

LG

MULTI F

(60Hz/R410A)

6CIM0-02C (Replace: 6CIM0-02B)

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK



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CONTENTS

Part 1 General information

Part 2 Product data

Part 3 Design and installation

Part 4 Special parts

Preface

New era brings the more sophisticated and advanced buildings which in turn demands for specialized and optimized direct expansion air conditioning systems. Also energy efficiency, environment friendly, low noise and low maintenance are the features which are essential for these systems.

As a part of vertical integration LG makes all the key components in house, which gives us an edge to LG to make better and latest technology products with best quality in optimized time.

MULTI F™ systems are equipped with inverter technology and R410A refrigerant which is perfect solution to various installation locations.

This Engineering product data book incorporates information about the product itself, and installation, designing for MULTI F™ system.

The comprehensive study of this book will improve your knowledge about the system and its application in detail.

LG Electronics Inc.
Air Conditioning Company

Publication history

Pub. No.	Frequency	Category	Type	Product name	Refrigerant	Outdoor units	Notes	Published in
6CIM0-01A	60Hz	CAC	Multi Inverter	Multi F	R410A	All models	New edition of EPDB - Engineering data addition - Design and installation guideline addition	April/2010
6CIM0-01B	60Hz	CAC	Multi Inverter	Multi F	R410A	All models	Change information - Dimensions - Field Wiring Diagrams - Installation Guide	Oct/2010
6CIM0-02A	60Hz	CAC	Multi Inverter	Multi F	R410A	-	Add new Models - A2UW183FA2 / A3UW243FA2 - AMNW09GDBL0 / AMNW12GDBL0 / AMNW18GDCL0	Nov/2010
6CIM0-02B	60Hz	CAC	Multi Inverter	Indoor Unit (Ducted Type)	R410A	AMNW09GB1A0 AMNW12GB1A0 AMNW18GB2A0	Update Product Dimensions	March/2011
6CIM0-02C	60Hz	CAC	Multi	Multi F	R410A	A2UW183FA2 A3UW243FA2 A4UW363FA1 A4UW363FA2	Correct errors on Electric Characteristics Update Operation Range Graph Update the Dimensions of TR/Q Chassis	June/2011

Step by step MULTI F™ system selection process (reference)

- (1) Calculate or obtain the maximum heat load for the area(s) to be air conditioned



- (2)
- Indoor unit specifications
 - Outdoor unit specifications
 - Capacity coefficient factor
 - Air flow and temperature distributions



- (3) Selection of BD unit and branch



- (4)
- Selection of the control system
 - Control wiring method
 - Description of devices



- (5)
- Electrical wiring
 - Electrical characteristics
 - Field wiring

⚠ CAUTION

- Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
- If the outdoor unit is installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

Part 1 General information

- 1. Model line up**
- 2. Nomenclature**
- 3. Appearance**
- 4. List of functions**
- 5. Control system(accessory)**
- 6. Combination**

1. Model line up

1.1 Indoor units

Category	Type	Chassis		Model names		
				Capacity, kW(kBtu/h Class)		
				2.64 (9)	3.52 (12)	5.28 (18)
Wall mounted	LIBERO		SB	AMNW09GDBL0 [LMN096HVT]	AMNW12GDBL0 [LMN126HVT]	
			SC			AMNW18GDCL0 [LMN186HVT]
ART COOL			SE	AMNW09GDER1 [LMAN095HVT]	AMNW12GDER1 [LMAN125HVT]	
			S8			AMNW18GD8R1 [LMAN185HVT]
Ceiling cassette			TR		AMNW12GTRA0 [LMCN125HV]	
			TQ			AMNW18GTQA0 [LMCN185HV]
Ceiling concealed duct	Low static pressure (Slim)		B1	AMNW09GB1A0 [LMDN095HV]	AMNW12GB1A0 [LMDN125HV]	
			B2			AMNW18GB2A0 [LMDN185HV]

MULTI F™

1. Model line up

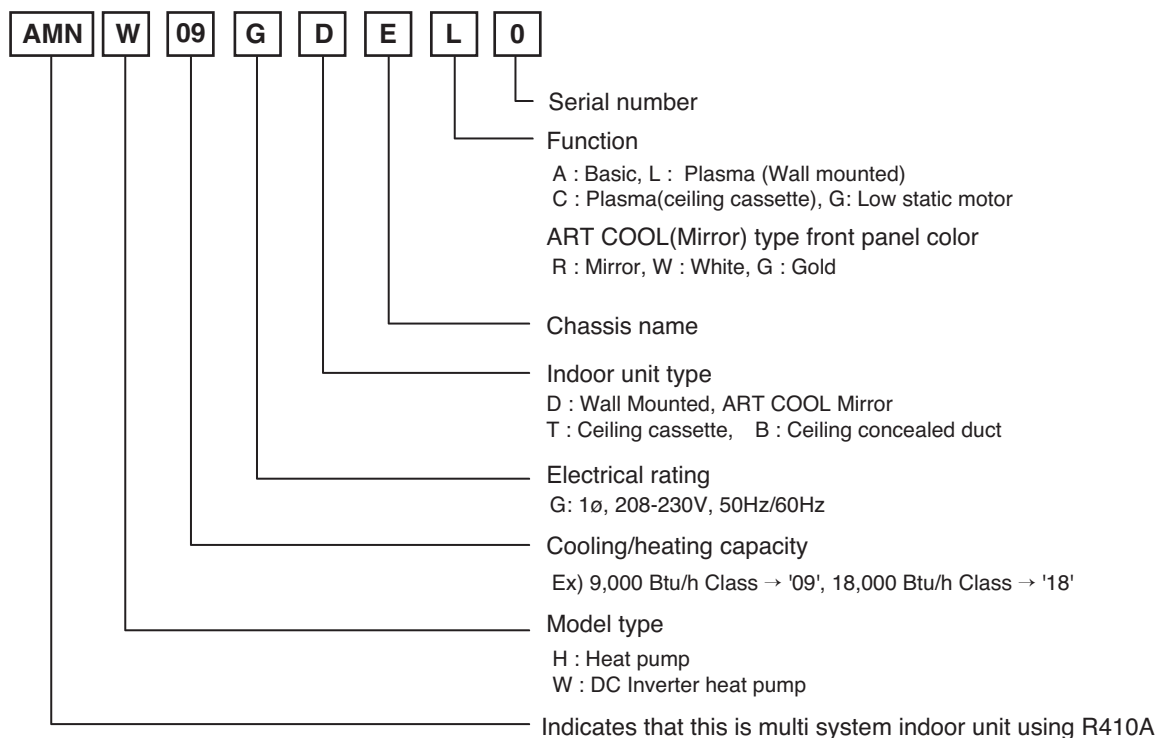
1.2 Outdoor units

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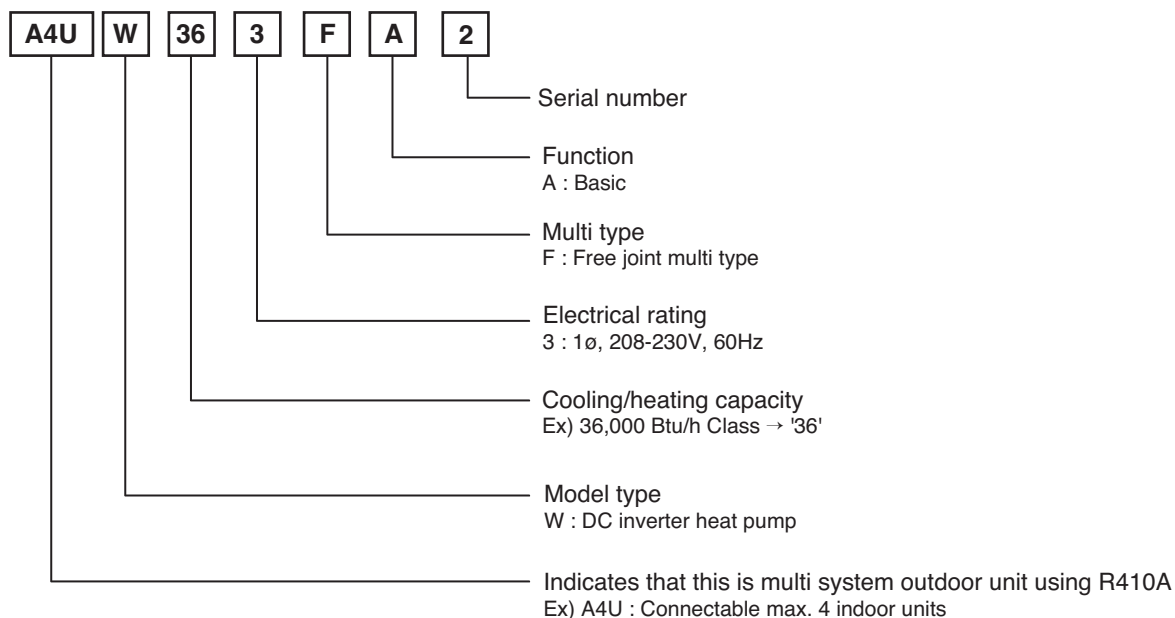
Heat pump	A2UW183FA2 [LMU187HV]	A3UW243FA2 [LMU247HV]	A4UW363FA1 [LMU366HV]	A4UW363FA2 [LMU369HV]
No. of connectable indoor units	Max.2	Max.3	Max.4	Max.4
Total capacity index of connectable indoor units	24	33	48	48
Power supply	1Ø, 208-230V, 60Hz			
Chassis				

2. Nomenclature

2.1 Indoor units(Global)



2.2 Outdoor unit(Global)



3. Appearance

3.1 Indoor units

• Wall Mounted (LIBERO)

AMNW09GDBL0[LMN096HVT]
AMNW12GDBL0[LMN126HVT]
AMNW18GDCL0[LMN186HVT]



• ART COOL Mirror

AMNW09GDER1[LMAN095HVT]
AMNW12GDER1[LMAN125HVT]
AMNW18GD8R1[LMAN185HVT]



Standard Mirror
PSAPECR10



Organic Cream White
PSAPECW10



Art Flower Gold
PSAPECF10



Snow Flower White
PSAPECT10

• Ceiling Concealed Duct – Low static pressure

AMNW09GB1A0[LMDN095HV]
AMNW12GB1A0[LMDN125HV]
AMNW18GB2A0[LMDN185HV]



• Ceiling Cassette 4-way

AMNW12GTRA0[LMCN125HV]
AMNW18GTQA0[LMCN185HV]

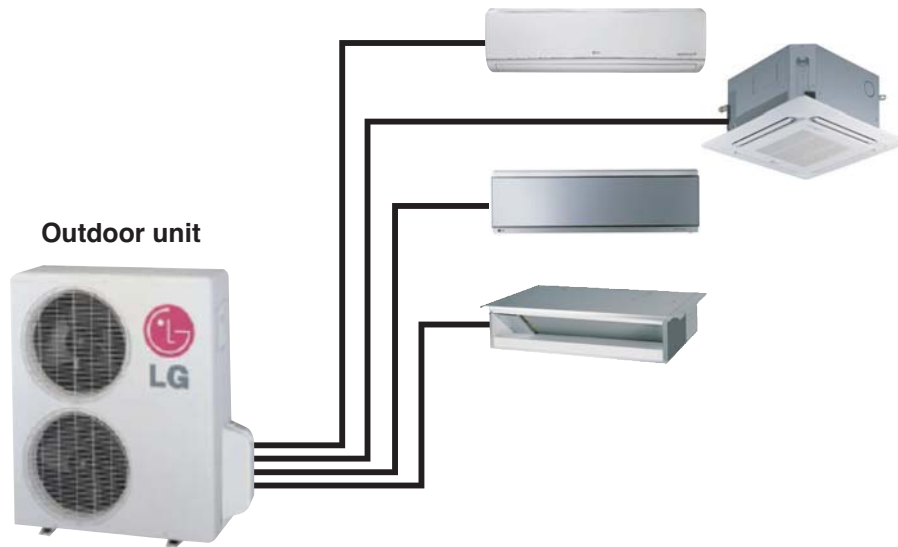


3. Appearance

3.2 Outdoor units

LG multi system provides various indoor units such as wall mounted, ART COOL Mirror, ceiling cassette and ceiling concealed duct.

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A2UW183FA2[LMU187HV]
A3UW243FA2[LMU247HV]
A4UW363FA1[LMU366HV]



A4UW363FA2[LMU369HV]

3. Appearance

3.3 Control system(standard)

These controllers will be provided with the respective indoor units.

Type	Individual controller	Applicable model
Wired remote controller		Ceiling concealed duct
Wireless remote controller		Wall mounted ART COOL Mirror Ceiling cassette

4. List of functions

Category	Function	Wall Mounted (LIBERO)	ART COOL Mirror	Ceiling Cassette 4-way	Ceiling Concealed Duct (Low static)
Air flow	Air supply outlet	1	1	4	1
	Airflow direction control(left & right)	Auto	Auto	X	-
	Airflow direction control(up & down)	Auto	Auto	Auto	-
	Auto swing(left & right)	O	O	X	-
	Auto swing(up & down)	O	x	O	-
	Airflow steps(fan/cool/heat)	5 / 6 / 6	3 / 4 / 3	4 / 5 / 4	3 / 3 / 3
	Chaos swing	X	O	X	-
	Chaos wind(auto wind)	O	X	O	X
	Jet cool/heat(Power wind)	O/O	O/X	O/X	O/X
	Swirl wind	X	X	O	X
Air purifying	Deodorizing filter	O	O	X	X
	Allergy free filter	O	X	X	X
	Plasma air purifier	O	O	Option	X
	Prefilter(washable / anti-fungus)	O	O	O	O
Installation	Drain pump	-	-	O	O
	E.S.P. control	-	-	-	O
	Electric heater(operation)	-	-	X	X
	High ceiling operation	-	-	O	-
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	O	O	X	X
	Auto operation(artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	O	-	O	O
	Energy-Saving Cooling Mode	O	X	X	X
	Forced operation	O	O	O	X
	Group control	-	-	O	O
	Sleep mode	O	O	O	X
	Timer(on/off)	O	O	O	X
	Timer(weekly)	O	-	O	X
	Two thermistor control	O	-	O	O
Individual control	Wide wired remote controller	Accessory	Accessory	Accessory	Accessory
	Deluxe wired remote controller	X	X	X	X
	Simple wired remote controller	Accessory	Accessory	Accessory	O
	Simple wired remote controller(for hotel use)	-	-	-	-
	Wireless remote controller(simple)	X	X	X	X
	Wireless LCD remote control	X	X	X	X
	Wireless LCD remote control(Ez)	O	O	O	Accessory
CAC network function	General central controller (Non LGAP)	X	X	X	X
	Dry contact	Accessory	Accessory	Accessory	Accessory
	Dry contact(temperature setting)	Accessory	Accessory	Accessory	Accessory
	Central control(LGAP)	O	O	O	O
	PDI(power distribution indicator)	Accessory	Accessory	Accessory	Accessory
	PI 485	Accessory	Accessory	Accessory	Accessory
Special function kit	CTIE	X	X	-	X
	Zone control	X	X	-	X
Others	Thermistor	-	-	-	-

* Some of functions are slightly different depending upon models, refer individual function table on. indoor units".

** For ceiling concealed duct models, auto-run function of dry contact is not applicable.

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

5. Control system(Accessory)

5.1 Individual control system

Item	Model name	Image	Function	Applicable model
Wired remote controller	Wide type	PQRCVSL0 	• On/off, fan speed, mode, temperture • Room temperture • Fan, plasma, swirl swing • Automatic • Vane control • ESP function • Reservation(simple/weekly) • Simple reservation • Timer function • Auto swing, child lock	Ceiling cassette Ceiling concealed duct Wall Mounted(Standard) Art Cool Mirror
	Simple type	PQRCUCS0C 	• On/Off Function • Fan speed Button • Temperature control Button • Mode Selection check Button • ESP Functon • Wireless Remocon Receiver	

5.2 Control device

Item	Model name	Image	Application model
Product interface units	Dry_contact	PQDSA 	Wall mounted ART COOL Mirror Ceiling cassette Ceiling concealed duct
	PQDSB		

6. Combination

6.1 Selection procedure

MULTI F (1 phase)

Outdoor units selection

In general, outdoor unit may be selected as follows, though the location of the unit, and usage of the room, etc. should be considered.

The combination of indoor and outdoor unit was to be decided that the sum of indoor unit capacity index should be smaller than the max. combination capacity of outdoor unit. Up to Max.4 indoor units can be connected to one outdoor unit. It is recommended to choose a large capacity outdoor unit if the installation space is large enough.

Model name		Heat pump			
		A2UW183FA2 [LMU187HV]	A3UW243FA2 [LMU247HV]	A4UW363FA1 [LMU366HV]	A4UW363FA2 [LMU369HV]
Capacity (kBtu/h Class)	Cooling	15.6	19.2	34.0	34.0
	Heating	17.0	26.4	37.0	41.0
Connectable indoor units	Number of indoor units	Max. 2 Uints	Max. 3 Uints	Max. 4 Uints	Max. 4 Uints
	Total capacity index	24	33	48	48

Indoor units selection

Look up the table on combination of indoor and outdoor unit', and determine the appropriate indoor unit capacity which satisfies the given thermal load.

For proper system operation, refer to the following:

- 1) At least 2 indoor units should be connected to outdoor unit.
- 2) Total capacity of indoor units connected should be minimum 40% of outdoor unit above mentioned capacity.
- 3) Calculation method for the connectable total capacity of indoor unit sum up the capacity of indoor unit.

Unit Capacity(kBtu/h Class)	9	12	18
Capacity Index	9	12	18

6. Combination

6.2 Combination of indoor and outdoor unit

The total capacity index of indoor units is the sum of capacity index of each units and should be within the capacity index of the outdoor unit.

Indoor units			Outdoor units			
			A2UW183FA2 [LMU187HV]	A3UW243FA2 [LMU247HV]	A4UW363FA1 [LMU366HV]	A4UW363FA2 [LMU369HV]
Model type	Capacity*		No. of connectable indoor units			
	Index	Btu/h Class	2	3	4	4
Wall mounted (LIBERO)	9	9,000	O	O	O	O
	12	12,000	O	O	O	O
	18	18,000	-	O	O	O
ART COOL Mirror	9	9,000	O	O	O	O
	12	12,000	O	O	O	O
	18	18,000	-	O	O	O
Ceiling cassette 4-way	12	12,000	O	O	O	O
	18	18,000	-	O	O	O
Ceiling Concealed Duct-Low static	9	9,000	O	O	O	O
	12	12,000	O	O	O	O
	18	18,000	-	O	O	O

Note: For more capacity* information, refer to the combination tables.

MULTI F

Part 2 Product data

- **Indoor units**
- **Outdoor units**

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■ Indoor units

1. Wall mounted(LIBERO)
2. ART COOL Mirror
3. Ceiling cassette 4-way
4. Ceiling concealed duct - Low static pressure

1. Wall mounted(LIBERO)

1.1 List of functions

Category	Function	AMNW09GDBL0 [LMN096HVT]	AMNW12GDBL0 [LMN126HVT]	AMNW18GDCL0 [LMN186HVT]
Air flow	Air supply outlet	1	1	1
	Airflow direction control(left & right)	Auto	Auto	Auto
	Airflow direction control(up & down)	Auto	Auto	Auto
	Auto swing(left & right)	O	O	O
	Auto swing(up & down)	O	O	O
	Airflow steps(fan/cool/heat)	5/6/6	5/6/6	5/6/6
	Chaos swing	X	X	X
	Chaos wind(auto wind)	O	O	O
	Jet cool/heat(Power wind)	O/O	O/O	O/O
Air purifying	Swirl wind	X	X	X
	Deodorizing filter	O	O	O
	Allergy free filter	O	O	O
	Plasma air purifier	O	O	O
Installation	Prefilter(washable / anti-fungus)	O	O	O
	Drain pump	-	-	-
	E.S.P. control	-	-	-
	Electric heater(operation)	-	-	-
Reliability	High ceiling operation	-	-	-
	Hot start	O	O	O
	Self diagnosis	O	O	O
Convenience	Soft dry operation	O	O	O
	Auto changeover	X	X	X
	Auto cleaning	O	O	O
	Auto operation(artificial intelligence)	O	O	O
	Auto restart operation	O	O	O
	Child lock	O	O	O
	Energy-Saving Cooling Mode	O	O	O
	Forced operation	O	O	O
	Group control	-	-	-
	Sleep mode	O	O	O
	Timer(on/off)	O	O	O
	Timer(weekly)	O	O	O
Individualcontrol	Two thermistor control	O	O	O
	Wide wired remote controller	PQRCVSL0	PQRCVSL0	PQRCVSL0
	Deluxe wired remote controller	X	X	X
	Simple wired remote controller	PQRCUCS0C	PQRCUCS0C	PQRCUCS0C
	Simple wired remote controller(for hotel use)	-	-	-
	Wireless remote controller(simple)	X	X	X
	Wireless LCD remote control	X	X	X
CAC networkfunction	Wireless LCD remote control(Ez)	O	O	O
	General central controller (Non LGAP)	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB
	Dry contact(temperature setting)	PQDSBC	PQDSBC	PQDSBC
	Central control(LGAP)	O	O	O
	PDI(power distribution indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
Specialfunction kit	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0
	CTIE	X	X	X
Others	Zone control	X	X	X
	Thermistor	-	-	-

※ PDI (power distribution indicator) & PI 485 are installed outdoor unit.

Note :

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

1. Wall mounted(LIBERO)

1.2 Specifications

Indoor unit type			Wall mounted(LIBERO)		
Model			AMNW09GDBL0 [LMN096HVT]	AMNW12GDBL0 [LMN126HVT]	AMNW18GDCL0 [LMN186HVT]
Decorative panel model name			-	-	-
Power Supply		Ø / V / Hz	1/208-230/60	1/208-230/60	1/208-230/60
Capacity(*)		Btu/h Class	9,000	12,000	18,000
Current	Running Current	A	0.15	0.15	0.25
Fan	Motor Type		BLDC	BLDC	BLDC
	Fan Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor Output(W) x No. of Unit		14.4x1	14.4x1	76x1
	Air Flow Rate (H / M / L)	CMM	7.0/6.5/6.0	9.5/9.0/8.5	16.2/14.2/12.3
		CFM	247/230/212	336/318/300	572/502/434
	External Static Pressure	mmAq	-	-	-
	Capacitor	µF / Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x Column x FPI		2R x 16C x 23	2R x 16C x 23	3R x 18C x 22
Dimensions (W x H x D)	Body	mm	895 x 285 x 210	895 x 285 x 210	1030 x 325 x 250
		inch	35 1/4 x 11 7/32 x 8 9/32	35 1/4 x 11 7/32 x 8 9/32	40 9/16 x 12 25/32 x 9 27/32
	Decorative Panel	mm	-	-	-
		inch	-	-	-
Net Weight	Body	kg (lbs)	11(24.5)	11(24.5)	17(37.5)
	Decorative Panel	kg (lbs)	-	-	-
Air Filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound Level (H / M / L)		dB(A)+3	33/30/27	39/36/31	37/33/28
Piping	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
Connections	Gas	mm (inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
	Drain(OD/ID)	mm(inch)	21.5/16.0 (27/32 / 5/8)	21.5/16.0 (27/32 / 5/8)	21.5/16.0 (27/32 / 5/8)
Dehumidification Rate		l/h(pts/h)	1.1(2.3)	1.2(2.5)	1.9(4.0)
Safety Devices			Fuse, Thermal Protector for Fan Motor		
Temperature Sensor			Thermistor	Thermistor	Thermistor
Refrigerant			R410A	R410A	R410A
Refrigerant Control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Transmission Interunit Cable		No. x AWG	4x18(including earth)	4x18(including earth)	4x18(including earth)

Note :

- Capacities are based on the following conditions:
 Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB
 - Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB
 Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
 - Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB
 Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)
 - Level Difference of Zero
- Wiring cable size must comply with the applicable local and national code.
- The specification may be subject to change without prior notice for purpose of improvement.
- For more Capacity(*),refer to the combination table

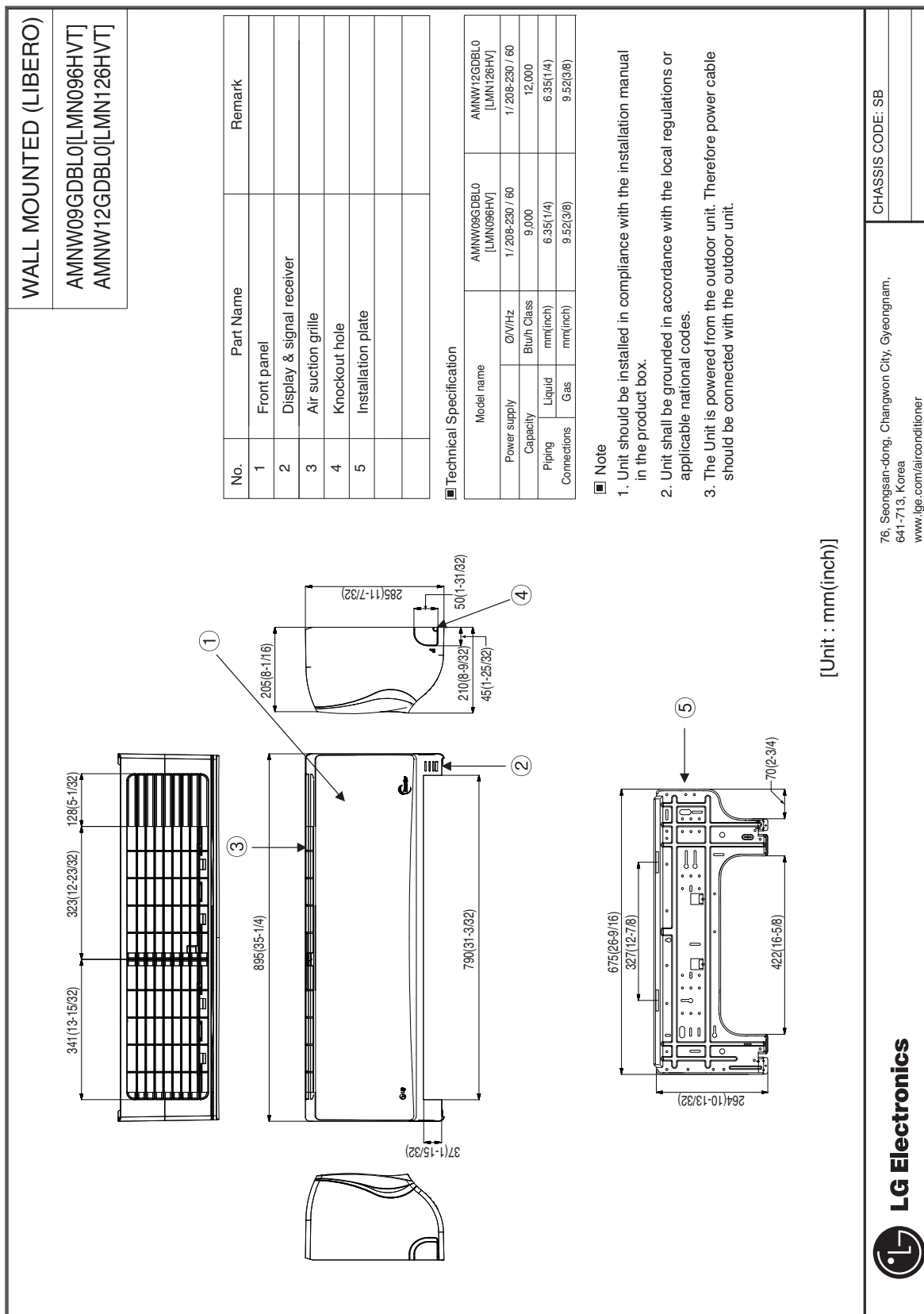
Conversion Formula

$$\text{kW} = \text{Btu/h Class} \times 0.0002931$$

$$\text{CFM} = \text{CMM} \times 35.3$$

1. Wall mounted(LIBERO)

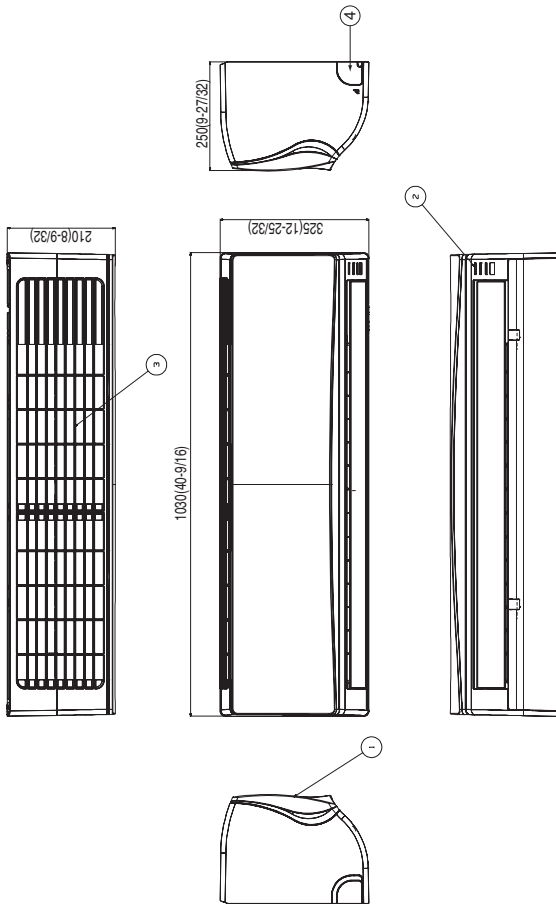
1.3 Dimensions



1. Wall mounted(LIBERO)

WALL MOUNTED (LIBERO)

AMNW18GDCL0[LMN186HVT]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

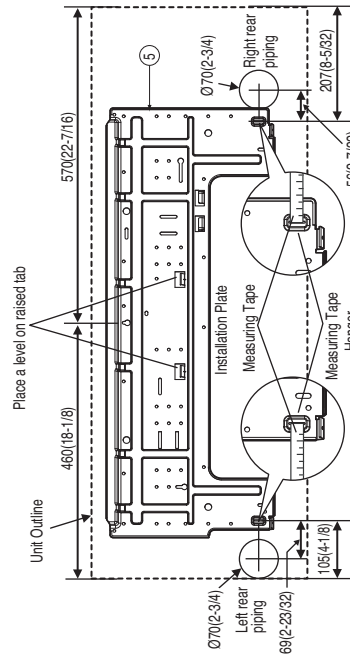
Technical Specification

Model name		AMNW18GDCL0 [LMN186HVT]
Power supply Capacity	Q/V/Hz	1 / 208-230 / 60
	Btu/h Class	18,000
Piping Connections	Liquid mm(inch)	6.35(1/4)
	Gas mm(inch)	12.7(1/2)

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

[Unit : mm(inch)]



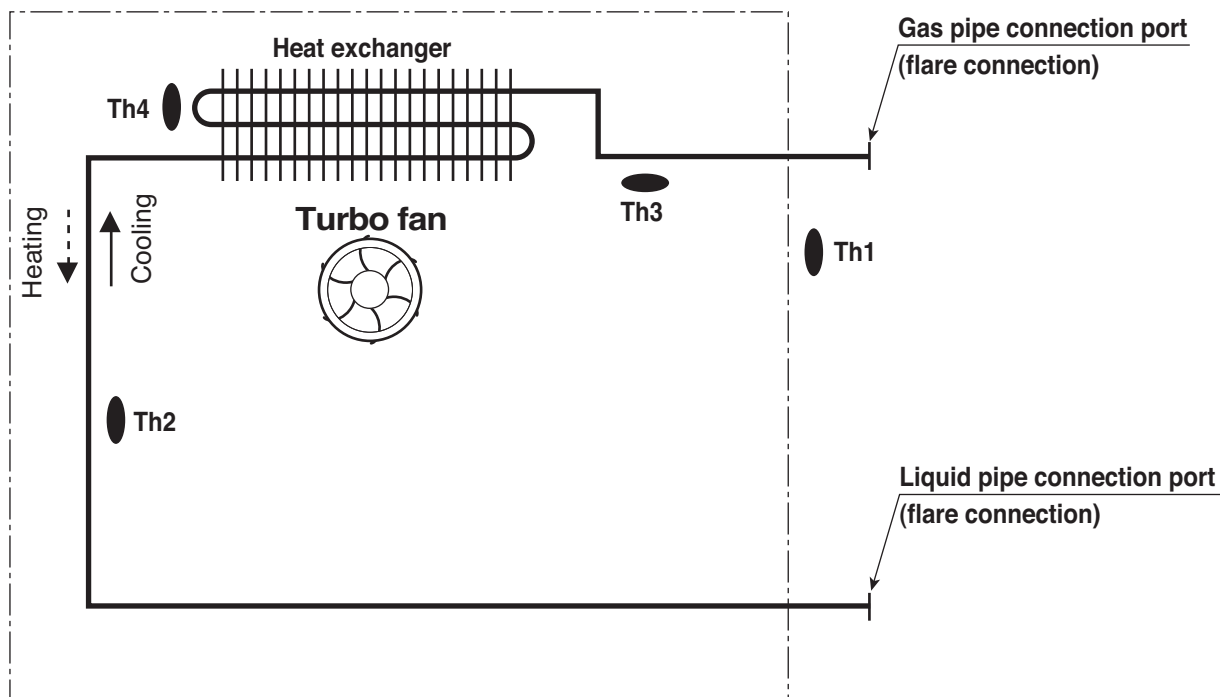
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641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: SC

1. Wall mounted(LIBERO)

1.4 Piping diagrams



■ Refrigerant pipe connection port diameters

Unit : mm(inch)

Model	Gas	Liquid
AMNW09GDBL0[LMN096HVT]	Ø9.52(3/8)	Ø6.35(1/4)
AMNW12GDBL0[LMN126HVT]		
AMNW18GDCL0[LMN186HVT]	Ø12.7(1/2)	Ø6.35(1/4)

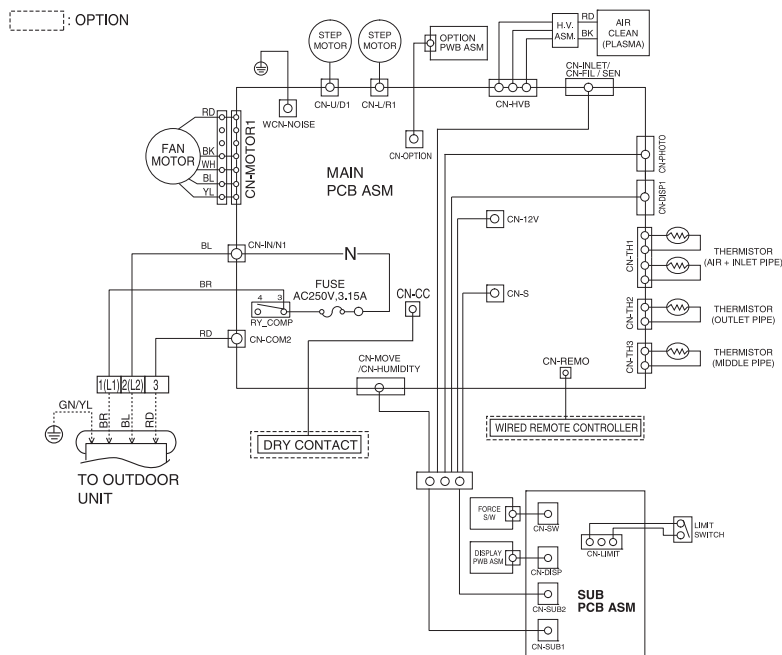
LOC.	Description	PCB Connector
Th1	Thermistor for Indoor Air Temperature	CN_TH1
Th2	Thermistor for Evaporator Inlet Temperature	
Th3	Thermistor for Evaporator Outlet Temperature	CN_TH2
Th4	Thermistor for Evaporator middle temperature	CN_TH3

Notes : Description is expressed based on Cooling mode.

1. Wall mounted(LIBERO)

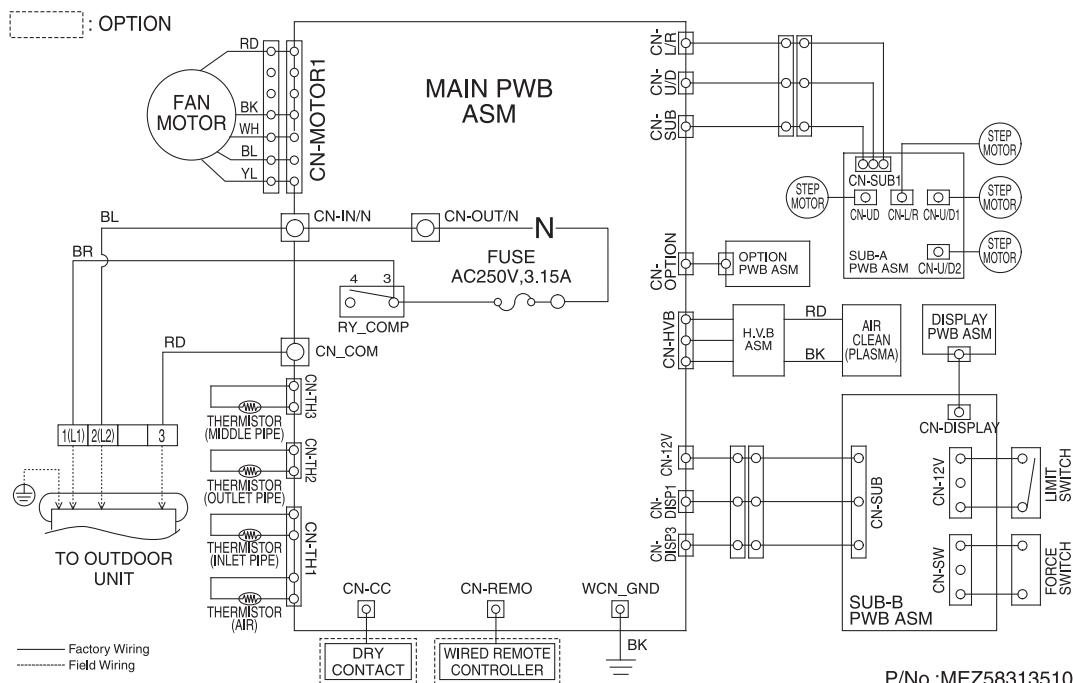
1.5 Wiring diagrams

Models: AMNW- SB



P/No : MEZ41961024

Models: AMNW- SC



P/No.:MEZ58313510

1. Wall mounted(LIBERO)

1.6 Capacity Tables

■ Cooling Capacity

Cooling Capacity

Unit Size (kBtu/h(kW))	Outdoor air temp. °F DB	Indoor Air Temp. °F WB											
		57.2		60.8		64.4		67.0		71.6		75.2	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
9.0 (2.64)	68.0	8.70	7.34	9.20	7.54	9.80	7.81	10.20	8.03	10.80	7.59	11.40	7.25
	77.0	8.40	6.80	8.90	6.99	9.40	7.16	9.80	7.32	10.50	7.10	11.00	6.89
	89.6	7.90	6.15	8.40	6.20	9.00	6.32	9.30	6.37	10.00	6.39	10.60	6.44
	95.0	7.70	6.10	8.20	6.14	8.80	6.24	9.00	6.32	9.80	6.39	10.40	6.46
	104.0	7.40	6.04	7.90	6.09	8.40	6.19	8.80	6.29	9.50	6.63	10.00	6.71
	109.4	7.20	6.16	7.70	6.26	8.20	6.42	8.60	6.53	9.30	6.79	9.80	6.97
	114.8	7.00	6.30	7.50	6.47	8.00	6.69	8.40	6.84	9.10	6.98	9.60	7.12
12 (3.52)	68.0	11.60	10.35	12.30	10.66	13.00	11.02	13.50	11.27	14.50	10.72	15.20	10.22
	77.0	11.20	9.60	11.90	9.83	12.60	10.10	13.10	10.30	14.00	10.00	14.70	9.73
	89.6	10.50	8.63	11.20	8.74	12.00	8.90	12.50	9.00	13.40	9.02	14.10	9.09
	95.0	10.30	8.72	11.00	8.75	11.70	8.79	12.00	8.90	13.10	9.03	13.80	9.10
	104.0	9.80	8.51	10.50	8.60	11.20	8.73	11.70	8.82	12.70	9.32	13.40	9.67
	109.4	9.50	8.63	10.30	8.86	11.00	9.05	11.50	9.19	12.40	9.53	13.10	9.83
	114.8	9.30	8.86	10.00	9.13	10.70	9.44	11.20	9.63	12.10	9.85	12.80	10.02
18 (5.28)	68.0	17.40	15.00	18.50	15.49	19.60	16.01	20.30	16.35	21.70	15.57	22.80	12.30
	77.0	16.80	13.94	17.80	14.27	18.90	14.70	19.60	14.95	21.00	14.49	22.10	11.73
	89.6	15.70	12.47	16.90	12.75	18.00	12.93	18.70	13.07	20.10	13.12	21.20	10.94
	95.0	15.30	12.57	16.40	12.66	17.60	12.78	18.00	12.90	19.70	13.12	20.80	10.97
	104.0	14.70	12.28	15.80	12.47	16.80	12.65	17.60	12.83	19.00	13.53	20.10	11.69
	109.4	14.30	12.52	15.40	12.83	16.40	13.10	17.20	13.34	18.50	13.79	19.70	11.86
	114.8	13.90	12.82	15.00	13.26	16.00	13.66	16.80	13.97	18.20	14.28	19.20	12.05

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity(kBtu/h)
SHC: Sensible Heat Capacity(kBtu/h)

1. Wall mounted(LIBERO)

■ Heating Capacity

Heating capacity

Unit Size (kBtu/h(kW))	Indoor air temp. °F DB	Outdoor Air Temp. °F WB						
		5	14	23	32	43	50	59
		TC	TC	TC	TC	TC	TC	TC
9.0 (2.64)	60.8	6.0	7.4	8.5	9.5	10.5	10.9	11.0
	64.4	6.0	7.3	8.4	9.4	10.4	10.9	10.9
	68.0	5.9	7.3	8.4	9.4	10.4	10.9	10.9
	70.0	5.9	7.2	8.3	9.3	10.4	10.8	10.8
	71.6	5.8	7.2	8.2	9.2	10.3	10.7	10.8
	75.2	5.5	6.9	8.0	9.0	10.0	10.5	10.5
12 (3.52)	60.8	8.0	9.8	11.3	12.6	14.0	14.6	14.6
	64.4	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	68.0	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	70.0	7.8	9.6	11.1	12.4	13.8	14.4	14.4
	71.6	7.7	9.5	11.0	12.3	13.7	14.3	14.3
	75.2	7.4	9.2	10.6	12.0	13.4	13.9	14.0
18 (5.28)	60.8	12.0	14.8	16.9	18.9	20.9	21.9	22.0
	64.4	11.9	14.6	16.7	18.8	20.8	21.8	21.8
	68.0	11.8	14.6	16.7	18.7	20.7	21.7	21.8
	70.0	11.7	14.4	16.6	18.5	20.8	21.6	21.6
	71.6	11.6	14.3	16.4	18.4	20.5	21.4	21.5
	75.2	11.0	13.7	16.0	17.9	20.0	20.9	20.9

Notes:

1. Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

2. TC : Total Capacity(kBtu/h)

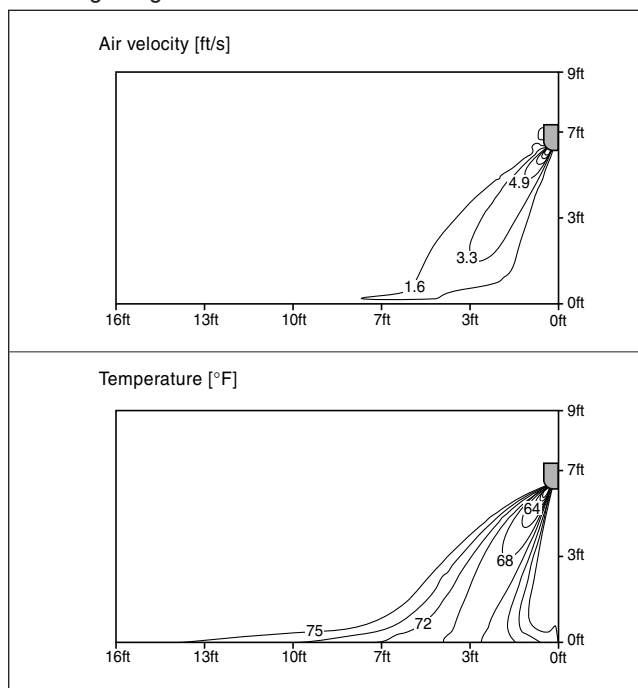
1. Wall mounted(LIBERO)

1.7 Air flow and temperature distributions (reference data)

Model : 9kBtu/h Class

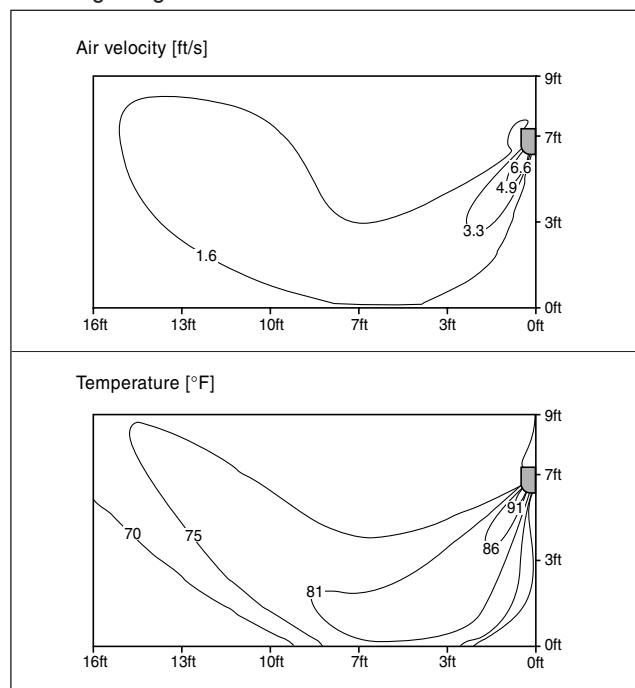
Cooling

Discharge angle : 40°



Heating

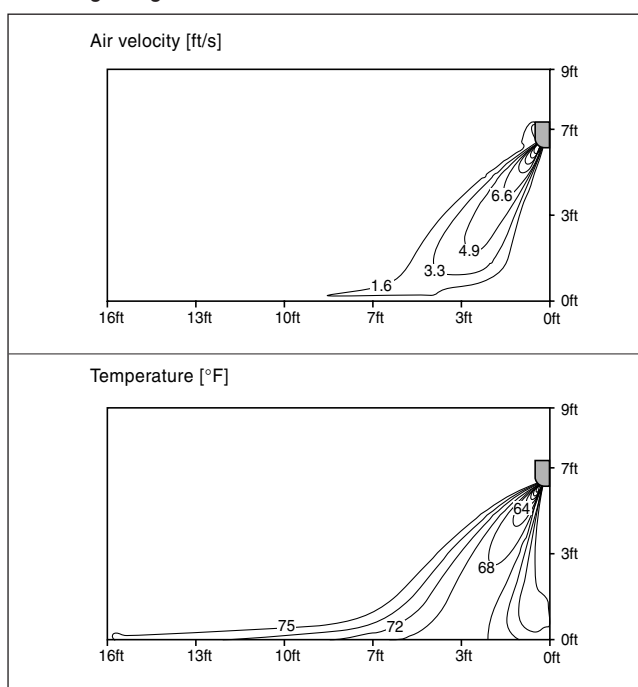
Discharge angle : 50°



Model : 12kBtu/h Class

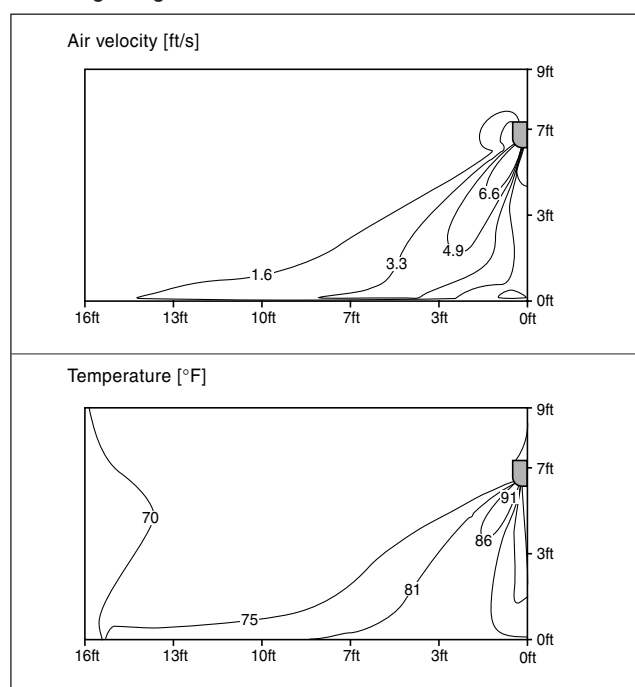
Cooling

Discharge angle : 40°



Heating

Discharge angle : 50°

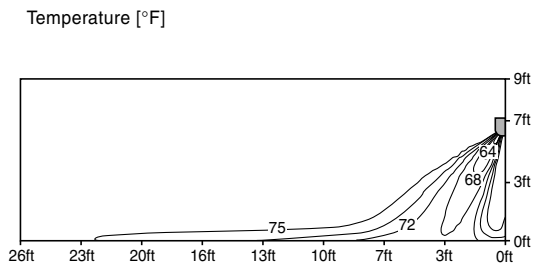
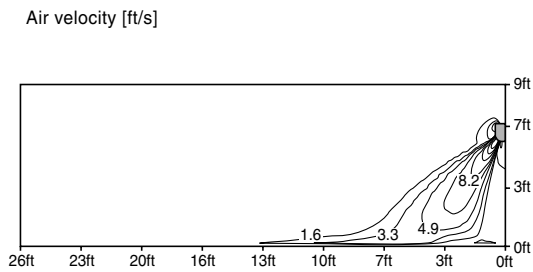


1. Wall mounted(LIBERO)

Model : 18kBtu/h Class

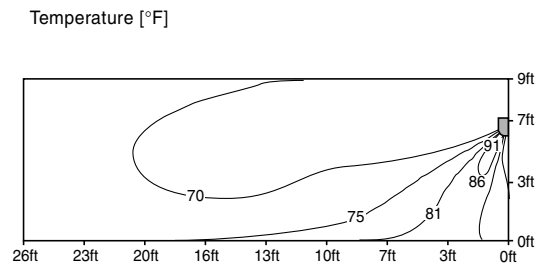
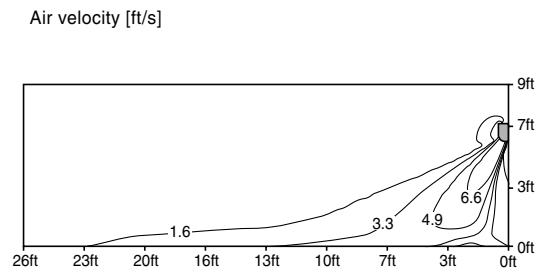
Cooling

Discharge angle : 40°



Heating

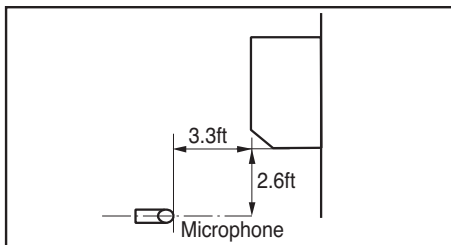
Discharge angle : 50°



1. Wall mounted(LIBERO)

1.8 Sound levels

Overall



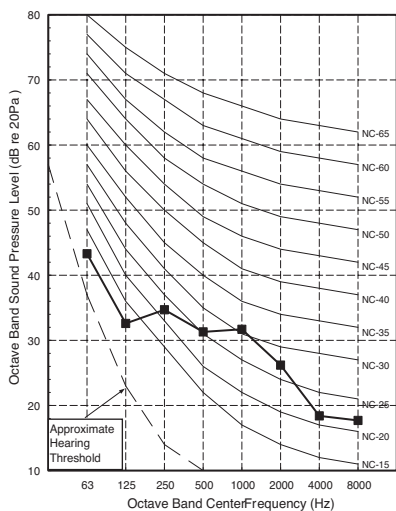
Notes:

- Sound measured at 3.3ft away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20Pa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

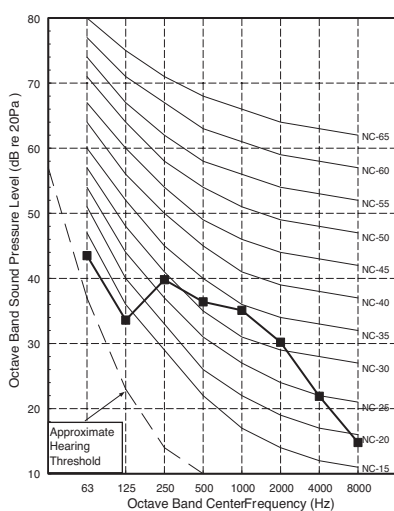
Model	Sound Levels [dB(A)]		
	H	M	L
AMNW09GDBL0[LMN096HVT]	33	30	27
AMNW12GDBL0[LMN126HVT]	39	36	31
AMNW18GDCL0[LMN186HVT]	37	33	28

Sound pressure level

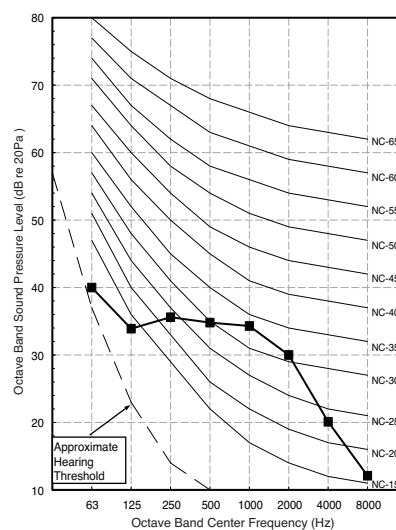
**AMNW09GDBL0
[LMN096HVT]**



**AMNW12GDBL0
[LMN126HVT]**



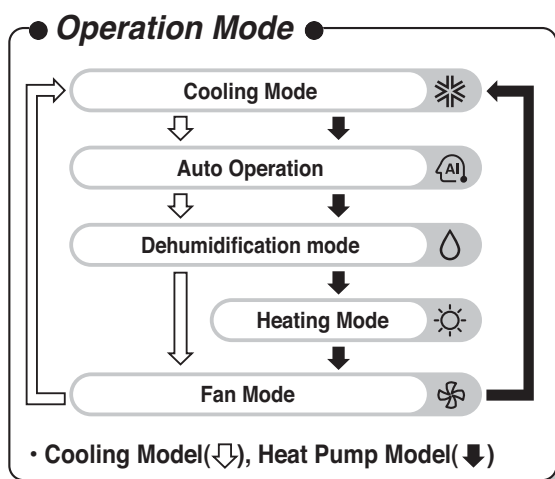
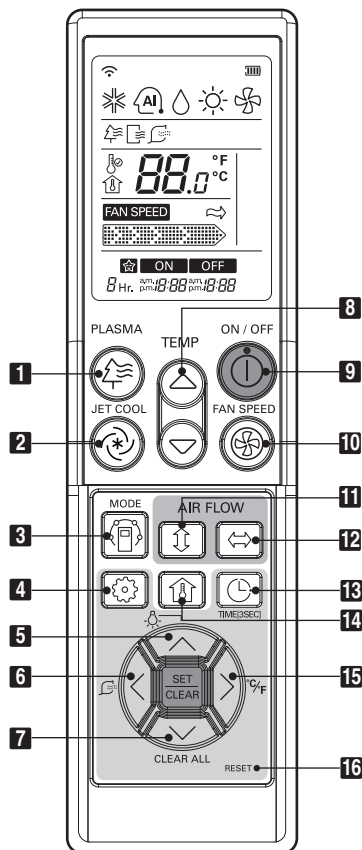
**AMNW18GDCL0
[LMN186HVT]**



1. Wall mounted(LIBERO)

1.9 Controller

Wireless remote control



NOTE

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

- 1 PLASMA Button (Optional)**
Used to start or stop the plasma-purification function.
- 2 JET COOL Button**
Speed cooling operates super high fan speed.
- 3 OPERATION MODE SELECTION Button**
Used to select the operation mode.
- 4 FUNCTION SETTING Button**
Used to set or clear Auto Clean or Smart Clean.
- 5 LCD LUMINOSITY Button (Optional)**
Used to adjust LCD luminosity
- 6 SMART CLEAN Button (Optional)**
Used to start or stop Smart Clean.
- 7 CLEAR ALL Button**
Used to clear all timer.
- 8 ROOM TEMPERATURE SETTING Button**
Used to select the room temperature.
- 9 ON/OFF Button**
Used to turn on/off the unit.
- 10 INDOOR FAN SPEED SELECTION Button**
Used to select fan speed in four steps low, medium, high and chaos.
- 11 UP/DOWN AIRFLOW Button**
Used to stop or start louver movement and set the desired up/down airflow direction.
- 12 LEFT/RIGHT AIRFLOW Button(Optional)**
Used to set the desired left/right(horizontal) airflow direction.
- 13 TIMER AND TIME SETTING Button**
Used to set the time of starting or stopping and sleeping operation.
- 14 ROOM TEMPERATURE CHECKING Button**
Used to check the room temperature.
- 15 C/ F SWITCH Button**
Used to switch temperature reading from Celsius to Fahrenheit.
- 16 RESET Button**
Used to reset the remote controller.

2. ART COOL Mirror

2.1 List of functions

Category	Function	AMNW09GDER1 [LMAN095HVT]	AMNW12GDER1 [LMAN125HVT]	AMNW18GD8R1 [LMAN185HVT]
Air flow	Air supply outlet	1	1	1
	Airflow direction control(left & right)	Auto	Auto	Auto
	Airflow direction control(up & down)	Auto	Auto	Auto
	Auto swing(left & right)	O	O	O
	Auto swing(up & down)	X	X	X
	Airflow steps(fan / cool / heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	Chaos swing	O	O	O
	Chaos wind(auto wind)	X	X	X
	Jet cool(Power wind)	O	O	O
Air purifying	Swirl wind	X	X	X
	Deodorizing filter	O	O	O
	Plasma air purifier	O	O	O
	Prefilter(washable / anti-fungus)	O	O	O
Installation	Drain pump	-	-	-
	E.S.P. control	-	-	-
	Electric heater(operation)	-	-	-
	High ceiling operation	-	-	-
Reliability	Hot start	O	O	O
	Self diagnosis	O	O	O
	Soft dry operation	O	O	O
Convenience	Auto changeover	X	X	X
	Auto cleaning	O	O	O
	Auto operation(artificial intelligence)	O	O	O
	Auto restart operation	O	O	O
	Child lock	-	-	-
	Energy-Saving Cooling Mode	X	X	X
	Forced operation	O	O	O
	Group control	-	-	-
	Sleep mode	O	O	O
	Timer(on/off)	O	O	O
Individual control	Timer(weekly)	-	-	-
	Two thermistor control	-	-	-
	Wide wired remote controller	PQRCVSL0	PQRCVSL0	PQRCVSL0
	Deluxe wired remote controller	X	X	X
	Simple wired remote controller	PQRCUCS0C	PQRCUCS0C	PQRCUCS0C
	Simple wired remote controller(for hotel use)	-	-	-
	Wireless remote controller(simple)	X	X	X
	Wireless LCD remote control	X	X	X
CAC network function	Wireless LCD remote control(Ez)	O	O	O
	General central controller (Non LGAP)	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O
	PDI(power distribution indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
Special function kit	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0
	CTIE	X	X	X
Others	Zone control	X	X	X
	Thermistor	-	-	-

※ PDI (power distribution indicator) & PI 485 are installed outdoor unit.

Note :

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

2. ART COOL Mirror

2.2 Specifications

Indoor unit type			ART COOL Mirror		
Model			AMNW09GDER1 [LMAN095HVT]	AMNW12GDER1 [LMAN125HVT]	AMNW18GD8R1 [LMAN185HVT]
Decorative panel model name			-	-	-
Power Supply		Ø / V / Hz	1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60
Capacity(*)		Btu/h Class	9,000	12,000	18,000
Current	Running Current	A	0.15	0.15	0.15
Fan	Motor Type		BLDC	BLDC	BLDC
	Fan Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor Output(W) x No. of Unit		7.8 x 1	7.8 x 1	25.6 x 1
	Air Flow Rate (H / M / L)	CMM	8.0 / 7.0 / 5.0	10.0 / 8.0 / 6.0	12.6 / 11.5 / 10.0
		CFM	283 / 247 / 177	353 / 283 / 212	445 / 406 / 353
	External Static Pressure	mmAq	-	-	-
	Capacitor	µF / Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x Column x FPI		2R x 15C x 18	2R x 15C x 18	2R x 15C x 20
Dimensions (W x H x D)	Body	mm	915 x 282 x 165	915 x 282 x 165	1,107 x 299 x 200
		inch	36 1/32 x 11 3/32 x 6 1/2	36 1/32 x 11 3/32 x 6 1/2	43 19/32 x 11 25/32 x 7 7/8
	Decorative Panel	mm	-	-	-
		inch	-	-	-
Net Weight	Body	kg (lbs)	9.5(20.9)	9.5(20.9)	14.1(31.09)
	Decorative Panel	kg (lbs)	-	-	-
Air Filter			Long life filter	Long life filter	Long life filter
Sound Level (H / M / L)		dB(A)+3	31 / 26 / 22	35 / 28 / 24	39 / 37 / 35
Piping	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
Connections	Gas	mm (inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
	Drain(OD/ID)	mm(inch)	21.5/16.0 (27/32 / 5/8)	21.5/16.0 (27/32 / 5/8)	21.5/16.0 (27/32 / 5/8)
Dehumidification Rate		l/h(pts/h)	1.2(2.5)	1.5(3.2)	2.0(4.2)
Safety Devices			Fuse, Thermal Protector for Fan Motor		
Temperature Sensor			Thermistor	Thermistor	Thermistor
Refrigerant			R410A	R410A	R410A
Refrigerant Control			EEV(in Outdoor unit)	EEV(in Outdoor unit)	EEV(in Outdoor unit)
Transmission Interunit Cable		No. x AWG	4 x 18(Including Earth)	4 x 18(Including Earth)	4 x 18(Including Earth)

Note :

1. Capacities are based on the following conditions:

- Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB
- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB
- Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. For more Capacity(*),refer to the combination table

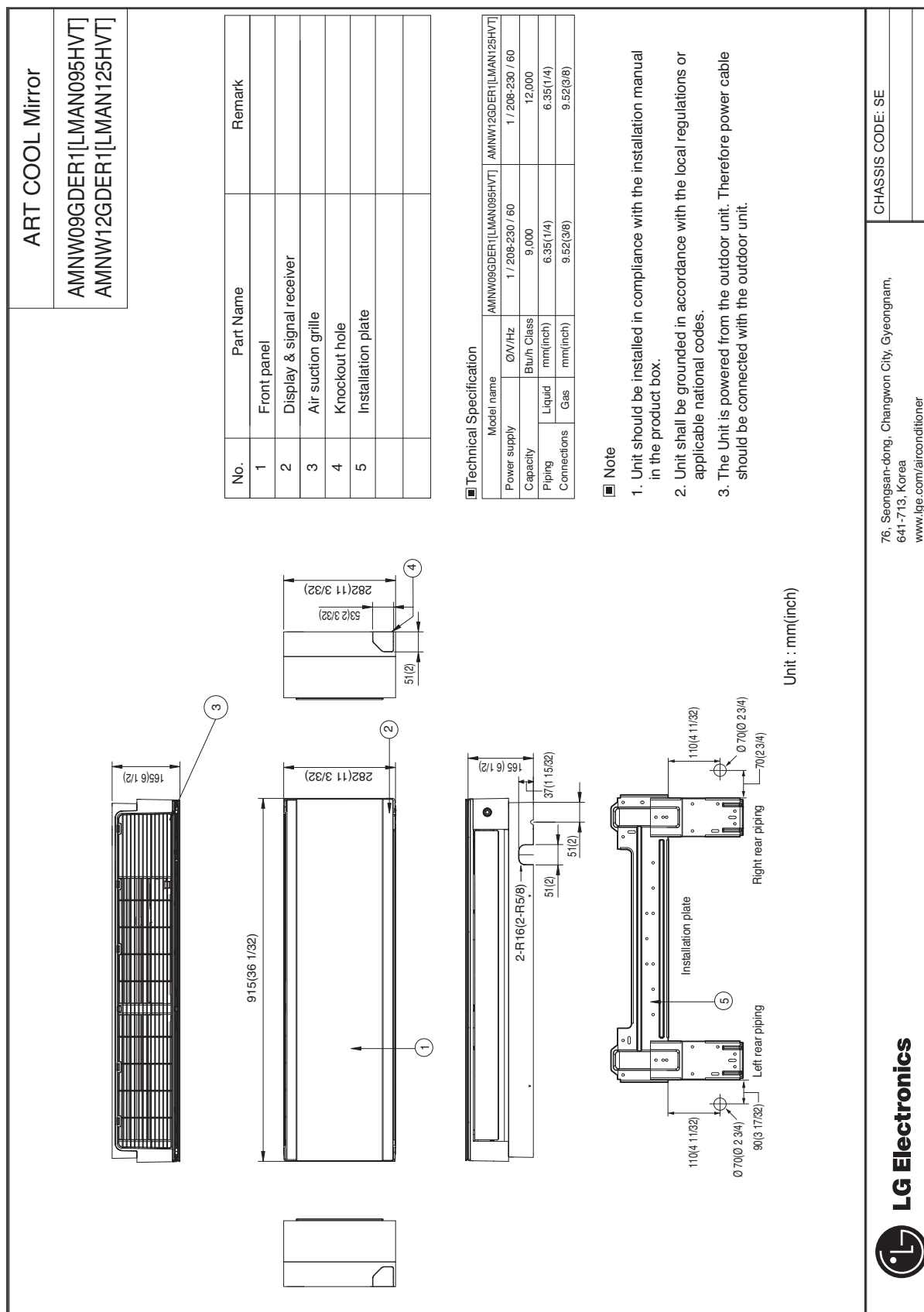
Conversion Formula

$$\text{kW} = \text{Btu/h Class} \times 0.0002931$$

$$\text{CFM} = \text{CMM} \times 35.3$$

2. ART COOL Mirror

2.3 Dimensions

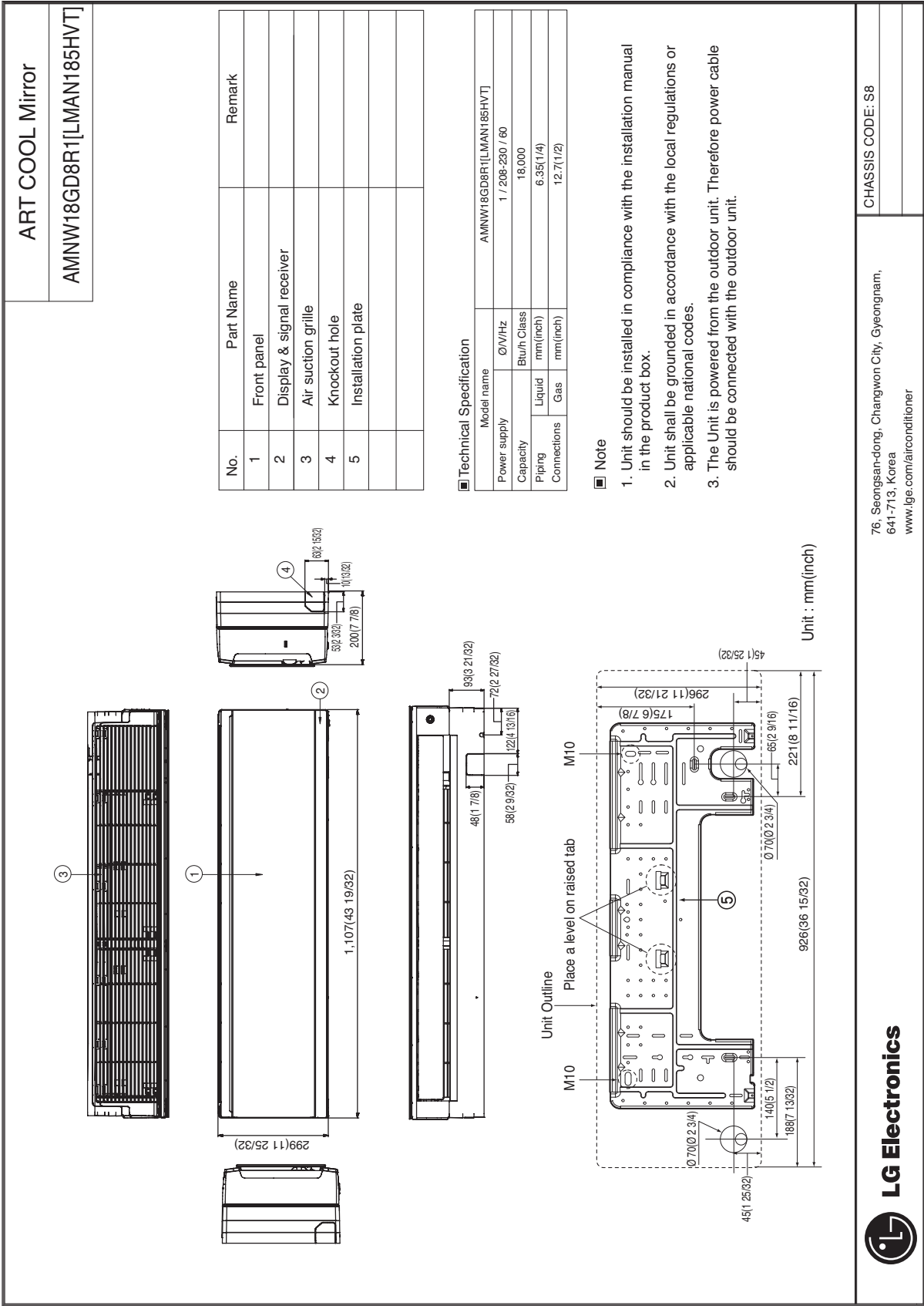


LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

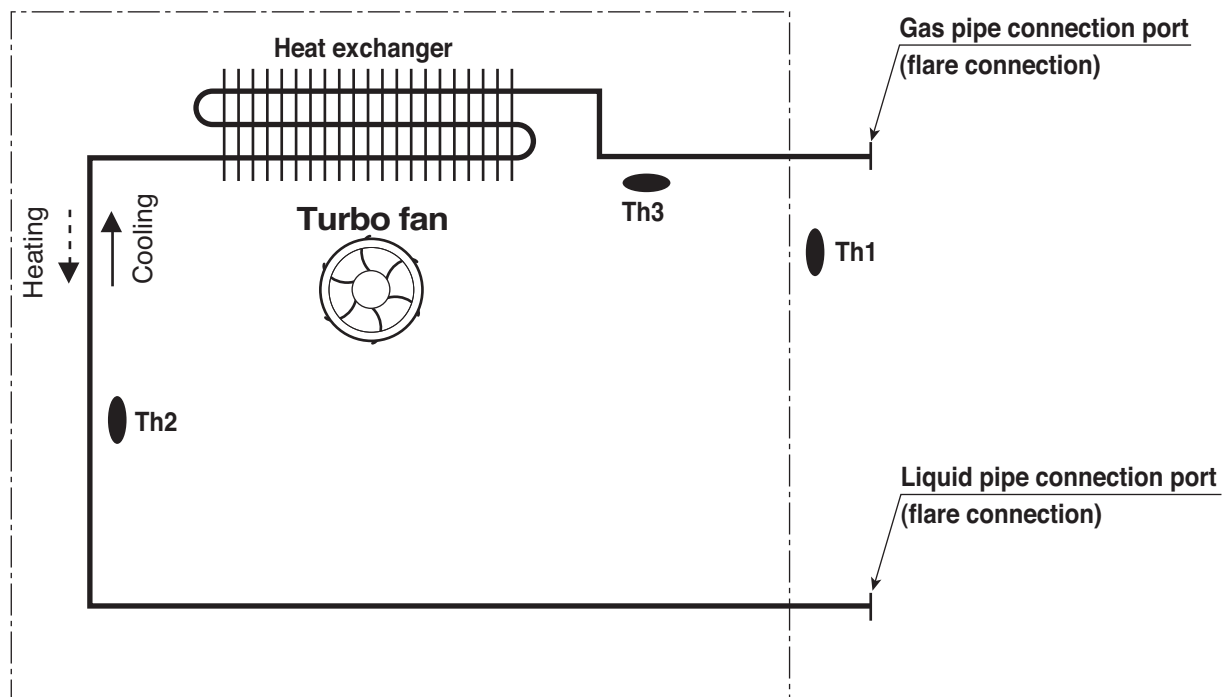
CHASSIS CODE: SE

2. ART COOL Mirror



2. ART COOL Mirror

2.4 Piping diagrams



■ Refrigerant pipe connection port diameters

Unit : mm(inch)

Model	Gas	Liquid
AMNW09GDER1[LMAN095HVT]	Ø9.52(3/8)	Ø6.35(1/4)
AMNW12GDER1[LMAN125HVT]	Ø9.52(3/8)	Ø6.35(1/4)
AMNW18GD8R1[LMAN185HVT]	Ø12.7(1/2)	Ø6.35(1/4)

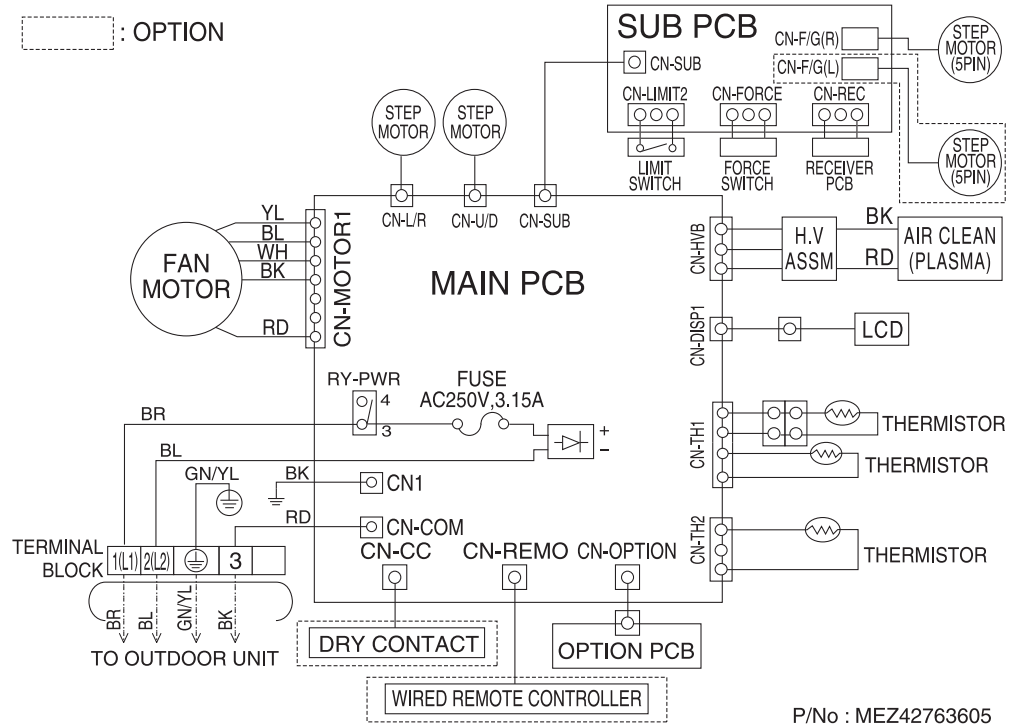
LOC.	Description	PCB Connector
Th1	Thermistor for Indoor Air Temperature	CN_TH1
Th2	Thermistor for Evaporator Inlet Temperature	
Th3	Thermistor for Evaporator Outlet Temperature	

Notes : Description is expressed based on Cooling mode.

2. ART COOL Mirror

2.5 Wiring diagrams

Models: AMNW-SE /S8



2. ART COOL Mirror

2.6 Capacity Tables

■ Cooling Capacity

Cooling Capacity

Unit Size (kBtu/h(kW))	Outdoor air temp. °F DB	Indoor Air Temp. °F WB											
		57.2		60.8		64.4		67.0		71.6		75.2	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
9.0 (2.64)	68.0	8.70	7.89	9.20	8.29	9.80	8.59	10.20	8.82	10.80	8.49	11.40	8.12
	77.0	8.40	7.29	8.90	7.66	9.40	7.85	9.80	8.03	10.50	7.81	11.00	7.43
	89.6	7.90	6.54	8.40	6.78	9.00	6.90	9.30	7.13	10.00	6.81	10.60	6.53
	95.0	7.70	6.51	8.20	6.78	8.80	6.82	9.00	7.08	9.80	7.16	10.40	6.87
	104.0	7.40	6.42	7.90	6.65	8.40	6.77	8.80	7.04	9.50	7.19	10.00	7.28
	109.4	7.20	6.55	7.70	6.84	8.20	7.01	8.60	7.31	9.30	7.48	9.80	7.59
12 (3.52)	114.8	7.00	6.72	7.50	7.08	8.00	7.32	8.40	7.66	9.10	7.82	9.60	7.96
	68.0	11.60	11.19	12.30	11.79	13.00	12.24	13.50	12.69	14.50	12.30	15.20	11.55
	77.0	11.20	10.29	11.90	10.85	12.60	11.14	13.10	11.53	14.00	11.41	14.70	10.96
	89.6	10.50	9.17	11.20	9.53	12.00	9.71	12.50	10.10	13.40	10.26	14.10	10.21
	95.0	10.30	9.13	11.00	9.53	11.70	9.59	12.00	9.98	13.10	10.27	13.80	10.22
	104.0	9.80	8.99	10.50	9.33	11.20	9.51	11.70	10.03	12.70	10.60	13.40	10.53
18 (5.28)	109.4	9.50	9.06	10.30	9.37	11.00	9.62	11.50	10.19	12.40	10.60	13.10	10.72
	114.8	9.30	9.18	10.00	9.73	10.70	10.09	11.20	10.48	12.10	10.99	12.80	11.07
	68.0	17.40	15.84	18.50	16.64	19.60	17.25	20.30	18.01	21.70	17.16	22.80	16.34
	77.0	16.80	14.63	17.80	15.39	18.90	15.77	19.60	16.47	21.00	15.96	22.10	15.57
	89.6	15.70	13.13	16.90	13.62	18.00	13.86	18.70	14.40	20.10	14.46	21.20	14.52
	95.0	15.30	13.08	16.40	13.62	17.60	13.69	18.00	14.22	19.70	14.46	20.80	14.57
18 (5.28)	104.0	14.70	12.89	15.80	13.35	16.80	13.60	17.60	14.13	19.00	14.90	20.10	15.51
	109.4	14.30	13.16	15.40	13.74	16.40	14.08	17.20	14.70	18.50	15.20	19.70	15.75
	114.8	13.90	13.50	15.00	14.22	16.00	14.71	16.80	15.40	18.20	15.75	19.20	16.01

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity(kBtu/h)
SHC: Sensible Heat Capacity(kBtu/h)

2. ART COOL Mirror

■ Heating Capacity

Heating capacity

Unit Size (kBtu/h(kW))	Indoor air temp. °F DB	Outdoor Air Temp. °F WB						
		5	14	23	32	43	50	59
		TC	TC	TC	TC	TC	TC	TC
9.0 (2.64)	60.8	6.0	7.4	8.5	9.5	10.5	10.9	11.0
	64.4	6.0	7.3	8.4	9.4	10.4	10.9	10.9
	68.0	5.9	7.3	8.4	9.4	10.4	10.9	10.9
	70.0	5.9	7.2	8.3	9.3	10.4	10.8	10.8
	71.6	5.8	7.2	8.2	9.2	10.3	10.7	10.8
	75.2	5.5	6.9	8.0	9.0	10.0	10.5	10.5
12 (3.52)	60.8	8.0	9.8	11.3	12.6	14.0	14.6	14.6
	64.4	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	68.0	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	70.0	7.8	9.6	11.1	12.4	13.8	14.4	14.4
	71.6	7.7	9.5	11.0	12.3	13.7	14.3	14.3
	75.2	7.4	9.2	10.6	12.0	13.4	13.9	14.0
18 (5.28)	60.8	12.0	14.8	16.9	18.9	20.9	21.9	22.0
	64.4	11.9	14.6	16.7	18.8	20.8	21.8	21.8
	68.0	11.8	14.6	16.7	18.7	20.7	21.7	21.8
	70.0	11.7	14.4	16.6	18.5	20.8	21.6	21.6
	71.6	11.6	14.3	16.4	18.4	20.5	21.4	21.5
	75.2	11.0	13.7	16.0	17.9	20.0	20.9	20.9

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

2. TC : Total Capacity(kBtu/h)

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

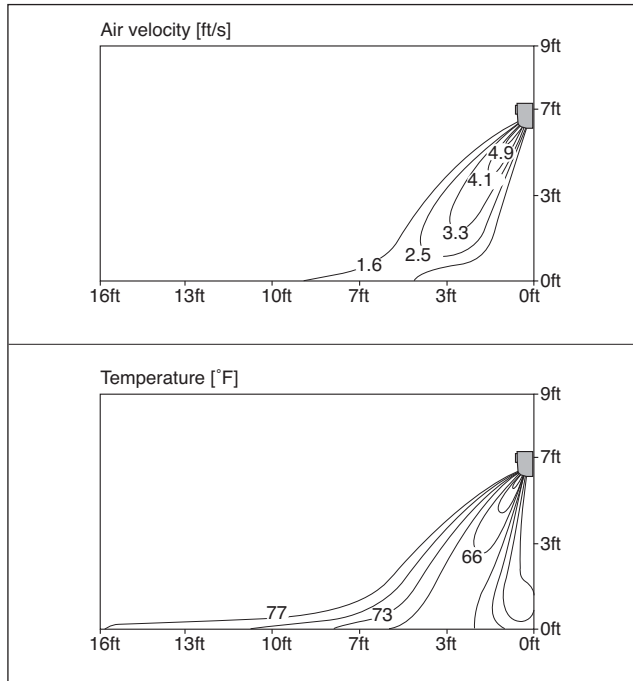
2. ART COOL Mirror

2.7 Air flow and temperature distributions (reference data)

Model : 12kBtu/h Class

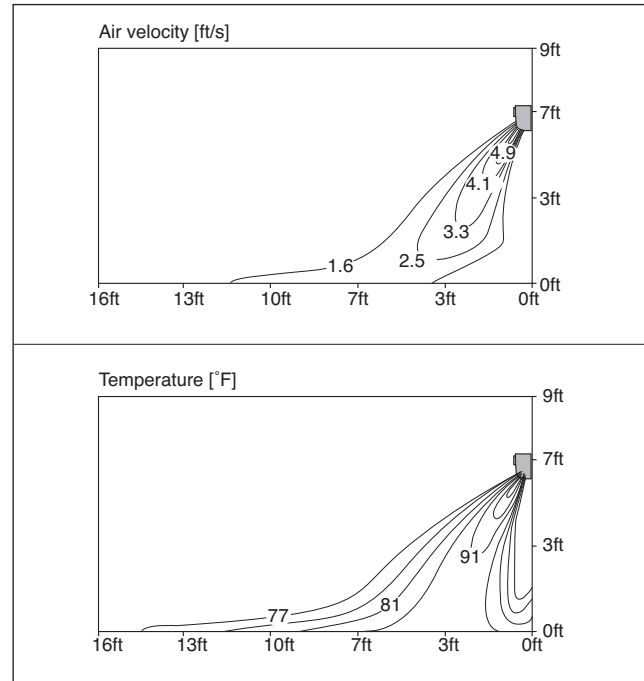
Cooling

Discharge angle : 40°



Heating

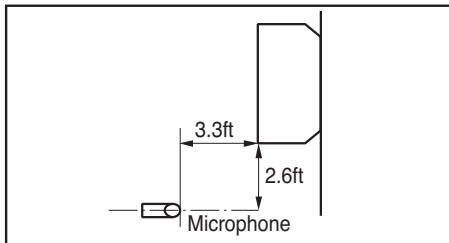
Discharge angle : 50°



2. ART COOL Mirror

2.8 Sound levels

Overall

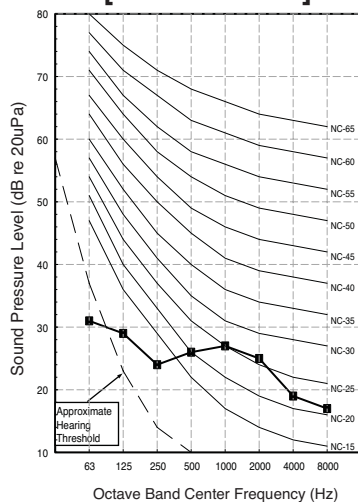

Notes:

- Sound measured at 3.3ft away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20Pa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

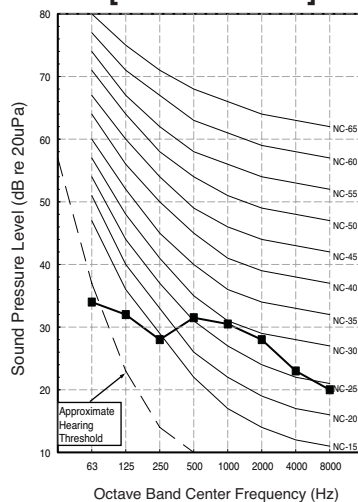
Model	Sound Levels [dB(A)]		
	H	M	L
AMNW09GDER1[LMAN095HVT]	31	26	22
AMNW12GDER1[LMAN125HVT]	35	28	24
AMNW18GD8R1[LMAN185HVT]	39	37	35

Sound pressure level

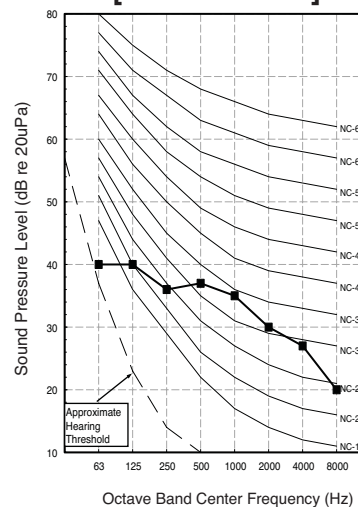
**AMNW09GDER1
[LMAN095HVT]**



**AMNW12GDER1
[LMAN125HVT]**



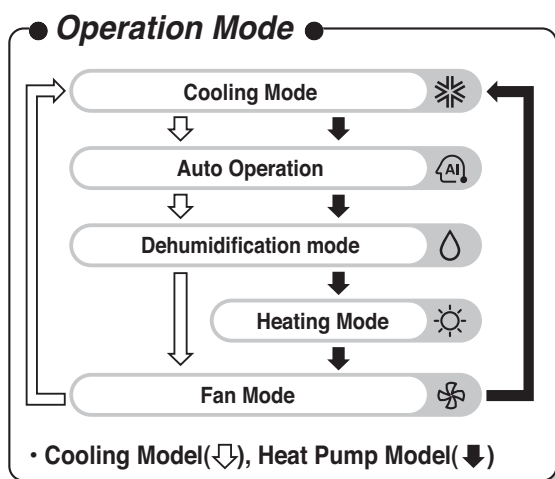
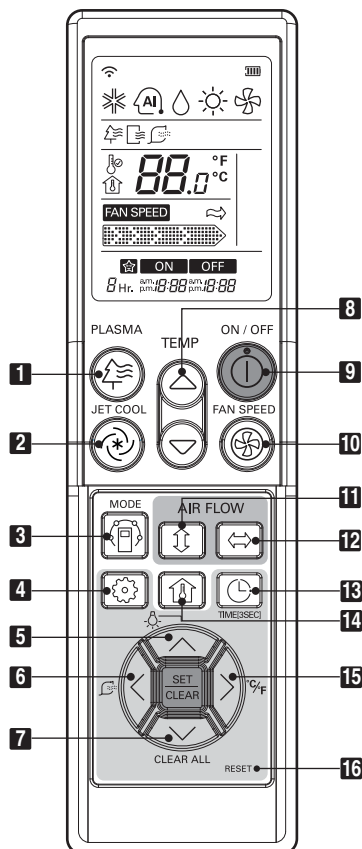
**AMNW18GD8R1
[LMAN185HVT]**



2. ART COOL Mirror

2.9 Controller

Wireless remote control



NOTE

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

- 1 PLASMA Button (Optional)**
Used to start or stop the plasma-purification function.
- 2 JET COOL Button**
Speed cooling operates super high fan speed.
- 3 OPERATION MODE SELECTION Button**
Used to select the operation mode.
- 4 FUNCTION SETTING Button**
Used to set or clear Auto Clean or Smart Clean.
- 5 LCD LUMINOSITY Button (Optional)**
Used to adjust LCD luminosity
- 6 SMART CLEAN Button (Optional)**
Used to start or stop Smart Clean.
- 7 CLEAR ALL Button**
Used to clear all timer.
- 8 ROOM TEMPERATURE SETTING Button**
Used to select the room temperature.
- 9 ON/OFF Button**
Used to turn on/off the unit.
- 10 INDOOR FAN SPEED SELECTION Button**
Used to select fan speed in four steps low, medium, high and chaos.
- 11 UP/DOWN AIRFLOW Button**
Used to stop or start louver movement and set the desired up/down airflow direction.
- 12 LEFT/RIGHT AIRFLOW Button(Optional)**
Used to set the desired left/right(horizontal) airflow direction.
- 13 TIMER AND TIME SETTING Button**
Used to set the time of starting or stopping and sleeping operation.
- 14 ROOM TEMPERATURE CHECKING Button**
Used to check the room temperature.
- 15 C/ F SWITCH Button**
Used to switch temperature reading from Celsius to Fahrenheit.
- 16 RESET Button**
Used to reset the remote controller.

3. Ceiling cassette 4-way

3.1 List of functions

Category	Function	AMNW12GTQA0 [LMCN125HV]	AMNW18GTQA0 [LMCN185HV]
Air flow	Air supply outlet	4	4
	Airflow direction control(left & right)	X	X
	Airflow direction control(up & down)	Auto	Auto
	Auto swing(left & right)	X	X
	Auto swing(up & down)	O	O
	Airflow steps(fan / cool / heat)	4 / 5 / 4	4 / 5 / 4
	Chaos swing	X	X
	Chaos wind(auto wind)	O	O
	Jet cool(Power wind)	O	O
	Swirl wind	O	O
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	Option	Option
	Prefilter(washable / anti-fungus)	O	O
Installation	Drain pump	O	O
	E.S.P. control	-	-
	Electric heater(operation)	X	X
	High ceiling operation	O	O
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto operation(artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Energy-Saving Cooling Mode	X	X
	Forced operation	O	O
	Group control	O	O
	Sleep mode	O	O
	Timer(on/off)	O	O
	Timer(weekly)	O	O
	Two thermistor control	O	O
Individual control	Wide wired remote controller	PQRCVSL0	PQRCVSL0
	Deluxe wired remote controller	-	-
	Simple wired remote controller	PQRCUCS0C	PQRCUCS0C
	Simple wired remote controller(for hotel use)	-	-
	Wireless remote controller(simple)	X	X
	Wireless LCD remote control	X	X
	Wireless LCD remote control(Ez)	O	O
CAC network function	General central controller (Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(power distribution indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special function kit	CTIE	-	-
	Zone control	-	-
Others	Thermistor	-	-

※ PDI (power distribution indicator) & PI 485 are installed outdoor unit.

Note :

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

3. Ceiling cassette 4-way

3.2 Specifications

Indoor unit type			Ceiling Cassette - 4way	
Model			AMNW12GTRA0 [LMCN125HV]	AMNW18GTQA0 [LMCN185HV]
Decorative panel model name			PT-UQC	PT-UQC
Power Supply		Ø / V / Hz	1 / 208-230 / 60	1 / 208-230 / 60
Capacity(*)		Btu/h Class	12,000	18,000
Current	Running Current	A	0.25	0.25
Fan	Motor Type		BLDC	BLDC
	Fan Type		Turbo Fan	Turbo Fan
	Motor Output(W) x No. of Unit		43 x 1	43 x 1
	Air Flow Rate (H / M / L)	CMM	9.5/ 8.0 / 7.0	13.0 / 12.0 / 11.0
		CFM	335 / 283 / 247	459 / 424 / 388
	External Static Pressure	mmAq	-	-
	Capacitor	µF / Vac	-	-
Drive			Direct Drive	Direct Drive
Coil	Row x Column x FPI		2R x 8C x 18	2R x 10C x 18
Dimensions (W x H x D)	Body	mm	570 × 214 × 570	570 × 256 × 570
		inch	22 7/16 × 8 7/16 × 22 7/16	22 7/16 × 10 3/32 × 22 7/16
	Decorative Panel	mm	700 × 22 × 700	700 × 22 × 700
		inch	27 9/16 × 7/8 × 27 9/16	27 9/16 × 7/8 × 27 9/16
Net Weight	Body	kg (lbs)	14 (30.9)	15 (33.1)
	Decorative Panel	kg (lbs)	3 (6.6)	3 (6.6)
Air Filter			Long life filter	Long life filter
Sound Level (H / M / L)		dB(A)+3	38 / 35 / 32	38 / 37 / 34
Piping	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)
Connections	Gas	mm (inch)	9.52 (3/8)	12.7 (1/2)
	Drain(OD/ID)	mm(inch)	32 / 25 (1-1/4 / 31/32)	32 / 25 (1-1/4 / 31/32)
Dehumidification Rate		l/h(pts/h)	2.0(4.2)	2.0(4.2)
Safety Devices			Fuse, thermal protector for fan motor	
Temperature Sensor			Thermistor	Thermistor
Refrigerant			R410A	R410A
Refrigerant Control			EEV(in Outdoor unit)	EEV(in Outdoor unit)
Transmission Interunit Cable		No. x AWG	4 x 18(Including Earth)	4 x 18(Including Earth)

Note :

- Capacities are based on the following conditions:
 Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB
 - Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB
 Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
 - Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB
 Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)
 - Level Difference of Zero
- Wiring cable size must comply with the applicable local and national code.
- The specification may be subject to change without prior notice for purpose of improvement.
- For more Capacity(*), refer to the combination table

Conversion Formula

$$\text{kW} = \text{Btu/h Class} \times 0.0002931$$

$$\text{CFM} = \text{CMM} \times 35.3$$

3. Ceiling cassette 4-way

3.3 Dimensions

Ceiling Cassette 4-way + Decoration Panel

AMNW12GTRAQ[LMCN125HV]+PT-UQC

No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

■ Technical Specification

Model name		AMNW12GTRAQ[LMCN125HV]
Power supply	Q/V/Hz	1 / 208-230 / 60
Capacity	Btu/h Class	12,000
Piping	Liquid mm(inch)	6.35(1/4)
Connections	Gas mm(inch)	9.52(3/8)

■ Note

- Unit should be installed in compliance with the installation manual in the product box.
- Unit shall be grounded in accordance with the local regulations or applicable national codes.
- The Unit is powered from the outdoor unit. should be connected with the outdoor unit.

Therefore power cable

Unit : mm(inch)

LG Electronics

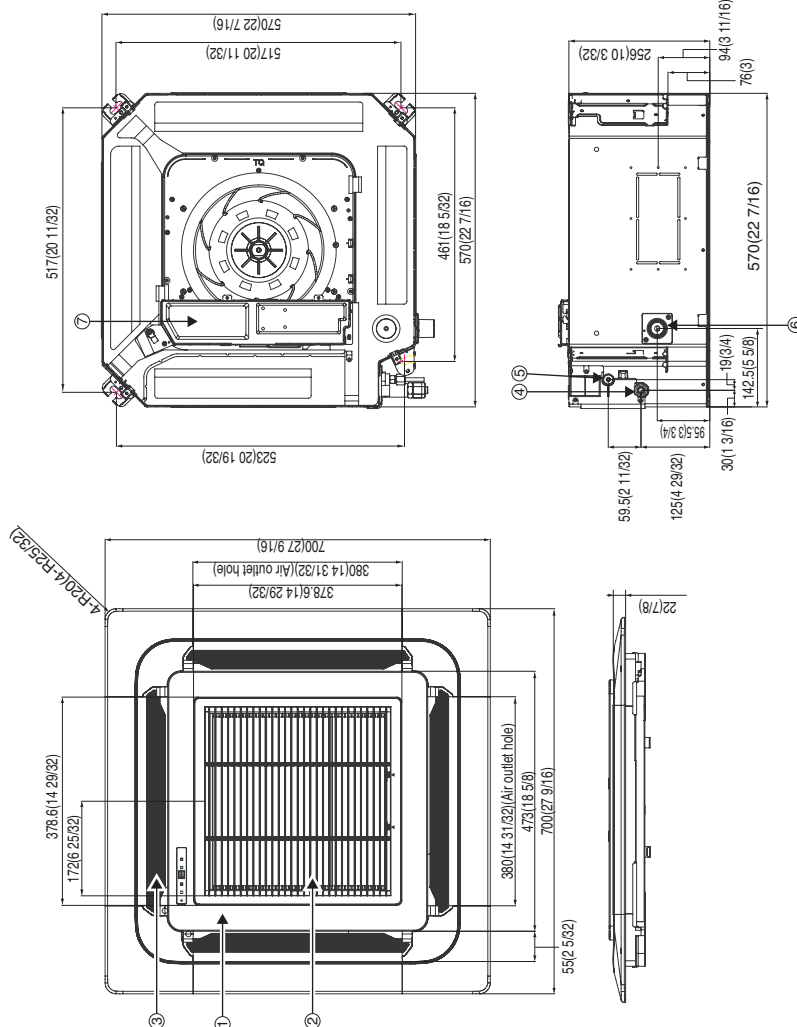
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: TR

3. Ceiling cassette 4-way

Ceiling Cassette 4-way + Decoration Panel

AMNW18GTQA0[LMCN185HV]+PT-UQC



Unit : mm(inch)

No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

Technical Specification

Model name		AMNW18GTQA0[LMCN185HV]
Power supply	ØV/Hz	1 / 208-230 / 60
Capacity	Btu/h Class	18,000
Piping Connections	Liquid mm(inch)	6.35(1/4)
	Gas mm(inch)	12.7(1/2)

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

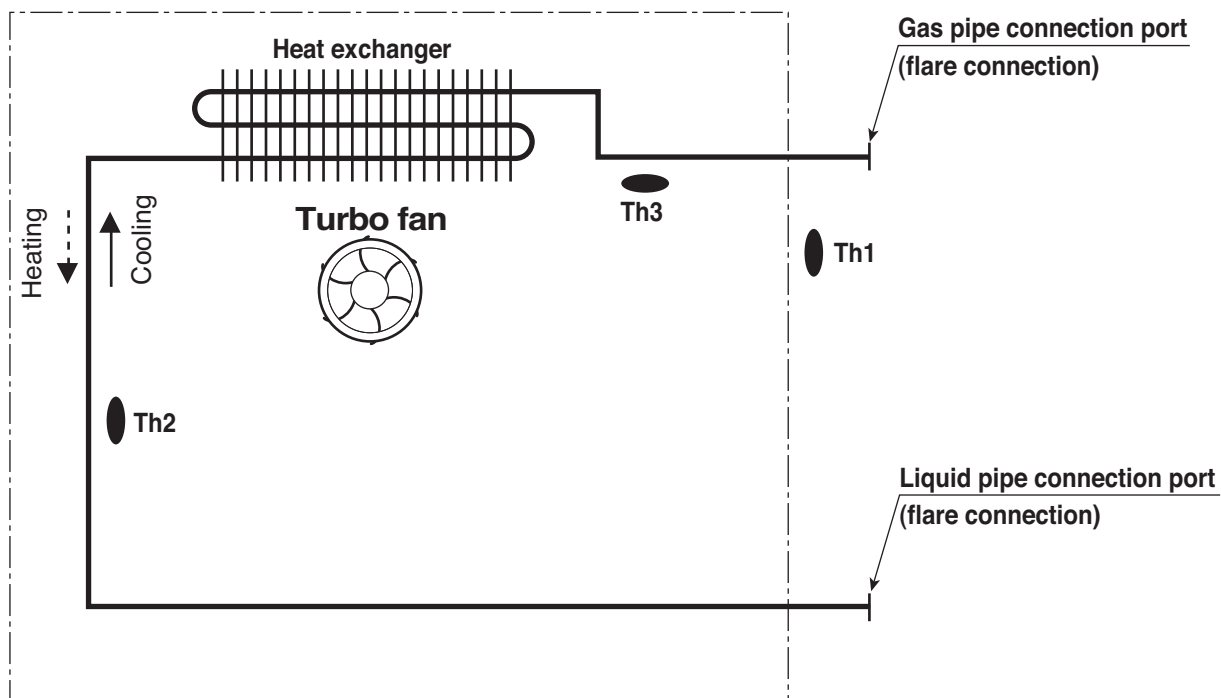

LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: TQ

3. Ceiling cassette 4-way

3.4 Piping diagrams



■ Refrigerant pipe connection port diameters

Unit : mm(inch)

Model	Gas	Liquid
AMNW12GTRA0[LMCN125HV]	Ø9.52(3/8)	Ø6.35(1/4)
AMNW18GTQA0[LMCN185HV]	Ø12.7(1/2)	Ø6.35(1/4)

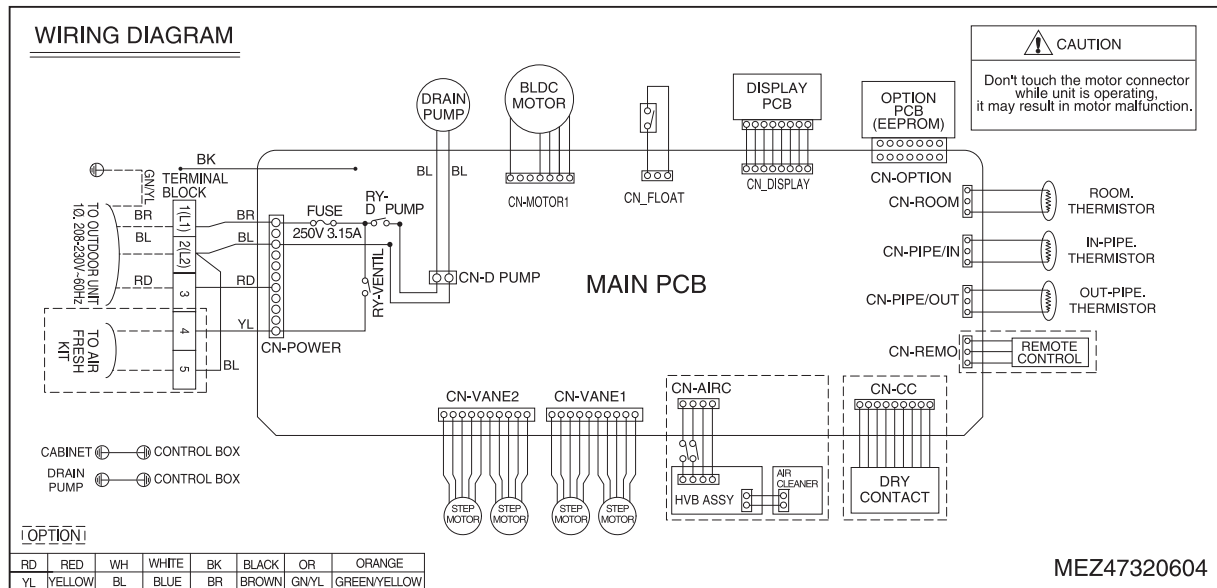
LOC.	Description	PCB Connector
Th1	Thermistor for Indoor Air Temperature	CN_ROOM
Th2	Thermistor for Evaporator Inlet Temperature	CN_PIPE/IN
Th3	Thermistor for Evaporator Outlet Temperature	CN_PIPE/OUT

Notes : Description is expressed based on Cooling mode.

3. Ceiling cassette 4-way

3.5 Wiring diagrams

Models: AMNW12GTRA0[LMCN125HV] / AMNW18GTQA0[LMCN185HV]



3. Ceiling cassette 4-way

3.6 Capacity Tables

■ Cooling Capacity

Cooling Capacity

Unit Size (kBtu/h(kW))	Outdoor air temp. °F DB	Indoor Air Temp. °F WB											
		57.2		60.8		64.4		67.0		71.6		75.2	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12 (3.52)	68.0	11.60	10.26	12.30	10.58	13.00	10.95	13.50	11.23	14.50	10.66	15.20	10.14
	77.0	11.20	9.51	11.90	9.74	12.60	10.02	13.10	10.23	14.00	9.90	14.70	9.63
	89.6	10.50	8.51	11.20	8.62	12.00	8.79	12.50	8.89	13.40	8.90	14.10	8.98
	95.0	10.30	8.60	11.00	8.63	11.70	8.67	12.00	8.90	13.10	8.92	13.80	8.99
	104.0	9.80	8.37	10.50	8.49	11.20	8.61	11.70	8.97	12.70	9.21	13.40	9.24
	109.4	9.50	8.52	10.30	8.74	11.00	8.94	11.50	9.30	12.40	9.42	13.10	9.74
	114.8	9.30	8.74	10.00	9.03	10.70	9.35	11.20	9.66	12.10	9.77	12.80	10.04
18 (5.28)	68.0	17.40	15.67	18.50	16.16	19.60	16.73	20.30	17.14	21.70	16.28	22.80	15.49
	77.0	16.80	14.52	17.80	14.88	18.90	15.30	19.60	15.62	21.00	15.13	22.10	14.71
	89.6	15.70	13.00	16.90	13.17	18.00	13.43	18.70	13.58	20.10	13.60	21.20	13.71
	95.0	15.30	13.13	16.40	13.18	17.60	13.24	18.00	13.76	19.70	13.62	20.80	13.73
	104.0	14.70	12.96	15.80	13.13	16.80	13.32	17.60	14.04	19.00	14.07	20.10	14.11
	109.4	14.30	13.18	15.40	13.52	16.40	13.82	17.20	14.53	18.50	14.39	19.70	14.88
	114.8	13.90	13.52	15.00	13.62	16.00	14.45	16.80	14.92	18.20	14.92	19.20	15.33

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity(kBtu/h)
SHC: Sensible Heat Capacity(kBtu/h)

3. Ceiling cassette 4-way

■ Heating Capacity

Heating capacity

Unit Size (kBtu/h(kW))	Indoor air temp. °F DB	Outdoor Air Temp. °F WB						
		5	14	23	32	43	50	59
		TC	TC	TC	TC	TC	TC	TC
12 (3.52)	60.8	8.0	9.8	11.3	12.6	14.0	14.6	14.6
	64.4	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	68.0	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	70.0	7.8	9.6	11.1	12.4	13.8	14.4	14.4
	71.6	7.7	9.5	11.0	12.3	13.7	14.3	14.3
	75.2	7.4	9.2	10.6	12.0	13.4	13.9	14.0
18 (5.28)	60.8	12.0	14.8	16.9	18.9	20.9	21.9	22.0
	64.4	11.9	14.6	16.7	18.8	20.8	21.8	21.8
	68.0	11.8	14.6	16.7	18.7	20.7	21.7	21.8
	70.0	11.7	14.4	16.6	18.5	20.8	21.6	21.6
	71.6	11.6	14.3	16.4	18.4	20.5	21.4	21.5
	75.2	11.0	13.7	16.0	17.9	20.0	20.9	20.9

Notes:

1. Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

2. TC : Total Capacity(kBtu/h)

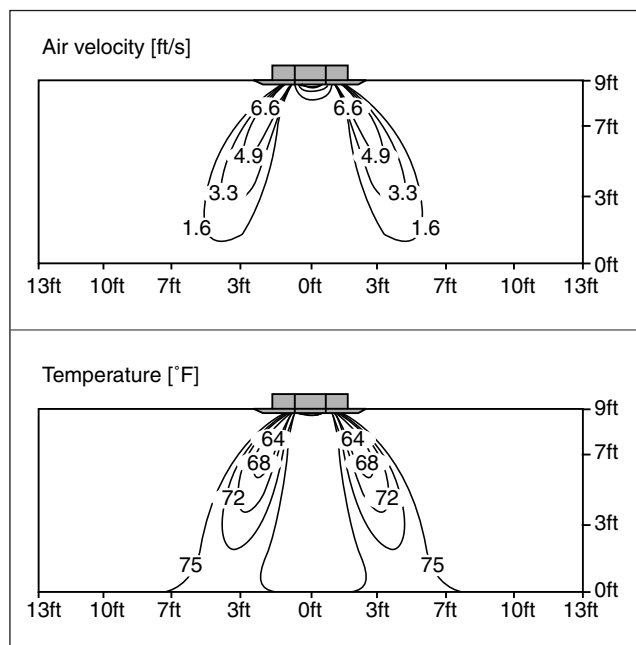
3. Ceiling cassette 4-way

3.7 Air flow and temperature distributions (reference data)

Model : 18kBtu/h Class

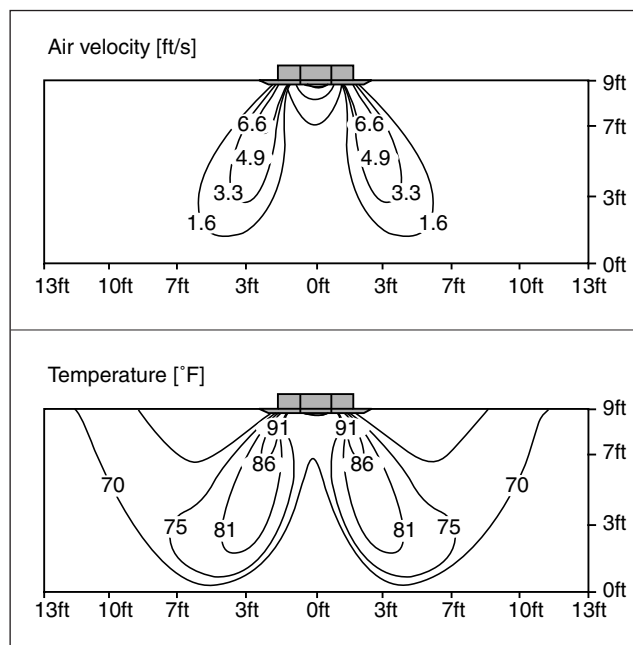
Cooling

Discharge angle : 40°



Heating

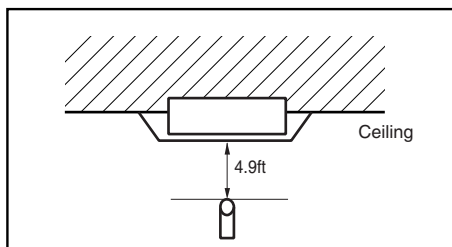
Discharge angle : 50°



3. Ceiling cassette 4-way

3.8 Sound levels

Overall

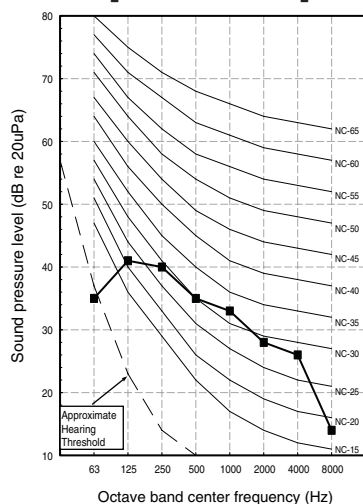

Notes:

- Sound measured at 4.9ft away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

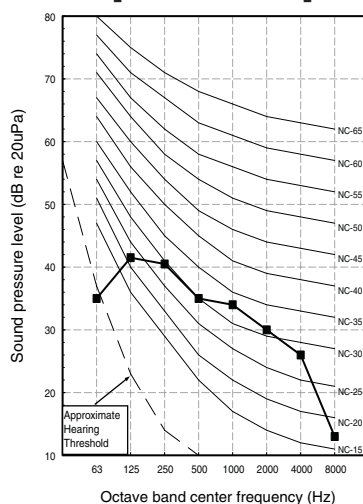
Model	Sound Levels [dB(A)]		
	H	M	L
AMNW12GTRA0[LMCN125HV]	38	35	32
AMNW18GTQA0[LMCN185HV]	38	37	34

Sound pressure level

**AMNW12GTRA0
[LMCN125HV]**



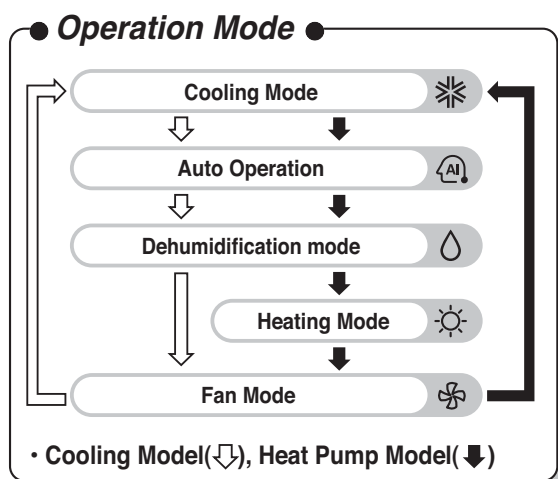
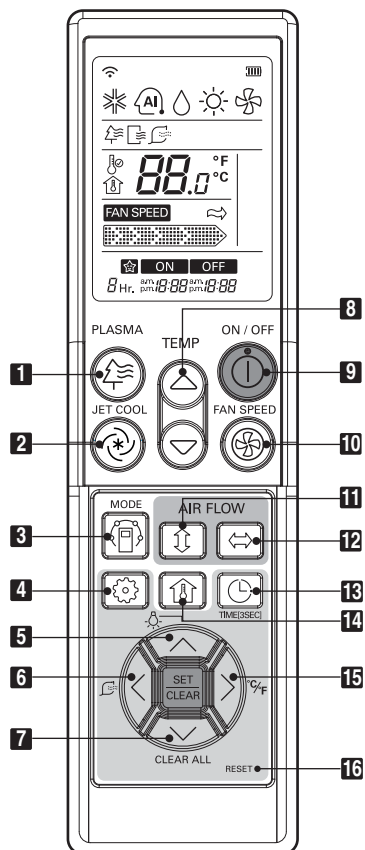
**AMNW18GTQA0
[LMCN185HV]**



3. Ceiling cassette 4-way

3.9 Controller

Wired remote controller



- 1 PLASMA Button (Optional)**
Used to start or stop the plasma-purification function.
- 2 JET COOL Button**
Speed cooling operates super high fan speed.
- 3 OPERATION MODE SELECTION Button**
Used to select the operation mode.
- 4 FUNCTION SETTING Button**
Used to set or clear Auto Clean or Smart Clean.
- 5 LCD LUMINOSITY Button (Optional)**
Used to adjust LCD luminosity
- 6 SMART CLEAN Button (Optional)**
Used to start or stop Smart Clean.
- 7 CLEAR ALL Button**
Used to clear all timer.
- 8 ROOM TEMPERATURE SETTING Button**
Used to select the room temperature.
- 9 ON/OFF Button**
Used to turn on/off the unit.
- 10 INDOOR FAN SPEED SELECTION Button**
Used to select fan speed in four steps low, medium, high and chaos.
- 11 UP/DOWN AIRFLOW Button**
Used to stop or start louver movement and set the desired up/down airflow direction.
- 12 LEFT/RIGHT AIRFLOW Button(Optional)**
Used to set the desired left/right(horizontal) airflow direction.
- 13 TIMER AND TIME SETTING Button**
Used to set the time of starting or stopping and sleeping operation.
- 14 ROOM TEMPERATURE CHECKING Button**
Used to check the room temperature.
- 15 C/ F SWITCH Button**
Used to switch temperature reading from Celsius to Fahrenheit.
- 16 RESET Button**
Used to reset the remote controller.

NOTE

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

4. Ceiling concealed duct - low static pressure

4.1 List of functions

Category	Function	AMNW09GB1A0 [LMDN095HV]	AMNW12GB1A0 [LMDN125HV]	AMNW18GB2A0 [LMDN185HV]
Air flow	Air supply outlet	1	1	1
	Airflow direction control(left & right)	-	-	-
	Airflow direction control(up & down)	-	-	-
	Auto swing(left & right)	-	-	-
	Auto swing(up & down)	-	-	-
	Airflow steps(fan / cool / heat)	3 / 3 / 3	3 / 3 / 3	3 / 3 / 3
	Chaos swing	-	-	-
	Chaos wind(auto wind)	X	X	X
	Jet cool(Power wind)	X	X	X
Air purifying	Swirl wind	X	X	X
	Deodorizing filter	X	X	X
	Plasma air purifier	X	X	X
Installation	Prefilter(washable / anti-fungus)	O	O	O
	Drain pump	O	O	O
	E.S.P. control	O	O	O
	Electric heater(operation)	X	X	X
Reliability	High ceiling operation	-	-	-
	Hot start	O	O	O
	Self diagnosis	O	O	O
Convenience	Soft dry operation	O	O	O
	Auto changeover	X	X	X
	Auto cleaning	X	X	X
	Auto operation(artificial intelligence)	O	O	O
	Auto restart operation	O	O	O
	Child lock	O	O	O
	Energy-Saving Cooling Mode	X	X	X
	Forced operation	X	X	X
	Group control	O	O	O
	Sleep mode	X	X	X
	Timer(on/off)	X	X	X
	Timer(weekly)	X	X	X
Individual control	Two thermistor control	O	O	O
	Wide wired remote controller	PQRCVSL0	PQRCVSL0	PQRCVSL0
	Deluxe wired remote controller	-	-	-
	Simple wired remote controller	PQRCUCS0C	PQRCUCS0C	PQRCUCS0C
	Simple wired remote controller(for hotel use)	-	-	-
	Wireless remote controller(simple)	X	X	X
	Wireless LCD remote control	X	X	X
CAC network function	Wireless LCD remote control(Ez)	PQWRHDN0	PQWRHDN0	PQWRHDN0
	General central controller (Non LGAP)	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O
	PDI(power distribution indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
Special function kit	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0
	CTIE	X	X	X
Others	Zone control	X	X	X
	Thermistor	-	-	-

※ PDI (power distribution indicator) & PI 485 are installed outdoor unit.

Note :

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

4. Ceiling concealed duct - low static pressure

4.2 Specifications

Indoor unit type			Ceiling Concealed Duct - Low Static		
Model			AMNW09GB1A0 [LMDN095HV]	AMNW12GB1A0 [LMDN125HV]	AMNW18GB2A0 [LMDN185HV]
Decorative panel model name			-	-	-
Power Supply		Ø / V / Hz	1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60
Capacity(*)		Btu/h Class	9,000	12,000	18,000
Current	Running Current	A	0.25	0.25	0.25
Fan	Motor Type		BLDC	BLDC	BLDC
	Fan Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output(W) x No. of Unit		5 x 1, 19 x 1	5 x 1, 19 x 1	19 x 2
	Air Flow Rate (H / M / L)	CMM	8.5 / 7.5 / 6.5	9.5 / 8.5 / 7.5	15.0 / 13.5 / 11.5
		CFM	300 / 265 / 230	335 / 300 / 265	530 / 477 / 406
	External Static Pressure	mmAq	4	4	4
	Capacitor	µF / Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x Column x FPI		2R x 12C x 21	2R x 12C x 21	2R x 11C x 21
Dimensions (W x H x D)	Body	mm	820 x 190 x 575	820 x 190 x 575	1,100 x 190 x 575
		inch	32 9/32 x 7 15/32 x 22 5/8	32 9/32 x 7 15/32 x 22 5/8	43 5/16 x 7 15/32 x 22 5/8
	Decorative Panel	mm	-	-	-
		inch	-	-	-
Net Weight	Body	kg (lbs)	20.5(45.2)	20.5(45.2)	26.5 (58.4)
	Decorative Panel	kg (lbs)	-	-	-
Air Filter			Long life filter	Long life filter	Long life filter
Sound Level (H / M / L)		dB(A)+3	32 / 26 / 25	33 / 31 / 26	34 / 31 / 29
Piping	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
Connections	Gas	mm (inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
	Drain(OD/ID)	mm(inch)	32/25(1-1/4 / 31/32)	32/25(1-1/4 / 31/32)	32/25(1-1/4 / 31/32)
Dehumidification Rate		l/h(pts/h)	1.0(2.1)	1.2(2.5)	2.0(4.2)
Safety Devices			Fuse, thermal protector for fan motor		
Temperature Sensor			Thermistor	Thermistor	Thermistor
Refrigerant			R410A	R410A	R410A
Refrigerant Control			EEV(in Outdoor unit)	EEV(in Outdoor unit)	EEV(in Outdoor unit)
Transmission Interunit Cable		No. x AWG	4 x 18(Including Earth)	4 x 18(Including Earth)	4 x 18(Including Earth)

Note :

- Capacities are based on the following conditions:
 Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB
 - Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB
 Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
 - Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB
 Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)
 - Level Difference of Zero
- Wiring cable size must comply with the applicable local and national code.
- The specification may be subject to change without prior notice for purpose of improvement.
- For more Capacity(*), refer to the combination table

Conversion Formula

$$\text{kW} = \text{Btu/h Class} \times 0.0002931$$

$$\text{CFM} = \text{CMM} \times 35.3$$

4. Ceiling concealed duct - low static pressure

4.3 Dimensions

CEILING CONCEALED DUCT

AMNW09GB1A0[LMDN095HV]
AMNW12GB1A0[LMDN125HV]

Unit : mm(inch)

■ Technical Specification

Model name		AMNW09GB1A0[LMDN095HV]	AMNW12GB1A0[LMDN125HV]
Power supply	Q/V/Hz	1 / 208-230 / 60	1 / 208-230 / 60
	Blu/h Class	9 000	12 000
Capacity			
Piping	Liquid	6.35(1/4)	6.35(1/4)
Connections	Gas	9.52(3/8)	9.52(3/8)

■ Note

- Unit should be installed in compliance with the installation manual in the product box.
- Unit shall be grounded in accordance with the local regulations or applicable national codes.
- The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE : B1

4. Ceiling concealed duct - low static pressure

CEILING CONCEALED DUCT

AMNW18GB2A0[LMDN185HV]

No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquid pipe connection	
5	Drain pipe connection	
6	Power supply connection	

Technical Specification

Model name	AMNW18GB2A0[LMDN185HV]
Power supply	ØV/Hz 1 / 208-230 / 60
Capacity	Btu/h Class 18 000
Piping Connections	Liquid mm(inch) 6.35(1/4)
	Gas mm(inch) 12.7(1/2)

Note

- 1. Unit should be installed in compliance with the installation manual in the product box.
- 2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
- 3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

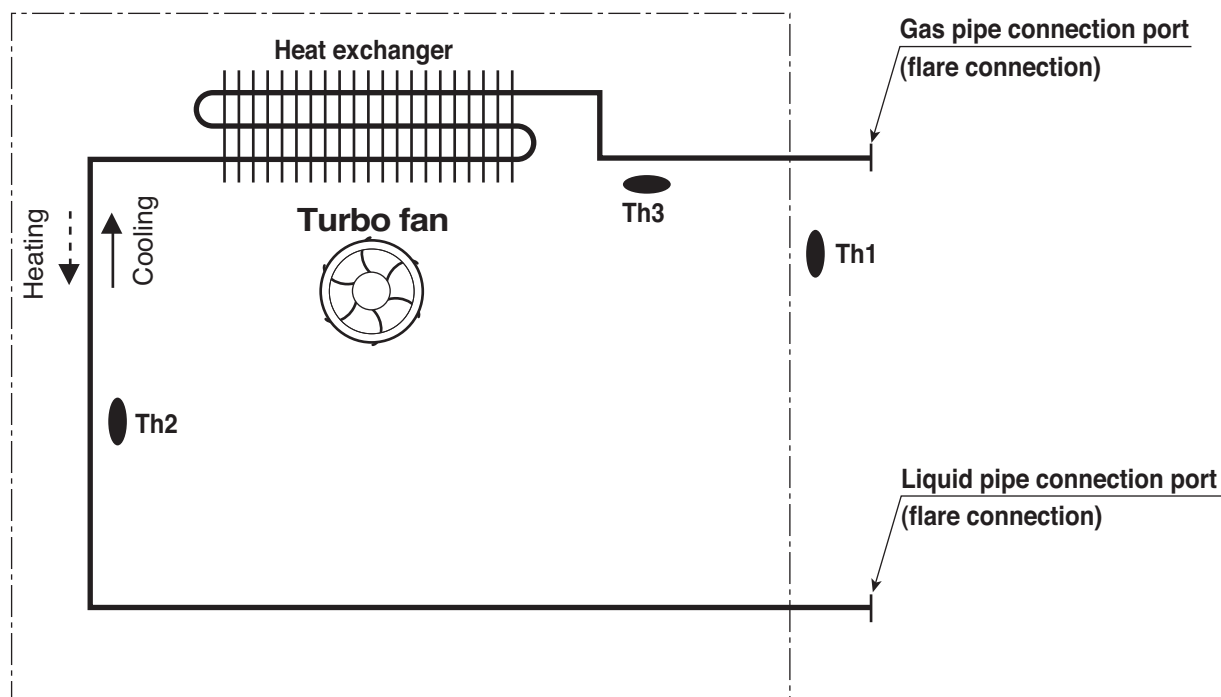
Unit : mm(inch)

76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: B2

4. Ceiling concealed duct - low static pressure

4.4 Piping diagrams



■ Refrigerant pipe connection port diameters

Unit : mm(inch)

Model	Gas	Liquid
AMNW09GB1A0[LMDN095HV]	ø9.52(3/8)	ø6.35(1/4)
AMNW12GB1A0[LMDN125HV]		
AMNW18GB2A0[LMDN185HV]	ø12.7(1/2)	ø6.35(1/4)

LOC.	Description	PCB Connector
Th1	Thermistor for Indoor Air Temperature	CN_ROOM
Th2	Thermistor for Evaporator Inlet Temperature	CN_PIPE/IN
Th3	Thermistor for Evaporator Outlet Temperature	CN_PIPE/OUT

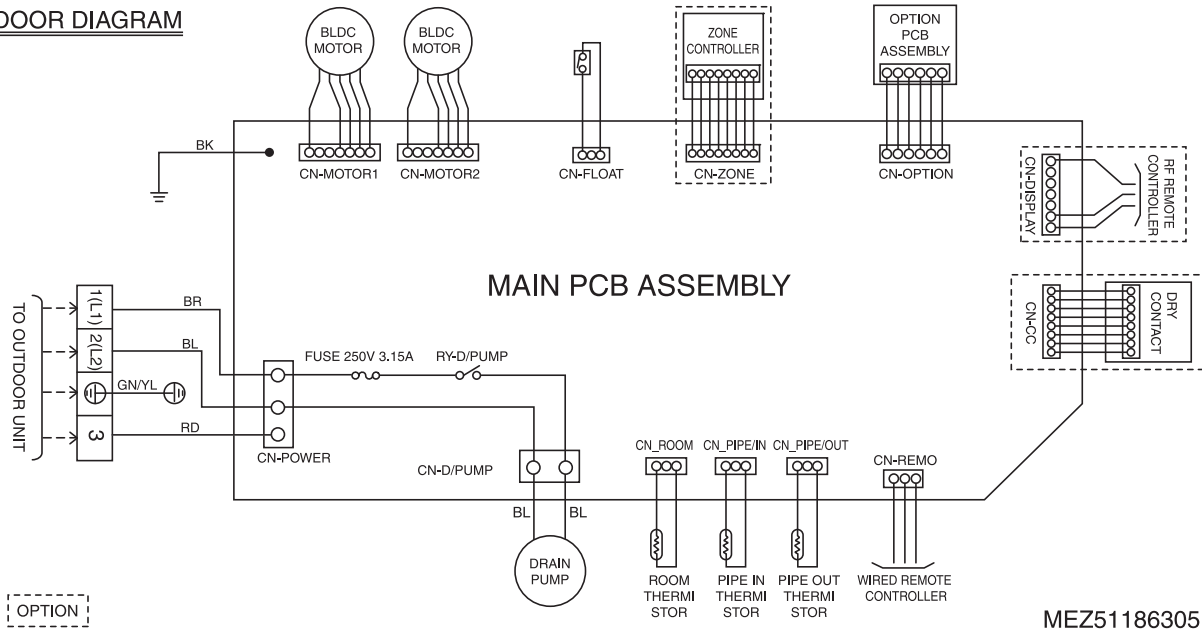
Notes : Description is expressed based on Cooling mode.

4. Ceiling concealed duct - low static pressure

4.5 Wiring diagrams

Models: AMNW-B1/B2

INDOOR DIAGRAM



4. Ceiling concealed duct - low static pressure

4.6 Capacity Tables

■ Cooling Capacity

Cooling Capacity

Unit Size (kBtu/h(kW))	Outdoor air temp. °F DB	Indoor Air Temp. °F WB											
		57.2		60.8		64.4		67.0		71.6		75.2	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
9.0 (2.64)	68.0	9.14	7.99	9.34	8.04	9.64	8.10	9.93	8.18	10.30	8.25	11.20	8.41
	77.0	8.92	7.83	9.24	7.87	9.64	7.97	9.85	8.07	10.50	8.19	11.40	8.41
	89.6	8.92	7.55	9.24	7.66	9.74	7.83	9.95	7.92	10.70	8.03	11.70	8.35
	95.0	8.22	7.20	8.64	7.37	8.80	7.50	9.00	7.62	9.90	7.77	11.10	8.05
	104.0	7.73	7.02	8.14	7.23	8.56	7.48	8.78	7.65	9.50	7.84	10.10	8.10
	109.4	7.53	7.15	7.94	7.31	8.26	7.53	8.48	7.75	9.20	7.99	9.90	8.22
12 (3.52)	114.8	7.33	7.25	7.64	7.44	7.96	7.62	8.18	7.88	8.90	8.08	9.60	8.39
	68.0	12.19	10.54	12.45	10.60	12.85	10.69	13.24	10.78	13.73	10.88	14.93	11.09
	77.0	11.89	10.32	12.32	10.38	12.85	10.51	13.13	10.64	14.00	10.80	15.20	11.09
	89.6	11.89	9.96	12.32	10.10	12.99	10.32	13.27	10.44	14.27	10.60	15.60	11.01
	95.0	10.96	9.50	11.52	9.72	11.73	9.89	12.00	10.05	13.20	10.25	14.80	10.61
	104.0	10.31	9.25	10.85	9.53	11.41	9.87	11.71	10.10	12.67	10.35	13.47	10.68
18 (5.28)	109.4	10.04	9.44	10.59	9.65	11.01	9.94	11.31	10.22	12.27	10.53	13.20	10.85
	114.8	9.77	9.56	10.19	9.82	10.61	10.05	10.91	10.39	11.87	10.66	12.80	11.07
	68.0	18.28	14.30	18.68	14.39	19.28	14.51	19.86	14.64	20.60	14.76	22.40	15.05
	77.0	17.84	14.01	18.48	14.08	19.28	14.26	19.70	14.45	21.00	14.66	22.80	15.05
	89.6	17.84	13.52	18.48	13.71	19.48	14.01	19.90	14.17	21.40	14.38	23.40	14.95
	95.0	16.44	12.89	17.28	13.20	17.60	13.42	18.00	13.64	19.80	13.91	22.20	14.40
18 (5.28)	104.0	15.46	12.56	16.28	12.93	17.12	13.40	17.56	13.70	19.00	14.04	20.20	14.50
	109.4	15.06	12.81	15.88	13.09	16.52	13.49	16.96	13.87	18.40	14.29	19.80	14.72
	114.8	14.66	12.97	15.28	13.32	15.92	13.64	16.36	14.10	17.80	14.47	19.20	15.02

Notes:

1. Capacities are based on the following conditions.

Corresponding refrigerant piping length : 25ft

Level difference : 0ft

2. TC : Total Capacity(kBtu/h)

SHC: Sensible Heat Capacity(kBtu/h)

4. Ceiling concealed duct - low static pressure

■ Heating Capacity

Heating capacity

Unit Size (kBtu/h(kW))	Indoor air temp. °F DB	Outdoor Air Temp. °F WB						
		5	14	23	32	43	50	59
		TC	TC	TC	TC	TC	TC	TC
9.0 (2.64)	60.8	6.0	7.4	8.5	9.5	10.5	10.9	11.0
	64.4	6.0	7.3	8.4	9.4	10.4	10.9	10.9
	68.0	5.9	7.3	8.4	9.4	10.4	10.9	10.9
	70.0	5.9	7.2	8.3	9.3	10.4	10.8	10.8
	71.6	5.8	7.2	8.2	9.2	10.3	10.7	10.8
	75.2	5.5	6.9	8.0	9.0	10.0	10.5	10.5
12 (3.52)	60.8	8.0	9.8	11.3	12.6	14.0	14.6	14.6
	64.4	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	68.0	7.9	9.7	11.2	12.5	13.9	14.5	14.5
	70.0	7.8	9.6	11.1	12.4	13.8	14.4	14.4
	71.6	7.7	9.5	11.0	12.3	13.7	14.3	14.3
	75.2	7.4	9.2	10.6	12.0	13.4	13.9	14.0
18 (5.28)	60.8	12.0	14.8	16.9	18.9	20.9	21.9	22.0
	64.4	11.9	14.6	16.7	18.8	20.8	21.8	21.8
	68.0	11.8	14.6	16.7	18.7	20.7	21.7	21.8
	70.0	11.7	14.4	16.6	18.5	20.8	21.6	21.6
	71.6	11.6	14.3	16.4	18.4	20.5	21.4	21.5
	75.2	11.0	13.7	16.0	17.9	20.0	20.9	20.9

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity(kBtu/h)

4. Ceiling concealed duct - low static pressure

4.7 External pressure setting for

 (E.S.P. Control) provide required constant air flow rate irrespective of E.S.P. charge.

(1) Open the rear cover of the wired remote-controller to set the mode.

(2) Select one of three selectable modes as follows.

Group control switch

1. For individual control/Master use
2. For group control/Slave use

Ceiling height selection switch

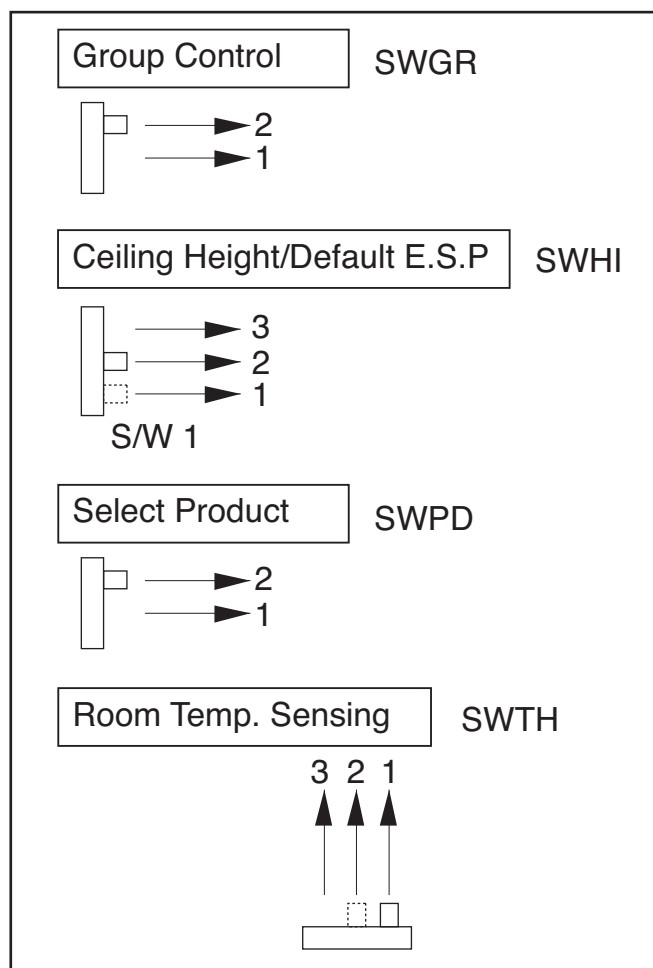
1. Position V-L:
 - Minimum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.
2. Position F-H:
 - Maximum E.S.P. setting & Fan speed doesn't vary according to the opening & closing of dampers.
3. Position V-H:
 - Maximum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.

Product selection switch

1. Cooling Only product
2. Heat Pump product

Indoor temperature sensor selection switch

1. Use the temperature sensor on the remote controller.
2. Use the temperature sensor on the product.
3. Use the sensors on the product and remote controller.



- When changing the product selection switch and group control switch, the power must be reconnected to reflect the changes.
- The central control could operate inappropriately depends on indoor unit type, when the remote controller is set as slave.

4. Ceiling concealed duct - low static pressure

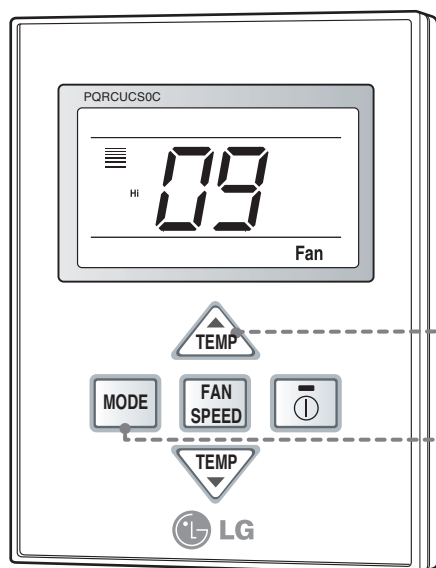
How to Set E.S.P. on the remote controller?

This Function can be controlled with new wired remote controller

Procedure of RPM change:

Ex) External static pressure is 29Pa for model name "AMNW12GB1A0[LMDN125HV]".

- To protect the unit, compressor is designed to be off during E.S.P. setting.
 - E.S.P function is setting the volume of each fan speed.
- It is for the convenience of installation.
It is recommended that you should not use this function while using the remote controller.

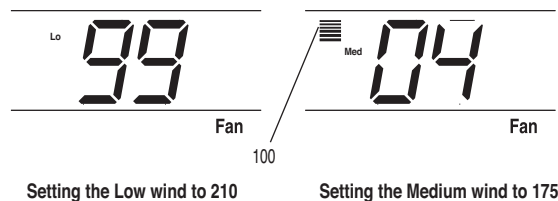


1 Press the mode button and the temperature increasing button(▲) same time for three seconds.

2 Set the volume of each fan speed(Low, Medium, Hi) by using the temperature control button. Press the fan speed button to select the fan speed.
The value of E.S.P can be adjusted from 1 to 255.

3 If you press the On/Off button while setting the ESP function, it will be canceled. (The picture on the left side is the example of setting the Hi wind to ESP 09.)

4 Press the mode button and the temperature increasing button (s) same time for three seconds. Then the ESP setting will be activated after the temperature display flashes three times.



※ The E.S.P value is set at the proper value at the factory.
So it is highly recommended that you should not change the E.S.P value at your discretion.

4. Ceiling concealed duct - low static pressure

E.S.P. setting value (reference)

Static pressure(mmAq)		0	1	2	3	4
Model name	Step(Hi/Mid/Lo)	Setting value				
AMNW09GB1A0 [LMDN095HV]	8.5 CMM(300CFM)	75	84	94	104	114
	7.5 CMM(265CFM)	69	77	88	99	110
	6.5 CMM(230CFM)	62	71	83	95	106
AMNW12GB1A0 [LMDN125HV]	9.5 CMM(336CFM)	82	90	99	109	118
	8.5 CMM(300CFM)	75	84	94	104	114
	7.5 CMM(265CFM)	69	77	88	99	110
AMNW18GB2A0 [LMDN185HV]	15 CMM(530CFM)	90	97	105	114	122
	13.5 CMM(477CFM)	82	90	99	109	119
	11.5 CMM(406CFM)	75	84	93	103	114

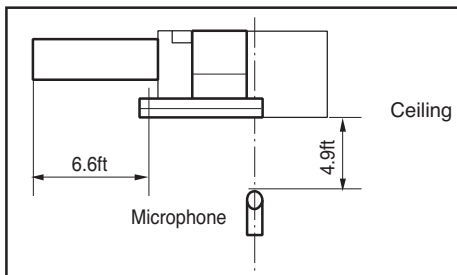
[Notes]

1. To get the desired Airflow & E.S.P. combination from the table set the matching value from the table. Value other than that in table will not give the combinations of airflow & E.S.P. which are mentioned in the table.
2. Table data is based at 230V. According to the fluctuation of voltage, air flow rate varies.

4. Ceiling concealed duct - low static pressure

4.8 Sound levels

Overall

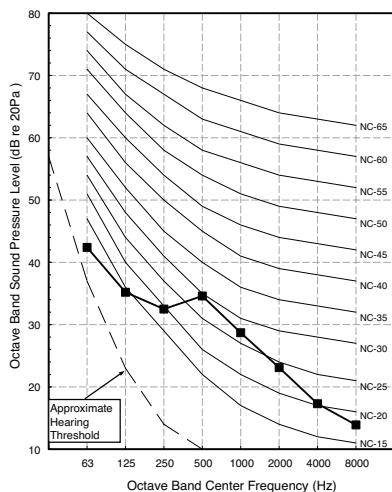

Notes:

- Data is valid at nominal operation condition
- Reference acoustic pressure $O_dB = 20Pa$
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

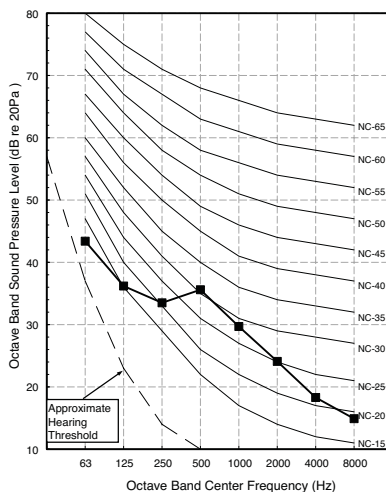
Model	Sound Levels [dB(A)]		
	H	M	L
AMNW09GB1A0[LMDN095HV]	32	26	25
AMNW12GB1A0[LMDN125HV]	33	31	26
AMNW18GB2A0[LMDN185HV]	34	31	29

Sound pressure level

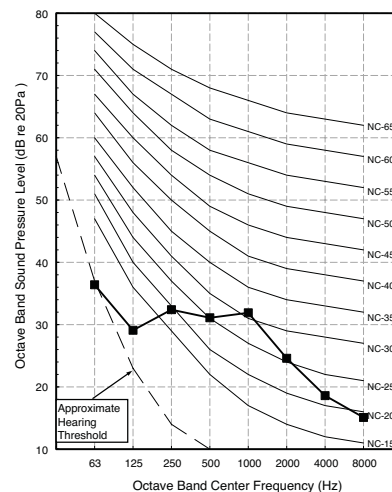
**AMNW09GB1A0
[LMDN095HV]**



**AMNW12GB1A0
[LMDN125HV]**



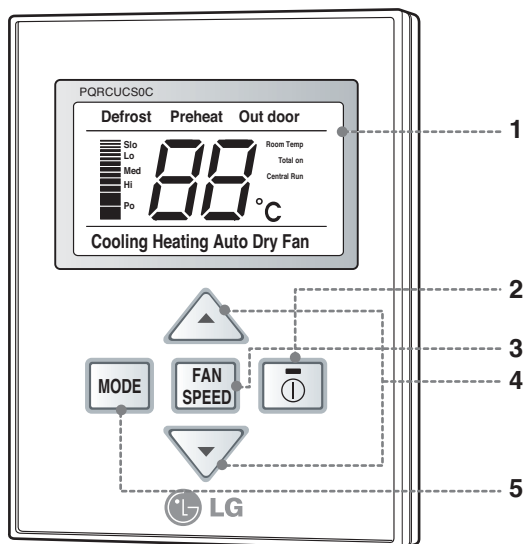
**AMNW18GB2A0
[LMDN185HV]**



4. Ceiling concealed duct - low static pressure

4.9 Controller

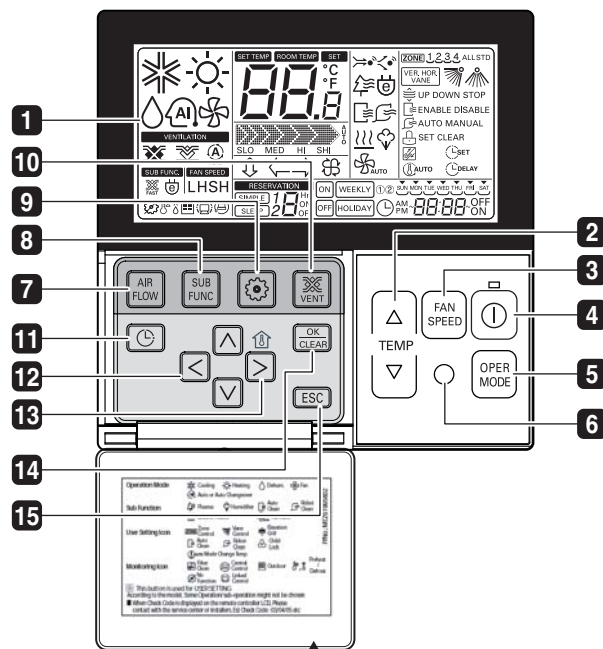
1) Wired remote controller



1. Operation Display Panel
2. On/Off Function
3. Fan Speed Button
4. Temperature Control Button
5. Mode Selection Check Button

4. Ceiling concealed duct - low static pressure

2) Wide wired remote controller(accessory)



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

- | | |
|---|---|
| 1 OPERATION INDICATION SCREEN | 9 FUNCTION SETTING Button |
| 2 SET TEMPERATURE Button | 10 VENTILATION Button |
| 3 FAN SPEED Button | 11 RESERVATION |
| 4 ON/OFF Button | 12 UP,DOWN,LEFT,RIGHT Button
• To check the indoor temperature, press  button. |
| 5 OPERATION MODE SELECTION Button | 13 ROOM TEMPERATURE Button |
| 6 WIRELESS REMOTE CONTROLLER RECEIVER
• Some products don't receive the wireless signals. | 14 SETTING/CANCEL Button |
| 7 AIR FLOW Button | 15 EXIT Button |
| 8 SUBFUNCTION Button | |

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

MULTI F

■ Outdoor units

1. Multi piping type MULTI F

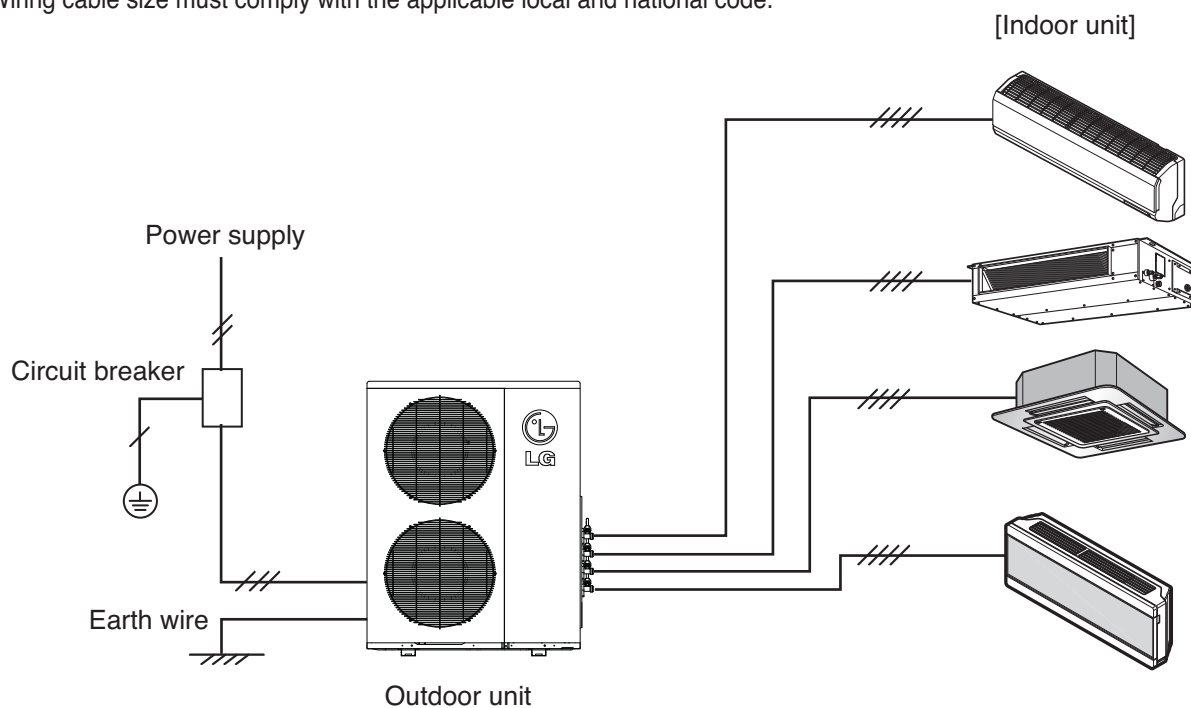
1. Multi piping type MULTI F

1.1 Power supply

Type	Outdoor unit	Circuit breaker capacity	Power supply
Heat pump	A2UW183FA2[LMU187HV]	15A	1Φ, 208-230V. 60Hz
	A3UW243FA2[LMU247HV]	25A	
	A4UW363FA1[LMU366HV]		
	A4UW363FA2[LMU369HV]		

External wiring procedure

- The power supply work is needed only to the outdoor unit. The power supply to the indoor unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
- Wiring cable size must comply with the applicable local and national code.



1. Multi piping type MULTI F

1.2 List of functions

Category	Function	A2UW183FA2 [LMU187HV]	A3UW243FA2 [LMU247HV]	A4UW363FA1 [LMU366HV]	A4UW363FA2 [LMU369HV]
Reliability	Defrost / Deicing	O	O	O	O
	High Pressure Switch	X	X	X	X
	Low Pressure Switch	X	X	X	X
	Phase protection	X	X	X	X
	Restart Delay (3-minutes)	O	O	O	O
	Self Diagnosis	O	O	O	O
	Soft Start	O	O	O	O
	Test Function	X	X	X	X
Convenience	Auto operation(Artificial intelligence)	O	O	O	O
	Auto Restart Operation	O	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special function kit	Low ambient operation	O	O	O	O
Others	Thermistor	-	-	-	-

O : Applied X : Not applied - : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

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

1. Multi piping type MULTI F

1.3 Specifications

Outdoor Unit			A2UW183FA2 [LMU187HV]	A3UW243FA2 [LMU247HV]	A4UW363FA1 [LMU366HV]	A4UW363FA2 [LMU369HV]
Capacity(*)		Btu/h Class	18,000	24,000	36,000	34,000
Power Input (Min.~Rated~Max.)	Cooling	kW	0.26~1.12~2.37	0.39~1.43~3.09	0.72~3.75~3.92	0.77~2.72~3.92
	Heating	kW	0.28~1.29~2.48	0.42~2.21~3.10	0.72~3.7~4.10	1.12~3.58~4.1
Running Current (Min.~Rated~Max.)	Cooling	A	1.5~5.2~10.8	2.8~6.6~14.0	3.0~17.4~18.2	3.3~11.8~17.0
	Heating	A	1.5~6.0~11.3	3.0~10.2~14.1	4.5~17.2~18.8	4.9~15.5~17.8
Starting Current	Cooling/Heating	A	-	-	-	-
Power Supply		Φ/V/Hz	1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60	1 / 208-230 / 60
Power Supply Cable(Outdoor)		No.xAWG	3x14	3x12	3 x 12	3x12
Transmission Cable(Outdoor to indoor unit)		No.xAWG	4x18(Including Earth)	4x18(Including Earth)	4 x 18 (Including Earth)	4x18(Including Earth)
Dimensions	WxHxD	mm	870x808x320	870x808x320	870 x 808 x 320	900x1,165x370
		inch	34 1/4x31 13/16x12 19/32	34 1/4x31 13/16x12 19/32	34 1/4 x 31 13/16 x 12 19/32	35 7/16x45 7/8x14 9/16
Net Weight		kg(lbs)	56(123.5)	59(130.1)	65(143.3)	95(209.4)
Max. Number of Connectable Indoor Units			2	3	4	4
Compressor	Type		Twin-Rotary	Twin-Rotary	Twin-Rotary	Twin-Rotary
	QtyxModel		1xGKT141D	1xGJT240D	1 x 5KD240X	1xGPT425D
	Motor Type		BLDC	BLDC	BLDC	BLDC
	Oil charge volume	cc	570	900	900	1,300
	Oil Type		FVC68D	FVC68D	FV50S	FVC68D
Refrigerant	Cycle A Charge(at 7.5m)	g(oz)	1,900(67.0)	2,100(74.1)	2,550(89.9)	3,500(123.5)
	Cycle B Charge(at 7.5m)	g(oz)	-	-	-	-
	Type		R410A	R410A	R410A	R410A
	Control		EEV	EEV	EEV	EEV
Heat Exchanger	(RowsxColumnxFPI)xNo.		(2Rx36Cx16)x1	(2Rx36Cx16)x1	(2Rx36Cx18) x1	(2Rx26Cx17)x2
	Coil tube dia.	mm(inch)	7(0.276)	7(0.276)	7(0.276)	7(0.276)
	Defrosting Method		Reversing cycle	Reversing cycle	Reversing cycle	Reversing cycle
Fan	Type		Propeller	Propeller	Propeller	Propeller
	Motor Output(W) x No. of Unit		84 x 1	84 x 1	124 x 1	124 x 2
	Capacitor	μ/Vac	-	-	-	-
	Drive		Direct(DC)	Direct(DC)	Direct (DC)	Direct(DC)
	Discharge Direction(Side/Top)		Side	Side	Side	Side
	Air Flow RatexNo. of Fan	CMM(CFM)	60(2,119) x 1	60(2,119) x 1	60(2,119) x 1	60(2,119) x 2
Sound Level(H)	Sound Pressure	dB(A)+3	51	51	52	57
Piping Connections	Liquid(Cycle A)	mm(inch)	6.35(1/4)x2EA	6.35(1/4)x3EA	6.35(1/4)x4EA	6.35(1/4)x4EA
	Gas(Cycle A)	mm(inch)	9.52(3/8)x2EA	9.52(3/8)x3EA	9.52(3/8)x4EA	9.52(3/8)x4EA
	Liquid(Cycle B)	mm(inch)	-	-	-	-
	Gas(Cycle B)	mm(inch)	-	-	-	-
Max. Interunit Piping Length	Total Piping	m(ft.)	50(164.0)	75(246.1)	75(246.1)	75(246.1)
	Main Piping	m(ft.)	-	-	-	-
	Total Branch Piping	m(ft.)	-	-	-	-
	Each Branch Piping	m(ft.)	25(82.0)	25(82.0)	25(82.0)	25(82.0)
	Chargeless Piping length (no add'l refrigerant)	m(ft.)	15(49.2)	22.5(73.8)	37.5(123.0)	30(98.4)
Max. Elevation Difference	Outdoor Unit~Indoor Unit	m(ft.)	15(49.2)	15(49.2)	15(49.2)	15(49.2)
	Indoor Unit~Indoor Unit	m(ft.)	7.5(24.6)	7.5(24.6)	7.5(24.6)	7.5(24.6)
Operation Range (Outdoor)	Cooling	°C DB(°F DB)	-10~43(14~109)	-10~43(14~109)	-10~43(14~109)	-10~43(14~109)
	Heating	°C WB(°F WB)	-15~18(5~64)	-15~18(5~64)	-15~18(5~64)	-15~18(5~64)

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. At least two indoor units should be connected.

5. For more Capacity(*),refer to the combination table

6. This value is based on the non-ducted type indoor units.

Conversion Formula

$$\text{kW} = \text{Btu/h Class} \times 0.0002931$$

$$\text{CFM} = \text{CMM} \times 35.3$$

1. Multi piping type MULTI F

1.4 Combination table

Models : A2UW183FA2[LMU187HV]

■ Non ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	7,800	7,800	-	-	10,798	3.16	15,600	4.57	19,000	5.57	924	1,118	2,370	4.2	5.2	10.8	14.0	21.0
	9	12	-	-	21	6,686	8,914	-	-	10,798	3.16	15,600	4.57	19,000	5.57	924	1,118	2,370	4.2	5.2	10.8	14.0	21.0
	12	12	-	-	24	7,800	7,800	-	-	10,798	3.16	15,600	4.57	19,000	5.57	924	1,118	2,370	4.2	5.2	10.8	14.0	21.0

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	8,500	8,500	-	-	12,418	3.64	17,000	4.98	21,000	6.15	1,150	1,290	2,480	5.2	6.0	11.3	3.9	9.2
	9	12	-	-	21	7,286	9,714	-	-	12,418	3.64	17,000	4.98	21,000	6.15	1,150	1,290	2,480	5.2	6.0	11.3	3.9	9.2
	12	12	-	-	24	8,500	8,500	-	-	12,418	3.64	17,000	4.98	21,000	6.15	1,150	1,290	2,480	5.2	6.0	11.3	3.9	9.2

■ Ducted type indoor unit

Cooling

	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER	
										Min		Middle		Max										
UNIT	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Middle	Max	Min	Middle	Max			
2 UNIT	9	9	-	-	18	7,400	7,400	-	-	10,798	3.16	14,800	4.34	19,000	5.57	945	1,244	2,370	4.3	5.7	10.8	11.9	17.7	
	9	12	-	-	21	6,343	8,457	-	-	10,798	3.16	14,800	4.34	19,000	5.57	945	1,244	2,370	4.3	5.7	10.8	11.9	17.7	
	12	12	-	-	24	7,400	7,400	-	-	10,798	3.16	14,800	4.34	19,000	5.57	945	1,244	2,370	4.3	5.7	10.8	11.9	17.7	

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	8,400	8,400	-	-	12,418	3.64	16,800	4.92	21,000	6.15	1,170	1,306	2,480	5.3	6.0	11.3	3.8	8.8
	9	12	-	-	21	7,200	9,600	-	-	12,418	3.64	16,800	4.92	21,000	6.15	1,170	1,306	2,480	5.3	6.0	11.3	3.8	8.8
	12	12	-	-	24	8,400	8,400	-	-	12,418	3.64	16,800	4.92	21,000	6.15	1,170	1,306	2,480	5.3	6.0	11.3	3.8	8.8

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB
- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)
- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 24kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

Models : A3UW243FA2[LMU247HV]

■ Non ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	8,500	8,500	-	-	10,798	3.16	17,000	4.98	19,800	5.80	1,002	1,349	2,560	4.6	6.1	11.6	12.6	19.0
	9	12	-	-	21	7,586	10,114	-	-	11,100	3.25	17,700	5.19	23,100	6.77	1,044	1,383	2,830	4.7	6.3	12.9	12.8	19.0
	12	12	-	-	24	9,600	9,600	-	-	11,400	3.34	19,200	5.63	25,500	7.47	1,194	1,469	3,090	5.4	6.7	14.0	13.1	19.0
	9	18	-	-	27	6,400	12,800	-	-	11,400	3.34	19,200	5.63	27,500	8.06	1,284	1,469	3,090	5.8	6.7	14.0	13.1	19.0
	12	18	-	-	30	7,680	11,520	-	-	11,400	3.34	19,200	5.63	27,500	8.06	1,284	1,469	3,090	5.8	6.7	14.0	13.1	19.0
3 UNIT	9	9	9	-	27	6,400	6,400	6,400	-	11,700	3.43	19,200	5.63	28,800	8.44	1,200	1,431	3,050	5.5	6.6	13.9	13.4	21.7
	9	9	12	-	30	5,760	5,760	5,760	-	11,700	3.43	19,200	5.63	28,800	8.44	1,200	1,431	3,050	5.5	6.6	13.9	13.4	21.7
	9	12	12	-	33	5,236	6,982	6,982	-	11,700	3.43	19,200	5.63	28,800	8.44	1,200	1,431	3,050	5.5	6.6	13.9	13.4	21.7

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	10,120	10,120	-	-	12,418	3.64	20,240	5.93	23,700	6.95	1,200	1,951	2,660	5.5	8.9	12.1	3.0	7.7
	9	12	-	-	21	9,857	13,143	-	-	12,765	3.74	23,000	6.74	27,700	8.12	1,260	2,174	3,010	5.7	9.9	13.7	3.1	7.7
	12	12	-	-	24	13,200	13,200	-	-	16,200	4.75	26,400	7.74	29,040	8.51	1,368	2,320	3,100	6.2	10.5	14.1	3.3	8.2
	9	18	-	-	27	8,800	17,600	-	-	16,200	4.75	26,400	7.74	31,500	9.23	1,428	2,320	3,100	6.5	10.5	14.1	3.3	8.2
	12	18	-	-	30	10,560	15,840	-	-	16,200	4.75	26,400	7.74	31,500	9.23	1,428	2,320	3,100	6.5	10.5	14.1	3.3	8.2
3 UNIT	9	9	9	-	27	8,800	8,800	8,800	-	16,200	4.75	26,400	7.74	32,000	9.38	1,308	2,207	3,090	5.9	10.2	14.0	3.5	9.4
	9	9	12	-	30	7,920	7,920	7,920	-	16,200	4.75	26,400	7.74	32,000	9.38	1,308	2,207	3,090	5.9	10.2	14.0	3.5	9.4
	9	12	12	-	33	7,200	9,600	9,600	-	16,200	4.75	26,400	7.74	32,000	9.38	1,308	2,207	3,090	5.9	10.2	14.0	3.5	9.4

■ Ducted type indoor unit

Cooling

	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
UNIT	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	8,300	8,300	-	-	10,798	3.16	16,600	4.87	19,800	5.80	1,042	1,495	2,560	4.7	6.8	11.6	11.1	14.4
	9	12	-	-	21	7,286	9,714	-	-	12,000	3.52	17,000	4.98	23,100	6.77	1,084	1,504	2,830	4.9	6.8	12.9	11.3	14.4
	12	12	-	-	24	9,000	9,000	-	-	12,300	3.60	18,000	5.28	25,500	7.47	1,234	1,565	3,090	5.6	7.1	14.0	11.5	14.4
	9	18	-	-	27	6,000	12,000	-	-	12,300	3.60	18,000	5.28	27,500	8.06	1,324	1,565	3,090	6.0	7.1	14.0	11.5	14.4
	12	18	-	-	30	7,200	10,800	-	-	12,300	3.60	18,000	5.28	27,500	8.06	1,324	1,565	3,090	6.0	7.1	14.0	11.5	14.4
3 UNIT	9	9	9	-	27	6,000	6,000	6,000	-	12,300	3.60	18,000	5.28	28,800	8.44	1,260	1,525	3,050	5.7	6.9	13.9	11.8	16.4
	9	9	12	-	30	5,400	5,400	5,400	-	12,300	3.60	18,000	5.28	28,800	8.44	1,260	1,525	3,050	5.7	6.9	13.9	11.8	16.4
	9	12	12	-	33	4,909	6,545	6,545	-	12,300	3.60	18,000	5.28	28,800	8.44	1,260	1,525	3,050	5.7	6.9	13.9	11.8	16.4

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	10,000	10,000	-	-	12,418	3.64	20,000	5.86	23,700	6.95	1,240	1,967	2,660	5.6	8.9	12.1	3.0	7.9
	9	12	-	-	21	9,771	13,029	-	-	13,800	4.04	22,800	6.68	27,700	8.12	1,300	2,227	3,010	5.9	10.1	13.7	3.0	7.9
	12	12	-	-	24	13,100	13,100	-	-	16,500	4.84	26,200	7.68	29,040	8.51	1,408	2,360	3,100	6.4	10.6	14.1	3.3	8.1
	9	18	-	-	27	8,733	17,467	-	-	16,500	4.84	26,200	7.68	31,500	9.23	1,468	2,360	3,100	6.7	10.6	14.1	3.3	8.1
	12	18	-	-	30	10,480	15,720	-	-	16,500	4.84	26,200	7.68	31,500	9.23	1,468	2,360	3,100	6.7	10.6	14.1	3.3	8.1
3 UNIT	9	9	9	-	27	8,733	8,733	8,733	-	16,500	4.84	26,200	7.68	32,000	9.38	1,368	2,226	3,090	6.2	10.3	14.0	3.4	8.5
	9	9	12	-	30	7,860	7,860	7,860	-	16,500	4.84	26,200	7.68	32,000	9.38	1,368	2,226	3,090	6.2	10.3	14.0	3.4	8.5
	9	12	12	-	33	7,145	9,527	9,527	-	16,500	4.84	26,200	7.68	32,000	9.38	1,368	2,226	3,090	6.2	10.3	14.0	3.4	8.5

Note :

1. Capacities are based on the following conditions:

Cooling : - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating : - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 24kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

Models : A4UW363FA1[LMU366HV]

■ Non ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	9,000	9,000	-	-	10,800	3.2	18,000	5.3	19,800	5.8	930	1,550	2,434	4.3	7.2	11.3	10.6	15.1
	9	12	-	-	21	9,000	12,000	-	-	12,600	3.7	21,000	6.2	23,100	6.8	1,020	1,700	2,632	4.7	7.9	12.2	11.4	15.3
	12	12	-	-	24	12,000	12,000	-	-	14,400	4.2	24,000	7.1	26,400	7.8	1,116	1,860	2,830	5.2	8.6	13.1	11.9	15.7
	9	18	-	-	27	9,000	18,000	-	-	16,200	4.8	27,000	7.9	29,700	8.7	1,320	2,200	3,270	6.1	10.2	15.2	11.3	16.4
	12	18	-	-	30	11,600	17,400	-	-	17,400	5.1	29,000	8.5	32,000	9.4	1,758	2,930	3,710	8.2	13.6	17.2	8.9	16.4
	18	18	-	-	36	16,500	16,500	-	-	19,800	5.8	33,000	9.7	35,000	10.3	2,160	3,600	3,920	10.0	16.7	18.2	8.2	16.4
3 UNIT	9	9	9	-	27	9,000	9,000	9,000	-	16,200	4.8	27,000	7.9	29,700	8.7	1,320	2,200	3,270	6.1	10.2	15.2	11.8	16.8
	9	9	12	-	30	9,000	9,000	12,000	-	18,000	5.3	30,000	8.8	33,000	9.7	1,758	2,930	3,710	8.2	13.6	17.2	9.7	16.8
	9	12	12	-	33	8,618	11,491	11,491	-	18,960	5.6	31,600	9.3	34,500	10.1	1,992	3,320	3,815	9.2	15.4	17.7	9.0	16.8
	12	12	12	-	36	10,767	10,767	10,767	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	16.8
	9	9	18	-	36	8,075	8,075	16,150	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	17.0
	9	12	18	-	39	7,454	9,938	14,908	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	17.0
	12	12	18	-	42	9,229	9,229	13,843	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	17.0
	9	18	18	-	45	6,460	12,920	12,920	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	17.0
4 UNIT	12	18	18	-	48	8,075	12,113	12,113	-	19,380	5.7	32,300	9.5	36,000	10.6	2,160	3,600	3,920	10.0	16.7	18.2	8.5	17.0
	9	9	9	9	36	8,075	8,075	8,075	8,075	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0
	9	9	9	12	39	7,454	7,454	7,454	9,938	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0
	9	9	12	12	42	6,921	6,921	9,229	9,229	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0
	9	12	12	12	45	6,460	8,613	8,613	8,613	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0
	9	9	9	18	45	6,460	6,460	6,460	12,920	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0
4 UNIT	12	12	12	12	48	8,075	8,075	8,075	8,075	19,380	5.7	32,300	9.5	36,000	10.6	2,250	3,750	3,920	10.4	17.4	18.2	8.6	18.0

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	10,350	10,350	-	-	12,420	3.7	20,700	6.1	22,770	6.7	1,554	2,590	3,090	7.2	12.0	14.3	2.3	8.5
	9	12	-	-	21	10,329	13,771	-	-	14,460	4.3	24,100	7.1	26,510	7.8	1,608	2,680	3,100	7.5	12.4	14.4	2.6	8.5
	12	12	-	-	24	13,800	13,800	-	-	16,560	4.9	27,600	8.1	30,360	8.9	1,662	2,770	3,300	7.7	12.8	15.3	2.9	8.5
	9	18	-	-	27	10,000	20,000	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,770	2,950	3,500	8.2	13.7	16.2	3.0	8.7
	12	18	-	-	30	13,200	19,800	-	-	19,800	5.8	33,000	9.7	36,300	10.7	1,878	3,130	4,010	8.7	14.5	18.6	3.1	8.7
	18	18	-	-	36	17,000	17,000	-	-	20,400	6.0	34,000	10.0	37,400	11.0	2,166	3,610	4,010	10.0	16.7	18.6	2.8	8.7
3 UNIT	9	9	9	-	27	10,333	10,333	10,333	-	18,600	5.5	31,000	9.1	34,100	10.0	1,800	3,000	3,500	8.3	13.9	16.2	3.0	8.9
	9	9	12	-	30	10,200	10,200	13,600	-	20,400	6.0	34,000	10.0	37,400	11.0	1,932	3,220	4,000	9.0	14.9	18.6	3.1	8.9
	9	12	12	-	33	9,545	12,727	12,727	-	21,000	6.2	35,000	10.3	38,500	11.3	2,076	3,460	4,050	9.6	16.0	18.8	3.0	8.9
	12	12	12	-	36	11,800	11,800	11,800	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	8.9
	9	9	18	-	36	8,850	8,850	17,700	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	12	18	-	39	8,169	10,892	16,338	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	12	12	18	-	42	10,114	10,114	15,171	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	18	18	-	45	7,080	14,160	14,160	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
4 UNIT	12	18	18	-	48	8,850	13,275	13,275	-	21,240	6.2	35,400	10.4	41,000	12.1	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	9	9	9	36	8,850	8,850	8,850	8,850	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	9	9	12	39	8,169	8,169	8,169	10,892	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	9	12	12	42	7,586	7,586	10,114	10,114	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	12	12	12	45	7,080	9,440	9,440	9,440	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
	9	9	9	18	45	7,080	7,080	7,080	14,160	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1
4 UNIT	12	12	12	12	48	8,850	8,850	8,850	8,850	21,240	6.2	35,400	10.4	42,000	12.3	2,220	3,700	4,100	10.3	17.2	18.8	2.8	9.1

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 48kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

■ Ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	9,000	9,000	-	-	10,800	3.2	18,000	5.3	19,800	5.8	980	1,630	2,560	4.5	7.6	11.9	10.0	14.3
	9	12	-	-	21	9,000	12,000	-	-	12,600	3.7	21,000	6.2	23,100	6.8	1,080	1,790	2,760	5.0	8.3	12.8	10.7	14.5
	12	12	-	-	24	12,000	12,000	-	-	14,400	4.2	24,000	7.1	26,400	7.8	1,170	1,950	2,970	5.4	9.0	13.8	11.3	14.9
	9	18	-	-	27	9,000	18,000	-	-	16,200	4.8	27,000	7.9	29,700	8.7	1,390	2,310	3,430	6.4	10.7	15.9	10.7	15.6
	12	18	-	-	30	11,600	17,400	-	-	17,400	5.1	29,000	8.5	32,000	9.4	1,660	2,960	3,900	7.7	13.7	18.1	9.8	15.6
3 UNIT	18	18	-	-	36	16,500	16,500	-	-	19,800	5.8	33,000	9.7	35,000	10.3	2,230	3,800	4,010	10.3	17.6	18.6	8.7	15.6
	9	9	9	-	27	9,000	9,000	9,000	-	16,200	4.8	27,000	7.9	29,700	8.7	1,390	2,310	3,430	6.4	10.7	15.9	11.7	16.0
	9	9	12	-	30	9,000	9,000	12,000	-	18,000	5.3	30,000	8.8	33,000	9.7	1,660	2,960	3,900	7.7	13.7	18.1	10.1	16.0
	9	12	12	-	33	8,618	11,491	11,491	-	18,960	5.6	31,600	9.3	34,500	10.1	1,900	3,370	4,010	8.8	15.6	18.6	9.4	16.0
	12	12	12	-	36	11,000	11,000	11,000	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.0
	9	9	18	-	36	8,250	8,250	16,500	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.2
	9	12	18	-	39	7,615	10,154	15,231	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.2
	12	12	18	-	42	9,429	9,429	14,143	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.2
	9	18	18	-	45	6,600	13,200	13,200	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.6
4 UNIT	12	18	18	-	48	8,250	12,375	12,375	-	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	16.6
	9	9	9	9	36	8,250	8,250	8,250	8,250	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0
	9	9	9	12	39	7,615	7,615	7,615	10,154	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0
	9	9	12	12	42	7,071	7,071	9,429	9,429	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0
	9	12	12	12	45	6,600	8,800	8,800	8,800	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0
	9	9	9	18	45	6,600	6,600	6,600	13,200	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0
4 UNIT	12	12	12	12	48	8,250	8,250	8,250	8,250	19,800	5.8	33,000	9.7	36,000	10.6	2,230	3,800	4,010	10.3	17.6	18.6	8.7	17.0

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	10,350	10,350	-	-	12,420	3.7	20,700	6.1	22,770	6.7	1,480	2,460	2,940	6.9	11.4	13.6	2.5	8.1
	9	12	-	-	21	10,350	13,800	-	-	14,490	4.3	24,150	7.1	26,560	7.8	1,530	2,550	2,950	7.1	11.8	13.7	2.8	8.1
	12	12	-	-	24	13,800	13,800	-	-	16,560	4.9	27,600	8.1	30,360	8.9	1,580	2,630	3,140	7.3	12.2	14.6	3.1	8.1
	9	18	-	-	27	10,350	20,700	-	-	18,630	5.5	31,050	9.1	34,150	10.0	1,680	2,800	3,330	7.8	13.0	15.4	3.2	8.3
	12	18	-	-	30	13,340	20,010	-	-	20,010	5.9	33,350	9.8	36,680	10.8	1,780	2,970	3,810	8.3	13.8	17.7	3.3	8.3
	18	18	-	-	36	18,975	18,975	-	-	22,770	6.7	37,950	11.2	40,000	11.8	2,060	3,430	3,910	9.6	15.9	17.7	3.2	8.3
3 UNIT	9	9	9	-	27	10,350	10,350	10,350	-	18,630	5.5	31,050	9.1	35,700	10.5	1,710	2,850	3,330	7.9	13.2	15.4	3.2	8.5
	9	9	12	-	30	10,350	10,350	13,800	-	20,700	6.1	34,500	10.1	38,640	11.4	1,840	3,060	3,800	8.5	14.2	17.6	3.3	8.5
	9	12	12	-	33	9,911	13,215	13,215	-	21,804	6.4	36,340	10.7	39,820	11.7	1,970	3,290	3,850	9.1	15.3	17.9	3.2	8.5
	12	12	12	-	36	12,333	12,333	12,333	-	22,200	6.5	37,000	10.9	41,000	12.1	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.5
	9	9	18	-	36	9,250	9,250	18,500	-	22,200	6.5	37,000	10.9	41,000	12.1	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.6
	9	12	18	-	39	8,538	11,385	17,077	-	22,200	6.5	37,000	10.9	41,300	12.1	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.6
	12	12	18	-	42	10,571	10,571	15,857	-	22,200	6.5	37,000	10.9	41,600	12.2	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.6
	9	18	18	-	45	7,400	14,800	14,800	-	22,200	6.5	37,000	10.9	42,000	12.3	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.9
	12	18	18	-	48	9,250	13,875	13,875	-	22,200	6.5	37,000	10.9	42,300	12.4	2,110	3,520	3,900	9.8	16.3	18.1	3.1	8.9
4 UNIT	9	9	9	9	36	9,250	9,250	9,250	9,250	22,200	6.5	37,000	10.9	41,000	12.1	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0
	9	9	9	12	39	8,538	8,538	8,538	11,385	22,200	6.5	37,000	10.9	42,300	12.4	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0
	9	9	12	12	42	7,929	7,929	10,571	10,571	22,200	6.5	37,000	10.9	41,600	12.2	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0
	9	12	12	12	45	7,400	9,867	9,867	9,867	22,200	6.5	37,000	10.9	42,000	12.3	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0
	9	9	9	18	45	7,400	7,400	7,400	14,800	22,200	6.5	37,000	10.9	42,000	12.3	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0
	12	12	12	12	48	9,250	9,250	9,250	9,250	22,200	6.5	37,000	10.9	42,000	12.3	2,110	3,520	3,900	9.8	16.3	18.1	3.1	9.0

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 48kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

Models : A4UW363FA2[LMU369HV]

■ Non ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	9,000	9,000	-	-	10,798	3.2	18,000	5.3	19,800	5.8	1,140	1,900	2,586	5.0	8.3	11.3	9.5	13.5
	9	12	-	-	21	9,000	12,000	-	-	12,597	3.7	21,000	6.2	23,100	6.8	1,266	2,110	2,872	5.5	9.2	12.5	10.0	14.1
	12	12	-	-	24	12,000	12,000	-	-	14,397	4.2	24,000	7.0	26,400	7.7	1,392	2,320	3,158	6.1	10.1	13.8	10.3	14.7
	9	18	-	-	27	9,000	18,000	-	-	16,197	4.7	27,000	7.9	29,700	8.7	1,452	2,420	3,294	6.3	10.6	14.4	11.2	15.8
	12	18	-	-	30	11,600	17,400	-	-	17,397	5.1	29,000	8.5	32,000	9.4	1,560	2,600	3,539	6.8	11.3	15.4	11.2	15.8
	18	18	-	-	36	18,000	18,000	-	-	21,596	6.3	36,000	10.5	39,600	11.6	1,728	2,880	3,920	7.5	12.6	17.1	12.5	17.8
3 UNIT	9	9	9	-	27	9,000	9,000	9,000	-	16,197	4.7	27,000	7.9	29,700	8.7	1,452	2,420	3,294	6.3	10.6	14.4	11.2	15.8
	9	9	12	-	30	9,000	9,000	12,000	-	17,996	5.3	30,000	8.8	33,000	9.7	1,560	2,600	3,539	6.8	11.3	15.4	11.5	16.4
	9	12	12	-	33	9,000	12,000	12,000	-	19,796	5.8	33,000	9.7	36,300	10.6	1,644	2,740	3,729	7.2	11.9	16.3	12.0	17.1
	12	12	12	-	36	11,333	11,333	11,333	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	9	18	-	36	8,500	8,500	17,000	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	12	18	-	39	7,846	10,462	15,692	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	12	12	18	-	42	9,714	9,714	14,571	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	18	18	-	45	6,800	13,600	13,600	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
4 UNIT	12	18	18	-	48	8,500	12,750	12,750	-	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	9	9	9	36	8,500	8,500	8,500	8,500	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	9	9	12	39	7,846	7,846	7,846	10,462	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	9	12	12	42	7,286	7,286	9,714	9,714	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	12	12	12	45	6,800	9,067	9,067	9,067	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
	9	9	9	18	45	6,800	6,800	6,800	13,600	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5
12	12	12	12	48	8,500	8,500	8,500	8,500	20,396	6.0	34,000	10.0	37,400	11.0	1,632	2,720	3,702	7.1	11.9	16.1	12.5	17.5	

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
										Btu/h	kW	Btu/h	kW	Btu/h	kW								
2 UNIT	9	9	-	-	18	10,350	10,350	-	-	12,418	3.6	20,700	6.1	22,770	6.7	1,248	2,080	2,416	5.4	9.1	10.5	2.9	9.3
	9	12	-	-	21	10,350	13,800	-	-	14,487	4.2	24,150	7.1	26,510	7.8	1,524	2,540	2,950	6.6	11.1	12.9	2.8	8.9
	12	12	-	-	24	13,800	13,800	-	-	16,557	4.9	27,600	8.1	30,360	8.9	1,554	2,590	3,008	6.8	11.3	13.1	3.1	10.0
	9	18	-	-	27	10,350	20,700	-	-	18,626	5.5	31,050	9.1	33,000	9.7	1,740	2,900	3,368	7.6	12.6	14.7	3.1	10.0
	12	18	-	-	30	13,800	20,700	-	-	20,696	6.1	34,500	10.1	36,300	10.6	1,932	3,220	3,740	8.4	14.0	16.3	3.1	10.0
	18	18	-	-	36	19,000	19,000	-	-	22,795	6.7	38,000	11.1	37,400	11.0	2,118	3,530	4,100	9.2	15.4	17.9	3.2	10.1
3 UNIT	9	9	9	-	27	10,350	10,350	10,350	-	18,626	5.5	31,050	9.1	34,100	10.0	1,740	2,900	3,368	7.6	12.6	14.7	3.1	10.0
	9	9	12	-	30	10,350	10,350	13,800	-	20,696	6.1	34,500	10.1	37,400	11.0	1,932	3,220	3,740	8.4	14.0	16.3	3.1	10.0
	9	12	12	-	33	10,350	13,800	13,800	-	22,765	6.7	37,950	11.1	38,500	11.3	2,040	3,400	3,949	8.9	14.8	17.2	3.3	10.4
	12	12	12	-	36	13,667	13,667	13,667	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	9	18	-	36	10,250	10,250	20,500	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	12	18	-	39	9,462	12,615	18,923	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	12	12	18	-	42	11,714	11,714	17,571	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	18	18	-	45	8,200	16,400	16,400	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
4 UNIT	12	18	18	-	48	10,250	15,375	15,375	-	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	9	9	9	36	10,250	10,250	10,250	10,250	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	9	9	12	39	9,462	9,462	9,462	12,615	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	9	12	12	42	8,786	8,786	11,714	11,714	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	12	12	12	45	8,200	10,933	10,933	10,933	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5
	9	9	9	18	45	8,200	8,200	8,200	16,400	24,595	7.2	41,000	12.0	45,100	13.2	2,148	3,580	4,153	9.4	15.6	18.1	3.4	10.5

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 48kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

■ Ducted type indoor unit

Cooling

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			EER	SEER
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	9,000	9,000	-	-	10,798	3.2	18,000	5.3	19,800	5.8	1,188	1,980	2,695	5.2	8.6	11.7	9.1	12.7
	9	12	-	-	21	9,000	12,000	-	-	12,597	3.7	21,000	6.2	23,100	6.8	1,320	2,200	2,995	5.8	9.6	13.1	9.5	13.4
	12	12	-	-	24	12,000	12,000	-	-	14,397	4.2	24,000	7.0	26,400	7.7	1,452	2,420	3,294	6.3	10.6	14.4	9.9	13.9
	9	18	-	-	27	9,000	18,000	-	-	16,197	4.7	27,000	7.9	29,700	8.7	1,518	2,530	3,443	6.6	11.0	15.0	10.7	14.9
	12	18	-	-	30	11,600	17,400	-	-	17,397	5.1	29,000	8.5	32,000	9.4	1,626	2,710	3,688	7.1	11.8	16.1	10.7	15.0
	18	18	-	-	36	16,500	16,500	-	-	19,796	5.8	33,000	9.7	35,000	10.3	1,800	3,000	4,083	7.8	13.1	17.8	11.0	15.4
3 UNIT	9	9	9	-	27	9,000	9,000	9,000	-	16,197	4.7	27,000	7.9	29,700	8.7	1,518	2,530	3,443	6.6	11.0	15.0	10.7	14.9
	9	9	12	-	30	9,000	9,000	12,000	-	17,996	5.3	30,000	8.8	33,000	9.7	1,626	2,710	3,688	7.1	11.8	16.1	11.1	15.5
	9	12	12	-	33	9,000	12,000	12,000	-	19,796	5.8	33,000	9.7	36,300	10.6	1,716	2,860	3,892	7.5	12.5	17.0	11.5	16.2
	12	12	12	-	36	11,333	11,333	11,333	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	9	18	-	36	8,500	8,500	17,000	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	12	18	-	39	7,846	10,462	15,692	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	12	12	18	-	42	9,714	9,714	14,571	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	18	18	-	45	6,800	13,600	13,600	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
4 UNIT	12	18	18	-	48	8,500	12,750	12,750	-	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	9	9	9	36	8,500	8,500	8,500	8,500	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	9	9	12	39	7,846	7,846	7,846	10,462	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	9	12	12	42	7,286	7,286	9,714	9,714	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	12	12	12	45	6,800	9,067	9,067	9,067	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5
	9	9	9	18	45	6,800	6,800	6,800	13,600	20,396	6.0	34,000	10.0	37,400	11.0	1,704	2,840	3,865	7.4	12.4	16.9	12.0	16.5

Heating

UNIT	Combination of Indoor Unit (kBtu/h Class)					Room Capacity				Total Capacity						Input(W)			Current(A)			COP	HSPF
	UNIT-A	UNIT-B	UNIT-C	UNIT-D	Total	UNIT-A (Btu/h)	UNIT-B (Btu/h)	UNIT-C (Btu/h)	UNIT-D (Btu/h)	Min		Middle		Max		Min	Middle	Max	Min	Middle	Max		
2 UNIT	9	9	-	-	18	10,350	10,350	-	-	12,418	3.6	20,700	6.1	22,770	6.7	1,302	2,170	2,520	5.7	9.5	11.0	2.8	8.5
	9	12	-	-	21	10,350	13,800	-	-	14,487	4.2	24,150	7.1	26,510	7.8	1,536	2,560	2,973	6.7	11.2	13.0	2.8	8.8
	12	12	-	-	24	13,800	13,800	-	-	16,557	4.9	27,600	8.1	30,360	8.9	1,614	2,690	3,124	7.0	11.7	13.6	3.0	9.0
	9	18	-	-	27	10,350	20,700	-	-	18,626	5.5	31,050	9.1	33,000	9.7	1,812	3,020	3,508	7.9	13.2	15.3	3.0	9.0
	12	18	-	-	30	13,800	20,700	-	-	20,696	6.1	34,500	10.1	36,300	10.6	2,010	3,350	3,891	8.8	14.6	17.0	3.0	9.0
	18	18	-	-	36	19,000	19,000	-	-	22,795	6.7	38,000	11.1	37,400	11.0	2,208	3,680	4,274	9.6	16.0	18.6	3.0	9.0
3 UNIT	9	9	9	-	27	10,350	10,350	10,350	-	18,626	5.5	31,050	9.1	34,100	10.0	1,812	3,020	3,508	7.9	13.2	15.3	3.0	9.0
	9	9	12	-	30	10,350	10,350	13,800	-	20,696	6.1	34,500	10.1	37,400	11.0	2,010	3,350	3,891	8.8	14.6	17.0	3.0	9.0
	9	12	12	-	33	10,350	13,800	13,800	-	22,765	6.7	37,950	11.1	38,500	11.3	2,130	3,550	4,123	9.3	15.5	18.0	3.1	9.2
	12	12	12	-	36	13,667	13,667	13,667	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	9	18	-	36	10,250	10,250	20,500	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	12	18	-	39	9,462	12,615	18,923	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	12	12	18	-	42	11,714	11,714	17,571	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	18	18	-	45	8,200	16,400	16,400	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
4 UNIT	12	18	18	-	48	10,250	15,375	15,375	-	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	9	9	9	36	10,250	10,250	10,250	10,250	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	9	9	12	39	9,462	9,462	9,462	12,615	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	9	12	12	42	8,786	8,786	11,714	11,714	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	12	12	12	45	8,200	10,933	10,933	10,933	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5
	9	9	9	18	45	8,200	8,200	8,200	16,400	24,595	7.2	41,000	12.0	45,100	13.2	2,232	3,720	4,321	9.7	16.2	18.8	3.2	9.5

Note :

1. Capacities are based on the following conditions:

Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F) WB

- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F) WB

Heating: - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB

- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB

Piping Length - Interconnecting Piping Length 7.5m(25 ft.)

- Level Difference of Zero

2. Wiring cable size must comply with the applicable local and national code.

3. The specification may be subject to change without prior notice for purpose of improvement.

4. The total ability of connected a indoor unit is up to 48kBtu/h Class

5. At least two indoor units should be connected.

1. Multi piping type MULTI F

1.5 Dimensions

OUTDOOR UNIT

A2UW183FA2[LMU187HV]

No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

Technical Specification

Model name	A2UW183FA2[LMU187HV]		
Power supply	ØV/Hz	1 / 208-230 / 60	
Capacity	Btu/h Class	16,500	
Piping Connections	Liquid mm(inch)	6.35(1/4)	
	Gas mm(inch)	9.52(3/8)	

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

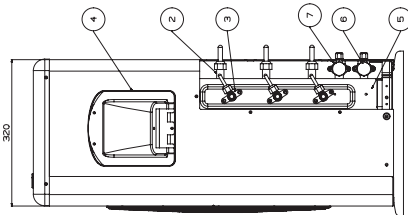
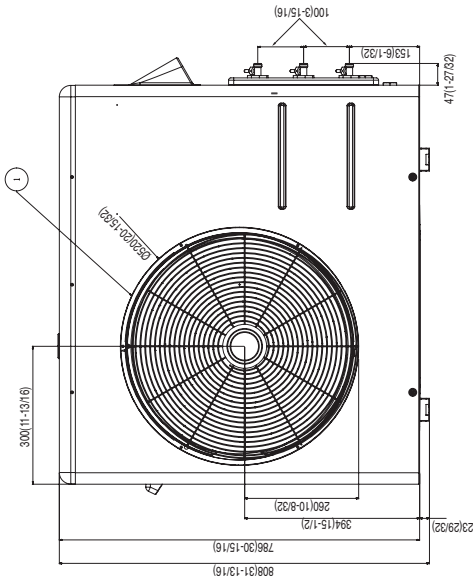
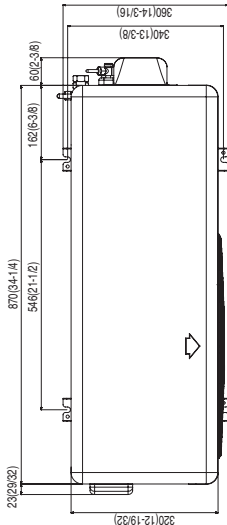
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UE1

LG Electronics

OUTDOOR UNIT

A3UW243FA2[LMU247HV]



Unit:mm(inch)

No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

Technical Specification

Model name		A3UW243FA2[LMU247HV]
Power supply	Q/V/Hz	1 / 208-230 / 60
Capacity	Btu/h Class	23,400
Piping Connections	Liquid mm(inch)	6.35(1/4)
	Gas mm(inch)	9.52(3/8)

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.



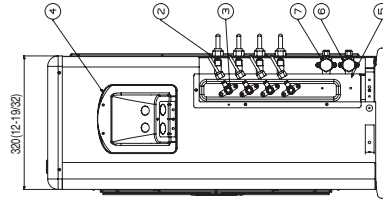
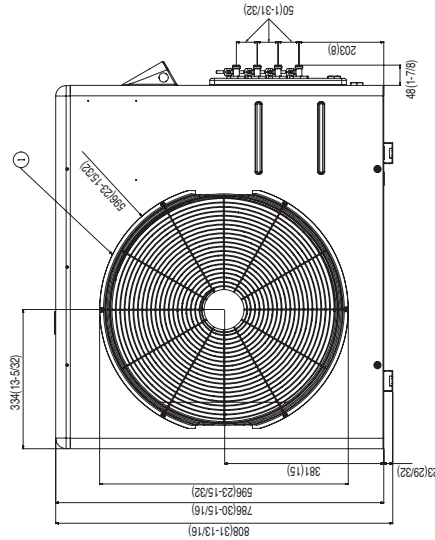
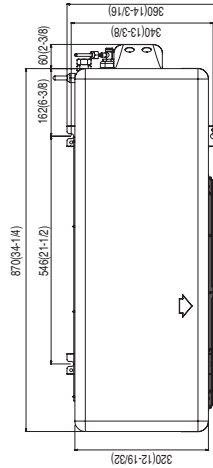
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UE1

OUTDOOR UNIT

A4UW363FA1[LMU366HV]



Unit:mm(inch)

No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

Technical Specification

Model name		A4UW363FA1[LMU366HV]	
Power supply		1 / 208-230 / 60	
Cooling Capacity	Q _W /Hz	10.00	
	kW	34,000	
Heating Capacity	Btu/h Class	10.84	
	kW	37,000	
Piping Connections	Liquid mm(inch)	6.35(1/4)	
	Gas mm(inch)	9.52(3/8)	

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.



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641-713, Korea
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CHASSIS CODE: UE1

1. Multi piping type MULTI F

OUTDOOR UNIT

A4UW363FA2[LMU369HV]

900(35-7/16)

550(21-2/32)

175(6-7/8)

370(14-9/16)

395(15-9/16)

424(16-11/16)

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

1180(45-21/32)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

370(14-9/16)

395(15-9/16)

424(16-11/16)

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

4

370(14-9/16)

3

2

7

6

5

1

308(12-1/8)

520(20-15/32)

565(22-1/4)

277(10-29/32)

1135(44-11/16)

1160(45-21/32)

157(6-3/16)

50(1-3/32)

50(1-3/32)

50(1-3/32)

50(1-3/32)

50(1-3/32)

Unit:mm(inch)

No.

Part Name

Remark

1

Air discharge grille

2

Gas pipe connection

3

Liquid pipe connection

4

Power & transmission connection

5

Earth screw

6

Main service valve(Liquid)

7

Main service valve(Gas)

Technical Specification

Model name

A4UW363FA2[LMU369HV]

Power supply

Ø/V/Hz

1 / 208 - 230 / 60

Capacity

Bluh Class

36,000

Piping

Liquid

mm(inch)

6.35(1/4)

Connections

Gas

mm(inch)

9.52(3/8)

Note

1. Unit should be installed in compliance with the installation manual in the product box.

2. Unit should be grounded in accordance with the local regulations or applicable national codes.

3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.

4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

LG Electronics

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641-713, Korea
www.lge.com/airconditioner

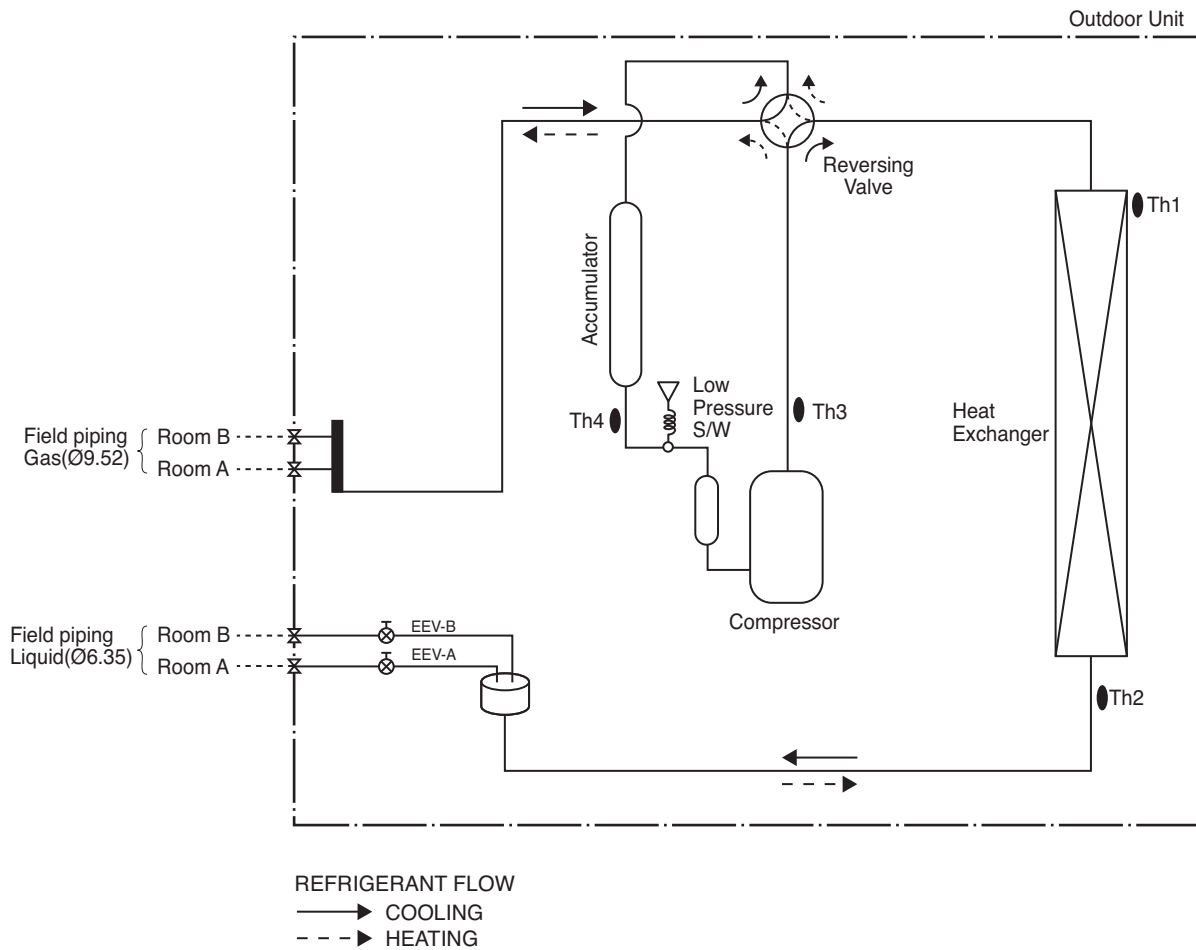
CHASSIS CODE: UH

13 _ 60Hz/R410A

1. Multi piping type MULTI F

1.6 Piping diagrams

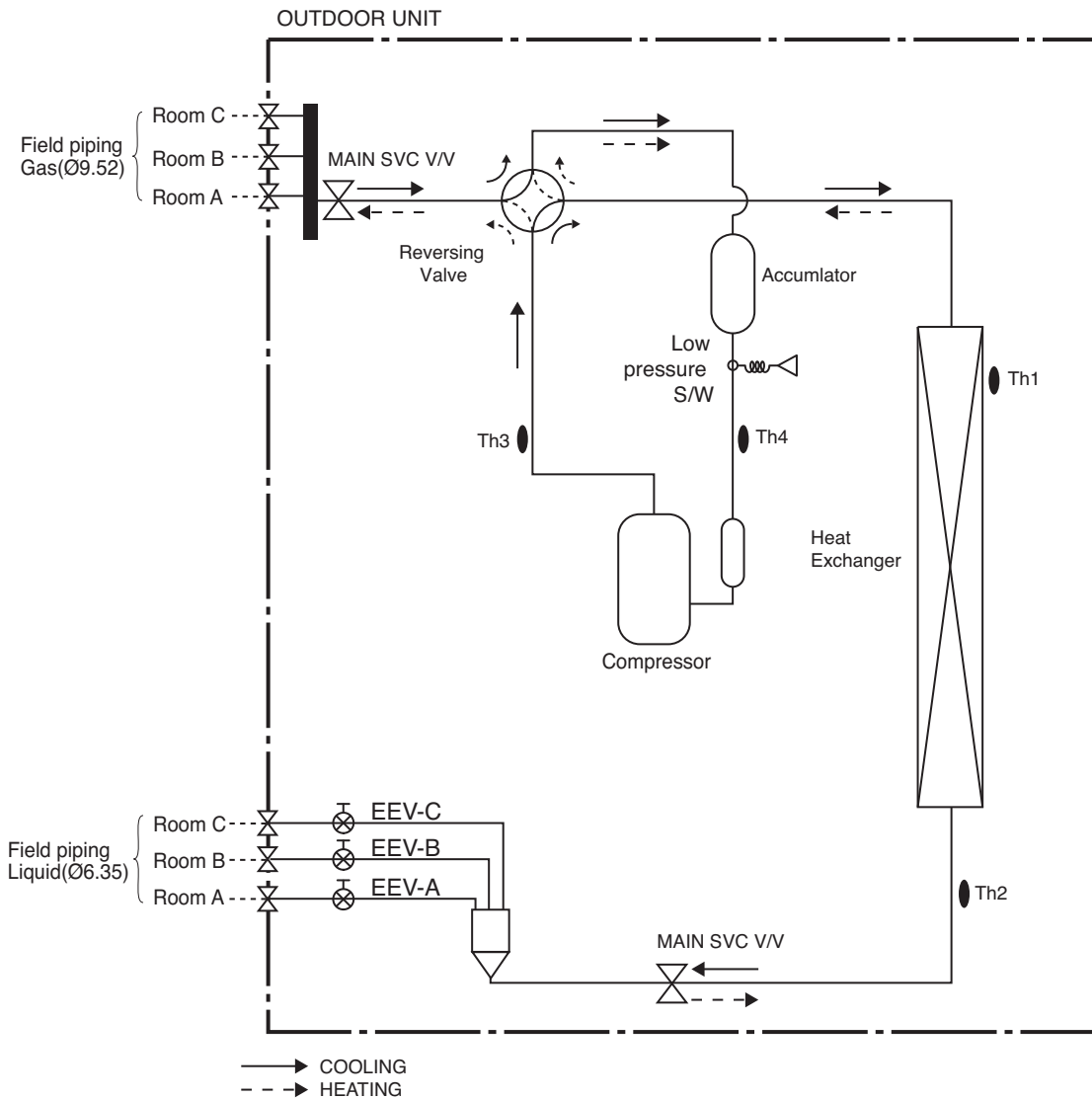
Models : A2UW183FA2[LMU187HV]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

1. Multi piping type MULTI F

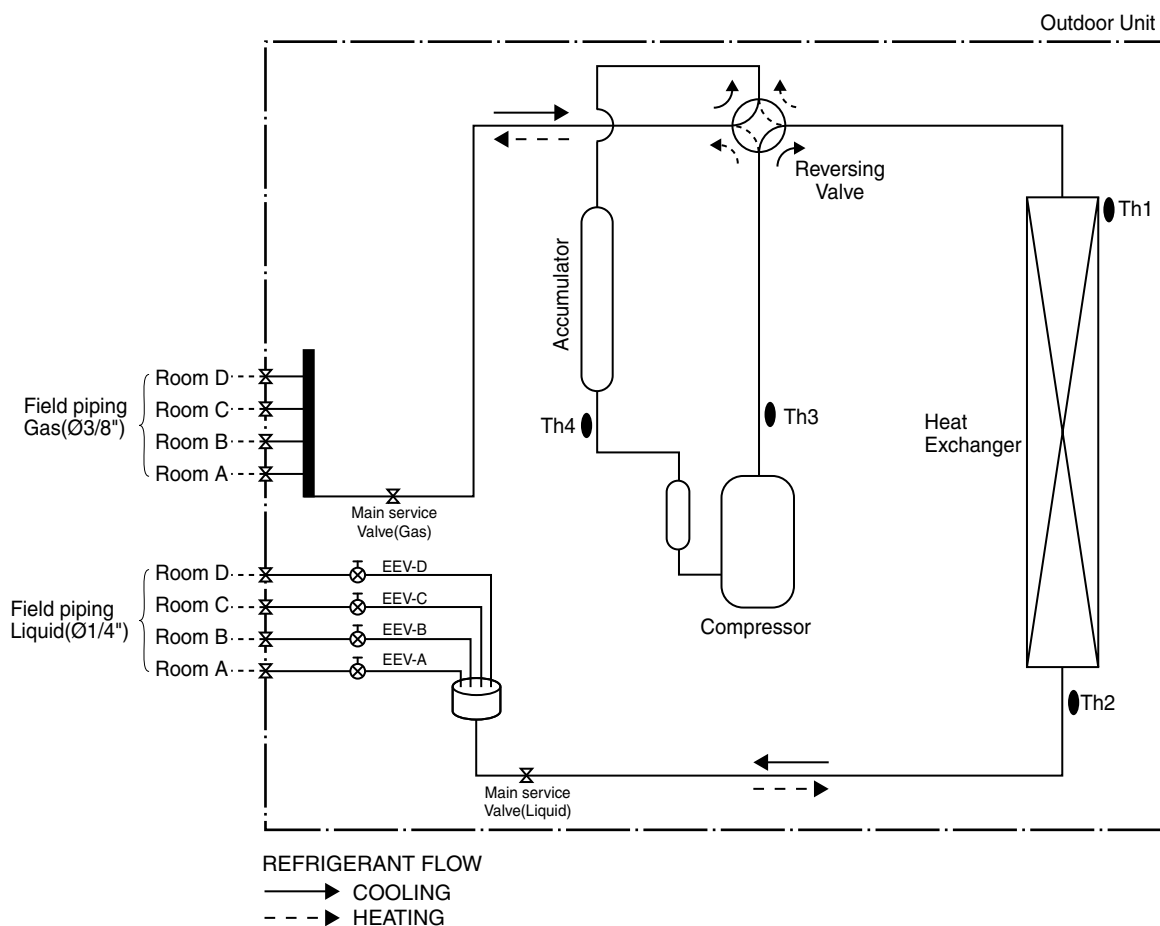
Models : A3UW243FA2[LMU247HV]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

1. Multi piping type MULTI F

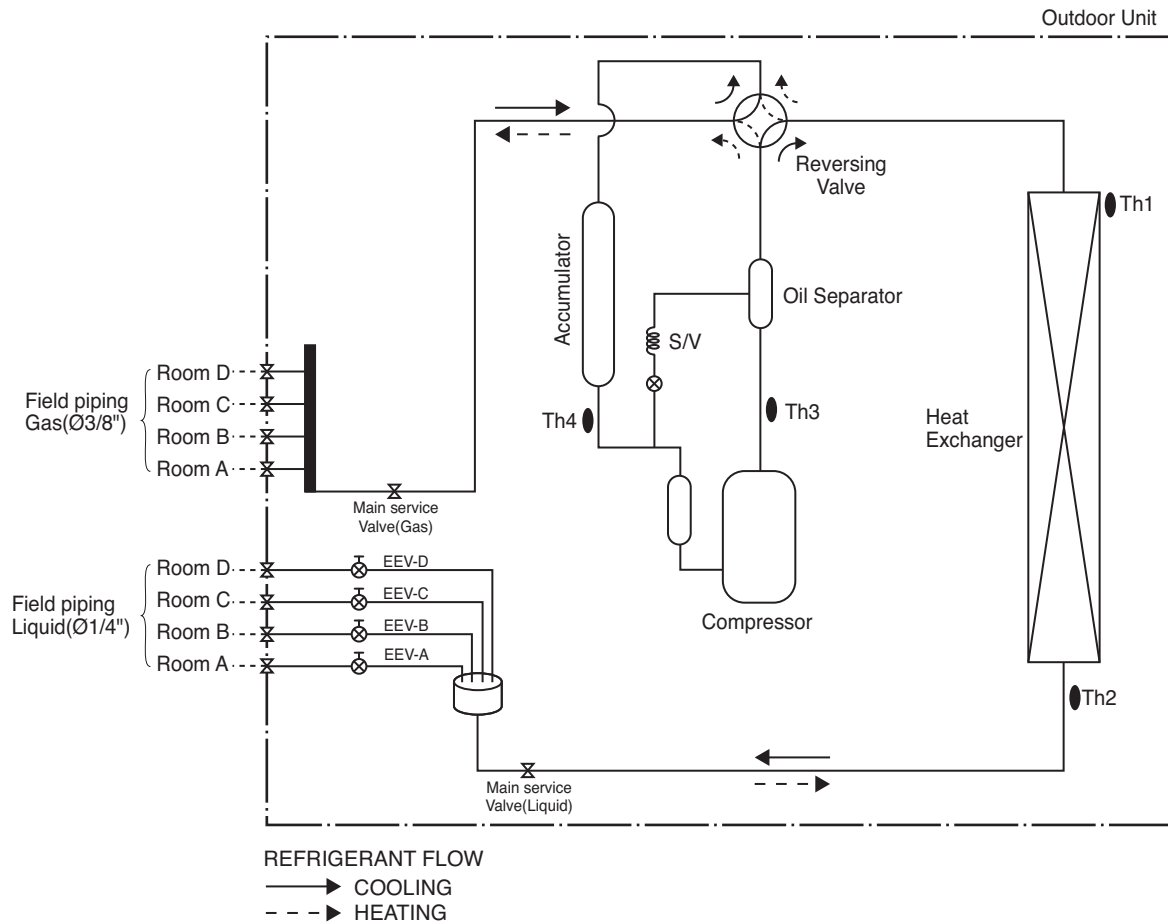
Models : A4UW363FA1[LMU366HV]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

1. Multi piping type MULTI F

Models : A4UW363FA2[LMU369HV]



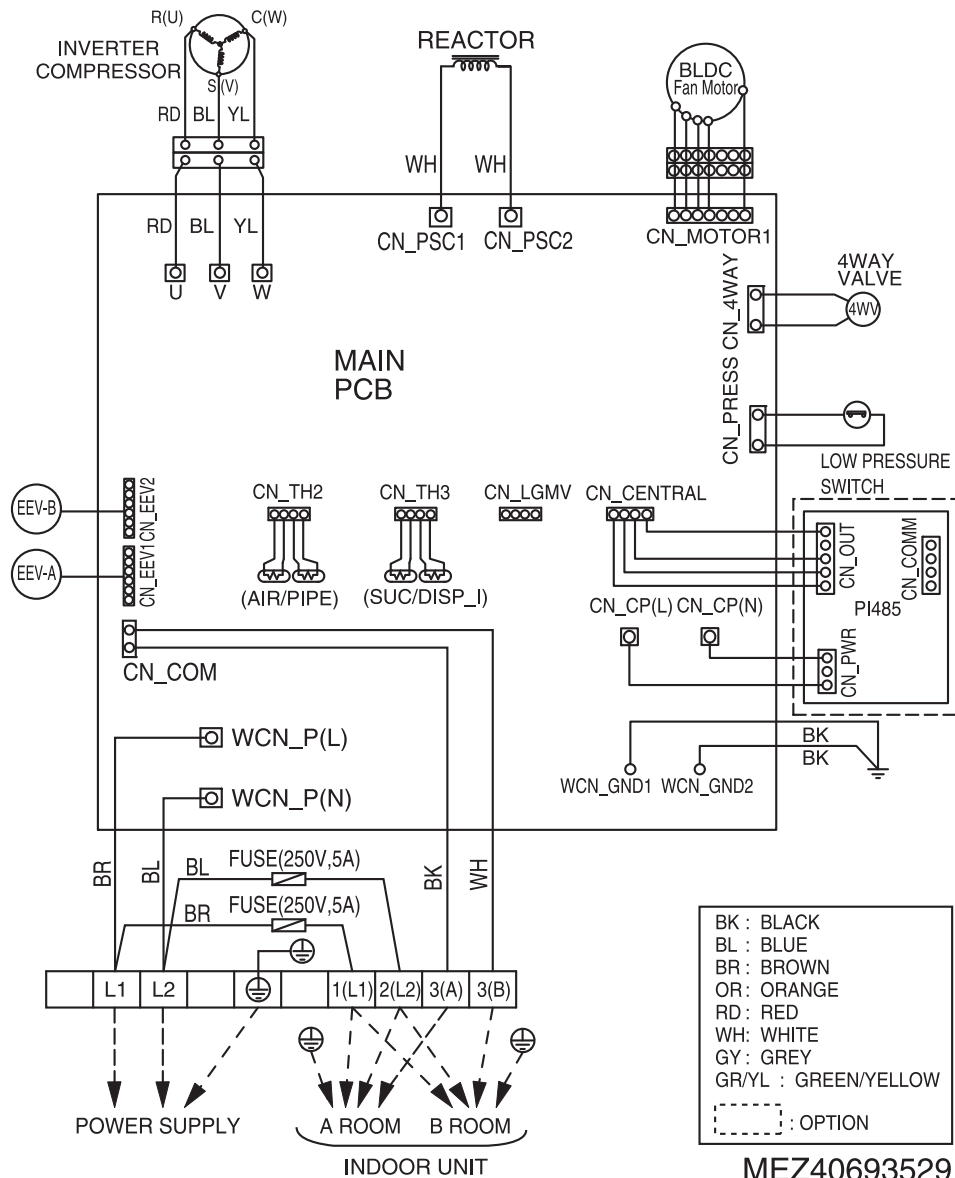
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

1. Multi piping type MULTI F

1.7 Wiring diagram

Models : A2UW183FA2[LMU187HV]

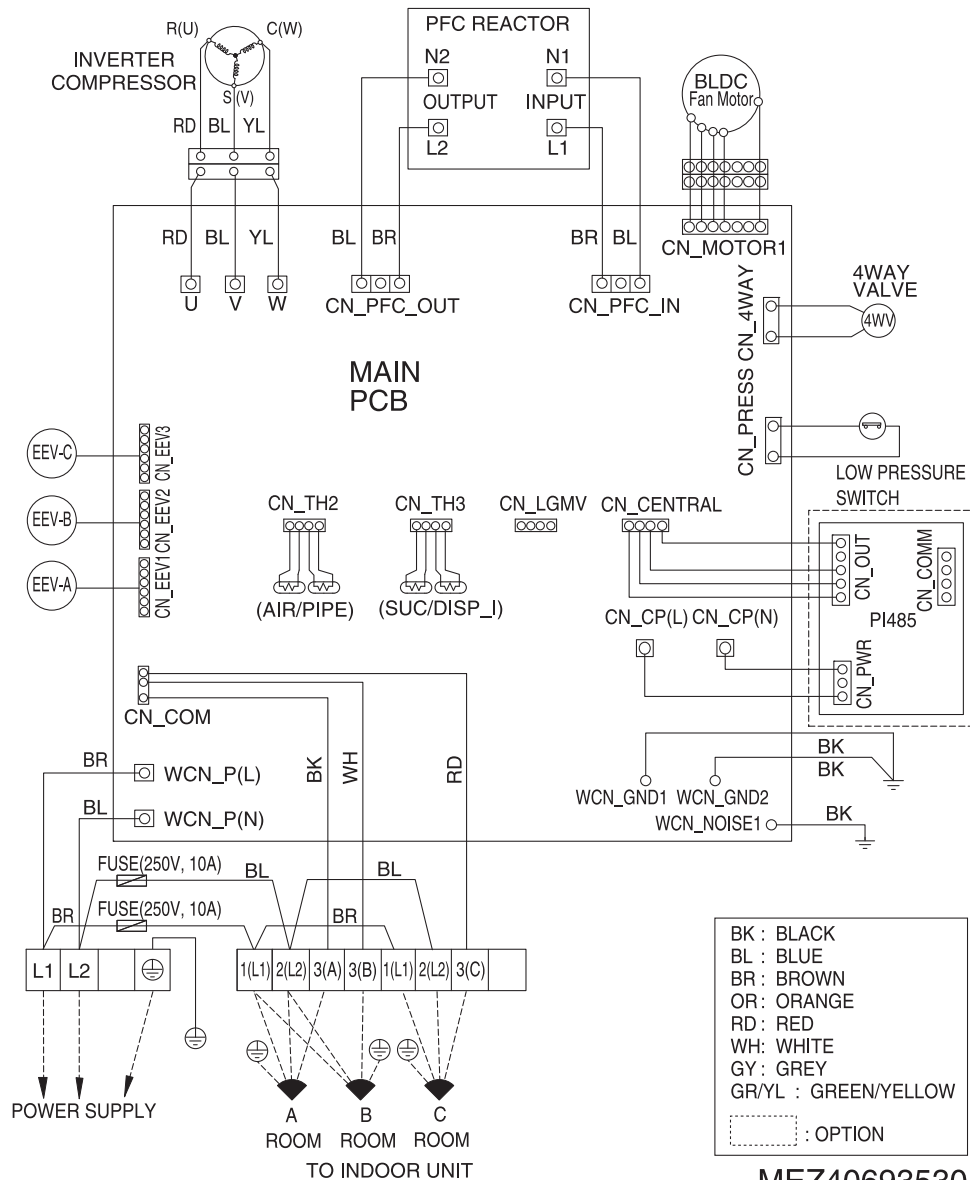
OUTDOOR WIRING DIAGRAM



1. Multi piping type MULTI F

Models : A3UW243FA2[LMU247HV]

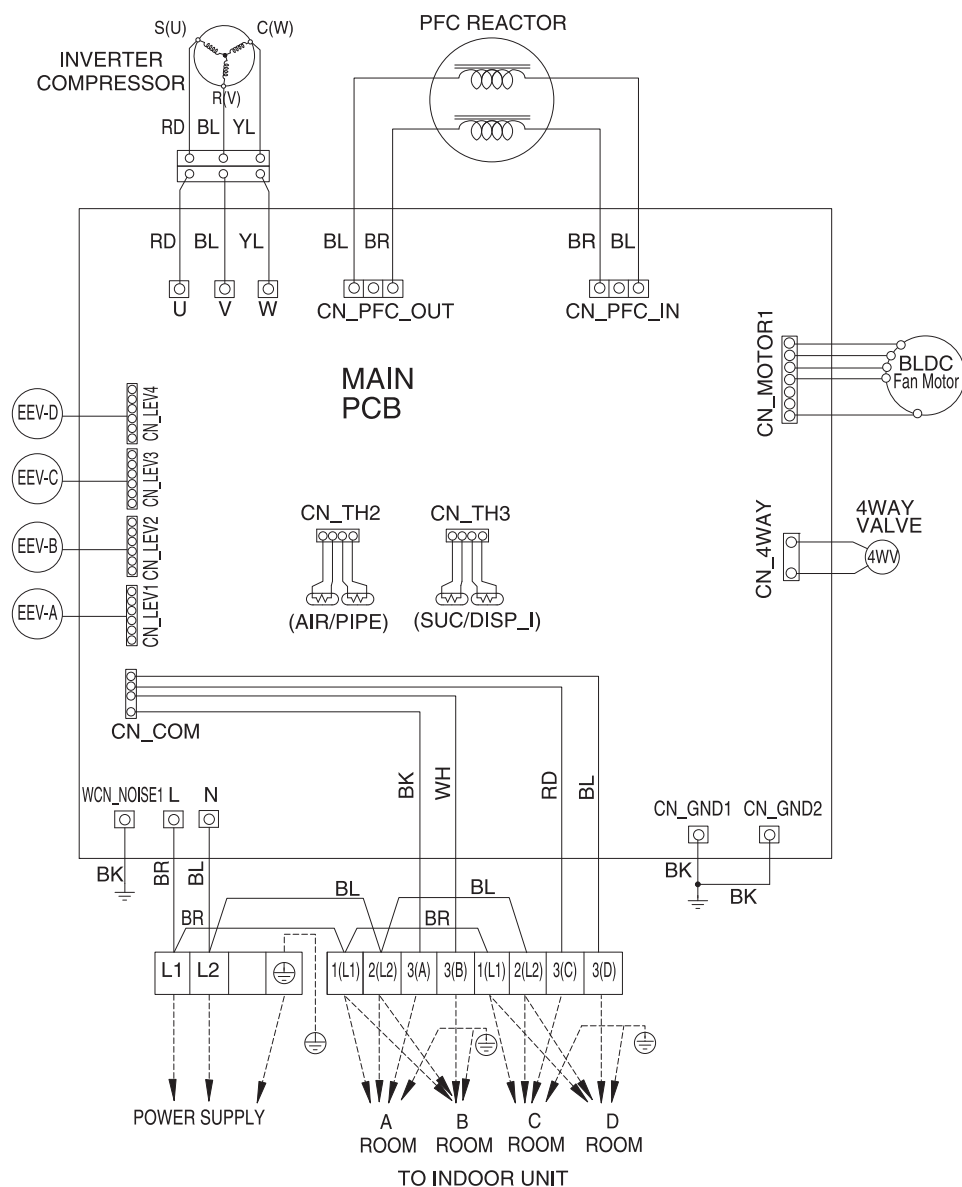
OUTDOOR WIRING DIAGRAM



1. Multi piping type MULTI F

Models : A4UW363FA1[LMU366HV]

OUTDOOR WIRING DIAGRAM

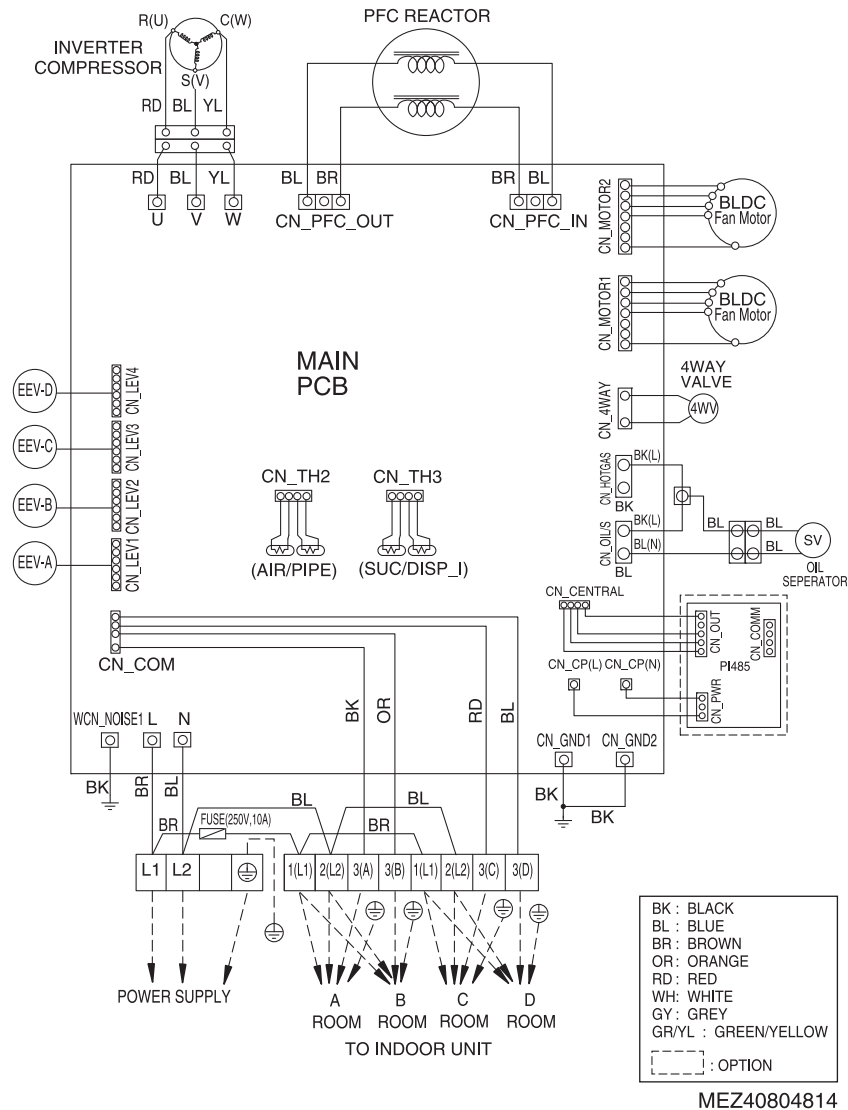


MEZ40693516

1. Multi piping type MULTI F

Models : A4UW363FA2[LMU369HV]

OUTDOOR WIRING DIAGRAM



Notes:

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

1. Multi piping type MULTI F

1.8 Capacity tables

Models : A2UW183FA2[LMU187HV]

■ Non ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70.0	12.8	0.65	14.6	0.69	16.4	0.73	17.8	0.76	18.5	0.76	19.1	0.76
		75.0	13.3	0.92	14.9	0.96	16.5	1.00	17.6	1.03	18.8	1.02	19.8	1.01
		85.0	14.1	1.30	15.3	1.33	16.5	1.37	17.3	1.40	19.3	1.37	20.8	1.35
		95.0	14.3	1.41	15.2	1.43	16.0	1.45	15.6	1.12	17.9	1.43	20.0	1.39
		105.0	12.0	1.29	13.2	1.35	14.4	1.42	15.2	1.46	16.7	1.46	17.8	1.46
		115.0	11.3	1.34	12.2	1.35	13.2	1.37	13.9	1.38	15.1	1.39	16.1	1.39
	9+12	125.0	10.5	1.39	11.2	1.35	12.0	1.32	13.3	1.38	13.6	1.31	14.4	1.32
		70.0	12.8	0.65	14.6	0.69	16.4	0.73	17.8	0.76	18.5	0.76	19.1	0.76
		75.0	13.3	0.92	14.9	0.96	16.5	1.00	17.6	1.03	18.8	1.02	19.8	1.01
		85.0	14.1	1.30	15.3	1.33	16.5	1.37	17.3	1.40	19.3	1.37	20.8	1.35
		95.0	14.3	1.41	15.2	1.43	16.0	1.45	15.6	1.12	17.9	1.43	20.0	1.39
		105.0	12.0	1.29	13.2	1.35	14.4	1.42	15.2	1.46	16.7	1.46	17.8	1.46
	12+12	115.0	11.3	1.34	12.2	1.35	13.2	1.37	13.9	1.38	15.1	1.39	16.1	1.39
		125.0	10.5	1.39	11.2	1.35	12.0	1.32	13.3	1.38	13.6	1.31	14.4	1.32
		70.0	12.8	0.65	14.6	0.69	16.4	0.73	17.8	0.76	18.5	0.76	19.1	0.76
		75.0	13.3	0.92	14.9	0.96	16.5	1.00	17.6	1.03	18.8	1.02	19.8	1.01
		85.0	14.1	1.30	15.3	1.33	16.5	1.37	17.3	1.40	19.3	1.37	20.8	1.35
		95.0	14.3	1.41	15.2	1.43	16.0	1.45	15.6	1.12	17.9	1.43	20.0	1.39
		105.0	12.0	1.29	13.2	1.35	14.4	1.42	15.2	1.46	16.7	1.46	17.8	1.46
		115.0	11.3	1.34	12.2	1.35	13.2	1.37	13.9	1.38	15.1	1.39	16.1	1.39
		125.0	10.5	1.39	11.2	1.35	12.0	1.32	13.3	1.38	13.6	1.31	14.4	1.32

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	10.7	0.99	13.4	1.07	15.7	1.14	17.9	1.21	18.1	1.24	18.2	1.17
		64.4	10.3	1.02	13.0	1.10	15.2	1.18	17.5	1.25	18.0	1.26	18.0	1.19
		68.0	10.0	1.05	12.5	1.14	14.7	1.21	17.0	1.29	17.8	1.28	17.8	1.21
		71.6	9.7	1.08	12.1	1.19	14.2	1.26	16.5	1.33	17.6	1.29	17.6	1.22
		75.2	9.3	1.11	11.6	1.22	13.7	1.30	15.9	1.37	17.1	1.31	17.2	1.23
		60.8	10.7	0.99	13.4	1.07	15.7	1.14	17.9	1.21	18.1	1.24	18.2	1.17
	9+12	64.4	10.3	1.02	13.0	1.10	15.2	1.18	17.5	1.25	18.0	1.26	18.0	1.19
		68.0	10.0	1.05	12.5	1.14	14.7	1.21	17.0	1.29	17.8	1.28	17.8	1.21
		71.6	9.7	1.08	12.1	1.19	14.2	1.26	16.5	1.33	17.6	1.29	17.6	1.22
		75.2	9.3	1.11	11.6	1.22	13.7	1.30	15.9	1.37	17.1	1.31	17.2	1.23
		60.8	10.7	0.99	13.4	1.07	15.7	1.14	17.9	1.21	18.1	1.24	18.2	1.17
		64.4	10.3	1.02	13.0	1.10	15.2	1.18	17.5	1.25	18.0	1.26	18.0	1.19
	12+12	68.0	10.0	1.05	12.5	1.14	14.7	1.21	17.0	1.29	17.8	1.28	17.8	1.21
		71.6	9.7	1.08	12.1	1.19	14.2	1.26	16.5	1.33	17.6	1.29	17.6	1.22
		75.2	9.3	1.11	11.6	1.22	13.7	1.30	15.9	1.37	17.1	1.31	17.2	1.23
		60.8	10.7	0.99	13.4	1.07	15.7	1.14	17.9	1.21	18.1	1.24	18.2	1.17
		64.4	10.3	1.02	13.0	1.10	15.2	1.18	17.5	1.25	18.0	1.26	18.0	1.19
		68.0	10.0	1.05	12.5	1.14	14.7	1.21	17.0	1.29	17.8	1.28	17.8	1.21

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

■ Ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70.0	12.1	0.72	13.9	0.77	15.6	0.81	16.9	0.85	17.5	0.85	18.1	0.85
		75.0	12.6	1.02	14.1	1.07	15.6	1.11	16.7	1.14	17.9	1.13	18.8	1.12
		85.0	13.4	1.45	14.5	1.48	15.6	1.52	16.4	1.56	18.3	1.52	19.7	1.50
		95.0	13.5	1.57	14.4	1.59	15.2	1.62	14.8	1.24	17.0	1.59	19.0	1.55
		105.0	11.4	1.43	12.5	1.51	13.6	1.58	14.4	1.63	15.8	1.63	16.9	1.62
		115.0	10.7	1.49	11.6	1.51	12.5	1.52	13.2	1.54	14.4	1.54	15.3	1.55
	9+12	125.0	9.9	1.54	10.7	1.51	11.4	1.47	12.6	1.53	12.9	1.46	13.7	1.47
		70.0	12.1	0.72	13.9	0.77	15.6	0.81	16.9	0.85	17.5	0.85	18.1	0.85
		75.0	12.6	1.02	14.1	1.07	15.6	1.11	16.7	1.14	17.9	1.13	18.8	1.12
		85.0	13.4	1.45	14.5	1.48	15.6	1.52	16.4	1.56	18.3	1.52	19.7	1.50
		95.0	13.5	1.57	14.4	1.59	15.2	1.62	14.8	1.24	17.0	1.59	19.0	1.55
		105.0	11.4	1.43	12.5	1.51	13.6	1.58	14.4	1.63	15.8	1.63	16.9	1.62
	12+12	115.0	10.7	1.49	11.6	1.51	12.5	1.52	13.2	1.54	14.4	1.54	15.3	1.55
		125.0	9.9	1.54	10.7	1.51	11.4	1.47	12.6	1.53	12.9	1.46	13.7	1.47
		70.0	12.1	0.72	13.9	0.77	15.6	0.81	16.9	0.85	17.5	0.85	18.1	0.85
		75.0	12.6	1.02	14.1	1.07	15.6	1.11	16.7	1.14	17.9	1.13	18.8	1.12
		85.0	13.4	1.45	14.5	1.48	15.6	1.52	16.4	1.56	18.3	1.52	19.7	1.50
		95.0	13.5	1.57	14.4	1.59	15.2	1.62	14.8	1.24	17.0	1.59	19.0	1.55
		105.0	11.4	1.43	12.5	1.51	13.6	1.58	14.4	1.63	15.8	1.63	16.9	1.62
		115.0	10.7	1.49	11.6	1.51	12.5	1.52	13.2	1.54	14.4	1.54	15.3	1.55
		125.0	9.9	1.54	10.7	1.51	11.4	1.47	12.6	1.53	12.9	1.46	13.7	1.47

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	10.6	1.00	13.2	1.09	15.5	1.16	17.7	1.23	17.9	1.25	18.0	1.19
		64.4	10.2	1.03	12.8	1.12	15.0	1.20	17.3	1.27	17.7	1.28	17.8	1.21
		68.0	9.9	1.07	12.4	1.16	14.5	1.23	16.8	1.31	17.6	1.30	17.6	1.22
		71.6	9.6	1.10	11.9	1.20	14.0	1.28	16.3	1.35	17.3	1.31	17.4	1.24
		75.2	9.2	1.13	11.5	1.24	13.5	1.32	15.7	1.39	16.9	1.33	17.0	1.25
	9+12	60.8	10.6	1.00	13.2	1.09	15.5	1.16	17.7	1.23	17.9	1.25	18.0	1.19
		64.4	10.2	1.03	12.8	1.12	15.0	1.20	17.3	1.27	17.7	1.28	17.8	1.21
		68.0	9.9	1.07	12.4	1.16	14.5	1.23	16.8	1.31	17.6	1.30	17.6	1.22
		71.6	9.6	1.10	11.9	1.20	14.0	1.28	16.3	1.35	17.3	1.31	17.4	1.24
		75.2	9.2	1.13	11.5	1.24	13.5	1.32	15.7	1.39	16.9	1.33	17.0	1.25
	12+12	60.8	10.6	1.00	13.2	1.09	15.5	1.16	17.7	1.23	17.9	1.25	18.0	1.19
		64.4	10.2	1.03	12.8	1.12	15.0	1.20	17.3	1.27	17.7	1.28	17.8	1.21
		68.0	9.9	1.07	12.4	1.16	14.5	1.23	16.8	1.31	17.6	1.30	17.6	1.22
		71.6	9.6	1.10	11.9	1.20	14.0	1.28	16.3	1.35	17.3	1.31	17.4	1.24
		75.2	9.2	1.13	11.5	1.24	13.5	1.32	15.7	1.39	16.9	1.33	17.0	1.25

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Models : A3UW243FA2[LMU247HV]

■ Non ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	68.0	13.9	0.78	15.9	0.84	17.9	0.88	19.4	0.92	20.2	0.92	20.8	0.92
		77.0	14.5	1.11	16.2	1.16	17.9	1.21	19.2	1.24	20.5	1.23	21.6	1.22
		89.6	15.4	1.57	16.7	1.61	18.0	1.65	18.9	1.69	21.0	1.65	22.7	1.62
		95.0	15.6	1.70	16.5	1.72	17.5	1.75	17.0	1.35	19.5	1.72	21.8	1.68
		104.0	13.1	1.55	14.4	1.63	15.7	1.71	16.6	1.77	18.2	1.76	19.4	1.76
		109.4	12.3	1.62	13.3	1.63	14.4	1.65	15.1	1.67	16.5	1.67	17.5	1.68
	9+12	114.8	11.4	1.67	12.3	1.63	13.1	1.60	14.5	1.66	14.8	1.58	15.7	1.60
		68.0	14.5	0.80	16.6	0.86	18.7	0.91	20.2	0.94	21.0	0.94	21.6	0.94
		77.0	15.1	1.14	16.9	1.19	18.7	1.24	19.9	1.27	21.3	1.26	22.4	1.25
		89.6	16.0	1.61	17.4	1.65	18.7	1.69	19.7	1.73	21.9	1.69	23.6	1.67
		95.0	16.2	1.74	17.2	1.77	18.2	1.80	17.7	1.38	20.3	1.76	22.7	1.72
		104.0	13.7	1.59	15.0	1.67	16.3	1.75	17.3	1.81	18.9	1.81	20.2	1.80
	12+12	109.4	12.8	1.66	13.9	1.67	15.0	1.69	15.8	1.71	17.2	1.71	18.3	1.72
		114.8	11.9	1.71	12.8	1.67	13.6	1.64	15.1	1.70	15.4	1.62	16.3	1.64
		68.0	15.7	0.85	18.0	0.91	20.2	0.96	21.9	1.00	22.8	1.00	23.5	1.00
		77.0	16.4	1.21	18.3	1.26	20.3	1.31	21.6	1.35	23.2	1.33	24.4	1.32
		89.6	17.4	1.71	18.8	1.75	20.3	1.80	21.3	1.84	23.7	1.79	25.6	1.77
		95.0	17.6	1.85	18.7	1.88	19.8	1.91	19.2	1.47	22.1	1.87	24.7	1.83
	9+18	104.0	14.8	1.69	16.3	1.78	17.7	1.86	18.7	1.92	20.5	1.92	21.9	1.91
		109.4	13.9	1.76	15.0	1.78	16.2	1.80	17.1	1.82	18.6	1.82	19.8	1.83
		114.8	12.9	1.82	13.8	1.78	14.8	1.74	16.4	1.81	16.7	1.72	17.7	1.74
		68.0	15.7	0.85	18.0	0.91	20.2	0.96	21.9	1.00	22.8	1.00	23.5	1.00
		77.0	16.4	1.21	18.3	1.26	20.3	1.31	21.6	1.35	23.2	1.33	24.4	1.32
		89.6	17.4	1.71	18.8	1.75	20.3	1.80	21.3	1.84	23.7	1.79	25.6	1.77
	12+18	95.0	17.6	1.85	18.7	1.88	19.8	1.91	19.2	1.47	22.1	1.87	24.7	1.83
		104.0	14.8	1.69	16.3	1.78	17.7	1.86	18.7	1.92	20.5	1.92	21.9	1.91
		109.4	13.9	1.76	15.0	1.78	16.2	1.80	17.1	1.82	18.6	1.82	19.8	1.83
		114.8	12.9	1.82	13.8	1.78	14.8	1.74	16.4	1.81	16.7	1.72	17.7	1.74
		68.0	15.7	0.85	18.0	0.91	20.2	0.96	21.9	1.00	22.8	1.00	23.5	1.00
		77.0	16.4	1.21	18.3	1.26	20.3	1.31	21.6	1.35	23.2	1.33	24.4	1.32
3 UNITS	9+9+9	89.6	17.4	1.71	18.8	1.75	20.3	1.80	21.3	1.84	23.7	1.79	25.6	1.77
		95.0	17.6	1.80	18.7	1.83	19.8	1.86	19.2	1.43	22.1	1.82	24.7	1.78
		104.0	14.8	1.65	16.3	1.73	17.7	1.81	18.7	1.87	20.5	1.87	21.9	1.86
		109.4	13.9	1.71	15.0	1.73	16.2	1.75	17.1	1.77	18.6	1.77	19.8	1.78
		114.8	12.9	1.77	13.8	1.73	14.8	1.69	16.4	1.76	16.7	1.68	17.7	1.69
		68.0	15.7	0.83	18.0	0.89	20.2	0.94	21.9	0.98	22.8	0.98	23.5	0.98
	9+9+12	77.0	16.4	1.18	18.3	1.23	20.3	1.28	21.6	1.32	23.2	1.30	24.4	1.29
		89.6	17.4	1.67	18.8	1.71	20.3	1.75	21.3	1.79	23.7	1.75	25.6	1.72
		95.0	17.6	1.80	18.7	1.83	19.8	1.86	19.2	1.43	22.1	1.82	24.7	1.78
		104.0	14.8	1.65	16.3	1.73	17.7	1.81	18.7	1.87	20.5	1.87	21.9	1.86
		109.4	13.9	1.71	15.0	1.73	16.2	1.75	17.1	1.77	18.6	1.77	19.8	1.78
		114.8	12.9	1.77	13.8	1.73	14.8	1.69	16.4	1.76	16.7	1.68	17.7	1.69
	9+12+12	68.0	15.7	0.83	18.0	0.89	20.2	0.94	21.9	0.98	22.8	0.98	23.5	0.98
		77.0	16.4	1.18	18.3	1.23	20.3	1.28	21.6	1.32	23.2	1.30	24.4	1.29
		89.6	17.4	1.67	18.8	1.71	20.3	1.75	21.3	1.79	23.7	1.75	25.6	1.72
		95.0	17.6	1.80	18.7	1.83	19.8	1.86	19.2	1.43	22.1	1.82	24.7	1.78
		104.0	14.8	1.65	16.3	1.73	17.7	1.81	18.7	1.87	20.5	1.87	21.9	1.86
		109.4	13.9	1.71	15.0	1.73	16.2	1.75	17.1	1.77	18.6	1.77	19.8	1.78
		114.8	12.9	1.77	13.8	1.73	14.8	1.69	16.4	1.76	16.7	1.68	17.7	1.69

Notes:

1. Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	12.7	1.49	15.9	1.62	18.7	1.73	21.3	1.83	21.5	1.87	21.6	1.77
		64.4	12.3	1.54	15.4	1.67	18.1	1.79	20.8	1.89	21.3	1.90	21.4	1.80
		68.0	11.9	1.59	14.9	1.73	17.4	1.83	20.2	1.95	21.1	1.93	21.2	1.82
		71.6	11.5	1.63	14.4	1.79	16.9	1.91	19.6	2.01	20.9	1.95	20.9	1.84
		75.2	11.1	1.68	13.8	1.84	16.3	1.96	18.9	2.07	20.4	1.98	20.4	1.86
	9+12	60.8	14.5	1.66	18.1	1.80	21.2	1.92	24.2	2.04	24.5	2.08	24.6	1.97
		64.4	14.0	1.71	17.5	1.85	20.6	1.99	23.7	2.10	24.3	2.11	24.3	2.00
		68.0	13.5	1.77	16.9	1.92	19.9	2.04	23.0	2.17	24.0	2.15	24.1	2.03
		71.6	13.1	1.82	16.4	1.99	19.2	2.13	22.3	2.24	23.7	2.17	23.8	2.05
		75.2	12.6	1.87	15.7	2.05	18.5	2.18	21.5	2.30	23.2	2.21	23.3	2.07
	12+12	60.8	16.6	1.78	20.8	1.93	24.4	2.05	27.8	2.18	28.1	2.22	28.2	2.10
		64.4	16.0	1.83	20.1	1.98	23.6	2.13	27.2	2.25	27.9	2.26	27.9	2.14
		68.0	15.5	1.89	19.4	2.06	22.8	2.18	26.4	2.32	27.6	2.30	27.7	2.17
		71.6	15.0	1.95	18.8	2.13	22.1	2.27	25.6	2.39	27.3	2.32	27.3	2.19
		75.2	14.4	2.00	18.1	2.19	21.3	2.33	24.7	2.46	26.6	2.36	26.7	2.21
	9+18	60.8	16.6	1.78	20.8	1.93	24.4	2.05	27.8	2.18	28.1	2.22	28.2	2.10
		64.4	16.0	1.83	20.1	1.98	23.6	2.13	27.2	2.25	27.9	2.26	27.9	2.14
		68.0	15.5	1.89	19.4	2.06	22.8	2.18	26.4	2.32	27.6	2.30	27.7	2.17
		71.6	15.0	1.95	18.8	2.13	22.1	2.27	25.6	2.39	27.3	2.32	27.3	2.19
		75.2	14.4	2.00	18.1	2.19	21.3	2.33	24.7	2.46	26.6	2.36	26.7	2.21
	12+18	60.8	16.6	1.78	20.8	1.93	24.4	2.05	27.8	2.18	28.1	2.22	28.2	2.10
		64.4	16.0	1.83	20.1	1.98	23.6	2.13	27.2	2.25	27.9	2.26	27.9	2.14
		68.0	15.5	1.89	19.4	2.06	22.8	2.18	26.4	2.32	27.6	2.30	27.7	2.17
		71.6	15.0	1.95	18.8	2.13	22.1	2.27	25.6	2.39	27.3	2.32	27.3	2.19
		75.2	14.4	2.00	18.1	2.19	21.3	2.33	24.7	2.46	26.6	2.36	26.7	2.21
3 UNITS	9+9+9	60.8	16.6	1.69	20.8	1.84	24.4	1.96	27.8	2.07	28.1	2.12	28.2	2.00
		64.4	16.0	1.74	20.1	1.89	23.6	2.03	27.2	2.14	27.9	2.15	27.9	2.04
		68.0	15.5	1.80	19.4	1.96	22.8	2.08	26.4	2.21	27.6	2.19	27.7	2.07
		71.6	15.0	1.85	18.8	2.03	22.1	2.17	25.6	2.28	27.3	2.21	27.3	2.08
		75.2	14.4	1.91	18.1	2.08	21.3	2.22	24.7	2.35	26.6	2.25	26.7	2.11
	9+9+12	60.8	16.6	1.69	20.8	1.84	24.4	1.96	27.8	2.07	28.1	2.12	28.2	2.00
		64.4	16.0	1.74	20.1	1.89	23.6	2.03	27.2	2.14	27.9	2.15	27.9	2.04
		68.0	15.5	1.80	19.4	1.96	22.8	2.08	26.4	2.21	27.6	2.19	27.7	2.07
		71.6	15.0	1.85	18.8	2.03	22.1	2.17	25.6	2.28	27.3	2.21	27.3	2.08
		75.2	14.4	1.91	18.1	2.08	21.3	2.22	24.7	2.35	26.6	2.25	26.7	2.11
	9+12+12	60.8	16.6	1.69	20.8	1.84	24.4	1.96	27.8	2.07	28.1	2.12	28.2	2.00
		64.4	16.0	1.74	20.1	1.89	23.6	2.03	27.2	2.14	27.9	2.15	27.9	2.04
		68.0	15.5	1.80	19.4	1.96	22.8	2.08	26.4	2.21	27.6	2.19	27.7	2.07
		71.6	15.0	1.85	18.8	2.03	22.1	2.17	25.6	2.28	27.3	2.21	27.3	2.08
		75.2	14.4	1.91	18.1	2.08	21.3	2.22	24.7	2.35	26.6	2.25	26.7	2.11

Notes:

1. Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

■ Ducted type indoor unit Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	68.0	13.6	0.87	15.5	0.93	17.5	0.98	18.9	1.02	19.7	1.02	20.3	1.02
		77.0	14.2	1.23	15.8	1.28	17.5	1.34	18.7	1.37	20.0	1.36	21.1	1.35
		89.6	15.0	1.74	16.3	1.79	17.5	1.83	18.4	1.87	20.5	1.83	22.1	1.80
		95.0	15.2	1.89	16.1	1.91	17.1	1.94	16.6	1.50	19.1	1.91	21.3	1.86
		104.0	12.8	1.72	14.1	1.81	15.3	1.90	16.2	1.96	17.7	1.95	18.9	1.95
		109.4	12.0	1.79	13.0	1.81	14.0	1.83	14.8	1.85	16.1	1.85	17.1	1.86
	9+12	114.8	11.1	1.85	12.0	1.81	12.8	1.77	14.2	1.84	14.5	1.75	15.3	1.77
		68.0	13.9	0.87	15.9	0.93	17.9	0.99	19.4	1.03	20.2	1.03	20.8	1.03
		77.0	14.5	1.24	16.2	1.29	17.9	1.35	19.2	1.38	20.5	1.37	21.6	1.36
		89.6	15.4	1.75	16.7	1.80	18.0	1.84	18.9	1.88	21.0	1.84	22.7	1.81
		95.0	15.6	1.90	16.5	1.92	17.5	1.95	17.0	1.50	19.5	1.92	21.8	1.88
		104.0	13.1	1.73	14.4	1.82	15.7	1.91	16.6	1.97	18.2	1.97	19.4	1.96
	12+12	109.4	12.3	1.80	13.3	1.82	14.4	1.84	15.1	1.86	16.5	1.86	17.5	1.87
		114.8	11.4	1.86	12.3	1.82	13.1	1.78	14.5	1.85	14.8	1.76	15.7	1.78
		68.0	14.7	0.91	16.9	0.97	19.0	1.03	20.5	1.07	21.3	1.07	22.0	1.07
		77.0	15.4	1.29	17.2	1.34	19.0	1.40	20.3	1.44	21.7	1.42	22.8	1.41
		89.6	16.3	1.82	17.6	1.87	19.0	1.92	20.0	1.96	22.2	1.91	24.0	1.88
		95.0	16.5	1.97	17.5	2.00	18.5	2.03	18.0	1.57	20.7	2.00	23.1	1.95
	9+18	104.0	13.9	1.80	15.2	1.90	16.6	1.98	17.6	2.05	19.2	2.04	20.5	2.04
		109.4	13.0	1.87	14.1	1.90	15.2	1.92	16.0	1.93	17.5	1.94	18.6	1.95
		114.8	12.1	1.94	13.0	1.90	13.9	1.85	15.3	1.93	15.7	1.84	16.6	1.85
		68.0	14.7	0.91	16.9	0.97	19.0	1.03	20.5	1.07	21.3	1.07	22.0	1.07
		77.0	15.4	1.29	17.2	1.34	19.0	1.40	20.3	1.44	21.7	1.42	22.8	1.41
		89.6	16.3	1.82	17.6	1.87	19.0	1.92	20.0	1.96	22.2	1.91	24.0	1.88
	12+18	95.0	16.5	1.97	17.5	2.00	18.5	2.03	18.0	1.57	20.7	2.00	23.1	1.95
		104.0	13.9	1.80	15.2	1.90	16.6	1.98	17.6	2.05	19.2	2.04	20.5	2.04
		109.4	13.0	1.87	14.1	1.90	15.2	1.92	16.0	1.93	17.5	1.94	18.6	1.95
		114.8	12.1	1.94	13.0	1.90	13.9	1.85	15.3	1.93	15.7	1.84	16.6	1.85
		68.0	14.7	0.91	16.9	0.97	19.0	1.03	20.5	1.07	21.3	1.07	22.0	1.07
		77.0	15.4	1.29	17.2	1.34	19.0	1.40	20.3	1.44	21.7	1.42	22.8	1.41
3 UNITS	9+9+9	89.6	16.3	1.82	17.6	1.87	19.0	1.92	20.0	1.96	22.2	1.91	24.0	1.88
		95.0	16.5	1.97	17.5	2.00	18.5	2.03	18.0	1.57	20.7	2.00	23.1	1.95
		104.0	13.9	1.80	15.2	1.90	16.6	1.98	17.6	2.05	19.2	2.04	20.5	2.04
		109.4	13.0	1.87	14.1	1.90	15.2	1.92	16.0	1.93	17.5	1.94	18.6	1.95
		114.8	12.1	1.94	13.0	1.90	13.9	1.85	15.3	1.93	15.7	1.84	16.6	1.85
		68.0	14.7	0.89	16.9	0.95	19.0	1.00	20.5	1.04	21.3	1.04	22.0	1.04
	9+9+12	77.0	15.4	1.26	17.2	1.31	19.0	1.36	20.3	1.40	21.7	1.39	22.8	1.38
		89.6	16.3	1.78	17.6	1.82	19.0	1.87	20.0	1.91	22.2	1.86	24.0	1.84
		95.0	16.5	1.92	17.5	1.95	18.5	1.98	18.0	1.53	20.7	1.94	23.1	1.90
		104.0	13.9	1.76	15.2	1.85	16.6	1.93	17.6	2.00	19.2	1.99	20.5	1.99
		109.4	13.0	1.83	14.1	1.85	15.2	1.87	16.0	1.89	17.5	1.89	18.6	1.90
		114.8	12.1	1.89	13.0	1.85	13.9	1.80	15.3	1.88	15.7	1.79	16.6	1.80
	9+12+12	68.0	14.7	0.89	16.9	0.95	19.0	1.00	20.5	1.04	21.3	1.04	22.0	1.04
		77.0	15.4	1.26	17.2	1.31	19.0	1.36	20.3	1.40	21.7	1.39	22.8	1.38
		89.6	16.3	1.78	17.6	1.82	19.0	1.87	20.0	1.91	22.2	1.86	24.0	1.84
		95.0	16.5	1.92	17.5	1.95	18.5	1.98	18.0	1.53	20.7	1.94	23.1	1.90
		104.0	13.9	1.76	15.2	1.85	16.6	1.93	17.6	2.00	19.2	1.99	20.5	1.99
		109.4	13.0	1.83	14.1	1.85	15.2	1.87	16.0	1.89	17.5	1.89	18.6	1.90
	9+12+12	114.8	12.1	1.89	13.0	1.85	13.9	1.80	15.3	1.88	15.7	1.79	16.6	1.80
		68.0	14.7	0.89	16.9	0.95	19.0	1.00	20.5	1.04	21.3	1.04	22.0	1.04
		77.0	15.4	1.26	17.2	1.31	19.0	1.36	20.3	1.40	21.7	1.39	22.8	1.38
		89.6	16.3	1.78	17.6	1.82	19.0	1.87	20.0	1.91	22.2	1.86	24.0	1.84
		95.0	16.5	1.92	17.5	1.95	18.5	1.98	18.0	1.53	20.7	1.94	23.1	1.90
		104.0	13.9	1.76	15.2	1.85	16.6	1.93	17.6	2.00	19.2	1.99	20.5	1.99

Notes:

1. Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	12.6	1.51	15.7	1.64	18.5	1.74	21.1	1.85	21.3	1.89	21.4	1.79
		64.4	12.1	1.56	15.3	1.68	17.9	1.81	20.6	1.91	21.1	1.92	21.2	1.81
		68.0	11.8	1.60	14.7	1.75	17.3	1.85	20.0	1.97	20.9	1.95	21.0	1.84
		71.6	11.4	1.65	14.2	1.81	16.7	1.93	19.4	2.03	20.7	1.97	20.7	1.86
		75.2	10.9	1.70	13.7	1.86	16.1	1.98	18.7	2.09	20.2	2.00	20.2	1.88
	9+12	60.8	14.3	1.71	17.9	1.85	21.1	1.97	24.0	2.09	24.3	2.14	24.4	2.02
		64.4	13.8	1.76	17.4	1.91	20.4	2.05	23.5	2.16	24.1	2.17	24.1	2.05
		68.0	13.4	1.82	16.8	1.98	19.7	2.10	22.8	2.23	23.8	2.21	23.9	2.08
		71.6	13.0	1.87	16.2	2.05	19.1	2.19	22.1	2.30	23.5	2.23	23.6	2.10
	12+12	75.2	12.5	1.92	15.6	2.10	18.4	2.24	21.3	2.37	23.0	2.27	23.1	2.13
		60.8	16.5	1.81	20.6	1.96	24.2	2.09	27.6	2.21	27.9	2.26	28.0	2.14
		64.4	15.9	1.86	20.0	2.02	23.4	2.16	27.0	2.29	27.7	2.30	27.7	2.17
		68.0	15.4	1.92	19.3	2.09	22.6	2.22	26.2	2.36	27.4	2.34	27.5	2.21
		71.6	14.9	1.98	18.6	2.17	21.9	2.31	25.4	2.43	27.1	2.36	27.1	2.23
	9+18	75.2	14.3	2.04	17.9	2.23	21.1	2.37	24.5	2.51	26.4	2.40	26.5	2.25
		60.8	16.5	1.81	20.6	1.96	24.2	2.09	27.6	2.21	27.9	2.26	28.0	2.14
		64.4	15.9	1.86	20.0	2.02	23.4	2.16	27.0	2.29	27.7	2.30	27.7	2.17
		68.0	15.4	1.92	19.3	2.09	22.6	2.22	26.2	2.36	27.4	2.34	27.5	2.21
	12+18	71.6	14.9	1.98	18.6	2.17	21.9	2.31	25.4	2.43	27.1	2.36	27.1	2.23
		75.2	14.3	2.04	17.9	2.23	21.1	2.37	24.5	2.51	26.4	2.40	26.5	2.25
		60.8	16.5	1.81	20.6	1.96	24.2	2.09	27.6	2.21	27.9	2.26	28.0	2.14
		64.4	15.9	1.86	20.0	2.02	23.4	2.16	27.0	2.29	27.7	2.30	27.7	2.17
		68.0	15.4	1.92	19.3	2.09	22.6	2.22	26.2	2.36	27.4	2.34	27.5	2.21
3 UNITS	9+9+9	71.6	14.9	1.98	18.6	2.17	21.9	2.31	25.4	2.43	27.1	2.36	27.1	2.23
		75.2	14.3	1.92	17.9	2.10	21.1	2.24	24.5	2.37	26.4	2.27	26.5	2.13
		60.8	16.5	1.71	20.6	1.85	24.2	1.97	27.6	2.09	27.9	2.14	28.0	2.02
		64.4	15.9	1.76	20.0	1.91	23.4	2.05	27.0	2.16	27.7	2.17	27.7	2.05
		68.0	15.4	1.82	19.3	1.98	22.6	2.10	26.2	2.23	27.4	2.21	27.5	2.08
	9+9+12	71.6	14.9	1.87	18.6	2.05	21.9	2.19	25.4	2.30	27.1	2.23	27.1	2.10
		75.2	14.3	1.92	17.9	2.10	21.1	2.24	24.5	2.37	26.4	2.27	26.5	2.13
		60.8	16.5	1.71	20.6	1.85	24.2	1.97	27.6	2.09	27.9	2.14	28.0	2.02
		64.4	15.9	1.76	20.0	1.91	23.4	2.05	27.0	2.16	27.7	2.17	27.7	2.05
		68.0	15.4	1.82	19.3	1.98	22.6	2.10	26.2	2.23	27.4	2.21	27.5	2.08
	9+12+12	71.6	14.9	1.87	18.6	2.05	21.9	2.19	25.4	2.30	27.1	2.23	27.1	2.10
		75.2	14.3	1.92	17.9	2.10	21.1	2.24	24.5	2.37	26.4	2.27	26.5	2.13
		60.8	16.5	1.71	20.6	1.85	24.2	1.97	27.6	2.09	27.9	2.14	28.0	2.02
		64.4	15.9	1.76	20.0	1.91	23.4	2.05	27.0	2.16	27.7	2.17	27.7	2.05
		68.0	15.4	1.82	19.3	1.98	22.6	2.10	26.2	2.23	27.4	2.21	27.5	2.08
		71.6	14.9	1.87	18.6	2.05	21.9	2.19	25.4	2.30	27.1	2.23	27.1	2.10
		75.2	14.3	1.92	17.9	2.10	21.1	2.24	24.5	2.37	26.4	2.27	26.5	2.13

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Models : A4UW363FA1[LMU366HV]

■ Non ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70	17.17	1.06	18.39	1.08	19.16	1.09	19.84	1.11	20.79	1.13	21.28	1.14
		75	16.92	1.16	18.13	1.18	18.89	1.20	19.55	1.22	20.50	1.24	20.97	1.25
		85	16.31	1.34	17.47	1.36	18.20	1.38	18.84	1.40	19.75	1.42	20.21	1.44
		95	15.58	1.48	16.69	1.50	17.39	1.52	18.00	1.55	18.87	1.57	19.31	1.59
		105	14.89	1.58	15.95	1.61	16.62	1.63	17.20	1.66	18.03	1.68	18.45	1.70
		115	14.05	1.67	15.05	1.70	15.68	1.72	16.23	1.75	17.02	1.78	17.41	1.80
	9+12	125	13.02	1.75	13.94	1.78	14.53	1.80	15.04	1.83	15.76	1.86	16.13	1.88
		70	20.03	1.16	21.45	1.18	22.36	1.20	23.14	1.22	24.26	1.24	24.82	1.25
		75	19.75	1.28	21.15	1.30	22.04	1.32	22.81	1.34	23.91	1.36	24.47	1.38
		85	19.03	1.47	20.38	1.49	21.24	1.51	21.99	1.54	23.04	1.56	23.58	1.58
		95	18.18	1.62	19.47	1.65	20.29	1.67	21.00	1.70	22.01	1.72	22.52	1.75
		105	17.37	1.73	18.60	1.76	19.39	1.79	20.07	1.82	21.03	1.85	21.52	1.87
	12+12	115	16.39	1.83	17.56	1.87	18.30	1.89	18.94	1.92	19.85	1.95	20.31	1.98
		125	15.18	1.92	16.26	1.95	16.95	1.97	17.54	2.01	18.39	2.04	18.82	2.07
		70	22.89	1.27	24.52	1.29	25.55	1.31	26.45	1.34	27.72	1.35	28.37	1.37
		75	22.57	1.40	24.17	1.42	25.19	1.44	26.07	1.47	27.33	1.49	27.97	1.51
		85	21.75	1.60	23.29	1.63	24.27	1.65	25.13	1.68	26.34	1.71	26.95	1.73
		95	20.77	1.77	22.25	1.80	23.18	1.83	24.00	1.86	25.15	1.89	25.74	1.91
	9+18	105	19.85	1.90	21.26	1.93	22.16	1.95	22.93	1.99	24.04	2.02	24.60	2.04
		115	18.73	2.01	20.07	2.04	20.91	2.07	21.65	2.10	22.69	2.14	23.22	2.16
		125	17.35	2.10	18.59	2.13	19.37	2.16	20.05	2.20	21.02	2.23	21.51	2.26
		70	25.8	1.51	27.6	1.53	28.7	1.55	29.8	1.58	31.2	1.60	31.9	1.62
		75	25.4	1.65	27.2	1.68	28.3	1.70	29.3	1.73	30.7	1.76	31.5	1.78
		85	24.5	1.90	26.2	1.93	27.3	1.95	28.3	1.99	29.6	2.02	30.3	2.04
	12+18	95	23.4	2.10	25.0	2.13	26.1	2.16	27.0	2.20	28.3	2.23	29.0	2.26
		105	22.3	2.24	23.9	2.28	24.9	2.31	25.8	2.35	27.0	2.39	27.7	2.42
		115	21.1	2.37	22.6	2.41	23.5	2.44	24.4	2.49	25.5	2.53	26.1	2.56
		125	19.5	2.48	20.9	2.52	21.8	2.56	22.6	2.60	23.6	2.64	24.2	2.67
		70	27.7	2.00	29.6	2.04	30.9	2.07	32.0	2.10	33.5	2.13	34.3	2.16
		75	27.3	2.20	29.2	2.24	30.4	2.27	31.5	2.31	33.0	2.34	33.8	2.37
	18+18	85	26.3	2.53	28.1	2.57	29.3	2.60	30.4	2.65	31.8	2.69	32.6	2.72
		95	25.1	2.79	26.9	2.84	28.0	2.88	29.0	2.93	30.4	2.97	31.1	3.01
		105	24.0	2.99	25.7	3.04	26.8	3.08	27.7	3.14	29.0	3.18	29.7	3.22
		115	22.6	3.16	24.2	3.21	25.3	3.26	26.2	3.32	27.4	3.36	28.1	3.40
		125	21.0	3.30	22.5	3.36	23.4	3.40	24.2	3.47	25.4	3.52	26.0	3.56
		70	31.5	2.46	33.7	2.51	35.1	2.54	36.4	2.58	38.1	2.62	39.0	2.65
3 UNITS	9+9+9	75	31.0	2.71	33.2	2.75	34.6	2.79	35.9	2.84	37.6	2.88	38.5	2.91
		85	29.9	3.10	32.0	3.16	33.4	3.20	34.5	3.26	36.2	3.30	37.1	3.34
		95	28.6	3.43	30.6	3.49	31.9	3.53	33.0	3.60	34.6	3.65	35.4	3.70
		105	27.3	3.67	29.2	3.74	30.5	3.78	31.5	3.85	33.1	3.91	33.8	3.96
		115	25.8	3.88	27.6	3.95	28.8	4.00	29.8	4.07	31.2	4.13	31.9	4.18
		125	23.9	4.06	25.6	4.13	26.6	4.18	27.6	4.26	28.9	4.32	29.6	4.37
	9+9+12	70	25.8	1.51	27.6	1.53	28.7	1.55	29.8	1.58	31.2	1.60	31.9	1.62
		75	25.4	1.65	27.2	1.68	28.3	1.70	29.3	1.73	30.7	1.76	31.5	1.78
		85	24.5	1.90	26.2	1.93	27.3	1.95	28.3	1.99	29.6	2.02	30.3	2.04
		95	23.4	2.10	25.0	2.13	26.1	2.16	27.0	2.20	28.3	2.23	29.0	2.26
		105	22.3	2.24	23.9	2.28	24.9	2.31	25.8	2.35	27.0	2.39	27.7	2.42
		115	21.1	2.37	22.6	2.41	23.5	2.44	24.4	2.49	25.5	2.53	26.1	2.56
	9+12+12	125	19.5	2.48	20.9	2.52	21.8	2.56	22.6	2.60	23.6	2.64	24.2	2.67
		70	28.6	2.00	30.6	2.04	31.9	2.07	33.1	2.10	34.7	2.13	35.5	2.16
		75	28.2	2.20	30.2	2.24	31.5	2.27	32.6	2.31	34.2	2.34	35.0	2.37
		85	27.2	2.53	29.1	2.57	30.3	2.60	31.4	2.65	32.9	2.69	33.7	2.72
		95	26.0	2.79	27.8	2.84	29.0	2.88	30.0	2.93	31.4	2.97	32.2	3.01
		105	24.8	2.99	26.6	3.04	27.7	3.08	28.7	3.14	30.0	3.18	30.7	3.22
	12+12+12	115	23.4	3.16	25.1	3.21	26.1	3.26	27.1	3.32	28.4	3.36	29.0	3.40
		125	21.7	3.30	23.2	3.36	24.2	3.40	25.1	3.47	26.3	3.52	26.9	3.56
		70	30.1	2.27	32.3	2.31	33.6	2.34	34.8	2.38	36.5	2.42	37.4	2.45
		75	29.7	2.49	31.8	2.54	33.2	2.57	34.3	2.62	36.0	2.66	36.8	2.69
		85	28.6	2.86	30.7	2.91	32.0	2.95	33.1	3.00	34.7	3.05	35.5	3.08
		95	27.3	3.16	29.3	3.22	30.5	3.26	31.6	3.32	33.1	3.37	33.9	3.41
	12+12+12	105	26.1	3.39	28.0	3.45	29.2	3.49	30.2	3.55	31.7	3.61	32.4	3.65
		115	24.7	3.58	26.4	3.64	27.5	3.69	28.5	3.76	29.9	3.81	30.6	3.86
		125	22.8	3.74	24.5	3.81	25.5	3.86	26.4	3.93	27.7	3.99	28.3	4.03
		70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
		85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
	12+12+12	95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
		105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
		115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
		125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	9+9+18	70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
		85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
		95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
		105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
		115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
	9+12+18	125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37
		70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
		85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
		95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
		105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
	12+12+18	115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
		125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37
		70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
		85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
		95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
	9+18+18	105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
		115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
		125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37
		70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
		85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
4 UNITS	12+18+18	95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
		105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
		115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
		125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37
		70	30.8	2.46	33.0	2.51	34.4	2.54	35.6	2.58	37.3	2.62	38.2	2.65
		75	30.4	2.71	32.5	2.75	33.9	2.79	35.1	2.84	36.8	2.88	37.6	2.91
	9+9+9+9	85	29.3	3.10	31.3	3.16	32.7	3.20	33.8	3.26	35.4	3.30	36.3	3.34
		95	28.0	3.43	29.9	3.49	31.2	3.53	32.3	3.60	33.9	3.65	34.6	3.70
		105	26.7	3.67	28.6	3.74	29.8	3.78	30.9	3.85	32.4	3.91	33.1	3.96
		115	25.2	3.88	27.0	3.95	28.1	4.00	29.1	4.07	30.5	4.13	31.2	4.18
		125	23.4	4.06	25.0	4.13	26.1	4.18	27.0	4.26	28.3	4.32	28.9	4.37
		70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
	9+9+9+12	75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48
		95	28.0	3.57	29.9	3.64	31.2	3.68	32.3	3.75	33.9	3.80	34.6	3.85
		105	26.7	3.83	28.6	3.89	29.8	3.94	30.9	4.01	32.4	4.07	33.1	4.12
		115	25.2	4.04	27.0	4.11	28.1	4.17	29.1	4.24	30.5	4.31	31.2	4.36
		125	23.4	4.23	25.0	4.30	26.1	4.36	27.0	4.44	28.3	4.50	28.9	4.56
	9+9+12+12	70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
		75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48
		95	28.0	3.57	29.9	3.64	31.2	3.68	32.3	3.75	33.9	3.80	34.6	3.85
		105	26.7	3.83	28.6	3.89	29.8	3.94	30.9	4.01	32.4	4.07	33.1	4.12
		115	25.2	4.04	27.0	4.11	28.1	4.17	29.1	4.24	30.5	4.31	31.2	4.36
	9+12+12+12	125	23.4	4.23	25.0	4.30	26.1	4.36	27.0	4.44	28.3	4.50	28.9	4.56
		70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
		75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48
		95	28.0	3.57	29.9	3.64	31.2	3.68	32.3	3.75	33.9	3.80	34.6	3.85
		105	26.7	3.83	28.6	3.89	29.8	3.94	30.9	4.01	32.4	4.07	33.1	4.12
9+9+9+18	9+9+9+18	115	25.2	4.04	27.0	4.11	28.1	4.17	29.1	4.24	30.5	4.31	31.2	4.36
		125	23.4	4.23	25.0	4.30	26.1	4.36	27.0	4.44	28.3	4.50	28.9	4.56
		70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
		75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48
		95	28.0	3.57	29.9	3.64	31.2	3.68	32.3	3.75	33.9	3.80	34.6	3.85
	9+9+9+18	105	26.7	3.83	28.6	3.89	29.8	3.94	30.9	4.01	32.4	4.07	33.1	4.12
		115	25.2	4.04	27.0	4.11	28.1	4.17	29.1	4.24	30.5	4.31	31.2	4.36
		125	23.4	4.23	25.0	4.30	26.1	4.36	27.0	4.44	28.3	4.50	28.9	4.56
		70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
		75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
4 UNITS	12+12+12+12	70	30.8	2.57	33.0	2.61	34.4	2.64	35.6	2.69	37.3	2.73	38.2	2.76
		75	30.4	2.82	32.5	2.87	33.9	2.90	35.1	2.96	36.8	3.00	37.6	3.04
		85	29.3	3.23	31.3	3.29	32.7	3.33	33.8	3.39	35.4	3.44	36.3	3.48
		95	28.0	3.57	29.9	3.64	31.2	3.68	32.3	3.75	33.9	3.80	34.6	3.85
		105	26.7	3.83	28.6	3.89	29.8	3.94	30.9	4.01	32.4	4.07	33.1	4.12
		115	25.2	4.04	27.0	4.11	28.1	4.17	29.1	4.24	30.5	4.31	31.2	4.36
		125	23.4	4.23	25.0	4.30	26.1	4.36	27.0	4.44	28.3	4.50	28.9	4.56

Notes:

1. Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 25t
 Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
 PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	13.02	1.79	16.27	2.03	19.12	2.25	21.80	2.43	22.07	2.48	22.14	2.35
		64.4	12.57	1.85	15.79	2.09	18.51	2.33	21.31	2.51	21.87	2.52	21.90	2.39
		68.0	12.17	1.91	15.24	2.16	17.88	2.39	20.70	2.59	21.64	2.56	21.71	2.42
		71.6	11.78	1.96	14.72	2.24	17.30	2.49	20.09	2.67	21.37	2.59	21.44	2.44
		75.2	11.32	2.02	14.17	2.30	16.67	2.55	19.36	2.75	20.87	2.63	20.94	2.47
	9+12	60.8	15.16	1.86	18.95	2.10	22.26	2.33	25.38	2.51	25.70	2.57	25.77	2.43
		64.4	14.63	1.91	18.39	2.16	21.55	2.41	24.81	2.60	25.46	2.61	25.49	2.47
		68.0	14.17	1.97	17.75	2.24	20.81	2.47	24.10	2.68	25.19	2.65	25.27	2.51
		71.6	13.71	2.03	17.14	2.32	20.14	2.58	23.39	2.76	24.88	2.68	24.96	2.53
		75.2	13.18	2.09	16.50	2.38	19.41	2.64	22.54	2.85	24.30	2.72	24.38	2.56
	12+12	60.8	17.36	1.92	21.70	2.17	25.49	2.40	29.06	2.60	29.43	2.65	29.52	2.51
		64.4	16.76	1.98	21.06	2.23	24.68	2.49	28.41	2.68	29.15	2.70	29.19	2.55
		68.0	16.23	2.04	20.32	2.31	23.84	2.56	27.60	2.77	28.85	2.74	28.94	2.59
		71.6	15.70	2.10	19.63	2.40	23.07	2.66	26.79	2.86	28.50	2.77	28.59	2.61
		75.2	15.10	2.16	18.89	2.46	22.23	2.73	25.81	2.94	27.83	2.82	27.92	2.64
	9+18	60.8	18.87	2.04	23.59	2.31	27.71	2.56	31.59	2.77	31.99	2.82	32.08	2.67
		64.4	18.22	2.11	22.89	2.38	26.82	2.65	30.88	2.86	31.69	2.87	31.73	2.72
		68.0	17.64	2.17	22.09	2.47	25.91	2.72	30.00	2.95	31.36	2.92	31.46	2.76
		71.6	17.07	2.24	21.34	2.55	25.07	2.84	29.12	3.04	30.98	2.95	31.07	2.78
		75.2	16.41	2.30	20.54	2.62	24.17	2.90	28.06	3.13	30.25	3.00	30.35	2.82
	12+18	60.8	20.76	2.17	25.94	2.45	30.48	2.72	34.75	2.94	35.19	3.00	35.29	2.84
		64.4	20.04	2.24	25.18	2.52	29.51	2.81	33.97	3.03	34.86	3.05	34.91	2.88
		68.0	19.40	2.31	24.30	2.62	28.50	2.89	33.00	3.13	34.50	3.10	34.61	2.93
		71.6	18.78	2.37	23.47	2.71	27.58	3.01	32.03	3.23	34.07	3.13	34.18	2.95
		75.2	18.05	2.44	22.59	2.78	26.58	3.08	30.86	3.32	33.28	3.18	33.38	2.99
	18+18	60.8	21.39	2.50	26.73	2.82	31.40	3.13	35.80	3.39	36.25	3.46	36.36	3.27
		64.4	20.65	2.58	25.94	2.91	30.40	3.25	35.00	3.50	35.92	3.52	35.96	3.32
		68.0	19.99	2.66	25.04	3.02	29.36	3.33	34.00	3.61	35.54	3.58	35.65	3.37
		71.6	19.34	2.74	24.18	3.13	28.42	3.47	33.00	3.72	35.11	3.61	35.21	3.41
		75.2	18.60	2.82	23.27	3.21	27.39	3.55	31.80	3.83	34.29	3.67	34.40	3.45
3 UNITS	9+9+9	60.8	19.50	2.08	24.37	2.35	28.63	2.60	32.64	2.81	33.05	2.87	33.15	2.72
		64.4	18.82	2.14	23.65	2.42	27.72	2.70	31.91	2.91	32.75	2.92	32.79	2.76
		68.0	18.23	2.21	22.83	2.51	26.77	2.77	31.00	3.00	32.41	2.97	32.51	2.80
		71.6	17.64	2.28	22.05	2.60	25.91	2.88	30.09	3.09	32.01	3.00	32.11	2.83
		75.2	16.96	2.34	21.22	2.67	24.97	2.95	28.99	3.19	31.26	3.05	31.36	2.86
	9+9+12	60.8	21.39	2.23	26.73	2.52	31.40	2.80	35.80	3.02	36.25	3.08	36.36	2.92
		64.4	20.65	2.30	25.94	2.59	30.40	2.90	35.00	3.12	35.92	3.14	35.96	2.97
		68.0	19.99	2.37	25.04	2.69	29.36	2.97	34.00	3.22	35.54	3.19	35.65	3.01
		71.6	19.34	2.44	24.18	2.79	28.42	3.10	33.00	3.32	35.11	3.22	35.21	3.04
		75.2	18.60	2.51	23.27	2.86	27.39	3.17	31.80	3.42	34.29	3.27	34.40	3.07
	9+12+12	60.8	22.02	2.40	27.52	2.71	32.32	3.00	36.85	3.25	37.32	3.31	37.43	3.14
		64.4	21.25	2.47	26.70	2.79	31.29	3.11	36.03	3.35	36.97	3.37	37.02	3.19
		68.0	20.58	2.55	25.77	2.89	30.23	3.19	35.00	3.46	36.59	3.43	36.70	3.23
		71.6	19.91	2.62	24.89	3.00	29.25	3.33	33.97	3.57	36.14	3.46	36.25	3.26
		75.2	19.15	2.70	23.96	3.08	28.19	3.41	32.74	3.67	35.30	3.52	35.41	3.30
	12+12+12	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+9+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+12+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	12+12+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+18+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+18+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
4 UNITS	9+9+9+9	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+9+9+12	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+9+12+12	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+12+12+12	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	9+9+9+18	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53
	12+12+12+12	60.8	22.27	2.56	27.83	2.90	32.69	3.21	37.27	3.47	37.74	3.54	37.86	3.35
		64.4	21.50	2.64	27.01	2.98	31.65	3.33	36.44	3.59	37.39	3.60	37.45	3.41
		68.0	20.81	2.72	26.07	3.09	30.57	3.41	35.40	3.70	37.01	3.66	37.12	3.46
		71.6	20.14	2.81	25.18	3.20	29.59	3.56	34.36	3.81	36.55	3.70	36.66	3.49
		75.2	19.37	2.89	24.23	3.29	28.52	3.64	33.11	3.93	35.70	3.76	35.81	3.53

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

■ Ducted type indoor unit Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70	14.74	0.95	16.85	1.01	18.97	1.07	20.49	1.11	21.34	1.11	22.00	1.11
		75	15.38	1.34	17.18	1.40	18.98	1.46	20.29	1.50	21.71	1.48	22.83	1.47
		85	16.28	1.90	17.65	1.95	19.01	2.00	20.00	2.04	22.24	1.99	24.00	1.96
		95	16.48	2.05	17.50	2.08	18.52	2.12	18.00	1.63	20.68	2.08	23.13	2.03
		105	13.90	1.88	15.24	1.97	16.58	2.07	17.55	2.14	19.23	2.13	20.55	2.12
		115	12.99	1.95	14.10	1.97	15.22	2.00	16.02	2.01	17.45	2.02	18.58	2.03
	9+12	125	12.09	2.02	12.97	1.97	13.85	1.93	15.35	2.01	15.68	1.91	16.60	1.93
		70	17.20	1.04	19.66	1.11	22.13	1.17	23.91	1.22	24.89	1.22	25.66	1.22
		75	17.94	1.47	20.05	1.54	22.15	1.60	23.67	1.65	25.33	1.63	26.63	1.61
		85	18.99	2.09	20.59	2.14	22.18	2.19	23.33	2.24	25.95	2.19	28.00	2.16
		95	19.22	2.26	20.41	2.29	21.61	2.33	21.00	1.79	24.13	2.28	26.99	2.23
		105	16.21	2.06	17.78	2.17	19.34	2.27	20.48	2.34	22.43	2.34	23.97	2.33
	12+12	115	15.16	2.14	16.45	2.17	17.75	2.19	18.69	2.21	20.36	2.22	21.67	2.22
		125	14.10	2.22	15.13	2.17	16.16	2.12	17.91	2.21	18.29	2.10	19.37	2.12
		70	19.65	1.13	22.47	1.21	25.29	1.28	27.32	1.33	28.45	1.33	29.33	1.33
		75	20.51	1.61	22.91	1.68	25.31	1.74	27.05	1.79	28.95	1.77	30.44	1.76
		85	21.71	2.27	23.53	2.33	25.35	2.39	26.66	2.44	29.65	2.38	32.00	2.35
		95	21.97	2.46	23.33	2.49	24.69	2.53	24.00	1.95	27.57	2.49	30.84	2.43
	9+18	105	18.53	2.25	20.32	2.36	22.11	2.47	23.40	2.55	25.64	2.55	27.40	2.54
		115	17.32	2.33	18.80	2.36	20.29	2.39	21.36	2.41	23.27	2.42	24.77	2.42
		125	16.12	2.42	17.29	2.36	18.47	2.31	20.46	2.40	20.91	2.29	22.14	2.31
		70	22.11	1.34	25.28	1.43	28.45	1.51	30.74	1.58	32.00	1.58	33.00	1.58
		75	23.07	1.90	25.78	1.98	28.48	2.07	30.43	2.12	32.57	2.10	34.24	2.08
		85	24.42	2.69	26.47	2.76	28.52	2.83	29.99	2.89	33.36	2.82	36.00	2.78
	12+18	95	24.71	2.91	26.25	2.95	27.78	3.00	27.00	2.31	31.02	2.94	34.70	2.88
		105	20.85	2.66	22.85	2.80	24.87	2.93	26.33	3.03	28.84	3.02	30.82	3.01
		115	19.49	2.77	21.16	2.80	22.82	2.83	24.03	2.85	26.18	2.86	27.87	2.87
		125	18.13	2.86	19.46	2.80	20.78	2.73	23.02	2.85	23.52	2.71	24.90	2.73
		70	23.75	1.72	27.15	1.83	30.56	1.94	33.02	2.02	34.37	2.02	35.44	2.02
		75	24.78	2.44	27.69	2.54	30.59	2.65	32.68	2.72	34.98	2.69	36.78	2.67
	18+18	85	26.23	3.45	28.43	3.53	30.63	3.63	32.22	3.70	35.83	3.62	38.66	3.56
		95	26.54	3.73	28.19	3.78	29.84	3.85	29.00	2.96	33.32	3.77	37.27	3.69
		105	22.39	3.41	24.55	3.59	26.71	3.75	28.28	3.88	30.98	3.87	33.10	3.86
		115	20.93	3.54	22.72	3.59	24.51	3.63	25.81	3.66	28.12	3.67	29.93	3.68
		125	19.47	3.67	20.90	3.59	22.32	3.50	24.73	3.65	25.26	3.47	26.75	3.50
		70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
3 UNITS	9+9+9	75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+9+12	70	22.11	1.34	25.28	1.43	28.45	1.51	30.74	1.58	32.00	1.58	33.00	1.58
		75	23.07	1.90	25.78	1.98	28.48	2.07	30.43	2.12	32.57	2.10	34.24	2.08
		85	24.42	2.69	26.47	2.76	28.52	2.83	29.99	2.89	33.36	2.82	36.00	2.78
		95	24.71	2.91	26.25	2.95	27.78	3.00	27.00	2.31	31.02	2.94	34.70	2.88
		105	20.85	2.66	22.85	2.80	24.87	2.93	26.33	3.03	28.84	3.02	30.82	3.01
		115	19.49	2.77	21.16	2.80	22.82	2.83	24.03	2.85	26.18	2.86	27.87	2.87
	9+12+12	125	18.13	2.86	19.46	2.80	20.78	2.73	23.02	2.85	23.52	2.71	24.90	2.73
		70	24.56	1.72	28.09	1.83	31.61	1.94	34.16	2.02	35.56	2.02	36.66	2.02
		75	25.63	2.44	28.64	2.54	31.64	2.65	33.81	2.72	36.19	2.69	38.05	2.67
		85	27.13	3.45	29.41	3.53	31.69	3.63	33.33	3.70	37.07	3.62	40.00	3.56
		95	27.46	3.73	29.16	3.78	30.86	3.85	30.00	2.96	34.46	3.77	38.55	3.69
		105	23.16	3.41	25.39	3.59	27.64	3.75	29.25	3.88	32.05	3.87	34.24	3.86
	12+12+12	115	21.65	3.54	23.51	3.59	25.36	3.63	26.70	3.66	29.09	3.67	30.96	3.68
		125	20.14	3.67	21.62	3.59	23.09	3.50	25.58	3.65	26.14	3.47	27.67	3.50
		70	25.87	1.96	29.58	2.09	33.30	2.21	35.98	2.30	37.46	2.30	38.62	2.30
		75	27.00	2.78	30.17	2.90	33.33	3.01	35.62	3.10	38.12	3.06	40.08	3.04
		85	28.58	3.93	30.98	4.02	33.38	4.13	35.10	4.21	39.04	4.12	42.13	4.06
		95	28.92	4.25	30.72	4.31	32.51	4.38	31.60	3.37	36.30	4.30	40.61	4.20
	12+12+12	105	24.40	3.88	26.75	4.08	29.11	4.27	30.81	4.41	33.76	4.40	36.07	4.39
		115	22.81	4.03	24.76	4.08	26.71	4.13	28.12	4.17	30.64	4.18	32.61	4.19
		125	21.22	4.18	22.77	4.08	24.32	3.99	26.94	4.15	27.53	3.95	29.15	3.99
		70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	9+9+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+12+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	12+12+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+18+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	12+18+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
4 UNITS	9+9+9+9	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+9+9+12	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+9+12+12	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+12+12+12	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50
	9+9+9+18	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
4 UNITS	12+12+12+12	70	27.02	2.21	30.89	2.35	34.78	2.49	37.57	2.60	39.11	2.60	40.33	2.60
		75	28.20	3.13	31.51	3.26	34.81	3.40	37.19	3.49	39.80	3.45	41.85	3.43
		85	29.85	4.43	32.35	4.54	34.85	4.66	36.66	4.75	40.77	4.64	44.00	4.58
		95	30.20	4.79	32.08	4.86	33.95	4.94	33.00	3.80	37.91	4.84	42.41	4.74
		105	25.48	4.38	27.93	4.60	30.40	4.82	32.18	4.98	35.25	4.96	37.67	4.95
		115	23.82	4.55	25.86	4.60	27.89	4.66	29.37	4.70	32.00	4.71	34.06	4.72
		125	22.16	4.71	23.78	4.60	25.40	4.50	28.14	4.68	28.75	4.46	30.44	4.50

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	13.02	1.70	16.27	1.92	19.12	2.14	21.80	2.31	22.07	2.36	22.14	2.23
		64.4	12.57	1.76	15.79	1.98	18.51	2.21	21.31	2.38	21.87	2.40	21.90	2.27
		68.0	12.17	1.81	15.24	2.06	17.88	2.27	20.70	2.46	21.64	2.44	21.71	2.30
		71.6	11.78	1.87	14.72	2.13	17.30	2.36	20.09	2.54	21.37	2.46	21.44	2.32
		75.2	11.32	1.92	14.17	2.19	16.67	2.42	19.36	2.61	20.87	2.50	20.94	2.35
	9+12	60.8	15.19	1.77	18.99	2.00	22.30	2.21	25.43	2.39	25.75	2.44	25.83	2.31
		64.4	14.66	1.82	18.42	2.05	21.59	2.29	24.86	2.47	25.51	2.48	25.55	2.35
		68.0	14.20	1.88	17.78	2.13	20.86	2.35	24.15	2.55	25.25	2.53	25.32	2.38
		71.6	13.74	1.93	17.18	2.21	20.18	2.45	23.44	2.63	24.94	2.55	25.01	2.41
		75.2	13.21	1.99	16.53	2.27	19.45	2.51	22.59	2.71	24.35	2.59	24.43	2.43
	12+12	60.8	17.36	1.82	21.70	2.06	25.49	2.28	29.06	2.47	29.43	2.52	29.52	2.38
		64.4	16.76	1.88	21.06	2.12	24.68	2.36	28.41	2.55	29.15	2.56	29.19	2.42
		68.0	16.23	1.94	20.32	2.20	23.84	2.43	27.60	2.63	28.85	2.60	28.94	2.46
		71.6	15.70	1.99	19.63	2.28	23.07	2.53	26.79	2.71	28.50	2.63	28.59	2.48
		75.2	15.10	2.05	18.89	2.34	22.23	2.59	25.81	2.79	27.83	2.67	27.92	2.51
	9+18	60.8	19.53	1.94	24.41	2.19	28.68	2.43	32.69	2.63	33.11	2.68	33.21	2.54
		64.4	18.85	2.00	23.69	2.25	27.76	2.52	31.96	2.71	32.80	2.73	32.84	2.58
		68.0	18.25	2.06	22.86	2.34	26.82	2.58	31.05	2.80	32.46	2.77	32.56	2.62
		71.6	17.67	2.12	22.08	2.42	25.95	2.69	30.14	2.89	32.06	2.80	32.16	2.64
		75.2	16.99	2.19	21.25	2.49	25.01	2.76	29.04	2.97	31.31	2.85	31.41	2.67
	12+18	60.8	20.98	2.06	26.22	2.32	30.80	2.58	35.12	2.79	35.56	2.84	35.67	2.69
		64.4	20.25	2.12	25.44	2.39	29.82	2.67	34.33	2.88	35.23	2.89	35.28	2.74
		68.0	19.61	2.19	24.56	2.48	28.80	2.74	33.35	2.97	34.87	2.94	34.97	2.78
		71.6	18.97	2.25	23.72	2.57	27.87	2.85	32.37	3.06	34.43	2.97	34.54	2.80
		75.2	18.24	2.32	22.83	2.64	26.86	2.92	31.19	3.15	33.63	3.02	33.74	2.84
	18+18	60.8	23.88	2.37	29.84	2.68	35.05	2.98	39.96	3.22	40.46	3.28	40.59	3.11
		64.4	23.04	2.45	28.95	2.76	33.93	3.08	39.07	3.32	40.09	3.34	40.14	3.16
		68.0	22.31	2.53	27.94	2.87	32.78	3.16	37.95	3.43	39.67	3.40	39.80	3.21
		71.6	21.59	2.60	26.99	2.97	31.72	3.30	36.83	3.54	39.18	3.43	39.31	3.24
		75.2	20.76	2.68	25.98	3.05	30.57	3.38	35.49	3.64	38.27	3.49	38.39	3.27
3 UNITS	9+9+9	60.8	19.53	1.97	24.41	2.23	28.68	2.47	32.69	2.67	33.11	2.73	33.21	2.58
		64.4	18.85	2.04	23.69	2.30	27.76	2.56	31.96	2.76	32.80	2.78	32.84	2.62
		68.0	18.25	2.10	22.86	2.38	26.82	2.63	31.05	2.85	32.46	2.82	32.56	2.66
		71.6	17.67	2.16	22.08	2.47	25.95	2.74	30.14	2.94	32.06	2.85	32.16	2.69
		75.2	16.99	2.22	21.25	2.53	25.01	2.81	29.04	3.03	31.31	2.90	31.41	2.72
	9+9+12	60.8	21.70	2.12	27.12	2.39	31.86	2.66	36.33	2.87	36.79	2.93	36.90	2.77
		64.4	20.95	2.19	26.32	2.46	30.85	2.75	35.51	2.97	36.44	2.98	36.49	2.82
		68.0	20.28	2.25	25.40	2.56	29.80	2.82	34.50	3.06	36.07	3.03	36.18	2.86
		71.6	19.63	2.32	24.54	2.65	28.83	2.94	33.49	3.15	35.62	3.06	35.73	2.89
		75.2	18.87	2.39	23.62	2.72	27.79	3.01	32.27	3.25	34.79	3.11	34.90	2.92
	9+12+12	60.8	22.86	2.28	28.57	2.57	33.56	2.86	38.26	3.09	38.75	3.15	38.86	2.98
		64.4	22.07	2.35	27.72	2.65	32.49	2.96	37.41	3.19	38.39	3.21	38.44	3.03
		68.0	21.36	2.42	26.76	2.75	31.39	3.03	36.34	3.29	37.99	3.26	38.11	3.08
		71.6	20.68	2.50	25.85	2.85	30.37	3.16	35.27	3.39	37.52	3.29	37.64	3.10
		75.2	19.88	2.57	24.87	2.92	29.27	3.24	33.99	3.49	36.65	3.34	36.76	3.14
	12+12+12	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+9+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+12+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
4 UNITS	12+12+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
	9+18+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
	9+18+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+18+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
4 UNITS	9+9+9+9	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+9+9+12	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+9+12+12	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+12+12+12	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	9+9+9+18	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36
	12+12+12+12	60.8	23.28	2.44	29.09	2.75	34.17	3.06	38.96	3.30	39.45	3.37	39.57	3.19
		64.4	22.47	2.51	28.23	2.83	33.08	3.17	38.09	3.41	39.08	3.43	39.14	3.24
		68.0	21.75	2.59	27.24	2.94	31.96	3.25	37.00	3.52	38.68	3.49	38.80	3.29
		71.6	21.05	2.67	26.32	3.05	30.92	3.38	35.91	3.63	38.20	3.52	38.32	3.32
		75.2	20.24	2.75	25.33	3.13	29.80	3.47	34.61	3.74	37.31	3.58	37.43	3.36

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Models : A4UW363FA2[LMU369HV]

■ Non ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70	14.74	1.15	16.85	1.22	18.97	1.30	20.49	1.35	21.34	1.35	22.00	1.35
		75	15.38	1.63	17.18	1.70	18.99	1.77	20.29	1.82	21.71	1.80	22.83	1.78
		85	16.28	2.31	17.65	2.37	19.01	2.43	20.00	2.47	22.24	2.42	24.00	2.38
		95	16.48	2.50	17.50	2.53	18.52	2.57	18.00	1.90	20.68	2.52	23.13	2.47
		105	13.90	2.28	15.24	2.40	16.58	2.51	17.55	2.59	19.23	2.59	20.54	2.58
		115	12.99	2.37	14.10	2.40	15.22	2.43	16.02	2.45	17.45	2.46	18.57	2.46
	9+12	125	12.09	2.46	12.97	2.40	13.86	2.34	15.35	2.44	15.68	2.33	16.60	2.34
		70	17.20	1.28	19.66	1.36	22.13	1.44	23.91	1.50	24.89	1.50	25.66	1.50
		75	17.95	1.81	20.05	1.89	22.15	1.97	23.67	2.02	25.33	2.00	26.63	1.98
		85	18.99	2.56	20.59	2.63	22.18	2.70	23.33	2.75	25.95	2.69	28.00	2.65
		95	19.22	2.78	20.42	2.82	21.61	2.86	21.00	2.11	24.12	2.81	26.99	2.75
		105	16.21	2.54	17.78	2.67	19.34	2.79	20.47	2.89	22.43	2.88	23.97	2.87
	12+12	115	15.16	2.64	16.46	2.67	17.75	2.70	18.69	2.72	20.36	2.73	21.67	2.74
		125	14.10	2.73	15.13	2.67	16.17	2.61	17.91	2.71	18.29	2.59	19.37	2.60
		70	19.65	1.41	22.47	1.50	25.29	1.59	27.32	1.65	28.45	1.65	29.33	1.65
		75	20.51	2.00	22.91	2.08	25.31	2.16	27.05	2.22	28.95	2.20	30.44	2.18
		85	21.71	2.82	23.53	2.89	25.35	2.97	26.66	3.02	29.65	2.96	32.00	2.91
		95	21.97	3.06	23.33	3.10	24.69	3.14	24.00	2.32	27.57	3.09	30.84	3.02
	9+18	105	18.53	2.79	20.32	2.93	22.11	3.07	23.40	3.17	25.64	3.17	27.39	3.16
		115	17.32	2.90	18.81	2.93	20.29	2.97	21.36	3.00	23.27	3.00	24.77	3.01
		125	16.12	3.01	17.30	2.94	18.48	2.87	20.46	2.98	20.91	2.84	22.14	2.86
		70	22.11	1.47	25.28	1.56	28.45	1.66	30.74	1.72	32.00	1.73	32.99	1.73
		75	23.07	2.08	25.78	2.17	28.48	2.26	30.43	2.32	32.57	2.29	34.24	2.27
		85	24.42	2.94	26.47	3.02	28.52	3.10	30.00	3.15	33.36	3.09	35.99	3.04
	12+18	95	24.72	3.19	26.25	3.23	27.78	3.28	27.00	2.42	31.02	3.22	34.70	3.15
		105	20.84	2.91	22.86	3.06	24.87	3.20	26.32	3.31	28.84	3.30	30.82	3.29
		115	19.49	3.02	21.16	3.06	22.83	3.10	24.03	3.12	26.18	3.13	27.86	3.14
		125	18.13	3.14	19.46	3.06	20.79	2.99	23.02	3.11	23.52	2.97	24.91	2.99
		70	24.57	1.58	28.09	1.68	31.61	1.78	34.16	1.85	35.56	1.85	36.66	1.85
		75	25.64	2.24	28.64	2.33	31.64	2.42	33.81	2.49	36.19	2.46	38.05	2.44
	18+18	85	27.13	3.16	29.41	3.24	31.69	3.33	33.33	3.39	37.07	3.32	39.99	3.27
		95	27.46	3.42	29.16	3.47	30.87	3.52	30.00	2.60	34.46	3.46	38.55	3.39
		105	23.16	3.13	25.40	3.28	27.63	3.44	29.25	3.56	32.05	3.55	34.24	3.54
		115	21.65	3.25	23.51	3.29	25.36	3.33	26.70	3.36	29.09	3.37	30.96	3.37
		125	20.15	3.37	21.62	3.29	23.09	3.21	25.58	3.34	26.13	3.19	27.67	3.21
		70	27.02	1.75	30.90	1.86	34.77	1.97	37.57	2.05	39.12	2.05	40.33	2.05
3 UNITS	9+9+9	75	28.20	2.48	31.50	2.58	34.81	2.69	37.19	2.76	39.81	2.73	41.85	2.71
		85	29.85	3.50	32.35	3.59	34.85	3.69	36.66	3.75	40.77	3.68	43.99	3.62
		95	30.21	3.79	32.08	3.85	33.95	3.90	33.00	2.88	37.91	3.83	42.41	3.75
		105	25.47	3.46	27.93	3.64	30.39	3.81	32.17	3.94	35.25	3.93	37.66	3.92
		115	23.82	3.60	25.86	3.64	27.90	3.69	29.37	3.72	32.00	3.73	34.05	3.74
		125	22.16	3.73	23.78	3.65	25.40	3.56	28.14	3.70	28.74	3.53	30.44	3.56
	9+9+12	70	22.11	1.47	25.28	1.56	28.45	1.66	30.74	1.72	32.00	1.73	32.99	1.73
		75	23.07	2.08	25.78	2.17	28.48	2.26	30.43	2.32	32.57	2.29	34.24	2.27
		85	24.42	2.94	26.47	3.02	28.52	3.10	30.00	3.15	33.36	3.09	35.99	3.04
		95	24.72	3.19	26.25	3.23	27.78	3.28	27.00	2.42	31.02	3.22	34.70	3.15
		105	20.84	2.91	22.86	3.06	24.87	3.20	26.32	3.31	28.84	3.30	30.82	3.29
		115	19.49	3.02	21.16	3.06	22.83	3.10	24.03	3.12	26.18	3.13	27.86	3.14
	9+12+12	125	18.13	3.14	19.46	3.06	20.79	2.99	23.02	3.11	23.52	2.97	24.91	2.99
		70	24.57	1.58	28.09	1.68	31.61	1.78	34.16	1.85	35.56	1.85	36.66	1.85
		75	25.64	2.24	28.64	2.33	31.64	2.42	33.81	2.49	36.19	2.46	38.05	2.44
		85	27.13	3.16	29.41	3.24	31.69	3.33	33.33	3.39	37.07	3.32	39.99	3.27
		95	27.46	3.42	29.16	3.47	30.87	3.52	30.00	2.60	34.46	3.46	38.55	3.39
		105	23.16	3.13	25.40	3.28	27.63	3.44	29.25	3.56	32.05	3.55	34.24	3.54
	9+12+12	115	21.65	3.25	23.51	3.29	25.36	3.33	26.70	3.36	29.09	3.37	30.96	3.37
		125	20.15	3.37	21.62	3.29	23.09	3.21	25.58	3.34	26.13	3.19	27.67	3.21
		70	27.02	1.66	30.90	1.77	34.77	1.88	37.57	1.95	39.12	1.95	40.33	1.95
		75	28.20	2.36	31.50	2.46	34.81	2.56	37.19	2.63	39.81	2.60	41.85	2.57
		85	29.85	3.33	32.35	3.42	34.85	3.51	36.66	3.57	40.77	3.50	43.99	3.44
		95	30.21	3.61	32.08	3.66	33.95	3.71	33.00	2.74	37.91	3.65	42.41	3.57
	9+12+12	105	25.47	3.30	27.93	3.46	30.39	3.63	32.17	3.75	35.25	3.74	37.66	3.73
		115	23.82	3.42	25.86	3.47	27.90	3.51	29.37	3.54	32.00	3.55	34.05	3.56
		125	22.16	3.55	23.78	3.47	25.40	3.39	28.14	3.52	28.74	3.36	30.44	3.38

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+12+12	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
	9+9+18	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	9+12+18	115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	12+12+18	115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
	9+18+18	95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
	12+18+18	95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		4 UNITS	9+9+9+9	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94
75	29.05			2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
85	30.75			3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
95	31.12			3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
105	26.25			3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
115	24.54			3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
125	22.83			3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
9+9+9+12	70		27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
	75		29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
	85		30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
	95		31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
	105		26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	115		24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	125		22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
9+9+12+12	70		27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
	75		29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
	85		30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
	95		31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
	105		26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	115		24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	125		22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
9+12+12+12	70		27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
	75		29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
	85		30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
	95		31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
	105		26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	115		24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	125		22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
4 UNITS	9+9+9+18	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
	12+12+12+12	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.72	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25t
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	12.46	1.44	16.27	1.63	19.12	1.81	21.80	1.95	22.07	1.99	22.14	1.89
		64.4	12.03	1.49	15.79	1.67	18.51	1.87	21.31	2.02	21.87	2.03	21.90	1.92
		68.0	11.68	1.53	15.24	1.74	17.88	1.92	20.70	2.08	21.64	2.06	21.71	1.94
		71.6	11.27	1.58	14.72	1.80	17.30	2.00	20.09	2.14	21.37	2.08	21.44	1.96
		75.2	10.84	1.62	14.17	1.85	16.67	2.05	19.36	2.21	20.87	2.11	20.94	1.99
	9+12	60.8	14.54	1.76	18.99	1.99	22.30	2.21	25.43	2.38	25.75	2.43	25.83	2.30
		64.4	14.03	1.81	18.42	2.05	21.59	2.28	24.86	2.46	25.51	2.47	25.55	2.34
		68.0	13.63	1.87	17.78	2.12	20.86	2.34	24.15	2.54	25.25	2.52	25.32	2.37
		71.6	13.15	1.93	17.18	2.20	20.18	2.44	23.44	2.62	24.94	2.54	25.01	2.40
		75.2	12.64	1.98	16.53	2.26	19.45	2.50	22.59	2.70	24.35	2.58	24.43	2.42
	12+12	60.8	16.62	1.79	21.70	2.03	25.49	2.25	29.06	2.43	29.43	2.48	29.52	2.35
		64.4	16.04	1.85	21.06	2.09	24.68	2.33	28.41	2.51	29.15	2.52	29.19	2.39
		68.0	15.58	1.91	20.32	2.16	23.84	2.39	27.60	2.59	28.85	2.56	28.94	2.42
		71.6	15.03	1.96	19.63	2.24	23.07	2.49	26.79	2.67	28.50	2.59	28.59	2.44
		75.2	14.45	2.02	18.89	2.30	22.23	2.55	25.81	2.75	27.83	2.63	27.92	2.47
	9+18	60.8	18.69	2.01	24.41	2.27	28.68	2.52	32.69	2.72	33.11	2.78	33.21	2.63
		64.4	18.04	2.07	23.69	2.34	27.76	2.61	31.96	2.81	32.80	2.83	32.84	2.67
		68.0	17.52	2.14	22.86	2.42	26.82	2.68	31.05	2.90	32.46	2.87	32.56	2.71
		71.6	16.91	2.20	22.08	2.51	25.95	2.79	30.14	2.99	32.06	2.90	32.16	2.74
		75.2	16.26	2.26	21.25	2.58	25.01	2.86	29.04	3.08	31.31	2.95	31.41	2.77
	12+18	60.8	20.77	2.23	27.12	2.52	31.86	2.80	36.33	3.02	36.79	3.08	36.90	2.92
		64.4	20.05	2.30	26.32	2.59	30.85	2.90	35.51	3.12	36.44	3.14	36.49	2.97
		68.0	19.47	2.37	25.40	2.69	29.80	2.97	34.50	3.22	36.07	3.19	36.18	3.01
		71.6	18.78	2.44	24.54	2.79	28.83	3.10	33.49	3.32	35.62	3.22	35.73	3.04
		75.2	18.06	2.51	23.62	2.86	27.79	3.17	32.27	3.42	34.79	3.27	34.90	3.07
	18+18	60.8	22.88	2.44	29.87	2.76	35.09	3.06	40.01	3.31	40.52	3.38	40.64	3.20
		64.4	22.08	2.52	28.99	2.84	33.98	3.17	39.12	3.42	40.14	3.44	40.20	3.25
		68.0	21.45	2.60	27.98	2.95	32.82	3.26	38.00	3.53	39.73	3.50	39.85	3.30
		71.6	20.69	2.68	27.03	3.06	31.76	3.39	36.88	3.64	39.24	3.53	39.36	3.33
		75.2	19.89	2.76	26.01	3.14	30.61	3.48	35.54	3.75	38.32	3.59	38.44	3.37
3 UNITS	9+9+9	60.8	18.69	2.01	24.41	2.27	28.68	2.52	32.69	2.72	33.11	2.78	33.21	2.63
		64.4	18.04	2.07	23.69	2.34	27.76	2.61	31.96	2.81	32.80	2.83	32.84	2.67
		68.0	17.52	2.14	22.86	2.42	26.82	2.68	31.05	2.90	32.46	2.87	32.56	2.71
		71.6	16.91	2.20	22.08	2.51	25.95	2.79	30.14	2.99	32.06	2.90	32.16	2.74
		75.2	16.26	2.26	21.25	2.58	25.01	2.86	29.04	3.08	31.31	2.95	31.41	2.77
	9+9+12	60.8	20.77	2.23	27.12	2.52	31.86	2.80	36.33	3.02	36.79	3.08	36.90	2.92
		64.4	20.05	2.30	26.32	2.59	30.85	2.90	35.51	3.12	36.44	3.14	36.49	2.97
		68.0	19.47	2.37	25.40	2.69	29.80	2.97	34.50	3.22	36.07	3.19	36.18	3.01
		71.6	18.78	2.44	24.54	2.79	28.83	3.10	33.49	3.32	35.62	3.22	35.73	3.04
		75.2	18.06	2.51	23.62	2.86	27.79	3.17	32.27	3.42	34.79	3.27	34.90	3.07
	9+12+12	60.8	22.85	2.35	29.84	2.66	35.05	2.95	39.96	3.19	40.46	3.26	40.59	3.08
		64.4	22.05	2.43	28.95	2.74	33.93	3.06	39.07	3.29	40.09	3.31	40.14	3.13
		68.0	21.42	2.50	27.94	2.84	32.78	3.14	37.95	3.40	39.67	3.37	39.80	3.18
		71.6	20.66	2.58	26.99	2.94	31.72	3.27	36.83	3.51	39.18	3.40	39.31	3.21
		75.2	19.87	2.65	25.98	3.02	30.57	3.35	35.49	3.61	38.27	3.46	38.39	3.25
	12+12+12	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+9+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+12+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	12+12+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+18+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+18+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
4 UNITS	9+9+9+9	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+9+9+12	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+9+12+12	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+12+12+12	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	9+9+9+18	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42
	12+12+12+12	60.8	24.68	2.48	32.23	2.80	37.86	3.11	43.17	3.36	43.72	3.43	43.85	3.25
		64.4	23.83	2.56	31.28	2.88	36.66	3.22	42.21	3.47	43.31	3.49	43.37	3.30
		68.0	23.14	2.64	30.19	2.99	35.41	3.30	41.00	3.58	42.86	3.55	42.99	3.35
		71.6	22.32	2.72	29.16	3.10	34.27	3.44	39.79	3.69	42.33	3.58	42.46	3.38
		75.2	21.46	2.79	28.06	3.18	33.03	3.52	38.35	3.80	41.35	3.64	41.48	3.42

Notes:

- Capacities are based on the following conditions.
Corresponding refrigerant piping length : 25ft
Level difference : 0ft

- TC : Total Capacity (kBtu/h)
PI : Power Input (kW)

1. Multi piping type MULTI F

■ Ducted type indoor unit

Cooling capacity

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	70	14.74	1.15	16.85	1.22	18.97	1.30	20.49	1.35	21.34	1.35	22.00	1.35
		75	15.38	1.63	17.18	1.70	18.99	1.77	20.29	1.82	21.71	1.80	22.83	1.78
		85	16.28	2.30	17.65	2.37	19.01	2.43	20.00	2.47	22.24	2.42	24.00	2.38
		95	16.48	2.50	17.50	2.53	18.52	2.57	18.00	1.98	20.68	2.52	23.13	2.47
		105	13.90	2.28	15.24	2.40	16.58	2.51	17.55	2.59	19.23	2.59	20.54	2.58
		115	12.99	2.37	14.10	2.40	15.22	2.43	16.02	2.45	17.45	2.46	18.57	2.46
	9+12	125	12.09	2.46	12.97	2.40	13.86	2.34	15.35	2.44	15.68	2.32	16.60	2.34
		70	17.20	1.28	19.66	1.36	22.13	1.44	23.91	1.50	24.89	1.50	25.66	1.50
		75	17.95	1.81	20.05	1.89	22.15	1.96	23.67	2.02	25.33	2.00	26.63	1.98
		85	18.99	2.56	20.59	2.63	22.18	2.70	23.33	2.75	25.95	2.69	28.00	2.65
		95	19.22	2.77	20.42	2.82	21.61	2.86	21.00	2.20	24.12	2.80	26.99	2.74
		105	16.21	2.53	17.78	2.66	19.34	2.79	20.47	2.88	22.43	2.87	23.97	2.87
	12+12	115	15.16	2.63	16.46	2.66	17.75	2.70	18.69	2.72	20.36	2.73	21.67	2.73
		125	14.10	2.73	15.13	2.67	16.17	2.60	17.91	2.71	18.29	2.58	19.37	2.60
		70	19.65	1.41	22.47	1.50	25.29	1.59	27.32	1.65	28.45	1.65	29.33	1.65
		75	20.51	1.99	22.91	2.08	25.31	2.16	27.05	2.22	28.95	2.20	30.44	2.18
		85	21.71	2.82	23.53	2.89	25.35	2.97	26.66	3.02	29.65	2.96	32.00	2.91
		95	21.97	3.05	23.33	3.10	24.69	3.14	24.00	2.42	27.57	3.08	30.84	3.02
	9+18	105	18.53	2.79	20.32	2.93	22.11	3.07	23.40	3.17	25.64	3.16	27.39	3.16
		115	17.32	2.90	18.81	2.93	20.29	2.97	21.36	2.99	23.27	3.00	24.77	3.01
		125	16.12	3.00	17.30	2.93	18.48	2.86	20.46	2.98	20.91	2.84	22.14	2.86
		70	22.11	1.47	25.28	1.56	28.45	1.66	30.74	1.73	32.00	1.73	32.99	1.73
		75	23.07	2.08	25.78	2.17	28.48	2.26	30.43	2.32	32.57	2.30	34.24	2.28
		85	24.42	2.94	26.47	3.02	28.52	3.10	30.00	3.16	33.36	3.09	35.99	3.04
	12+18	95	24.72	3.19	26.25	3.24	27.78	3.28	27.00	2.53	31.02	3.22	34.70	3.16
		105	20.84	2.91	22.86	3.06	24.87	3.21	26.32	3.31	28.84	3.31	30.82	3.30
		115	19.49	3.03	21.16	3.06	22.83	3.10	24.03	3.13	26.18	3.14	27.86	3.15
		125	18.13	3.14	19.46	3.07	20.79	2.99	23.02	3.12	23.52	2.97	24.91	2.99
		70	24.57	1.57	28.09	1.67	31.61	1.78	34.16	1.85	35.56	1.85	36.66	1.85
		75	25.64	2.23	28.64	2.33	31.64	2.42	33.81	2.49	36.19	2.46	38.05	2.44
	18+18	85	27.13	3.15	29.41	3.24	31.69	3.32	33.33	3.38	37.07	3.31	39.99	3.26
		95	27.46	3.42	29.16	3.47	30.87	3.52	30.00	2.71	34.46	3.45	38.55	3.38
		105	23.16	3.12	25.40	3.28	27.63	3.44	29.25	3.55	32.05	3.54	34.24	3.53
		115	21.65	3.24	23.51	3.28	25.36	3.32	26.70	3.35	29.09	3.36	30.96	3.37
		125	20.15	3.36	21.62	3.29	23.09	3.21	25.58	3.34	26.13	3.18	27.67	3.20
		70	27.02	1.74	30.90	1.85	34.77	1.97	37.57	2.05	39.12	2.05	40.33	2.05
3 UNITS	9+9+9	75	28.20	2.47	31.50	2.58	34.81	2.68	37.19	2.75	39.81	2.72	41.85	2.70
		85	29.85	3.49	32.35	3.58	34.85	3.68	36.66	3.74	40.77	3.67	43.99	3.61
		95	30.21	3.78	32.08	3.84	33.95	3.89	33.00	3.00	37.91	3.82	42.41	3.74
		105	25.47	3.46	27.93	3.63	30.39	3.80	32.17	3.93	35.25	3.92	37.66	3.91
		115	23.82	3.59	25.86	3.63	27.90	3.68	29.37	3.71	32.00	3.72	34.05	3.73
		125	22.16	3.72	23.78	3.64	25.40	3.55	28.14	3.69	28.74	3.52	30.44	3.55
	9+9+12	70	22.11	1.47	25.28	1.56	28.45	1.66	30.74	1.73	32.00	1.73	32.99	1.73
		75	23.07	2.08	25.78	2.17	28.48	2.26	30.43	2.32	32.57	2.30	34.24	2.28
		85	24.42	2.94	26.47	3.02	28.52	3.10	30.00	3.16	33.36	3.09	35.99	3.04
		95	24.72	3.19	26.25	3.24	27.78	3.28	27.00	2.53	31.02	3.22	34.70	3.16
		105	20.84	2.91	22.86	3.06	24.87	3.21	26.32	3.31	28.84	3.31	30.82	3.30
		115	19.49	3.03	21.16	3.06	22.83	3.10	24.03	3.13	26.18	3.14	27.86	3.15
	9+12+12	125	18.13	3.14	19.46	3.07	20.79	2.99	23.02	3.12	23.52	2.97	24.91	2.99
		70	24.57	1.57	28.09	1.67	31.61	1.78	34.16	1.85	35.56	1.85	36.66	1.85
		75	25.64	2.23	28.64	2.33	31.64	2.42	33.81	2.49	36.19	2.46	38.05	2.44
		85	27.13	3.15	29.41	3.24	31.69	3.32	33.33	3.38	37.07	3.31	39.99	3.26
		95	27.46	3.42	29.16	3.47	30.87	3.52	30.00	2.71	34.46	3.45	38.55	3.38
		105	23.16	3.12	25.40	3.28	27.63	3.44	29.25	3.55	32.05	3.54	34.24	3.53
	9+12+12	115	21.65	3.24	23.51	3.28	25.36	3.32	26.70	3.35	29.09	3.36	30.96	3.37
		125	20.15	3.36	21.62	3.29	23.09	3.21	25.58	3.34	26.13	3.18	27.67	3.20
		70	27.02	1.66	30.90	1.77	34.77	1.87	37.57	1.95	39.12	1.95	40.33	1.95
		75	28.20	2.36	31.50	2.46	34.81	2.55	37.19	2.63	39.81	2.60	41.85	2.57
		85	29.85	3.33	32.35	3.42	34.85	3.51	36.66	3.57	40.77	3.50	43.99	3.44
		95	30.21	3.61	32.08	3.66	33.95	3.71	33.00	2.86	37.91	3.64	42.41	3.57
	9+12+12	105	25.47	3.29	27.93	3.46	30.39	3.63	32.17	3.75	35.25	3.74	37.66	3.73
		115	23.82	3.42	25.86	3.46	27.90	3.51	29.37	3.54	32.00	3.55	34.05	3.56
		125	22.16	3.55	23.78	3.47	25.40	3.39	28.14	3.52	28.74	3.36	30.44	3.38

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+12+12	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	9+9+18	125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	9+12+18	115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
	12+12+18	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	9+18+18	125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	12+18+18	115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
4 UNITS	9+9+9+9	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
	9+9+9+12	125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
		70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
	9+9+12+12	115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36
	9+12+12+12	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Outdoor Air Temp.: °FDB	Indoor Air Temp.: °FWB											
			57.2		60.8		64.4		67.0		71.6		75.2	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
4 UNITS	9+9+9+18	70	27.84	1.65	31.83	1.76	35.83	1.86	38.71	1.94	40.30	1.94	41.55	1.94
		75	29.05	2.34	32.46	2.44	35.86	2.54	38.32	2.61	41.01	2.58	43.12	2.56
		85	30.75	3.31	33.33	3.39	35.91	3.48	37.77	3.55	42.01	3.47	45.33	3.42
		95	31.12	3.58	33.05	3.63	34.98	3.69	34.00	2.84	39.06	3.62	43.69	3.54
		105	26.25	3.27	28.78	3.44	31.32	3.60	33.15	3.72	36.32	3.71	38.81	3.70
		115	24.54	3.40	26.64	3.44	28.74	3.48	30.26	3.51	32.97	3.52	35.09	3.53
		125	22.83	3.52	24.50	3.44	26.17	3.36	28.99	3.50	29.62	3.33	31.36	3.36

Notes:

1. Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 25t
 Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
 PI : Power Input (kW)

1. Multi piping type MULTI F

Heating capacity

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
2 UNITS	9+9	60.8	12.46	1.50	16.27	1.70	19.12	1.88	21.80	2.04	22.07	2.08	22.14	1.97
		64.4	12.03	1.55	15.79	1.75	18.51	1.95	21.31	2.10	21.87	2.11	21.90	2.00
		68.0	11.68	1.60	15.24	1.81	17.88	2.00	20.70	2.17	21.64	2.15	21.71	2.03
		71.6	11.27	1.65	14.72	1.88	17.30	2.09	20.09	2.24	21.37	2.17	21.44	2.05
		75.2	10.84	1.69	14.17	1.93	16.67	2.14	19.36	2.30	20.87	2.21	20.94	2.07
	9+12	60.8	14.54	1.77	18.99	2.00	22.30	2.22	25.43	2.40	25.75	2.45	25.83	2.32
		64.4	14.03	1.83	18.42	2.06	21.59	2.30	24.86	2.48	25.51	2.49	25.55	2.36
		68.0	13.63	1.89	17.78	2.14	20.86	2.36	24.15	2.56	25.25	2.54	25.32	2.39
		71.6	13.15	1.94	17.18	2.22	20.18	2.46	23.44	2.64	24.94	2.56	25.01	2.42
		75.2	12.64	2.00	16.53	2.28	19.45	2.52	22.59	2.72	24.35	2.60	24.43	2.44
	12+12	60.8	16.62	1.86	21.70	2.10	25.49	2.34	29.06	2.52	29.43	2.58	29.52	2.44
		64.4	16.04	1.92	21.06	2.17	24.68	2.42	28.41	2.61	29.15	2.62	29.19	2.48
		68.0	15.58	1.98	20.32	2.25	23.84	2.48	27.60	2.69	28.85	2.66	28.94	2.51
		71.6	15.03	2.04	19.63	2.33	23.07	2.59	26.79	2.77	28.50	2.69	28.59	2.54
		75.2	14.45	2.10	18.89	2.39	22.23	2.65	25.81	2.86	27.83	2.73	27.92	2.57
	9+18	60.8	18.69	2.09	24.41	2.36	28.68	2.62	32.69	2.83	33.11	2.89	33.21	2.74
		64.4	18.04	2.16	23.69	2.43	27.76	2.72	31.96	2.93	32.80	2.94	32.84	2.78
		68.0	17.52	2.22	22.86	2.52	26.82	2.79	31.05	3.02	32.46	2.99	32.56	2.82
		71.6	16.91	2.29	22.08	2.62	25.95	2.90	30.14	3.11	32.06	3.02	32.16	2.85
		75.2	16.26	2.36	21.25	2.68	25.01	2.97	29.04	3.21	31.31	3.07	31.41	2.88
	12+18	60.8	20.77	2.32	27.12	2.62	31.86	2.91	36.33	3.14	36.79	3.21	36.90	3.04
		64.4	20.05	2.39	26.32	2.70	30.85	3.01	35.51	3.25	36.44	3.26	36.49	3.09
		68.0	19.47	2.47	25.40	2.80	29.80	3.09	34.50	3.35	36.07	3.32	36.18	3.13
		71.6	18.78	2.54	24.54	2.90	28.83	3.22	33.49	3.45	35.62	3.35	35.73	3.16
		75.2	18.06	2.62	23.62	2.98	27.79	3.30	32.27	3.56	34.79	3.41	34.90	3.20
	18+18	60.8	22.88	2.55	29.87	2.88	35.09	3.20	40.01	3.45	40.52	3.52	40.64	3.34
		64.4	22.08	2.63	28.99	2.96	33.98	3.31	39.12	3.57	40.14	3.59	40.20	3.39
		68.0	21.45	2.71	27.98	3.08	32.82	3.39	38.00	3.68	39.73	3.64	39.85	3.44
		71.6	20.69	2.79	27.03	3.19	31.76	3.54	36.88	3.79	39.24	3.68	39.36	3.47
		75.2	19.89	2.87	26.01	3.27	30.61	3.62	35.54	3.91	38.32	3.74	38.44	3.51
3 UNITS	9+9+9	60.8	18.69	2.09	24.41	2.36	28.68	2.62	32.69	2.83	33.11	2.89	33.21	2.74
		64.4	18.04	2.16	23.69	2.43	27.76	2.72	31.96	2.93	32.80	2.94	32.84	2.78
		68.0	17.52	2.22	22.86	2.52	26.82	2.79	31.05	3.02	32.46	2.99	32.56	2.82
		71.6	16.91	2.29	22.08	2.62	25.95	2.90	30.14	3.11	32.06	3.02	32.16	2.85
		75.2	16.26	2.36	21.25	2.68	25.01	2.97	29.04	3.21	31.31	3.07	31.41	2.88
	9+9+12	60.8	20.77	2.32	27.12	2.62	31.86	2.91	36.33	3.14	36.79	3.21	36.90	3.04
		64.4	20.05	2.39	26.32	2.70	30.85	3.01	35.51	3.25	36.44	3.26	36.49	3.09
		68.0	19.47	2.47	25.40	2.80	29.80	3.09	34.50	3.35	36.07	3.32	36.18	3.13
		71.6	18.78	2.54	24.54	2.90	28.83	3.22	33.49	3.45	35.62	3.35	35.73	3.16
		75.2	18.06	2.62	23.62	2.98	27.79	3.30	32.27	3.56	34.79	3.41	34.90	3.20
	9+12+12	60.8	22.85	2.46	29.84	2.78	35.05	3.08	39.96	3.33	40.46	3.40	40.59	3.22
		64.4	22.05	2.54	28.95	2.86	33.93	3.19	39.07	3.44	40.09	3.46	40.14	3.27
		68.0	21.42	2.61	27.94	2.97	32.78	3.27	37.95	3.55	39.67	3.52	39.80	3.32
		71.6	20.66	2.69	26.99	3.07	31.72	3.41	36.83	3.66	39.18	3.55	39.31	3.35
		75.2	19.87	2.77	25.98	3.16	30.57	3.49	35.49	3.77	38.27	3.61	38.39	3.39
	12+12+12	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+9+18	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+12+18	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	12+12+18	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
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		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55

1. Multi piping type MULTI F

Operation	Combination Capacity Index	Indoor Air Temp.: °FDB	Outdoor Air Temp.: °FWB											
			14		23		32		43		50		59	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
3 UNITS	12+18+18	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
4 UNITS	9+9+9+9	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+9+9+12	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+9+12+12	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+12+12+12	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
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		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	9+9+9+18	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55
	12+12+12+12	60.8	24.68	2.58	32.23	2.91	37.86	3.23	43.17	3.49	43.72	3.56	43.85	3.37
		64.4	23.83	2.66	31.28	3.00	36.66	3.35	42.21	3.60	43.31	3.62	43.37	3.43
		68.0	23.14	2.74	30.19	3.11	35.41	3.43	41.00	3.72	42.86	3.68	42.99	3.48
		71.6	22.32	2.82	29.16	3.22	34.27	3.58	39.79	3.84	42.33	3.72	42.46	3.51
		75.2	21.46	2.90	28.06	3.31	33.03	3.66	38.35	3.95	41.35	3.78	41.48	3.55

Notes:

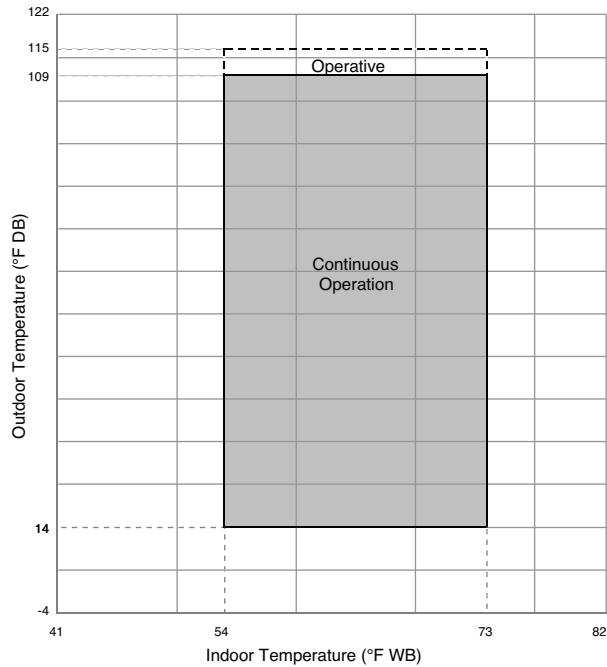
1. Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 25ft
 Level difference : 0ft

2. TC : Total Capacity (kBtu/h)
 PI : Power Input (kW)

1. Multi piping type MULTI F

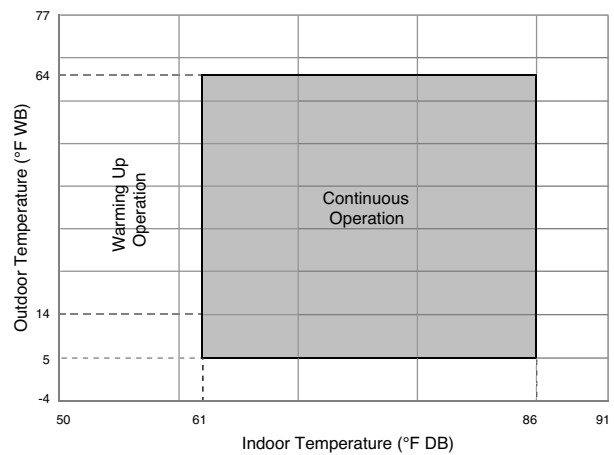
1.9 Operation range

Cooling



[Note] What means 'Operative' ?
Intermittent operation due to the operating conditions
(indoor/outdoor temperature, humidity, load etc.) can cause
a reduction in total capacity.

Heating



[Note] The unit can be operated upto 0°F WB.

1. Multi piping type MULTI F

1.10 Electric characteristics

Unit					Power		Compressor		OFM	
Model	Type	Hz	Voltage	Voltage range	MCA	MOP	MSC	RLA	kW	FLA
A2UW183FA2[LMU187HV]	Inverter	60	208~230	MIN.:187 MAX.:253	11.0	19.2	-	8.2	0.08	0.40
A3UW243FA2[LMU247HV]					15.4	27.0	-	11.6	0.08	0.40
A4UW363FA1[LMU366HV]					16.8	29.3	-	12.5	0.12	0.55
A4UW363FA2[LMU369HV]					16.8	28.9	-	12.1	0.12	0.55

Notes :

1. Voltage range
Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phase is 2%.
3. Select wire spec. based on the larger value of MCA.
4. RLA is measured during each individual compressor test condition.
5. OFM is measured as the outdoor unit test condition.
6. Recommended circuit breaker is ELCB (Earth Leakage Circuit Breaker).

MCA : Minimum Circuit Amperes. (A)

MOP : Maximum rating of Overcurrent Protective device. (A)

MSC : Maximum Starting Current. (A)

RLA : Rated Load Amperes. (A)

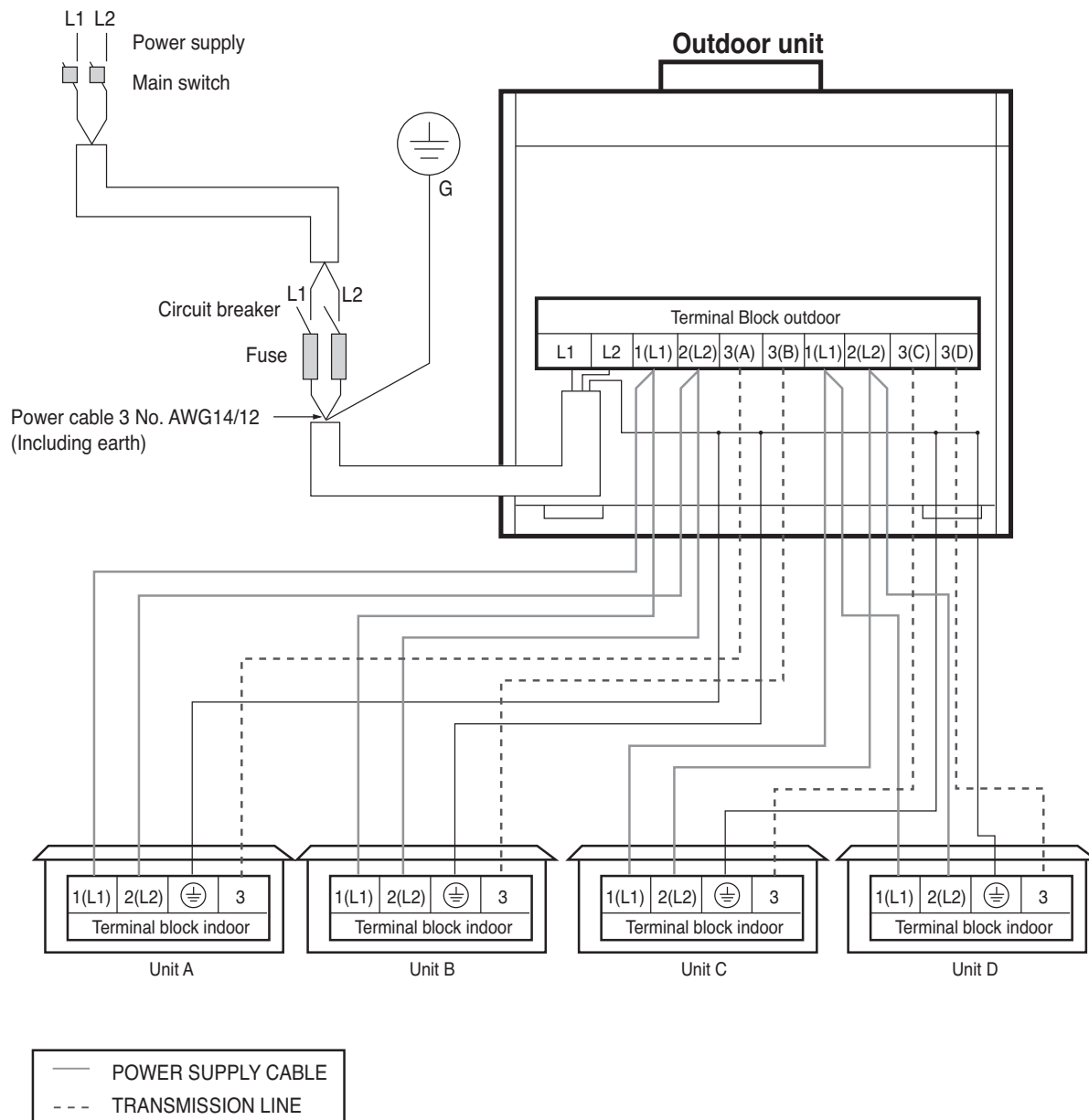
OFM : Outdoor Fan Motor.

kW : Fan Motor rated output. (kW)

FLA : Full Load Amperes. (A)

1. Multi piping type MULTI F

1.11 Field wiring diagrams



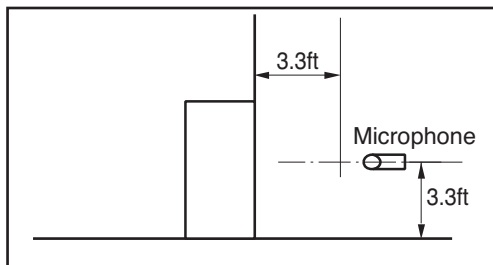
Notes:

1. All wirings, components and materials to be procured on the site should be according to the standard
2. Use copper conductor only
3. Install circuit breaker for safety
4. Unit should be grounded in compliance with the applicable local and national codes
5. Wiring cable size must comply with the applicable local and national code.

1. Multi piping type MULTI F

1.12 Sound levels

Overall



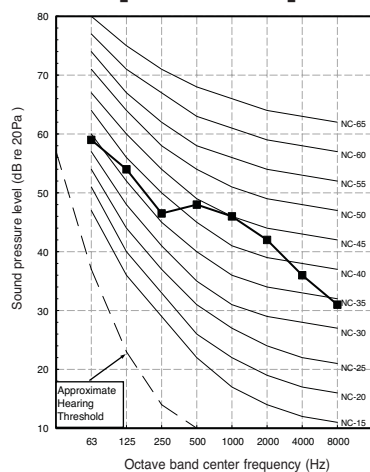
Notes:

- Sound measured at 3.3ft away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20Pa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

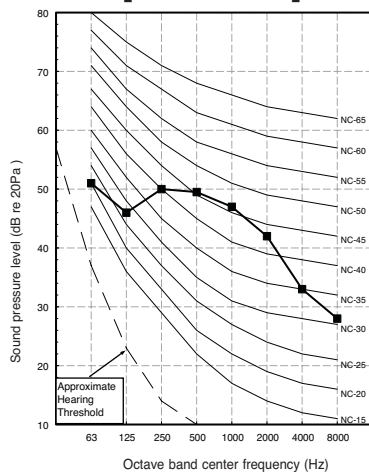
Model	Sound Levels [dB(A)]
	H
A2UW183FA2[LMU187HV]	51
A3UW243FA2[LMU247HV]	51
A4UW363FA1[LMU366HV]	52
A4UW363FA2[LMU369HV]	57

Sound pressure level

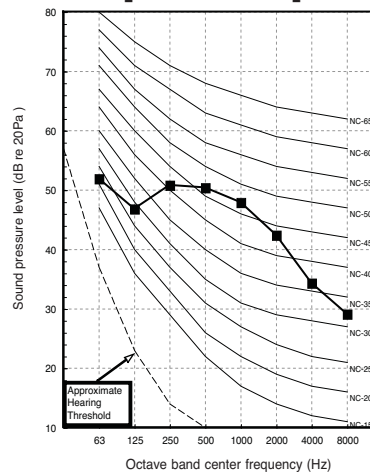
**A2UW183FA2
[LMU187HV]**



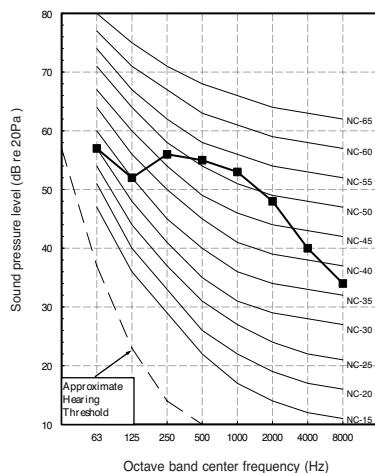
**A3UW243FA2
[LMU247HV]**



**A4UW363FA1
[LMU366HV]**



**A4UW363FA2
[LMU369HV]**



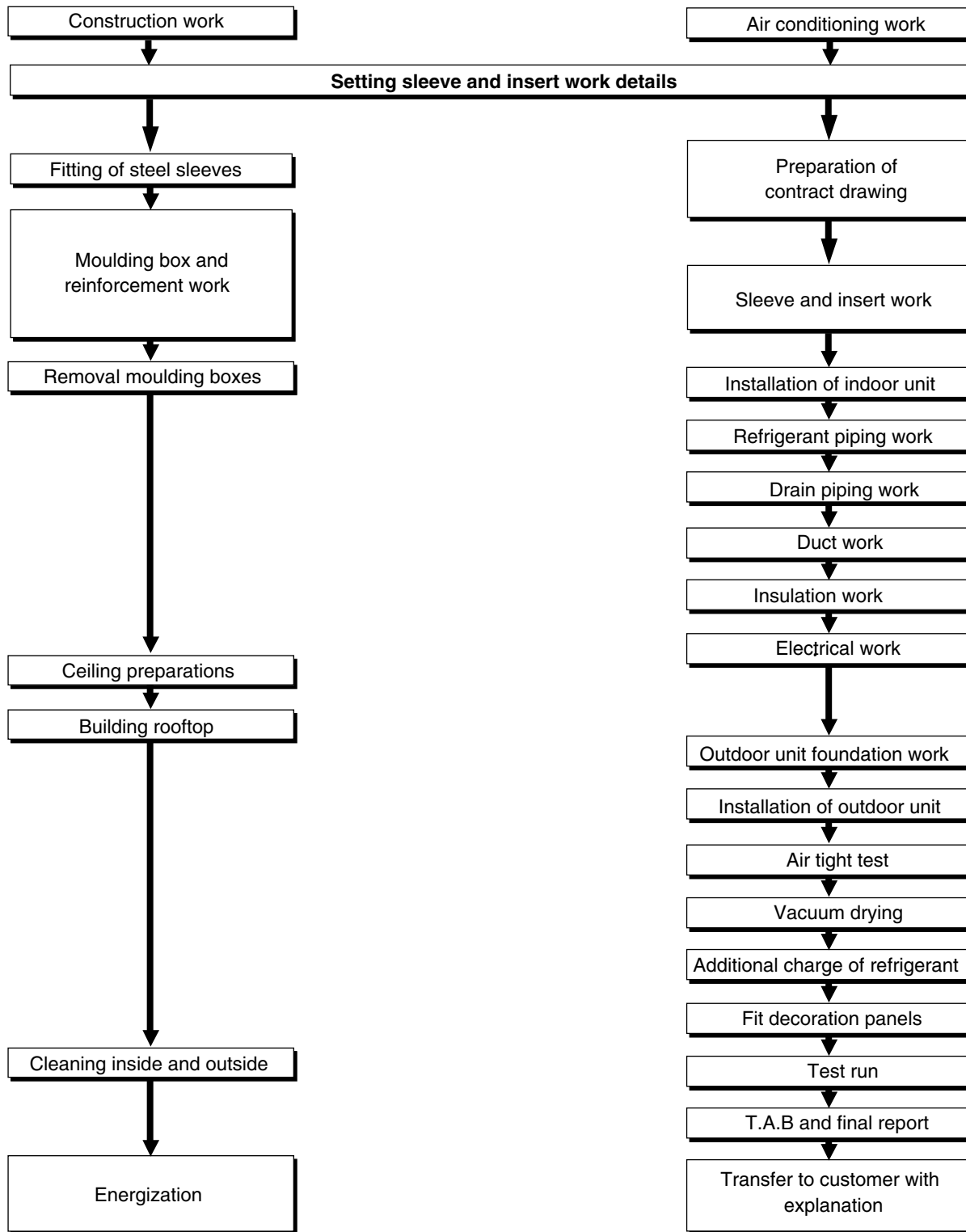
Part 3 Design and installation

- 1. General installation guideline**
- 2. Guideline for each installation process**
- 3. Installation of indoor unit**
- 4. Installation of outdoor unit**

1. General installation guideline

1.1 Installation process & Guideline

Striking a balance between system installation & General construction work.



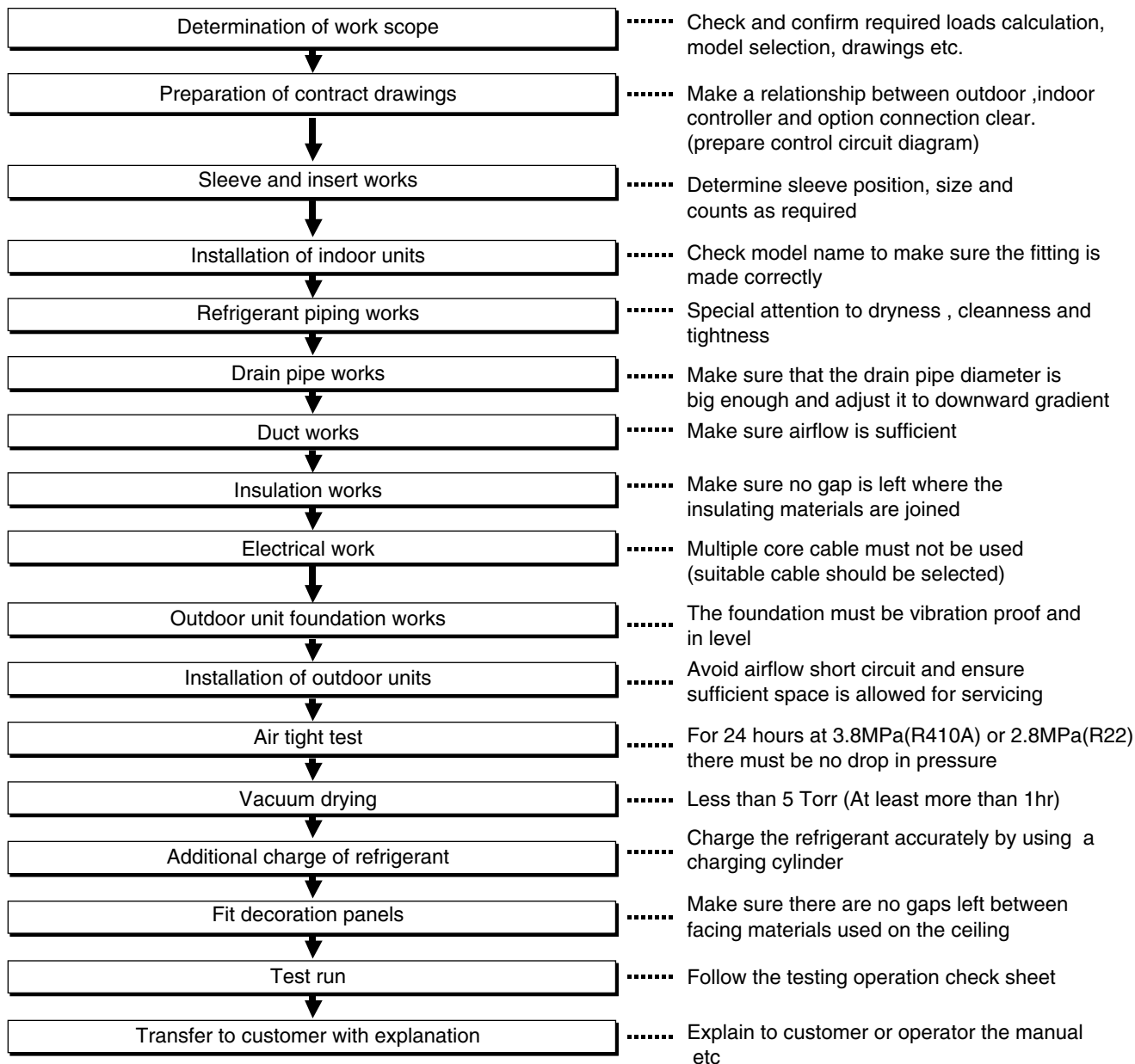
1. The division of the work should be thoroughly clarified.
2. keep a constant check on the progress of the construction work to avoid deviations from the air conditioning work schedule.

1. General installation guideline

1.2 Checking the drawing

Installation procedure

Remarks



2. Guideline for each installation process

2.1 Sleeve and insert work

2.1.1 Positioning of the pipe holes

- 1) The through holes for the drain piping should be positioned such that pipes have a downward gradient (the gradient must be at least 1/100. The thickness of the insulating materials must also be taken into consideration.)
- 2) The diameter of the through holes for the refrigerant piping should include an allowance for the thickness of the heat insulation materials.
- 3) Attention should be paid to the construction of the beam themselves since there are sometimes parts of the beam which cannot be used to accommodate through holes.

2.1.2 Selection of sleeve

Sleeve work should be performed to make a space for passing pipe through the wall or ground under construction.

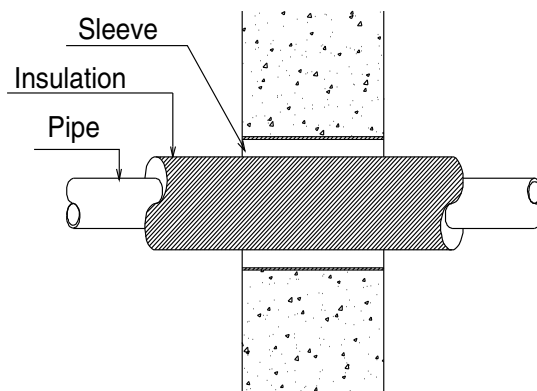
For example if gas pipe and liquid pipe is 1/2inch, 1/4inch the sleeve diameter is minimum 3.1 inch

Gas pipe diameter	1/2"
Liquid pipe diameter	1/4"
Insulation thickness(gas pipe)	0.4" x 2
Insulation thickness(liquid pipe)	0.4" x 2
0.8inch surplus	0.8"
Total sleeve diameter	3.1"

* Assumption : Gas pipe insulation thickness and liquid pipe insulation thickness is 0.4 inch and 0.4 inch respectively

2. Guideline for each installation process

2.1.3 Sleeve type



NOTE

Sleeve type should be considered as per local regulation & laws.

CAUTION

1. In high voltage generation places, water-proof flexible conduit should be used. (in substation room, in elevator room)
2. Conduit should be chosen in accordance with electrical installation regulation.

NOTE

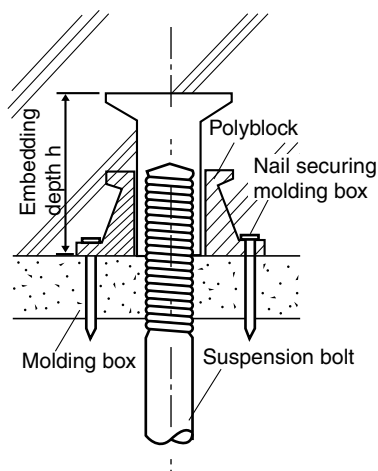
Cable conduit should be considered under the local regulation & laws.

2.1.4 Insert work and support work

An insert is a metal tool which is inserted into a floor or beam before the concrete is set such that fittings such as duct, pipes or suspension bolts for hanging units can be fitted into the place later. The positioning of the inserts must be decided early.

1) Insert work

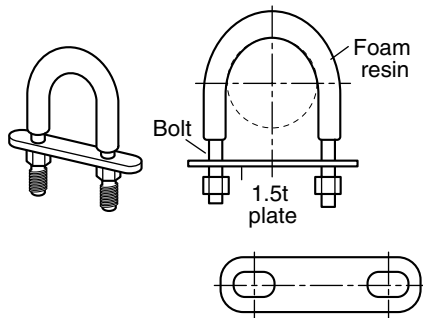
Example : Through holes in a reinforced concrete beam



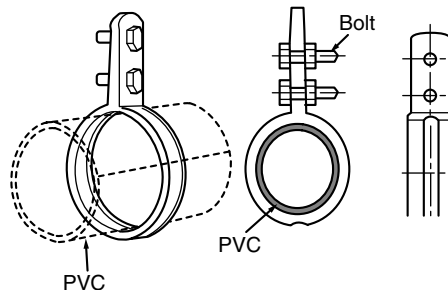
2. Guideline for each installation process

2) Support work.

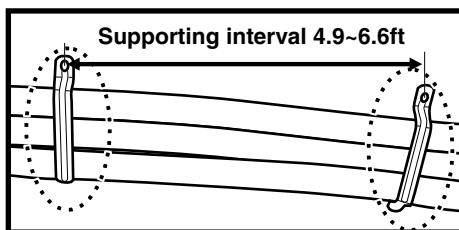
■ Insulated U-bolt type supporting



■ Insulated O-ring band type supporting



■ Saddle supporting

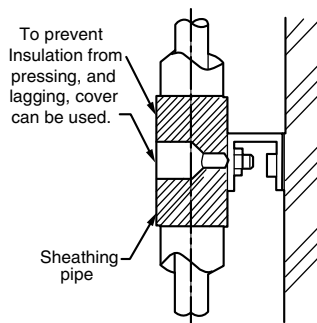


⚠ CAUTION

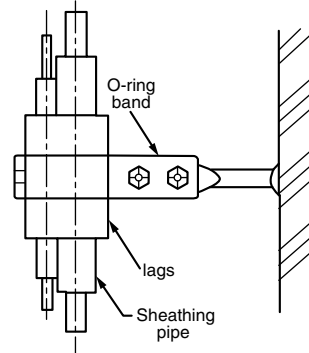
During saddle supporting work, insulation should not be pressed by saddle as this can lead to tearing of insulation and thus falling of condensed water during product operation.

a) Supporting with insulated pipe

① U-bolt supporting

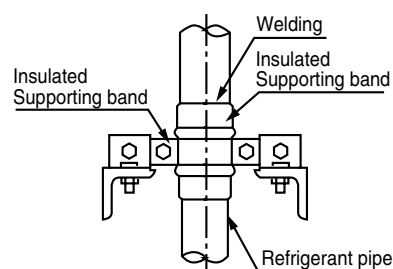
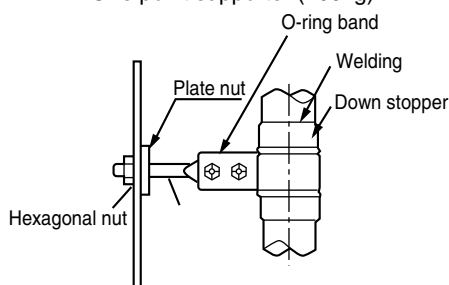


② O-ring band supporting



B) Down stopper supporting

One point supporter (200kg)



2. Guideline for each installation process

2.2 Refrigerant piping work

2.2.1 Principles of refrigerant piping

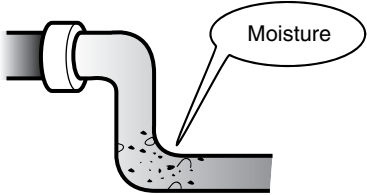
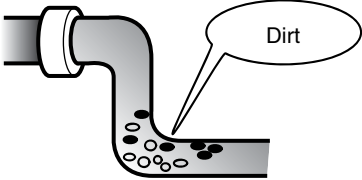
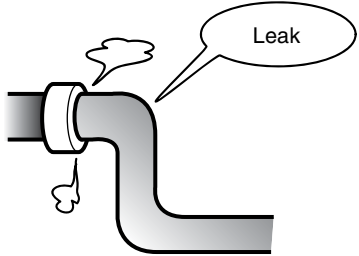
The “principles of refrigerant piping” must be strictly observed.

	Cause of problem	Action to avoid problem
Dry	-Rainwater, work water, etc gets into pipes from outside -Moisture generated inside pipe due to condensation	Flushing → Pipe covering → Vacuum drying
Clean	-Formation of oxides inside pipes during soldering -Dirt, dust or other extraneous material gets into pipes from outside	Replace Nitrogen → Pipe covering Flushing → Pipe covering
Air tight	-Leak from soldered area -Leak from flared area -Leak from flange area	Use the proper materials Adhere strictly to standard soldering work practice. Adhere strictly to standard flaring work practice. Adhere strictly to standard flaring connection work practice.

- The end of all copper pipes should be capped to protect them from dust or water particles while safe keeping



The 3 principles of refrigerant piping work

Dry	Clean	Air tight
Make sure there is no moisture inside the pipes	Make sure there is no dirt inside the pipes	Make sure the refrigerant does not leak out.
		

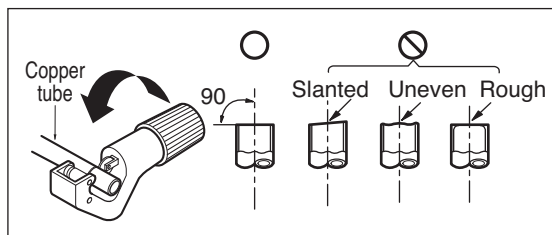
2. Guideline for each installation process

2.2.2 Flaring work

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

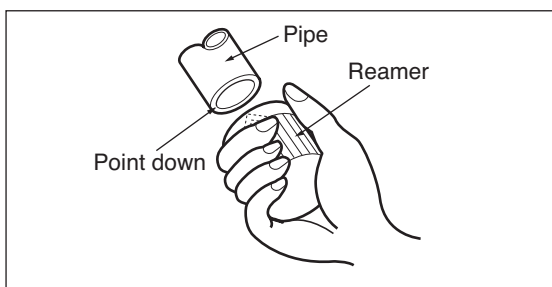
1) Cut the pipes and the cable.

- ① Use the piping kit accessory or the pipes purchased locally.
- ② Measure the distance between the indoor and the outdoor unit.
- ③ Cut the pipes a little longer than measured distance.
- ④ Cut the cable 4.9ft longer than the pipe length.



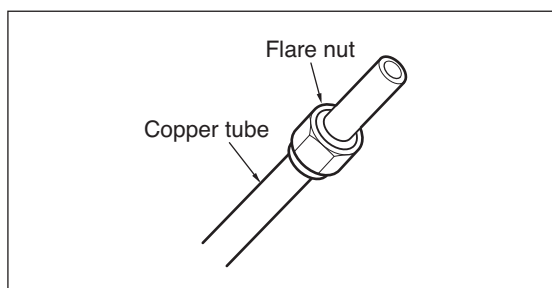
2) Burrs removal

- ① Completely remove all burrs from the cut cross section of pipe/tube.
- ② Put the end of the copper tube/pipe in a downward direction as you remove burrs in order to avoid dropping of burrs into the tubing.



3) Putting nut on

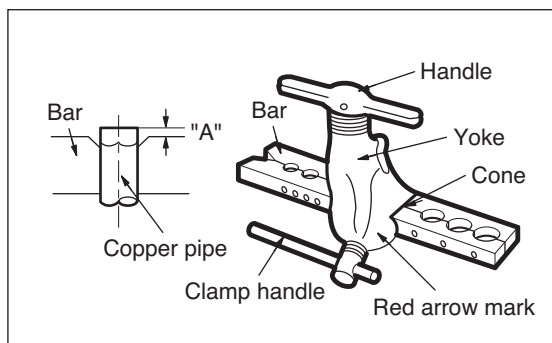
- ① Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal. (not possible to put them on after flaring work)



4) Flaring work

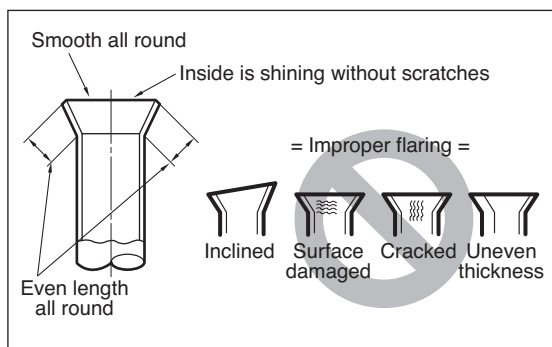
- ① Carry out flaring work using flaring tool as shown below.
- ② Firmly hold copper pipe in a die in the dimension shown in the table below.

Outer diameter		A
mm	inch	mm(inch)
Ø6.35	1/4	1.1~1.3(0.043~0.051)
Ø9.52	3/8	1.5~1.7(0.059~0.067)
Ø12.7	1/2	1.6~1.8(0.063~0.071)
Ø15.88	5/8	1.6~1.8(0.063~0.071)
Ø19.05	3/4	1.9~2.1(0.075~0.083)



5) Check after flaring

- ① Compare the flared work with figure on right side.
- ② If flare is found to be defective, cut off the flared section and do flaring work again.



2. Guideline for each installation process

NOTE Choice of material for refrigerant piping Copper pipe selection

- The wall thickness of the refrigerant piping should comply with relevant local and national regulation for R410A the design pressure is 3.8MPa.(38.7kgf/cm²)
- If not, we recommend to use with phosphorus deoxidized copper type
- Generally used copper pipe specifications as follows;

Unit : mm

Size(ø)inch	Thickness	
	R22	R410A
1/4	0.7	0.8
3/8	0.8	0.8
1/2	0.8	0.8
5/8	0.8	1.0
3/4	0.8	1.0

* Never use the pipe which is mixed scrap or a pipe used somewhere else
The method how to distinguish the pipe mixed scarp : check the oxidization evidence after leaving the pipe for 24hour.

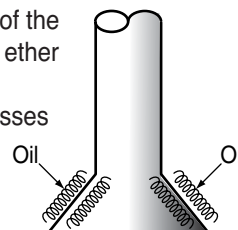
CAUTION

Flare connection and procedure

- Stiffened pipe must always be annealed at least once prior to the flaring work.
- A pipe cutter must be used to cut the pipe.
(A large pipe cutter must be used where the pipe has a large diameter. When cutting a pipe which is too big for the pipe cutter a metal saw may be used but care must be taken to ensure that the debris from sawing does not get into the pipe.)



- Set the flaring tool to make sure the flare size remains within the prescribed limits.
- Coat the inner and outer surface of the flare with refrigerator oil (Ester or ether oil).
(this ensures that the flare nut passes smoothly, preventing the pipe from twisting.)
Do not use SUNISO-4GS oil.



External diameter of pipe D		Pipe widening dimension A(in)
(in)	(mm)	
1/4	6.35	0.34~0.35
3/8	9.52	0.50~0.51
1/2	12.7	0.62~0.63
5/8	15.88	0.74~0.76
3/4	19.05	0.90~0.91

CAUTION

- Burrs should be carefully removed.
- 2 spanners should be used to grip the pipe.
- The flare nut must be inserted before starting the flaring operation.
- The appropriate amount of torque should be used to tighten the flare nut.
- Check that there is no superficial damage to the surface of the flare.

2. Guideline for each installation process

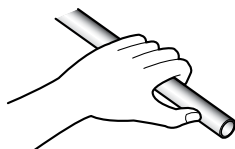
NOTE

Flange connection and procedure

- 1) Cut the pipe using a pipe cutter.



- 2) The cut edge has burrs.
(the amount of burrs becomes larger when pipe wall is thick)



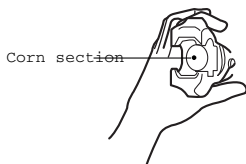
- 3) Remove the burrs using a reamer
(Be careful not to let particles enter the pipe.
Point the pipe end downward during cutting)



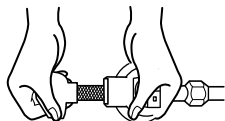
- 4) Clean the inside of the pipe
(use a thin stick with a cloth wrapped around it)



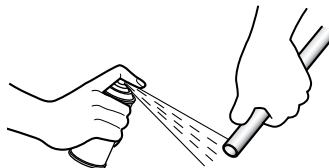
- 5) Before flaring, clean the cone section of the flaring tool.



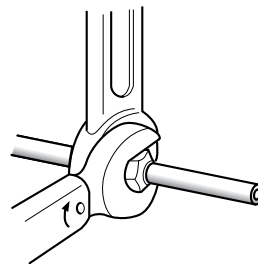
- 6) Flare the pipe.
Rotate the flaring tool 3 or 4 turns after a clicking sound is produced. this results in a clean flared surface



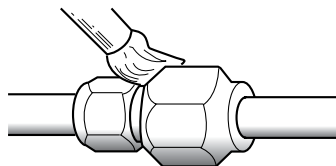
- 7) Apply refrigerant oil on the inside and outside of the flared section.
(Do not apply SUNISO oil)
(Be careful to keep dust away)



- 8) Tighten the flare nut. (Use a torque wrench to apply the proper tightening force)



- 9)
- Check for gas leaks.
(Check at the threaded section of the flare nut for gas leak)
 - Spray-type gas leak detecting products are available on the market.
 - Soap water may be used to check for leaks, but use only neutral soap to prevent corrosion of the flare nut.
 - Be sure to wipe the nut area clean after the gas leak check.



2. Guideline for each installation process

2.2.3 Pipe connection flaring

NOTE

1. After installation completion make sure to open the valve. operating the unit with the valve shut off will destroy the compressor (Refer to the additional refrigerant charge detail information)
2. Use R410A to add refrigerant. All field piping must be installed by a licensed refrigeration technician
3. Must comply with local and national standard regulations.

CAUTION

Improper piping and flaring can lead to the leakage of refrigerant

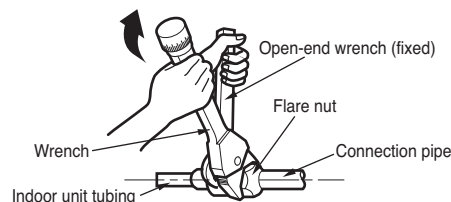
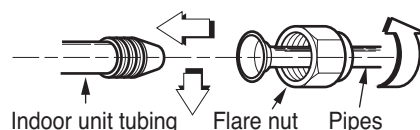
NOTE

For flaring work of the piping, follow the instructions in the installation manual to each unit.

1) Connecting the piping to the indoor unit and drain hose to drain pipe

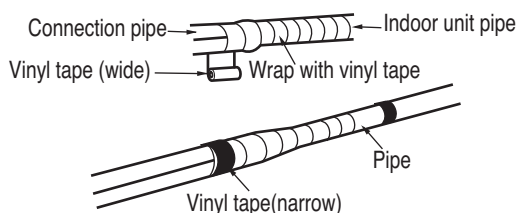
- ① Align the center of the piping and sufficiently tighten the flare nut by hand.
- ② Tighten the flare nut with a wrench. Wrap the insulation material around the connecting portion.

Outside diameter(Ø)		Torque
mm	inch	kg·f·m(lbf·ft)
6.35	1/4	1.80~2.50(13.0~18.0)
9.52	3/8	3.40~4.20(24.6~30.4)
12.7	1/2	5.50~6.60(39.8~47.7)
15.88	5/8	6.30~8.20(45.6~59.3)
19.05	3/4	9.90~12.1(71.6~87.5)



2) Wrap the insulation material around the connecting portion.

- ① Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there is no gap.
- ② Wrap the area which accommodates the rear piping housing section with vinyl tape.
- ③ When the piping is passed through a tray, duct work or a sleeve the insulation wrapping on the pipe is not required.



3) Close up a socket out of use with a brass cap.

- ① Align the center of the piping and sufficiently tighten the brass cap by hand.
- ② Tighten the brass cap with a wrench.
- ③ Wrap the area contacted with insulation.

CAUTION

Over tightening of the flare nuts in the pipes may cause nuts to crack or the refrigerant to leak.

CAUTION

Never use the plastic cap during closing.

2. Guideline for each installation process

2.2.4 Brazing work

CAUTION

Brazing of refrigerant piping :

The following precaution should be taken.

1. Do not use flux when brazing copper to copper refrigerant piping.

(Particularly for the HFC refrigerant piping)

Therefore, use the phosphor copper brazing filler metal (BCuP) which does not require flux.

(Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)

If brazing work is carried out without passing nitrogen gas through the pipes then it allows the formation of oxidation bubbles on the inside surface of the pipes.

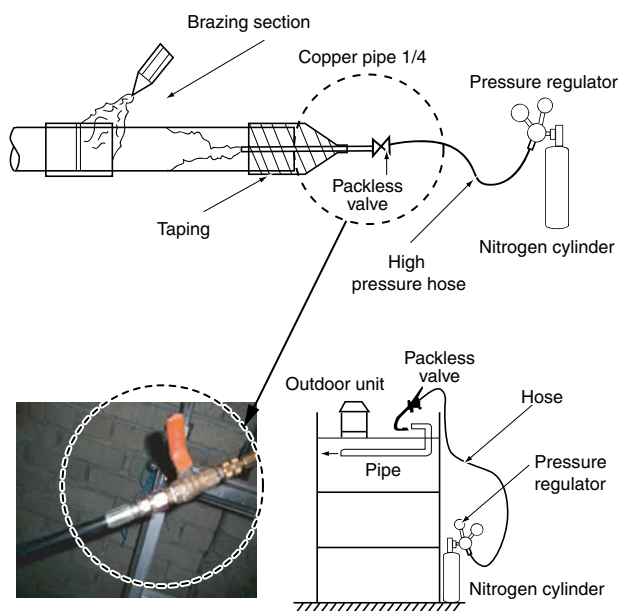
These oxidation bubbles are then carried along inside the pipes to cause damage to various members of the system such as valve or compressors and the system ceases to function properly.

In order to avoid this problem nitrogen is passed through the pipe while the soldering work is being carried out.

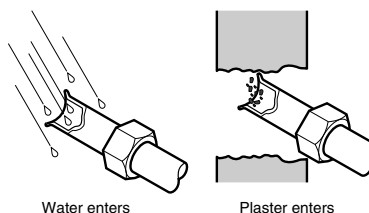
This operation work is known as nitrogen replacement. (Air is replaced by nitrogen)

This is standard work during all brazing works.

1) Nitrogen flushing method (During brazing)



CAUTION



Make sure to keep the connecting piping dry (away from water), clean (away from dust), and air tight (avoid refrigerant leakage)

CAUTION

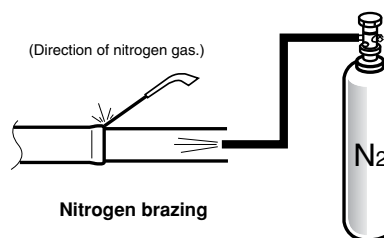
Pipe bending

Annealed copper pipe with small diameter ($\varnothing 1/4"$ or $\varnothing 3/8"$) can be easily bent manually. In this case, secure large R (radius) for the bend section and gradually bend pipe. If annealed copper pipe is large in diameter ($\varnothing 5/8"$ or over), bend pipe with bender. Use bender appropriate for the pipe diameter.

CAUTION

Nitrogen brazing

- This procedure is designed to prevent formation of oxidation film by filling piping with inert gas. Note that excessive gas pressure will generate pinholes at brazed points. (Nitrogen gas: Supply pressure 0.05~0.1kg/cm²G)
- When supplying inert gas, be sure to open one end of piping.



2. Guideline for each installation process

Brazing work should be carried out either downwards or sideways.

An upward direction should be avoided wherever possible(to prevent leakage).

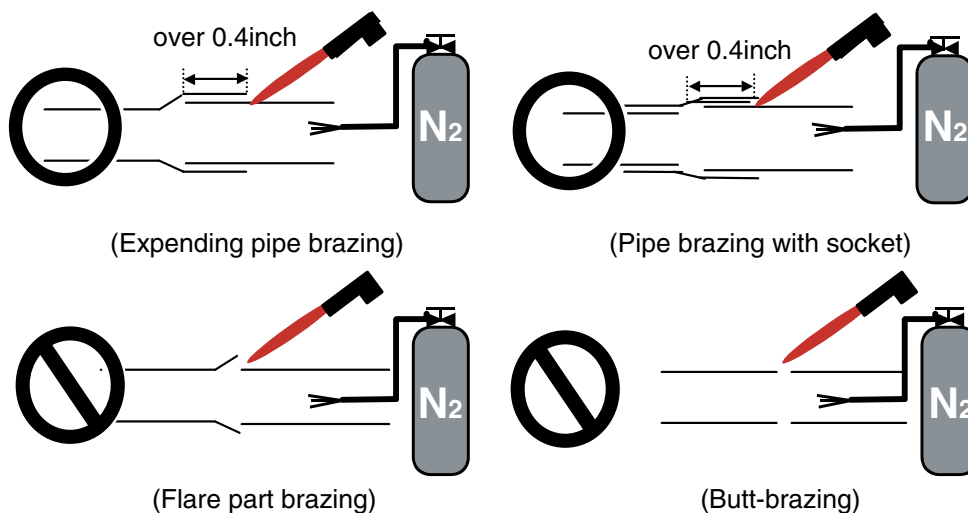


Table 1: Correlation of nozzle tip and size of refrigeration piping

		Nozzle tip No.							Brazing filler diameter fl		
		# 200	# 225	# 250	# 315	# 400	# 450	# 500	1.6	2.4	3.2
Piping size	fl 0.25										
	fl 0.37										
	fl 0.50										
	fl 0.63										
	fl 0.75										
	fl 0.87										
	fl 1.00										
	fl 1.25										
	fl 1.50										
	fl 1.75										

⚠ CAUTION

1. Generally expending pipe brazing is performed with pan-coil type copper pipe, and socket blazing is performed with straight copper pipe.
2. Do not perform flare part brazing or butt-brazing.
3. Brazing should be performed on welding table.
4. Any dust should enter in the pipe while brazing.
5. Distance of copper pipe support spacing is within 3.3~6.6ft.
6. The copper pipe should not be secured directly by metal brackets.

2. Guideline for each installation process

2.2.5 Refrigerant pipe flushing

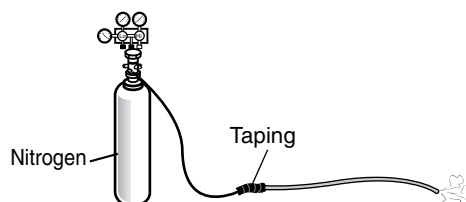
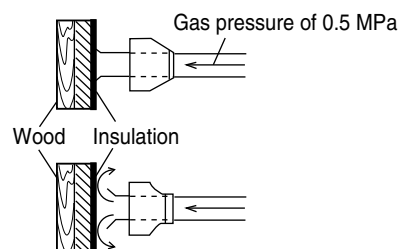
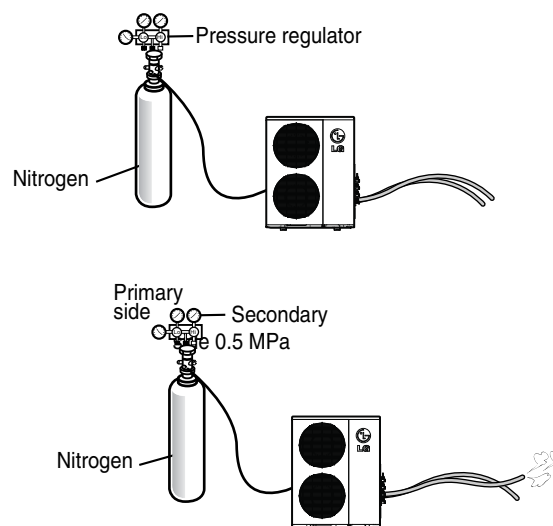
Flushing is a method of cleaning extraneous matter out of pipes using pressurized gas.

NOTE

Refrigerant pipe flushing of 3 major effects

1. Removal of oxidation bubbles formed inside copper pipes when “nitrogen replacement is insufficient” during soldering work
2. Removal of extraneous material and moisture from pipes when covering has been insufficient
3. Checks connections in pipes linking outdoor and indoor units (Both liquid and gas pipes)

- ① Set pressure regulator on nitrogen cylinder.
- ② Connect the charge hose from pressure regulator to service port on the liquid pipe side of the outdoor unit before its connection to B/D unit or indoor unit.
- ③ Open the main valve on the nitrogen cylinder and set the pressure regulator to 0.5MPa.
- ④ Ensure that nitrogen is flowing through the pipe properly.
- ⑤ For flushing block the end of the pipe with wood insulation block.
- ⑥ When the pressure becomes great remove the block quickly.
- ⑦ Do step 6 & 7 repeatedly till cleanness is ensured.
- ⑧ Connect the charge hose from pressure regulator to service port on the gas pipe side of outdoor unit before its connection to B/D unit or indoor unit.
- ⑨ Flow the steps 3, 4, 5, 6, 7.
- ⑩ In case of BD unit system, before connecting to indoor units, each pipe should be flushed individually.
- ⑪ Flow the steps 3, 4, 5, 6, 7.



CAUTION

After welding the pipe, nitrogen flushing is strongly recommended.

2. Guideline for each installation process

2.3 Drain piping work

The purpose of drain piping is to prevent damage of products and ceiling materials by proper draining of dew condensation which is generated from the evaporator of indoor unit when the hot vapors come in contact with the evaporator.

1) Application

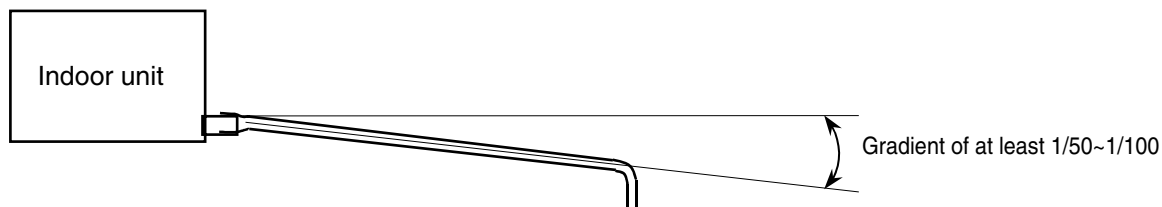
Pipes for draining water generated from indoor unit on cooling operation

Specification for drain piping

Type		Drain pipe diameter (External/ Internal)	Drain pump	Drain pump discharge head	Drain amount (at 0.033ft height)
					cm ³ /min (Gal/min)
Indoor	Ceiling cassette	Ø32/25mm (Ø1-1/4 / 31/32 inch)	Standard	700mm (27 1/2 inch)	400 (0.105)
	Duct	Ø32/25mm (Ø1-1/4 / 31/32 inch)	Standard	700mm (27 1/2 inch)	400 (0.105)
	ART COOL	Ø21.5/16 (Ø27/32 / 5/8 inch)	-	-	-
	Wall Mounted	Ø21.5/16 (Ø27/32 / 5/8 inch)	-	-	-

2.3.1 Drain pipe slope and support

- Slope gradient for drain should be (1/50~1/100) and PVC pipes should be used.
- Support hanger should be at 3.3~4.9ft interval to prevent from loosening and dropping.
- Drain pipe insulation
: The inside temperature of drain pipe is about 50°F. When high temperature and humidity air touches the surface of pipe, dew condensation occurs. To prevent that, drain pipe keeps warm using insulation with polyethylene 0.4 inch thickness.



1) Application

Refrigerant pipe length contracts and expands on heating and cooling repeatedly. So supporting work is needed not to hinder each copper pipe connection part.

2. Guideline for each installation process

2) Supporting distance for common drain pipe

[Table]The interval of the supporting hanger for drainage pipe

Pipe diameter (inch)	Ø0.8~1.6	Ø1.6~2.0	Ø2.6~4.9
Max. interval(ft)	Below 3.3	Below 3.9	Below 4.9

3) Anchor bolt supporting work

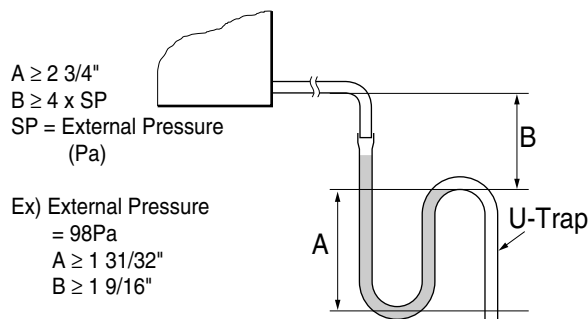
Anchor bolt supporting work should be used for supporting a heavy indoor unit to ceiling.

Clamp hanger supporting work is for hanging refrigerant pipe, drain pipe and cables.

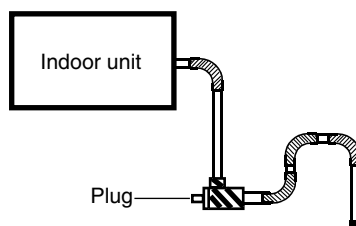
It can prevent vibrating noise from passing through pipe.

We recommend set anchor bolt for supporting indoor unit and strong anchor bolt for supporting pipes and cables

2.3.2 Drain pipe trap (only for high static duct)



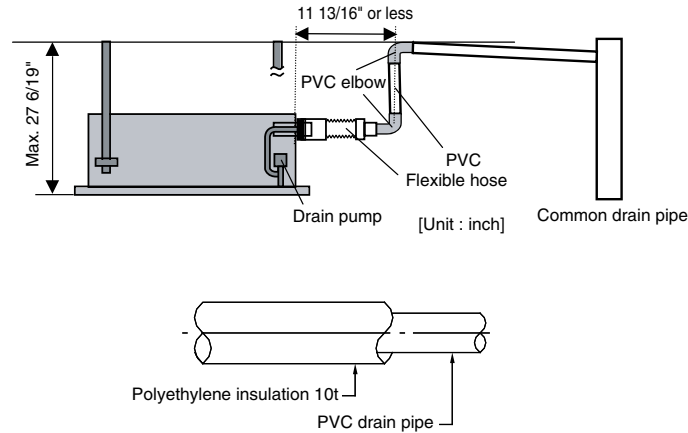
<U-trap size calculations>



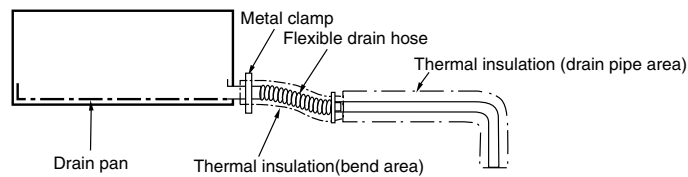
- In case of duct high static pressure, the U trap maintains a positive pressure on the indoor side of the unit.

2. Guideline for each installation process

1) Models with drain pump

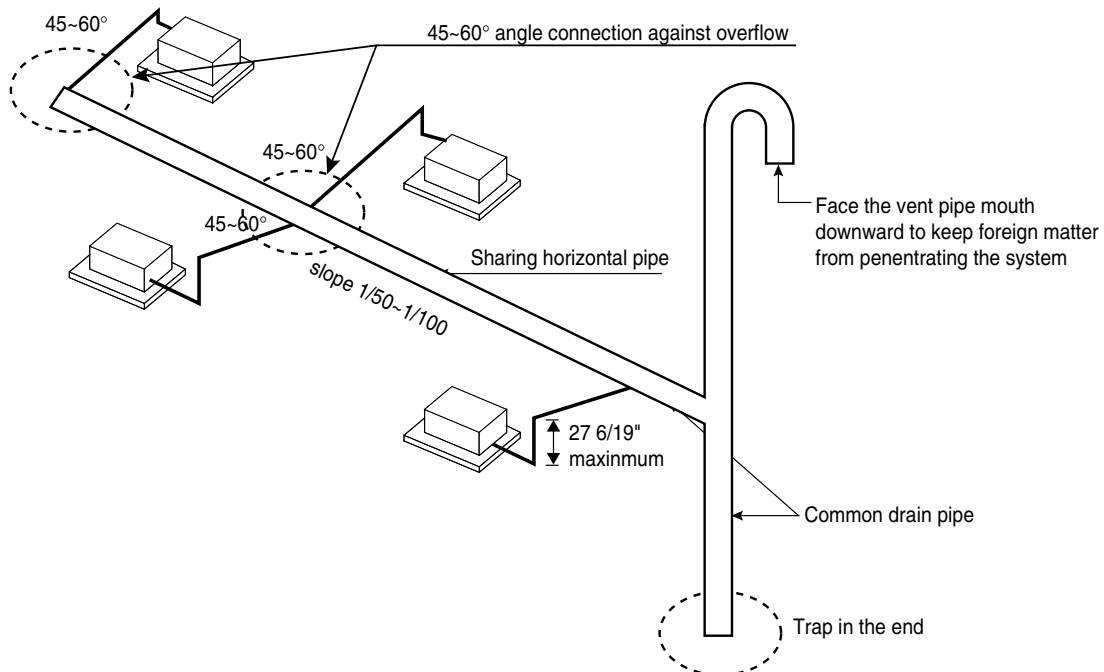


2) Models without drain pump



2.3.3 Grouped drain pipes

It is standard work practice to make connections to the main pipe from above.
The pipe down from the combination should be as large as possible.
The diameter of ventilation pipe should be same or larger than drain pipe diameter.



2. Guideline for each installation process

NOTE

1. Trap is required if the pipe is open towards sewage to prevent bad smell from coming to indoor.
2. Do not connect drain pipe with building common drain pipe in heavy snow area. It might block the pipe with ice and remaining collected water can get back to indoor unit.
Provide separate air conditioner drain pipe.

Grouped drain piping standard

- For drain pipe diameter selection, refer to the following table.
- The drainpipe should be used for only air conditioners. If you share it for rainwater drain, you should be careful of a back flow, leakage, bad odor and so on.
- Use separate drain pipe for polluted water or wasted water

[Table] Drain pipe diameter selection standard

(Unit : inch)

Sum of the capacity of indoor units (Btu/h.Class)	~80,000	~200,000	~400,000	~600,000
Internal diameter (External)	0.98(1.26)	1.25(1.57)	1.57(1.97)	1.97(2.36)

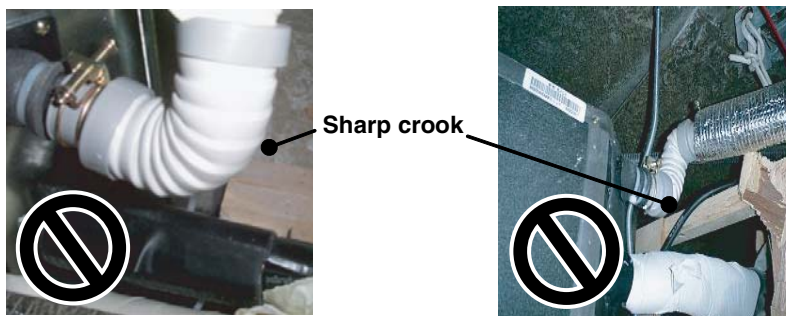
NOTE

Select the diameter of the horizontal pipe bigger than vertical.

2.3.4 Caution for drain piping work

1) Notice on drain working

- ① Flexible tube should not be crooked sharply.
The tube can be broken by continuous vibration for a long time.



CAUTION

Flexible tube should be connected with clamp concentrically.
If not, water will leak from the connection.

2. Guideline for each installation process



<clamp connection>

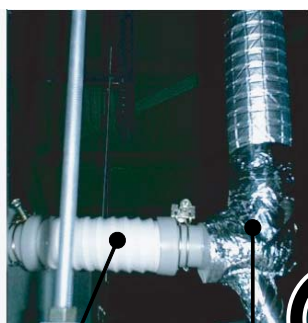
- ② No reverse slope for drain connection



<Reverse slope>

2) Drain pipe insulation

- Drain pipe should be insulated all connected joints and ends.

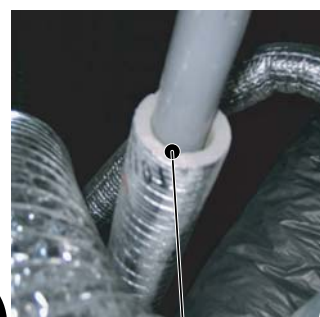


Insulation
not required

Insulation
required



Loose fitting
wrong insulation



Fitting insulation

- Do not use the loose fitting insulation.

3) Drain water leakage test

- Water leakage test should be performed 24 hours later after drain work finishing.
- In the test, only water should be used. Other liquids are unacceptable.

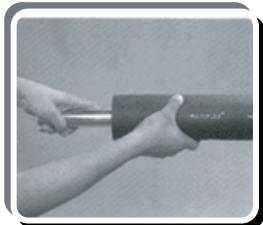
2. Guideline for each installation process

2.4 Insulation work

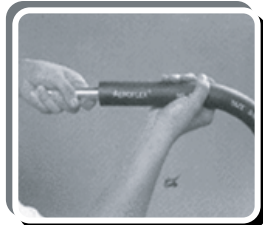
2.4.1 Insulation



1) Operational steps



- ① EPDM length should be more longer than pipe length.
Do not extend EPDM by force.



- ② Put the pipe in EPDM insulation carefully so that the pipe will not get damaged with EPDM.



- ③ Bond on both side of cut surfaces of move sure to use the correct type of bond for EPDM cut surface attaching.



- ④ Dry it until it becomes thick, sticky and does not get detached.

2) Bending vertical side of insulation



- ① Use the original uncut insulation material.



- ② Only in specialcase is the vertical cutting of the insulation allowed.



- ③ Bond both sides of the surface of EPDM and press them together for long lasting bonding.



- ④ Dry it until it becomes thick and sticky.

3) 'L' Fitting connection part insulation



- ① All of the fitting connecting parts should be insulated.
Bring face to face the each end of EPDM on fitting connection part.



- ② Make fitting cover to fit the EPDM insulation fitting cover should be overlapped with insulation min 1 inch (2.5cm).



- ③ Bond the both cutting sides of fitting cover.

2. Guideline for each installation process

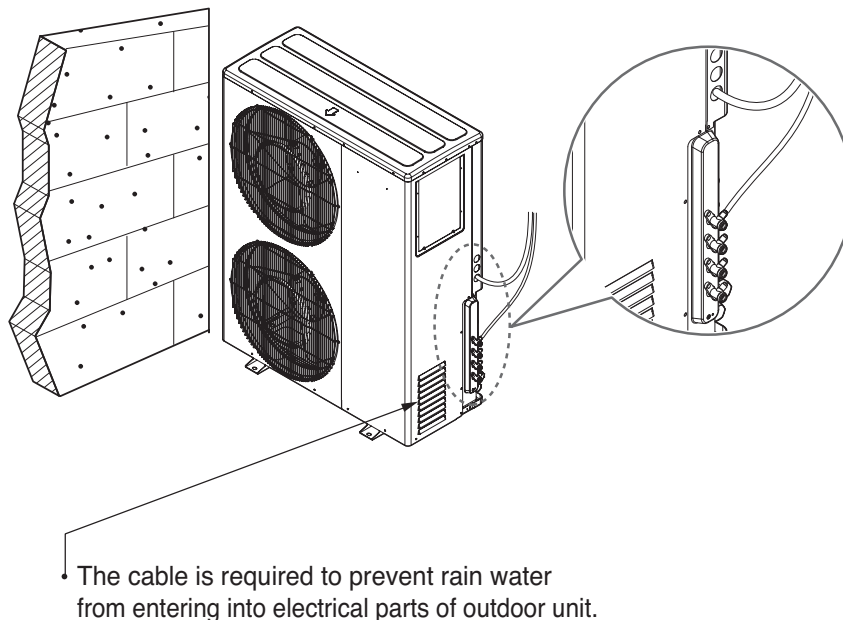
2.4.2 Forming the piping

1) Form the piping by wrapping the connecting portion of the indoor unit with insulation material and secure it with two kinds of vinyl tape.

- If you want to connect an additional drain hose, the end of the drain outlet should be routed above the ground. Secure the drain hose appropriately.

2) In cases where the outdoor unit is installed below the indoor unit perform the following.

- ① Tape the piping, drain hose and cable from down to up.
- ② Secure the tapped piping along the exterior wall using saddle or equivalent.

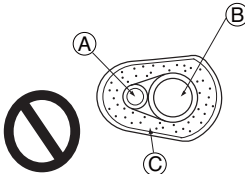
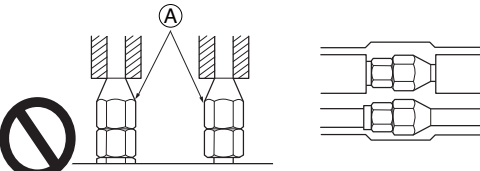
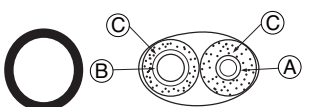
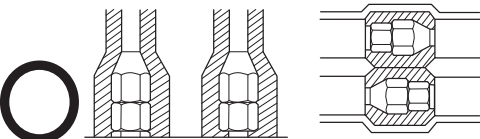


2. Guideline for each installation process

2.4.3 Essential points of thermal insulation

1) Thermal insulation of refrigerant piping

Be sure to give insulation work to refrigerant piping by covering liquid pipe and gas pipe separately with enough thickness heat-resistant insulation materials, so that no gap is observed in the joint between indoor unit and insulating material, and insulating materials themselves. When insulation work is insufficient, there is a possibility of condensation drip, etc. pay special attention to insulation work to ceiling plenum.

Wrong method	Do not insulate gas or low pressure pipe and liquid or high pressure pipe together.  (A) Liquid pipe (B) Gas pipe (C) Insulation	Be sure to fully insulate connecting portion.  (A) These parts are not insulated.
Correct method	 (A) Liquid pipe (B) Gas pipe (C) Insulation	

2) Caution during insulation work

- In case the cables are installed in the conduit, a finishing tape is not required.
- Defect and insufficient insulation can cause condensation drops.
- Binding the insulation too tight may result in dew drops.
- Be sure not to tie rap the insulation but put special taping or the clamp at the connecting portion.
- The insulation overlapping part at the piping connection must be a distance from the flaring part at the pipe connection.

2. Guideline for each installation process

3) Insulation tube thickness

① Thickness decision of insulation tube

- Insulation material: EPDM or polyethylene foam
- Heat resistance=212°F(Cooling only) or more
248°F(Heat pump) or over

② The thickness of the thermal insulation material must be determined in the light of the pipe sizes.

Pipe size	Thickness of insulation material (normal)
1/4~1 inch	13/32 inch or more
1 inch~	19/32 inch

③ It will be necessary to increase the thickness of insulation in the above table when conditions are hot and humid.

④ Where a customer supplies his own specifications then these must be adhered to.

⚠ CAUTION

Outdoor temperature and humidity around the cooling piping might exceed 86°F and RH80%, reinforce the insulation on the cooling piping (at least 13/16 inch thick)

2. Guideline for each installation process

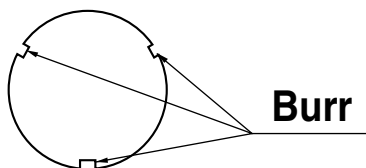
2.5. Electrical work

2.5.1 Precautions

⚠ CAUTION

When knocking out knock holes

- To punch a knock hole, hit on it with a hammer.
- After knocking out the holes, we recommend you paint the edges and areas around the edges using paint to prevent rusting.
- When passing electrical wiring through the knock holes, remove any burrs from the knock holes and wrap the wiring with protective tape to prevent damage.



If there are any possibilities that small animals or insects enter the system through the knock holes, plug the holes with packing materials (to be prepared onsite).

Use a conduit for the cable

- Outside the unit, make sure the thin signal cable (i.e. for the remote control, between units, etc.) and the thick electric wiring do not pass near each other, and the shield signal cable, is recommended. Otherwise, the outdoor unit may be affected by electrical noise (external noise), and malfunction or fail.
- Secure the wiring with the accessory clamps so that it does not touch the piping.
- Make sure the wiring and the electric parts box cover do not stick up above the structure, and close the cover firmly.

⚠ CAUTION

Do not operate the air conditioner until the refrigerant piping work is completed.

(Operating the air conditioner before the refrigerant piping work is completed may damage the compressor.)

- Install an earth leakage circuit breaker.
Since this is an inverter air conditioner. In order to prevent malfunction of the earth leakage breaker itself, use a breaker resistant to higher harmonics.
- After finishing the electric work, confirm that each electric part and terminal inside the electric parts box is connected securely.

NOTE

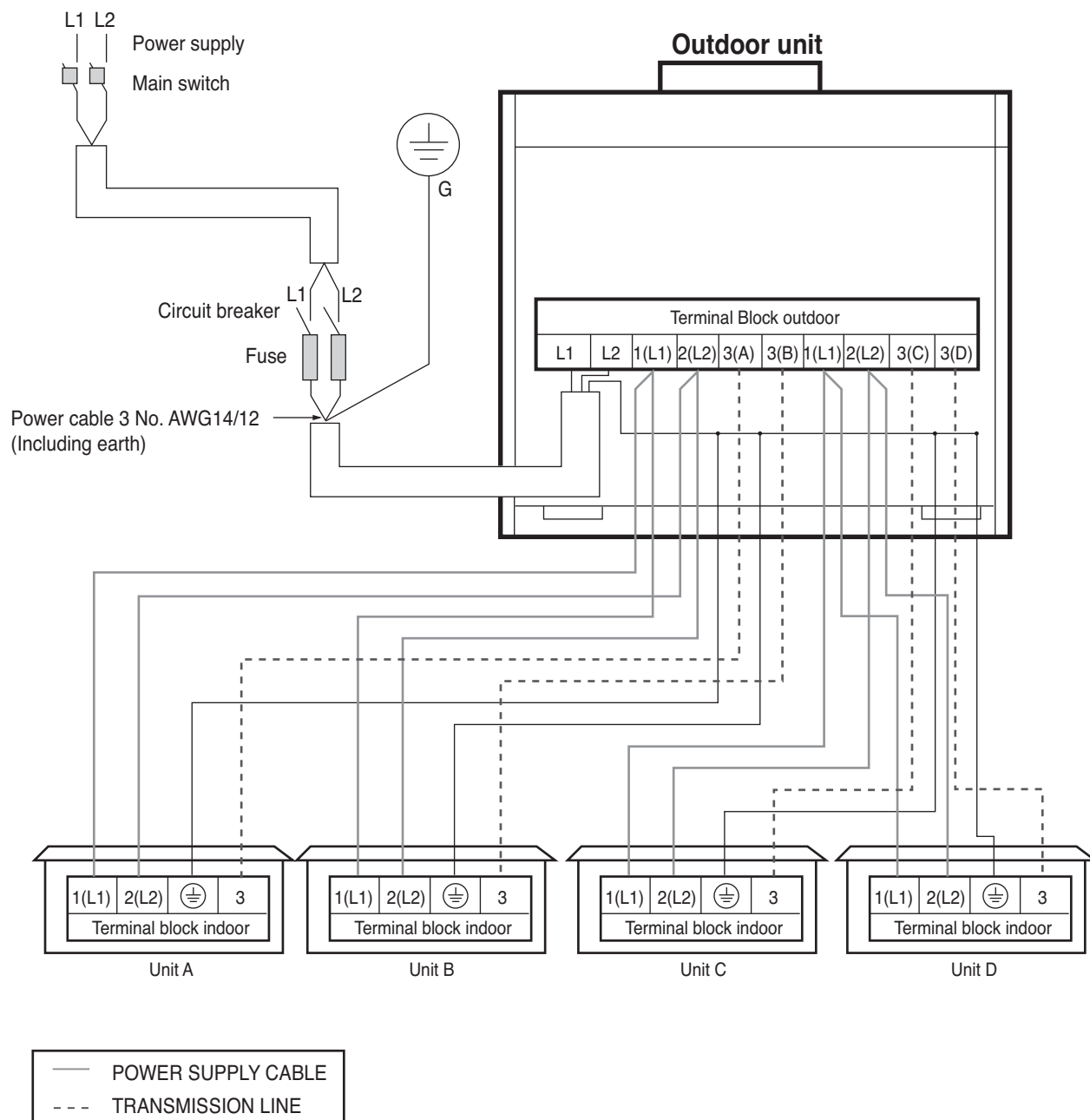
- Only professional electricians having sufficient knowledge should perform the electrical wiring work.
Perform the electrical wiring work in accordance with the electrical wiring diagram.
Make sure to set OFF the branch switch and over current breaker before starting the work.
- Install an earth leakage breaker.
- Perform grounding to the indoor units and outdoor units.
 - Do not connect the ground wire to gas pipes, sewage pipes, lightning rods telephone ground wires.
 - Gas pipes Can explode or catch fire if gas leaks.
 - Sewage pipes Provides no grounding effect if hard plastic pipes are used.
 - Telephone ground wires and lightning rods dangerous when struck by lightning due to abnormal rise in the electrical potential in the ground.

2. Guideline for each installation process

- Use only copper wires.
- Make sure to shut down the power before starting the electric wiring work.
Do not set ON any switch until the work is completed.
- The outdoor unit has an inverter compressor which generates noise and charges the outer casing with the leakage current. The outdoor unit should be grounded so that the effect of the generated noise on other equipment can be reduced, and that the outer casing can be discharged.
- Never install a phase advancing capacitor for power factor improvement.
(Even if it is installed, the power factor is not improved. And if it is installed, the outdoor unit is abnormally overheated.)
- Use specified electric wires in the wiring, and connect them securely.
Fix them in such a way that external force is not applied at the terminals
(transmission wiring in the local field and ground terminal).
- Never push excessive electric wires into the units.
- Protect electric wires with conduit tubes or other proper tubes so that they will not be damaged by edges of knock holes.
- Do not use multi conductor cable which have more than 5 wires in one core.

2. Guideline for each installation process

2.5.2 Control wiring / Power supply



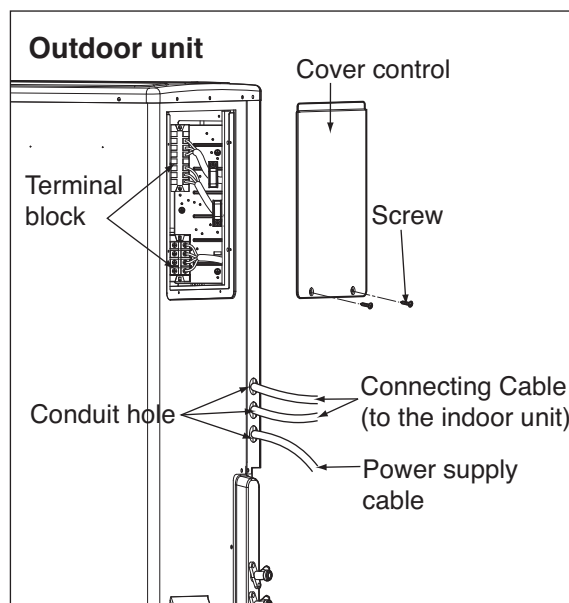
Notes:

1. Wiring cable size must comply with the applicable local and national code.

2. Guideline for each installation process

2.5.3 Connect the cable to the Outdoor unit.

- 1) Remove the cover control from the unit by loosening the screw. Connect the wires to the terminals on the control board individually as the following.
- 2) Secure the cable onto the control board with the holder (clammer).
- 3) Refix the cover control to the original position with the screw.



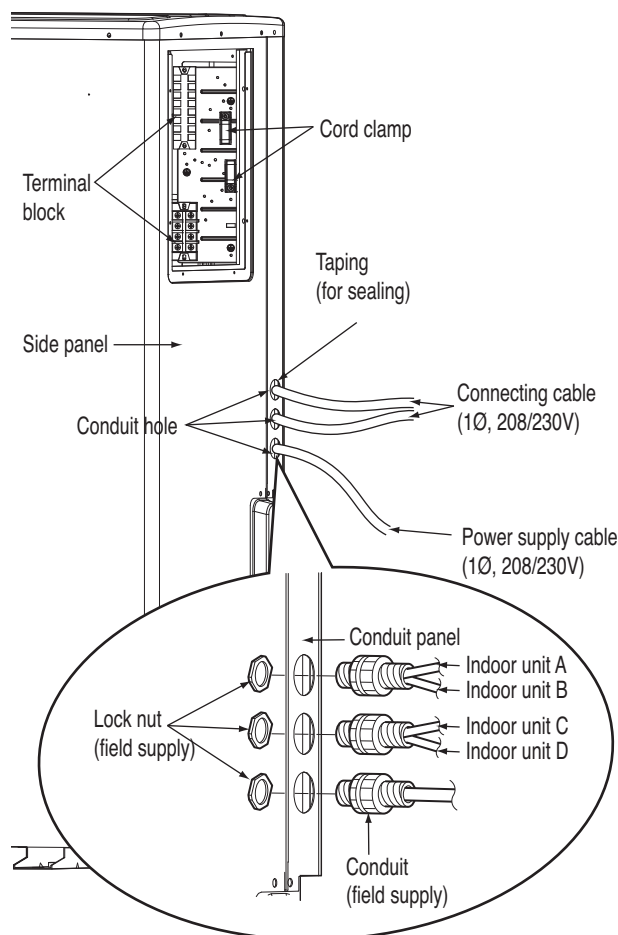
2.5.4 Connection method of the connecting cable

- 1) Remove the side panel and knockout of conduit panel.
- 2) Make a hole appropriate for the passage of connection cable through on cap by tool.
- 3) Pass the Power cable or connecting cable through the conduit and panel.
- 4) Properly connect the cable on the terminal block.
- 5) Fix the connection cable with cord clamp provided on the unit not to have strain at the terminal when the connection cable is pulled outside up to a 35 pound weight.
- 6) Wind the vinyl tape round the connecting cable for sealing between the surface of the connection cable and cap.
- 7) Finally, Fix the cap to the conduit panel and cover control.

⚠ WARNING

- Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Therefore, be sure all wiring is tightly connected.
- Do not open knockout of cover control for conduit hole, unless it could lead to rain or snow penetration into the outdoor unit.
- You should prohibit water penetration by sealing the gap between the hole and cover control with silicone or tape after finishing work.

When connecting each power wire to the corresponding terminal, follow instructions "How to connect wiring to the terminals" and fasten the wire tightly with the fixing screw of the terminal plate.



2. Guideline for each installation process

2.6. Air tight test

2.6.1 Air purging

Air and moisture remaining in the refrigerant system have undesirable effects as indicated below.

- ① Pressure in the system rises.
- ② Operating current rises.
- ③ Cooling (or heating) efficiency drops.
- ④ Moisture in the refrigerant circuit may freeze and block capillary tubing.
- ⑤ Water may lead to corrosion of parts in the refrigeration system. Therefore, the indoor/outdoor unit and connecting tube must be checked for leak tight, and vacuumed to remove incondensable gas and moisture in the system.

1)Checking method

① Preparation

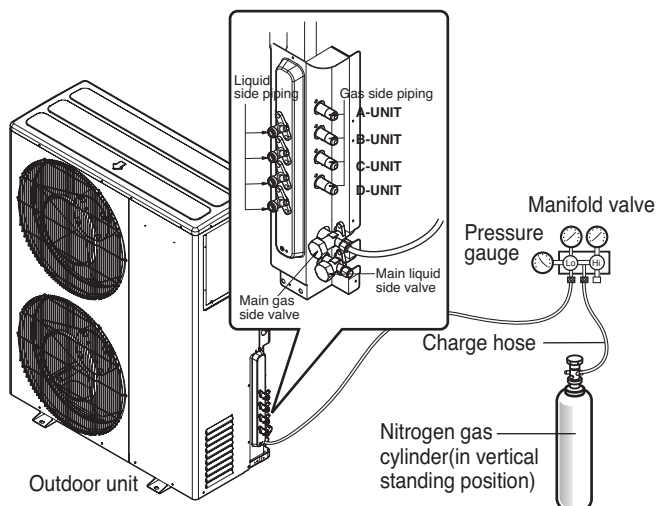
- Check that each pipe (both liquid and gas side pipes) between the indoor and outdoor units have been properly connected and all wiring for the test run has been completed. Remove the service valve caps from both the gas and the liquid side on the outdoor unit. Check that both the liquid and the gas side service valves on the outdoor unit are kept closed at this stage.

② Leakage test

- Connect the manifold valve (with pressure gauges) and dry nitrogen gas cylinder to this service port with charge hoses.

CAUTION

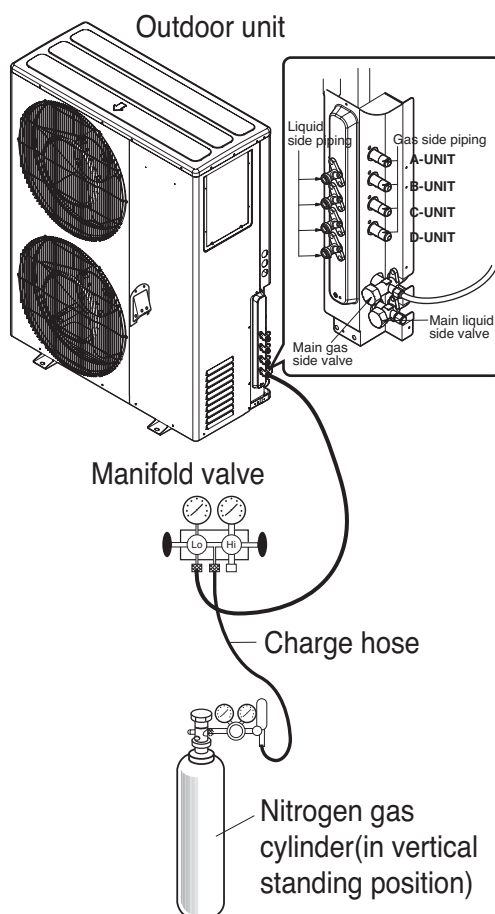
Be sure to use a manifold valve for leakage test. If it is not available, use a stop valve for this purpose. The "Hi" knob of the manifold valve must always be kept close.



CAUTION

To avoid nitrogen entering the refrigerant system in a liquid state, the top of the cylinder must be higher than its bottom when you pressurize the system. Usually, the cylinder is used in a vertical standing position.

1. Do a leakage test of all joints of the Tubing (both indoor and outdoor) and both gas and liquid side service valves. Bubbles indicate a leak. Be sure to wipe off the soap with a clean cloth.
2. After the system is found to be free of leaks, relieve the nitrogen pressure by loosening the charge hose connector at the nitrogen cylinder. When the system pressure is reduced to normal, disconnect the hose from the cylinder.



2. Guideline for each installation process

2.6.2 Essential points of testing

The key to successful testing is strict adherence to the following procedure:

- 1) The liquid and gas piping in each refrigerant system should be pressurized in turn in accordance with the following steps.
(Nitrogen gas must be used.)

- | | |
|--|------------------------|
| Step 1: increase pressure to 0.3MPa for 3 minutes or more | } Major leaks indicate |
| Step 2: increase pressure to 1.5MPa for 3 minutes or more | |
| Step 3: increase pressure to 3.8MPa for approximate 24 hours | |

} Minor leaks indicate

Increasing the system pressure to 3.8MPa does not guarantee the identification of minor leaks if pressure is maintained for only a short time. It is therefore recommended that the system remain pressurized in accordance with Step 3 above for at least 24 hours.

NOTE

Piping should not be pressured more than 3.8MPa.

- 2) Check for pressure drop

If there is no drop in pressure then the test is deemed a success.

If the pressure drops then the leak must be located. See following page.

However, if there is a change in the ambient temperature between the pressurizing stage and the time when you check for a drop in pressure then you will have to adjust your calculations accordingly since a change of 33°F can account for a pressure change of approximately 0.01MPa.

Compensating adjustment value:

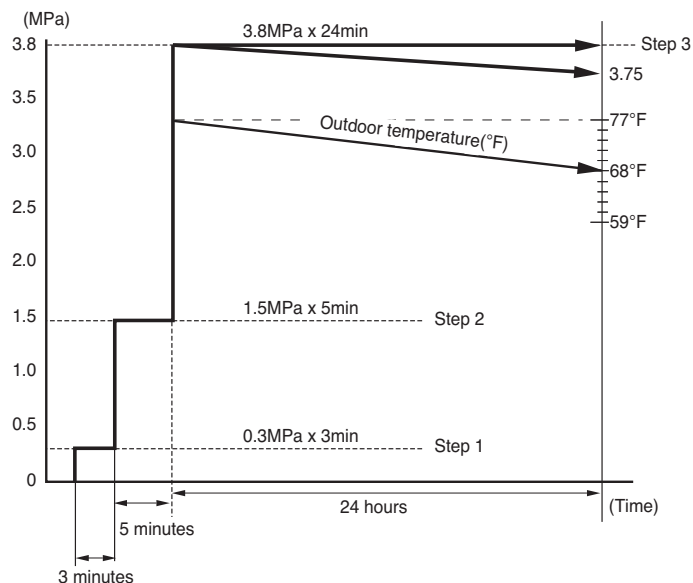
$(\text{temperature at time of pressurizing} - \text{temperature at time of checking}) \times 0.01$

Example:

During of pressurizing: 3.8MPa 77°F

24 hours later: 3.75MPa 68°F

Although the gauge pressure is dropped from 3.8MPa to 3.75MPa, it can be safely assumed that there is no leakage because the gauge pressure can also drop due to the change in outdoor temperature.



2. Guideline for each installation process

2.6.3 Checking for leakage

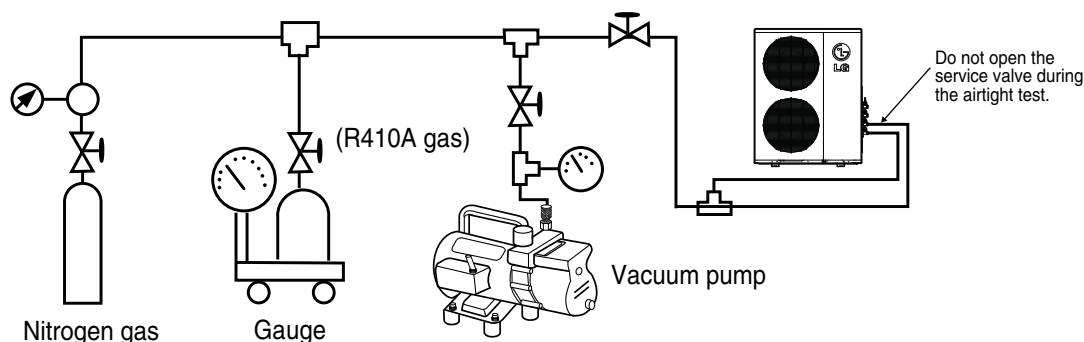
[Check 1] (Where pressure falls while carrying out Steps 1 to 3 described on previous page)

- ▶ Check by measure gage.....Gas detector.
- ▶ Check by ear.....Listen for the sound of a major leakage.
- ▶ Check by hand.....Check for leak by feeling around jointed sections with hand.
- ▶ Bubble checkBubbles will reveal the presence of a leakage.

[Check 2] (When searching for a minor leak or when there has been a fall in pressure while the system has been fully pressurized but the source of the leak cannot be traced.)

- ① Release the nitrogen until the pressure reaches 0.3MPa.
- ② Increase pressure to 1.5MPa using gaseous refrigerant(R410A).
- ③ Search for the source of the leakage using a leakage detector such as a halide torch or a propane or electronic detector.
- ④ If the source of the leakage still cannot be traced then repressurize with nitrogen up to 3.8MPa and check again.
(The pressure must not be increased to more than 3.8MPa.)

(System sample)



Important points

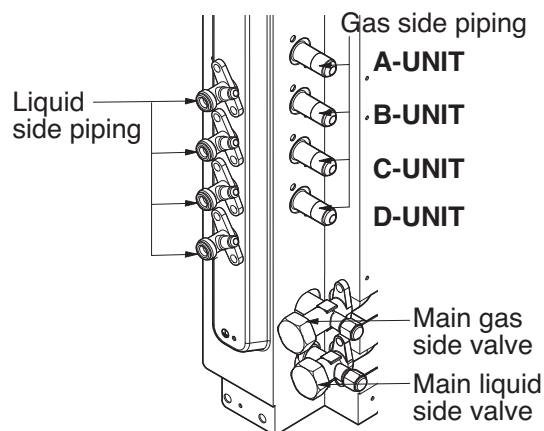
Where the lengths of piping involved are particularly long then the air tight test should be carried out block by block.

- Indoor side
- Indoor side + vertical pipes
- Indoor side + vertical pipes + outdoor side

CAUTION

Soap water method

1. Remove the caps from the 2-way and 3-way valves.
2. Remove the service-port cap from the 3-way valve.
3. To open the liquid side valve turn the valve stem counterclockwise approximately 90°, wait for about 2~3 sec, and close it.
4. Apply a soap water or a liquid neutral detergent on the indoor unit connection or outdoor unit connections by a soft brush to check for leakage of the connecting points of the piping.
5. If bubbles appear then those points have leakage.



2. Guideline for each installation process

2.7. Vacuum drying work

2.7.1 What is Vacuum drying?

Vacuum drying is : The use of a vacuum pump to vaporize(gasify) the moisture (liquid) inside the pipe and expel it leaving the pipes completely dry inside.

At 1 atm(760mmHg) the boiling point (evaporating temperature) of water is 212°F but if a vacuum is created inside the pipes using a vacuum pump then the boiling point is rapidly reduced as the degree of the vacuum is increased.

If the boiling point is reduced to a level below that of the ambient temperature then the moisture in the pipes will evaporate.

Example

When outside temperature is 53.1°F as shown in the table on the right , the degree of vacuum must be lowered below -750mmHg

The evacuation of air conditioner piping provides the following effects.

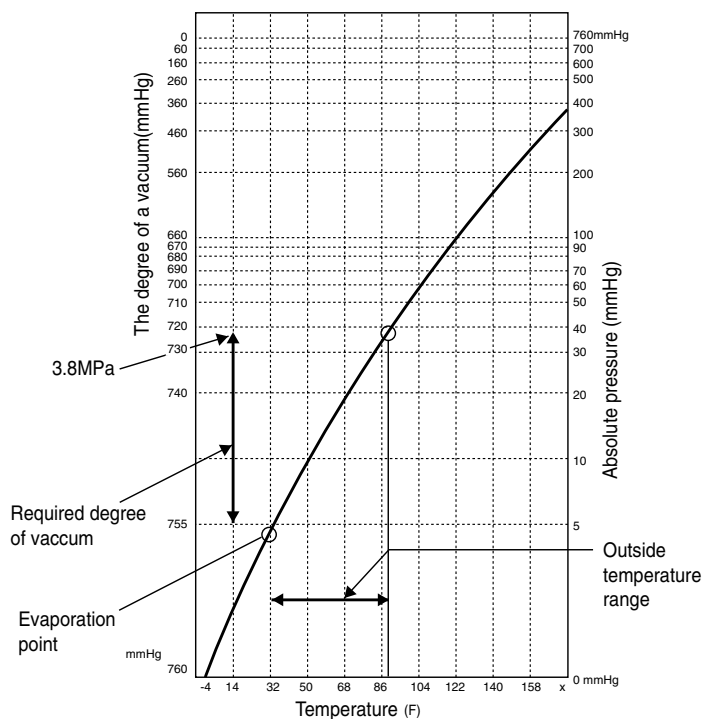
- Vacuum drying
- Removes air and nitrogen(used in air-tightness test) from the inside of pipes.

Therefore , it is necessary to ensure that both purposes have been achieved in the vacuum drying operation.

Boiling point of water(°F)	The degree of a vacuum	Pressure	
	mmHg	Pa	Torr
104	-705	7333	55
86.0	-724	4800	36
80.1	-735	3333	25
75.9	-738	3066	22
72.0	-740	2666	20
69.1	-742	2400	18
64.0	-745	2000	15
59.0	-747	1733	13
53.1	-750	1333	10
45.0	-752	1066	8
32.0	-755	667	5

NOTE

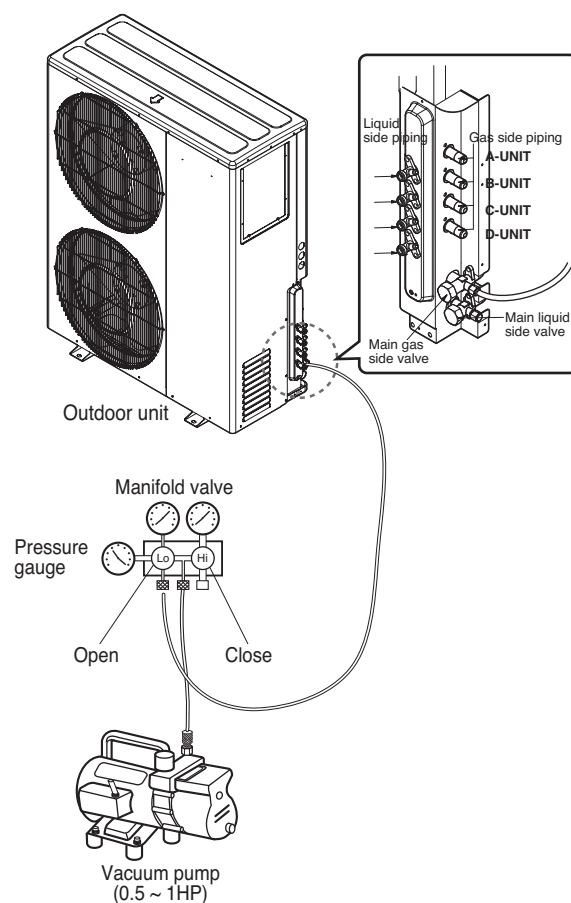
Key point: Maintain a vacuum level of -755mmHg



2. Guideline for each installation process

2.7.2 Evacuation

- ① Connect the manifold hose end described in the preceding steps to the vacuum pump to evacuate the tubing and indoor unit. Confirm the "Lo" knob of the manifold valve is open. Then, run the vacuum pump. The operation time for evacuation varies with tubing length and capacity of the pump. The following table shows the time required for evacuation.
- ② When the desired vacuum is reached, close the "Lo" knob of the manifold valve and stop the vacuum pump.



CAUTION

Finishing the job

1. With a service valve wrench, turn the valve stem of liquid side valve counter-clockwise to fully open the valve.
2. Turn the valve stem of gas side valve counter-clockwise to fully open the valve.
3. Loosen the charge hose connected to the gas side service port slightly to release the pressure, then remove the hose.
4. Replace the flare nut and fasten the flare nut securely with an adjustable wrench. This process is very important to prevent leakage from the system.
5. Replace the valve caps at both gas and liquid side service valves and fasten them tight. This completes air purging with a vacuum pump. The air conditioner is now ready for test run.

2. Guideline for each installation process

2.7.3 Choosing a vacuum pump

The necessity for counter flow prevention

After the vacuum process of the refrigerant cycle, the inside of the hose will be vacuumed after stopping the vacuum pump, the oil of vacuum pump may flow back. Moreover, if the vacuum pump stops during the operation for some reason. Therefore, in order to prevent the counter flow from the vacuum pump, a check valve is required.

1) Vacuum pump performance

The 2 most important things for determining vacuum pump performance are as follows:

- ① Exhaust velocity
- ② Degree of vacuum

① Exhaust velocity

Exhaust volume is usually expressed as l/min or m³/hr. The larger the number, the faster the vacuum is achieved.

Generally speaking, the faster the exhaust velocity, the larger and heavier the vacuum pump itself is.

Commercially available vacuum pumps (exhaust velocity of 20 - 30 l/min) usually take an extremely long time to achieve vacuum. (We recommend a vacuum pump of approx. 60 - 100 l/min.)

② Degree of vacuum

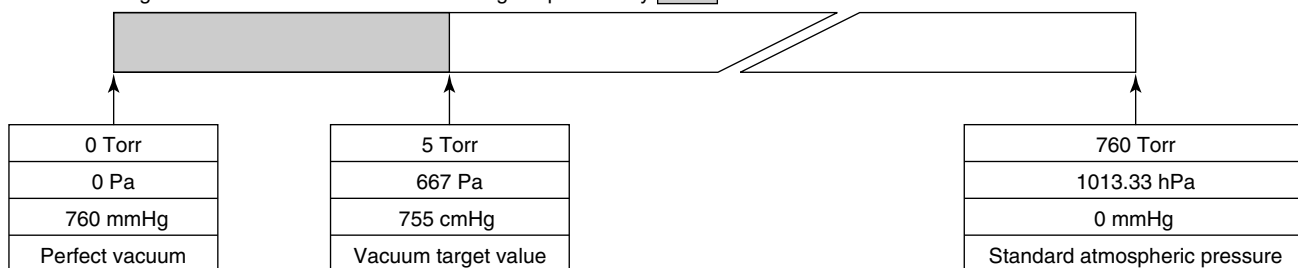
Ultimate vacuum varies largely according to use of the vacuum pump. Vacuum pumps used for vacuum forming cannot be used for vacuum drying. (A vacuum pump with a high degree of vacuum is required.)

When selecting a vacuum, you should select one which is capable of achieving 0.2 Torr of ultimate vacuum.

Degree of vacuum is expressed in Torr, micron, mmHg, and Pascal (Pa). The units correlate as follows:

	Unit	Standard atmospheric pressure	Perfect vacuum
Gauge pressure	kg/cm ²	0	-1.033
Absolute pressure	kg/cm ² abs	1.033	0
Torr	Torr	760	0
Micron	Micron	760000	0
mmHg	mmHg	0	760
Pa	Pa	1013.33	0

Degree of vacuum must be within the range expressed by



2. Guideline for each installation process

2) Vacuum pump maintenance

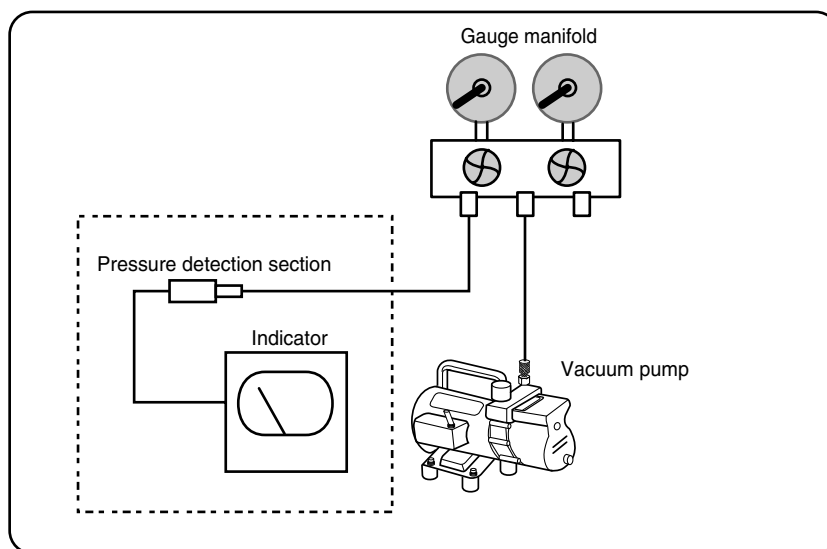
Because of their nature, most vacuum pumps contain large amounts of oil which lubricates bearings, etc., and functions to enhance airtightness of pistons. When using a vacuum pump to discharge air from refrigerant piping, moisture in the air tends to get mixed in with the oil. You must therefore change oil periodically and make sure the proper oil level is maintained. (Perform periodic inspections in accordance with the operating instructions.)

3) Degree of vacuum measurement

An extremely accurate vacuum gauge is required to test degree of vacuum. You cannot accurately measure degree of vacuum with the compound gauge on the gauge manifold. A Pirani vacuum gauge is required to measure degree of vacuum accurately. Because Pirani gauges are very sensitive and require extreme care when using, they are not very suitable for use in the field. You should therefore use the Pirani gauge to calibrate the attached vacuum gauge on the gauge manifold and the degree of vacuum of the vacuum pump.

4) Calibration method

- ① Connect a Pirani vacuum gauge and the gauge manifold vacuum gauge (760 mmHg) to the vacuum pump at the same time, and run the pump for about 3 minutes.
- ② Make sure the reading of the Pirani vacuum gauge is 5 Torr (667 Pa) or less. The reading of conventional vacuum pumps lowers to about 0.2 Torr.
If the reading is not 5 Torr or less, check the vacuum pump oil. (Oil is low in many cases.)
- ③ Check the attached gauge on the gauge manifold. Adjust the gauge if the reading is not exactly correct.
- ④ Adjust the gauge manifold valve so that the Pirani vacuum gauge reads 5 Torr.
- ⑤ Mark the position indicated by the gauge manifold gauge with an oil based ink pen.
- ⑥ Use the mark of the gauge manifold as a target when vacuuming in the field.



(Reference) Types of vacuum pump with respect to maximum degree of vacuum

Type	Maximum degree of vacuum		Use	
	Expulsion capacity		Vacuum drying	Air expulsion
Oil rotary (Oil using)	0.02 mmHg	100 l/min	Suitable	Suitable
Oilless rotary (No need of oil)	10 mmHg	50 l/min	Unsuitable	Suitable
	0.02 mmHg	40 l/min	Suitable	Suitable

Many handy pumps fall into this category ←

2. Guideline for each installation process

2.7.4 Vacuum drying procedure

There are two vacuum drying methods and the appropriate one should always be chosen to confirm with individual local conditions.

[Normal vacuum drying].....The standard method

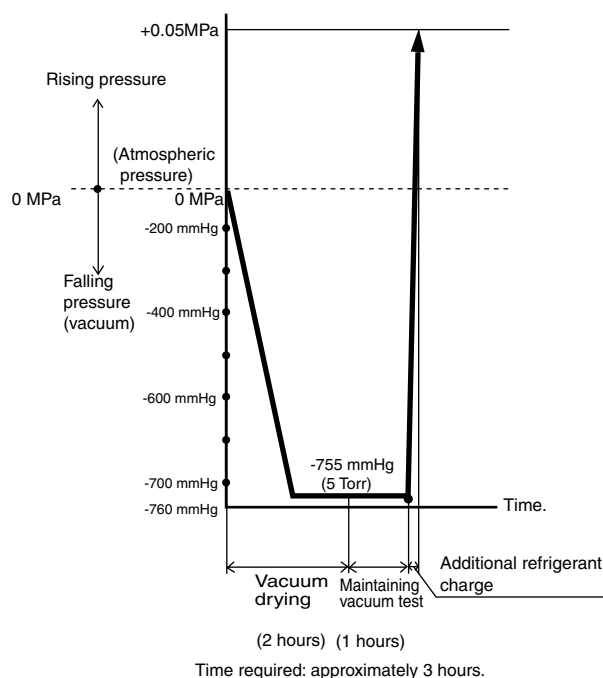
[Operational steps]

- ① Vacuum drying (1st time): Connect a manifold gauge to the service port of the liquid or gas pipe and operate the vacuum pump for at least 2 hours.
(The degree of vacuum produced should be in excess of 5 Torr)
If after 2 hours the vacuum produced has not exceeded 5 Torr then either there is moisture in the pipe or there is a leak.
Operate the vacuum pump for further one more hour.
If, even after 3 hours, the vacuum has not reached 5 Torr then check the system for a leak.
- ② Carry out vacuum test.
Produce a vacuum in excess of 5 Torr and do not release it for an hour or more. Check the vacuum gauge to make sure that it has not risen. (If the gauge rise then there is still moisture in the pipe or there is a leak somewhere.)
- ③ Additional charge of refrigerant.
Connect the charging cylinder to the liquid pipe service port and charge with the required amount of refrigerant.
- ④ Open stop valve to the full.
Open the stop valve on the liquid and the gas pipes to the full.

NOTE

Vacuums should be produced in both the liquid and the gas pipes.

(Because there are a large number of functional components in the indoor unit which cut off the vacuum mid-way through)



2. Guideline for each installation process

2.8 Additional charge of refrigerant

2.8.1 Refrigerant charging instructions

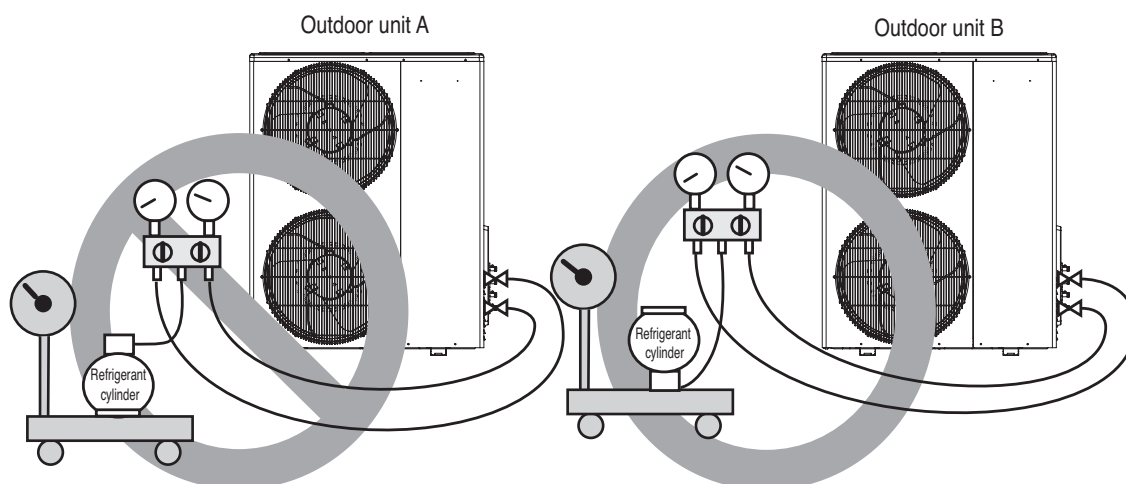
- ① The results of all calculations must be recorded. (make a list)
- ② The refrigerant will need to be additionally charged when the distance between the outdoor Unit and the most distant indoor unit is more than length (refer to section 8 outdoor unit installation condition)
- ③ The additional charging operation should be carried out by input of liquid into the liquid pipes from a charging cylinder following completion of the Vacuum drying operation.
- ④ When the additional charging operation cannot be satisfactorily completed, use the action of the compressor to complete the additional charging during the test run.

R-410A is a non-azeotrope refrigerants. Therefore, these refrigerants must be charged in the Liquid state.

When charging the refrigerant into equipment from the cylinder, turn the refrigerant cylinder upside down.

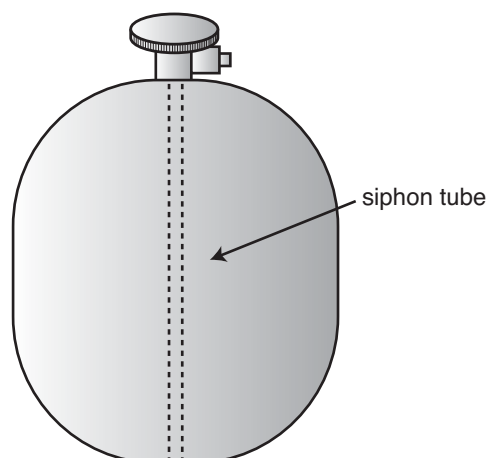
NOTE

Make sure that the refrigerant (liquid) is taken out from the bottom part of the refrigerant cylinder. Do not take out the refrigerant (gas) at the upper of the refrigerant cylinder for charging.



CAUTION

- Since some refrigerant cylinders differ in the internal mechanism, it is necessary to examine the cylinder carefully. (Some cylinders have a siphon tube to eliminate the need for turning it upside down)

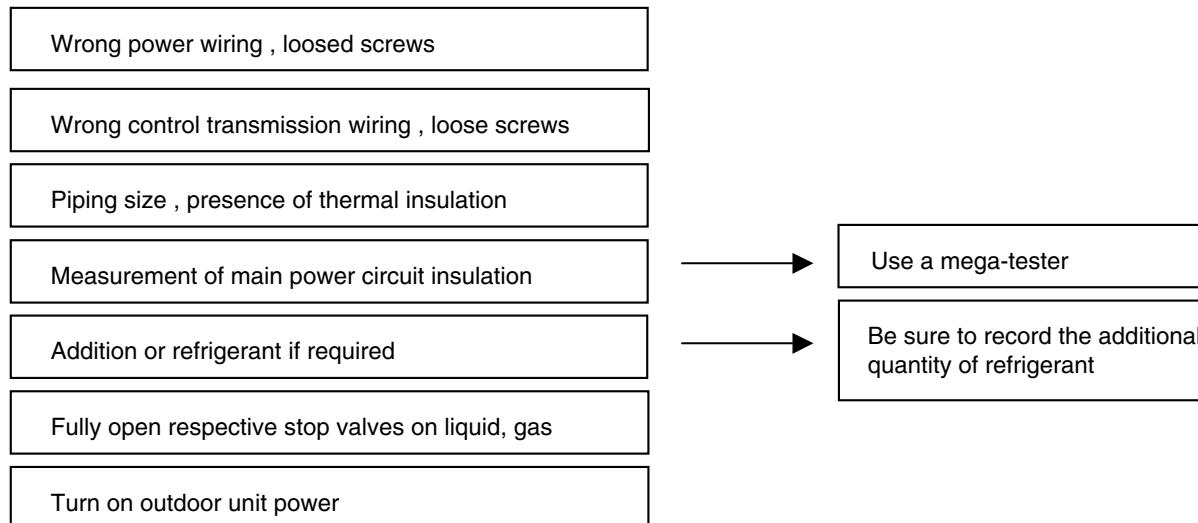


2. Guideline for each installation process

2.9 Trial test run operation

2.9.1 Test run procedure

Check the following before turning power on

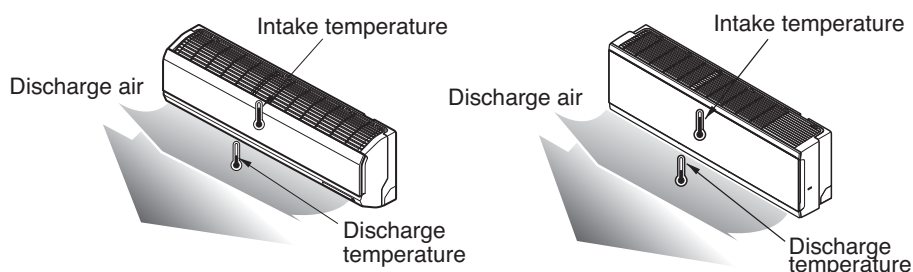


2.9.2 Evaluation performance

Evaluation of the performance

Operate unit for 15~20 minutes, then check the system refrigerant charge:

- ① Measure the pressure of the gas side service valve.
- ② Measure the temperature of the intake and discharge of air.
- ③ Ensure the difference between the intake temperature and the discharge is more than 46.4°F



- ④ For reference, the gas side pressure of optimum condition is as below. (Cooling)

Refrigerant	Outside ambient Temp.	The pressure of the gas side service valve.
R22	35°C (95°F)	4~5kg/cm ² G
R410A	35°C (95°F)	8.0~10.0kg/cm ² G

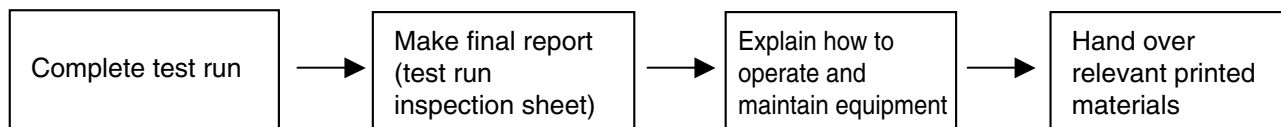
NOTE

: If the actual pressure is higher than shown, the system is most likely overcharged so extra refrigerant should be removed.
 If the actual pressure is lower than shown, the system is most likely undercharged so extra refrigerant should be added.
 The air conditioner is now ready for use.

2. Guideline for each installation process

2.9.3 Transfer to customer with explanation

Operational step



- ① The measurements taken during the test run should be recorded and kept on a test run inspection sheet.
- ② Do not forget to record the length of the refrigerant piping and the refrigerant additional charging volume on the plate on the back of the outdoor unit external notice board, as this information will be required for servicing the system.
- ③ Explain to the customer how to operate and maintain the equipment and let him try it.
- ④ Assemble all the relevant diagrams and other printed matter which is required to operate the system and hand over to the customer (on the spot) and request him to keep it handy.
- ⑤ Service contact address.

List of equipment which has been delivered

Installation drawing

1 set of operation manuals

Names of those responsible for the work (emergency contact address)

Equipment guarantees.

It is essential to prepare a control wiring diagram which clarifies the refrigerant system and the control system.

3. Installation of indoor unit

3.1 Safety precautions

Please strictly follow the instructions given in the Installation manual .Improper installation by ignoring the instructions can lead to damage of life and property.

Make sure to read the following safety instructions very carefully and thoroughly .

WARNING

This symbol indicates the possibility of death or serious injury.

CAUTION

This symbol indicates the possibility of injury or damage to properties only.

n The meanings of the symbols used in this manual are as shown below.



Be sure not to do.



Be sure to follow the instruction.

WARNING

Do not use a defective or underrated circuit breaker.

- There is risk of fire or electric shock.

Always use this appliance on a dedicated circuit breaker.

- Otherwise it can cause electric shock or fire.

For electrical work, contact the dealer, seller, a qualified electrician, or an authorized service center. Do not disassemble or repair the product by yourself.

- There is risk of fire or electric shock.

Always ground the product as per the field wiring diagram. Do not connect the ground wire to gas or water pipes lightning rod or telephone ground wire.

- There is risk of fire or electric shock.

Install the panel and the cover of control box securely.

- There is risk of fire or electric shock due to dust , water etc.

Use the correctly rated breaker or fuse.

- There is risk of fire or electric shock.

Do not modify or extend the power cable. If the power cable or cord has scratches or skin peeled off or deteriorated then immediately replace it.

- There is risk of fire or electric shock.

For installation, removal or reinstall, always contact the dealer or an Authorized Service Center.

- There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective installation foundation. Be sure that the installation area does not deteriorate with age.

- If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

When the product is soaked (flooded or submerged) in water, contact an Authorized Service Center for repair before using it again.

- There is risk of fire or electric shock.

In outdoor unit the step-up capacitor supplies high voltage electricity to the electrical components.

Be sure to discharge the capacitor completely before conducting the repair work.

- An charged capacitor can cause electrical shock.

Be sure to use only those parts which are listed in the service parts list. Never attempt to modify the equipment.

- The use of inappropriate parts can cause an electrical shock, excessive heat generation or fire.

Indoor/outdoor wiring connections must be secured tightly and the cable should be routed properly so that there is no force pulling the cable at the connection terminals.

- Improper or loose connections can cause excessive heat generation or fire.

3. Installation of indoor unit

Safely dispose off the packing materials.

- Things like screws, nails, batteries, broken things etc. after installation or svc can cause injury to small kids. Tear away and throw away the plastic packaging bags so that children will not play with them.

During svc be sure to check the refrigerant to be used.

- Incorrect refrigerant used can prevent the normal operation of the unit.

When installing the unit, use the installation kit provided with the product.

- Otherwise the unit may fall and cause severe injury .

Do not touch, operate, or repair the product with wet hands.

- There is risk of electric shock or fire.

Do not place a heater or other appliances near the power cable.

- There is risk of fire and electric shock.

Do not allow water to run into electric parts. Install the unit away from water sources

- There is risk of fire, failure of the product, or electric shock.

Do not store or use or even allow flammable gas or combustibles near the product.

- There is risk of fire or failure of product.

Do not use the product in a tightly closed space for a long time. Perform ventilation regularly.

- Oxygen deficiency could occur and hence harm your health.

If strange sounds, smell or smoke comes from product, immediately turn the breaker off or disconnect the power supply cable.

- There is risk of electric shock or fire.

When installing the unit, use the installation kit provided with the product.

- Otherwise the unit may fall and cause severe injury.

Do not open the front grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)

- There is risk of physical injury, electric shock or product failure.

Ventilate the product room from time to time when operating it together with a stove, or heating element etc.

- Oxygen deficiency can occur and hence harm your health.

Turn the main power when cleaning or repairing the product.

- There is risk of electric shock.

When the product is not to be used for a long time, shut off the circuit breaker.

- There is risk of product damage or failure or unintended operation.

3. Installation of indoor unit

⚠ CAUTION

Use two or more people to lift and transport the product.

- Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.

- It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

Install the drain hose to ensure that water is drained away properly.

- A bad connection may cause water leakage.

Keep level even when installing the product.

- To avoid vibration or noise.

Always check for gas (refrigerant) leakage after installation or repair of product.

- Low pressure levels may cause failure of product.

Do not block the inlet or outlet of air flow.

- It may cause product failure.

Use a soft cloth to clean. Do not use harsh detergents, solvents or splashing water etc .

- There is risk of fire, electric shock, or damage to the plastic parts of the product.

Do not step on or put anything on the product. (outdoor units)

- There is risk of personal injury and failure of product.

Do not insert hands or other objects through the air inlet or outlet while the product is operating.

- There are sharp and moving parts that could cause personal injury.

Be cautious when unpacking and installing the product.

- Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

If the refrigerant gas leaks during the repair, do not touch the leaking refrigerant gas.

- The refrigerant gas can cause frostbite (cold burn).

Do not tilt the unit when removing or uninstalling it.

- The condensed water inside can cause spill and wet the furniture and the floor.

Do not mix air or gas other than the specified refrigerant used in the system.

- If air enters the refrigerant system, an excessively high pressure results, causing equipment damage or injury.

Replace the all batteries in the remote control with new ones of the same type. Do not mix old and new batteries or different types of batteries.

- There is risk of fire or explosion.

If the liquid from the batteries gets onto your skin or clothes, wash it well with clean water. Do not use the remote if the batteries have leaked.

- The chemicals in batteries could cause burns or other health hazards.

Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer air conditioner, not a precision refrigeration system.

- There is risk of damage or loss of property.

Do not touch the metal parts of the product when removing the air filter.

- There is risk of personal injury.

If the refrigerant gas leaks during the installation or operation ventilate the area immediately.

- Otherwise it can be harmful for your health.

Do not turn off the power immediately after stopping the operation.

- Always wait for 5 minutes before turning off the power otherwise water leakage and troubles can occur.

Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.

- Moisture may condense and wet or damage furniture.

Do not expose your skin or kids or plants to the cool or hot air draft.

- This could harm to your health.

Do not drink the water drained from the product.

- It is not sanitary and could cause serious health issues.

Use a firm stool or ladder when cleaning, maintaining or repairing the product at an height.

- Be careful and avoid personal injury.

Dismantling of the unit , treatment of the refrigerant oil and eventual parts should be done in accordance with local and national standards.

Do not recharge or disassemble the batteries. Do not dispose off batteries in fire.

- They may burn or explode.

3. Installation of indoor unit

3.1.1 Points for explanation about operations

The items with WARNING and CAUTION marks in the operation manual are the items pertaining to possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the owner's manual.

NOTE to the installer

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3.1.2 Selecting installation site for indoor units

1) Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

- ① Location strong enough to bear the weight of the unit.
- ② Location accessible and having enough clearance for inspection and service in the future.
- ③ Location allowing easy condensate drainage and suitable gradient of the unit and the drain pipe.
- ④ Piping between the indoor and outdoor unit is possible within the allowable limits.
- ⑤ Location free from electrical noise.
- ⑥ Location allowing optimum air distribution without any blocking to air flow.
- ⑦ Location having no risk of flammable gas leakage.
- ⑧ Location free from mineral oil mist or an oil spray or vapor example in kitchen .It could result in leakage .
- ⑨ Location free from corrosive gases such as sulphurous acid gas because it corrodes the copper pipes or soldered parts resulting in leakage .
- ⑩ Location free from any machinery emitting electromagnetic waves which may disturb the control system thus causing malfunction of the unit .
- ⑪ Location free from flammable gases , carbon fibre , or ignitable dust suspensions in the air or where volatile flames are handled like gasoline or thinner. Operating in such conditions may result in fire .
- ⑫ Install the indoor and outdoor units, power supply wiring and connecting wires at least 1m away from televisions or radios in order to prevent image interference or noise. (Depending on the radio waves, a distance of 1m. may not be sufficient enough to eliminate the noise.)
- ⑬ Consider whether the place where the unit will be installed can support the full weight of the unit, and reinforce it with boards and beams, etc. If needed before proceeding with the installation. Also, reinforce the place to prevent vibration and noise before installing.
- ⑭ The indoor ART COOL mirror, Wallmount unit may not be directly installed on the wall. Use the attached installation plate before installing the unit.
- ⑮ Obey the local and national regulations and limits regarding airconditioner installation.

3. Installation of indoor unit

2) For the following items, take special care during construction and check after installation is finished

Items to be checked after completion of installation work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling or heating.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	It may be dangerous during electric leakage.	
Is wiring size correct according to specifications?	The unit may malfunction or the components burn out.	
Is there something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling or heating.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

3.1.3 Before installation

During product unpacking and removing it from the packing case, be sure to lift it without exerting any pressure on other parts, especially, horizontal flaps, the refrigerant piping, drain piping, and other resin parts.

- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- When using the wireless remote controller, refer to the installation manual attached to the wireless remote controller.

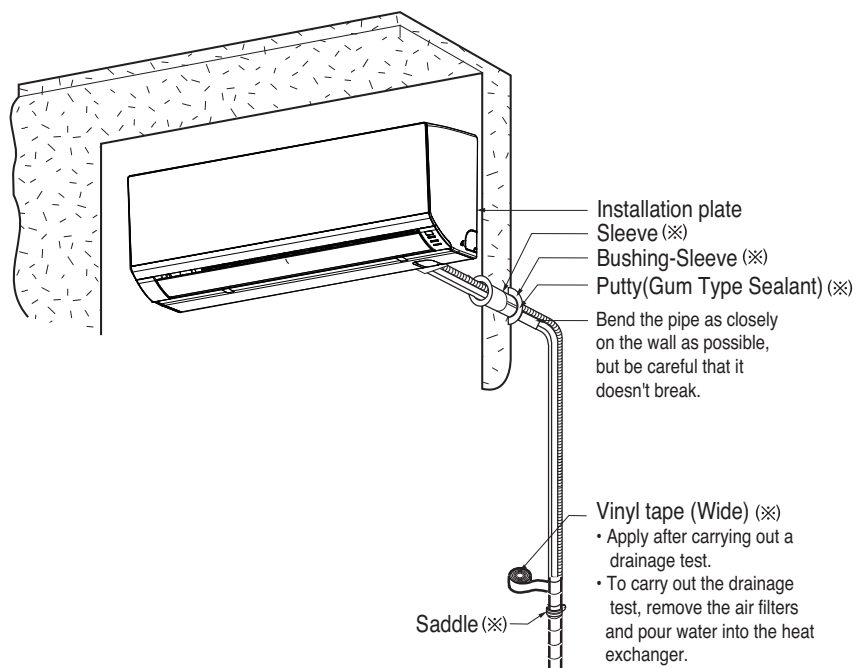
NOTE

- **Be sure to read this manual before installing the indoor unit.**
- Entrust installation to the place of purchase or an authorized serviceman. Improper installation could lead to leaks and in worst cases, electric shock or fire.
- Use only parts provided with the unit or parts satisfying required specifications. Unspecified parts could cause the unit to fall out of place, or could lead to leaks and in the worst cases, electric shock or fire.

3. Installation of indoor unit

3.2. Wall mounted(LIBERO)

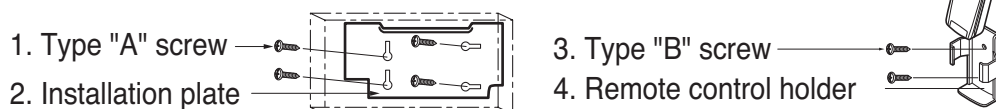
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personal only.

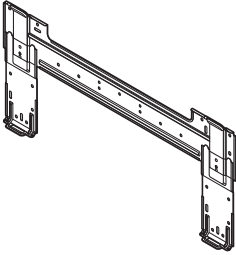
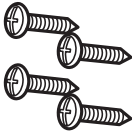


3.2.1 Accessories

The following accessories are included with your unit.

1) Standard accessories

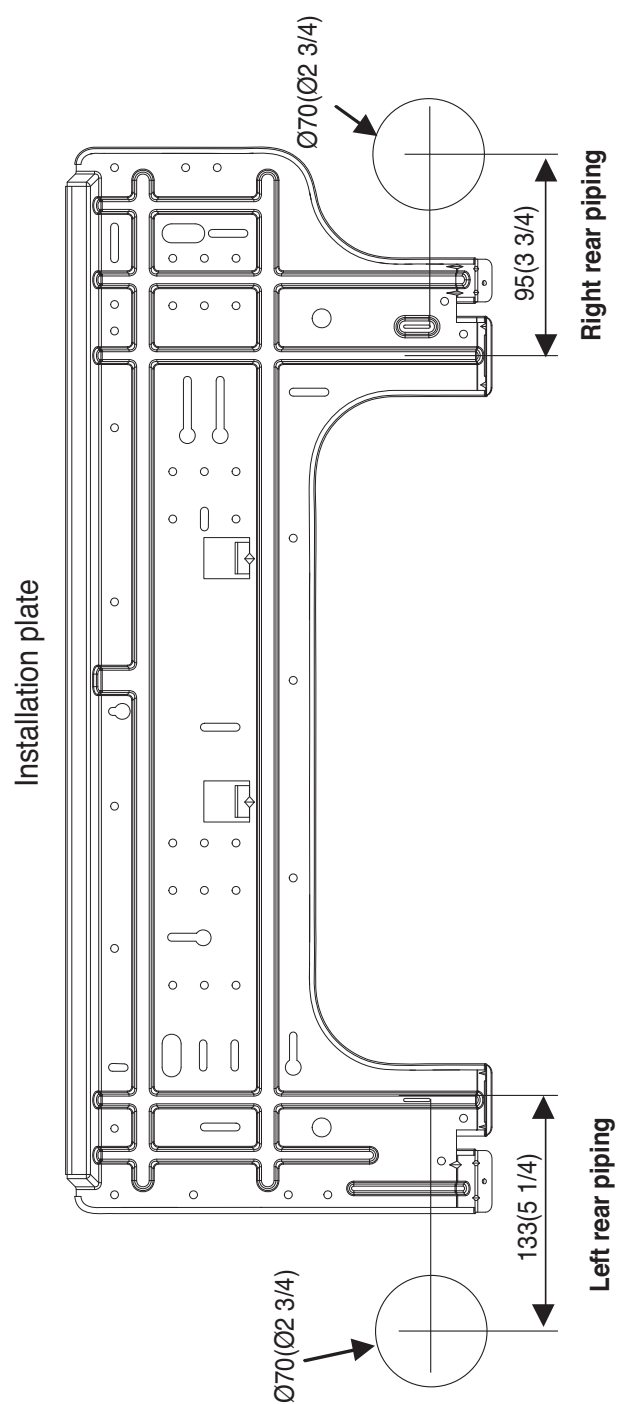


Name	Installation panel	Securing screws		(Other)
Shape		Type "A" screw	Type "B" screw	
	 The feature can be changed according a type or model.		 M4 x 12L	• Owner's manual • Installation manual

3. Installation of indoor unit

2) Installation plates dimensions

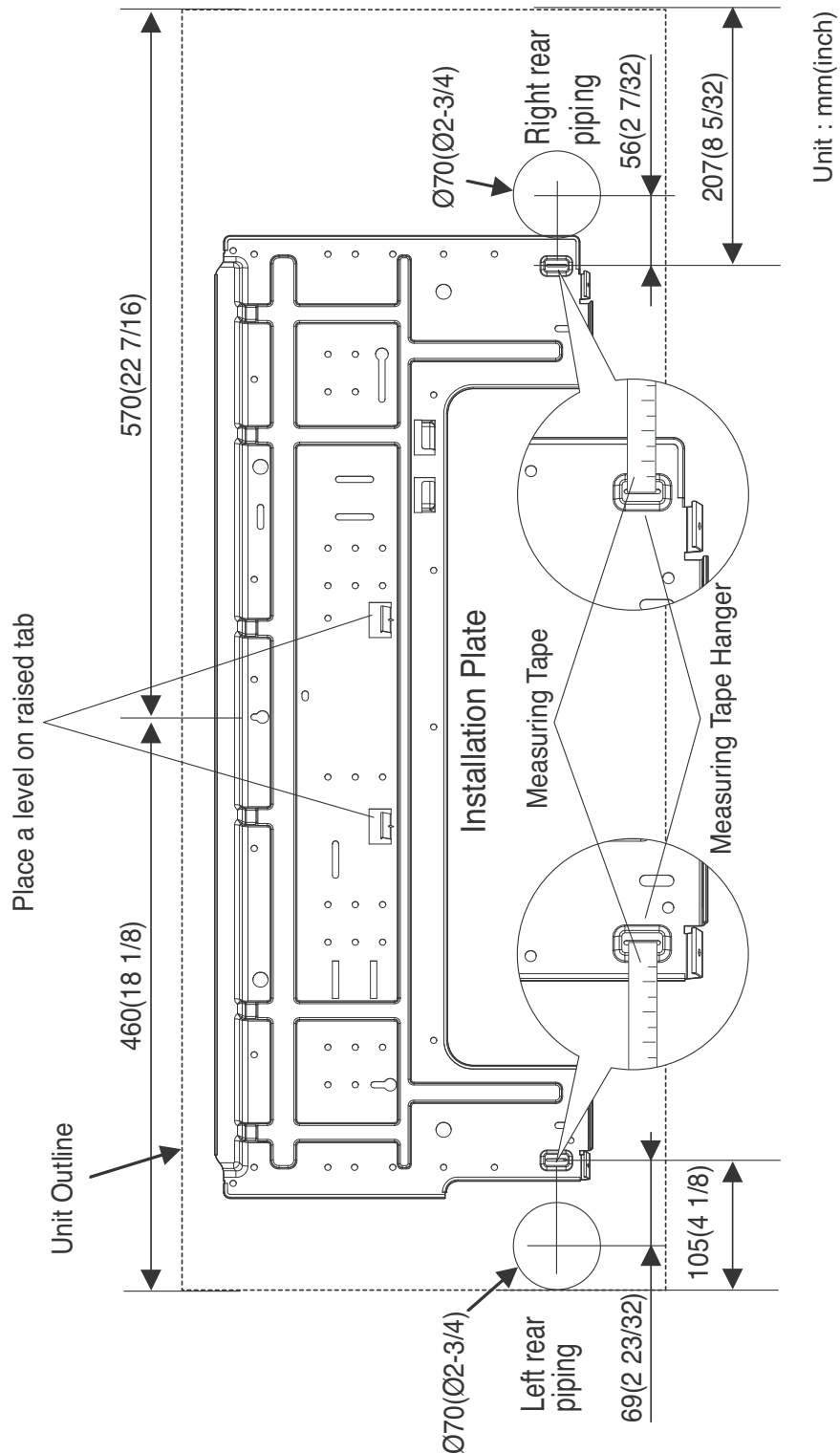
Type 1: SB Chassis



Unit : mm (inch)

3. Installation of indoor unit

Type 2: SC Chassis



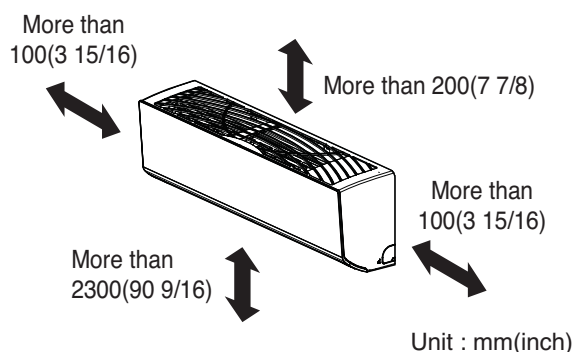
CAUTION

- Use only those accessories (Standard or optional) which have designated specifications

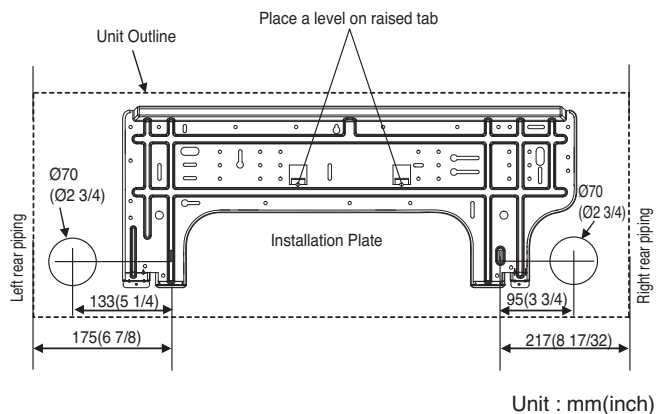
3. Installation of indoor unit

3.2.2 Selection of the best location

- ① There should not be any heat or steam near the unit.
- ② Select a place where there are no obstacles around of the unit.
- ③ Make sure that condensation drainage can be conveniently routed away.
- ④ Do not install near a doorway.
- ⑤ Ensure that the interval between a wall and the left (or right) of the unit is more than 100mm(3 15/16 inch). The unit should be installed as high as possible on the wall, allowing a minimum of 200mm(7 7/8 inch) from ceiling.
- ⑥ Use a metal detector to locate studs to prevent unnecessary damage to the wall.



- ② Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.



3.2.4 Before piping work

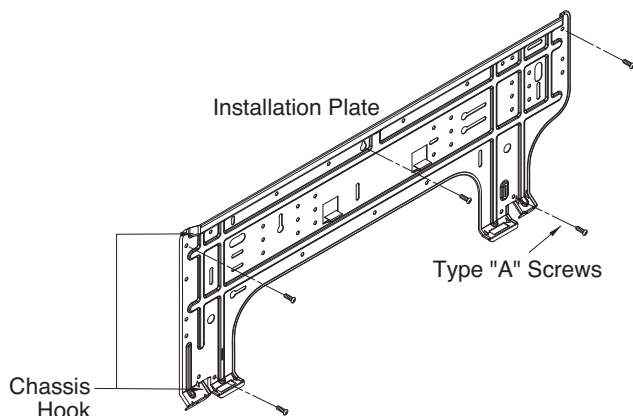
CAUTION

- Installation Information. For right piping. Follow the instruction given below.

3.2.3 Fixing installation plate

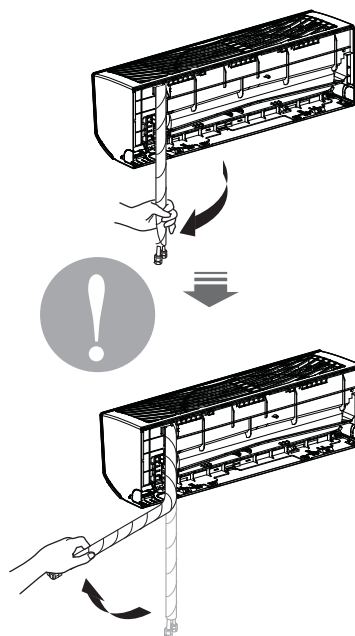
The wall you select should be strong and solid enough to prevent vibration

- ① Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
 - Mount the installation plate horizontally by aligning the centerline using Horizontal meter .



Good case

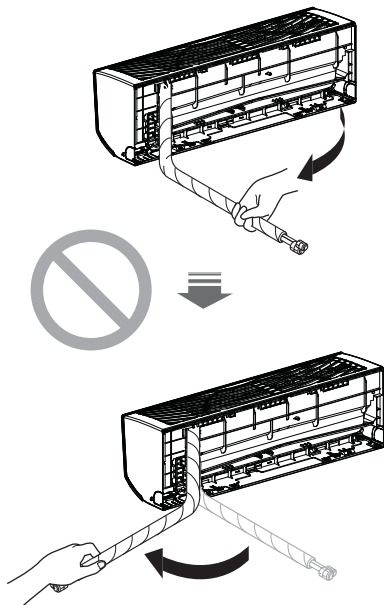
- Press on the upper side of clamp and unfold the tubing to downward slowly.



3. Installation of indoor unit

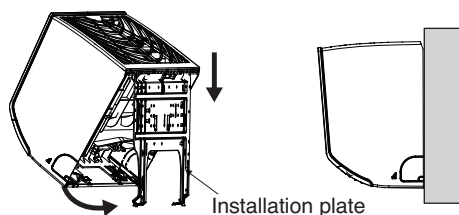
Wrong method

- Following bending type from left to right may cause damage to the tubing.

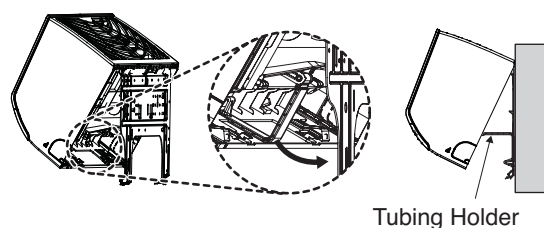


1) Installation of Indoor Unit

- Hook the indoor unit onto the upper portion of the installation plate. (engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right



- Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall

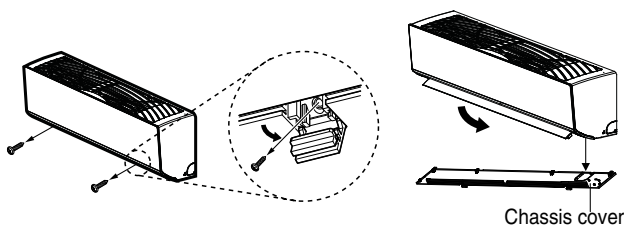


Piping

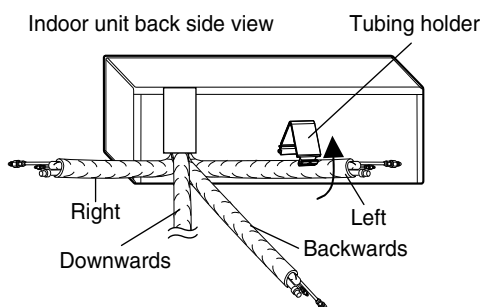
- Insert the connecting cable through the bottom side of indoor unit and connect the cable (You can see detail contents in 'Connecting the cables' section)

3.2.5 Connecting the piping

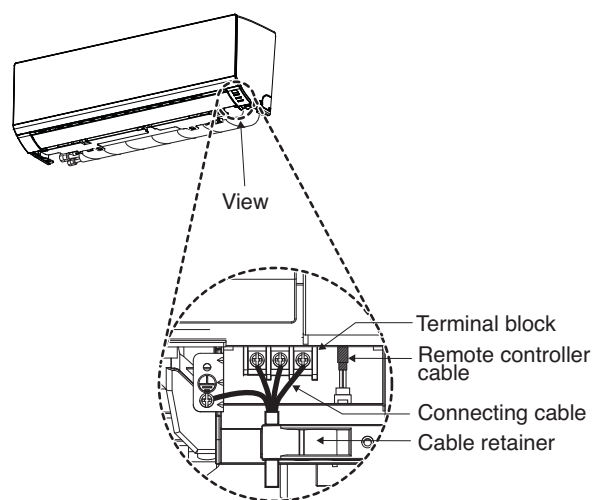
- Pull the screw cap at the bottom of the indoor unit
- Remove the chassis cover from the unit by loosening 2 screws



- Pull back the tubing holder.
- Remove pipe port cover and positioning the tubing

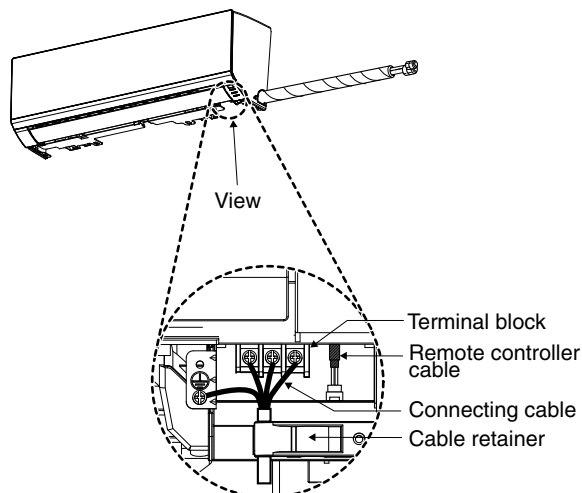


<Left side piping>



3. Installation of indoor unit

<Right side piping>



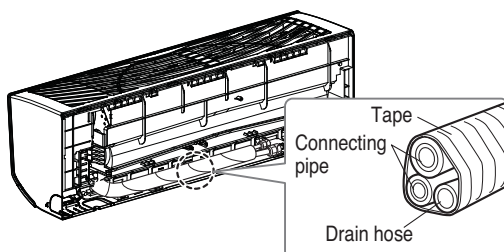
- ② Secure the cable onto the control board with the cable retainer.
- ③ Tape the tubing pipe, drain hose. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.

CAUTION

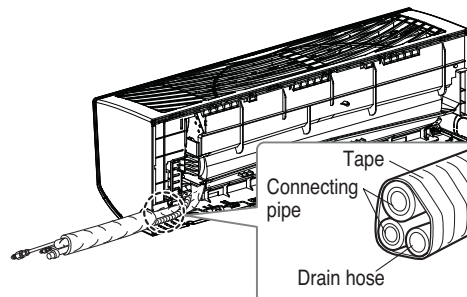
If the drain hose is routed inside the room insulate the hose with an insulation material* so that dripping from sweating (condensation) will not damage furniture or floors.

* Foamed polyethylene or equivalent is recommended.

<Left side piping>

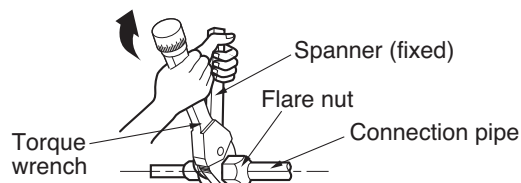
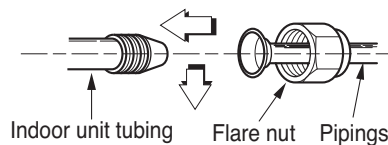


<Right side piping>



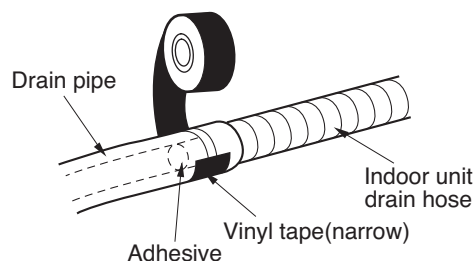
3) Connecting the installation pipe and drain hose to the indoor unit.

- ① Align the center of the pipes and sufficiently tighten the flare nut by hand
- ② Tighten the flare nut with a wrench



Outside diameter		Torque
mm	inch	kgf·m
Ø6.35	1/4	1.8~2.5
Ø9.52	3/8	3.4~4.2
Ø12.7	1/2	5.5~6.5
Ø15.88	5/8	6.3~8.2
Ø19.05	3/4	9.9~12.1

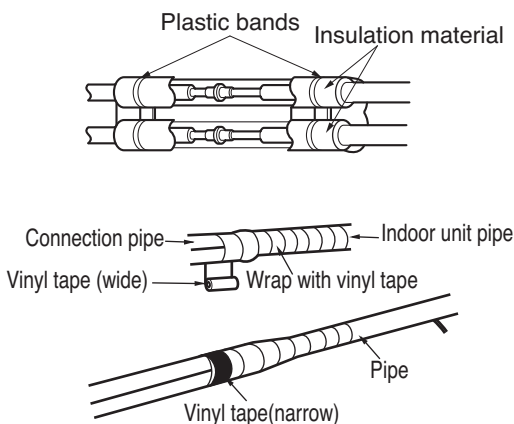
- ③ When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing



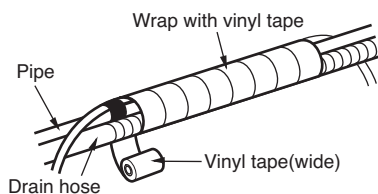
3. Installation of indoor unit

4) Wrap the insulation material around the connecting portion.

- ① Overlap the connection pipe heat insulation and the indoor unit pipe heat insulation material. Bind them together with vinyl tape so that there may be no gap.
- ② Wrap the area which accommodates the rear piping housing section with vinyl tape.

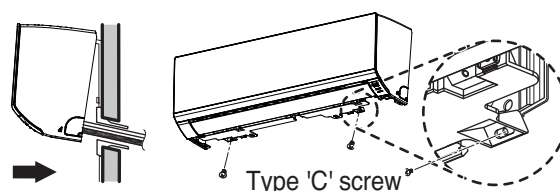


- ③ Bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.



5) Finishing the indoor unit installation

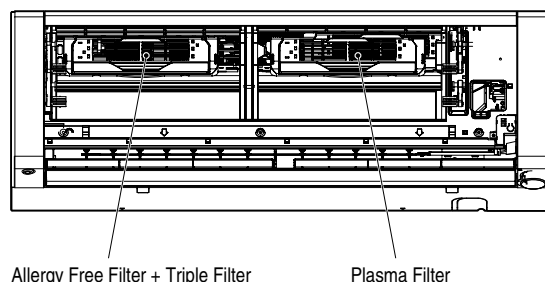
- ① Mount the tubing holder in the original position.
- ② Ensure that the hooks are properly seated on the installation plate by moving it left and right.
- ③ Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
- ④ Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover.



Installation of filters

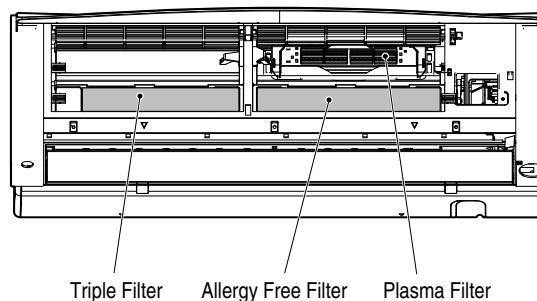
• Premium type

- ① Pull out the [Allergy free filter + Triple Filter] from the separately packed plastic bag.
- ② Detach the two nitto tapes from the filter.
- ③ Insert the filter into the filter case.
- ④ Detach two nitto tapes from the plasma filter.



• Rational type

- ① Pull out the triple filter and allergy free filter from the separately packed plastic bag.
- ② Insert the triple filter into the left case and insert the allergy free filter into the right case.
- ③ Detach two nitto tapes from the plasma filter.

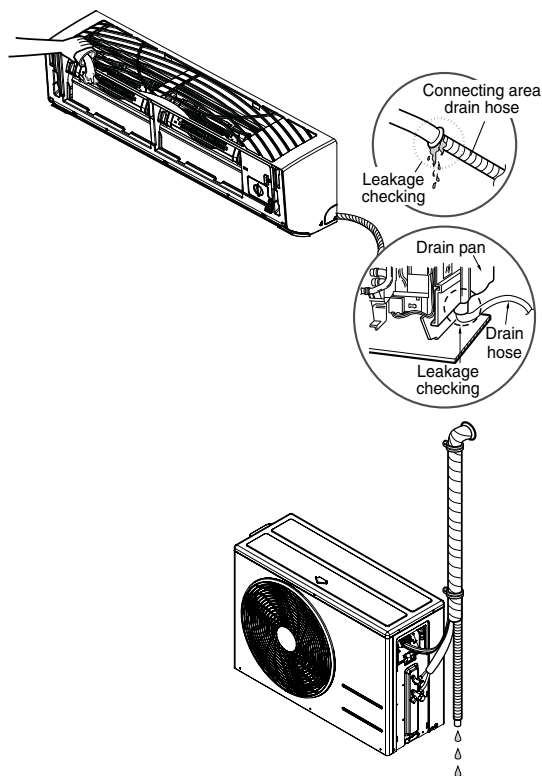


3. Installation of indoor unit

3.2.6 Checking the Drainage

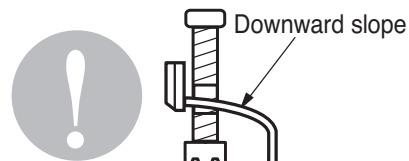
1) To check the drainage.

- ① Pour a glass of water on the evaporator.
- ② Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

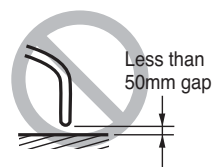
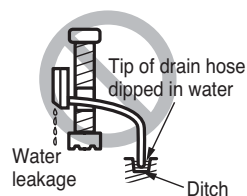
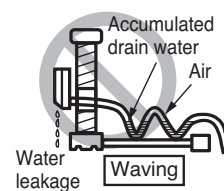
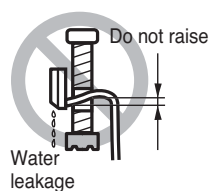


2) Drain piping

- ① The drain hose should point downward for easy drain flow.



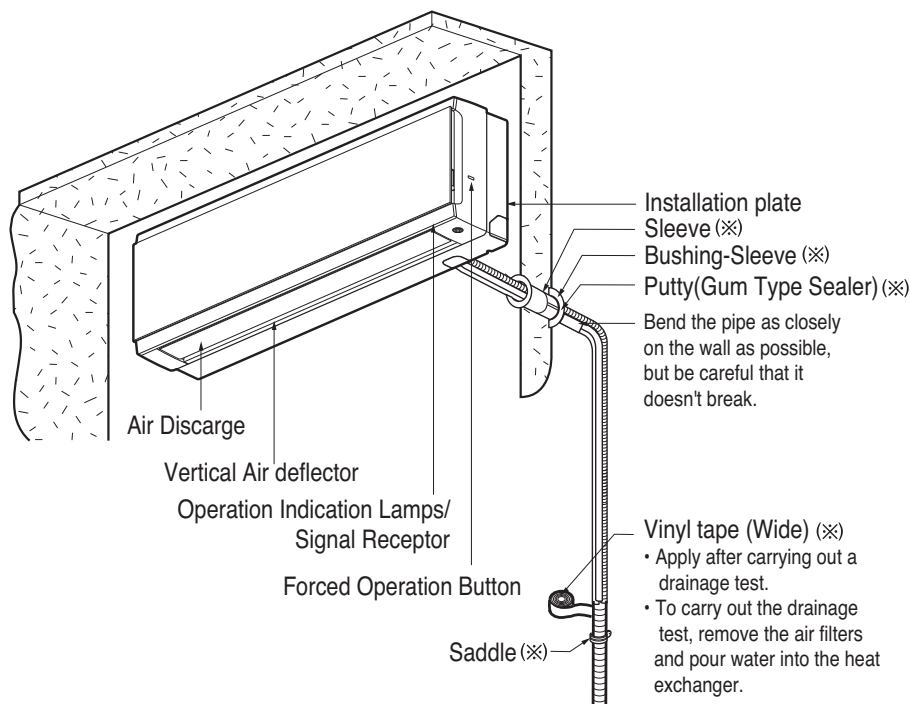
- ② Do not make drain piping like the following.



3. Installation of indoor unit

3.3 ART COOL Mirror

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

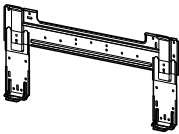
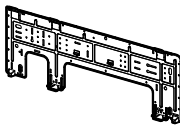


3.3.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

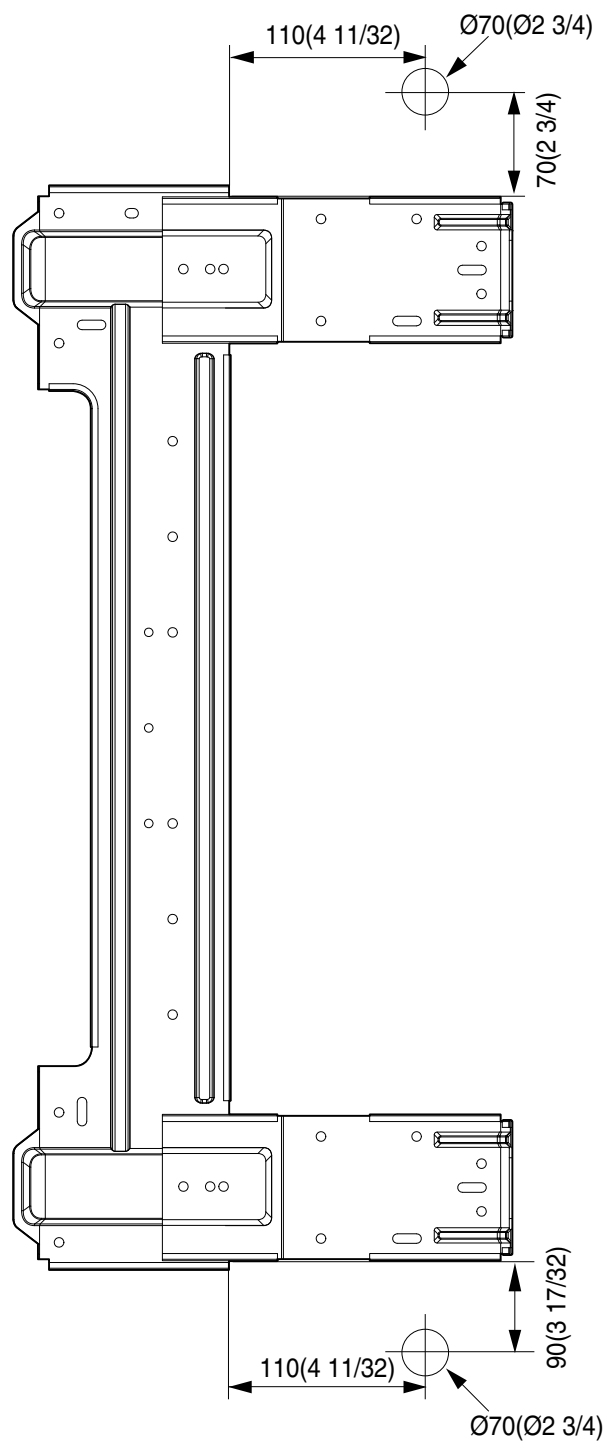
1. Type "A" screw
2. Installation plate
3. Type "B" screw
4. Remote control holder

Type 1	Type 2
Installation plate	Installation plate
	
Type "B" screw	Type "B" screw
	
Type "A" screw (6 EA)	Type "A" screw (8 EA)
	
Remote control holder	Remote control holder
	

3. Installation of indoor unit

2) Installation plates dimensions

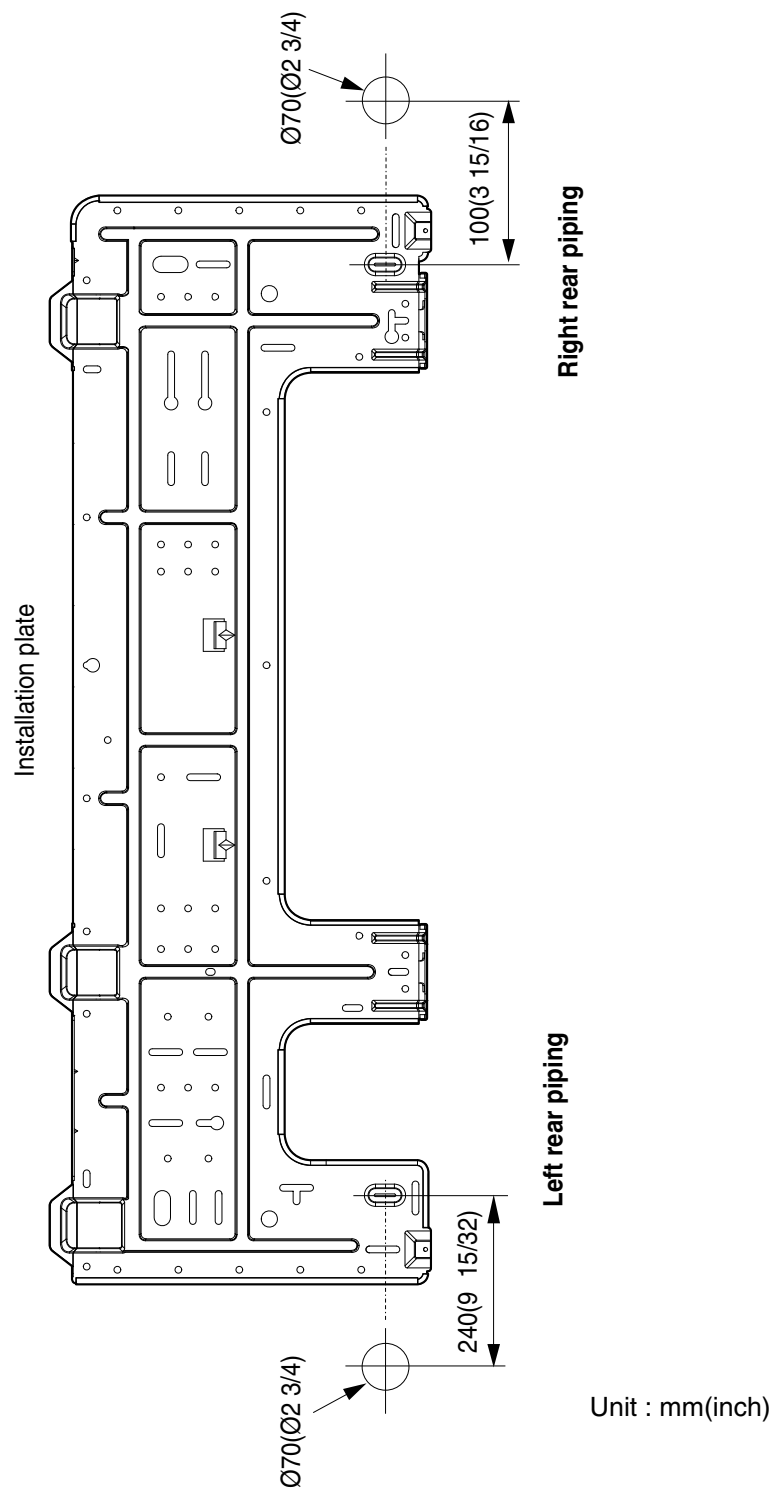
Type 1: SE Chassis



Unit : mm(inch)

3. Installation of indoor unit

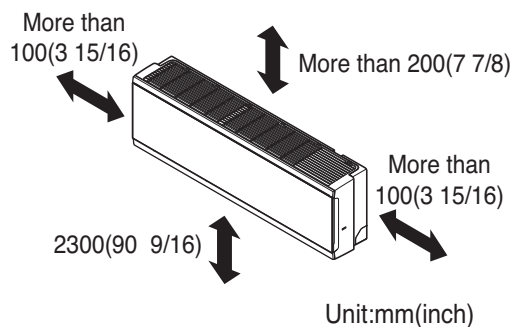
Type 2: S8 chassis



3. Installation of indoor unit

3.3.2 Selection of the best location

- Do not have any heat or steam near the unit.
- Select a place where there are no obstacles in front of the unit.
- Make sure that condensation drainage can be conveniently routed away.
- Do not install near to doorway.
- Ensure that the interval between a wall and the left (or right) of the unit is more than 3 15/16 inch. The unit should be installed as high as possible on the wall, allowing a minimum of 7 7/8 inch from ceiling.
- Use a stud finder to locate studs to prevent unnecessary damage to the wall.
- The mounting wall should be strong and solid enough too protect it from the vibration.



CAUTION

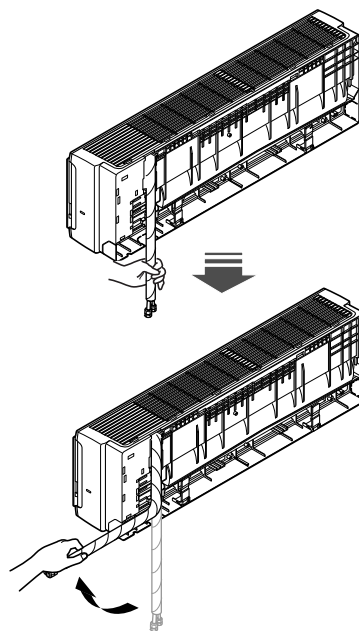
- Install the indoor unit on the wall where the height from the floors is more than 7.5ft.

1) Preparation

• Correct method

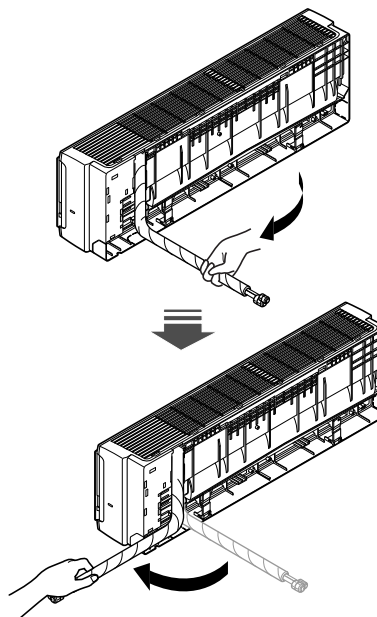
For right piping. Follow the instruction given below.

- Press on the upper side of clamp and unfold the tubing to downward slowly.



• Wrong method

- Following bending type from right to left may cause damage to the tubing.

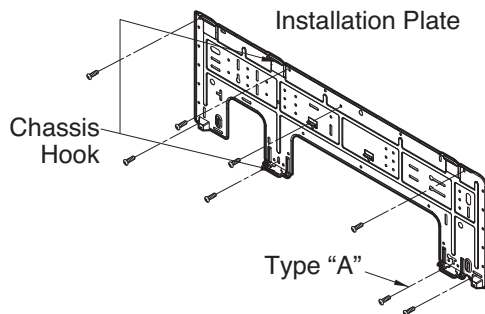


3. Installation of indoor unit

3.3.3 Fixing installation plate

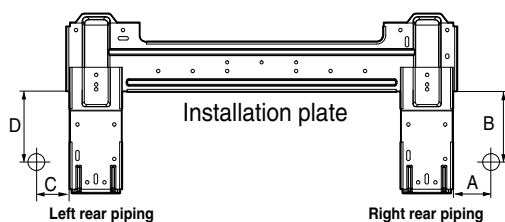
The wall you select should be strong and solid enough to prevent vibration

- ① Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
 - Mount the installation plate horizontally by aligning the centerline using a level.

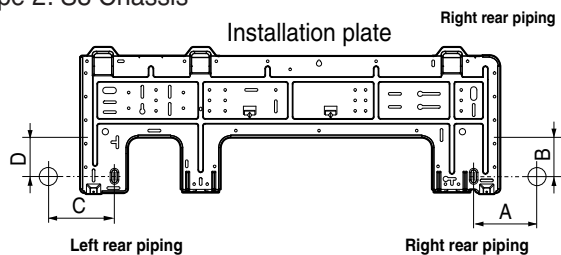


- ② Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate—routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.
 - For S3 chassis, the center of the unit is different from that of the installation plate.

Type 1: SE Chassis



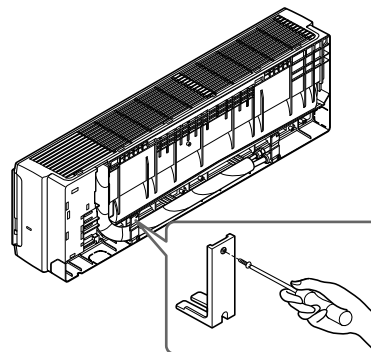
Type 2: S8 Chassis



CHASSIS (Grade)	Distance [mm(inch)]			
	A	B	C	D
SE	70(2 3/4)	110(4 11/32)	90(3 17/32)	110(4 11/32)
S8	100(3 15/16)	122(4 13/16)	240(9 15/32)	122(4 13/16)

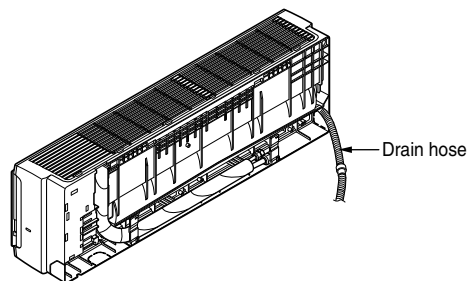
3.3.4 Connecting the piping

- ① Prepare the indoor unit's piping and drain hose for installation through the wall.
- ② Remove the plastic tubing retainer(Refer to the figure given below) and pull the tubing and drain hose away from chassis.
- ③ Replace only the plastic tubing holder 1, not the holder 2 in the original position.

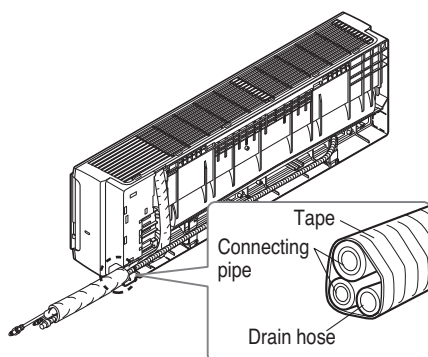


1) For right rear piping

- ① Route the indoor tubing and the drain hose in the direction of rear right.
- ② Insert the connecting cable into the indoor unit from the outdoor unit through the piping hole.
 - ※ Do not connect the cable to the indoor unit but make a small loop with the cable for easy connection later.
- ③ Tape the tubing and drain hose. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause drain pan to overflow inside the unit.



3. Installation of indoor unit

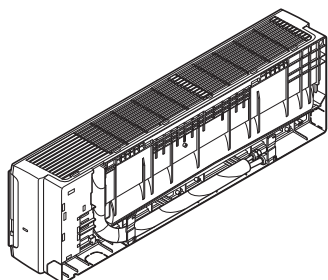
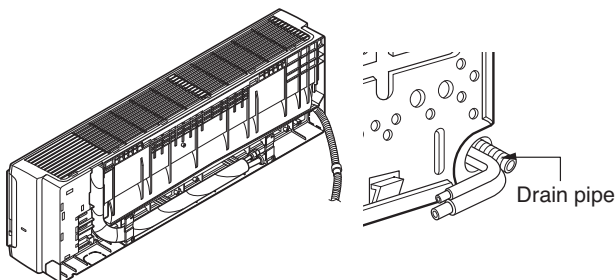


CAUTION

- If the drain hose is routed inside the room, insulate the hose with an insulation material so that condensation will not damage furniture or floors.
*Foamed polyethylene or equivalent is recommended.

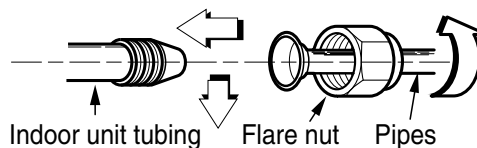
2) For left rear piping

- ① Route the indoor tubing and the drain hose to the required piping hole position.
- ② Insert the piping, drain hose and the connecting cable into the piping hole.
- ③ Insert the connecting cable into the indoor unit.
 - Don't connect the cable to the indoor unit but make a small loop with the cable for easy connection later.
- ④ Tape the piping and the drain hose.

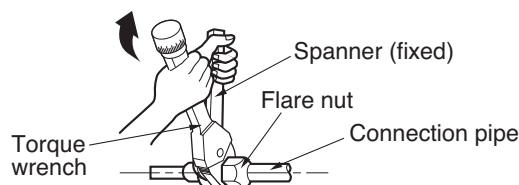


3) Connecting the piping to the indoor unit and the drain hose to drain pipe.

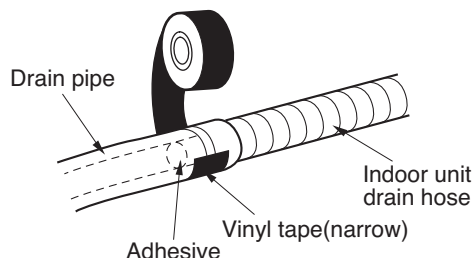
- ① Align the center of the pipes and tighten the flare nut by hand.



- ② Tighten the flare nut with a wrench.



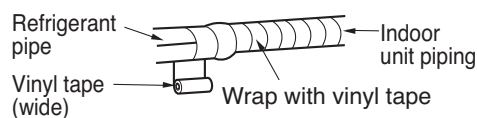
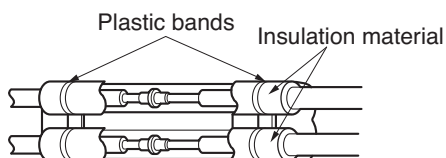
- ③ When extending the drain hose at the indoor unit, install the drain pipe.



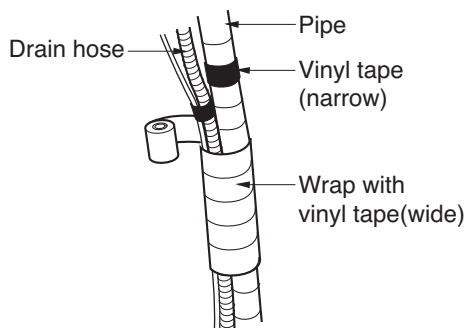
3. Installation of indoor unit

3.3.5 Wrap the insulation material around the connecting portion.

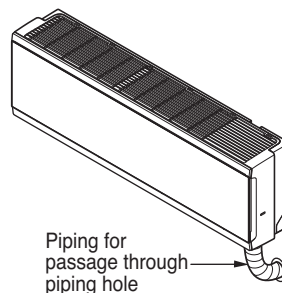
- ① Overlap the connection pipe heat insulation and the indoor unit pipe heat insulation material. Bind them together with vinyl tape so that there may be no gap.
- ② Wrap the area which accommodates the rear piping housing section with vinyl tape.



- ③ Bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.

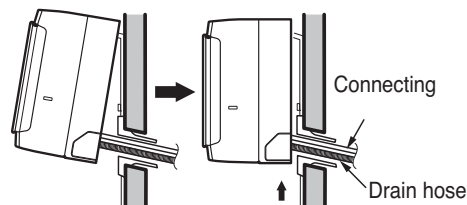


- ④ Reroute the pipings and the drain hose across the back of the chassis.



3.3.6 Indoor unit installation on the plate

- ① Remove the spacer.
- ② Ensure that the hooks are properly seated on the installation plate by moving it left and right.
- ③ Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).

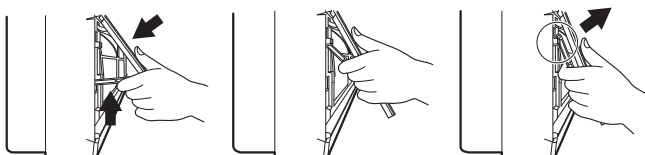


3. Installation of indoor unit

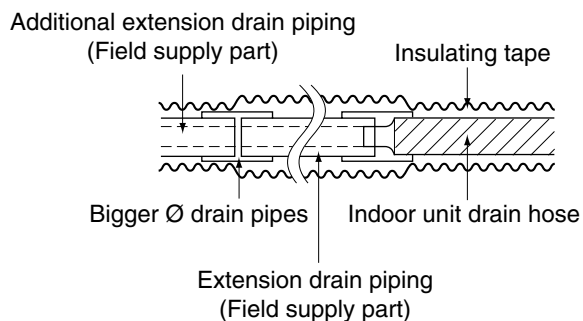
3.3.7 Connection of pipings

1) To remove the front panel from the indoor unit.

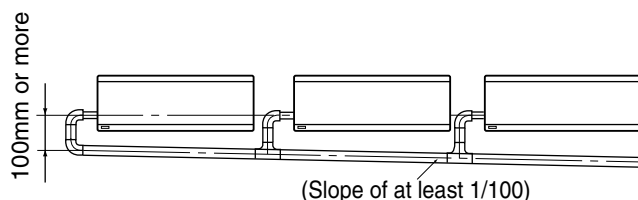
- ① Set the air direction louvers up-and-down to the position(horizontally) by hand. Raise the link up to hook hanger and remove front panel forward.
- ② Remove the securing screws that retain the front panel. Pull the lower left and right sides of the grille toward you and lift it off.



- When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors. (Refer to the figure given below)



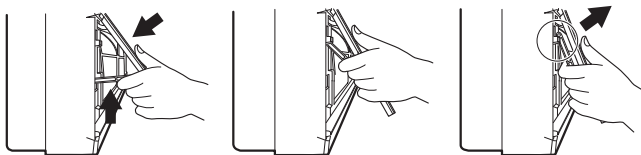
- Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose (hard vinyl chloride, inner diameter 13/16 inch) or bigger.
- In case of converging multiple drain pipes, install them referring to the figure given below.
- Select diameter of drain piping which adapts to the capacity of the unit connected.



3.3.8 Checking the drainage

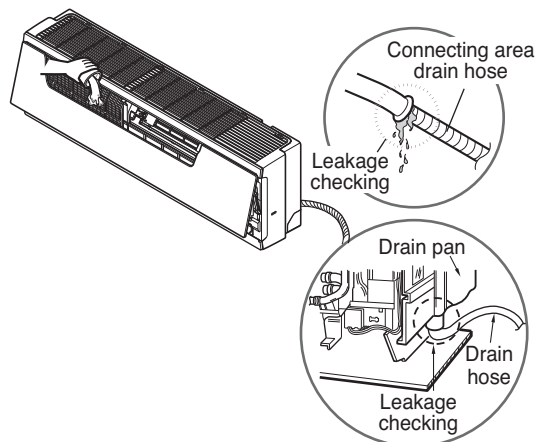
1) To remove the front panel from the indoor unit.

- ① Set the air direction louvers up-and-down to the position(horizontally) by hand. Raise the link up to hook hanger and remove front panel forward.
- ② Remove the securing screws that retain the front panel. Pull the lower left and right sides of the grille toward you and lift it off.



2) To check the drainage.

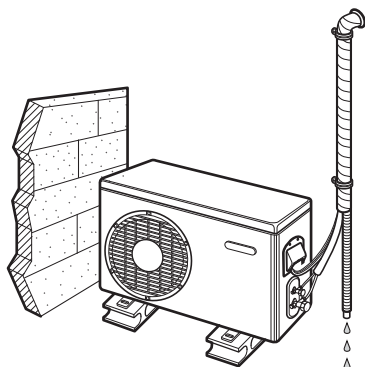
- ① Pour a glass of water on the evaporator.
- ② Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the through the drain exit.



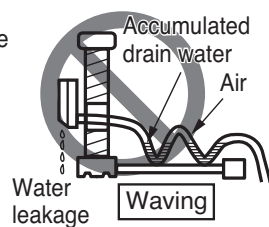
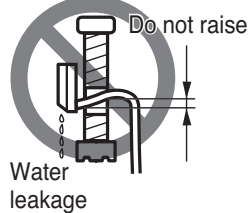
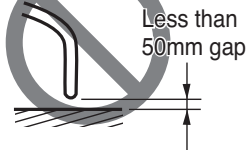
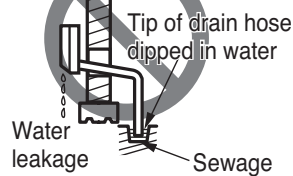
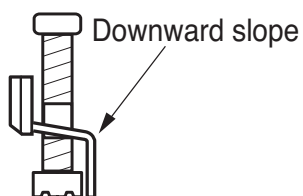
3. Installation of indoor unit

3) Drain piping

- ① The drain hose should point downward for easy drain flow.



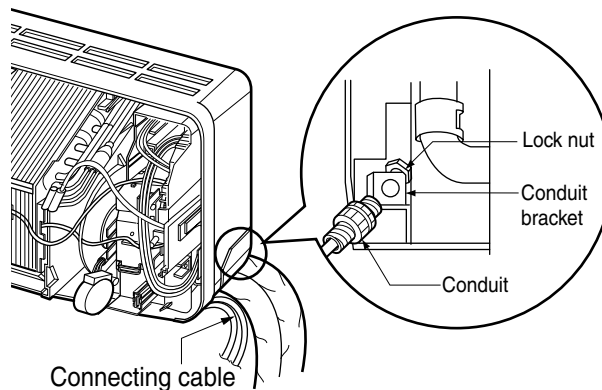
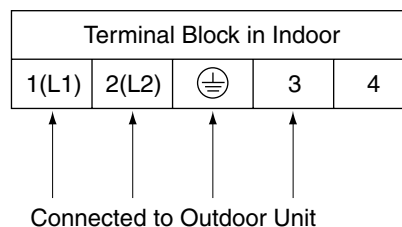
CAUTION



3.3.9 Connecting the cable

- 1) Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

- ① Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



3. Installation of indoor unit

⚠ CAUTION

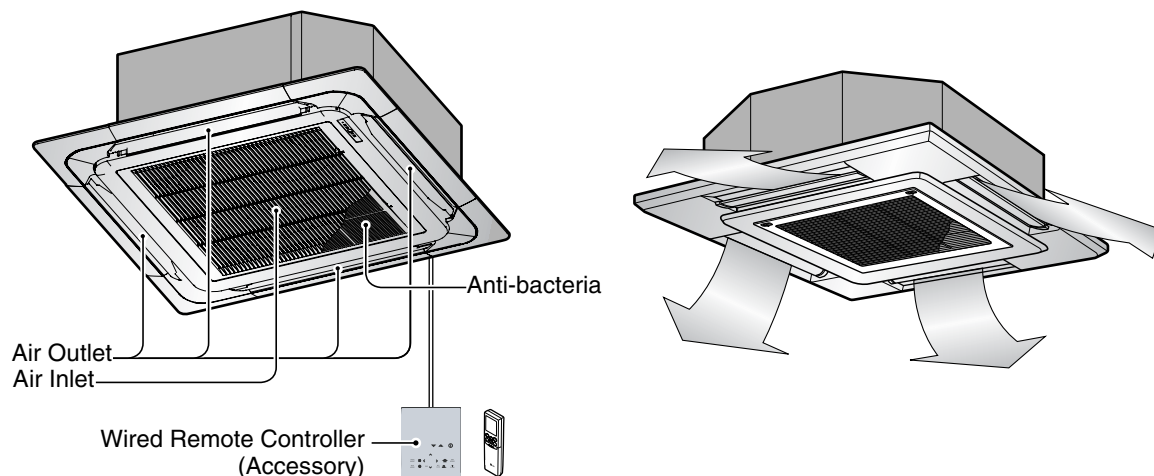
After the confirmation of the above conditions, prepare the wiring as follows:

- 1) Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.
- 2) The screw which fasten the wiring in the casing of electrical fittings are liable to become loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burn-out of the wires.)
- 3) Confirm the specification of power source.
- 4) Confirm that electrical capacity is sufficient.
- 5) See to that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- 6) Confirm that the cable thickness is as specified in the power source specification.
(Particularly note the relation between cable length and thickness.)
- 7) Always install an earth leakage circuit breaker in a wet or moist area.
- 8) The following would be caused by voltage drop.
 - Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.
- 9) The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 1/8" in each active(phase) conductors.
- 10) When carrying out wiring connection, take care not to pull at the conduit.

3. Installation of indoor unit

3.4 Ceiling cassette 4-way

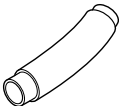
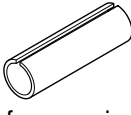
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



3.4.1 Accessories

Check whether the following accessories are included with your unit.

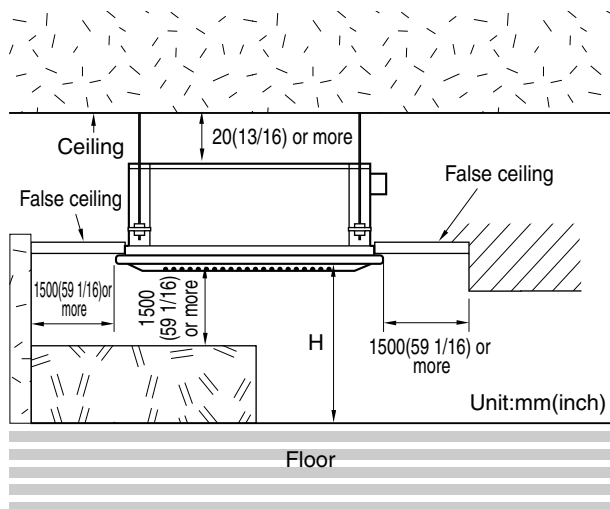
1) Standard accessories

Name	Drain hose	Clamp metal	Washer for hanging bracket	Clamp	Conduit Bracket	Insulation for fitting	(Other)
Quantity	1 EA	1 EA	8 EA	8 EA	1 EA	1 SET	
Shape					 Conduit Bracket   Screw(M4) 2EA	 for gas pipe  for liquid pipe	• Paper pattern for installation • Owner's manual • Installation manual

3. Installation of indoor unit

3.4.2 Selection of the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to the air circulation.
- There should be provision of easy condensate drain.
- Taking into accounting the noise prevention criteria, spot the installation location.
- Do not install the unit near the door way.
- Keep proper distances, of the unit, from ceiling, fence, floor, walls and other obstacles as shown in figure.
- The indoor unit must have the maintenance space.

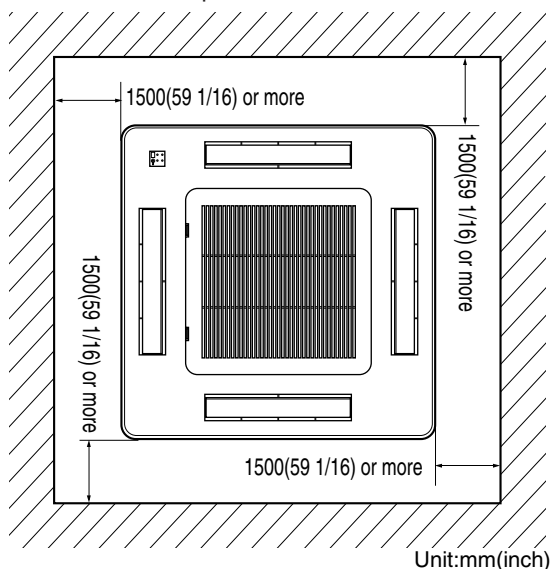


NOTE

Above figure means minimum value. Please keep these value at least.

If H is 106~126: High ceiling operation control required

If H is ~106: Normal operation

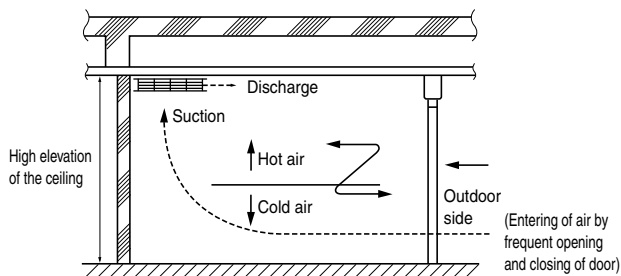


3.4.3 Precautions regarding cassette indoor unit installation

1) Main points about the indoor installation

- In case of high height ceiling

In general commercial places and offices though the height of the ceiling is 8.9ft, the ceiling height can be 9.8ft. In such cases because of the temperature difference with the floor the heating effect can fall down.

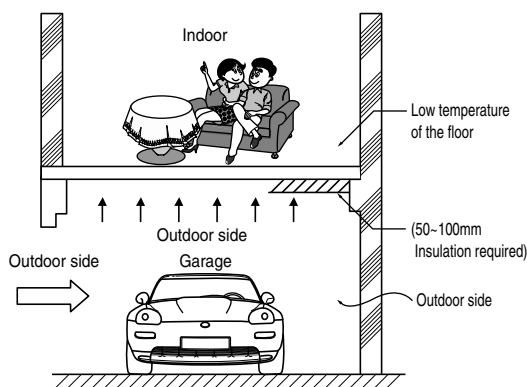


- Countermeasure method

- ① Air conditioner must be able to operate in high ceiling conditioner.
- ② Plan to install the circulator.
- ③ The air discharge port is made to give more airflow to the down wood directions.
- ④ The gate or exit of the building is protected by dual door system.

2) In case the floor or surfaces of the place to be air conditioned is in direct contact with the outdoor air

- The floor of the heating room indirect contact with the storeroom, garage or the outside air receives the cold air at the floor and the floor temperature decrease will feel cold at the feet.



In such places where the feet comes in direct contact with floors will give a cold feeling to th floor.

3. Installation of indoor unit

- Countermeasure:

- Use the carpet on the floor (compared to the tiles the carpet over it will have a 3 degree rise in temperature)
- Insulating the floor.
- Floor heating

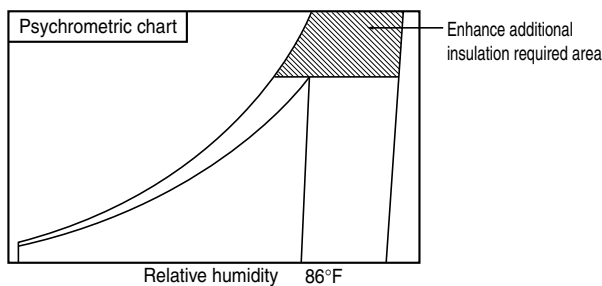
⚠ CAUTION

• Case of cold air intake:

The duct surface will have the dew drops so a insulation on the duct is a must. (Insulation material: a glass wool of thickness 1.0inch will be appropriate.)

3) In case of high temperature or high humidity between the false ceiling and ceiling slab (near by the sea, river, lake, spa)

- In case of temperature of 30 degree and humidity above 80%, the units body as well as the piping insulation should be strengthened. Refer to the picture given below.

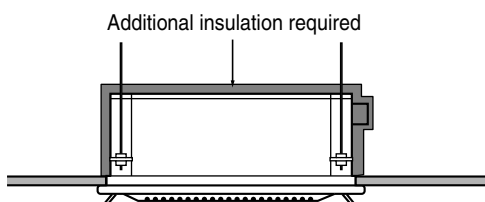


- Places having the temperature and humidity of the surrounding water sources (sea, river etc.)

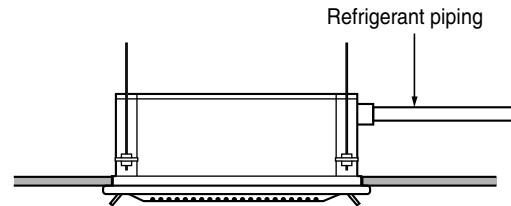
In case the steam is generated between the false ceiling and the ceiling slab

Due to some nearby by steam source.

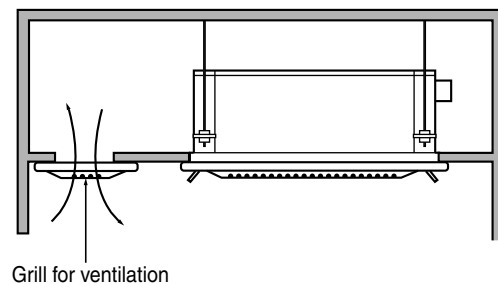
- Indoor unit: Insulate the unit body with some insulation like glass wool at least 13/32 inch in thickness.



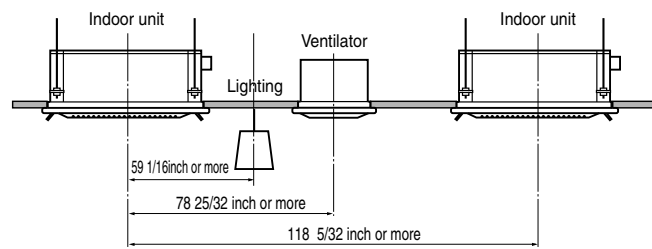
- Refrigerant piping: Increase the piping insulation thickness with thickness above 13/16 inch.



- Others: Inside the ceiling near the air tight seal places (To escape of the humidity inside false ceiling)



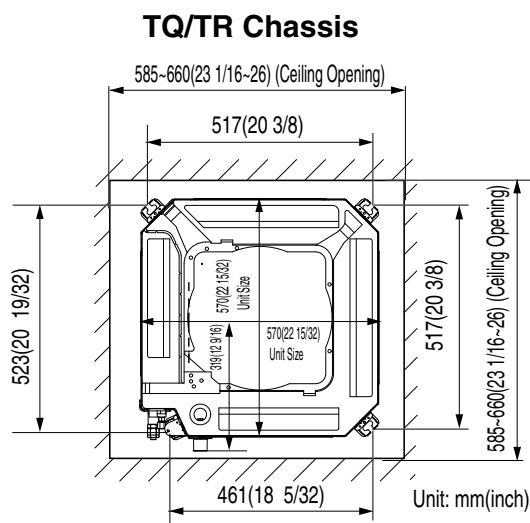
4) In case of multiple indoor cassette units (recommended)



3. Installation of indoor unit

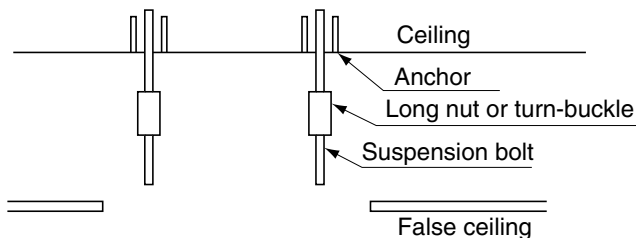
3.4.4 Ceiling opening dimensions and hanging bolt location

- ① The dimensions of the paper pattern for installation are the same as those of the ceiling opening dimensions.
- ② Select and mark the position for fixing bolts and piping hole.
- ③ Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
- ④ Drill the hole for anchor bolt on the wall.



1) Install the suspension bolts.

(Use either a W3/8" or M10 size bolt) Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance from the ceiling before proceeding further.



NOTE

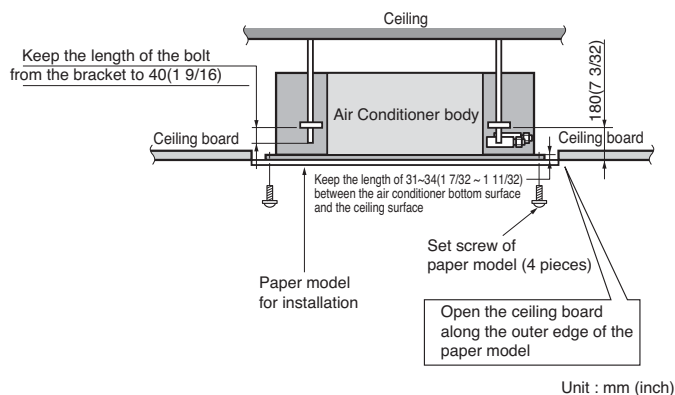
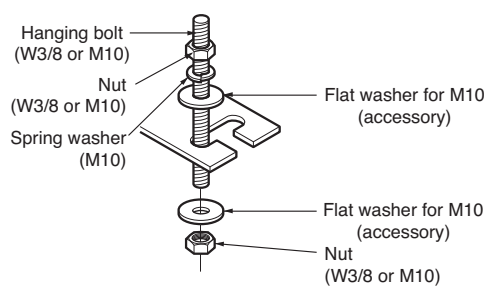
All the above parts are field supplied.

3.4.5 Indoor unit installation

- Installing of the accessories (except for the decoration panel) before installing the indoor unit is easier.

1) Install the indoor unit.

- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket.



3. Installation of indoor unit

- The following parts are local purchasing.
- Hanging Bolt - W 3/8 or M10
- Nut - W 3/8 or M10
- Spring Washer - M10
- Plate Washer - M10

2) For new ceilings

① Refer to the paper pattern for ceiling opening dimension.

- The center of the ceiling opening is indicated on the paper pattern for installation.
The center of the unit is indicated on the label attached to the unit and on the paper pattern for installation.
- First remove paper packaging material from the 4 corners of the paper pattern for installation, fix the paper pattern to the unit with screws.
- Ceiling height is shown on the side of the paper pattern for installation. Adjust the height of the unit according to this indication.

<Ceiling work>

② Adjust the unit to the right position for installation.

③ Assure that the unit is horizontal.

- The indoor unit is equipped with a built-in drain pump and float switch. At each of the unit's 3 corners, verify that it is level by using a water-level or a water-filled vinyl tube. (Otherwise it will result in the malfunctioning of unit and cause water to drip.)

④ Remove the washer fixing plate used for preventing the washer from falling and tighten the upper nut.

5) Remove the paper pattern for installation

2) For existing ceilings

- ① Adjust the height and position of the unit.
- ② Perform steps 3 and 4 in "5.1 For new ceilings".

3.4.6 Connecting pipes to the indoor unit

1) Refrigerant piping work

please refer "REFRIGERANT PIPING WORK".

2) Piping insulation

- ① Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.
- ② Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 248°F).
- ③ Precautions in high humidity circumstance:
- ④ Refer to insulation work

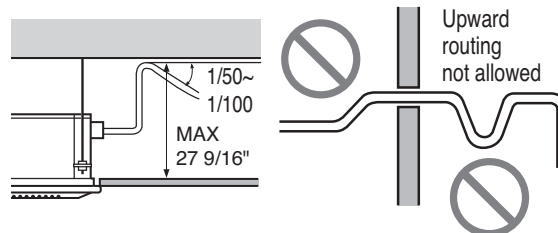
⚠ CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

3) Indoor unit drain piping

- Drain piping must have downward (1/50 to 1/100); be sure not to provide up-and-down slope to prevent reverse flow.
- During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 1 1/4".

Piping material: Polyvinyl chloride pipe 1" and pipe fittings

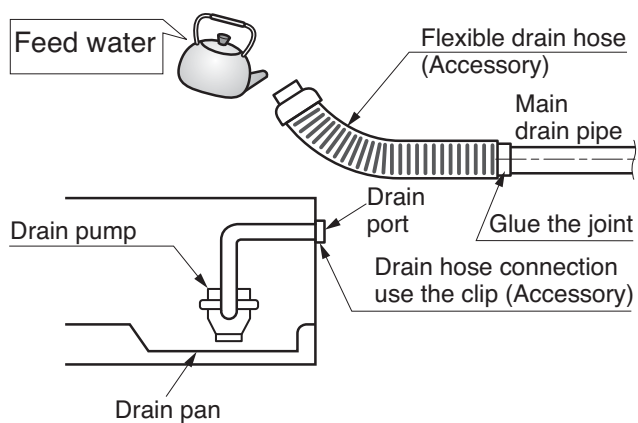


3. Installation of indoor unit

- Be sure to install heat insulation on the drain piping.

Heat insulation material: Polyethylene foam with thickness more than 13/32".

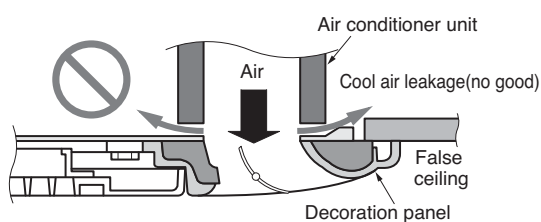
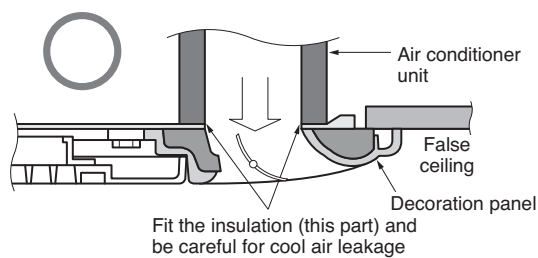
4) Drain test



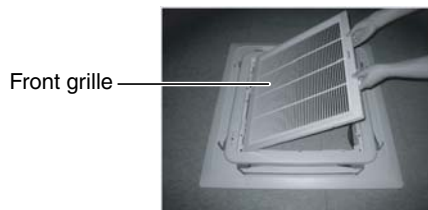
3.4.7 Installation of decoration panel

⚠ CAUTION

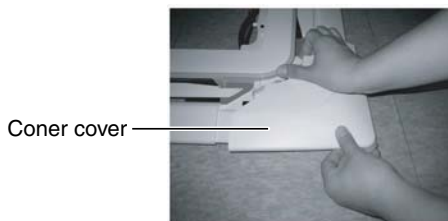
- Properly install decoration panel because any slit or gap between unit and decoration panel will result cool air leakage which may be responsible for water dribbling.



1. Remove the packing and take out air inlet grille from front panel.

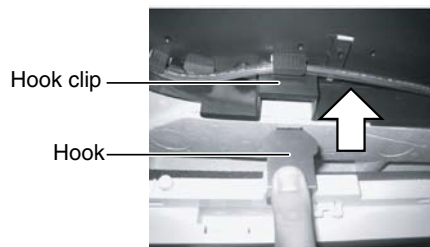


2. Remove the Corner covers of the panel.



3. Installation of indoor unit

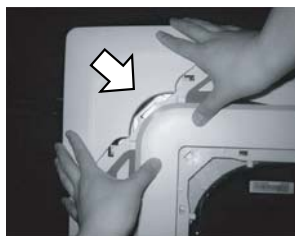
3. Fit the panel on the unit by inserting hooks as shown in picture.



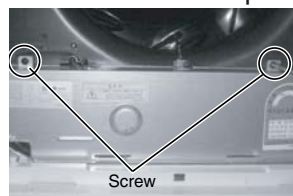
4. Insert two screws on diagonal corners of panel. Do not tighten the bolts completely. (The fixing screws are included in the indoor unit box.) Check the alignment of panel with the ceiling. Height can be adjusted using hanging bolts as shown in picture. Insert the other two screws and tighten all screws completely.



5. Fit the corner covers.



6. Open two screws of control panel cover.

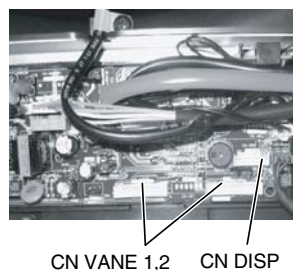


7. Connect one display connector and two vane control connectors of front panel to indoor unit PCB.

The position marking on PCB is as:

Display connector : CN-DISP

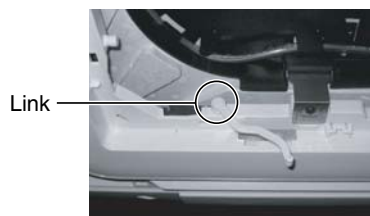
Vane control connector: CN-VANE 1,2



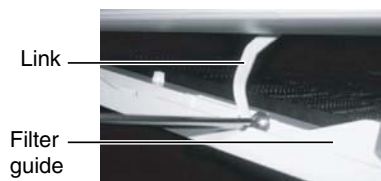
8. Close the cover for control box.



9. Fit the link on the panel as shown in picture. (The link is included in the front panel unit box.)



10. Attach the other side of link on the filter guide of inlet grille. Install the air inlet grille and filter on the panel.



3. Installation of indoor unit

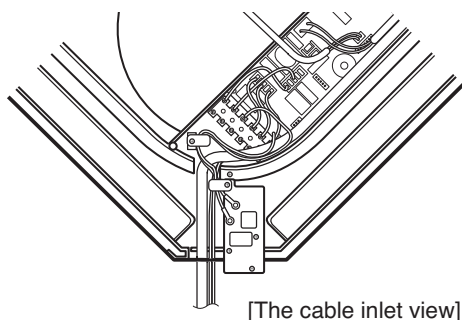
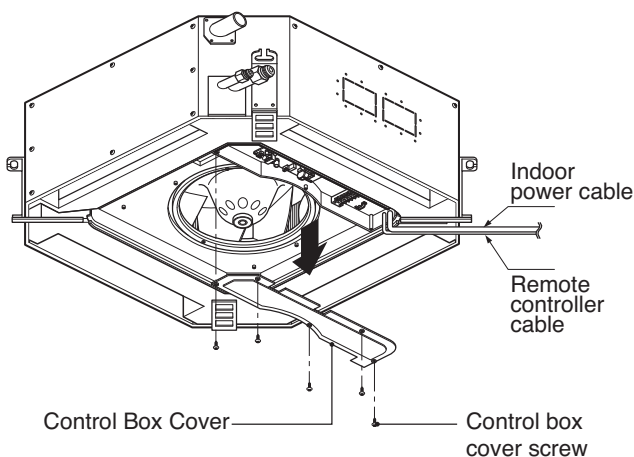
3.4.8 Electric wiring work

1) General instructions

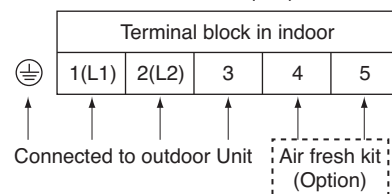
- ① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.
- ② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- ③ All wiring must be performed by an authorized electrician.
- ④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor units are mismatched, the system may cause a malfunction.
- ⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring Connection

- ① Open the control box cover and connect the Remote controller cord and Indoor power wires.



■ 12k/18kBtu/h Class (1Ø)



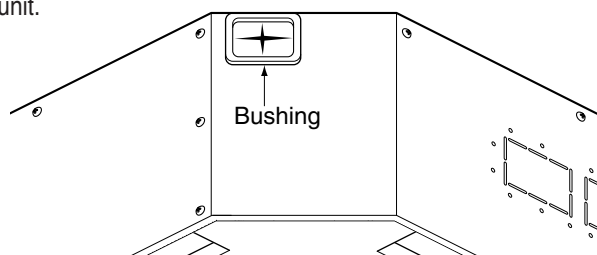
- ② Make sure to attach the sealing material (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- ③ When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the holes to prevent damage to them.
- ④ Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

⚠ WARNING

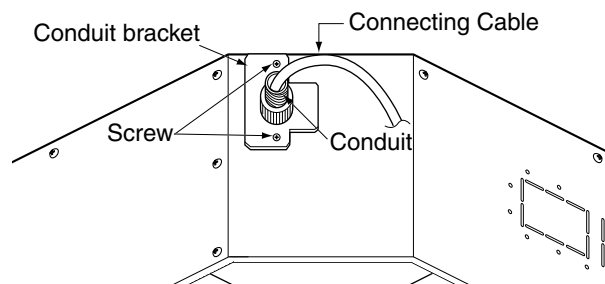
- Make sure that the screws of the terminal are not loose.

3) Conduit connection

- ① Remove the busing rubber product attached on the indoor unit.



- ② Join the conduit and the conduit bracket together using nut.
- ③ Set the connecting cable into the terminal block of indoor unit, and tighten set screw to lock the conduit bracket to the indoor unit.

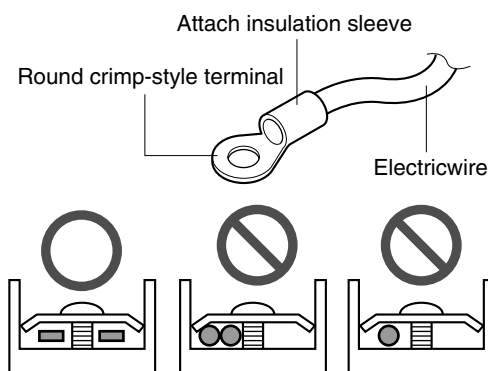


3. Installation of indoor unit

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

- Do not connect wires of different gauge to the same power supply terminal. (Looseness connection may cause overheating.)
- Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

4. At the unit, keep proper separation between transmissio and power supply wiring.

The equipment may malfunction if subjected to electrical (external) noise.

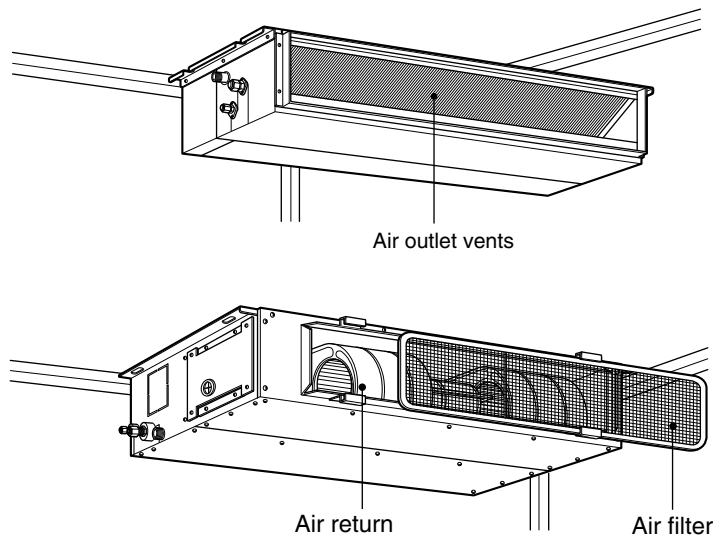
5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful that wires should not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worst case, electric shock or fire.

3. Installation of indoor unit

3.5 Ceiling concealed duct (Low static)

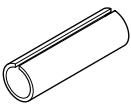
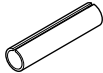
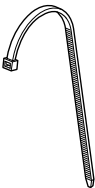
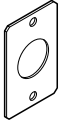
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.



3.5.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

Name	Clamp metal	Insulation for fitting	Screws for duct flanges	Clamp	Conduit Bracket	(Other)
Quantity	1 EA	1 set	1 set	8 EA	1 EA	
Shape		 for gas pipe  for liquid pipe			 Conduit Bracket  Screw(M4) 2EA	• Owner's manual

3. Installation of indoor unit

3.5.2 Selection of the best location

Install the air conditioner in the location that satisfies the following conditions.

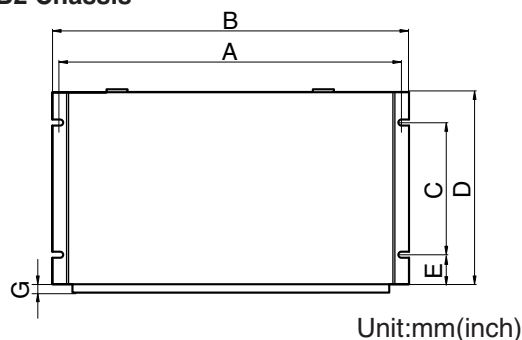
- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage. (Suitable dimension "H" is necessary to get a slope to drain as figure.)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

3.5.3 Ceiling dimension and hanging bolt location and service space

1) Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

- If supporting structural members are not strong enough to take the unit's weight, the unit could fall out of place and cause serious injury.
- Where sufficient clearance of maintenance and service can be ensured.
- Where optimum air distribution can be ensured.
- Where nothing blocks the air passage.
- Where condensate can be properly drained.
- Where piping between indoor and outdoor units is possible within the allowable limit (Refer to the installation manual of the outdoor unit.)
- Keep the indoor and outdoor units, power cable and transmission wiring, at least 3.3ft from TVs and radios, to prevent distorted pictures and static. (Depending on the type and source of the electrical waves, static may be heard even when more than 3.3ft away.)

• B1/B2 Chassis

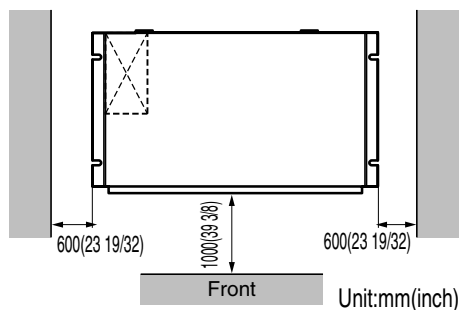


Dimension	A	B	C	D	E	F	G	H	I
Capacity									
9/12k Btu/h Class	850 (33 15/32)	900 (35 15/32)	383 (15 3/32)	570 (22 7/16)	93.5 (3 11/16)	190 (7 1/2)	20.6 (13/16)	795 (31 5/16)	163 (6 13/32)
18k Btu/h Class	1130 (44 1/2)	1180 (46 1/2)	383 (15 3/32)	570 (22 7/16)	93.5 (3 11/16)	190 (7 1/2)	20.6 (13/16)	1065 (41 15/16)	163 (6 13/32)

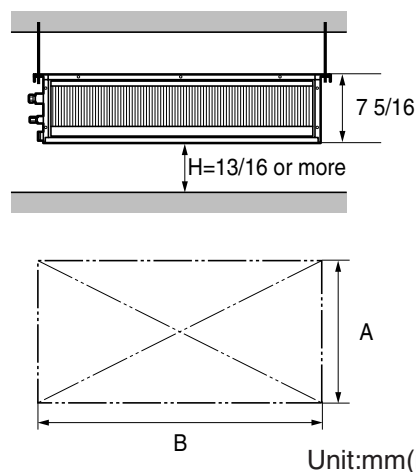
2) Relative positions of indoor unit, suspension bolt and inspection hatch size

• B1/B2 Chassis

Top view



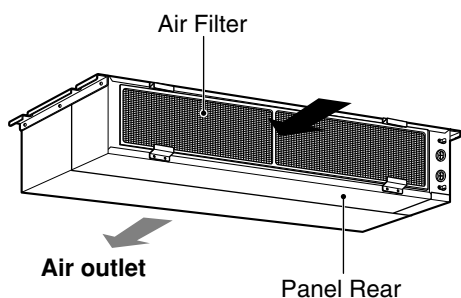
Front view



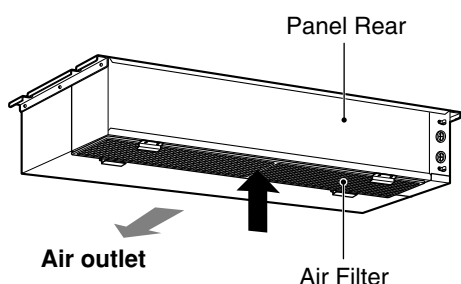
Capacity(Btu/h Class)	A	B
9/12k	600(23 5/8)	900(35 15/32)
18k	600(23 5/8)	1100(43 5/16)

3. Installation of indoor unit

- Low static duct type in case of suction from back side.



- Low static duct type in case of suction from bottom side



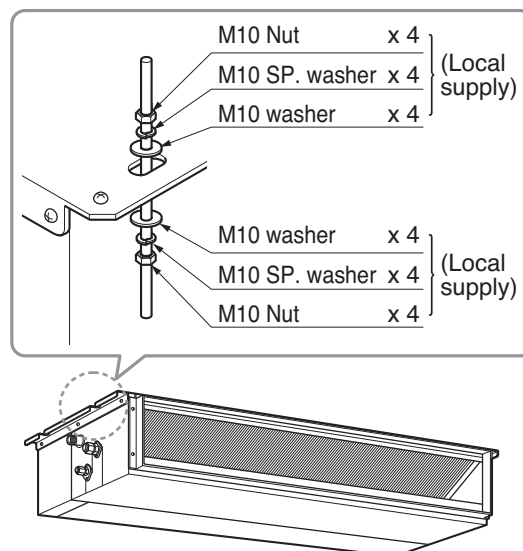
3) Install a canvas duct to the air discharge outlet and air inlet so that vibration from the machine body is not transmitted to the duct or ceiling. You should also apply acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts.

4) Install suspension bolts. (Use bolts of 13/32 inch diameter.)

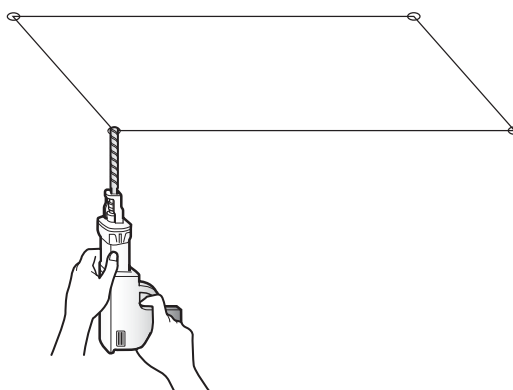
- Install the equipment where supporting structures are strong enough to bear the equipment's weight. Use embedded inserts or anchor bolts with new buildings and hole-in-anchors with old buildings.

3.5.4 Position of suspension bolt

- ① A place where the unit will be leveled and that can support the weight of the unit.
- ② A place where the unit can withstand its vibration.
- ③ A place where service can be easily performed.



- ④ Select and mark the position for fixing bolts.
- ⑤ Drill the hole for set anchor on the face of ceiling.

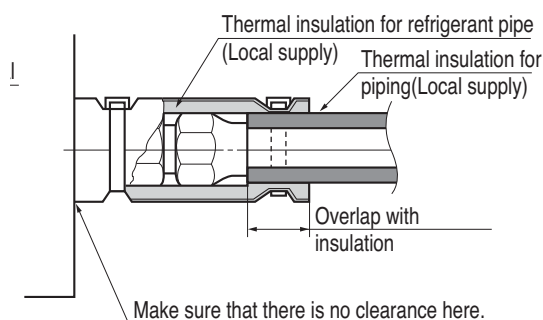
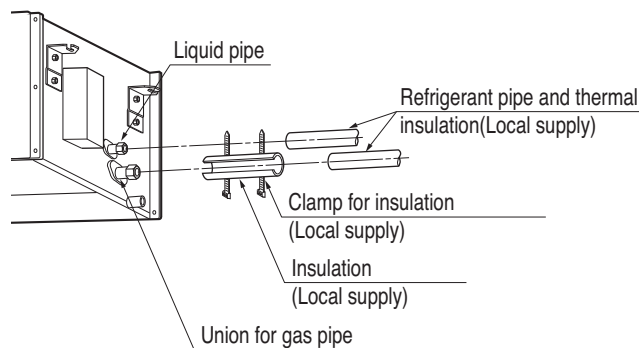
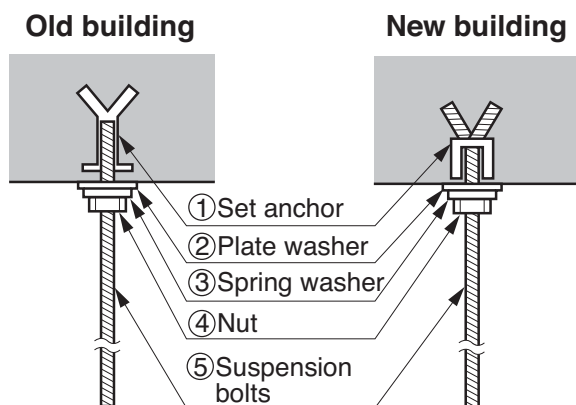


CAUTION

- Tighten the nut and bolt to prevent the unit falling.

3. Installation of indoor unit

- ⑥ Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- ⑦ Mount the suspension bolts to the set anchor firmly.
- ⑧ Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.



3.5.5 Connecting pipes to the indoor unit

1) Refrigerant piping work

please refer "REFRIGERANT PIPING WORK".

2) Piping insulation

- ① Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.
Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 248°F).
- ② Precautions in high humidity circumstance: This air conditioner has been tested according to the "KS Conditions" and confirmed that there is not any default. However, if it is operated for a long time in high humid atmosphere (dew point temperature: more than 73°F), water drops are liable to fall. In this case, add heat insulation material according to the following procedure:
- ③ Heat insulation material : Adiabatic glass wool with thickness 13/32 to 13/16 inch.
- ④ Stick glass wool on all air conditioners that are located in ceiling atmosphere.

CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

3. Installation of indoor unit

3) Indoor unit drain piping

- ① Drain piping must have down-slope (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reversal flow.
- ② During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- ③ The outside diameter of the drain connection on the indoor unit is 1 1/4 inch.

Piping material: Polyvinyl chloride pipe inner diameter Ø1 inch and pipe fittings

⚠ CAUTION

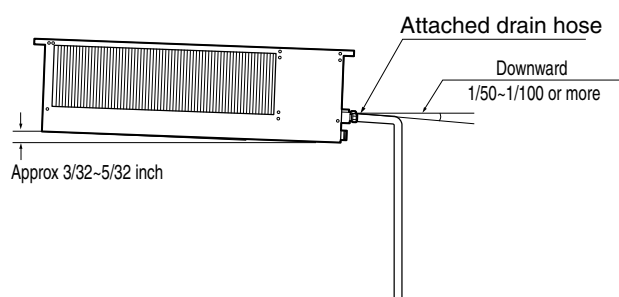
1. Decline Installation of indoor unit is very important for the drain of the duct type air conditioner.
2. Minimum thickness of the insulation for the connecting pipe should be 7/32 inch.

4) Caution for gradient of unit and drain piping

- Without drain pump:

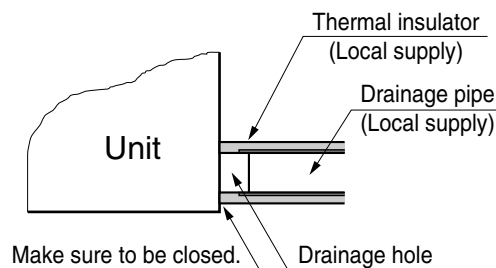
- Always lay the drain with downward inclination (1/50 to 1/100). Prevent any upward flow or reverse flow in any part.
- 7/32 inch or thicker formed thermal insulation shall always be provided for the drain pipe.

Correct method

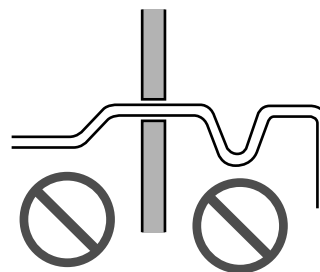


※ U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)

- Lay the drain hose with a downware inclination so water will drain out.



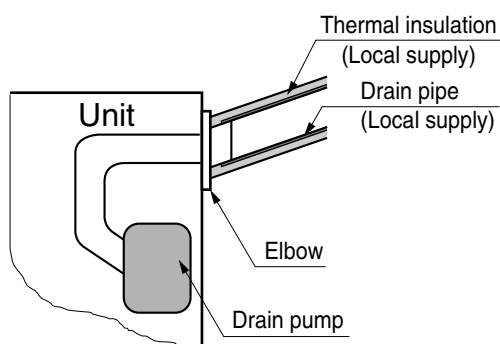
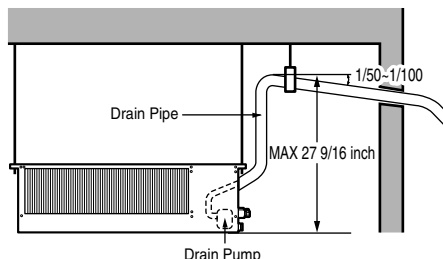
Wrong method



3. Installation of indoor unit

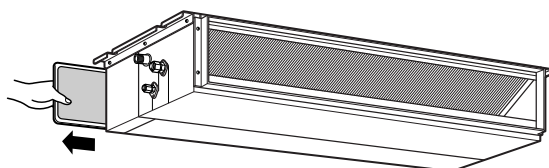
- With drain pump

- ① Possible drain head height is upto 27 6/19 inch. So the drain head should be below 27 6/19 inch.
- ② Keep the drain hose downward upto 1/50~1/100 inclination. Prevent any upward flow or reverse flow in any part.
- ③ 7/32 inch or thicker insulation should be provided for the drain pipe.



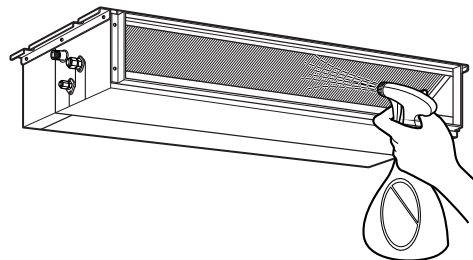
5) Checking the drainage

- ① Remove the air filter.



② Check the drainage

- Spray one or two glasses of water on the evaporator.
- Ensure that water flows through the drain hose from indoor unit without any leakage.



3.5.6 Electric wiring work

1) General instructions

- ① All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- ② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- ③ All wiring must be performed by an authorized electrician.
- ④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and ID unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.
- ⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring connection

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

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

Terminal block in indoor			
1(L1)	2(L2)		3

↑ ↑ ↑ ↑
Connected to outdoor unit

3. Installation of indoor unit

Clamping of cables

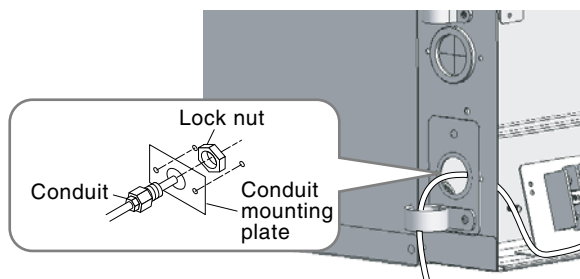
- ① Arrange 2 power cables on the control panel.
- ② First, fasten the steel clamp with a screw to the inner boss of control panel.
- ③ For the cooling model, fix the other side of the clamp with a screw strongly. For the heat pump model, put the 0.75mm² cable (thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel.
- ④ In Australia, the length of power supply cord measured from the entry of the power supply cord to the middle of live pin on the power plug should be over 5.9ft.

CAUTION

- Make sure that the screws of the terminal are fixed tightly.

3) Conduit connection

- ① Remove the busing rubber product attached on the indoor unit.
- ② Set the connecting cable into the terminal block of indoor unit, and tighten set screw to lock the conduit bracket to the indoor unit.
- ③ Join the conduit and the conduit bracket together.



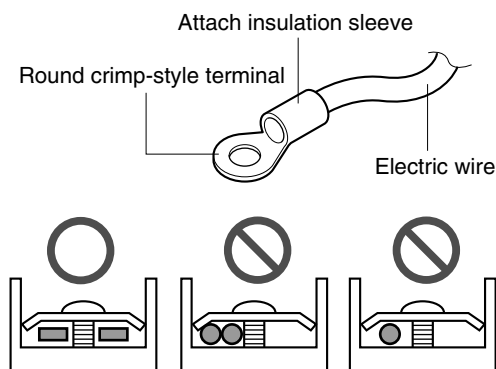
CAUTION

- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

- Do not connect wires of different gauge to the same power supply terminal.
- Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

4. Outside of the unit, keep proper separation between transmission and power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

4. Installation of outdoor unit

4.1 Safety precautions

Please strictly follow the instructions given in the Installation manual .Improper installation by ignoring the instructions can lead to damage to life and property.

Make sure to read the following safety instructions very carefully and thoroughly .



This symbol indicates the possibility of death or serious injury.



This symbol indicates the possibility of injury or damage to properties.

n The meanings of the symbols used in this manual are as shown below.



Be sure not to do.



Be sure to follow the instruction.



Do not use a defective or underrated circuit breaker.

- There is risk of fire or electric shock.

Do not use a multi consent. Always use this appliance on a dedicated circuit and breaker.

- Otherwise it can cause electric shock or fire.

For electrical work, contact the dealer, seller, a qualified electrician, or an authorized service center. Do not disassemble or repair the product by yourself.

- There is risk of fire or electric shock.

Always ground the product as per the wiring diagram. Do not connect the ground wire to gas or water pipes lightning rod or telephone ground wire.

- There is risk of fire or electric shock.

Install the panel and the cover of control box securely.

- There is risk of fire or electric shock due to dust , water etc.

Use the correctly rated breaker or fuse.

- There is risk of fire or electric shock.

If the power cable or cord has scratches or skin peeled off or deteriorated then immediately replace it.

- There is risk of fire or electric shock.

For installation, removal or reinstall, always contact the dealer or an authorized service center.

- There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective foundation. Be sure that the installation area does not deteriorate with age.

- If the foundation collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

Never install the outdoor unit at a place from where it can fall down.

- The falling outdoor unit can cause damage or injury or even death of a person and also damage or malfunctioning of the product itself.

When the product is soaked (flooded or submerged) in water, contact an authorized service center for repair before using it again.

- There is risk of fire or electric shock.

In outdoor units the the step up capacitor supplies high voltage electricity to the electrical components. Be sure to discharge the capacitor completely before conducting the repair work.

- An charged capacitor can cause electrical shock.

4. Installation of outdoor unit

Be sure to use only those parts which are listed in the svc parts list. Never attempt to modify the equipment.

- The use of inappropriate parts can cause an electrical shock, excessive heat generation or fire.

Indoor/outdoor wiring connections must be secured tightly and the cable should be routed properly so that there is no force pulling the cable at the connection terminals.

- Improper or loose connections can cause excessive heat generation or fire.

Safely dispose off the packing materials.

- Things like screws, nails, batteries, broken things etc after installation or svc can cause injury to small kids. Tear away and throw away the plastic packaging bags so that children will not play with them.

Make sure to check that the power cable plug is not dirty, loose or broken, then only insert the plug completely.

- Dirty, loose or broken power plug can cause electric shock or fire.

During svc be sure to check the refrigerant to be used.

- Incorrect refrigerant used can prevent the normal operation of the unit.

When installing the unit, use the installation kit provided with the product.

- Otherwise the unit may fall and cause severe injury.

Do not touch, operate, or repair the product with wet hands.

- There is risk of electric shock or fire.

Do not place a heater or other appliances near the power cable.

- There is risk of fire and electric shock.

Do not allow water to run into electric parts. Install the unit away from water sources

- There is risk of fire, failure of the product, or electric shock.

Do not store or use or even allow flammable gas or combustibles near the product.

- There is risk of fire or failure of product.

If strange sounds, smell or smoke comes from the product, immediately turn the breaker off or disconnect the power supply cable.

- There is risk of electric shock or fire.

Do not open the front grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)

- There is risk of physical injury, electric shock, or product failure.

Turn the main power off when cleaning or repairing the product.

- There is risk of electric shock.

When the product is not to be used for a long time, turn off the circuit breaker.

- There is risk of product damage or failure, or unintended operation.

Take care to ensure that nobody especially kids could step on or fall onto the outdoor unit.

- This could result in personal injury and product damage.

4. Installation of outdoor unit

⚠ CAUTION

Use two or more people to lift and transport the product.

- Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.

- It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

Keep level even when installing the product.

- To avoid vibration or noise.

Do not install the product where the noise or hot air from the outdoor unit could damage or disturb the neighborhoods.

- It may cause a problem for your neighbors and hence dispute.

Always check for gas (refrigerant) leakage after installation or repair of product.

- Low refrigerant levels may cause failure of product.

Do not block the inlet or outlet of air flow.

- It may cause product failure.

Do not step on or put anything on the product.

- There is risk of personal injury and failure of product.

Do not insert hands or other objects through the air inlet or outlet while the product is operating.

- There are sharp and moving parts that could cause personal injury.

Be cautious when unpacking and installing the product.

- Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

If the refrigerant gas leaks during the repair, do not touch the leaking refrigerant gas.

- The refrigerant gas can cause frostbite (cold burn).

Do not tilt the unit when removing or uninstalling it.

- The condensed water inside can cause spill and wet the furniture and the floor.

Do not mix air or gas other than the specified refrigerant used in the system.

- If air enters the refrigerant system, an excessively high pressure results, causing equipment damage or injury.

If the refrigerant gas leaks during the installation or operation ventilate the area immediately.

- Otherwise it can be harmful for your health.

Do not expose your skin or kids or plants to the cool or hot air draft.

- This could harm to your health.

Use a firm stool or ladder when cleaning, maintaining or repairing the product at an height.

- Be careful and avoid personal injury.

Dismantling the unit, treatment of the refrigerant oil, oil and eventual parts should be done in accordance with local and national standards.

4. Installation of outdoor unit

4.1.1 Points for explanation about operations

The items with WARNING and CAUTION marks in the operation manual are the items pertaining to possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the operation manual.

4.1.2 Note to the installer

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

4.1.3 Selecting installation site for outdoor units

Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

- ① Location strong enough to bear the weight of the unit.
- ② Location accessible and having enough clearance for inspection and service in the future.
- ③ Location allowing easy condensate drainage suitable gradient of the unit and the drain pipe.
- ④ Piping between the indoor and outdoor unit is possible within the allowable limits.
- ⑤ Location free from electrical noise.
- ⑥ Location allowing optimum air distribution without any blocking to air flow.
- ⑦ Location having no risk of flammable gas leakage.
- ⑧ Location free from mineral oil mist or an oil spray or vapor eg in kitchen .It could result in leakage .
- ⑨ Location free from corrosive gases such as sulphurous acid gas because it corrodes the copper pipes or soldered parts resulting in leakage .
- ⑩ Location free from any machinery emitting electromagnetic waves which may disturb the control system thus causing malfunction of the unit .
- ⑪ Location free from flammable gases , carbon fibre , or ignitable dust suspensions in the air or where volatile flames are handled like gasoline or thinner. Operating in such conditions may result in fire .
- ⑫ Install the indoor and outdoor units, power supply wiring and connecting wires at least 1m. away from televisions or radios in order to prevent image interference or noise. (Depending on the radio waves, a distance of 1m. may not be sufficient enough to eliminate the noise.)
- ⑬ Consider whether the place where the unit will be installed can support the full weight of the unit, and reinforce it with boards and beams, etc. if needed before proceeding with the installation. Also, reinforce the place to prevent vibration and noise before installing. (The installation pitch can be found on the paper pattern for installation (3), so refer to it when considering the necessity for reinforcing the location.)
- ⑭ Obey the local and national regulations and limits regarding airconditioner installation.
- ⑮ Location free from lavatory (NH3.etc.). NH3 gas will cause corrosion of outdoor unit metallic parts.

4. Installation of outdoor unit

4.1.4 For the following items, take special care during construction and check after installation is finished

1. Items to be checked after completion of work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	It may be dangerous at electric leakage.	
Is wiring size according to specifications?	The unit may malfunction or the components burn out.	
Is something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

⚠ CAUTION

- **Be very careful about product transportation.**
Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.
- **Safely dispose of the packing materials.**
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

NOTE

- **Install the indoor and outdoor units, power supply wiring and connecting wires at least 3.3ft. away from televisions or radios in order to prevent image interference or noise.**
(Depending on the radio waves, a distance of 3.3ft. may not be sufficient enough to eliminate the noise.)

4. Installation of outdoor unit

4.1.5 Before installation

- **During product unpacking and removing it from the packing case, be sure to lift it without exerting any pressure on other parts, especially, horizontal flaps, the refrigerant piping, drain piping, and other resin parts.**
- Be sure to remove a cushion (corrugated paper) located between the heat exchanger and the right air filter.
- Be sure to check the type of R410A refrigerant to be used before installing the unit. (Using an incorrect refrigerant will prevent normal operation of the unit.)
- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- For the installation of an outdoor unit, refer to the installation manual attached to the outdoor unit.
- When using the wireless remote controller, refer to the installation manual attached to the wireless remote controller.
- Entrust installation to the place of purchase or an authorized serviceman. Improper installation could lead to leaks and in worst cases, electric shock or fire.
- Use only parts provided with the unit or parts satisfying required specifications. Unspecified parts could cause the unit to fall out of place, or could lead to leaks and, in the worst cases, electric shock or fire.

4. Installation of outdoor unit

4.2 Introduction

This installation guidance describes the procedures for outdoor unit installation, piping, wiring, and control between outdoor units, indoor units and controller.

Installation of the indoor units is not described in this part. Please refer to the installation guidance manual which supplied with indoor units for their respective installation.

4.2.1 Lifting method

- ① When carrying the unit suspended, pass the ropes under the unit and use the two fork lift slots each at the front and rear.
- ② Always lift the unit with ropes attached at four points so that impact is not applied to the unit.
- ③ Attach the ropes to the unit at an angle of 40° or less.
- ④ Use two ropes at least 23ft long.

CAUTION

Be very careful when carrying the product.

- 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.
- 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 of it.

4.2.2 Inspecting and handling the unit

At the time of delivery, the package should be checked for any damage from out side and inside, If damaged then it should be reported to the carrier claims agent immediately . When handling the unit refer to following cautions:

- ① Handle the unit with care. Keep the unit upright in order to avoid inside components damage.
- ② If a forklift is to be used it should pass the forklift arms through the openings at the bottom of the unit.
- ③ If a crane is used, lift the unit preferably with 2 ropes of at least 23ft length.
- ④ When lifting the unit with a crane, always use protectors to prevent belt damage and pay attention to the position of the unit's center of gravity.
- ⑤ Bring the unit in original package to prevent damage during local transport.

4. Installation of outdoor unit

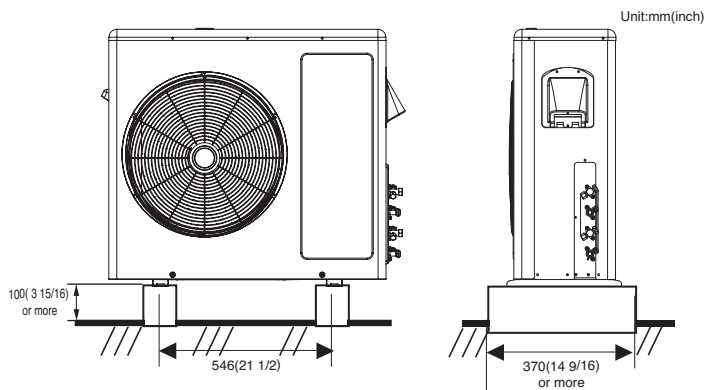
4.3 Foundation

MULTI F™

A2UW183FA2[LMU187HV]

<Basic intensity>

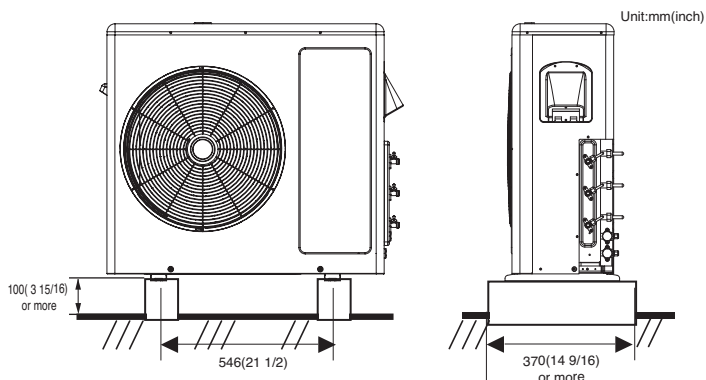
Bolt Factor	M10-J type
Concrete height	3 15/16 inch or more
Bolt inserted depth	2 3/4 inch or more



A3UW243FA2[LMU247HV]

<Basic intensity>

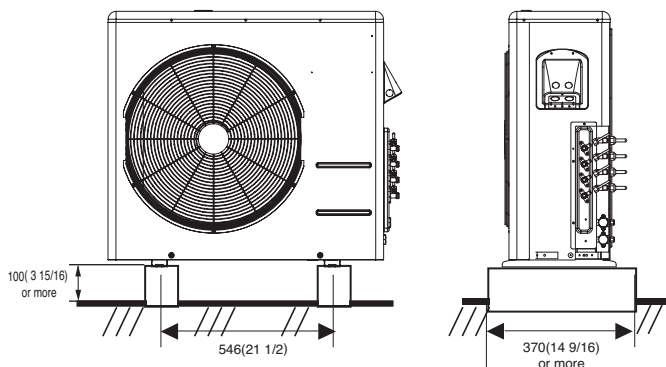
Bolt Factor	M10-J type
Concrete height	3 15/16 inch or more
Bolt inserted depth	2 3/4 inch or more



A4UW363FA1[LMU366HV]

<Basic intensity>

Bolt Factor	M10-J type
Concrete height	3 15/16 inch or more
Bolt inserted depth	2 3/4 inch or more

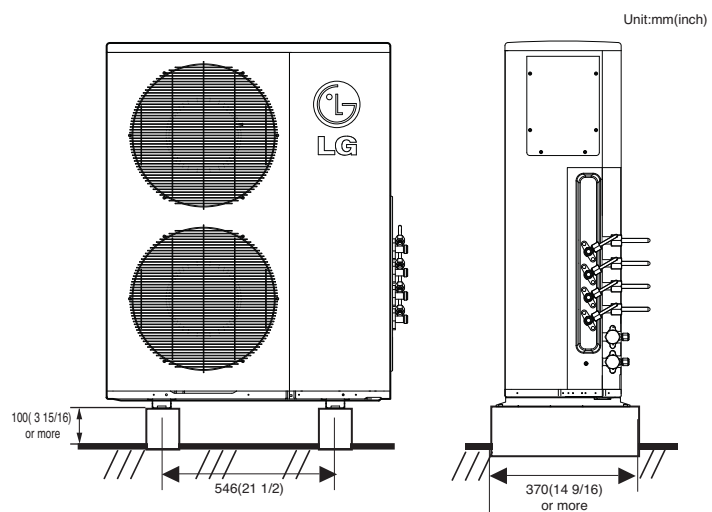


4. Installation of outdoor unit

A4UW363FA2[LMU369HV]

<Basic intensity>

Bolt Factor	M10-J type
Concrete height	3 15/16 inch or more
Bolt inserted depth	2 3/4 inch or more

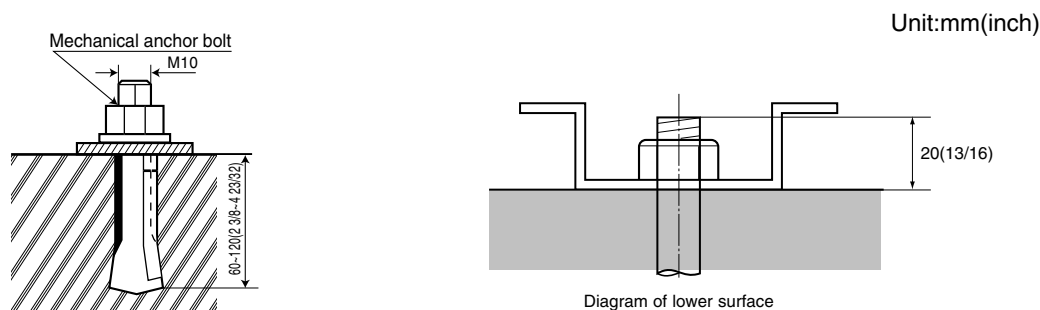


4. Installation of outdoor unit

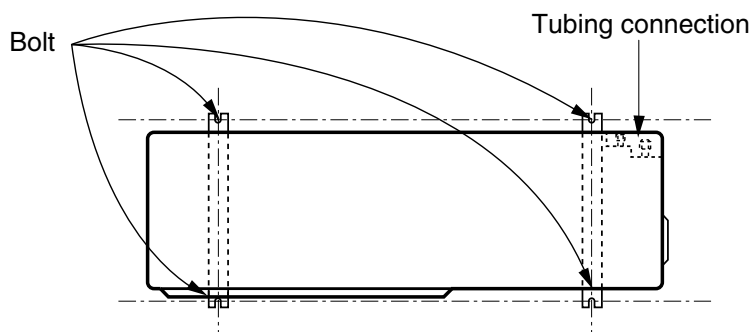
4.4 Settlement of the outdoor unit

- Anchor the outdoor unit with a bolt and nut tightly and horizontally on a concrete or rigid mount.
- When installing on the wall, roof or rooftop, anchor the mounting base securely with a nail or wire assuming the influence of wind and earthquake.
- In the case when the vibration of the unit is conveyed to the house, secure the unit with an anti-vibration rubber.

Bolt construction work



Settlement draw of outdoor units



CAUTION

- The ingredients of foundation : Cement : Sand : Gravel for the concrete should 1 : 2 : 4 ratio
- The foundation surface should be finished with mortar.
- The edges of foundation should be rounded.
- A drain passage should be made around the foundation to thoroughly drain water away from the equipment installation area.
- If installing the outdoor units on the roof, the roof's strength have to be checked.
- Care should be taken for weather - proofing
- Blocking all gaps of outdoor unit, for passing piping and wiring, using sealing material (Field supply)
(Animals and bugs might enter in the machine.)

4. Installation of outdoor unit

4.5 Selection of the best location

This Multi F & Multi F DX unit is suitable for installation in a residential and commercial environmental situation. If installed near a household appliance it can cause electromagnetic interference.

The units should be installed in a location that meets the following requirements:

- ① A robust and strong base which can support the weight of the unit and will not degrade easily
- ② If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that the discharge air of the condenser is not restricted.
- ③ It is recommended that the outdoor unit should be fenced to avoid animals or plants being exposed in the direct path of the discharged air .
- ④ Ensure proper spaces between the unit and its surrounding as given in the figure.
- ⑤ Ensure that the water shall not cause any damage by overflowing in case of water condensation
- ⑥ The noise, vibration and hot discharged air of the outdoor unit should not annoy the surrounding environment.
- ⑦ Ensure that there is no damage to the pipes in long run as it may cause the refrigerant leakage.
- ⑧ In case the outdoor may have heavy snow :
 - a. Make foundation at a suitable height.
 - b. Fit a suitable hood or a awning over the unit.
- ⑨ Rooftop Installations : If the outdoor unit is installed on a roof structure, be sure to level the unit. Ensure the roof structure and anchoring method are adequate for the unit location. Consult local codes regarding rooftop mounting.

CAUTION

An inverter air conditioner can cause electronic noise generated from broadcasting frequency. Make sure to maintain proper distances between the products and electric wires keeping away from stereo, TV set or other appliances

1. Branch switch, over current breaker
2. Remote controller
3. Cool/heat selector
4. Radio or TV set
5. Wireless microphone

If frequency signal of AM broadcasting or TV Set is non stable, keep distances of 9.8ft or more from product and use electric wire along with conduit tubes for power and transmission cable.

CAUTION

1. Actually the R410A refrigerant is not toxic, nonflammable and odor free. Any how if the refrigerant is leaked then its concentration may exceed the allowable limit depending on the related space volume.
Due to this, it is necessary to take measures for the volume size against leakage.
2. Do not install unit in following locations.
 - Locations where sulfurous acids or this kind of other corrosive gases might be help to corrode of copper piping and soldered joints, and can cause refrigerant leakage.
 - Locations such as kitchens or cuisine which contain a lot of hot oil or steam or where oil may splatter to the product. Can cause the unit to make leak or other serious problem.
 - Locations where electromagnetic waves is prevalent. The electromagnetic waves may cause the control system to malfunction or causing an abnormal operation.
 - Locations where inflammable gas might leak, where combined gasoline, methane or other volatile substances, carbon dust and other incendiary substances are found in the atmosphere. Leaked gas may accumulate around the unit, can cause an serious explosion.

4. Installation of outdoor unit

4.6 Clearance space

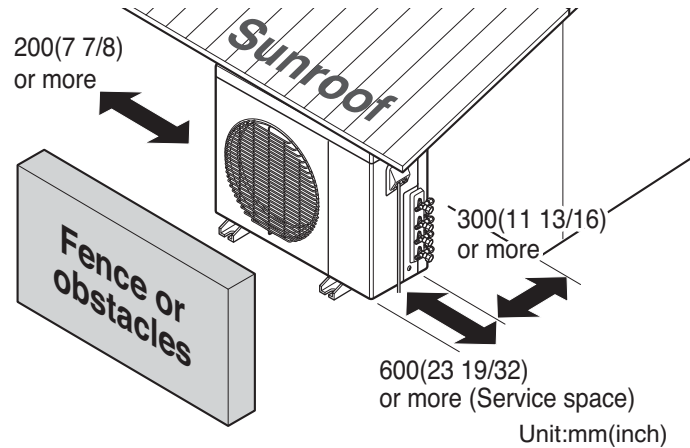
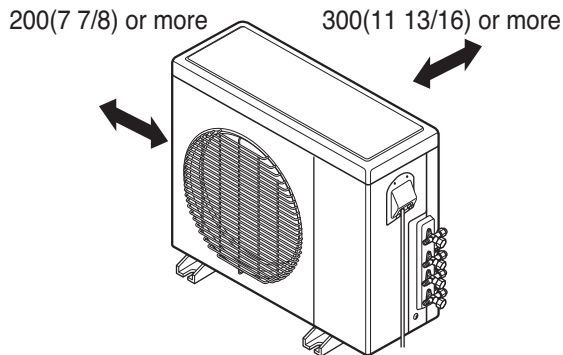
4.6.1 Clearance around outdoor unit

MULTI F™

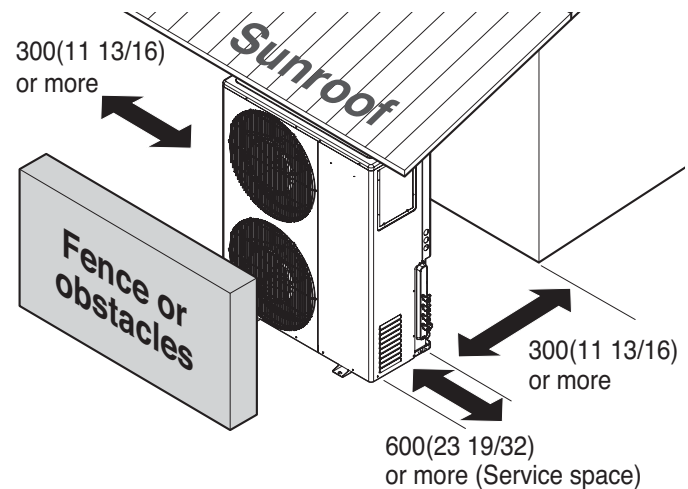
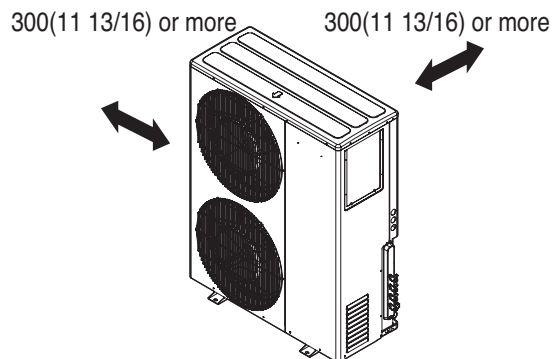
A2UW183FA2[LMU187HV]

A3UW243FA2[LMU247HV]

A4UW363FA1[LMU366HV]



A4UW363FA2[LMU369HV]



- Ensure that the space around the back is more than 7 7/8 inch on the opposite to the PCB side and secure 23 19/32 inch space near the compressor and PCB side of the aircondition for service.

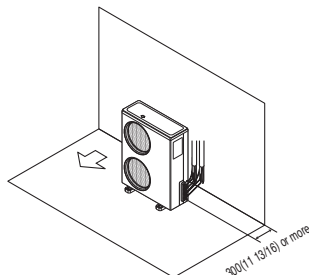
4. Installation of outdoor unit

Clearance of side discharge unit [Unit:mm(inch)]

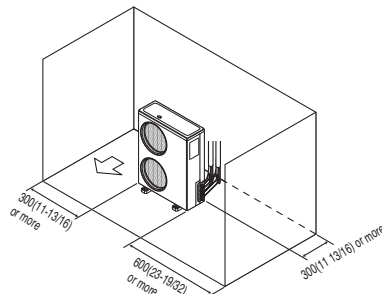
1) Where there is an obstacle on the air intake side:

■ No obstacle above

- Obstacle on the suction side only

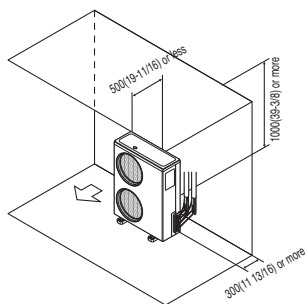


- Obstacle on the both sides

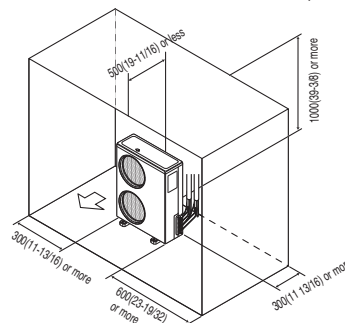


■ Obstacle above, too

- Obstacle on the air intake side, too

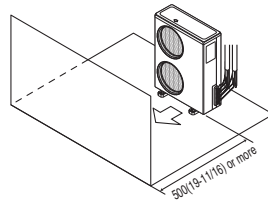


- Obstacle on the air intake side, and both sides

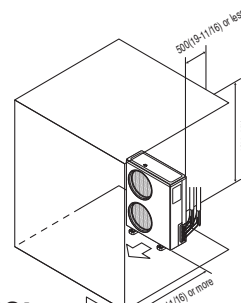


2) Where there is an obstacle on the discharge side:

■ No obstacle above



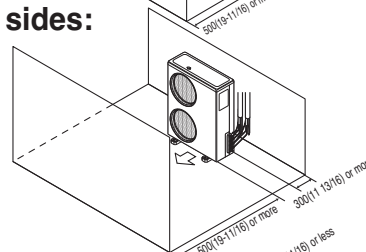
■ Obstacle above, too



3) Where there are obstacles on both suction and discharge sides:

■ Where the obstacles on the discharge side is higher than the unit:

- No obstacle above

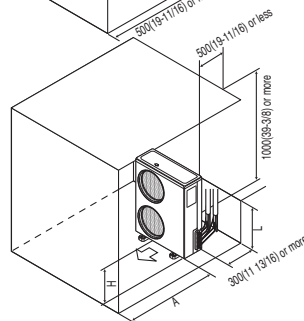


- Obstacle above, too

The relations between H, A and L are as follows:

	L	A[mm(inch)]
$L \leq H$	$0 < L \leq 1/2H$	750(29 1/32)
	$1/2H < L$	1 000(39 3/8)
$H < L$	Set the stand as: $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed.



4. Installation of outdoor unit

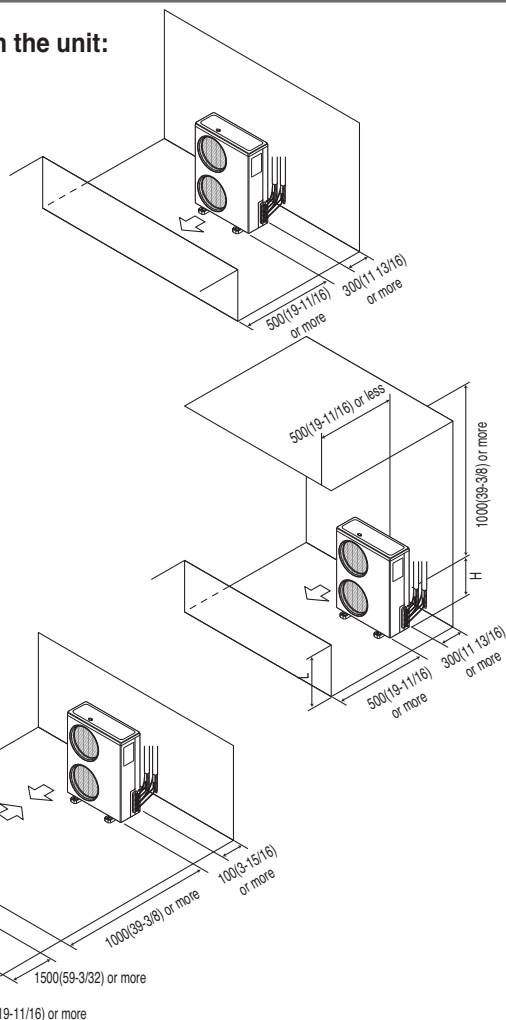
■ Where the obstacles on the discharge side is lower than the unit:

- No obstacle above

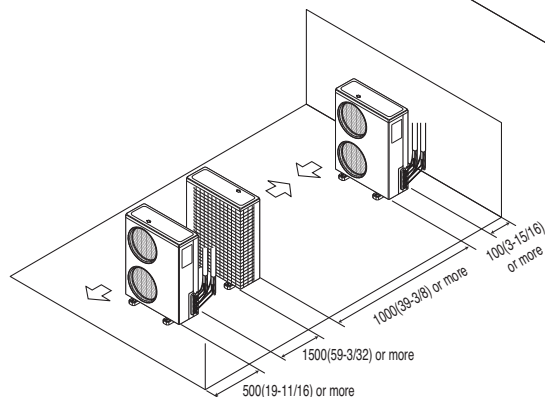
- Obstacle above, too

'L' should be lower than 'H'.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.



4) Series installation



4.6.2 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.

4.6.3 Lightning safety zone

- 1) To protect outdoor unit from lightning, it should be placed within lightning safety zone.

Safety zone

Building Height [ft]	66	98	148	197
Protection Angle [°]	55	45	35	25

- 2) Power cable and communication cable should be 4.9ft away from lightning rod.
- 3) High resistance grounded system should be performed against induced lightning or indirect stroke.
- 4) If the building has no lightning protection, outdoor may be damage from lightning. This should be informed to customer or building owner in advance.

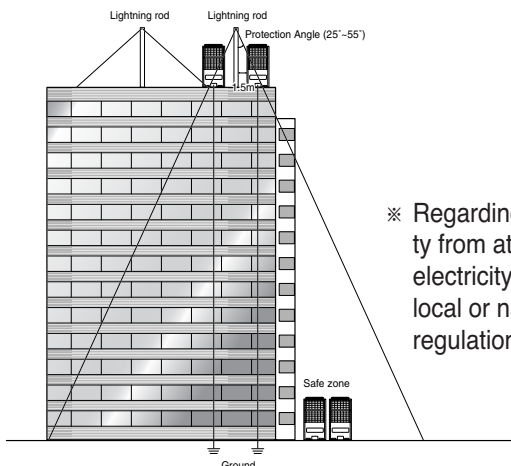
[Example]



<Without air guide>
Safety dorice activation



<With air guide>
Normal operation



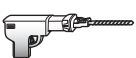
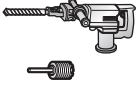
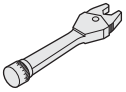
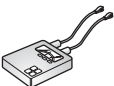
※ Regarding the safety from atmosphere electricity, follow the local or national regulations

4. Installation of outdoor unit

4.7 Outdoor unit piping

4.7.1 Outdoor unit piping

Required tools

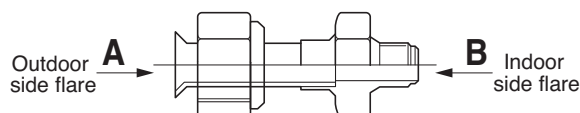
			
Screw Driver	Drill M/C f 3.5/F14.5	Measuring Tape, Blade	Core drill
			
Spanner	Torque Wrench	Soap Foam	Thermometer
			
Hexagonal wrench(4mm, 5mm)	Hook Meter	Multi Tester	Flare Set

4.7.2 Connecting piping

1) Connecting socket must be used when connecting the piping to the indoor and outdoor units

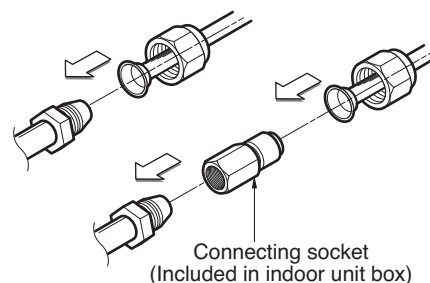
n Multi F connecting socket

Indoor unit capacity (Btu/h Class)	Gas		Liquid	
	A	B	A	B
18k, 24k	Ø9.52(3/8)Ø12.7(1/2)		Not necessary	



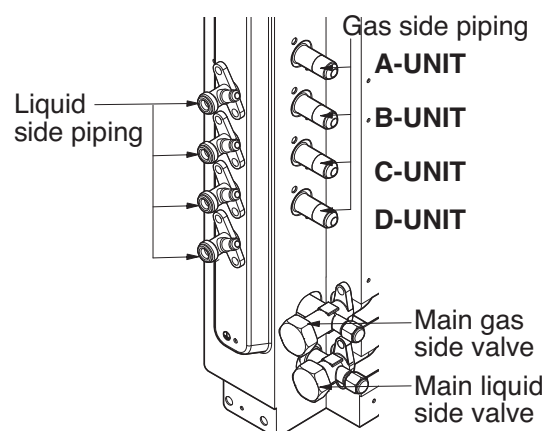
※ Connecting socket will be provided with indoor unit in same box.

2) Align the center of the piping and sufficiently tighten the flare nut by hand.



3) Finally, tighten the flare nut with torque wrench until the wrench clicks.

- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

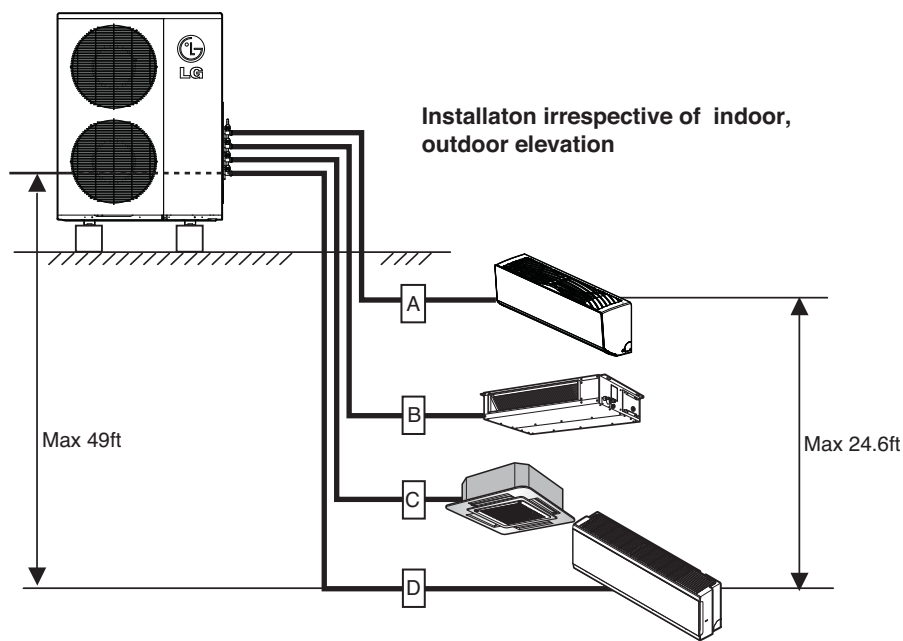


4. Installation of outdoor unit

4.8 Outdoor unit installation requirements

4.8.1 Piping elevation and length

MULTI F™



Model [Outdoor unit]	Standard length(ft)	Max. pipe length of indoor unit (ft)				Max. total pipe length of each room (ft)
	A,B,C,D	A	B	C	D	
A2UW183FA2[LMU187HV]	25	82	82	-	-	164
A3UW243FA2[LMU247HV]	25	82	82	82	-	246
A4UW363FA1[LMU366HV]	25	82	82	82	82	246
A4UW363FA2[LMU369HV]	25	82	82	82	82	246

- The minimum piping length should be 10ft.
- The max piping length of last indoor unit is max total piping length-(sum of other units piping length)for example in case of A4UW363FA2[LMU369HV] (ft)=246-(82+82) =66(ft)

Refrigerant charge

Model	Standard length (ft)	Standard Total Piping Length (No Add'l refrigerant)	Max. piping for one room(ft)	Max. total piping length(ft)	Additional charge[g/m(oz/ft)]
A2UW183FA2[LMU187HV]	25	49.2	82	164	20(0.22)
A3UW243FA2[LMU247HV]	25	73.8	82	246	20(0.22)
A4UW363FA1[LMU366HV]	25	123	82	246	20(0.22)
A4UW363FA2[LMU369HV]	25	98.4	82	246	20(0.22)

4. Installation of outdoor unit

4.8.2 Refrigerant charge

The calculation of the additional charge should be taken into account for the additional length of pipe.

■ MULTI F™ (1Ø)

Additional charge(oz) = (Total Installation Piping Length-Standard Total Piping Length) x 0.22

NOTE

If the total additional charge value after calculation comes out to be negative, then do not consider additional charge.

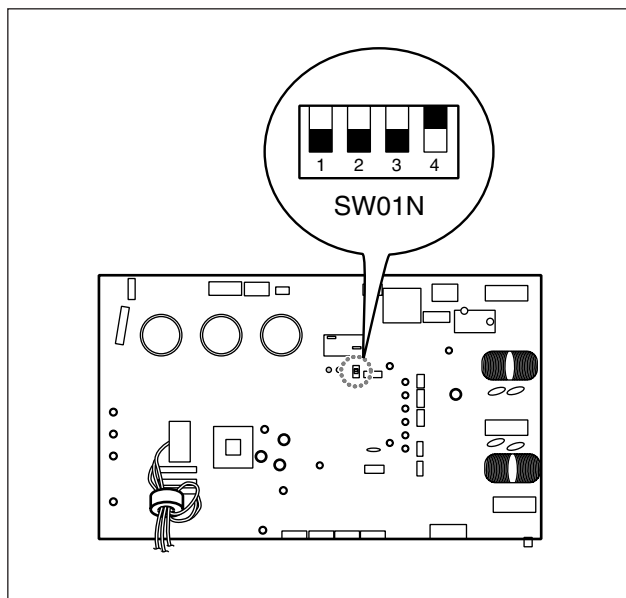
Long pipe setting

- 1) Open the top cover of outdoor unit.
- 2) If total piping length is more than standard, move the slide switch. (*Refer to the below table.)
- 3) Close the top cover and check whether the product works normally.

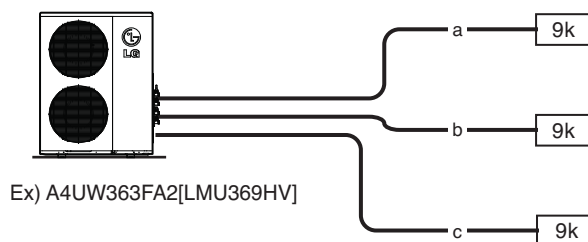
Model [Outdoor unit]	Standard total piping length (ft)
A2UW183FA2[LMU187HV]	49.2
A3UW243FA2[LMU247HV]	73.8
A4UW363FA1[LMU366HV]	123
A4UW363FA2[LMU369HV]	98.4

CAUTION

Do not open the top cover or set the pipe length when operating the product.



Additional refrigerant charge calculation example - 1



Each branch pipe
a=82ft
b=16ft
c=49ft

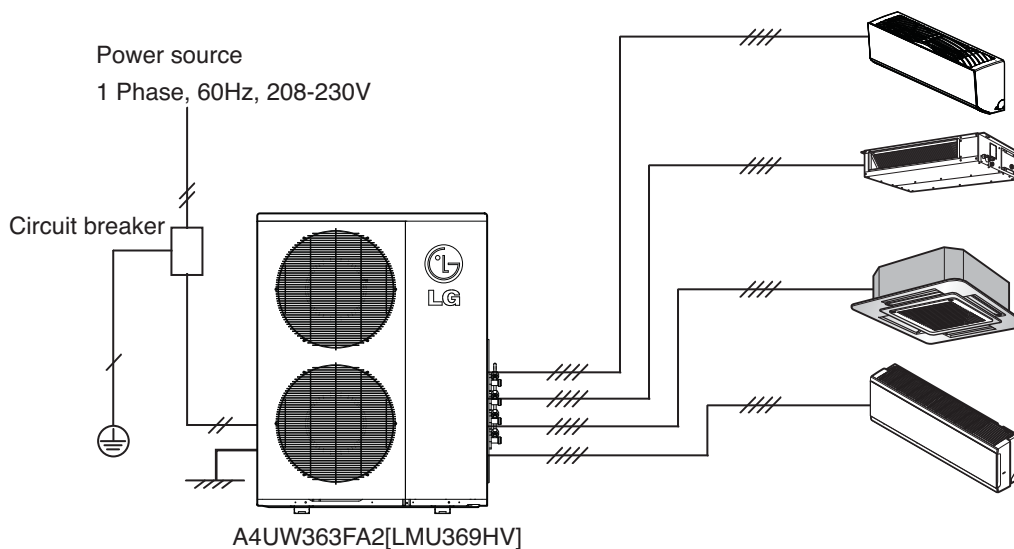
❖ Additional Charge
= {(82+16+49)-98.4} x 0.22 = 10.69 oz

4. Installation of outdoor unit

4.8.3 Transmission and power cable connection

1) Example for the connection of transmission and power cable

- No need of independent power supply for the indoor units.


NOTE

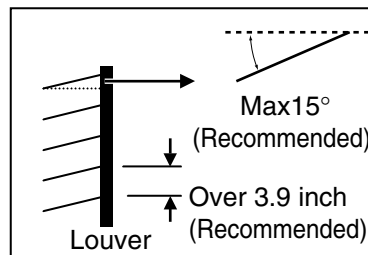
* //// : The 4 slashed lines represent 2 power line, 1 earth line and 1 transmission cable.

4. Installation of outdoor unit

4.9 Outdoor unit cabin

4.9.1 Outdoor cabin louver requirement

- 1) Outdoor cabin type : Manual door open type
- 2) Louver angle : less than 15° on the horizontal base
- 3) Louver interval: over 3 15/16 inch (recommend)
- 4) Louver shape : wing type or plane type

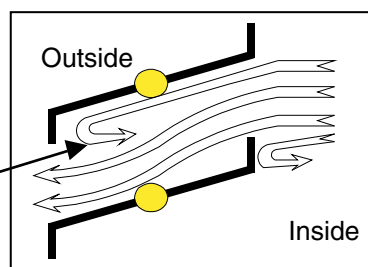


Section

CAUTION

- Opening rate and suction should be considered for louvered outdoor room.
- Do not use 'S' type louver.

Noise can occur due to the backward flow of the air passing through the louver blade

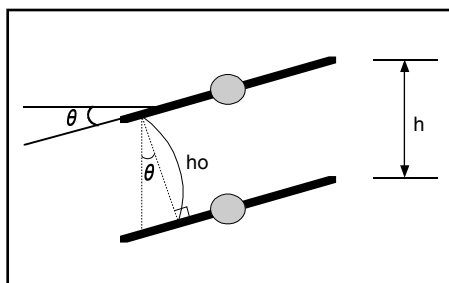


NOTE

The problem in case the louver opening rate is small.

1. Noise can occur due to the increased velocity of the air passing through louver blade.
2. Noise can occur due to the louver blade vibrations.
3. Drop in outdoor fan performance (Excess static pressure damage can cause drop in the performance as well as outdoor heat exchange efficiency).
4. In case the louver opening rate is small or there is insufficient air flow exchange, it might stop the air conditioner.

Opening rate by louver radian



$$\theta \leq 15^\circ$$

$$h_o = h \cdot \cos \theta$$

$$\text{Total face area}(A) = H \cdot W$$

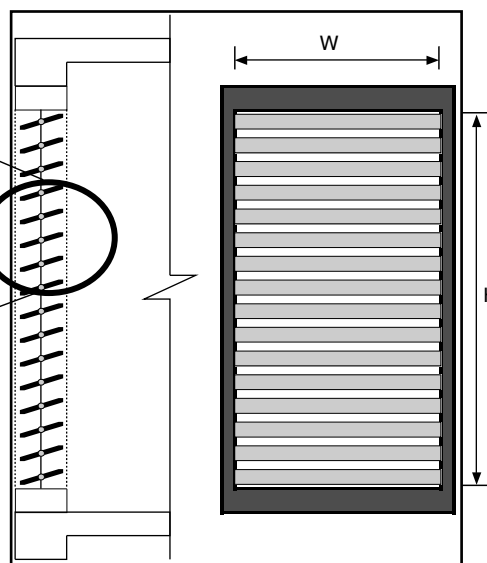
$$\text{Number of open space}(N) = (\text{number of louver} - 1)$$

$$\text{Effective face area}(A_f) = h_o \cdot W \cdot N$$

$$\text{Louver opening rate}(n) = A_f / A$$

$$\therefore A_f = A \cdot n$$

Effective face area of cross section



[Side view]

[Front view]

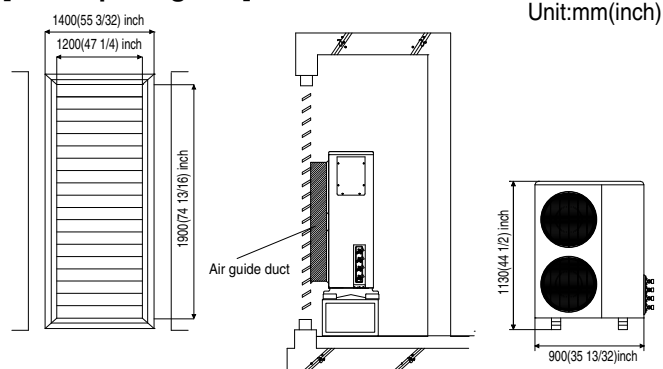
4. Installation of outdoor unit

4.9.2 Air flow rate confirmation

Example. 1

n Application Model : A4UW363FA2[LMU369HV] Airflow rate 120 CMM

[Total opening rate]



n Case : velocity of discharging air: 5m/s,
velocity of suction air: 2.5m/s

n Openness rate = 80% or more

$$[\text{Openness rate}] = \frac{\text{Effective face area}(A_f)}{\text{Total face area}(A)}$$

n Air guide of discharging air part should be equipped.

- n Louver total dimension (excluding frame)
- n Louver shielding dimension by product
- n Suction able louver dimension
- n Equivalent suction dimension (Opening rate 80%)
- n Equivalent suction air volume
- n Required air volume / equivalent volume

$$\begin{aligned}
 (A) &= 1.2 \text{ m} \times 1.9 \text{ m} = 2.28 \text{ m}^2 \\
 (B) &= 0.9 \text{ m} \times 1.13 \text{ m} = 1.02 \text{ m}^2 \\
 (A-B) &= 1.26 \text{ m}^2 \\
 &= 1.26 \text{ m}^2 \times 0.8 = 1.01 \text{ m}^2 \\
 &= 1.2816 \text{ m}^2 \times 2.5 \text{ m/s} \times 60 \text{ s/m} = 152 \text{ CMM} \\
 &= 152 \text{ CMM} / 120 \text{ CMM}(\text{product airflow rate}) = 127 \% \\
 &\cdot \text{OK}
 \end{aligned}$$

MULTI F

Part 4 Special Part

- 1. Installation guide at the seaside**
- 2. Seasonal wind and cautions in winter**

1. Installation guide at the seaside

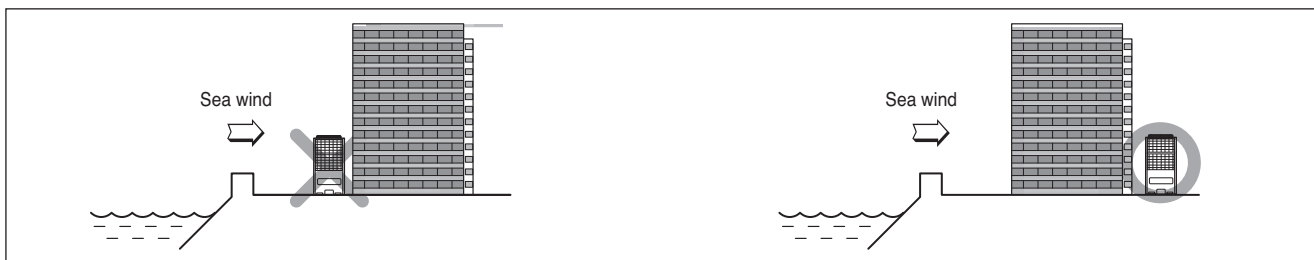


CAUTION

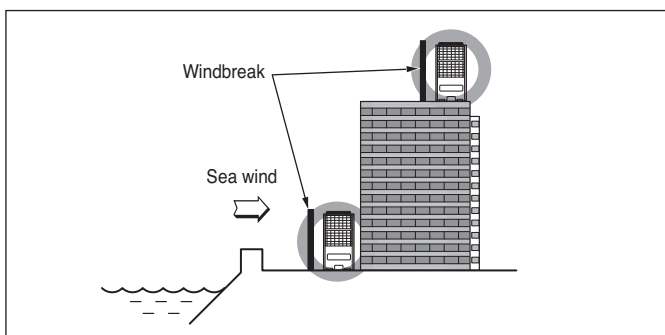
1. Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator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

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.

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

2. Seasonal wind and cautions in winter

- Sufficient measures are required in a snow area or severe cold area in winter so that product can be operated well.
- Get ready for seasonal wind or snow in winter even in other areas.
- Install a suction and discharge duct not to let in snow or rain.
- Install the outdoor unit not to come in contact with snow directly. If snow piles up and freezes on the air suction hole, the system may malfunction. If it is installed at snowy area, attach the hood to the system.
- Install the outdoor unit at the higher installation console by 50cm than the average snowfall (annual average snowfall) if it is installed at the area with much snowfall.
- Where snow accumulated on the upper part of the Outdoor Unit by more than 10cm, always remove snow for operation.

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



P/No.: MFL59730706



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quality assurance and ISO14001 certificate for environmental management system.