

LG

MULTI V[™] S

Heat Recovery 220-240V + 220V
R410A(50Hz/60Hz)
0CVM0-01H (Replaces 0CVM0-01G)

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK

MULTI V 
Heat Recovery

General information

Product Data

HR Unit

Installation of Outdoor Units

Special Guide

Control System




General information

- 1. Model Line-up & External Appearance**
- 2. Nomenclature**

1. Model Line-up & External Appearance

1.1 Outdoor Unit

Chassis	Model Name	External Appearance
U3	ARUB060GSS4	

1.2 HR Unit

2 Branches	3 Branches	4 Branches	6 Branches	8 Branches
PRHR023	PRHR033	PRHR043	PRHR063	PRHR083

Note

- These HR Units will be in effect from July 2018.

2. Nomenclature

Model Name	ARU	B	060	G	S	S	4
No.	1	2	3	4	5	6	7

No.	Signification
1	MULTI V System Outdoor Unit using R410A
2	Combination of Inverter Type and Cooling Only or Heat Pump B: Inverter and Heat Recovery
3	Total Cooling Capacity in Horse Power(HP) unit EX) 6HP → '060', 10HP → '100'
4	Electrical Ratings L : 3Ø, 380-415V, 50Hz / 3Ø, 380V, 60Hz G : 1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz
5	Air Discharge Type S : Side Discharge
6	Model Type S : Standard
7	Serial number

Product Data

- 1. Specifications**
- 2. Dimensions**
- 3. Electric Characteristics**
- 4. Indoor Unit and Outdoor Unit Capacity Index**
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1. Specifications

HP			6
Model Name			ARUB060GSS4
Capacity (Rated)	Cooling*	kW	15.5
		Btu/h	52,900
	Heating*	kW	18.0
		Btu/h	61,400
Input (Rated)	Cooling*	kW	3.97
	Heating*	kW	4.10
EER (Rated)			3.90
ESEER (Rated)			7.15
SLC ESEER (Rated)			8.05
COP (Rated)			4.39
Power Factor	Rated	-	0.93
Exterior	Color		Warm Gray
	RAL code		NL503K
Heat Exchanger			Wide Louver Plus
Compressor	Type		Hermetically Sealed Scroll
	Piston Displacement	cm ³ /rev	43.8
	Number of Revolution	rev/min	3,600
	Motor Output	W	4,200
	Starting Method		DC Inverter Starting
Oil Type			FVC68D(PVE)
Fan	Type		Axial Flow Fan
	Motor Output x Number	W	124 x 2
	Air Flow Rate(High)	m ³ /min	110
		ft ³ /min	3,885
	Drive		DC INVERTER
Discharge	Side / Top	Side	
Piping Connections	Liquid Pipe	mm(inch)	Ø 9.52 (3/8)
	Low Pressure Gas Pipe	mm(inch)	Ø 19.05 (3/4)
	High Pressure Gas Pipe	mm(inch)	Ø 15.88 (5/8)
Dimensions(W × H × D)	mm		950 × 1,380 × 330
	inch		37-13/32 × 54-11/32 × 13
Net Weight	kg		118
	lbs		260
Shipping Weight	kg		132
	lbs		291
Sound Pressure Level	Cooling	dB(A)	56
	Heating	dB(A)	58
Sound Power Level	Cooling	dB(A)	69
	Heating	dB(A)	71
Protection Devices	High pressure protection	-	High pressure sensor / High pressure switch
	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection / Over-current protection
Communication Cable(VCTF-SB)		No. x mm ²	2C x 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A
	Precharged Amount	kg	3.5
		lbs	7.7
	t-CO ₂ eq.		7.306
Control			Electronic Expansion Valve
Power Supply	V, Ø, Hz		220-240 , 1 , 50
			220, 1, 60
Number of maximum connectable indoor units			13

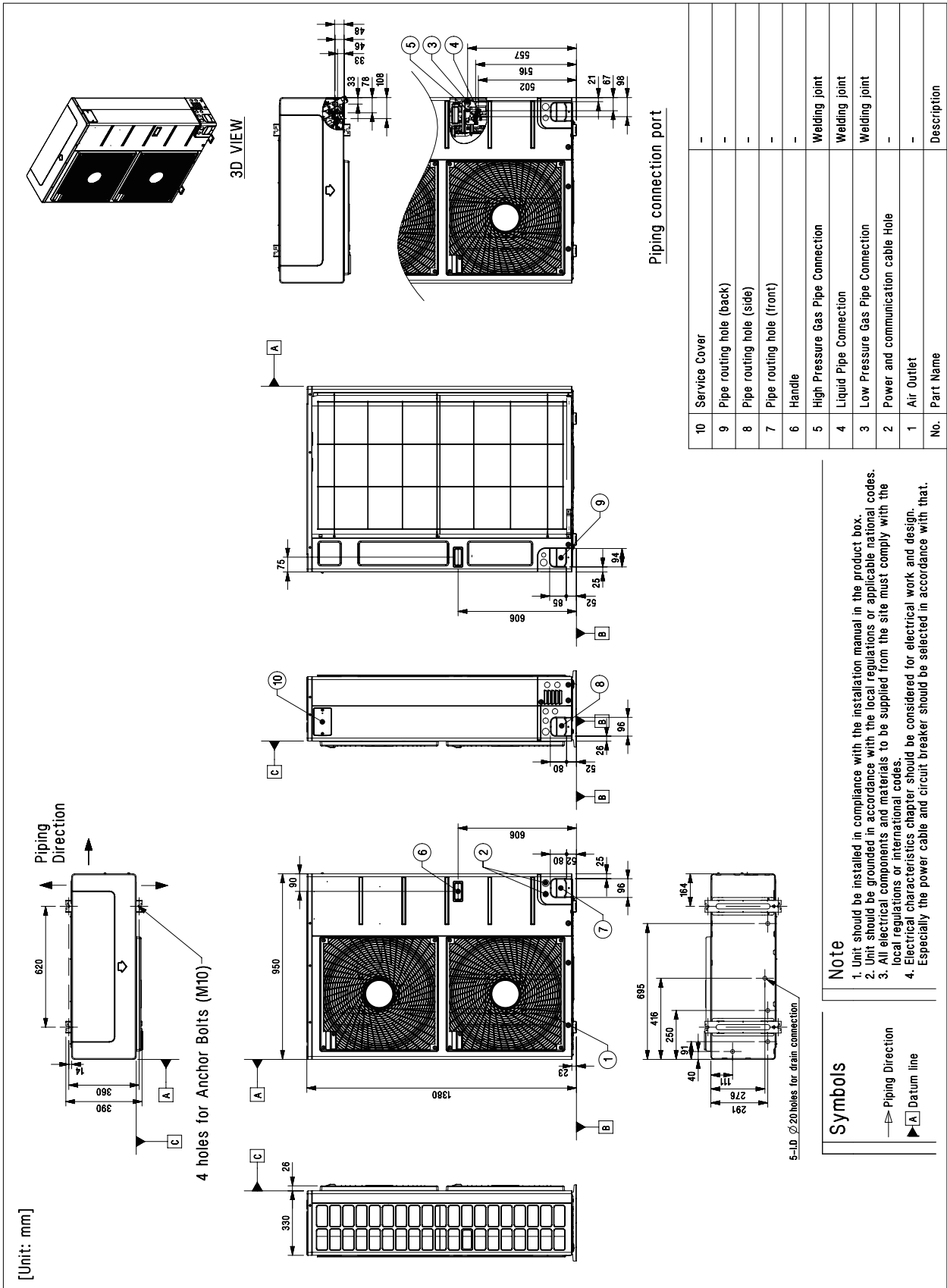
Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard.
Therefore, these values can be increased owing to ambient conditions during operation.
- Performances are based on the following conditions :
 - *Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - *Heating : Indoot Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
 - Interconnected Pipe Length is 7.5m and difference of Elevation (Outdoor ~ Indoor Unit) is Zero.
- EUROVENT Test Condition :
 - Performance values on the this PDB are based on Ceiling concealed duct combination.
 - Refer to EUROVENT web site(www.eurovent-certification.com) for other indoor unit combination and more detail test conditions.
- ESEER calculation corresponds with below conditions and power input of indoor units is not included.
ESEER Formula = A x EER100% + B x EER75% + C x EER50% + D x EER25%
 - Coefficient : A=0.03, B=0.33, C=0.41, D=0.23
 - Outdoor temperature condition : EER 100% / 75% / 50% / 25% = 35°CDB / 30°CDB / 25°CDB / 20°CDB
 - Indoor temperature condition : 27°C(80.6°F) DB / 19°C(66.2°F) WB
- The maximum combination ratio is 160%.
- This product contains Fluorinated greenhouse gases.(R410A, GWP(Global warming potential) = 2087.5)

2. Dimensions

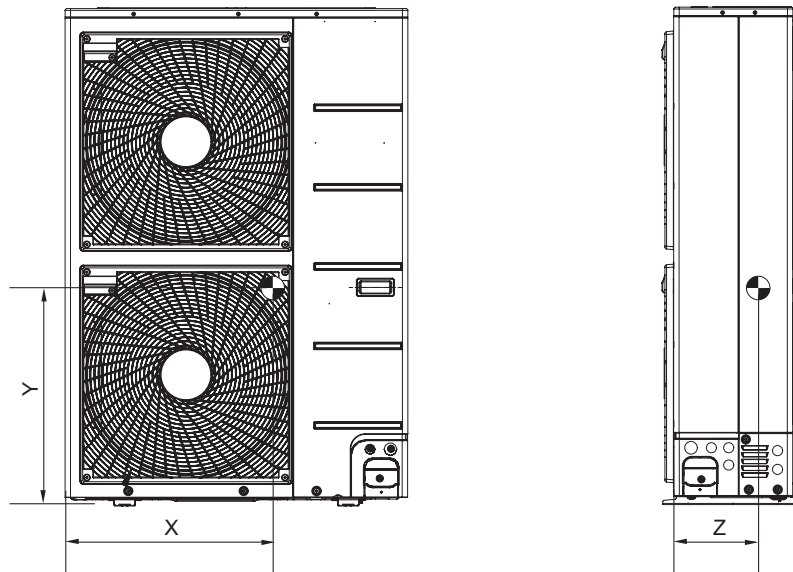
2.1 Dimensional Drawings

[U3 Chassis] ARUB060GSS4



2. Dimensions

2.2 Center of Gravity



Model Name	X [mm]	Y [mm]	Z [mm]
ARUB060GSS4	440	657	233

3. Electric Characteristics

■ Wiring of Main Power Supply and Equipment Capacity

1. Use a separate power supply for the Outdoor Unit and Indoor Unit.
2. Bear in mind ambient conditions (ambient temperature, direct sunlight, rain liquid, etc.) when proceeding with the wiring and connections
3. The wire size is the minimum value for metal conduit wiring. The power cord size should be 1 rank thicker taking into account the line voltage drops. Make sure the power-supply voltage does not drop more than 10%.
4. Specific wiring requirements should adhere to the wiring regulations of the region.
5. Power supply cords of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord.
6. Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.

WARNING

- Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.
- Make sure to use specified wires for connections so that no external force is imparted to terminal connections. If connections are not fixed firmly, it may cause heating or fire.
- Make sure to use the appropriate type of overcurrent protection switch. Note that generated overcurrent may include some amount of direct current.
- All installation site may require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.

CAUTION

- Do not use anything other than breaker and fuse with correct capacity. Using fuse and wire or copper wire with too large capacity may cause a malfunction of unit or fire.

■ 50Hz

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
6 HP	50	220-240	Min.:198, Max.:264	36.0	39.6	40	4.3	18.6	18.7	0.35	1.0

■ 60Hz

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
6 HP	60	220	Min.:198, Max.:242	36.0	39.6	40	4.3	18.6	18.7	0.35	1.0

Note

1. Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phase is 2%.
3. MSC means the Max. current during the starting of compressor.
4. MSC and RLA are measured as the compressor only test condition.
5. OFM are measured as the outdoor unit test condition.
6. TOCA means the total over current value of each outdoor unit.
7. Select the wire size based on the larger value among MCA or TOCA.
8. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].
9. Select the electrical equipment of combination unit according to the electrical characteristics of individual unit.

Symbols

- MCA** : Minimum Circuit Amperes (A)
- TOCA** : Total Over Current Amperes (A)
- MFA** : Maximum Fuse Amperes (A)
- MSC** : Maximum Starting Current (A)
- RLA** : Rated Load Amperes (A)
- OFM** : Outdoor Fan Motor
- kW** : Fan Motor rated output (kW)
- FLA** : Full Load Amperes (A)

4. Indoor Unit and Outdoor Unit Capacity Index

4.1 Outdoor Unit Selection

See the indoor unit capacity tables for given Indoor and Outdoor temperature.

Select the unit whose capacity is the nearest to or greater than given load.

Note

Individual Indoor Unit capacity is subject to change by combination. Actual capacity has to be calculated according to the combination by using Outdoor unit capacity table.

4.2 Outdoor Unit Selection

Allowable combinations are indicated below. In general, outdoor unit can be selected depending on the location of the unit, zoning and usage of the rooms.

The indoor and outdoor unit combination is determined by comparing the sum of indoor unit capacity index with each Outdoor Unit. It is recommended to be the nearest to 100% combination ratio or to be smaller than that. Refer the table below. To manage cooling/heating load properly, it's better to be selected the bigger capacity outdoor unit rather than the nearest, if the installation space is large enough.

◆ Allowable Total Capacity Index Table of Combined Indoor Units

Outdoor Unit Capacity(HP)	Indoor Unit Combination Ratio									
	50%	60%	70%	80%	90%	100%	110%	120%	130%	160%
6	7.8	9.3	10.9	12.4	14.0	15.5	17.1	18.6	20.2	24.8

* Capacity Index is same as the capacity(kW).

◆ INDOOR UNIT CAPACITY INDEX

Unit Capacity (Btu/h)	5k	7k	9k	12k	15k	18k	21k	24k	28k	36k	42k	48k	54k	60k	76k	96k
Capacity Index	1.6	2.2	2.8	3.6	4.5	5.6	6.2	7.1	8.2	10.6	12.3	14.1	15.8	17.5	22.4	28.0

* Capacity Index is same as the capacity(kW).

CAUTION

◆ Combination Ratio(50~160%)

Notes :

1. We can guarantee the operation only within 130% combination ratio. If you want to connect more than 130% combination ratio, please contact us and discuss the requirement.
2. In case that operating indoor units ratio to rated capacity of outdoor unit is more than 130%, the airflow should be operated as low step in the all indoor units.
3. This combination ratio is applied only for outdoor units which are produced after Jan. 1st, 2015.

5. Capacity Tables

5.1 Cooling Capacity

5.1.1 Standard Mode

◆ ARUB060GSS4

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14	16	18	19	20	22	24	TC	PI	TC	PI	TC	PI	
130	10	14.2	1.68	16.9	2.06	18.1	2.39	18.6	2.44	19.1	2.46	20.0	2.48	20.6	2.48
	12	14.2	1.73	16.9	2.13	18.1	2.49	18.6	2.50	19.1	2.52	20.0	2.54	20.6	2.56
	14	14.2	1.78	16.9	2.21	18.1	2.58	18.6	2.60	19.1	2.62	20.0	2.64	20.6	2.66
	16	14.2	1.85	16.9	2.29	18.1	2.69	18.6	2.72	19.1	2.74	20.0	2.77	20.6	2.79
	18	14.2	1.93	16.9	2.42	18.1	2.82	18.6	2.88	19.1	2.90	20.0	2.93	20.6	2.95
	20	14.2	2.01	16.9	2.58	18.1	2.96	18.6	3.17	19.1	3.19	19.8	3.22	20.3	3.25
	21	14.2	2.06	16.9	2.67	18.1	3.02	18.6	3.35	19.1	3.38	19.6	3.41	20.2	3.44
	23	14.2	2.21	16.9	2.81	18.1	3.18	18.6	3.70	18.9	3.73	19.4	3.76	19.9	3.79
	25	14.2	2.37	16.9	2.97	18.1	3.39	18.4	4.10	18.6	4.13	19.1	4.18	19.6	4.20
	27	14.2	2.53	16.9	3.17	17.9	3.62	18.1	4.52	18.4	4.55	18.9	4.60	19.4	4.63
	29	14.2	2.70	16.9	3.39	17.6	3.89	17.8	4.96	18.1	4.99	18.6	5.04	19.1	5.06
	31	14.2	2.88	16.8	3.57	17.3	4.14	17.6	4.94	17.8	4.97	18.3	5.02	18.8	5.04
	33	14.2	3.07	16.5	3.78	17.1	4.44	17.3	4.90	17.6	4.93	18.1	4.97	18.5	4.99
	35	14.2	3.27	16.2	3.96	16.8	4.81	17.1	4.83	17.3	4.86	17.8	4.91	18.3	4.92
	37	14.2	3.49	16.0	4.16	16.5	4.75	16.8	4.77	17.1	4.80	17.5	4.84	18.0	4.86
	39	14.2	3.71	15.7	4.38	16.2	4.68	16.5	4.71	16.8	4.73	17.3	4.78	17.8	4.79
41	13.8	3.94	15.1	4.60	15.6	4.62	15.8	4.64	16.1	4.67	16.6	4.71	17.1	4.73	
43	13.5	4.15	14.4	4.53	14.9	4.55	15.2	4.58	15.5	4.60	16.0	4.65	16.4	4.66	
46	12.6	4.45	13.2	4.44	13.7	4.46	13.9	4.48	14.2	4.51	14.6	4.55	15.0	4.57	
48	11.2	4.32	11.4	4.33	11.9	4.34	12.1	4.36	12.3	4.39	12.7	4.42	13.1	4.44	
120	10	13.1	1.52	15.6	1.86	17.0	2.21	17.5	2.39	18.1	2.42	19.0	2.43	19.5	2.45
	12	13.1	1.56	15.6	1.92	17.0	2.30	17.5	2.44	18.1	2.51	19.0	2.54	19.5	2.56
	14	13.1	1.61	15.6	1.99	17.0	2.39	17.5	2.53	18.1	2.61	19.0	2.64	19.5	2.66
	16	13.1	1.67	15.6	2.07	17.0	2.48	17.5	2.62	18.1	2.73	19.0	2.76	19.5	2.78
	18	13.1	1.73	15.6	2.16	17.0	2.58	17.5	2.76	18.1	2.87	19.0	2.90	19.5	2.92
	20	13.1	1.80	15.6	2.29	17.0	2.72	17.5	2.91	18.1	3.02	19.0	3.06	19.5	3.08
	21	13.1	1.85	15.6	2.37	17.0	2.80	17.5	2.99	18.1	3.12	19.0	3.16	19.5	3.18
	23	13.1	1.98	15.6	2.54	17.0	3.00	17.5	3.18	18.1	3.32	19.0	3.36	19.5	3.38
	25	13.1	2.12	15.6	2.72	17.0	3.16	17.5	3.39	18.1	3.56	18.8	3.59	19.3	3.62
	27	13.1	2.26	15.6	2.91	17.0	3.36	17.5	3.62	18.1	3.83	18.5	3.85	19.0	3.89
	29	13.1	2.41	15.6	3.10	17.0	3.54	17.5	3.87	17.8	4.08	18.2	4.14	18.8	4.18
	31	13.1	2.57	15.6	3.31	17.0	3.72	17.3	4.15	17.5	4.38	18.0	4.46	18.5	4.49
	33	13.1	2.73	15.6	3.53	16.8	3.94	17.0	4.50	17.3	4.70	17.7	4.75	18.2	4.79
	35	13.1	2.91	15.6	3.77	16.5	4.17	16.7	4.96	17.0	4.99	17.5	5.00	17.9	5.04
	37	13.1	3.13	15.6	3.97	16.3	4.44	16.5	4.86	16.7	4.88	17.2	4.90	17.7	4.94
	39	13.1	3.37	15.5	4.20	16.0	4.71	16.2	4.76	16.4	4.78	17.0	4.80	17.4	4.83
41	12.8	3.61	14.9	4.43	15.4	4.62	15.6	4.66	15.8	4.68	16.3	4.70	16.7	4.73	
43	12.5	3.85	14.2	4.36	14.7	4.51	14.9	4.56	15.2	4.58	15.6	4.60	16.1	4.63	
46	11.7	4.14	13.0	4.26	13.4	4.37	13.6	4.41	13.8	4.43	14.3	4.44	14.7	4.48	
48	10.3	4.05	11.3	4.18	11.7	4.29	11.9	4.31	12.0	4.33	12.4	4.34	12.8	4.36	
110	10	12.0	1.36	14.3	1.66	16.0	1.97	16.4	2.14	17.5	2.30	17.9	2.36	19.1	2.40
	12	12.0	1.41	14.3	1.72	16.0	2.05	16.4	2.20	17.5	2.38	17.9	2.46	19.1	2.52
	14	12.0	1.45	14.3	1.79	16.0	2.15	16.4	2.30	17.5	2.50	17.9	2.58	19.1	2.63
	16	12.0	1.50	14.3	1.86	16.0	2.24	16.4	2.41	17.5	2.62	17.9	2.69	19.1	2.74
	18	12.0	1.56	14.3	1.94	16.0	2.37	16.4	2.53	17.5	2.76	17.9	2.82	19.1	2.87
	20	12.0	1.61	14.3	2.03	16.0	2.51	16.4	2.65	17.5	2.90	17.9	2.97	19.1	3.02
	21	12.0	1.65	14.3	2.09	16.0	2.57	16.4	2.72	17.5	2.98	17.9	3.05	19.1	3.10
	23	12.0	1.76	14.3	2.24	16.0	2.72	16.4	2.87	17.5	3.15	17.9	3.21	19.1	3.27
	25	12.0	1.88	14.3	2.40	16.0	2.87	16.4	3.04	17.5	3.32	17.9	3.37	18.8	3.44
	27	12.0	2.00	14.3	2.56	16.0	3.03	16.4	3.21	17.5	3.47	17.9	3.55	18.6	3.61
	29	12.0	2.14	14.3	2.73	16.0	3.20	16.4	3.40	17.5	3.67	17.9	3.73	18.3	3.79
	31	12.0	2.28	14.3	2.92	16.0	3.39	16.4	3.61	17.2	3.86	17.6	3.93	18.0	3.97
	33	12.0	2.43	14.3	3.10	16.0	3.58	16.4	3.82	16.9	4.07	17.4	4.14	17.8	4.16
	35	12.0	2.58	14.3	3.31	16.0	3.78	16.4	4.05	16.7	4.30	17.1	4.34	17.5	4.36
	37	12.0	2.73	14.3	3.52	16.0	3.99	16.2	4.29	16.4	4.53	16.8	4.55	17.2	4.56
	39	12.0	2.94	14.3	3.74	15.7	4.21	15.9	4.59	16.1	4.76	16.5	4.77	17.0	4.77
41	11.7	3.16	13.9	3.96	15.0	4.44	15.2	4.96	15.4	4.96	15.9	5.00	16.3	5.04	
43	11.4	3.32	13.6	4.12	14.4	4.71	14.6	4.76	14.8	4.75	15.2	4.78	15.6	4.79	
46	10.7	3.24	12.7	3.98	13.1	4.47	13.4	4.47	13.5	4.51	13.9	4.53	14.3	4.54	
48	9.4	3.14	11.1	3.84	11.4	4.25	11.6	4.28	11.8	4.30	12.1	4.31	12.4	4.33	

5. Capacity Tables

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14		16		18		19		20		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100	10	10.5	1.23	12.5	1.49	14.5	1.77	15.5	1.91	16.5	2.05	18.3	2.29	18.7	2.31
	12	10.5	1.27	12.5	1.55	14.5	1.83	15.5	1.96	16.5	2.12	18.3	2.41	18.7	2.43
	14	10.5	1.31	12.5	1.61	14.5	1.91	15.5	2.05	16.5	2.21	18.3	2.54	18.7	2.57
	16	10.5	1.35	12.5	1.67	14.5	1.99	15.5	2.15	16.5	2.33	18.3	2.67	18.7	2.70
	18	10.5	1.39	12.5	1.73	14.5	2.06	15.5	2.25	16.5	2.47	18.3	2.82	18.7	2.84
	20	10.5	1.44	12.5	1.80	14.5	2.18	15.5	2.41	16.5	2.64	18.3	2.95	18.7	2.98
	21	10.5	1.46	12.5	1.84	14.5	2.26	15.5	2.49	16.5	2.74	18.3	3.02	18.7	3.04
	23	10.5	1.55	12.5	1.97	14.5	2.43	15.5	2.67	16.5	2.94	18.3	3.16	18.7	3.19
	25	10.5	1.65	12.5	2.09	14.5	2.59	15.5	2.86	16.5	3.14	18.3	3.30	18.5	3.32
	27	10.5	1.76	12.5	2.24	14.5	2.77	15.5	3.06	16.5	3.34	17.9	3.45	18.3	3.48
	29	10.5	1.88	12.5	2.39	14.5	2.96	15.5	3.27	16.5	3.53	17.6	3.59	18.0	3.62
	31	10.5	2.00	12.5	2.55	14.5	3.16	15.5	3.49	16.5	3.71	17.3	3.73	17.8	3.76
	33	10.5	2.12	12.5	2.71	14.5	3.37	15.5	3.72	16.5	3.85	17.1	3.87	17.5	3.90
	35	10.5	2.26	12.5	2.89	14.5	3.59	15.5	3.97	16.2	3.99	16.7	4.01	17.2	4.04
	37	10.5	2.42	12.5	3.09	14.5	3.80	15.5	4.16	16.0	4.18	16.4	4.20	16.8	4.24
	39	10.5	2.59	12.5	3.32	14.5	4.03	15.5	4.36	15.7	4.38	16.2	4.40	16.6	4.44
	41	10.3	2.77	12.3	3.55	14.3	4.25	14.9	4.57	15.2	4.58	15.6	4.60	16.1	4.64
	43	9.9	2.93	11.8	3.77	13.8	4.45	14.3	4.74	14.4	4.76	14.9	4.77	15.3	4.82
46	9.3	3.15	11.1	4.06	12.9	4.73	13.0	4.96	13.2	4.98	13.6	4.99	13.9	5.04	
48	8.2	2.72	9.8	3.51	11.2	4.04	11.3	4.21	11.4	4.22	11.8	4.23	12.1	4.27	
90	10	9.4	1.08	11.2	1.30	13.1	1.53	14.0	1.65	14.8	1.77	16.7	1.99	18.5	2.21
	12	9.4	1.09	11.2	1.32	13.1	1.56	14.0	1.68	14.8	1.81	16.7	2.03	18.5	2.25
	14	9.4	1.11	11.2	1.34	13.1	1.59	14.0	1.71	14.8	1.85	16.7	2.06	18.5	2.29
	16	9.4	1.13	11.2	1.37	13.1	1.62	14.0	1.75	14.8	1.88	16.7	2.10	18.5	2.33
	18	9.4	1.15	11.2	1.40	13.1	1.65	14.0	1.79	14.8	1.92	16.7	2.15	18.5	2.45
	20	9.4	1.17	11.2	1.42	13.1	1.68	14.0	1.82	14.8	1.99	16.7	2.30	18.5	2.57
	21	9.4	1.19	11.2	1.44	13.1	1.71	14.0	1.88	14.8	2.07	16.7	2.34	18.5	2.63
	23	9.4	1.21	11.2	1.50	13.1	1.83	14.0	2.02	14.8	2.21	16.7	2.48	18.2	2.75
	25	9.4	1.27	11.2	1.60	13.1	1.96	14.0	2.16	14.8	2.36	16.7	2.65	18.0	2.87
	27	9.4	1.36	11.2	1.70	13.1	2.09	14.0	2.30	14.8	2.53	16.7	2.82	17.7	3.00
	29	9.4	1.44	11.2	1.81	13.1	2.24	14.0	2.46	14.8	2.70	16.7	2.99	17.4	3.12
	31	9.4	1.53	11.2	1.93	13.1	2.38	14.0	2.62	14.8	2.88	16.7	3.13	17.2	3.24
	33	9.4	1.63	11.2	2.06	13.1	2.54	14.0	2.79	14.8	3.05	16.7	3.29	16.9	3.36
	35	9.4	1.73	11.2	2.18	13.1	2.70	14.0	2.98	14.8	3.24	16.4	3.47	16.7	3.55
	37	9.4	1.83	11.2	2.32	13.1	2.88	14.0	3.16	14.8	3.42	16.1	3.63	16.4	3.71
	39	9.4	1.94	11.2	2.47	13.1	3.05	14.0	3.37	14.8	3.60	15.8	3.83	16.1	3.88
	41	9.2	2.17	10.9	2.74	12.7	3.35	13.6	3.68	14.5	3.88	15.2	4.04	15.5	4.13
	43	8.9	2.35	10.7	2.96	12.4	3.65	13.3	3.97	14.1	4.16	14.6	4.32	14.8	4.37
46	8.4	2.64	10.0	3.37	11.6	4.16	12.4	4.50	12.8	4.62	13.3	4.74	13.5	4.75	
48	7.4	2.31	8.9	2.95	10.3	3.64	11.0	3.92	11.1	3.98	11.6	4.08	11.8	4.09	
80	10	8.4	0.99	10.0	1.19	11.6	1.39	12.4	1.50	13.2	1.61	14.8	1.84	16.4	2.00
	12	8.4	1.01	10.0	1.20	11.6	1.42	12.4	1.53	13.2	1.64	14.8	1.87	16.4	2.04
	14	8.4	1.02	10.0	1.23	11.6	1.44	12.4	1.56	13.2	1.67	14.8	1.91	16.4	2.08
	16	8.4	1.04	10.0	1.25	11.6	1.47	12.4	1.59	13.2	1.70	14.8	1.95	16.4	2.12
	18	8.4	1.06	10.0	1.27	11.6	1.50	12.4	1.61	13.2	1.74	14.8	1.98	16.4	2.16
	20	8.4	1.08	10.0	1.30	11.6	1.53	12.4	1.65	13.2	1.77	14.8	2.06	16.4	2.29
	21	8.4	1.08	10.0	1.31	11.6	1.54	12.4	1.67	13.2	1.81	14.8	2.12	16.4	2.35
	23	8.4	1.11	10.0	1.33	11.6	1.61	12.4	1.77	13.2	1.94	14.8	2.24	16.4	2.47
	25	8.4	1.15	10.0	1.42	11.6	1.73	12.4	1.89	13.2	2.07	14.8	2.40	16.4	2.64
	27	8.4	1.22	10.0	1.51	11.6	1.85	12.4	2.03	13.2	2.21	14.8	2.55	16.4	2.78
	29	8.4	1.29	10.0	1.61	11.6	1.96	12.4	2.16	13.2	2.36	14.8	2.73	16.4	2.97
	31	8.4	1.37	10.0	1.71	11.6	2.09	12.4	2.30	13.2	2.51	14.8	2.90	16.4	3.11
	33	8.4	1.46	10.0	1.83	11.6	2.23	12.4	2.45	13.2	2.68	14.8	3.06	16.4	3.26
	35	8.4	1.54	10.0	1.94	11.6	2.38	12.4	2.61	13.2	2.86	14.8	3.24	16.3	3.39
	37	8.4	1.63	10.0	2.06	11.6	2.52	12.4	2.77	13.2	3.03	14.8	3.42	16.0	3.55
	39	8.4	1.73	10.0	2.18	11.6	2.70	12.4	2.98	13.2	3.26	14.8	3.61	15.7	3.74
	41	8.1	1.91	9.7	2.41	11.3	2.96	12.1	3.27	12.9	3.58	14.5	3.96	15.1	4.05
	43	7.9	2.10	9.5	2.63	11.0	3.23	11.8	3.56	12.6	3.92	14.1	4.24	14.5	4.33
46	7.4	2.34	8.9	2.96	10.3	3.64	11.0	3.96	11.8	4.42	12.9	4.70	13.2	4.75	
48	6.6	2.04	7.9	2.59	9.1	3.18	9.8	3.46	10.4	3.87	11.2	4.07	11.5	4.09	

5. Capacity Tables

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14	16	18	19	20	22	24	TC	PI	TC	PI	TC	PI	
70	10	7.3	0.86	8.7	1.02	10.1	1.18	10.9	1.28	11.6	1.37	13.0	1.56	14.4	1.74
	12	7.3	0.87	8.7	1.03	10.1	1.21	10.9	1.30	11.6	1.39	13.0	1.58	14.4	1.77
	14	7.3	0.89	8.7	1.05	10.1	1.23	10.9	1.32	11.6	1.41	13.0	1.62	14.4	1.80
	16	7.3	0.90	8.7	1.07	10.1	1.25	10.9	1.35	11.6	1.44	13.0	1.64	14.4	1.84
	18	7.3	0.91	8.7	1.09	10.1	1.28	10.9	1.37	11.6	1.47	13.0	1.67	14.4	1.88
	20	7.3	0.93	8.7	1.11	10.1	1.30	10.9	1.40	11.6	1.50	13.0	1.71	14.4	1.95
	21	7.3	0.94	8.7	1.12	10.1	1.31	10.9	1.41	11.6	1.51	13.0	1.74	14.4	1.99
	23	7.3	0.95	8.7	1.14	10.1	1.34	10.9	1.46	11.6	1.59	13.0	1.86	14.4	2.10
	25	7.3	0.97	8.7	1.18	10.1	1.43	10.9	1.56	11.6	1.70	13.0	1.99	14.4	2.20
	27	7.3	1.02	8.7	1.26	10.1	1.52	10.9	1.66	11.6	1.81	13.0	2.12	14.4	2.34
	29	7.3	1.09	8.7	1.34	10.1	1.62	10.9	1.76	11.6	1.93	13.0	2.27	14.4	2.51
	31	7.3	1.16	8.7	1.43	10.1	1.72	10.9	1.89	11.6	2.06	13.0	2.41	14.4	2.66
	33	7.3	1.22	8.7	1.51	10.1	1.83	10.9	2.00	11.6	2.18	13.0	2.57	14.4	2.83
	35	7.3	1.29	8.7	1.61	10.1	1.95	10.9	2.13	11.6	2.33	13.0	2.74	14.4	3.00
	37	7.3	1.37	8.7	1.70	10.1	2.07	10.9	2.27	11.6	2.47	13.0	2.91	14.4	3.17
	39	7.3	1.46	8.7	1.82	10.1	2.21	10.9	2.44	11.6	2.67	13.0	3.12	14.4	3.42
41	7.1	1.61	8.5	1.99	9.9	2.43	10.6	2.67	11.3	2.91	12.6	3.43	14.0	3.69	
43	6.9	1.75	8.3	2.17	9.6	2.65	10.3	2.91	11.0	3.17	12.3	3.74	13.7	3.98	
46	6.5	1.95	7.8	2.44	9.0	2.98	9.7	3.25	10.3	3.58	11.5	4.22	12.8	4.44	
48	5.8	1.70	6.9	2.13	8.0	2.61	8.5	2.84	9.1	3.13	10.2	3.69	11.3	3.84	
60	10	6.3	0.73	7.5	0.86	8.7	1.00	9.3	1.07	9.9	1.14	11.1	1.29	12.3	1.44
	12	6.3	0.75	7.5	0.87	8.7	1.01	9.3	1.09	9.9	1.16	11.1	1.31	12.3	1.47
	14	6.3	0.75	7.5	0.89	8.7	1.03	9.3	1.11	9.9	1.18	11.1	1.34	12.3	1.50
	16	6.3	0.77	7.5	0.91	8.7	1.05	9.3	1.13	9.9	1.21	11.1	1.36	12.3	1.52
	18	6.3	0.78	7.5	0.92	8.7	1.07	9.3	1.15	9.9	1.22	11.1	1.38	12.3	1.56
	20	6.3	0.79	7.5	0.93	8.7	1.09	9.3	1.17	9.9	1.24	11.1	1.41	12.3	1.59
	21	6.3	0.80	7.5	0.94	8.7	1.10	9.3	1.18	9.9	1.26	11.1	1.43	12.3	1.60
	23	6.3	0.81	7.5	0.96	8.7	1.11	9.3	1.20	9.9	1.28	11.1	1.48	12.3	1.70
	25	6.3	0.83	7.5	0.98	8.7	1.16	9.3	1.26	9.9	1.36	11.1	1.58	12.3	1.82
	27	6.3	0.85	7.5	1.03	8.7	1.23	9.3	1.34	9.9	1.45	11.1	1.68	12.3	1.94
	29	6.3	0.91	7.5	1.10	8.7	1.31	9.3	1.42	9.9	1.54	11.1	1.80	12.3	2.08
	31	6.3	0.96	7.5	1.17	8.7	1.39	9.3	1.52	9.9	1.64	11.1	1.92	12.3	2.21
	33	6.3	1.01	7.5	1.23	8.7	1.48	9.3	1.61	9.9	1.75	11.1	2.04	12.3	2.36
	35	6.3	1.07	7.5	1.31	8.7	1.57	9.3	1.71	9.9	1.86	11.1	2.17	12.3	2.50
	37	6.3	1.13	7.5	1.38	8.7	1.66	9.3	1.82	9.9	1.97	11.1	2.30	12.3	2.66
	39	6.3	1.20	7.5	1.47	8.7	1.80	9.3	1.95	9.9	2.12	11.1	2.47	12.3	2.85
41	6.1	1.31	7.3	1.61	8.5	1.95	9.1	2.13	9.7	2.30	10.8	2.71	12.0	3.10	
43	5.9	1.42	7.1	1.76	8.3	2.13	8.8	2.32	9.4	2.51	10.6	2.96	11.7	3.39	
46	5.6	1.59	6.7	1.97	7.7	2.39	8.3	2.61	8.8	2.82	9.9	3.33	11.0	3.86	
48	4.9	1.38	5.9	1.72	6.8	2.09	7.3	2.28	7.8	2.47	8.8	2.92	9.7	3.38	
50	10	5.2	0.62	6.3	0.72	7.3	0.82	7.8	0.88	8.2	0.93	9.2	1.05	10.3	1.17
	12	5.2	0.63	6.3	0.73	7.3	0.83	7.8	0.89	8.2	0.95	9.2	1.07	10.3	1.19
	14	5.2	0.64	6.3	0.74	7.3	0.85	7.8	0.90	8.2	0.96	9.2	1.08	10.3	1.21
	16	5.2	0.65	6.3	0.75	7.3	0.86	7.8	0.92	8.2	0.98	9.2	1.10	10.3	1.23
	18	5.2	0.66	6.3	0.76	7.3	0.87	7.8	0.94	8.2	1.00	9.2	1.12	10.3	1.25
	20	5.2	0.66	6.3	0.77	7.3	0.89	7.8	0.95	8.2	1.02	9.2	1.14	10.3	1.28
	21	5.2	0.67	6.3	0.78	7.3	0.90	7.8	0.96	8.2	1.02	9.2	1.15	10.3	1.29
	23	5.2	0.68	6.3	0.79	7.3	0.91	7.8	0.98	8.2	1.04	9.2	1.17	10.3	1.32
	25	5.2	0.69	6.3	0.81	7.3	0.93	7.8	1.00	8.2	1.07	9.2	1.23	10.3	1.41
	27	5.2	0.70	6.3	0.83	7.3	0.98	7.8	1.06	8.2	1.14	9.2	1.32	10.3	1.50
	29	5.2	0.74	6.3	0.88	7.3	1.04	7.8	1.13	8.2	1.21	9.2	1.40	10.3	1.59
	31	5.2	0.78	6.3	0.94	7.3	1.11	7.8	1.19	8.2	1.29	9.2	1.49	10.3	1.70
	33	5.2	0.83	6.3	0.99	7.3	1.17	7.8	1.26	8.2	1.37	9.2	1.58	10.3	1.81
	35	5.2	0.87	6.3	1.05	7.3	1.24	7.8	1.34	8.2	1.45	9.2	1.67	10.3	1.92
	37	5.2	0.92	6.3	1.11	7.3	1.31	7.8	1.42	8.2	1.53	9.2	1.78	10.3	2.04
	39	5.2	0.99	6.3	1.19	7.3	1.40	7.8	1.53	8.2	1.65	9.2	1.90	10.3	2.20
41	5.1	1.07	6.1	1.29	7.1	1.54	7.6	1.66	8.0	1.78	9.0	2.08	10.0	2.39	
43	5.0	1.16	5.9	1.40	6.9	1.67	7.4	1.81	7.8	1.94	8.8	2.27	9.8	2.61	
46	4.7	1.30	5.6	1.57	6.5	1.87	6.9	2.03	7.3	2.18	8.2	2.55	9.2	2.94	
48	4.1	1.13	4.9	1.37	5.7	1.63	6.1	1.77	6.5	1.90	7.3	2.23	8.1	2.57	

Note

1. TC: Total Capacity(kW), PI : Power Input(kW, Comp. + Outdoor fan motor)
2. Capacity tables show the average value of conditions which may occur.

5. Capacity Tables

5.1.2 SLC Mode

◆ ARUB060GSS4

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14	16	18	19	20	22	24	TC	PI	TC	PI	TC	PI	
130	10	2.2	0.23	3.0	0.28	4.0	0.35	5.6	0.42	7.4	0.53	10.6	0.70	14.1	0.93
	12	2.2	0.23	3.0	0.29	4.0	0.35	5.6	0.43	7.4	0.53	10.6	0.71	14.1	0.94
	14	2.2	0.23	3.0	0.29	4.0	0.35	5.6	0.43	7.4	0.54	10.6	0.72	14.1	0.95
	16	2.2	0.23	3.0	0.29	4.0	0.36	5.6	0.43	7.4	0.54	10.6	0.72	14.1	0.96
	18	2.2	0.24	3.0	0.30	4.0	0.36	5.6	0.44	7.4	0.55	10.6	0.73	14.1	0.97
	20	2.2	0.24	3.0	0.30	4.0	0.36	5.6	0.44	7.4	0.55	10.6	0.74	14.1	0.98
	21	2.2	0.24	3.0	0.31	4.9	0.45	6.5	0.53	8.3	0.68	11.3	0.93	14.5	1.10
	23	3.8	0.43	5.3	0.56	6.8	0.64	8.5	0.71	10.0	1.02	12.7	1.32	15.4	1.56
	25	5.6	0.68	6.8	0.85	8.7	0.96	10.6	1.13	11.7	1.47	14.1	1.92	16.3	2.26
	27	7.3	1.08	8.7	1.28	10.7	1.45	12.6	1.73	13.5	2.20	15.5	2.78	17.3	3.13
	29	9.0	1.50	10.6	1.76	12.6	2.13	14.7	2.51	15.2	2.99	16.9	3.59	18.2	3.99
	31	10.7	1.96	12.5	2.42	14.5	2.94	16.2	3.43	16.9	3.91	17.9	4.92	18.5	4.99
	33	12.3	2.42	14.3	3.16	16.4	3.78	16.9	4.80	17.4	4.88	17.9	4.92	18.5	4.99
	35	14.2	3.27	16.2	3.96	16.8	4.81	17.1	4.83	17.3	4.86	17.8	4.91	18.3	4.92
	37	14.2	3.49	16.0	4.16	16.5	4.75	16.8	4.77	17.1	4.80	17.5	4.84	18.0	4.86
	39	14.2	3.71	15.7	4.38	16.2	4.68	16.5	4.71	16.8	4.73	17.3	4.78	17.8	4.79
	41	13.8	3.94	15.1	4.60	15.6	4.62	15.8	4.64	16.1	4.67	16.6	4.71	17.1	4.73
	43	13.5	4.15	14.4	4.53	14.9	4.55	15.2	4.58	15.5	4.60	16.0	4.65	16.4	4.66
46	12.6	4.45	13.2	4.44	13.7	4.46	13.9	4.48	14.2	4.51	14.6	4.55	15.0	4.57	
48	11.2	4.32	11.4	4.33	11.9	4.34	12.1	4.36	12.3	4.39	12.7	4.42	13.1	4.44	
120	10	2.0	0.21	2.7	0.27	3.7	0.32	5.2	0.39	6.8	0.49	9.8	0.66	13.0	0.87
	12	2.0	0.21	2.7	0.27	3.7	0.33	5.2	0.40	6.8	0.50	9.8	0.66	13.0	0.88
	14	2.0	0.22	2.7	0.27	3.7	0.33	5.2	0.40	6.8	0.50	9.8	0.67	13.0	0.89
	16	2.0	0.22	2.7	0.27	3.7	0.33	5.2	0.41	6.8	0.51	9.8	0.68	13.0	0.90
	18	2.0	0.22	2.7	0.28	3.7	0.34	5.2	0.41	6.8	0.51	9.8	0.68	13.0	0.91
	20	2.0	0.22	2.7	0.28	3.7	0.34	5.2	0.41	6.8	0.52	9.8	0.69	13.0	0.91
	21	2.0	0.23	2.8	0.29	4.6	0.42	6.0	0.49	7.7	0.64	10.5	0.87	13.5	1.03
	23	3.5	0.40	5.0	0.54	6.6	0.60	7.9	0.67	9.5	0.96	11.9	1.24	14.4	1.46
	25	5.4	0.64	7.0	0.80	8.5	0.90	9.8	1.06	11.4	1.38	13.5	1.80	15.3	2.12
	27	7.6	1.00	9.6	1.20	10.5	1.35	11.6	1.61	13.3	2.04	15.0	2.58	16.3	2.95
	29	9.7	1.39	11.5	1.61	12.4	1.98	13.5	2.33	15.2	2.77	16.5	3.33	17.2	3.74
	31	11.5	1.77	13.5	2.13	14.4	2.62	15.4	3.09	16.7	3.52	17.1	4.23	17.7	4.31
	33	12.8	2.18	15.4	2.78	16.3	3.38	16.6	3.92	16.9	4.61	17.3	4.66	17.9	4.70
	35	13.1	2.91	15.6	3.77	16.5	4.17	16.7	4.96	17.0	4.99	17.5	5.00	17.9	5.04
	37	13.1	3.13	15.6	3.97	16.3	4.44	16.5	4.86	16.7	4.88	17.2	4.90	17.7	4.94
	39	13.1	3.37	15.5	4.20	16.0	4.71	16.2	4.76	16.4	4.78	17.0	4.80	17.4	4.83
	41	12.8	3.61	14.9	4.43	15.4	4.62	15.6	4.66	15.8	4.68	16.3	4.70	16.7	4.73
	43	12.5	3.85	14.2	4.36	14.7	4.51	14.9	4.56	15.2	4.58	15.6	4.60	16.1	4.63
46	11.7	4.14	13.0	4.26	13.4	4.37	13.6	4.41	13.8	4.43	14.3	4.44	14.7	4.48	
48	10.3	4.05	11.3	4.18	11.7	4.29	11.9	4.31	12.0	4.33	12.4	4.34	12.8	4.36	
110	10	1.8	0.20	2.5	0.25	3.4	0.30	4.7	0.37	6.2	0.46	9.0	0.62	11.9	0.82
	12	1.8	0.20	2.5	0.25	3.4	0.31	4.7	0.37	6.2	0.47	9.0	0.62	11.9	0.83
	14	1.8	0.20	2.5	0.25	3.4	0.31	4.7	0.38	6.2	0.47	9.0	0.63	11.9	0.83
	16	1.8	0.21	2.5	0.26	3.4	0.31	4.7	0.38	6.2	0.48	9.0	0.64	11.9	0.84
	18	1.8	0.21	2.5	0.26	3.4	0.32	4.7	0.39	6.2	0.48	9.0	0.64	11.9	0.85
	20	1.8	0.21	2.5	0.26	3.4	0.32	4.7	0.39	6.2	0.49	9.0	0.65	11.9	0.86
	21	1.8	0.21	2.5	0.27	4.2	0.40	5.6	0.46	6.9	0.60	9.7	0.82	12.5	0.97
	23	3.3	0.38	4.2	0.50	5.9	0.56	7.3	0.63	8.8	0.90	11.0	1.16	13.6	1.37
	25	4.8	0.60	5.9	0.76	7.6	0.84	9.0	1.00	10.4	1.29	12.3	1.69	14.7	1.99
	27	6.2	0.94	7.6	1.12	9.3	1.26	10.6	1.51	12.2	1.92	13.7	2.42	15.9	2.77
	29	7.7	1.31	9.2	1.51	10.9	1.86	12.4	2.19	13.9	2.61	15.1	3.07	16.7	3.40
	31	9.1	1.66	10.9	2.00	12.6	2.46	14.1	2.90	15.6	3.31	16.5	3.55	17.3	3.82
	33	10.6	2.05	12.6	2.61	14.3	3.17	15.9	3.54	16.6	3.98	17.1	4.09	17.5	4.09
	35	12.0	2.58	14.3	3.31	16.0	3.78	16.4	4.05	16.7	4.30	17.1	4.34	17.5	4.36
	37	12.0	2.73	14.3	3.52	16.0	3.99	16.2	4.29	16.4	4.53	16.8	4.55	17.2	4.56
	39	12.0	2.94	14.3	3.74	15.7	4.21	15.9	4.59	16.1	4.76	16.5	4.77	17.0	4.77
	41	11.7	3.16	13.9	3.96	15.0	4.44	15.2	4.96	15.4	4.96	15.9	5.00	16.3	5.04
	43	11.4	3.32	13.6	4.12	14.4	4.71	14.6	4.76	14.8	4.75	15.2	4.78	15.6	4.79
46	10.7	3.24	12.7	3.98	13.1	4.47	13.4	4.47	13.5	4.51	13.9	4.53	14.3	4.54	
48	9.4	3.14	11.1	3.84	11.4	4.25	11.6	4.28	11.8	4.30	12.1	4.31	12.4	4.33	

5. Capacity Tables

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14		16		18		19		20		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100	10	1.7	0.18	2.3	0.23	3.1	0.28	4.3	0.34	5.7	0.42	8.2	0.57	10.9	0.75
	12	1.7	0.19	2.3	0.23	3.1	0.28	4.3	0.34	5.7	0.43	8.2	0.57	10.9	0.76
	14	1.7	0.19	2.3	0.23	3.1	0.28	4.3	0.35	5.7	0.43	8.2	0.58	10.9	0.76
	16	1.7	0.19	2.3	0.24	3.1	0.29	4.3	0.35	5.7	0.44	8.2	0.58	10.9	0.77
	18	1.7	0.19	2.3	0.24	3.1	0.29	4.3	0.35	5.7	0.44	8.2	0.59	10.9	0.78
	20	1.7	0.19	2.3	0.24	3.1	0.29	4.3	0.36	5.7	0.45	8.2	0.60	10.9	0.79
	21	1.7	0.19	2.3	0.25	3.8	0.37	5.1	0.43	6.5	0.55	8.9	0.75	11.5	0.89
	23	2.9	0.35	4.0	0.46	5.4	0.52	6.7	0.58	8.1	0.83	10.2	1.07	12.6	1.26
	25	4.2	0.55	5.4	0.69	6.9	0.77	8.4	0.91	9.8	1.19	11.5	1.55	13.7	1.83
	27	5.4	0.87	6.9	1.03	8.4	1.16	9.9	1.39	11.4	1.76	12.8	2.22	14.8	2.54
	29	6.7	1.20	8.3	1.39	9.9	1.70	11.6	2.01	13.0	2.39	14.1	2.87	15.9	3.12
	31	7.9	1.52	9.7	1.84	11.5	2.26	13.2	2.66	14.6	3.03	15.4	3.32	17.2	3.54
	33	9.2	1.88	11.1	2.40	13.0	2.91	14.8	3.38	16.2	3.69	16.7	3.75	17.2	3.83
	35	10.5	2.26	12.5	2.89	14.5	3.59	15.5	3.97	16.2	3.99	16.7	4.01	17.2	4.04
	37	10.5	2.42	12.5	3.09	14.5	3.80	15.5	4.16	16.0	4.18	16.4	4.20	16.8	4.24
	39	10.5	2.59	12.5	3.32	14.5	4.03	15.5	4.36	15.7	4.38	16.2	4.40	16.6	4.44
	41	10.3	2.77	12.3	3.55	14.3	4.25	14.9	4.57	15.2	4.58	15.6	4.60	16.1	4.64
43	9.9	2.93	11.8	3.77	13.8	4.45	14.3	4.74	14.4	4.76	14.9	4.77	15.3	4.82	
46	9.3	3.15	11.1	4.06	12.9	4.73	13.0	4.96	13.2	4.98	13.6	4.99	13.9	5.04	
48	8.2	2.72	9.8	3.51	11.2	4.04	11.3	4.21	11.4	4.22	11.8	4.23	12.1	4.27	
90	10	1.5	0.17	2.1	0.21	2.8	0.26	3.8	0.30	5.1	0.39	7.4	0.51	9.8	0.67
	12	1.5	0.17	2.1	0.21	2.8	0.27	3.8	0.31	5.1	0.39	7.4	0.52	9.8	0.68
	14	1.5	0.17	2.1	0.21	2.8	0.27	3.8	0.31	5.1	0.40	7.4	0.53	9.8	0.69
	16	1.5	0.17	2.1	0.22	2.8	0.27	3.8	0.31	5.1	0.40	7.4	0.53	9.8	0.70
	18	1.5	0.18	2.1	0.22	2.8	0.28	3.8	0.31	5.1	0.41	7.4	0.54	9.8	0.70
	20	1.5	0.18	2.1	0.22	2.8	0.28	3.8	0.32	5.1	0.41	7.4	0.54	9.8	0.71
	21	1.5	0.18	2.1	0.22	3.5	0.35	4.5	0.38	5.8	0.49	8.0	0.60	10.3	0.78
	23	2.1	0.28	3.1	0.38	4.8	0.50	5.9	0.54	7.1	0.72	9.2	0.88	11.4	1.07
	25	3.3	0.47	4.4	0.62	6.2	0.74	7.2	0.86	8.4	1.06	10.4	1.33	12.4	1.55
	27	4.5	0.69	5.8	0.88	7.6	1.14	8.6	1.27	9.7	1.54	11.6	1.80	13.5	2.03
	29	5.7	0.93	7.1	1.21	9.0	1.59	9.9	1.76	11.0	2.03	12.8	2.31	14.5	2.69
	31	7.0	1.16	8.5	1.55	10.3	1.99	11.3	2.24	12.3	2.53	14.0	2.69	15.6	3.12
	33	8.2	1.50	9.9	1.91	11.7	2.41	12.6	2.66	13.6	2.95	15.2	3.18	16.7	3.49
	35	9.4	1.73	11.2	2.18	13.1	2.70	14.0	2.98	14.8	3.24	16.4	3.47	16.7	3.55
	37	9.4	1.83	11.2	2.32	13.1	2.88	14.0	3.16	14.8	3.42	16.1	3.63	16.4	3.71
	39	9.4	1.94	11.2	2.47	13.1	3.05	14.0	3.37	14.8	3.60	15.8	3.83	16.1	3.88
	41	9.2	2.17	10.9	2.74	12.7	3.35	13.6	3.68	14.5	3.88	15.2	4.04	15.5	4.13
43	8.9	2.35	10.7	2.96	12.4	3.65	13.3	3.97	14.1	4.16	14.6	4.32	14.8	4.37	
46	8.4	2.64	10.0	3.37	11.6	4.16	12.4	4.50	12.8	4.62	13.3	4.74	13.5	4.75	
48	7.4	2.31	8.9	2.95	10.3	3.64	11.0	3.92	11.1	3.98	11.6	4.08	11.8	4.09	
80	10	1.3	0.15	1.8	0.19	2.4	0.23	3.3	0.27	4.4	0.35	6.3	0.46	8.4	0.60
	12	1.3	0.15	1.8	0.19	2.4	0.24	3.3	0.27	4.4	0.35	6.3	0.46	8.4	0.60
	14	1.3	0.15	1.8	0.19	2.4	0.24	3.3	0.27	4.4	0.35	6.3	0.46	8.4	0.61
	16	1.3	0.15	1.8	0.19	2.4	0.24	3.3	0.28	4.4	0.36	6.3	0.47	8.4	0.61
	18	1.3	0.16	1.8	0.19	2.4	0.24	3.3	0.28	4.4	0.36	6.3	0.47	8.4	0.62
	20	1.3	0.16	1.8	0.20	2.4	0.25	3.3	0.28	4.4	0.36	6.3	0.48	8.4	0.63
	21	1.3	0.16	1.8	0.20	3.0	0.31	4.0	0.34	5.0	0.44	6.9	0.53	8.9	0.69
	23	2.3	0.29	2.9	0.35	4.2	0.44	5.3	0.49	6.2	0.64	8.0	0.78	10.0	0.95
	25	3.3	0.42	4.1	0.56	5.4	0.65	6.6	0.77	7.3	0.93	9.2	1.18	11.0	1.37
	27	4.3	0.62	5.3	0.79	6.6	1.01	7.9	1.15	8.5	1.36	10.3	1.59	12.1	1.80
	29	5.3	0.80	6.5	1.09	7.9	1.41	9.1	1.58	9.7	1.80	11.4	2.04	13.1	2.38
	31	6.3	0.98	7.6	1.37	9.1	1.76	10.4	2.02	11.1	2.18	12.6	2.35	14.2	2.73
	33	7.3	1.29	8.8	1.68	10.3	2.07	11.7	2.40	12.4	2.50	13.7	2.79	15.2	3.08
	35	8.4	1.54	10.0	1.94	11.6	2.38	12.4	2.61	13.2	2.86	14.8	3.24	16.3	3.39
	37	8.4	1.63	10.0	2.06	11.6	2.52	12.4	2.77	13.2	3.03	14.8	3.42	16.0	3.55
	39	8.4	1.73	10.0	2.18	11.6	2.70	12.4	2.98	13.2	3.26	14.8	3.61	15.7	3.74
	41	8.1	1.91	9.7	2.41	11.3	2.96	12.1	3.27	12.9	3.58	14.5	3.96	15.1	4.05
43	7.9	2.10	9.5	2.63	11.0	3.23	11.8	3.56	12.6	3.92	14.1	4.24	14.5	4.33	
46	7.4	2.34	8.9	2.96	10.3	3.64	11.0	3.96	11.8	4.42	12.9	4.70	13.2	4.75	
48	6.6	2.04	7.9	2.59	9.1	3.18	9.8	3.46	10.4	3.87	11.2	4.07	11.5	4.09	

5. Capacity Tables

Combination (%)	Outdoor Air Temp. (°C DB)	Indoor Air Temp. (DB/WB, °C)													
		20		23		26		27		28		30		32	
		14		16		18		19		20		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70	10	1.1	0.13	1.5	0.16	2.1	0.21	2.9	0.24	3.8	0.31	5.5	0.40	7.3	0.53
	12	1.1	0.13	1.5	0.17	2.1	0.21	2.9	0.24	3.8	0.31	5.5	0.41	7.3	0.53
	14	1.1	0.13	1.5	0.17	2.1	0.21	2.9	0.24	3.8	0.31	5.5	0.41	7.3	0.54
	16	1.1	0.14	1.5	0.17	2.1	0.21	2.9	0.25	3.8	0.31	5.5	0.42	7.3	0.54
	18	1.1	0.14	1.5	0.17	2.1	0.22	2.9	0.25	3.8	0.32	5.5	0.42	7.3	0.55
	20	1.1	0.14	1.5	0.17	2.1	0.22	2.9	0.25	3.8	0.32	5.5	0.42	7.3	0.55
	21	1.1	0.14	1.8	0.20	2.7	0.29	3.6	0.32	4.4	0.39	6.1	0.47	7.9	0.61
	23	1.6	0.21	2.8	0.33	3.7	0.42	4.8	0.45	5.6	0.57	7.2	0.69	9.0	0.84
	25	2.6	0.35	3.8	0.49	4.8	0.57	6.1	0.72	6.8	0.83	8.4	1.04	10.1	1.21
	27	3.5	0.50	4.8	0.70	5.9	0.85	7.3	1.06	8.0	1.20	9.5	1.40	11.1	1.59
	29	4.5	0.64	5.8	0.92	6.9	1.15	8.6	1.45	9.2	1.59	10.7	1.80	12.2	2.10
	31	5.4	0.79	6.7	1.15	8.0	1.44	9.8	1.82	10.4	1.93	11.8	2.08	13.3	2.42
	33	6.4	1.06	7.7	1.40	9.1	1.68	10.9	2.11	11.6	2.21	13.0	2.46	14.4	2.72
	35	7.3	1.29	8.7	1.61	10.1	1.95	10.9	2.13	11.6	2.33	13.0	2.74	14.4	3.00
	37	7.3	1.37	8.7	1.70	10.1	2.07	10.9	2.27	11.6	2.47	13.0	2.91	14.4	3.17
	39	7.3	1.46	8.7	1.82	10.1	2.21	10.9	2.44	11.6	2.67	13.0	3.12	14.4	3.42
41	7.1	1.61	8.5	1.99	9.9	2.43	10.6	2.67	11.3	2.91	12.6	3.43	14.0	3.69	
43	6.9	1.75	8.3	2.17	9.6	2.65	10.3	2.91	11.0	3.17	12.3	3.74	13.7	3.98	
46	6.5	1.95	7.8	2.44	9.0	2.98	9.7	3.25	10.3	3.58	11.5	4.22	12.8	4.44	
48	5.8	1.70	6.9	2.13	8.0	2.61	8.5	2.84	9.1	3.13	10.2	3.69	11.3	3.84	
60	10	1.0	0.11	1.3	0.14	1.8	0.18	2.5	0.21	3.3	0.26	4.8	0.35	6.3	0.46
	12	1.0	0.12	1.3	0.14	1.8	0.18	2.5	0.21	3.3	0.27	4.8	0.35	6.3	0.46
	14	1.0	0.12	1.3	0.15	1.8	0.18	2.5	0.21	3.3	0.27	4.8	0.36	6.3	0.47
	16	1.0	0.12	1.3	0.15	1.8	0.18	2.5	0.22	3.3	0.27	4.8	0.36	6.3	0.47
	18	1.0	0.12	1.3	0.15	1.8	0.19	2.5	0.22	3.3	0.28	4.8	0.36	6.3	0.48
	20	1.0	0.12	1.3	0.15	1.8	0.19	2.5	0.22	3.3	0.28	4.8	0.37	6.3	0.48
	21	1.0	0.12	1.3	0.16	2.2	0.24	3.0	0.27	3.8	0.33	5.2	0.40	6.7	0.53
	23	1.0	0.13	2.2	0.28	3.2	0.36	4.1	0.39	4.8	0.49	6.0	0.60	7.5	0.73
	25	1.9	0.25	3.1	0.43	4.1	0.50	5.3	0.66	5.8	0.72	7.0	0.89	8.3	1.05
	27	2.7	0.37	4.0	0.61	5.0	0.73	6.4	0.92	6.8	1.03	7.9	1.17	9.1	1.35
	29	3.6	0.48	4.8	0.78	5.9	0.98	7.5	1.21	7.8	1.31	8.7	1.47	9.9	1.73
	31	4.5	0.61	5.7	0.93	6.8	1.19	8.4	1.45	8.7	1.52	9.8	1.63	10.7	1.99
	33	5.4	0.85	6.6	1.13	7.8	1.34	9.1	1.62	9.7	1.74	10.6	1.93	11.5	2.27
	35	6.3	1.07	7.5	1.31	8.7	1.57	9.3	1.71	9.9	1.86	11.1	2.17	12.3	2.50
	37	6.3	1.13	7.5	1.38	8.7	1.66	9.3	1.82	9.9	1.97	11.1	2.30	12.3	2.66
	39	6.3	1.20	7.5	1.47	8.7	1.80	9.3	1.95	9.9	2.12	11.1	2.47	12.3	2.85
41	6.1	1.31	7.3	1.61	8.5	1.95	9.1	2.13	9.7	2.30	10.8	2.71	12.0	3.10	
43	5.9	1.42	7.1	1.76	8.3	2.13	8.8	2.32	9.4	2.51	10.6	2.96	11.7	3.39	
46	5.6	1.59	6.7	1.97	7.7	2.39	8.3	2.61	8.8	2.82	9.9	3.33	11.0	3.86	
48	4.9	1.38	5.9	1.72	6.8	2.09	7.3	2.28	7.8	2.47	8.8	2.92	9.7	3.38	
50	10	0.9	0.10	1.2	0.12	1.7	0.16	2.3	0.19	3.0	0.23	4.4	0.30	5.8	0.39
	12	0.9	0.10	1.2	0.12	1.7	0.16	2.3	0.19	3.0	0.23	4.4	0.31	5.8	0.40
	14	0.9	0.10	1.2	0.13	1.7	0.16	2.3	0.19	3.0	0.23	4.4	0.31	5.8	0.40
	16	0.9	0.10	1.2	0.13	1.7	0.16	2.3	0.20	3.0	0.24	4.4	0.31	5.8	0.41
	18	0.9	0.10	1.2	0.13	1.7	0.16	2.3	0.20	3.0	0.24	4.4	0.31	5.8	0.41
	20	0.9	0.10	1.2	0.13	1.7	0.16	2.3	0.20	3.0	0.24	4.4	0.32	5.8	0.41
	21	0.9	0.10	1.2	0.13	2.1	0.21	2.7	0.24	3.4	0.29	4.7	0.35	6.1	0.46
	23	0.9	0.11	1.9	0.23	3.0	0.31	3.8	0.37	4.4	0.43	5.5	0.52	6.7	0.63
	25	1.6	0.20	2.7	0.34	3.8	0.44	5.1	0.61	5.4	0.62	6.2	0.73	7.4	0.89
	27	2.3	0.29	3.4	0.47	4.7	0.61	5.9	0.81	6.2	0.84	6.9	0.95	8.0	1.13
	29	3.1	0.38	4.1	0.61	5.5	0.79	6.6	1.01	7.1	1.08	7.6	1.18	8.6	1.42
	31	3.8	0.49	4.8	0.73	6.2	0.96	7.2	1.12	7.6	1.19	8.3	1.28	9.3	1.57
	33	4.5	0.68	5.5	0.88	7.0	1.08	7.5	1.23	7.9	1.32	9.0	1.51	9.9	1.76
	35	5.2	0.87	6.3	1.05	7.3	1.24	7.8	1.34	8.2	1.45	9.2	1.67	10.3	1.92
	37	5.2	0.92	6.3	1.11	7.3	1.31	7.8	1.42	8.2	1.53	9.2	1.78	10.3	2.04
	39	5.2	0.99	6.3	1.19	7.3	1.40	7.8	1.53	8.2	1.65	9.2	1.90	10.3	2.20
41	5.1	1.07	6.1	1.29	7.1	1.54	7.6	1.66	8.0	1.78	9.0	2.08	10.0	2.39	
43	5.0	1.16	5.9	1.40	6.9	1.67	7.4	1.81	7.8	1.94	8.8	2.27	9.8	2.61	
46	4.7	1.30	5.6	1.57	6.5	1.87	6.9	2.03	7.3	2.18	8.2	2.55	9.2	2.94	
48	4.1	1.13	4.9	1.37	5.7	1.63	6.1	1.77	6.5	1.90	7.3	2.23	8.1	2.57	

Note
 1. TC: Total Capacity(kW), PI : Power Input(kW, Comp. + Outdoor fan motor)
 2. Capacity tables show the average value of conditions which may occur.

5. Capacity Tables

5.2 Heating Capacity

5.2.1 Standard mode

◆ ARUB060GSS4

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130	-24.8	-25	11.2	6.30	11.2	6.34	11.1	6.38	11.1	6.43	11.1	6.48	10.9	6.57
	-21.8	-22	13.6	6.38	13.6	6.42	13.5	6.46	13.5	6.51	13.5	6.57	13.2	6.65
	-19.8	-20	14.3	6.44	14.3	6.48	14.2	6.51	14.2	6.57	14.2	6.62	14.0	6.71
	-18.8	-19	14.7	6.46	14.7	6.51	14.6	6.54	14.6	6.60	14.6	6.65	14.3	6.74
	-16.7	-17	15.4	6.52	15.4	6.57	15.3	6.60	15.3	6.66	15.3	6.71	15.0	6.79
	-13.7	-15	16.4	6.61	16.4	6.65	16.3	6.69	16.3	6.74	16.3	6.79	16.0	6.49
	-11.8	-13	16.9	6.66	16.9	6.70	16.8	6.74	16.8	6.79	16.8	6.59	16.6	6.30
	-9.8	-11	17.5	6.72	17.5	6.76	17.4	6.79	17.4	6.57	17.4	6.37	17.2	6.09
	-9.5	-10	17.6	6.72	17.6	6.77	17.5	6.76	17.5	6.53	17.5	6.33	17.3	6.06
	-8.5	-9.1	17.9	6.75	17.9	6.79	17.8	6.64	17.8	6.42	17.7	6.22	17.7	5.96
	-7	-7.6	18.4	6.79	18.4	6.62	18.3	6.46	18.3	6.25	18.3	6.06	18.2	5.81
	-5	-5.6	19.1	6.55	19.1	6.38	19.0	6.22	19.0	6.02	19.0	5.84	18.8	5.60
	-3	-3.7	19.7	6.31	19.7	6.14	19.6	5.99	19.6	5.79	19.6	5.62	19.5	5.40
	0	-0.7	20.7	5.95	20.7	5.78	20.6	5.63	20.6	5.45	20.6	5.29	20.3	5.10
	3	2.2	21.7	5.59	21.7	5.42	21.6	5.27	21.6	5.11	21.6	4.96	20.3	4.79
	5	4.1	22.4	5.35	22.4	5.18	22.3	5.03	22.3	4.88	21.8	4.74	20.3	4.59
7	6	23.1	5.11	23.1	4.94	22.9	4.80	22.6	4.66	21.8	4.52	20.3	4.38	
9	7.9	23.3	4.90	23.3	4.74	23.2	4.60	22.6	4.47	21.8	4.34	20.3	4.21	
11	9.8	23.3	4.74	23.3	4.58	23.2	4.45	22.6	4.32	21.8	4.19	20.3	4.07	
13	11.8	23.3	4.56	23.3	4.42	23.2	4.29	22.6	4.16	21.8	4.04	20.3	3.92	
15	13.7	23.3	4.38	23.3	4.24	23.2	4.11	22.6	4.00	21.8	3.88	20.3	3.76	
120	-24.8	-25	11.1	6.34	11.1	6.38	11.0	6.43	11.0	6.48	11.0	6.57	10.8	6.63
	-21.8	-22	13.5	6.42	13.5	6.46	13.4	6.51	13.4	6.57	13.4	6.65	13.1	6.71
	-19.8	-20	14.2	6.48	14.2	6.51	14.1	6.57	14.1	6.62	14.1	6.71	13.9	6.77
	-18.8	-19	14.6	6.51	14.6	6.54	14.5	6.60	14.5	6.65	14.5	6.74	14.2	6.79
	-16.7	-17	15.3	6.57	15.3	6.60	15.2	6.66	15.2	6.71	15.2	6.79	14.9	6.60
	-13.7	-15	16.3	6.65	16.3	6.69	16.2	6.74	16.2	6.79	16.2	6.50	15.8	6.32
	-11.8	-13	16.8	6.70	16.8	6.74	16.7	6.79	16.7	6.58	16.7	6.31	16.5	6.14
	-9.8	-11	17.4	6.76	17.4	6.79	17.3	6.56	17.3	6.36	17.3	6.12	17.1	5.95
	-9.5	-10	17.5	6.77	17.5	6.76	17.4	6.53	17.4	6.33	17.4	6.09	17.2	5.92
	-8.5	-9.1	17.8	6.79	17.8	6.63	17.7	6.41	17.7	6.22	17.7	5.99	17.5	5.83
	-7	-7.6	18.3	6.60	18.3	6.44	18.2	6.23	18.2	6.05	18.2	5.84	18.0	5.69
	-5	-5.6	18.9	6.35	18.9	6.19	18.8	6.00	18.8	5.83	18.8	5.64	18.7	5.50
	-3	-3.7	19.6	6.09	19.6	5.94	19.5	5.76	19.5	5.61	19.5	5.45	19.1	5.32
	0	-0.7	20.6	5.71	20.6	5.56	20.5	5.41	20.5	5.28	20.5	5.15	19.1	5.04
	3	2.2	21.6	5.33	21.6	5.19	21.5	5.06	21.2	4.95	20.5	4.86	19.1	4.76
	5	4.1	22.2	5.07	22.2	4.94	21.9	4.83	21.2	4.73	20.5	4.66	19.1	4.57
7	6	22.9	4.81	22.8	4.68	21.9	4.59	21.2	4.50	20.5	4.46	19.1	4.38	
9	7.9	23.1	4.61	22.8	4.49	21.9	4.40	21.2	4.32	20.5	4.28	19.1	4.20	
11	9.8	23.1	4.45	22.8	4.33	21.9	4.25	21.2	4.17	20.5	4.13	19.1	4.05	
13	11.8	23.1	4.28	22.8	4.17	21.9	4.08	21.2	4.01	20.5	3.97	19.1	3.90	
15	13.7	23.1	4.10	22.8	3.99	21.9	3.91	21.2	3.84	20.5	3.80	19.1	3.73	
110	-24.8	-25	11.0	6.38	11.0	6.43	11.0	6.48	11.0	6.57	11.0	6.63	10.7	6.65
	-21.8	-22	13.4	6.46	13.4	6.51	13.3	6.57	13.3	6.65	13.3	6.71	13.1	6.74
	-19.8	-20	14.2	6.51	14.2	6.57	14.1	6.62	14.1	6.71	14.1	6.77	13.8	6.79
	-18.8	-19	14.5	6.54	14.5	6.60	14.4	6.65	14.4	6.74	14.4	6.79	14.1	6.69
	-16.7	-17	15.2	6.60	15.2	6.66	15.1	6.71	15.1	6.79	15.1	6.59	14.8	6.48
	-13.7	-15	16.2	6.69	16.2	6.74	16.1	6.79	16.1	6.48	16.1	6.29	16.1	6.18
	-11.8	-13	16.7	6.74	16.7	6.79	16.6	6.57	16.6	6.27	16.6	6.10	16.6	5.99
	-9.8	-11	17.3	6.79	17.3	6.54	17.2	6.33	17.2	6.06	17.2	5.90	17.1	5.79
	-9.5	-10	17.4	6.75	17.4	6.50	17.3	6.30	17.3	6.03	17.3	5.87	17.2	5.76
	-8.5	-9.1	17.7	6.61	17.7	6.37	17.6	6.18	17.6	5.92	17.6	5.77	17.2	5.66
	-7	-7.6	18.2	6.40	18.2	6.18	18.1	6.00	18.1	5.77	18.1	5.62	17.2	5.51
	-5	-5.6	18.8	6.12	18.8	5.92	18.7	5.76	18.7	5.55	18.4	5.42	17.2	5.30
	-3	-3.7	19.5	5.85	19.5	5.67	19.4	5.52	19.0	5.34	18.4	5.22	17.2	5.10
	0	-0.7	20.5	5.43	20.5	5.28	19.7	5.17	19.0	5.02	18.4	4.92	17.2	4.80
	3	2.2	21.5	5.01	21.0	4.90	19.7	4.81	19.0	4.71	18.4	4.62	17.2	4.50
	5	4.1	22.1	4.73	21.0	4.64	19.7	4.57	19.0	4.49	18.4	4.43	17.2	4.30
7	6	22.2	4.45	21.0	4.38	19.7	4.33	19.0	4.28	18.4	4.23	17.2	4.10	
9	7.9	22.2	4.25	21.0	4.18	19.7	4.14	19.0	4.09	18.4	4.03	17.2	3.91	
11	9.8	22.2	4.08	21.0	4.02	19.7	3.97	19.0	3.93	18.4	3.88	17.2	3.76	
13	11.8	22.2	3.90	21.0	3.84	19.7	3.80	19.0	3.76	18.4	3.71	17.2	3.59	
15	13.7	22.2	3.72	21.0	3.66	19.7	3.62	19.0	3.58	18.4	3.53	17.2	3.42	

5. Capacity Tables

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100	-24.8	-25	11.0	7.06	11.0	7.03	10.9	6.52	10.9	6.94	10.9	6.90	10.7	6.88
	-21.8	-22	13.4	7.01	13.4	6.97	13.3	6.73	13.3	6.89	13.3	6.94	13.0	6.83
	-19.8	-20	14.1	6.97	14.1	6.94	14.0	6.86	14.0	6.85	14.0	6.84	13.7	6.79
	-18.8	-19	14.4	6.95	14.3	6.92	14.3	6.89	14.3	6.83	14.3	6.79	14.0	6.68
	-16.7	-17	15.0	6.92	15.0	6.88	15.0	6.94	14.9	6.79	14.9	6.55	14.6	6.43
	-13.7	-15	16.1	6.86	16.1	6.83	16.0	6.79	16.0	6.43	16.0	6.19	15.7	6.07
	-11.8	-13	16.6	6.83	16.5	6.79	16.5	6.55	16.5	6.20	16.5	5.97	15.7	5.84
	-9.8	-11	17.2	6.79	17.2	6.52	17.1	6.29	17.1	5.96	16.8	5.73	15.7	5.61
	-9.5	-10	17.3	6.75	17.3	6.47	17.2	6.25	17.2	5.92	16.8	5.70	15.7	5.57
	-8.5	-9.1	17.6	6.60	17.6	6.33	17.5	6.12	17.4	5.80	16.8	5.58	15.7	5.45
	-7	-7.6	18.4	6.38	18.3	6.13	18.0	5.92	17.4	5.62	16.8	5.40	15.7	5.27
	-5	-5.6	19.2	6.08	19.0	5.85	18.0	5.66	17.4	5.38	16.8	5.17	15.7	5.04
	-3	-3.7	19.8	5.79	19.2	5.57	18.0	5.40	17.4	5.13	16.8	4.93	15.7	4.80
	0	-0.7	20.3	5.34	19.2	5.15	18.0	5.01	17.4	4.77	16.8	4.58	15.7	4.44
	3	2.2	20.3	4.90	19.2	4.73	18.0	4.62	17.4	4.41	16.8	4.22	15.7	4.08
	5	4.1	20.3	4.60	19.2	4.45	18.0	4.36	17.4	4.16	16.8	3.99	15.7	3.85
	7	6	20.3	4.31	19.2	4.17	18.0	4.10	17.4	3.92	16.8	3.75	15.7	3.61
9	7.9	20.3	4.08	19.2	3.96	18.0	3.89	17.4	3.72	16.8	3.56	15.7	3.42	
11	9.8	20.3	3.89	19.2	3.77	18.0	3.71	17.4	3.55	16.8	3.39	15.7	3.26	
13	11.8	20.3	3.69	19.2	3.58	18.0	3.51	17.4	3.36	16.8	3.22	15.7	3.09	
15	13.7	20.3	3.48	19.2	3.37	18.0	3.31	17.4	3.17	16.8	3.03	15.7	2.92	
90	-24.8	-25	10.9	6.27	10.9	6.36	10.9	6.42	10.9	6.44	10.9	6.50	10.6	6.58
	-21.8	-22	13.3	6.36	13.3	6.44	13.2	6.50	13.2	6.53	13.2	6.58	13.0	6.27
	-19.8	-20	14.0	6.41	14.0	6.50	13.9	6.56	13.9	6.58	13.9	6.37	13.7	6.06
	-18.8	-19	14.4	6.44	14.3	6.52	14.3	6.58	14.3	6.47	14.3	6.26	14.0	5.96
	-16.7	-17	15.0	6.50	15.0	6.58	15.0	6.35	15.0	6.24	15.0	6.03	14.3	5.74
	-13.7	-15	16.1	6.58	16.1	6.23	16.0	6.02	16.0	5.90	15.4	5.71	14.3	5.43
	-11.8	-13	16.6	6.34	16.5	6.01	16.5	5.80	16.0	5.69	15.4	5.51	14.3	5.23
	-9.8	-11	17.2	6.08	17.2	5.78	16.5	5.58	16.0	5.47	15.4	5.29	14.3	5.03
	-9.5	-10	17.3	6.05	17.3	5.74	16.5	5.55	16.0	5.43	15.4	5.26	14.3	4.99
	-8.5	-9.1	17.6	5.92	17.5	5.63	16.5	5.44	16.0	5.32	15.4	5.15	14.3	4.89
	-7	-7.6	18.4	5.73	17.5	5.45	16.5	5.27	16.0	5.15	15.4	4.99	14.3	4.74
	-5	-5.6	18.6	5.47	17.5	5.22	16.5	5.05	16.0	4.93	15.4	4.77	14.3	4.53
	-3	-3.7	18.6	5.22	17.5	4.98	16.5	4.83	16.0	4.70	15.4	4.56	14.3	4.32
	0	-0.7	18.6	4.83	17.5	4.63	16.5	4.49	16.0	4.37	15.4	4.23	14.3	4.01
	3	2.2	18.6	4.45	17.5	4.28	16.5	4.16	16.0	4.03	15.4	3.91	14.3	3.70
	5	4.1	18.6	4.19	17.5	4.05	16.5	3.94	16.0	3.81	15.4	3.70	14.3	3.49
	7	6	18.6	3.94	17.5	3.82	16.5	3.71	16.0	3.59	15.4	3.48	14.3	3.28
9	7.9	18.6	3.70	17.5	3.59	16.5	3.49	16.0	3.37	15.4	3.27	14.3	3.08	
11	9.8	18.6	3.47	17.5	3.36	16.5	3.27	16.0	3.16	15.4	3.06	14.3	2.89	
13	11.8	18.6	3.23	17.5	3.13	16.5	3.05	16.0	2.94	15.4	2.85	14.3	2.69	
15	13.7	18.6	2.99	17.5	2.90	16.5	2.82	16.0	2.73	15.4	2.65	14.3	2.49	
80	-24.8	-25	10.9	5.53	10.9	5.61	10.8	5.67	10.8	5.70	10.8	5.84	10.6	5.56
	-21.8	-22	13.2	5.61	13.2	5.69	13.2	5.75	13.2	5.84	13.2	5.56	12.8	5.30
	-19.8	-20	13.9	5.67	13.9	5.75	13.9	5.84	13.9	5.64	13.8	5.38	12.8	5.13
	-18.8	-19	14.2	5.69	14.2	5.84	14.2	5.74	14.2	5.54	13.8	5.29	12.8	5.04
	-16.7	-17	14.7	5.84	14.7	5.63	14.7	5.53	14.3	5.34	13.8	5.10	12.8	4.86
	-13.7	-15	15.4	5.52	15.1	5.33	14.7	5.23	14.3	5.05	13.8	4.82	12.8	4.60
	-11.8	-13	15.8	5.32	15.3	5.14	14.7	5.04	14.3	4.86	13.8	4.65	12.8	4.43
	-9.8	-11	16.2	5.11	15.5	4.94	14.7	4.84	14.3	4.67	13.8	4.47	12.8	4.26
	-9.5	-10	16.3	5.08	15.6	4.91	14.7	4.81	14.3	4.64	13.8	4.44	12.8	4.23
	-8.5	-9.1	16.5	4.98	15.7	4.81	14.7	4.71	14.3	4.54	13.8	4.35	12.8	4.14
	-7	-7.6	16.6	4.82	15.7	4.66	14.7	4.56	14.3	4.39	13.8	4.21	12.8	4.01
	-5	-5.6	16.6	4.61	15.7	4.46	14.7	4.36	14.3	4.20	13.8	4.03	12.8	3.84
	-3	-3.7	16.6	4.40	15.7	4.26	14.7	4.16	14.3	4.00	13.8	3.84	12.8	3.67
	0	-0.7	16.6	4.09	15.7	3.96	14.7	3.86	14.3	3.71	13.8	3.57	12.8	3.41
	3	2.2	16.6	3.77	15.7	3.66	14.7	3.56	14.3	3.42	13.8	3.29	12.8	3.14
	5	4.1	16.6	3.56	15.7	3.46	14.7	3.36	14.3	3.22	13.8	3.11	12.8	2.97
	7	6	16.6	3.35	15.7	3.26	14.7	3.16	14.3	3.03	13.8	2.93	12.8	2.80
9	7.9	16.6	3.15	15.7	3.06	14.7	2.97	14.3	2.84	13.8	2.75	12.8	2.63	
11	9.8	16.6	2.92	15.7	2.84	14.7	2.75	14.3	2.64	13.8	2.55	12.8	2.44	
13	11.8	16.6	2.73	15.7	2.65	14.7	2.57	14.3	2.46	13.8	2.38	12.8	2.27	
15	13.7	16.6	2.57	15.7	2.49	14.7	2.42	14.3	2.32	13.8	2.24	12.8	2.14	

5. Capacity Tables

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70	-24.8	-25	10.9	5.53	10.9	5.56	10.8	5.62	10.8	5.70	10.8	5.41	10.6	5.13
	-21.8	-22	12.6	5.62	12.6	5.65	12.5	5.70	12.1	5.41	11.8	5.13	11.0	4.87
	-19.8	-20	13.8	5.67	13.3	5.70	12.5	5.49	12.1	5.21	11.8	4.95	11.0	4.70
	-18.8	-19	14.1	5.70	13.3	5.59	12.5	5.39	12.1	5.11	11.8	4.86	11.0	4.61
	-16.7	-17	14.1	5.47	13.3	5.37	12.5	5.17	12.1	4.91	11.8	4.67	11.0	4.43
	-13.7	-15	14.1	5.15	13.3	5.04	12.5	4.86	12.1	4.61	11.8	4.40	11.0	4.16
	-11.8	-13	14.1	4.95	13.3	4.84	12.5	4.66	12.1	4.43	11.8	4.22	11.0	4.00
	-9.8	-11	14.1	4.73	13.3	4.62	12.5	4.45	12.1	4.23	11.8	4.04	11.0	3.82
	-9.5	-10	14.1	4.70	13.3	4.59	12.5	4.42	12.1	4.20	11.8	4.01	11.0	3.80
	-8.5	-9.1	14.1	4.59	13.3	4.48	12.5	4.32	12.1	4.10	11.8	3.92	11.0	3.71
	-7	-7.6	14.1	4.43	13.3	4.32	12.5	4.16	12.1	3.96	11.8	3.78	11.0	3.58
	-5	-5.6	14.1	4.21	13.3	4.10	12.5	3.96	12.1	3.76	11.8	3.60	11.0	3.41
	-3	-3.7	14.1	4.00	13.3	3.88	12.5	3.75	12.1	3.57	11.8	3.42	11.0	3.23
	0	-0.7	14.1	3.67	13.3	3.56	12.5	3.44	12.1	3.27	11.8	3.15	11.0	2.97
	3	2.2	14.1	3.35	13.3	3.24	12.5	3.12	12.1	2.98	11.8	2.87	11.0	2.71
	5	4.1	14.1	3.14	13.3	3.02	12.5	2.92	12.1	2.78	11.8	2.69	11.0	2.53
	7	6	14.1	2.92	13.3	2.80	12.5	2.71	12.1	2.59	11.8	2.51	11.0	2.36
9	7.9	14.1	2.64	13.3	2.53	12.5	2.45	12.1	2.34	11.8	2.26	11.0	2.13	
11	9.8	14.1	2.45	13.3	2.36	12.5	2.28	12.1	2.17	11.8	2.11	11.0	1.98	
13	11.8	14.1	2.30	13.3	2.20	12.5	2.13	12.1	2.03	11.8	1.97	11.0	1.85	
15	13.7	14.1	2.17	13.3	2.08	12.5	2.01	12.1	1.92	11.8	1.86	11.0	1.75	
60	-24.8	-25	10.8	5.48	10.8	5.53	10.8	5.62	10.4	5.31	10.0	5.01	9.4	4.74
	-21.8	-22	11.6	5.56	11.5	5.62	10.8	5.31	10.4	5.01	10.0	4.74	9.4	4.48
	-19.8	-20	12.1	5.62	11.5	5.40	10.8	5.10	10.4	4.82	10.0	4.56	9.4	4.31
	-18.8	-19	12.1	5.50	11.5	5.28	10.8	4.99	10.4	4.72	10.0	4.47	9.4	4.22
	-16.7	-17	12.1	5.27	11.5	5.05	10.8	4.78	10.4	4.52	10.0	4.28	9.4	4.04
	-13.7	-15	12.1	4.93	11.5	4.72	10.8	4.46	10.4	4.23	10.0	4.01	9.4	3.78
	-11.8	-13	12.1	4.71	11.5	4.51	10.8	4.27	10.4	4.05	10.0	3.84	9.4	3.61
	-9.8	-11	12.1	4.49	11.5	4.29	10.8	4.06	10.4	3.85	10.0	3.66	9.4	3.44
	-9.5	-10	12.1	4.45	11.5	4.25	10.8	4.03	10.4	3.82	10.0	3.63	9.4	3.41
	-8.5	-9.1	12.1	4.34	11.5	4.14	10.8	3.92	10.4	3.73	10.0	3.54	9.4	3.33
	-7	-7.6	12.1	4.17	11.5	3.98	10.8	3.77	10.4	3.58	10.0	3.40	9.4	3.20
	-5	-5.6	12.1	3.95	11.5	3.76	10.8	3.56	10.4	3.39	10.0	3.22	9.4	3.02
	-3	-3.7	12.1	3.72	11.5	3.53	10.8	3.35	10.4	3.19	10.0	3.04	9.4	2.85
	0	-0.7	12.1	3.38	11.5	3.20	10.8	3.04	10.4	2.90	10.0	2.77	9.4	2.59
	3	2.2	12.1	3.04	11.5	2.87	10.8	2.73	10.4	2.61	10.0	2.49	9.4	2.33
	5	4.1	12.1	2.82	11.5	2.65	10.8	2.52	10.4	2.42	10.0	2.31	9.4	2.16
	7	6	12.1	2.59	11.5	2.43	10.8	2.31	10.4	2.22	10.0	2.13	9.4	1.98
9	7.9	12.1	2.31	11.5	2.16	10.8	2.06	10.4	1.98	10.0	1.90	9.4	1.77	
11	9.8	12.1	2.16	11.5	2.02	10.8	1.93	10.4	1.85	10.0	1.78	9.4	1.65	
13	11.8	12.1	2.02	11.5	1.89	10.8	1.81	10.4	1.73	10.0	1.66	9.4	1.55	
15	13.7	12.1	1.91	11.5	1.79	10.8	1.71	10.4	1.64	10.0	1.57	9.4	1.46	
50	-24.8	-25	10.1	4.76	9.5	4.85	9.0	4.57	8.7	4.32	8.4	4.08	7.8	3.86
	-21.8	-22	10.1	4.85	9.5	4.57	9.0	4.32	8.7	4.08	8.4	3.86	7.8	3.65
	-19.8	-20	10.1	4.65	9.5	4.39	9.0	4.15	8.7	3.92	8.4	3.71	7.8	3.51
	-18.8	-19	10.1	4.56	9.5	4.30	9.0	4.07	8.7	3.84	8.4	3.64	7.8	3.44
	-16.7	-17	10.1	4.36	9.5	4.11	9.0	3.89	8.7	3.68	8.4	3.48	7.8	3.29
	-13.7	-15	10.1	4.07	9.5	3.84	9.0	3.63	8.7	3.44	8.4	3.26	7.8	3.08
	-11.8	-13	10.1	3.89	9.5	3.66	9.0	3.47	8.7	3.29	8.4	3.12	7.8	2.94
	-9.8	-11	10.1	3.70	9.5	3.48	9.0	3.30	8.7	3.13	8.4	2.97	7.8	2.80
	-9.5	-10	10.1	3.67	9.5	3.46	9.0	3.28	8.7	3.10	8.4	2.95	7.8	2.78
	-8.5	-9.1	10.1	3.57	9.5	3.36	9.0	3.20	8.7	3.02	8.4	2.88	7.8	2.71
	-7	-7.6	10.1	3.43	9.5	3.23	9.0	3.07	8.7	2.90	8.4	2.77	7.8	2.61
	-5	-5.6	10.1	3.24	9.5	3.05	9.0	2.90	8.7	2.74	8.4	2.62	7.8	2.46
	-3	-3.7	10.1	3.05	9.5	2.87	9.0	2.73	8.7	2.59	8.4	2.47	7.8	2.32
	0	-0.7	10.1	2.76	9.5	2.59	9.0	2.48	8.7	2.35	8.4	2.25	7.8	2.11
	3	2.2	10.1	2.47	9.5	2.32	9.0	2.22	8.7	2.11	8.4	2.03	7.8	1.90
	5	4.1	10.1	2.28	9.5	2.14	9.0	2.05	8.7	1.95	8.4	1.88	7.8	1.76
	7	6	10.1	2.09	9.5	1.96	9.0	1.88	8.7	1.79	8.4	1.73	7.8	1.62
9	7.9	10.1	1.89	9.5	1.77	9.0	1.70	8.7	1.62	8.4	1.57	7.8	1.46	
11	9.8	10.1	1.77	9.5	1.65	9.0	1.59	8.7	1.51	8.4	1.47	7.8	1.37	
13	11.8	10.1	1.66	9.5	1.55	9.0	1.49	8.7	1.42	8.4	1.38	7.8	1.28	
15	13.7	10.1	1.57	9.5	1.47	9.0	1.41	8.7	1.34	8.4	1.30	7.8	1.21	

Note

1. TC: Total Capacity(kW), PI : Power Input(kW, Comp. + Outdoor fan motor)
2. Capacity tables show the average value of conditions which may occur.
3. In the range beyond the operation limit of the outdoor unit, continuous operation and performance can not be guaranteed. When selecting the outdoor units, avoid the air temperature range that is not guaranteed continuous operation.

5. Capacity Tables

5.2.2 SLC mode

◆ ARUB060GSS4

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130	-24.8	-25	11.2	6.30	11.2	6.34	11.1	6.38	11.1	6.43	11.1	6.48	10.9	6.57
	-21.8	-22	13.6	6.38	13.6	6.42	13.5	6.46	13.5	6.51	13.5	6.57	13.2	6.65
	-19.8	-20	14.3	6.44	14.3	6.48	14.2	6.51	14.2	6.57	14.2	6.62	14.0	6.71
	-18.8	-19	14.7	6.46	14.7	6.51	14.6	6.54	14.6	6.60	14.6	6.65	14.3	6.74
	-16.7	-17	15.4	6.52	15.4	6.57	15.3	6.60	15.3	6.66	15.3	6.71	15.0	6.79
	-13.7	-15	16.4	6.61	16.4	6.65	16.3	6.69	16.3	6.74	16.3	6.79	16.0	6.49
	-11.8	-13	16.9	6.66	16.9	6.70	16.8	6.74	16.8	6.79	16.8	6.84	16.6	6.30
	-9.8	-11	17.5	6.72	17.5	6.76	17.4	6.79	17.4	6.84	17.4	6.89	17.2	6.09
	-9.5	-10	17.6	6.72	17.6	6.77	17.5	6.76	17.5	6.81	17.5	6.86	17.3	6.06
	-8.5	-9.1	17.9	6.75	17.9	6.79	17.8	6.84	17.8	6.89	17.7	6.94	17.7	6.06
	-7	-7.6	18.4	6.79	18.4	6.84	18.3	6.89	18.3	6.94	18.3	6.99	18.2	5.81
	-5	-5.6	19.1	6.55	19.1	6.58	19.0	6.62	19.0	6.66	19.0	6.70	18.8	5.60
	-3	-3.7	19.7	6.31	19.7	6.34	19.6	6.38	19.6	6.42	19.6	6.46	19.5	5.40
	0	-0.7	20.7	5.95	20.7	6.00	20.6	6.04	20.6	6.08	20.6	6.12	20.3	5.10
	3	2.2	21.7	5.59	21.7	5.64	21.6	5.68	21.6	5.72	21.6	5.76	20.3	4.79
	5	4.1	22.0	4.87	22.0	4.92	21.8	4.96	21.8	5.00	21.8	5.04	19.9	4.15
7	6	22.1	4.54	22.0	4.59	21.9	4.63	21.9	4.67	21.9	4.71	19.4	3.90	
9	7.9	21.4	4.16	21.4	4.21	21.3	4.25	21.3	4.29	21.3	4.33	18.7	3.57	
11	9.8	20.3	3.83	20.2	3.88	20.2	3.92	20.2	3.96	20.2	4.00	17.7	3.29	
13	11.8	19.0	3.45	19.0	3.50	18.9	3.54	18.9	3.58	18.9	3.62	16.6	2.96	
15	13.7	18.0	3.12	18.0	3.17	17.9	3.21	17.9	3.25	17.9	3.29	15.7	2.68	
120	-24.8	-25	11.1	6.34	11.1	6.38	11.0	6.43	11.0	6.48	11.0	6.53	10.8	6.63
	-21.8	-22	13.5	6.42	13.5	6.46	13.4	6.51	13.4	6.56	13.4	6.61	13.1	6.71
	-19.8	-20	14.2	6.48	14.2	6.53	14.1	6.57	14.1	6.62	14.1	6.67	13.9	6.77
	-18.8	-19	14.6	6.51	14.6	6.56	14.5	6.60	14.5	6.65	14.5	6.70	14.2	6.79
	-16.7	-17	15.3	6.57	15.3	6.62	15.2	6.66	15.2	6.71	15.2	6.76	14.9	6.60
	-13.7	-15	16.3	6.65	16.3	6.69	16.2	6.74	16.2	6.79	16.2	6.84	15.8	6.32
	-11.8	-13	16.8	6.70	16.8	6.75	16.7	6.79	16.7	6.84	16.7	6.89	16.5	6.14
	-9.8	-11	17.4	6.76	17.4	6.81	17.3	6.85	17.3	6.90	17.3	6.95	17.1	5.95
	-9.5	-10	17.5	6.77	17.5	6.82	17.4	6.86	17.4	6.91	17.4	6.96	17.2	5.92
	-8.5	-9.1	17.8	6.79	17.8	6.84	17.7	6.88	17.7	6.93	17.7	6.98	17.5	5.83
	-7	-7.6	18.3	6.60	18.3	6.65	18.2	6.70	18.2	6.75	18.2	6.80	18.0	5.69
	-5	-5.6	18.9	6.35	18.9	6.40	18.8	6.45	18.8	6.50	18.8	6.55	18.7	5.50
	-3	-3.7	19.6	6.09	19.6	6.14	19.5	6.19	19.5	6.24	19.5	6.29	19.1	5.32
	0	-0.7	20.6	5.71	20.6	5.76	20.5	5.81	20.5	5.86	20.5	5.91	19.1	5.04
	3	2.2	21.6	5.33	21.6	5.38	21.5	5.43	21.5	5.48	21.5	5.53	19.1	4.76
	5	4.1	21.9	4.61	21.8	4.66	21.8	4.71	21.8	4.76	21.8	4.81	18.7	4.12
7	6	21.9	4.29	21.8	4.34	21.9	4.39	21.9	4.44	21.9	4.49	18.2	3.90	
9	7.9	21.3	3.92	21.0	3.97	21.0	4.02	21.0	4.07	21.0	4.12	17.6	3.56	
11	9.8	20.1	3.60	19.9	3.65	19.9	3.70	19.9	3.75	19.9	3.80	16.6	3.27	
13	11.8	18.9	3.23	18.7	3.28	18.7	3.33	18.7	3.38	18.7	3.43	15.6	2.94	
15	13.7	17.9	2.91	17.7	2.96	17.7	3.01	17.7	3.06	17.7	3.11	14.8	2.65	
110	-24.8	-25	11.0	6.38	11.0	6.43	11.0	6.48	11.0	6.53	11.0	6.58	10.7	6.65
	-21.8	-22	13.4	6.46	13.4	6.51	13.3	6.56	13.3	6.61	13.3	6.66	13.1	6.74
	-19.8	-20	14.2	6.51	14.2	6.56	14.1	6.61	14.1	6.66	14.1	6.71	13.8	6.79
	-18.8	-19	14.5	6.54	14.5	6.59	14.4	6.64	14.4	6.69	14.4	6.74	14.1	6.69
	-16.7	-17	15.2	6.60	15.2	6.65	15.1	6.70	15.1	6.75	15.1	6.80	14.8	6.48
	-13.7	-15	16.2	6.69	16.2	6.74	16.1	6.79	16.1	6.84	16.1	6.89	16.1	6.18
	-11.8	-13	16.7	6.74	16.7	6.79	16.6	6.84	16.6	6.89	16.6	6.94	16.6	5.99
	-9.8	-11	17.3	6.79	17.3	6.84	17.2	6.89	17.2	6.94	17.2	6.99	17.1	5.79
	-9.5	-10	17.4	6.75	17.4	6.80	17.3	6.85	17.3	6.90	17.3	6.95	17.2	5.76
	-8.5	-9.1	17.7	6.61	17.7	6.66	17.6	6.71	17.6	6.76	17.6	6.81	17.2	5.66
	-7	-7.6	18.2	6.40	18.2	6.45	18.1	6.50	18.1	6.55	18.1	6.60	17.2	5.51
	-5	-5.6	18.8	6.12	18.8	6.17	18.7	6.22	18.7	6.27	18.7	6.32	17.2	5.30
	-3	-3.7	19.5	5.85	19.5	5.90	19.4	5.95	19.4	6.00	19.4	6.05	17.2	5.10
	0	-0.7	20.5	5.43	20.5	5.48	20.4	5.53	20.4	5.58	20.4	5.63	17.2	4.80
	3	2.2	21.5	5.01	21.0	5.06	21.0	5.11	21.0	5.16	21.0	5.21	17.2	4.50
	5	4.1	21.7	4.30	20.6	4.35	20.6	4.40	20.6	4.45	20.6	4.50	16.8	3.88
7	6	21.2	3.96	20.0	4.01	20.0	4.06	20.0	4.11	20.0	4.16	16.4	3.65	
9	7.9	20.4	3.60	19.3	3.65	19.3	3.70	19.3	3.75	19.3	3.80	15.8	3.32	
11	9.8	19.3	3.29	18.2	3.34	18.2	3.39	18.2	3.44	18.2	3.49	14.9	3.03	
13	11.8	18.1	2.94	17.1	2.99	17.1	3.04	17.1	3.09	17.1	3.14	14.0	2.70	
15	13.7	17.2	2.63	16.2	2.68	16.2	2.73	16.2	2.78	16.2	2.83	13.3	2.42	

5. Capacity Tables

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100	-24.8	-25	11.0	7.06	11.0	7.03	10.9	6.52	10.9	6.94	10.9	6.90	10.7	6.88
	-21.8	-22	13.4	7.01	13.4	6.97	13.3	6.73	13.3	6.89	13.3	6.94	13.0	6.83
	-19.8	-20	14.1	6.97	14.1	6.94	14.0	6.86	14.0	6.85	14.0	6.84	13.7	6.79
	-18.8	-19	14.4	6.95	14.3	6.92	14.3	6.89	14.3	6.83	14.3	6.79	14.0	6.68
	-16.7	-17	15.0	6.92	15.0	6.88	15.0	6.94	14.9	6.79	14.9	6.55	14.6	6.43
	-13.7	-15	16.1	6.86	16.1	6.83	16.0	6.79	16.0	6.43	16.0	6.19	15.7	6.07
	-11.8	-13	16.6	6.83	16.5	6.79	16.5	6.55	16.5	6.20	16.5	5.97	15.7	5.84
	-9.8	-11	17.2	6.79	17.2	6.52	17.1	6.29	17.1	5.96	16.8	5.73	15.7	5.61
	-9.5	-10	17.3	6.75	17.3	6.47	17.2	6.25	17.2	5.92	16.8	5.70	15.7	5.57
	-8.5	-9.1	17.6	6.60	17.6	6.33	17.5	6.12	17.4	5.80	16.8	5.58	15.7	5.45
	-7	-7.6	18.4	6.38	18.3	6.13	18.0	5.92	17.4	5.62	16.8	5.40	15.7	5.27
	-5	-5.6	19.2	6.08	19.0	5.85	18.0	5.66	17.4	5.38	16.8	5.17	15.7	5.04
	-3	-3.7	19.8	5.79	19.2	5.57	18.0	5.40	17.4	5.13	16.8	4.93	15.7	4.80
	0	-0.7	20.3	5.34	19.2	5.15	18.0	5.01	17.4	4.77	16.8	4.58	15.7	4.44
	3	2.2	20.3	4.90	19.2	4.73	18.0	4.62	17.4	4.41	16.8	4.22	15.7	4.08
	5	4.1	19.9	4.19	18.8	4.04	17.6	3.95	17.1	3.77	16.5	3.61	15.4	3.48
7	6	19.4	3.83	18.3	3.71	17.2	3.65	16.6	3.49	16.1	3.34	15.0	3.21	
9	7.9	18.7	3.46	17.6	3.35	16.6	3.29	16.0	3.15	15.5	3.02	14.4	2.90	
11	9.8	17.7	3.13	16.7	3.04	15.7	2.98	15.2	2.85	14.7	2.73	13.7	2.63	
13	11.8	16.6	2.77	15.6	2.68	14.7	2.63	14.2	2.52	13.8	2.41	12.8	2.32	
15	13.7	15.7	2.44	14.8	2.36	13.9	2.32	13.5	2.22	13.0	2.13	12.1	2.05	
90	-24.8	-25	10.9	6.27	10.9	6.36	10.9	6.42	10.9	6.44	10.9	6.50	10.6	6.58
	-21.8	-22	13.3	6.36	13.3	6.44	13.2	6.50	13.2	6.53	13.2	6.58	13.0	6.27
	-19.8	-20	14.0	6.41	14.0	6.50	13.9	6.56	13.9	6.58	13.9	6.37	13.7	6.06
	-18.8	-19	14.4	6.44	14.3	6.52	14.3	6.58	14.3	6.47	14.3	6.26	14.0	5.96
	-16.7	-17	15.0	6.50	15.0	6.58	15.0	6.35	15.0	6.24	15.0	6.03	14.3	5.74
	-13.7	-15	16.1	6.58	16.1	6.23	16.0	6.02	16.0	5.90	15.4	5.71	14.3	5.43
	-11.8	-13	16.6	6.34	16.5	6.01	16.5	5.80	16.0	5.69	15.4	5.51	14.3	5.23
	-9.8	-11	17.2	6.08	17.2	5.78	16.5	5.58	16.0	5.47	15.4	5.29	14.3	5.03
	-9.5	-10	17.3	6.05	17.3	5.74	16.5	5.55	16.0	5.43	15.4	5.26	14.3	4.99
	-8.5	-9.1	17.6	5.92	17.5	5.63	16.5	5.44	16.0	5.32	15.4	5.15	14.3	4.89
	-7	-7.6	18.4	5.73	17.5	5.45	16.5	5.27	16.0	5.15	15.4	4.99	14.3	4.74
	-5	-5.6	18.6	5.47	17.5	5.22	16.5	5.05	16.0	4.93	15.4	4.77	14.3	4.53
	-3	-3.7	18.6	5.22	17.5	4.98	16.5	4.83	16.0	4.70	15.4	4.56	14.3	4.32
	0	-0.7	18.6	4.83	17.5	4.63	16.5	4.49	16.0	4.37	15.4	4.23	14.3	4.01
	3	2.2	18.6	4.45	17.5	4.28	16.5	4.16	16.0	4.03	15.4	3.91	14.3	3.70
	5	4.1	18.2	3.80	17.1	3.66	16.1	3.56	15.6	3.45	15.1	3.34	14.1	3.15
7	6	17.8	3.50	16.7	3.40	15.7	3.30	15.2	3.19	14.7	3.10	13.7	2.92	
9	7.9	17.1	3.16	16.1	3.07	15.2	2.98	14.7	2.88	14.2	2.80	13.2	2.64	
11	9.8	16.2	2.84	15.2	2.75	14.3	2.67	13.9	2.58	13.4	2.51	12.5	2.36	
13	11.8	15.2	2.45	14.3	2.38	13.5	2.31	13.0	2.23	12.6	2.17	11.7	2.04	
15	13.7	14.4	2.14	13.5	2.08	12.7	2.02	12.3	1.95	11.9	1.89	11.1	1.78	
80	-24.8	-25	10.9	5.53	10.9	5.61	10.8	5.67	10.8	5.70	10.8	5.84	10.6	5.56
	-21.8	-22	13.2	5.61	13.2	5.69	13.2	5.75	13.2	5.84	13.2	5.56	12.8	5.30
	-19.8	-20	13.9	5.67	13.9	5.75	13.9	5.84	13.9	5.64	13.8	5.38	12.8	5.13
	-18.8	-19	14.2	5.69	14.2	5.84	14.2	5.74	14.2	5.54	13.8	5.29	12.8	5.04
	-16.7	-17	14.7	5.84	14.7	5.63	14.7	5.53	14.3	5.34	13.8	5.10	12.8	4.86
	-13.7	-15	15.4	5.52	15.1	5.33	14.7	5.23	14.3	5.05	13.8	4.82	12.8	4.60
	-11.8	-13	15.8	5.32	15.3	5.14	14.7	5.04	14.3	4.86	13.8	4.65	12.8	4.43
	-9.8	-11	16.2	5.11	15.5	4.94	14.7	4.84	14.3	4.67	13.8	4.47	12.8	4.26
	-9.5	-10	16.3	5.08	15.6	4.91	14.7	4.81	14.3	4.64	13.8	4.44	12.8	4.23
	-8.5	-9.1	16.5	4.98	15.7	4.81	14.7	4.71	14.3	4.54	13.8	4.35	12.8	4.14
	-7	-7.6	16.6	4.82	15.7	4.66	14.7	4.56	14.3	4.39	13.8	4.21	12.8	4.01
	-5	-5.6	16.6	4.61	15.7	4.46	14.7	4.36	14.3	4.20	13.8	4.03	12.8	3.84
	-3	-3.7	16.6	4.40	15.7	4.26	14.7	4.16	14.3	4.00	13.8	3.84	12.8	3.67
	0	-0.7	16.6	4.09	15.7	3.96	14.7	3.86	14.3	3.71	13.8	3.57	12.8	3.41
	3	2.2	16.6	3.77	15.7	3.66	14.7	3.56	14.3	3.42	13.8	3.29	12.8	3.14
	5	4.1	16.3	3.23	15.4	3.13	14.4	3.04	14.0	2.91	13.5	2.81	12.6	2.68
7	6	15.9	2.98	15.0	2.90	14.1	2.81	13.6	2.70	13.2	2.61	12.2	2.49	
9	7.9	15.3	2.61	14.4	2.54	13.6	2.48	13.1	2.39	12.7	2.30	11.8	2.19	
11	9.8	14.5	2.27	13.7	2.21	12.8	2.15	12.4	2.07	12.0	2.00	11.2	1.90	
13	11.8	13.6	1.92	12.8	1.86	12.0	1.82	11.7	1.75	11.3	1.69	10.5	1.61	
15	13.7	12.9	1.67	12.1	1.63	11.4	1.59	11.0	1.53	10.6	1.47	9.9	1.40	

5. Capacity Tables

Combination (%)	Outdoor air temp		Indoor air temp. °C DB											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70	-24.8	-25	10.9	5.53	10.9	5.56	10.8	5.62	10.8	5.70	10.8	5.41	10.6	5.13
	-21.8	-22	12.6	5.62	12.6	5.65	12.5	5.70	12.1	5.41	11.8	5.13	11.0	4.87
	-19.8	-20	13.8	5.67	13.3	5.70	12.5	5.49	12.1	5.21	11.8	4.95	11.0	4.70
	-18.8	-19	14.1	5.70	13.3	5.59	12.5	5.39	12.1	5.11	11.8	4.86	11.0	4.61
	-16.7	-17	14.1	5.47	13.3	5.37	12.5	5.17	12.1	4.91	11.8	4.67	11.0	4.43
	-13.7	-15	14.1	5.15	13.3	5.04	12.5	4.86	12.1	4.61	11.8	4.40	11.0	4.16
	-11.8	-13	14.1	4.95	13.3	4.84	12.5	4.66	12.1	4.43	11.8	4.22	11.0	4.00
	-9.8	-11	14.1	4.73	13.3	4.62	12.5	4.45	12.1	4.23	11.8	4.04	11.0	3.82
	-9.5	-10	14.1	4.70	13.3	4.59	12.5	4.42	12.1	4.20	11.8	4.01	11.0	3.80
	-8.5	-9.1	14.1	4.59	13.3	4.48	12.5	4.32	12.1	4.10	11.8	3.92	11.0	3.71
	-7	-7.6	14.1	4.43	13.3	4.32	12.5	4.16	12.1	3.96	11.8	3.78	11.0	3.58
	-5	-5.6	14.1	4.21	13.3	4.10	12.5	3.96	12.1	3.76	11.8	3.60	11.0	3.41
	-3	-3.7	14.1	4.00	13.3	3.88	12.5	3.75	12.1	3.57	11.8	3.42	11.0	3.23
	0	-0.7	14.1	3.67	13.3	3.56	12.5	3.44	12.1	3.27	11.8	3.15	11.0	2.97
	3	2.2	14.1	3.35	13.3	3.24	12.5	3.12	12.1	2.98	11.8	2.87	11.0	2.71
	5	4.1	14.1	2.90	13.1	2.73	12.3	2.64	11.9	2.52	11.5	2.43	10.7	2.29
7	6	14.1	2.73	12.7	2.49	12.0	2.41	11.6	2.30	11.2	2.23	10.5	2.10	
9	7.9	13.6	2.32	12.3	2.12	11.5	2.05	11.1	1.95	10.8	1.89	10.1	1.78	
11	9.8	12.9	2.01	11.6	1.84	10.9	1.77	10.5	1.69	10.2	1.64	9.5	1.54	
13	11.8	12.1	1.71	10.9	1.57	10.2	1.51	9.9	1.44	9.6	1.40	9.0	1.32	
15	13.7	11.4	1.48	10.3	1.35	9.7	1.30	9.4	1.25	9.1	1.21	8.5	1.14	
60	-24.8	-25	10.8	5.48	10.8	5.53	10.8	5.62	10.4	5.31	10.0	5.01	9.4	4.74
	-21.8	-22	11.6	5.56	11.5	5.62	10.8	5.31	10.4	5.01	10.0	4.74	9.4	4.48
	-19.8	-20	12.1	5.62	11.5	5.40	10.8	5.10	10.4	4.82	10.0	4.56	9.4	4.31
	-18.8	-19	12.1	5.50	11.5	5.28	10.8	4.99	10.4	4.72	10.0	4.47	9.4	4.22
	-16.7	-17	12.1	5.27	11.5	5.05	10.8	4.78	10.4	4.52	10.0	4.28	9.4	4.04
	-13.7	-15	12.1	4.93	11.5	4.72	10.8	4.46	10.4	4.23	10.0	4.01	9.4	3.78
	-11.8	-13	12.1	4.71	11.5	4.51	10.8	4.27	10.4	4.05	10.0	3.84	9.4	3.61
	-9.8	-11	12.1	4.49	11.5	4.29	10.8	4.06	10.4	3.85	10.0	3.66	9.4	3.44
	-9.5	-10	12.1	4.45	11.5	4.25	10.8	4.03	10.4	3.82	10.0	3.63	9.4	3.41
	-8.5	-9.1	12.1	4.34	11.5	4.14	10.8	3.92	10.4	3.73	10.0	3.54	9.4	3.33
	-7	-7.6	12.1	4.17	11.5	3.98	10.8	3.77	10.4	3.58	10.0	3.40	9.4	3.20
	-5	-5.6	12.1	3.95	11.5	3.76	10.8	3.56	10.4	3.39	10.0	3.22	9.4	3.02
	-3	-3.7	12.1	3.72	11.5	3.53	10.8	3.35	10.4	3.19	10.0	3.04	9.4	2.85
	0	-0.7	12.1	3.38	11.5	3.20	10.8	3.04	10.4	2.90	10.0	2.77	9.4	2.59
	3	2.2	12.1	3.04	11.5	2.87	10.8	2.73	10.4	2.61	10.0	2.49	9.4	2.33
	5	4.1	11.9	2.55	11.2	2.40	10.5	2.28	10.2	2.19	9.8	2.09	9.2	1.95
7	6	11.6	2.31	11.0	2.16	10.3	2.06	9.9	1.98	9.6	1.90	9.0	1.76	
9	7.9	11.1	1.94	10.5	1.81	9.9	1.73	9.6	1.66	9.2	1.59	8.6	1.48	
11	9.8	10.5	1.68	10.0	1.57	9.4	1.50	9.0	1.44	8.7	1.38	8.2	1.28	
13	11.8	9.9	1.43	9.4	1.34	8.8	1.28	8.5	1.23	8.2	1.18	7.7	1.09	
15	13.7	9.4	1.24	8.9	1.17	8.3	1.10	8.0	1.06	7.8	1.01	7.3	0.95	
50	-24.8	-25	10.1	4.76	9.5	4.85	9.0	4.57	8.7	4.32	8.4	4.08	7.8	3.86
	-21.8	-22	10.1	4.85	9.5	4.57	9.0	4.32	8.7	4.08	8.4	3.86	7.8	3.65
	-19.8	-20	10.1	4.65	9.5	4.39	9.0	4.15	8.7	3.92	8.4	3.71	7.8	3.51
	-18.8	-19	10.1	4.56	9.5	4.30	9.0	4.07	8.7	3.84	8.4	3.64	7.8	3.44
	-16.7	-17	10.1	4.36	9.5	4.11	9.0	3.89	8.7	3.68	8.4	3.48	7.8	3.29
	-13.7	-15	10.1	4.07	9.5	3.84	9.0	3.63	8.7	3.44	8.4	3.26	7.8	3.08
	-11.8	-13	10.1	3.89	9.5	3.66	9.0	3.47	8.7	3.29	8.4	3.12	7.8	2.94
	-9.8	-11	10.1	3.70	9.5	3.48	9.0	3.30	8.7	3.13	8.4	2.97	7.8	2.80
	-9.5	-10	10.1	3.67	9.5	3.46	9.0	3.28	8.7	3.10	8.4	2.95	7.8	2.78
	-8.5	-9.1	10.1	3.57	9.5	3.36	9.0	3.20	8.7	3.02	8.4	2.88	7.8	2.71
	-7	-7.6	10.1	3.43	9.5	3.23	9.0	3.07	8.7	2.90	8.4	2.77	7.8	2.61
	-5	-5.6	10.1	3.24	9.5	3.05	9.0	2.90	8.7	2.74	8.4	2.62	7.8	2.46
	-3	-3.7	10.1	3.05	9.5	2.87	9.0	2.73	8.7	2.59	8.4	2.47	7.8	2.32
	0	-0.7	10.1	2.76	9.5	2.59	9.0	2.48	8.7	2.35	8.4	2.25	7.8	2.11
	3	2.2	10.1	2.47	9.5	2.32	9.0	2.22	8.7	2.11	8.4	2.03	7.8	1.90
	5	4.1	9.9	2.07	9.3	1.94	8.8	1.86	8.5	1.76	8.2	1.70	7.7	1.59
7	6	9.7	1.86	9.1	1.74	8.6	1.68	8.3	1.59	8.0	1.54	7.5	1.44	
9	7.9	9.3	1.58	8.8	1.48	8.2	1.42	8.0	1.35	7.7	1.31	7.2	1.22	
11	9.8	8.8	1.38	8.3	1.30	7.8	1.25	7.5	1.19	7.3	1.15	6.8	1.07	
13	11.8	8.3	1.17	7.8	1.09	7.3	1.05	7.1	1.01	6.9	0.97	6.4	0.91	
15	13.7	7.8	1.02	7.4	0.95	6.9	0.92	6.7	0.87	6.5	0.85	6.0	0.79	

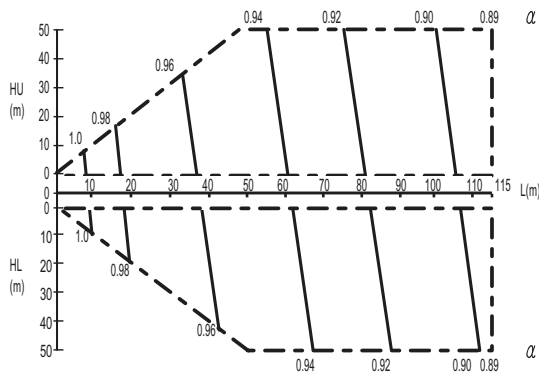
Note

1. TC: Total Capacity(kW), PI : Power Input(kW, Comp. + Outdoor fan motor)
2. Capacity tables show the average value of conditions which may occur.
3. In the range beyond the operation limit of the outdoor unit, continuous operation and performance can not be guaranteed. When selecting the outdoor units, avoid the air temperature range that is not guaranteed continuous operation.

6. Capacity Correction Factor

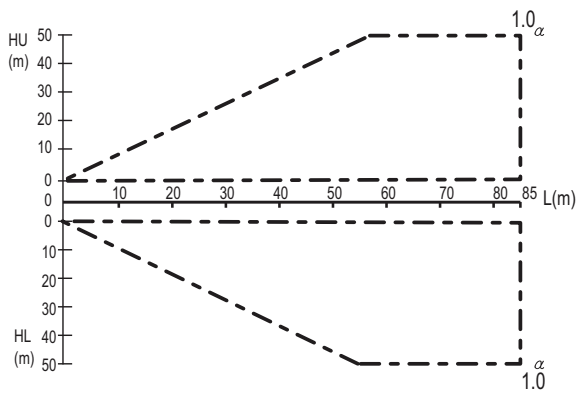
6.1 Correction Factor by Pipe Length and Elevation

◆ Rate of change in Cooling capacity



50	-	-	-	-	-	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.89	α
40	-	-	-	-	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.89	
30	-	-	-	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	
20	-	-	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	
10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	
7.5	0.99	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	
0	1.0	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	
0	7.5	10	20	30	40	50	60	70	80	90	100	110	115	L(m)
0	1.0	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	
7.5	1.0	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	
10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	
20	-	-	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	
30	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.89	
40	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.89	
50	-	-	-	-	-	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	α

◆ Rate of change in Heating capacity



50	-	-	-	-	-	1.0	1.0	1.0	1.0	1.0	α
40	-	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	
30	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
20	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
10	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
7.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
0	7.5	10	20	30	40	50	60	70	80	85	L(m)
0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
7.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
10	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
20	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
30	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
40	-	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	
50	-	-	-	-	-	1.0	1.0	1.0	1.0	1.0	α

Symbols

HU : Level difference between indoor and outdoor units where outdoor unit in upper position (m)

HL : Level difference between indoor and outdoor units where outdoor unit in lower position (m)

L : Equivalent pipe length (m)

α : Capacity correction factor

6. Capacity Correction Factor

Note

1. These figures illustrate the rate of change in capacity of a standard indoor unit system at maximum load under standard conditions. (Moreover, under partial load conditions there is only a minor deviation from the rate of change in capacity shown in the above figures.)
2. With this outdoor unit, evaporating pressure constant control when cooling, and condensing pressure constant control when heating is carried out.
3. If heat insulation of piping is insufficient, heat loss will become larger and capacity will decrease.
4. Method of calculating cooling / heating capacity : maximum cooling / heating capacity of outside units = cooling / heating capacity of outside units obtained from capacity table X capacity correction factor due to piping length to the farthest indoor unit
5. Equivalent piping length for Y Branch and other pipes can be calculated with following table.

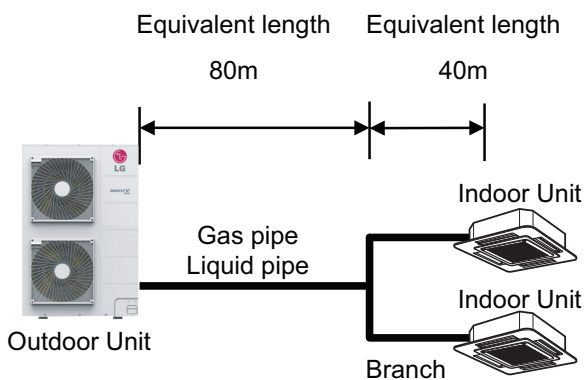
mm (inch)	Ø6.35 (1/4)	Ø9.52 (3/8)	Ø12.7 (1/2)	Ø15.88 (5/8)	Ø19.05 (3/4)	Ø22.2 (7/8)	Ø25.4 (1)	Ø28.58 (1-1/8)	Ø31.8 (1-1/4)	Ø34.9 (1-3/8)	Ø38.1 (1-1/2)	Ø41.3 (1-5/8)	Ø44.5 (1-3/4)	Ø53.98 (2-1/8)
Elbow (m)	0.16	0.18	0.2	0.25	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.85
Y Branch (m)	0.5													
Header (m)	1													
HR unit (m)	2.5													

6. When the any one (or both) of below conditions are satisfied, the diameter of main pipe must be increased.
 - The equivalent length between outdoor unit and the farthest indoor unit is 90m or more (Liquid and Gas pipes are increased)
 - The level difference (Outdoor unit ↔ Indoor unit) is 50m or more (Only liquid pipe is increased)

Refer to the table (Refrigerant pipe diameter from outdoor unit to first branch.) in the 'installation of outdoor units' part.

7. Read cooling / heating capacity rate of change in the above figures based on the following equivalent length. : overall equivalent length = (equivalent length of main pipe) X correction factor + (equivalent length after first branching)
 - **6 HP**

Rate of change (object piping)	Correction factor	
	standard size	size increase
Cooling(Gas pipe)	1	0.5
Heating(Liquid pipe)	1	0.2



* (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
 * (Heating) Overall equivalent length = 80 m x 0.2 + 40 m = 56 m

The rate of change in Cooling capacity when HU=0m is thus approximately 0.92
 Heating capacity when HU=0m is thus approximately 1.00

6. Capacity Correction Factor

6.2 Defrosting Correction Factor for Heating Operation

The capacity table does not consider reduction in capacity when frost has accumulated or during defrosting.

The capacity values considered these factors, in other words the integrated heating capacity values, can be obtained as follows:

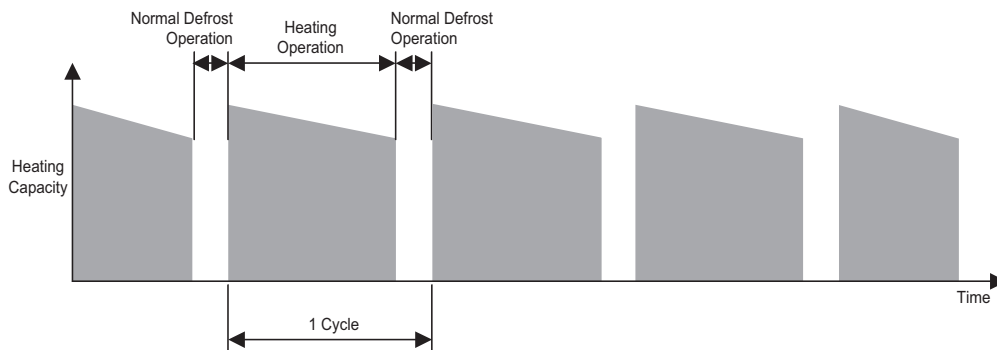
[Formula]

- Integrated Heating capacity = A
- Value given in table of capacity characteristics = B
- Integrated correction factor for frost accumulation = C
- $A=B \times C$

[Correction factor for finding integrated Heating capacity]

Inlet Port Temperature of Heat Exchange (°C, RH 85%)	-7	-5	-3	0	3	5	7
Integrated Correction Factor for Frost Accumulation (Normal Defrost Operation)	0.92	0.90	0.86	0.84	0.85	0.90	1.0
Integrated Correction Factor for Frost Accumulation (Normal Defrost Operation / Dual sensing)	0.92	0.90	0.86	0.86	0.86	0.91	1.0

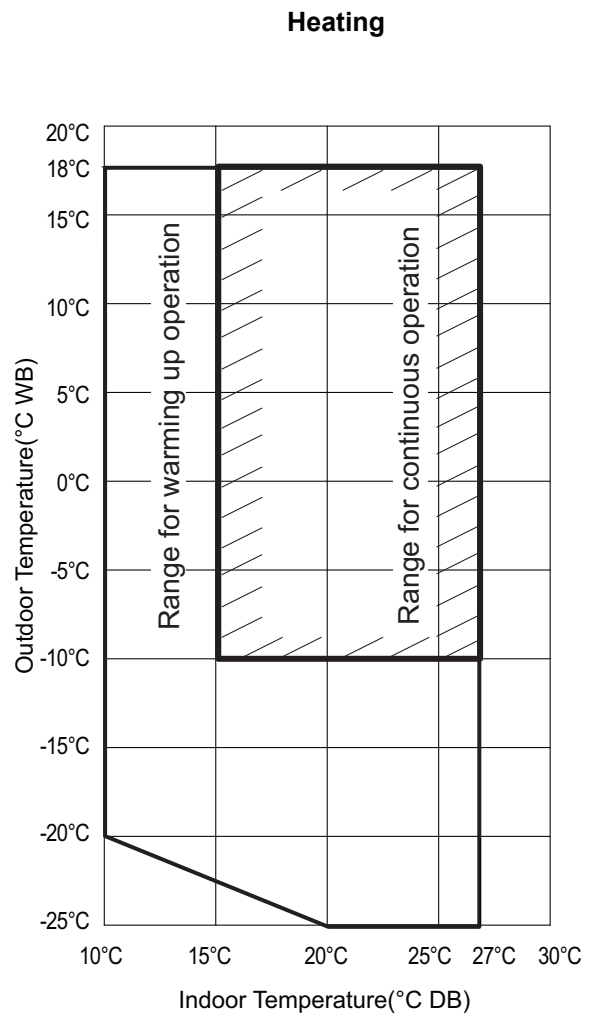
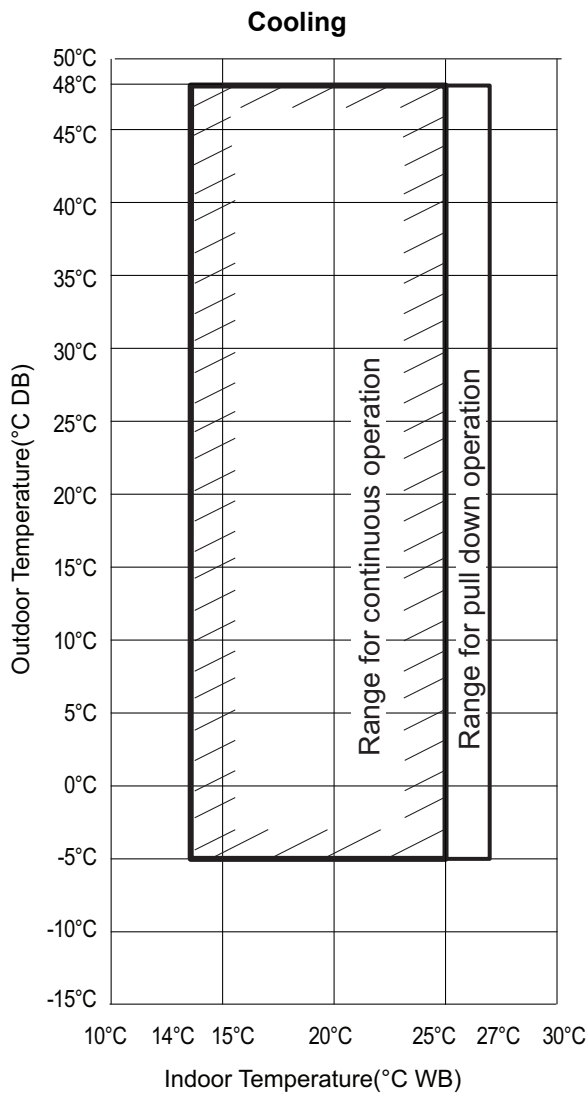
◆ Normal Defrost Operation



Please note that there will be temporary reduction in capacity when snow piles up on the outside surface of the outdoor unit heat exchanger. Of course, it will be different in degree depending on a number of other factors, for example, the outdoor temperature(°CDB), the relative humidity(RH) and the frosting amount.

7. Operation Limits

■ Cooling / Heating Operation

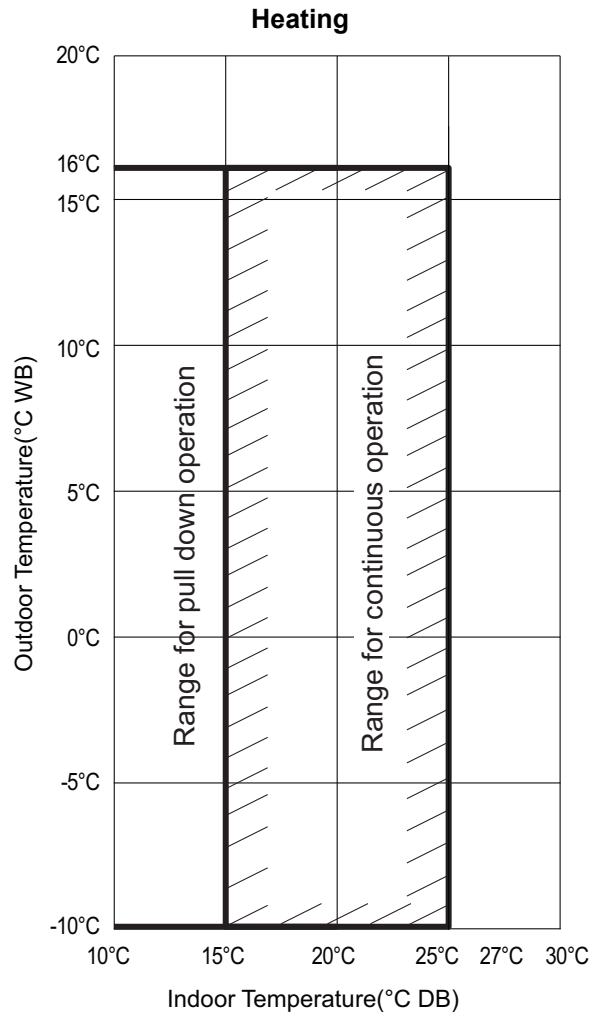
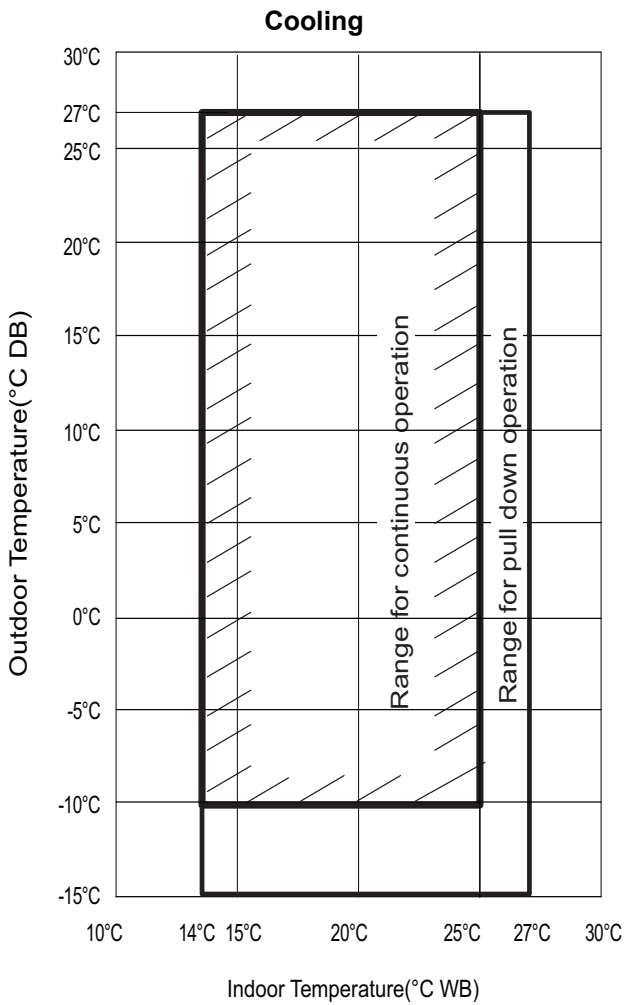


Note

1. These figures assume the following operating conditions:
 Equivalent piping length:7.5m
 Level difference:0m
2. Range of pull down operation:
 If the relative humidity is too high, cooling capacity can be decreased by the sensible heat reduction.

7. Operation Limits

■ Simultaneous Cooling / Heating Operation

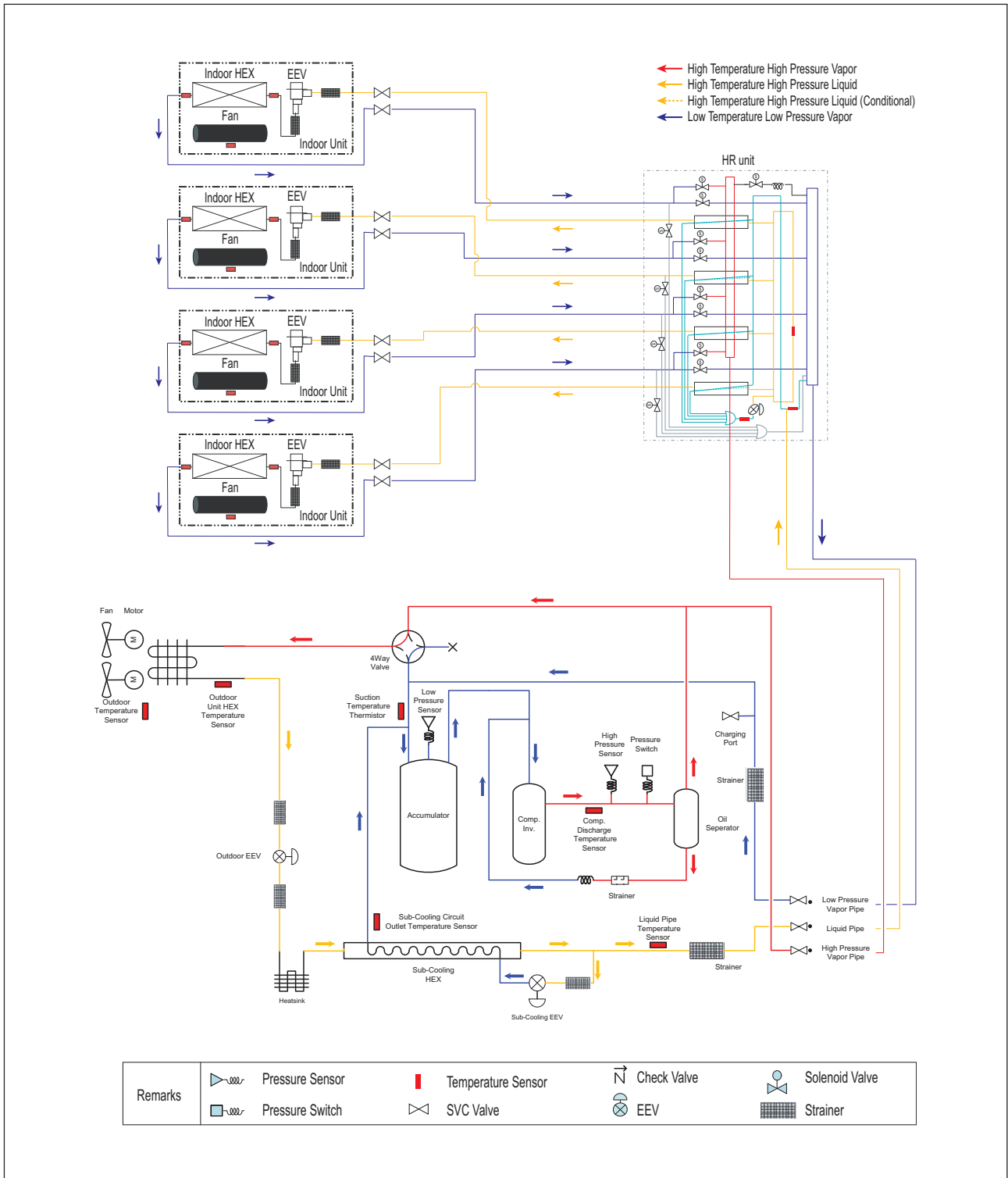


Note

1. These figures assume the following operating conditions:
 Equivalent piping length: 7.5m
 Level difference: 0m
2. Range of pull down operation:
 If the relative humidity is too high, cooling capacity can be decreased by the sensible heat reduction.

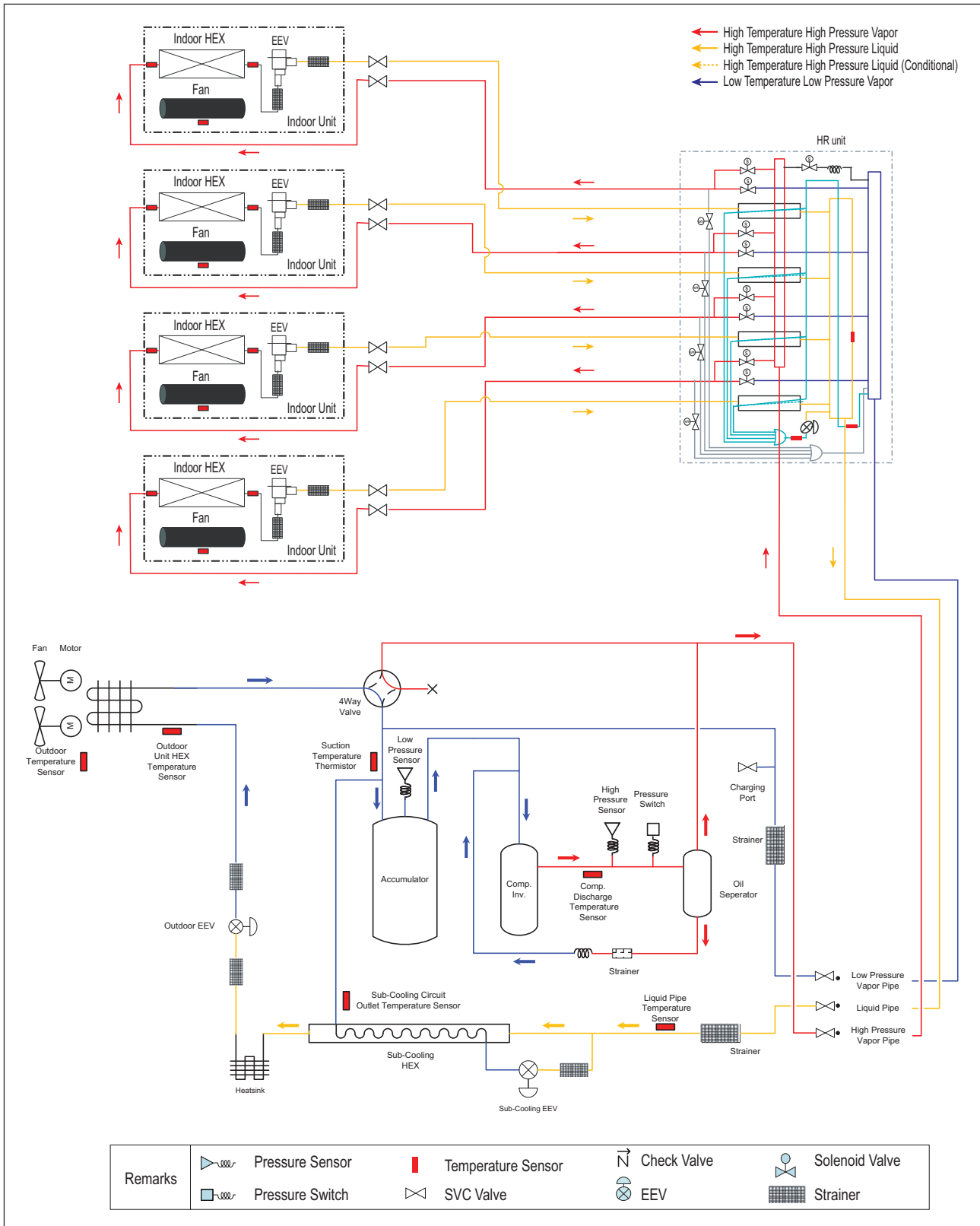
8. Piping Diagrams

■ Cooling Operation



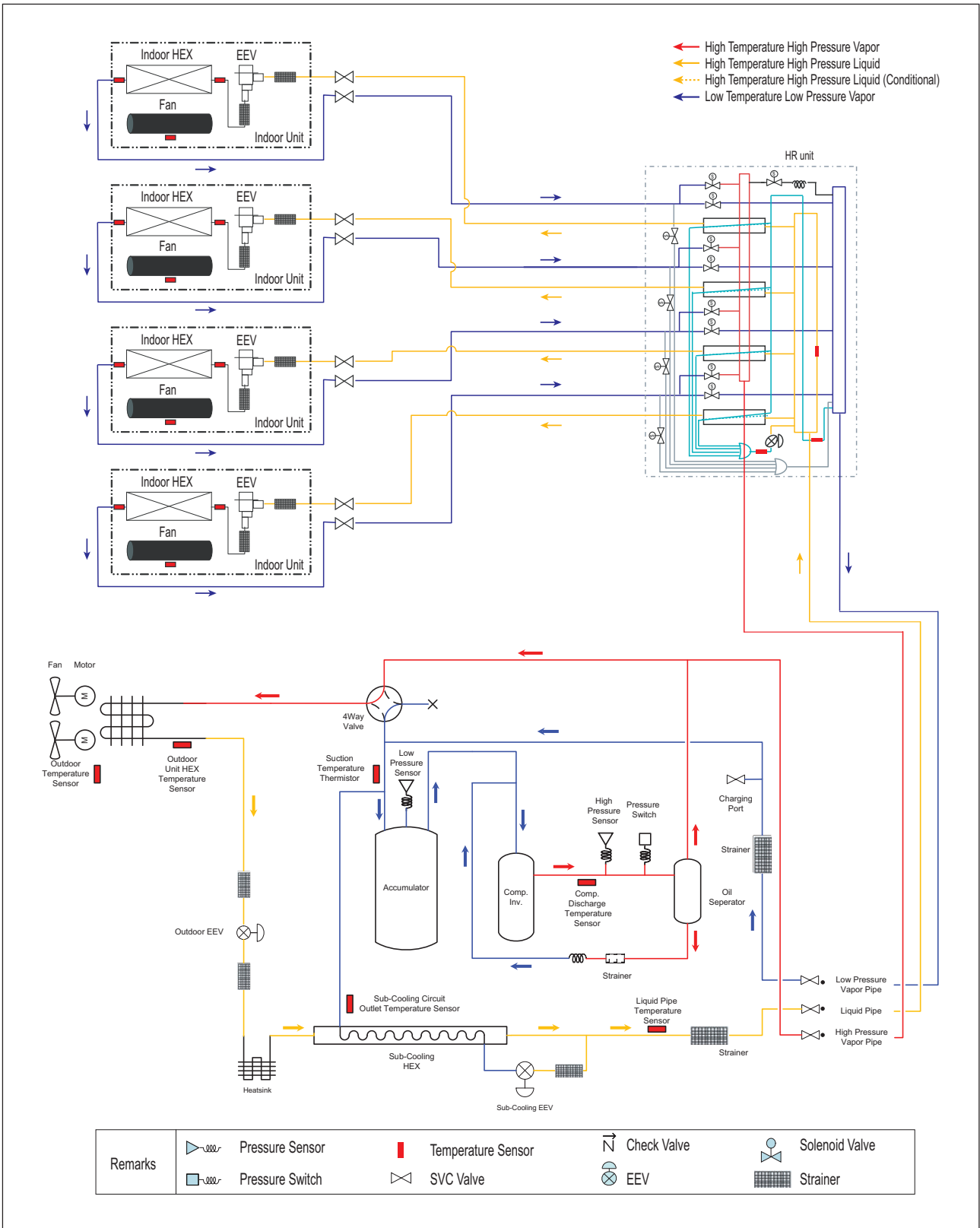
8. Piping Diagrams

■ Heating Operation



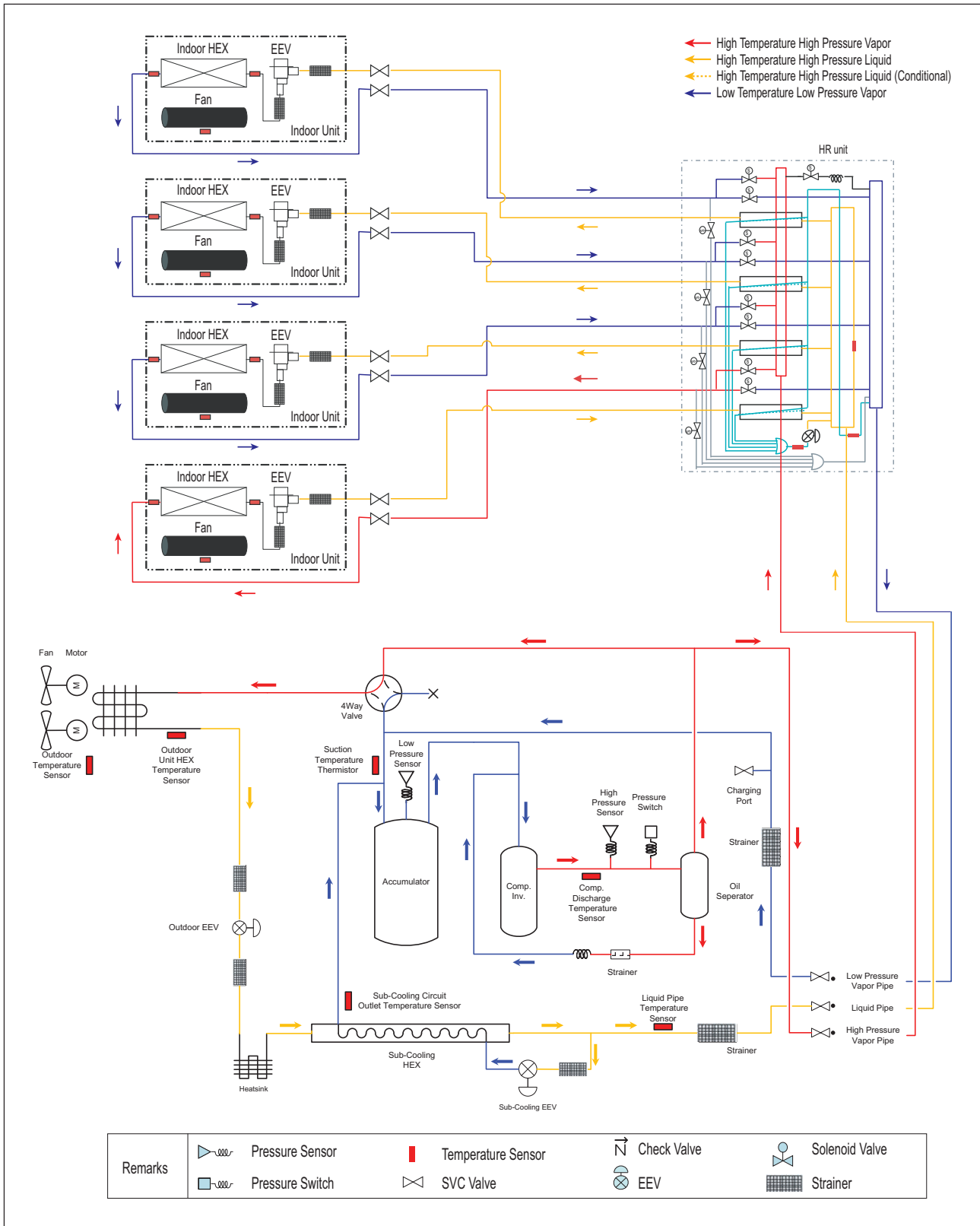
8. Piping Diagrams

Oil Return / Defrost Operation



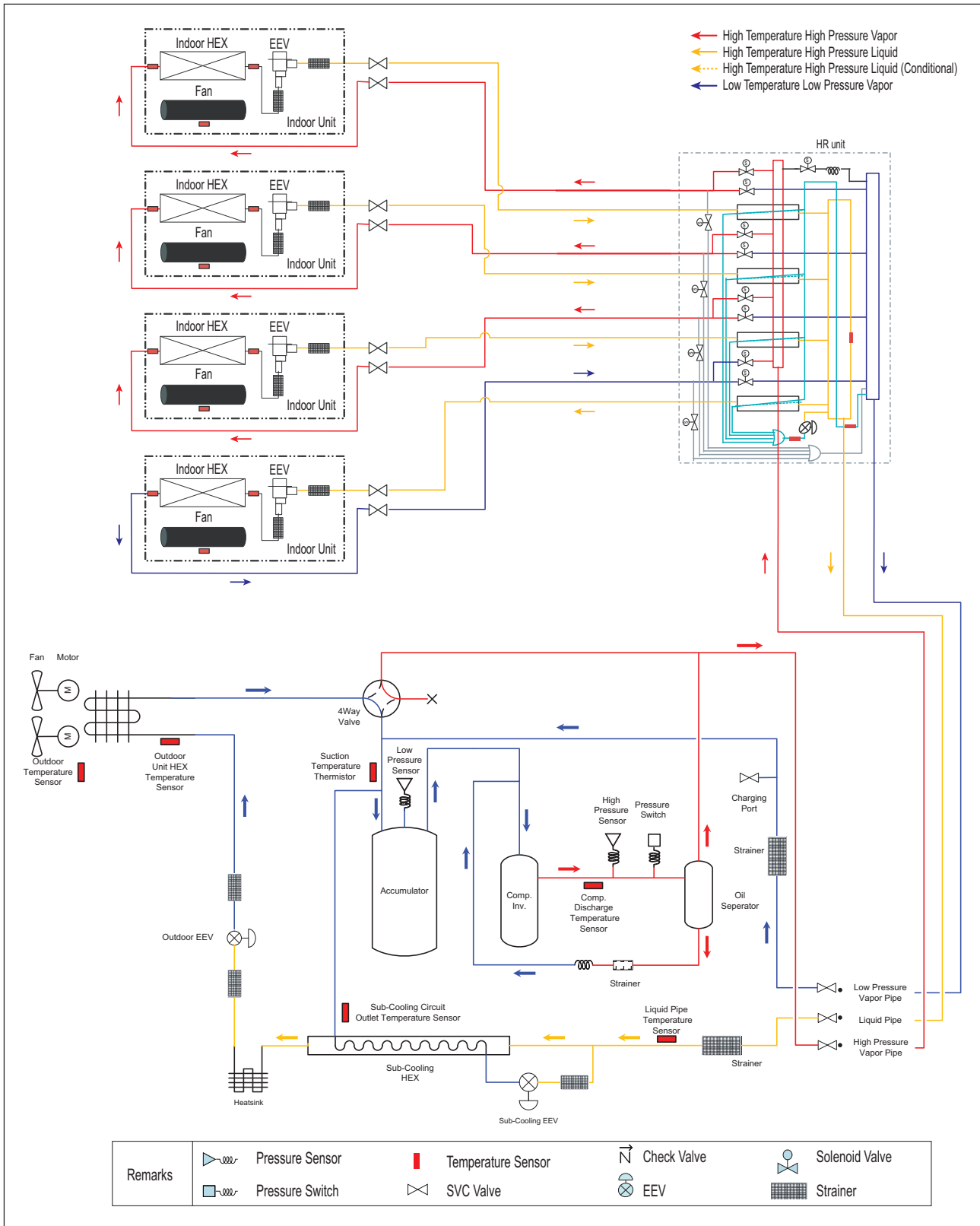
8. Piping Diagrams

■ Cooling-based Simultaneous Operation



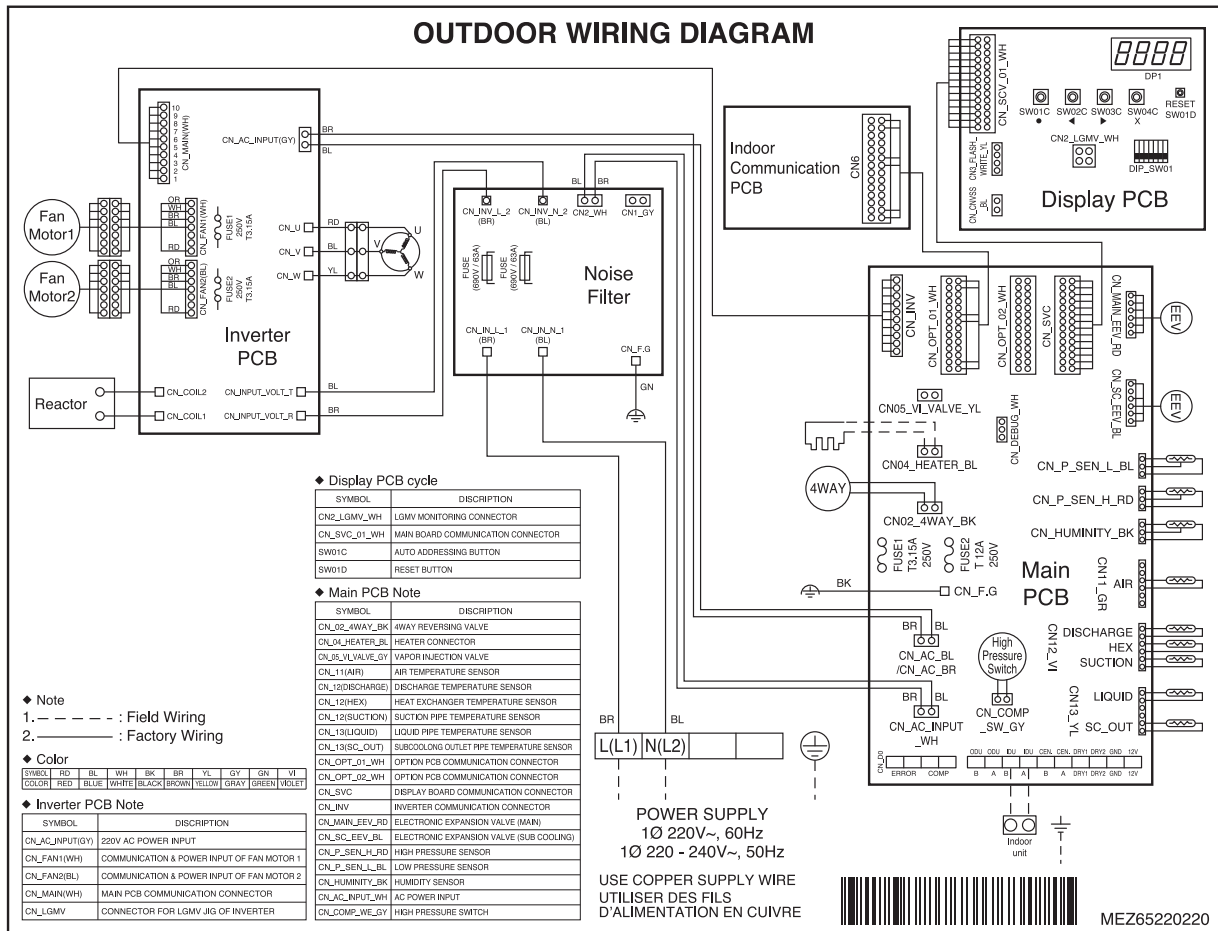
8. Piping Diagrams

■ Heating-based Simultaneous Operation



9. Wiring Diagrams

◆ 6 HP

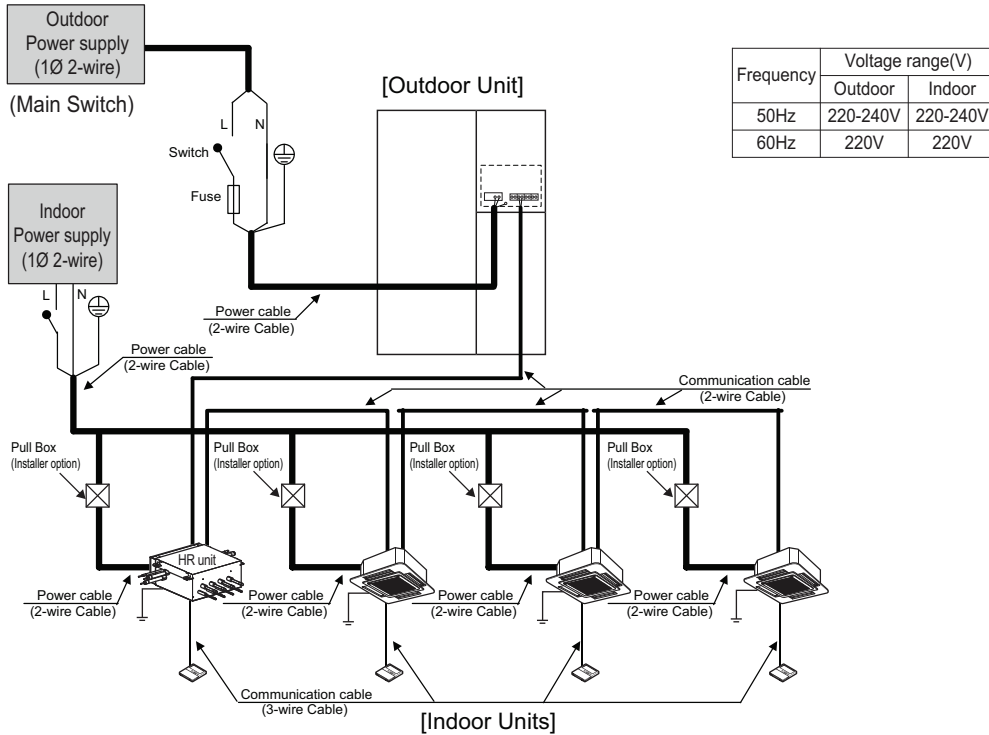


10. Field Wiring

10.1 50Hz/60Hz (1 Phase)

■ Example Connection of Communication Cable

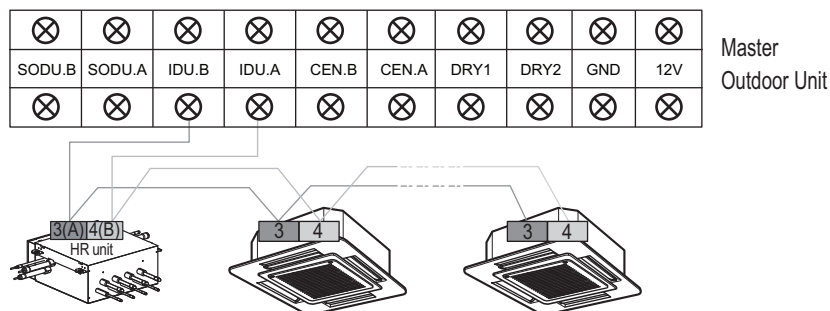
◆ Single Outdoor Unit



⚠ WARNING

- Indoor Unit ground Lines are required for preventing electrical shock accident during current leakage, Communication disorder by noise effect and motor current leakage (without connection to pipe).
 - Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.
 - Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
 - If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally.
- Running the product in reversed phase may break the compressor and other parts.

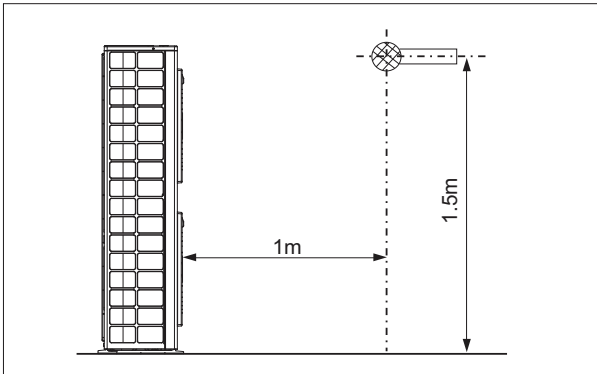
Between Indoor and Master Outdoor unit



The GND terminal at the main PCB is a '-' terminal for day contact, it is not the point to make ground connection.

11. Sound Levels

11.1 Sound Pressure Level

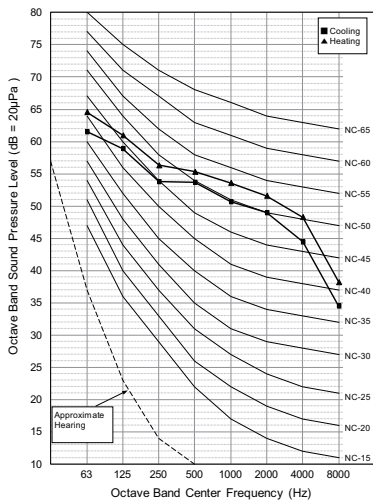


Note

- 1.Data is valid at free field condition.
- 2.Reference acoustic pressure 0dB = 20μPa.
- 3.Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
- 4.Sound levels can be increased in accordance with installation and operating conditions. (Operating conditions include some functional condition like Static pressure mode, air guide use, Room target temperature setting, etc and these functions are different in accordance with each model.)
- 5.Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound Pressure Levels [dB(A)]	
	Cooling	Heating
ARUB060GSS4	56	58

ARUB060GSS4



11. Sound Levels

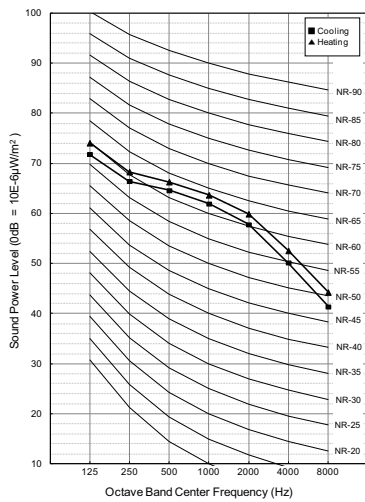
11.2 Sound Power Levels

Note

1. Data is valid at diffuse field condition.
2. Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
3. Sound power level is measured on the rated condition in the reverberation rooms. Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
4. Sound levels can be increased in accordance with installation and operating conditions. (Operating conditions include some functional condition like Static pressure mode, air guide use, Room target temperature setting, etc and these functions are different in accordance with each model.)
5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment in installed.

Model	Sound Power Levels [dB(A)]	
	Cooling	Heating
ARUB060GSS4	69	71

ARUB060GSS4



HR Unit

- 1.Nomenclature**
- 2.Specifications**
- 3.Dimensions**
- 4.Prats Function**
- 5.Piping Diagrams**
- 6.Wiring Diagrams**
- 7.Sound Levels**

1. Nomenclature

Model Name	PRHR	04	3
No.	1	2	3

No.	Signification
1	HR Unit connecting to Multi V Heat Recovery System Outdoor Unit using R410A PRHR : Global line-up
2	The No. of connected branches 02 : For 2 branches 03 : For 3 branches 04 : For 4 branches 06 : For 6 branches 08 : For 8 branches
3	Serial Number

2. Specifications

Model		PRHR023	PRHR033	PRHR043	
Max. Connectable No. of Indoor Units		16	24	32	
Max. Connectable No. of Indoor Units of a branch		8	8	8	
Nominal Input	Cooling(W)	39.8	39.8	39.8	
	Heating(W)	37.2	37.2	37.2	
Net. Weight	kg	14.9	16.7	18.2	
	lbs	32.8	36.8	40.1	
Dimensions (WxHxD)	mm	786 x 218 x 657			
	Inch	30-15/16 x 8-19/32 x 25-7/8			
Casing		Galvanized steel plate			
Connecting Pipes	Indoor side	Liquid Pipe [mm/inch]	Ø9.52[3/8] ~ Ø6.35[1/4]		
		Gas Pipe [mm/inch]	Ø15.88[5/8] ~ Ø12.7[1/2]		
	Outdoor side	Liquid [mm/inch]	Ø9.52[3/8]	Ø12.7[1/2]	Ø15.88[5/8]
		Low Pressure [mm/inch]	Ø22.2[7/8]	Ø28.58[1-1/8]	Ø28.58[1-1/8]
		High Pressure [mm/inch]	Ø19.05[3/4]	Ø22.2[7/8]	Ø22.2[7/8]
Sound Absorbing Insulation Material		Polyethylene Foam			
Current	Minimum circuit Amps(MCA)	0.17			
	Maximum fuse Amps(MFA)	15			
Power Supply		1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz			

Note

1. Voltage range : Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA = 1.25 x FLA , MFA ≤ (4 x FLA)
Next lower standard fuse rating. Minimum 15A.
4. Select wire size based on the MCA.
5. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].

2. Specifications

Model			PRHR063	PRHR083
Max. Connectable No. of Indoor Units			48	64
Max. Connectable No. of Indoor Units of a branch			8	8
Nominal Input	Cooling(W)		75.9	75.9
	Heating(W)		72.1	72.1
Net. Weight	kg		27.2	30.7
	lbs		60.0	67.7
Dimensions (WxHxD)	mm		1,113 x 218 x 657	
	Inch		43-13/16 x 8-19/32 x 25-7/8	
Casing			Galvanized steel plate	
Connecting Pipes	Indoor side	Liquid Pipe [mm/inch]	Ø9.52[3/8] ~ Ø6.35[1/4]	
		Gas Pipe [mm/inch]	Ø15.88[5/8] ~ Ø12.7[1/2]	
	Outdoor side	Liquid [mm/inch]	Ø15.88[5/8]	Ø15.88[5/8]
		Low Pressure [mm/inch]	Ø28.58[1-1/8]	Ø28.58[1-1/8]
		High Pressure [mm/inch]	Ø22.2[7/8]	Ø22.2[7/8]
	Sound Absorbing Insulation Material			Polyethylene Foam
Current	Minimum circuit Amps(MCA)		0.27	
	Maximum fuse Amps(MFA)		15	
Power Supply			1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz	

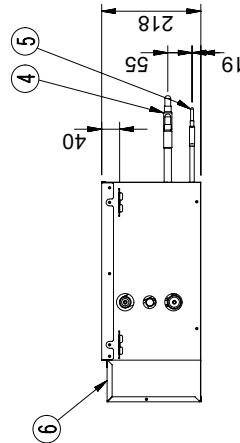
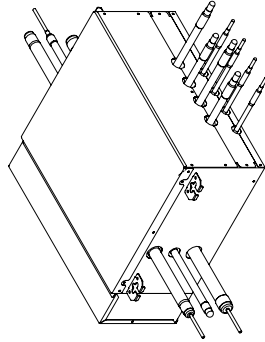
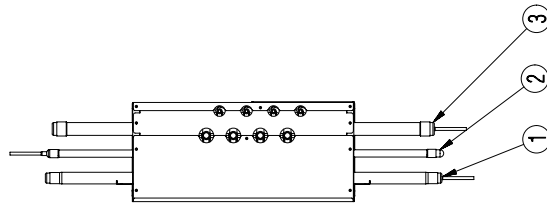
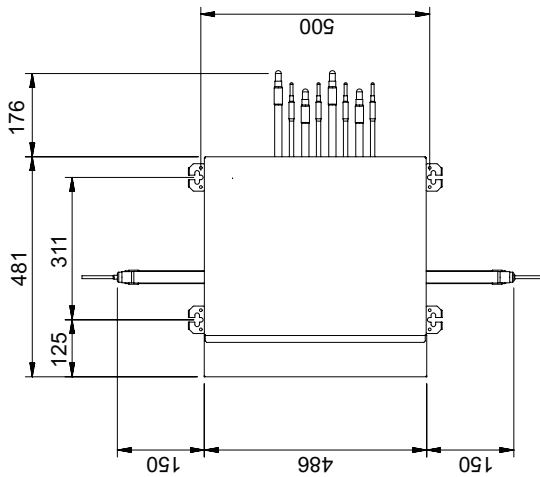
Note

1. Voltage range : Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA = 1.25 x FLA , MFA ≤ (4 x FLA)
Next lower standard fuse rating. Minimum 15A.
4. Select wire size based on the MCA.
5. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].

3. Dimensions

PRHR023 / PRHR033 / PRHR043

[Unit: mm]



Note

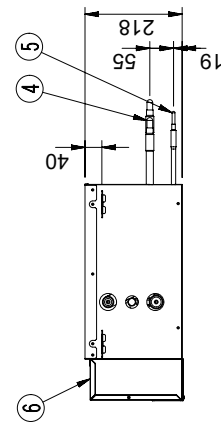
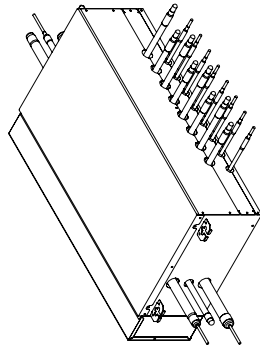
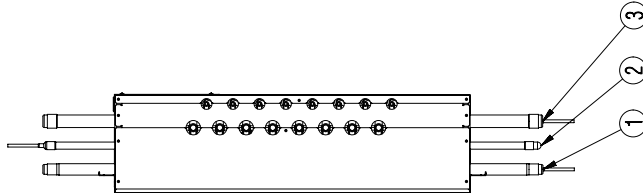
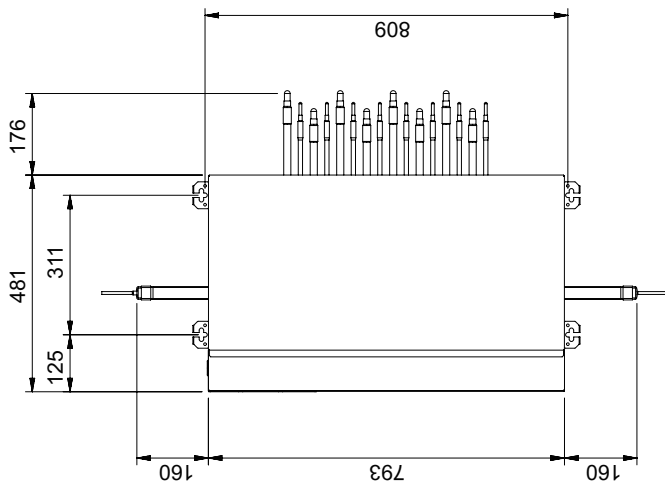
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied from the site must comply with the local regulations or international codes.

No.	Part Name	Description
6	Control box	-
5	Liquid pipe to Indoor unit	8- \varnothing 9.52 - \varnothing 6.35
4	Gas pipe to Indoor unit	8- \varnothing 15.88 - \varnothing 12.7
3	Low pressure gas pipe	2- \varnothing 28.58
2	Liquid pipe to Outdoor unit	2- \varnothing 15.88
1	High pressure gas pipe	2- \varnothing 22.2

3. Dimensions

PRHR063 / PRHR083

[Unit: mm]



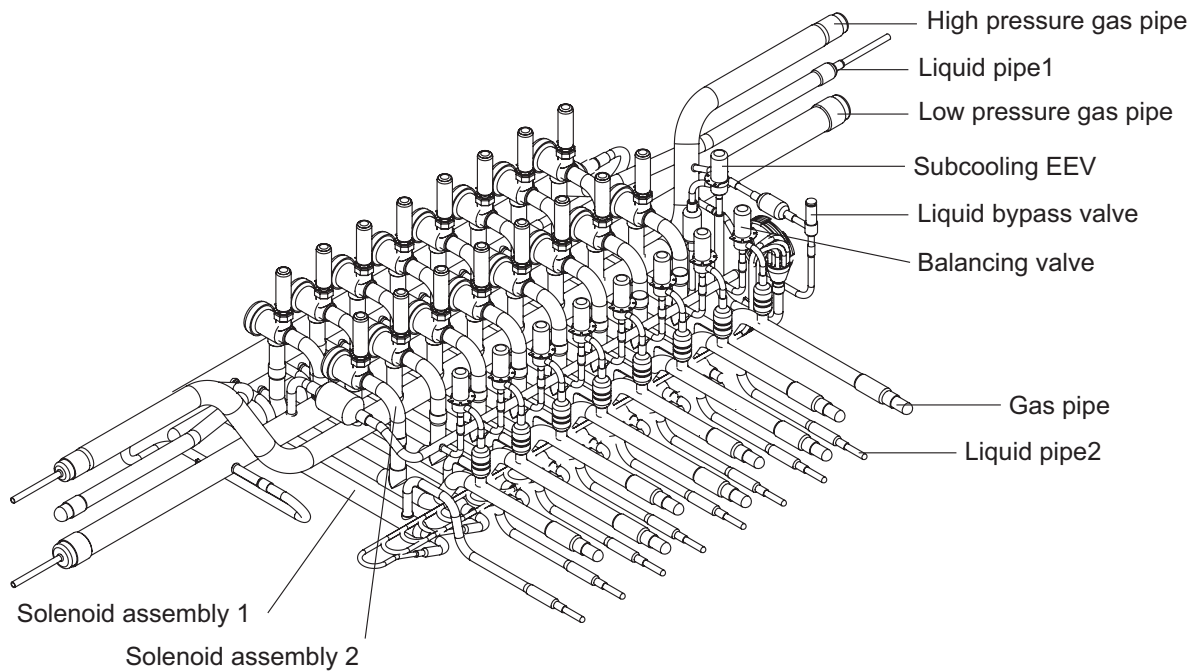
Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied from the site must comply with the local regulations or international codes.

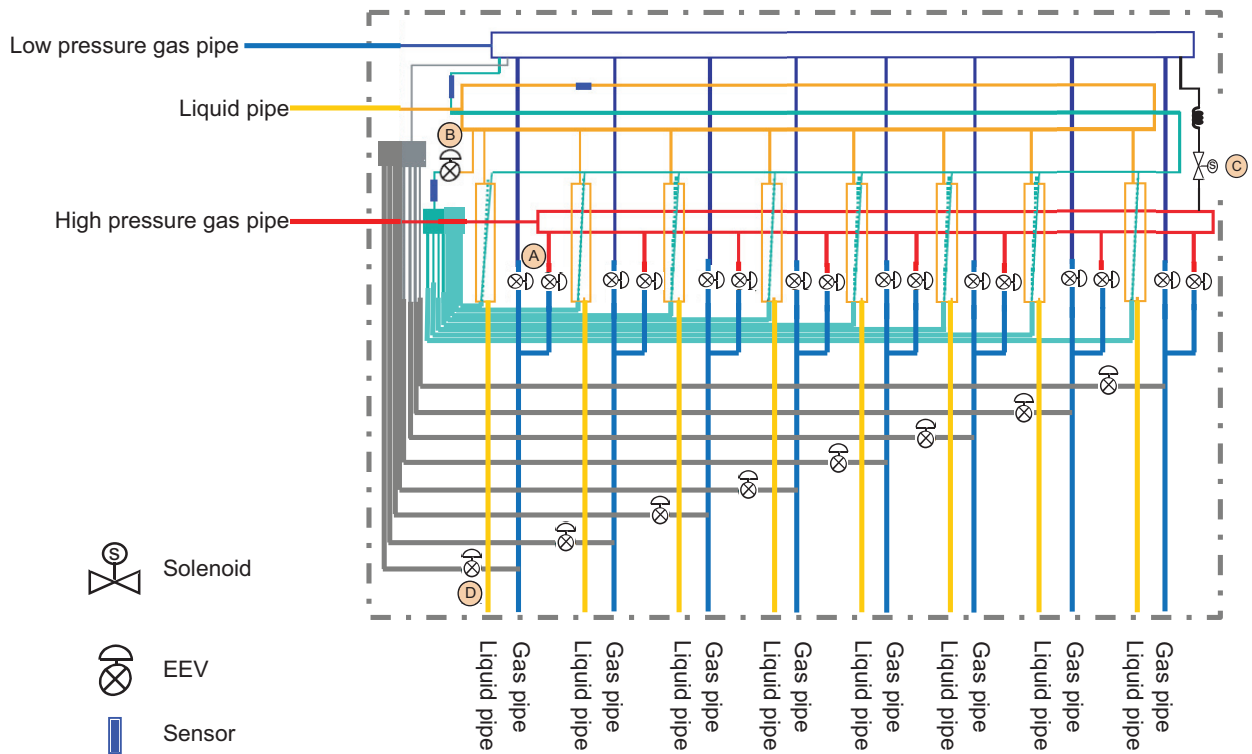
No.	Part Name	Description
6	Control box	-
5	Liquid pipe to Indoor unit	8- \varnothing 9.52 - \varnothing 6.35
4	Gas pipe to Indoor unit	8- \varnothing 15.88 - \varnothing 12.7
3	Low pressure gas pipe	2- \varnothing 28.58
2	Liquid pipe to Outdoor unit	2- \varnothing 15.88
1	High pressure gas pipe	2- \varnothing 22.2

4. Parts Function

Parts Name	Symbol	Major Function
Low pressure gas pipe	LPGV	Pipe for Low pressure gas
High pressure gas pipe	HPGV	Pipe for High pressure gas
Liquid pipe 1	LP1	Liquid pipe connected with outdoor unit
Liquid bypass valve	LBV	Prevent Liquid charging
Solenoid Assembly 1, 2	SOL1, 2	Control the path for heating or cooling
Liquid pipe 2	LP2	Liquid pipe connected with indoor unit
Gas pipe	GSP	Gas pipe connected with indoor unit
Balancing valve	BLV	Control the pressure between High and Low pressure pipe during operation switching
Subcooling EEV	SCEEV	Control the subcooling



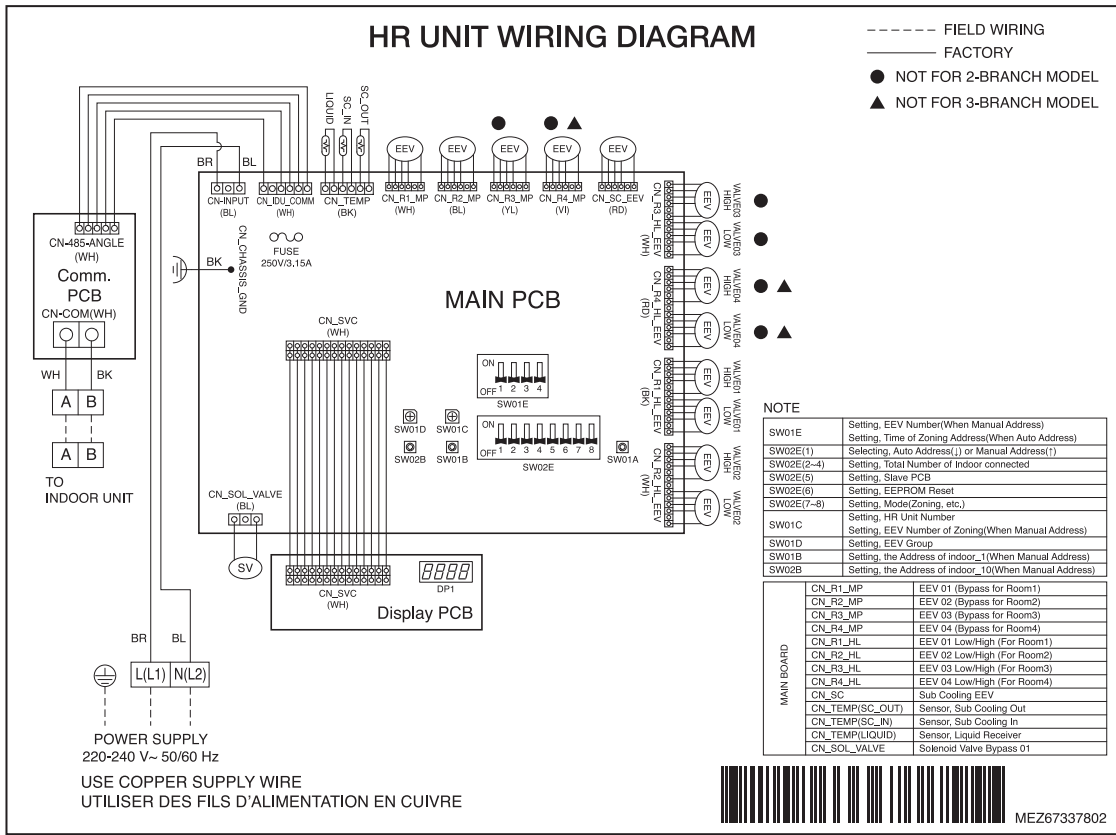
5. Piping Diagrams



- A : To be switched operation between cooling and heating by two valves
- B : To be used decreasing noise according to sub-cooling of inlet of indoor unit and outlet of indoor unit (Simultaneous operation)
- C : To prevent liquid charging between H/P gas valve and HR unit at cooling mode
- D : To be controlled the pressure between High and Low pressure pipe during operation switching

6. Wiring Diagrams

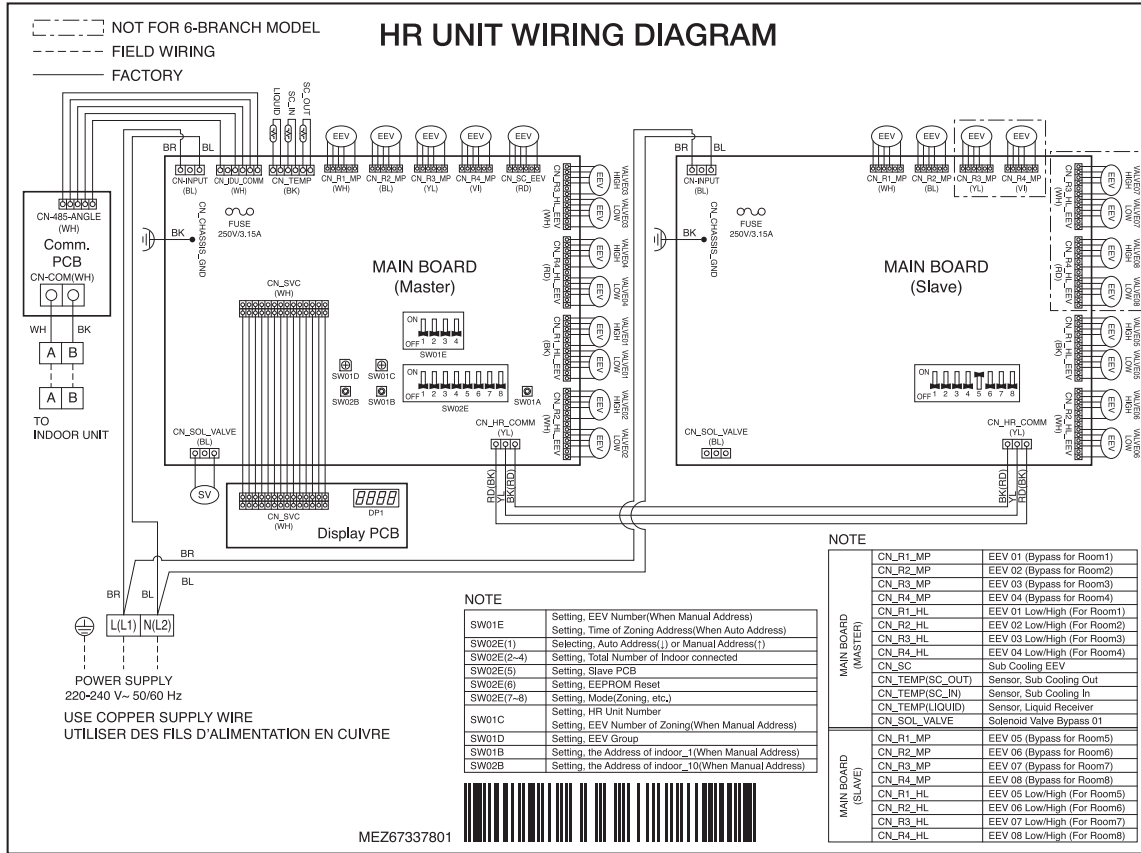
PRHR023, PRHR033, PRHR043



CONNECTOR NUMBER	FUNCTION
CN_R1_MP	EEV 01 (Bypass for Room1)
CN_R2_MP	EEV 02 (Bypass for Room2)
CN_R3_MP	EEV 03 (Bypass for Room3)
CN_R4_MP	EEV 04 (Bypass for Room4)
CN_R1_HL	EEV 01 Low/High (For Room1)
CN_R2_HL	EEV 02 Low/High (For Room2)
CN_R3_HL	EEV 03 Low/High (For Room3)
CN_R4_HL	EEV 04 Low/High (For Room4)
CN_SC	Sub Cooling LEV
CN_TEMP(SC_OUT)	Sensor, Sub Cooling Out
CN_TEMP(SC_IN)	Sensor, Sub Cooling In
CN_TEMP(LIQUID)	Sensor, Liquid Receiver
CN_SOL_VALVE	Solenoid Valve Bypass 01
SW01E	Setting, EEV Number (When Manual Address) Setting, Time of Zoning Address (When Auto Address)
SW02E(1)	Selecting, Auto Address (↓) or manual Address (↑)
SW02E(2~4)	Setting, Total Number of Indoor connected
SW02E(5)	Setting, Slave PCB
SW02E(6)	Setting, EEPROM Reset
SW02E(7~8)	Setting, Mode (Zoning, etc.)
SW01C	Setting, HR Unit Number Setting, EEV Number of Zoning (When Manual Address)
SW01D	Setting, EEV Group
SW01B	Setting, the Address of indoor_1 (When Manual Address)
SW02B	Setting, the Address of indoor_10 (When manual Address)

6. Wiring Diagrams

PRHR063, PRHR083



	CONNECTOR NUMBER	FUNCTION
MAIN BOARD (MASTER)	CN_R1_MP	EEV 01 (Bypass for Room1)
	CN_R2_MP	EEV 02 (Bypass for Room2)
	CN_R3_MP	EEV 03 (Bypass for Room3)
	CN_R4_MP	EEV 04 (Bypass for Room4)
	CN_R1_HL	EEV 01 Low/High (For Room1)
	CN_R2_HL	EEV 02 Low/High (For Room2)
	CN_R3_HL	EEV 03 Low/High (For Room3)
	CN_R4_HL	EEV 04 Low/High (For Room4)
	CN_SC	Sub Cooling EEV
	CN_TEMP(SC_OUT)	Sensor, Sub Cooling Out
	CN_TEMP(SC_IN)	Sensor, Sub Cooling In
	CN_TEMP(LIQUID)	Sensor, Sub Cooling Out
	CN_SEN_02 (SC_IN)	Sensor, Sub Cooling In
	CN_SEN_02 (LIQUID)	Sensor, Liquid Receiver
CN_SOL_VALVE	Solenoid Valve Bypass 01	
MAIN BOARD (SLAVE)	CN_R1_MP	EEV 05 (Bypass for Room5)
	CN_R2_MP	EEV 06 (Bypass for Room6)
	CN_R3_MP	EEV 07 (Bypass for Room7)
	CN_R4_MP	EEV 08 (Bypass for Room8)
	CN_R1_HL	EEV 05 Low/High (For Room5)
	CN_R2_HL	EEV 06 Low/High (For Room6)
	CN_R3_HL	EEV 07 Low/High (For Room7)
	CN_R4_HL	EEV 08 Low/High (For Room8)

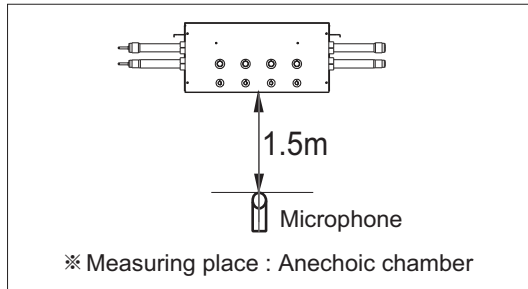
6. Wiring Diagrams

CONNECTOR NUMBER	FUNCTION
SW01E	Setting, EEV Number(When Manual Address)
	Setting, Time of Zoning Address(When Auto Address)
SW02E(1)	Selecting, Auto Address(↓) or Manual Address(↑)
SW02E(2~4)	Setting, Total Number of Indoor connected
SW02E(5)	Setting, Slave PCB
SW02E(6)	Setting, EEPROM Reset
SW02E(7~8)	Setting, Mode(Zoning, etc.)
SW01C	Setting, HR Unit Number
	Setting, EEV Number of Zoning(When Manual Address)
SW01D	Setting, EEV Group
SW01B	Setting, the Address of indoor_1(When Manual Address)
SW02B	Setting, the Address of indoor_10(When Manual Address)

7. Sound Levels

7.1 Sound pressure level

Overall

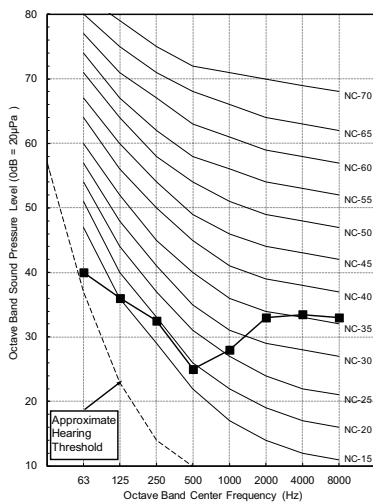


Note

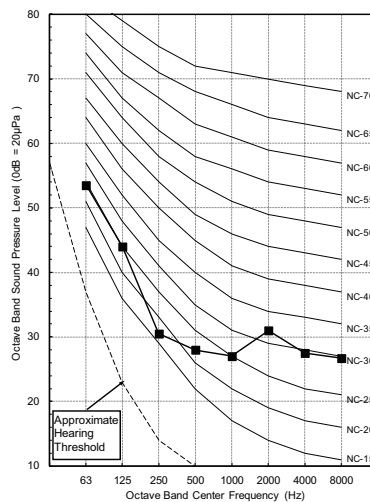
- Sound measured at 1.5m away from the center of the unit.
- Operating condition|
 - Power source : 220-240V 50Hz / 220V 60Hz
 - Cooling : Indoor temperature (27°C DB, 19°C WB), Outdoor temperature (35°C DB, 24°C WB)
 - Heating : Indoor temperature (20°C DB, 15°C WB), Outdoor temperature (7°C DB, 6°C WB)
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The changeover sound was measured by switching the mode of one indoor unit.
It could vary depending on the number of indoor units in operation, piping length and installation environment.

Operation Mode	50Hz, 220-240V
	Sound pressure Levels [dB(A)]
Cooling	30
Heating	30
Changeover : Cooling → Heating	33
Changeover : Heating → Cooling	38

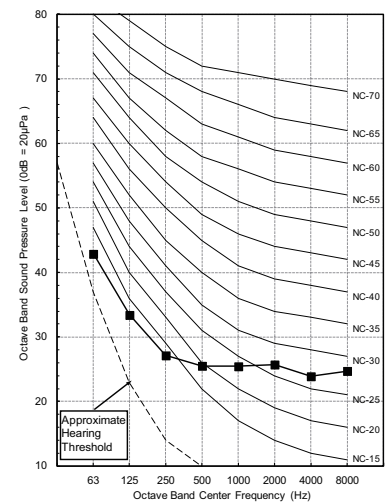
Cooling



Heating

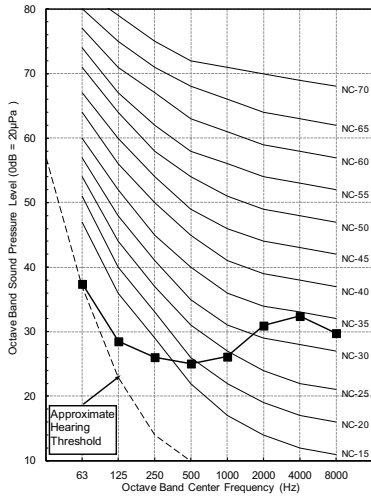


Changeover : Cooling → Heating



7. Sound Levels

Changeover : Heating → Cooling



Installation of Outdoor Units

- 1. Alternative Refrigerant R410A**
- 2. Select the Best Location**
- 3. Installation Space**
- 4. Lifting Method**
- 5. Installation**
- 6. Refrigerant Piping Installation**
- 7. Refrigerant Piping System**
- 8. Electrical Wiring**
- 9. Commissioning Setting**
- 10. Setting the Function**

1. Alternative Refrigerant R410A

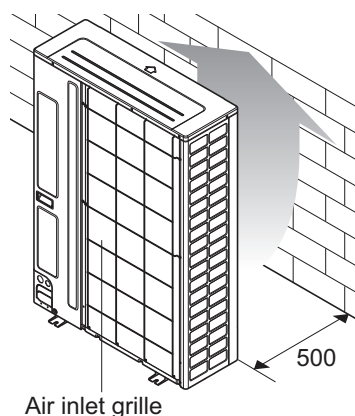
- The refrigerant R410A has the property of higher operating pressure in comparison with R22. Therefore, all materials have the characteristics of higher resisting pressure than R22 ones and this characteristic should be also considered during the installation.
R410A is an azeotrope of R32 and R125 mixed at 50:50, so the ozone depletion potential (ODP) of R410A is 0.
-

CAUTION

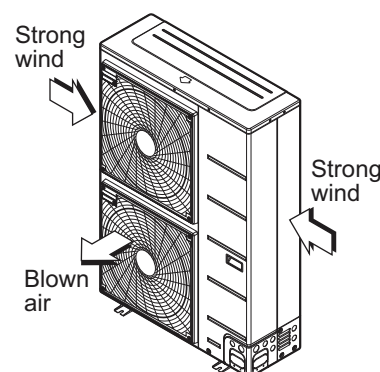
- The wall thickness of the piping should comply with the relevant local and national regulations for the designed pressure 3.8MPa
 - Since R410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in its gaseous state, its composition changes and the system will not work properly.
 - Do not place the refrigerant container under the direct rays of the sun to prevent it from exploding.
 - For high-pressure refrigerant, any unapproved pipe must not be used.
 - Do not heat pipes more than necessary to prevent them from softening.
 - Be careful not to install wrongly to minimize economic loss because it is expensive in comparison with R22.
-

2. Select the Best Location

1. Select space for installing outdoor unit, which will meet the following conditions:
 - No direct thermal radiation from other heat sources
 - No possibility of annoying neighbors by noise from unit
 - No exposition to strong wind
 - With strength which bears weight of unit
 - Note that drain flows out of unit when heating
 - With space for air passage and service work shown next
 - Because of the possibility of fire, do not install unit to the space where generation, inflow, stagnation, and leakage of combustible gas is expected.
 - Avoid unit installation in a place where acidic solution and spray (sulfur) are often used.
 - Do not use unit under any special environment where oil, steam and sulfuric gas exist.
 - It is recommended to fence round the outdoor unit in order to prevent any person or animal from accessing the outdoor unit.
 - If installation site is area of heavy snowfall, then the following directions should be observed.
 - Make the foundation as high as possible.
 - Fit a snow protection hood.
2. Select installation location considering following conditions to avoid bad condition when additionally performing defrost operation.
 - Install the outdoor unit at a place well ventilated and having a lot of sunshine in case of installing the product at a place with a high humidity in winter (near beach, coast, lake, etc).
(Ex) Rooftop where sunshine always shines.
 - Performance of heating will be reduced and pre-heat time of the indoor unit may be lengthened in case of installing the outdoor unit in winter at following location:
 - Shade position with a narrow space
 - Location with much moisture in neighboring floor.
 - Location with much humidity around.
 - Location where ventilation is good.
It is recommended to install the outdoor unit at a place with a lot of sunshine as possible as.
 - Location where water gathers since the floor is not even.
3. When installing the outdoor unit in a place that is constantly exposed to a strong wind like a coast or on a high story of a building, secure a normal fan operation by using a duct or a wind shield.
 - Install the unit so that its discharge port faces to the wall of the building.
Keep a distance 500mm or more between the unit and the wall surface.
 - Supposing the wind direction during the operation season of the air conditioner, install the unit so that the discharge port is set at right angle to the wind direction.



Turn the air outlet side toward the building's wall, fence or windbreak screen.



Set the outlet side at a right angle to the direction of the wind.

2. Select the Best Location

◆ Seasonal wind and cautions in winter

- Sufficient measures are required in a snow area or severe cold area in winter so that product can be operated well.
- Get ready for seasonal wind or snow in winter even in other areas.
- Install a suction and discharge duct not to let in snow or rain.
- Install the outdoor unit not to come in contact with snow directly. If snow piles up and freezes on the air suction hole, the system may malfunction. If it is installed at snowy area, attach the hood to the system.
- Install the outdoor unit at the higher installation console by 50cm than the average snowfall (annual average snowfall) if it is installed at the area with much snowfall.

Note

1. The height of H frame must be more than 2 times the snowfall and its width shall not exceed the width of the product. (If width of the frame is wider than that of the product, snow may accumulate)
 2. Don't install the suction hole and discharge hole of the Outdoor Unit facing the seasonal wind.
-

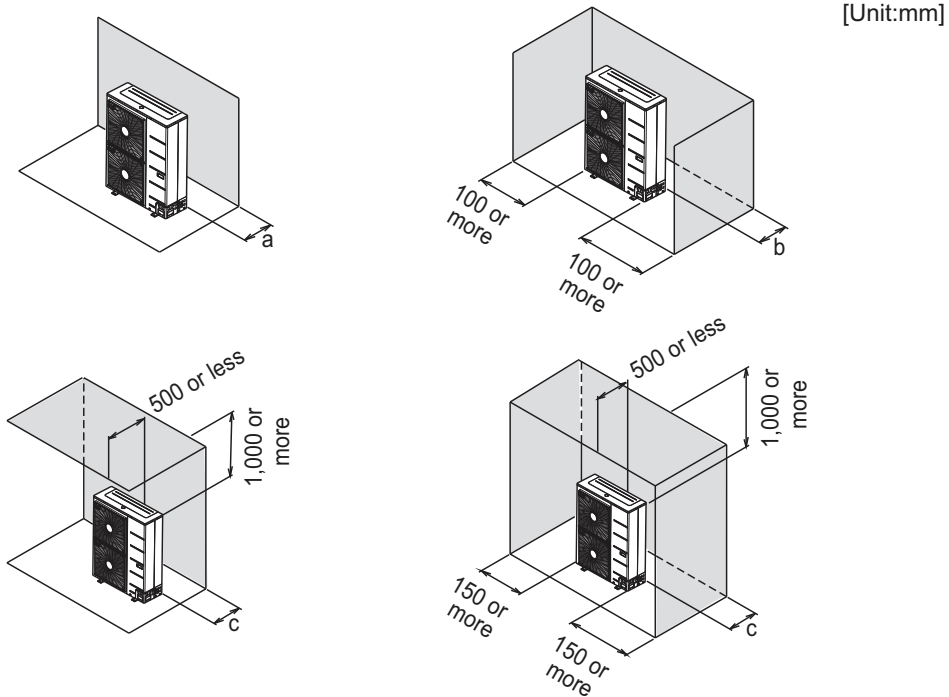
3. Installation Space

- The following values are the least space for installation.
If any service area is needed for service according to field circumstance, obtain enough service space.
- The unit of values is mm.

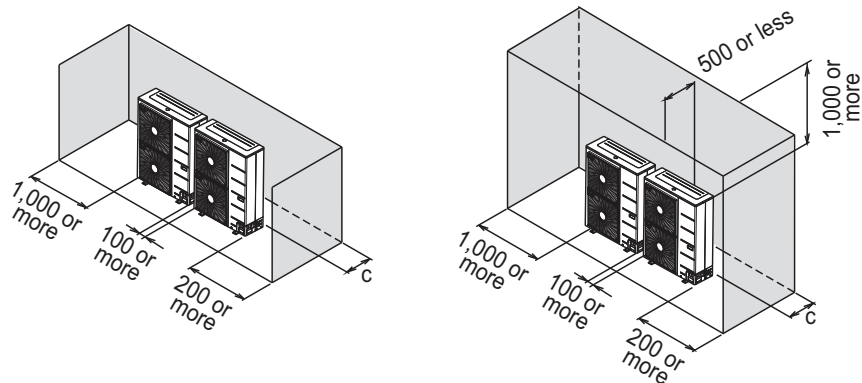
3.1 Individual Installation

■ In case of obstacles on the suction side

1. Stand alone installation



2. Collective installation



Chassis code	U4 / U3 Chassis	U7 Chassis
a	100 or more	200 or more
b	100 or more	300 or more
c	300 or more	350 or more

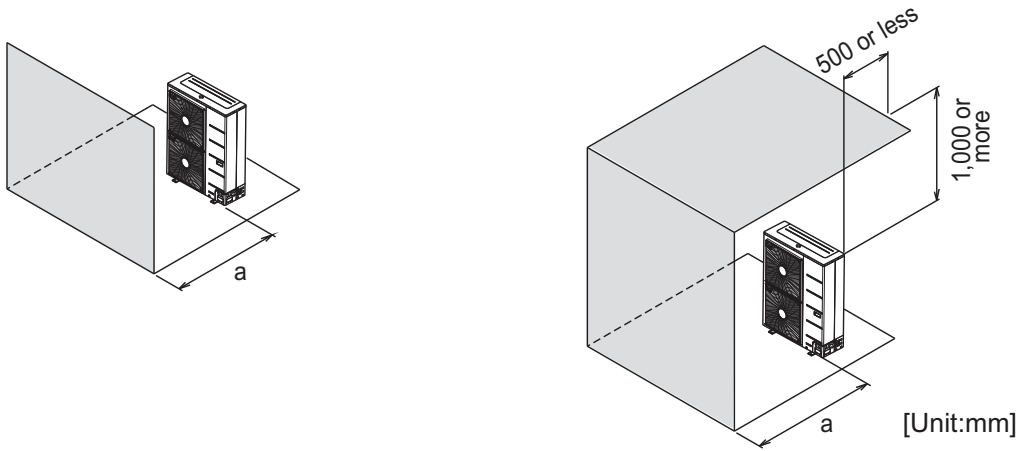
Note

- Depending on the sales region or product type, external appearance and applicability of each "Chassis" might be varied.

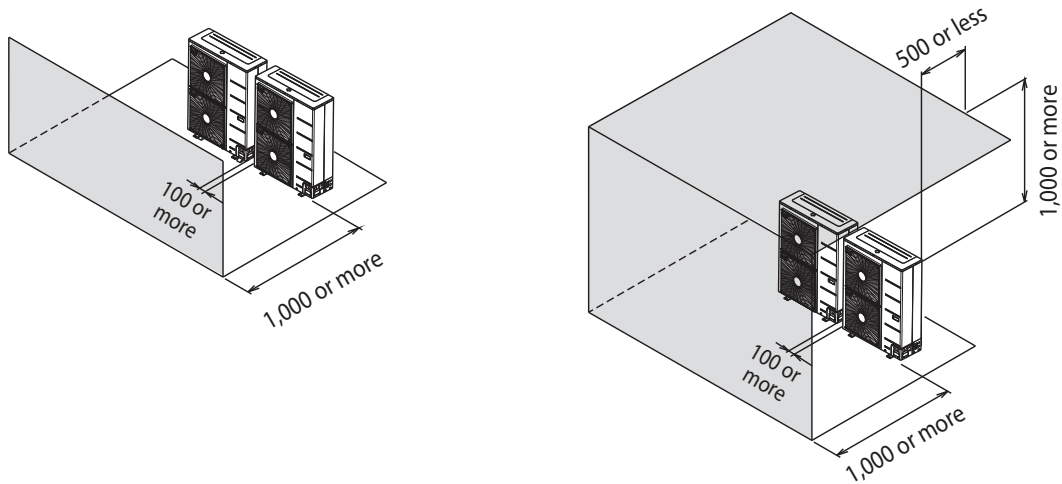
3. Installation Space

■ In case of obstacles on the discharge side

1. Stand alone installation



2. Collective installation



Chassis code	U4 / U3 Chassis	U7 Chassis
a	500 or more	700 or more

Note

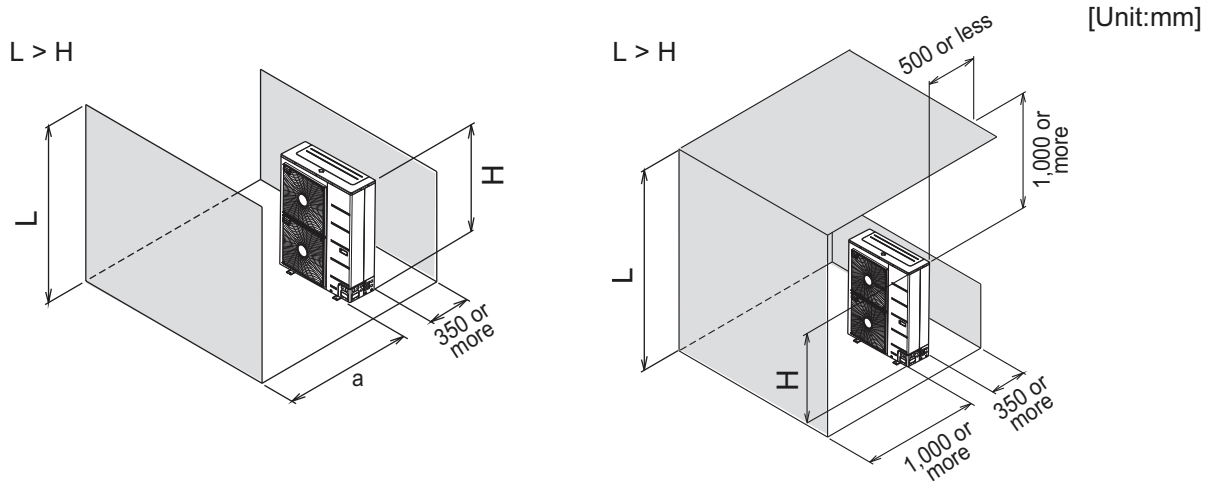
• Depending on the sales region or product type, external appearance and applicability of each "Chassis" might be varied.

3. Installation Space

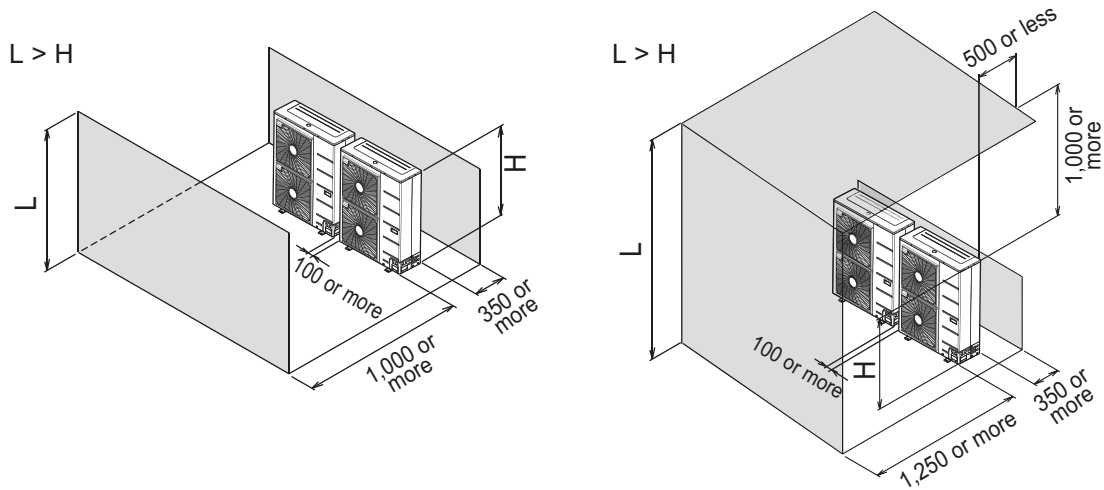
■ In case of obstacles on the suction and the discharge side

- Obstacle height of discharge side is higher than the unit

1. Stand alone installation



2. Collective installation



Chassis code	U4 / U3 Chassis	U7 Chassis
a	500 or more	700 or more

Note

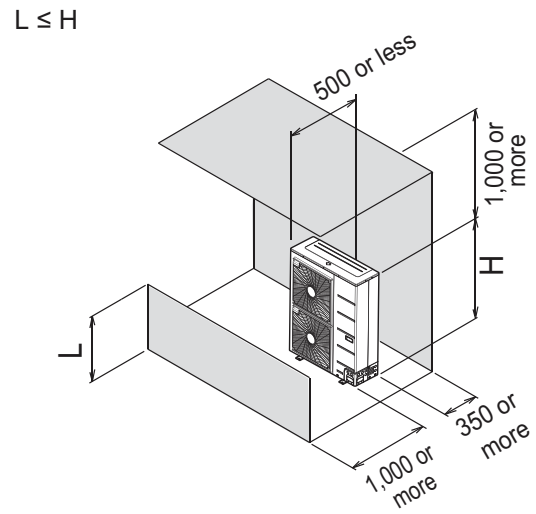
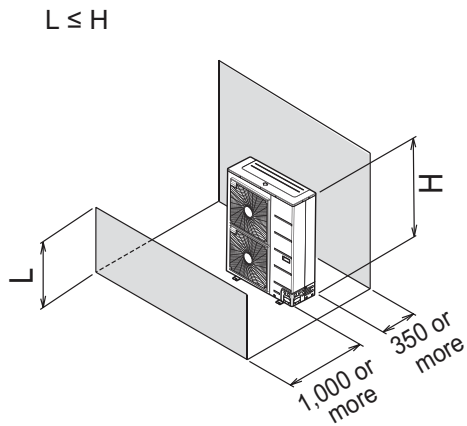
- Depending on the sales region or product type, external appearance and applicability of each "Chassis" might be varied.

3. Installation Space

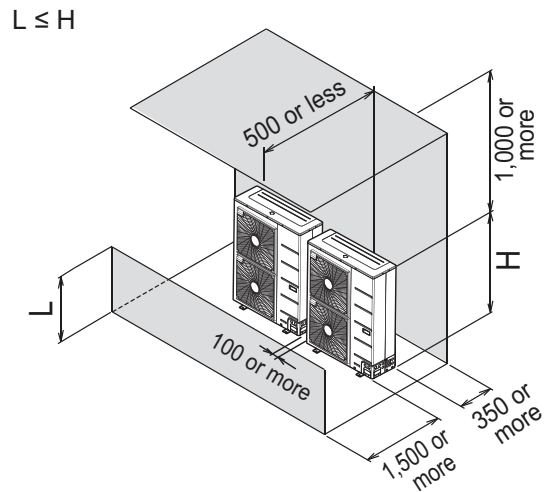
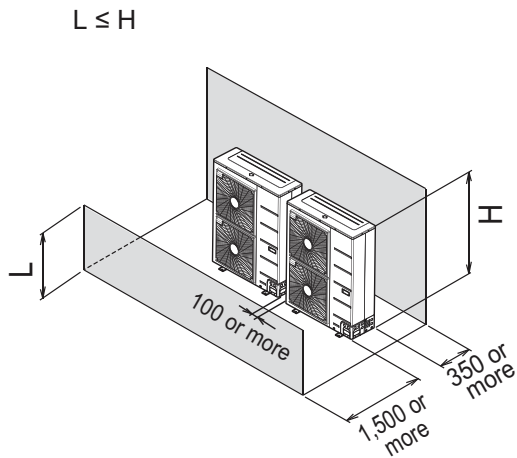
- Obstacle height of discharge side is lower than the unit

1. Stand alone installation

[Unit:mm]



2. Collective installation

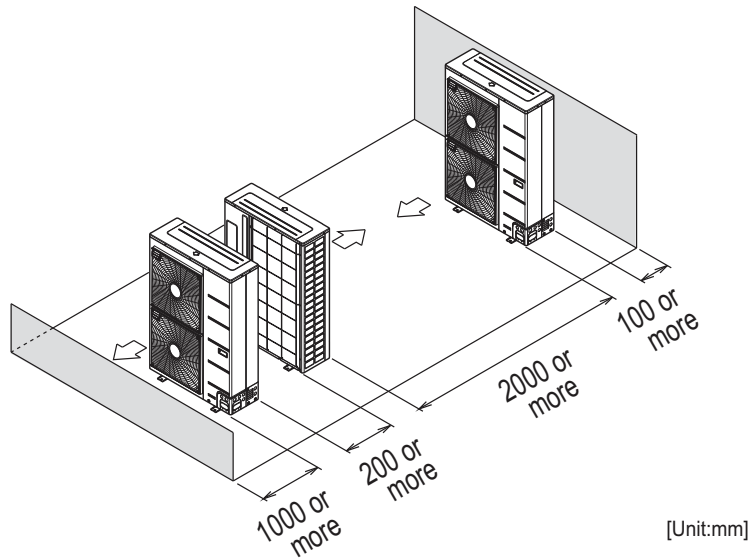


3. Installation Space

3.2 Collective / continuous installation

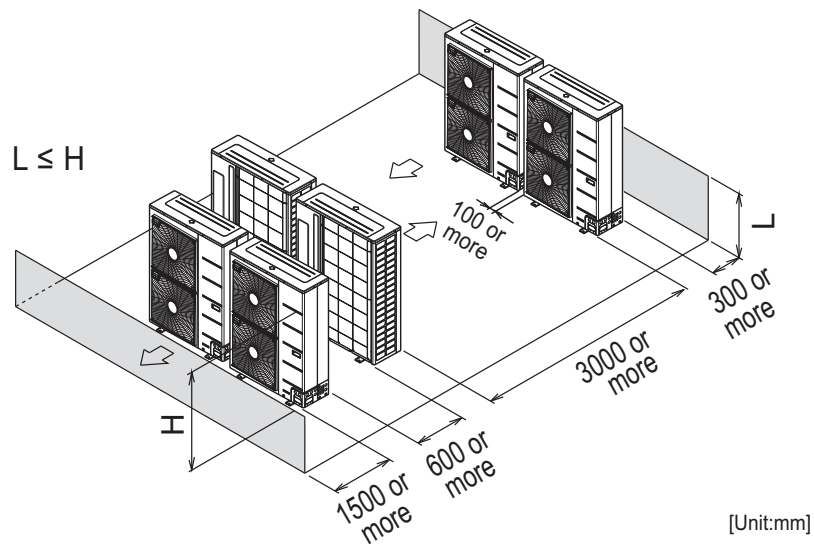
Space required for collective installation and continuous installation: When installing several units, leave space between each block as shown below considering passage for air and people.

■ One row of stand alone installation



■ Rows of collective installation (2 or more)

- L should be smaller than H



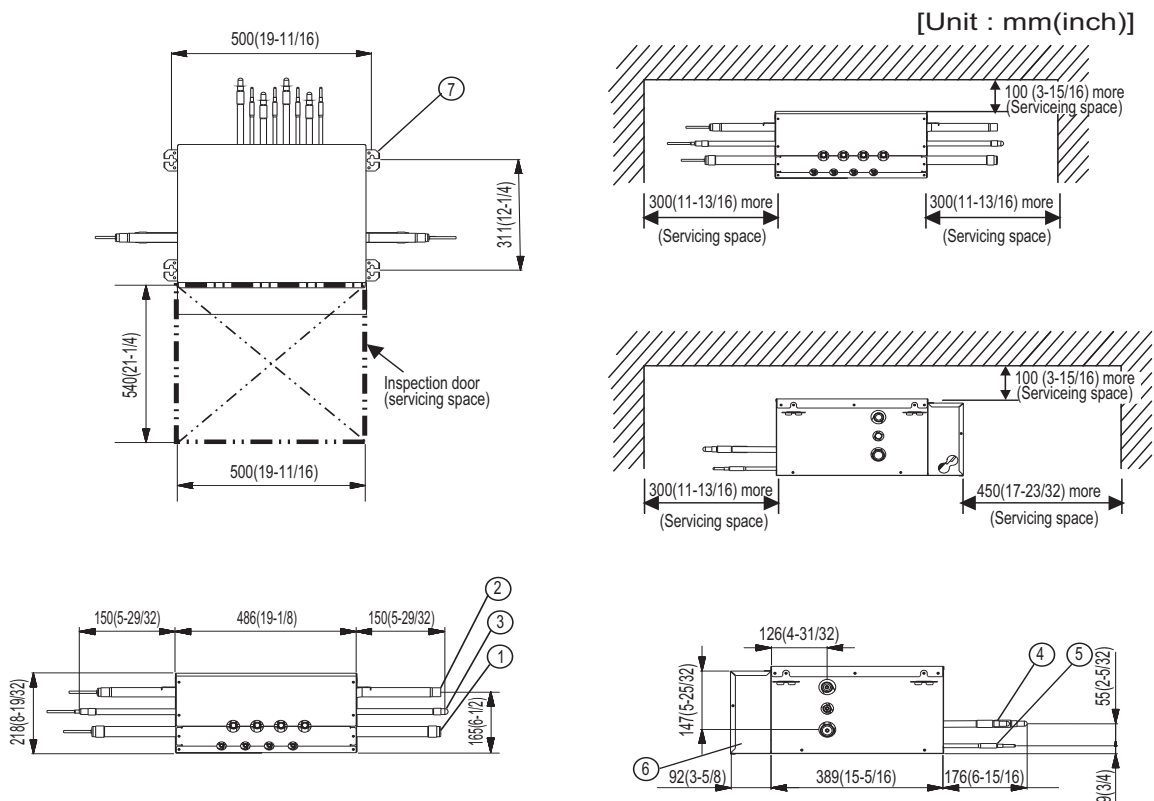
3. Installation Space

3.3 Installation of HR unit

■ Select installation location of the HR unit suitable for following conditions

- Avoid a place where rain may enter since the HR unit is for indoor.
- Sufficient service space must be obtained.
- Refrigerant pipe must not exceed limited length.
- Avoid a place subject to a strong radiation heat from other heat source.
- Avoid a place where oil spattering, vapor spray or high frequency electric noise is expected.
- Install the unit at a place in which it is not affected by operation noise. (Installation within cell such as meeting room etc. may disturb business due to noise.)
- Place where refrigerant piping, drain piping and electrical wiring works are easy.

PRHR023 / PRHR033 / PRHR043



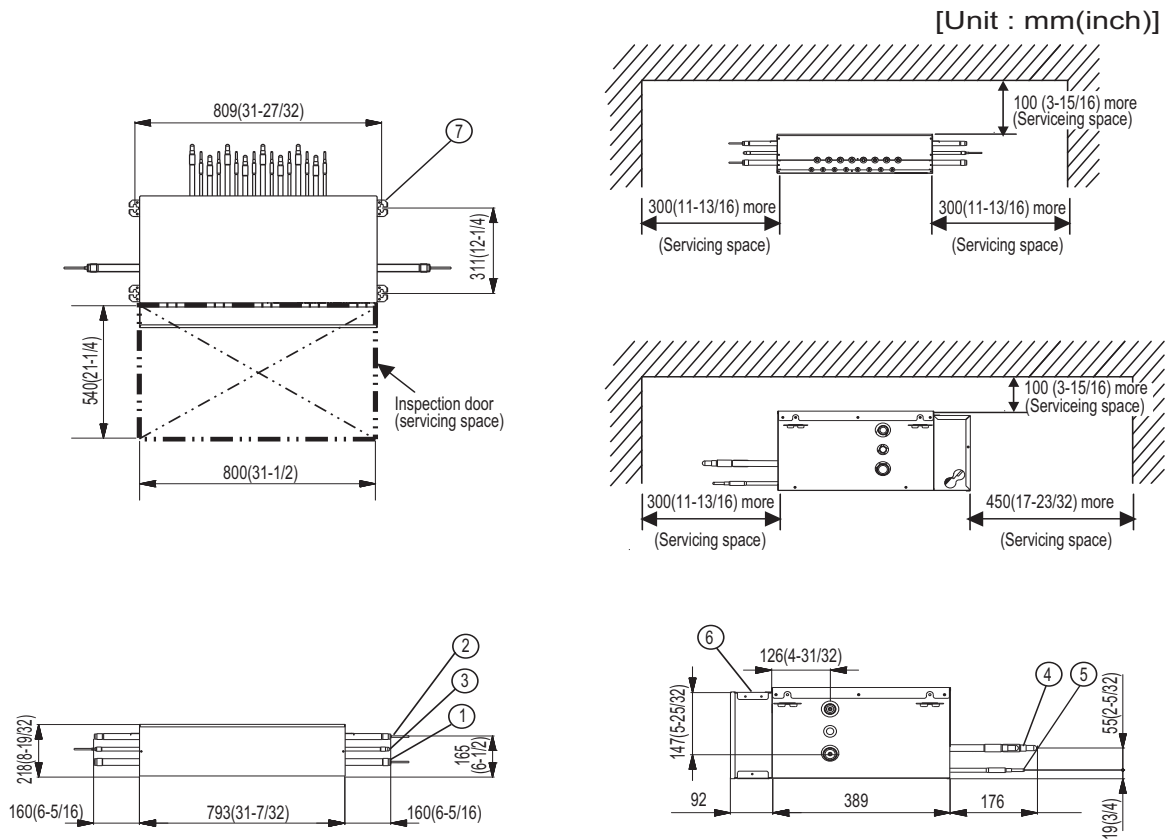
No.	Part Name	Description	
		PRHR033 / PRHR043	PRHR023
1	Low pressure Gas pipe connection port	Ø28.58(1-1/8) Brazing connection	Ø22.2(7/8) Brazing connection
2	High pressure Gas pipe connection port	Ø22.2(7/8) Brazing connection	Ø19.05(3/4) Brazing connection
3	Liquid pipe connection port	Ø15.88(5/8) Brazing connection(PRHR043) Ø12.7 Brazing connection(PRHR033)	Ø9.52(3/8) Brazing connection
4	Indoor unit Gas pipe connection port	Ø15.88(5/8)~Ø12.7(1/2) Brazing connection	Ø15.88(5/8)~Ø12.7(1/2) Brazing connection
5	Indoor unit Liquid pipe connection port	Ø9.52(3/8)~Ø6.35(1/4) Brazing connection	Ø9.52(3/8)~Ø6.35(1/4) Brazing connection
6	Control box	-	-
7	Hanger metal	Suspension bolt M10 or M8	Suspension bolt M10 or M8

Notice

1. Be sure to install the inspection door at the control box side.
2. If reducers are used, servicing space must be increased equal to reducer's dimension.

3. Installation Space

PRHR063 / PRHR083



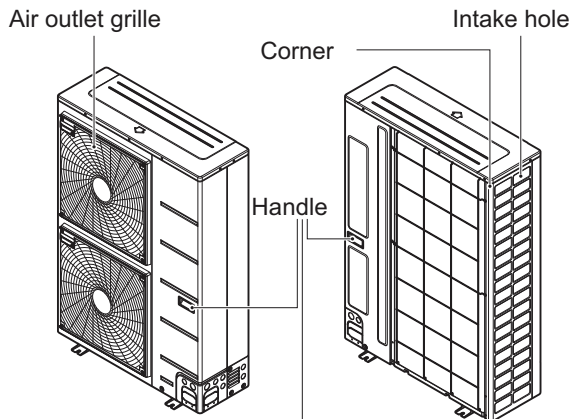
No.	Part Name	Description
		PRHR063 / PRHR083
1	Low pressure Gas pipe connection port	Ø28.58(1-1/8) Brazing connection
2	High pressure Gas pipe connection port	Ø22.2(7/8) Brazing connection
3	Liquid pipe connection port	Ø15.88(5/8) Brazing connection
4	Indoor unit Gas pipe connection port	Ø15.88(5/8)~Ø12.7(1/2) Brazing connection
5	Indoor unit Liquid pipe connection port	Ø9.52(3/8)~Ø6.35(1/4) Brazing connection
6	Control box	-
7	Hanger metal	Suspension bolt M10 or M8

Notice

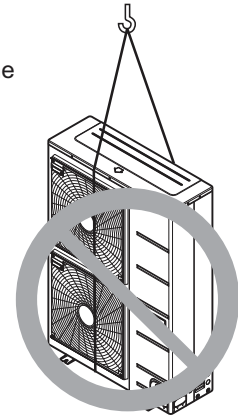
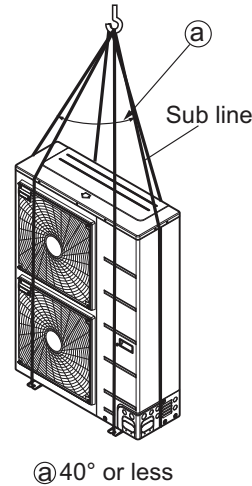
1. Be sure to install the inspection door at the control box side.
2. If reducers are used, servicing space must be increased equal to reducer's dimension.

4. Lifting Method

- When carrying the suspended, unit pass the ropes between legs of base panel under the unit.
- Always lift the unit with ropes attached at four points so that impact is not applied to the unit.
- Attach the ropes to the unit at an angle of 40° or less.
- Use only accessories and parts which are of the designated specification when installing.



Always hold the unit by the corners, as holding it by the side intake holes on the casing may cause them to deform.



WARNING

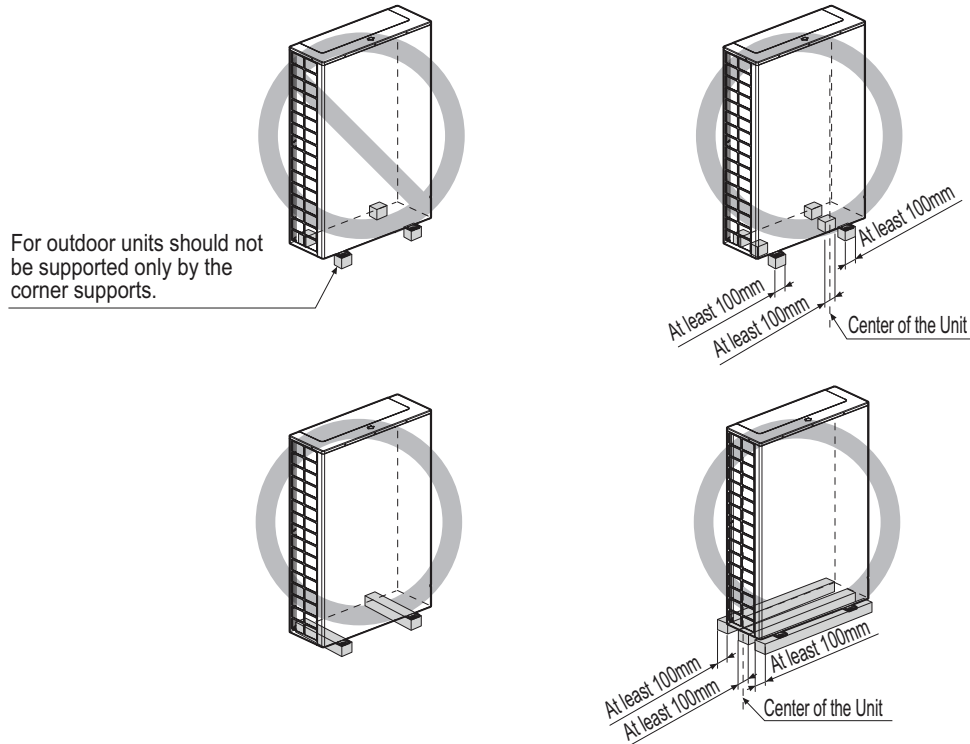
CAUTION

Be very careful while carrying the product.

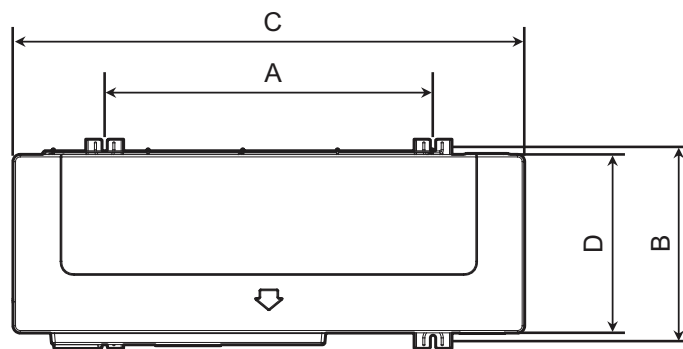
- Do not have only one person carry product if it is more than 20 kg.
- PP bands are used to pack some products. Do not use them as a mean for transportation because they are dangerous.
- Do not touch heat exchanger fins with your bare hands. Otherwise you may get a cut in your hands.
- Tear plastic packaging bag and scrap it so that children cannot play with it. Otherwise plastic packaging bag may suffocate children to death.
- When carrying in Outdoor Unit, be sure to support it at four points. Carrying in and lifting with 3-point support may make Outdoor Unit unstable, resulting in a fall.

5. Installation

- Install at places where it can endure the weight and vibration/noise of the outdoor unit.
- The outdoor unit supports at the bottom shall have width of at least 100mm under the Unit's legs before being fixed.
- The outdoor unit supports should have minimum height of 200mm.
- Anchor bolts must be inserted at least 75mm.



5.1 The location of the Anchor bolts



Chassis	Model	A x B [Unit : mm]	C x D [Unit : mm]
U4 / U3	4, 5, 6, 8 HP	620 x 360	950 x 330
U7	10, 12 HP	620 x 360	1,090 x 380

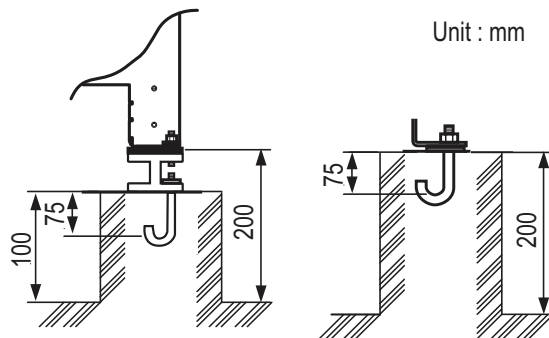
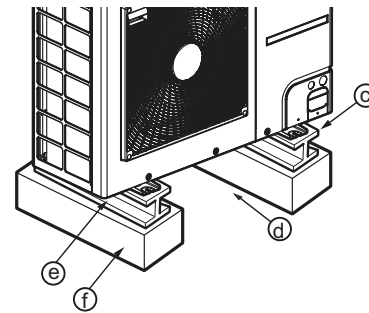
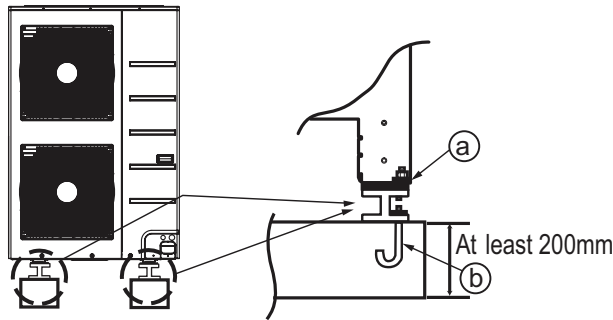
Note

- Depending on the sales region or product type, external appearance and applicability of each "Chassis" might be varied.

5. Installation

5.2 Foundation for Installation

- Fix the unit tightly with bolts as shown below so that unit will not fall down due to earthquake or gust.
- Use the H-beam support as a base support
- Noise and vibration may occur from the floor or wall since vibration is transferred through the installation part depending on installation status. Thus, use anti-vibration materials (cushion pad) fully (The base pad shall be more than 200mm).



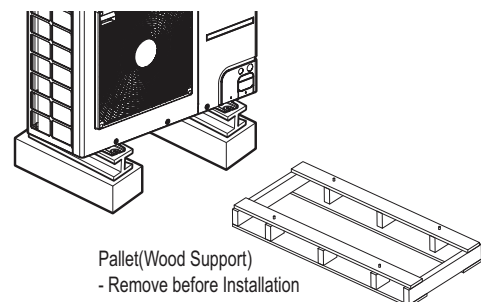
- Ⓐ The corner part must be fixed firmly. Otherwise, the support for the installation may be bent.
- Ⓑ Get and use M10 Anchor bolt.
- Ⓒ Put Cushion Pad between the outdoor unit and ground support for the vibration protection in wide area.
- Ⓓ Space for pipes and wiring (Pipes and wirings for bottom side)
- Ⓔ H-beam support
- Ⓕ Concrete support

⚠ WARNING

- Install where it can sufficiently support the weight of the outdoor unit.
If the support strength is not enough, the outdoor unit may drop and hurt people.
- Install where the outdoor unit may not fall in strong wind or earthquake.
If there is a fault in the supporting conditions, the outdoor unit may fall and hurt people.
- Please take extra cautions on the supporting strength of the ground, water outlet treatment (treatment of the water flowing out of the outdoor unit in operation), and the passages of the pipe and wiring, when making the ground support.
- Do not use tube or pipe for water outlet in the Base pan. Use drainage instead for water outlet. The tube or pipe may freeze and the water may not be drained.

⚠ WARNING

- Be sure to remove the Pallet (Wood Support) of the bottom side of the outdoor unit Base Pan before fixing the bolt. It may cause the unstable state of the outdoor settlement, and may cause freezing of the heat exchanger resulting in abnormal operations.
- Be sure to remove the Pallet (Wood Support) of the bottom side of the outdoor unit before welding. Not removing Pallet (Wood Support) causes hazard of fire during welding.

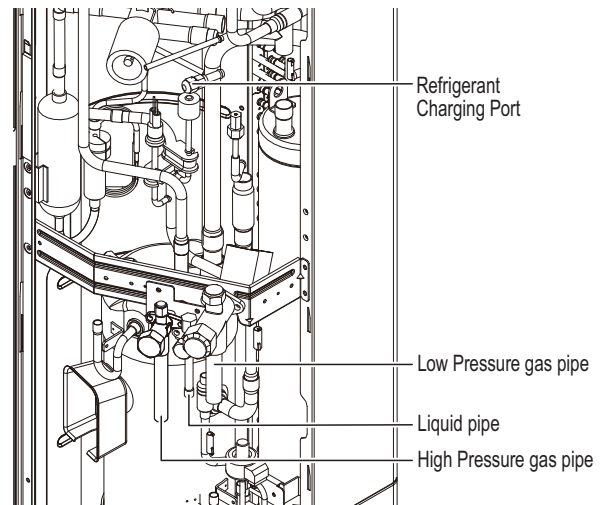


6. Refrigerant Piping Installation

6.1 Precautions on Pipe connection / Valve operation

Pipe connection is done by connecting from the end of the pipe to the branching pipes, and the refrigerant pipe coming out of the outdoor unit is divided at the end to connect to each indoor unit. Flare connection for the indoor unit, and welding connection for the outdoor pipe and the branching parts.

- Use hexagonal wrench to open/close the valve.



⚠ WARNING

- Always careful not to leak the refrigerant during welding.
- The refrigerant generates poisonous gas harmful to human body if combusted.
- Do not perform welding in a closed space.
- Be sure to close the cap of the service port to prevent gas leakage after the work.

⚠ CAUTION

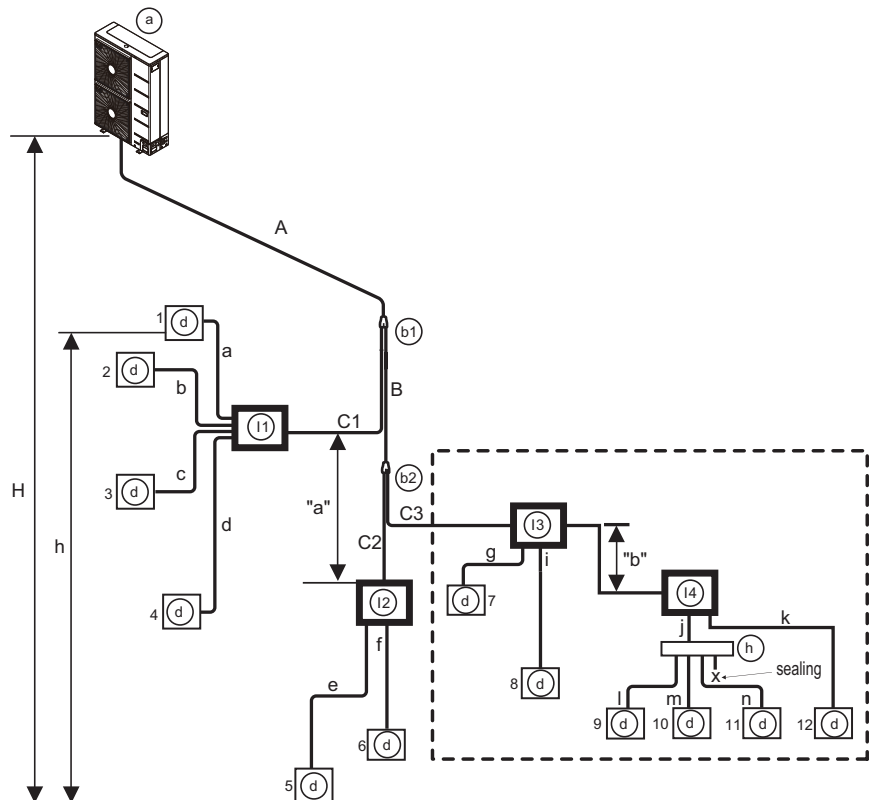
Please block the pipe knock outs of the front and side panels after installing the pipes.
(Animals or foreign objects may be brought in to damage wires.)

7. Refrigerant piping system

7.1 Pipe Connection Method between outdoor unit / indoor unit

Example : 12 Indoor Units connected

- Ⓐ Outdoor Unit
- Ⓑ Y branch
- Ⓓ Indoor Units
- Ⓗ Header
- Ⓘ HR Unit



- Case 1 ("a") : Maximum height is 15m if you install with Y branch.
- Case 2 ("b") : Maximum height is 5m in serial connection of HR units.

⚠ WARNING

- **Branch pipe can not be used after header.**
- **It is recommended that difference in length of the pipes connected to the indoor units (a~f) is minimized. The large difference in pipe lengths, the more different performance between indoor units.**
- **If the large capacity indoor units (Over 5 HP; using overØ15.88/Ø9.52) are installed, it should be used the Valve Group setting.**
- **Refer to the HR unit PCB part for the valve group control setting.**

7. Refrigerant piping system

■ Total pipe length = $A+B+C1+C2+C3+a+b+c+d+e+f+g+i+j+k+l+m+n \leq 300 \text{ m}$

Maximum pipe length	Total pipe length ($A+B+C1+C2+C3+a+b+c+d+e+f+g+i+j+k+l+m+n$)		300m
	L	Longest pipe length ($A+B+C3+k$) : between Outdoor Unit and Indoor Unit	150m (200m ^{**})
		Longest pipe Equivalent length* : between Outdoor Unit and Indoor Unit	175m (225m ^{**})
/	Longest pipe length after 1st branch		40m (90m ^{**})
Maximum difference in height	H	Between Outdoor Unit and Indoor Unit	50m
	h	Between Indoor Unit and Indoor Unit	15m
	h1	Between Indoor Unit and Indoor Unit	5m
	h2	Between Indoor Unit and HR Unit	15m
	a	Between HR Unit and HR Unit	15m
	b	Between HR Unit and HR Unit within same branch	5m

Note

- * : Assume equivalent pipe length of Y branch to be 0.5m, that of header to be 1m, and that of HR unit to be 2.5m for calculation purpose.
- It is recommended that indoor unit is installed at lower position than the header.
- ** : Conditional Application

WARNING

- When the any one (or both) of below conditions are satisfied, the diameter of main pipe (A) must be increased according to below table.
 - The equivalent length between outdoor unit and the farthest indoor unit is 90m or more.
: Liquid , High pressure/Low pressure Gas pipes must be increased.
 - The level difference (Outdoor unit and Indoor unit) is 50m or more.
: Only liquid pipe must be increased.

◆ Refrigerant pipe diameter from outdoor unit to first branch. (A)

Upward Outdoor unit total capacity	Standard Pipe Diameter			Pipe diameter when pipe length is over 90m		
	Liquid pipe[mm(inch)]	Low Pressure Gaspipe [mm(inch)]	High Pressure Gaspipe [mm(inch)]	Liquid pipe[mm(inch)]	Low Pressure Gaspipe [mm(inch)]	High Pressure Gaspipe [mm(inch)]
HP						
6	Ø 9.52 (3/8)	Ø 19.05 (3/4)	Ø 15.88 (5/8)	Ø 12.7 (1/2)	Ø 22.2 (7/8)	Ø 19.05 (3/4)

Note

- If available on site, select pipe size according to upper table. Otherwise it doesn't need to be increased.

7. Refrigerant piping system

◆ Refrigerant pipe diameter from branch to branch (B,C)

Downward indoor unit total capacity[kW(Btu/h)]	Liquid pipe[mm(inch)]	Gas pipe [mm(inch)]	
		Low pressure	High pressure
≤ 5.6(19,100)	Ø6.35(1/4)	Ø12.7(1/2)	Ø9.52(3/8)
< 16.0 (54,600)	Ø9.52(3/8)	Ø15.88(5/8)	Ø12.7(1/2)
< 22.4 (76,400)	Ø9.52(3/8)	Ø19.05(3/4)	Ø15.88(5/8)
< 33.6(114,700)	Ø9.52(3/8)	Ø22.2(7/8)	Ø19.05(3/4)
< 50.4(229,000)	Ø12.7(1/2)	Ø28.58(1-1/8)	Ø22.2(7/8)
< 61.6(210,600)	Ø15.88(5/8)	Ø28.58(1-1/8)	Ø22.2(7/8)
< 72.8(210,600)	Ø15.88(5/8)	Ø34.9(1-3/8)	Ø28.58(1-1/8)
< 100.8(344,000)	Ø19.05(3/4)	Ø34.9(1-3/8)	Ø28.58(1-1/8)
< 173.6(592,500)	Ø19.05(3/4)	Ø41.3(1-5/8)	Ø34.9(1-3/8)
< 184.8(630,700)	Ø22.2(7/8)	Ø44.5(1-3/4)	Ø41.3(1-5/8)
≤ 224.0(764,400)	Ø22.2(7/8)	Ø53.98(2-1/8)	Ø44.5(1-3/4)

■ Conditional Application (only for Y Branch method)

If the below conditions are satisfied, limit of longest pipe length after 1st branch(ℓ) could be extended by 40m → 90m.

Note

1. Pipe diameter Size Up

Pipe diameter(Liquid/Gas pipes) between 1st branch ↔ last branch(B,C,D) is increased by on step.

If the pipe diameter of B,C,D is same as A, it is not necessary.

: Ø 6.35 → Ø 9.52 → Ø 12.7 → Ø 15.88 → Ø 19.05 → Ø 22.2 → Ø 25.4*

: Ø 28.58 → Ø 31.8*

: Ø 34.9 → Ø 38.1*

(* : It is not necessary to size up.)

* If available on site, use this size. Otherwise it can't be increased.

2. Correction for calculating the total pipe length

When calculating total pipe length, pipe B,C,D length should be calculated twice.

: $A+Bx2+Cx2+Dx2+a+b+c+d+e \leq 300$ m

3. Indoor unit pipe length

Length of pipe from each indoor unit to the closest branch (a,b,c,d,e) ≤ 40 m.

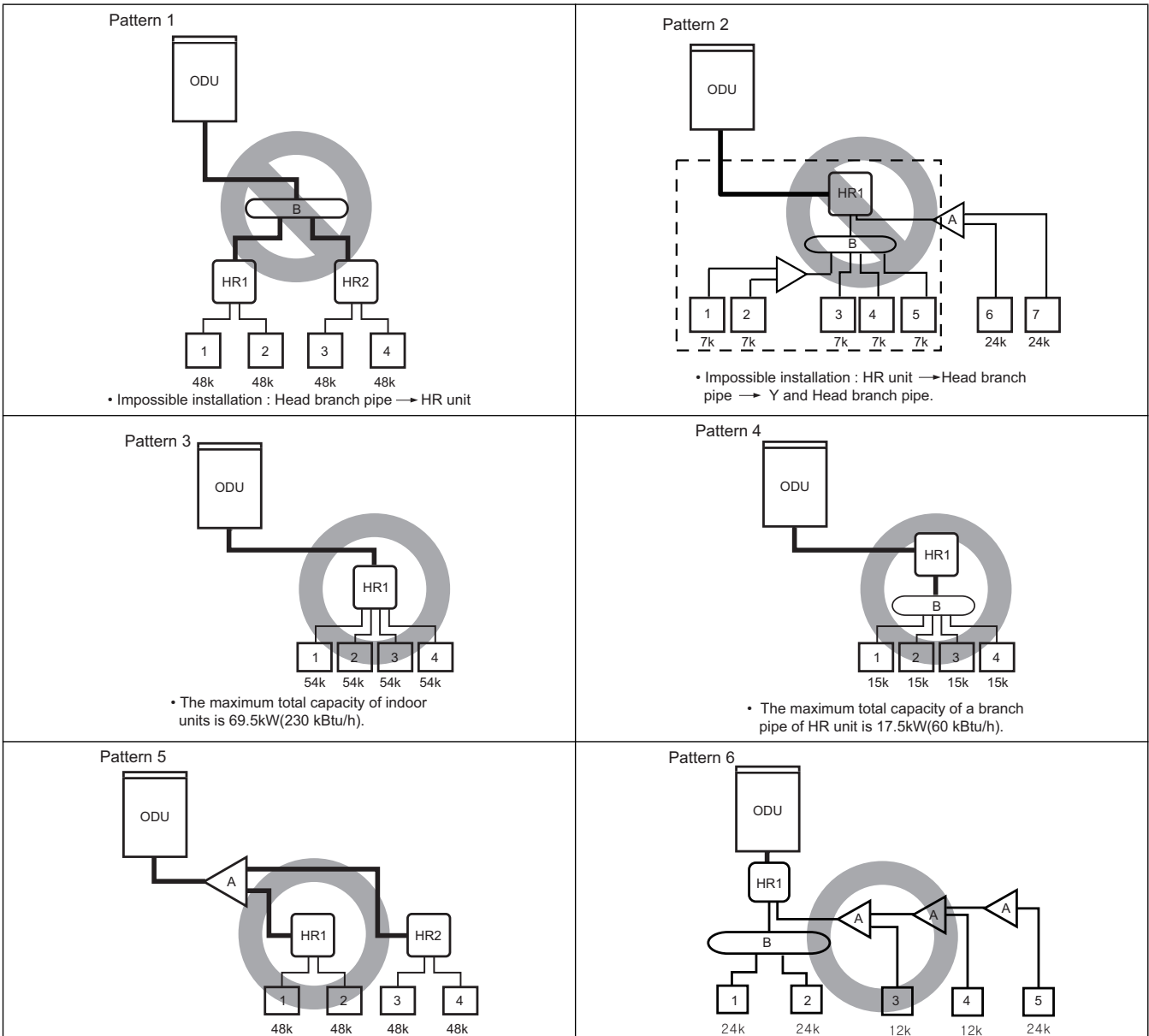
4. Difference in length between outdoor unit and the farthest or closest indoor unit

[Length of pipe from outdoor unit to the farthest indoor unit 5 (A+B+C+D+e)]

- [Length of pipe from outdoor unit to the closest indoor unit 1 (A+a)] ≤ 40 m

7. Refrigerant piping system

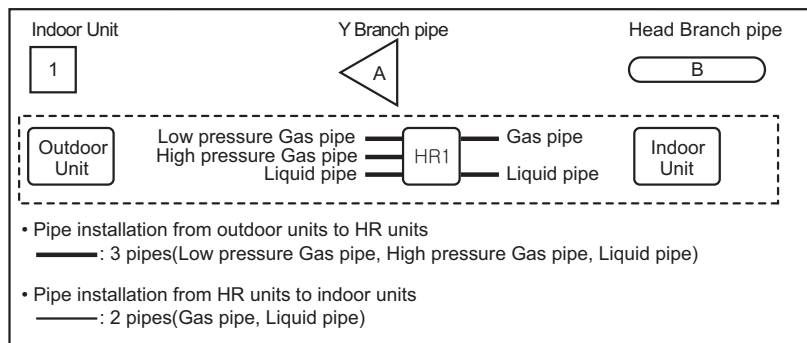
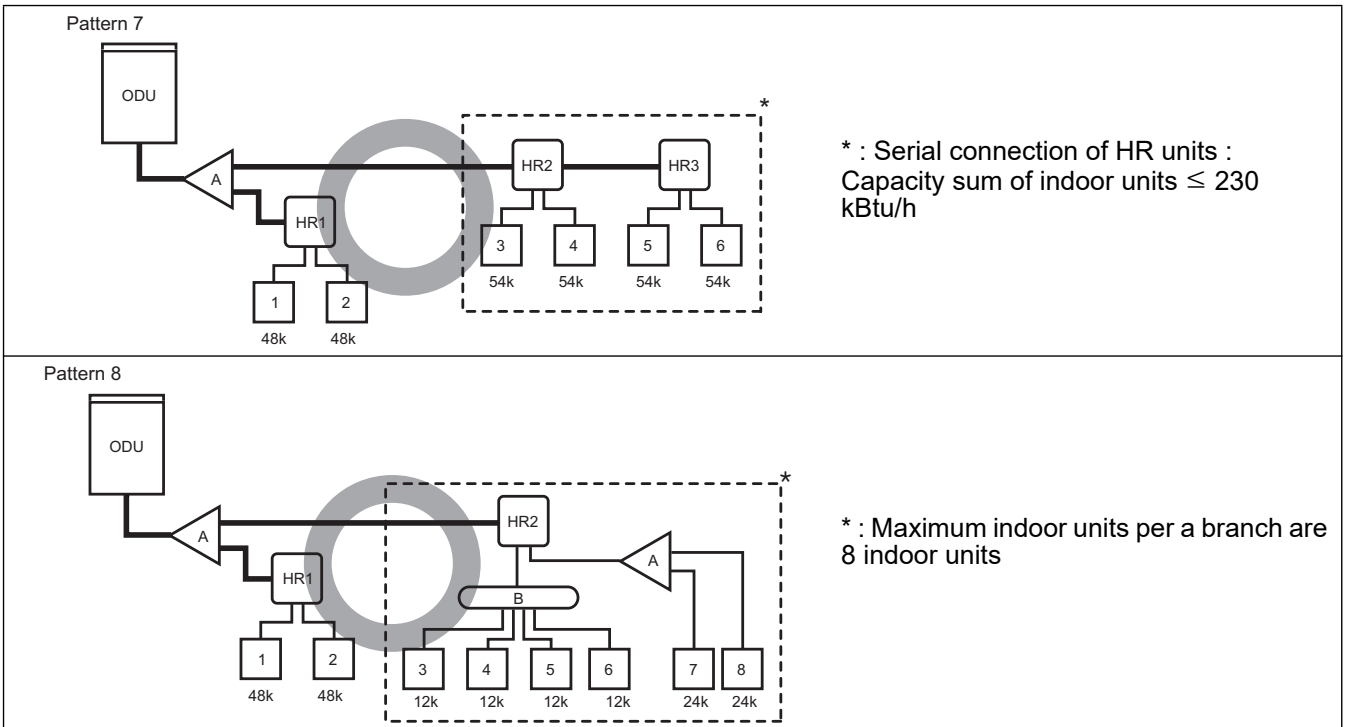
Y branch, Header and HR unit connection pattern



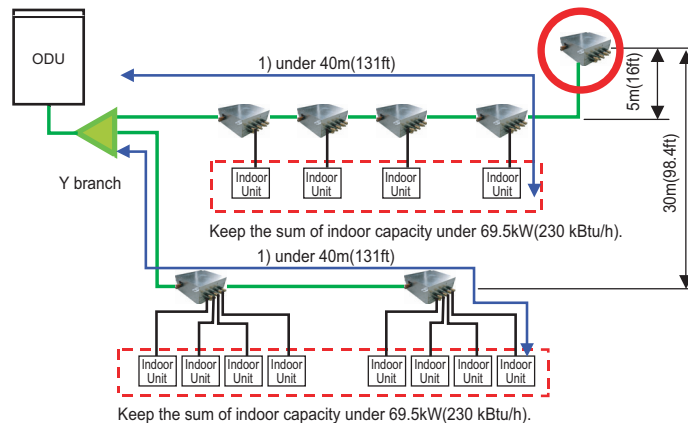
Note

- If the large capacity(76kBTu/h and 96kBTu/h unit) indoor units are installed, two neighboring outlets of one HR unit are linked by Y branch pipe and connected to one indoor unit.

7. Refrigerant piping system



- Keep the 40m(131ft) distance from the first branch to the farthest indoor.



Note

- If the large capacity(76kBtu/h and 96kBtu/h grade) indoor units are installed, two neighboring outlets of one HR unit are linked by Y branch pipe and connected to one indoor unit.

7. Refrigerant piping system

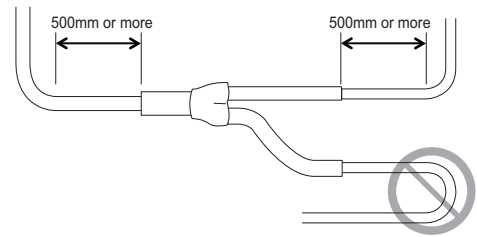
7.2 Indoor Unit Connection

◆ Indoor Unit connecting pipe from branch (a, b, c, d, e, f)

Indoor Unit capacity [kW(Btu/h)]	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]
≤ 5.6(19,100)	Ø6.35(1/4)	Ø12.7(1/2)
< 16.0(54,600)	Ø9.52(3/8)	Ø15.88(5/8)
< 22.4(76,400)	Ø9.52(3/8)	Ø19.05(3/4)
≤ 28.0(95,900)	Ø9.52(3/8)	Ø22.2(7/8)

⚠ CAUTION

- Bending radius should be at least twice the diameter of the pipe.
- Bend pipe after 500mm or more from branch(or header).
Do not bend U type.
It may affect performance or result in noise.
If U type bending is required the R should be more than 200mm.



7. Refrigerant piping system

7.3 The amount of Refrigerant

The calculation of the additional charge should take into account the length of pipe and CF(correctionFactor) value of indoor unit.

Additional charge(kg)	=	Total liquid pipe : Ø25.4 mm	×	0.480(kg/m)
	+	Total liquid pipe : Ø22.2 mm	×	0.354(kg/m)
	+	Total liquid pipe : Ø19.05 mm	×	0.266(kg/m)
	+	Total liquid pipe : Ø15.88 mm	×	0.173(kg/m)
	+	Total liquid pipe : Ø12.7 mm	×	0.118(kg/m)
	+	Total liquid pipe : Ø9.52 mm	×	0.061(kg/m)
	+	Total liquid pipe : Ø6.35 mm	×	0.022(kg/m)
	+	Number of installed HR units(2,3,4port)	×	0.500(kg)
	+	Number of installed HR units(6,8port)	×	1.000(kg)
	+	CF value of indoor unit		

Note

For CF value (additional refrigerant) table of indoor units, please refer to th PDB of indoor unit.

7. Refrigerant piping system

7.4 Selection of Y Branch, Header and Reducer

7.4.1 Y Branch

■ Heat Recovery Piping (side to HR unit)

Models	Low Pressure Gas pipe [unit:mm]	High Pressure Gas pipe [unit:mm]	Liquid pipe [unit:mm]
ARBLB01621			
ARBLB03321			
ARBLB07121			
ARBLB14521			
ARBLB23220			

7. Refrigerant piping system

Heat Pump Piping (side to Indoor unit)

Models	Gas pipe [unit:mm]	Liquid pipe [unit:mm]
ARBLN01621		
ARBLN03321		
ARBLN07121		
ARBLN14521		
ARBLN23220		

7. Refrigerant piping system

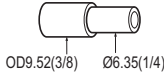
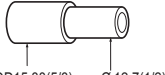
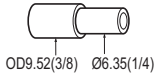
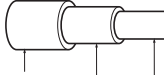
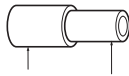
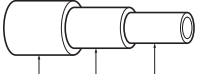
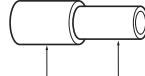
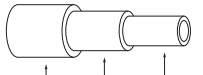

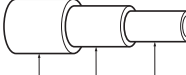
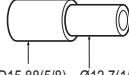
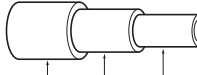
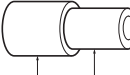
7.4.2 Header

Models	Gas pipe [unit:mm]	Liquid pipe [unit:mm]
4 branch ARBL054		
7 branch ARBL057		
4 branch ARBL104		
7 branch ARBL107		
10 branch ARBL1010		
10 branch ARBL2010		

7. Refrigerant piping system

7.4.3 Reducer

◆ Reducers for indoor unit and HR unit

Models		Liquid pipe [unit:mm]	Gas pipe [unit:mm]	
			High pressure	Low pressure
Indoor unit reducer		 OD9.52(3/8) Ø6.35(1/4)	-	 OD15.88(5/8) Ø12.7(1/2)
HR unit reducer	PRHR023	 OD9.52(3/8) Ø6.35(1/4)	 OD19.05(3/4) Ø15.88(5/8) Ø12.7(1/2)  OD12.7(1/2) Ø9.52(3/8)	 OD22.2(7/8) Ø19.05(3/4) Ø15.88(5/8)  OD15.88(5/8) Ø12.7(1/2)
	PRHR033 PRHR043 PRHR063 PRHR083	 OD15.88(5/8) Ø12.7(1/2) Ø9.52(3/8)  OD12.7(1/2) Ø9.52(3/8)	 OD22.2(7/8) Ø19.05(3/4) Ø15.88(5/8)  OD15.88(5/8) Ø12.7(1/2)	 OD28.58(1-1/8) Ø22.2(7/8) Ø19.05(3/4)  OD19.05(3/4) Ø15.88(5/8)

8. Electrical Wiring

8.1 Caution

1. Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.

⚠ WARNING

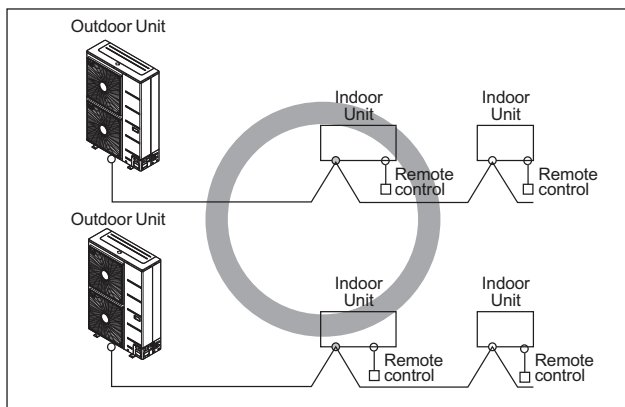
Be sure to have authorized electrical engineers do the electric work using special circuits in accordance with regulations and this installation manual. If power supply circuit has a lack of capacity or electric work deficiency, it may cause an electric shock or fire.

2. Install the Outdoor Unit communication line away from the power source wiring so that it is not affected by electric noise from the power source. (Do not run it through the same conduit.)
3. Be sure to provide designated grounding work to Outdoor Unit.

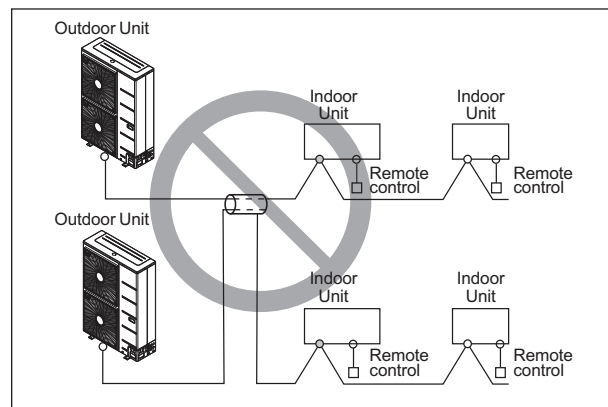
⚠ CAUTION

Be sure to correct the outdoor unit to earth. Do not connect earth line to any gas pipe, liquid pipe, lightning rod or telephone earth line. If earth is incomplete, it may cause an electric shock.

4. Give some allowance to wiring for electrical part box of Indoor and Outdoor Units, because the box is sometimes removed at the time of service work.
5. Never connect the main power source to terminal block of communication line. If connected, electrical parts will be burnt out.
6. Use 2-core shield cable for communication line. (○ mark in the figure below) If communication lines of different systems are wired with the same multiplecore cable, the resultant poor transmitting and receiving will cause erroneous operations. (⊗ mark in the figure below)
7. Only the communication line specified should be connected to the terminal block for Outdoor Unit communication.



2-Core Shield Cable



Multi-Core Cable

⚠ CAUTION

- This product have reversed phase protection detector that only works when the power is turned on. If there exists black out or the power goes on and off which the product is operating, attach a reversed

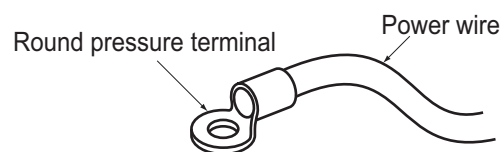
8. Electrical Wiring

phase protection circuit locally. running the product in reversed phase may break the compressor and other parts.

- Use the 2-core shield cables for communication lines. Never use them together with power cables.
- The conductive shielding layer of cable should be grounded to the metal part of both units.
- Never use multi-core cable
- As this unit is equipped with an inverter, to install a phase leading capacitor not only will deteriorate power factor improvement effect, but also may cause capacitor abnormal heating. Therefore, never install a phase leading capacitor.
- Make sure that the power unbalance ratio is not greater than 2%. If it is greater, the unit's lifespan will be reduced.
- Introducing with a missing N-phase or with a mistaken N-phase will break the equipment.

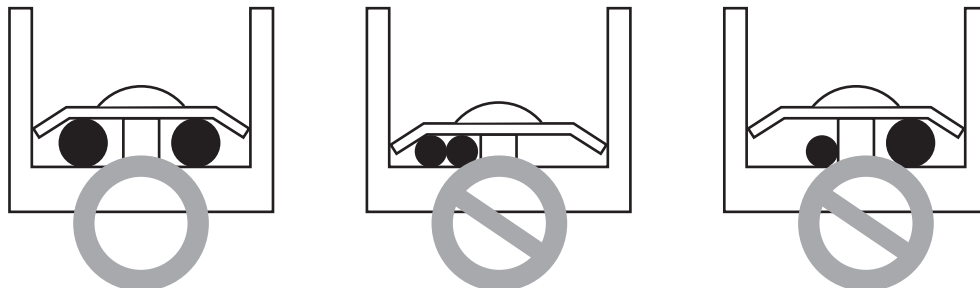
■ Precautions when laying power wiring

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.



- For wiring, use the designated power wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal block.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them.

⚠ CAUTION

When the 400 volt power supply is applied to "N" phase by mistake, replace inverter PCB and transformer in control box.

8. Electrical Wiring

8.2 Communication and Power Lines

1. Communication cable

- Types: shielding cable
- Cross section: 1.0~1.5mm²
- Maximum allowable temperature: 60°C
- Maximum allowable cable length: under 300m

2. Remote control cable

- Types : 3-core cable

3. Central control cable

Product type	Cable type	Diameter
ACP	2-core wire (shielding wire)	1.0~1.5mm ²
AC Smart	2-core wire (shielding wire)	1.0~1.5mm ²
AC Ez	4-core wire (shielding wire)	1.0~1.5mm ²

4. Separation of communication and power lines

- If communication and power lines are run alongside each other then there is a strong likelihood of operational faults developing due to interference in the signal wiring caused by electrostatic and electromagnetic coupling.

The tables below indicates our recommendation as to appropriate spacing of communication and powerlines where these are to be run side by side

Current capacity of power line		Spacing
100V or more	10A	300mm
	50A	500mm
	100A	1,000mm
	Exceed 100A	1,500mm

Note

- The figures are based on assumed length of parallel cabling up to 100m. For length in excess of 100m the figures will have to be recalculated in direct proportion to the additional length of line involved.
- If the power supply waveform continues to exhibit some distortion the recommended spacing in the table should be increased.
 - If the cable are laid inside conduits then the following point must also be taken into account when grouping various cable together for introduction into the conduits
 - Power cable(including power supply to air conditioner) and communication cables must not be laid inside the same
 - In the same way, when grouping the power wires and communication cables should not be bunched together.

CAUTION

- If apparatus is not properly earthed then there is always a risk of electric shocks, the earthing of the apparatus must be carried out by a qualified person.
- Use a power wire pipe for the power wiring.

9. Commissioning Setting

9.1 Outdoor Unit Setting

9.1.1 Checking according to dip switch setting

You can check the setting values of the Master outdoor unit from the 7 segment LED.

The dip switch setting should be changed when the power is OFF.

9.1.2 Checking the setting of the outdoor unit

The number is sequentially appeared at the 7 segment in 5 seconds after applying the power. This number represents the setting condition.

- Initial display order

Order	Mean	No	Example
①	Cooling Capacity in Horse Power(HP) unit	04~12	Cooling Only / Heat Pump
		07	ARUB060SS4 only
②	Operation Mode	1	Cooling only
		2	Heat pump
		3	Heat Recovery
③	Electrical Ratings	38	380V
		46	460V
		22	220V
④	Model Type	1	Standard / Corrosion Resistance
		5	Cold temperature area
		6	Tropical

- Example) ARUB060SS4

①	②	③	④
07	3	22	1

Note

- Example of model names could be different with model names included within this PDB.
- In accordance with the number of combined outdoor unit or target region, it could not be applied to set the order ③,④.

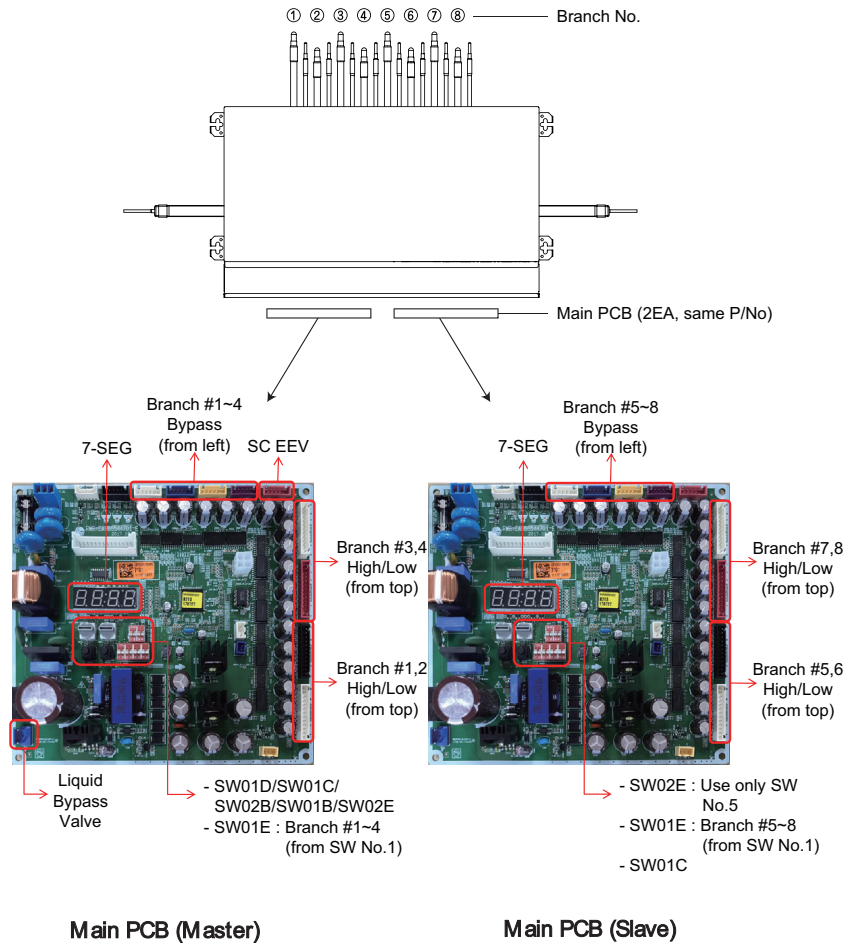
CAUTION

Product may not properly operate if the relevant DIP switch is not properly setup.

9. Commissioning Setting

9.2 HR Unit PCB (For Heat Recovery System)

◆ Switch for setup of HR Unit



9.2.1 Setup the switch of HR Unit

■ Setup the switch of HR Unit

	S/W	Function
Dip SW		SW02E (8pin Dip SW) Selection of the method for pipe detection Selection of Master/Slave Main PCB Setting the Zoning Control Selection of the No. of connected branches
No.2		SW01E (4pin Dip SW) Selection of the valve to address
No.3		SW01D (Left) Selection of the Valve Group Control Setting to address HR units
No.4		SW01C (Right) Manual addressing of zoning indoor units
No.5		SW02B (Left) Increase in the digit of 10
No.6		SW01B (Right) Increase in the digit of 1

9. Commissioning Setting

■ Main function of SW02E

ON S/W	Selection
No.1	Method for pipe detection of an HR unit (Auto/Manual)
No.2	No. of connected branches
No.3	
No.4	
No.5	Master/Slave (Main PCB) Setting
No.6	EEPROM factory initialization (4,5,6)
No.7	Use only in factory production (preset to "OFF"), Zoning setting ("ON")
No.8	Use only in factory production (preset to "OFF"), Zoning setting ("ON")

1. Selection of the method for pipe detection of an HR unit (Auto/Manual)

Auto	Manual
Switch No.1 Off	Switch No.1 On
<p>Master</p>	<p>Master</p>

2. Selection of Master/Slave Main PCB

Master	Slave
Switch No.5 Off	Switch No.5 On

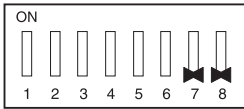
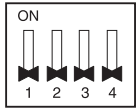
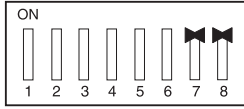
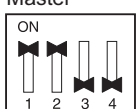
Note

Do not turn on any SW02E on Slave Main PCB except No.5.

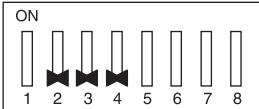
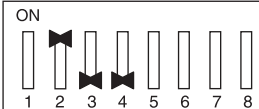
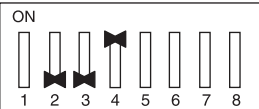
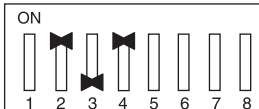
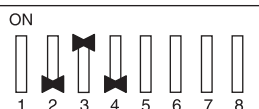
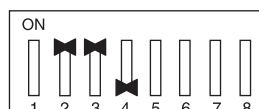




9. Commissioning Setting

3. Setting the zoning control

	SW02E setting	SW01E setting
Normal control	<p>Master</p> 	 <p>SW01E</p>
Zoning control	<p>Master</p> 	<p>Turn the dip switch of the zoning branch on. EX) Branch 1,2 are zoning control.</p> <p>Master</p>  <p>SW01E</p>

4. Selection of the No. of connected branches

1 branch Connected		5 branches Connected	
2 branches Connected		6 branches Connected	
3 branches Connected		7 branches Connected	
4 branches Connected		8 branches Connected	

* Each model is shipped with the switches No.2, 3, 4 pre-adjusted as above in the factory.

WARNING

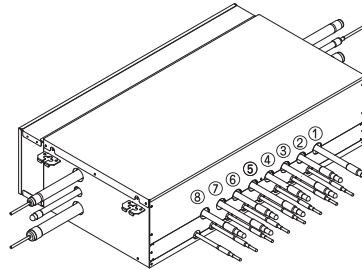
If you want to use a "Model" for "No. of using branch(es)" HR Unit after closing the "Closing pipe No.", set the dip switch for "No. of using branch(es)" HR Unit.

Ex) If you want to use a PRHR083 for 4 branches HR Unit after closing the 5~8th pipes, set the dip switch for 4 branches HR Unit.

9. Commissioning Setting

■ SW01D (Rotary S/W for addressing HR unit)

Use the Valve Group Control when 2 branches are connected with only 1 indoor unit which has higher capacity than 61 kBtu/h.



Valve Group	SW01D Setting	Valve Group	SW01D Setting
Not control	0	No. 5,6/7,8 Valve Control	8
No. 1,2 Valve Control	1	No. 1,2/5,6 Valve Control	9
No. 2,3 Valve Control	2	No. 1,2/7,8 Valve Control	A
No. 3,4 Valve Control	3	No. 3,4/5,6 Valve Control	B
No. 5,6 Valve Control	4	No. 3,4/7,8 Valve Control	C
No. 6,7 Valve Control	5	No. 1,2/3,4/5,6 Valve Control	D
No. 7,8 Valve Control	6	No. 1,2/3,4/6,7 Valve Control	E
No. 1,2/3,4 Valve Control	7	No. 1,2/3,4/7,8 Valve Control	F

Note

If the large capacity indoor units are installed, below Y branch pipe should be used.

◆ Y branch pipe

Models	Gas pipe [Unit : mm]	Liquid pipe [Unit : mm]
ARBLN03321		

9. Commissioning Setting

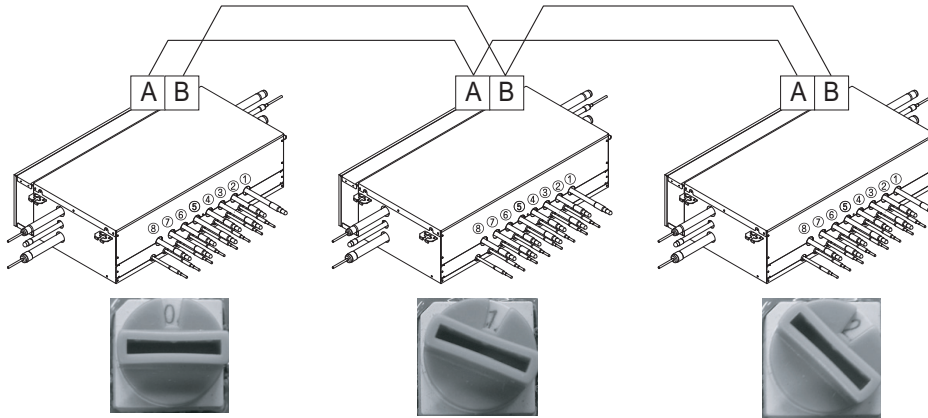
SW01C (Rotary S/W for addressing HR unit)

Must be set to '0' when installing only one HR unit.

When installing multiple HR units, address the HR units with sequentially increasing numbers starting from '0'.

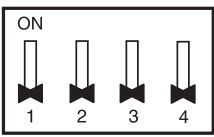



Maximum 16 HR Units can be installed.

Example) Installation of 3 HR units



SW01B/SW01C/SW01E/SW02B (Dip S/W and push S/W for manual pipe detection)

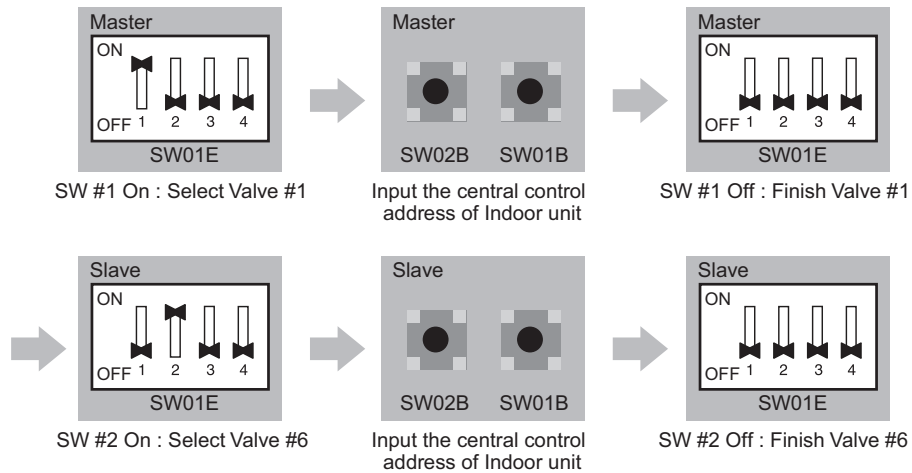
- Set the address of the valve of the HR unit to the central control address of the connected indoor unit.
- SW01E : selection of the valve to address
 SW02B : increase in the digit of 10 of valve address
 SW01B : increase in the last digit of valve address
 SW01C : Manual addressing of zoning indoor units (use for Zoning setting)
- Prerequisite for manual pipe detection : central control address of each indoor unit must be preset differently at its wired remote control.

 SW01E	S/W No.	Setup
		No.1
	No.2	Manual addressing of valve #2 (Master) / #6 (Slave)
	No.3	Manual addressing of valve #3 (Master) / #7 (Slave)
	No.4	Manual addressing of valve #4 (Master) / #8 (Slave)
 SW02B	SW02B	Increase in the digit of 10 of valve address
 SW01B	SW01B	Increase in the last digit of valve address
* Use for Zoning setting  SW01C	SW01C	Manual addressing of zoning indoor units

9. Commissioning Setting

1. Normal setting (Non-Zoning setting)

ex) Manual pipe detection of Valve #1, 6.



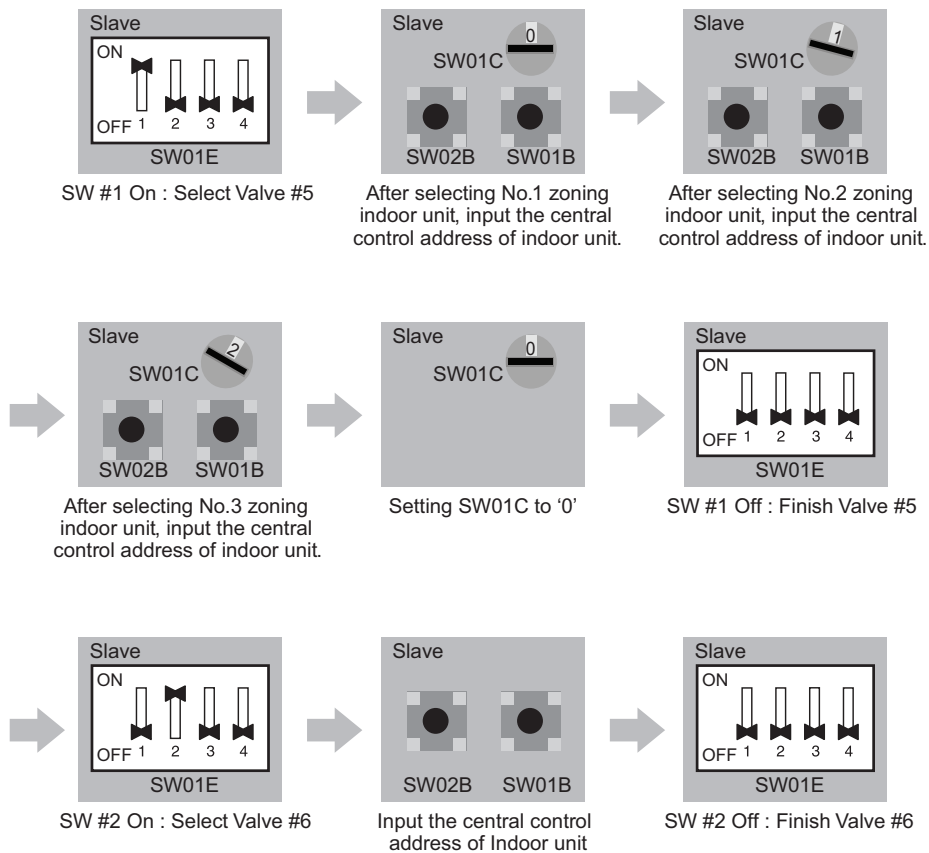
2. Zoning setting

Note

Use the Zoning Control when install two or more indoor units at 1 branch of HR Unit.

The indoor units controlled by Zoning Control can be selected collectively as the cooling/heating mode.

ex) Manual pipe detection of Valve #5 with three zoning indoor units, #6 without zoning unit.



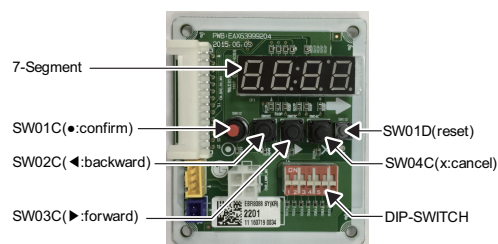
9. Commissioning Setting

9.3 Automatic Addressing

■ The address of indoor units would be set by auto addressing

1. Wait for 3 minutes after supplying power. (Master and Slave outdoor units, indoor units)
2. Press RED button of the outdoor units for 5 seconds. (SW01C)
3. A "88" is indicated on 7-segment LED of the outdoor unit PCB.
4. For completing addressing, 2~7 minutes are required depending on numbers of connected indoor units
5. Numbers of connected indoor units whose addressing is completed are indicated for 30 seconds on 7-segment LED of the outdoor unit PCB
6. After completing addressing, address of each indoor unit is indicated on the wired remote control display window. (CH01, CH02, CH03,, CH06 : Indicated as numbers of connected indoor units)

◆ Service PCB (Heat Recovery model)

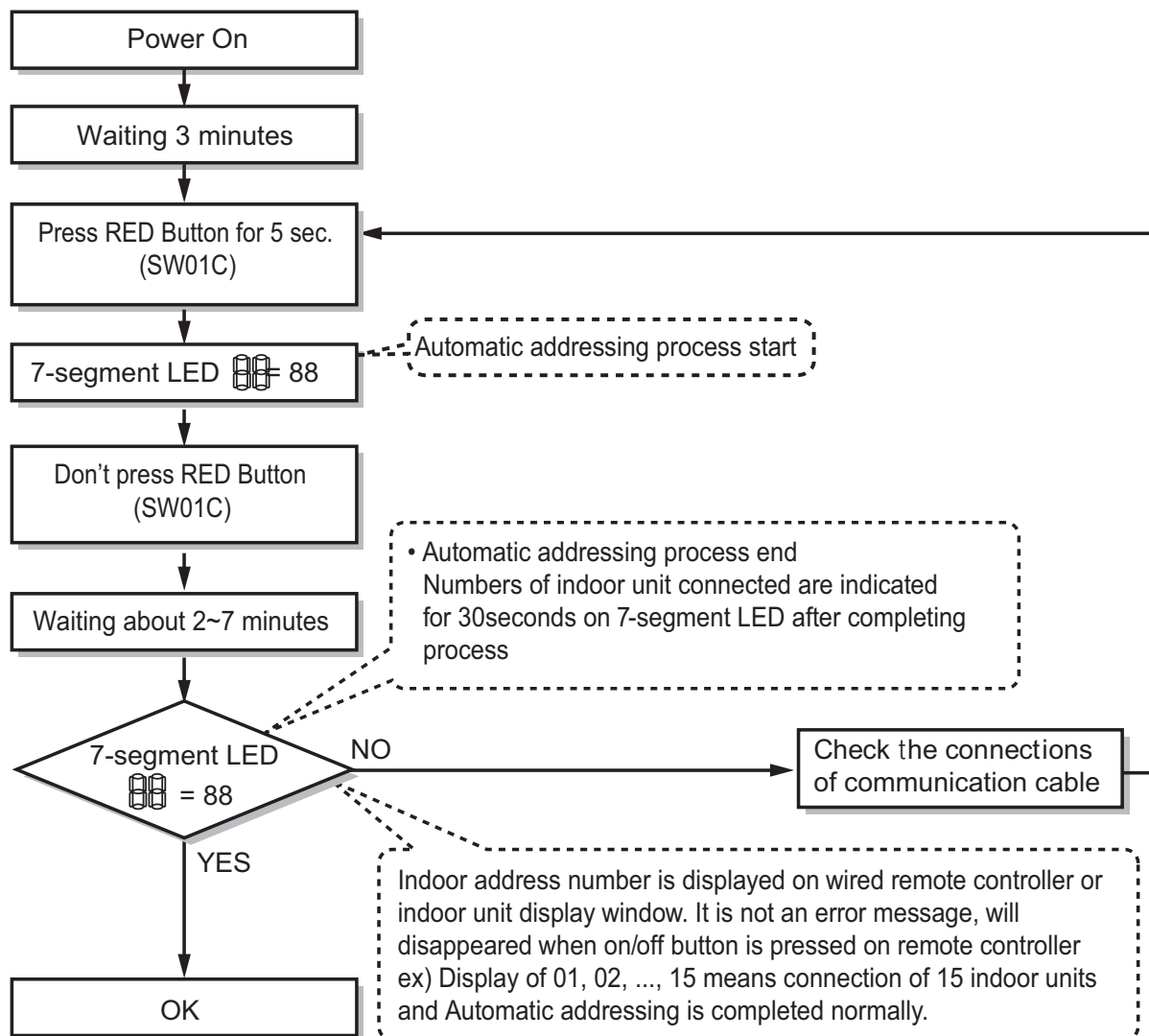


⚠ CAUTION

- In replacement of the indoor unit PCB, always perform Auto addressing setting again (At that time, please check about using Independent power module to any indoor unit.)
- If power supply is not applied to the indoor unit, operation error occur.
- Automatic Addressing has to be performed after more than 3 minutes to improve indoor unit communication when initial power is supplied.
- Please be sure that all the dip switch (1~7) of master outdoor unit is OFF before Automatic Addressing setting.

9. Commissioning Setting

◆ The Procedure of Automatic Addressing



9. Commissioning Setting

■ Automatic pipe detection(For Heat Recovery System)

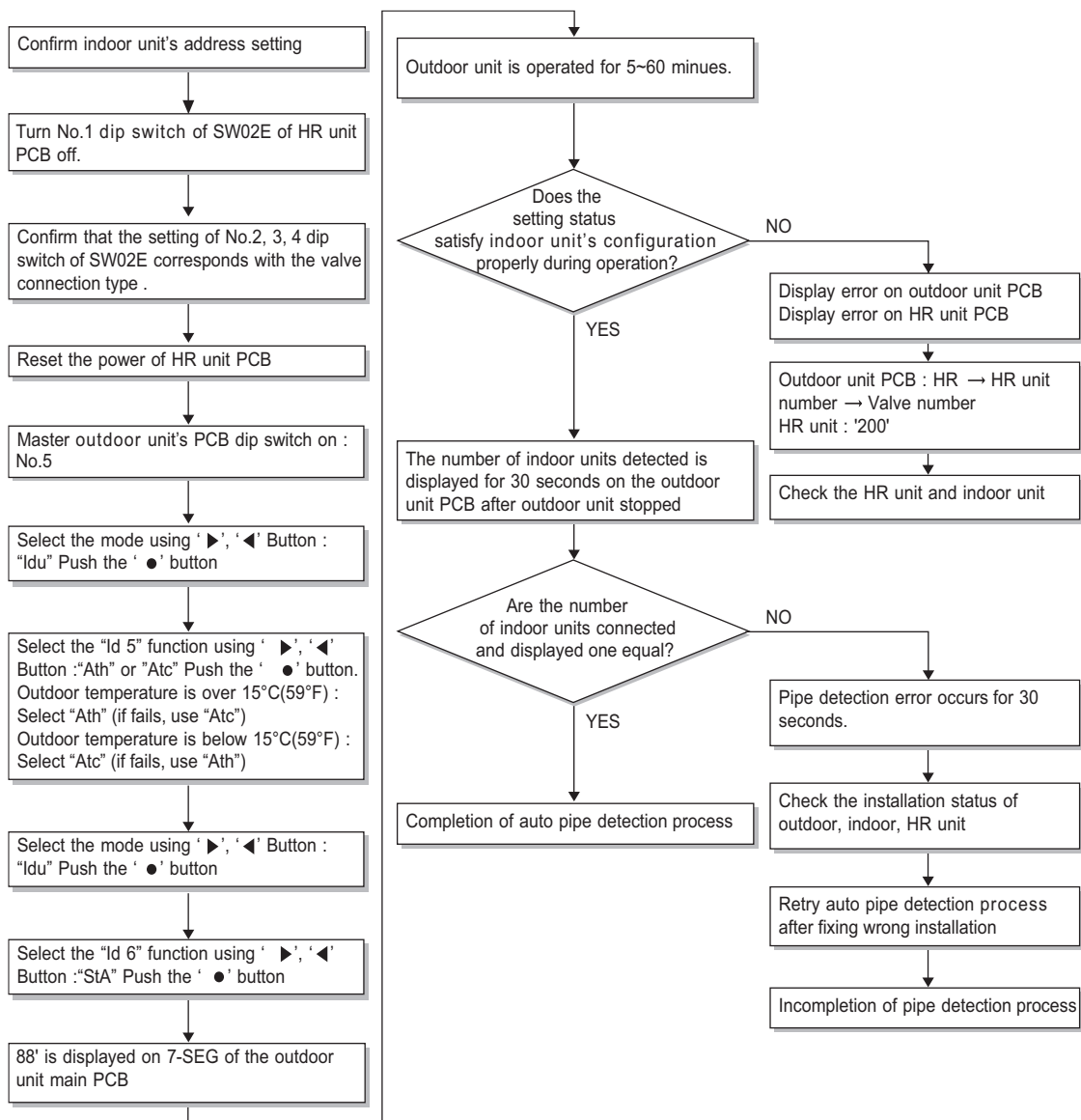
1. Turn No.1 dip switch of SW02E of HR unit PCB off.
2. Confirm that the setting of No.2, 3, 4 of SW02E corresponds with the type of the valve connection.
3. Reset the power of HR unit PCB
4. Master outdoor unit PCB DIP switch on : No.5
5. Select the mode using '▶', '◀' Button : "Idu" Push the '●' button
6. Select the "Id 5" function using '▶', '◀' Button : "Ath" or "Atc" Push the '●' button.
Outdoor temperature is over 15°C(59°F) : "Ath" Using (If it fail, use "Atc")
Outdoor temperature is below 15°C(59°F) : "Atc" Using (If it fail, use "Ath")
7. Select the mode using '▶', '◀' Button : "Idu" Push the '●' button
8. Select the "Id 6" function using '▶', '◀' Button : "StA" Push the '●' button
9. System is operated after "88" is displayed on 7-SEG of the outdoor unit main PCB.
10. Pipe detection process is proceeded.
11. 5~30 minutes are required depending on the number of the indoor units and outdoor temperature.
12. The number of the indoor units connected is displayed on 7-SEG of the outdoor unit main PCB for about 1 minute
 - For a HR unit, the number of the indoor units connected to each HR unit is displayed.
 - '200' is displayed in case of auto pipe detecting error, and auto pipe detection process is completed when after "88" is disappeared.

CAUTION

- **Execute auto addressing and auto pipe detection again whenever the indoor PDB and HR unit PCB is replaced.**
 - **Operation error occurs unless power is supplied to the indoor and HR units.**
- **Error No.200 occurs if the number of connected indoor units and that of scanned indoor units are different.**
- **If auto pipe detection process fails, complete it with manual pipe detection (see Manual pipe detection part).**
- **If auto pipe detection process is completed normally, manual pipe detection is not required.**
- **If you want to do auto pipe detection again after auto pipe detection fails, do after reset of outdoor unit by all means.**
- **During 5 minutes after pipe detection is completed, do not turn off the main unit PCB to save the result of pipe detection automatically.**

9. Commissioning Setting

◆ Flow chart of auto pipe detection process



* It is possible to be generated mode changing noise of heating and cooling which is normal.
There is no mode changing noise at normal operation.

9. Commissioning Setting

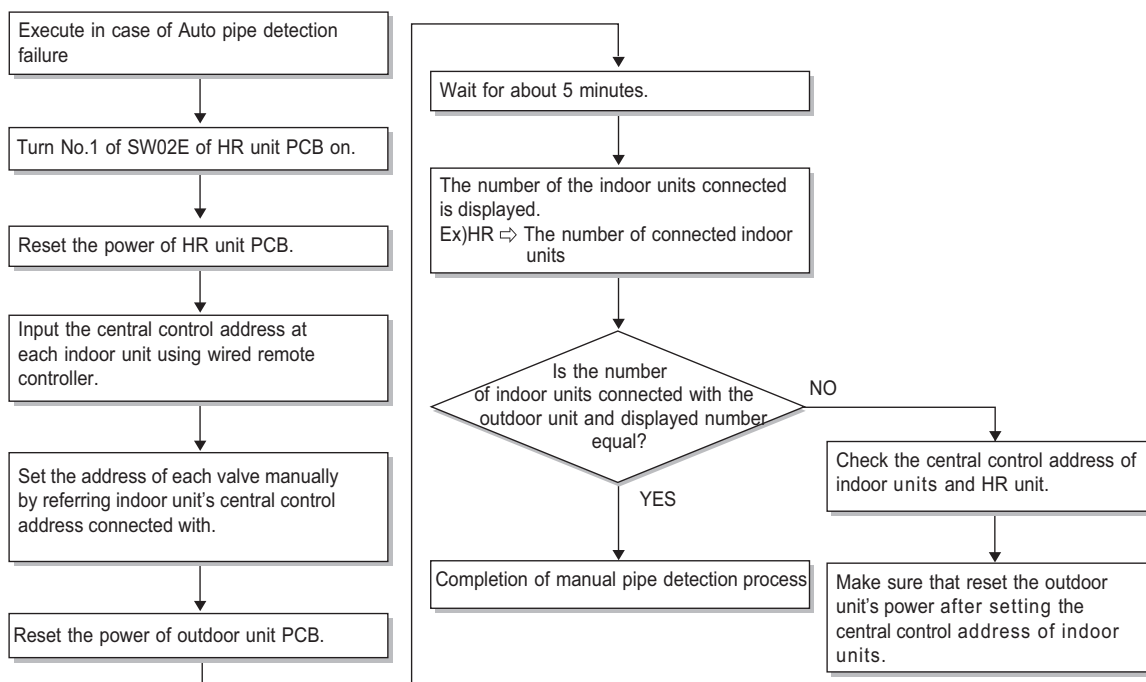
Manual pipe detection

1. Enter the central control address into each indoor unit using its wired remote controller.
2. Turn No.1 dip switch of SW02E of HR unit PCB on.
3. Reset the power of HR unit PCB.
4. On the HR unit PCB, manually set address of each valve of the HR unit to the central control address of the indoor unit connected to the valve.
5. Reset the power of outdoor unit PCB.
6. The number of the indoor unit installed is displayed after about 5 minutes.
Ex) HR → The number of the indoor
7. Reset the power of outdoor unit PCB, HR unit.
8. Manual pipe detection is completed

CAUTION

- In case that central controller is not installed, firstly set up central controller's setting to make address setting of indoor units.
- In case that central controller is installed, please set central control address of indoor units by using wired remote controller.
- HR units's manual pipe address is set by the central control address of indoor units.
- Address of valve which is not connected with indoor unit should be set differently with the address of a valve which is indoor unit connected.
(If address is overlapped, valve will not work properly)
- If there occurs some error during pipe detection process, it means pipe detection process is not properly finished.
- During 5 minutes after pipe detection process is completed, do not turn off the main outdoor unit's PCB to save the result of pipe detection automatically.

Flow chart of manual addressing for pipe detection



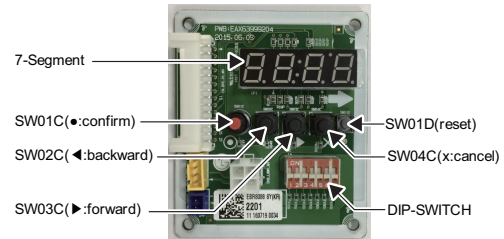
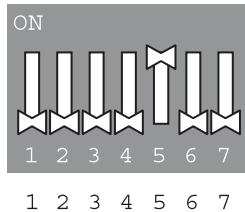
Note

If you need to more information of Addressing method, please refer to the Installation Manual.

10. Setting the Function

10.1 Dip Switch Setting

Select the mode/function/option/value using '▶', '◀' Button and confirm that using the '●' button after dip switch No.5 is turned on.



Optional Mode Selection		Function Selection		Option Selection		Remarks
Content	Display (○)	Content	Display (◀, ▶, ●)	Default	Optional (◀, ▶, ●)	
FDD	Fdd	Automatic Refrigerant Charging (Cooling)	Fd1	-	-	-
		Automatic Refrigerant Charging (Heating)	Fd2	-	-	-
		Refrigerant Amount Check (Cooling)	Fd3	-	-	-
		Refrigerant Amount Check (Heating)	Fd4	-	-	-
		Automatic	Fd7	-	-	-
		All IDU operation (Cooling)	Fd8	-	-	Compulsory Operation
		All IDU operation (Heating)	Fd9	-	-	for 1hour
Installation	Func	Cool & Heat Selector	Fn 1	oFF	oFF, oP1~oP2	save in EEPROM
		High Static Pressure compensation	Fn 2	oFF	oFF, oP1~oP7	save in EEPROM
		Night low noise	Fn 3	oFF	oFF, oP1~oP12	save in EEPROM
		Overall Defrost	Fn 4	North America : oFF Europe : oFF Tropical : oN	on, oFF	save in EEPROM
		ODU Addressing	Fn 5	0	0~255	save in EEPROM
		Snow Removal & Rapid Defrost	Fn 6	oFF	oFF, oP1~oP3	save in EEPROM
		Capacity Up Airflow Adjusting for IDU (Heating)	Fn 7	oFF	on, oFF	save in EEPROM
		Target Pressure Adjusting	Fn 8	oFF	oFF, oP1~oP6	save in EEPROM
		Low Ambient Kit	Fn 9	oFF	on, oFF	save in EEPROM
		High Efficiency Mode (Cooling Operation)	Fn 10	oFF	on, oFF	save in EEPROM
		Auto Dust Removal Mode	Fn 11	oFF	oFF, oP1~oP5	save in EEPROM
		Compressor Max. Frequency Limit	Fn 12	oFF	oFF, oP1~oP9	save in EEPROM
		ODU Fan Max. RPM Limit	Fn 13	oFF	oFF, oP1~oP7	save in EEPROM
		Smart Load Control	Fn 14	oFF	oFF, oP1~oP3	save in EEPROM
		Humidity Reference	Fn 16	on	on, oFF	save in EEPROM
Compressor Input Current Limit	Fn 20	oFF	oFF, oP1~oP10	save in EEPROM		
Optional Base panel Heater	Fn 23	oFF	on, oFF	save in EEPROM		
Service	SvC	Vacuum mode	SE3	vACC	-	1time / 1 Selection
User	Idu	Comfort Cooling	Id10	EACH	-	save in EEPROM

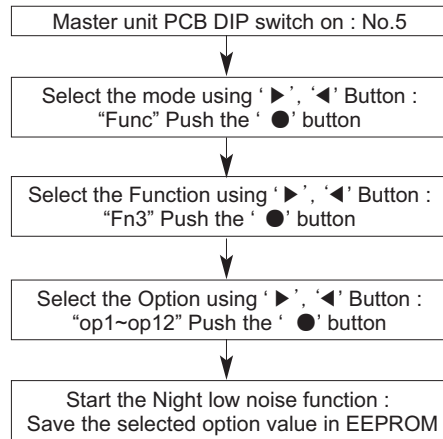
- Functions "save in EEPROM" will be kept continuously, though the system power was reset.
- For detail information about SVC and IDU setting functions, refer to the installation manual or SVC manual.

10. Setting the Function

10.2 Night Low Noise Function

In cooling mode, this function makes the ODU fan operate at low RPM to reduce the fan noise of ODU at night which has low cooling load.

◆ Night low noise function setting method



◆ Time Settings

Step	Judgment Time(Hr)	Operation Time(Hr)
op1	8	9
op2	6.5	10.5
op3	5	12
op4	8	9
op5	6.5	10.5
op6	5	12
op7	8	9
op8	6.5	10
op9	5	12
op10	Continuous operation	
op11	Continuous operation	
op12	Continuous operation	

◆ Noise

Capacity	6 HP (Heat Recovery)
Step	Noise(dB(A))
op1 ~ op3, op10	54
op4 ~ op6, op11	52
op7 ~ op9, op12	50

⚠ CAUTION

- Request installer to set the function during installation.
- If ODU RPM changes, cooling capacity may go down.



Special Guide

- 1. Caution for Refrigerance Leaks**
- 2. Installation Guide at the Seaside**

1. Caution For Refrigerant Leaks

The installer and system specialist shall secure safety against leakage according to local regulations or standards. The following standards may be applicable if local regulations are not available.

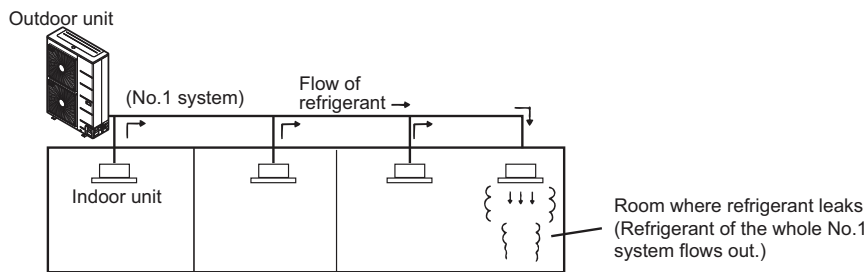
1.1 Introduction

Though the R410A refrigerant is harmless and incombustible itself, the room to equip the air conditioner should be large to such an extent that the refrigerant gas will not exceed the limiting concentration even if the refrigerant gas leaks in the room.

1.1.1 Limiting concentration

Limiting concentration is the limit of Freon gas concentration where immediate measures can be taken without hurting human body when refrigerant leaks in the air. The limiting concentration shall be described in the unit of kg/m³ (Freon gas weight per unit air volume) for facilitating calculation.

Limiting concentration: 0.44kg/m³(R410A)



1.2 Checking procedure of limiting concentration

Check limiting concentration along following steps and take appropriate measure depending on the situation.

1.2.1 Calculate amount of all the replenished refrigerant (kg) per each refrigerant system.

◆ Calculate amount of all the replenished refrigerant (kg) per each refrigerant system.

Amount of replenished refrigerant per one outside unit system	+	Amount of additional replenished refrigerant	=	Total amount of replenished refrigerant in refrigerant facility (kg)
Amount of replenished refrigerant at factory shipment		Amount of additionally replenished refrigerant depending on piping length or piping diameter at customer		

Note

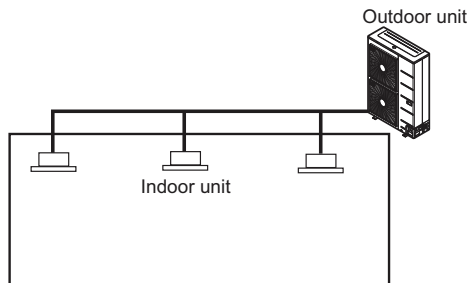
In case one refrigerant facility is divided into 2 or more refrigerant systems and each system is independent, amount of replenished refrigerant of each system shall be adopted.

1. Caution For Refrigerant Leaks

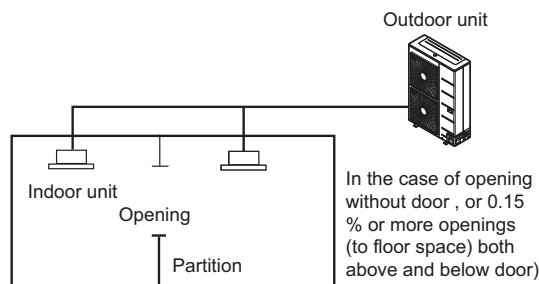
1.2.2 Calculate minimum room capacity

Calculate room capacity by regarding a portion as one room or the smaller room.

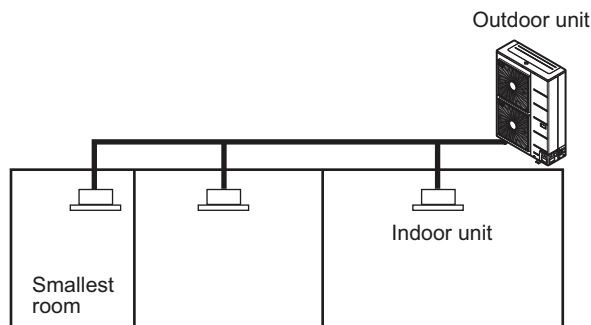
1. Without partition



2. With partition and with opening which serve as passage of air to adjoining room



3. With partition and without opening which serve as passage of air to adjoining room



◆ Calculate refrigerant concentration

Total amount of replenished refrigerant in refrigerant facility (kg)
 Capacity of smallest room where indoor unit is installed (m³)

$$= \frac{\text{Refrigerant concentration}}{\text{(R410A)}} \quad (\text{kg/m}^3)$$

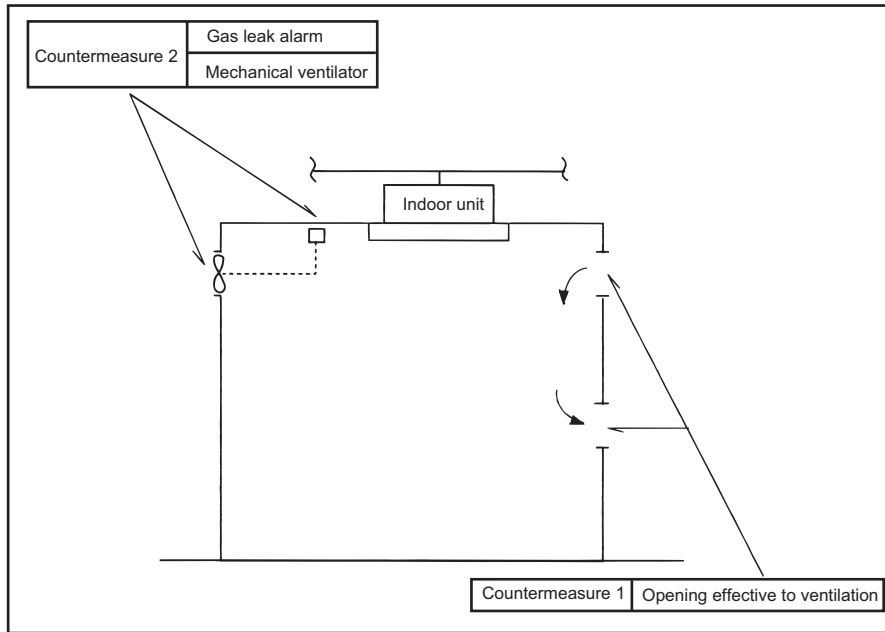
In case the result of calculation exceeds the limiting concentration, perform the same calculations by shifting to the second smallest, and the third smallest rooms until at last the result is below the limiting concentration.

◆ In case the concentration exceeds the limit

When the concentration exceeds the limit, change original plan or take one of the counter measure shown below:

- **Counter measure 1**
 Provide opening for ventilation.
 Provide 0.15% or more opening to floor space both above and below door, or provide opening without door.
- **Counter measure 2**
 Provide gas leak alarm linked with mechanical ventilator.
 Reducing the outdoor refrigerant qty.

1. Caution For Refrigerant Leaks



⚠ CAUTION

Pay a special attention to the place, such as a basement, etc. where refrigerant can stay, since refrigerant is heavier than air.

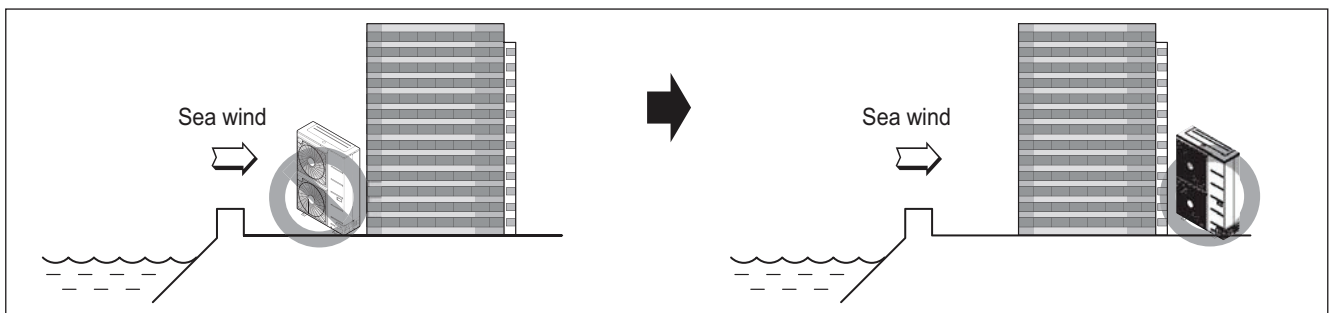
2. Installation Guide at the seaside

⚠ CAUTION

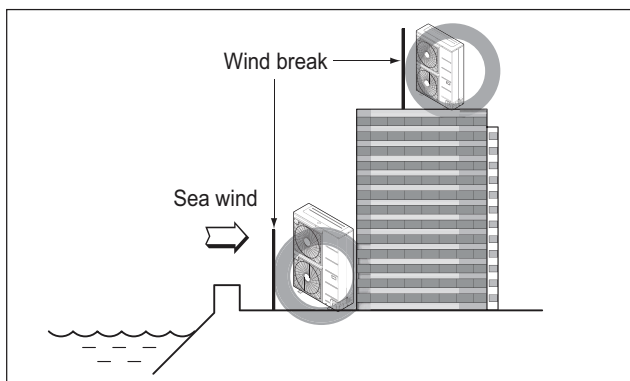
1. Air conditioners must not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.
3. If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional corrosion resistance treatment on the heat exchanger.

2.1 Selecting the location(Outdoor Unit)

1. If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



2. In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It must be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It must be kept more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

3. Select a well-drained place.
4. Where the distance between the outdoor unit and the sea shore is more than 1km.
(Ensure the distance between the outdoor unit and the sea shore is more than 300m and less than 1km for the Corrosion Resistance models.)

⚠ CAUTION

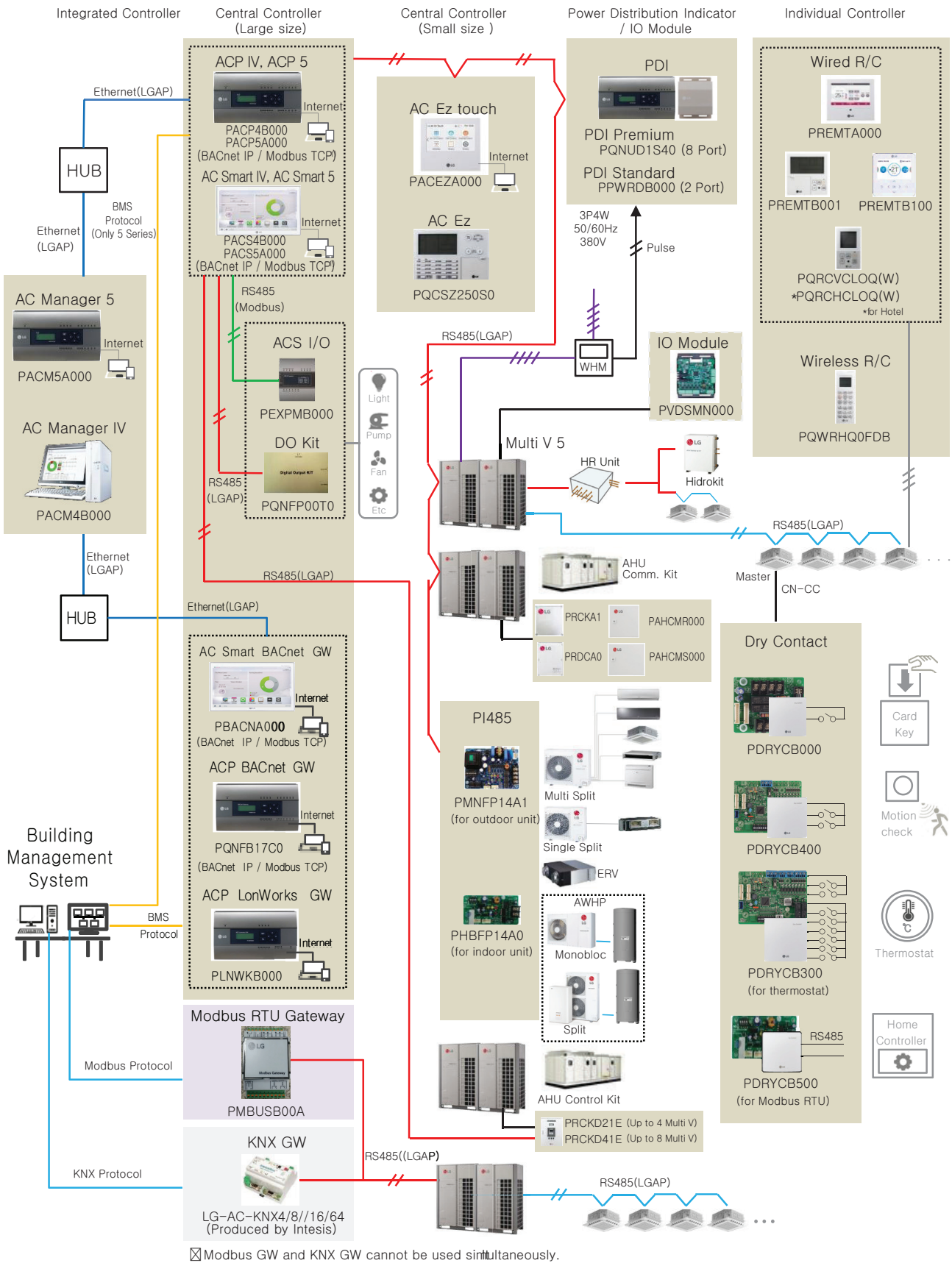
- It needs the periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using liquid.
- LG is not warranty that HEX periodic cleaning is not doing or windbreak is not installed.



Control System








- 1. Solution Overview**
- 2. Control System List**
- 3. Function List**
- 4. Accessory Compatibility List**
- 5. Centralized Controller Compatibility List**

1. Solution Overview



- 1) It is available 5 series controllers (ACP5, AC Smart5) only.
- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home > Doc.Library > Product > Control(BECON))

2. Control System List

Category	Controller name	Model name	Compatible Product	Dimensions (W x H x D, mm)	Feature
Individual controller	Premium Wired Remote Controller	PREMTA000(A/B) 	All IDU ERV ¹⁾ ERV DX	137 x 121 x 16.5	<ul style="list-style-type: none"> 5 inch color Display Touch Screen Group control (Max 16 indoor unit) Temp./Humid. sensing
	Standard Wired Remote Controller	PREMTB100 PREMTBB10 	All IDU ERV ¹⁾ ERV DX	120 x 120 x 16	<ul style="list-style-type: none"> 4.3 inch color Display Touch button Group control (Max 16 indoor unit) Temp./Humid. sensing 1 Digital Output available(on/off)
		PREMTB001 PREMTBB01 	All IDU ERV ¹⁾ ERV DX	120 x 120 x 16	<ul style="list-style-type: none"> 4.3 inch mono Display Hard button Group control (Max 16 indoor unit) 2-remote controller control Temp. sensing Basic / Advanced function* schedule function
	Simple Wired Remote Controller	PQRCVCL0Q(W) 	All IDU	120 x 64 x 15	<ul style="list-style-type: none"> 2.6 inch mono Display Hard button Group control (Max 16 indoor unit) 2-remote controller control Temp. sensing Basic function*
		PQRCHCA0Q(W) 	All IDU	120 x 64 x 15	<ul style="list-style-type: none"> 2.6 inch mono Display Hard button Group control (Max 16 indoor unit) 2-remote controller control Temp. sensing Basic function* (except mode change)
	Wireless Remote Controller	PQWRHQ0FDB 	All IDU	153 x 51 x 26	<ul style="list-style-type: none"> Heat Pump 2 inch mono Display Hard button Temp. sensing Basic function*
		PQWRCQ0FDB 	All IDU	153 x 51 x 26	<ul style="list-style-type: none"> Cooling Only 2 inch mono Display Hard button Temp. sensing Basic function*

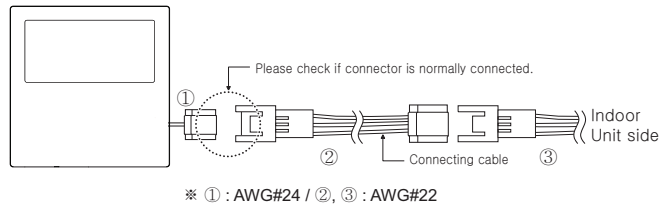
- 1) ERV : Energy Recovery Ventilation
- * Basic/Advanced function refer [Function List /Individual Controller].
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

Outline of system

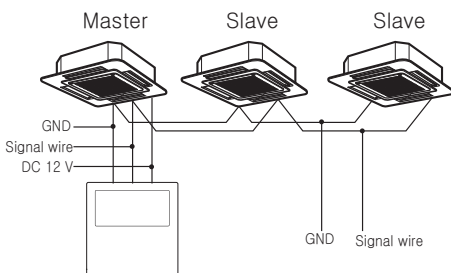
1. Installation Method

12 V	Red
Signal	Yellow
GND	Black



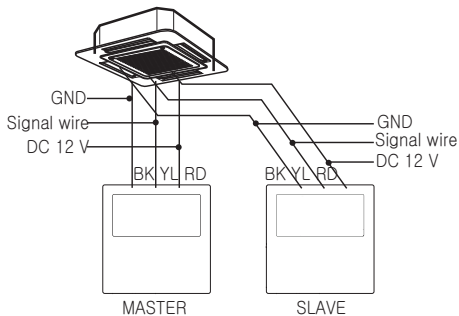
⇒ The total cable length must not exceed 50m. (It can cause communication error.)

2. Group Control



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

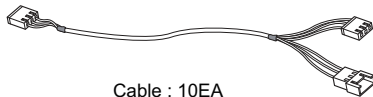
3. 2-Remote Controller Control



⇒ When installing more than 2 units of wired remote controller to one air conditioner, set one wired remote controller as master and the others all as slaves.

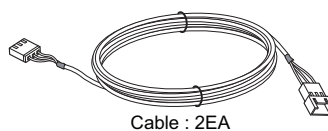
• 2-Remote Controller Control cable

- Model name : PZCWRC2
- Length : 0.25m



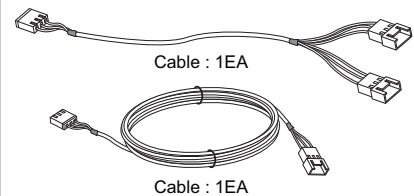
• Extension cable

- Model name : PZCWRC1
- Length : 9.6m









• Group Control cable

- Model name : PZCWRCG3
- Length : 0.25m



• If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

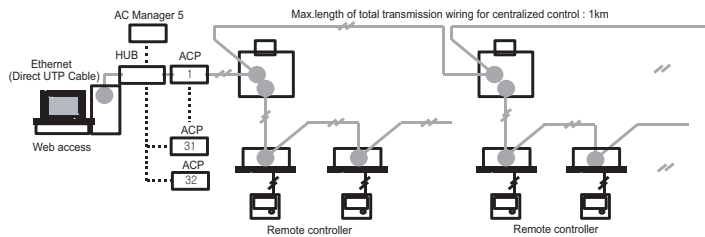
Category	Controller name	Model name	Compatible Product	Dimensions (W x H x D, mm)	Feature
Central controller	AC Manager 5	PACM5A000 	All IDU ERV ¹⁾ ERV DX Heating AHU Chiller*	270 x 155 x 65	<ul style="list-style-type: none"> • PC Access Controller • DC 12 V Adaptor • Max 8,192 indoor unit control (Supports 32 ACP IV or AC Smart IV) • Chrome(Recommended), Safari, Internet Explorer 11 support
	AC Manager IV	PACM4B000 	All IDU ERV ¹⁾ ERV DX Heating AHU Chiller*	-	<ul style="list-style-type: none"> • PC installation SW • Max 8,192 indoor unit control (Supports 32 ACP IV or AC Smart IV) • Windows XP/7/8/8.1/10 OS support
	ACP 5	PACP5A000 	All IDU ERV ¹⁾ ERV DX Heating AHU Chiller*	270 x 155 x 65	<ul style="list-style-type: none"> • PC Access Controller • DC 12 V Adaptor • Max 256 indoor unit control • RS-485 : 6 channels CH1~4 : indoor unit ²⁾ CH5 : LGAP(AHU) or Modbus(AHU, Chiller, ACS I/O) CH6 : Modbus(AHU, Chiller, ACS I/O) • DI 10EA, DO 4EA (DI1 : Emergency stop Only)
	ACP IV	PACP4B000 			
	ACP BACnet	PQNFB17C0 	All IDU ERV ¹⁾ ERV DX Heating AHU	270 x 155 x 65	<ul style="list-style-type: none"> • PC Access Controller • Max 256 indoor unit control • DC 12 V Adaptor • RS-485 : 6 channels CH1~4 : indoor unit ²⁾ CH5 : LGAP(AHU) CH6 : Modbus(AHU, Chiller, ACS I/O) • DI 10EA, DO 4EA (DI1 : Emergency stop Only) • BACnet IP Protocol Support • Modbus TCP Protocol Support • BTL Certified(B-ASC)
	ACP Lonworks	PLNWKB000 	All IDU ERV ¹⁾ ERV DX Heating AHU	270 x 155 x 65	<ul style="list-style-type: none"> • PC Access Controller • Max 64 indoor unit control • DC 12 V Adaptor • RS-485 : 6 channels Lon Comm. : 1 channel CH1~4 : indoor unit ²⁾ CH5 : LGAP(AHU) CH6 : Not use LON : Lon Talk • Lonworks Protocol Support

- 1) ERV : Energy Recovery Ventilation
- 2) Indoor unit : IDU, ERV, DX ERV, Hydro Kit, DO Kit
- * It needs to apply Chiller Option KIT.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

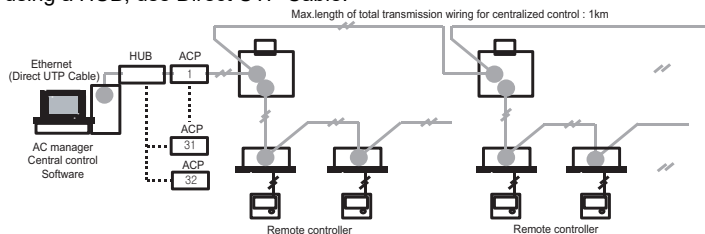
2. Control System List

Outline of system

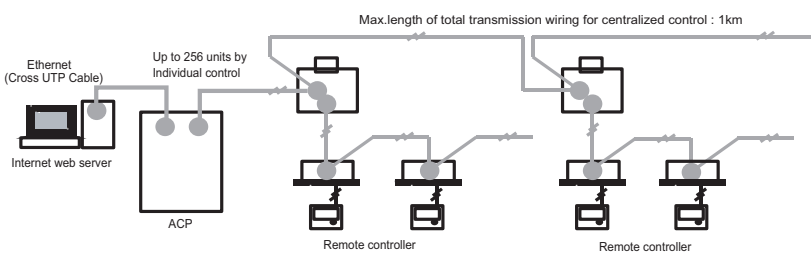
▶ When using a HUB, use Direct UTP Cable.



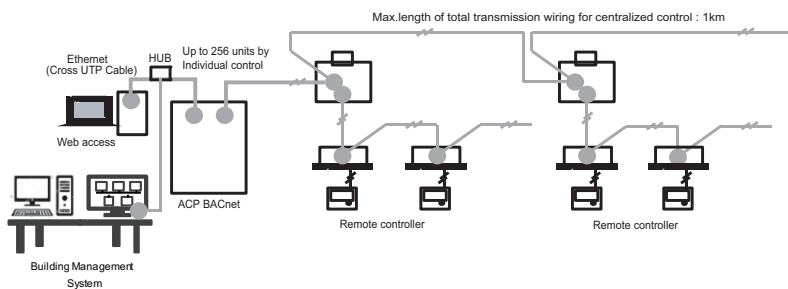
▶ When using a HUB, use Direct UTP Cable.



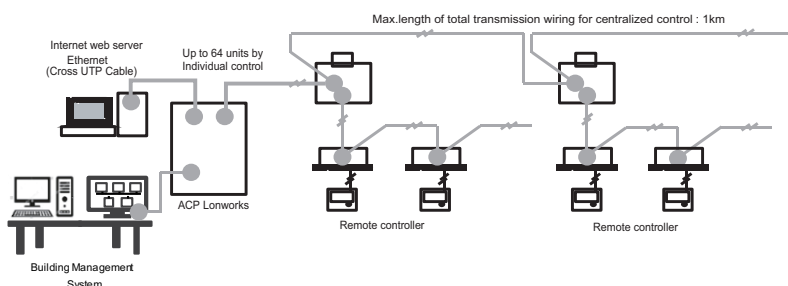
- Recommended PC Specifications for AC Manager IV
 - CPU : Dual Core 2.4GHz or faster
 - System Memory: 4 GB or more
 - Hard Disk Space : 100 GB or more
 - OS : Windows XP/7/8/8.1/10
 - Resolution : 1280 x 1024 or higher
 - Recommended Graphics: VGA: For NVidia, Geforce or later. For ATI, Radeon or later
 - ACP : ACP version 1.1.4p or higher



- Max. the number of connected node* in one RS485 Line : 32
- Communication cable
 - Types : shielding wire
 - Use wires of size : over 0.75 ~ 1.5 mm²
 - Max. allowable temperature of cable : 60 °C
 - Max. length of total transmission wiring (End to End) : 1 km




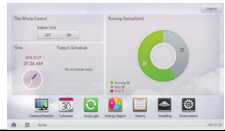





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- Max. the number of connected node* in one RS485 Line : 32
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 - Max. allowable temperature of cable : 60 °C
 - Max. length of total transmission wiring (End to End) : 1 km

- * nodes : Central controller + (Multi V outdoor unit x 2) + Other PI 485 G/W ≤ 32 ea
Ex) ACP 1ea + AC Smart Premium 2 ea + Multi V outdoor unit 6ea = 1 + 2 + (6 x 2) = 15 nodes
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

Category	Controller name	Model name	Compatible Product	Dimensions (W x H x D, mm)	Feature
Central controller	AC Smart 5	PACS5A000 	All IDU ERV ¹⁾ ERV DX Heating AHU Chiller*	253.2 x 167.7 x 28.9	<ul style="list-style-type: none"> • 10.2 inch color Display • Touch Screen • DC 12 V Adaptor • Max 128 indoor unit control • RS-485 : 2 channels CH1 : - LGAP(AHU) or - Modbus(AHU, Chiller, ACS I/O) - Indoor unit ²⁾(AC Smart5 only³⁾) CH2 : Indoor unit ²⁾ • DI 2EA, DO 2EA
	AC Smart IV / AC Smart BACnet	PACS4B000 / PBACNA000 			
	AC Ez Touch	PACEZA000 	All IDU ERV ¹⁾ ERV DX Heating	137x 121 x 25	<ul style="list-style-type: none"> • 5inch color Display • Touch Screen • DC 12 V Adaptor • Max 64 indoor unit control • RS-485 : 1 channel • DI 1EA (Emergency stop Only)
	AC Ez	PQCSZ250S0 	All IDU ERV ¹⁾ ERV DX	190 x 120 x 20	<ul style="list-style-type: none"> • TN Mono Display & 18 LED • Button Control • DC 12 V • Max 32 indoor unit control • RS-485 : 1 channel
	PDI Premium	PQNUD1S40 	All IDU ERV DX Heating	[Controller] 270 x 155 x 65 [Power Module] 120 x 155 x 65	<ul style="list-style-type: none"> • EHP ODU 8EA(GHP 4EA) • 128 EHP Indoor Units (64 GHP Indoor Units) • AC 220~240 V Power Input • 8port Pulse Input
	PDI Standard	PPWRDB000 	All IDU ERV DX Heating	[Controller] 270 x 155 x 65 [Power Module] 120 x 155 x 65	<ul style="list-style-type: none"> • EHP ODU 2EA(GHP 1EA) • 128 EHP Indoor Units (64 GHP Indoor Units) • AC 220~240 V Power Input • 2port Pulse Input
Interface Device	ACS I/O Module	PEXPMB000 	ACP 5 ACP IV AC Smart 5 AC Smart IV	126 x 155 x 65	<ul style="list-style-type: none"> • 24 V~ Power Input • AO 4EA (Voltage) • UI 4EA (Voltage, Current, NTC 10k, PT1000, Ni1000, Dry Contact) • DI 3EA (Dry Contact) • DO 3EA (Relay Output / Normal Open) • RS-485 : 1 channel(Modbus)






- * It needs to apply Chiller Option KIT.
- 1) ERV : Energy Recovery Ventilation
- 2) Indoor unit : IDU, ERV, DX ERV, Heating
- 3) In case of using AC Smart IV or AC Smart BACnet, can't use CH1 for Indoor unit.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

Outline of system	
<p>Up to 128 units by individual control</p> <p>AC Smart IV</p> <p>Remote controller</p> <p>Remote controller</p> <p>Max. length of total transmission wiring for centralized control : 1km</p>	<ul style="list-style-type: none"> • Communication cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature of cable : 60 °C – Max. length of total transmission wiring (End to End) : 1 km
<p>Up to 64 units by individual control</p> <p>AC Ez Touch</p> <p>Remote controller</p> <p>Remote controller</p> <p>Max. length of total transmission wiring for centralized control : 1km</p>	<ul style="list-style-type: none"> • Communication cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature of cable : 60 °C – Max. length of total transmission wiring (End to End) : 1 km
<p>Up to 32 units by individual control</p> <p>AC Ez</p> <p>Remote controller</p> <p>Remote controller</p> <p>Max. length of total transmission wiring for centralized control : 1km</p>	<ul style="list-style-type: none"> • Communication cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature of cable : 60 °C – Max. length of total transmission wiring (End to End) : 1 km
<p>Power In single phase 220-240 V~, 50/60 Hz</p> <p>Power In 3 phase 4 wire 380-400 V~, 50/60 Hz</p> <p>Wattmeter</p> <p>Pulse signal</p> <p>RS485 (LGAP)</p> <p>Power cable of indoor unit</p> <p>(00) (01) (02) (03)</p> <p>(70) (71) (72) (73)</p> <p>RS485 (LGAP)</p> <p>ACP MANAGER</p> <p>ACP</p>	<ul style="list-style-type: none"> • Communication cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature of cable : 60 °C – Max. length of total transmission wiring (End to End) : 1 km • Pulse cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature of cable : 60 °C – Max. length of total transmission wiring (End to End) : 10 m
<p>ACP IV</p> <p>AC Smart IV</p> <p>ACS IO Module</p> <p>ACS IO Module</p> <p>DI DO UI AO</p> <p>3EA 3EA 4EA 4EA</p> <p>DI DO UI AO</p> <p>3EA 3EA 4EA 4EA</p> <p>Max. length of I/O wiring : 100m</p>	<ul style="list-style-type: none"> • ACP IV : Up to 16 ACS IO Modules* • AC Smart IV : Up to 9 ACS IO Modules* • Communication cable <ul style="list-style-type: none"> – Types : shielding wire – Use wires of size : over 0.75 ~ 1.5 mm² – Max. allowable temperature : 60 °C – Max. length of total transmission wiring for centralized control : 1km – Max. length of I/O wiring : 100m

- * The maximum quantity of connected indoor unit is different depending on the quantity of connected I/O modules
- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

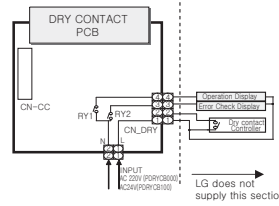
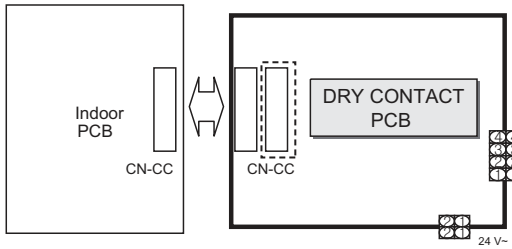
Category	Controller name	Model name	Objective / Use	Dimensions (W x H x D, mm)	Feature
Interface Device	Dry Contract	PDRYCB000 PDRYCB100 	For Connect indoor unit to other forced on/off controller	120 x 120 x 36.5	<ul style="list-style-type: none"> • 1SET / 1 IDU • 1 Contact point • Input power AC 220V~240 V <ul style="list-style-type: none"> – PDRYCB000 : AC 220V~240V – PDRYCB100 : AC 24V • 2 output contacts(operation, error)
		PDRYCB300 	For Connect Indoor unit to Other Thermostat Controller. (Available from Multi V II series)	120 x 120 x 36.5	<ul style="list-style-type: none"> • 1SET / 1 IDU • 8 Contact point • No need AC input • Target temperature setting is possible • 2 output contacts(operation, error)
		PDRYCB400 	For Connect Indoor unit to other Forced on/off Controller. (Available from Multi V II series)	120 x 120 x 36.5	<ul style="list-style-type: none"> • 1SET / 1 IDU • 2 Contact point • No need AC input • Target temperature setting is possible • 2 output contacts(operation, error)
		PDRYCB500 	For Connect Indoor unit to external controller. (Available from Multi V II series)	120 x 120 x 36.5	<ul style="list-style-type: none"> • 1SET / 1 IDU • 2 wire RS-485 • MODBUS • Address range (01~08)
	Remote Temperature Sensor	PQRSTA0 	Sensor for detecting the room temperature	70 x 120 x 14.8	

- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

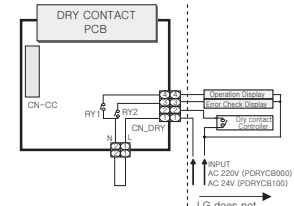
2. Control System List

Outline of system

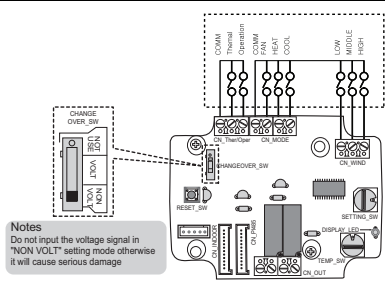
Connect CN-CC with Indoor PCB by the cable(provided)
 - Connection of Dry contact only



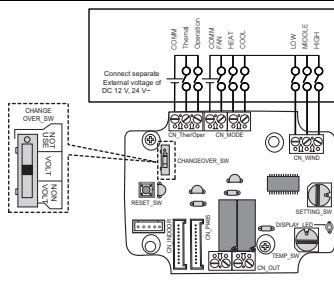
To Apply Power Source through PCB



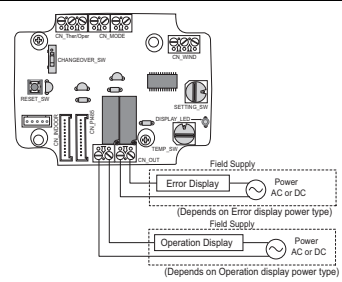
To Apply Power Source Directly to External Source



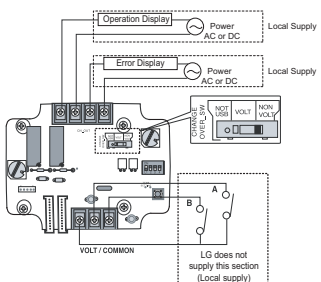
For no Power Contact Point signal Input



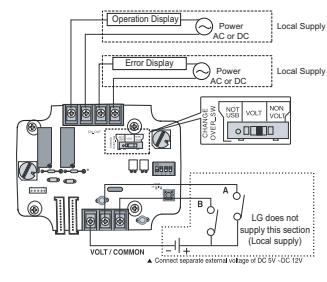
For Power Contact Point signal Input



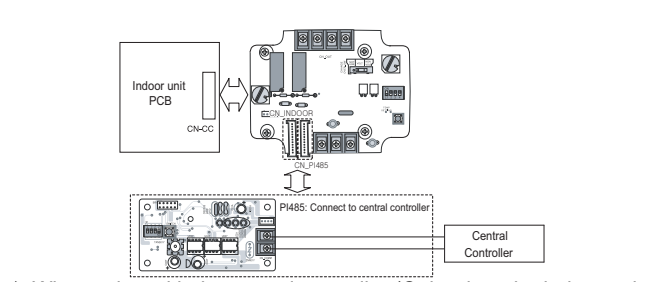
Indoor Unit Monitoring



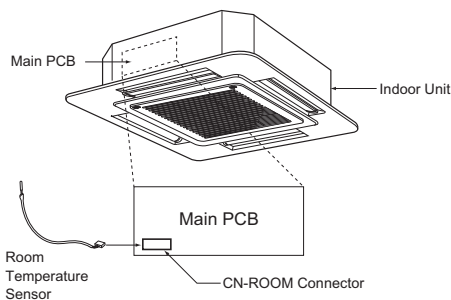
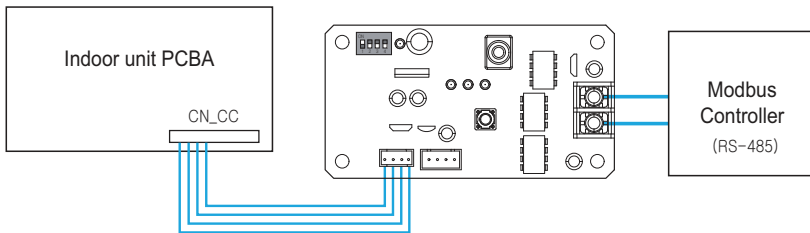
In Case Non Voltage Signal



In Case Voltage Signal







▶ When using with the central controller (Only when the indoor unit PCB is a non-communication model)



CAUTION
 Remote temperature sensor only applied to Cassette and Duct products.

- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

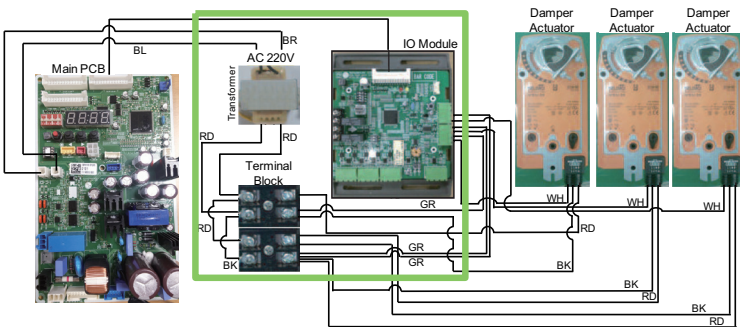
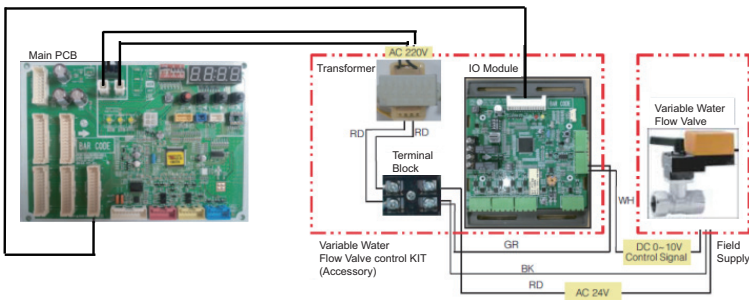
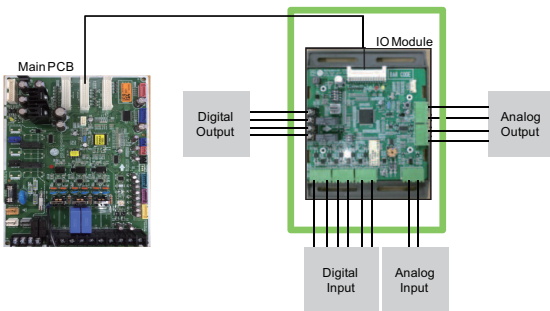
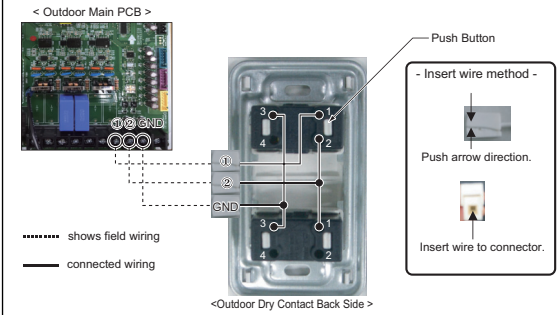
2. Control System List

Category	Controller name	Model name	Objective / Use	Dimensions (W x H x D, mm)	Feature
Interface Device	Cool/Heat Selector	PRDSBM 	To Select Operation Mode	74 x 120 x 103	<ul style="list-style-type: none"> • Push Button Type • Mode : Cooling, Heating, Fan
	IO(Input/Output) Module	PVDSMN000 	Expansion IO function (Available from Multi V IV series)	126 x 155 x 33	<ul style="list-style-type: none"> • AO 2EA (Voltage) • AI 2EA (Voltage) • DI 6EA (DryContact) • DO 2EA (operation, error) Relay Output / Normal Open
	Variable Water Flow Valve Control Kit ¹⁾	PWFCKN000 	Variable Water Flow Valve (Available from Multi V Water IV series)	218 x 200 x 85	<ul style="list-style-type: none"> • AO 2EA (Voltage) • AI 2EA (Voltage) • DI 6EA (DryContact) • DO 2EA (operation, error) Relay Output / Normal Open
	Low Ambient Control Kit	PRVC2 	Low Ambient (Available from Multi V IV series)	126 x 155 x 33	<ul style="list-style-type: none"> • AO 2EA (Voltage) • AI 2EA (Voltage) • DI 6EA (DryContact) • DO 2EA (operation, error) Relay Output / Normal Open

- 1) It is available Multi V Water Outdoor unit only.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))



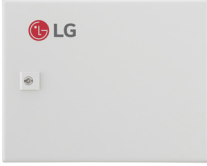

2. Control System List

Outline of system



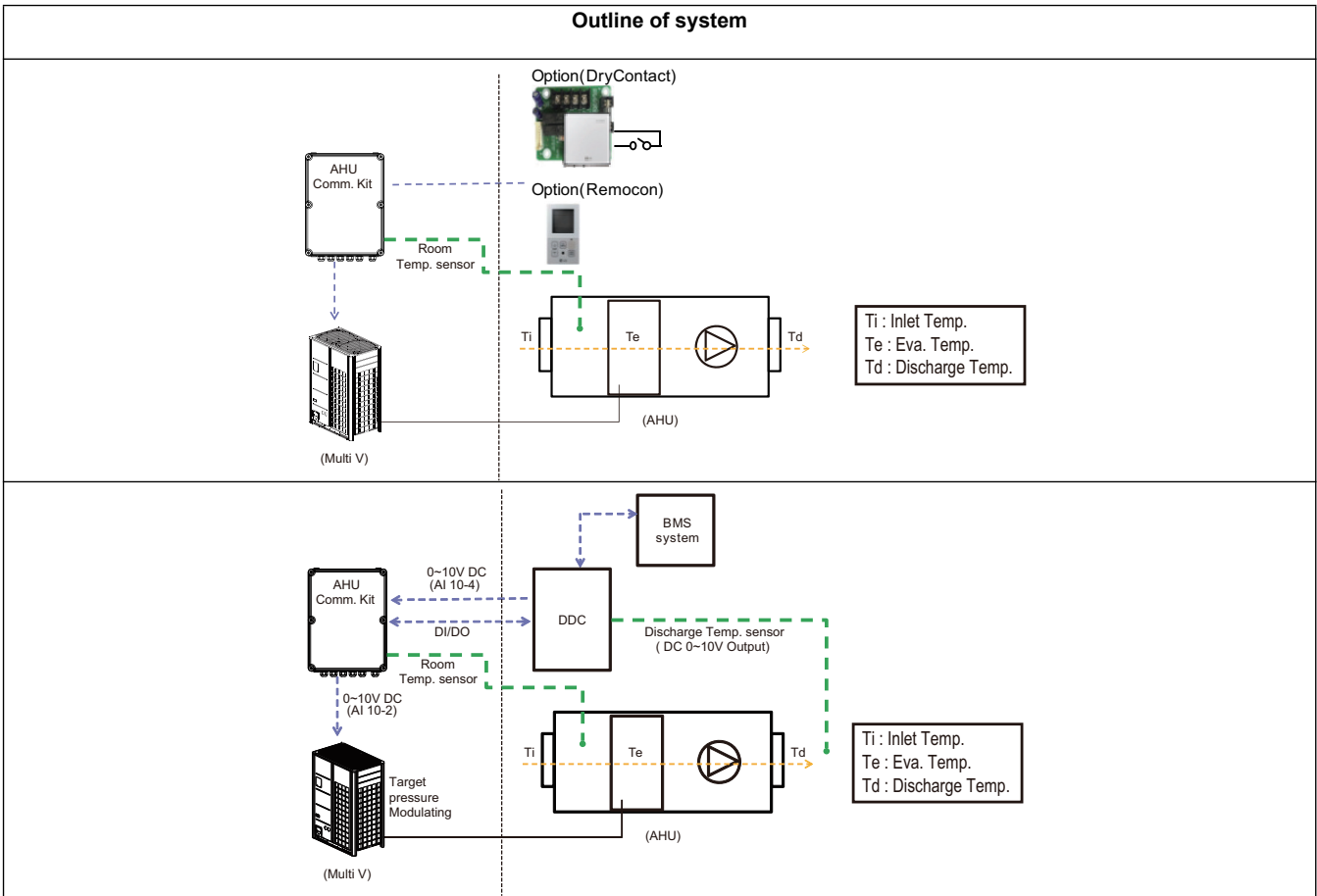
- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

Category	Controller name	Model name	Objective / Use	Dimensions (W x H x D, mm)	Feature
Interface Device	AHU Comm. Kit	<p>PAHCMR000</p>  <p><Product cover></p>  <p><Communication Module></p>	Return Air Temperature Control	300 X 300 X 155	<ul style="list-style-type: none"> • UI 4EA (AI/DI) • DO 3EA (Relay, A type) • T/B Spring Push Type
	AHU Comm. Kit	<p>PAHCMS000</p>  <p><Product cover></p>  <p><Main Module(left) and Communication Module(right)></p>	Discharge Air Temperature Control	380 X 300 X 155	<ul style="list-style-type: none"> • UI 15EA (AI/DI) • DI 3EA (Dry Contact) • DO 9EA (Relay,A type 8EA, C type 1EA) • AO 6EA (0~10V) • T/B Spring Push Type


- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))


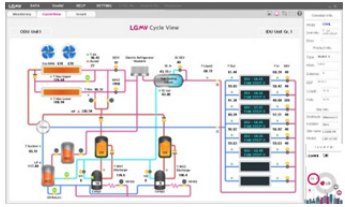
2. Control System List



- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List

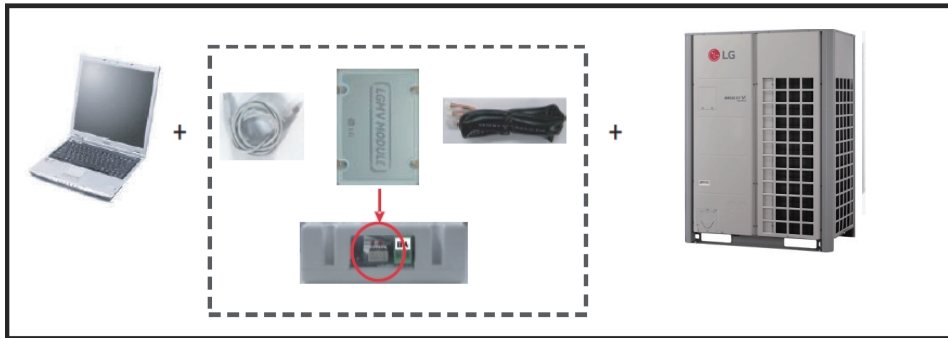
Category	Controller name	Model name	Objective /Use	Dimensions (W x H x D, mm)	Feature
Maintenance Accessory	LGMV	<p>PRCTILO</p> 	LGMV data monitoring via Personal Computer	105 x 78 x 36	<ul style="list-style-type: none"> Length of cable : 1m (3m extension cable is included) RS232(ODU), RS485(IDU) support USB type of connection are possible.

Category	Connected device	Installation Method	Feature
Maintenance Accessory	<p>PC Program</p>  	<ul style="list-style-type: none"> Web Install <ul style="list-style-type: none"> Connect to homepage (http://partner.lge.com) and select HVAC category then downloaded installation file on software menu. Automatic Install <ul style="list-style-type: none"> The accessory application program supports for automatic updates. CD Install <ul style="list-style-type: none"> It can be installed on from CD. 	<ul style="list-style-type: none"> Minimum Specification <ul style="list-style-type: none"> Windows XP MS Office 2003 Recommended Specification <ul style="list-style-type: none"> Windows7 (Win10 is possible) MS Office 2007 Resolution <ul style="list-style-type: none"> 2048 x 1536 (optimization) 1024 x 768 Basic specification <ul style="list-style-type: none"> CPU 1 GHz RAM 1 GB

- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

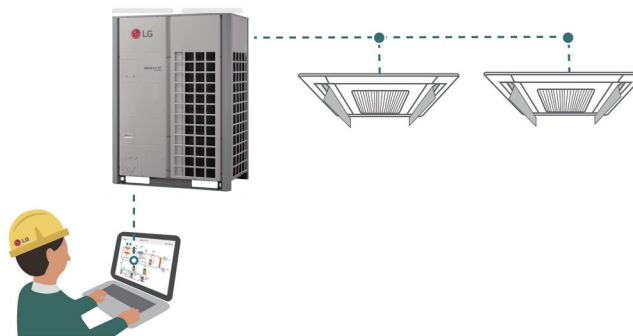
2. Control System List

Outline of system



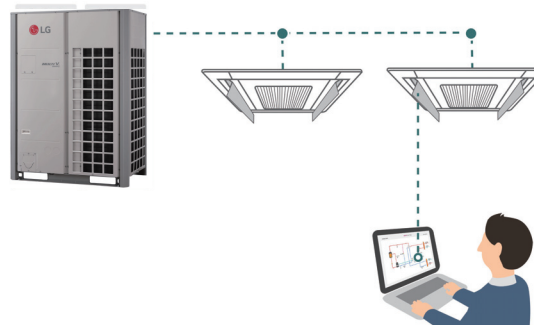
1. Outdoor connection

Connect LGMV cable to Multi V PCB LGMV port




2. Indoor unit connection


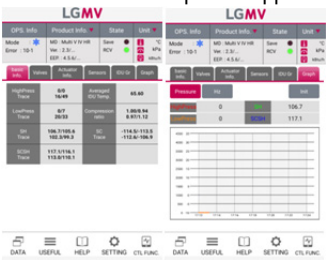
Connect LGMV cable to Multi V Indoor unit communication port



- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home > Doc.Library > Product > Control(BECON))

2. Control System List

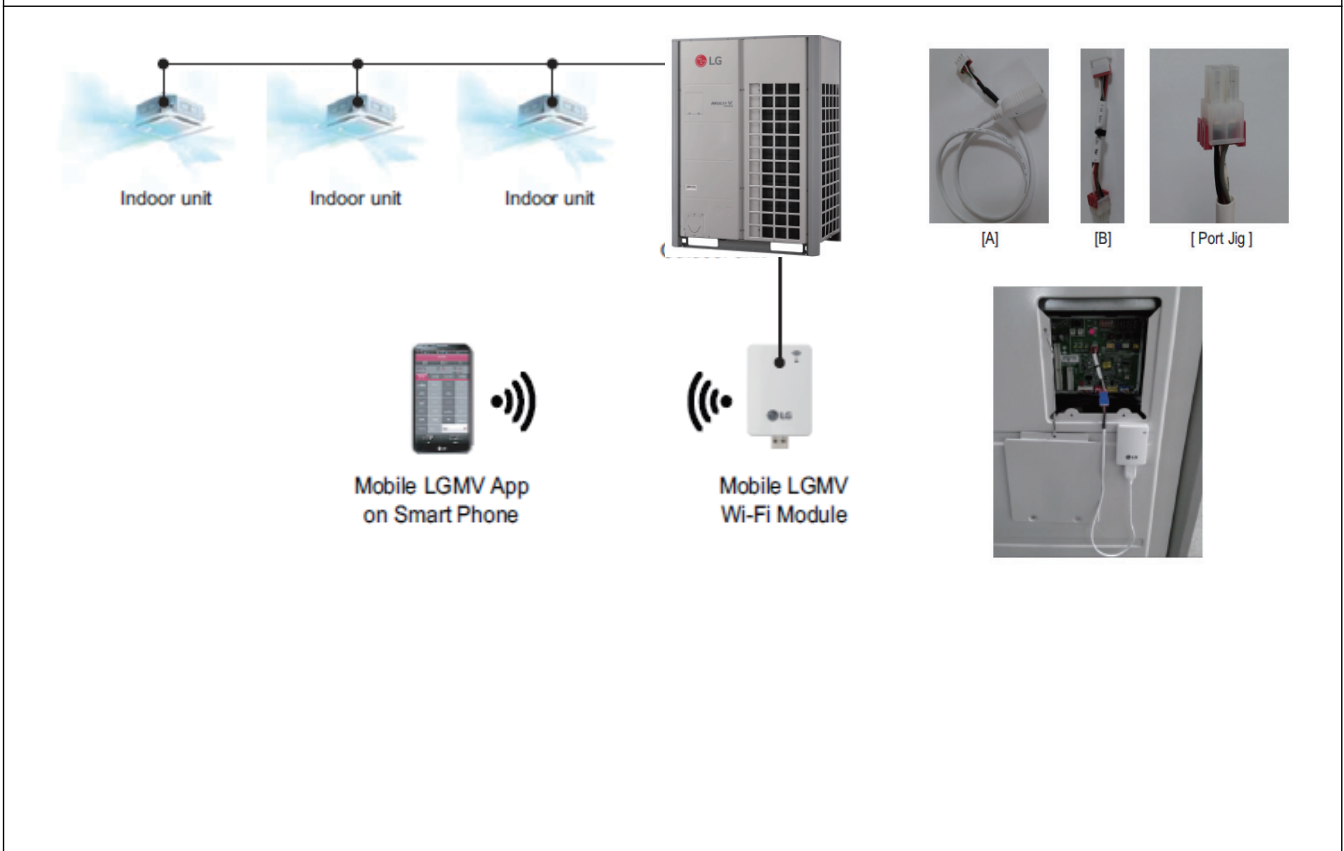
Category	Controller name	Model name	Objective /Use	Dimensions (W x H x D, mm)	Feature
Maintenance Accessory	Mobile LGMV	<p>PLGMVW100</p> 	LGMV monitoring via mobile device	48 x 78 x 14.5	<ul style="list-style-type: none"> The effective distance for wireless communication is 10m The effective distance may be reduced by the communication environment.

Category	Connected device	Installation Method	Feature
Maintenance Accessory	<p>iOS App. (iPad only)</p> 	<p>Tap the app Store icon on the screen. And then Search 'mobile lgmv'</p>	<ul style="list-style-type: none"> Minimum Specification <ul style="list-style-type: none"> iOS 7.1 Recommended Specification <ul style="list-style-type: none"> iOS 7.1/8.0/8.1 Resolution <ul style="list-style-type: none"> 2048 x 1536 (optimization) 1024 x 768
	<p>Android mobile phone App.</p> 	<p>Tap the Play Store icon on the screen. And then Search 'mobile lgmv'</p>	<ul style="list-style-type: none"> Basic specification <ul style="list-style-type: none"> Phone: Android OS 2.2 Pad: Android 4.4.2(Kitkat) CPU 1 GHz RAM 1 GB Recommended Specification <ul style="list-style-type: none"> Android OS 4.4.2(Kitkat) or higher, CPU 1 GHz Dual Core or higher, RAM 1 GB or higher 1280 x 720, 800 x 480 resolution (Optimized)

- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Control System List







Outline of system



- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

3. Function List





Individual Controller

Controller Name		Premium Wired Remote Controller	Standard Wired Remote Controller		Simple Wired Remote Controller	Simple Wired Remote Controller	Wireless Remote Controller
Product Image							
Model Name		PREMTA000 PREMTA000A PREMTA000B	PREMTB100 PREMTBB10	PREMTB001 PREMTBB01	PQRCVCL0Q PQRCVCL0QW	PQRCHCA0Q PQRCHCA0QW	PQWRHQ0FDB
Basic	On / Off	O	O	O	O	O	O
	Fan Speed Control	O	O	O	O	O	O
	Temperature Setting	O	O	O	O	O	O
	Mode Change	O	O	O	O	X	O
	Auto Swing	O	O	O	O	O	O
	Vane Control (Louver Angle)	O	O	O	O	O	O
	E.S.P (External Static Pressure)	O	O	O	O	O	X
	Electric Failure Compensation	O	O	O	O	O	X
	Indoor Temperature Display	O	O	O	O	O	O
	ALL Button Lock (Child Lock)	O	O	O	O	O	X
Advanced	Schedule / Timer	O	O	O	X	X	O
	Additional Mode Setting*	O	O	O	X	X	X
	Time Display	O	O	O	X	X	O
	humid. Display	O	O	X	X	X	X
	Advanced Lock (mode, set point, set point range, on/off Lock)	Advanced Lock	Advanced Lock	Mode Lock	X	X	X
	Filter Sign	O	O	O	X	X	X
	EnergyManagement **	O	O	O	X	X	X
	Dual Set point	O	O	X	X	X	X
	Human Detection	X	O	X	X	X	X
	Temp, Humidity compensation	O	O	X	X	X	X
Wifi AP mode setting	O	O	O	O	O	O	
ETC	Operation StatusLED	O	O	O	O	O	X
	Wireless Remote Controller Receiver	O***	X	O***	O***	O***	X
	Display	5 inch Color Display	4.3 inch Color Display	4.3 inch mono Display	2.6 inch mono Display	2.6 inch mono Display	2 inch mono Display
	Size (W x H x D, mm)	137 x 121 x 16.5	120 x 120 x 16	120 x 120 x 15	64 x 120 x 15	64 x 120 x 15	51 x 153 x 26
	Black Light Control for Screen Saver	O	O	X	X	X	X

- O : Applied X : Not applied
- * It might not be indicated or operated at the partial product
- ** Centralized control (PACS5A000 / PACS4B000 / PACP5A000 / PACP4B000 / PQNFB17C0 / PLNWKB000) and PDI (PQNUD1S40 / PPWRDB000) should be installed for this function
- *** For ceiling type duct
- Indoor unit should have functions requested by the controller
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))





3. Function List

■ Central Controller

Controller Name	AC Ez	AC Ez touch	AC Smart IV	AC Smart 5 ²⁾
Product Image				
Model Name	PQCSZ250S0	PACEZA000	PACS4B000	PACS5A000
Maximum Number of Indoor Units	32	64	128	128
Individual / Group Control (On & Off, Mode, Set Point, Fan Speed)	O	O	O	O
Individual Controller Lock	O (All)	O (Temperature, Mode, Fan, All)	O (Temperature, Mode, Fan, All)	O (Temperature, Mode, Fan, All)
Error Check	O	O	O	O
Mode Change	O	O	O	O
Schedule	8 Event	Daily, Weekly, Monthly, Yearly, Exception day	Daily, Weekly, Monthly, Yearly, Exception day	Daily, Weekly, Monthly, Yearly, Exception day
Operation History	X	X	O	O
Visual Navigation	X	X	O	O
Operation Time Limit	X	X	O	O
Temperature Limit	X	O	O	O
Remote Access ¹⁾	X	PC SW	Web	Web
Auto Changeover / Setback	X	O	O	O
Power Consumption Monitoring (with PDI)	X	O	O	O
Energy navigation	X	X	O	O
Interlock Control	X	X	O	O
Virtual Group Control	X	X	O	O
Emergency Alarm Display	X	O	O	O
ACS I/O Module Interlocking	X	X	O	O
External IO Port No.	X	DI 1EA	DI 2EA DO 2EA	DI 2EA DO 2EA
Connectable Products	Air conditioner ERV ERV DX	Air conditioner ERV ERV DX Hydro kit	Air conditioner ERV ERV DX Hydro kit AHU Chiller*	Air conditioner ERV ERV DX Hydro kit AHU Chiller*

- O : Applied X : Not applied
- 1) Assignment of public IP address is required to access central controller through internet.
- 2) Without additional device, ACP 5 and AC Smart 5 provide BACnet IP and Modbus TCP interface for BMS.
- * It needs to apply Chiller Option KIT.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

3. Function List

Controller Name	ACP IV	ACP 5 ²⁾	AC Manager IV	AC Manager 5
Product Image				
Model Name	PACP4B000	PACP5A000	PACM4B000	PACM5A000
Maximum Number of Indoor Units	256	256	8,192	8,192
Individual / Group Control (On & Off, Mode, Set Point, Fan Speed)	O	O	O	O
Individual Controller Lock	O (Temperature, Mode, Fan, All)	O (Temperature, Mode, Fan, All)	O (Temperature, Mode, Fan, All)	O (Temperature, Mode, Fan, All)
Error Check	O	O	O	O
Mode Change	O	O	O	O
Schedule	Daily, Weekly, Monthly, Yearly, Exception day	Daily, Weekly, Monthly, Yearly, Exception day	Daily, Weekly, Monthly, Yearly, Exception day	Daily, Weekly, Monthly, Yearly, Exception day
Operation History	O	O	O	O
Visual Navigation	O	O	O	O
Operation Time Limit	O	O	O	O
Temperature Limit	O	O	O	O
Remote Access ¹⁾	Web	Web	PC SW	Web
Auto Changeover / Setback	O	O	O	O
Power Consumption Monitoring (with PDI)	O	O	O	O
Energy navigation	O	O	X	O
Interlock Control	O	O	O	O
Virtual Group Control	O	O	O	O
Emergency Alarm Display	O	O	O	O
ACS I/O Module Interlocking	O	O	O	O
External IO Port No.	DI 10EA DO 4EA	DI 10EA DO 4EA	X	X
Connectable Products	Air conditioner ERV ERV DX Hydro kit AHU Chiller*	Air conditioner ERV ERV DX Hydro kit AHU Chiller*	Air conditioner ERV ERV DX Hydro kit AHU Chiller*	Air conditioner ERV ERV DX Hydro kit AHU Chiller*

- O : Applied X : Not applied
- 1) Assignment of public IP address is required to access central controller through internet.
- 2) Without additional device, ACP 5 and AC Smart 5 provide BACnet IP and Modbus TCP interface for BMS.
- * It needs to apply Chiller Option KIT.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

4. Accessory Compatibility List

Product		Model name	ETC	Compatibility
Wireless Remote Controller	-	PQWRH(C)Q0FDB	-	○
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	○*
		PQRCHCA0Q(W)	for Hotel	○*
	Standard	PREMTB001	Standard II(White)	○
		PREMTBB01	Standard II (Black)	○
		PREMTB100	Standard III (White)	○
		PREMTBB10	Standard III (Black)	○
Premium	PREMTA000(A/B)	Premium	○**	
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	○
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	○
		PDRYCB300	Dry Contact For 3rd Party Thermostat	○
		PDRYCB500	Dry Contact For Modbus	○
	IO Module	PQDSBCDVM0	Demand controller for MULTI V III	X
		PVDSMN000	Demand controller From MULTI V IV series	○
	Variable Water Flow Control kit	PRVC0	For MULTI V WATER II	X
PWFCKN000		For MULTI V WATER IV	○	
Gateway	IDU PI485	PHNFP14A0	Connected with the Indoor Units	X
	ODU PI485	PMNFP14A1	PI 485 Gateway	X
	Cool/Heat Selector	PRDSBM	For MULTI V Heat Pump / Mode lock (Cool/Heat/Fan)	○
	Low Ambient Kit	PRVC2	From MULTI V IV series	○
	AHU Comm. Kit	PAHCMR000	Return Air Temperature Control	○
		PAHCMS000	Discharge Air Temperature Control	○
	BACnet	PQNFB17C0	ACP BACnet	○
	Lonworks	PLNWKB000	ACP Lonworks	○
	Modbus	PMBUSB00A	Modbus RTU	○
	KNX Gateway ¹⁾	LG-AC-KNX4	Max. Indoor Units : 4	○
		LG-AC-KNX8	Max. Indoor Units : 8	○
		LG-AC-KNX16	Max. Indoor Units : 16	○
LG-AC-KNX64		Max. Indoor Units : 64	○	
Central Controller	Simple	PQCSZ250S0	AC Ez	○
	AC Ez Touch	PACEZA000	AC Ez Touch	○
	AC Smart	PACS4B000	AC Smart IV	○
		PACS5A000	AC Smart 5	○
	ACP	PACP4B000	ACP IV	○
		PACP5A000	ACP 5	○
AC Manager	PACM5A000	AC Manager 5	○***	
ETC	Remote Temperature Sensor	PQRSTA0	-	○
	Zone Controller	ABZCA	-	X
	CO ₂ Sensor	AHCS100H0	For ERV, ERV DX Indoor units (Internal type)	○
	Group Control Wire	PZCWRCG3	0.25m	-
	2-Remo Control Wire	PZCWRC2	0.25m	-
	Extension Wire	PZCWRC1	10m	-
	Wi-Fi Controller*	PWFMD200	-	○
	PDI	PPWRDB000	PDI Standard	○
		PQNUD1S40	PDI Premium	○
	ACS I/O Module	PEXPMB000	-	-

- : Possible X : Impossible - : Not applicable
- * It is possible basic function only. (Refer [Function List – Individual Controller])
- ** It isn't possible some function
- *** PACS4B000, PACP4B000, PACS5A000, PACP5A000, PQNFB17C0 or PLNWKB000 is needed.
- 1) This product is provided by INTESIS.
- If you need more detail, please refer to the Control PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

4. Accessory Compatibility List

■ E.O.L Model ¹⁾

Product		Model name	ETC	Compatibility
Wireless Remote Controller	-	PQWRH(C)DF0	-	○
Wired Remote Controller	Standard	PQRCVSL0	RS2 Wired (black)	○*
		PQRCVSL0QW	RS2 Wired (White)	○*
Dry contact	Simple Contact	PQDSA	-	○
		PQDSA(1)	-	○
		PQDSB(1)	-	○
	Communication type	PQDSBC	-	○
		PQDSBNGCM1	-	○
		PQDSBCGCD0	Dry Contact for Thermostat	○
Central Controller	Simple	PQCSB101S0	Simple central controller	○
		+ PQCSC101S0	Function controller	○**
		+ PQCSD130A0	Function Scheduler	○**
	AC Smart	PQCSW320A1E	AC Smart II	○
		+ PQCSE341A0	Option Kit	○***
		+ PQCSE342A0	Option Kit	○***
		+ PQCSE440U0	Expansion Kit	○***
	ACP	PQCSW421E0A	AC Smart Premium	○
		PQCPA11A0E	ACP without IO	○
		PQCPC22N0	ACP Standard	○
		PQCPB11A0E	ACP with IO	○
	AC Manager	PQCPC22A0	ACP Premium	○
		PQCSS520A0E	AC Manager	○****
		PQCSSA21E0	AC Manager Plus	○****
PACM4B000		AC Manager IV	○****	
Gateway	IDU PI485	PSNFP14A0	Connected with the Indoor Units	X
	ODU PI485	PMNFP14A0	PI 485 Gateway	X
		PV485N000	PI 485 Gateway (For Multi V IV)	X
	Low Ambient Kit	AQLA	-	X
	BACnet	PQNFB17B0	BACnet Gateway	○
Lonworks	PQNFB16A1	Lonworks Gateway	○	
ETC	PDI	PQNUD1S00	PDI	○
	Telecom Shelter Controller	PQCSA001T0	-	○
	Electronic Thermostat	AQETC	-	○
	CTI	PKFC0	-	○
	CO ₂ Sensor	PES-C0RV0	For ERV, ERV DX Indoor units (External type)	○
	DO KIT	PQNFP00T0	-	-

- O: Possible X: Impossible
- * It isn't possible some function.
- ** PQCSB101S0 is needed.
- *** PQCSW320A1E is needed.
- **** ACP is needed.
- 1) E.O.L Model has been discontinued, so stock is subject to availability.

5. Centralized Controller Compatibility List

Compatibility between Controllers

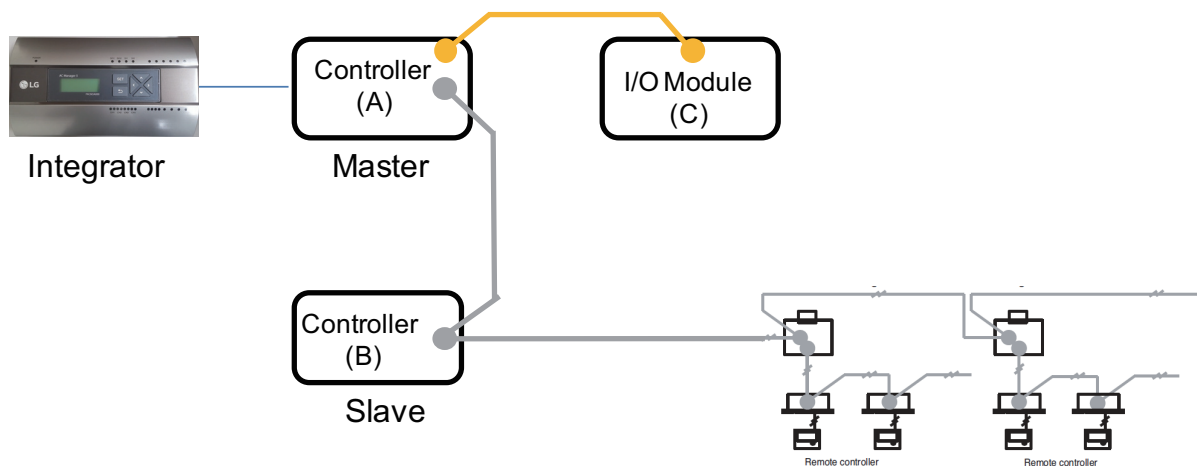
Master (A)	Slave (B)						
	AC Ez	AC Ez Touch	AC Smart IV AC Smart 5	ACP IV ACP 5	ACP BACnet	ACP Lonworks	PDI
AC Ez	○	X	X	X	X	X	X
AC Ez Touch	○	○	X	X	X	X	○
AC Smart IV, AC Smart 5	○	○	○	X	X	X	○
ACP IV, ACP 5	○	○	○	X	X	X	○
ACP BACnet	○	○	○	X	X	X	○
ACP Lonworks	○	○	○	X	X	X	○
PDI	X	X	X	X	X	X	X

Compatibility with Integrator

Integrator	Controller						
	AC Ez	AC Ez Touch	AC Smart IV AC Smart 5	ACP IV ACP 5	ACP BACnet	ACP Lonworks	PDI
AC Manager IV	X	X	○	○	○	○	X
AC Manager 5	X	X	○	○	○	○	X

Compatibility with IO Module

IO Module (C)	Controller							
	AC Ez	AC Ez Touch	AC Smart IV AC Smart 5	AC Smart BACnet	ACP IV ACP 5	ACP BACnet	ACP Lonworks	PDI
ACS I/O Module	X	X	○	○ ¹⁾	○	○ ¹⁾	○ ¹⁾	X



- If you need more detail, please refer to the Control PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))
- 1) This Function is possible to use in Web Only. (BMS Point is not applied)



Air Solution

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The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.
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