button pressed for 15 seconds or more at ventilation mode, it automatically converts back to air conditioner mode.
- Ventilation product represent general ventilation product and direct expansion ventilation product.

11. LCD Wired Remote Control

11.2 Interlinked operation with general ventilation

It is used when air conditioner is interlinked with ventilation product.

It is a function that cools and refreshes indoor air using the ventilation product at the same time operating the air conditioning function.



Ventilation interlinked operation

1 Press VENT button on the remote controller control panel.
- It is only used when air conditioner and general ventilation is interlinked.('Interlinked operation' displayed on the remote controller display)

2 Pressing 'Start/Stop' button at ventilation mode will start ventilation.

3 Pressing OPER MODE button will change the ventilation operation mode.
Pressing operation selection button will change the mode in the order of 'Heat exchange ' normal ' automatic'
※ It only displays on the remote controller display when it is in ventilation mode, and it displays the desired temperature when it returns to air condition mode.

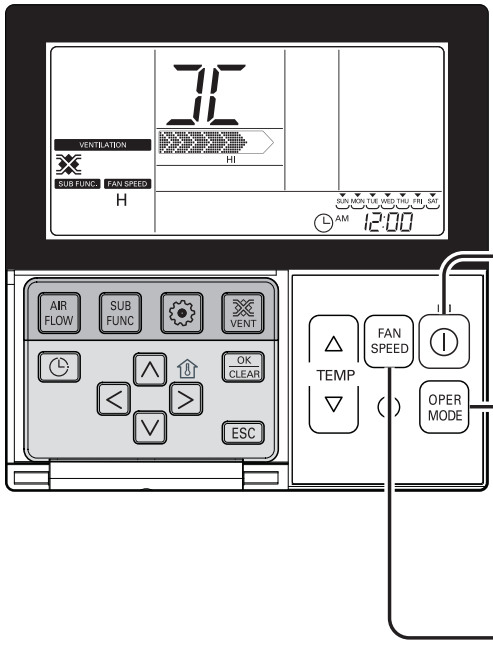
4 Pressing FAN SPEED button in general ventilation mode will change airflow speed.
Pressing airflow speed button will change the mode in the order of 'weak ' strong ' extra strong'.
If CO_2 sensor is installed, it can select from 'weak ' strong ' very strong ' automatic'.

5 Changing back to air conditioner mode
1)Automatic Conversion : when no button is pressed for 15 seconds or longer, it automatically converts back to air conditioner mode.
2) Manual Conversion : Pressing VENT button in ventilation mode will manually convert.

11. LCD Wired Remote Control

11.3 Ventilation mode manually convert method

It is a function to cool and refresh the indoor air using general ventilation product.



Ventilation single operation

1 Press ⏻ button on the remote controller.

2 Pressing OPER MODE button will change the ventilation mode.

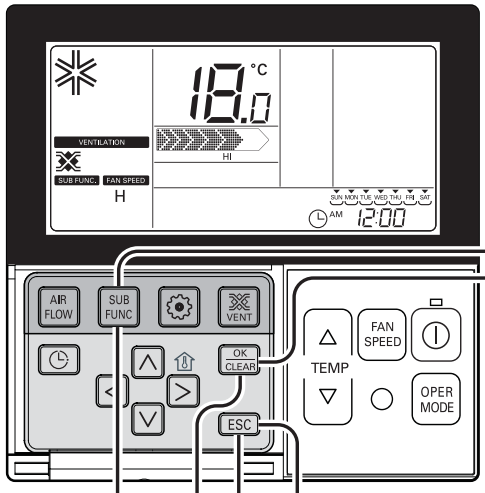
Ventilation mode	Remote Controller Display	Contents
Heat exchange	HE	Circulate indoor air without loss of heat
Normal	CI	Directly circulate indoor air without going through heat exchanger
Automatic	AU	Circulate indoor air with automatically comparing indoor and outdoor air

3 Pressing FAN SPEED button will change the strength of the wind
- Pressing the button can select from 'weak ' strong ' very strong'.
- If CO_2 sensor is installed, it can select from 'weak ' strong ' very strong ' automatic'.

11. LCD Wired Remote Control

11.4 Fast/Energy saving ventilation mode

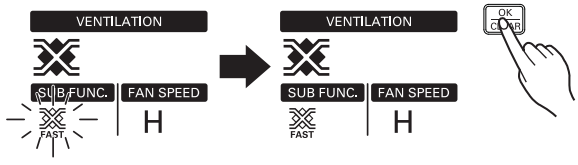
It is a function to operate ventilation function more efficiently through the ventilation additional functions, fast / power saving settings.



Fast : ventilates fast

1 Press SUB FUNC button in ventilation mode.
- It converts in the order of 'fast → power saving' in ventilation mode.

2 'Fast' is blinking on the display, and pressing OK CLEAR button will stabilize 'fast' icon, and the function is set.

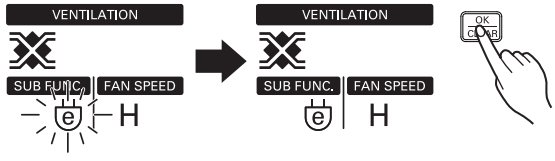


3 Pressing ESC button will exit the settings.

Power Saving : efficiently ventilates and performs power savings.

1 Press SUB FUNC button in ventilation mode.
- It converts in the order of 'fast → power saving' in ventilation mode.

2 'Power Saving' is blinking on the display, and pressing OK CLEAR button will stabilize 'Power Saving' icon, and the function is set.



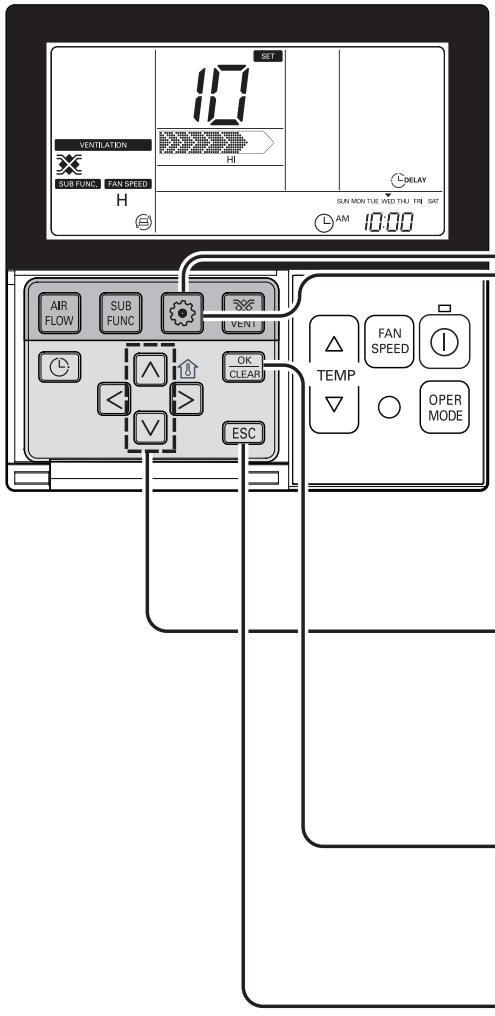
3 Pressing ESC button will exit the settings.

❊ General ventilation and direct expansion ventilation have the same additional functions.

❊ Ventilation/Heater/Humidifier additional function settings are the same as air conditioner.

11.5 Ventilation Product Function Setting

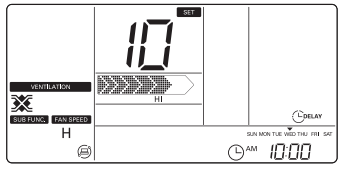
11.5.1 Delay Time Setting



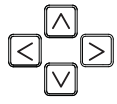
Delay Time : It operates after delay time in ventilation operation.

1 Press ⚙ Settings button.

2 Pressing ⚙ button repeatedly will move to the delay time menu.
Then delay time icon is displayed, and the delay time blinks at the temperature display area.



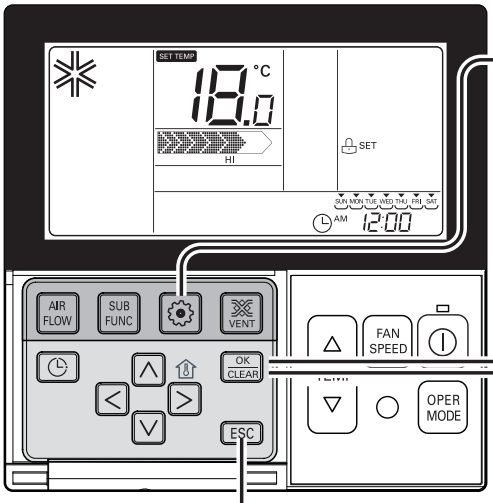
3 Pressing △ ▽ button will change the delay time settings.
❉ Boundary of delay time settings : 00 ~ 60 minutes (in the units of 1 minute)



4 When the desired delay time is displayed, press OK CLEAR button to finish the settings.

5 Press ESC button when the setting is finished.
❉ If no button input for 1 minute after the setting, it exits the settings mode automatically.
❉ When exiting without pressing set button, the manipulated value is not reflected.

11.5.2 Child Lock Setting



1 Press ⚙ button repeatedly until the 🔒 is flashing.

2 If moving to 'setup' icon area by using < > button, 'setup' icon blinks, and child lock function is setup if pressing OK CLEAR button at that time.

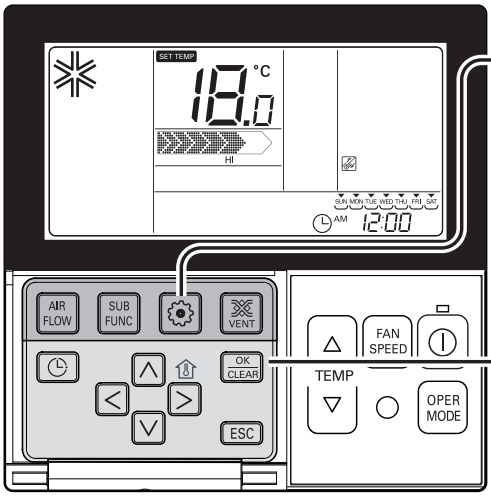
3 When cancelling lock function, if moving to 'cancel' icon by pressing < > button and then, pressing OK CLEAR button, child lock function is cancelled.

4 Press ESC button to exit.

❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❊ When exiting without pressing set button, the manipulated value is not reflected.

11.5.3 Filter Sign Clear



1 Press ⚙ button repeatedly until the 🧹 is flashing.

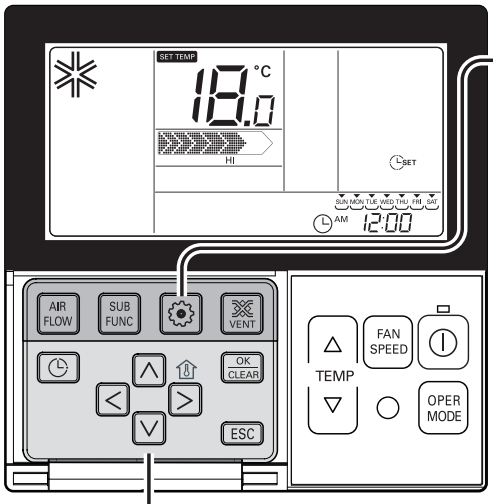
2 When the 🧹 is flashing, press the OK CLEAR to clear this display

• When filter is covered by dust, it will reduce cooling/heating efficiency and accumulate more electric power. Therefore. do clean the filter whenever cleaning time is expired.

❊ Filter cleaning indication is automatically cancelled without the separate cancellation after certain period of time.

11. LCD Wired Remote Control

11.6 Changing Current Time

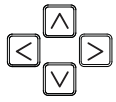


1 Please press function setup button. If pressing function setup button repeatedly, it moves to time setup menu. 'Time setup' icon is indicated at that time and date blinks at current time indication area.

Ex) Changing Current Time as 'Monday / AM 10:20'.

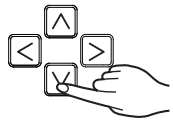
2 Press [<] [>] key to adjust the current day.

SUN MON TUE WED THU FRI SAT

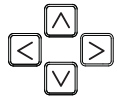


3 Press [V] key to move to AM/ PM setting mode (the 'AM/ PM segment will flash).

AM 12:00

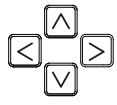


4 Setting AM/ PM value by pressing [^] [V] button.



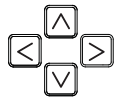
5 Press [<] [>] button to move to 'Hour' setting mode. (the 'Hour' segment will flash)

AM 12:00

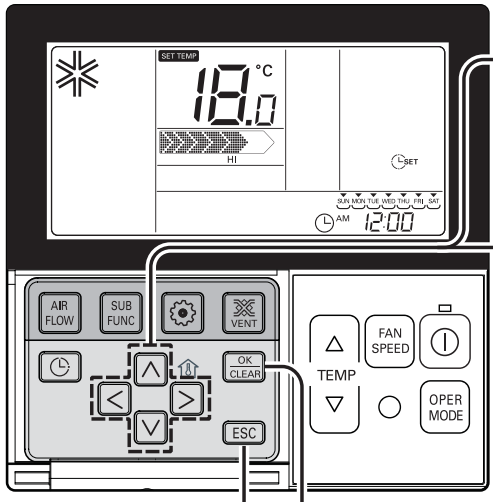


6 Setting Hour value by pressing [^] [V] button.

AM 10:00

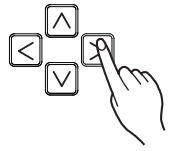


11. LCD Wired Remote Control



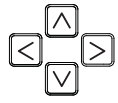
7 Press < > button to move to 'Minute' setting mode. (the 'Minute' segment will flash)

AM 10:00



8 Setting Minute value by pressing ∧ ∨ button.

AM 10:20



9 Press OK CLEAR button to finish.

AM 10:20

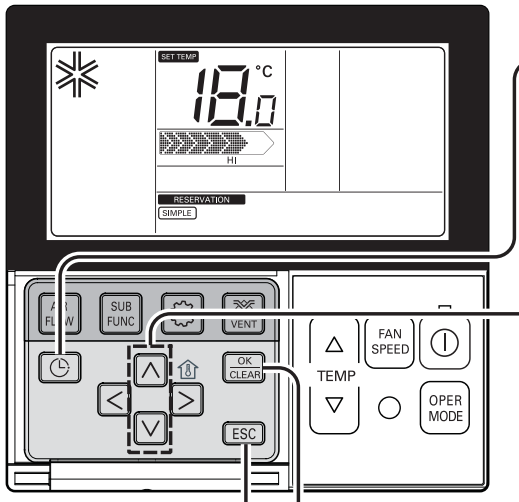
10 In the process, press ESC button to release and exit from setting mode.
(In case of exit with incomplete information, it will return to the previous setting)

❊ When exiting without pressing set button, the manipulated value is not reflected.

11.7 Ventilation Product Reservation Setting

11.7.1 Simple Reservation

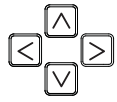
You can set the reservation conveniently in the units of 1 hour from 1 hour to 7 hours.



1 Press ⏲ button to enter the Programming mode.
(the SIMPLE segment flashing)

Ex) Setting Simple Reservation time as '3'.

2 Press ∧ ∨ button to adjust reservation time.



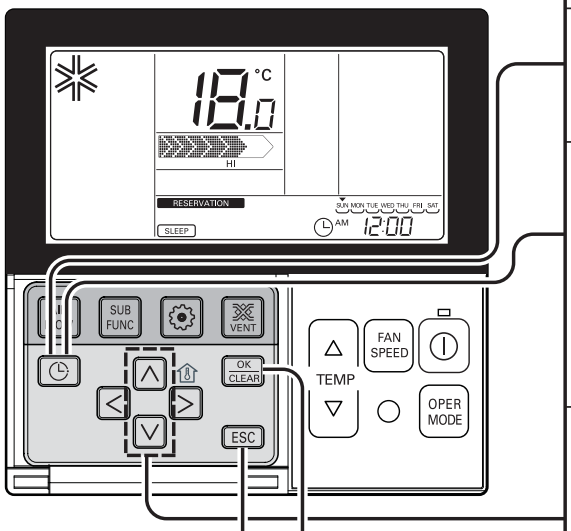
3 Press OK CLEAR button to finish setting.

4 Press ESC button to exit.

❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❊ When exiting without pressing set button, the manipulated value is not reflected.

11.7.2 Sleep Reservation

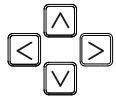


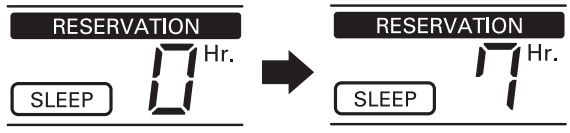
Sleep Reservations : Sets to operate ventilation lightly during the sleep.

1 Press [⏲] button to enter the reservation settings mode.

2 Press [⏲] button again to move to Sleep. 'Sleep' icon blinks and the reservation time is displayed.

3 Use [∧] [∨] button to set the reservation time.
Reservation time can be set between 1 ~ 12 hours.





4 When Sleep reservation setting is finished, press [OK CLEAR] button.

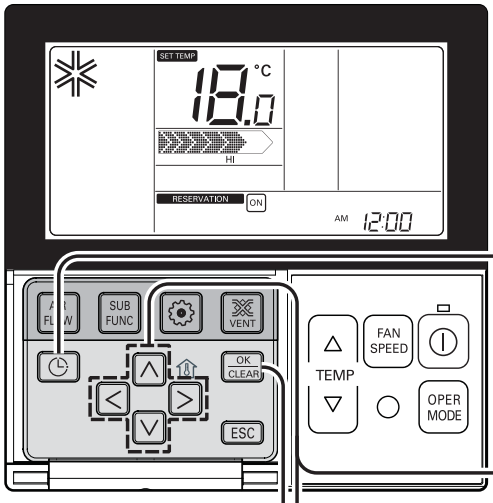
5 Pressing [ESC] button will exit the settings mode.

❊ If no button input for 60 seconds after the setting, it exits the settings mode automatically.
❊ When exiting without pressing set button, the manipulated value is not reflected.
- When the reservation is set, 'Sleep' is displayed at the bottom of LCD screen.

- When the reservation is cancelled, 'Sleep' mark disappears.

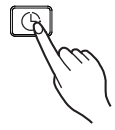
6 When the sleep reservation setting is finished, it operates lightly for the set time.

11.7.3 On Reservation



1 Press [clock] button.

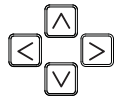
Ex) Setting ON Reservation Time as 'AM 10:20'.



2 Repeat pressing [clock] button to enter the ON reservation setting mode.
([ON] segment flashing)

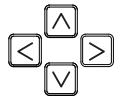
3 Press [∧] [∨] button to adjust AM/ PM setting.

AM 12:00

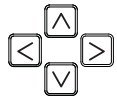


4 Press [<] [>] button to Hour setting mode. When the Hour icon flash, please setting time.
The setting range is within 1~12.

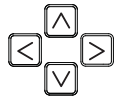
AM 12:00



AM 10:00

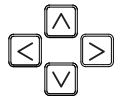


5 Press [<] [>] button to shift to Minute setting mode. When the Minute icon flash, please setting minute the setting range is within 00~59.



AM 10:00

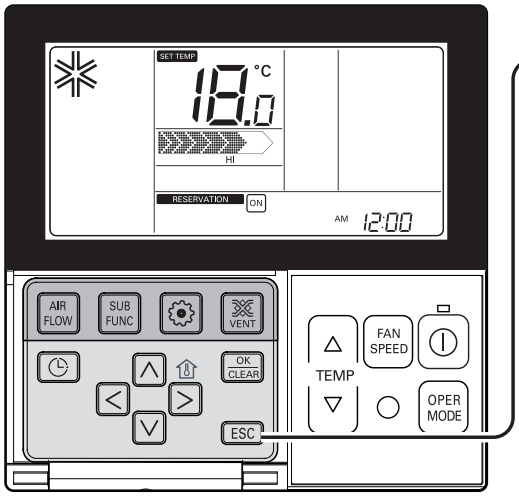
AM 10:20



6 Press [OK CLEAR] button to finish setting.

AM 10:20

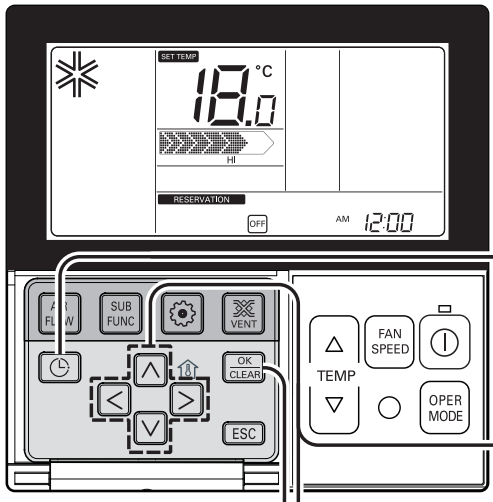
11. LCD Wired Remote Control



7 Press ESC button to exit.

- ❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❊ When exiting without pressing set button, the manipulated value is not reflected.
  - If reservation is set, 'turned on' indication shows up at the lower part of LCD screen, and air-conditioner product runs at the time that is set.
  - If reservation is cancelled, 'turned on' indication disappears.

11.7.4 Off Reservation



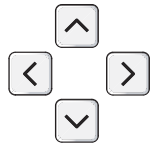
1 Press [clock] button.

Ex) Setting OFF Reservation
Time as 'AM 10:20'.

2 Repeatedly pressing [clock] button to enter the OFF reservation setting mode.
(OFF segment flashing)

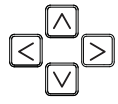
3 Press [∧] [∨] button to adjust AM/ PM setting.

AM 12:00

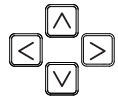


4 Press [<] [>] button to shift to Hour setting mode. When the Hour icon flash, please setting time.
The setting range is within 1~12.

AM 12:00

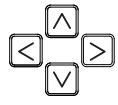


AM 10:00

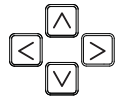


5 Press [<] [>] button to shift to Minute setting mode. When the Minute icon flash, please setting minute the setting range is within 00~59.

AM 10:00



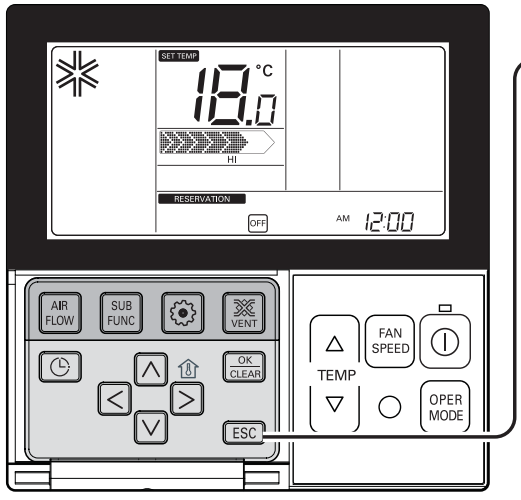
AM 10:20



6 Press [OK CLEAR] button to finish setting.

AM 10:20

11. LCD Wired Remote Control



7 Press ESC button to exit.

❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❊ When exiting without pressing set button, the manipulated value is not reflected.

- If reservation is set, 'turned off' indication shows up at the lower part of LCD screen, and air-conditioner product runs at the time that is set.
- If reservation is cancelled, 'turned off' indication disappears.

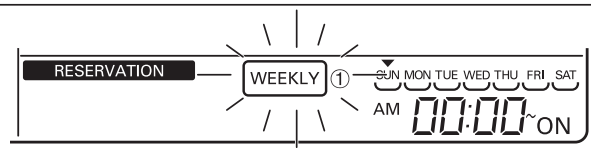
11.7.5 Weekly Reservation

You can set the daily reservation in weekly unit.

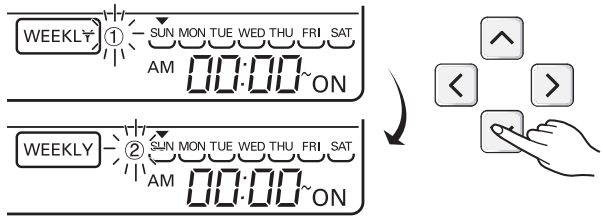
Weekly reservation keeps operating until before you cancel it once you setup

1 Please move to reservation setup mode by pressing reservation button.
❊ You can setup two weekly reservations for one day, and up to fourteen reservations for a week.
For example, to setup (Tuesday morning 11:30 turned on ~ afternoon 12:30 turned off), you setup in order below.

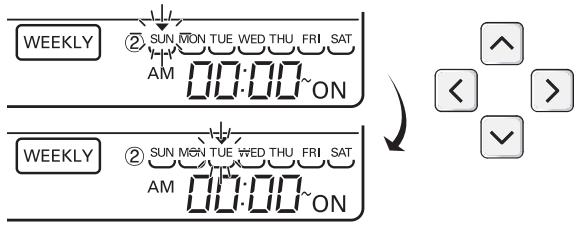
2 Please move to 'weekly' by repeatedly pressing reservation button. 'Weekly' blinks at this time.



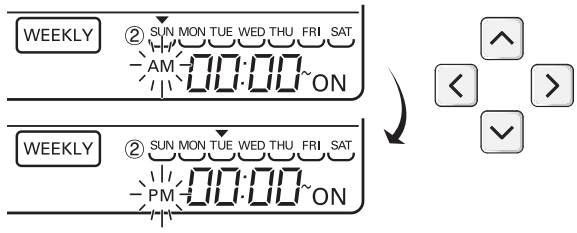
3 Please select weekly reservation ① or weekly reservation ② by using ∧ ∨ button.
❊ You can setup two reservations, weekly reservation 1 and weekly reservation 2, for a day.



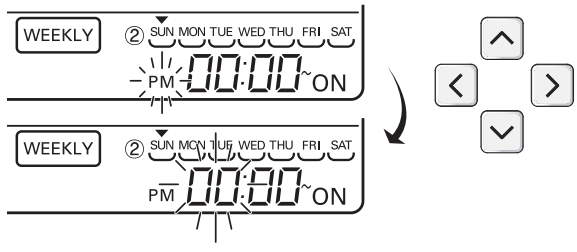
4 Please move to 'date' setup part by using < > button. If 'date' indication blinks, please setup date. You can setup date from Monday to Sunday.



5 Please move to 'AM/PM' setup part of turning on by using ∧ ∨ button.



6 Please move to 'hour' setup part of turning on by using < > button.
- It is the part to setup the time at which air-conditioner is turned on.



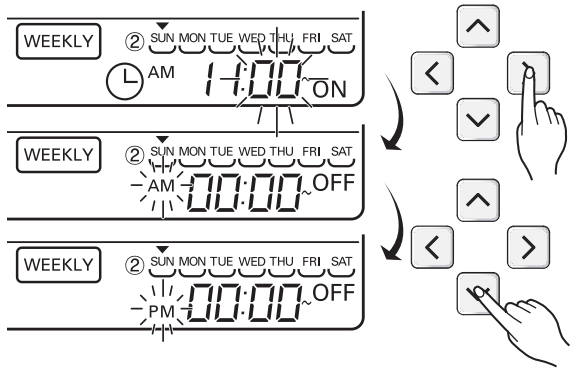
7 Please change time by using ∧ ∨ button.
- You can setup hour 0~12.

8 Please move to 'minute' setup part of turning on by using > button.

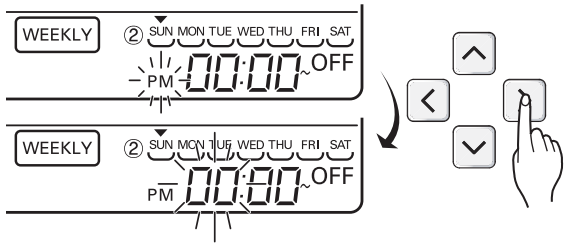
9 If 'minute' indication blinks, please setup 'minute' by using ∧ ∨ button

11. LCD Wired Remote Control

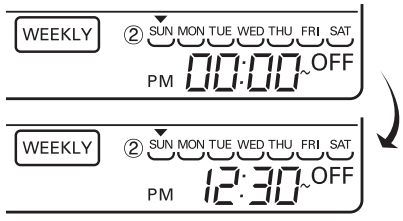
10 Please move to 'AM/PM' setup part of turning off by using [>] button.
- AM/PM setup is identical with turning on time setup.



11 Please move to 'hour' setup part of turning off by using Right button.
- It is the part to reserve the time at which air-conditioner is turned off.
- If 'hour' indication blinks, please setup 'hour'.



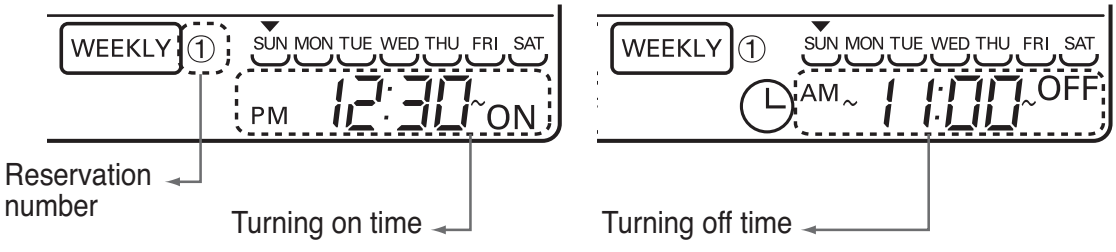
※ Please setup 'hour' and 'minute' identically with the method to setup turning on time.



12 If finishing weekly reservation setup, please press setup/cancellation button. Weekly reservation setup for the day that you set is finished.

13 If you setup with the method identical with above by selecting the day that you'd like to setup, it operates weekly reservation.
If you setup both turning on reservation time and turning off reservation time identically, it doesn't operate reservation drive.

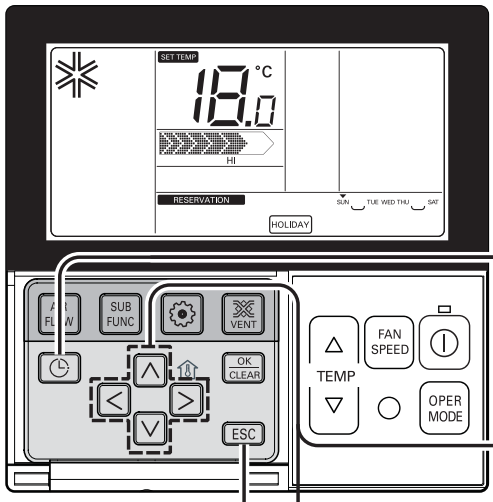
Weekly reservation explanation



SUN MON TUE WED THU FRI SAT
Under bar: the indication that there is weekly reservation for corresponding day

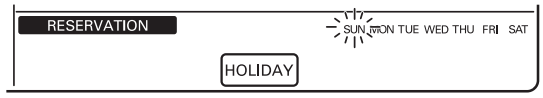
11.7.6 Holyday Reservation

It automatically stops at reserved day that you set.

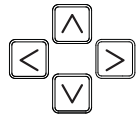


1 Please press ◷ button.
It enters into reservation setup mode.

2 Please move to 'holiday' by repeatedly pressing ◷ button.



3 Please move to 'date' that you want to setup holiday by using < > button.



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4 Please appoint or cancel holiday by using ∧ ∨ or OK CLEAR button.
For example, when you setup Monday/Friday to holiday
- 'Monday', 'Friday' letter disappears.

5 Please press ESC button if finishing holiday setup.

❊ If it comes to appointed holiday, air-conditioner automatically stops. Once you setup holiday appointment, until before you cancel holiday setup, air-conditioner automatically stops within one hour even though you run air-conditioner.

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Life's Good

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