ERV

Energy Recovery Ventilator with DX Coil
0CED0-01P(Replaces OCED0-01N)

LG

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK

LG
Life's Good

P/No. : MFL55028431

ERV

ERV DX (Energy Recovery Ventilator with DX Coil)

General Information

1. Model names & External Appearance
2. Nomenclature
3. Indoor Unit Capacity Index and ODU Compatibility

1. Model Names & External Appearance

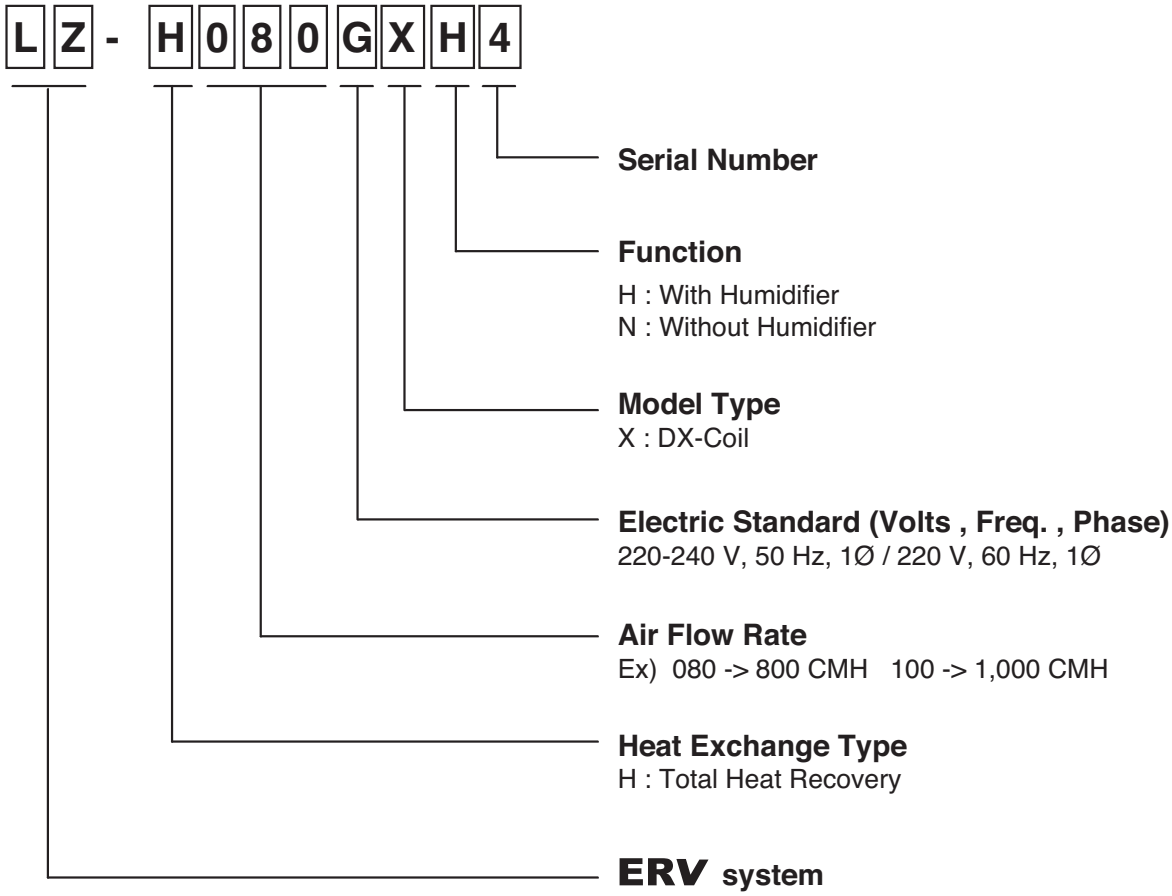
■ Model Names

Category	Humidifier	Chassis Name	Nominal Air Flow Rate		
			500CHM	800CMH	1000CMH
ERV with DX Coil	X	ZG	LZ-H050GXN4	LZ-H070GXN4	LZ-H100GXN4
ERV with DX Coil	O	ZG	LZ-H050GXH4	LZ-H070GXH4	LZ-H100GXH4

■ External Appearance

Category	Chassis Name	Model Name	Appearance
ERV with DX Coil	ZG	LZ-H050GXN4	
		LZ-H080GXN4	
		LZ-H100GXN4	
		LZ-H050GXH4	
		LZ-H080GXH4	
		LZ-H100GXH4	

2. Nomenclature



3. Indoor Unit Capacity Index

■ Indoor Unit Capacity Index

Model	LZ-H050GXN4	LZ-H080GXN4	LZ-H100GXN4
	LZ-H050GXH4	LZ-H080GXH4	LZ-H100GXH4
Capacity Index	3.7 kW	5.6 kW	6.6 kW

■ ODU-IDU Compatibility

O : Compatible, X : Not Compatible

Line up	Outdoor Unit Type	Normal Indoor Units	Special Indoor Units [1]						
			Hydro Kit [2]			Fresh Air Intake Unit(FAU)	ERV DX	AHU. Comm. Kit & EEV Kit	
			Floor standing		Wall Mounted			Return (Room) air	Discharge (Supply) air
			Med. Temp	High Temp					
Multi V 5	Heat Pump & Heat Recovery	O	O	O	X	O (HP* only)	O	O	O (HP* only)
Multi V S	R410A Heat Pump	O	O	O	X	O	O	O	O
	R410A Heat Recovery	O	O	O	X	X	O	O	X
	R32 Heat Pump	O	X	X	O	X	X	O	O
Multi V Water IV	Heat Pump	O	O	O	X	O	O	O	O
	Heat Recovery	O	O	O	X	X	O	O	X
Multi V M	MULTI V M [3]	O	X	X	X	X	X	X	X

■ Combination Ratio for System with Special Indoor Units

Type		Hydro Kit [2]	ERV DX	Fresh Air Intake Unit (FAU)	AHU Comm. Kit & EEV Kit [4]	
					In Heat Recovery AHU	In Fresh Air AHU
1 ODU : 1 IDU		50 ~ 105%				
One ODU with normal IDUs and Special IDUs	Total (Normal IDUs + Special IDUs)	Refer to 'Combination Ratio for System with Normal Indoor Units' in outdoor unit PDB	50 ~ 130%	50 ~105%	50 ~ 130 %	50 ~ 105%
	Max. Special IDUs	~105%	~50%	~ 30% (Max 4 Units)	~ 50%	~ 50%
One ODU with Multiple Special IDUs only (no normal IDUs)		50 ~105%	50 ~ 130 %	50 ~ 105%	50 ~ 130 %	50 ~ 105%

Note

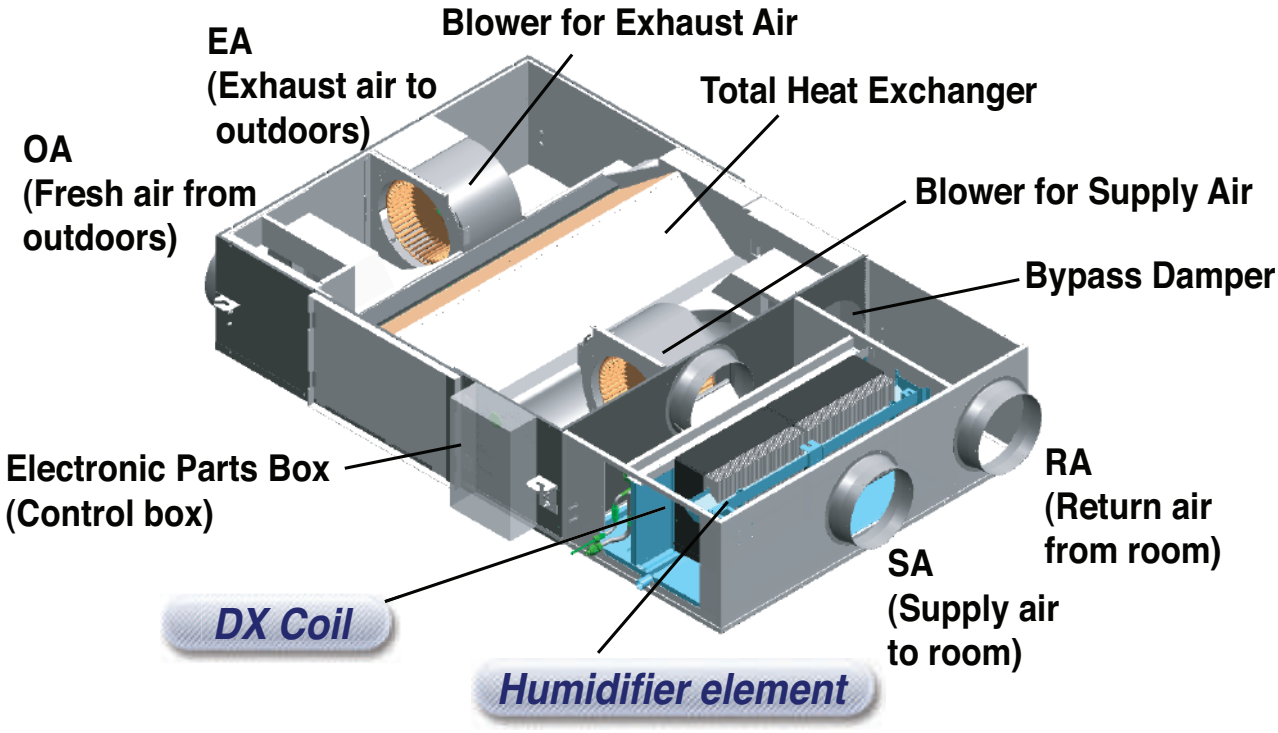
1. Special Indoor Unit : Hydro Kit, FAU, ERV DX, AHU Comm. Kit & EEV kit, Water. Comm. Module & EEV Kit.
   The compatibility of "Water Communication Module + EEV Kit" follows that of Floor Standing Hydro Kit.
   If more than 2 types of special IDUs are connected, total combination ratio follows the small one.
2. Hydro Kit cannot be combined with Multi V quadruple frame (4 units) system.
3. Special Indoor Units cannot be combined with Multi V M.
4. The combination ratio for systems with AHU Comm. Kit& EEV kit is determined by: (heat exchanger capacity + indoor unit nominal capacity index) / outdoor unit nominal cooling capacity. The on-coil temperature (i,e. coil inlet temperature) of Heat Recovery AHU should be within the operation range of the indoor units. For more detail about AHU comm. Kit application, please refer to AHU Comm. Kit PDB.
5. * : Heat Pump

ERV

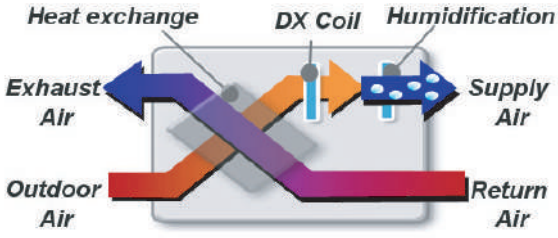
ERV DX (Energy Recovery Ventilator with DX Coil)

Product Data

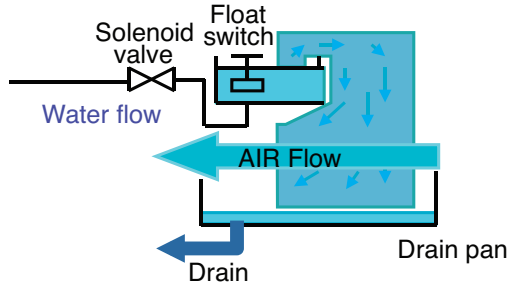
1. Structure



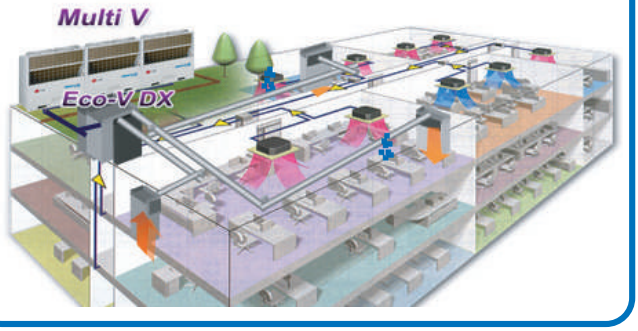
First. Total Air conditioning solution



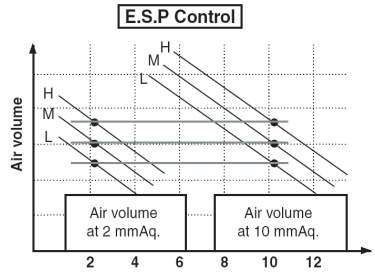
Second. Antibacterial Humidification



Third. Interlocking with Multi-V



Forth. ESP control (BLDC motor)



2. List of functions

■ List of Functions

Category	Function	LZ-H050GXN4 LZ-H080GXN4 LZ-H100GXN4	LZ-H050GXH4 LZ-H080GXH4 LZ-H100GXH4
Ventilation	Bypass Operation	O	O
	Heat Exchange Mode	O	O
	Seasonal Auto Operation	O	O
	Airflow steps by Ventilation Mode (Heat Exchange/Bypass/Auto)	3 / 3 / 3	3 / 3 / 3
	Airflow steps by Air conditioning Mode (Cooling/Heating/Auto)	5 / 5 / 5	5 / 5 / 5
Air Purification	Pre-Filter	O	O
	Fine Dust Filter	Accessory	Accessory
	UVnano	X	X
	Humidification	X	O
Reliability	Self Diagnosis	O	O
	Hot start	O	O
Convenience	CO_2 fan control	Accessory	Accessory
	CO_2 level display (Remote controller)	Accessory	Accessory
	CO_2 level monitoring (Central controller)	Accessory	Accessory
	Fine dust level display (Outdoor/Indoor)	X	X
	Fast ventilation	O	O
	Filter Check Alarm	O	O
	Energy saving ventilation operation	O	O
	Auto Restart	O	O
	Child Lock	O	O
	Forced Operation	O	O
	Sleep Timer	O	O
	Turn On/Off Reservation	O	O
	Schedule	O	O
	External On/Off	O	O
Interlocking air conditioner	Night Time Free Cooling	O	O
	Auto operation mode interlocking air conditioner	O	O
	Fast cleaning indoor air operation	O	O
	Air conditioner / ventilator control by single wired remote controller	O	O
	Delayed Operation (Delay time setting function)	O	O
	Interlock operation during IDU defrost	O	O
Installation	Group Control	O	O
	E.S.P Setting	O	O
	Test Function	O	O
	OA,EA Motorizes Damper Control	O	O
	Change OUTDOOR AIR / RETURN AIR SIDE	X	X
Special Functions	Wi-Fi Control	X	X
	Central Control (LGAP)	O	O

Note

1. O : Applied, X : Not applied
   Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.
   Accessory line-ups varies by region, so check your local catalogue or local sales material.
2. Some functions can be limited by romote controller, please refer to the remote control manual.

2. List of functions

■ Accessory Compatibility List

Type	Product Name	Model	LZ-H050GXN4 LZ-H080GXN4 LZ-H100GXN4	LZ-H050GXH4 LZ-H080GXH4 LZ-H100GXH4
Wired Remote Controller	Standard II (White)	PREMTB001	O	O
	Srnadard II (Black)	PREMTBB01	O	O
	Standard III (White)	PREMTB101	O	O
	Standard III (Black)	PREMTBB11	O	O
	Premium (English/Portuguese/Spanish/French)	PREMTA000	O	O
	Premium (English/Italian/Russian/Chinese)	PREMTA000A	O	O
	Premium (English/German/Polish/Czech)	PREMTA000B	O	O
	Deluxe	PREMTA200	X	X
	Deluxe	PREMTA201	X	X
Dry Contact	Simple (1 Input) Dry Contact	PDRYCB000	O	O
	Simple (1 Input) Dry Contact	PDRYCB100	O	O
	Dry Contact for Modbus (WITH CASE)	PDRYCB500	O	O
	Dry Contact for Modbus (WITHOUT CASE)	PDRYCB510	X	X
Gateway	PI485 (WITHOUT CASE)	PNF-P14A0C	X	X
		PHNFP14A0	X	X
	PI485 (WITH CASE)	PNF-P14A0R	X	X
		PSNFP14A0	X	X
	Modbus RTU	PMBUSB00A	O	O
Central Controller	Simple AC Ez	PQCSZ250S0	O	O
		PCS-Z150S0	X	X
	AC Ez Touch	PACEZA000	O	O
		PACEZB000	X	X
	AC Smart 5	PACS5A000	O	O
	ACP 5	PACP5A000	O	O
	AC Manager 5	PACM5A000	O	O
Accessory	Group control wire (0.25m)	PZCWRCG3	O	O
		PCW-QG00A	X	X
	Extension Wire (10m)	PZCWRC1	O	O
		PCW-QE10A	X	X
	Wi-Fi Modem	PWFMDD200	X	X
	Independent Power Module	PRIP0	O	O
	Refrigerant Leakage Detection (R410A)	PRLDNVS0	O	O
	CO_2 Sensor	AHCS100H0	O	O
	Fine Dust Filter (ISO ePM1 75% (F7 Filter)	AHFT100H0	O	O
		AHFT035H0 (250CMH)	X	X
		AHFT050H0 (350, 500CMH)	X	X
		AHFT100H1 (800, 1000, 1500, 2000CMH)	X	X

Note

1. O: Possible, X: Impossible, Embedded : Included with product.
2. If you need more detail, please refer to the BECON PDB or the manual of product.
   (http://partner.lge.com/global : Home> Doc.Library> Product > Control(BECON))

3. Specifications

3.1 Guide Specifications

General

Units shall be completely factory assembled including fan motors, filters, heat exchanger element and so on. 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 and piping connections. 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.

Humidifier Element

Utilizing the principle of capillary action, water is permeated throughout the humidifier element. The heated air from the DX-Coil goes through the humidifier element and absorbs the moisture. Humidifier element is consist of porosity plates.

DX-Coil (Direct Expansion Coil)

Coils shall be constructed of cooper tube and aluminum fins. Fins shall be bonded to the tubing and pressure and leak tested at the factory at 450psig (30kg/cm^2 G). The condensate drain pan shall be constructed of powder coated galvanized iron.

3. Specifications

3.2 With DX_coil

TECHNICAL SPECIFICATIONS				LZ-H050GXN4	LZ-H080GXN4	LZ-H100GXN4
Refrigerant				R410A		
Power Supply	Phase			1	1	1
	Frequency		Hz	50 / 60	50 / 60	50 / 60
	Voltage		V	220-240 / 220		
Dimensions	Height x Width x Depth		mm	365 x 1,667 x 1,140	365 x 1,667 x 1,140	365 x 1,667 x 1,140
Fresh Air Conditioning Load	Cooling Capacity (Note1,2)		kW	4.93 (1.23+3.70)	7.46 (1.84+5.60)	9.12 (2.53+6.59)
	Heating Capacity (Note1,3)		kW	6.73 (2.53+4.20)	9.80 (3.68+6.12)	11.72 (4.32+7.40)
Power Input	Heat Exchange Mode	Super-High	kW	0.25	0.42	0.48
		High	kW	0.20	0.35	0.42
		Low	kW	0.15	0.25	0.27
	Bypass Mode	Super-High	kW	0.25	0.42	0.48
		High	kW	0.20	0.35	0.42
		Low	kW	0.15	0.25	0.27
Casing	Material			Galvanized Steel Plate		
Weight		Net	kg	98	98	98
Fan	Type			Sirocco Fan		
Air Flow Rate (Note 5)	Heat Exchange Mode	Super-High	CMH	500	800	1,000
		High	CMH	500	800	1,000
		Low	CMH	440	640	820
	Bypass Mode	Super-High	CMH	500	800	1,000
		High	CMH	500	800	1,000
		Low	CMH	440	640	820
Fan	External Static Pressure	Super-High	Pa	180	170	150
		High	Pa	150	120	100
		Low	Pa	110	80	70
	Motor	Quantity	EA	2	2	2
		Output	W	195	195	195
Temperature Exchange Efficiency(note 8)		Super-High	%	86	80	76
		High	%	86	80	76
		Low	%	87	81	78
Enthalpy Exchange Efficiency	Cooling	Super-High	%	61	50	45
		High	%	61	50	45
		Low	%	63	53	50
	Heating	Super-High	%	76	67	64
		High	%	76	67	64
		Low	%	77	69	66
Sound Pressure Level (Note 4)	Heat Exchange Mode	Super-High	dB(A)	39	41	41
		High	dB(A)	37	38	39
		Low	dB(A)	35	36	36
	Bypass Mode	Super-High	dB(A)	39	41	41
		High	dB(A)	37	38	39
		Low	dB(A)	35	36	36
Piping Connection	Liquid	Type		Flare Connection		
		Diameter	mm	Ø6.35	Ø6.35	Ø6.35
	Gas	Type		Flare Connection		
		Diameter	mm	Ø12.7	Ø12.7	Ø12.7
	Water	Type		-		
		Diameter	mm	-	-	-
	Drain (Outer Diameter)		mm	25.4		
Nominal Running Current	Heat Exchange Mode	Super-High	A	1.5	2.5	3.6
		High	A	1.3	2.0	3.2
		Low	A	1.0	1.5	2.3
	Bypass Mode	Super-High	A	1.5	2.5	3.6
		High	A	1.3	2.0	3.2
		Low	A	1.0	1.5	2.3
Operation Range	Outdoor Air Temperature / Relative Humidity		°C / %RH	-15~45 / 20~80		
Refrigerant	Type		-	R410A		
	Additional Charging Amount		kg	0.2		
	Control		-	Electronic Expansion Valve		
Insulation Material				Self-Extinguishable Urethane Foam		
Heat Exchange System				Air to Air Cross Flow Total Heat (Sensible + Latent Heat) Exchange		
Heat Exchange Element				Specially Processed Non-Flammable Paper		
Air Filter				Multidirectional Fibrous Fleeces		
Connection Duct Diameter			mm	Ø250	Ø250	Ø250
Operation Mode				Heat Exchange Mode, Bypass Mode, Auto Mode		

Notes:

1. Cooling and heating capacities are based on the following conditions.
   - Fan is based on High and Super-high.
   - The figures in the parenthesis indicate the heat reclaimed from the Energy recovery ventilator.
   - Fresh air conditioning Cooling or Heating capacity (kW) is presented as below, Total Capacity (heat reclaimed capacity + DX coil capacity)
2. Cooling Capacity Test condition :
   Indoor temperature : 27°C DB, 19°C WB, Outdoor temperature : 35°C DB
3. Heating Capacity Test condition :
   Indoor temperature : 20°C DB, Outdoor temperature : 7°C DB, 6°C WB
4. The operating sound measured at the point 1.5 m below the center of the unit is converted to that measured at an anechoic chamber built in accordance with the KS B 6879 conditions.
   The actual operating sound varies depending on the surrounding conditions(near running unit's sound, reflected sound and so on) and is normally higher than this value. For operation in a quiet room, it is required to take measures to lower the sound.
5. Air flow rate can be changed over to low mode or high mode.
6. Normal Amp., input, efficiency depend on the other above conditions.
7. The specifications, designs and information here are subject to change without notice.
8. Temperature Exchange Efficiency is tested at heating condition.
9. In heating operation, freezing of the outdoor unit's coil increases.Heating capability decreases and the system goes into defrost operation. During defrost operation, the fans of the unit continues driving (factory setting). The purpose of this is to maintain the amount of ventilation and humidifying.
10. This product contains Fluorinated Greenhouse Gases.

3. Specifications

3.3 With DX_coil & Humidifier

TECHNICAL SPECIFICATIONS				LZ-H050GXH4	LZ-H080GXH4	LZ-H100GXH4
Refrigerant				R410A		
Power Supply	Phase			1	1	1
	Frequency		Hz	50 / 60	50 / 60	50 / 60
	Voltage		V	220-240 / 220		
Dimensions	Height x Width x Depth		mm	365 x 1,667 x 1,140	365 x 1,667 x 1,140	365 x 1,667 x 1,140
Fresh Air Conditioning Load	Cooling Capacity (Note 1,2)		kW	4.93 (1.23+3.70)	7.46 (1.84+5.60)	9.12 (2.53+6.59)
	Heating Capacity (Note 1,3)		kW	6.73 (2.53+4.20)	9.80 (3.68+6.12)	11.72 (4.32+7.40)
Power Input	Heat Exchange Mode	Super-high	kW	0.25	0.42	0.48
		High	kW	0.20	0.35	0.42
		Low	kW	0.15	0.25	0.27
	Bypass Mode	Super-high	kW	0.25	0.42	0.48
		High	kW	0.20	0.35	0.42
		Low	kW	0.15	0.25	0.27
Casing	Material			Galvanized Steel Plate		
Weight		Net	kg	105	105	105
		Gross	kg	115	115	115
Fan	Type			Sirocco Fan		
Air Flow Rate (Note 5)	Heat Exchange Mode	Super-high	CMH	500	800	1,000
		High	CMH	500	800	1,000
		Low	CMH	440	640	820
	Bypass Mode	Super-high	CMH	500	800	1,000
		High	CMH	500	800	1,000
		Low	CMH	440	640	820
Fan	External Static Pressure	Super-high	Pa	160	140	110
		High	Pa	120	90	70
		Low	Pa	100	70	60
	Motor	Quantity	EA	2	2	2
		Output	W	195	195	195
Temperature Exchange Efficiency(note 8)		Super-high	%	86	80	76
		High	%	86	80	76
		Low	%	87	81	78
Enthalpy Exchange Efficiency	Cooling	Super-high	%	61	50	45
		High	%	61	50	45
		Low	%	63	53	50
	Heating	Super-high	%	76	67	64
		High	%	76	67	64
		Low	%	77	69	66
Humidifier	System			Natural Evaporating Type		
	Amount(Note 6)		kg/h	2.70	4.00	5.40
	Pressure Feed Water		MPa	0.02 ~ 0.49		
	Number		EA	2	2	2
	Control Range		%	20 ~ 80(Default 40 ~ 60%, at a step of 5%)		
Sound Pressure Level (Note 4)	Heat Exchange Mode	Super-High	dB(A)	38	39	40
		High	dB(A)	36	37	38
		Low	dB(A)	33	34	35
	Bypass Mode	Super-High	dB(A)	39	40	40
		High	dB(A)	37	38	38
		Low	dB(A)	34	35	35
Piping Connection	Liquid	Type		Flare Connection		
		Diameter	mm	Ø6.35	Ø6.35	Ø6.35
	Gas	Type		Flare Connection		
		Diameter	mm	Ø12.7	Ø12.7	Ø12.7
	Water	Type		Flare Connection		
		Diameter	mm	Ø6.35	Ø6.35	Ø6.35
	Drain (Outer Diameter)		mm	25.4		
Nominal Running Current	Heat Exchange Mode	Super-High	A	1.5	2.5	3.6
		High	A	1.3	2.0	3.2
		Low	A	1.0	1.5	2.3
	Bypass Mode	Super-High	A	1.5	2.5	3.6
		High	A	1.3	2.0	3.2
		Low	A	1.0	1.5	2.3
Operation Range	Outdoor Air Temperature / Relative Humidity		°C / %RH	-15~45 / 20~80		
Refrigerant	Type		-	R410A		
	Additional Charging Amount		kg	0.2		
	Control		-	Electronic Expansion Valve		
Insulation Material				Self-Extinguishable Urethane Foam		
Heat Exchange System				Air to Air Cross Flow Total Heat (Sensible + Latent Heat) Exchange		
Heat Exchange Element				Specially Processed Non-Flammable Paper		
Air Filter				Multidirectional Fibrous Fleeces		
Connection Duct Diameter			mm	Ø250	Ø250	Ø250
Operation Mode				Heat Exchange Mode, Bypass Mode, Auto Mode		

Notes:

1. Cooling and heating capacities are based on the following conditions.
   - Fan is based on High and Super-high.
   - The figures in the parenthesis indicate the heat reclaimed from the Energy recovery ventilator.
   - Fresh air conditioning Cooling or Heating capacity (kW) is presented as below, Total Capacity (heat reclaimed capacity + DX coil capacity)
2. Cooling Capacity Test condition :
   Indoor temperature : 27°C DB, 19°C WB, Outdoor temperature : 35°C DB
3. Heating Capacity Test condition :
   Indoor temperature : 20°C DB, Outdoor temperature : 7°C DB, 6°C WB
4. The operating sound measured at the point 1.5 m below the center of the unit is converted to that measured at an anechoic chamber built in accordance with the KS B 6879 conditions.
   The actual operating sound varies depending on the surrounding conditions(near running unit's sound, reflected sound and so on) and is normally higher than this value. For operation in a quiet room, it is required to take measures to lower the sound.
5. Air flow rate can be changed over to low mode or high mode.
6. Normal Amp., input, efficiency depend on the other above conditions.
7. The specifications, designs and information here are subject to change without notice.
8. Temperature Exchange Efficiency is tested at heating condition.
9. In heating operation, freezing of the outdoor unit's coil increases.Heating capability decreases and the system goes into defrost operation. During defrost operation, the fans of the unit continues driving (factory setting). The purpose of this is to maintain the amount of ventilation and humidifying.
10. This product contains Fluorinated Greenhouse Gases.

3. Specifications

3.4 Humidifier

	LZ-H050GXH4	LZ-H080GXH4	LZ-H100GXH4
Humidifier type	Natural evaporating type humidifier		
Wetted element	Porosity plate 120pcs. (60 x 2pcs.)	Porosity plate 120pcs. (60 x 2pcs.)	Porosity plate 120pcs. (60 x 2pcs.)
Supply water pressure(kg/cm^2)	0.2(Min.) ~ 5.0(Max.)		

Note:

1. Feed clean water (city water, tap water or equivalent)
   Dirty water may clog the valve or cause dirt deposits in the water container, resulting in poor humidifier performance. (Never use any cooling tower water and heating - purpose water.)
   Life of humidifying element is about 3 years (4,000 hours), under the supply water conditions of hardness: 150 mg/l.
   (Life of humidifying element is about 1 year (1,500 hours) under the supply water conditions of hardness: 400 mg/l.)
   Annual operating hours: 10 hours / day x 26 days / month x 5 month = 1,300 hours
2. Maintain the supply water temperature at 5 ~ 50°C and its pressure at 20 ~ 490 kPa (0.2 ~ 5.0 kg/cm^2).
   If the water pressure is above 490 kPa (5.0 kg/cm^2), add pressure reducing valve in between the kit and the supply water shut - off valve.
3. The supply water line cannot be directly connected with a utility water tap.
   To unavoidably take water from such line, employ a CISTERN (gotten configuration authorization).
4. Be sure to provide thermal insulation around the indoor piping as well as the shut - off valves.
5. In order to prevent harmful bacteria from generating, do maintenance on humidifying unit portion at the beginning and the end of the heating season according to the installation manual.

4. Operation Range

■ Operation Range and details by temperature range

Operation range of ERV model is in the below table.

Operation Range	Operative	Normal Operation Range		Operative
Outdoor Air Temperature	-15°C	-15°C ~ -10°C	-10°C ~ 43°C	43°C ↑
Ventilation Mode	ERV	ERV	Set Operation Mode	ERV
Fan Operation	Off	Intermittent	Set Air Flow Step	Set Air Flow Step

Note

- Because there is a hysteresis range(4°C), the real temperature point at which the ventilation and fan operation mode changes could be different with this table.
- ERV ventilation : Energy(Total Heat) Recovery Mode
  It is the mode of ventilation with both supply/discharge through the total heat exchanger. It is adequate to use when the indoor/outdoor temperature difference is big.
- Bypass ventilation : General Ventilation Mode.
  It is the ventilation where the exhausted air is ventilated without going through the total heat exchanger. (Ventilation : O, Energy Recovery : X)
  It is adequate to use when the indoor contamination is severe.

*** Intermittent Operation Control (Fan operation)**

3 Steps will be repeated from 0 to 2 (like as 'Step 0 → Step 1 → Step 2 → Step 0 → …..). Operation by each step is in the below table.

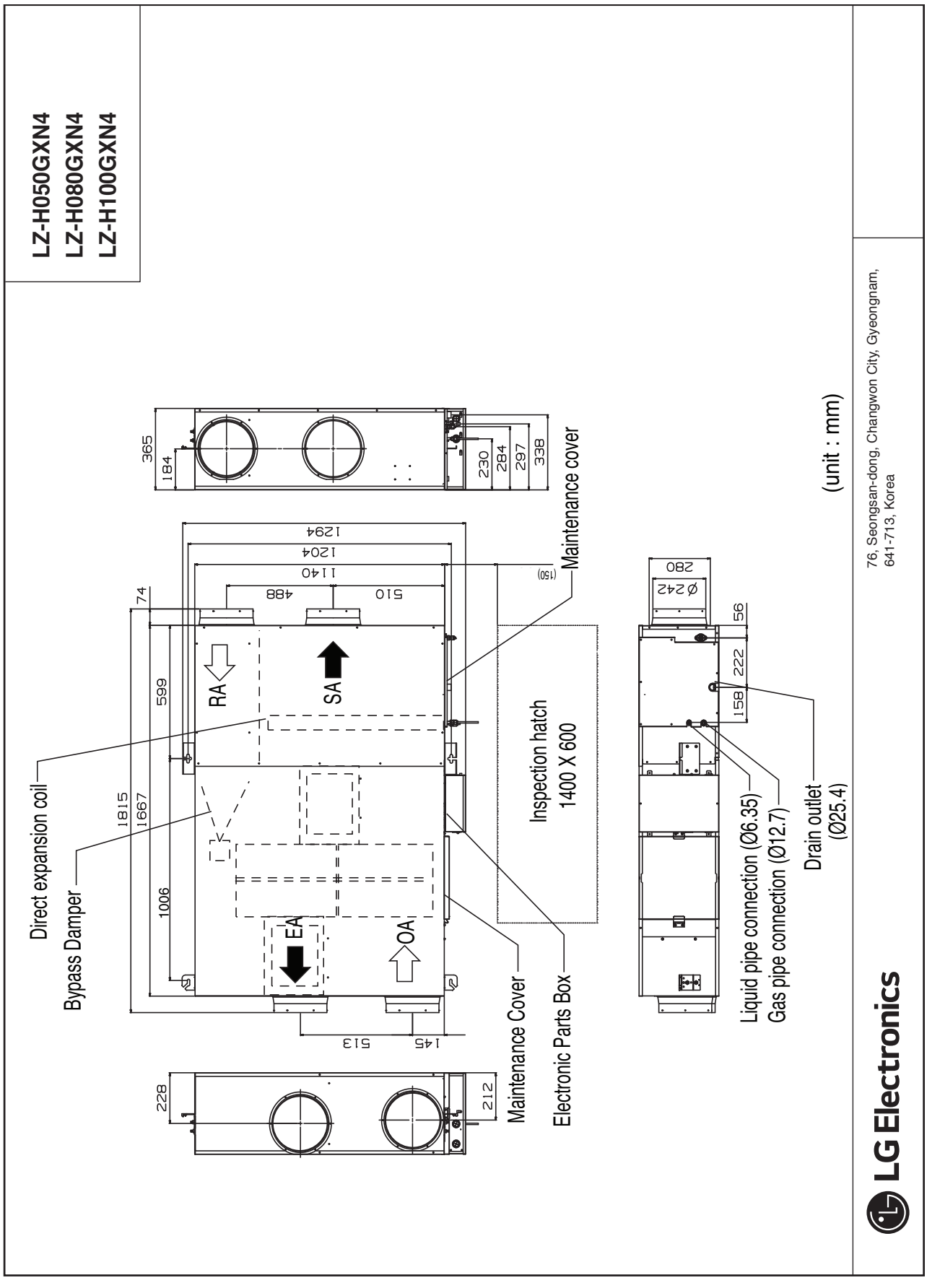
Step	**Step 0**	**Step 1**	**Step 2**
Time	**5 min**	**15 min**	**45 min**
Supply Fan	Low	Minimum RPM	Setting air flow
Exhaust Fan	Set Air Flow Step		
Thermistor	Thermal Off		Thermal On

*** Fan OFF Operation Control**

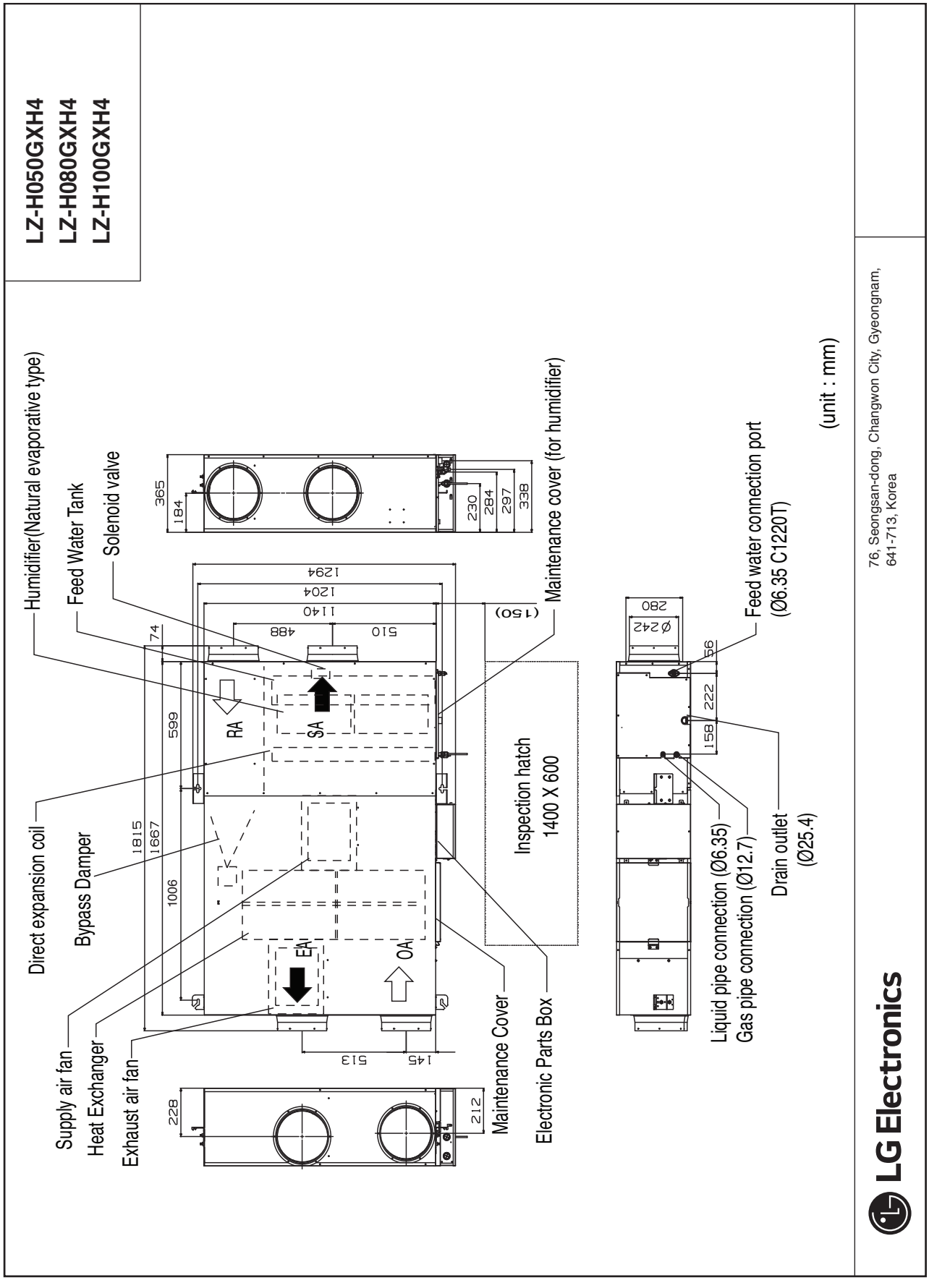
2 Steps will be repeated from 0 to 1 (like as 'Step 0 → Step 1 → Step 0 → Step 1 → …..). Operation by each step is in the below table.

Step	**Step 0**	**Step 1**
Time	**5 min**	**55 min**
Supply Fan	Low	Off
Exhaust Fan	Set Air Flow Step	Off
Thermistor	Thermal Off	

5. Dimensions

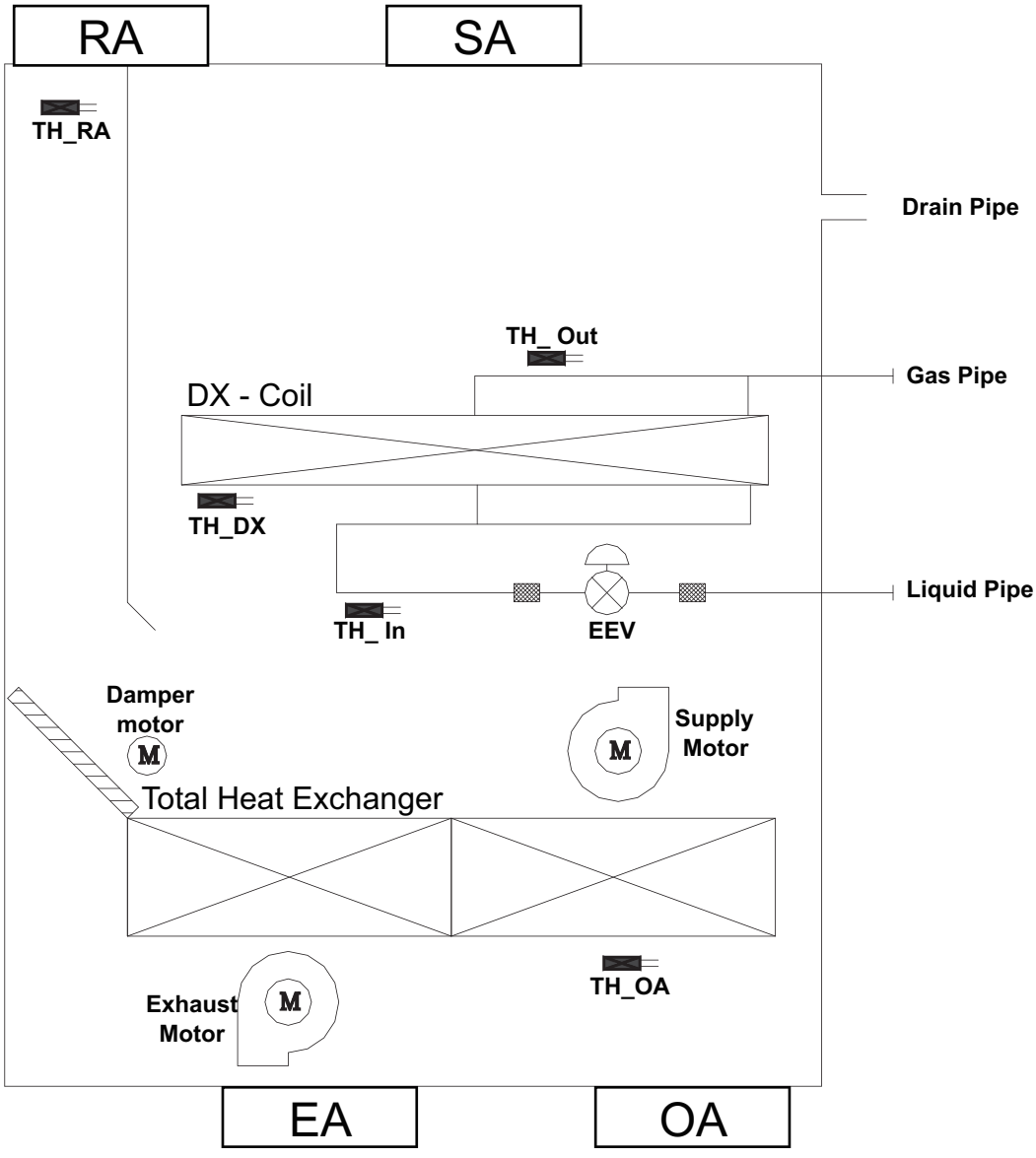


5. Dimensions



6. Piping Diagrams

6.1 LZ-H050GXN4 / LZ-H080GXN4 / LZ-H100GXN4



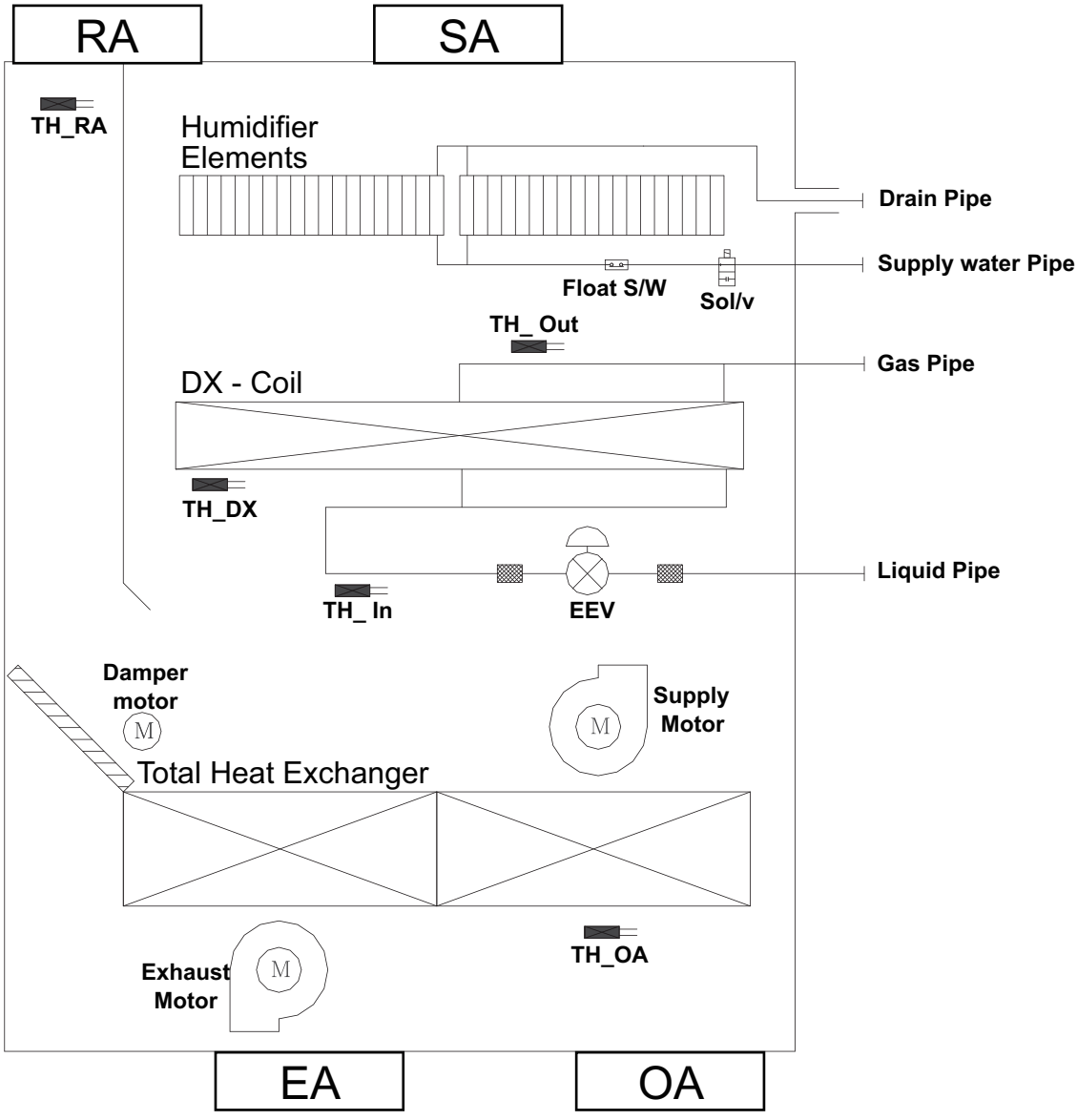
EEV : Electric Expansion Valve (Active/Inactive)

Supply Motor : Motor for supply
Exhaust Motor : Motor for Exhaust
Damper Motor : Synchronous motor for Bypass Damper

TH_DX : Temperature sensor in back of DX-Coil
TH_RA : Temperature sensor for Return (Room) Air
TH_OA : Temperature sensor for Outdoor Air
TH_ In : Temperature sensor for Liquid pipe
TH_ Out : Temperature sensor for Gas pipe

6. Piping Diagrams

6.2 LZ-H050GXH4 / LZ-H080GXH4 / LZ-H100GXH4



Sol/v #1 : Solenoid valve for water supply (Active/Inactive)
Float S/W #1 : Float switch for water supply (Open/Short)

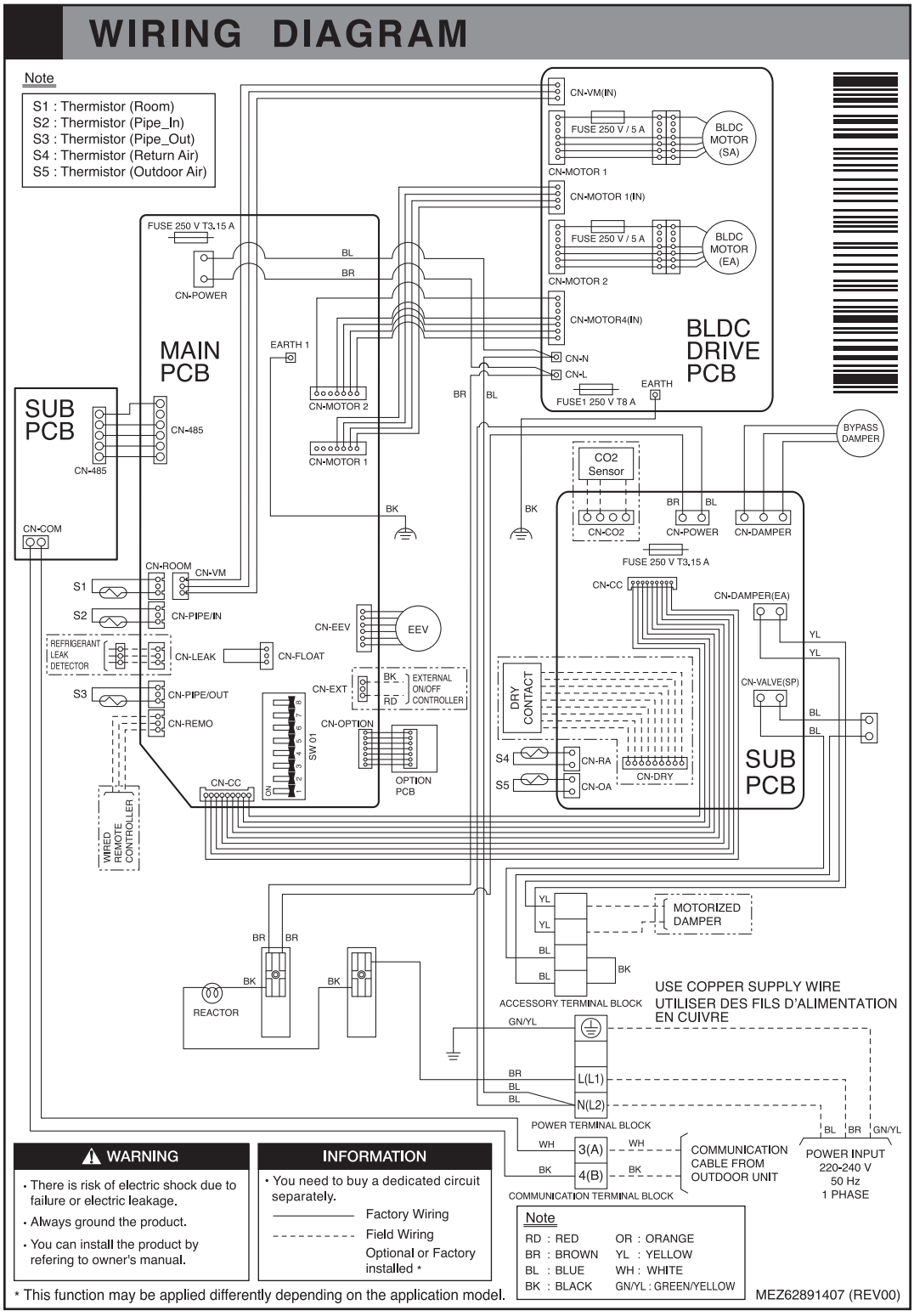
EEV : Electric Expansion Valve (Active/Inactive)

Supply Motor : Motor for supply
Exhaust Motor : Motor for Exhaust
Damper Motor : Synchronous motor for Bypass Damper

TH_DX : Temperature sensor in back of DX-Coil
TH_RA : Temperature sensor for Return (Room) Air
TH_OA : Temperature sensor for Outdoor Air
TH_ In : Temperature sensor for Liquid pipe
TH_ Out : Temperature sensor for Gas pipe

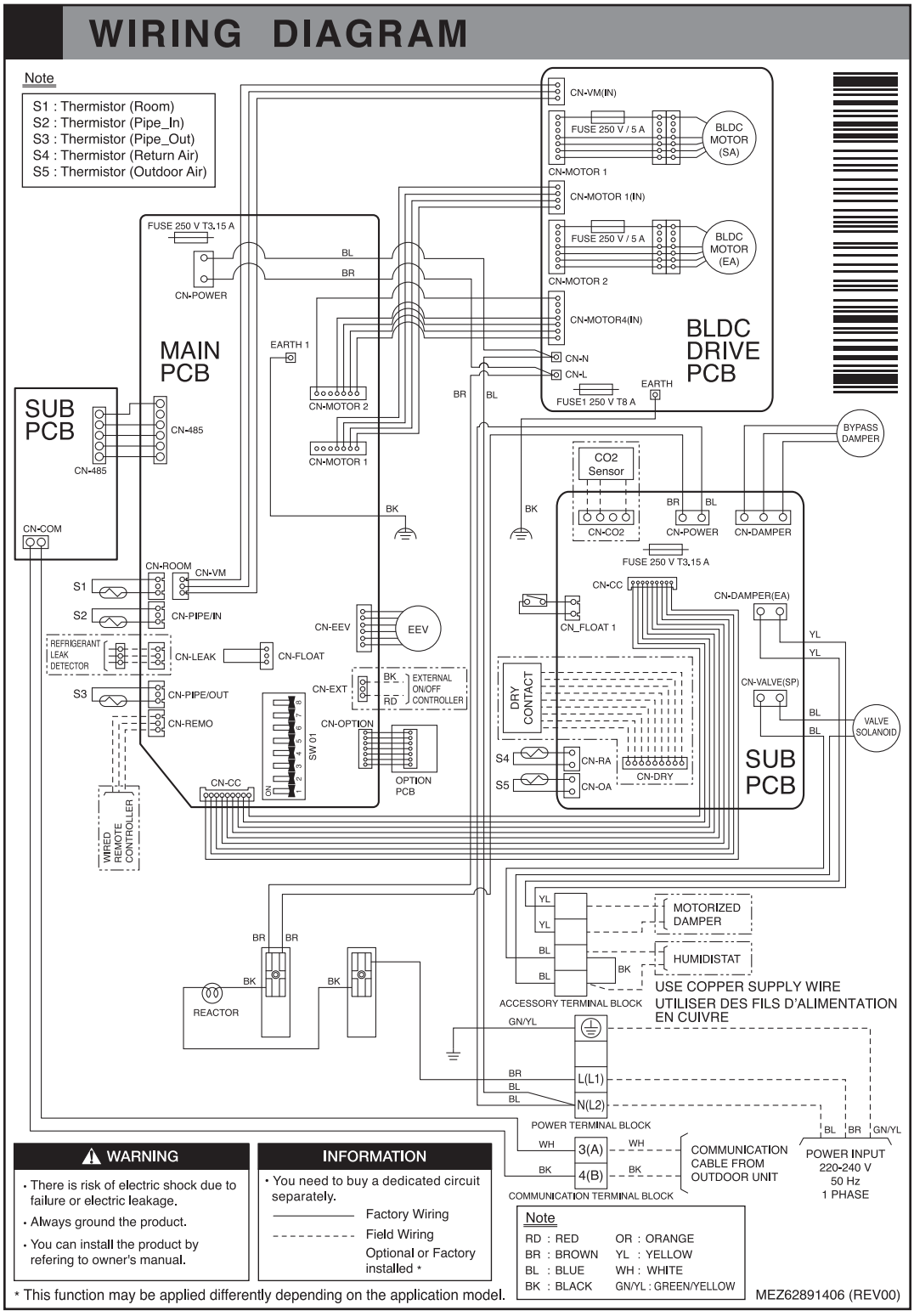
7. Wiring Diagrams

7.1 LZ-H050GXN4 / LZ-H080GXN4 / LZ-H100GXN4



7. Wiring Diagrams

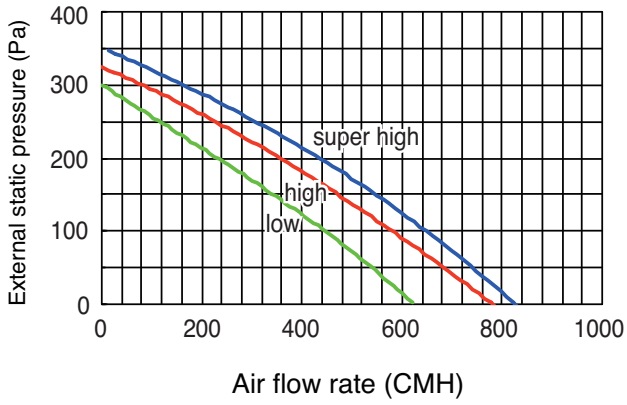
7.2 LZ-H050GXH4 / LZ-H080GXH4 / LZ-H100GXH4



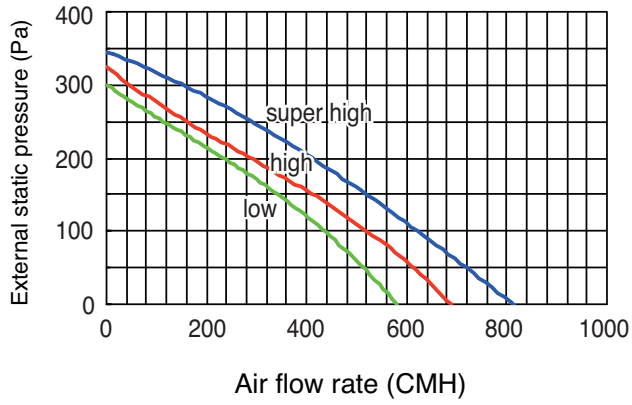
8. Fan Performance

8.1 Fan Performance

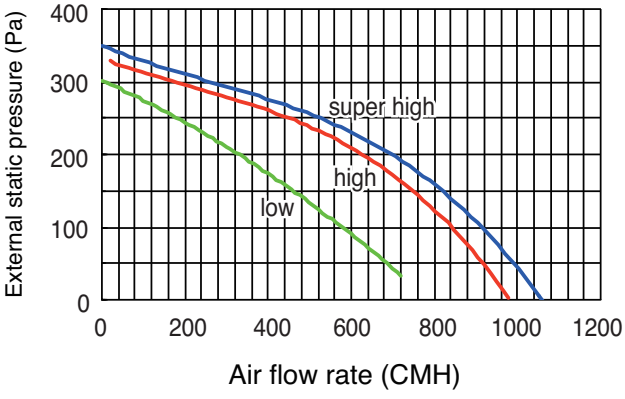
LZ-H050GXN4



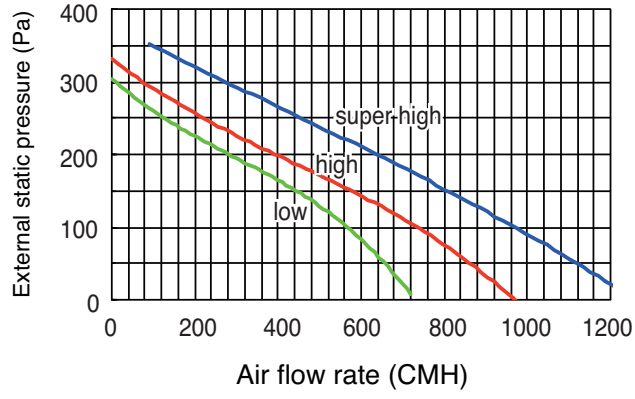
LZ-H050GXH4



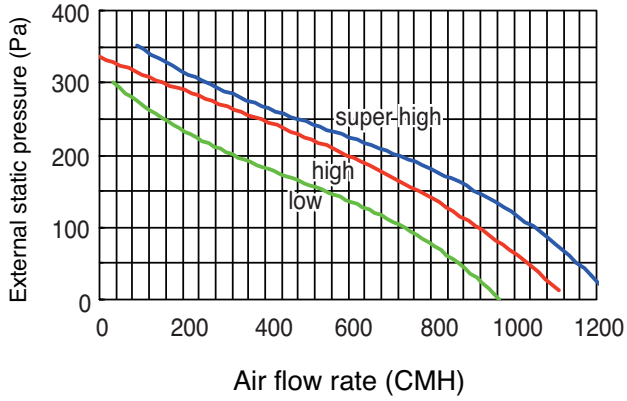
LZ-H080GXN4



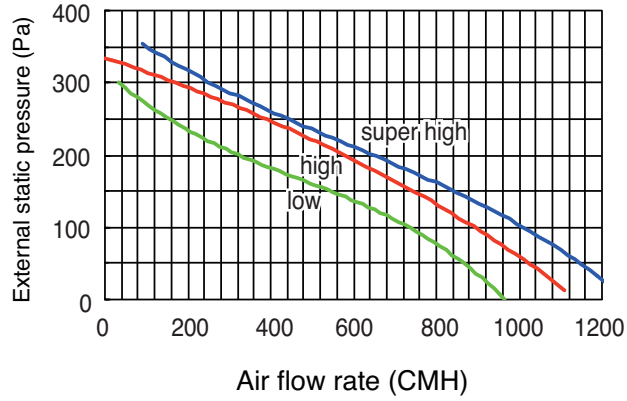
LZ-H080GXH4



LZ-H100GXN4



LZ-H100GXH4



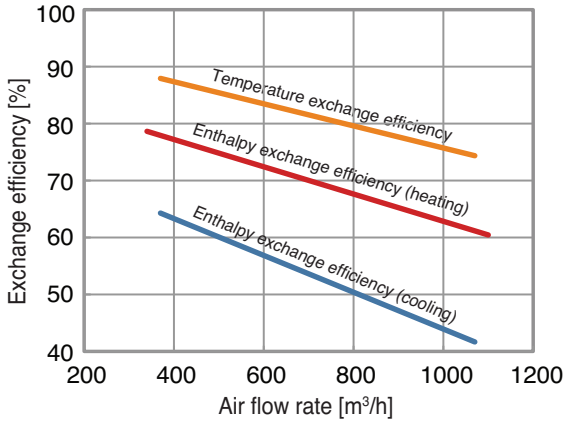
Note

1. Operating conditions:
   - Power source: Single phase 50Hz 230V
   - Ventilation mode : Heat Exchange mode

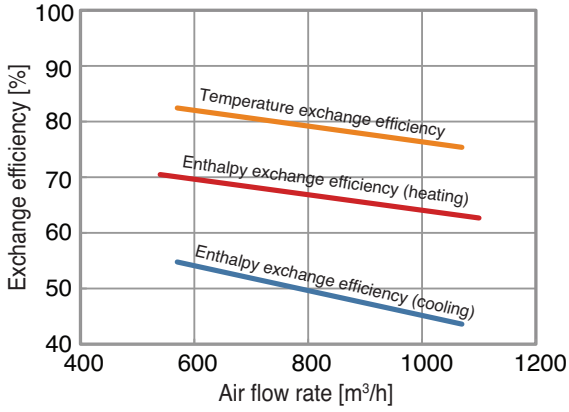
8. Fan Performance

8.2 The correction ratio of exchange efficiency

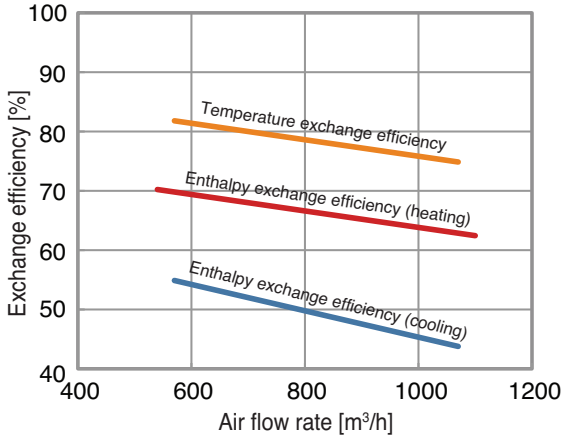
LZ-H050GXN4, LZ-H050GXH4



LZ-H080GXN4, LZ-H080GXH4



LZ-H100GXN4, LZ-H100GXH4



Note

1. Heat exchanger individual test.
2. Test condition
   - Winter : Indoor (DB 20°C,WB 14°C), Outdoor (DB 5°C,WB 2°C)
   - Summer: Indoor (DB 27°C,WB 20°C), Outdoor (DB 35°C,WB 29°C)

9. Capacity Tables

9.1 Cooling

Model	Capacity	Outdoor Temp. (°C)DB	Coil inlet air temp. (°C)													
	DX Coil Only		14 WB		16 WB		18 WB		19 WB		20 WB		22 WB		24 WB	
			20 DB		23 DB		26 DB		27 DB		28 DB		30 DB		32 DB	
			TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
LZ-H050GX*4	3.7kW	10	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.5	2.6
		12	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.5	2.6
		14	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		16	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		18	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		20	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		21	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		23	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		25	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.4	2.7	4.4	2.6
		27	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.3	2.7	4.4	2.6
		29	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.2	2.6	4.4	2.6
		31	2.6	2.0	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.2	2.6	4.4	2.6
		33	-	-	3.0	2.3	3.4	2.6	3.7	2.6	3.9	2.6	4.1	2.6	4.4	2.6
		35	-	-	3.0	2.3	3.4	2.6	3.7	2.6	3.8	2.6	4.1	2.6	4.3	2.5
		37	-	-	3.0	2.3	3.4	2.6	3.7	2.6	3.8	2.6	4.0	2.5	4.2	2.5
		39	-	-	3.0	2.3	3.4	2.6	3.7	2.6	3.7	2.6	3.9	2.5	4.2	2.5
LZ-H080GX*4	5.6kW	10	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.8	4.1
		12	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.8	4.1
		14	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.8	4.1
		16	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.8	4.1
		18	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.6	4.0
		20	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.6	4.0
		21	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.6	4.0
		23	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.6	4.0
		25	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.6	4.2	6.6	4.0
		27	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.5	4.2	6.6	4.0
		29	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.4	4.2	6.6	4.0
		31	4.0	3.2	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.3	4.1	6.6	4.0
		33	-	-	4.5	3.6	5.1	4.0	5.6	4.1	5.9	4.1	6.2	4.1	6.6	4.0
		35	-	-	4.5	3.6	5.1	4.0	5.6	4.1	5.8	4.1	6.1	4.0	6.5	4.0
		37	-	-	4.5	3.6	5.1	4.0	5.6	4.1	5.7	4.0	6.0	4.0	6.4	4.0
		39	-	-	4.5	3.6	5.1	4.0	5.6	4.1	5.6	4.0	5.9	4.0	6.3	3.9
LZ-H100GX*4	6.6kW	10	4.7	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		12	4.7	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		14	4.7	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		16	4.7	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		18	4.7	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		20	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.9	4.9
		21	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.8	4.8
		23	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.8	4.8
		25	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.8	5.1	7.8	4.8
		27	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.7	5.1	7.8	4.8
		29	4.8	3.9	5.3	4.4	6.0	4.8	6.6	4.8	7.0	5.0	7.6	5.0	7.8	4.8
		31	4.8	3.9	5.3	4.3	6.0	4.8	6.6	4.8	7.0	5.0	7.4	5.0	7.8	4.8
		33	-	-	5.3	4.3	6.0	4.8	6.6	4.8	7.0	5.0	7.3	4.8	7.8	4.8
		35	-	-	5.3	4.3	6.1	4.8	6.6	4.9	6.9	5.0	7.2	4.9	7.7	4.8
		37	-	-	5.3	4.3	6.0	4.8	6.6	4.8	6.7	4.9	7.1	4.7	7.5	4.7
		39	-	-	5.3	4.3	6.0	4.8	6.6	4.8	6.6	4.9	7.0	4.7	7.4	4.7

TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
Note : Cooling capacity is based on the following conditions.
Fan is based on High and Super-High.

When calculating the capacity as indoor units, use the following figures:
- LZ-H050GX*4 : 3.6 kW
- LZ-H080GX*4 : 5.6 kW
- LZ-H100GX*4 : 7.1 kW

: Bypass ventilation mode condition

9. Capacity Tables

9.2 Heating

Model	Capacity	Outdoor Temp. (°C)		Coil inlet air temp. (°C)					
	DX Coil Only	DB	WB	16	18	20	21	22	24
LZ-H050GX*4	4.2kW	-14.7	-15.0	2.9	2.9	3.2	3.1	3.2	-
		-12.6	-13.0	3.0	3.0	3.2	3.3	3.5	-
		-10.5	-11.0	3.1	3.1	3.3	3.5	3.5	3.5
		-9.5	-10.0	3.3	3.1	3.6	3.5	3.6	3.6
		-8.5	-9.1	3.3	3.3	3.7	3.6	3.8	3.8
		-7.0	-7.6	3.4	3.5	3.8	3.7	3.9	3.8
		-5.0	-5.6	3.5	3.5	4.0	3.8	4.0	4.0
		-3.0	-3.7	3.6	3.6	4.0	4.0	4.2	4.2
		0.0	-0.7	3.9	3.9	4.1	4.1	4.2	4.2
		3.0	2.2	4.0	4.0	4.2	4.1	4.2	4.2
		5.0	4.1	4.3	4.2	4.2	4.1	4.2	4.2
		7.0	6.0	4.5	4.3	4.2	4.1	4.2	4.2
		9.0	7.9	4.6	4.3	4.2	4.1	4.2	4.0
		11.0	9.8	4.7	4.3	4.2	4.1	4.2	4.0
		13.0	9.8	4.7	4.3	4.2	4.1	4.2	3.8
		15.0	13.7	4.7	4.3	4.2	4.1	4.2	3.8
LZ-H080GX*4	6.1kW	-14.7	-15.0	4.2	4.2	4.8	4.9	5.4	-
		-12.6	-13.0	4.4	4.4	5.0	5.3	5.6	-
		-10.5	-11.0	4.5	4.5	5.0	5.3	5.6	5.6
		-9.5	-10.0	4.7	4.5	5.0	5.3	5.6	5.6
		-8.5	-9.1	4.7	4.7	5.2	5.6	5.9	5.6
		-7.0	-7.6	4.9	5.0	5.2	5.6	5.9	5.6
		-5.0	-5.6	5.1	5.1	5.2	5.6	5.9	5.7
		-3.0	-3.7	5.3	5.3	5.8	5.8	5.9	5.7
		0.0	-0.7	5.7	5.7	5.9	5.9	5.9	5.7
		3.0	2.2	5.8	5.8	6.1	5.9	6.1	5.7
		5.0	4.1	6.3	6.0	6.1	5.9	6.1	5.7
		7.0	6.0	6.5	6.3	6.1	5.9	6.1	5.7
		9.0	7.9	6.7	6.3	6.1	5.9	6.1	5.7
		11.0	9.8	6.8	6.3	6.1	5.9	6.1	5.8
		13.0	9.8	6.9	6.3	6.1	5.9	6.1	5.9
		15.0	13.7	6.9	6.3	6.1	5.9	6.1	5.9
LZ-H100GX*4	7.4kW	-14.7	-15.0	5.1	5.1	5.9	5.9	6.2	-
		-12.6	-13.0	5.3	5.3	6.1	6.1	6.4	-
		-10.5	-11.0	5.5	5.5	6.3	6.3	6.6	6.4
		-9.5	-10.0	5.7	5.5	6.3	6.3	6.8	6.6
		-8.5	-9.1	5.7	5.7	6.5	6.5	6.8	6.6
		-7.0	-7.6	6.0	6.1	6.8	6.5	6.8	6.6
		-5.0	-5.6	6.2	6.2	6.8	6.8	7.1	6.9
		-3.0	-3.7	6.4	6.4	7.0	7.0	7.1	6.9
		0.0	-0.7	6.9	6.9	7.2	7.2	7.1	7.0
		3.0	2.2	7.1	7.1	7.4	7.2	7.3	7.0
		5.0	4.1	7.7	7.3	7.4	7.2	7.3	7.0
		7.0	6.0	7.9	7.6	7.4	7.2	7.4	7.0
		9.0	7.9	8.1	7.7	7.4	7.2	7.3	7.0
		11.0	9.8	8.3	7.7	7.4	7.2	7.3	7.0
		13.0	9.8	8.3	7.7	7.4	7.2	7.3	7.1
		15.0	13.7	8.3	7.7	7.4	7.2	7.3	7.1

TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
Note : Heating capacity is based on the following conditions.
Fan is based on High and Super-High.

When calculating the capacity as indoor units, use the following figures:
- LZ-H050GX*4 : 3.6 kW
- LZ-H080GX*4 : 5.6 kW
- LZ-H100GX*4 : 7.1 kW

10. Electrical Characteristics

Units					Power Supply	IFM		PI
Model	Type	Hz	Voltage	Voltage Range	MCA	kW	FLA	W
LZ-H050GXH4	ZG	50/60	220-240	Max. : 264 Min. : 198	2.61	0.39	2.3	250
LZ-H080GXN4	ZG				2.61	0.39	2.3	420
LZ-H080GXH4	ZG				2.61	0.39	2.3	420
LZ-H100GXN4	ZG				2.61	0.39	2.3	480
LZ-H100GXH4	ZG				2.61	0.39	2.3	480

Symbols

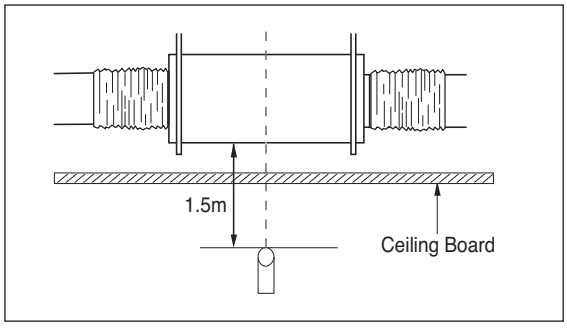
MCA : Minimum Circuit Amperes (A)
MFA : Maximum Fuse Amperes (A)
kW : Fan Motor Rated Output (kW)
FLA : Full Load Amperes (A)
IFM : Indoor Fan Motor
PI : Maximum Power Input (W)

Note

1. Voltage range
   Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above the listed range limits.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MFA/MCA
   MFA = 1.25 x FLA, MCA= MFA / 1.1
   (If MFA is smaller than minimum standard value, Use minimum standard value in region for selecting circuit breaker.)
4. Select wire size based on the MCA
5. Instead of fuse, use Circuit Breaker.

11. Sound Level

11.1 Overall



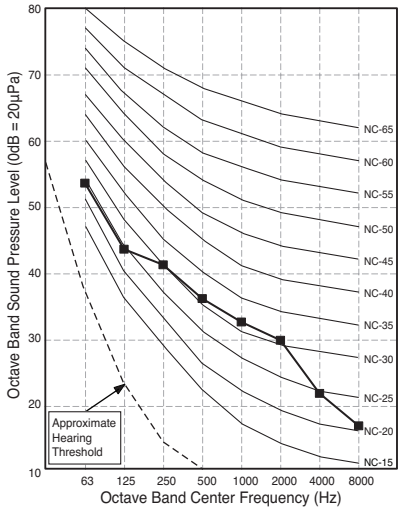
Note:

1. Operating conditions:
   - Power source: Single phase 50Hz 230V
   - Ventilation mode : Heat Exchange mode
2. Measuring place:
   - Operation noise is measured in an anechoic chamber.
   - The operation noise level becomes greater than this value depending on the operation conditions, reflected sound, and peripheral noise.
   - Operation noise differs with operation and ambient conditions.
   - S-H: Super-high, H: high, L: low
3. Operation noise differs with operation and ambient conditions.

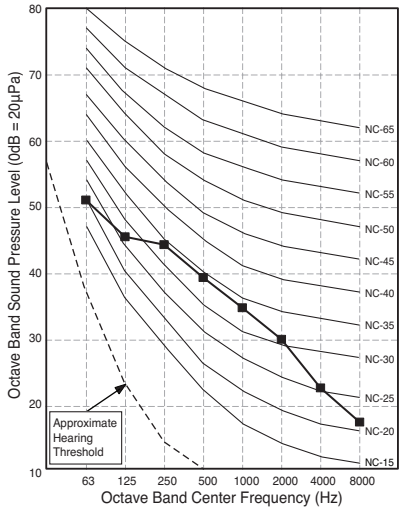
Model	Sound Levels [dB(A)]		
	SH	H	L
LZ-H050GXN4	39	37	35
LZ-H080GXN4	41	38	36
LZ-H100GXN4	41	39	36
LZ-H050GXH4	38	36	33
LZ-H080GXH4	39	37	34
LZ-H100GXH4	40	38	35

Sound pressure level

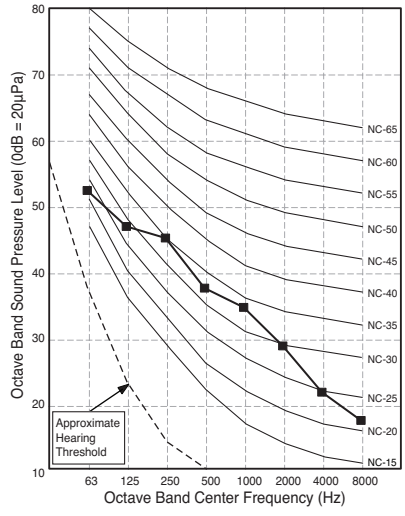
LZ-H050GXN4



LZ-H080GXN4

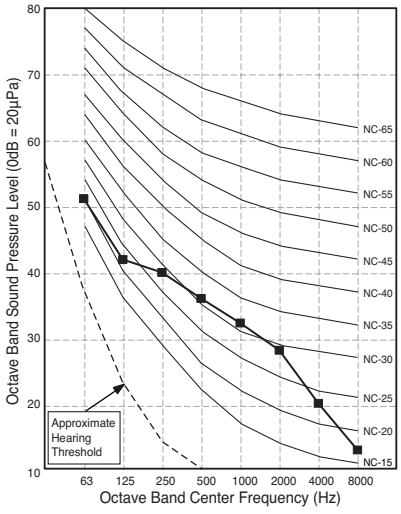


LZ-H100GXN4

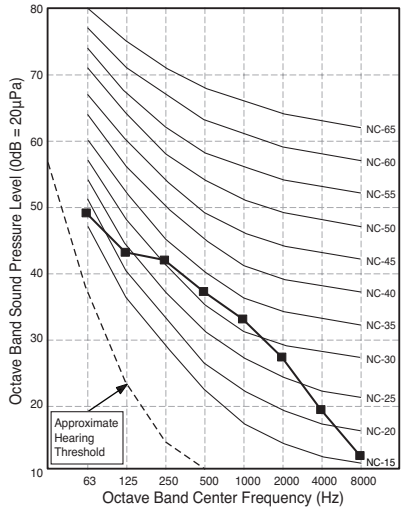


11. Sound Level

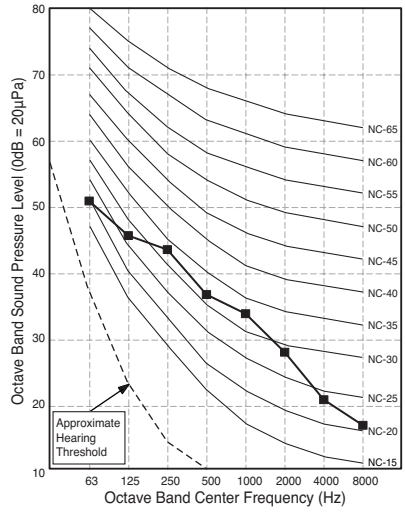
LZ-H050GXH4



LZ-H080GXH4

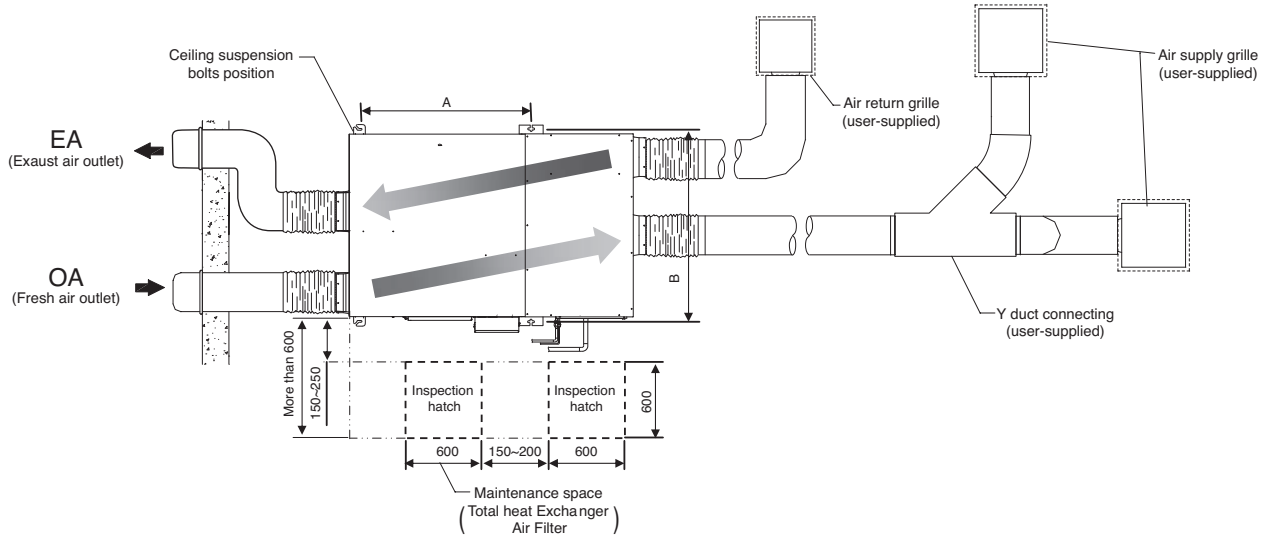


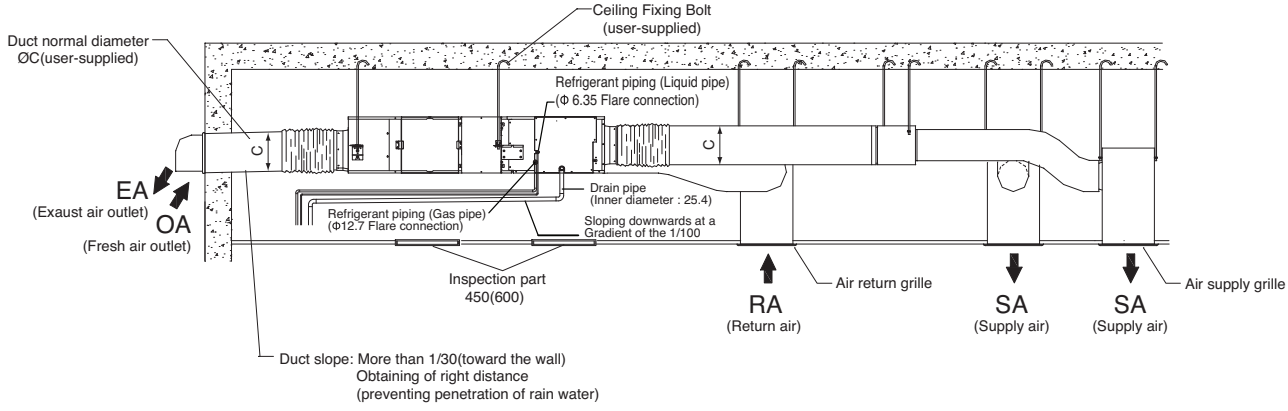
LZ-H100GXH4



12. Standard Drawing of Installation

12.1 LZ-H050GXN4 / LZ-H080GXN4 / LZ-H100GXN4



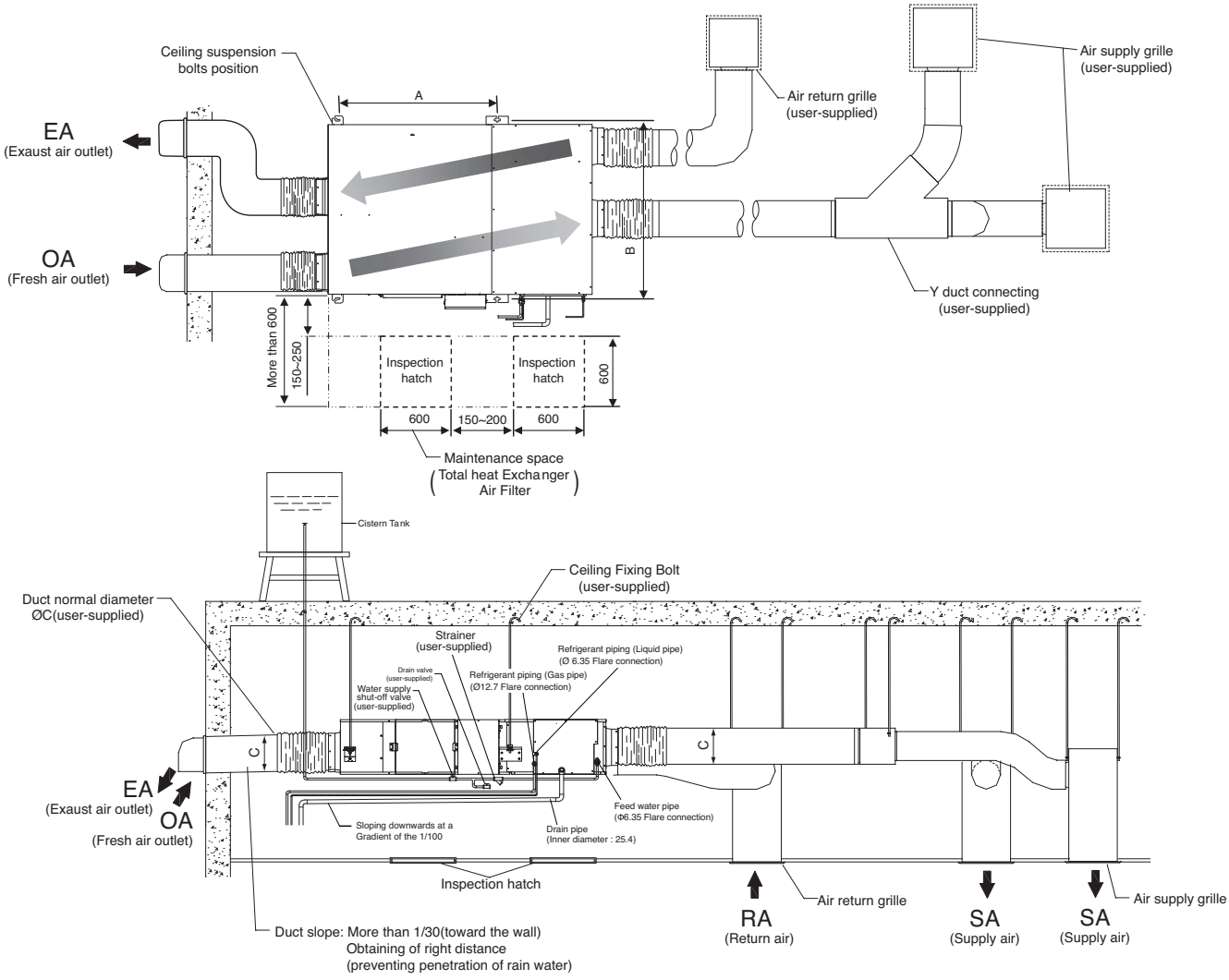


[Unit : mm]

Model	A	B	C
LZ-H050GXN4 LZ-H080GXN4 LZ-H100GXN4	1,006	1,204	250

12. Standard Drawing of Installation

12.2 LZ-H050GXH4 / LZ-H080GXH4 / LZ-H100GXH4

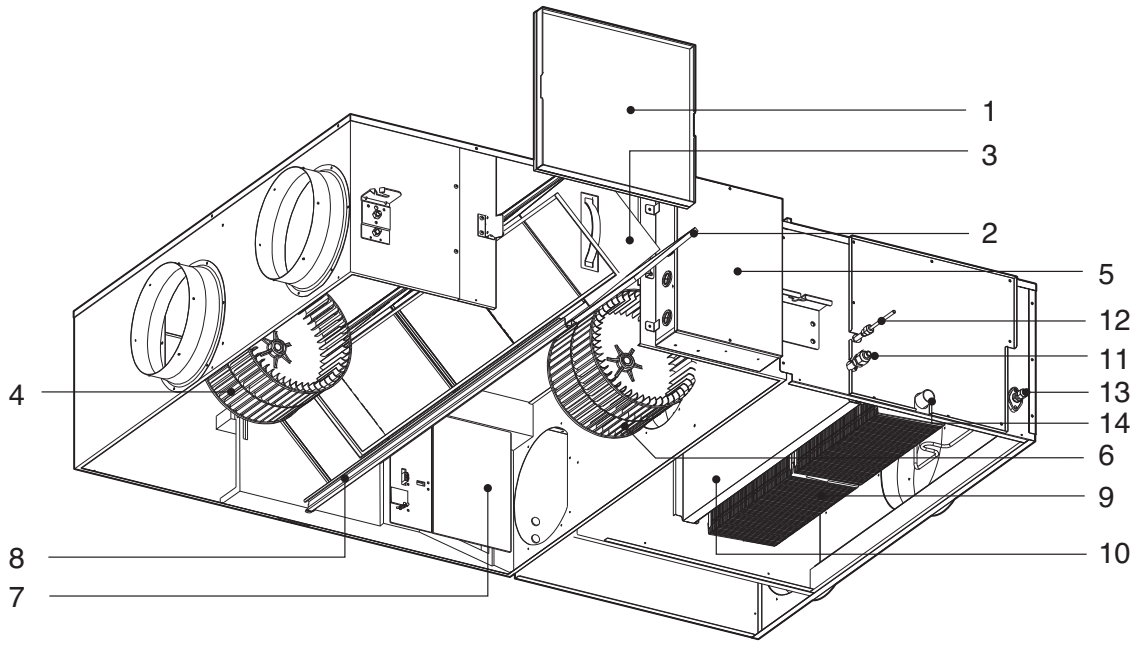


[Unit : mm]

Model	A	B	C
LZ-H050GXH4 LZ-H080GXH4 LZ-H100GXH4	1,006	1,204	250

13. Operation

13.1 Introduction



1. Maintenance cover

2. Air Filter
Prevents clogging of the Total heat exchanger due to dust.

3. Total Heat Exchanger
Exchanges temperature and moisture between supply air and exhaust air.

4. Blower for Exhaust Air
A blower for draining polluted air outside.

5. Electronic Parts Box (Control box)

6. Blower for Supply Air
A blower for induction outside air.

7. Bypass Damper
Converts the ventilation via Total heat exchange to the normal ventilation.

8. Holder for Total Heat Exchanger
Used for installation guide of the Total heat exchanger.

9. Humidifier Element

10. Direct expansion coil (DX Coil)

11. Gas pipe connection (Ø12.7)

12. Liquid pipe connection (Ø6.35)

13. Feed water connection port (Ø6.35)

14. Drain outlet (Ø25.4)

13. Operation

13.2 Prior to Operation

12.2.1 Preparing for operation

1. Contact an installation specialist for installation.
2. Plug in the power plug properly.
3. Use a dedicated circuit.
4. Do not use an extension cord.
5. Do not start/stop operation by plugging/unplugging the power cord.
6. If the cord/plug is damaged, replace it with only an authorized replacement part.

13.2.2 Usage

1. Being exposed to direct airflow for an extended period of time could be hazardous to your health. Do not expose occupants, pets, or plants to direct airflow for extended periods of time.
2. Due to the possibility of oxygen deficiency, ventilate the room when used together with stoves or other heating devices.
3. Do not use this ventilator for non-specified special purposes (e.g. preserving precision devices, food, pets, plants, and art objects). Such usage could damage the items.
4. This unit cannot control room temperature.
   If this is needed, do not install the ventilation unit alone, but rather install another indoor unit.

13.2.3 Cleaning and maintenance

1. Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling sharp metal edges.
2. Do not use water to clean inside the ventilator. Exposure to water can destroy the insulation, leading to possible electric shock.
3. When cleaning the unit, first make sure that the power and breaker are turned off. The fan rotates at a very high speed during operation. There is a possibility of injury if the unit's power is accidentally triggered on while cleaning inner parts of the unit.

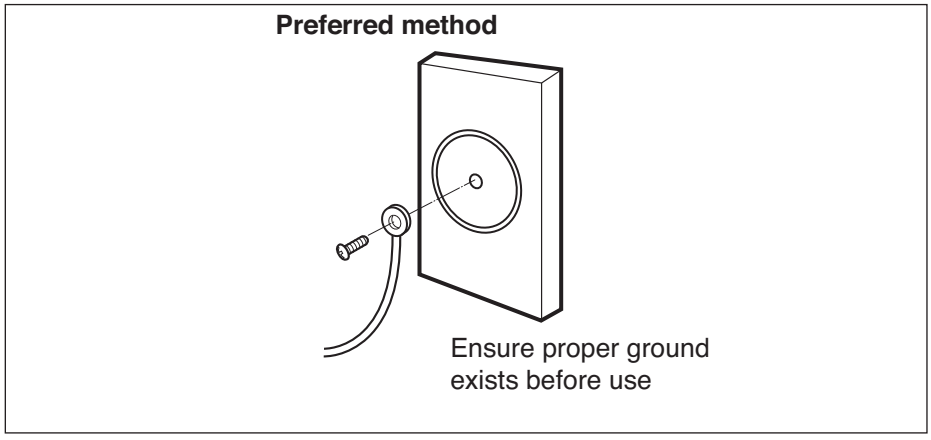
13.2.4 Service

For repair and maintenance, contact your authorized service dealer.

13.3 Electrical Safety

WARNING: This appliance must be properly grounded.

To minimize the risk of electric shock, you must always plug into a grounded outlet.



WARNING: Do not cut or remove the grounding prong from the power wire.

WARNING: Attaching the adapter ground terminal to the wall receptacle cover screw does not ground the appliance unless the cover screw is metal and not insulated, and the wall receptacle is grounded through the house wiring.

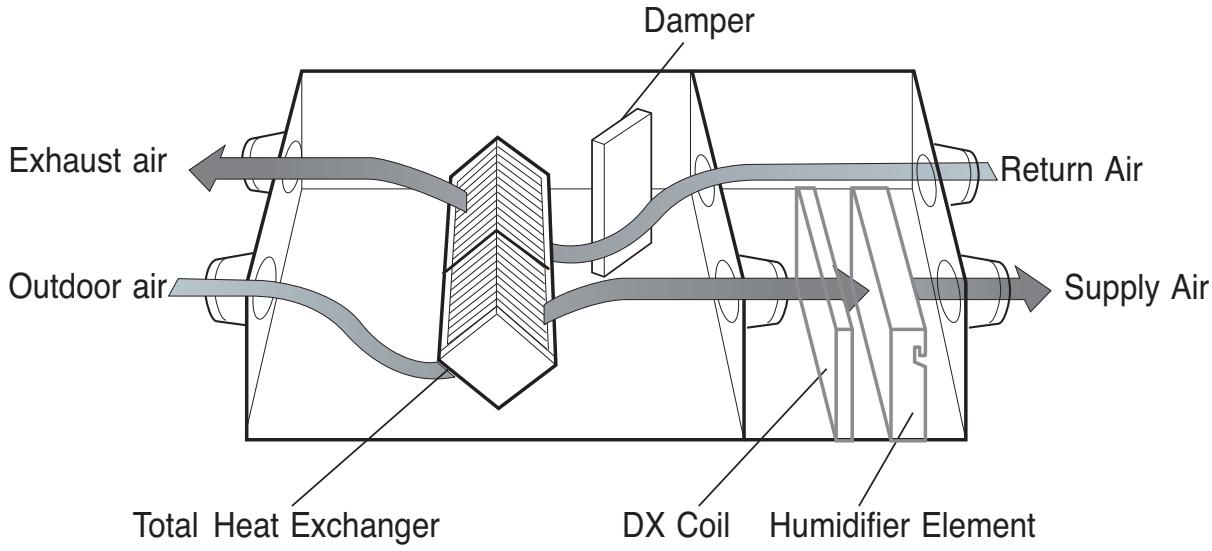
WARNING: If you have any doubt whether the ventilator is properly grounded, have the wall receptacle and circuit checked by a qualified electrician.

13.4 Characteristics

13.4.1 Energy Recovery Ventilation via Total Heat Exchanger

Exhausts indoor air via the Total Heat Exchanger outdoor.

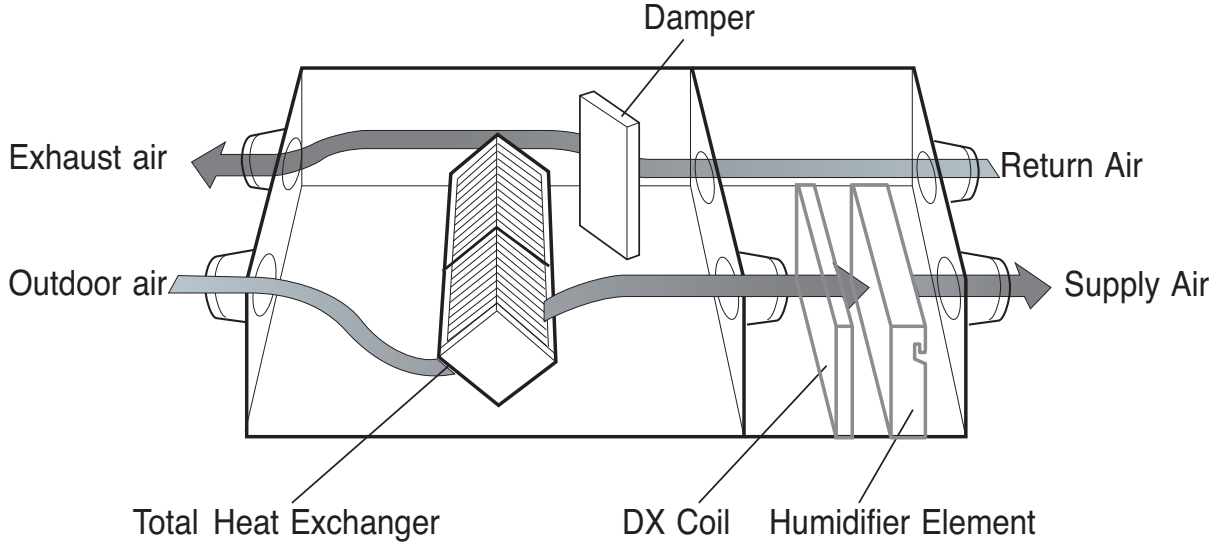
• The outdoor air heat exchanged is supplied to indoor. Operate the ventilator in the **Ventilation via Total heat exchanger** in summer/winter when cool/heat operation is done.



13.4.2 Normal Ventilation

Exhausts the polluted indoor-air directly without via the Total Heat Exchanger.

• Operate the ventilator in the **Normal Ventilation** in spring/autumn when the Total heat exchanger is not required.

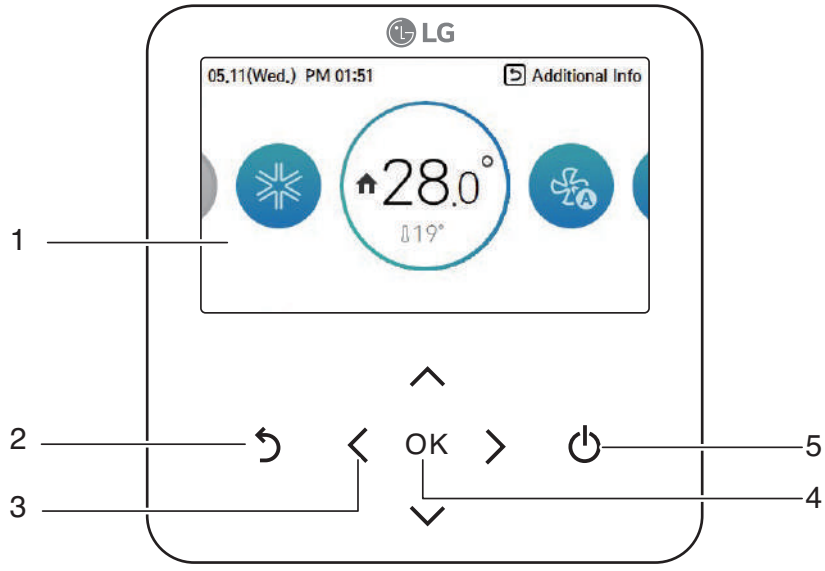


CAUTION: In case of high outdoor pollution degree like yellow sand please pause the ventilator.

13. Operation

13.5 Operating Instruction (Accessory) - PREMTB100

LG RS3 Standard Wired Remote Controller



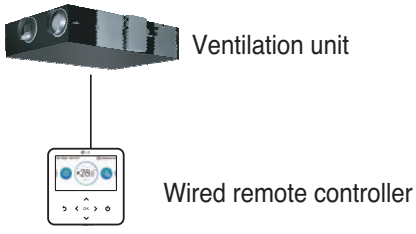
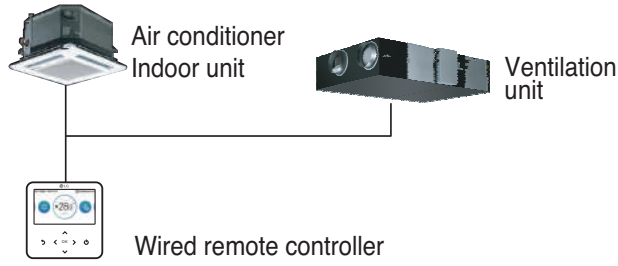
Functions (Button Descriptions)		
No.	Name	Functions
1	Operation display window	Operation and Settings status display
2	Back button	When you move to the previous stage from the menu's setting stage
3	Up/down/left/right button	When you change the menu's setting value
4	OK button	When you save the menu's setting value
5	On/Off button	When you turn ON/OFF the air conditioner

13.5.1 Ventilation operating scene and ventilation operating method

This unit's remote controller can be installed with two types; Single Operation & Interlinked Operation

1) Single Operation
- It controls using the wired remote controller at a place where ventilation unit is connected only.

2) Interlinked Operation
- It controls using the wired remote controller at a place where the air conditioner indoor unit and the ventilation product are connected and installed at the same time.
- When the power is applied, the remote controller recognizes the product and operates normally.

Single Operation	Interlinked Operation
	

❊ The wiring method is the same as the air conditioner user manual. (Refer to the remote controller manual group control page contents)

13.5.2 Operation Control

1) On / Off

■ Single operation

Air conditioner and ventilator will be turned on or off.

• Press ⏻ (On/Off) button on the remote controller. It displays as the below figure.

< Air conditioner main screen>

<Genernal Ventilation main screen>

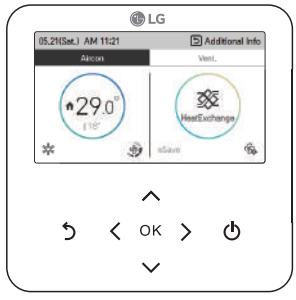
<Dx Ventilation main screen>

■ Interlinked operation

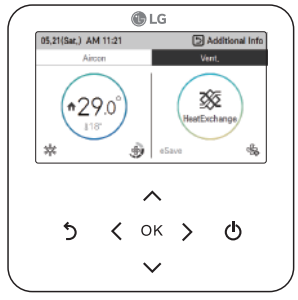
It can only be used when the air conditioner is interlinked with ventilation product.

• Press ⏻ (On/Off) button on the remote controller.
When you control the air conditioner and the ventilation product with one remote controller, the screen is displayed as in the below figure.

- You can set the air conditioner by pressing [<(left)] button and pressing [OK] button to move to the air conditioner screen.
- You can set the ventilation by pressing [>(right)] button and pressing [OK] button to move to the ventilation screen.



<Air conditioner mode>



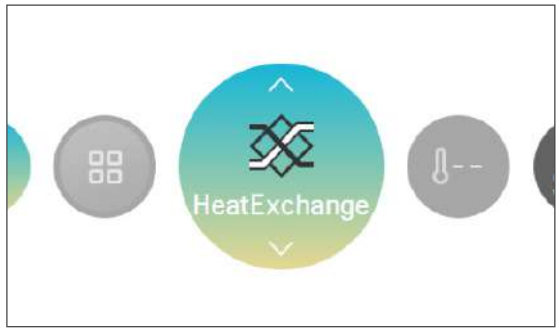
<Ventilation mode>

❉ Ventilation product means general ventilation product and direct expansion ventilation product.

13. Operation

2) Operation mode

• In the main screen, press [< , >(left/right)] button to select the operation mode category, and press [∧ , ∨ (up/down)] button to set the operation mode.



■ Ventilation operation mode (general / direct expansion ventilation product)

Mode	Description
Auto	It automatically operates in the optimum ventilation mode by measuring the indoor/outdoor air temperature of the ventilation system.
Heat Exchange	It is the mode of ventilation with both supply/discharge through the heat exchanger. It is adequate to use in summer/winter where the indoor/outdoor temperature difference is big.
Bypass	It is the ventilation where the exhausted air is ventilated without going through the exchanger. It is adequate to use in spring/fall or when the indoor contamination is severe.

■ Air conditioner operation mode (direct expansion ventilation product)

Mode	Description
Cool	It cools down the room to desired temperature.
Heat	It provides warm wind to the room.
Auto	It automatically provides the appropriate fan speed based on the temperature of the room.
Stop	It stops the product's air conditioner operation.

Note :
• Some products may not support some operation modes.
• The air conditioner operation mode is composed separately from the ventilation operation mode.

13. Operation

3) Fan speed control

- In the main screen, press [< , >(left/right)] button to select the fan speed category, and press [∧, ∨(up/down)] button to set the fan speed.
  It circulates in the order of 'low ↔ high ↔ power ↔ auto'.

❉ The auto Fan can be used only when the air contamination (CO2) sensor is installed.

4) Returning to the screen

- In the main screen, after moving to the category by pressing [< , >(left/right)] button, if there is no remote controller operation, after 10 seconds, it returns to the main screen basic position. (basic position: indoor temperature display part)
- In the screens except the main screen, if there is no remote controller operation for 1 minute, it moves to the main screen.

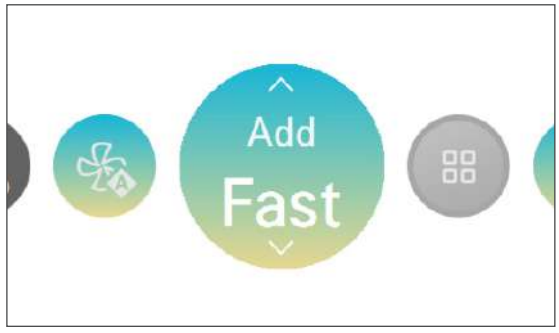
13. Operation

13.5.3 Additional Function

1) Fast/Energy saving ventilation mode

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

- In the main screen, press [< , >(left/right)] button to select the additional operation category, and press [∧, ∨(up/down)] button to set the additional operation.



Additional Operation	Description
Fast	It ventilates in short period of time. It is the function to operate the ventilation function more efficiently through the express setting which is an additional operation of the ventilation product.
Energy saving	It performs the energy saving function while ventilating efficiently.

Note :

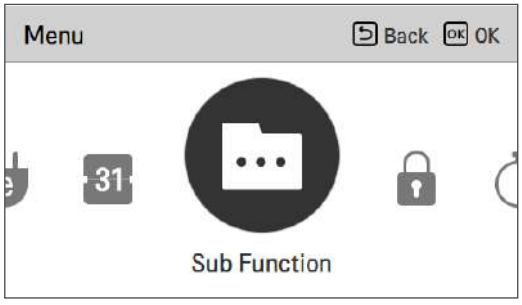
- The general ventilation and the direct expansion ventilation's additional operation are the same.
- The ventilation product's additional functions (air cleaning / heater / humidification / fan auto) setting methods are the same as the air conditioner.

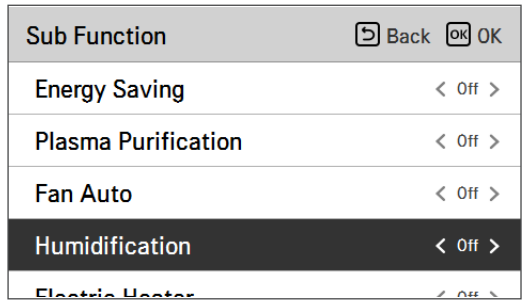
2) Humidification operating mode

It is the function to activate the humidifier installed in the product when the indoor air is dry.

■ Additional function setting list

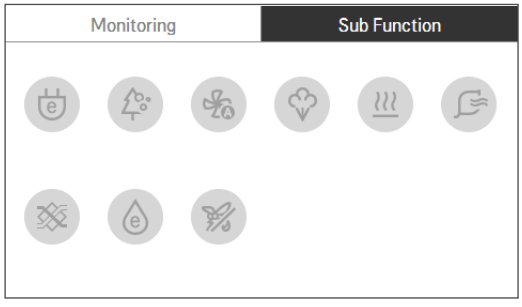
- In the menu screen, press [< , >(left/right)] button to select the additional function category, and press [OK] button to move to the additional function setting list screen.
- In the additional function setting list screen, if you press [∧, ∨ (left/right)] button, you can turn on/off the corresponding additional function.

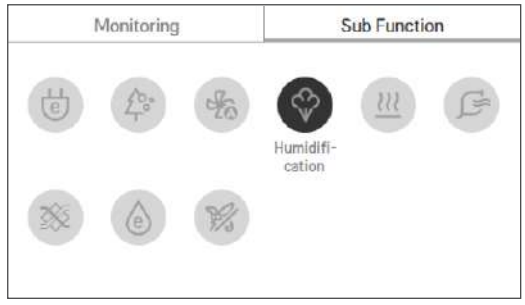




■ Additional function screen

- In the main screen, press [Back] button to move to the monitoring/additional function screen, and press [< , >(left/right)] button to move to the additional function screen.
- In the additional function screen, select the additional function category to set, and if you press [OK] button, you can turn on/off the corresponding function.





Note :

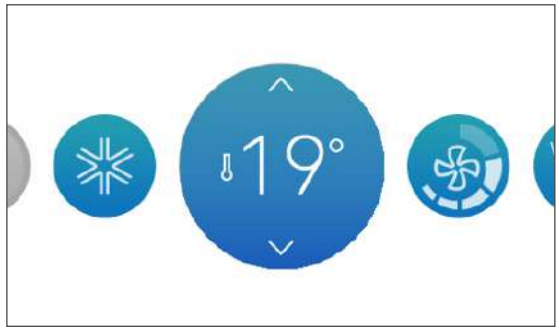
- Humidification function might not be operated at the partial product.
- When you choose heating operating mode, humidity mode is automatically selected.

13. Operation

3) Temperature setting / Room Temperature check

You can easily control to the desired temperature and check the current indoor temperature.

- In the main screen, press [< , >(left/right)] button to select the desired temperature category, and press [∧, ∨(up/down)] button to set the desired temperature.
- In the cooling, heating, and AI/auto mode, the desired temperature control is possible.



Mode	Description
Cool	If the desired temperature is higher than the indoor temperature, the cooling is not performed. Set the desired temperature lower than the indoor temperature. You can select in the range of 18°C ~ 30°C (16°C ~ 30°C).
Heat	If the desired temperature is lower than the indoor temperature, the heating is not performed. Set the desired temperature higher than the indoor temperature. You can select in the range of 16°C ~ 30°C.
AI / Auto	For cooling/heating product, you can select in the range of 18°C ~ 30°C. For cooling exclusive product, you can select Hot, A little hot, Adequate, A little Cold, and Cold.

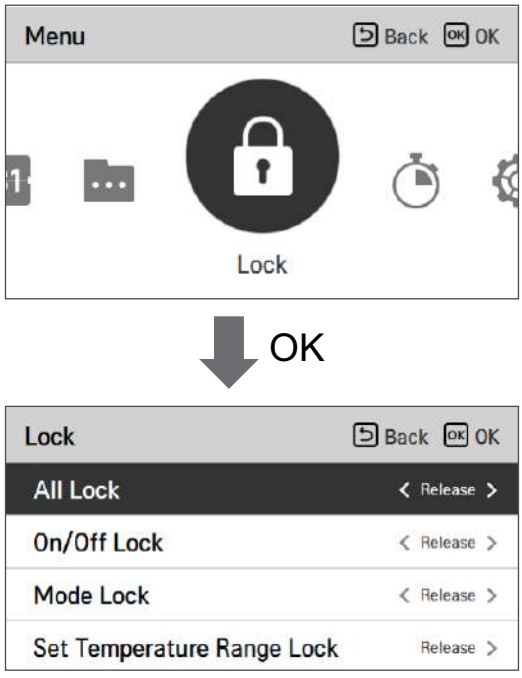
Note :

- 5°C is proper for the difference between room and outside temperature.
- Ventilation unit can't make room temperature reach to the set temperature because the air is supplied from outdoor.
- General ventilation in single operation cannot control room temperature. If this is needed, do not install the ventilation unit alone, but rather install another indoor unit.

13.5.4 Locking Setting

It is the function to lock the button operation of the remote controller so that children or other persons cannot use it without permission.
It is the function to limit the desired temperature range that can be set in the wired remote controller.

- In the menu screen, press [< , >(left/right)] button to select “lock setting” category, and press [OK] button to move to the lock setting list screen.
- In the lock setting list, if you press [∧, ∨(up/down)] button, you can turn on/off the corresponding lock function.



Lock	Description
All lock	It locks all button operation of the remote controller.
On/Off lock	It locks the On/Off button operation of the remote controller.
Mode lock	It locks the operation mode button operation of the remote controller.
Temperature range lock	It is the function that can limit the range of the desired temperature that can be set in the wired remote controller. It works as soon as you press the [∧, ∨(up/down)] Lower limit: 16°C~30°C Upper limit: 18°C~30°C

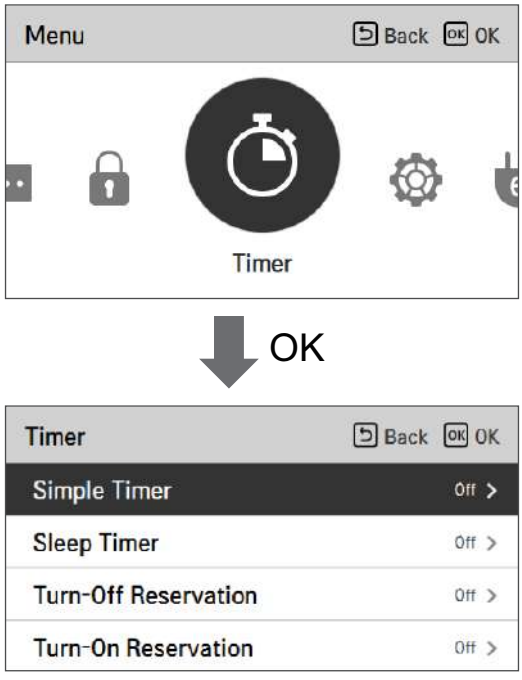
Note :

- In the central controller, when the central control temperature range lock is set, the wired remote controller’s temperature lock setting is cleared.
- The temperature change by external equipment is reflected regardless of the remote controller temperature range lock.

13.5.5 Timer Setting

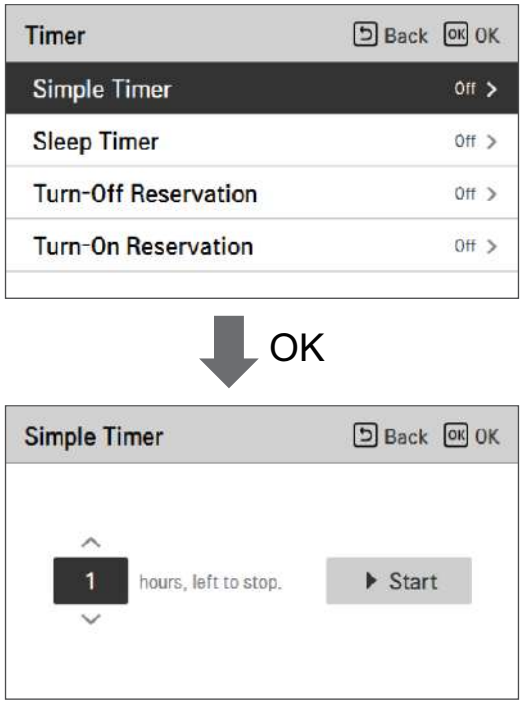
1) Timer entrance and setting method

- In the menu screen, press [< , >(left/right)] button to select the timer category, and press [OK] button to move to the timer setting list screen.
- In the timer setting list screen, press [∧, ∨(up/down)] button to select the timer to set, and press [OK] button to move to the detail screen.
- After setting the value, when you press [OK] button, the timer is activated.
- After setting the value, if you press [Back] button, the changed value will not be reflected.



2) Simple timer

You can easily set the timer in the range of 1~7 hours in the units of 1 hour.

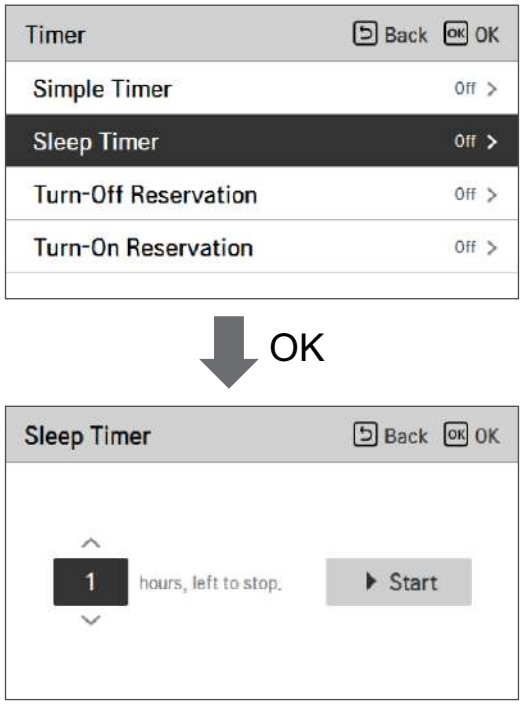


Notes :

- If the product operation is On, the easy timer turns off the operation after the corresponding time.
- If the product operation is Off, the easy timer turns on the operation after the corresponding time.
- If the easy timer operation is turned On/Off before the timer operation, the set timer will be cleared.

3) Sleep timer

Sleep timer is the function to operate the air conditioner in sleep mode before going to sleep for certain hours and stop the operation.

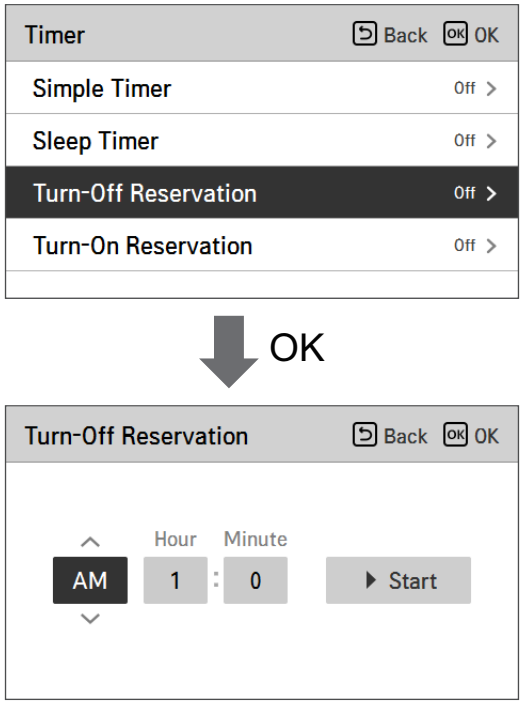


Notes :

- You can set the sleep timer while the product is in operation.
- If the sleep timer operation is turned On before the timer operation, the set timer will be cleared.

4) Turn-off Reservation

The product is automatically turned Off at the set timer time.

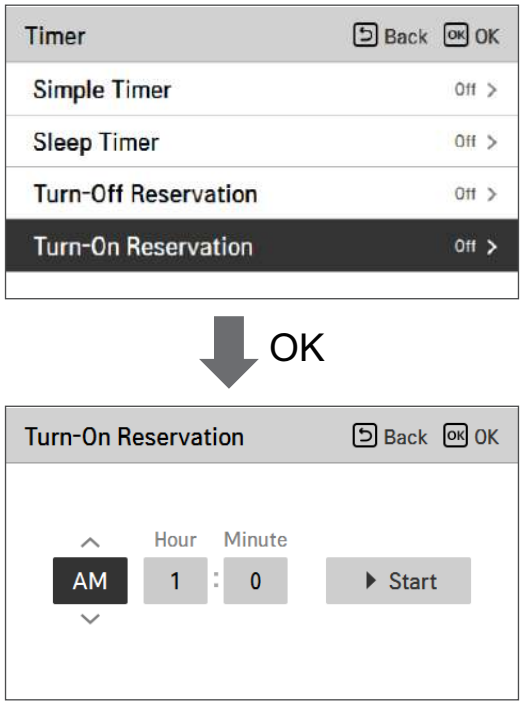


Notes :

- Even if the Turn-off Reservation operation is turned On/Off after the setting and before the timer operation, the set timer is not cleared.

5) Turn-on Reservation

The product is automatically turned On at the set timer time.



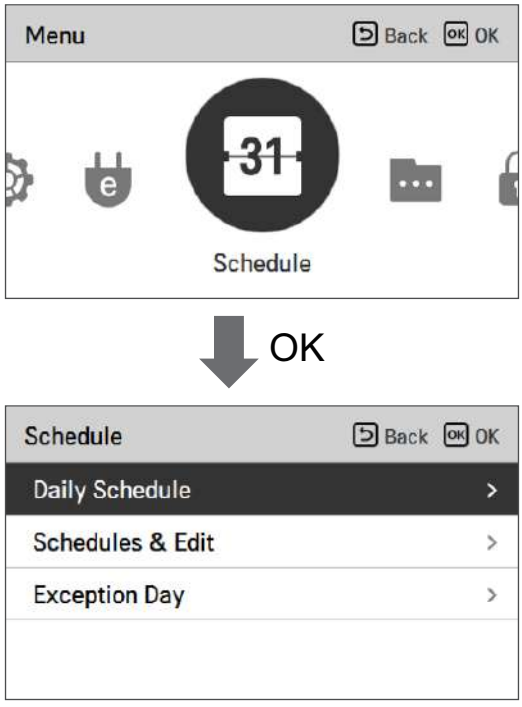
Notes :

- Even if the Turn-on Reservation operation is turned On/Off after the setting and before the timer operation, the set timer is not cleared..

13.5.6 Schedule setting

1) How to enter schedule

- In the menu screen, press [< , >(left/right)] button so select the schedule category, and press [OK] button to move to the schedule setting list screen.
- In the schedule setting list screen, press [∧, ∨(up/down)] button to select the menu to set, and press [OK] button to move to the detail screen.

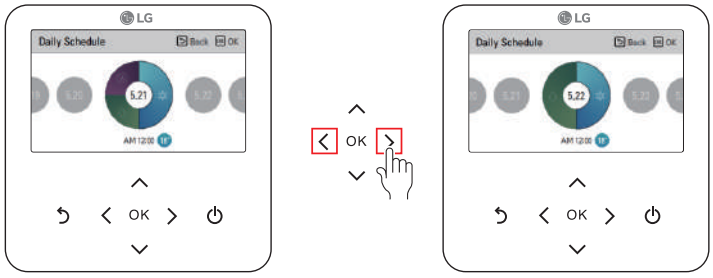


13. Operation

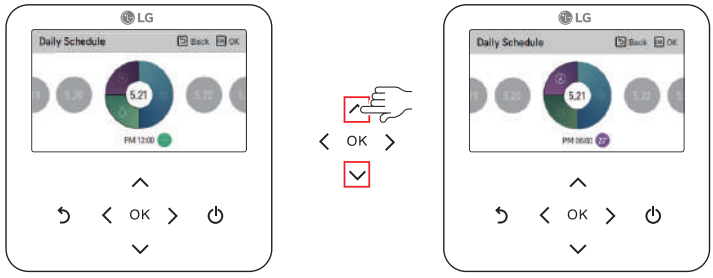
2) Daily schedule

It is the function that can check the status of the timer (schedule) saved in the remote controller.

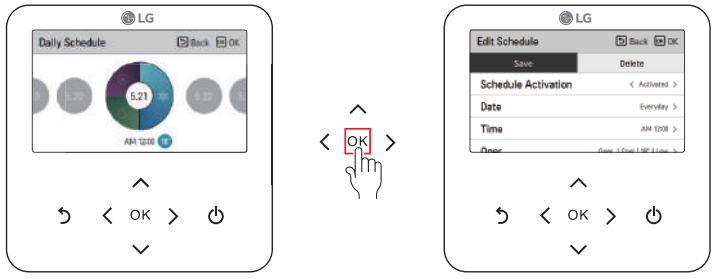
- In the schedule list, select the daily schedule status category, and press [OK] button to move to the detail daily schedule status screen.
- You can use the remote controller's [< , >(left/right)] button to check the timer information of other dates.



- You can use the remote controller's [∧,∨(up/down)] button to check the corresponding date's other timer information.



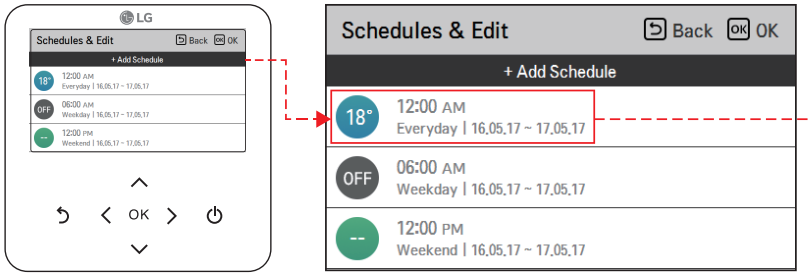
- Select the timer information, and press [OK] button to move to the corresponding timer's edit screen.



3) Schedules & Edit

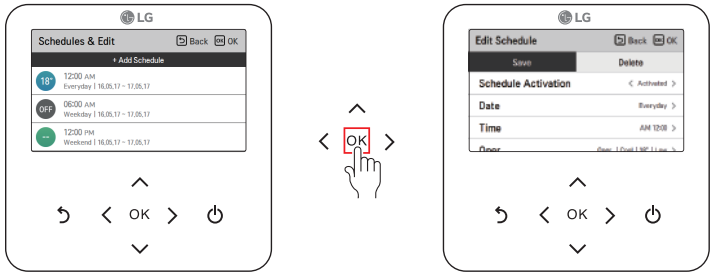
It is the function that can check the status of the timer (schedule) saved in the remote controller.

- In the schedule list, select the daily schedule status category, and press [OK] button to move to the daily schedule status detail screen.
- You can use the remote controller's [< , >(left/right)] button to check other date's timer information.



You can check the set timer's operation information (operation On/Off, operation mode, desired temperature), timer time, period, and day of week.

- You can edit the saved schedule's timer information.
  - Select the schedule to edit using [∧, ∨(up/down)] button, and press [OK] button to move to the edit screen.



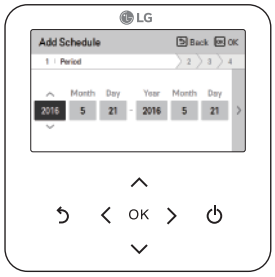
- Select the timer information, and press [OK] button to move to the corresponding timer's edit screen.

< If schedule is changed >

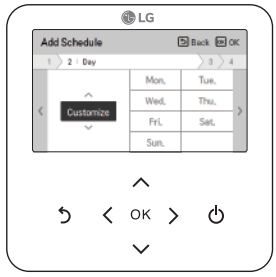
< If schedule is deleted >

4) Schedules & Edit – Add Schedule

• Description of each stage in Add schedule



Stage 1. Period setting



Stage 2. Day of week setting

Stage 3. Time setting

Stage 4. Operation setting

Add schedule is completed

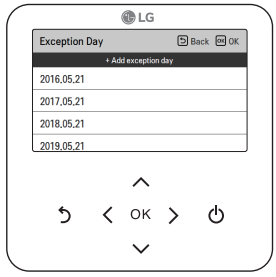
Category	Description
Stage 1	It sets the period to perform the timer.
Stage 2	It sets the day of week to perform the timer. - You can select ‘Everyday / Weekend / Weekdays / Individual selection’.
Stage 3	It sets the start time for the timer.
Stage 4	It sets the timer operation information. - If ‘Stop’ is selected, you cannot set the mode / temperature / fan speed.

* When stages 1~4 are completed, along with the message of ‘schedule is added’, it moves to View and edit schedule screen.

5) Exception day

It is the function to automatically stop the operation on the set timer day.

- In the schedule list, select the exception day category, and press [OK] button to move to the Exception day designation detail screen.
- In the exception day, you can check, and add/change/delete the exception day information saved in the remote controller.
  - To add an exception day, in the Exception day registration detail screen, designate year/month/day, and press [OK] button to save the Exception day.
  - Select the Exception day to edit using [∧, ∨(up/down)] button, and press [OK] button to move to the edit screen.

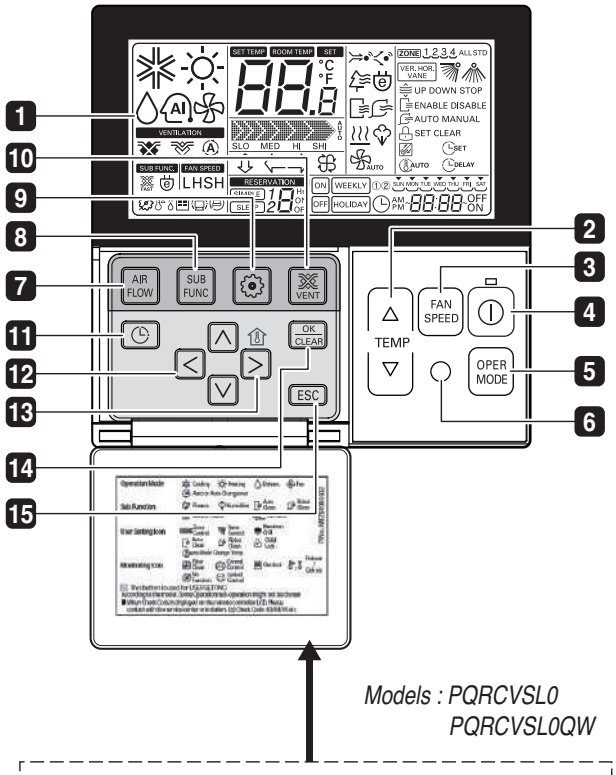


- In the exception day edit screen, you can check, delete/change the corresponding exception day's setting contents.
- When you change the exception day information, you need to save it after the change.

13. Operation

13.6 Operating Instruction (Accessory) – PQRCVSL0 / PQRCVSL0QW

Name and Function of Remote Controller



Models : 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**
13. **ROOM TEMPERATURE BUTTON(*)**
14. **SETTING/CANCEL BUTTON**
15. **EXIT BUTTON**

※ Some functions may not be operated and displayed depending on the product type.
Refer to remote controller in order to know detail functions.

※ (*) : Functions for air conditioner.

13. Operation

13.6.1 Ventilation operating scene and ventilation operating method

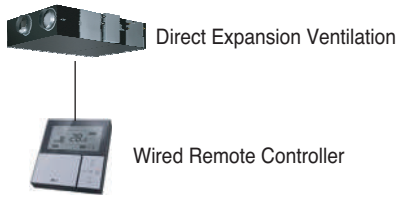
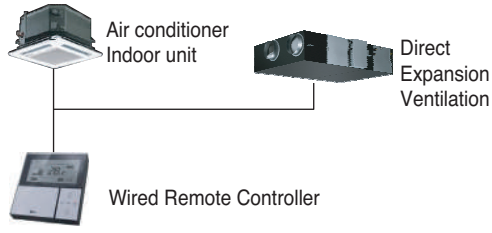
This unit's remote controller can be installed with two types; Single Operation & Interlinked Operation

1) Single Operation

- It controls using the wired remote controller at a place where ventilation unit is connected only.

2) Interlinked Operation

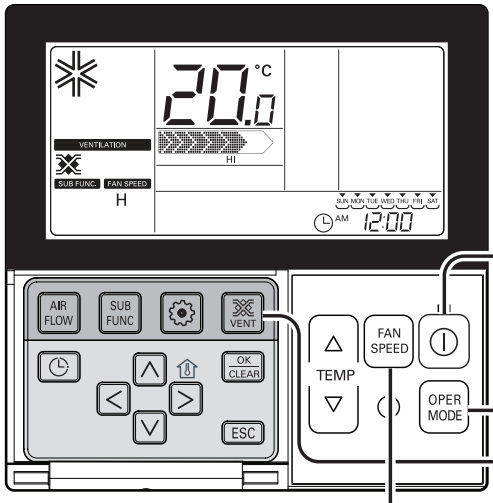
- It controls using the wired remote controller at a place where the air conditioner indoor unit and the ventilation product are connected and installed at the same time.
- When the power is applied, the remote controller recognizes the product and operates normally.

	Single Operation	Interlinked Operation
Direct Expansion Ventilation		

❊ The wiring method is the same as the air conditioner user manual. (Refer to the remote controller manual group control page contents)

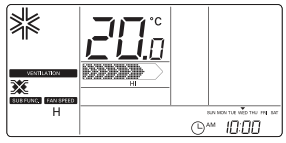
13.6.2 Single operation control

Pressing It performs ventilation operation with cooling or heating at the same time using the heat exchanger inside the direct expansion type ventilation product.



Direct expansion type ventilation single operation

1 button on the remote controller. It displays as the figure right side in the direct expansion type ventilation single operation.



2 Pressing VENT button will change the ventilation mode.
Pressing the button converts from 'Heat exchange → Normal → Automatic'.

Ventilation mode	Remote Controller Display	Contents
Heat exchange	E J	Mode that supply/exhaust air via Total heat exchanger. Appropriate for use in summer/winter when temperature difference between indoor/outdoor air is severe.
Normal	C J	Mode that exhaust the air without the Total heat exchange method. Appropriate for use in spring/autumn or in case of the high indoor pollution degree.
Automatic	AU	Automatically operates in the optimum ventilation mode by measuring the indoor/outdoor air temperature of the ventilation system. ❊ Searches the optimum status by operation mode or setting temperature of ventilator as well as by indoor/outdoor temperature of the ventilation system if linked to Multi-V system.(Only for some models)

❊ The 88 segment display above is only displayed when it is in direct expansion type ventilation single operation and the air conditioner is stopped.

3 Pressing OPER MODE button will change operation mode.
- Pressing the button will convert from 'Cooling → Heating → Automatic → Stop'.

4 Pressing FAN SPEED button in ventilation mode changes the strength of wind.
- Pressing the button can select from 'Low → High → Super High'.

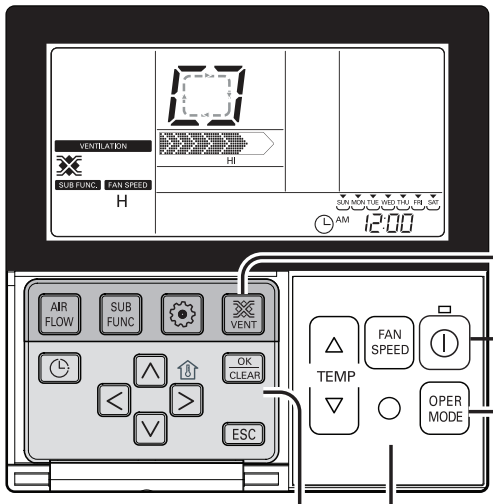
❊ Cooling/heating operation selection and the desired temperature can be adjusted in direct expansion type ventilation single operation.

❊ Refer to the basic operation - temperature adjustment for changing desired temperature.

13. Operation

13.6.3 Interlinked operation control

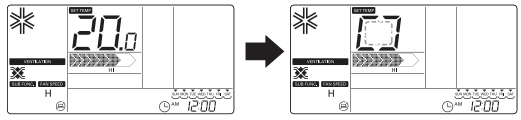
It can only be used when the air conditioner is interlinked with direct expansion ventilation product.



Interlinked Operation with Direct Expansion Ventilation

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

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



Air conditioner mode **Ventilation mode**

- 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.

2 Pressing ⏻ button in ventilation mode starts ventilation.

3 Pressing OPER MODE button in ventilation mode will change the ventilation mode.
- Every time the button is pressed, it changes from 'Heat exchange → Normal → Automatic'.

❊ The display on the remote controller displays only when it is in ventilation mode, and when it converts to air conditioner mode, it displays the desired temperature.

4 Pressing FAN SPEED button in ventilation mode changes the strength of wind.
- Pressing the button can select from 'Low → High → Super High'.

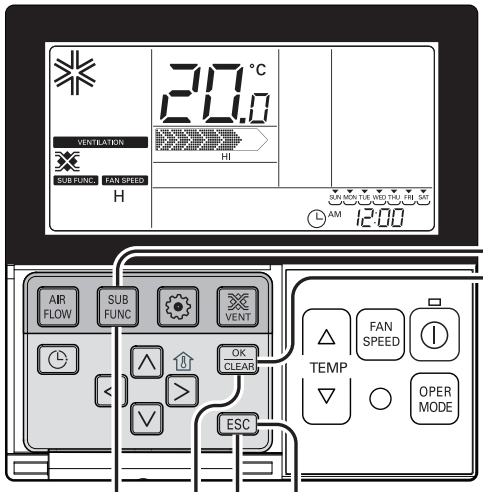
5 Changing back to air conditioner mode
1) Automatic Conversion : when no button is pressed for 15 seconds or longer, it automatically converts back to air conditioner mode.
2) Manual Conversion : Pressing VENT button in ventilation mode will manually convert.

13. Operation

13.6.4 Additional Function

1) Fast/Energy saving ventilation mode

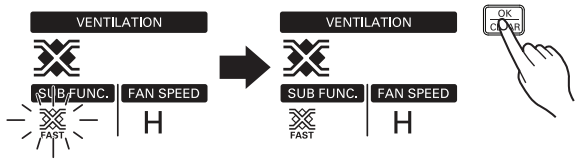
It is a function to operate ventilation function more efficiently through the ventilation additional functions, fast / energy saving settings.



Fast : ventilates fast

1 Press SUB FUNC button in ventilation mode.
- It converts in the order of 'Fast → Energy 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.

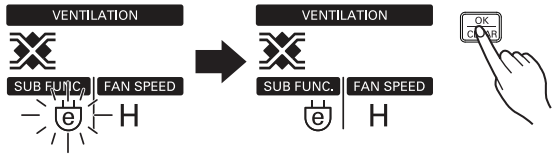


3 Pressing ESC button will exit the settings.

Energy Saving : efficiently ventilates and performs energy savings.

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

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



3 Pressing ESC button will exit the settings.

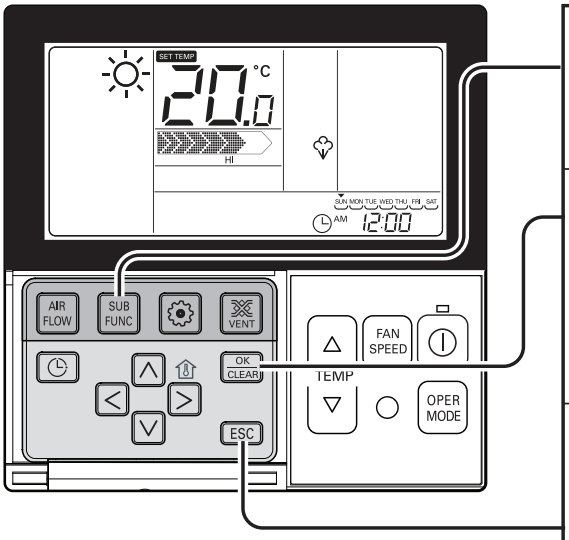
❊ General ventilation and direct expansion ventilation have the same additional functions.

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

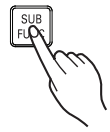
13. Operation

2) Humidification operating mode

Only products with humidifying function can use this.



1 Repeatedly pressing SUB FUNC button until icon flash.



2 Turn on/off HUMIDIFIER by pressing OK CLEAR button (The icon will be displayed in case of SETTING option and disappear in reverse case .)

3 Press ESC button to exit.

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

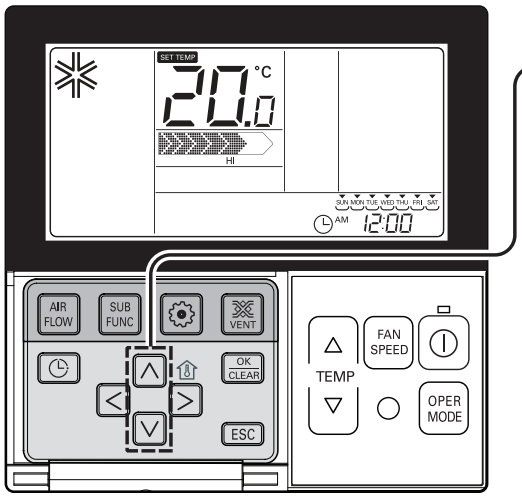
❉ When exiting without pressing set button, the manipulated value is not reflected.

NOTE

- Humidification function might not be operated at the partial product.
- When you choose heating operating mode, humidity mode is automatically selected.
- In case of interlinked operating, control Humidification operating mode refer to above chart on ventilation mode, though pushing the VENT button.

13. Operation

3) Temperature setting/Room Temperature check



Temperature Setting

1 We can simply adjust the desired temperature.

- Press the ∧ ∨ buttons to adjust the desired temperature.

∧ : Increase 1˚C or 2˚F per one time pressing

∨ : Decrease 1˚C or 2˚F per one time pressing

- Room temp: not display in single operation.
- Set temp: Indicate the temperature that user want to set.

❊ Depend on what kind of controller, the desired temperature can be adjusted at 0.5˚C or 1˚F.

Cooling operation:

- The cooling mode doesn't work if desired temperature is higher than room temperature Please lower the set temperature.

Heating operation:

- The heating mode doesn't work if set temperature is lower than room temperature Please increase the set temperature.

- For air-cooling drive, from 18°C to 30°C, and for heating drive, from 16°C to 30°C, you can select desired temperature.
- 5°C is proper for the difference between room and outside temperature.
- Ventilation unit can't make room temperature reach to the set temperature because the air is supplied from outdoor.
- This unit cannot control room temperature. If this is needed, do not install the ventilation unit alone, but rather install another indoor unit.

13.10 Maintenance and Service

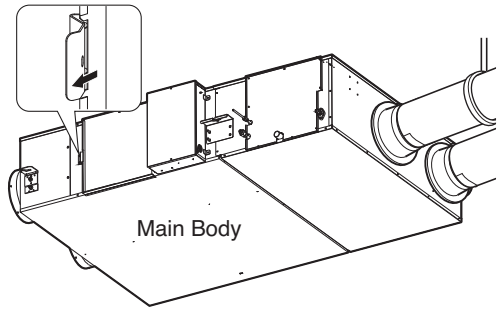
13.10.1 Handling and Cleaning

To prevent function of the ventilator deteriorating, clean dust adhered to the air filter and total heat exchanger regularly.

Method to take each part out (Air filter, Total heat exchanger)

1. Remove the maintenance cover.

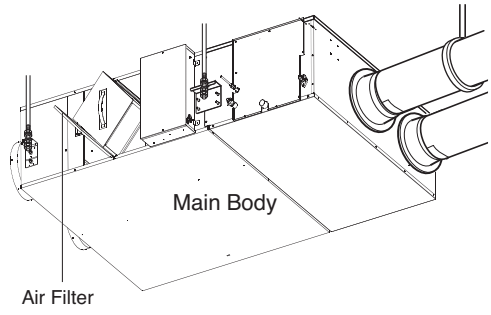
Loosen a screw on the maintenance cover.
Put the hands inside of the ceiling from the maintenance cover, and pull the maintenance cover up.
(Looser the hinge and detach the maintenance cover.)



2. Take the air filter out.

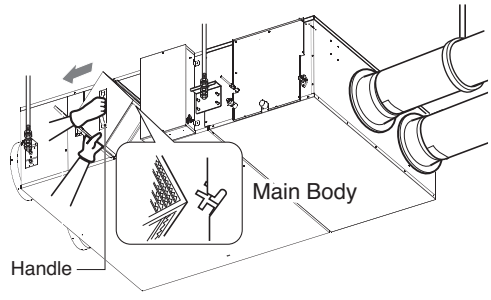
Take the air filter with each contained to the left/right downside of the Total heat exchanger.

CAUTION: Take care to ensure that you could not damage when taking the air filter out since there is a sharp part on it.



3. Take the Total heat exchanger out.

Catch the handle and then take the Total heat exchanger (2EA) out from the main body.



WARNING: Turn the breaker off when cleaning the product.

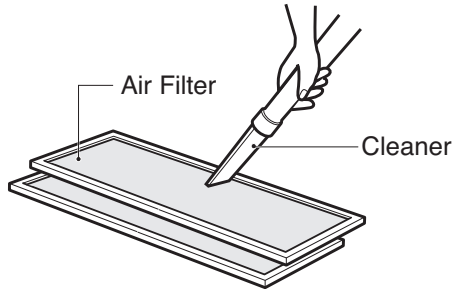
CAUTION: Gloves should be worn when doing the maintenance work.

13.10.2 Method to Clean and Replace Each Part

1. Cleaning of Air Filter

Clean once every 6 months.

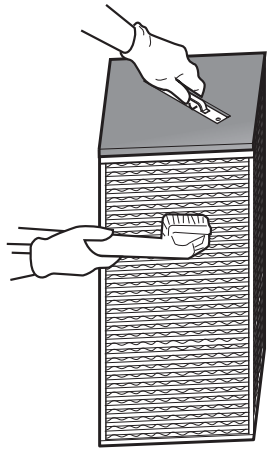
- Clean dirt from the air filter using a vacuum cleaner or wash with water.
  (If dirt is conspicuous, wash with a neutral detergent in lukewarm water)
- After washing with water, dry well in the shade.
  (Do not expose the air filter to direct sunlight or heat from a fire when drying it)
- If the air filter is damaged, purchase it from the service center or professional agent.



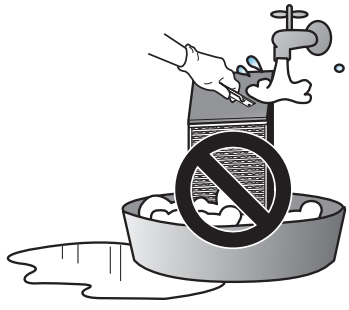
2. Cleaning of Total Heat Exchanger

Suck dusts adhered to the surface of the Total heat exchanger with a cleaner.

- Use the cleaner that attached to brush at its nozzle, and use a soft brush.
- Do not use a hard nozzle on the cleaner.
  (Otherwise, surface of the Total heat exchanger may be damaged.)
- Never wash the Total heat exchanger with water.
- Replacement expenses are for a consideration after 2 years from the purchasing date.
- Expenses are for a consideration when you will contact the service center even within 2 years from the purchasing date.
- For service, always contact the dealer or an Authorized Service Center.



Air Filter

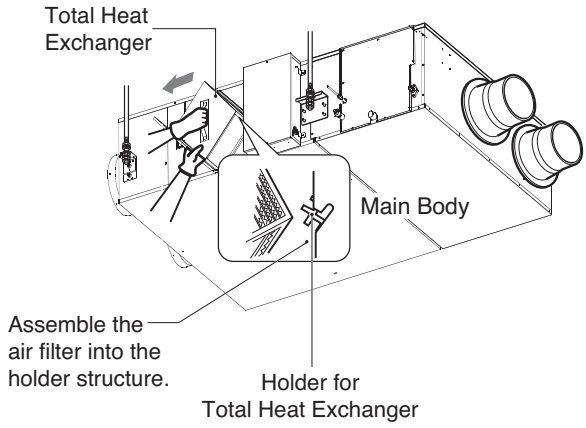


Total Heat Exchnger

13.10.3 Assembly and Check after Maintenance

1. Assembly of Total heat exchanger

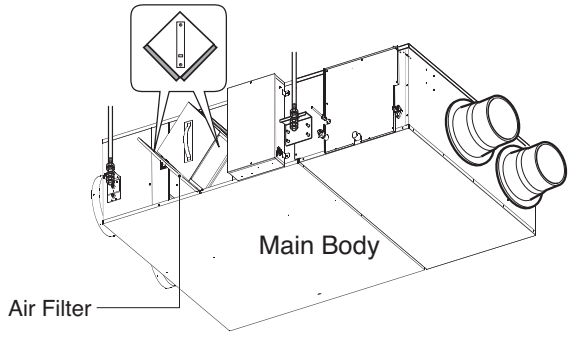
Securely put the corner parts (4 or 6 parts) of the Total heat exchanger into the holder for assembly and slide them into the inside of the main body.



2. Assembly of air filter

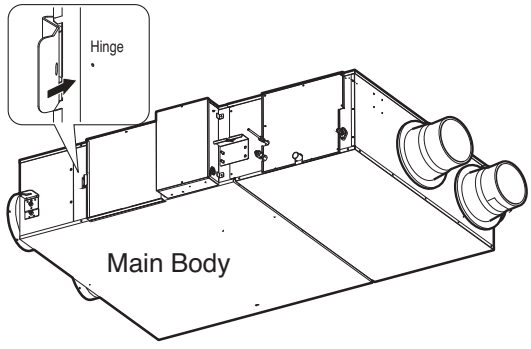
Assemble the air filter into the holder structure of the Total heat exchanger.

- Take care to ensure that surface of the Total heat exchanger could not be damaged.
- Dusts adhered to the Total heat exchanger may cause deterioration of Air volume.



3. Assembly of maintenance cover

Fix the cover to the right hinge and fix it to the left side. (A nameplate is adhered toward the reading direction). Tighten a screw on the maintenance cover.



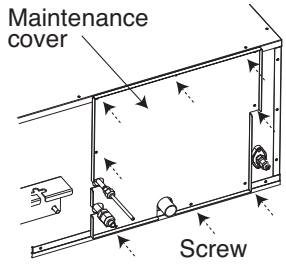
WARNING: Turn the breaker off when cleaning the product.

CAUTION: Gloves should be worn when doing the maintenance work.

13.10.4 Replacement of the Humidifier

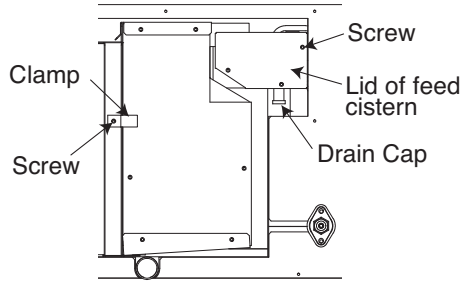
1. Remove the maintenance cover.

Loosen the screw (8EA) and detach the maintenance cover.



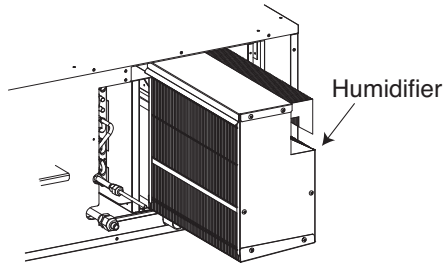
2. Prepare to replace the Humidifier.

- Uncork the Drain Cap to drain the remaining water in the feed cistern.
- Loosen the screw (3EA) and detach the lid of feed cistern.
- Loosen the screw (1EA) and Detach the clamp.



3. Pull out the Humidifier (2EA)

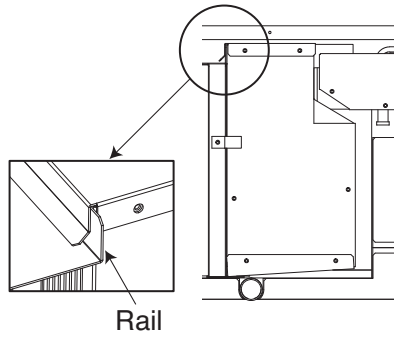
- Uncork the Drain Cap to drain the remaining water in the feed cistern.
- Loosen the screw (3EA) and detach the lid of feed cistern.
- Loosen the screw (1EA) and Detach the clamp.



4. Insert the new Humidifier (2EA)

Confirm that the edge of top panel of humidifier element has been hooked securely on the rail.

And assemble the clamp, rid of cistern and drain cap.



WARNING: Turn the breaker off when cleaning the product.

CAUTION: Gloves should be worn when doing the maintenance work.

13.11 Humidifier Maintenance

13.11.1 Inspection and Maintenance of the Humidifier

- **Have your dealer do the following inspections in order to get the longest use.**
- **In order to prevent harmful bacteria from generating, ask your dealer to do maintenance on humidifying unit portion at the beginning or the end of the heating season.**

Inspected part	Content of maintenance		Problems if maintenance is not carried out
	Items to be inspected	Solution	
Feed water tank	Check for operation of float switch	Clean if it does not work properly due to build-up.	Insufficient humidifying. Overflowed feed water tank.
	Check for dirt	Clean if very dirty.	Weak fan strength. Reduced humidifying capacity.
Solenoid valve	Check for shutting and opening. Check in a similar fashion when checking the float switch operation.	Replace if it doesn't work.	Insufficient humidifying. Overflowed feed water tank. (Increased tap water consumption.)

12.11.2 Replacing the Humidifier element

1. The humidifier element should in general be replaced once every three years when supply water is soft water, but outside factors (water quality, operating times) may shorten its productive life.
2. Contact your dealer if you have any questions.

NOTICE

This note is only applied to model that there is humidity function.

When humidifying fails, the remote controller does not display any error code.

(just twinkle the icon of Humidification"♨" for 30 minutes and disappeared)

Usage under that status will lead to insufficient humidification and increased tap water consumption.

The solenoid valve and float switch should be checked at the beginning of heating season.

If the water purifier is not installed, foreign object may occur and can affect the lifespan of the humidifier and cause odor.

13.11.3 Maintenance Cycle

• **Recommended maintenance cycle of each part.**

Name of Part	Inspection cycle (Cleaning cycle)	Replacement Cycle
Air filter	0.5 year	3 years
Total Heat Exchanger	1 year	10 years
Humidifier Element	1 year	1 ~ 3 years

•This table indicates main parts.

• See the maintenance and inspection contract for details.

• This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.

• Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).

• Life of humidifier element is about 3 years (4,000 hours), under the supply water conditions of hardness ; 150mg/l.

• Life of humidifier element is about 1 year (1,500 hours), under the supply water conditions of hardness ; 400mg/l.

• Annual operating hours : 10 hours/day x 26 days / month x 5 month = 1,300 hours.

• The cycle is not the same as the warranty period.

14. Installation

Read completely, then follow step by step.

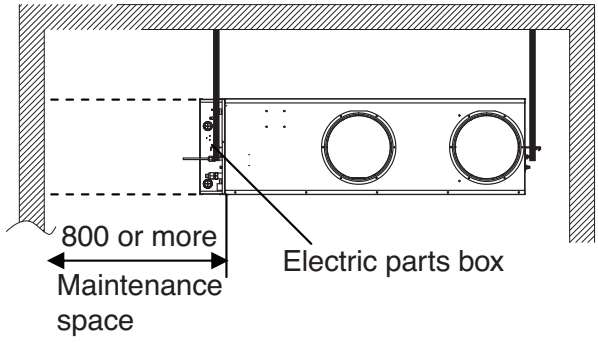
14.1 Selection of the best location

Install the ventilator in the location that satisfies the following conditions.

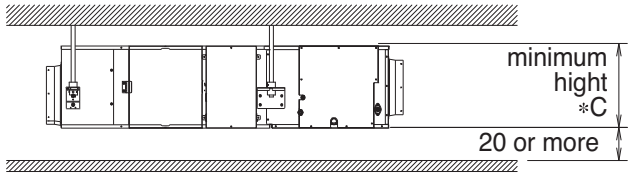
- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.(Suitable dimension "*C" is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.

Front view

Unit (mm)



Side view



CAUTION

In case that the unit is installed near the sea, the installation parts may be corroded by salt, The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

14. Installation

14.2 Ceiling dimension and hanging bolt location

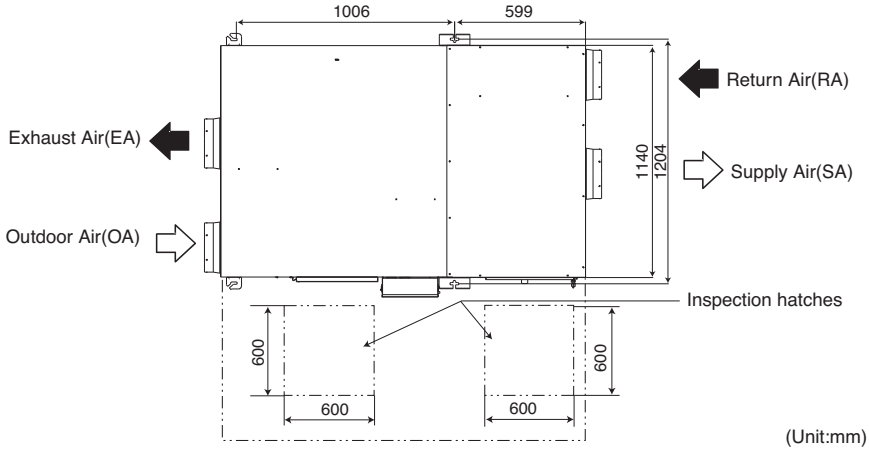
■ **Installation of Unit**

Install the unit above the ceiling correctly.

CASE 1

POSITION OF SUSPENSION BOLT

• Apply a Flexible duct between the unit and duct to absorb unnecessary vibration.

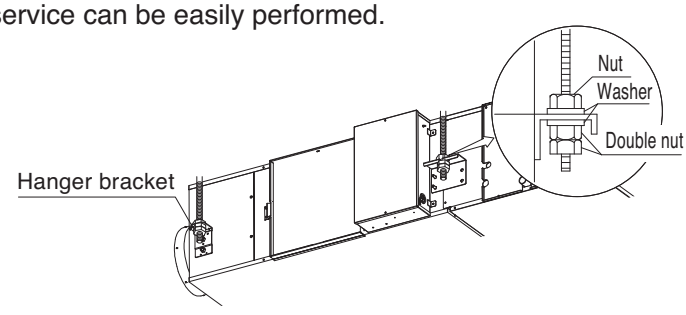


CASE 2

• Install the unit leaning to a drainage hole side as a figure for easy water drainage.

POSITION OF CONSOLE BOLT

• A place where the unit will be leveled and that can support the weight of the unit.
• A place where the unit can withstand its vibration.
• A place where service can be easily performed.

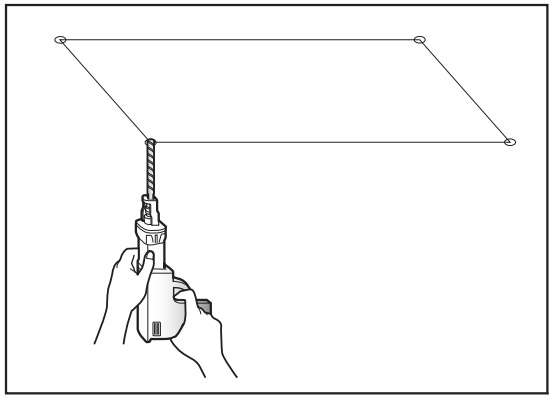


1. Avoid installing air conditioner in such circumstances where cutting oil mist or iron powder is in suspension in factories, etc.
2. Avoid places where inflammable gas is generated, flows in, is stored or vented.
3. Avoid places where sulfurous acid gas or corrosive gas is generated.
4. Avoid places near high frequency generators.

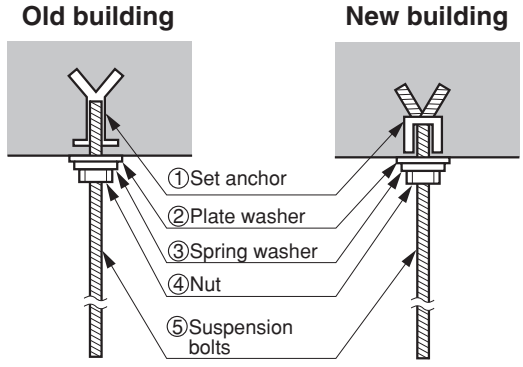
14. Installation

14.3 Install the fixing bolts.

- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.



- Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the set anchor firmly.
- Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.

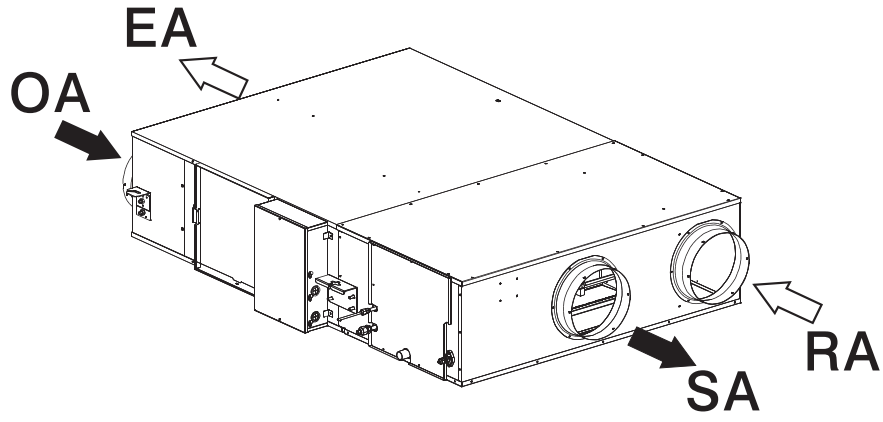


⚠ CAUTION

Tighten the nut and bolt to prevent unit falling.

14.4 Method of Installation

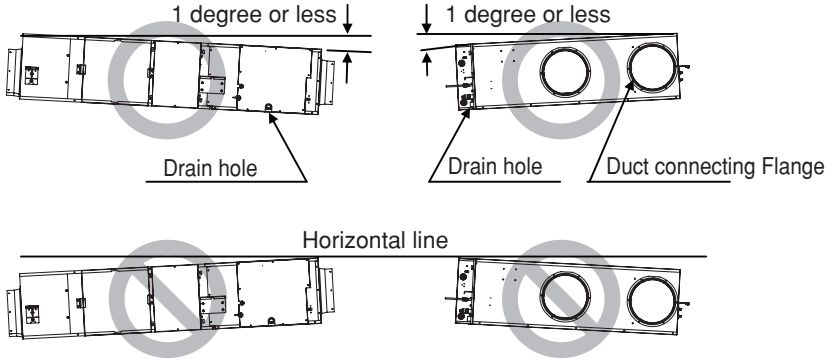
- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using nuts and washers (locally procured) from the upper and lower sides of the hanger bracket.
- Install the unit after checking the indoor (SA/RA) and outdoor (EA/OA) in accordance with the figure duct direction label.



- Adjust the height of the unit. (Tighten the double nuts securely.)
- Check the unit is horizontally level.

WARNING

- Install declination of the ventilation unit with DX coil is very important for the drain
- Minimum thickness of the insulation for the connecting pipe shall be 10mm.



- Tighten the upper nut.

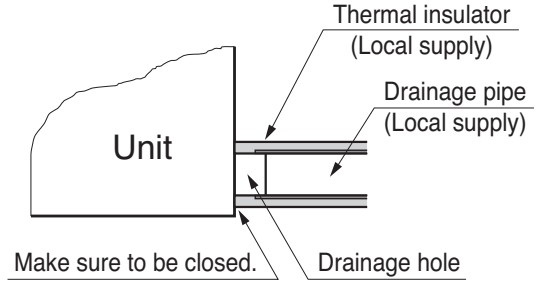
CAUTION

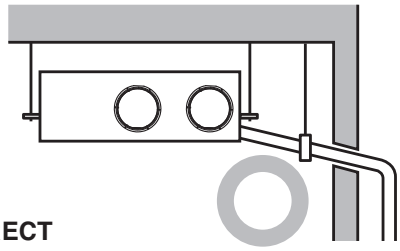
Use a level instrument to make sure that the unit is level and that the tilt (down slope) to the drain piping connection is within 1 degree. (Refer to above figures.)
One thing to watch out for in particular is if it is installed so that the slope is not in the Direction of the drain piping, as this might cause leaking.)

14. Installation

14.5 Drain Piping and Water Supply Work

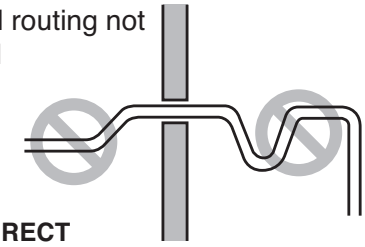
- Always lay the drain with downward inclination (1/100 to 1/50). Prevent any upward flow or reverse flow in any part.
- 10mm or thicker formed thermal insulator shall always be provided for the drain pipe.





CORRECT

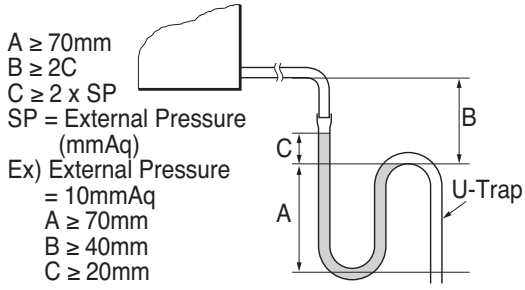
- Upward routing not allowed



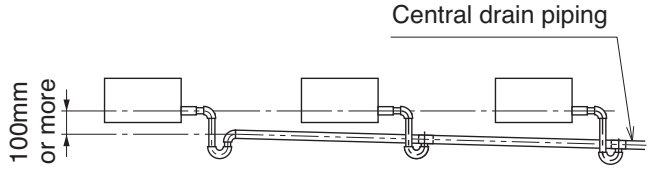
INCORRECT

- Install the P-Trap (or U-Trap) to prevent a water leakage caused by the blocking of intake air filter.

Applied U-Trap Dimension



- Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming.
- If converging multiple drain pipes, install according to the procedure shown below. (Install a drain trap for each indoor unit.)



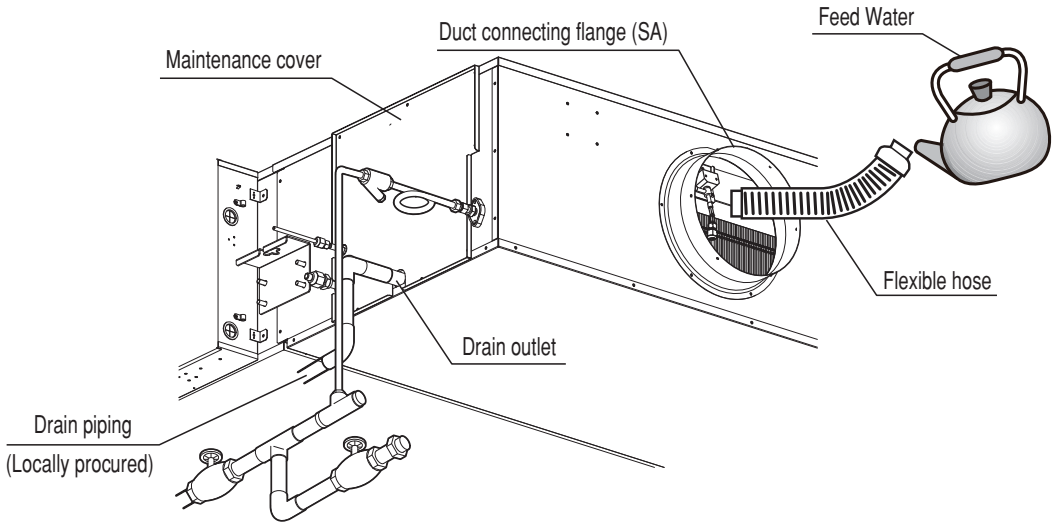
(Install with a downward slope of at least 1/100)

⚠ CAUTION

Water accumulating in the drain piping can cause the drain to clog.

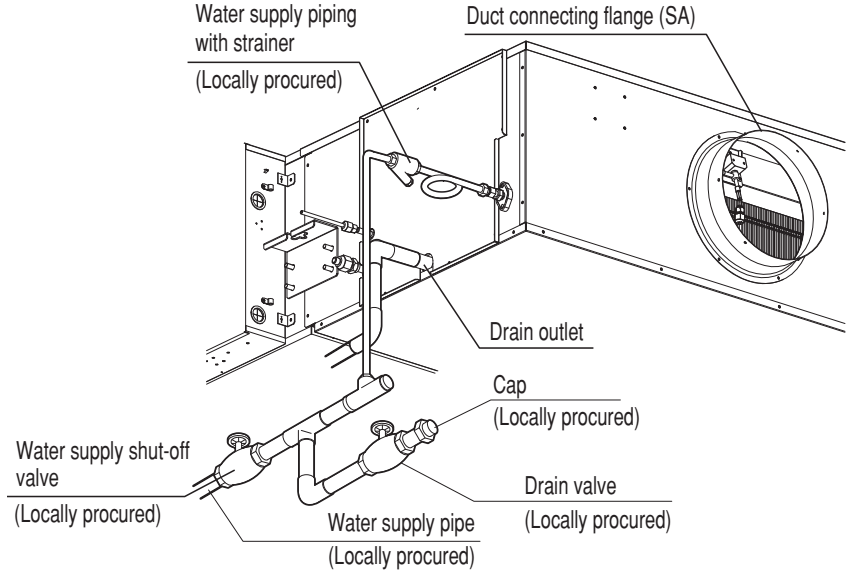
14.5.1 Check the drainage

- Test the drainage by pouring 1000cc of water into the drain pan through the inspection hole by removing the maintenance cover (8 screws) or through the outlet duct joint of supply air to room (SA).
- Make sure that heat insulation work is executed on the Indoor drain piping and Drain outlet to prevent any possibility water leakage due to dew condensation.



14.5.2 Install the water supply piping

- Connect the water supply with strainer, other pipes and valves (locally procured) to the indoor unit as shown in the figure at below.
- A water purifier (local procurement) should be installed in the water supply pipe to provide clean water.

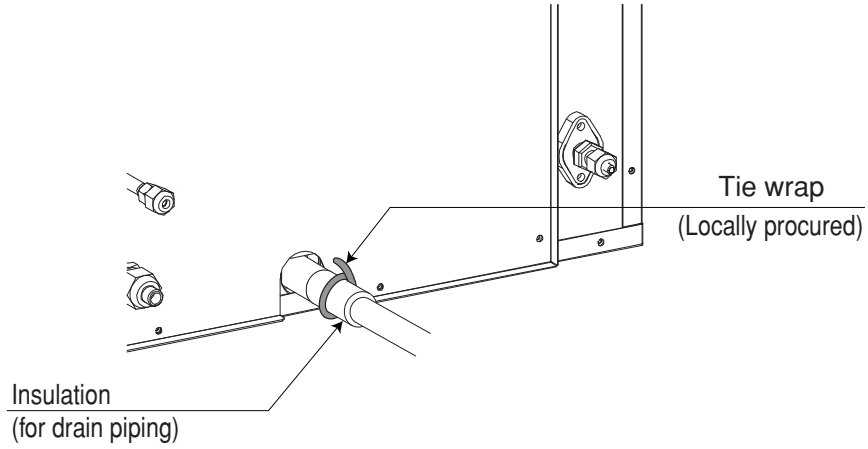


CAUTION

- When installing the water supply piping, wash the pipes with tap water so that all dirt is removed from them or install a drain valve somewhere along the piping and drain the pipes thoroughly until the water flowing through them is clear. Make sure no cutting oils or detergents get into the pipes.
- If the water purifier is not installed, foreign object may occur and can affect the lifespan of the humidifier and cause odor.

14.5.3 Insulate all piping that passes indoors

- After checking that the drain piping connections do no leakage, insulate them using the insulation. (Tighten with a clamp material)
- Wrap the drain piping with insulation to prevent condensation from forming.

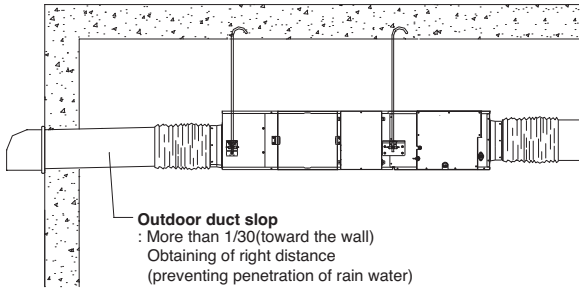


CAUTION

When installing the water supply piping, wash the pipes with tap water so that all dirt is removed from them or install a drain valve somewhere along the piping and drain the pipes thoroughly until the water flowing through them is clear. Make sure no cutting oils or detergents get into the pipes.

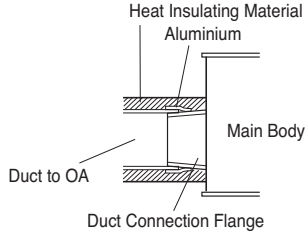
14.6 Duct Connection

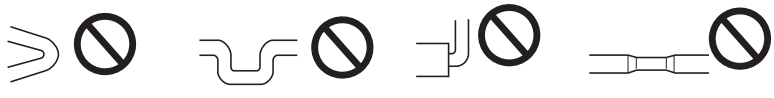
- After securely connect the duct with the duct connection flange, wrap it with a commercial aluminium tape so that air cannot be leaked.
- Adjust the duct from the ceiling so that no force is applied to the main body of the ventilation system.
- Always use two ducts at the outdoor with the heat insulating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



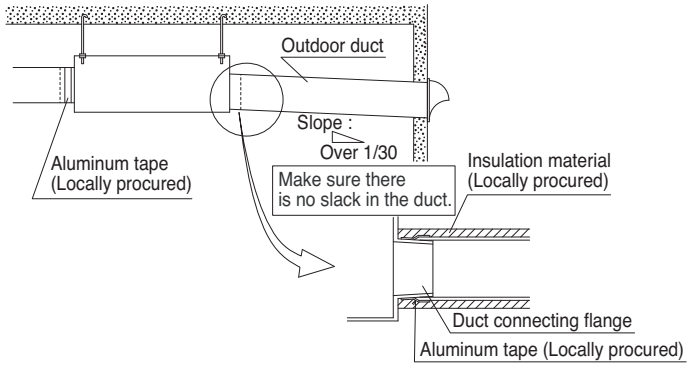
CAUTION

- 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

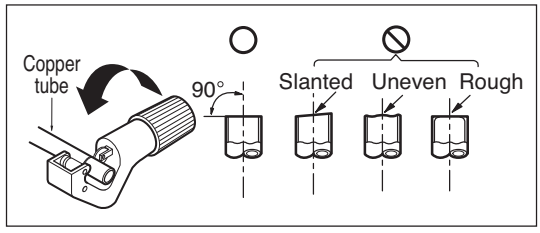


- The change of air discharge grill's location should be examined when the cold draft from air discharge grill is feared. The fan is driving while defrost operation, and the cold air is often blowing.

14.7 Connecting Pipes

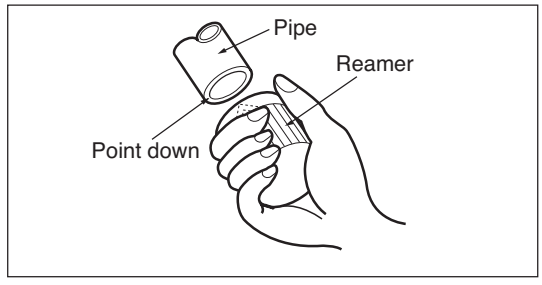
14.7.1 Preparation of Piping

Main cause of gas leakage is defect in flaring work. Carry out correct flaring work in the following procedure.



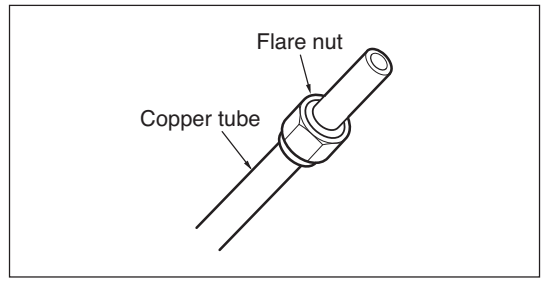
Cut the pipes and the cable.

- Use the accessory piping kit or the pipes purchased locally.
- Measure the distance between the indoor and the outdoor unit.
- Cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.



Burrs removal

- Completely remove all burrs from the cut cross section of pipe/tube.
- Put the end of the copper tube/pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the tubing.



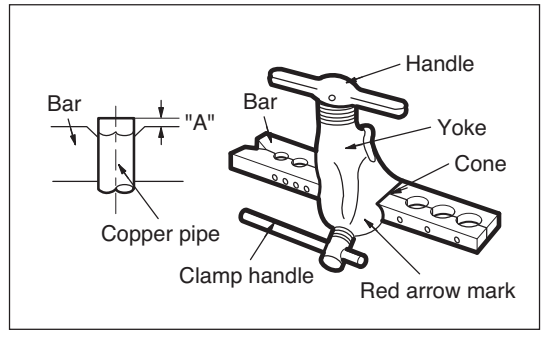
Putting nut on

- Remove flare nuts attached to indoor and outdoor units, than put them on pipe/tube having completed burr removal.
  (Not possible to put them on after flaring work)

Flaring work

- Carry out flaring work using dedicated flaring tool for R410A as shown below.

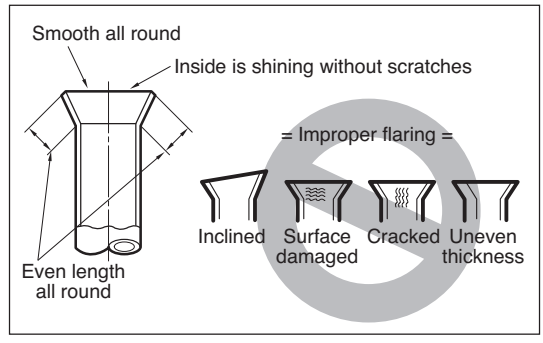
Outside diameter		"A"
mm	inch	mm
Ø6.35	1/4	1.1 ~ 1.3
Ø9.52	3/8	1.5 ~ 1.7
Ø12.7	1/2	1.6 ~ 1.8
Ø15.88	5/8	1.6 ~ 1.8
Ø19.05	3/4	1.9 ~ 2.1



Firmly hold copper tube in a bar(or die) as indicated dimension in the table above.

Check

- Compare the flared work with figure below.
- If flare is noted to be defective, cut off the flared section and do flaring work again.

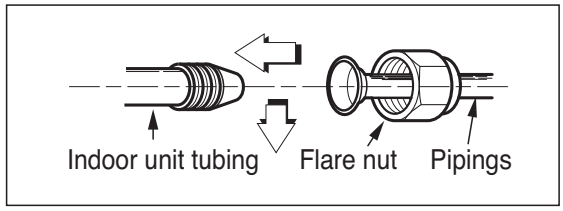


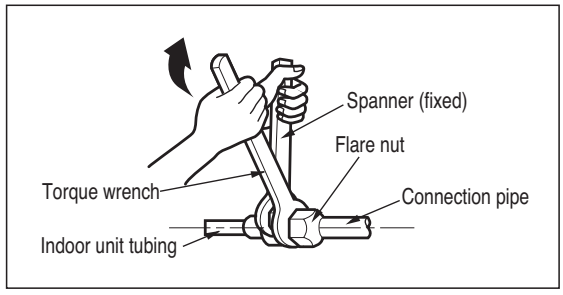
14.7.2 Connecting the pipings to the indoor unit and drain hose to drain pipe

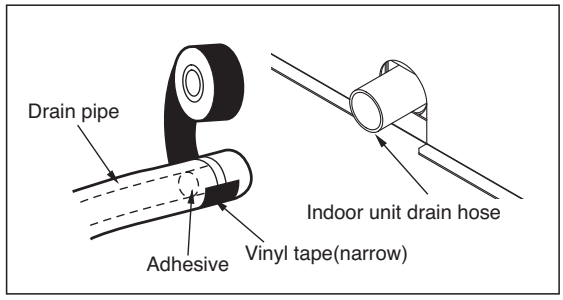
- Align the center of the pipings and sufficiently tighten the flare nut by hand.
- Tighten the flare nut with a wrench.

Outside diameter		Torque
mm	inch	kg·m
Ø6.35	1/4	1.8 ~ 2.5
Ø9.52	3/8	3.4 ~ 4.2
Ø12.7	1/2	5.5 ~ 6.6
Ø15.88	5/8	6.6 ~ 8.2
Ø19.05	3/4	9.9 ~ 12.1

- When extending the drain hose at the indoor unit, install the drain pipe.



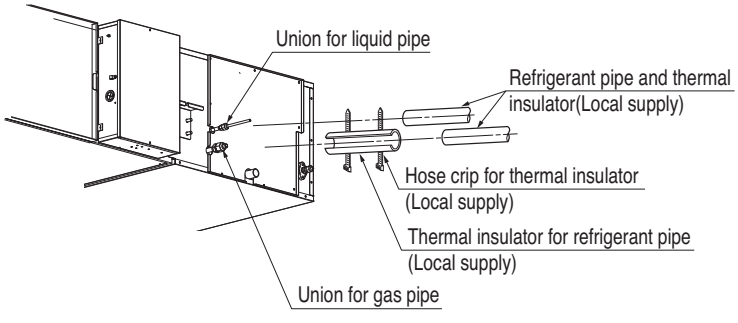


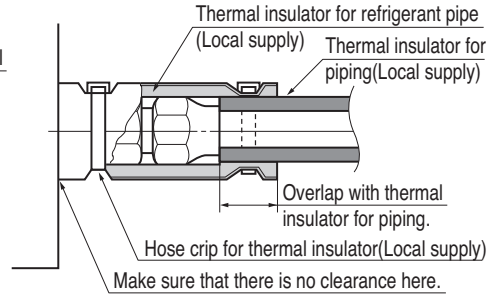


14.7.3 Insulation, Others

THERMAL INSULATION All thermal insulation must comply with local requirement.

- Insulate the joint and tubes completely



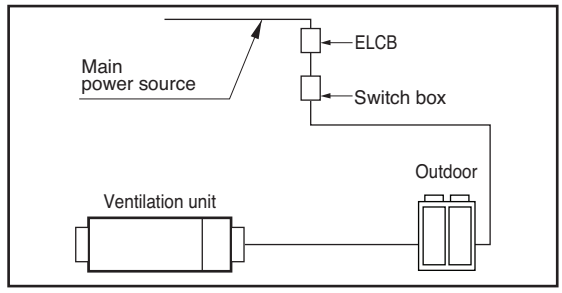


14.8 Wiring Connection

14.8.1 Electrical Wiring

Perform the electrical wiring work according to the electrical wiring connection.

- All wiring must comply with local requirements.
- Select a power source that is capable of supplying the current required by the ventilator.
- Use a recognized ELCB(Electric Leakage Circuit Breaker) between the power source and the unit. A disconnection device to adequately disconnect all supply lines must be fitted.
- Model of circuit breaker recommended by authorized personnel only

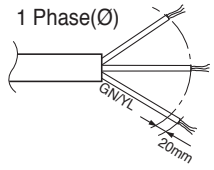


Ventilation unit				Power supply		Fan motor	
Capacity	Hz	Volts	Voltage range	MCA	MOP	kW	FLA
500CMH	50 / 60	220-240 V / 220 V	Max. 264V Min. 198V	2.8	8	0.2 x 2	1.25 x 2
800CMH				2.8	8	0.2 x 2	1.25 x 2
1,000CMH				2.8	8	0.2 x 2	1.25 x 2

MCA : Min. Circuit Amps (A) ; MOP : Maximum Over current Protection
kW : Fan Motor Rated Output (kW) ; FLA : Full Load Amps (A)

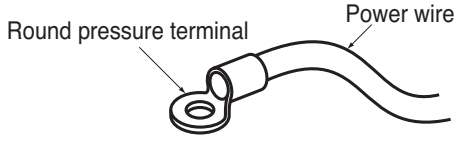
Wire Specification

Power Cable Specification : The power cord connected to the outdoor unit should be complied with IEC 60245 or HD 22.4 S4(Rubber insulated cord, type 60245 IEC 66 or H07RN-F)



Precautions when laying power wiring

Use round pressure terminals for connections to the power terminal block.

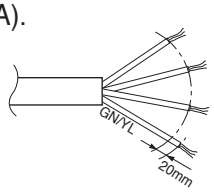


When none are available, follow the instructions below.

- Do not connect wiring of different thicknesses to the power terminal block. (Slack in the power wiring may cause abnormal heat.)
- When connecting wiring which is the same thickness, do as shown in the figure below.

14. Installation

Connecting Cable Specification : The connecting cable, being used to connect the indoor unit and outdoor unit, should be complied with IEC 60335-1 standard (Rubber insulation, type H07RN-F approved by HAR or SAA).



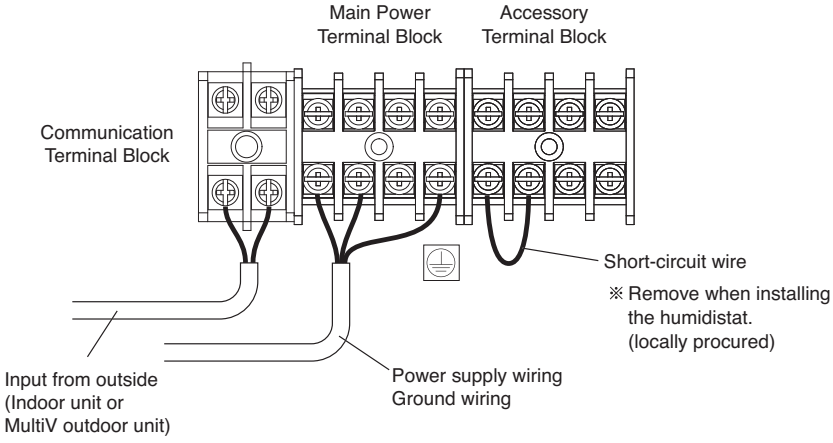
If the supply cable is damaged, it must be replaced by a special cable or assembly available from the manufacturer or its service agent.

WARNING

Make sure that the screws of the terminal are free from looseness.

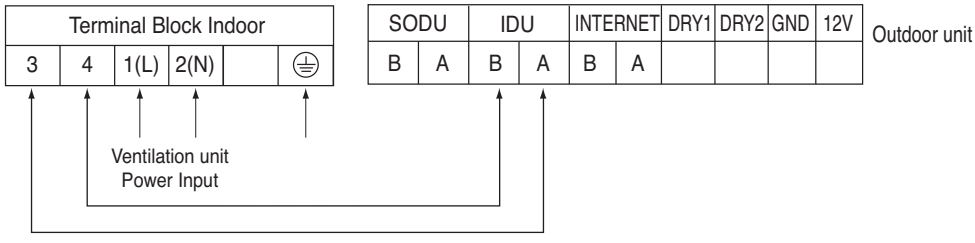
14.8.2 Method to Connect Wiring

• Pass the power supply wiring and the ground wiring through the wiring through-hole into the electrical parts box and secure with the included clamping material after connecting the wires to terminal blocks.



Connect the wires to the terminals on the control board individually according to the outdoor unitconnection.

• Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



WARNING

Make sure that the screws of the terminal are free from looseness.

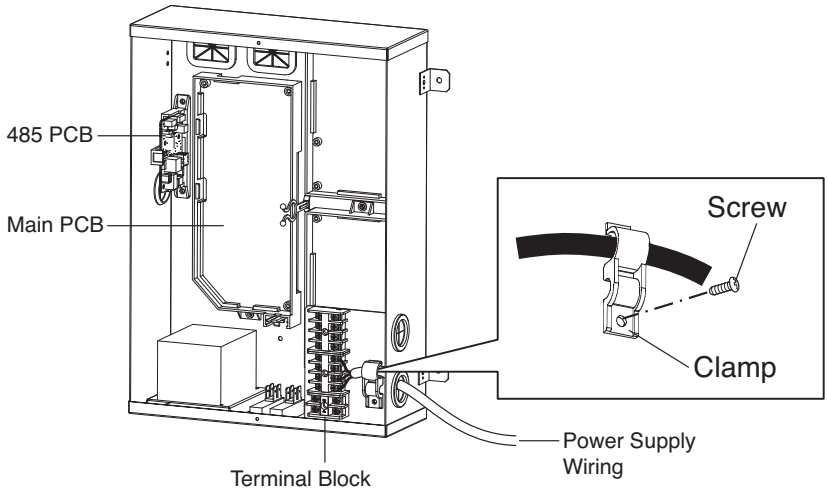
CAUTION

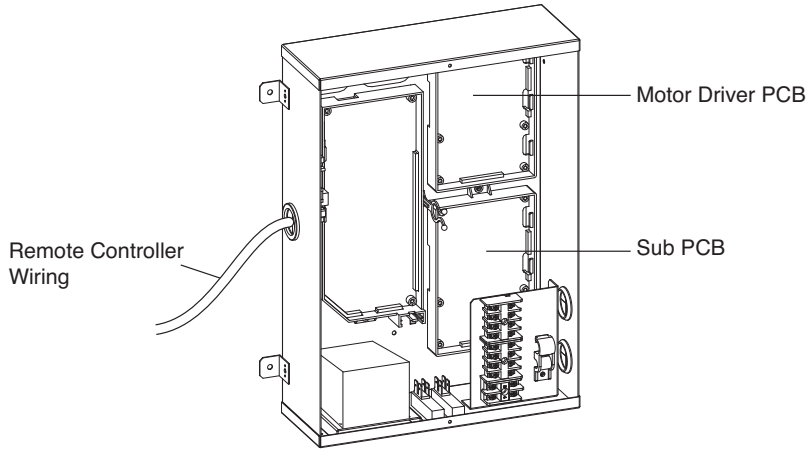
• When this ventilation unit is combined with Multi V Plus 2 Series, sometimes the system does not cooling operate for self protection in low ambient temperature when the capacity of IDU, which is connected to ventilation unit, is less than or equal to 10% of total capacity of all IDUs. In this case, the capacity of the IDU connected to ventilation unit should be higher than 10% of total capacity of all IDUs.

Clamping of cables

1) Arrange 2 power cables on the control panel.

2) First, fasten the Plastic clamp with screw to the inner boss of control panel.





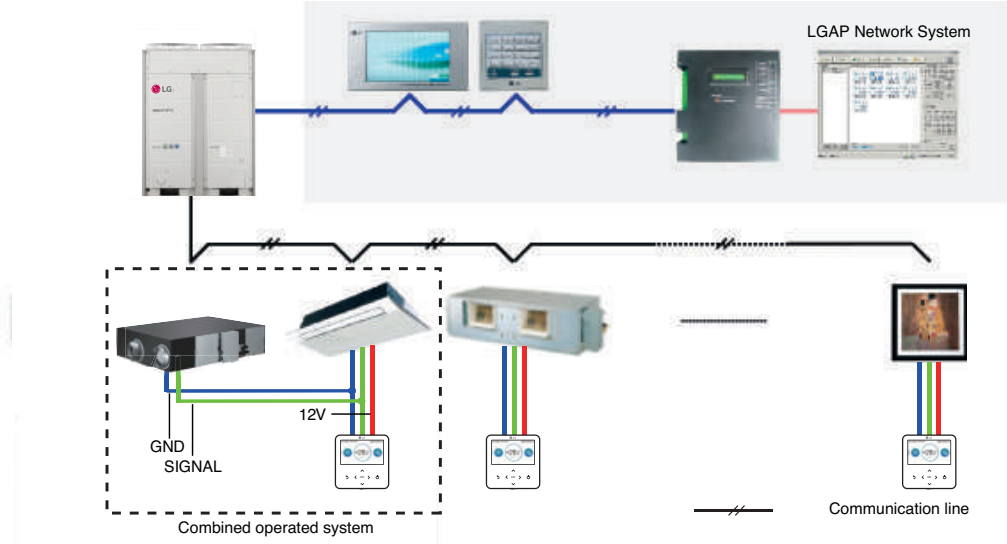
CAUTION

- See “Label Circuit” on the backside of the cover of control box for electric wiring work.
- Be sure to attach the sealing material or putty (locally procured) to hole of wiring to prevent the infiltration of water as well as any insects and other small creatures from outside. Otherwise a short-circuit may occur inside the control box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the lid on the control box fits snugly by arranging the wires neatly and attaching the control box cover firmly. When attaching the cover of control box, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them by at least 50mm, otherwise electrical noise (external static) could cause mistaken operation or breakage.

14.8.3 Wiring Example

- 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.
- PI 485 should be connected for operating ERV Unit only. (except ERV Models with DX coil)

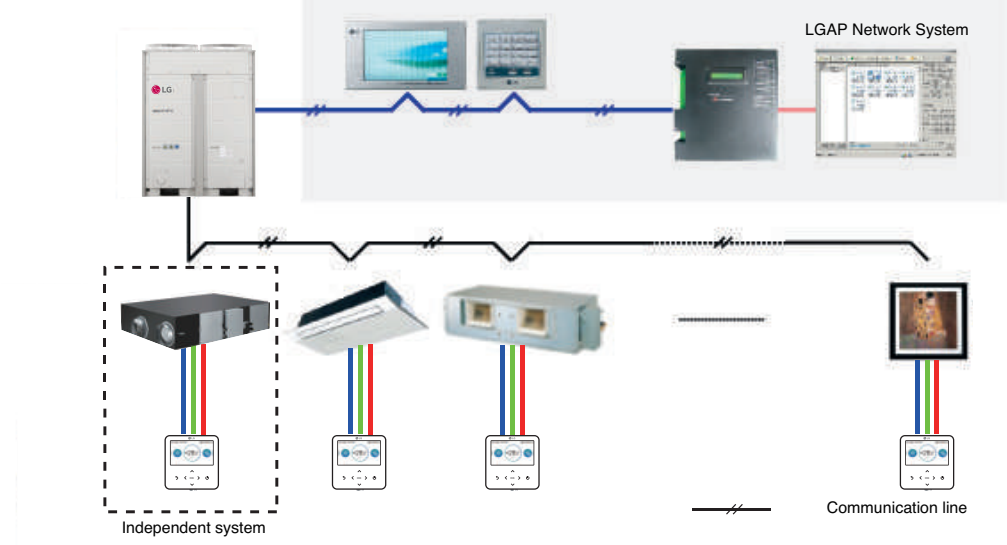
<Combined operation system with Multi-V system(connected with ventilation units and-standard indoor units in a single refrigerant circuit)>



CAUTION:

When this ventilation unit is combined with Multi V Plus 2 Series, sometimes the system does not cooling operate for self protection in low ambient temperature when the capacity of IDU, which is connected to ventilation unit, is less than or equal to 10% of total capacity of all IDUs. In this case, the capacity of the IDU connected to ventilation unit should be higher than 10% of total capacity of all IDUs.

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



14. Installation

14.9 Field Setting and Test Run

14.9.1 Perform field setting with the remote controller

1. Function Explanation

- After installation by the installer, it performs the function for product setting.

2. Installer Setting and Description Table

Menu	Applied products	Description
Test run setting	DX(Direct Exchanger) Type	It is the function to set the trial operation at the initial product installation.
Central control address Setting	General	It is the function to set the central control address of the indoor unit during the central controller connection.
Air supply ESP	General/DX Type	It is the function to set the fan speed value corresponding to the air supply side fan speed.
Air discharge ESP		It is the function to set the fan speed value corresponding to the air discharge side fan speed.
Temperature sensor setting	DX Type	It is the function to select the temperature sensor that will decide the indoor temperature.
Product direction	General	It is the function to set the ventilation indoor unit's installation direction.
Express ventilation priority	General/DX Type	It is the function to set the priority of the air supply and discharge during the express ventilation operation.
RMC master/slave setting		It is the function to set group control or 2-remote controller control.
Override master/slave setting	DX Type	The operation master / slave selection function is to avoid other mode operations, and it is the function to prevent the selection of the opposite mode of the indoor unit set as master by the indoor units set as slaves.
Dry contact mode setting	DX Type	Dry contact function is the function that can be used only when the dry contact devices is separately purchased and installed.
Fixed fan speed setting	DX Type	It is the function to set the indoor unit's fan speed option to variable or fixed.
Hum. Of Stand-alone Vent. Mode	General/DX Type	It is the function to set whether to use the humidification function in the direct cooling type ventilation's ventilation single operation.
Hum. Of Vent. With Heating Oper.	DX Type	It is the function to set the direct cooling type ventilation's heating humidification function as auto or manual.
Vent. Fan Speed Alignment	General	It is the function to increase/decrease ventilation's standard fan speed from the current status according to the field environment.
Indoor unit address verification	DX Type	This function allows you to check the address of the indoor unit designated by the outdoor unit.
Indoor unit Auto-Start setting	DX Type	It is a function that sets whether to restore the indoor unit operation by resuming the previous power-on state or as power-off state in the power failure compensation.
CN_EXT setting	DX Type	It is the function to set the indoor unit's Dry Contact Port to control external input and output according to DI/DO set by the customer. (It is the function to decide the usage of the contact point port (CN_EXT) mounted in the indoor unit PCB.)
ODU function master setting	DX Type	It is the function to set the outdoor unit's function Master / Slave.
Low noise mode priority setting	DX Type	It is the function to set the main agent of the low noise mode control. (It is the function to set only one of the outdoor unit / remote controller can control the low noise operation.)

• Some functions may not be displayed/operated in some product types.

❊ DX : Direct expansion ventilation
General : General ventilation

14. Installation

14.9.2 ESP setting value

Model	Mode		External Static Pressure			
			Pa (in.wg)			
			50 (0.2)	100 (0.4)	150 (0.6)	200 (0.8)
LZ-H050GXN4	Super High	SA	90	100	110	124
		EA	90	100	110	122
	High	SA	90	100	110	124
		EA	90	100	110	122
	Low	SA	84	96	106	118
		EA	84	90	106	116
LZ-H080GXN4	Super High	SA	110	122	136	-
		EA	98	114	128	-
	High	SA	110	122	138	-
		EA	98	114	128	-
	Low	SA	102	116	128	134
		EA	92	106	116	128
LZ-H100GXN4	Super High	SA	122	134	140	-
		EA	114	126	136	-
	High	SA	122	134	140	-
		EA	114	126	136	-
	Low	SA	112	122	136	-
		EA	100	114	130	-
LZ-H050GXH4	Super High	SA	94	106	116	128
		EA	92	100	110	122
	High	SA	94	106	116	128
		EA	92	100	110	122
	Low	SA	92	98	110	120
		EA	86	90	106	116
LZ-H080GXH4	Super High	SA	112	130	140	-
		EA	98	116	128	-
	High	SA	112	130	140	-
		EA	98	116	128	-
	Low	SA	106	117	130	134
		EA	92	106	116	130
LZ-H100GXH4	Super High	SA	128	138	-	-
		EA	116	126	-	-
	High	SA	128	138	-	-
		EA	116	126	-	-
	Low	SA	114	130	140	-
		EA	100	116	130	-

14.9.3 Installer Setting (PREMTB100)

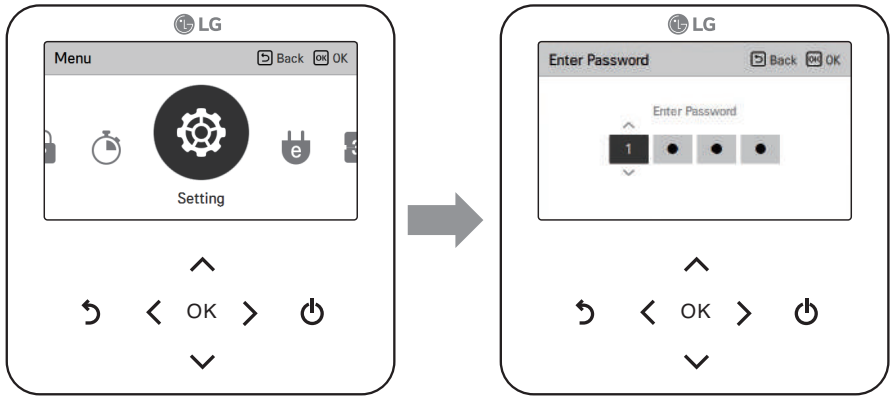
1. Installer setting Operation

1) Installer setting entry

- In the menu screen, press [< , > (left/right)] button to select the setting category, and press [∧(up)] button for 3 seconds to enter the password input screen for the installer setting.
- Input the password and press [OK] button to move to the installer setting list.

❊ Installer setting password
Main screen ⟶ menu ⟶ setting ⟶ service ⟶ RMC version information ⟶ SW Version

Example) SW version : 1.00.1 a
In the above case, the password is 1001.



2) Function operation

In the installer setting list, select the function category, and press [OK] button to move to the detail screen.

CAUTION:

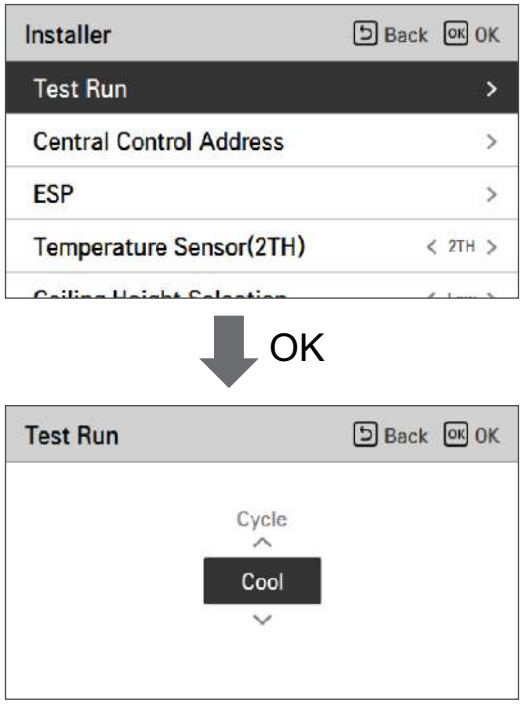
The installer setting mode is the mode to set the remote controller's detail function. If the installer setting mode is incorrectly set, it may cause product failure, user's injury, or property damage. It must be set by the installation specialist with the installation license, and if it is installed or changed without installation license, all problems caused will be the responsibility of the installer, and may void the LG warranty.

14. Installation

2. Test Run

It is the function to set the trial operation at the initial product installation.
For Test run related details, refer to the product manual.

- In the installer setting list, select the Test run setting category, and press [OK] button to move to the detail screen.
  - You can select ‘cooling Test run / heating Test run’
  - During the Test run, if you start the following functions, the Test run stops. (Operation mode, desired temperature, fan speed, wind direction, start/stop)



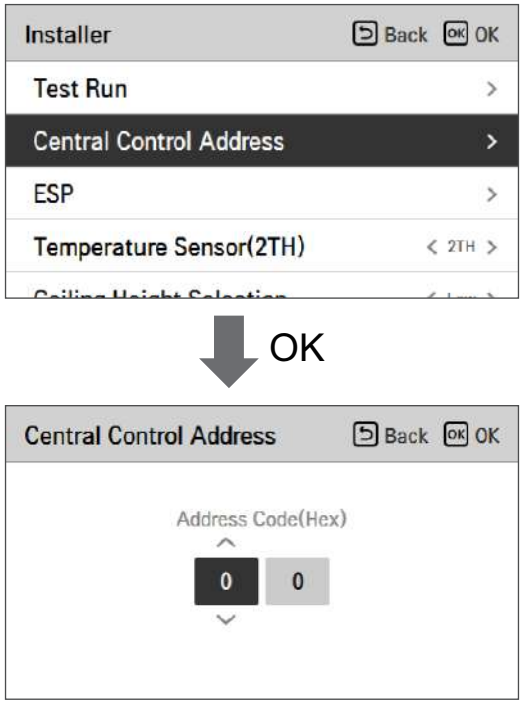
14. Installation

3. Setting Address of Central Control

It is the function to set the central control address of the indoor unit to allow communication with a central controller.

• In the installer setting list, select the central control address setting category, and press [OK] button to move to the detail screen.
- Select a address code(hex) between 00 and FF with inputting [∧, ∨ (up/down)] button.

Value 1: group address setting / value 2: indoor unit address setting



14. Installation

4. Supply/Exhaust ESP setting

It is the function to set the fan speed value corresponding to each fan speed for easy installation.

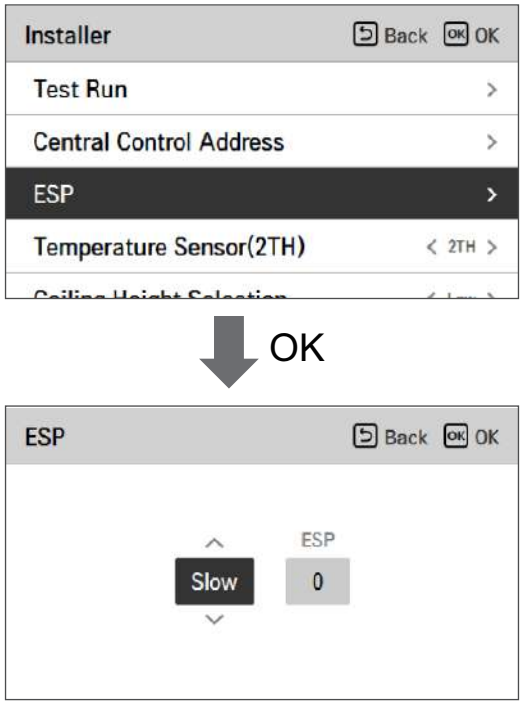
• Function control and setting (Refer to the explanation at prior page about function entry)

1) Select the wind strength with inputting [∧, ∨ (up/down)] button. (Low, High, Power)

2) Move the setting items with inputting [<,>(left/right)] button.

3) Select the RPM value of wind strength with inputting [∧, ∨ (up/down)] button. (0~255)

4) Complete the RPM setting with inputting [OK] button. (Send RPM setting data of indoor unit)



Note :

• If ESP is incorrectly set, the air conditioner may malfunction.

• This function must be set by the installation specialist that holds an installation license.

• For ventilation products, separate ESP values are used for the supply and exhaust fans.

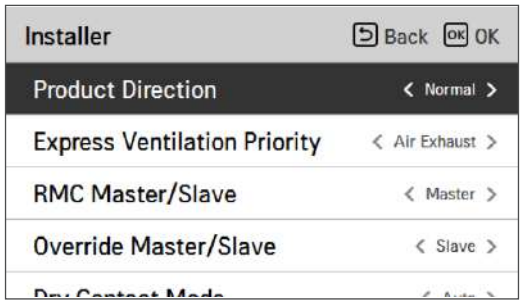
• Be especially careful not to switch ESP values corresponding to each fan speed.

• The ESP values that can be set may be different for each product and capacity.

5. Production direction

It is the function to set the installation direction of ventilation indoor unit.

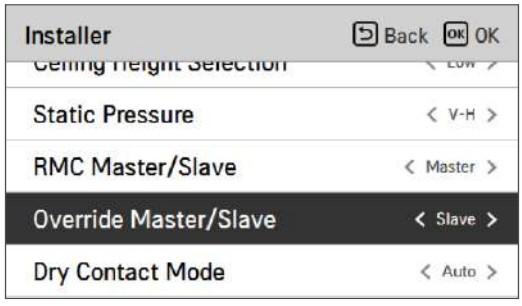
• Select value using [< , > (left/right)] button. (normal, Reverse)



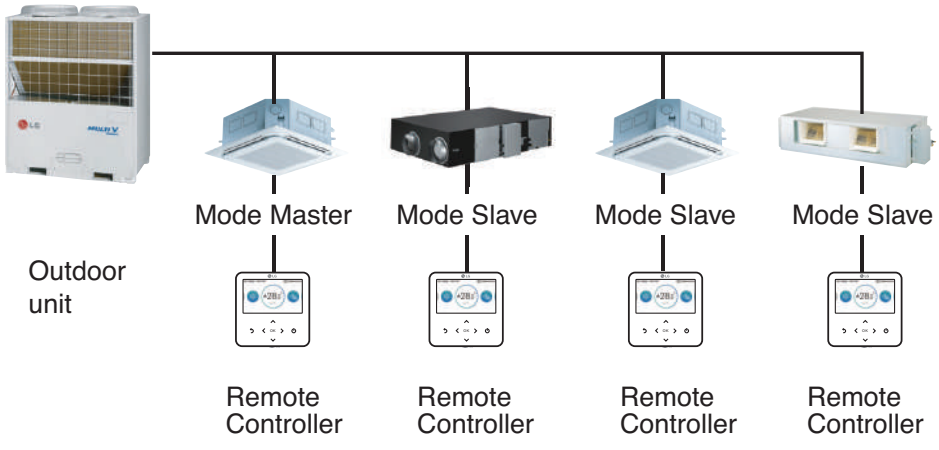
6. Override Setting

It is function to set the Override condition by setting the Mode Master/Slave of indoor unit.

• Change setting values using [< , >(left/right)] button. (Master, Slave)



14. Installation



<Override connecting Scene>

M/S	Description
Master	Using group control, this master sets the made of slave IDU's.
Slave	For the indoor unit set as slave, it can only select the some operation mode of the master indoor unit cycle. Ex) Master is in cooling cycle, Slave can select cooling, dehumidification, auto, and wind only Master is in heating cycle, Slave can select auto, heating, and wind only.

Note :

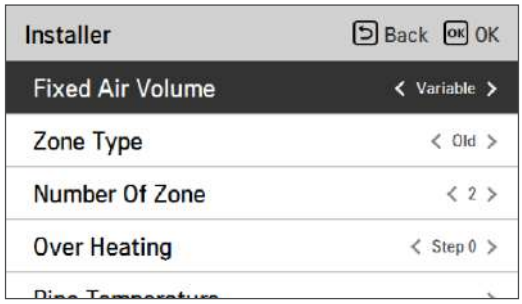
• Override M/S setting function is only available in some products.

7. Zone Stats

It is the function to apply different fan speeds automatically for each thermal control status.

• You can set the following setting values using [< , >(left/right)] button. (Variable, Fixed)

* when selecting wind strength as fixed, ESP is not changeable.



Value	Comp on	Comp off
Variable	Set fan speed	Low
Fixed	Set fan speed	Set fan speed

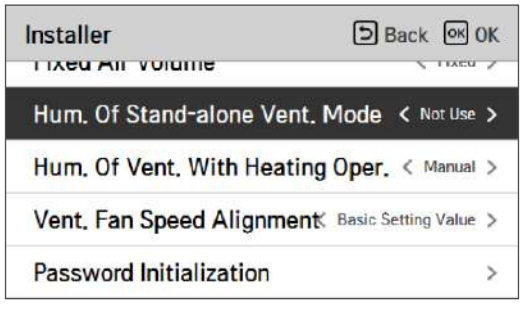
8. Humidification for Singlar Ventilation

It is the function to set whether to use the humidification function during the ventilation product single operation.

• Select value using [<,>(left/right)] button. (Not use, Use)

1) When Humidification for ventilation is set
   - In case of connection with General Ventilation : When operation is On, you can control the humidification
   - In case of connection with Direct Expansion Ventilation: When ventilation is operated only, you can control the humidification. (When operating DX Coil, impossible to control humidification)

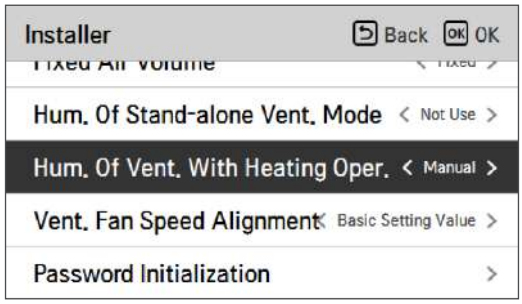
2) When Ventilation humidification function is not set
   - When operating only ventilation, impossible to control humidification.



9. Humidification for Heat Mode Ventilation

It is the function to set the heating humidification function of the direct ventilation to be automatic or manual.

• Select value using [<,>(left/right)] button. (Automatic, Manual)



M/S	Description
Automatic	If air conditioner operation mode is set as heat, it automatically switches on the humidification
Manual	If air conditioner operation mode is set as heat, you could turn on the humidification manually. (When it is set as heat mode, even the humidification is on, you cannot turn it off manually.)

* Humidification Cancellation : In case of the cancellation of heating operation, the product is off.

* Power failure compensation : When power failure compensation, receive the automatic/manual data from the indoor unit to set the Value.

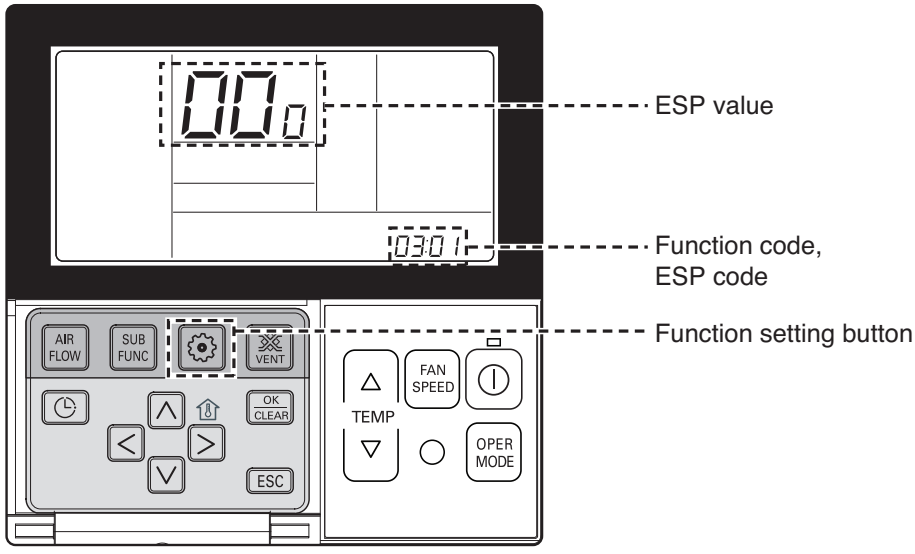
14.9.4 Installer Setting (PQRCVSL0 / PQRCVSL0QW)

1. Installer setting Operation

1) Function entry

1.1) Input the Function setting button for 3 seconds to enter the installer setting mode.

1.2) When entering, LCD other than relevant LCD is not appeared.



2) Function operation

2.1) When pressing Function selecting button, it follows the sequence specified below.
01: Test run → 02: Address setting → 03: Supply Air ESP → 04: Exhaust Air ESP →
05: Product Direction → 06: Quick refresh priority → 07: Master setting →
08: Override setting → 09: DryContact Auto → 10: Release of 3minute delay →
11: Zone stats → 12: Selecting °C or F → 13: Humidification for singular ventilation →
14: Humidification for Heat Mode Ventilation
※ Functions that are not contained in product do not appear.

2.2) Selected item LCD seg flickering (it keeps being flickering until set/cancel is pressed.)

2.3) Operation selection, wind strength, wind direction, extra operation, ventilation, reservation button is inputted, it is ignored.

3) Function operation and setting

3.1) Setting for each function, refer to the details for code.

3.2) When setting/cancel button is inputted, it is set and Seg flickering stops.

4) Function End

4.1) After 26 seconds without any input of relevant button (However, if relevant button (function setting, up/down/right,light button, setting/cancel...) is inputted, it lasts for 25 seconds.)

4.2) Exit button.

CAUTION:

The installer setting mode is the mode to set the remote controller's detail function. If the installer setting mode is incorrectly set, it may cause product failure, user's injury, or property damage. It must be set by the installation specialist with the installation license, and if it is installed or changed without installation license, all problems caused will be the responsibility of the installer, and may void the LG warranty.

14. Installation

2. Installer Setting Code and Value

No.	Function	Code	Value
1	Test run	1	01: Test run setting
2	Setting Address of Central Control	2	00 ~ FF : Address of central control
3	Supply ESP	3	Value1 – Step(01:low, 02:high, 03:super high) Value2 – ESP value(0 ~ 255)
4	Exhaust ESP	4	
5	Product direction	5	01:Normal, 02:Reverse
6	Quick Refresh Priority	6	01:Supply air first, 02:Exhaust air first
7	Master setting	7	00:Slave, 01:Master
8	Override setting	8	00:Slave, 01:Master
9	Dry Contact Auto	9	00:OFF, 01:ON
10	Release of 3Min. Delay	10	01:Set
11	Zone State	11	01:Variable, 02:Fixed
12	Selecting °C or F	12	00:Celsius , 01:Fahrenheit
13	Humidification for Singlar Ventilation	13	00 : Not in use 01 : Use
14	Humidification for Heat Mode Ventilation	14	01:Automatic, 02:Manual

1) Test Run

- Function explanation: when installing the product, test operation for checking the installation status
- When setting test operation, LCD Display
  - Cooling, normal, super-high mode, temperature setting 88Seg 'LO', extra operation.
  - When setting test operation, after test operating for 18 minutes, auto cancellation.
  - During test operation, extra operation control available. (including ventilation KIT)

2) Setting Address of Central Control

- Function explanation: when connecting central control, it sets the address of central control address of indoor unit.
- Function control and setting
  - Select the address code with inputting the up-down button. (0 ~ F)
  - Change the items with inputting the right-left button. (Group address ↔ indoor unit address)
  - Set the address with inputting Setting/Cancel button. (Indoor data send)

3) Supply/Exhaust ESP setting

- Function explanation: Set the E.S.P(RPM) value of air conditioner indoor unit.
- Function control and setting(Refer to the explanation at prior page about function entry)
  - Select the wind strength with inputting up-down button.
    * 01:low, 02:high, 03:very high(Seg flickering)
  - Move the setting items with inputting the right-left button.
    * Wind strength selection ↔ RPM value selection(Seg of selected item is flickering)
  - Select the RPM value of wind strength with inputting up-down button.
    *0 ~ 255(Seg selecting)
  - Complete the RPM setting with inputting Setting/Cancel button. (Send RPM setting data of indoor unit)
  - Set the Exhaust Air ESP with conducting the 2.1) ~ 2.4) process of installer by inputting function setting button and changing installer code 04.

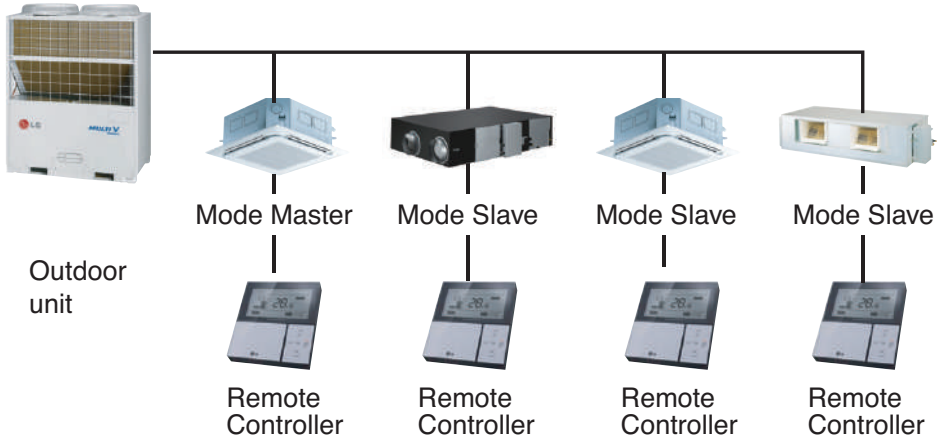
4) Production Direction

- Function Explanation: Set the installation direction of ventilation indoor unit.
- Function control and setting
  - Select the direction value with inputting the up-down button.
    *01: normal direction, 02:opposite direction
  - Complete the setting with inputting Setting/Cancel button. (Stop flickering and send the data to indoor unit)

5) Override Setting

- Function explanation: Set the Override condition by setting the Mode Master/Slave of indoor unit.
- Function control and setting
  - Set the Master/Slave value with inputting the up-down button.
    *00: Slave, 01: Master
  - Complete the setting with inputting Setting/Cancel button.
- Operation wired remote control after Slave setting
  - When changing operation mode of wired remote control connected to Mode Slave, it only can change to cycle operation mode.

  Ex) Outdoor unit cooling : Among wired remote control dehumidification mode, when inputting Operation Mode Selection button, indicating HL, it goes back to dehumidification mode. If you input it again, it changes to Artificial intelligence mode



<Override connecting Scene>

6) Zone Stats

- Function explanation: Set the wind strength option of indoor unit as Variable or fixed.
- Function control and setting
  - Select the wind strength option value with inputting the up-down button.
    *01: Variable, 02: Fixed
  - Complete the setting with inputting Setting/Cancel button.(Send setting data to indoor unit)
    ❊ When selecting wind strength as fixed, ESP is not changeable.

14. Installation

7) Selecting Celsius or Fahrenheit

- Function explanation: Control the temperature control unit by changing it Celsius ↔ Fahrenheit. (only set for export wired remote control)
- Function control and setting
  - Select the Celsius or Fahrenheit with inputting the up-down button.
    *00: Celsius (℃), 01: Fahrenheit(℉)
  - Complete the setting with inputting Setting/Cancel button. (Send setting date to indoor unit)
    - Save the Celsius/Fahrenheit at EEPROM

8) Humidification for Singlar Ventilation

- Function Explanation: Set the power supply to humidification When operating Singular ventilation of Direct Expansion or General Ventilation unit.
- Function control and setting
  - Select the Humidification for Singular Ventilation with inputting the up-down button.
    *00 : Not in use
    *01 : Use
  - Complete the setting with inputting Setting/Cancel button.(Stop filckering)
- Function Performance
  - When Humidification for ventilation is set
    ❊ In case of connection with General Ventilation : When operation is On, you can control the humidification
    ❊ In case of connection with Direct Expansion Ventilation: When ventilation is operated only, you can control the humidification. (When operating DX Coil, impossible to control humidification)
  - When Ventilation humidification function is not set
    ❊ When operating only ventilation, impossible to control humidification.

9) Humidification for Heat Mode Ventilation

- Function explanation: Set the Humidification for Heat mode of direct expansion ventilation as automatic setting or manual setting.
- Function control and setting
  - Select the humidification for heat mode with inputting the up-down button.
    *01 : Automatic
    *02 : Manual
  - Complete the setting with inputting Setting/Cancel button.(Stop flickering)
- Function performance
  - Automatic setting : If air conditioner operation mode is set as heat, it automatically switches on the humidification.
  - Manual setting : If air conditioner operation mode is set as heat, you could turn on the humidification manually. (When it is set as heat mode, even the humidification is on, you cannot turn it off manually.)
  - Humidification cancellation : In case of the cancellation of heating operation, the product is off.
  - Power failure compensation : When power failure compensation, receive the automatic/manual data from the indoor unit to set the Value.

14.9.5 Run the humidifier

<LZ-H*GXH series only>**

(1) Check that the water supply piping is connected securely.

(2) Open the water supply shut-off valve. (No water will be supplied at this time.)

(3) Run the eco-V unit in heating mode. (See the operating manual included with the indoor unit for details on how to run the unit in heating mode.) The water supply will start and the humidifier will begin operation.

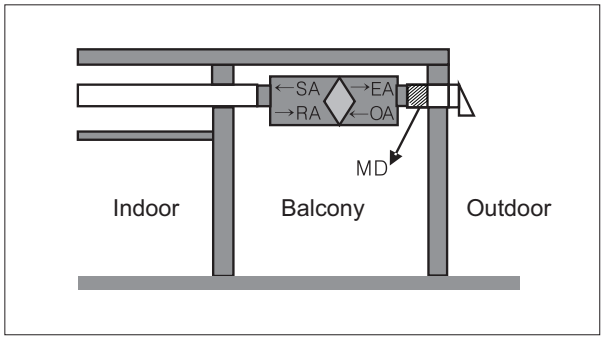
(4) After starting heating (humidifying), the sound of the water supply solenoid valve will be heard at intervals of several minutes (a clicking sound), so listening for that clicking sound let the unit run for 30 minutes to make sure that humidifying operation is normal.

CAUTION:

If carpentry work is not completed when a test run is finished, tell the customer not to run the humidifier for the protection of indoor unit and eco-V until it is completed.
If the humidifier is run, paint, particles generated from adhesive and other materials used for carpentry work may cause eco-V to get dirty, causing splash or leakage of water.

14.10 M.D(Motorized damper) installation criteria

■ Based on the M.D(Motorized Damper) installation



■ Outdoor temperature Conditions for normal product operation : -10 °C ~ 40 °C

- Installed at the enterance of the outdoor duct(OA & EA) ventilation device.
- If the temperature is outside the operating range of the product, there is a risk of condensation occurring inside the ventilation device.
- Do not intall it in a humid palce such as a bathroom.
- Install MD(Motorized Damper) to prevent external air inflow.
- Do not operate the ventilation system during rain or strong winds as water may flow into the indoors.

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The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.
The specifications, designs, and information in this brochure are subject to change without notice.