

LG

MULTI V 

Cooling Only

R410A(50/60Hz)

5CVM0-02G(Replaces 5CVM0-02F)

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK





General Information

- 1. Model Names**
- 2. External Appearance**
- 3. Nomenclature**

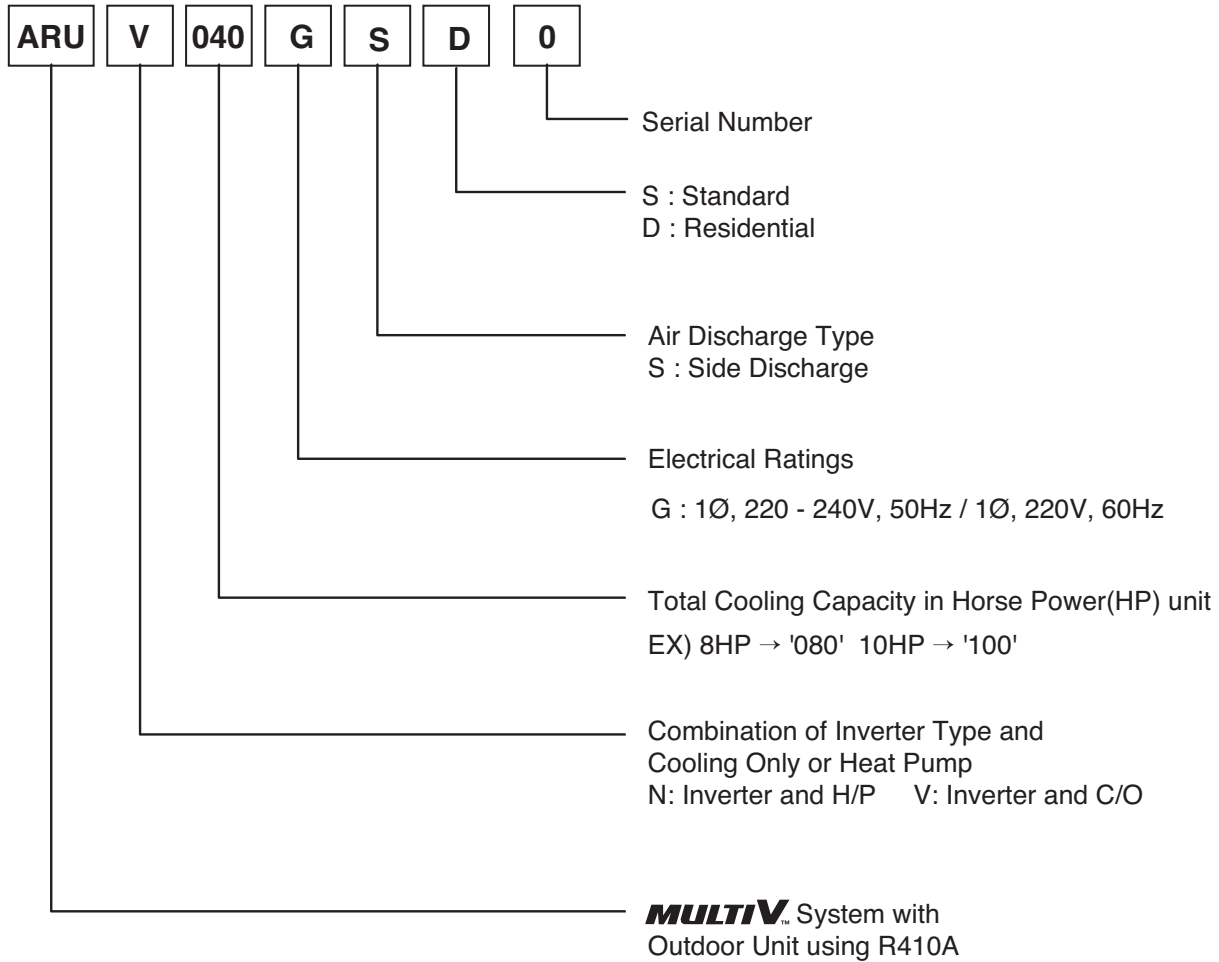
1. Model Names

Power Supply	2.5HP	3HP	4HP
220-240V, 1Ø, 50Hz 220V, 1Ø, 60Hz	ARUV025GSD0	ARUV030GSD0	ARUV040GSD0

2. External Appearance

CHASSIS	Model Name	Model
UE	ARUV025GSD0	
U4	ARUV030GSD0 ARUV040GSD0	

3. Nomenclature





Outdoor Units

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1. Outdoor Unit Function

Category	Functions	Multi V S
Reliability	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
	Test Run function	O
Convenience	Night Low Noise Operation	O
CAC network function	Network solution(LGAP)	O

Note :

O : Applied, X : Not applied

Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Device		Multi V S
Central Controller	AC Ez (Simple Controller)	PQCSZ250S0
	AC Smart Premium	PQCSW421E0A
	128 Unit Expansion Kit for AC Smart	PQCSE440U0
	Option Kit (SD card type) for AC Smart	PQCSE341A0 / PQCSE342A0
	ACP(Advanced Control Platform)	PQCPA11A0E / PQCPB11A0E
	AC Manager	PQCSS520A0E
	ACP(Advanced Control Platform) Standard	PQCPC22N0
	ACP(Advanced Control Platform) Premium	PQCPC22A0
	AC Manager Plus	PQCSSA21E0
	DO(Digital Output) Kit	PQNFP00T0
BNU (Building Network Unit)	LONWORKS Gateway (DC 12V Adapter)	PQNFB16A1 / PLNWKB000
	LONWORKS Gateway (AC 24 V)	PLNWKB100
	BACnet Gateway (DC 12V Adapter)	PQNFB17B0 / PQNFB17C0
	BACnet Gateway (AC 24 V)	PQNFB17C1
Installation	Refrigerant Charging Kit	O (Logical operation)
PDI(power distribution indicator)		PQNUD1S00
PDI(power distribution indicator) Premium		PQNUD1S40
Cool / Heat Selector		PRDSBM
IO Module (ODU Dry Contact)		PVDSMN000
Cycle Monitoring Device	LG MV	PRCT-FE1
	Mobile LGMV(Bluetooth)	PMVBTQ01
DS(Data Saving) Module		PVADTN000

Note :

O : Applied, X : Not applied

Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

2. Specifications

■ Cooling Only

50/60Hz

HP			2.5	3	4
Model Name	Combination Unit		ARUV025GSD0	ARUV030GSD0	ARUV040GSD0
Capacity ¹⁾ (Rated)	Cooling	kW	7.2	9.2	11.0
		kcal/h	6,191	7,911	9,458
		Btu/h	24,600	31,400	37,600
	Heating	kW	-	-	-
		kcal/h	-	-	-
		Btu/h	-	-	-
Input (Rated) ¹⁾	Cooling	kW	1.80	2.10	2.75
	Heating	kW	-	-	-
Power Factor	Rated	-	0.93	0.93	0.93
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Wide Louver Plus	Wide Louver Plus	Wide Louver Plus
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor	Hermetic Motor Compressor
	Piston Displacement	cm ³ /rev	18	24	24
	Number of Revolution	rev/min	6,000	6,600	6,600
	Motor Output x Number	W x No.	1,500 x 1	2,137 x 1	2,137 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
	Oil Charge		670	900	900
Fan	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	85.4 x 1	124.0 x 1	124.0 x 1
	Air Flow Rate(High)	m ³ /min	44	60	60
		ft ³ /min	1,553	2,118	2,118
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
Discharge	Side / Top	Side	Side	Side	
Piping Connections	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas	mm(inch)	15.88(5/8)	15.88(5/8)	15.88(5/8)
Dimensions(W x H x D)	mm		870 x 655 x 320	950 x 834 x 330	950 x 834 x 330
	mm		34-1/4 x 25-25/32 x 12-19/32	37-13/32 x 32-27/32 x 13	37-13/32 x 32-27/32 x 13
Net Weight	kg		45	59	59
	lbs		99.2	130	130
Sound Pressure Level	Cooling	dB(A)	50	50	50
	Heating	dB(A)	-	-	-
Sound Power Level		dB(A)	-	-	-
Protection Devices	High pressure protection	-	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch
	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection
Communication Cable		No.xmm ² (VCTF-SB)	1.0~1.5 x 2	1.0~1.5 x 2	1.0~1.5 x 2
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	1.0	1.4	1.4
		lbs	2.2	3.1	3.1
Control		Electronic Expansion Valve			
Power Supply	V, Ø, Hz	220-240, 1, 50		220-240, 1, 50	220-240, 1, 50
		220, 1, 60		220, 1, 60	220, 1, 60
Number of maximum connectable indoor units ²⁾			3	5	6

Notes:

- Capacities are based on the following conditions:
 - Cooling Temperature : Indoor 27°C(80.6°F) DB / 19°C(66.2°F) WB
Outdoor 35°C(95°F) DB / 24°C(75.2°F) WB
 - Heating Temperature : Indoor 20°C(68°F) DB / 15°C(59°F) WB
Outdoor 7°C(44.6°F) DB / 6°C(42.8°F) WB
 - Piping Length : Interconnected Pipe Length = 7.5m
 - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
- The maximum combination ratio is 130%.
- Wiring cable size must comply with the applicable local and national codes.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber. Therefore, these values can be increased owing to ambient conditions during operation.
- Power factor could vary less than ±1% according to the operating conditions.

3. Dimensions

3.1 Dimensional Drawings

UE Chassis

ARUV025GSD0

3D View

4 holes for Anchor Bolts (M10)

Piping Direction

1, 2, 4

3, 5, 6

Side view
(Valve cover removed)

2-ID. ∅ 20 holes for drain connection

No.	Part Name	Description
6	Liquid Pipe Connection	Flare joint
5	Gas Pipe Connection	Flare joint
4	SVC Valve Cover	-
3	Power and communication Cable Hole	-
2	Control Cover	-
1	Air Outlet	-

Note

- Unit should be installed in compliance with the installation manual in the product box.
- Unit should be grounded in accordance with the local regulations or applicable national codes.
- All electrical components and materials to be supplied from the site must comply with the local regulations or international codes.
- Electrical characteristics chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.

Symbols

↑ Piping Direction

▲ Datum line

[Unit: mm]

MULTI V™ S

3. Dimensions

U4 Chassis ARUV030GSD0 ARUV040GSD0	<p style="text-align: center;">3D View</p>
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[Unit: mm]

Piping connection port

5-∅ 20 holes for drain connection

No.	Part Name	Description
8	Pipe routing hole (back)	-
7	Pipe routing hole (side)	-
6	Pipe routing hole (front)	-
5	Handle	-
4	Liquid Pipe Connection	Flare joint
3	Gas Pipe Connection	Flare joint
2	Power and communication cable Hole	-
1	Air Outlet	-

Symbols

↑ Piping Direction

▲ Datum line

Note

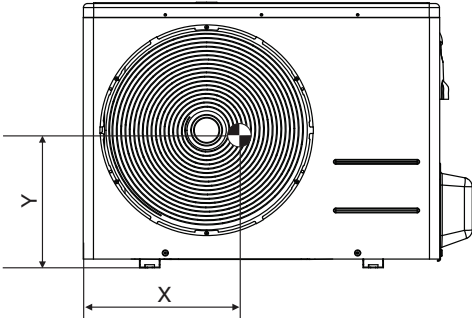
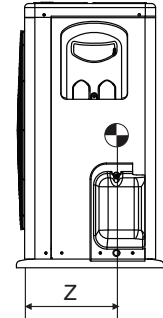
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3. Dimensions

3.2 Center of Gravity

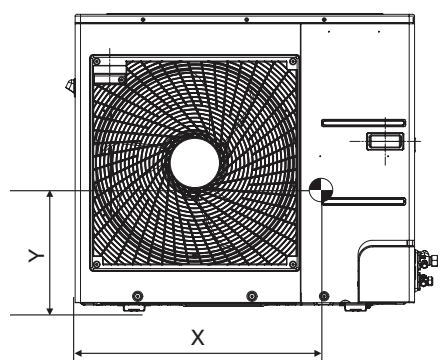
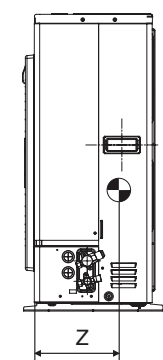
ARUV025GSD0 [Unit : mm]

Model Name	X	Y	Z
ARUV025GSD0	740	340	170

ARUV030GSD0
ARUV040GSD0 [Unit : mm]

Model Name	X	Y	Z
ARUV030GSD0 ARUV040GSD0	740	340	170

4. Electric Characteristics

◆ Wiring of Main Power Supply and Equipment Capacity

1. Bear in mind ambient conditions (ambient temperature, direct sunlight, rain liquid, etc.) when proceeding with the wiring and connections.
2. 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%.
3. Specific wiring requirements should adhere to the wiring regulations of the region.
4. Power supply cords of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord.
5. 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.

⚠ CAUTION

- All Installation site must require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.
- 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.

4. Electric Characteristics

◆ 50Hz

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
2.5 HP	50	220-240	Min.:198, Max.:264	13.4	13.8	20	-	9.9	-	0.12	0.5
3 HP				21.7	21.3	25	-	16.4	-	0.12	0.5
4 HP				21.7	21.3	25	-	16.3	-	0.12	0.5

◆ 60Hz

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
2.5 HP	60	220	Min.:198, Max.:242	13.4	13.8	20	-	9.9	-	0.12	0.5
3 HP				21.7	21.3	25	-	16.4	-	0.12	0.5
4 HP				21.7	21.3	25	-	16.3	-	0.12	0.5

Notes:

- Voltage range
Voltage supplied to the unit terminals should be within the minimum and maximum range
- Maximum allowable voltage unbalance between phase is 2%
- OFM is measured as the outdoor unit test condition.
- Select wire spec. based on the larger value of MCA or TOCA.
- TOCA means the total over current value of each outdoor unit.
- MSC means the Max. current during the starting of compressor.
- All installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)]
- MFA is used to select the circuit breaker and ground fault circuit interrupter (earth leakage circuit breaker)

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

5. Indoor Unit and Outdoor Unit Capacity Index

5.1 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.

5.2 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%
2.5	3.6	4.3	5.0	5.8	6.5	7.2	7.9	8.6	9.4
3	4.6	5.5	6.4	7.4	8.3	9.2	10.1	11.0	12.0
4	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.3

* 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
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

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

⚠ CAUTION

We can guarantee the operation only within 130% Combination Ratio.

6. Capacity Tables

6.1 Cooling capacity

ARUV025GSD0

Cooling Capacity(2.5HP)

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	6.6	0.76	7.8	0.93	9.1	1.08	9.5	1.10	9.5	1.12	9.8	1.12	10.0	1.13
	12	6.6	0.78	7.8	0.97	9.1	1.13	9.3	1.13	9.5	1.16	9.7	1.17	9.9	1.17
	14	6.6	0.81	7.8	1.00	9.1	1.17	9.2	1.18	9.3	1.20	9.5	1.21	9.8	1.22
	16	6.6	0.84	7.8	1.04	9.0	1.22	9.1	1.23	9.2	1.24	9.4	1.25	9.7	1.27
	18	6.6	0.87	7.8	1.10	8.8	1.29	8.9	1.30	9.1	1.30	9.3	1.31	9.5	1.32
	20	6.6	0.91	7.8	1.17	8.7	1.35	8.8	1.36	8.9	1.37	9.2	1.38	9.4	1.38
	21	6.6	0.94	7.8	1.21	8.6	1.38	8.8	1.39	8.9	1.40	9.1	1.41	9.4	1.42
	23	6.6	1.01	7.8	1.30	8.6	1.44	8.6	1.45	8.8	1.46	9.0	1.47	9.2	1.48
	25	6.6	1.07	7.8	1.39	8.4	1.50	8.6	1.52	8.6	1.53	8.9	1.54	9.1	1.55
	27	6.6	1.15	7.8	1.48	8.3	1.57	8.4	1.58	8.6	1.59	8.8	1.60	9.0	1.61
	29	6.6	1.22	7.8	1.59	8.2	1.63	8.3	1.64	8.4	1.66	8.6	1.67	8.9	1.67
	31	6.6	1.30	7.8	1.67	8.0	1.70	8.2	1.71	8.3	1.72	8.5	1.73	8.7	1.74
	33	6.6	1.39	7.7	1.73	7.9	1.76	8.0	1.78	8.2	1.78	8.4	1.79	8.6	1.80
	35	6.6	1.48	7.6	1.80	7.8	1.83	7.9	1.84	8.0	1.85	8.3	1.86	8.5	1.87
	37	6.6	1.53	7.4	1.83	7.7	1.86	7.8	1.88	7.9	1.89	8.1	1.89	8.4	1.91
	39	6.6	1.59	7.3	1.87	7.6	1.90	7.7	1.92	7.8	1.92	8.0	1.93	8.3	1.94
41	6.4	1.79	6.9	2.08	7.2	2.12	7.3	2.14	7.4	2.14	7.7	2.15	7.8	2.17	
43	6.3	1.90	6.7	2.18	6.9	2.22	7.0	2.24	7.2	2.24	7.4	2.25	7.6	2.27	
46	5.9	2.03	6.1	2.28	6.3	2.33	6.4	2.34	6.6	2.34	6.8	2.35	7.0	2.37	
120	10	6.1	0.69	7.2	0.84	8.4	1.00	9.0	1.08	9.5	1.10	9.6	1.10	9.9	1.11
	12	6.1	0.71	7.2	0.87	8.4	1.04	9.0	1.10	9.3	1.14	9.5	1.15	9.7	1.16
	14	6.1	0.73	7.2	0.90	8.4	1.08	9.0	1.15	9.2	1.18	9.4	1.20	9.6	1.21
	16	6.1	0.75	7.2	0.94	8.4	1.12	9.0	1.21	9.1	1.23	9.3	1.24	9.5	1.26
	18	6.1	0.79	7.2	0.98	8.4	1.19	8.8	1.27	8.9	1.30	9.2	1.30	9.4	1.31
	20	6.1	0.82	7.2	1.04	8.4	1.27	8.7	1.35	8.8	1.36	9.0	1.37	9.3	1.37
	21	6.1	0.84	7.2	1.08	8.4	1.32	8.6	1.38	8.7	1.39	9.0	1.40	9.2	1.41
	23	6.1	0.90	7.2	1.15	8.4	1.40	8.5	1.44	8.6	1.46	8.8	1.46	9.1	1.47
	25	6.1	0.96	7.2	1.23	8.3	1.48	8.4	1.51	8.5	1.52	8.7	1.53	9.0	1.53
	27	6.1	1.02	7.2	1.32	8.2	1.56	8.3	1.57	8.4	1.58	8.6	1.59	8.8	1.60
	29	6.1	1.09	7.2	1.41	8.0	1.62	8.2	1.63	8.3	1.65	8.5	1.65	8.7	1.66
	31	6.1	1.16	7.2	1.50	7.9	1.69	8.0	1.69	8.2	1.71	8.4	1.72	8.6	1.72
	33	6.1	1.24	7.2	1.60	7.8	1.75	7.9	1.76	8.0	1.78	8.2	1.78	8.5	1.79
	35	6.1	1.32	7.2	1.71	7.7	1.82	7.8	1.82	7.9	1.84	8.1	1.85	8.3	1.85
	37	6.1	1.38	7.2	1.75	7.6	1.85	7.7	1.86	7.8	1.87	8.0	1.88	8.2	1.88
	39	6.1	1.44	7.2	1.79	7.4	1.88	7.5	1.89	7.7	1.90	7.9	1.91	8.1	1.92
41	5.9	1.63	6.8	2.01	7.1	2.09	7.2	2.11	7.3	2.11	7.5	2.13	7.7	2.13	
43	5.8	1.74	6.6	2.11	6.8	2.19	6.9	2.20	7.0	2.21	7.2	2.22	7.5	2.23	
46	5.4	1.88	6.0	2.22	6.2	2.28	6.3	2.30	6.4	2.31	6.6	2.32	6.8	2.32	
110	10	5.6	0.62	6.7	0.75	7.7	0.90	8.3	0.97	8.8	1.04	9.5	1.08	9.7	1.09
	12	5.6	0.64	6.7	0.78	7.7	0.93	8.3	1.00	8.8	1.08	9.4	1.13	9.5	1.14
	14	5.6	0.66	6.7	0.81	7.7	0.97	8.3	1.05	8.8	1.14	9.2	1.17	9.4	1.19
	16	5.6	0.68	6.7	0.84	7.7	1.01	8.3	1.09	8.8	1.20	9.1	1.23	9.3	1.24
	18	5.6	0.71	6.7	0.88	7.7	1.07	8.3	1.16	8.8	1.27	9.0	1.30	9.2	1.30
	20	5.6	0.73	6.7	0.92	7.7	1.14	8.3	1.24	8.6	1.34	8.9	1.36	9.1	1.37
	21	5.6	0.75	6.7	0.95	7.7	1.18	8.3	1.28	8.6	1.38	8.8	1.39	9.0	1.40
	23	5.6	0.79	6.7	1.02	7.7	1.27	8.3	1.36	8.5	1.44	8.7	1.45	8.9	1.46
	25	5.6	0.85	6.7	1.08	7.7	1.35	8.3	1.44	8.4	1.50	8.6	1.52	8.7	1.52
	27	5.6	0.91	6.7	1.16	7.7	1.45	8.1	1.52	8.2	1.57	8.4	1.58	8.6	1.59
	29	5.6	0.97	6.7	1.24	7.7	1.54	8.0	1.59	8.1	1.64	8.3	1.64	8.5	1.65
	31	5.6	1.03	6.7	1.32	7.7	1.65	7.9	1.66	8.0	1.70	8.2	1.71	8.4	1.71
	33	5.6	1.10	6.7	1.41	7.7	1.74	7.8	1.73	7.9	1.76	8.1	1.77	8.3	1.78
	35	5.6	1.17	6.7	1.50	7.5	1.80	7.6	1.81	7.7	1.83	7.9	1.83	8.1	1.84
	37	5.6	1.21	6.7	1.55	7.4	1.84	7.5	1.84	7.6	1.86	7.8	1.86	8.0	1.87
	39	5.6	1.26	6.7	1.60	7.3	1.86	7.4	1.87	7.5	1.88	7.7	1.89	7.9	1.90
41	5.4	1.43	6.4	1.79	6.9	2.07	7.0	2.08	7.1	2.09	7.3	2.11	7.5	2.11	
43	5.3	1.52	6.3	1.89	6.7	2.16	6.8	2.17	6.9	2.18	7.1	2.19	7.3	2.20	
46	5.0	1.63	5.9	2.01	6.1	2.25	6.2	2.26	6.3	2.27	6.5	2.28	6.7	2.29	

Notes:

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. is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(2.5HP)

Outdoor Units

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	
100	10	4.9	0.56	5.8	0.68	6.8	0.80	7.2	0.87	7.7	0.93	8.6	1.04	9.5	1.05
	12	4.9	0.57	5.8	0.70	6.8	0.83	7.2	0.89	7.7	0.96	8.6	1.09	9.3	1.10
	14	4.9	0.59	5.8	0.73	6.8	0.86	7.2	0.93	7.7	1.00	8.6	1.16	9.2	1.16
	16	4.9	0.61	5.8	0.75	6.8	0.90	7.2	0.97	7.7	1.06	8.6	1.21	9.1	1.23
	18	4.9	0.63	5.8	0.79	6.8	0.94	7.2	1.02	7.7	1.12	8.6	1.28	9.0	1.29
	20	4.9	0.65	5.8	0.81	6.8	0.99	7.2	1.09	7.7	1.20	8.6	1.34	8.8	1.35
	21	4.9	0.66	5.8	0.83	6.8	1.02	7.2	1.13	7.7	1.24	8.6	1.37	8.8	1.38
	23	4.9	0.70	5.8	0.89	6.8	1.10	7.2	1.21	7.7	1.33	8.5	1.43	8.7	1.45
	25	4.9	0.75	5.8	0.95	6.8	1.17	7.2	1.30	7.7	1.42	8.4	1.49	8.6	1.51
	27	4.9	0.80	5.8	1.01	6.8	1.26	7.2	1.39	7.7	1.52	8.3	1.56	8.4	1.58
	29	4.9	0.85	5.8	1.08	6.8	1.34	7.2	1.48	7.7	1.60	8.1	1.63	8.3	1.64
	31	4.9	0.91	5.8	1.16	6.8	1.43	7.2	1.58	7.7	1.68	8.0	1.69	8.2	1.71
	33	4.9	0.96	5.8	1.23	6.8	1.53	7.2	1.69	7.7	1.75	7.9	1.75	8.0	1.77
	35	4.9	1.02	5.8	1.31	6.8	1.63	7.2	1.80	7.6	1.81	7.7	1.82	7.9	1.83
	37	4.9	1.07	5.8	1.36	6.8	1.67	7.2	1.83	7.4	1.84	7.7	1.85	7.8	1.86
	39	4.9	1.11	5.8	1.42	6.8	1.72	7.2	1.86	7.3	1.87	7.5	1.88	7.7	1.89
41	4.7	1.26	5.6	1.61	6.5	1.93	6.8	2.07	6.9	2.08	6.9	2.08	7.3	2.11	
43	4.6	1.34	5.5	1.72	6.4	2.03	6.6	2.16	6.7	2.17	6.9	2.18	7.1	2.19	
46	4.3	1.43	5.1	1.84	6.0	2.14	6.0	2.25	6.1	2.26	6.3	2.26	6.5	2.29	
90	10	4.4	0.49	5.2	0.59	6.1	0.69	6.5	0.75	6.9	0.80	7.7	0.90	8.6	1.00
	12	4.4	0.50	5.2	0.60	6.1	0.71	6.5	0.76	6.9	0.82	7.7	0.92	8.6	1.02
	14	4.4	0.50	5.2	0.61	6.1	0.72	6.5	0.78	6.9	0.84	7.7	0.94	8.6	1.04
	16	4.4	0.51	5.2	0.62	6.1	0.74	6.5	0.79	6.9	0.85	7.7	0.95	8.6	1.06
	18	4.4	0.52	5.2	0.63	6.1	0.75	6.5	0.81	6.9	0.87	7.7	0.97	8.6	1.11
	20	4.4	0.53	5.2	0.64	6.1	0.76	6.5	0.83	6.9	0.90	7.7	1.04	8.6	1.16
	21	4.4	0.54	5.2	0.65	6.1	0.78	6.5	0.85	6.9	0.94	7.7	1.08	8.6	1.19
	23	4.4	0.55	5.2	0.68	6.1	0.83	6.5	0.92	6.9	1.00	7.7	1.16	8.5	1.25
	25	4.4	0.58	5.2	0.72	6.1	0.89	6.5	0.98	6.9	1.07	7.7	1.24	8.4	1.30
	27	4.4	0.61	5.2	0.77	6.1	0.95	6.5	1.05	6.9	1.15	7.7	1.32	8.2	1.36
	29	4.4	0.65	5.2	0.82	6.1	1.01	6.5	1.12	6.9	1.23	7.7	1.41	8.1	1.41
	31	4.4	0.69	5.2	0.88	6.1	1.08	6.5	1.19	6.9	1.30	7.7	1.46	8.0	1.47
	33	4.4	0.74	5.2	0.93	6.1	1.15	6.5	1.27	6.9	1.38	7.7	1.52	7.8	1.52
	35	4.4	0.78	5.2	0.99	6.1	1.23	6.5	1.35	6.9	1.47	7.6	1.58	7.7	1.58
	37	4.4	0.83	5.2	1.05	6.1	1.30	6.5	1.44	6.9	1.55	7.5	1.63	7.6	1.63
	39	4.4	0.88	5.2	1.12	6.1	1.38	6.5	1.51	6.9	1.63	7.4	1.69	7.5	1.69
41	4.2	1.01	5.0	1.29	5.9	1.60	6.2	1.74	6.7	1.85	7.0	1.91	7.1	1.91	
43	4.1	1.10	5.0	1.40	5.8	1.73	6.2	1.87	6.6	1.97	6.8	2.02	6.9	2.02	
46	3.9	1.20	4.7	1.53	5.4	1.89	5.8	2.04	5.9	2.10	6.2	2.15	6.3	2.15	
80	10	3.9	0.46	4.6	0.55	5.4	0.65	5.8	0.70	6.1	0.75	6.9	0.86	7.7	0.93
	12	3.9	0.47	4.6	0.56	5.4	0.66	5.8	0.72	6.1	0.76	6.9	0.87	7.7	0.95
	14	3.9	0.48	4.6	0.57	5.4	0.67	5.8	0.73	6.1	0.78	6.9	0.89	7.7	0.97
	16	3.9	0.48	4.6	0.58	5.4	0.68	5.8	0.74	6.1	0.79	6.9	0.91	7.7	0.99
	18	3.9	0.49	4.6	0.59	5.4	0.70	5.8	0.75	6.1	0.81	6.9	0.93	7.7	1.01
	20	3.9	0.50	4.6	0.61	5.4	0.72	5.8	0.77	6.1	0.83	6.9	0.96	7.7	1.08
	21	3.9	0.50	4.6	0.61	5.4	0.72	5.8	0.78	6.1	0.85	6.9	0.99	7.7	1.12
	23	3.9	0.52	4.6	0.62	5.4	0.75	5.8	0.83	6.1	0.90	6.9	1.05	7.7	1.20
	25	3.9	0.53	4.6	0.66	5.4	0.81	5.8	0.88	6.1	0.97	6.9	1.12	7.7	1.28
	27	3.9	0.57	4.6	0.70	5.4	0.86	5.8	0.94	6.1	1.03	6.9	1.19	7.7	1.36
	29	3.9	0.60	4.6	0.75	5.4	0.92	5.8	1.01	6.1	1.10	6.9	1.27	7.7	1.41
	31	3.9	0.64	4.6	0.80	5.4	0.97	5.8	1.07	6.1	1.17	6.9	1.35	7.7	1.47
	33	3.9	0.68	4.6	0.85	5.4	1.04	5.8	1.14	6.1	1.25	6.9	1.42	7.7	1.52
	35	3.9	0.72	4.6	0.90	5.4	1.11	5.8	1.22	6.1	1.33	6.9	1.51	7.6	1.58
	37	3.9	0.76	4.6	0.96	5.4	1.17	5.8	1.29	6.1	1.41	6.9	1.60	7.4	1.63
	39	3.9	0.80	4.6	1.01	5.4	1.24	5.8	1.36	6.1	1.51	6.9	1.67	7.3	1.69
41	3.8	0.93	4.5	1.17	5.2	1.44	5.6	1.57	5.9	1.74	6.7	1.91	6.9	1.91	
43	3.7	1.00	4.4	1.27	5.1	1.55	5.5	1.70	5.9	1.88	6.6	2.02	6.7	2.02	
46	3.5	1.09	4.1	1.38	4.8	1.70	5.1	1.85	5.5	2.06	6.0	2.15	6.1	2.15	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(2.5HP)

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	3.4	0.41	4.1	0.49	4.7	0.57	5.0	0.61	5.4	0.65	6.0	0.75	6.7	0.83
	12	3.4	0.42	4.1	0.50	4.7	0.58	5.0	0.62	5.4	0.67	6.0	0.76	6.7	0.85
	14	3.4	0.42	4.1	0.50	4.7	0.59	5.0	0.63	5.4	0.68	6.0	0.78	6.7	0.86
	16	3.4	0.43	4.1	0.51	4.7	0.60	5.0	0.64	5.4	0.69	6.0	0.79	6.7	0.88
	18	3.4	0.44	4.1	0.52	4.7	0.61	5.0	0.66	5.4	0.70	6.0	0.80	6.7	0.90
	20	3.4	0.44	4.1	0.53	4.7	0.62	5.0	0.67	5.4	0.72	6.0	0.82	6.7	0.94
	21	3.4	0.45	4.1	0.53	4.7	0.63	5.0	0.68	5.4	0.73	6.0	0.83	6.7	0.96
	23	3.4	0.46	4.1	0.55	4.7	0.64	5.0	0.70	5.4	0.76	6.0	0.89	6.7	1.02
	25	3.4	0.46	4.1	0.57	4.7	0.68	5.0	0.75	5.4	0.81	6.0	0.95	6.7	1.09
	27	3.4	0.49	4.1	0.61	4.7	0.73	5.0	0.79	5.4	0.87	6.0	1.02	6.7	1.16
	29	3.4	0.52	4.1	0.64	4.7	0.78	5.0	0.85	5.4	0.92	6.0	1.08	6.7	1.24
	31	3.4	0.55	4.1	0.68	4.7	0.83	5.0	0.90	5.4	0.98	6.0	1.16	6.7	1.31
	33	3.4	0.59	4.1	0.72	4.7	0.88	5.0	0.96	5.4	1.05	6.0	1.23	6.7	1.38
	35	3.4	0.62	4.1	0.77	4.7	0.94	5.0	1.02	5.4	1.12	6.0	1.31	6.7	1.47
	37	3.4	0.66	4.1	0.82	4.7	0.99	5.0	1.08	5.4	1.19	6.0	1.40	6.7	1.55
	39	3.4	0.69	4.1	0.86	4.7	1.05	5.0	1.15	5.4	1.26	6.0	1.48	6.7	1.62
41	3.3	0.80	3.9	0.99	4.5	1.21	4.9	1.32	5.2	1.45	5.8	1.71	6.5	1.86	
43	3.2	0.86	3.9	1.07	4.5	1.31	4.8	1.43	5.1	1.57	5.7	1.85	6.4	1.99	
46	3.0	0.94	3.6	1.17	4.2	1.43	4.5	1.56	4.8	1.71	5.4	2.02	5.9	2.13	
60	10	2.9	0.36	3.5	0.42	4.1	0.49	4.3	0.53	4.6	0.56	5.2	0.64	5.7	0.71
	12	2.9	0.37	3.5	0.43	4.1	0.50	4.3	0.53	4.6	0.57	5.2	0.65	5.7	0.72
	14	2.9	0.37	3.5	0.44	4.1	0.51	4.3	0.54	4.6	0.58	5.2	0.66	5.7	0.74
	16	2.9	0.38	3.5	0.45	4.1	0.52	4.3	0.56	4.6	0.59	5.2	0.67	5.7	0.75
	18	2.9	0.39	3.5	0.45	4.1	0.53	4.3	0.57	4.6	0.61	5.2	0.68	5.7	0.77
	20	2.9	0.39	3.5	0.46	4.1	0.53	4.3	0.57	4.6	0.61	5.2	0.70	5.7	0.79
	21	2.9	0.39	3.5	0.46	4.1	0.54	4.3	0.58	4.6	0.62	5.2	0.71	5.7	0.79
	23	2.9	0.40	3.5	0.47	4.1	0.55	4.3	0.59	4.6	0.63	5.2	0.73	5.7	0.84
	25	2.9	0.41	3.5	0.48	4.1	0.57	4.3	0.62	4.6	0.67	5.2	0.78	5.7	0.90
	27	2.9	0.42	3.5	0.51	4.1	0.61	4.3	0.66	4.6	0.72	5.2	0.83	5.7	0.96
	29	2.9	0.45	3.5	0.54	4.1	0.65	4.3	0.70	4.6	0.76	5.2	0.89	5.7	1.02
	31	2.9	0.47	3.5	0.57	4.1	0.69	4.3	0.75	4.6	0.81	5.2	0.94	5.7	1.09
	33	2.9	0.50	3.5	0.61	4.1	0.73	4.3	0.79	4.6	0.86	5.2	1.01	5.7	1.16
	35	2.9	0.53	3.5	0.65	4.1	0.78	4.3	0.84	4.6	0.92	5.2	1.07	5.7	1.23
	37	2.9	0.56	3.5	0.68	4.1	0.82	4.3	0.90	4.6	0.97	5.2	1.14	5.7	1.31
	39	2.9	0.59	3.5	0.72	4.1	0.87	4.3	0.95	4.6	1.03	5.2	1.21	5.7	1.39
41	2.8	0.67	3.3	0.83	3.9	1.00	4.2	1.09	4.4	1.18	5.0	1.39	5.5	1.61	
43	2.8	0.72	3.3	0.89	3.8	1.08	4.1	1.18	4.4	1.28	4.9	1.50	5.5	1.74	
46	2.6	0.78	3.1	0.97	3.6	1.18	3.9	1.29	4.1	1.39	4.6	1.64	5.1	1.90	
50	10	2.4	0.31	2.9	0.37	3.4	0.42	3.6	0.45	3.8	0.47	4.3	0.53	4.8	0.59
	12	2.4	0.32	2.9	0.37	3.4	0.42	3.6	0.45	3.8	0.48	4.3	0.54	4.8	0.60
	14	2.4	0.32	2.9	0.38	3.4	0.43	3.6	0.46	3.8	0.49	4.3	0.55	4.8	0.61
	16	2.4	0.33	2.9	0.38	3.4	0.43	3.6	0.47	3.8	0.50	4.3	0.56	4.8	0.62
	18	2.4	0.33	2.9	0.39	3.4	0.44	3.6	0.48	3.8	0.50	4.3	0.57	4.8	0.64
	20	2.4	0.34	2.9	0.39	3.4	0.45	3.6	0.48	3.8	0.52	4.3	0.58	4.8	0.65
	21	2.4	0.34	2.9	0.39	3.4	0.46	3.6	0.49	3.8	0.52	4.3	0.58	4.8	0.65
	23	2.4	0.35	2.9	0.40	3.4	0.46	3.6	0.50	3.8	0.53	4.3	0.60	4.8	0.67
	25	2.4	0.35	2.9	0.41	3.4	0.47	3.6	0.50	3.8	0.54	4.3	0.63	4.8	0.72
	27	2.4	0.35	2.9	0.42	3.4	0.50	3.6	0.54	3.8	0.58	4.3	0.67	4.8	0.76
	29	2.4	0.38	2.9	0.45	3.4	0.53	3.6	0.57	3.8	0.61	4.3	0.71	4.8	0.81
	31	2.4	0.39	2.9	0.48	3.4	0.56	3.6	0.61	3.8	0.65	4.3	0.75	4.8	0.86
	33	2.4	0.42	2.9	0.50	3.4	0.60	3.6	0.64	3.8	0.69	4.3	0.80	4.8	0.92
	35	2.4	0.44	2.9	0.53	3.4	0.63	3.6	0.68	3.8	0.73	4.3	0.85	4.8	0.97
	37	2.4	0.47	2.9	0.56	3.4	0.67	3.6	0.72	3.8	0.78	4.3	0.90	4.8	1.03
	39	2.4	0.49	2.9	0.59	3.4	0.71	3.6	0.76	3.8	0.82	4.3	0.95	4.8	1.09
41	2.3	0.56	2.8	0.68	3.2	0.81	3.5	0.88	3.7	0.94	4.1	1.10	4.6	1.26	
43	2.3	0.61	2.8	0.73	3.2	0.87	3.4	0.94	3.6	1.01	4.1	1.19	4.5	1.36	
46	2.2	0.66	2.6	0.79	3.0	0.95	3.2	1.03	3.4	1.11	3.8	1.30	4.3	1.49	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(3HP)

ARUV030GSD0

Outdoor Units

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	8.4	0.89	10.0	1.09	11.6	1.26	12.1	1.29	12.2	1.30	12.5	1.31	12.8	1.32
	12	8.4	0.91	10.0	1.13	11.6	1.32	11.9	1.32	12.1	1.35	12.4	1.36	12.7	1.37
	14	8.4	0.94	10.0	1.17	11.6	1.37	11.7	1.37	11.9	1.40	12.2	1.41	12.5	1.42
	16	8.4	0.98	10.0	1.21	11.5	1.43	11.6	1.44	11.7	1.45	12.0	1.46	12.4	1.48
	18	8.4	1.02	10.0	1.28	11.3	1.50	11.4	1.52	11.6	1.52	11.9	1.53	12.2	1.54
	20	8.4	1.06	10.0	1.36	11.1	1.57	11.3	1.59	11.4	1.60	11.7	1.60	12.0	1.62
	21	8.4	1.09	10.0	1.41	11.0	1.61	11.2	1.63	11.3	1.64	11.7	1.64	12.0	1.65
	23	8.4	1.17	10.0	1.52	10.9	1.68	11.0	1.70	11.2	1.71	11.5	1.72	11.8	1.73
	25	8.4	1.25	10.0	1.62	10.7	1.75	10.9	1.77	11.0	1.78	11.3	1.79	11.7	1.80
	27	8.4	1.34	10.0	1.73	10.6	1.83	10.7	1.84	10.9	1.86	11.2	1.87	11.5	1.88
	29	8.4	1.43	10.0	1.85	10.4	1.90	10.6	1.92	10.7	1.93	11.0	1.94	11.3	1.95
	31	8.4	1.52	10.0	1.95	10.3	1.98	10.4	1.99	10.6	2.01	10.9	2.02	11.2	2.03
	33	8.4	1.62	9.8	2.02	10.1	2.06	10.3	2.07	10.4	2.08	10.7	2.09	11.0	2.10
	35	8.4	1.73	9.7	2.10	9.9	2.13	10.1	2.15	10.3	2.15	10.6	2.16	10.9	2.18
	37	8.4	1.79	9.5	2.14	9.8	2.17	9.9	2.19	10.1	2.20	10.4	2.21	10.7	2.22
	39	8.4	1.85	9.3	2.18	9.7	2.22	9.8	2.24	9.9	2.24	10.3	2.25	10.6	2.26
41	8.1	2.09	8.9	2.43	9.2	2.47	9.3	2.49	9.5	2.50	9.8	2.51	10.0	2.53	
43	8.0	2.22	8.6	2.55	8.9	2.59	9.0	2.61	9.2	2.62	9.5	2.62	9.7	2.65	
46	7.5	2.36	7.8	2.66	8.1	2.71	8.2	2.73	8.4	2.73	8.7	2.74	8.9	2.76	
120	10	7.8	0.80	9.2	0.98	10.8	1.17	11.5	1.26	12.1	1.28	12.3	1.29	12.6	1.29
	12	7.8	0.82	9.2	1.02	10.8	1.22	11.5	1.29	11.9	1.33	12.2	1.34	12.4	1.35
	14	7.8	0.85	9.2	1.05	10.8	1.26	11.5	1.34	11.7	1.38	12.0	1.40	12.3	1.41
	16	7.8	0.88	9.2	1.09	10.8	1.31	11.5	1.41	11.6	1.44	11.9	1.45	12.1	1.47
	18	7.8	0.92	9.2	1.14	10.8	1.39	11.3	1.49	11.4	1.52	11.7	1.52	12.0	1.53
	20	7.8	0.95	9.2	1.21	10.8	1.48	11.1	1.57	11.3	1.59	11.5	1.60	11.8	1.60
	21	7.8	0.98	9.2	1.26	10.8	1.54	11.0	1.61	11.2	1.63	11.5	1.63	11.7	1.64
	23	7.8	1.05	9.2	1.34	10.8	1.64	10.9	1.68	11.0	1.70	11.3	1.71	11.6	1.71
	25	7.8	1.12	9.2	1.44	10.6	1.73	10.7	1.76	10.8	1.78	11.2	1.78	11.5	1.79
	27	7.8	1.19	9.2	1.54	10.4	1.81	10.6	1.83	10.7	1.85	11.0	1.86	11.3	1.86
	29	7.8	1.28	9.2	1.64	10.3	1.89	10.4	1.90	10.6	1.92	10.8	1.93	11.1	1.94
	31	7.8	1.36	9.2	1.75	10.1	1.97	10.3	1.98	10.4	2.00	10.7	2.00	11.0	2.01
	33	7.8	1.45	9.2	1.87	10.0	2.04	10.1	2.05	10.2	2.07	10.5	2.08	10.8	2.09
	35	7.8	1.54	9.2	1.99	9.8	2.12	9.9	2.13	10.1	2.14	10.4	2.15	10.6	2.16
	37	7.8	1.61	9.2	2.04	9.7	2.16	9.8	2.17	9.9	2.18	10.2	2.19	10.5	2.20
	39	7.8	1.68	9.2	2.09	9.5	2.19	9.6	2.21	9.8	2.21	10.1	2.23	10.4	2.24
41	7.5	1.91	8.7	2.34	9.0	2.44	9.2	2.46	9.3	2.47	9.6	2.48	9.8	2.49	
43	7.4	2.04	8.5	2.46	8.7	2.55	8.9	2.57	9.0	2.57	9.2	2.59	9.5	2.60	
46	6.9	2.19	7.7	2.59	8.0	2.66	8.1	2.68	8.2	2.70	8.5	2.70	8.7	2.71	
110	10	7.1	0.72	8.5	0.88	9.9	1.04	10.6	1.13	11.2	1.22	12.1	1.27	12.4	1.27
	12	7.1	0.75	8.5	0.91	9.9	1.09	10.6	1.16	11.2	1.26	12.0	1.32	12.2	1.33
	14	7.1	0.77	8.5	0.95	9.9	1.14	10.6	1.22	11.2	1.33	11.8	1.36	12.0	1.39
	16	7.1	0.80	8.5	0.98	9.9	1.18	10.6	1.27	11.2	1.40	11.6	1.44	11.9	1.45
	18	7.1	0.82	8.5	1.02	9.9	1.25	10.6	1.35	11.2	1.49	11.5	1.51	11.7	1.52
	20	7.1	0.85	8.5	1.08	9.9	1.33	10.6	1.44	11.0	1.57	11.3	1.59	11.6	1.59
	21	7.1	0.87	8.5	1.11	9.9	1.38	10.6	1.50	11.0	1.60	11.2	1.62	11.5	1.63
	23	7.1	0.93	8.5	1.19	9.9	1.48	10.6	1.59	10.8	1.68	11.1	1.70	11.3	1.70
	25	7.1	0.99	8.5	1.27	9.9	1.58	10.6	1.68	10.7	1.75	10.9	1.77	11.2	1.78
	27	7.1	1.06	8.5	1.35	9.9	1.69	10.4	1.78	10.5	1.84	10.8	1.84	11.0	1.85
	29	7.1	1.13	8.5	1.45	9.9	1.80	10.2	1.85	10.4	1.91	10.6	1.92	10.9	1.93
	31	7.1	1.21	8.5	1.54	9.9	1.93	10.1	1.93	10.2	1.98	10.5	1.99	10.7	2.00
	33	7.1	1.28	8.5	1.64	9.8	2.03	9.9	2.02	10.1	2.06	10.3	2.06	10.6	2.08
	35	7.1	1.36	8.5	1.75	9.6	2.10	9.7	2.11	9.9	2.13	10.1	2.14	10.4	2.15
	37	7.1	1.42	8.5	1.81	9.5	2.14	9.6	2.14	9.7	2.16	10.0	2.17	10.2	2.18
	39	7.1	1.47	8.5	1.86	9.3	2.17	9.4	2.18	9.6	2.20	9.8	2.21	10.1	2.21
41	6.9	1.67	8.2	2.09	8.8	2.42	9.0	2.42	9.1	2.44	9.3	2.46	9.6	2.46	
43	6.8	1.78	8.1	2.21	8.5	2.52	8.7	2.53	8.8	2.55	9.0	2.56	9.3	2.57	
46	6.3	1.90	7.6	2.34	7.8	2.63	7.9	2.63	8.0	2.65	8.3	2.66	8.5	2.67	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(3HP)

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	
100	10	6.2	0.65	7.4	0.79	8.6	0.94	9.2	1.01	9.8	1.09	11.0	1.21	12.1	1.22
	12	6.2	0.67	7.4	0.82	8.6	0.97	9.2	1.04	9.8	1.12	11.0	1.28	11.9	1.29
	14	6.2	0.69	7.4	0.86	8.6	1.01	9.2	1.08	9.8	1.17	11.0	1.35	11.8	1.36
	16	6.2	0.71	7.4	0.88	8.6	1.05	9.2	1.13	9.8	1.23	11.0	1.41	11.6	1.43
	18	6.2	0.73	7.4	0.92	8.6	1.09	9.2	1.19	9.8	1.31	11.0	1.49	11.5	1.50
	20	6.2	0.76	7.4	0.95	8.6	1.16	9.2	1.28	9.8	1.40	11.0	1.56	11.3	1.58
	21	6.2	0.77	7.4	0.97	8.6	1.19	9.2	1.32	9.8	1.45	11.0	1.60	11.3	1.61
	23	6.2	0.82	7.4	1.04	8.6	1.28	9.2	1.42	9.8	1.55	10.8	1.67	11.1	1.69
	25	6.2	0.87	7.4	1.11	8.6	1.37	9.2	1.52	9.8	1.66	10.7	1.74	10.9	1.76
	27	6.2	0.93	7.4	1.18	8.6	1.47	9.2	1.62	9.8	1.77	10.6	1.83	10.8	1.84
	29	6.2	0.99	7.4	1.26	8.6	1.57	9.2	1.73	9.8	1.87	10.4	1.90	10.6	1.91
	31	6.2	1.06	7.4	1.35	8.6	1.67	9.2	1.84	9.8	1.96	10.2	1.98	10.4	1.99
	33	6.2	1.12	7.4	1.43	8.6	1.78	9.2	1.97	9.8	2.04	10.1	2.05	10.3	2.06
	35	6.2	1.19	7.4	1.53	8.6	1.90	9.2	2.10	9.7	2.11	9.9	2.12	10.1	2.14
	37	6.2	1.24	7.4	1.59	8.6	1.95	9.2	2.14	9.5	2.15	9.8	2.15	10.0	2.17
	39	6.2	1.29	7.4	1.65	8.6	2.00	9.2	2.17	9.3	2.18	9.6	2.19	9.8	2.21
	41	6.0	1.47	7.1	1.88	8.3	2.25	8.7	2.41	8.8	2.42	8.9	2.43	9.4	2.46
43	5.9	1.56	7.0	2.00	8.2	2.37	8.5	2.52	8.5	2.53	8.8	2.54	9.1	2.56	
46	5.5	1.67	6.6	2.15	7.7	2.50	7.7	2.62	7.8	2.63	8.1	2.64	8.3	2.67	
90	10	5.6	0.57	6.7	0.69	7.8	0.81	8.3	0.87	8.8	0.94	9.9	1.05	11.0	1.17
	12	5.6	0.58	6.7	0.70	7.8	0.82	8.3	0.89	8.8	0.96	9.9	1.07	11.0	1.19
	14	5.6	0.59	6.7	0.71	7.8	0.84	8.3	0.91	8.8	0.98	9.9	1.09	11.0	1.21
	16	5.6	0.60	6.7	0.72	7.8	0.86	8.3	0.92	8.8	0.99	9.9	1.11	11.0	1.23
	18	5.6	0.61	6.7	0.74	7.8	0.87	8.3	0.94	8.8	1.02	9.9	1.14	11.0	1.29
	20	5.6	0.62	6.7	0.75	7.8	0.89	8.3	0.96	8.8	1.06	9.9	1.22	11.0	1.36
	21	5.6	0.63	6.7	0.76	7.8	0.91	8.3	0.99	8.8	1.09	9.9	1.26	11.0	1.39
	23	5.6	0.64	6.7	0.79	7.8	0.97	8.3	1.07	8.8	1.17	9.9	1.35	10.8	1.45
	25	5.6	0.67	6.7	0.84	7.8	1.04	8.3	1.14	8.8	1.25	9.9	1.44	10.7	1.52
	27	5.6	0.72	6.7	0.90	7.8	1.11	8.3	1.22	8.8	1.34	9.9	1.54	10.5	1.59
	29	5.6	0.76	6.7	0.96	7.8	1.18	8.3	1.30	8.8	1.43	9.9	1.64	10.4	1.65
	31	5.6	0.81	6.7	1.02	7.8	1.26	8.3	1.39	8.8	1.52	9.9	1.71	10.2	1.71
	33	5.6	0.86	6.7	1.09	7.8	1.34	8.3	1.48	8.8	1.62	9.9	1.77	10.0	1.78
	35	5.6	0.91	6.7	1.16	7.8	1.43	8.3	1.58	8.8	1.71	9.7	1.84	9.9	1.84
	37	5.6	0.97	6.7	1.23	7.8	1.52	8.3	1.68	8.8	1.81	9.6	1.90	9.7	1.91
	39	5.6	1.03	6.7	1.31	7.8	1.61	8.3	1.76	8.8	1.90	9.4	1.97	9.6	1.97
	41	5.4	1.18	6.4	1.51	7.5	1.86	8.0	2.03	8.5	2.16	8.9	2.22	9.1	2.23
43	5.3	1.28	6.3	1.63	7.4	2.01	7.9	2.19	8.4	2.29	8.6	2.36	8.8	2.36	
46	5.0	1.40	6.0	1.78	6.9	2.20	7.4	2.38	7.6	2.45	7.9	2.51	8.1	2.51	
80	10	5.0	0.54	5.9	0.65	6.9	0.76	7.4	0.82	7.8	0.88	8.8	1.00	9.8	1.09
	12	5.0	0.55	5.9	0.65	6.9	0.77	7.4	0.83	7.8	0.89	8.8	1.02	9.8	1.11
	14	5.0	0.56	5.9	0.67	6.9	0.78	7.4	0.85	7.8	0.91	8.8	1.04	9.8	1.13
	16	5.0	0.56	5.9	0.68	6.9	0.80	7.4	0.86	7.8	0.93	8.8	1.06	9.8	1.15
	18	5.0	0.57	5.9	0.69	6.9	0.81	7.4	0.88	7.8	0.94	8.8	1.08	9.8	1.18
	20	5.0	0.58	5.9	0.71	6.9	0.83	7.4	0.89	7.8	0.96	8.8	1.12	9.8	1.26
	21	5.0	0.59	5.9	0.71	6.9	0.84	7.4	0.91	7.8	0.99	8.8	1.16	9.8	1.30
	23	5.0	0.60	5.9	0.72	6.9	0.88	7.4	0.96	7.8	1.05	8.8	1.22	9.8	1.40
	25	5.0	0.62	5.9	0.77	6.9	0.94	7.4	1.03	7.8	1.13	8.8	1.30	9.8	1.49
	27	5.0	0.66	5.9	0.82	6.9	1.01	7.4	1.10	7.8	1.20	8.8	1.39	9.8	1.59
	29	5.0	0.70	5.9	0.88	6.9	1.07	7.4	1.17	7.8	1.28	8.8	1.49	9.8	1.65
	31	5.0	0.75	5.9	0.93	6.9	1.14	7.4	1.25	7.8	1.37	8.8	1.58	9.8	1.71
	33	5.0	0.79	5.9	0.99	6.9	1.21	7.4	1.33	7.8	1.45	8.8	1.66	9.8	1.78
	35	5.0	0.84	5.9	1.05	6.9	1.29	7.4	1.42	7.8	1.55	8.8	1.76	9.7	1.84
	37	5.0	0.89	5.9	1.12	6.9	1.37	7.4	1.51	7.8	1.65	8.8	1.86	9.5	1.91
	39	5.0	0.94	5.9	1.18	6.9	1.45	7.4	1.59	7.8	1.76	8.8	1.95	9.3	1.97
	41	4.8	1.08	5.7	1.37	6.6	1.68	7.1	1.83	7.6	2.03	8.5	2.22	8.9	2.23
43	4.7	1.17	5.6	1.48	6.5	1.81	7.0	1.98	7.5	2.20	8.4	2.36	8.6	2.36	
46	4.4	1.27	5.3	1.61	6.1	1.98	6.6	2.16	7.0	2.40	7.6	2.51	7.8	2.51	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(3HP)

Outdoor Units

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	4.4	0.48	5.2	0.57	6.0	0.66	6.4	0.71	6.9	0.76	7.7	0.87	8.5	0.97
	12	4.4	0.49	5.2	0.58	6.0	0.68	6.4	0.73	6.9	0.78	7.7	0.88	8.5	0.99
	14	4.4	0.50	5.2	0.58	6.0	0.69	6.4	0.74	6.9	0.79	7.7	0.91	8.5	1.01
	16	4.4	0.50	5.2	0.60	6.0	0.70	6.4	0.75	6.9	0.81	7.7	0.92	8.5	1.03
	18	4.4	0.51	5.2	0.61	6.0	0.71	6.4	0.77	6.9	0.82	7.7	0.93	8.5	1.05
	20	4.4	0.52	5.2	0.62	6.0	0.73	6.4	0.78	6.9	0.84	7.7	0.96	8.5	1.09
	21	4.4	0.52	5.2	0.62	6.0	0.73	6.4	0.79	6.9	0.85	7.7	0.97	8.5	1.12
	23	4.4	0.53	5.2	0.64	6.0	0.75	6.4	0.82	6.9	0.89	7.7	1.04	8.5	1.19
	25	4.4	0.54	5.2	0.66	6.0	0.80	6.4	0.87	6.9	0.95	7.7	1.11	8.5	1.27
	27	4.4	0.57	5.2	0.71	6.0	0.85	6.4	0.93	6.9	1.01	7.7	1.19	8.5	1.35
	29	4.4	0.61	5.2	0.75	6.0	0.91	6.4	0.99	6.9	1.08	7.7	1.27	8.5	1.44
	31	4.4	0.65	5.2	0.80	6.0	0.97	6.4	1.06	6.9	1.15	7.7	1.35	8.5	1.53
	33	4.4	0.68	5.2	0.84	6.0	1.02	6.4	1.12	6.9	1.22	7.7	1.44	8.5	1.62
	35	4.4	0.72	5.2	0.90	6.0	1.09	6.4	1.19	6.9	1.30	7.7	1.53	8.5	1.71
	37	4.4	0.77	5.2	0.95	6.0	1.16	6.4	1.27	6.9	1.38	7.7	1.63	8.5	1.81
	39	4.4	0.81	5.2	1.01	6.0	1.23	6.4	1.34	6.9	1.47	7.7	1.73	8.5	1.89
41	4.2	0.93	5.0	1.16	5.8	1.42	6.2	1.54	6.6	1.69	7.4	2.00	8.3	2.17	
43	4.1	1.00	4.9	1.25	5.7	1.53	6.1	1.67	6.5	1.83	7.3	2.16	8.1	2.32	
46	3.9	1.09	4.6	1.37	5.3	1.67	5.8	1.81	6.1	2.00	6.9	2.36	7.6	2.49	
60	10	3.7	0.42	4.4	0.50	5.2	0.57	5.5	0.62	5.9	0.66	6.6	0.74	7.3	0.83
	12	3.7	0.43	4.4	0.50	5.2	0.58	5.5	0.62	5.9	0.67	6.6	0.76	7.3	0.84
	14	3.7	0.43	4.4	0.51	5.2	0.60	5.5	0.63	5.9	0.68	6.6	0.77	7.3	0.86
	16	3.7	0.44	4.4	0.52	5.2	0.60	5.5	0.65	5.9	0.69	6.6	0.78	7.3	0.88
	18	3.7	0.45	4.4	0.53	5.2	0.61	5.5	0.66	5.9	0.71	6.6	0.80	7.3	0.89
	20	3.7	0.46	4.4	0.53	5.2	0.62	5.5	0.67	5.9	0.72	6.6	0.81	7.3	0.92
	21	3.7	0.46	4.4	0.54	5.2	0.63	5.5	0.68	5.9	0.72	6.6	0.82	7.3	0.92
	23	3.7	0.47	4.4	0.55	5.2	0.64	5.5	0.69	5.9	0.74	6.6	0.86	7.3	0.98
	25	3.7	0.47	4.4	0.56	5.2	0.67	5.5	0.72	5.9	0.78	6.6	0.91	7.3	1.05
	27	3.7	0.49	4.4	0.60	5.2	0.71	5.5	0.77	5.9	0.83	6.6	0.97	7.3	1.12
	29	3.7	0.52	4.4	0.63	5.2	0.76	5.5	0.82	5.9	0.89	6.6	1.03	7.3	1.19
	31	3.7	0.55	4.4	0.67	5.2	0.80	5.5	0.87	5.9	0.94	6.6	1.10	7.3	1.27
	33	3.7	0.58	4.4	0.71	5.2	0.85	5.5	0.93	5.9	1.01	6.6	1.17	7.3	1.35
	35	3.7	0.62	4.4	0.76	5.2	0.91	5.5	0.98	5.9	1.07	6.6	1.25	7.3	1.44
	37	3.7	0.65	4.4	0.80	5.2	0.96	5.5	1.04	5.9	1.13	6.6	1.33	7.3	1.53
	39	3.7	0.68	4.4	0.84	5.2	1.01	5.5	1.11	5.9	1.20	6.6	1.41	7.3	1.63
41	3.6	0.78	4.3	0.97	5.0	1.17	5.3	1.28	5.7	1.38	6.4	1.63	7.1	1.88	
43	3.5	0.84	4.2	1.04	4.9	1.26	5.3	1.38	5.6	1.49	6.3	1.75	7.0	2.03	
46	3.3	0.91	3.9	1.13	4.6	1.38	4.9	1.50	5.3	1.63	5.9	1.92	6.5	2.22	
50	10	3.1	0.37	3.7	0.43	4.3	0.48	4.6	0.52	4.9	0.55	5.5	0.62	6.1	0.69
	12	3.1	0.37	3.7	0.43	4.3	0.49	4.6	0.53	4.9	0.56	5.5	0.63	6.1	0.70
	14	3.1	0.38	3.7	0.44	4.3	0.50	4.6	0.53	4.9	0.57	5.5	0.64	6.1	0.71
	16	3.1	0.39	3.7	0.45	4.3	0.51	4.6	0.55	4.9	0.58	5.5	0.65	6.1	0.72
	18	3.1	0.39	3.7	0.45	4.3	0.52	4.6	0.56	4.9	0.59	5.5	0.66	6.1	0.74
	20	3.1	0.39	3.7	0.46	4.3	0.53	4.6	0.56	4.9	0.60	5.5	0.67	6.1	0.76
	21	3.1	0.40	3.7	0.46	4.3	0.53	4.6	0.57	4.9	0.61	5.5	0.68	6.1	0.76
	23	3.1	0.40	3.7	0.47	4.3	0.54	4.6	0.58	4.9	0.62	5.5	0.70	6.1	0.78
	25	3.1	0.41	3.7	0.48	4.3	0.55	4.6	0.59	4.9	0.63	5.5	0.73	6.1	0.83
	27	3.1	0.41	3.7	0.49	4.3	0.58	4.6	0.63	4.9	0.67	5.5	0.78	6.1	0.89
	29	3.1	0.44	3.7	0.52	4.3	0.62	4.6	0.67	4.9	0.72	5.5	0.83	6.1	0.94
	31	3.1	0.46	3.7	0.56	4.3	0.66	4.6	0.71	4.9	0.76	5.5	0.88	6.1	1.01
	33	3.1	0.49	3.7	0.58	4.3	0.70	4.6	0.75	4.9	0.81	5.5	0.93	6.1	1.07
	35	3.1	0.52	3.7	0.62	4.3	0.73	4.6	0.80	4.9	0.86	5.5	0.99	6.1	1.14
	37	3.1	0.55	3.7	0.66	4.3	0.78	4.6	0.84	4.9	0.91	5.5	1.06	6.1	1.21
	39	3.1	0.57	3.7	0.69	4.3	0.82	4.6	0.89	4.9	0.96	5.5	1.11	6.1	1.28
41	3.0	0.66	3.6	0.79	4.1	0.95	4.4	1.02	4.7	1.10	5.3	1.28	5.9	1.47	
43	3.0	0.71	3.5	0.85	4.1	1.02	4.4	1.10	4.6	1.18	5.2	1.38	5.8	1.59	
46	2.8	0.77	3.3	0.93	3.8	1.11	4.1	1.20	4.4	1.29	4.9	1.51	5.5	1.74	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(4P)

ARUV040GSD0

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	10.1	1.17	12.0	1.42	13.9	1.65	14.4	1.69	14.6	1.70	15.0	1.71	15.3	1.72
	12	10.1	1.20	12.0	1.48	13.9	1.72	14.2	1.73	14.5	1.76	14.8	1.78	15.1	1.79
	14	10.1	1.24	12.0	1.53	13.8	1.79	14.0	1.80	14.2	1.83	14.6	1.85	15.0	1.86
	16	10.1	1.28	12.0	1.58	13.7	1.87	13.8	1.89	14.0	1.90	14.4	1.91	14.8	1.93
	18	10.1	1.34	12.0	1.68	13.5	1.97	13.7	1.98	13.8	1.99	14.2	2.00	14.6	2.02
	20	10.1	1.39	12.0	1.78	13.3	2.06	13.5	2.08	13.7	2.09	14.0	2.10	14.4	2.12
	21	10.1	1.43	12.0	1.85	13.2	2.11	13.4	2.13	13.6	2.14	13.9	2.15	14.3	2.17
	23	10.1	1.54	12.0	1.98	13.1	2.20	13.2	2.22	13.4	2.24	13.8	2.25	14.1	2.26
	25	10.1	1.64	12.0	2.12	12.8	2.30	13.1	2.32	13.2	2.33	13.6	2.35	13.9	2.36
	27	10.1	1.76	12.0	2.26	12.7	2.40	12.8	2.41	13.1	2.43	13.4	2.45	13.8	2.46
	29	10.1	1.87	12.0	2.42	12.5	2.49	12.7	2.51	12.8	2.53	13.2	2.54	13.6	2.56
	31	10.1	1.99	11.9	2.55	12.3	2.60	12.5	2.61	12.7	2.63	13.0	2.64	13.4	2.66
	33	10.1	2.12	11.7	2.65	12.1	2.69	12.3	2.71	12.5	2.73	12.8	2.74	13.2	2.75
	35	10.1	2.26	11.5	2.75	11.9	2.79	12.1	2.81	12.3	2.82	12.6	2.83	13.0	2.85
	37	10.1	2.34	11.3	2.80	11.7	2.85	11.9	2.87	12.1	2.88	12.4	2.89	12.8	2.91
	39	10.1	2.42	11.1	2.85	11.5	2.90	11.7	2.93	11.9	2.94	12.3	2.95	12.6	2.96
41	9.7	2.74	10.6	3.18	11.0	3.24	11.1	3.26	11.3	3.27	11.7	3.29	12.0	3.31	
43	9.6	2.90	10.3	3.33	10.6	3.39	10.8	3.42	11.0	3.43	11.3	3.44	11.6	3.46	
46	8.9	3.10	9.3	3.49	9.7	3.55	9.8	3.57	10.1	3.58	10.4	3.59	10.7	3.62	
120	10	9.3	1.05	11.0	1.29	12.9	1.53	13.8	1.65	14.4	1.68	14.7	1.69	15.1	1.69
	12	9.3	1.08	11.0	1.33	12.9	1.59	13.8	1.69	14.2	1.74	14.5	1.76	14.9	1.77
	14	9.3	1.12	11.0	1.38	12.9	1.65	13.8	1.75	14.0	1.81	14.4	1.83	14.7	1.85
	16	9.3	1.15	11.0	1.43	12.9	1.72	13.7	1.84	13.8	1.89	14.2	1.90	14.5	1.92
	18	9.3	1.20	11.0	1.49	12.9	1.82	13.5	1.95	13.7	1.98	14.0	1.99	14.3	2.00
	20	9.3	1.25	11.0	1.59	12.9	1.94	13.3	2.06	13.5	2.08	13.8	2.09	14.1	2.10
	21	9.3	1.28	11.0	1.64	12.9	2.01	13.2	2.11	13.4	2.13	13.8	2.14	14.0	2.15
	23	9.3	1.37	11.0	1.76	12.9	2.14	13.0	2.20	13.2	2.23	13.5	2.24	13.8	2.25
	25	9.3	1.47	11.0	1.88	12.7	2.26	12.8	2.30	13.0	2.33	13.4	2.33	13.7	2.34
	27	9.3	1.56	11.0	2.01	12.5	2.38	12.7	2.40	12.8	2.42	13.2	2.43	13.5	2.44
	29	9.3	1.67	11.0	2.15	12.3	2.47	12.5	2.49	12.6	2.52	13.0	2.53	13.3	2.54
	31	9.3	1.78	11.0	2.30	12.1	2.58	12.3	2.59	12.5	2.61	12.8	2.62	13.1	2.63
	33	9.3	1.90	11.0	2.45	11.9	2.67	12.1	2.69	12.2	2.71	12.6	2.72	12.9	2.73
	35	9.3	2.01	11.0	2.61	11.7	2.78	11.9	2.79	12.1	2.81	12.4	2.82	12.7	2.83
	37	9.3	2.11	11.0	2.68	11.5	2.82	11.7	2.84	11.9	2.85	12.2	2.87	12.5	2.88
	39	9.3	2.19	11.0	2.74	11.3	2.87	11.5	2.89	11.7	2.90	12.0	2.92	12.4	2.93
41	9.0	2.50	10.4	3.07	10.8	3.20	11.0	3.22	11.1	3.23	11.4	3.25	11.7	3.26	
43	8.8	2.67	10.1	3.22	10.5	3.34	10.6	3.37	10.8	3.37	11.0	3.39	11.4	3.40	
46	8.3	2.87	9.2	3.39	9.5	3.49	9.7	3.52	9.8	3.53	10.1	3.54	10.4	3.55	
110	10	8.5	0.94	10.2	1.15	11.8	1.37	12.6	1.48	13.4	1.59	14.4	1.66	14.8	1.66
	12	8.5	0.98	10.2	1.19	11.8	1.42	12.6	1.52	13.4	1.65	14.3	1.72	14.6	1.75
	14	8.5	1.00	10.2	1.24	11.8	1.49	12.6	1.60	13.4	1.74	14.1	1.78	14.4	1.82
	16	8.5	1.04	10.2	1.29	11.8	1.55	12.6	1.67	13.4	1.84	13.9	1.89	14.2	1.90
	18	8.5	1.08	10.2	1.34	11.8	1.64	12.6	1.77	13.4	1.95	13.7	1.98	14.0	1.99
	20	8.5	1.12	10.2	1.41	11.8	1.74	12.6	1.89	13.2	2.05	13.6	2.08	13.8	2.09
	21	8.5	1.14	10.2	1.45	11.8	1.80	12.6	1.96	13.1	2.10	13.4	2.12	13.8	2.13
	23	8.5	1.21	10.2	1.55	11.8	1.93	12.6	2.08	12.9	2.20	13.3	2.22	13.6	2.23
	25	8.5	1.30	10.2	1.66	11.8	2.07	12.6	2.20	12.8	2.30	13.1	2.32	13.4	2.33
	27	8.5	1.39	10.2	1.77	11.8	2.21	12.4	2.33	12.6	2.40	12.9	2.41	13.2	2.42
	29	8.5	1.48	10.2	1.90	11.8	2.36	12.2	2.42	12.4	2.50	12.7	2.51	13.0	2.52
	31	8.5	1.58	10.2	2.02	11.8	2.52	12.0	2.53	12.2	2.60	12.5	2.61	12.8	2.62
	33	8.5	1.68	10.2	2.15	11.7	2.66	11.9	2.64	12.0	2.69	12.3	2.70	12.6	2.72
	35	8.5	1.78	10.2	2.30	11.5	2.75	11.6	2.76	11.8	2.79	12.1	2.80	12.4	2.82
	37	8.5	1.85	10.2	2.37	11.3	2.81	11.5	2.81	11.6	2.83	11.9	2.85	12.2	2.86
	39	8.5	1.92	10.2	2.44	11.1	2.85	11.3	2.85	11.4	2.88	11.7	2.89	12.1	2.90
41	8.2	2.19	9.8	2.74	10.6	3.17	10.7	3.17	10.9	3.20	11.1	3.22	11.4	3.23	
43	8.1	2.33	9.6	2.89	10.2	3.31	10.4	3.31	10.5	3.33	10.8	3.35	11.1	3.36	
46	7.6	2.49	9.0	3.07	9.3	3.44	9.5	3.45	9.6	3.47	9.9	3.49	10.2	3.50	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(4P)

Outdoor Units

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	
100	10	7.4	0.85	8.8	1.03	10.3	1.23	11.0	1.33	11.7	1.42	13.2	1.58	14.4	1.60
	12	7.4	0.88	8.8	1.07	10.3	1.27	11.0	1.36	11.7	1.47	13.2	1.67	14.2	1.69
	14	7.4	0.91	8.8	1.12	10.3	1.32	11.0	1.42	11.7	1.53	13.2	1.76	14.1	1.78
	16	7.4	0.93	8.8	1.15	10.3	1.38	11.0	1.48	11.7	1.62	13.2	1.85	13.9	1.87
	18	7.4	0.96	8.8	1.20	10.3	1.43	11.0	1.56	11.7	1.71	13.2	1.95	13.7	1.97
	20	7.4	0.99	8.8	1.24	10.3	1.51	11.0	1.67	11.7	1.83	13.2	2.04	13.5	2.06
	21	7.4	1.01	8.8	1.27	10.3	1.56	11.0	1.73	11.7	1.90	13.2	2.09	13.5	2.11
	23	7.4	1.07	8.8	1.36	10.3	1.68	11.0	1.85	11.7	2.04	13.0	2.19	13.3	2.21
	25	7.4	1.14	8.8	1.45	10.3	1.79	11.0	1.98	11.7	2.18	12.8	2.28	13.1	2.30
	27	7.4	1.22	8.8	1.55	10.3	1.92	11.0	2.12	11.7	2.32	12.6	2.39	12.9	2.41
	29	7.4	1.30	8.8	1.65	10.3	2.05	11.0	2.26	11.7	2.45	12.4	2.49	12.7	2.51
	31	7.4	1.39	8.8	1.76	10.3	2.19	11.0	2.41	11.7	2.57	12.2	2.59	12.5	2.61
	33	7.4	1.47	8.8	1.88	10.3	2.33	11.0	2.58	11.7	2.67	12.0	2.68	12.3	2.70
	35	7.4	1.56	8.8	2.00	10.3	2.48	11.0	2.75	11.5	2.77	11.8	2.78	12.1	2.80
	37	7.4	1.63	8.8	2.08	10.3	2.55	11.0	2.80	11.3	2.81	11.7	2.82	11.9	2.85
	39	7.4	1.69	8.8	2.17	10.3	2.62	11.0	2.84	11.1	2.86	11.5	2.87	11.7	2.89
	41	7.2	1.92	8.5	2.46	9.9	2.95	10.5	3.16	10.6	3.17	10.6	3.18	11.2	3.22
43	7.1	2.04	8.4	2.62	9.8	3.10	10.1	3.30	10.2	3.31	10.6	3.32	10.9	3.35	
46	6.6	2.19	7.9	2.82	9.2	3.27	9.2	3.44	9.3	3.45	9.6	3.46	9.9	3.49	
90	10	6.7	0.75	8.0	0.90	9.3	1.06	9.9	1.14	10.5	1.23	11.8	1.38	13.1	1.53
	12	6.7	0.76	8.0	0.91	9.3	1.08	9.9	1.16	10.5	1.26	11.8	1.40	13.1	1.55
	14	6.7	0.77	8.0	0.93	9.3	1.10	9.9	1.19	10.5	1.28	11.8	1.43	13.1	1.59
	16	6.7	0.78	8.0	0.95	9.3	1.13	9.9	1.21	10.5	1.30	11.8	1.46	13.1	1.62
	18	6.7	0.80	8.0	0.97	9.3	1.14	9.9	1.24	10.5	1.33	11.8	1.49	13.1	1.69
	20	6.7	0.81	8.0	0.99	9.3	1.16	9.9	1.26	10.5	1.38	11.8	1.59	13.1	1.78
	21	6.7	0.82	8.0	0.99	9.3	1.19	9.9	1.30	10.5	1.43	11.8	1.65	13.1	1.82
	23	6.7	0.84	8.0	1.04	9.3	1.27	9.9	1.40	10.5	1.53	11.8	1.77	13.0	1.90
	25	6.7	0.88	8.0	1.11	9.3	1.36	9.9	1.49	10.5	1.64	11.8	1.89	12.8	1.98
	27	6.7	0.94	8.0	1.18	9.3	1.45	9.9	1.60	10.5	1.75	11.8	2.01	12.6	2.08
	29	6.7	0.99	8.0	1.26	9.3	1.55	9.9	1.70	10.5	1.87	11.8	2.15	12.4	2.16
	31	6.7	1.06	8.0	1.34	9.3	1.65	9.9	1.82	10.5	1.99	11.8	2.24	12.2	2.25
	33	6.7	1.13	8.0	1.42	9.3	1.76	9.9	1.93	10.5	2.12	11.8	2.32	12.0	2.33
	35	6.7	1.20	8.0	1.51	9.3	1.87	9.9	2.06	10.5	2.25	11.6	2.41	11.8	2.41
	37	6.7	1.27	8.0	1.61	9.3	1.99	9.9	2.19	10.5	2.37	11.4	2.49	11.6	2.50
	39	6.7	1.34	8.0	1.71	9.3	2.11	9.9	2.31	10.5	2.49	11.2	2.58	11.4	2.58
	41	6.4	1.55	7.7	1.97	8.9	2.44	9.5	2.66	10.2	2.83	10.7	2.91	10.9	2.92
43	6.3	1.68	7.6	2.14	8.8	2.64	9.4	2.86	10.0	3.00	10.3	3.09	10.5	3.09	
46	5.9	1.83	7.1	2.33	8.3	2.89	8.8	3.11	9.1	3.20	9.4	3.29	9.6	3.29	
80	10	5.9	0.71	7.1	0.85	8.2	0.99	8.8	1.07	9.4	1.15	10.5	1.31	11.7	1.42
	12	5.9	0.72	7.1	0.85	8.2	1.01	8.8	1.09	9.4	1.17	10.5	1.34	11.7	1.45
	14	5.9	0.73	7.1	0.87	8.2	1.03	8.8	1.11	9.4	1.19	10.5	1.36	11.7	1.48
	16	5.9	0.74	7.1	0.89	8.2	1.05	8.8	1.13	9.4	1.21	10.5	1.39	11.7	1.51
	18	5.9	0.75	7.1	0.91	8.2	1.06	8.8	1.15	9.4	1.24	10.5	1.41	11.7	1.54
	20	5.9	0.77	7.1	0.92	8.2	1.09	8.8	1.17	9.4	1.26	10.5	1.47	11.7	1.65
	21	5.9	0.77	7.1	0.93	8.2	1.10	8.8	1.19	9.4	1.29	10.5	1.51	11.7	1.71
	23	5.9	0.79	7.1	0.95	8.2	1.15	8.8	1.26	9.4	1.38	10.5	1.60	11.7	1.83
	25	5.9	0.82	7.1	1.01	8.2	1.23	8.8	1.35	9.4	1.48	10.5	1.71	11.7	1.96
	27	5.9	0.86	7.1	1.07	8.2	1.32	8.8	1.44	9.4	1.57	10.5	1.82	11.7	2.08
	29	5.9	0.92	7.1	1.15	8.2	1.40	8.8	1.54	9.4	1.68	10.5	1.95	11.7	2.16
	31	5.9	0.98	7.1	1.22	8.2	1.49	8.8	1.64	9.4	1.79	10.5	2.06	11.7	2.25
	33	5.9	1.04	7.1	1.30	8.2	1.59	8.8	1.75	9.4	1.90	10.5	2.18	11.7	2.33
	35	5.9	1.10	7.1	1.38	8.2	1.69	8.8	1.86	9.4	2.04	10.5	2.31	11.5	2.41
	37	5.9	1.16	7.1	1.47	8.2	1.79	8.8	1.97	9.4	2.16	10.5	2.44	11.3	2.50
	39	5.9	1.23	7.1	1.55	8.2	1.90	8.8	2.08	9.4	2.30	10.5	2.55	11.1	2.58
	41	5.7	1.42	6.8	1.79	7.9	2.19	8.5	2.40	9.0	2.66	10.2	2.91	10.6	2.92
43	5.6	1.53	6.7	1.93	7.8	2.37	8.3	2.59	8.9	2.88	10.0	3.09	10.3	3.09	
46	5.3	1.67	6.3	2.11	7.3	2.59	7.9	2.82	8.3	3.15	9.1	3.29	9.4	3.29	

Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

6. Capacity Tables

Cooling Capacity(4P)

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	5.2	0.63	6.2	0.75	7.2	0.87	7.7	0.93	8.2	1.00	9.2	1.14	10.2	1.27
	12	5.2	0.64	6.2	0.76	7.2	0.89	7.7	0.95	8.2	1.02	9.2	1.16	10.2	1.30
	14	5.2	0.65	6.2	0.77	7.2	0.90	7.7	0.97	8.2	1.04	9.2	1.19	10.2	1.32
	16	5.2	0.66	6.2	0.78	7.2	0.92	7.7	0.99	8.2	1.06	9.2	1.20	10.2	1.35
	18	5.2	0.67	6.2	0.80	7.2	0.93	7.7	1.00	8.2	1.07	9.2	1.22	10.2	1.37
	20	5.2	0.68	6.2	0.81	7.2	0.95	7.7	1.03	8.2	1.10	9.2	1.25	10.2	1.43
	21	5.2	0.69	6.2	0.82	7.2	0.96	7.7	1.04	8.2	1.11	9.2	1.27	10.2	1.47
	23	5.2	0.70	6.2	0.84	7.2	0.98	7.7	1.07	8.2	1.16	9.2	1.36	10.2	1.55
	25	5.2	0.71	6.2	0.87	7.2	1.05	7.7	1.14	8.2	1.24	9.2	1.46	10.2	1.66
	27	5.2	0.75	6.2	0.92	7.2	1.12	7.7	1.21	8.2	1.33	9.2	1.55	10.2	1.76
	29	5.2	0.80	6.2	0.98	7.2	1.19	7.7	1.29	8.2	1.41	9.2	1.66	10.2	1.89
	31	5.2	0.85	6.2	1.05	7.2	1.27	7.7	1.38	8.2	1.50	9.2	1.77	10.2	2.01
	33	5.2	0.90	6.2	1.11	7.2	1.34	7.7	1.47	8.2	1.60	9.2	1.88	10.2	2.12
	35	5.2	0.95	6.2	1.18	7.2	1.43	7.7	1.56	8.2	1.70	9.2	2.01	10.2	2.25
	37	5.2	1.00	6.2	1.25	7.2	1.52	7.7	1.66	8.2	1.81	9.2	2.13	10.2	2.37
	39	5.2	1.06	6.2	1.32	7.2	1.61	7.7	1.75	8.2	1.92	9.2	2.26	10.2	2.48
41	5.0	1.22	6.0	1.52	6.9	1.85	7.4	2.02	7.9	2.22	8.9	2.61	9.9	2.84	
43	4.9	1.31	5.9	1.64	6.8	2.00	7.3	2.18	7.8	2.40	8.7	2.82	9.7	3.04	
46	4.6	1.43	5.5	1.79	6.4	2.19	6.9	2.38	7.3	2.62	8.2	3.09	9.1	3.25	
60	10	4.4	0.55	5.3	0.65	6.2	0.75	6.6	0.81	7.0	0.86	7.9	0.97	8.7	1.09
	12	4.4	0.56	5.3	0.66	6.2	0.76	6.6	0.82	7.0	0.87	7.9	0.99	8.7	1.11
	14	4.4	0.56	5.3	0.67	6.2	0.78	6.6	0.83	7.0	0.89	7.9	1.01	8.7	1.13
	16	4.4	0.58	5.3	0.68	6.2	0.79	6.6	0.85	7.0	0.91	7.9	1.03	8.7	1.15
	18	4.4	0.59	5.3	0.69	6.2	0.80	6.6	0.86	7.0	0.92	7.9	1.04	8.7	1.17
	20	4.4	0.60	5.3	0.70	6.2	0.82	6.6	0.88	7.0	0.94	7.9	1.06	8.7	1.20
	21	4.4	0.60	5.3	0.71	6.2	0.83	6.6	0.89	7.0	0.95	7.9	1.08	8.7	1.21
	23	4.4	0.61	5.3	0.72	6.2	0.84	6.6	0.90	7.0	0.97	7.9	1.12	8.7	1.28
	25	4.4	0.62	5.3	0.74	6.2	0.87	6.6	0.95	7.0	1.03	7.9	1.20	8.7	1.37
	27	4.4	0.64	5.3	0.78	6.2	0.93	6.6	1.01	7.0	1.09	7.9	1.27	8.7	1.47
	29	4.4	0.68	5.3	0.83	6.2	0.99	6.6	1.07	7.0	1.16	7.9	1.35	8.7	1.56
	31	4.4	0.72	5.3	0.88	6.2	1.05	6.6	1.14	7.0	1.24	7.9	1.44	8.7	1.67
	33	4.4	0.76	5.3	0.93	6.2	1.11	6.6	1.21	7.0	1.32	7.9	1.54	8.7	1.77
	35	4.4	0.81	5.3	0.99	6.2	1.19	6.6	1.29	7.0	1.40	7.9	1.63	8.7	1.89
	37	4.4	0.85	5.3	1.04	6.2	1.26	6.6	1.37	7.0	1.48	7.9	1.74	8.7	2.01
	39	4.4	0.90	5.3	1.10	6.2	1.33	6.6	1.46	7.0	1.57	7.9	1.84	8.7	2.13
41	4.3	1.02	5.1	1.27	5.9	1.53	6.4	1.67	6.8	1.81	7.6	2.13	8.4	2.46	
43	4.2	1.10	5.1	1.36	5.8	1.65	6.3	1.80	6.7	1.95	7.5	2.30	8.3	2.66	
46	4.0	1.20	4.7	1.48	5.5	1.80	5.9	1.97	6.3	2.13	7.0	2.51	7.8	2.91	
50	10	3.7	0.48	4.4	0.56	5.2	0.63	5.5	0.68	5.8	0.72	6.6	0.81	7.3	0.91
	12	3.7	0.49	4.4	0.56	5.2	0.64	5.5	0.69	5.8	0.74	6.6	0.83	7.3	0.92
	14	3.7	0.49	4.4	0.57	5.2	0.65	5.5	0.70	5.8	0.75	6.6	0.84	7.3	0.93
	16	3.7	0.50	4.4	0.58	5.2	0.66	5.5	0.71	5.8	0.76	6.6	0.85	7.3	0.95
	18	3.7	0.51	4.4	0.59	5.2	0.68	5.5	0.73	5.8	0.77	6.6	0.87	7.3	0.97
	20	3.7	0.51	4.4	0.60	5.2	0.69	5.5	0.74	5.8	0.79	6.6	0.88	7.3	0.99
	21	3.7	0.52	4.4	0.60	5.2	0.70	5.5	0.75	5.8	0.79	6.6	0.89	7.3	1.00
	23	3.7	0.53	4.4	0.62	5.2	0.71	5.5	0.76	5.8	0.81	6.6	0.91	7.3	1.02
	25	3.7	0.53	4.4	0.63	5.2	0.72	5.5	0.77	5.8	0.83	6.6	0.96	7.3	1.09
	27	3.7	0.54	4.4	0.64	5.2	0.76	5.5	0.82	5.8	0.88	6.6	1.02	7.3	1.16
	29	3.7	0.57	4.4	0.69	5.2	0.81	5.5	0.87	5.8	0.94	6.6	1.08	7.3	1.23
	31	3.7	0.60	4.4	0.73	5.2	0.86	5.5	0.92	5.8	1.00	6.6	1.15	7.3	1.32
	33	3.7	0.64	4.4	0.77	5.2	0.91	5.5	0.98	5.8	1.06	6.6	1.22	7.3	1.40
	35	3.7	0.68	4.4	0.81	5.2	0.96	5.5	1.04	5.8	1.12	6.6	1.29	7.3	1.49
	37	3.7	0.71	4.4	0.86	5.2	1.02	5.5	1.10	5.8	1.19	6.6	1.38	7.3	1.58
	39	3.7	0.75	4.4	0.90	5.2	1.08	5.5	1.16	5.8	1.25	6.6	1.46	7.3	1.67
41	3.6	0.86	4.3	1.04	5.0	1.24	5.3	1.34	5.6	1.44	6.3	1.68	7.1	1.93	
43	3.5	0.92	4.2	1.12	4.9	1.34	5.2	1.44	5.5	1.55	6.2	1.81	6.9	2.08	
46	3.3	1.00	4.0	1.21	4.6	1.45	4.9	1.57	5.2	1.69	5.8	1.98	6.5	2.27	

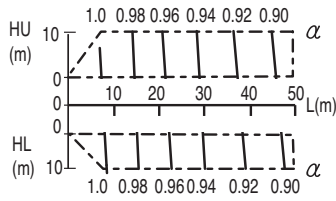
Notes:

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. ■ is shown as reference. When operating at this temperature, these values can be different by discontinuous operation.

7. Capacity Correction Factor

7.1 2.5/3/4 HP

■ Rate of change in Cooling capacity



HU (m)	10	-	0.99	0.97	0.93	0.91	0.90	α
	7.5	1.0	0.99	0.97	0.93	0.91	0.90	
	0	1.0	1.00	0.97	0.93	0.91	0.90	
	0	7.5	10	20	30	40	50	L(m)
HL (m)	0	1.0	1.0	0.97	0.93	0.91	0.90	
	7.5	1.0	1.0	0.98	0.93	0.92	0.90	
	10	-	1.0	0.98	0.94	0.92	0.90	α

Description of 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 piping length(m)
- α : Capacity correction factor

7. Capacity Correction Factor

Notes

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 outside 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													

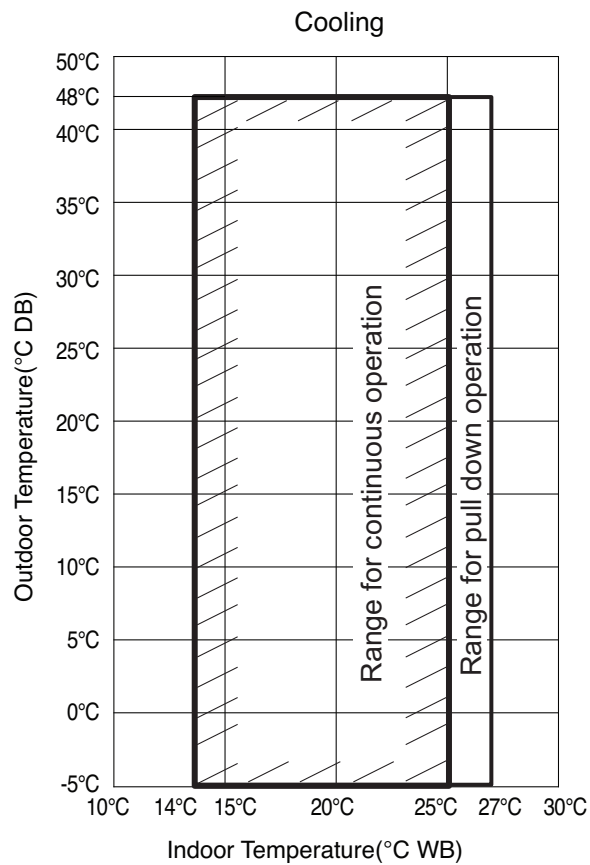
6. When the any one (or both) of below conditions are satisfied, the diameter of main pipe must be increased.
 - The equivalent length between outdoor unit and the farthest indoor unit is 90m or more (Liquid and Gas pipes are increased)

Upward Outdoor unit total capacity HP	Standard Pipe Diameter	
	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]
2.5	Ø 9.52(3/8)	Ø 15.88(5/8)
3	Ø 9.52(3/8)	Ø 15.88(5/8)
4	Ø 9.52(3/8)	Ø 15.88(5/8)

- * If available on site, select pipe size according to upper table. Otherwise it doesn't need to be increased.
- * Model line up could be different in accordance with target region.

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)

8. Operation Limits

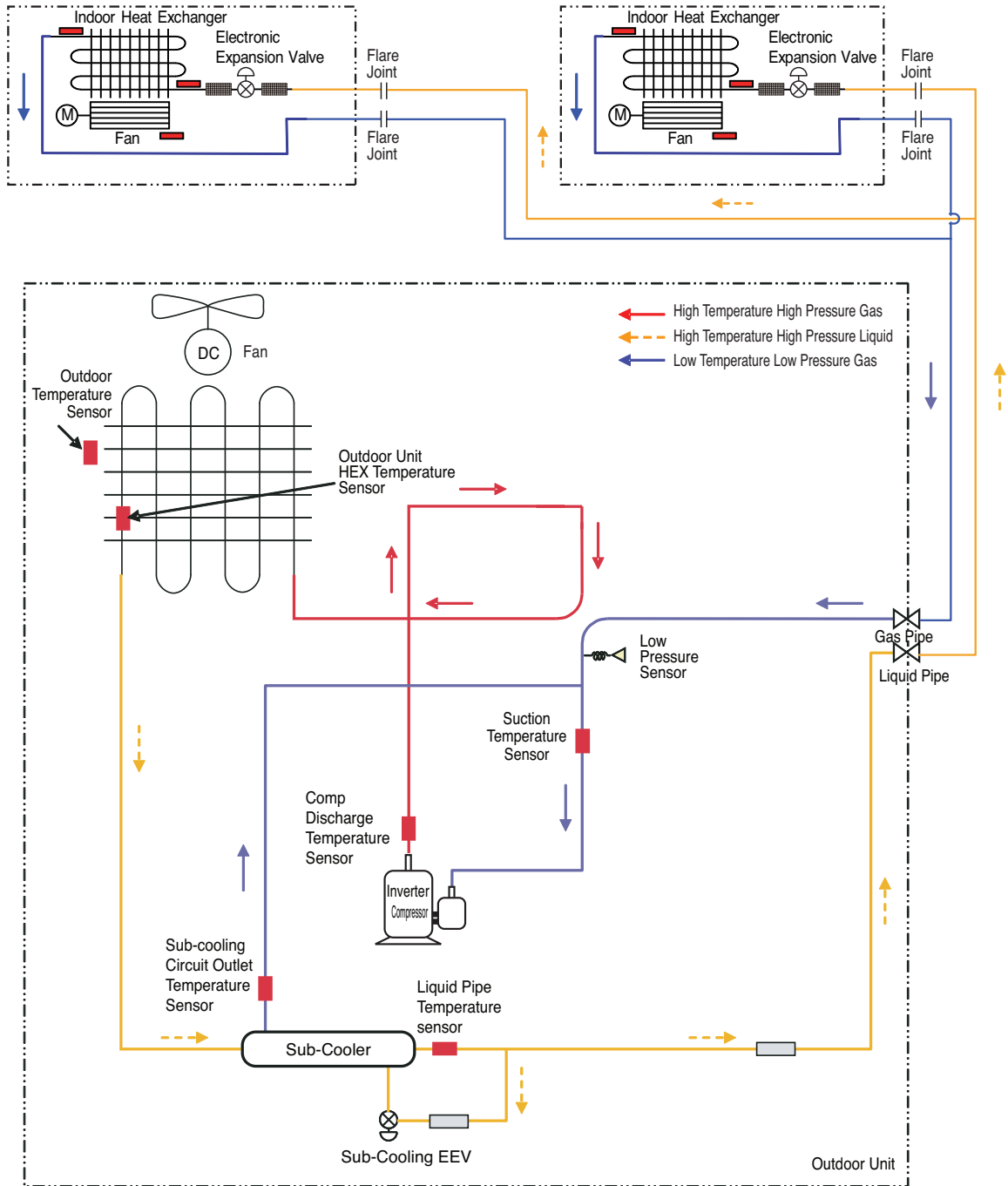
**Notes:**

These figures assume the following operating conditions:
Equivalent piping length: 7.5m
Level difference: 0m

9. Piping Diagrams

9.1 2.5 HP

Cooling Operation / Oil Return



Remarks	Pressure Sensor	Temperature Sensor	Check valve	Solenoid valve
	Pressure Switch	SVC Valve	EEV	Strainer

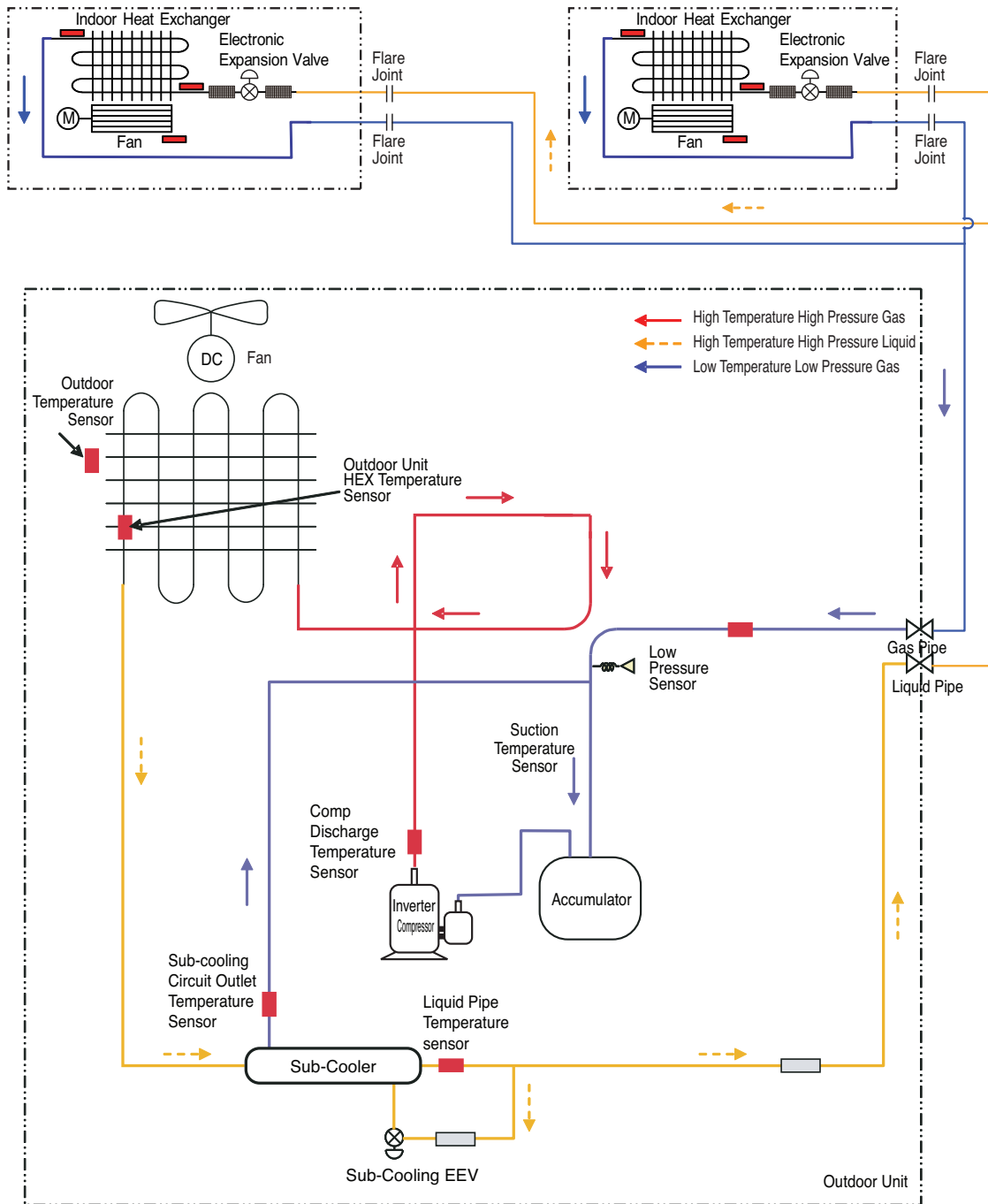
Outdoor Units

9. Piping Diagrams

9.2 3 / 4HP

Cooling Operation / Oil Return

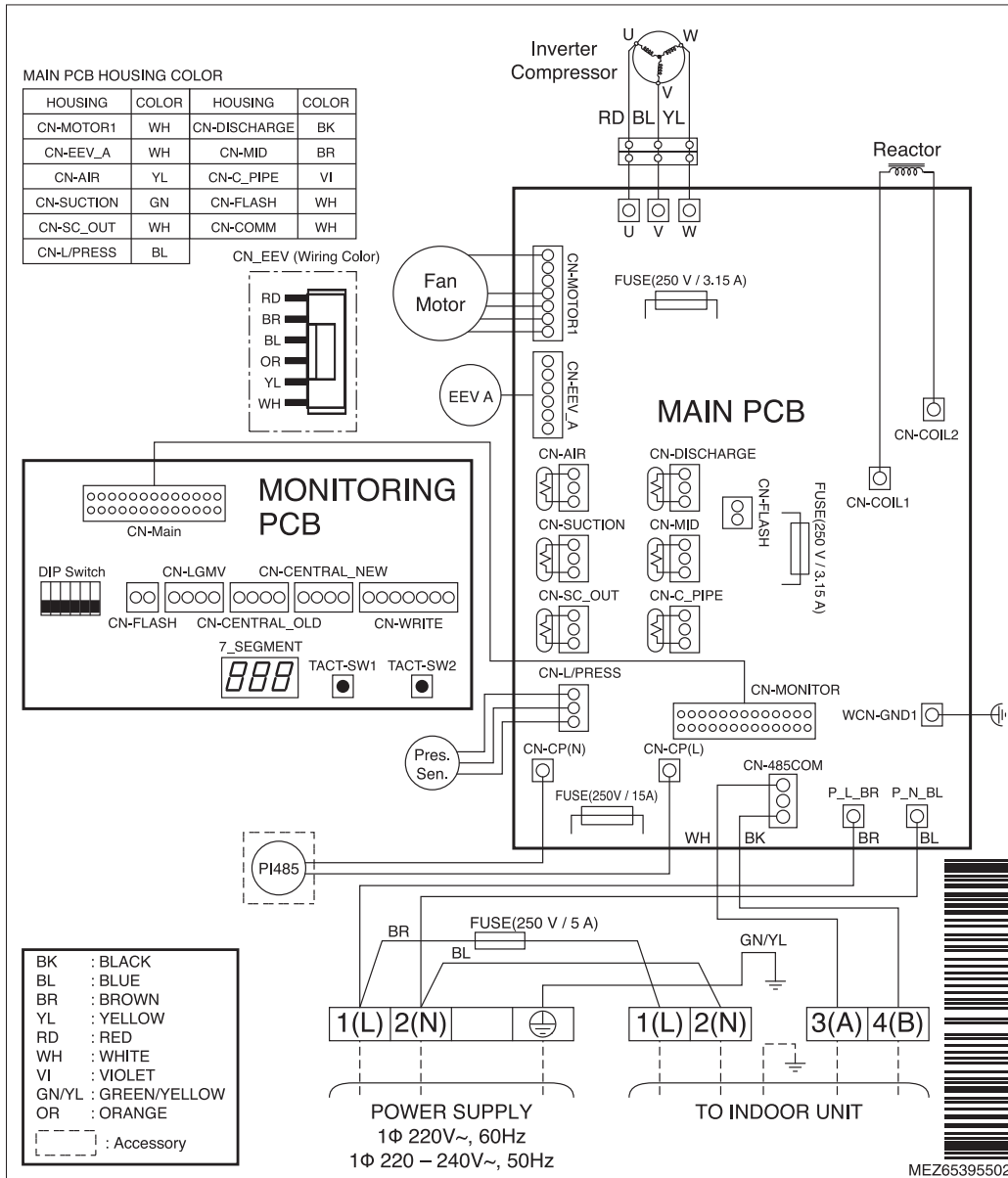
Outdoor Units



Remarks	Pressure Sensor	Temperature Sensor	Check valve	Solenoid valve
	Pressure Switch	SVC Valve	EEV	Strainer

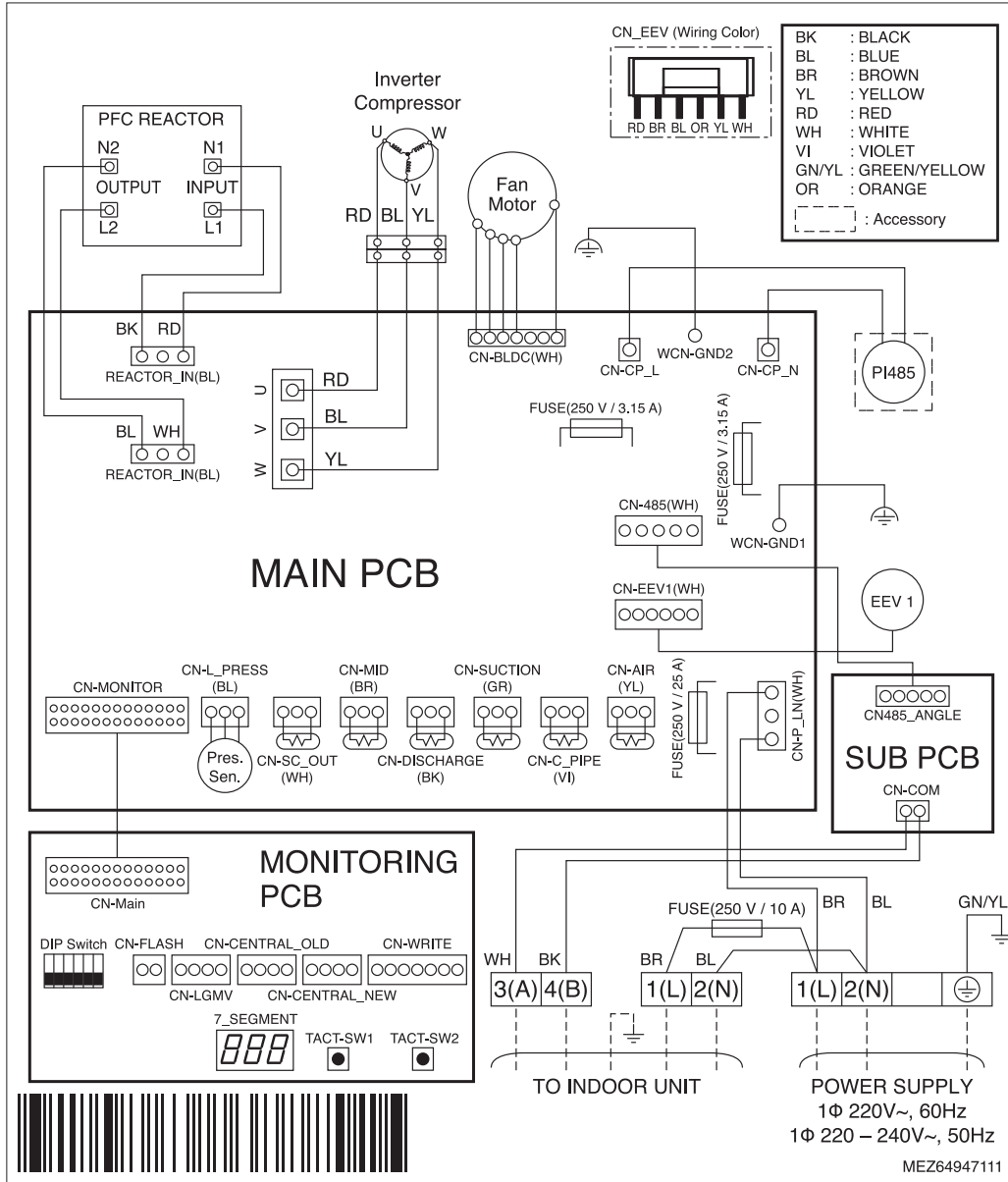
10. Wiring Diagrams

10.1 2.5 HP



10. Wiring Diagrams

10.2 3 / 4 HP



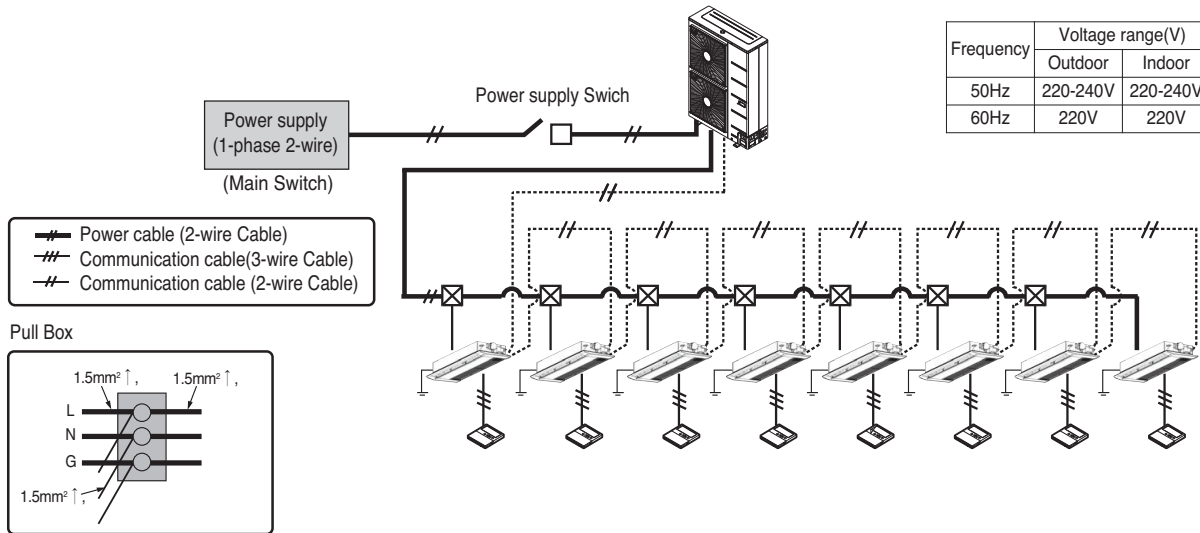
Outdoor Units

11. Field Wiring

11.1 50/60Hz

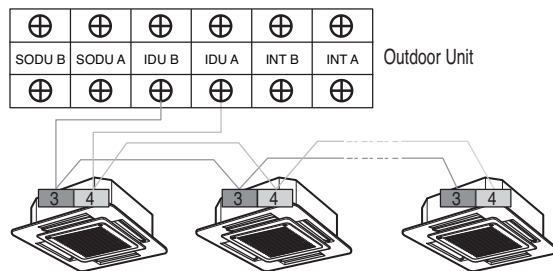
◆ Example Connection of Communication Cable

■ Single Outdoor Unit



⚠ WARNING

- All installation site must require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.
- 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.



The GND terminal at the main PCB is a '3' terminal for day contact, it is not the point to make ground connection.

11. Field Wiring

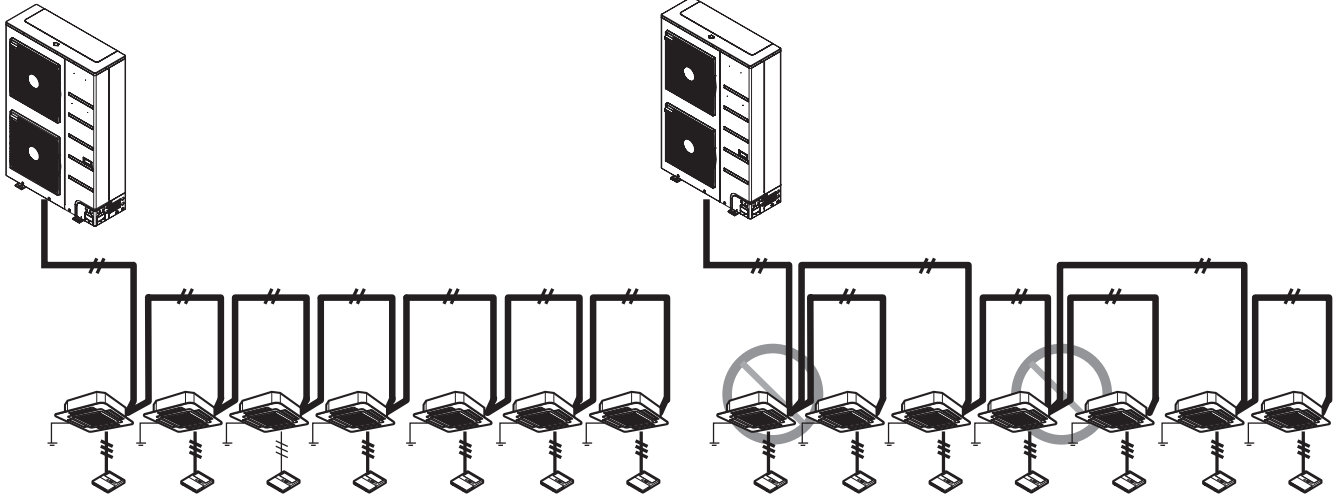
◆ Example Connection of Communication Cable

[BUS type]

- Connection of communication cable must be installed like below figure between indoor unit to outdoor unit.

[STAR type]

- Abnormal operation can be caused by communication defect, when connection of communication cable is installed like below figure(STAR type).

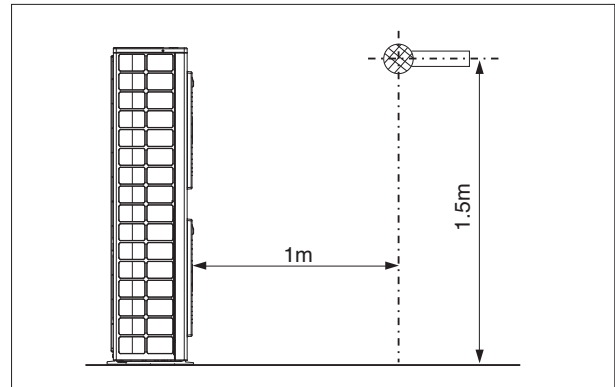


12. Sound Levels

12.1 Sound Pressure Level

Unit : dB(A)

Model	Sound Pressure Levels (60Hz)	
	Cooling	Heating
ARUV025GSD0	50	-
ARUV030GSD0	50	-
ARUV040GSD0	50	-

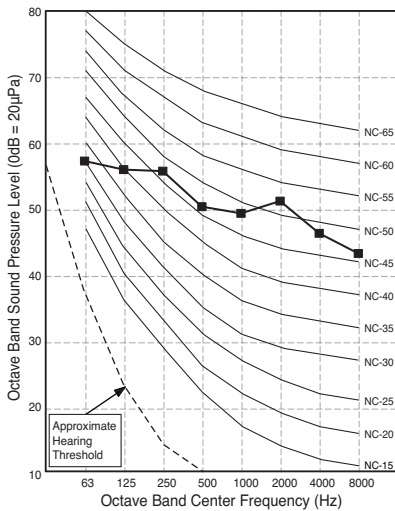


Notes:

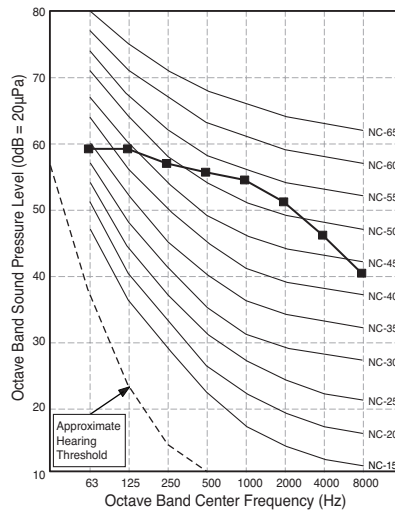
- Data is valid at free field condition
- Data is valid at nominal operating condition
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed
- Sound level can be increased in static pressure mode or used air guide.

■ Cooling

ARUV025GSD0



**ARUV030GSD0
ARUV040GSD0**





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**

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

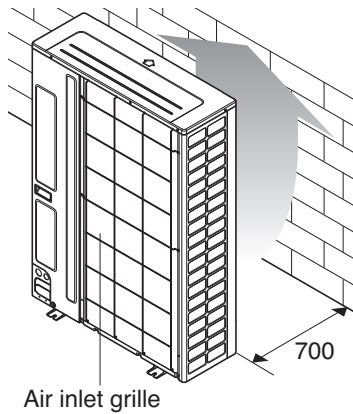
- The wall thickness of the piping should comply with the relevant local and national regulations for the designed pressure 3.8MPa
- Since R410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in its gaseous state, its composition 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

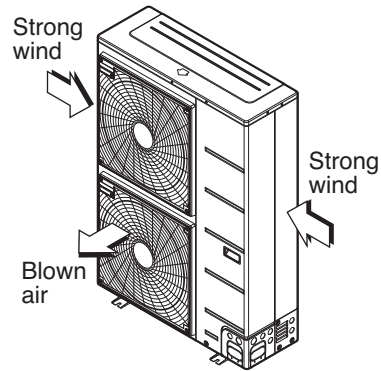
1. Select space for installing outdoor unit, which will meet the following conditions:
 - No direct thermal radiation from other heat sources
 - No possibility of annoying neighbors by noise from unit
 - No exposition to strong wind
 - With strength which bears weight of unit
 - Note that drain flows 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.

2. Select the Best Location

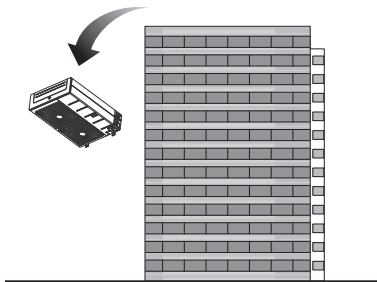
3. When installing the outdoor unit in a place that is constantly exposed to a strong wind like a coast or on a high story of a building, secure a normal fan operation by using a duct or a wind shield.
- Install the unit so that its discharge port faces to the wall of the building.
Keep a distance 700mm 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.



⚠ WARNING

Fix the outdoor unit firmly with anchor bolt or it may fall and hurt people. (refer to 'Foundation for installation')

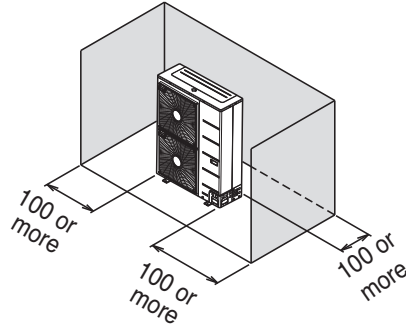
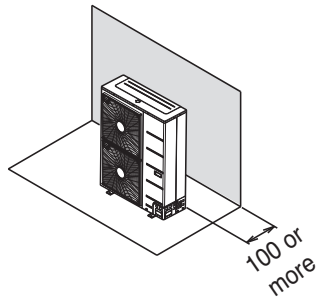
3. Installation Space

- 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.

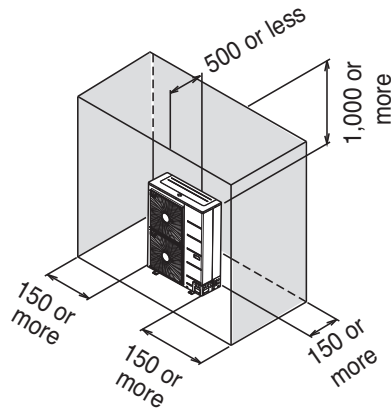
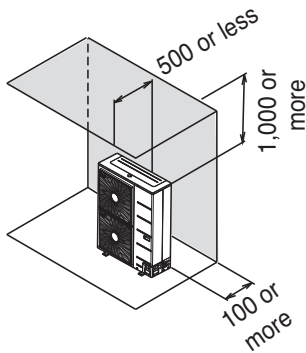
3.1 Individual Installation

■ In case of obstacles on the suction side

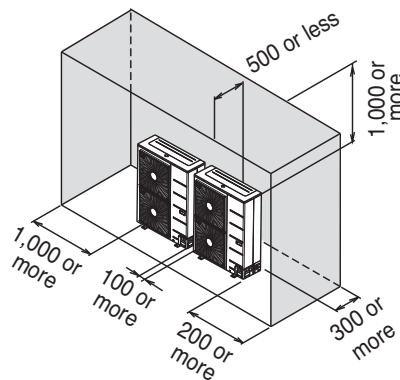
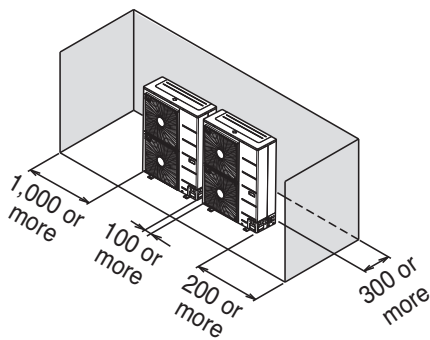
1. Stand alone installation



[Unit:mm]



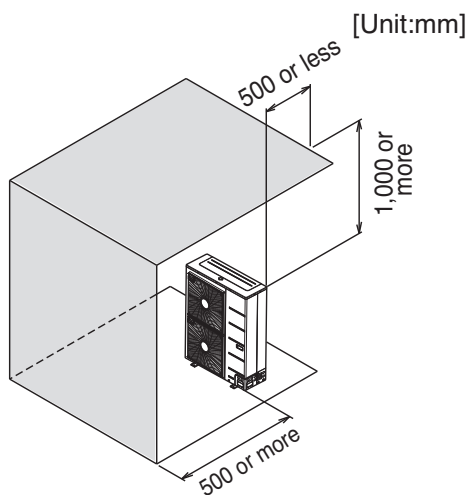
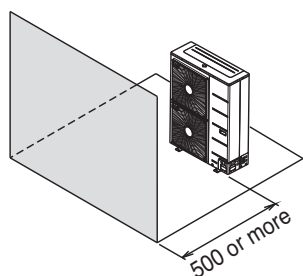
2. Collective installation



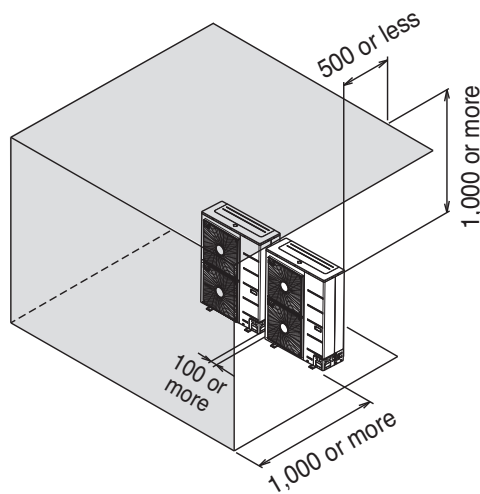
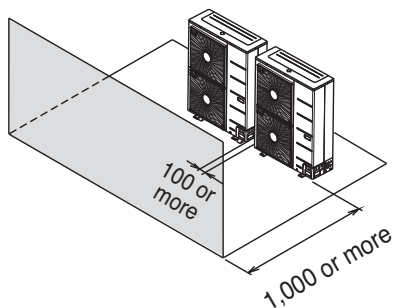
3. Installation Space

■ In case of obstacles on the discharge side

1. Stand alone installation



2. Collective installation

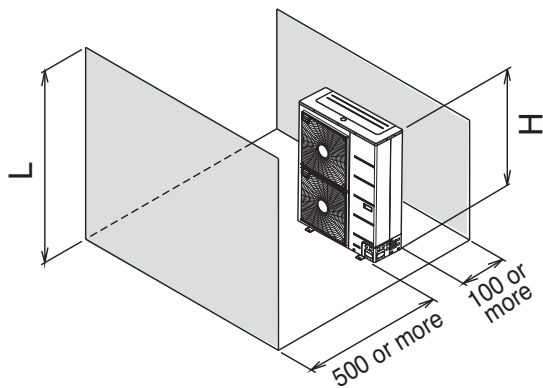


■ In case of obstacles on the suction and the discharge side

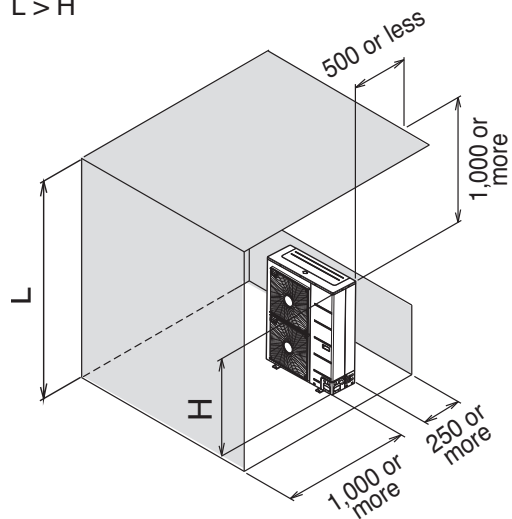
▷ Obstacle height of discharge side is higher than the unit

1. Stand alone installation

$L > H$



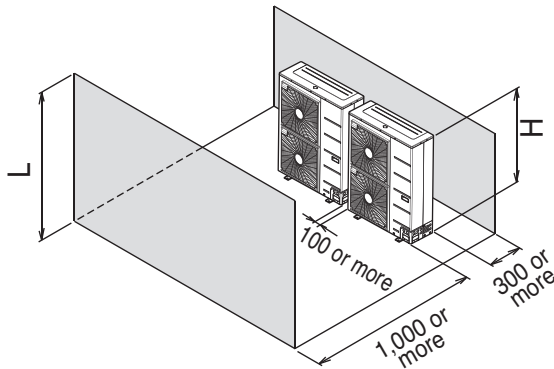
$L > H$



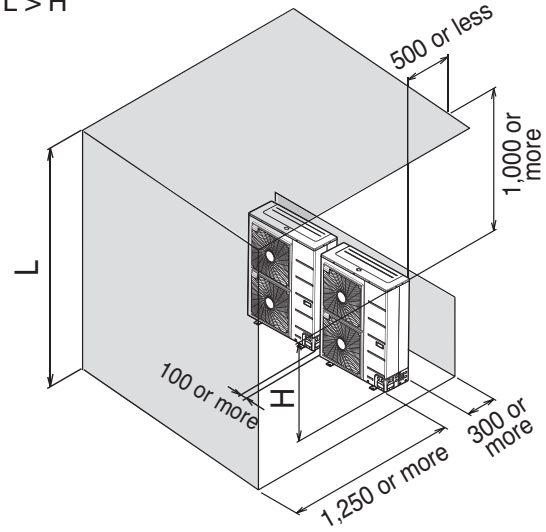
3. Installation Space

2. Collective installation

$L > H$



$L > H$

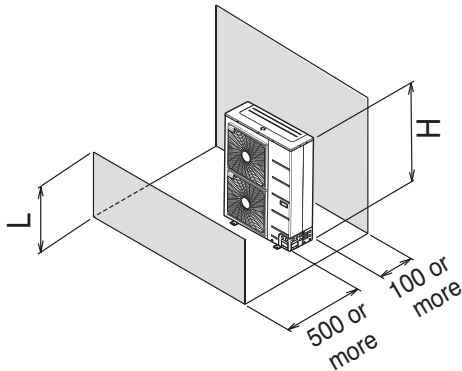


▷ Obstacle height of discharge side is lower than the unit

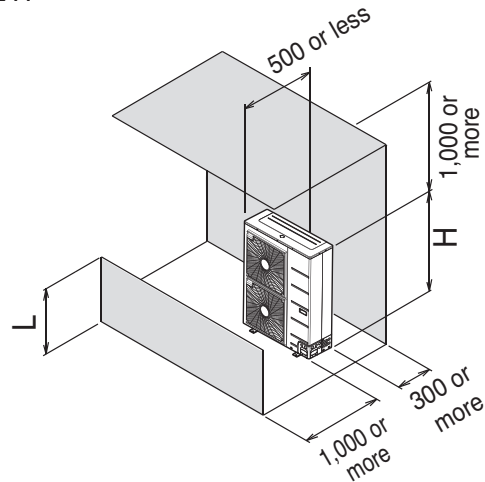
1. Stand alone installation

[Unit:mm]

$L \leq H$

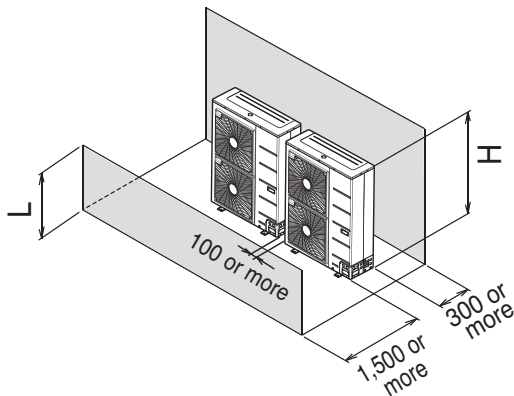


$L \leq H$

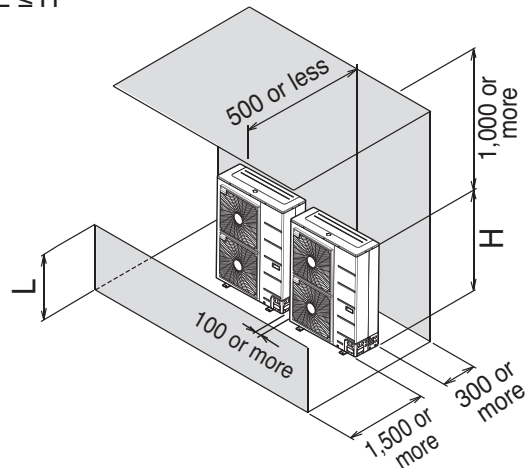


2. Collective installation

$L \leq H$



$L \leq H$

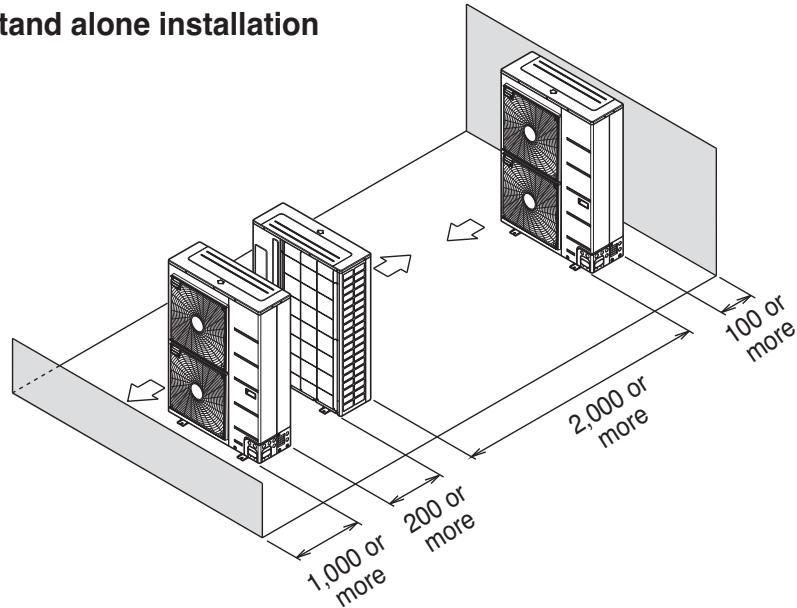


3. Installation Space

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.

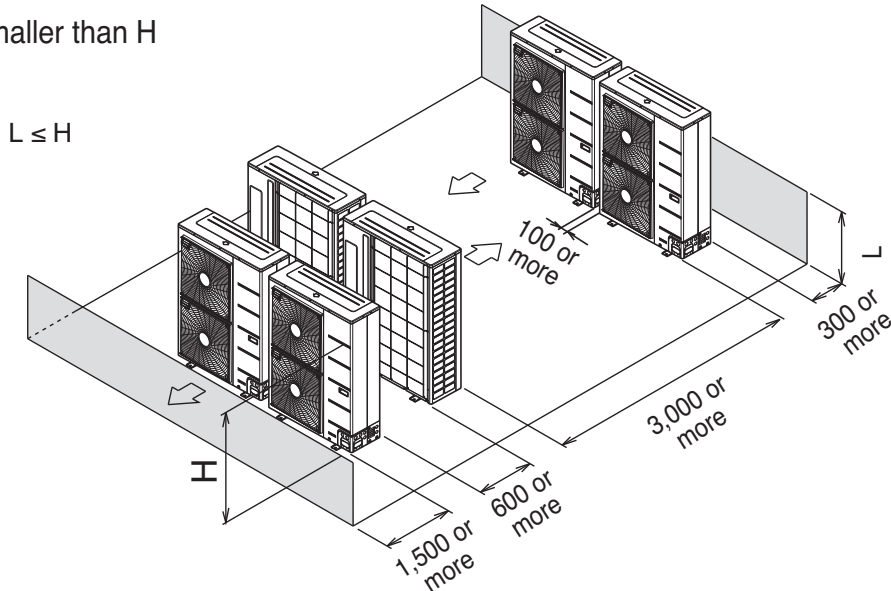
1. One row of stand alone installation



[Unit:mm]

2. Rows of collective installation (2 or more)

- L should be smaller than H



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.
- The raised support platform must be high enough to allow the unit to remain above possible snow drifts, and must be higher than the maximum anticipated snowfall for the location.

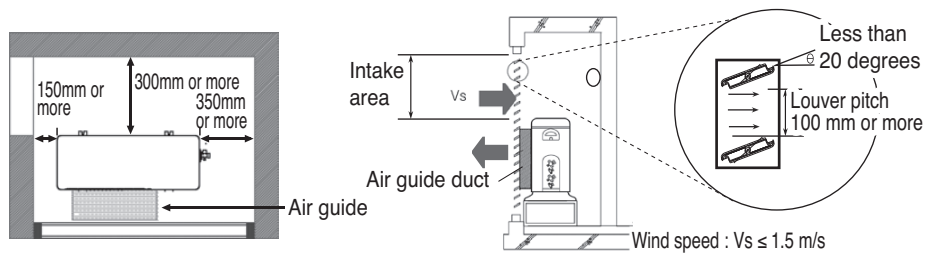
Don't install the suction hole and discharge hole of the Outdoor Unit facing the seasonal wind.

3. Installation Space

3.3 Air guide work

In case of out door unit is located outdoor cabin of apartment or flats, then the efficiency can drop and system pressure increases thus finally damaging the compressor or other components in the system by heat short circuit.

- Do not use bended louver. It disturbs the air circulation.
- The opening ratio is at least 80%
- Louver angle is 0-20 degree
- Louver pitch will be as more than 100mm
- If you have a insect control net, consider the shielded area and static pressure loss
- Check the static pressure range of outdoor unit fan. Then, install air guide in the range of static pressure.



Secure minimum intake area

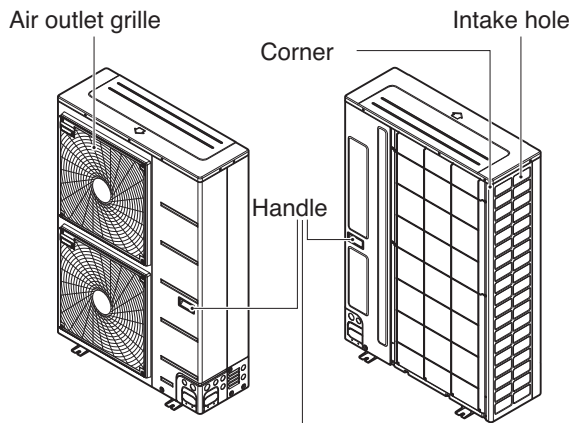
When the intake area is not secured can efficiency drop and products may not be operating

- Minimum intake area (For reference)

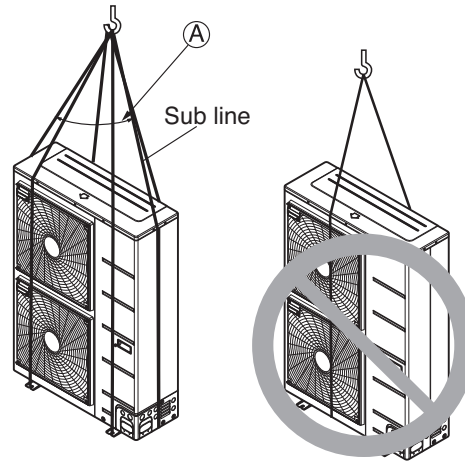
Model	ARUV025GSD0 ARUV030GSD0 ARUV040GSD0
Minimum intake area (m ²)	0.7

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

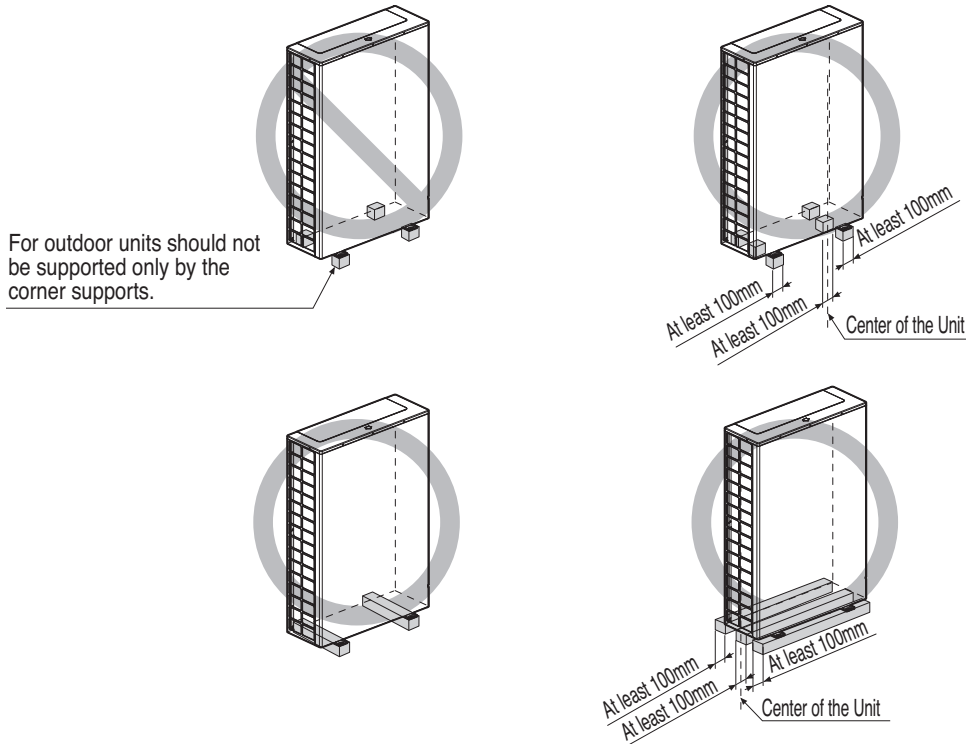
! CAUTION

Be very careful while carrying the product.

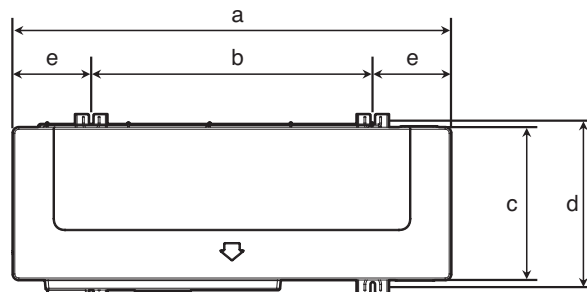
- Do not have only one person carry product if it is more than 20 kg.
- PP bands are used to pack some products. Do not use them as a mean for transportation because they are dangerous.
- Do not touch heat exchanger fins with your bare hands. Otherwise you may get a cut in your hands.
- Tear plastic 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



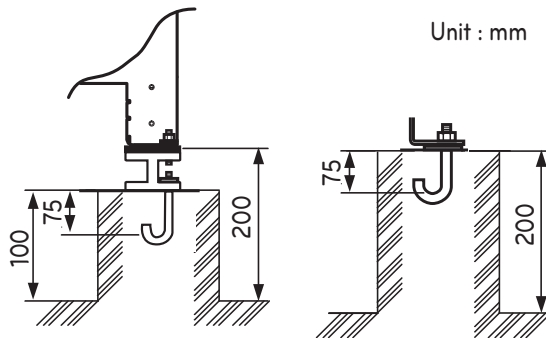
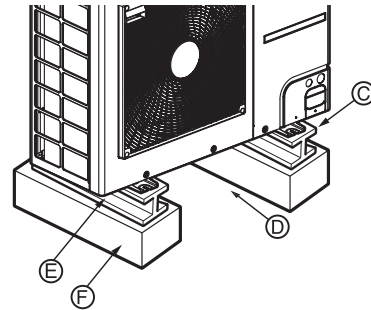
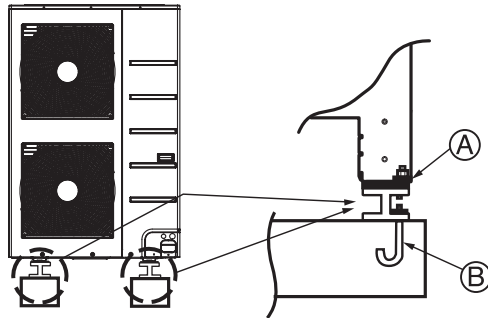
[Unit : mm]

	ARUV025GSD0	ARUV030GSD0 ARUV040GSD0
a	920	1,090
b	618	700
c	330	380
d	360	401
e	151	195

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

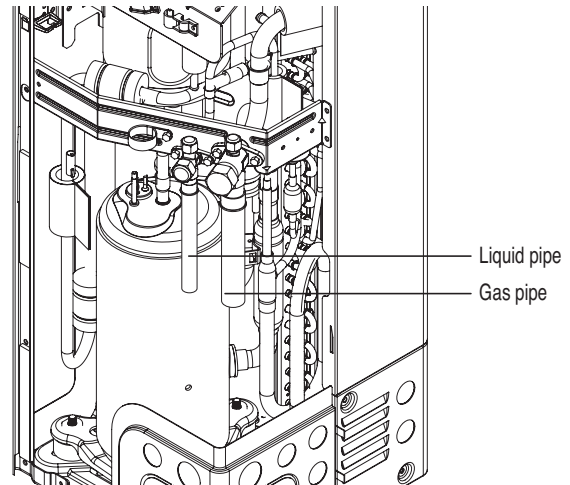
- Install where it can sufficiently support the weight of the outdoor unit.
If the support strength is not enough, the outdoor unit may drop and hurt people.
- Install where the outdoor unit may not fall in strong wind or earthquake.
If there is a fault in the supporting conditions, the outdoor unit 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.

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.

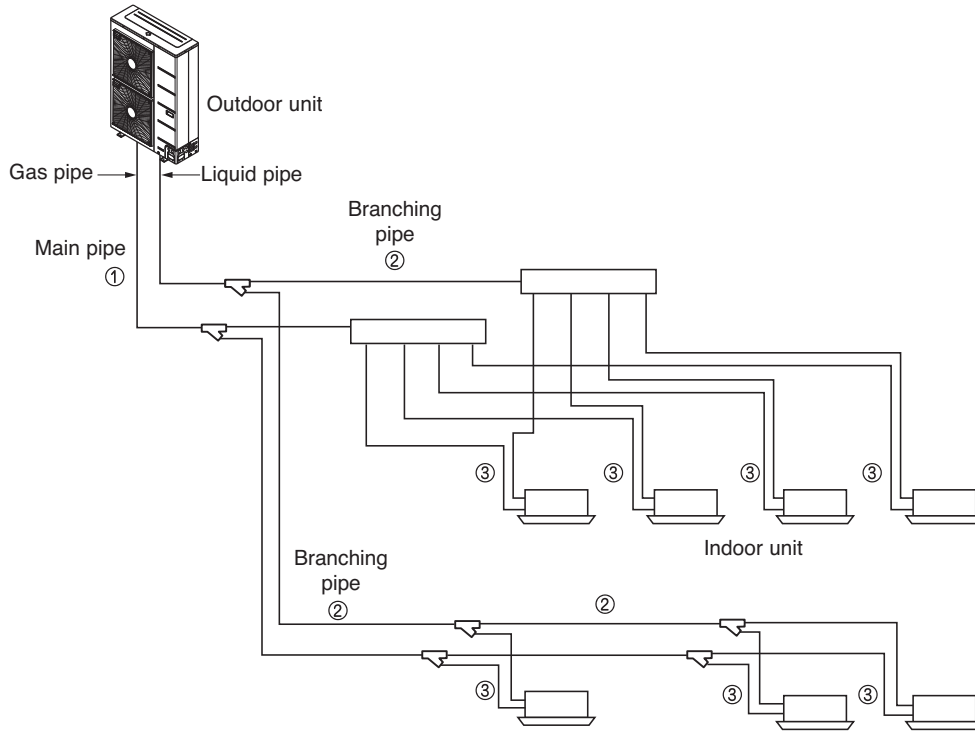
⚠ CAUTION

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

7.1.1 Selection of Refrigerant Piping



No.	Piping parts	Name	Selection of pipe size															
①	Outdoor unit ↓ 1st branching section	Main pipe	Size of main pipe <table border="1"> <thead> <tr> <th>Outdoor unit capacity[HP]</th> <th>Liquid pipe [mm(inch)]</th> <th>Gas pipe [mm(inch)]</th> </tr> </thead> <tbody> <tr> <td>2.5</td> <td>Ø9.52(3/8)</td> <td>Ø15.88(5/8)</td> </tr> <tr> <td>3</td> <td>Ø9.52(3/8)</td> <td>Ø15.88(5/8)</td> </tr> <tr> <td>4</td> <td>Ø9.52(3/8)</td> <td>Ø15.88(5/8)</td> </tr> </tbody> </table>	Outdoor unit capacity[HP]	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]	2.5	Ø9.52(3/8)	Ø15.88(5/8)	3	Ø9.52(3/8)	Ø15.88(5/8)	4	Ø9.52(3/8)	Ø15.88(5/8)			
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4	Ø9.52(3/8)	Ø15.88(5/8)																
②	Branching section ↓ Branching section	Branching pipe	Pipe size of between branching sections <table border="1"> <thead> <tr> <th>Indoor unit capacity[kW(Btu/h)]</th> <th>Liquid pipe [mm(inch)]</th> <th>Gas pipe [mm(inch)]</th> </tr> </thead> <tbody> <tr> <td>≤ 5.6(19,100)</td> <td>Ø6.35(1/4)</td> <td>Ø12.7(1/2)</td> </tr> <tr> <td>< 16.0(54,600)</td> <td>Ø9.52(3/8)</td> <td>Ø15.88(5/8)</td> </tr> <tr> <td>< 22.4(76,400)</td> <td>Ø9.52(3/8)</td> <td>Ø19.05(3/4)</td> </tr> <tr> <td>< 36.4(124,200)</td> <td>Ø9.52(3/8)</td> <td>Ø22.2(7/8)</td> </tr> </tbody> </table>	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)	< 36.4(124,200)	Ø9.52(3/8)	Ø22.2(7/8)
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③	Branching section ↓ Indoor unit	Indoor unit connecting pipe	Connecting pipe size of indoor unit <table border="1"> <thead> <tr> <th>Indoor unit capacity[kW(Btu/h)]</th> <th>Liquid pipe [mm(inch)]</th> <th>Gas pipe [mm(inch)]</th> </tr> </thead> <tbody> <tr> <td>≤ 5.6(19,100)</td> <td>Ø6.35(1/4)</td> <td>Ø12.7(1/2)</td> </tr> <tr> <td>< 16.0(54,600)</td> <td>Ø9.52(3/8)</td> <td>Ø15.88(5/8)</td> </tr> <tr> <td>≤ 22.4(76,400)</td> <td>Ø9.52(3/8)</td> <td>Ø19.05(3/4)</td> </tr> <tr> <td>≤ 28.0(95,900)</td> <td>Ø9.52(3/8)</td> <td>Ø22.2(7/8)</td> </tr> </tbody> </table>	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)
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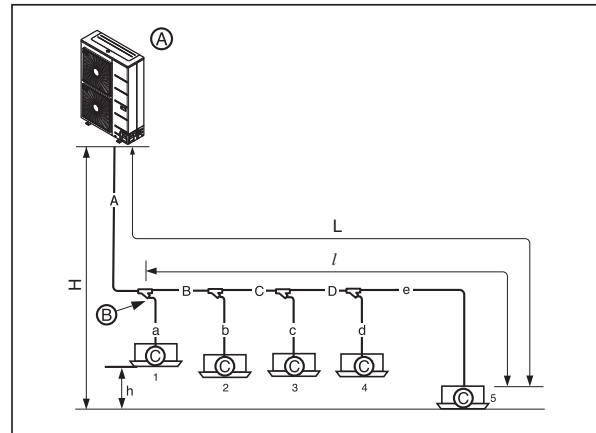
7. Refrigerant Piping System

7.2 Refrigerant piping system

Y branch method

Example : 5 Indoor Units connected

- Ⓐ : Outdoor Unit
- Ⓑ : 1st branch (Y branch)
- Ⓒ : Indoor Units



Outdoor unit capacity (HP)		2.5	3	4
T	Total pipe length (m)	50	80	85
	A+B+C+D+a+b+c+d+e			
L	Longest pipe length (m) (Equivalent pipe length)	30	40	50
	A+B+C+D+e			
l	Longest pipe length after 1st branch (m)	20	30	30
	B+C+D+e			
H	Difference in height (m) (Outdoor Unit ↔ Indoor Unit)	15	15	15
	H			
h	Difference in height (m) (Indoor Unit ↔ Indoor Unit)	7.5	7.5	7.5
	h			

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

Outdoor unit total capacity (HP)	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]
2.5	Ø9.52(3/8)	Ø15.88(5/8)
3	Ø9.52(3/8)	Ø15.88(5/8)
4	Ø9.52(3/8)	Ø15.88(5/8)

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

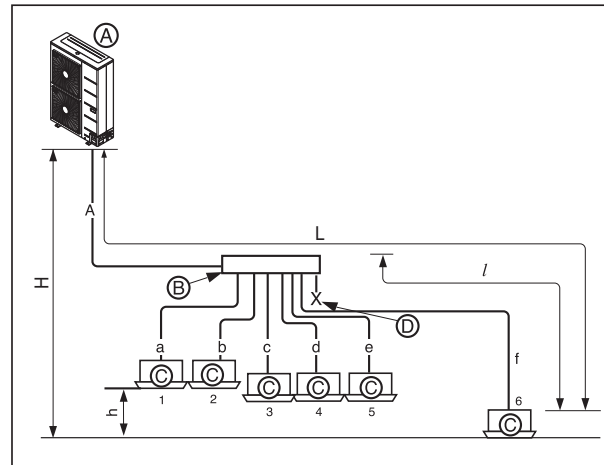
Downward Indoor Unit total capacity [kW(Btu/h)]	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]
≤ 5.6(19,100)	Ø6.35(1/4)	Ø12.7(1/2)
< 16.0(54,600)	Ø9.52(3/8)	Ø15.88(5/8)
≤ 22.4(76,400)	Ø9.52(3/8)	Ø19.05(3/4)
< 36.4(124,200)	Ø9.52(3/8)	Ø22.2(7/8)

7. Refrigerant Piping System

Header Method

Example : 6 Indoor Units connected

- Ⓐ : Outdoor Unit
- Ⓑ : 1st branch
- Ⓒ : Indoor Units
- Ⓓ : Sealed piping



Outdoor unit capacity (HP)		2.5	3	4
T	Total pipe length (m)	50	80	85
	$A+a+b+c+d+e+f$			
L	Longest pipe length (m) (Equivalent pipe length)	30	40	50
	$A+f$			
l	Longest pipe length after 1st branch (m)	20	30	30
	f			
H	Difference in height (m) (Outdoor Unit ↔ Indoor Unit)	15	15	15
	H			
h	Difference in height (m) (Indoor Unit ↔ Indoor Unit)	7.5	7.5	7.5
	h			

⚠ WARNING

Pipe length after header branching (a~f)

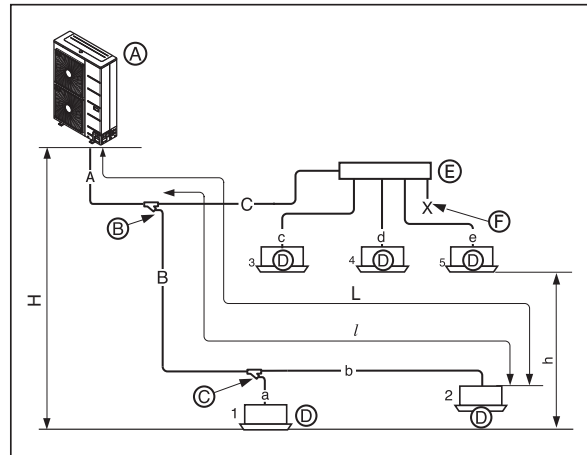
It is recommended that difference in length of the pipes connected to the Indoor Units is minimized. Performance difference between Indoor Units may occur.

7. Refrigerant Piping System

Combination of Y branch/header method

Example : 5 Indoor Units connected

- Ⓐ : Outdoor Unit
- Ⓑ : 1st branch (Y branch)
- Ⓒ : Y branch
- Ⓓ : Indoor Unit
- Ⓔ : Header
- Ⓕ : Sealed piping



Branch pipe can not be used after header

Outdoor unit capacity (HP)		2.5	3	4
T	Total pipe length (m)	50	80	85
	$A+B+C+a+b+c+d+e$			
L	Longest pipe length (m) (Equivalent pipe length)	30	40	50
	$A+B+b$			
l	Longest pipe length after 1st branch (m)	20	30	30
	$B+b$			
H	Difference in height (m) (Outdoor Unit ↔ Indoor Unit)	15	15	15
	H			
h	Difference in height (m) (Indoor Unit ↔ Indoor Unit)	7.5	7.5	7.5
	h			

7. Refrigerant Piping System

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

Outdoor unit total capacity (HP)	Liquid pipe [mm(inch)]	Gas pipe [mm(inch)]
2.5	Ø9.52(3/8)	Ø15.88(5/8)
3	Ø9.52(3/8)	Ø15.88(5/8)
4	Ø9.52(3/8)	Ø15.88(5/8)

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)]
≤ 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)
< 36.4(124,200)	Ø9.52(3/8)	Ø22.2(7/8)

Outdoor unit Connection

WARNING

- In case of pipe diameter B connected after first branch is bigger than the main pipe diameter A, B should be of the same size with A.

7. Refrigerant Piping System

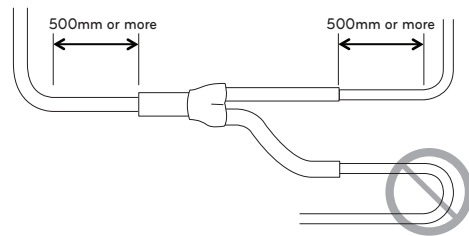
7.2 Indoor Unit Connection

▷ 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 cause Performance unsatisfactory or noise.



7.3 The amount of Refrigerant

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

$$\begin{aligned}
 \text{Additional charge(kg)} &= \text{Total liquid pipe : } \text{Ø9.52 mm} \times 0.061(\text{kg/m}) \\
 &+ \text{Total liquid pipe : } \text{Ø6.35 mm} \times 0.022(\text{kg/m}) \\
 &+ \text{CF value of indoor unit (kg/EA)}
 \end{aligned}$$

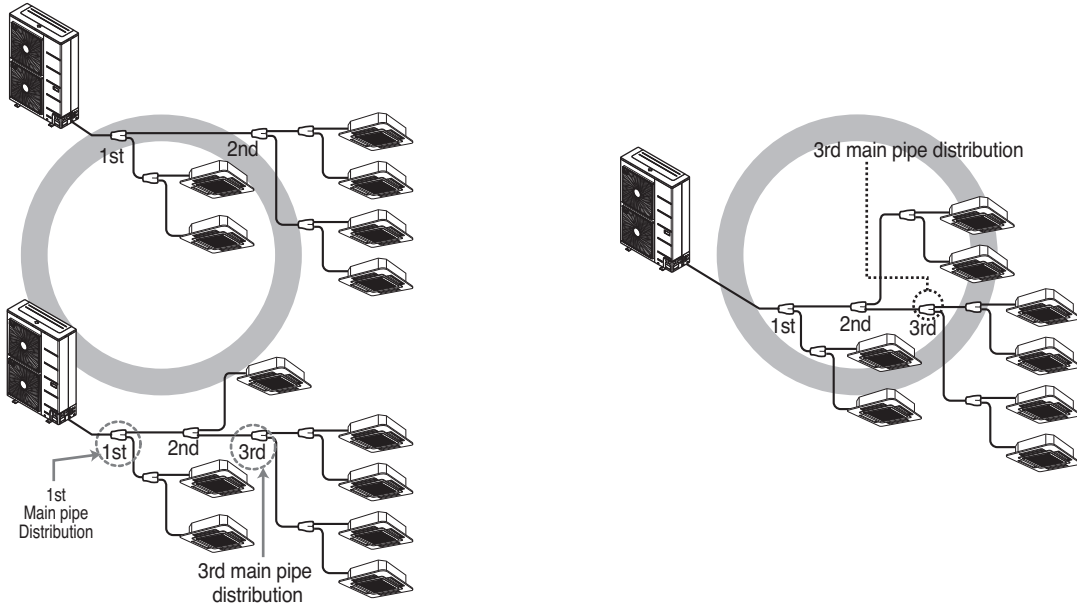
Note:

For CF value (additional refrigerant) table of indoor units, please refer to installation manual of outdoor unit.

7. Refrigerant Piping System

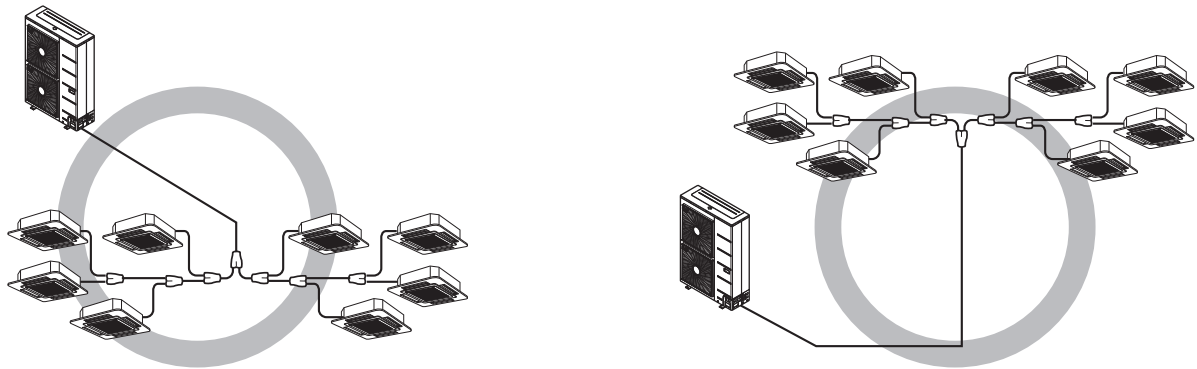
7.4 Distribution Method

1. Line Distribution

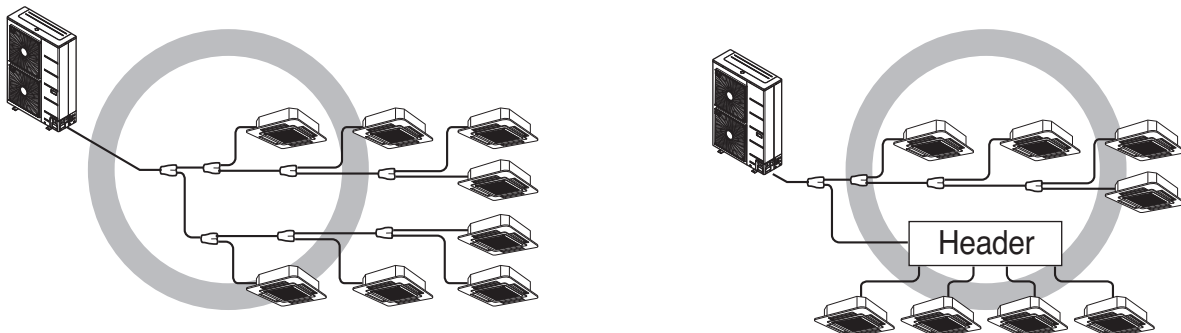


2. Vertical Distribution

Ensure that the branch pipes are attached vertically.



3. The others



7. Refrigerant Piping System

7.5.2 Header

[unit:mm]

Models	Gas pipe	Liquid pipe
4 branch ARBL054		
7 branch ARBL057		
4 branch ARBL104		
7 branch ARBL107		
10 branch ARBL1010		
10 branch ARBL2010		

8. Electrical Wiring

8.1 Electrical Wiring

8.1.1 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

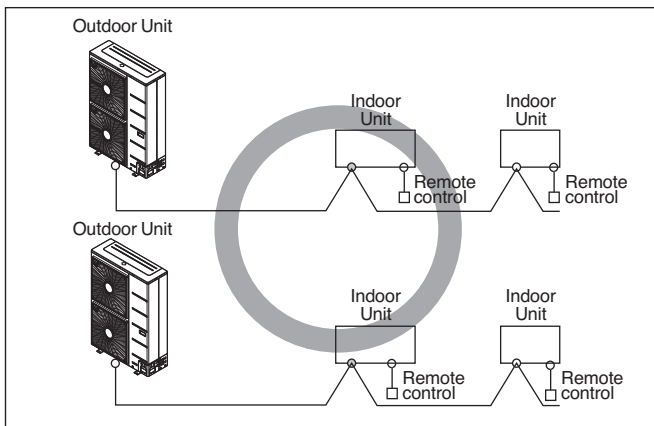
Be sure to have authorized electrical engineers do the electric work using special circuits in accordance with regulations and this installation manual. If power supply circuit has a lack of capacity or electric work deficiency, it may cause an electric shock or fire.

- 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.

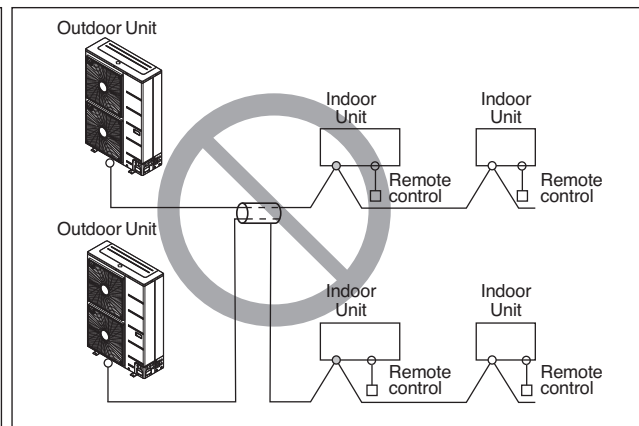
⚠ CAUTION

Be sure to connect the Outdoor Unit to earth. Do not connect earth line to any gas pipe, water 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 multiple-core 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

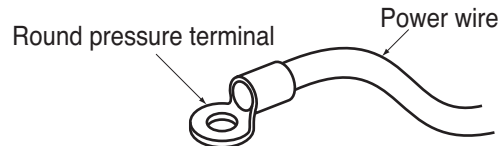
8. Electrical Wiring

⚠ CAUTION

- This product has a reversed phase protection detector that only works when the power is turned on. If there is a black out 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.
- 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.

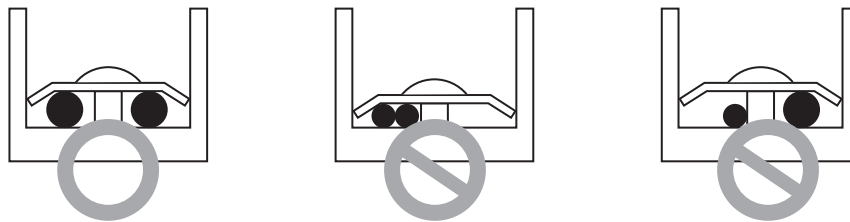
◆ Precautions when laying power wiring

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

8.1.2 Communication and Power Cables

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 cable (Shielding cable)	1.0~1.5mm ²
AC Smart	2-core cable (Shielding cable)	1.0~1.5mm ²
AC Ez	4-core cable (Shielding cable)	1.0~1.5mm ²

4) Separation of communication and power cables

- If communication and power cables 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 power cables where these are to be run side by side

Current capacity of power cable		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 cable 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.

8. Electrical Wiring

8.2 Checking the setting of outdoor units

8.2.1 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.

8.2.2 Checking the initial display

The number is sequentially appeared at the 7 segment in 5 seconds after applying the power. This number represents the setting condition. (For example, represents R410A 6HP)

• Initial display order

Order	No	Note
①	2~6	Model capacity
②	1	Cooling only
	2	Heat pump
③	38	380V
	46	460V
	22	220V
④	1	Standard
	5	Cold temperature area
	6	Tropical

• Example) ARUV060GSD0

①	②	③	④
6	1	22	1

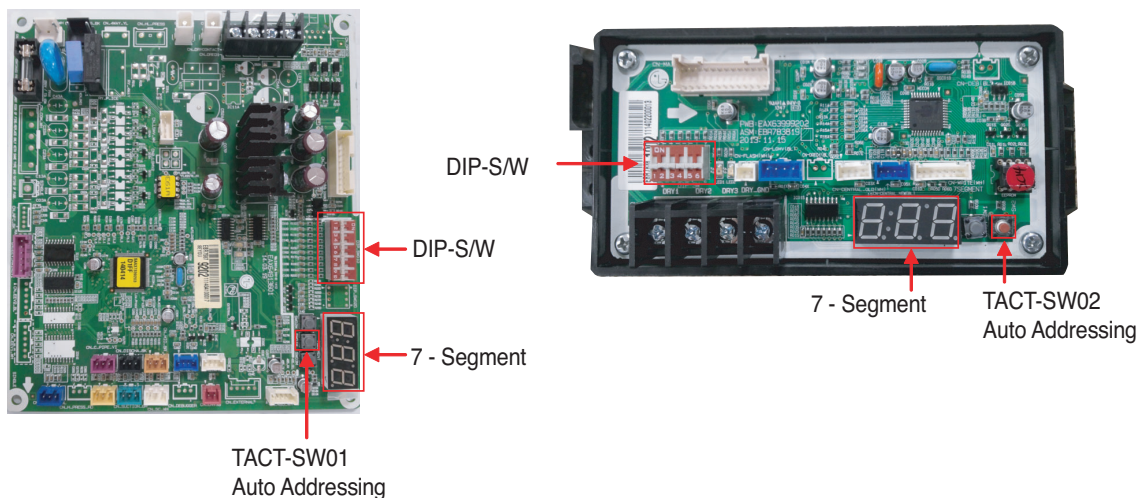
8. Electrical Wiring

8.3 Automatic Addressing

• **The address of indoor units would be set by auto addressing**

- 1) Wait for 3 minutes after supplying power. (IDU and ODU should be off)
- 2) Press RED button of the outdoor units for 5 seconds. (5/6HP : SW01, 2.5/3/4HP : SW02)
- 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)

■ **Main PCB**

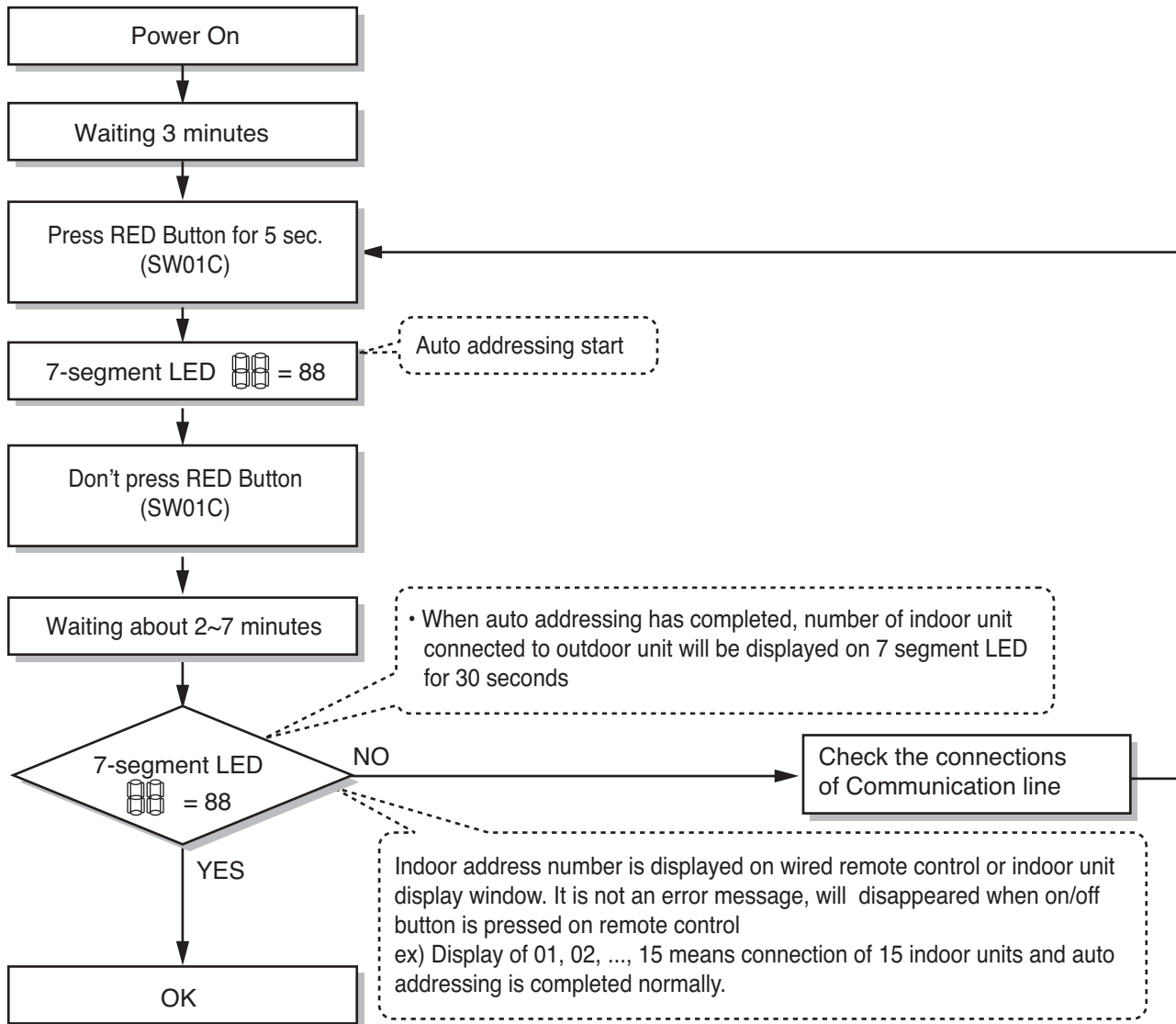


⚠ CAUTION

- 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.
- Auto addressing is only possible on the master Unit.
- Auto addressing has to be performed after 3 minutes to improve communication.

8. Electrical Wiring

◆ The Procedure of Automatic Addressing





Special Guide

- 1. Cautions for Refrigerant 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.

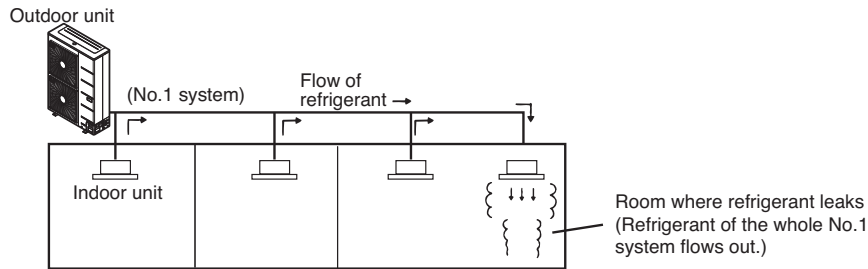
1.1 Introduction

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

■ 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.

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

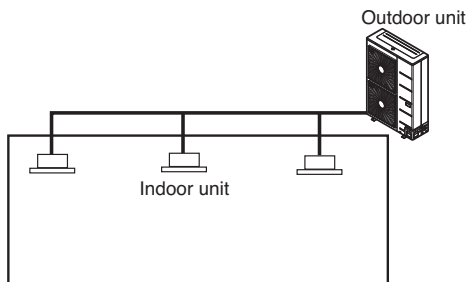
$$\begin{array}{r}
 \text{Amount of replenished} \\
 \text{refrigerant per one outdoor} \\
 \text{unit system} \\
 | \\
 \text{Amount of replenished} \\
 \text{refrigerant at factory shipment}
 \end{array}
 +
 \begin{array}{r}
 \text{Amount of additional} \\
 \text{replenished refrigerant} \\
 | \\
 \text{Amount of additionally} \\
 \text{replenished refrigerant} \\
 \text{depending on piping} \\
 \text{length or piping} \\
 \text{diameter at customer}
 \end{array}
 =
 \begin{array}{r}
 \text{Total amount of replenished} \\
 \text{refrigerant in refrigerant} \\
 \text{facility (kg)}
 \end{array}$$

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.

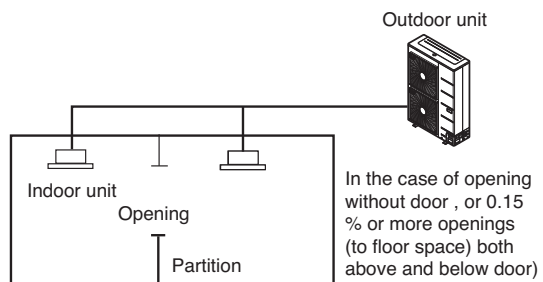
■ Calculate minimum room capacity

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

(1) Without partition

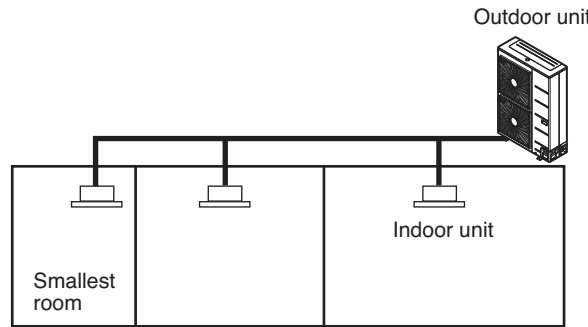


(2) With partition and with opening which serve as passage of air to adjoining room



1. Caution For Refrigerant Leaks

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



■ Calculate refrigerant concentration

$$\frac{\text{Total amount of replenished refrigerant in refrigerant facility (kg)}}{\text{Capacity of smallest room where indoor unit is installed (m}^3\text{)}} \leq \text{Refrigerant concentration (kg/m}^3\text{)} \quad \text{(R410A)}$$

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:

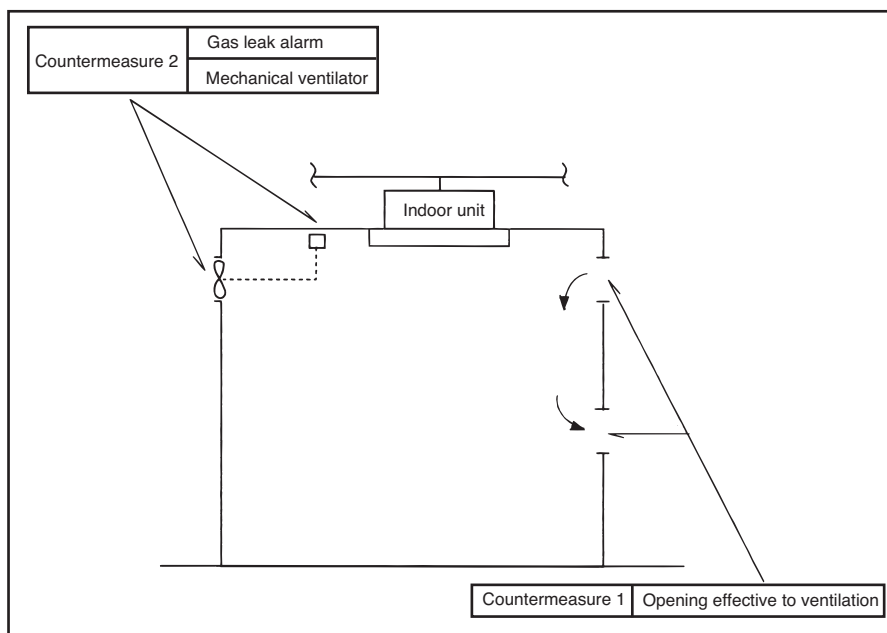
• Counter measure 1

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.



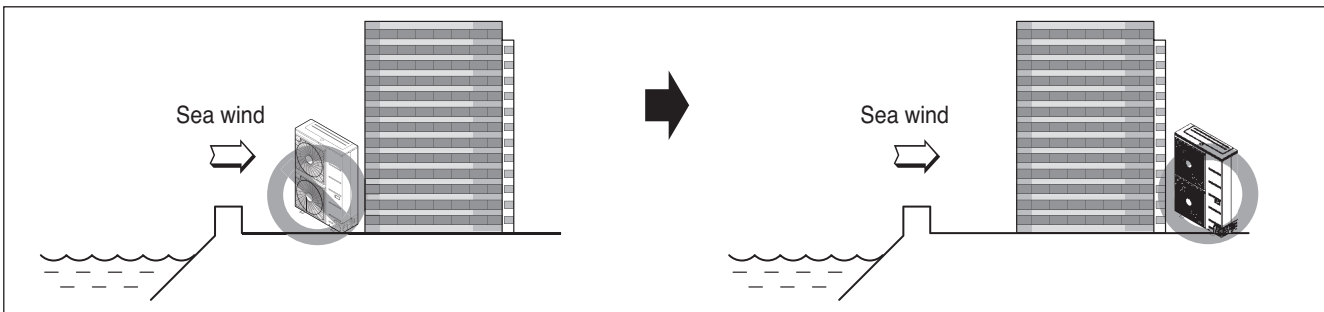
2. Installation guide at the seaside

⚠ CAUTION

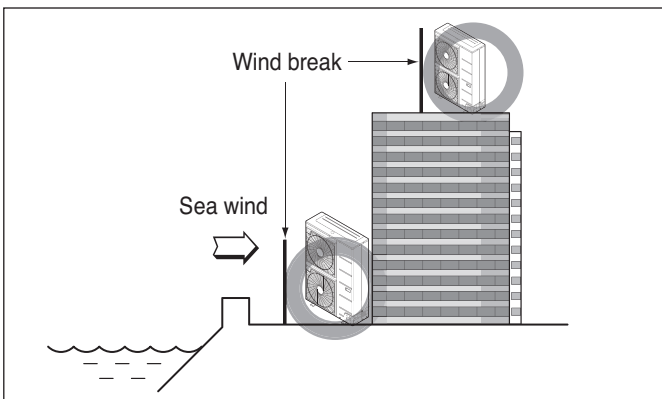
1. Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator 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 anticorrosion 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 should 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 should be keep 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.)

1. Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water.

2. Installation guide at the seaside

2.2 Installation and maintenance

Even though the corrosion resistance model has reinforced material or coating, it is still not completely safe from corrosion. And for this reason, you need to increase the effect of preventing corrosion through installation planning and maintenance/repair.

- (1) Install the product where it will avoid salt water splash and beach sand as much as possible.
 - Install the machine in the direction the wind blows away from the building.
 - If you inevitably have to install the machine on by the shore, install a fence to block the wind to avoid direct contact from sea wind.
 - Be careful of the installation direction.
(The level of corrosion differs when the unit is parallel or vertical to the coast line.)
- (2) Try to install the unit so that the particles from the sea side attached on the exterior panel can be sufficiently cleaned by the rain.
- (3) Because the water collected within the floor of the outdoor unit significantly accelerates the corrosion process, make sure to install the unit so that water is well drained considering the inclination etc.
- (4) For the outdoor unit installed on the sea shore, periodically wash the unit with clean water to remove any salt attached on the unit.
- (5) Install the unit where it is well drained. Especially, secure good drainage at the floor part.
- (6) Always repair dents caused from installation, maintenance etc.
- (7) Periodically check the condition of the machine (Set water resistance treatment or replace parts, if necessary.)
- (8) When you are not running the machine for a long period of time, such as during the off season, put a cover on the outdoor unit.
- (9) Sufficiently maintain the machine well. (When installing the corrosion resistance coating such as water resistant grease or wax, repeat the coating every 3 months) Also, when install the machine in a special environment, you need to take separate consideration sufficiently.



P/No.: MFL67474029



Air Solution

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The specifications, designs, and information in this brochure are subject to change without notice.