

Engineering Data

RXYMQ4AVMK
RXYMQ4/5/6AYFK

Heat Pump 50/60 Hz

R-410A



VRV

1. Basic Information

2. Specification

3. Installation

4. Appendix

3

11

43

117

1. Basic Information

1. Lineup.....	4
1.1 Outdoor Units	4
1.2 Indoor Units.....	4
2. External Appearance	5
2.1 Outdoor Units.....	5
2.2 Indoor Units.....	5
3. Capacity Range.....	6
3.1 Connection Ratio	6
3.2 Outdoor Unit Combinations.....	6
4. CSPF.....	7

1. Lineup

1.1 Outdoor Units

Capacity range			4 HP		5 HP	6 HP	Power supply, Standard
			11.3 kW		14.1 kW	16.0 kW	
			100		125	150	
Capacity index			100		125	150	
Heat pump	RXYMQ	1 phase	4A	—	—	—	VMK
		3 phase	—	4A	5A	6A	YFK

VMK: 1 phase, 220-240 V, 50/60 Hz

YFK: 3 phase, 380-415/400 V, 50/60 Hz

1.2 Indoor Units

VRV Indoor Units

Capacity range		2.2 kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW	7.1 kW	8.0 kW	9.0 kW	11.2 kW	14.0 kW	16.0 kW	Power supply, Standard
		0.8 HP	1 HP	1.25 HP	1.6 HP	2 HP	2.5 HP	3 HP	3.2 HP	4 HP	5 HP	6 HP	
Capacity index		20	25	31.25	40	50	62.5	71	80	100	125	140	
Ceiling mounted cassette (Round flow with sensing/Round flow) type	FXFSQ	—	25AR	32AR	40AR	50AR	63AR	—	80AR	100AR	125AR	140AR	V1
Slim ceiling mounted duct type	FXDQ	20PD	25PD	32PD	—	—	—	—	—	—	—	—	VM
		—	—	—	40ND	50ND	63ND	—	—	—	—	—	
Ceiling mounted duct type (Middle static pressure)	FXMQ	—	—	—	40AR	50AR	63AR	—	80AR	100AR	—	—	V1
Ceiling mounted duct type (Middle and high static pressure)	FXMQ	—	—	—	40PB	50PB	63PB	—	80PB	100PB	125PB	140PB	V1
Wall mounted type	FXAQ	20AR	25AR	32AR	40AR	50AR	63AR	—	—	—	—	—	VM

Note:

V1: 1 phase, 220-240 V, 50/60 Hz

VM: 1 phase, 220-240 V, 50/60 Hz

2. External Appearance

2.1 Outdoor Units

4, 5, 6 HP	
	
RXYMQ4AVMK	RXYMQ4AYFK RXYMQ5AYFK RXYMQ6AYFK

2.2 Indoor Units

VRV Indoor Units

Ceiling mounted cassette (Round flow with sensing/Round flow) type FXFSQ-AR  Round flow with sensing type  Round flow type	Ceiling mounted duct type (Middle static pressure) FXMQ-AR 
	Ceiling mounted duct type (Middle and high static pressure) FXMQ-PB 
Slim ceiling mounted duct type FXDQ-PD FXDQ-ND 	Wall mounted type FXAQ-AR 

3. Capacity Range

3.1 Connection Ratio

Connection ratio =	$\frac{\text{Total capacity index of the indoor units}}{\text{Capacity index of the outdoor units}}$
--------------------	--

Type	Min. connection ratio	Max. connection ratio
		Types of connected indoor units
		VRV indoor units
Single outdoor units	50%	130%

3.2 Outdoor Unit Combinations

Model			1 phase	RXYMQ4AVMK	—	—	—
			3 phase	—	RXYMQ4AYFK	RXYMQ5AYFK	RXYMQ6AYFK
kW			11.3	11.3	14.1	16.0	
HP			4	4	5	6	
Capacity index			100	100	125	150	
Total capacity index of connectable indoor units	Connection ratio (%)	50%	50	50	62.5	75	
		100%	100	100	125	150	
		130%	130	130	162.5	195	
Maximum number of connectable indoor units			6	6	8	9	

4. CSPF



Cooling Seasonal Performance Factor



Nominal Efficiency vs. Seasonal Efficiency in line with real life performance



Currently, the energy efficiency of cooling devices is measured in artificial and standardized conditions. For air conditioners, this is done at a constant temperature of 46 °C or 35 °C and at full cooling capacity. This results in T1 & T3 energy efficiency (EER), which is representing only two points to conclude on Energy performance.

In other markets, like in the US and Europe, seasonal performance is measured with IPLV, SEER or ESEER calculations based on real-life

conditions. However, these calculation methods have not been adopted for high Ambient or hot climates. In order to correct this situation, a more realistic calculation method called Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$ has been developed by the ISO Refrigeration and Air-Conditioning Subcommittee (SC6) for the testing and rating of air conditioners and heat pumps. This is the standard ISO 16358 -1 Amendment 1 issued in 2019 for the hot T3 climate zones.

The implementation of the Seasonal Efficiency calculation reflects more realistic energy efficiency value through the entire cooling season at hot climate conditions compared to currently used EER value.

The calculation follows the below considerations:

- Use of a high ambient climate weather bin for cooling instead of one nominal temperature
- Considering operation at partial capacity instead of full capacity.

The adoption of the $CSPF_{T3}$ calculation method will result in a better estimation of the equipment's real-life performance over a year.

What is $CSPF_{T3}$?

(**Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$**) is the testing and rating of air conditioners as per the ISO 16358 -1 Amendment 1 issued in 2019 for T3 hot climate zones and takes into consideration the bin hours reflecting high ambient conditions.

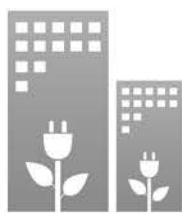
How is $CSPF_{T3}$ expressed?

- It is expressed as the $CSPF_{T3}$ value (**Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$**)
- It is defined as the ratio of the total annual amount of heat that the equipment can remove from the indoor air when operating for cooling in active mode to the total annual amount of energy consumed by the equipment during the same period.

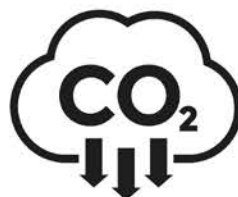
$$CSPF_{T3} = \frac{\text{Cooling Seasonal Total Load @ T3 ISO weather bin}}{\text{Cooling Seasonal Energy Consumption @ T3 ISO weather bin}}$$

Benefits of $CSPF_{T3}$

The implementation of seasonal efficiency will provide end users with a fair comparison of different equipment based on realistic year-round efficiency which will lead to:



Reduced energy
consumption



Reduced CO2
emission

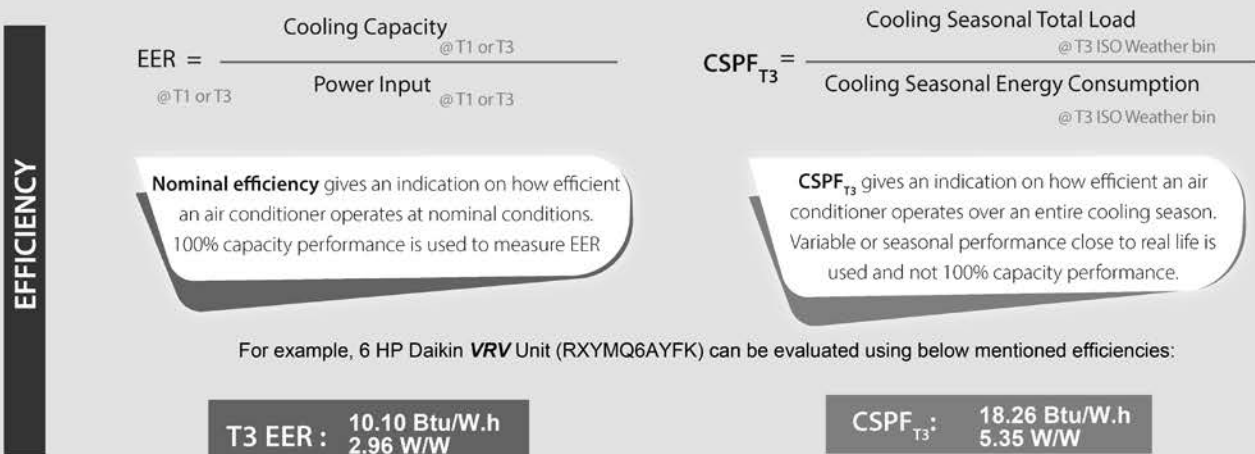
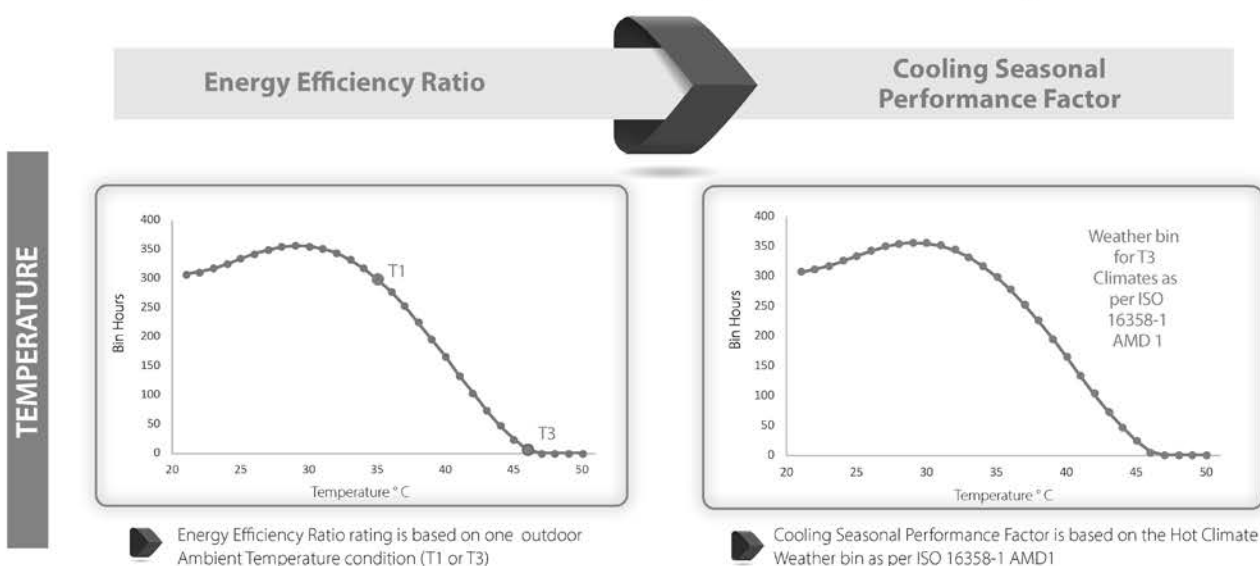


Reduced
electricity bills

Pioneering in innovation and environmental responsibility

For Daikin, seasonal efficiency brings together two core ambitions: pushing for innovation and reducing the environmental footprint of our products. Being the first in the industry to design equipment based on optimal seasonal efficiency values, Daikin is once again pioneering high-performance cooling products that lower the impact on the environment and on your wallet.

Benefits of Seasonal Efficiency vs. Nominal Efficiency



When the new ISO standard for hot climate was published, Daikin has resolutely chosen for early implementation of this new legislation and started testing all products for seasonal efficiency. This commitment to pioneering the implementation of seasonal efficiency is a practice we observe every day.

Today, Daikin leads the way towards more efficient and cost-effective comfort solutions. All Daikin products - residential, commercial, as well as industrial - are seasonal-efficient, reducing energy and costs the smart way.

2. Specification

1. Specifications	12
2. Dimensions.....	14
3. Service Space	17
4. Piping Diagrams	18
5. Wiring Diagrams	20
6. Field Wiring	22
7. Electric Characteristics	24
8. Safety Devices Setting	25
9. Capacity Tables	26
9.1 Cooling Capacity	26
9.2 Heating Capacity	30
9.3 Capacity Correction Factor	34
9.4 Notes for Heating Capacity Characteristics (Heat Pump)	36
10. Operation Limits	37
11. Sound Levels	38
12. Optional Accessories	42

1. Specifications

Model				RXYMQ4AVMK		RXYMQ4AYFK	
Cooling capacity at T1 ① (★1)		Capacity	kW	11.3		11.3	
		Capacity	Btu/h	38,500		38,500	
		EER	kW/kW	4.10		4.07	
		EER	Btu/W.h	14.00		13.90	
		PI	kW	2.75		2.77	
Cooling capacity at T1 ② (★1)		Capacity	kW	11.3		11.3	
		Capacity	Btu/h	38,500		38,500	
		EER	kW/kW	4.13		4.09	
		EER	Btu/W.h	14.10		13.95	
		PI	kW	2.73		2.76	
Cooling capacity at T3 ③ (★1)		Capacity	kW	10.4		10.6	
		Capacity	Btu/h	35,400		36,200	
		EER	kW/kW	3.14		3.14	
		EER	Btu/W.h	10.70		10.70	
		PI	kW	3.31		3.38	
		CSPF (★3)	W/W	5.80		5.70	
		Power factor		0.9		0.9	
Cooling capacity at T4 ④ (★1)		Capacity	kW	10.1		10.1	
		Capacity	Btu/h	34,400		34,400	
		EER	kW/kW	2.96		2.97	
		EER	Btu/W.h	10.10		10.15	
		PI	kW	3.41		3.39	
Heating capacity at H1 ⑤ (★1)		Capacity	kW	12.6		12.6	
		Capacity	Btu/h	43,000		43,000	
		COP	kW/kW	4.70		4.50	
		COP	Btu/W.h	16.04		15.37	
		PI	kW	2.68		2.80	
Allowed indoor capacity index connection		Nom.		100		100	
		Min.		50		50	
		Max.		130		130	
Dimensions	Unit (H × W × D)		mm	870 × 1,100 × 460		870 × 1,100 × 460	
	Packing (H × W × D)		mm	1,010 × 1,190 × 560		1,010 × 1,190 × 560	
Mass	Unit		kg	100		120	
	Packed unit		kg	114		134	
Sound pressure level (★4)		Cooling	dB (A)	51		51	
		Heating	dB (A)	54		63	
Heat exchanger	Specifications	Type		Cross fin coil		Cross fin coil	
Fan	Type		Propeller		Propeller		
	Discharge direction		Side		Side		
	Motor	Quantity		1		1	
		Model		Brushless DC		Brushless DC	
		Output/pcs	W	234		600	
	Airflow rate	Cooling	m³/min	87		123	
Heating		m³/min	94		145		
Compressor	Quantity		1		1		
	Motor	Quantity		1		1	
		Model		Inverter		Inverter	
		Type		Hermetically sealed swing type		Hermetically sealed swing type	
Refrigerant	Refrigerant name		R410A		R410A		
	Charge	kg	4.2		4.95		
Piping connections	Liquid	Type	Flare connection		Flare connection		
		Diameter (OD)	mm	9.5		9.5	
	Gas	Type	Flare connection		Brazing connection		
		Diameter (OD)	mm	15.9		15.9	
Safety devices				High pressure switch, Fan driver overload protector, Inverter overload protector, Fuse, Bimetal thermostat (external overload relay)		High pressure switch, Fan driver overload protector, Inverter overload protector, Fuse, Bimetal thermostat (external overload relay), Over/under voltage protection PCB	
Standard accessories				Installation manuals, Operation manual, Ferrite core, etc.		Installation manuals, Operation manual, Auxiliary pipe, etc.	
Drawing No.	Specifications		C: 2D135391B		C: 2D135391B		
	Sound level	Cooling	4D135360		4D135342		
		Heating	4D135531		4D135532		

Note:

★1. The data are based on the conditions shown in the table below.

Condition	Indoor DB (°C)	Indoor WB (°C)	Outdoor DB (°C)	Outdoor WB (°C)	Reference standard
T1 ①	27.0	19.0	35.0	—	ISO 15042:2011
T1 ②	26.6	19.4	35.0	—	AHRI-1230
T3 ③	29.0	19.0	46.0	—	ISO 15042:2011
T4 ④	26.6	19.4	48.0	—	AHRI-1230
H1 ⑤	20.0	—	7.0	6.0	ISO 15042:2011

★2. For detailed contents, see installation/operational manual.

★3. For calculating CSPF value, testing data of below standards was considered:
(Cooling seasonal performance factor for hot climates at T3 condition per ISO 16358-1:2013/AMD 1:2019)

★4. Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.5 m.
During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Model				RXMQ5AYFK		RXMQ6AYFK	
Cooling capacity at T1 ① (★1)		Capacity	kW	14.1		16.0	
		Capacity	Btu/h	48,000		54,500	
		EER	kW/kW	3.91		3.90	
		EER	Btu/W.h	13.35		13.30	
		PI	kW	3.60		4.10	
Cooling capacity at T1 ② (★1)		Capacity	kW	14.1		16.0	
		Capacity	Btu/h	48,000		54,500	
		EER	kW/kW	3.94		3.94	
		EER	Btu/W.h	13.45		13.45	
		PI	kW	3.57		4.05	
Cooling capacity at T3 ③ (★1)		Capacity	kW	12.7		14.5	
		Capacity	Btu/h	43,500		49,500	
		EER	kW/kW	2.97		2.96	
		EER	Btu/W.h	10.15		10.10	
		PI	kW	4.29		4.90	
		CSPF (★3)	W/W	5.40		5.35	
		Power factor		0.9		0.9	
Cooling capacity at T4 ④ (★1)		Capacity	kW	11.7		12.9	
		Capacity	Btu/h	40,000		44,000	
		EER	kW/kW	2.99		3.00	
		EER	Btu/W.h	10.20		10.25	
		PI	kW	3.92		4.29	
Heating capacity at H1 ⑤ (★1)		Capacity	kW	16.0		18.0	
		Capacity	Btu/h	54,500		61,500	
		COP	kW/kW	4.35		4.25	
		COP	Btu/W.h	14.85		14.50	
		PI	kW	3.67		4.24	
Allowed indoor capacity index connection		Nom.		125		150	
		Min.		62.5		75	
		Max.		162.5		195	
Dimensions	Unit (H × W × D)		mm	870 × 1,100 × 460		870 × 1,100 × 460	
	Packing (H × W × D)		mm	1,010 × 1,190 × 560		1,010 × 1,190 × 560	
Mass	Unit		kg	120		120	
	Packed unit		kg	134		134	
Sound pressure level (★4)		Cooling	dB (A)	58		58	
		Heating	dB (A)	63		63	
Heat exchanger	Specifications	Type		Cross fin coil		Cross fin coil	
Fan	Type			Propeller		Propeller	
	Discharge direction			Side		Side	
	Motor	Quantity		1		1	
		Model		Brushless DC		Brushless DC	
		Output/pcs	W	600		600	
	Airflow rate	Cooling	m³/min	123		123	
Heating		m³/min	145		145		
Compressor	Quantity		1		1		
	Motor	Quantity		1		1	
		Model		Inverter		Inverter	
		Type		Hermetically sealed swing type		Hermetically sealed swing type	
Refrigerant	Refrigerant name			R410A		R410A	
	Charge		kg	5.4		5.4	
Piping connections	Liquid	Type		Flare connection		Flare connection	
		Diameter (OD)	mm	9.5		9.5	
	Gas	Type		Brazing connection		Brazing connection	
		Diameter (OD)	mm	15.9		19.1	
Safety devices				High pressure switch, Fan driver overload protector, Inverter overload protector, Fuse, Bimetal thermostat (external overload relay), Over/under voltage protection PCB		High pressure switch, Fan driver overload protector, Inverter overload protector, Fuse, Bimetal thermostat (external overload relay), Over/under voltage protection PCB	
Standard accessories				Installation manuals, Operation manual, Auxiliary pipe, etc.		Installation manuals, Operation manual, Auxiliary pipe, etc.	
Drawing No.	Specifications		C: 2D135391B		C: 2D135391B		
	Sound level	Cooling	4D135347		4D135355		
		Heating	4D135532		4D135532		

Note:

★1. The data are based on the conditions shown in the table below.

Condition	Indoor DB (°C)	Indoor WB (°C)	Outdoor DB (°C)	Outdoor WB (°C)	Reference standard
T1 ①	27.0	19.0	35.0	—	ISO 15042:2011
T1 ②	26.6	19.4	35.0	—	AHRI-1230
T3 ③	29.0	19.0	46.0	—	ISO 15042:2011
T4 ④	26.6	19.4	48.0	—	AHRI-1230
H1 ⑤	20.0	—	7.0	6.0	ISO 15042:2011

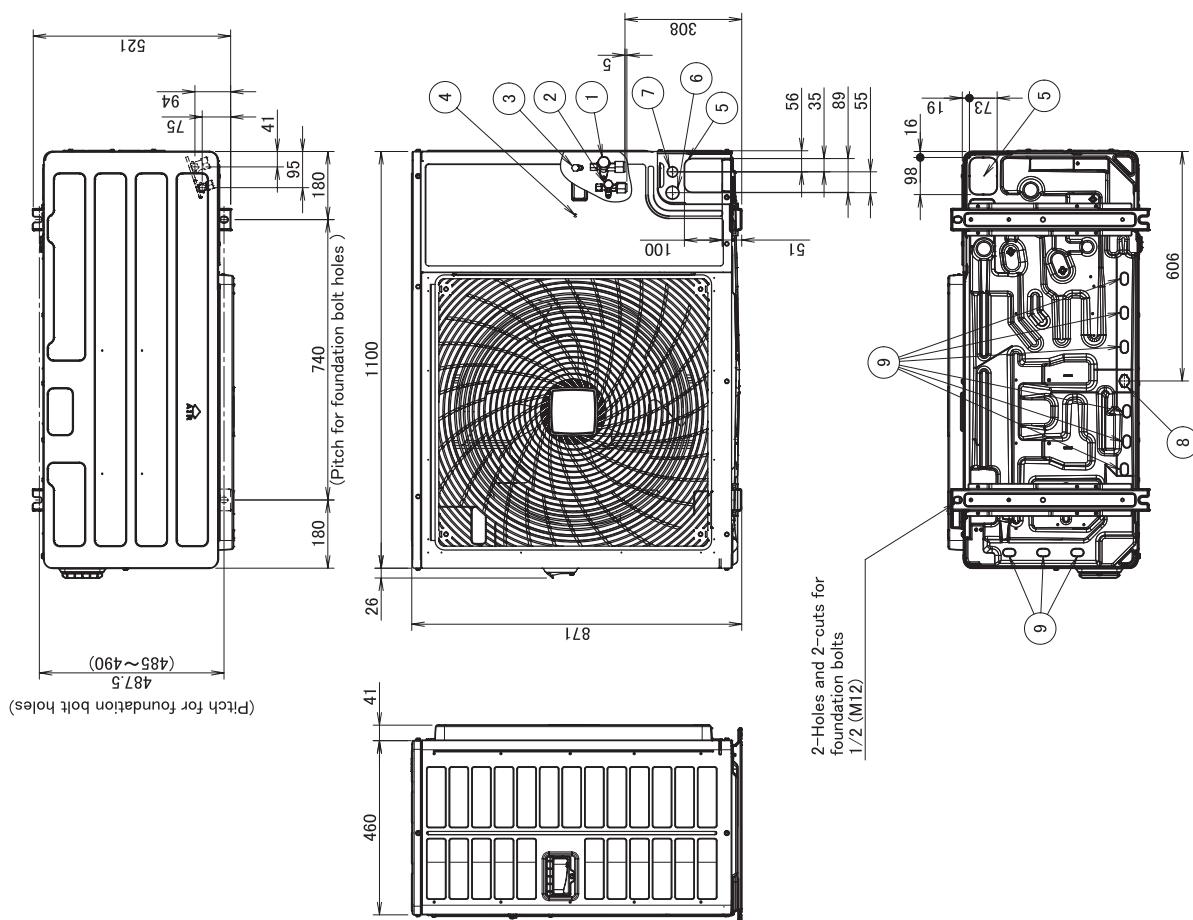
★2. For detailed contents, see installation/operational manual.

★3. For calculating CSPF value, testing data of below standards was considered:
(Cooling seasonal performance factor for hot climates at T3 condition per ISO 16358-1:2013/AMD 1:2019)★4. Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.5 m.
During actual operation, these values are normally somewhat higher as a result of ambient conditions.

2. Dimensions

RXYMQ4AVMK

Unit: mm



No.	Parts name	Remark
1	Gas pipe connection	Ø 15.9 mm flare connection
2	Liquid pipe connection	Ø 9.5 mm flare connection
3	Automatic refrigerant charge port	Ø 7.9 mm flare connection
4	Grounding terminal	Inside of unit (M5)
5	Pipe routing hole	
6	Power supply routing hole	Ø 34 mm
7	Transmission wire routing hole	Ø 27 mm
8	Drain socket connection	Ø 27 mm hole for connection with drain socket
9	Drain plug connection	See note 2

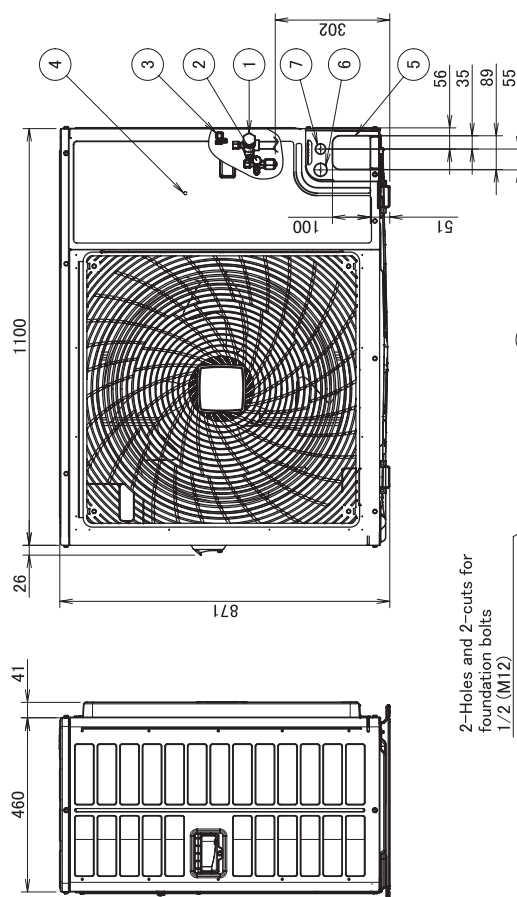
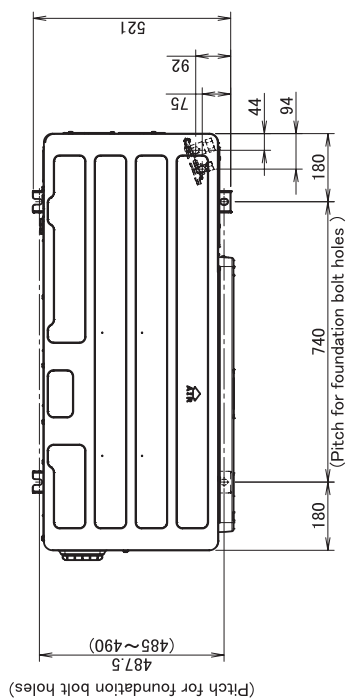
Notes:

1. Item 5 to 7 knock out hole.
2. When conducting concentrated drain piping work, attach the drain plugs.

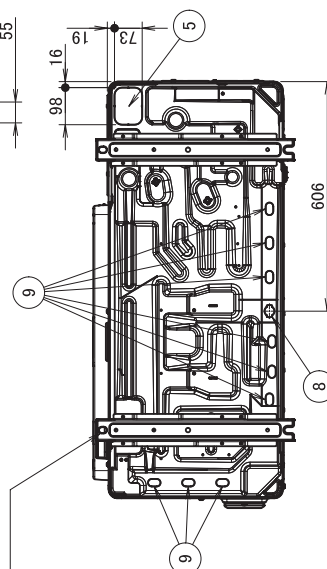
3D135067

RXYMQ4AYFK / RXYMQ5AYFK

Unit: mm



2-Holes and 2-cuts for
foundation bolts
1/2 (M12)



No.	Parts name	Remark
1	Gas pipe connection	Ø 15.9 mm brazing connection
2	Liquid pipe connection	Ø 9.5 mm flare connection
3	Automatic refrigerant charge port	Ø 7.9 mm flare connection
4	Grounding terminal	Inside of unit (M5)
5	Pipe routing hole	—
6	Power supply routing hole	Ø 34 mm
7	Transmission wire routing hole	Ø 27 mm
8	Drain socket connection	Ø 27 mm hole for connection with drain socket
9	Drain plug connection	See note 2

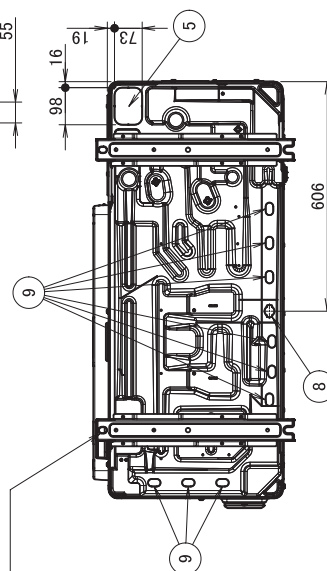
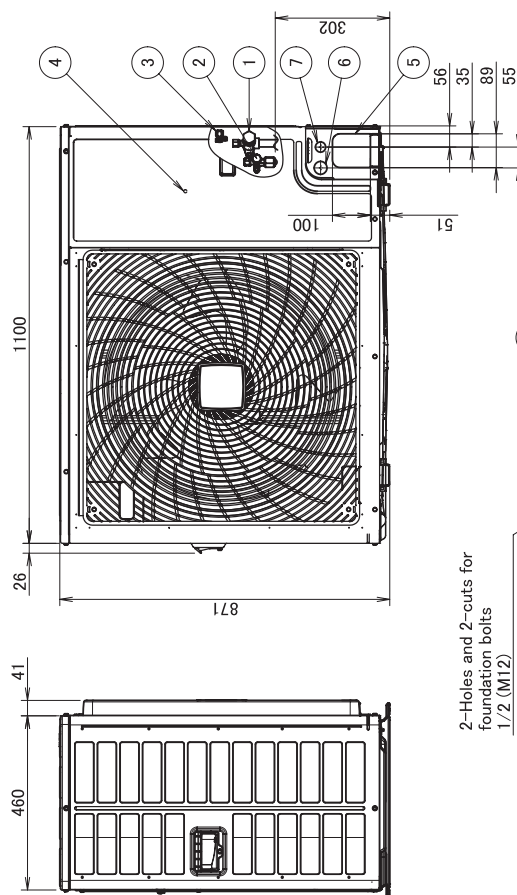
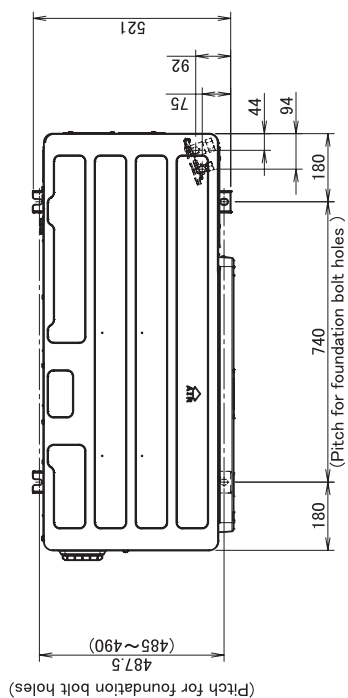
Notes:

- Notes:
1. Item 5 to 7 knock out hole.
 2. When conducting concentrated drain piping work, attach the drain plugs.

3D135066

RXYMQ6AYFK

Unit: mm



No.	Parts name	Remark
1	Gas pipe connection	Ø 19,1 mm brazing connection
2	Liquid pipe connection	Ø 9,5 mm flare connection
3	Automatic refrigerant charge port	Ø 7,9 mm flare connection
4	Grounding terminal	Inside of unit (M5)
5	Pipe routing hole	—
6	Power supply routing hole	Ø 34 mm
7	Transmission wire routing hole	Ø 27 mm
8	Drain socket connection	Ø 27 mm hole for connection with drain socket
9	Drain plug connection	See note 3.

Notes:

- Notes:
1. Item 5 to 7 knock out hole.
 2. When conducting concentrated drain piping work, attach the drain plugs.

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3. Service Space

RXYM4AVMK / RXYM4AYFK / RXYM5AYFK / RXYM6AYFK

REQUIRED INSTALLATION SPACE

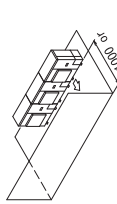
For side by side installation, the connection piping is lead out from the front, the bottom, and the side should be kept the inter space over 100 mm. The unit of the values is mm.

1. Where there is an obstacle on the suction side:

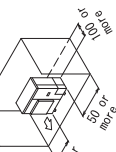
- (1) Stand-alone installation
- Obstacle on the suction side only



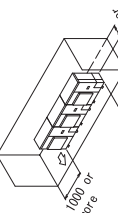
(2) Series installation (2 or more)



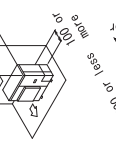
- Obstacle on both sides



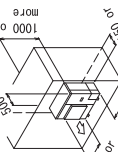
- (2) Series installation
- Obstacle on both sides



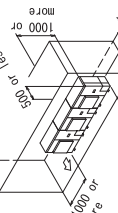
- (b) Obstacle above, too
- (1) Stand-alone installation
- Obstacle on the suction side, too



- Obstacle on the suction side and both sides



- (2) Series installation
- Obstacle on the suction side and both sides

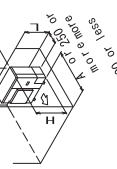


- (b) Obstacle above, too
- (1) Stand-alone installation

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	750
$L \leq H$	1000
$1/2 H < L \leq H$	1000
$H < L$	Set the stand as: $L \leq H$.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.



- (2) Series installation (2 or more)

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	1000
$L \leq H$	1250
$1/2 H < L \leq H$	1250
$H < L$	Set the stand as: $L \leq H$.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.

Only two units can be installed for this series.

Pattern 2

Where the obstacles on the discharge side is lower than the unit: (There is no height limit for obstructions)

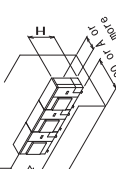
- (a) No obstacle above
- (1) Stand-alone installation

$L \leq H$

- (2) Series installation (2 or more)

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	250
$1/2 H < L \leq H$	300

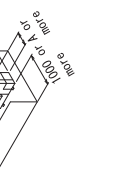


- (b) Obstacle above, too
- (1) Stand-alone installation

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	100
$1/2 H < L \leq H$	200
$H < L$	Set the stand as: $L \leq H$.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.



- (2) Series installation

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	250
$L \leq H$	300
$1/2 H < L \leq H$	300
$H < L$	Cannot be installed.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.

Only two units can be installed for this series.

4. Double-decker installation

- (a) Obstacle on the discharge side

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.

Do not stack more than two unit.

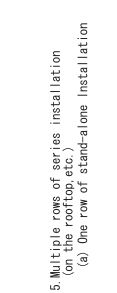
(b) Obstacle on the suction side

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.

Do not stack more than two unit.

5. Multiple rows of series installation (on the rooftop, etc.)

- (a) One row of stand-alone installation



- (b) Rows of series installation (2 or more)

The relations between H, A and L are as follows:

L	A
$0 < L \leq 1/2 H$	250
$L \leq H$	300
$1/2 H < L \leq H$	300
$H < L$	Cannot be installed.

Close the bottom of the installation frame to prevent the discharged air from being bypassed.

6. Obstacle on the discharge side

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.

Do not stack more than two unit.

7. Obstacle on the suction side

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.

Do not stack more than two unit.

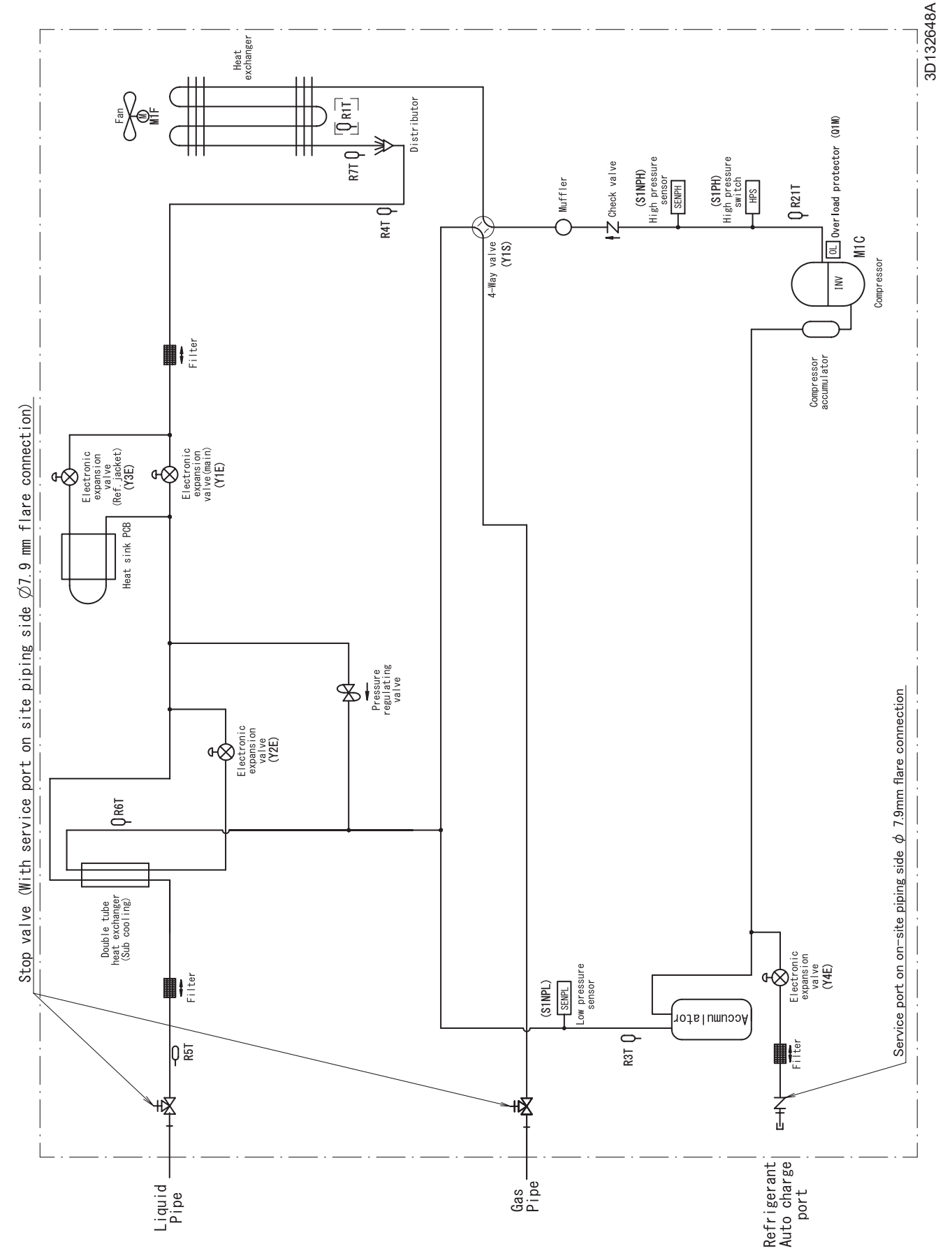
8. Obstacle on both sides

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.

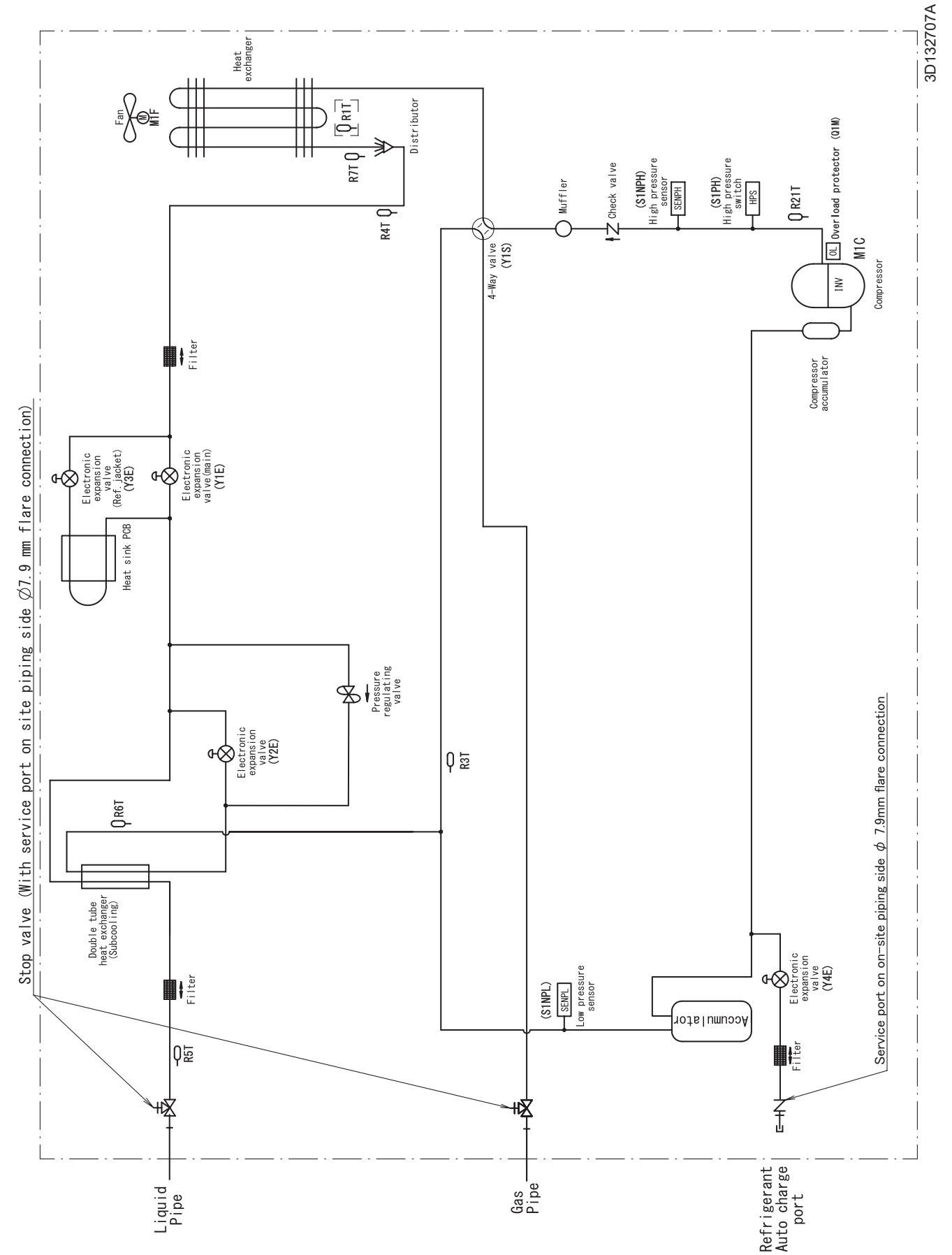
Do not stack more than two unit.

4. Piping Diagrams

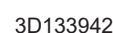
RXYMQ4AVMK



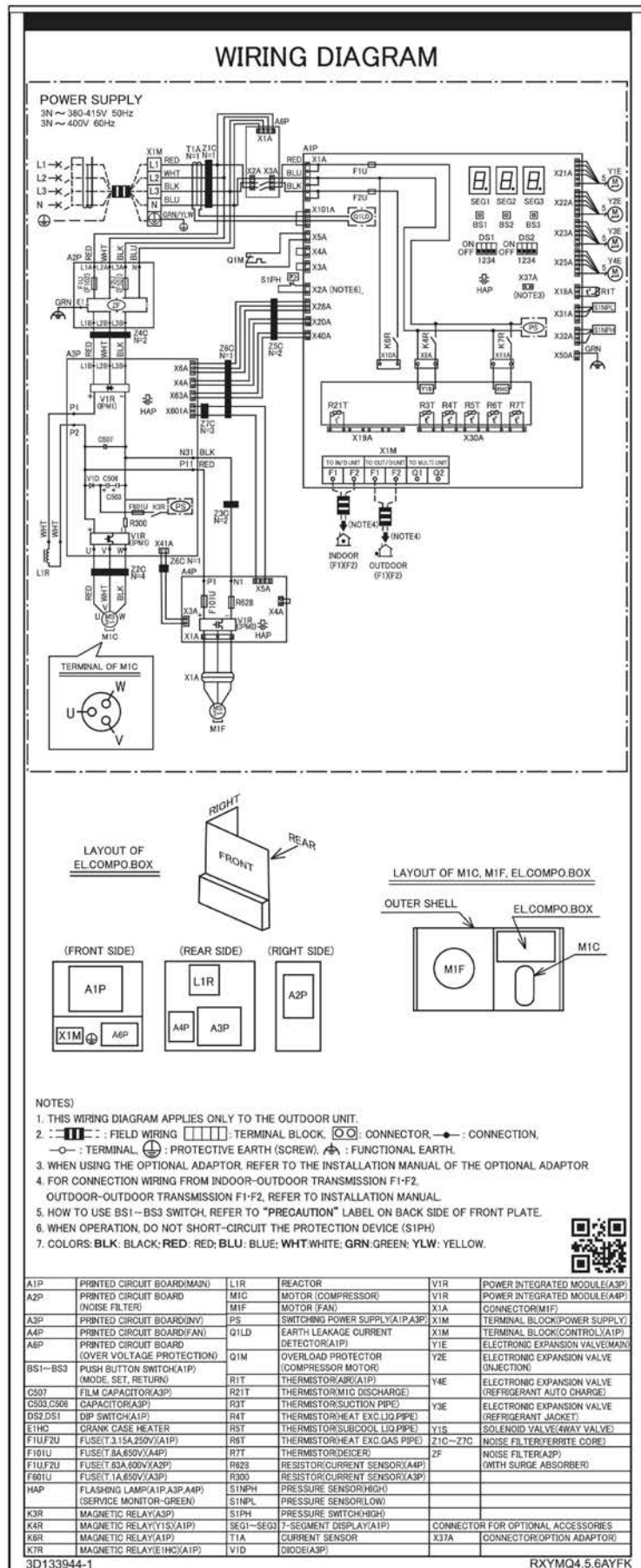
RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK



RXYMQ4AVMK



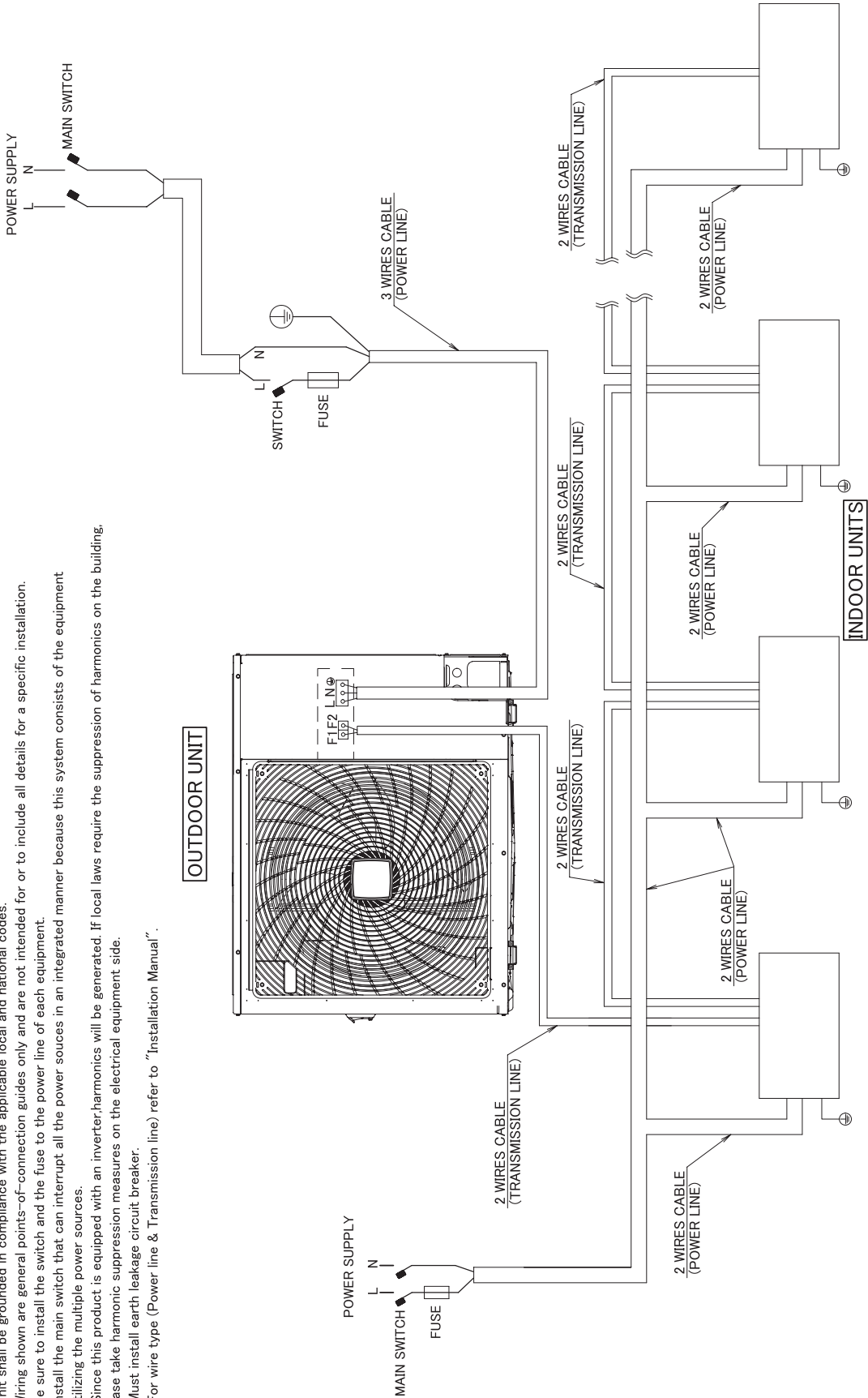
RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK



6. Field Wiring

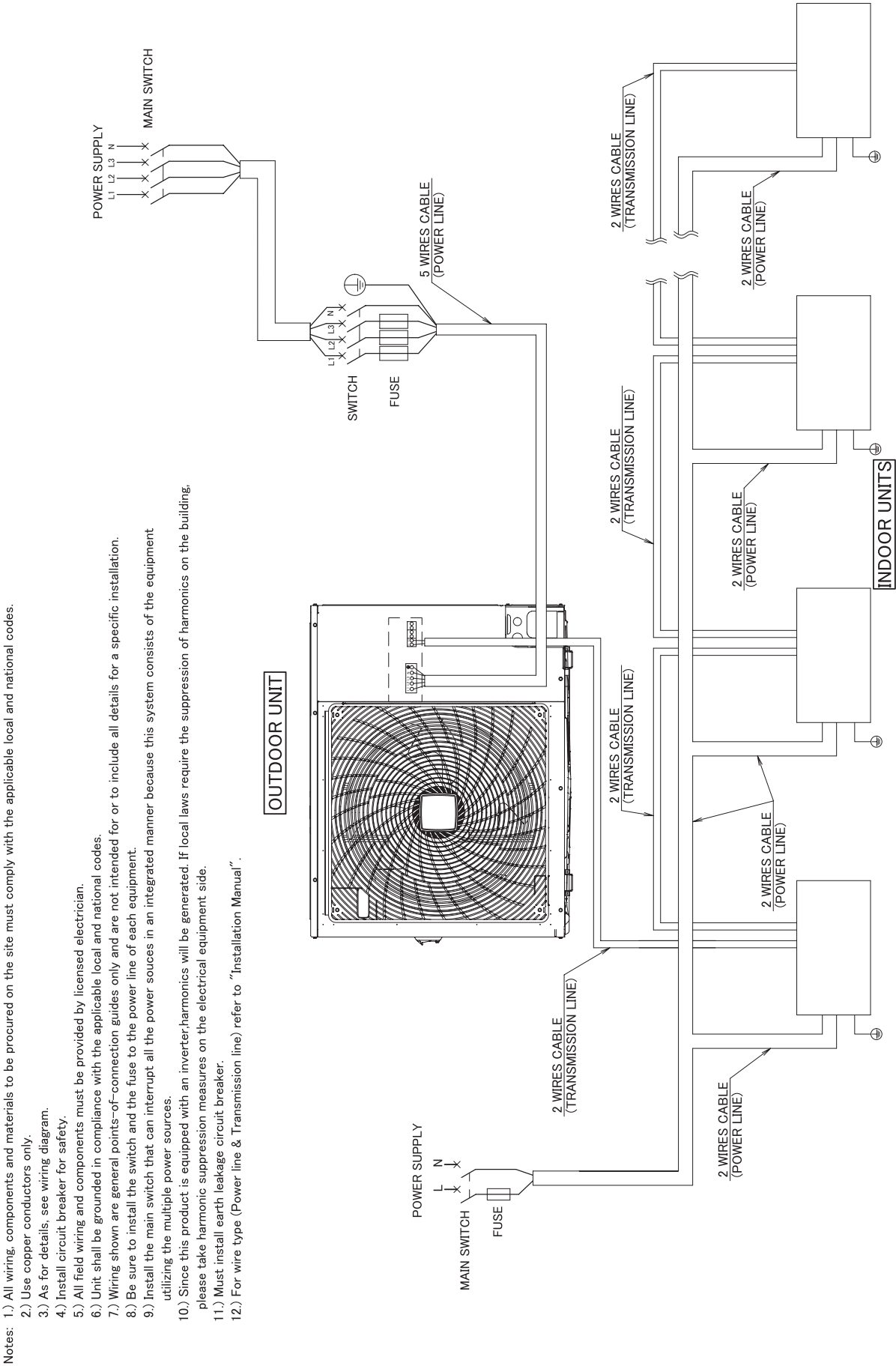
RXYMQ4AVMK

- Notes: 1.) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
2.) Use copper conductors only.
3.) As for details, see wiring diagram.
4.) Install circuit breaker for safety.
5.) All field wiring and components must be provided by licensed electrician.
6.) Unit shall be grounded in compliance with the applicable local and national codes.
7.) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8.) Be sure to install the switch and the fuse to the power line of each equipment.
9.) Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
10.) Since this product is equipped with an inverter, harmonics will be generated. If local laws require the suppression of harmonics on the building, please take harmonic suppression measures on the electrical equipment side.
11.) Must install earth leakage circuit breaker.
12.) For wire type (Power line & Transmission line) refer to "Installation Manual".



3D132665A

RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK



3D132687A

7. Electric Characteristics

RXYMQ4AVMK / RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK

MODEL				RXYMQ4AVMK	RXYMQ4AYFK	RXYMQ5AYFK	RXYMQ6AYFK
POWER SUPPLY	NAME			VM	YF		
	PHASE			1~	3N~		
	FREQUENCY		Hz	50/60	50/60		
	VOLTAGE	50 Hz	V	220-240	380-415		
		60 Hz	V		400		
CURRENT	NOMINAL RUNNING CURRENT (RLA) ^①		A	13.05	5.10	6.33	7.27
	MINIMUM CIRCUIT AMPS (MCA) ^②		A	27.0	18.9	18.9	18.9
	MAXIMUM FUSE AMPS (MFA) ^③		A	30	25	25	25
	FULL LOAD AMPS(FLA) ^④		A	1.41	2.14	2.14	2.14
VOLTAGE RANGE	50 Hz		V	220-240 ± 10%	380-415 ± 10%		
	60 Hz		V		400 ± 10%		
WIRING CONNECTIONS	FOR POWER SUPPLY		QUANTITY	3	5		
	FOR CONNECTION WITH INDOOR		QUANTITY	2 (F1/F2)			
POWER SUPPLY INTAKE				BOTH INDOOR AND OUTDOOR UNIT			

Symbols :

MCA : Min. Circuit Amps. (A)
 MFA : Max. Fuse Amps. (A)
 RLA : Rated Load Amps. (A)
 FLA : Full load Amps. (A)

Notes :

- ① RLA is based on following conditions:
COOLING Indoor Temperature: 27° CDB / 19° CWB, Outdoor Temperature: 35° CDB.
 - ② MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current.
 - ③ MFA must be used to select the circuit breaker and the ground fault circuit interrupter(earth leakage circuit breaker).
 - ④ FLA : Nominal Running Current Fan.
2. Voltage range: Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
 3. Maximum allowable voltage range variation between phases is 2%.

8. Safety Devices Setting

Safety devices			RXYMQ4AVMK
Printed circuit board fuse		A1P	250 V, 56.0 A 250 V, 6.3 A 250 V, 5 A
High pressure switch			OFF: 4.0 ⁺⁰ _{-0.15} MPa ON: 3.0±0.15 MPa
Overload protector	Thermal switch	M1C	OFF: 125±3°C ON: 110±6°C
	Over current	M1C	25.6 A
		M1C + M1F	27.0 A
Electronic expansion valve (main)		EV1	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (injection)		EV2	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (refrigerant jacket)		EV3	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (refrigerant auto charge)		EV4	Fully close: 0 pls Full open: 480 pls

Safety devices			RXYMQ4AYFK RXYMQ5AYFK RXYMQ6AYFK
Printed circuit board fuse		A1P	250 V, 3.15 A
		A2P	600 V, 63 A
		A3P	650 V, 1 A
		A4P	650 V, 8 A
High pressure switch		S1PH	OFF: 4.0 ⁺⁰ _{-0.15} MPa ON: 3.0±0.15 MPa
Overload protector	Thermal switch	M1C	OFF: 125±3°C ON: 110±6°C
	Over current	M1C	16.76 A
		M1C + M1F	18.9 A
Electronic expansion valve (main)		EV1	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (injection)		EV2	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (refrigerant jacket)		EV3	Fully close: 0 pls Full open: 480 pls
Electronic expansion valve (refrigerant auto charge)		EV4	Fully close: 0 pls Full open: 480 pls

9. Capacity Tables

9.1 Cooling Capacity

RXYMQ4AVMK Cooling capacity (Te: 6°C)

Combina- tion (%) (Capacity index)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)																70%								
		14				16				18				20					22				24			
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		TC	PI	TC	PI				
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW		kW	kW	kW	kW	kW			
10	12.5	1.52	13.2	1.54	13.9	1.55	14.3	1.57	14.6	1.60	15.4	1.67	15.9	1.75												
12	12.3	1.61	13.1	1.61	13.8	1.62	14.1	1.63	14.4	1.65	15.0	1.69	15.6	1.77												
14	12.1	1.68	12.9	1.68	13.7	1.68	14.0	1.69	14.3	1.70	15.0	1.74	15.7	1.82												
16	11.9	1.77	12.7	1.77	13.4	1.76	13.8	1.75	14.1	1.75	14.6	1.78	15.2	1.84												
18	11.8	1.87	12.6	1.85	13.3	1.83	13.6	1.82	13.9	1.82	14.5	1.85	15.0	1.88												
20	11.7	1.95	12.4	1.93	13.1	1.91	13.4	1.90	13.7	1.90	14.3	1.91	14.7	1.94												
21	11.6	1.95	12.3	1.94	13.1	1.94	13.4	1.94	13.6	1.94	14.2	1.95	14.7	1.97												
23	11.4	2.05	12.2	2.04	12.8	2.03	13.1	2.04	13.4	2.02	14.0	2.03	14.4	2.03												
25	11.3	2.15	12.1	2.13	12.7	2.12	13.0	2.13	13.2	2.14	13.8	2.14	14.2	2.16												
27	11.0	2.25	11.8	2.24	12.5	2.23	12.8	2.23	13.0	2.24	13.6	2.24	13.9	2.26												
29	11.0	2.34	11.7	2.33	12.3	2.33	12.6	2.33	12.9	2.33	13.4	2.35	13.8	2.36												
31	10.7	2.44	11.6	2.44	12.2	2.45	12.5	2.45	12.7	2.45	13.2	2.45	13.5	2.46												
33	10.6	2.54	11.3	2.55	11.9	2.56	12.3	2.57	12.5	2.57	13.1	2.59	13.3	2.58												
35	10.5	2.64	11.1	2.66	11.6	2.68	12.0	2.70	12.1	2.70	12.7	2.70	13.3	2.70												
37	10.3	2.74	10.9	2.77	11.4	2.78	11.8	2.80	12.0	2.79	12.6	2.78	13.2	2.78												
39	10.2	2.85	10.7	2.87	11.2	2.89	11.6	2.90	11.8	2.90	12.4	2.90	13.0	2.88												
41	10.0	2.92	10.5	2.95	11.1	2.98	11.5	3.01	11.6	3.00	12.2	3.01	12.8	3.01												
43	9.8	3.00	10.4	3.03	10.9	3.07	11.3	3.11	11.4	3.11	12.0	3.12	12.6	3.13												
46	9.5	3.12	10.1	3.18	10.6	3.23	11.0	3.26	11.2	3.28	11.8	3.30	12.4	3.30												
48	9.2	3.22	9.8	3.28	10.3	3.33	10.7	3.36	10.9	3.38	11.5	3.40	12.1	3.40												
50	6.4	2.43	7.0	2.49	7.5	2.53	7.9	2.57	8.1	2.58	8.7	2.61	9.3	2.61												
10	12.2	1.51	13.1	1.54	13.9	1.55	14.3	1.58	14.6	1.61	15.2	1.67	15.6	1.74												
12	12.0	1.60	12.9	1.61	13.7	1.62	14.1	1.63	14.4	1.65	14.9	1.69	15.4	1.77												
14	11.9	1.67	12.7	1.68	13.5	1.68	13.8	1.68	14.3	1.70	14.7	1.74	15.2	1.81												
16	11.7	1.77	12.5	1.76	13.3	1.75	13.7	1.75	14.0	1.75	14.5	1.78	15.0	1.84												
18	11.6	1.85	12.4	1.84	13.1	1.82	13.4	1.82	13.8	1.82	14.4	1.85	14.8	1.88												
20	11.4	1.94	12.1	1.91	12.8	1.90	13.1	1.92	13.4	1.90	14.0	1.91	14.5	1.94												
21	11.3	1.94	12.1	1.93	12.9	1.93	13.2	1.93	13.4	1.94	14.1	1.94	14.5	1.97												
23	11.2	2.04	12.0	2.02	12.6	2.02	12.9	2.03	13.2	2.02	13.9	2.02	14.3	2.03												
25	11.1	2.14	11.8	2.12	12.4	2.11	12.7	2.12	13.0	2.12	13.7	2.13	14.1	2.16												
27	10.8	2.23	11.6	2.22	12.3	2.22	12.5	2.22	12.8	2.22	13.4	2.23	13.8	2.24												
29	10.8	2.33	11.4	2.32	12.1	2.32	12.4	2.32	12.6	2.32	13.2	2.33	13.7	2.35												
31	10.5	2.43	11.4	2.42	11.9	2.43	12.3	2.43	12.4	2.43	13.0	2.44	13.4	2.45												
33	10.4	2.53	11.1	2.53	11.7	2.55	12.1	2.55	12.2	2.56	12.9	2.57	13.1	2.57												
35	10.4	2.63	10.9	2.65	11.4	2.67	11.7	2.68	11.8	2.69	12.4	2.69	13.1	2.69												
37	10.2	2.73	10.7	2.75	11.2	2.77	11.5	2.78	11.7	2.78	12.3	2.77	12.9	2.77												
39	10.0	2.83	10.5	2.86	11.0	2.87	11.4	2.88	11.5	2.88	12.1	2.88	12.8	2.87												
41	9.9	2.90	10.3	2.94	10.9	2.96	11.2	2.98	11.3	2.98	11.9	3.00	12.6	2.99												
43	9.7	2.97	10.2	3.02	10.7	3.06	11.0	3.09	11.1	3.10	11.7	3.11	12.4	3.11												
46	9.4	3.11	9.9	3.16	10.4	3.21	10.8	3.24	10.9	3.26	11.5	3.28	12.2	3.29												
48	9.1	3.21	9.6	3.26	10.1	3.31	10.4	3.34	10.6	3.36	11.2	3.38	11.9	3.39												
50	6.3	2.42	6.8	2.47	7.4	2.52	7.7	2.55	7.9	2.57	8.5	2.59	9.2	2.60												
10	12.1	1.51	12.9	1.54	13.7	1.55	14.1	1.57	14.4	1.60	15.0	1.67	15.4	1.73												
12	11.8	1.60	12.8	1.61	13.5	1.62	13.9	1.63	14.2	1.65	14.7	1.69	15.2	1.76												
14	11.7	1.67	12.5	1.67	13.4	1.67	13.6	1.68	14.1	1.70	14.5	1.74	15.0	1.80												
16	11.5	1.76	12.4	1.76	13.1	1.74	13.5	1.74	13.8	1.75	14.3	1.78	14.8	1.83												
18	11.3	1.85	12.2	1.83	12.9	1.82	13.2	1.81	13.6	1.81	14.2	1.84	14.6	1.87												
20	11.2	1.93	11.9	1.91	12.7	1.89	13.1	1.89	13.4	1.89	14.0	1.89	14.4	1.93												
21	11.1	1.93	11.9	1.92	12.7	1.89	13.0	1.92	13.2	1.93	13.9	1.93	14.3	1.96												
23	11.0	2.02	11.8	2.02	12.4	2.01	12.7	2.02	13.0	2.01	13.7	2.01	14.1	2.02												
25	10.8	2.12	11.6	2.10	12.3	2.10	12.6	2.12	12.9	2.12	13.5	2.13	13.9	2.15												
27	10.6	2.22	11.3	2.21	12.1	2.20	12.3	2.21	12.6	2.21	13.3	2.22	13.7	2.24												
29	10.5	2.31	11.2	2.31	11.9	2.30	12.2	2.31	12.4	2.31	13.1	2.32	13.5	2.34												
31	10.3	2.41	11.1	2.41	11.7	2.41	12.1	2.42	12.2	2.42	12.8	2.43	13.3	2.44												
33	10.2	2.51	10.9	2.51	11.4	2.53	11.9	2.53	12.0	2.54	12.7	2.56	13.0	2.57												
35	10.1	2.61	10.6	2.63	11.1	2.65	11.5	2.66	11.6	2.67	12.3	2.67	13.0	2.67												
37	9.9	2.71	10.4	2.73	10.9	2.75	11.3	2.76	11.5	2.76	12.1	2.75	12.8	2.76												
39	9.8	2.81	1																							

RXYSMQ4AYFK Cooling capacity (Te: 6°C)

Combina- tion (%) (Capacity index)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)												Combina- tion (%) (Capacity index)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)																
		14			16			18			19					20			22			24										
		TC	PI	kW	TC	PI	kW	TC	PI	kW	TC	PI	kW			TC	PI	kW	TC	PI	kW	TC	PI	kW	TC	PI	kW					
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW					
130%	10	12.8	1.88	13.6	1.92	14.4	1.95	14.8	1.97	15.1	1.98	16.0	2.01	17.2	2.02	12	8.5	0.83	9.0	0.82	9.6	0.82	9.8	0.81	10.1	0.81	10.6	0.81	11.1	0.81	11.6	0.81
	12	12.7	1.90	13.4	1.93	14.2	1.97	14.6	1.99	14.9	2.00	15.8	2.03	17.0	2.04	14	8.4	0.83	8.9	0.83	9.4	0.82	9.7	0.82	9.9	0.81	10.4	0.81	10.9	0.81	11.4	0.81
	14	12.5	1.92	13.2	1.96	14.0	2.00	14.4	2.01	14.7	2.02	15.5	2.05	16.8	2.07	16	8.3	0.84	8.8	0.83	9.3	0.83	9.5	0.83	9.8	0.83	10.3	0.82	10.8	0.82	11.3	0.82
	16	12.3	1.96	13.0	1.99	13.8	2.03	14.2	2.04	14.5	2.06	15.3	2.08	16.6	2.10	18	8.1	0.86	8.6	0.85	9.1	0.85	9.4	0.85	9.6	0.85	10.1	0.84	10.6	0.84	11.1	0.84
	18	12.1	1.99	12.8	2.03	13.6	2.06	13.9	2.08	14.3	2.10	15.1	2.12	16.4	2.14	20	7.8	0.88	8.5	0.88	9.0	0.87	9.2	0.87	9.5	0.87	10.0	0.87	10.5	0.87	11.0	0.87
	20	11.9	2.04	12.6	2.08	13.4	2.11	13.7	2.13	14.1	2.14	14.8	2.16	16.1	2.20	22	7.6	0.91	8.3	0.91	8.8	0.91	9.1	0.90	9.3	0.90	9.8	0.90	10.3	0.90	10.8	0.90
	21	11.8	2.06	12.5	2.10	13.3	2.14	13.6	2.15	14.0	2.16	14.7	2.19	16.0	2.23	23	7.6	0.93	8.3	0.93	8.8	0.92	9.0	0.92	9.2	0.92	9.7	0.92	10.2	0.92	10.7	0.92
	23	11.6	2.12	12.3	2.16	13.0	2.19	13.4	2.21	13.8	2.23	14.5	2.25	15.8	2.29	24	7.5	0.97	8.1	0.97	8.6	0.97	8.8	0.97	9.1	0.97	9.6	0.96	10.1	0.96	10.6	0.96
	25	11.4	2.19	12.1	2.22	12.8	2.26	13.2	2.27	13.6	2.29	14.3	2.32	15.6	2.36	25	7.4	1.01	8.0	1.02	8.5	1.02	8.7	1.02	8.9	1.02	9.4	1.02	9.9	1.02	10.4	1.02
	27	11.2	2.26	11.9	2.29	12.6	2.33	13.0	2.34	13.3	2.36	14.0	2.39	15.3	2.44	27	7.3	1.06	7.8	1.07	8.3	1.07	8.5	1.07	8.8	1.08	9.3	1.07	9.7	1.07	10.2	1.07
	29	11.0	2.34	11.7	2.37	12.4	2.41	12.8	2.42	13.1	2.44	13.8	2.48	15.0	2.52	29	7.2	1.12	7.6	1.13	8.1	1.14	8.4	1.14	8.6	1.14	9.1	1.14	9.6	1.14	10.1	1.14
	31	10.8	2.42	11.5	2.45	12.2	2.49	12.5	2.51	12.9	2.53	13.6	2.57	14.8	2.62	31	7.0	1.19	7.5	1.20	8.0	1.21	8.2	1.21	8.5	1.21	8.9	1.21	9.4	1.21	9.9	1.21
	33	10.6	2.52	11.3	2.54	12.0	2.58	12.3	2.60	12.7	2.62	13.3	2.66	14.5	2.72	33	6.9	1.26	7.3	1.28	7.8	1.29	8.1	1.29	8.3	1.29	8.8	1.29	9.2	1.29	9.7	1.29
	35	10.4	2.61	11.1	2.64	11.7	2.68	12.1	2.70	12.4	2.72	13.1	2.77	14.2	2.83	35	6.7	1.34	7.2	1.36	7.6	1.37	7.9	1.37	8.1	1.38	8.6	1.38	9.1	1.37	9.6	1.37
	37	10.2	2.75	10.8	2.78	11.4	2.82	11.8	2.84	12.1	2.86	12.8	2.91	13.9	2.98	37	6.6	1.41	7.0	1.43	7.5	1.44	7.7	1.45	7.9	1.45	8.4	1.45	8.8	1.44	9.3	1.44
	39	10.0	2.86	10.6	2.89	11.2	2.93	11.6	2.95	11.9	2.97	12.6	3.02	13.6	3.09	39	6.5	1.46	6.9	1.49	7.3	1.50	7.6	1.50	7.8	1.51	8.2	1.51	8.7	1.50	9.2	1.50
	41	9.8	2.96	10.4	2.99	11.0	3.04	11.3	3.06	11.7	3.09	12.3	3.14	13.4	3.21	41	6.3	1.52	6.8	1.54	7.2	1.55	7.4	1.56	7.6	1.56	8.1	1.56	8.5	1.55	9.0	1.55
	43	9.6	3.07	10.2	3.10	10.8	3.15	11.1	3.17	11.5	3.20	12.1	3.25	13.1	3.33	43	6.2	1.57	6.6	1.60	7.0	1.61	7.3	1.62	7.5	1.62	7.9	1.62	8.3	1.61	8.8	1.61
	46	9.4	3.21	10.0	3.25	10.6	3.30	11.0	3.32	11.4	3.35	12.0	3.40	13.0	3.48	46	6.3	1.65	6.8	1.67	7.2	1.69	7.4	1.69	7.6	1.70	8.1	1.70	8.5	1.69	9.0	1.69
	48	9.3	3.22	9.9	3.25	10.5	3.30	10.8	3.33	11.1	3.35	11.7	3.41	12.7	3.49	48	6.0	1.65	6.4	1.67	6.8	1.69	7.1	1.69	7.2	1.70	7.7	1.70	8.1	1.69	8.6	1.69
	50	7.4	3.09	7.9	3.12	8.3	3.17	8.6	3.19	8.9	3.21	9.4	3.27	10.1	3.34	50	4.8	1.58	5.1	1.60	5.4	1.62	5.6	1.62	5.8	1.63	6.1	1.63	6.4	1.62	6.7	1.62
120%	10	12.6	1.85	13.3	1.88	14.1	1.91	14.4	1.93	14.8	1.95	15.8	1.98	16.7	2.04	12	7.2	0.61	7.7	0.60	8.2	0.58	8.4	0.58	8.8	0.58	9.3	0.57	9.8	0.57	10.3	0.57
	12	12.4	1.87	13.1	1.91	13.9	1.94	14.2	1.96	14.6	1.97	15.6	2.01	16.5	2.05	14	7.1	0.62	7.5	0.61	8.0	0.60	8.3	0.60	8.5	0.60	9.0	0.59	9.5	0.58	10.0	0.58
	14	12.2	1.91	12.9	1.94	13.7	1.97	14.0	1.99	14.4	2.00	15.4	2.04	16.3	2.07	16	7.0	0.62	7.5	0.61	8.0	0.60	8.3	0.60	8.5	0.60	9.0	0.59	9.5	0.58	10.0	0.58
	16	12.0	1.94	12.8	1.98	13.5	2.01	13.8	2.02	14.2	2.04	15.2	2.07	16.1	2.10	18	6.9	0.64	7.4	0.63	7.9	0.62	8.1	0.62	8.4	0.61	8.8	0.61	9.3	0.60	9.8	0.60
	18	11.9	1.99	12.6	2.02	13.3	2.05	13.6	2.06	14.0	2.08	15.0	2.11	15.8	2.14	20	6.8	0.66	7.3	0.65	7.8	0.64	8.0	0.64	8.2	0.64	8.7	0.63	9.2	0.62	9.7	0.62
	20	11.7	2.04	12.4	2.08	13.1	2.10	13.4	2.11	13.8	2.13	14.8	2.16	15.6	2.18	22	6.7	0.69	7.1	0.68	7.6	0.67	7.9	0.67	8.1	0.67	8.6	0.66	9.0	0.65	9.5	0.65
	21	11.6	2.06	12.3	2.09	13.0	2.12	13.3	2.14	13.7	2.16	14.7	2.19	15.5	2.21	23	6.7	0.70	7.1	0.70	7.5	0.69	7.8	0.69	8.0	0.68	8.5	0.68	8.9	0.67	9.4	0.67
	23	11.4	2.12	12.1	2.15	12.8	2.18	13.1	2.20	13.5	2.22	14.4	2.25	15.2	2.27	25	6.5	0.73	7.0	0.73	7.4	0.73	7.6	0.72	7.9	0.72	8.3	0.71	8.8	0.71	9.3	0.71
	25	11.2	2.18	11.9	2.22	12.6	2.25	12.9	2.27	13.3	2.28	14.2	2.32	15.0	2.34	27	6.4	0.77	6.8	0.77	7.2	0.77	7.5	0.76	7.7	0.76	8.2	0.75	8.6	0.75	9.1	0.75
	27	11.0	2.25	11.7	2.29	12.4	2.32	12.7	2.34	13.1	2.35	14.0	2.39	14.8	2.42	29	6.3	0.82	6.7	0.81	7.1	0.81	7.3	0.81	7.5	0.81	8.0	0.80	8.5	0.80	9.0	0.80
	29	10.8	2.33	11.5	2.37	12.2	2.40	12.5	2.41	12.8	2.43	13.7	2.47	14.5	2.50	31	6.1	0.87	6.5	0.86	7.0	0.86	7.2	0.86	7.4	0.86	7.9	0.86	8.3	0.85	8.8	0.85
	31	10.6	2.41	11.3	2.45	11.9	2.48	12.3	2.50	12.6	2.52	13.5	2.56	14.3	2.60	33	6.0	0.92	6.4	0.92	6.8	0.92	7.0	0.92	7.2	0.92	7.7	0.92	8.2	0.92	8.7	0.92
	33	10.4	2.51	11.1	2.54	11.7	2.57	12.1	2.59	12.4	2.61	13.3	2.66	14.0	2.70	35	5.9	0.98	6.3	0.98	6.7	0.98	6.9	0.98	7.1	0.98	7.5	0.98	8.0	0.98	8.5	0.98
	35	10.2	2.60	10.9	2.64	11.5	2.67	11.9	2.69	12.2	2.71	13.0	2.77	13.8	2.81	37	5.7	1.04	6.1	1.04	6.5	1.04	6.7	1.04	7.0	1.05	7.4	1.05	7.8	1.06	8.3	1.06
	37	10.0	2.74	10.6	2.77	11.2	2.81	11.5	2.83	11.9	2.85	12.7	2.91	13.5	2.96	39																

RXYMQ5AYFK Cooling capacity (Te: 6°C)

Combina- tion (%) (Capacity index)	Outdoor air temp. (°CDB)	Indoor air temp. (°CWB)																	
		14						16						18					
		TC		PI		TC		PI		TC		PI		TC		PI		TC	
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	10	16.0	2.45	17.0	2.50	17.9	2.54	18.4	2.56	18.9	2.58	19.9	2.62	21.5	2.63				
	12	15.8	2.47	16.8	2.52	17.7	2.57	18.2	2.59	18.6	2.60	19.6	2.64	21.2	2.66				
	14	15.6	2.50	16.5	2.56	17.4	2.60	17.9	2.62	18.4	2.64	19.3	2.67	21.0	2.69				
	16	15.3	2.55	16.2	2.59	17.2	2.64	17.7	2.66	18.1	2.68	19.1	2.71	20.6	2.74				
	18	15.1	2.58	16.0	2.65	16.9	2.69	17.4	2.71	17.9	2.73	18.8	2.76	20.4	2.79				
	20	14.9	2.66	15.7	2.70	16.7	2.75	17.1	2.77	17.6	2.78	18.5	2.82	20.1	2.86				
	21	14.7	2.69	15.6	2.74	16.6	2.78	17.0	2.80	17.4	2.82	18.4	2.86	20.0	2.90				
	23	14.5	2.76	15.4	2.81	16.2	2.86	16.8	2.88	17.2	2.90	18.1	2.93	19.7	2.98				
	25	14.2	2.85	15.1	2.89	16.0	2.94	16.4	2.96	16.9	2.98	17.8	3.02	19.4	3.07				
	27	14.0	2.94	14.9	2.98	15.7	3.03	16.2	3.05	16.6	3.07	17.5	3.12	19.1	3.18				
	29	13.7	3.05	14.6	3.09	15.5	3.13	15.9	3.16	16.4	3.18	17.3	3.22	18.8	3.29				
	31	13.5	3.16	14.4	3.19	15.2	3.24	15.6	3.27	16.1	3.29	16.9	3.34	18.4	3.41				
	33	13.2	3.28	14.1	3.31	14.9	3.36	15.4	3.39	15.8	3.41	16.6	3.47	18.1	3.54				
	35	13.0	3.40	13.8	3.44	14.6	3.49	15.1	3.52	15.5	3.54	16.4	3.60	17.8	3.69				
	37	12.8	3.53	13.6	3.56	14.4	3.62	14.8	3.64	15.2	3.67	16.1	3.73	17.5	3.82				
	39	12.5	3.65	13.3	3.69	14.1	3.74	14.5	3.77	15.0	3.80	15.8	3.86	17.2	3.95				
	41	12.3	3.77	13.1	3.81	13.9	3.87	14.3	3.90	14.7	3.93	15.5	3.99	16.8	4.09				
	43	12.0	3.94	12.9	3.94	13.6	4.00	14.0	4.03	14.4	4.05	15.3	4.12	16.5	4.22				
	46	11.8	4.08	12.5	4.12	13.2	4.19	13.6	4.22	14.0	4.25	14.8	4.32	16.1	4.42				
	48	10.8	3.72	11.5	3.76	12.2	3.82	12.5	3.85	12.9	3.88	13.6	3.94	14.8	4.03				
	50	8.7	3.44	9.2	3.48	9.8	3.53	10.1	3.56	10.4	3.59	10.9	3.64	11.9	3.73				
120%	10	15.7	2.42	16.6	2.45	17.6	2.49	18.0	2.52	18.5	2.54	19.7	2.58	20.8	2.65				
	12	15.4	2.44	16.4	2.48	17.3	2.53	17.8	2.55	18.3	2.57	19.4	2.61	20.6	2.67				
	14	15.2	2.48	16.1	2.53	17.1	2.57	17.5	2.59	18.0	2.61	19.2	2.65	20.3	2.69				
	16	15.0	2.53	15.9	2.57	16.8	2.61	17.3	2.64	17.8	2.65	18.9	2.70	20.0	2.74				
	18	14.8	2.59	15.7	2.63	16.6	2.67	17.0	2.69	17.5	2.71	18.7	2.75	19.7	2.78				
	20	14.6	2.65	15.4	2.69	16.3	2.73	16.8	2.75	17.2	2.77	18.4	2.82	19.4	2.85				
	21	14.4	2.69	15.3	2.72	16.2	2.77	16.6	2.79	17.1	2.81	18.3	2.86	19.3	2.88				
	23	14.2	2.76	15.1	2.80	16.0	2.84	16.4	2.87	16.8	2.89	18.0	2.93	19.0	2.96				
	25	14.0	2.84	14.8	2.88	15.7	2.93	16.1	2.95	16.6	2.97	17.8	3.02	18.7	3.05				
	27	13.7	2.93	14.6	2.98	15.4	3.02	15.9	3.05	16.3	3.07	17.4	3.11	18.4	3.15				
	29	13.5	3.03	14.3	3.08	15.2	3.12	15.6	3.14	16.0	3.17	17.1	3.22	18.1	3.26				
	31	13.2	3.14	14.1	3.19	14.9	3.23	15.3	3.26	15.7	3.28	16.9	3.34	17.8	3.39				
	33	13.0	3.27	13.8	3.31	14.6	3.35	15.1	3.38	15.4	3.40	16.6	3.47	17.5	3.52				
	35	12.7	3.39	13.6	3.43	14.4	3.48	14.7	3.50	15.2	3.53	16.2	3.60	17.2	3.66				
	37	12.5	3.51	13.3	3.56	14.1	3.60	14.5	3.63	14.9	3.66	16.0	3.73	16.9	3.80				
	39	12.3	3.64	13.1	3.68	13.9	3.73	14.2	3.76	14.7	3.79	15.7	3.86	16.6	3.93				
	41	12.1	3.76	12.9	3.81	13.6	3.85	14.0	3.88	14.4	3.92	15.4	3.99	16.3	4.06				
	43	11.9	3.88	12.6	3.93	13.4	3.98	13.7	4.01	14.1	4.04	15.1	4.12	16.0	4.19				
	46	11.5	4.07	12.3	4.12	13.0	4.17	13.4	4.20	13.8	4.24	14.7	4.32	15.6	4.39				
	48	10.0	3.71	11.3	3.76	12.0	3.80	12.3	3.83	12.7	3.86	13.5	3.94	14.3	4.01				
	50	8.5	3.43	9.1	3.47	9.6	3.52	9.9	3.54	10.1	3.58	10.9	3.64	11.5	3.71				
110%	10	15.3	2.33	16.1	2.36	17.0	2.39	17.6	2.41	18.3	2.43	19.4	2.47	20.4	2.50				
	12	15.1	2.37	15.8	2.40	16.8	2.43	17.4	2.45	18.0	2.46	19.2	2.50	20.1	2.55				
	14	14.9	2.42	15.6	2.45	16.5	2.47	17.1	2.49	17.8	2.51	18.9	2.55	19.8	2.60				
	16	14.7	2.48	15.4	2.50	16.3	2.53	16.9	2.55	17.5	2.56	18.6	2.60	19.6	2.66				
	18	14.4	2.54	15.1	2.56	16.1	2.59	16.6	2.60	17.3	2.63	18.4	2.67	19.3	2.72				
	20	14.2	2.61	14.9	2.63	15.8	2.66	16.4	2.68	17.0	2.70	18.1	2.74	19.0	2.80				
	21	14.1	2.65	14.8	2.67	15.7	2.70	16.2	2.71	16.9	2.74	18.0	2.78	18.9	2.84				
	23	13.9	2.73	14.6	2.75	15.4	2.78	16.0	2.80	16.6	2.82	17.7	2.87	18.6	2.93				
	25	13.7	2.82	14.3	2.84	15.2	2.87	15.7	2.89	16.4	2.91	17.4	2.97	18.3	3.02				
	27	13.4	2.91	14.1	2.94	14.9	2.97	15.5	2.99	16.2	3.01	17.1	3.07	18.0	3.13				
	29	13.2	3.01	13.8	3.05	14.7	3.08	15.2	3.10	15.8	3.13	16.9	3.18	17.8	3.24				
	31	12.9	3.12	13.6	3.16	14.4	3.20	14.9	3.22	15.6	3.25	16.6	3.30	17.4	3.37				
	33	12.7	3.23	13.4	3.28	14.2	3.32	14.7	3.35	15.2	3.38	16.3	3.43	17.1	3.50				
	35	12.5	3.38	13.1	3.42	13.9	3.46	14.4	3.49	15.0	3.52	16.0	3.58	16.9	3.63				
	37	12.3	3.50	12.9	3.54	13.7	3.59	14.2	3.61	14.7	3.64	15.7	3.70	16.6	3.76				
	39	12.1	3.63	12.7	3.67	13.5	3.71	13.9	3.74	14.5	3.77	15.5	3.83	16.3	3.90				
	41	11.8	3.75	12.4	3.79	13.2	3.84	13.7	3.86	14.2	3.90	15.2	3.96	16.0	4.03				
	43	11.6	3.87	12.2	3.91	13.0	3.96	13.4	3.99	14.0	4.03	14.9	4.09	15.7	4.16				
	46	11.3	4.05	11.9	4.10	12.6	4.15	13.1	4.18	13.6	4.22	14.5	4.29	15.3	4.36				
	48	10.4	3.70	10.9	3.74	11.6	3.78	12.0	3.81	12.5	3.85	13.3	3.91	14.1	3.97				
	50	8.3	3.42	8.8	3.46	9.3	3.50	9.6	3.53	10.0	3.56	10.7	3.62	11.3	3.68				
100%	10	14.7	2.13	15.5	2.16	16.4	2.19	17.0	2.21	17.8	2.23	18.9	2.28	20.2	2.30				
	12	14.6	2.15	15.2	2.17	16.0	2.20	17.3	2.22	17.8	2.24	18.9	2.28	19.9	2.33				
	14	14.4	2.18	15.4	2.21	16.4	2.23	16.9	2.25	17.5	2.27	18.5	2.32	19.6	2.36				
	16	14.2	2.23	15.1	2.25	16.1	2.28	16.6	2.29	17.1	2.32	18.2	2.37	19.3	2.42				
	18	13.9	2.29	14.9	2.31	15.8	2.34	16.3	2.35	16.8	2.37	17.9	2.43	18.9	2.48				
	20	13.7	2.37	14.6	2.39	15.6	2.41	16.1	2.43	16.6	2.45	17.6	2.50	18.6	2.55				
	21	13.6	2.42	14.5	2.43	15.4	2.46	15.9	2.47	16.4	2.49	17.4	2.55	18.4	2.60				

RXYMQ6AYFK Cooling capacity (Te: 6°C)

Combina- tion (%) (Capacity index)	Outdoor air temp. (°CDB)	Indoor air temp. (°CWB)												Combina- tion (%) (Capacity index)	Outdoor air temp. (°CDB)	Indoor air temp. (°CWB)															
		14		16		18		19		20		22				24		14		16		18		19		20		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
130%	10	18.2	2.78	19.3	2.84	20.4	2.88	20.9	2.91	21.4	2.93	22.6	2.97	24.4	2.99	10	12.0	1.23	12.8	1.22	13.5	1.21	13.9	1.20	14.2	1.20	15.0	1.19	15.7	1.19	
	12	18.0	2.81	19.0	2.86	20.1	2.91	20.7	2.94	21.2	2.96	22.3	3.00	24.1	3.02	12	11.8	1.23	12.6	1.22	13.3	1.21	13.7	1.21	14.0	1.20	14.7	1.20			
	14	17.7	2.84	18.7	2.90	19.8	2.95	20.4	2.97	20.9	2.99	21.9	3.03	23.8	3.06	14	11.7	1.25	12.4	1.23	13.1	1.23	13.5	1.23	13.8	1.22	14.5	1.22			
	16	17.4	2.89	18.5	2.94	19.5	3.00	20.1	3.02	20.6	3.04	21.7	3.08	23.4	3.11	16	11.5	1.27	12.2	1.26	12.9	1.26	13.3	1.25	13.6	1.25	14.3	1.25			
	18	17.1	2.94	18.2	3.00	19.2	3.05	19.7	3.08	20.3	3.10	21.4	3.14	23.2	3.17	18	11.3	1.31	12.0	1.30	12.7	1.29	13.0	1.29	13.4	1.29	14.1	1.28			
	20	16.9	3.02	17.9	3.07	19.0	3.12	19.4	3.15	19.9	3.17	21.0	3.20	22.8	3.25	20	11.0	1.35	11.8	1.34	12.5	1.34	12.8	1.34	13.2	1.34	13.9	1.33			
	21	16.7	3.05	17.7	3.11	18.8	3.16	19.3	3.18	19.8	3.20	20.9	3.24	22.7	3.29	21	11.0	1.37	11.7	1.37	12.4	1.36	12.8	1.36	13.0	1.36	13.7	1.36			
	23	16.5	3.14	17.5	3.19	18.5	3.24	19.0	3.27	19.5	3.29	20.5	3.33	22.4	3.39	23	10.8	1.43	11.5	1.43	12.2	1.43	12.5	1.43	12.8	1.43	13.5	1.42			
	25	16.2	3.24	17.2	3.28	18.2	3.34	18.7	3.36	19.2	3.39	20.2	3.43	22.0	3.49	25	10.5	1.50	11.3	1.50	12.0	1.50	12.3	1.50	12.6	1.50	13.3	1.50			
	27	15.9	3.34	16.9	3.39	17.9	3.44	18.4	3.46	18.9	3.49	19.9	3.54	21.7	3.61	27	10.4	1.57	11.0	1.59	11.8	1.59	12.0	1.59	12.4	1.59	13.1	1.59			
	29	15.6	3.46	16.6	3.50	17.6	3.56	18.1	3.58	18.6	3.61	19.6	3.66	21.3	3.73	29	10.2	1.66	10.8	1.67	11.5	1.68	11.8	1.68	12.2	1.69	12.9	1.68			
	31	15.3	3.58	16.3	3.62	17.2	3.68	17.7	3.71	18.2	3.74	19.2	3.80	20.9	3.87	31	10.0	1.76	10.6	1.78	11.3	1.79	11.6	1.79	12.0	1.79	12.6	1.79			
	33	15.0	3.72	16.0	3.76	17.0	3.81	17.5	3.84	18.0	3.87	18.9	3.93	20.5	4.02	33	9.8	1.87	10.4	1.89	10.8	1.91	11.4	1.91	11.7	1.92	12.4	1.91			
	35	14.7	3.86	15.7	3.90	16.6	3.96	17.1	3.99	17.6	4.02	18.6	4.09	20.2	4.18	35	9.5	1.98	10.2	2.01	10.8	2.03	11.2	2.03	11.5	2.04	12.2	2.04			
	37	14.5	4.01	15.4	4.05	16.3	4.11	16.8	4.14	17.3	4.17	18.3	4.24	19.8	4.34	37	9.4	2.05	10.0	2.08	10.6	2.10	11.0	2.11	11.3	2.11	12.0	2.11			
	39	14.3	4.15	15.2	4.19	16.0	4.26	16.5	4.29	17.0	4.32	18.0	4.39	19.5	4.49	39	9.2	2.13	9.8	2.16	10.5	2.18	10.8	2.18	11.1	2.19	11.8	2.19			
	41	14.0	4.29	14.9	4.34	15.8	4.40	16.2	4.44	16.7	4.47	17.7	4.54	19.2	4.65	41	9.1	2.20	9.7	2.23	10.3	2.25	10.6	2.26	10.9	2.27	11.6	2.27			
	43	13.8	4.44	14.6	4.48	15.5	4.55	16.0	4.59	16.4	4.62	17.4	4.70	18.8	4.80	43	8.9	2.27	9.5	2.31	10.1	2.33	10.4	2.33	10.7	2.34	11.4	2.34			
	46	13.4	4.65	14.2	4.70	15.1	4.77	15.5	4.81	16.0	4.84	16.9	4.92	18.3	5.04	46	8.7	2.38	9.3	2.42	9.8	2.44	10.2	2.45	10.4	2.45	11.1	2.45			
	48	11.9	4.05	12.7	4.10	13.4	4.16	13.8	4.19	14.2	4.22	15.0	4.29	16.3	4.39	48	7.7	2.08	8.2	2.11	8.7	2.13	9.0	2.13	9.3	2.14	9.8	2.14			
	50	9.2	3.45	9.8	3.49	10.4	3.54	10.7	3.57	11.0	3.59	11.6	3.65	12.6	3.74	50	6.0	1.77	6.4	1.79	6.8	1.81	7.0	1.82	7.2	1.82	7.6	1.82			
120%	10	17.8	2.74	18.9	2.78	19.9	2.83	20.4	2.86	21.0	2.88	22.4	2.93	23.7	3.01	10	10.5	0.90	11.0	0.88	11.7	0.86	12.0	0.86	12.4	0.85	13.1	0.84			
	12	17.5	2.77	18.6	2.82	19.7	2.87	20.2	2.89	20.7	2.91	22.1	2.97	23.4	3.03	12	10.3	0.91	10.9	0.89	11.5	0.88	11.8	0.87	12.2	0.86	12.9	0.85			
	14	17.3	2.82	18.3	2.87	19.4	2.91	19.9	2.94	20.4	2.96	21.8	3.01	23.0	3.06	14	10.1	0.92	10.7	0.91	11.3	0.89	11.7	0.89	12.0	0.88	12.7	0.87			
	16	17.0	2.87	18.1	2.92	19.1	2.97	19.6	2.99	20.2	3.01	21.5	3.06	22.7	3.11	16	9.9	0.95	10.5	0.93	11.2	0.92	11.5	0.91	11.8	0.91	12.5	0.90			
	18	16.8	2.94	17.8	2.98	18.8	3.03	19.3	3.05	19.9	3.08	21.2	3.12	22.4	3.16	18	9.8	0.98	10.3	0.97	11.0	0.95	11.3	0.95	11.6	0.94	12.3	0.93			
	20	16.5	3.01	17.5	3.05	18.5	3.10	19.0	3.12	19.5	3.15	20.9	3.20	22.1	3.23	20	9.5	1.01	10.1	1.01	10.8	1.00	11.1	0.99	11.4	0.98	12.1	0.97			
	21	16.4	3.05	17.4	3.09	18.4	3.14	18.9	3.17	19.4	3.19	20.8	3.24	21.9	3.27	21	9.5	1.04	10.0	1.03	10.7	1.02	11.0	1.01	11.3	1.01	12.0	1.00			
	23	16.1	3.14	17.1	3.18	18.1	3.22	18.6	3.25	19.1	3.28	20.4	3.33	21.6	3.36	23	9.3	1.08	9.9	1.08	10.5	1.07	10.8	1.07	11.1	1.06	11.8	1.06			
	25	15.9	3.22	16.8	3.28	17.8	3.33	18.3	3.35	18.8	3.37	20.2	3.43	21.2	3.46	25	9.0	1.14	9.7	1.14	10.3	1.13	10.6	1.13	10.9	1.13	11.5	1.11			
	27	15.6	3.33	16.5	3.38	17.5	3.43	18.0	3.46	18.5	3.48	19.8	3.53	20.9	3.58	27	8.9	1.21	9.5	1.20	10.1	1.20	10.4	1.20	10.7	1.19	11.3	1.19			
	29	15.3	3.45	16.2	3.50	17.2	3.55	17.7	3.57	18.2	3.60	19.4	3.65	20.6	3.70	29	8.7	1.28	9.3	1.28	9.9	1.28	10.2	1.27	10.5	1.27	11.1	1.27			
	31	15.0	3.57	16.0	3.62	16.9	3.67	17.4	3.70	17.9	3.73	19.2	3.79	20.2	3.84	31	8.5	1.36	9.1	1.36	9.7	1.35	10.0	1.35	10.3	1.35	10.9	1.35			
	33	14.7	3.71	15.7	3.76	16.6	3.80	17.1	3.83	17.5	3.86	18.8	3.93	19.9	3.99	33	8.3	1.45	8.9	1.45	9.3	1.45	9.8	1.45	10.0	1.46	10.7	1.45			
	35	14.5	3.85	15.4	3.90	16.3	3.95	16.7	3.98	17.2	4.01	18.5	4.09	19.5	4.16	35	8.1	1.54	8.7	1.54	9.3	1.54	9.5	1.54	9.9	1.55	10.5	1.56			
	37	14.2	3.99	15.1	4.04	16.0	4.09	16.5	4.12	17.0	4.16	18.1	4.24	19.2	4.31	37	8.0	1.60	8.5	1.60	9.1	1.60	9.4	1.60	9.7	1.61	10.3	1.61			
	39	14.0	4.14	14.9	4.19	15.8	4.24	16.2	4.27	16.7	4.31	17.8	4.39	18.9	4.47	39	7.9	1.66	8.4	1.66	9.0	1.66	9.2	1.66	9.6	1.66	10.1	1.67			
	41	13.7	4.28	14.6	4.33	15.5	4.38	15.9	4.42	16.4	4.46	17.5	4.54	18.5	4.62	41	7.7	1.72	8.3	1.72	8.8	1.72	9.1	1.72	9.4	1.72	9.9	1.73			
	43	13.5	4.42	14.4	4.48	15.2	4.53	15.6	4.57	16.1	4.61	17.2	4.70	18.2	4.78	43	7.6	1.77	8.1	1.77	8.6	1.77	8.9	1.77	9.2	1.78	9.8	1.79			
	46	13.1	4.64	14.0	4.6.																										

9.2 Heating Capacity

RXYMQ4AVMK Heating capacity (Tc: 46°C)

Combina- tion (%) (Capacity index)	Outdoor air temp.	Inoor air temp. (°CDB)															
		16		18		20		21		22		24					
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-19.8	-20	5.6	1.99	5.6	2.03	5.5	2.06	5.5	2.08	5.5	2.10	5.4	2.13			
	-18.8	-19	5.8	2.00	5.7	2.04	5.7	2.07	5.7	2.09	5.6	2.11	5.6	2.15			
	-16.7	-17	6.2	2.03	6.2	2.06	6.1	2.10	6.1	2.12	6.0	2.14	6.0	2.18			
	-14.7	-15	6.7	2.04	6.6	2.09	6.5	2.14	6.5	2.15	6.5	2.17	6.4	2.22			
	-12.6	-13	7.1	2.07	7.1	2.12	7.0	2.16	7.0	2.19	6.9	2.21	6.9	2.25			
	-10.5	-11	7.6	2.10	7.6	2.14	7.5	2.19	7.4	2.22	7.4	2.25	7.4	2.29			
	-9.5	-10	7.9	2.11	7.8	2.16	7.7	2.21	7.7	2.23	7.6	2.26	7.6	2.31			
	-8.5	-9.1	8.1	2.12	8.1	2.17	8.0	2.23	7.9	2.25	7.9	2.28	7.8	2.33			
	-7	-7.6	8.5	2.14	8.5	2.19	8.4	2.25	8.3	2.28	8.3	2.30	8.2	2.36			
	-5	-5.6	9.1	2.17	9.0	2.23	9.0	2.28	8.9	2.31	8.8	2.34	8.8	2.39			
	-3	-3.7	9.7	2.19	9.6	2.25	9.5	2.32	9.5	2.34	9.4	2.37	9.3	2.43			
	0	-0.7	10.6	2.24	10.6	2.30	10.4	2.37	10.4	2.40	10.4	2.43	10.2	2.50			
	3	2.2	11.7	2.28	11.6	2.35	11.4	2.42	11.3	2.45	11.3	2.48	11.2	2.56			
	5	4.1	12.3	2.31	12.2	2.38	12.1	2.45	12.0	2.49	12.0	2.52	11.8	2.59			
	7	6	13.0	2.34	12.9	2.41	12.7	2.49	12.7	2.52	12.6	2.56	12.5	2.64			
120%	-19.8	-20	5.4	1.97	5.4	2.01	5.4	2.04	5.3	2.06	5.3	2.08	5.3	2.12			
	-18.8	-19	5.6	1.99	5.6	2.03	5.6	2.06	5.6	2.08	5.5	2.10	5.5	2.14			
	-16.7	-17	6.1	2.01	6.0	2.05	6.0	2.10	6.0	2.12	6.0	2.14	5.9	2.17			
	-14.7	-15	6.5	2.04	6.5	2.08	6.4	2.13	6.4	2.15	6.4	2.17	6.3	2.21			
	-12.6	-13	7.0	2.07	7.0	2.12	6.9	2.16	6.9	2.19	6.9	2.21	6.8	2.25			
	-10.5	-11	7.6	2.10	7.5	2.15	7.4	2.19	7.4	2.22	7.4	2.25	7.3	2.30			
	-9.5	-10	7.8	2.11	7.8	2.16	7.7	2.21	7.6	2.24	7.6	2.26	7.6	2.32			
	-8.5	-9.1	8.1	2.12	8.0	2.17	7.9	2.23	7.9	2.25	7.8	2.28	7.8	2.34			
	-7	-7.6	8.5	2.15	8.4	2.20	8.3	2.26	8.3	2.28	8.3	2.31	8.2	2.37			
	-5	-5.6	9.1	2.17	9.0	2.23	8.9	2.29	8.9	2.32	8.8	2.35	8.8	2.41			
	-3	-3.7	9.7	2.21	9.6	2.26	9.5	2.33	9.5	2.36	9.4	2.39	9.2	2.45			
	0	-0.7	10.6	2.25	10.5	2.32	10.4	2.38	10.4	2.41	10.3	2.45	10.2	2.51			
	3	2.2	11.6	2.30	11.5	2.37	11.4	2.44	11.3	2.47	11.3	2.51	11.1	2.58			
	5	4.1	12.3	2.34	12.2	2.41	12.0	2.48	12.0	2.51	11.9	2.55	11.8	2.62			
	7	6	13.0	2.37	12.9	2.44	12.7	2.52	12.7	2.56	12.6	2.59	12.5	2.67			
110%	-19.8	-20	5.6	1.98	5.5	2.02	5.5	2.06	5.5	2.08	5.5	2.10	5.4	2.13			
	-18.8	-19	5.7	1.99	5.7	2.03	5.7	2.07	5.7	2.09	5.6	2.11	5.6	2.15			
	-16.7	-17	6.2	2.02	6.1	2.06	6.1	2.10	6.1	2.13	6.0	2.15	6.0	2.19			
	-14.7	-15	6.6	2.05	6.6	2.10	6.5	2.14	6.5	2.16	6.5	2.18	6.4	2.23			
	-12.6	-13	7.1	2.08	7.0	2.12	7.0	2.17	6.9	2.19	6.9	2.22	6.8	2.26			
	-10.5	-11	7.6	2.11	7.5	2.15	7.4	2.21	7.4	2.23	7.4	2.26	7.3	2.31			
	-9.5	-10	7.8	2.12	7.8	2.17	7.7	2.23	7.6	2.25	7.6	2.28	7.6	2.33			
	-8.5	-9.1	8.1	2.14	8.0	2.19	7.9	2.24	7.9	2.27	7.8	2.30	7.8	2.35			
	-7	-7.6	8.5	2.16	8.4	2.21	8.3	2.27	8.3	2.30	8.3	2.32	8.2	2.38			
	-5	-5.6	9.1	2.19	9.0	2.25	8.9	2.31	8.8	2.34	8.8	2.37	8.7	2.43			
	-3	-3.7	9.7	2.22	9.5	2.28	9.5	2.34	9.4	2.37	9.4	2.41	9.2	2.47			
	0	-0.7	10.6	2.27	10.5	2.34	10.4	2.40	10.3	2.44	10.3	2.47	10.2	2.54			
	3	2.2	11.6	2.32	11.5	2.39	11.3	2.47	11.3	2.50	11.2	2.54	11.1	2.60			
	5	4.1	12.3	2.36	12.1	2.43	12.0	2.50	11.9	2.54	11.8	2.58	11.7	2.65			
	7	6	13.0	2.39	12.8	2.47	12.7	2.54	12.6	2.58	12.5	2.62	12.4	2.70			
100%	-19.8	-20	5.6	1.99	5.6	2.03	5.5	2.06	5.5	2.08	5.5	2.10	5.5	2.14			
	-18.8	-19	5.8	2.00	5.7	2.04	5.7	2.07	5.7	2.09	5.6	2.11	5.6	2.15			
	-16.7	-17	6.2	2.03	6.1	2.06	6.1	2.10	6.1	2.13	6.0	2.15	6.0	2.19			
	-14.7	-15	6.6	2.05	6.6	2.10	6.5	2.14	6.5	2.17	6.5	2.19	6.4	2.23			
	-12.6	-13	7.1	2.08	7.0	2.12	7.0	2.17	6.9	2.19	6.9	2.22	6.8	2.26			
	-10.5	-11	7.6	2.12	7.5	2.17	7.4	2.21	7.4	2.24	7.4	2.26	7.3	2.32			
	-9.5	-10	7.8	2.13	7.8	2.18	7.7	2.23	7.6	2.26	7.6	2.29	7.6	2.34			
	-8.5	-9.1	8.1	2.14	8.0	2.20	7.9	2.25	7.9	2.28	7.8	2.30	7.8	2.36			
	-7	-7.6	8.5	2.17	8.4	2.23	8.3	2.28	8.3	2.31	8.3	2.34	8.1	2.39			
	-5	-5.6	9.0	2.20	9.0	2.26	8.9	2.32	8.8	2.35	8.8	2.38	8.7	2.44			
	-3	-3.7	9.6	2.24	9.5	2.30	9.4	2.36	9.4	2.39	9.3	2.42	9.2	2.48			
	0	-0.7	10.6	2.29	10.4	2.36	10.4	2.43	10.3	2.46	10.2	2.49	10.1	2.56			
	3	2.2	11.6	2.35	11.4	2.41	11.3	2.48	11.2	2.52	11.1	2.56	11.1	2.63			
	5	4.1	12.2	2.38	12.0	2.46	11.9	2.53	11.8	2.57	11.8	2.61	11.7	2.68			
	7	6	12.9	2.42	12.7	2.50	12.6	2.58	12.5	2.61	12.5	2.65	12.3	2.73			
90%	-19.8	-20	6.4	2.38	6.4	2.43	6.4	2.47	6.4	2.49	6.4	2.52	6.4	2.56			
	-18.8	-19	6.7	2.41	6.7	2.45	6.7	2.50	6.7	2.52	6.7	2.55	6.7	2.59			
	-16.7	-17	7.3	2.46	7.3	2.51	7.2	2.56	7.2	2.59	7.2	2.61	7.2	2.67			
	-14.7	-15	7.8	2.51	7.8	2.57	7.8	2.62	7.8	2.65	7.8	2.68	7.7	2.73			
	-12.6	-13	8.5	2.56	8.4	2.63	8.3	2.68	8.3	2.71	8.3	2.74	8.3	2.80			
	-10.5	-11	9.0	2.62	9.0	2.68	8.9	2.74	8.9	2.78	8.9	2.81	8.8	2.87			
	-9.5	-10	9.3	2.65	9.2	2.71	9.2	2.78	9.2	2.81	9.2	2.84	9.1	2.90			
	-8.5	-9.1	9.6	2.67	9.5	2.74	9.5	2.80	9.5	2.83	9.4	2.87	9.3	2.94			
	-7	-7.6	10.1	2.71	10.0	2.78	9.9	2.85	9.9	2.89	9.9	2.92	9.8	2.99			
	-5	-5.6	10.6	2.77	10.6	2.84	10.5	2.91	10.4	2.94	10.4	2.98	10.4	3.05			
	-3	-3.7	11.3	2.82	11.1	2.89	11.1	2.97	11.1	3.01	11.0	3.05	10.9	3.12			
	0	-0.7	11.6	2.83	11.5	2.89	11.3	2.95	11.3	2.98	11.2	3.01	11.1	3.08			
	3	2.2	11.6	2.35	11.5	2.41	11.3	2.48	11.3	2.51	11.2	2.54	11.1	2.61			
	5	4.1	11.6	2.18	11.5	2.25	11.3	2.31	11.3	2.34	11.2	2.37	11.1	2.44			
	7	6	11.6	2.02	11.5	2.08	11.3	2.15	11.3	2.19	11.2	2.22	11.1	2.28			
80%	-19.8	-20	6.4	2.37	6.4	2.42	6.4	2.47	6.4	2.49	6.4	2					

RXYMQ4AYFK Heating capacity (Tc: 46°C)

Combina- tion (%) (Capacity index)	Outdoor air temp.	Inoor air temp. (°CDB)																Combina- tion (%) (Capacity index)	Outdoor air temp.	Indoor air temp. (°CDB)																							
		16				18				20				22						24				16				18				20				22				24			
		TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW			TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW								
130%	°CDB °CWB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW									
	-19.8 -20	4.8	1.92	4.8	1.96	4.8	1.99	4.8	2.01	4.8	2.03	4.8	2.06	4.8	2.07	-19.8 -20	5.3	2.54	5.3	2.54	5.2	2.55	5.2	2.56	5.3	2.56	5.3	2.56	5.3	2.58	5.3	2.58	5.3	2.58									
	-18.8 -19	5.0	1.94	5.0	1.98	5.0	2.02	5.0	2.04	5.0	2.06	5.0	2.10	5.0	2.10	-18.8 -19	5.5	2.57	5.5	2.57	5.5	2.59	5.5	2.60	5.5	2.61	5.5	2.61	5.5	2.63	5.5	2.63	5.5	2.63									
	-16.7 -17	5.5	1.98	5.5	2.02	5.4	2.06	5.4	2.09	5.4	2.11	5.4	2.15	5.4	2.15	-16.7 -17	5.9	2.63	5.9	2.64	6.0	2.66	6.0	2.67	6.0	2.67	6.0	2.69	6.1	2.72	6.0	2.69	6.1	2.72									
	-14.7 -15	6.0	2.01	5.9	2.06	5.9	2.11	5.9	2.14	5.9	2.16	5.8	2.21	5.8	2.21	-14.7 -15	6.4	2.69	6.5	2.71	6.5	2.74	6.5	2.76	6.6	2.78	6.6	2.78	6.6	2.81	6.6	2.81	6.6	2.81									
	-12.6 -13	6.5	2.06	6.4	2.11	6.4	2.16	6.4	2.18	6.3	2.21	6.3	2.26	6.3	2.26	-12.6 -13	7.1	2.75	7.1	2.78	7.2	2.82	7.2	2.84	7.2	2.86	7.2	2.86	7.2	2.86	7.2	2.86	7.2	2.91	7.2	2.91							
	-10.5 -11	7.1	2.09	7.0	2.15	6.9	2.20	6.9	2.23	6.9	2.26	6.8	2.31	6.8	2.31	-10.5 -11	7.8	2.81	7.8	2.86	7.8	2.90	7.8	2.92	7.8	2.95	7.8	2.95	7.8	3.01	7.8	3.01	7.8	3.01									
	-9.5 -10	7.4	2.11	7.3	2.17	7.2	2.22	7.2	2.26	7.2	2.28	7.1	2.34	7.1	2.34	-9.5 -10	8.1	2.85	8.2	2.89	8.2	2.94	8.2	2.96	8.2	2.99	8.2	2.99	8.2	3.05	8.2	3.05	8.2	3.05									
	-8.5 -9.1	7.7	2.13	7.6	2.19	7.5	2.25	7.5	2.27	7.4	2.31	7.3	2.36	7.3	2.36	-8.5 -9.1	9.1	2.84	9.0	2.87	8.8	2.90	8.8	2.92	8.7	2.93	8.7	2.93	8.6	2.97	8.6	2.97	8.6	2.97									
	-7 -7.6	8.1	2.16	8.0	2.21	7.9	2.28	7.9	2.31	7.8	2.34	7.8	2.41	7.8	2.41	-7 -7.6	9.1	2.67	9.0	2.70	8.8	2.74	8.8	2.76	8.7	2.77	8.7	2.77	8.6	2.81	8.6	2.81	8.6	2.81									
	-5 -5.6	8.7	2.19	8.6	2.26	8.5	2.32	8.5	2.36	8.4	2.39	8.3	2.46	8.3	2.46	-5 -5.6	9.1	2.45	9.0	2.49	8.8	2.53	8.8	2.55	8.7	2.57	8.7	2.57	8.6	2.61	8.6	2.61	8.6	2.61									
	-3 -3.7	9.4	2.22	9.3	2.29	9.2	2.36	9.1	2.40	9.0	2.43	8.9	2.51	8.9	2.51	-3 -3.7	9.1	2.25	9.0	2.29	8.8	2.34	8.8	2.36	8.7	2.38	8.7	2.38	8.6	2.43	8.6	2.43	8.6	2.43									
	0 -0.7	10.4	2.27	10.3	2.35	10.2	2.43	10.1	2.46	10.0	2.50	9.9	2.58	9.9	2.58	0 -0.7	9.1	1.96	9.0	2.01	8.8	2.06	8.8	2.09	8.7	2.11	8.6	2.17	8.6	2.17	8.6	2.17	8.6	2.17									
	3 2.2	11.5	2.32	11.3	2.41	11.2	2.49	11.1	2.53	11.1	2.57	10.9	2.65	10.9	2.65	3 2.2	9.1	1.71	9.0	1.76	8.8	1.82	8.8	1.85	8.7	1.87	8.6	1.93	8.6	1.93	8.6	1.93	8.6	1.93									
	5 4.1	12.2	2.36	12.1	2.44	11.9	2.52	11.9	2.56	11.8	2.61	11.6	2.70	11.6	2.70	5 4.1	9.1	1.56	9.0	1.61	8.8	1.67	8.8	1.70	8.7	1.73	8.6	1.79	8.6	1.79	8.6	1.79	8.6	1.79									
7 6	13.0	2.39	12.8	2.47	12.7	2.56	12.6	2.61	12.5	2.65	12.4	2.74	12.4	2.74	7 6	9.1	1.41	9.0	1.47	8.8	1.53	8.8	1.56	8.7	1.60	8.6	1.66	8.6	1.66	8.6	1.66	8.6	1.66										
9 7.9	13.8	2.42	13.6	2.51	13.4	2.60	13.4	2.65	13.3	2.69	13.1	2.78	13.1	2.78	9 7.9	9.1	1.28	9.0	1.35	8.8	1.41	8.8	1.44	8.7	1.47	8.6	1.54	8.6	1.54	8.6	1.54	8.6	1.54										
11 9.8	14.6	2.45	14.5	2.54	14.3	2.64	14.2	2.68	14.1	2.73	13.9	2.82	13.9	2.82	11 9.8	9.1	1.16	9.0	1.23	8.8	1.29	8.8	1.33	8.7	1.36	8.6	1.42	8.6	1.42	8.6	1.42	8.6	1.42										
13 11.8	15.5	2.48	15.4	2.58	15.2	2.67	15.1	2.72	15.0	2.77	14.8	2.87	14.8	2.87	13 11.8	9.1	1.05	9.0	1.11	8.8	1.18	8.8	1.21	8.7	1.25	8.6	1.32	8.6	1.32	8.6	1.32	8.6	1.32										
15 13.7	16.4	2.51	16.2	2.61	16.0	2.71	15.9	2.76	15.8	2.81	15.6	2.91	15.6	2.91	15 13.7	9.1	0.95	9.0	1.02	8.8	1.09	8.8	1.12	8.7	1.16	8.6	1.22	8.6	1.22	8.6	1.22	8.6	1.22										
120%	-19.8 -20	4.8	1.93	4.8	1.96	4.8	2.00	4.8	2.02	4.8	2.04	4.8	2.07	4.8	2.07	-19.8 -20	5.4	2.52	5.3	2.51	5.2	2.52	5.2	2.52	5.3	2.53	5.3	2.53	5.3	2.56	5.3	2.56	5.3	2.56									
	-18.8 -19	5.0	1.95	5.0	1.99	5.0	2.02	5.0	2.04	5.0	2.06	5.0	2.10	5.0	2.10	-18.8 -19	5.5	2.54	5.5	2.55	5.5	2.56	5.5	2.56	5.5	2.56	5.5	2.56	5.5	2.56	5.5	2.56	5.5	2.56	5.5	2.56							
	-16.7 -17	5.5	1.99	5.5	2.03	5.4	2.07	5.4	2.10	5.4	2.11	5.4	2.16	5.4	2.16	-16.7 -17	5.9	2.60	5.9	2.61	5.9	2.63	6.0	2.65	6.0	2.66	6.0	2.66	6.0	2.66	6.0	2.66	6.0	2.66	6.0	2.66							
	-14.7 -15	6.0	2.03	5.9	2.07	5.9	2.12	5.9	2.15	5.9	2.17	5.8	2.21	5.8	2.21	-14.7 -15	6.4	2.66	6.5	2.68	6.5	2.71	6.5	2.73	6.6	2.75	6.6	2.75	6.6	2.75	6.6	2.75	6.6	2.75									
	-12.6 -13	6.5	2.06	6.5	2.12	6.4	2.17	6.4	2.20	6.3	2.22	6.3	2.27	6.3	2.27	-12.6 -13	7.8	2.74	7.7	2.71	7.6	2.70	7.5	2.70	7.4	2.70	7.3	2.71	7.3	2.71	7.3	2.71	7.3	2.71									
	-10.5 -11	7.1	2.11	7.0	2.16	6.9	2.21	6.9	2.25	6.9	2.27	6.8	2.33	6.8	2.33	-10.5 -11	7.8	2.74	7.7	2.71	7.6	2.70	7.5	2.70	7.4	2.70	7.3	2.71	7.3	2.71	7.3	2.71	7.3	2.71									
	-9.5 -10	7.4	2.12	7.3	2.18	7.2	2.24	7.2	2.27	7.2	2.30	7.1	2.36	7.1	2.36	-9.5 -10	7.8	2.41	7.7	2.41	7.6	2.41	7.5	2.42	7.4	2.43	7.4	2.43	7.3	2.45	7.3	2.45	7.3	2.45									
	-8.5 -9.1	7.7	2.14	7.6	2.20	7.5	2.26	7.5	2.29	7.4	2.32	7.3	2.38	7.3	2.38	-8.5 -9.1	7.8	2.31	7.7	2.32	7.6	2.33	7.5	2.34	7.4	2.35	7.3	2.38	7.3	2.38	7.3	2.38	7.3	2.38									
	-7 -7.6	8.1	2.17	8.0	2.23	7.9	2.30	7.9	2.33	7.8	2.36	7.8	2.42	7.8	2.42	-7 -7.6	7.8	2.16	7.7	2.18	7.6	2.20	7.5	2.21	7.4	2.22	7.3	2.26	7.3	2.26	7.3	2.26	7.3	2.26									
	-5 -5.6	8.7	2.21	8.6	2.27	8.5	2.34	8.5	2.37	8.4	2.41	8.3	2.48	8.3	2.48	-5 -5.6	7.8	1.97	7.7	2.00	7.6	2.03	7.5	2.04	7.4	2.06	7.3	2.10	7.3	2.10	7.3	2.10	7.3	2.10									
	-3 -3.7	9.4	2.25	9.3	2.31	9.1	2.39	9.1	2.42	9.0	2.46	8.9	2.53	8.9	2.53	-3 -3.7	7.8	1.80	7.7	1.84	7.6	1.87	7.5	1.89	7.4	1.91	7.3	1.96	7.3	1.96	7.3	1.96	7.3	1.96									
	0 -0.7	10.4	2.30	10.3	2.38	10.2	2.45	10.1	2.49	10.0	2.53	9.9	2.61	9.9	2.61	0 -0.7	7.8	1.56	7.7	1.60	7.6	1.65	7.5	1.67	7.4	1.70	7.3	1.75	7.3	1.75	7.3	1.75	7.3	1.75									
	3 2.2	11.5	2.36	11.3	2.44	11.2	2.52	11.1	2.56	11.1	2.60	11.0	2.69	11.0	2.69	3 2.2	7.8	1.34	7.7	1.40	7.6	1.45	7.5	1.48	7.4	1.51	7.3	1.56	7.3	1.56	7.3	1.56	7.3	1.56									
	5 4.1	12.2	2.39	12.1	2.47	11.9	2.56	11.8	2.60	11.8	2.65	11.6	2.73	11.6	2.73	5 4.1	7.8	1.21	7.7	1.27	7.6	1.33	7.5	1.36	7.4	1.39	7.3	1.45	7.3	1.45	7.3	1.45	7.3	1.45									
	7 6	13.0	2.42	12.8	2.51	12.7	2.60	12.6	2.65	12.5	2.69	12.3	2.78	12.3	2.78	7 6	7.8	1.10	7.7	1.16	7.6	1.22	7.5	1.26	7.4	1.28	7.3	1.34	7.3	1.34	7.3	1.34	7.3	1.34									
9 7.9	13.8	2.46	13.6	2.55	13.4	2.64	13.3	2.69	13.3	2.73	13.1	2.82	13.1	2.82	9 7.9	7.8	1.00	7.7	1.																								

Combination (%) (Capacity index)	Outdoor air temp.	Indoor air temp. ("CDB)															
		16		18		20		21		22		24					
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI				
	"CDB" °CWB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW				
130%	-19.8	-20	6.1	2.53	6.1	2.58	6.1	2.62	6.1	2.65	6.1	2.67	6.1	2.73			
	-18.8	-19	6.4	2.56	6.4	2.61	6.3	2.66	6.3	2.68	6.3	2.71	6.3	2.76			
	-16.7	-17	7.0	2.61	7.0	2.67	6.9	2.72	6.9	2.75	6.9	2.78	6.8	2.83			
	-14.7	-15	7.6	2.65	7.5	2.72	7.5	2.78	7.5	2.82	7.5	2.85	7.4	2.91			
	-12.6	-13	8.3	2.71	8.2	2.77	8.1	2.84	8.1	2.88	8.0	2.91	8.0	2.98			
	-10.5	-11	9.0	2.76	8.9	2.83	8.8	2.90	8.7	2.94	8.7	2.98	8.6	3.05			
	-9.5	-10	9.3	2.78	9.3	2.86	9.1	2.93	9.1	2.97	9.1	3.01	9.0	3.08			
	-8.5	-9.1	9.7	2.80	9.6	2.88	9.4	2.96	9.4	2.99	9.4	3.04	9.3	3.11			
	-7	-7.6	10.3	2.84	10.1	2.92	10.0	3.00	10.0	3.04	9.9	3.08	9.8	3.17			
	-5	-5.6	11.0	2.88	10.9	2.97	10.8	3.06	10.7	3.10	10.7	3.15	10.5	3.23			
	-3	-3.7	11.9	2.93	11.7	3.02	11.6	3.11	11.5	3.16	11.4	3.20	11.3	3.30			
	0	-0.7	13.2	2.99	13.0	3.10	12.9	3.20	12.8	3.25	12.7	3.29	12.6	3.40			
	3	2.2	14.6	3.06	14.4	3.17	14.2	3.28	14.1	3.33	14.0	3.38	13.9	3.49			
	5	4.1	15.5	3.10	15.3	3.22	15.1	3.32	15.1	3.38	14.9	3.44	14.7	3.55			
	7	6	16.5	3.14	16.3	3.26	16.1	3.37	16.0	3.43	15.9	3.49	15.7	3.61			
	9	7.9	17.5	3.19	17.3	3.31	17.0	3.43	17.0	3.49	16.9	3.55	16.7	3.68			
120%	11	9.8	18.5	3.23	18.3	3.35	18.1	3.47	18.0	3.53	17.9	3.59	17.6	3.71			
	13	11.8	19.7	3.27	19.5	3.40	19.2	3.52	19.1	3.59	19.0	3.65	18.8	3.78			
	15	13.7	20.8	3.31	20.6	3.44	20.3	3.57	20.2	3.64	20.0	3.70	19.8	3.83			
	-19.8	-20	6.1	2.54	6.1	2.59	6.1	2.64	6.1	2.66	6.1	2.68	6.1	2.73			
	-18.8	-19	6.4	2.56	6.4	2.62	6.4	2.67	6.3	2.69	6.3	2.72	6.3	2.77			
	-16.7	-17	7.0	2.62	7.0	2.67	6.9	2.73	6.9	2.76	6.9	2.79	6.8	2.85			
	-14.7	-15	7.6	2.67	7.5	2.73	7.5	2.79	7.5	2.83	7.5	2.86	7.4	2.92			
	-12.6	-13	8.3	2.72	8.2	2.79	8.1	2.86	8.1	2.89	8.0	2.92	8.0	2.99			
	-10.5	-11	9.0	2.77	8.9	2.85	8.8	2.92	8.7	2.96	8.7	2.99	8.6	3.07			
	-9.5	-10	9.3	2.80	9.3	2.88	9.1	2.95	9.1	2.99	9.1	3.02	9.0	3.10			
	-8.5	-9.1	9.7	2.82	9.6	2.90	9.4	2.98	9.4	3.02	9.4	3.05	9.3	3.14			
	-7	-7.6	10.3	2.86	10.1	2.94	10.0	3.02	10.0	3.07	9.9	3.11	9.8	3.19			
	-5	-5.6	11.0	2.91	10.9	2.99	10.8	3.08	10.7	3.13	10.7	3.17	10.5	3.26			
	-3	-3.7	11.9	2.96	11.7	3.05	11.6	3.14	11.5	3.19	11.4	3.23	11.3	3.33			
	0	-0.7	13.2	3.03	13.0	3.13	12.9	3.23	12.8</								

Combina- tion (%) (Capacity index)	Outdoor air temp.	Indoor air temp. (*CDB)															
		16		18		20		21		22		24					
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI				
	*CWB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW		
70%	-19.8	-20	6.8	3.35	6.7	3.35	6.6	3.35	6.6	3.37	6.7	3.37	6.8	3.40			
	-18.8	-19	7.0	3.38	7.0	3.39	7.0	3.41	7.0	3.42	7.0	3.43	7.1	3.46			
	-16.7	-17	7.5	3.46	7.5	3.48	7.6	3.51	7.6	3.52	7.7	3.55	7.7	3.59			
	-14.7	-15	8.2	3.54	8.2	3.57	8.3	3.61	8.3	3.64	8.4	3.66	8.4	3.71			
	-12.6	-13	8.9	3.62	9.0	3.67	9.1	3.71	9.1	3.74	9.1	3.77	9.1	3.83			
	-10.5	-11	9.8	3.71	9.8	3.76	9.9	3.82	9.9	3.85	9.9	3.89	9.9	3.96			
	-9.5	-10	10.3	3.76	10.3	3.81	10.3	3.88	10.3	3.91	10.3	3.94	10.3	4.02			
	-8.5	-9.1	11.5	3.74	11.4	3.78	11.2	3.82	11.1	3.85	11.0	3.86	10.9	3.91			
	-7	-7.6	11.5	3.52	11.4	3.56	11.2	3.61	11.1	3.63	11.0	3.65	10.9	3.71			
	-5	-5.6	11.5	3.23	11.4	3.28	11.2	3.33	11.1	3.35	11.0	3.38	10.9	3.44			
	-3	-3.7	11.5	2.96	11.4	3.02	11.2	3.08	11.1	3.11	11.0	3.14	10.9	3.20			
	0	-0.7	11.5	2.58	11.4	2.65	11.2	2.71	11.1	2.75	11.0	2.79	10.9	2.86			
	3	2.2	11.5	2.25	11.4	2.32	11.2	2.40	11.1	2.43	11.0	2.47	10.9	2.55			
	5	4.1	11.5	2.05	11.4	2.12	11.2	2.20	11.1	2.24	11.0	2.28	10.9	2.36			
	7	6	11.5	1.86	11.4	1.94	11.2	2.02	11.1	2.06	11.0	2.10	10.9	2.19			
	9	7.9	11.5	1.68	11.4	1.77	11.2	1.86	11.1	1.90	11.0	1.94	10.9	2.02			
	11	9.8	11.5	1.53	11.4	1.62	11.2	1.70	11.1	1.75	11.0	1.79	10.9	1.87			
	13	11.8	11.5	1.38	11.4	1.47	11.2	1.56	11.1	1.60	11.0	1.65	10.9	1.74			
	15	13.7	11.5	1.25	11.4	1.34	11.2	1.43	11.1	1.48	11.0	1.52	10.9	1.61			
60%	-19.8	-20	6.8	3.32	6.7	3.31	6.6	3.32	6.6	3.32	6.7	3.34	6.8	3.37			
	-18.8	-19	7.0	3.35	7.0	3.35	7.0	3.37	7.0	3.38	7.0	3.39	7.1	3.43			
	-16.7	-17	7.5	3.42	7.5	3.44	7.5	3.47	7.6	3.49	7.6	3.50	7.7	3.55			
	-14.7	-15	8.2	3.50	8.2	3.53	8.2	3.57	8.3	3.59	8.4	3.62	8.4	3.67			
	-12.6	-13	8.9	3.61	9.8	3.58	9.6	3.56	9.3	3.56	9.4	3.56	9.3	3.58			
	-10.5	-11	9.9	3.31	9.8	3.30	9.6	3.30	9.5	3.31	9.4	3.32	9.3	3.34			
	-9.5	-10	9.9	3.17	9.8	3.17	9.6	3.18	9.5	3.19	9.4	3.20	9.3	3.23			
	-8.5	-9.1	9.9	3.04	9.8	3.05	9.6	3.07	9.5	3.08	9.4	3.10	9.3	3.13			
	-7	-7.6	9.9	2.85	9.8	2.87	9.6	2.89	9.5	2.91	9.4	2.93	9.3	2.97			
	-5	-5.6	9.9	2.59	9.8	2.63	9.6	2.67	9.5	2.69	9.4	2.71	9.3	2.76			
	-3	-3.7	9.9	2.37	9.8	2.42	9.6	2.47	9.5	2.49	9.4	2.52	9.3	2.58			
	0	-0.7	9.9	2.05	9.8	2.11	9.6	2.17	9.5	2.20	9.4	2.23	9.3	2.30			
	3	2.2	9.9	1.77	9.8	1.84	9.6	1.91	9.5	1.95	9.4	1.98	9.3	2.05			
	5	4.1	9.9	1.60	9.8	1.68	9.6	1.76	9.5	1.80	9.4	1.83	9.3	1.90			
	7	6	9.9	1.45	9.8	1.53	9.6	1.61	9.5	1.65	9.4	1.69	9.3	1.77			
	9	7.9	9.9	1.31	9.8	1.40	9.6	1.48	9.5	1.52	9.4	1.56	9.3	1.64			
	11	9.8	9.9	1.19	9.8	1.27	9.6	1.35	9.5	1.40	9.4	1.43	9.3	1.52			
	13	11.8	9.9	1.08	9.8	1.16	9.6	1.23	9.5	1.28	9.4	1.32	9.3	1.40			
	15	13.7	9.9	0.98	9.8	1.06	9.6	1.13	9.5	1.17	9.4	1.22	9.3	1.29			
50%	-19.8	-20	6.1	3.17	6.0	3.17	6.0	3.18	6.1	3.19	6.1	3.20	6.3	3.23			
	-18.8	-19	6.3	3.20	6.3	3.20	6.3	3.22	6.4	3.24	6.4	3.26	6.6	3.31			
	-16.7	-17	6.8	3.26	6.8	3.29	7.0	3.31	7.0	3.33	7.0	3.35	7.1	3.40			
	-14.7	-15	8.2	3.14	8.1	3.17	8.0	3.19	7.9	3.19	7.9	3.19	7.7	3.16			
	-12.6	-13	8.2	2.90	8.1	2.94	8.0	2.96	7.9	2.96	7.9	2.96	7.7	2.96			
	-10.5	-11	8.2	2.67	8.1	2.71	8.0	2.74	7.9	2.75	7.9	2.76	7.7	2.77			
	-9.5	-10	8.2	2.55	8.1	2.59	8.0	2.63	7.9	2.64	7.9	2.65	7.7	2.67			
	-8.5	-9.1	8.2	2.46	8.1	2.50	8.0	2.53	7.9	2.55	7.9	2.56	7.7	2.59			
	-7	-7.6	8.2	2.30	8.1	2.34	8.0	2.38	7.9	2.40	7.9	2.42	7.7	2.46			
	-5	-5.6	8.2	2.10	8.1	2.14	8.0	2.19	7.9	2.22	7.9	2.24	7.7	2.28			
	-3	-3.7	8.2	1.92	8.1	1.97	8.0	2.02	7.9	2.05	7.9	2.07	7.7	2.13			
	0	-0.7	8.2	1.65	8.1	1.71	8.0	1.77	7.9	1.80	7.9	1.83	7.7	1.89			
	3	2.2	8.2	1.43	8.1	1.49	8.0	1.55	7.9	1.58	7.9	1.62	7.7	1.68			
	5	4.1	8.2	1.29	8.1	1.35	8.0	1.41	7.9	1.45	7.9	1.49	7.7	1.56			
	7	6	8.2	1.16	8.1	1.23	8.0	1.29	7.9	1.33	7.9	1.37	7.7	1.44			
	9	7.9	8.2	1.05	8.1	1.11	8.0	1.18	7.9	1.22	7.9	1.25	7.7	1.32			
	11	9.8	8.2	0.94	8.1	1.01	8.0	1.08	7.9	1.11	7.9	1.15	7.7	1.22			
	13	11.8	8.2	0.84	8.1	0.91	8.0	0.98	7.9	1.01	7.9	1.05	7.7	1.12			
	15	13.7	8.2	0.75	8.1	0.83	8.0	0.90	7.9	0.93	7.9	0.96	7.7	1.02			

Note:

1. This table shows the average value or conditions which may occur.
2. This table indicates the situation of 50-130% combination of indoor units.
3.  shows rated condition.
4. When selecting the unit models, avoid the outdoor air temperature range shown by .

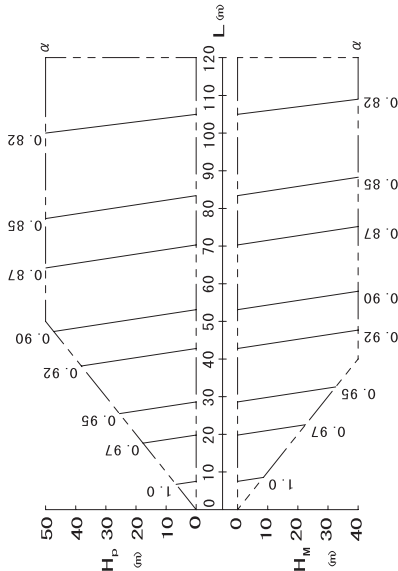
RXYMQ6AYFK Heating capacity (Tc: 46°C)

Combina- tion (%) (Capacity index)	Outdoor air temp.	Inoor air temp. (°CDB)																			
		16				18				20				22				24			
		TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW	TC	PI	kW	kW
130%	°CDB °CWB	6.9	2.91	6.9	2.97	6.9	3.02	6.9	3.05	6.9	3.08	6.8	3.13	6.8	3.16	6.8	3.19	6.8	3.22	6.8	3.25
	-19.8 -20	6.9	2.91	6.9	2.97	6.9	3.02	6.9	3.05	6.9	3.08	6.8	3.13	6.8	3.16	6.8	3.19	6.8	3.22	6.8	3.25
	-18.8 -19	7.2	2.95	7.2	3.00	7.2	3.06	7.2	3.09	7.1	3.12	7.1	3.18	7.1	3.21	7.1	3.24	7.1	3.27	7.1	3.30
	-16.7 -17	7.9	3.00	7.9	3.07	7.8	3.13	7.8	3.17	7.8	3.20	7.7	3.26	7.7	3.29	7.7	3.32	7.7	3.35	7.7	3.38
	-14.7 -15	8.6	3.06	8.5	3.13	8.4	3.20	8.4	3.24	8.4	3.28	8.4	3.35	8.4	3.38	8.4	3.41	8.4	3.44	8.4	3.47
	-12.6 -13	9.4	3.12	9.2	3.19	9.1	3.27	9.1	3.31	9.1	3.35	9.0	3.43	9.0	3.46	9.0	3.49	9.0	3.52	9.0	3.55
	-10.5 -11	10.2	3.17	10.0	3.26	9.9	3.34	9.9	3.39	9.9	3.43	9.7	3.51	9.7	3.54	9.7	3.57	9.7	3.60	9.7	3.63
	-9.5 -10	10.5	3.20	10.4	3.29	10.3	3.37	10.3	3.42	10.2	3.46	10.2	3.55	10.2	3.58	10.2	3.61	10.2	3.64	10.2	3.67
	-8.5 -9.1	10.9	3.23	10.8	3.32	10.7	3.41	10.7	3.45	10.6	3.50	10.4	3.59	10.4	3.62	10.4	3.65	10.4	3.68	10.4	3.71
	-7 -7.6	11.6	3.27	11.5	3.36	11.3	3.46	11.2	3.50	11.2	3.55	11.1	3.65	11.1	3.68	11.1	3.71	11.1	3.74	11.1	3.77
	-5 -5.6	12.5	3.32	12.3	3.42	12.2	3.53	12.1	3.57	12.0	3.63	11.9	3.73	11.9	3.76	11.9	3.79	11.9	3.82	11.9	3.85
	-3 -3.7	13.4	3.37	13.3	3.48	13.1	3.59	13.0	3.64	12.9	3.69	12.7	3.80	12.7	3.83	12.7	3.86	12.7	3.89	12.7	3.92
	0 -0.7	14.9	3.45	14.7	3.57	14.5	3.68	14.5	3.74	14.3	3.79	14.2	3.91	14.2	3.94	14.2	3.97	14.2	4.00	14.2	4.03
	3 2.2	16.4	3.53	16.2	3.65	16.1	3.77	15.9	3.84	15.8	3.90	15.6	4.02	15.6	4.05	15.6	4.08	15.6	4.11	15.6	4.14
	5 4.1	17.5	3.57	17.3	3.70	17.1	3.83	17.0	3.89	16.9	3.96	16.6	4.09	16.6	4.12	16.6	4.15	16.6	4.18	16.6	4.21
	7 6	18.6	3.62	18.4	3.75	18.2	3.88	18.0	3.95	17.9	4.02	17.7	4.16	17.7	4.19	17.7	4.22	17.7	4.25	17.7	4.28
9 7.9	19.7	3.67	19.5	3.81	19.2	3.95	19.2	4.02	19.0	4.08	18.8	4.22	18.8	4.25	18.8	4.28	18.8	4.31	18.8	4.34	
11 9.8	20.9	3.72	20.7	3.86	20.4	4.00	20.3	4.07	20.2	4.14	19.9	4.28	19.9	4.31	19.9	4.34	19.9	4.37	19.9	4.40	
13 11.8	22.2	3.77	22.0	3.91	21.7	4.06	21.5	4.13	21.4	4.20	21.2	4.35	21.2	4.38	21.2	4.41	21.2	4.44	21.2	4.47	
15 13.7	23.5	3.81	23.2	3.96	22.9	4.11	22.8	4.19	22.6	4.26	22.3	4.42	22.3	4.45	22.3	4.48	22.3	4.51	22.3	4.54	
120%	°CDB °CWB	6.9	2.93	6.9	2.99	6.9	3.04	6.9	3.07	6.9	3.10	6.9	3.15	6.9	3.18	6.9	3.21	6.9	3.24	6.9	3.27
	-19.8 -20	6.9	2.93	6.9	2.99	6.9	3.04	6.9	3.07	6.9	3.10	6.9	3.15	6.9	3.18	6.9	3.21	6.9	3.24	6.9	3.27
	-18.8 -19	7.2	2.95	7.2	3.02	7.2	3.07	7.2	3.10	7.2	3.13	7.1	3.19	7.1	3.22	7.1	3.25	7.1	3.28	7.1	3.31
	-16.7 -17	7.9	3.01	7.9	3.08	7.8	3.15	7.8	3.18	7.8	3.21	7.7	3.28	7.7	3.31	7.7	3.34	7.7	3.37	7.7	3.40
	-14.7 -15	8.6	3.08	8.5	3.15	8.5	3.21	8.4	3.26	8.4	3.29	8.4	3.36	8.4	3.39	8.4	3.42	8.4	3.45	8.4	3.48
	-12.6 -13	9.4	3.13	9.3	3.21	9.1	3.29	9.1	3.33	9.1	3.37	9.0	3.45	9.0	3.48	9.0	3.51	9.0	3.54	9.0	3.57
	-10.5 -11	10.2	3.19	10.0	3.28	9.9	3.36	9.9	3.41	9.9	3.45	9.7	3.53	9.7	3.56	9.7	3.59	9.7	3.62	9.7	3.65
	-9.5 -10	10.5	3.22	10.4	3.31	10.3	3.40	10.3	3.44	10.2	3.48	10.2	3.57	10.2	3.60	10.2	3.63	10.2	3.66	10.2	3.69
	-8.5 -9.1	10.9	3.25	10.8	3.34	10.7	3.43	10.7	3.48	10.6	3.52	10.4	3.61	10.4	3.64	10.4	3.67	10.4	3.70	10.4	3.73
	-7 -7.6	11.6	3.29	11.5	3.39	11.3	3.48	11.2	3.53	11.2	3.58	11.1	3.68	11.1	3.71	11.1	3.74	11.1	3.77	11.1	3.80
	-5 -5.6	12.5	3.35	12.3	3.45	12.2	3.55	12.1	3.60	12.0	3.66	11.9	3.76	11.9	3.79	11.9	3.82	11.9	3.85	11.9	3.88
	-3 -3.7	13.4	3.41	13.3	3.51	13.0	3.62	13.0	3.67	12.9	3.73	12.7	3.84	12.7	3.87	12.7	3.90	12.7	3.93	12.7	3.96
	0 -0.7	14.9	3.49	14.7	3.61	14.5	3.72	14.4	3.78	14.3	3.84	14.2	3.95	14.2	3.98	14.2	4.01	14.2	4.04	14.2	4.07
	3 2.2	16.4	3.57	16.2	3.70	16.0	3.82	15.9	3.88	15.8	3.95	15.6	4.07	15.6	4.10	15.6	4.13	15.6	4.16	15.6	4.19
	5 4.1	17.5	3.63	17.3	3.75	17.1	3.88	16.9	3.95	16.9	4.02	16.6	4.15	16.6	4.18	16.6	4.21	16.6	4.24	16.6	4.27
	7 6	18.6	3.68	18.4	3.81	18.2	3.95	18.0	4.02	17.9	4.08	17.6	4.22	17.6	4.25	17.6	4.28	17.6	4.31	17.6	4.34
9 7.9	19.7	3.73	19.5	3.87	19.2	4.01	19.1	4.08	19.0	4.15	18.7	4.28	18.7	4.31	18.7	4.34	18.7	4.37	18.7	4.40	
11 9.8	20.9	3.79	20.6	3.93	20.4	4.07	20.2	4.14	20.1	4.22	19.9	4.36	19.9	4.39	19.9	4.42	19.9	4.45	19.9	4.48	
13 11.8	22.2	3.84	21.9	3.99	21.6	4.13	21.5	4.21	21.4	4.28	21.1	4.43	21.1	4.46	21.1	4.49	21.1	4.52	21.1	4.55	
15 13.7	23.4	3.89	23.1	4.04	22.8	4.19	22.6	4.27	22.5	4.35	22.3	4.50	22.3	4.53	22.3	4.56	22.3	4.59	22.3	4.62	
110%	°CDB °CWB	6.9	2.93	6.9	2.99	6.9	3.04	6.9	3.07	6.9	3.10	6.9	3.15	6.9	3.18	6.9	3.21	6.9	3.24	6.9	3.27
	-19.8 -20	6.9	2.93	6.9	2.99	6.9	3.04	6.9	3.07	6.9	3.10	6.9	3.15	6.9	3.18	6.9	3.21	6.9	3.24	6.9	3.27
	-18.8 -19	7.2	2.97	7.2	3.02	7.2	3.07	7.2	3.10	7.2	3.13	7.2	3.20	7.2	3.23	7.2	3.26	7.2	3.29	7.2	3.32
	-16.7 -17	7.9	3.03	7.9	3.09	7.8	3.16	7.8	3.19	7.8	3.22	7.7	3.29	7.7	3.32	7.7	3.35	7.7	3.38	7.7	3.41
	-14.7 -15	8.6	3.09	8.5	3.16	8.5	3.24	8.4	3.27	8.4	3.30	8.4	3.38	8.4	3.41	8.4	3.44	8.4	3.47	8.4	3.50
	-12.6 -13	9.4	3.15	9.3	3.23	9.1	3.31	9.1	3.35	9.1	3.39	9.0	3.47	9.0	3.50	9.0	3.53	9.0	3.56	9.0	3.59
	-10.5 -11	10.2	3.21	10.0	3.30	9.9	3.39	9.9	3.43	9.9	3.47	9.7	3.56	9.7	3.59	9.7	3.62	9.7	3.65	9.7	3.68
	-9.5 -10	10.5	3.25	10.4	3.33	10.3	3.42	10.3	3.47	10.2	3.51	10.2	3.60	10.2	3.63	10.2	3.66	10.2	3.69	10.2	3.72
	-8.5 -9.1	10.9	3.28	10.8	3.37	10.7	3.46	10.7	3.50	10.6	3.55	10.4	3.64	10.4	3.67	10.4	3.70	10.4	3.73	10.4	3.76
	-7 -7.6	11.6	3.33	11.5	3.41	11.3	3.51	11.2	3.56	11.2	3.61	11.1	3.70	11.1	3.73	11.1	3.76	11.1	3.79	11.1	3.82
	-5 -5.6	12.5	3.39	12.3	3.48	12.2	3.59	12.1	3.64	12.0	3.69	11.9	3.79	11.9	3.82	11.9	3.85	11.9	3.88	11.9	3.91
	-3 -3.7	13.4	3.44	13.2	3.55	13.0	3.66	13.0	3.71	12.9	3.77	12.7	3.88	12.7	3.91	12.7	3.94	12.7	3.97	12.7	4.00
	0 -0.7	14.8	3.54	14.7	3.66	14.5	3.77	14.4	3.83	14.3	3.88	14.1	4.00	14.1	4.03	14.1	4.06	14.1	4.09	14.1	4.12
	3 2.2	16.4	3.63	16.2	3.75	16.0	3.88	15.9	3.94	15.8	4.00	15.6	4.13	td							

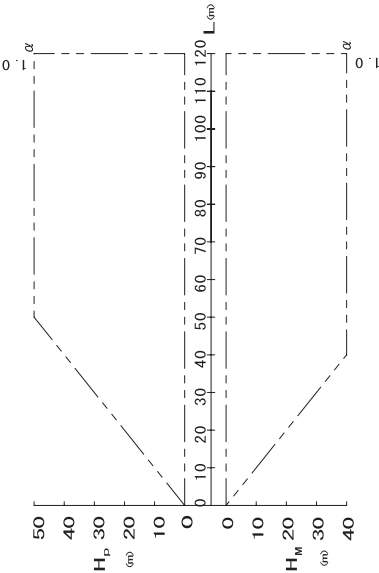
9.3 Capacity Correction Factor

RXYMQ4AVMK

1. Rate of change in cooling capacity



2. Rate of change in heating capacity



[Explanation of symbols]
H_P : Level difference(m) between indoor and outdoor units where indoor unit in inferior position
H_M : Level difference(m) between indoor and outdoor units where indoor unit in superior position
L : Equivalent pipe length(m)
Q: Capacity correction factor

[Diameter of pipes]

Model	gas	liquid
RXYMQ4AVMK	φ15.9	φ9.5

[Notes]

- These figures illustrate the rate of change in capacity of a standard indoor unit system at maximum load (with the thermostat set to maximum) under standard conditions.
Moreover, under partial load conditions there is only a minor deviation from the rate of change in capacity shown in the above figures.
- With this outdoor unit, evaporating pressure constant control when cooling, and condensing pressure constant control when heating is carried out.
- Method of calculating cooling / heating capacity (max capacity for combination with standard indoor unit)

cooling / heating capacity = cooling / heating capacity obtained from performance characteristics table X each capacity rate of change

In the case length of piping differs depending on the indoor unit, maximum capacity of each unit during simultaneous operation is:

cooling / heating capacity = cooling / heating capacity of each unit X capacity rate of change for each piping length

<As for RXYMQ4AVMK

- When overall equivalent pipe length is 90m or more, the diameter of the main gas pipes (outdoor unit-branch sections) must be increased.

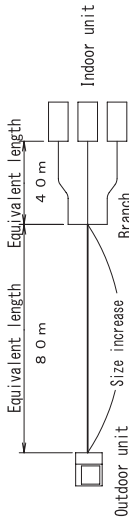
[Diameter of above case]

Model	gas	liquid
RXYMQ4AVMK	φ19.1	Not Increased

- When the main sections of the interunit gas pipe diameters are increased the overall equivalent length should be calculated as follows.

Overall equivalent length=Equivalent length to main pipe×0.5+Equivalent length after branching

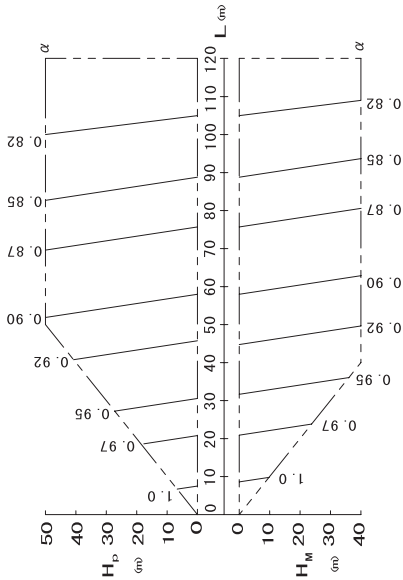
Example: RXYMQ4AVMK



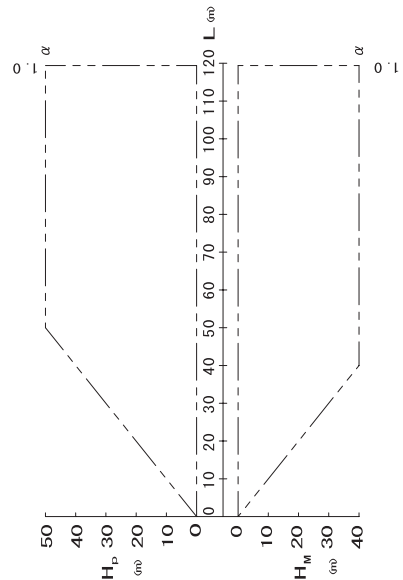
In the above case (Cooling)
Overall equivalent length=80m×0.5+40m=80m
The correction factor in capacity when H_P=0m is thus approximately 0.86.

RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK

1. Rate of change in cooling capacity



2. Rate of change in heating capacity



[Explanation of symbols]
H_p: Level difference (m) between indoor and outdoor units where indoor unit in inferior position
H_m: Level difference (m) between indoor and outdoor units where indoor unit in superior position
L: Equivalent pipe length (m)
Q: Capacity correction factor

[Diameter of pipes]

Model	gas	liquid
RXYMQ4AYFK	φ 15.9	φ 9.5
RXYMQ5AYFK	φ 15.9	φ 9.5
RXYMQ6AYFK	φ 19.1	φ 9.5

[Notes]

1. These figures illustrate the rate of change in capacity of a standard indoor unit system at maximum load (with the thermostat set to maximum) under standard conditions.
Moreover, under partial load conditions there is only a minor deviation from the rate of change in capacity shown in the above figures.

2. With this outdoor unit, evaporating pressure constant control when cooling, and condensing pressure constant control when heating is carried out.

3. Method of calculating cooling / heating capacity (max. capacity for combination with standard indoor unit)

cooling / heating capacity = cooling / heating capacity obtained from performance characteristics table × each capacity rate of change

In the case length of piping differs depending on the indoor unit, maximum capacity of each unit during simultaneous operation is:

cooling / heating capacity = cooling / heating capacity of each unit × capacity rate of change for each piping length

<As for RXYMQ4AYFK・RXYMQ5AYFK・RXYMQ6AYFK

4. When overall equivalent pipe length is 90m or more, the diameter of the main gas pipes (outdoor unit-branch sections) must be increased.
[Diameter of above case]

Model	gas	liquid
RXYMQ4AYFK RXYMQ5AYFK	φ 19.1	Not Increased
RXYMQ6AYFK	φ 22.2	φ 12.7

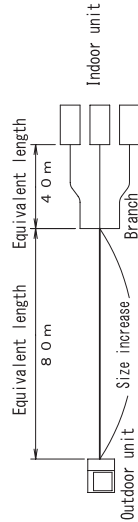
5. When the main sections of the interunit gas pipe diameters are increased the overall equivalent length should be calculated as follows.

Overall equivalent length = Equivalent length to main pipe × 0.5 + Equivalent length after branching

Example: RXYMQ4AYFK

RXYMQ5AYFK

RXYMQ6AYFK



In the above case (Cooling)
Overall equivalent length = 80m × 0.5 + 40m = 80m
The correction factor in capacity when H_p = 0m is thus approximately 0.86.

9.4 Notes for Heating Capacity Characteristics (Heat Pump)

— The tables do not take account of the reduction in capacity when frost has accumulated or while the defrosting operation is in progress.

The capacity values which take these factors into account, in other words the integrated heating capacity values, can be calculated as follows:

Formula

Integrated heating capacity = A

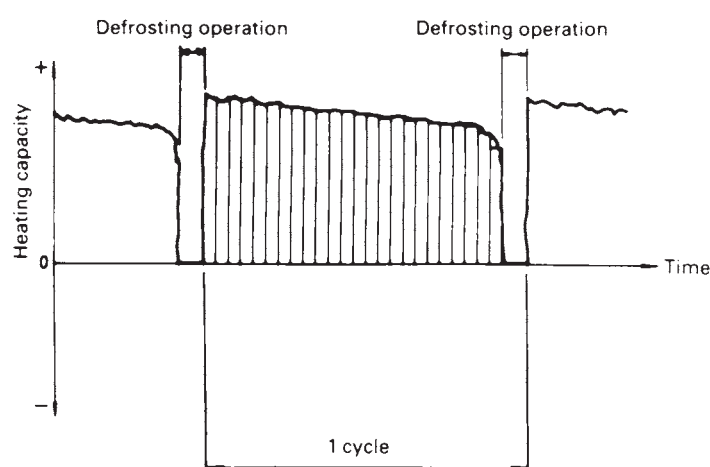
Value given in table of capacity characteristics = B

Integrating correction factor for frost accumulation = C

$A = B \times C$

— Correction factor for finding integrated heating capacity

Inlet port temperature of heat exchanger (°C / RH 85%)	-7	-5	-3	0	3	5	7
Integrating correction factor for frost accumulation	0.95	0.93	0.88	0.84	0.85	0.90	1.00



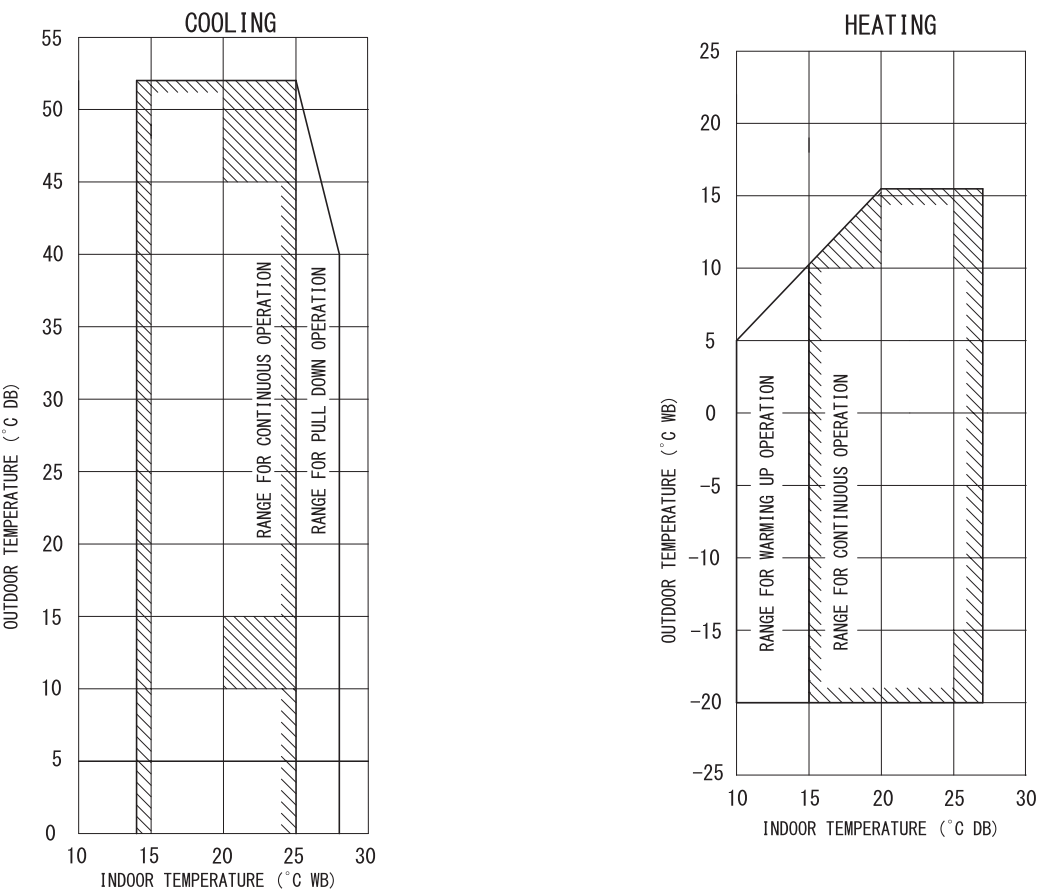
Note:

It will be seen from the figure above that the integrated heating capacity expresses the integrated heating capacity for a single cycle (from defrosting operation to defrosting operation) in terms of time.

— Please take note that when there is an accumulation of snow against the outside surface of the outdoor unit heat exchanger there will always be a temporary reduction in capacity although this will, of course, vary in degree in accordance with a number of other factors such as the outdoor temperature (°CDB), relative humidity (RH) and the amount of frosting which occurs.

10.Operation Limits

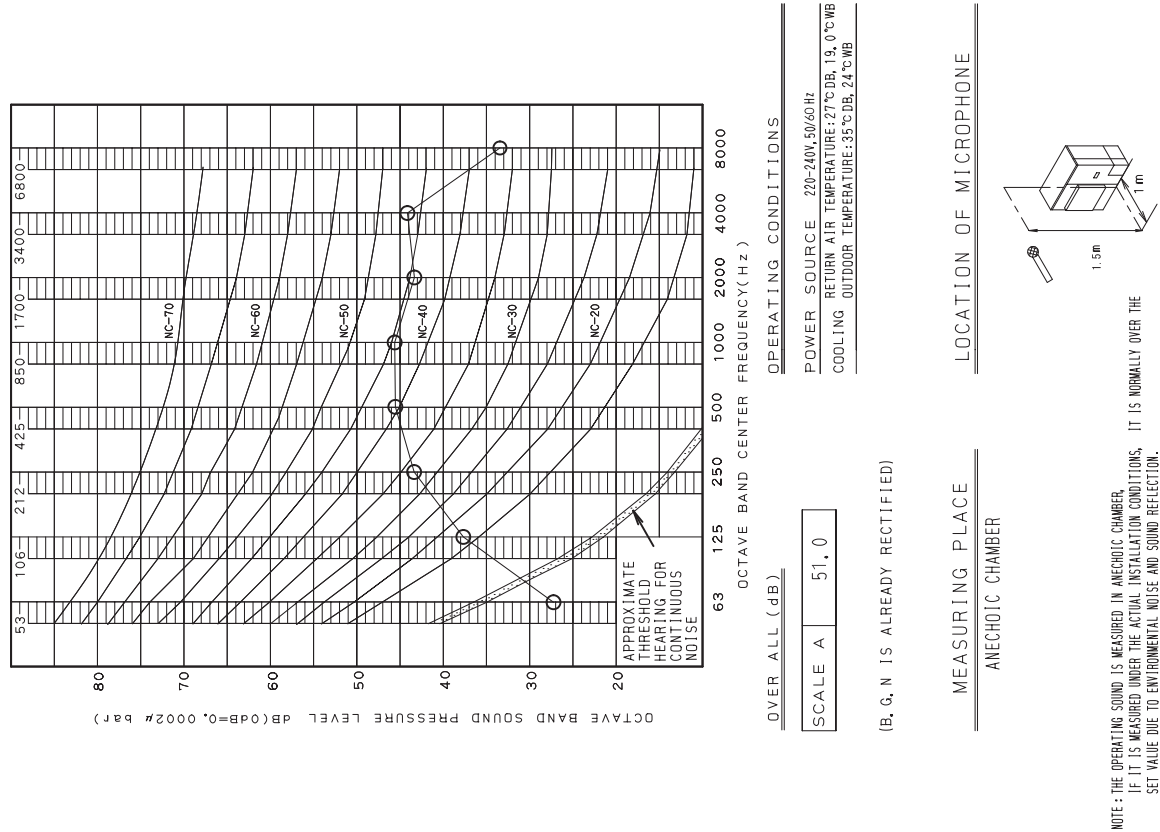
RXYMQ4AVMK / RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK



3D132650A

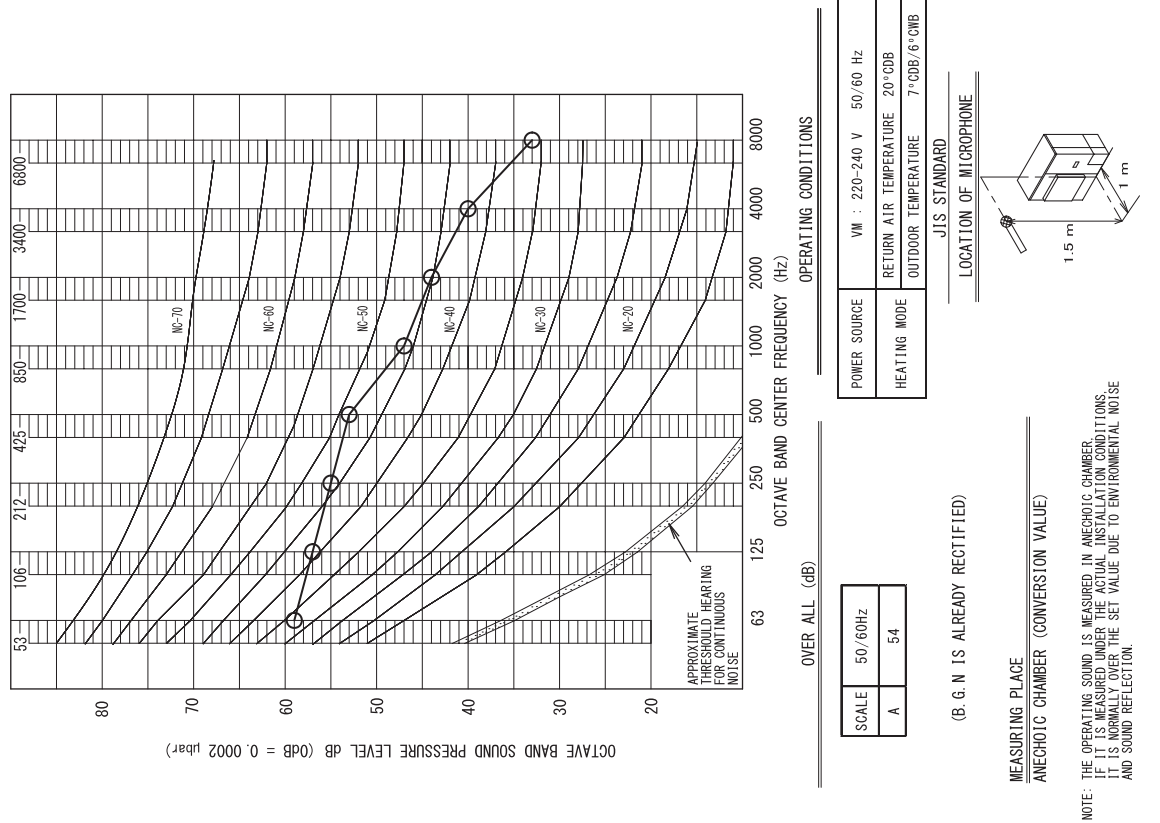
11. Sound Levels

RXYMQ4AVMK (cooling)



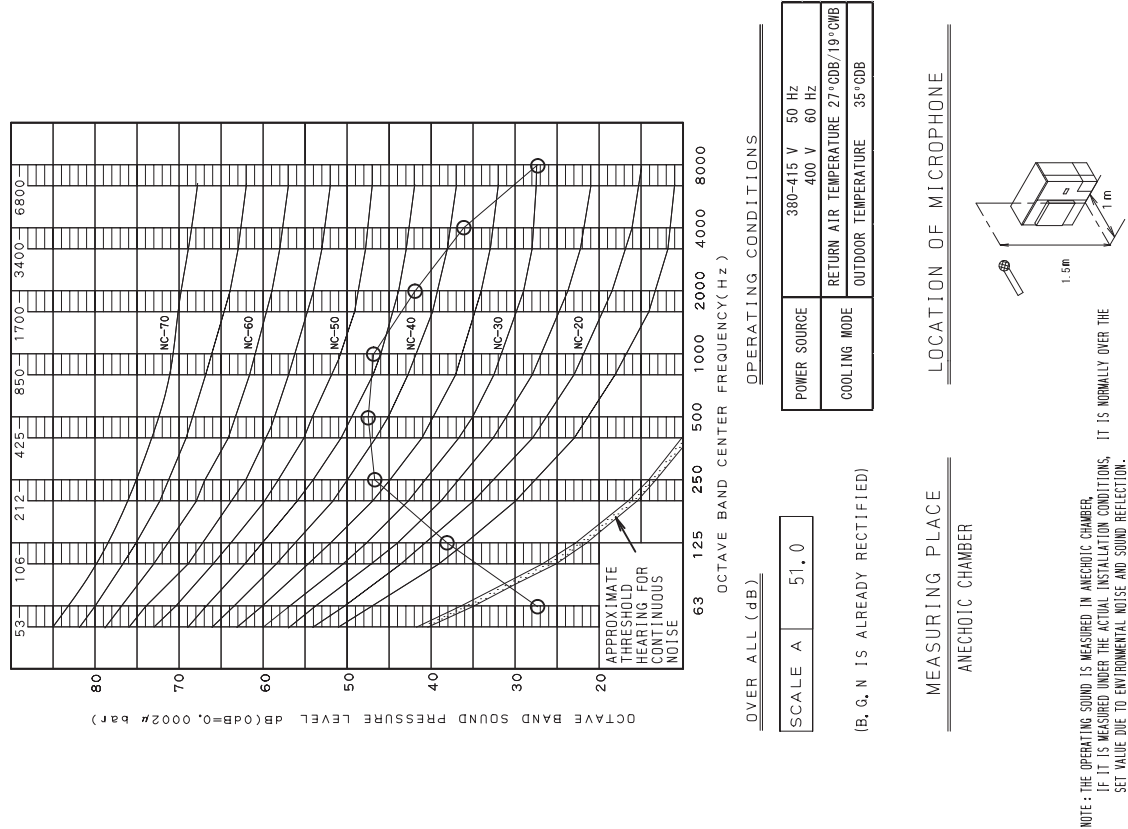
4D135360

RXYMQ4AVMK (heating)



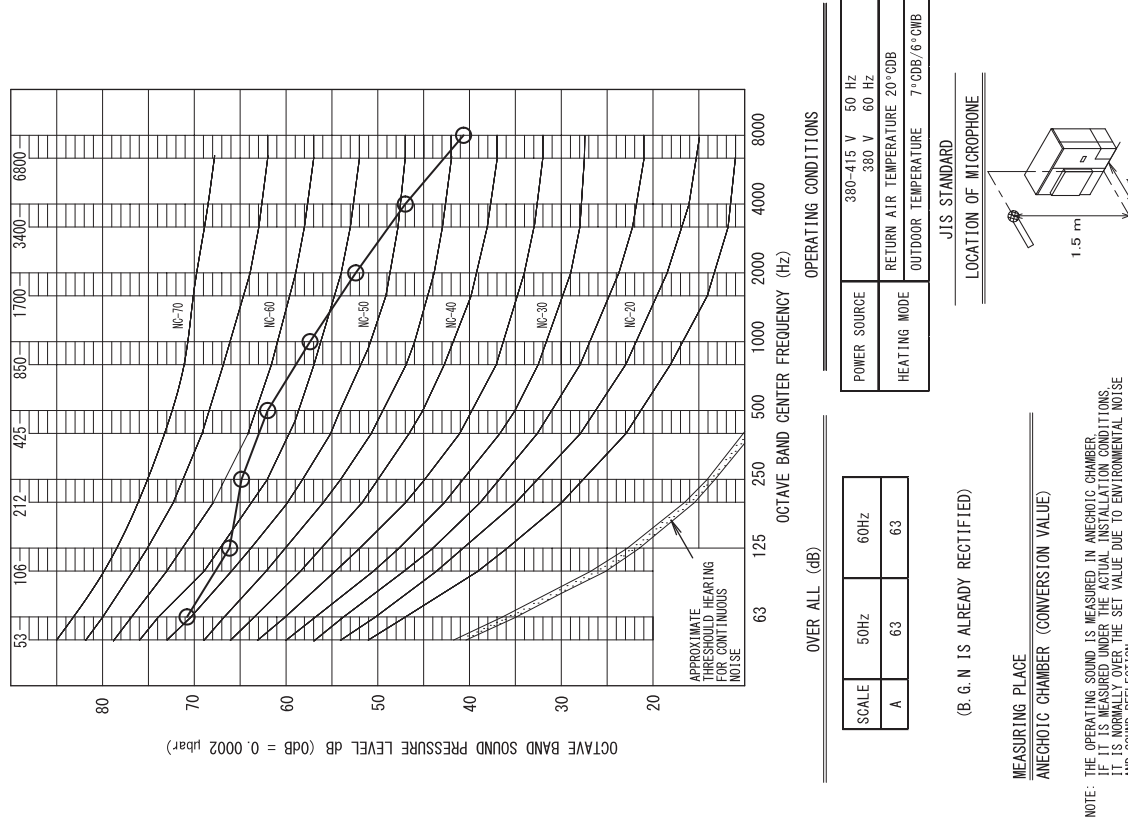
4D135531

RXYMQ4AYFK (cooling)



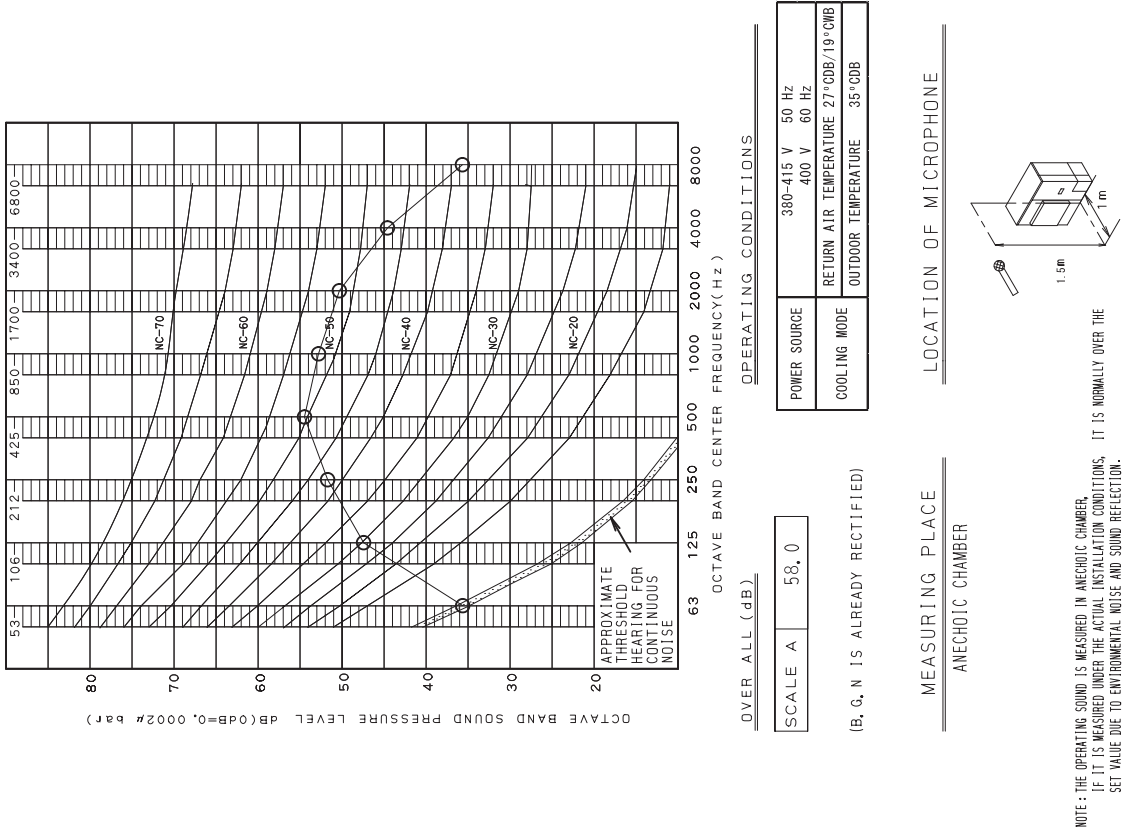
4D135342

RXYMQ4AYFK (heating)



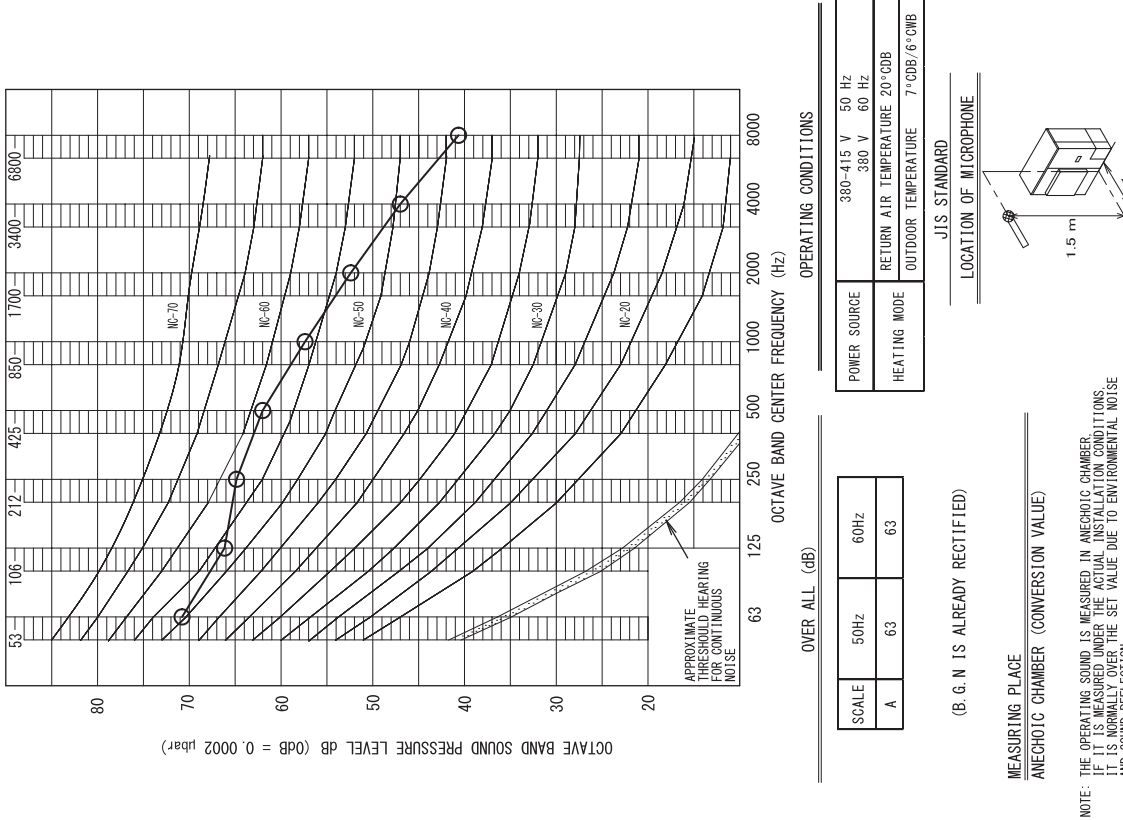
4D135532

RXYMQ5AYFK (cooling)



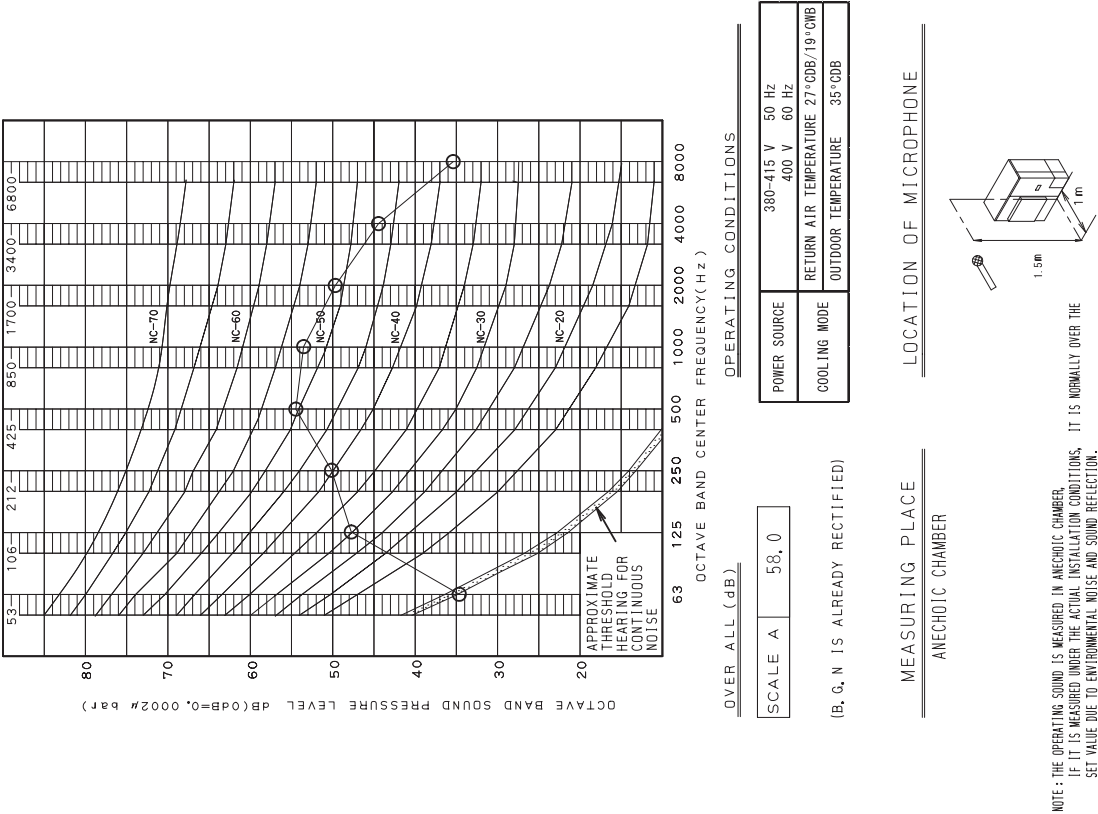
4D135347

RXYMQ5AYFK (heating)



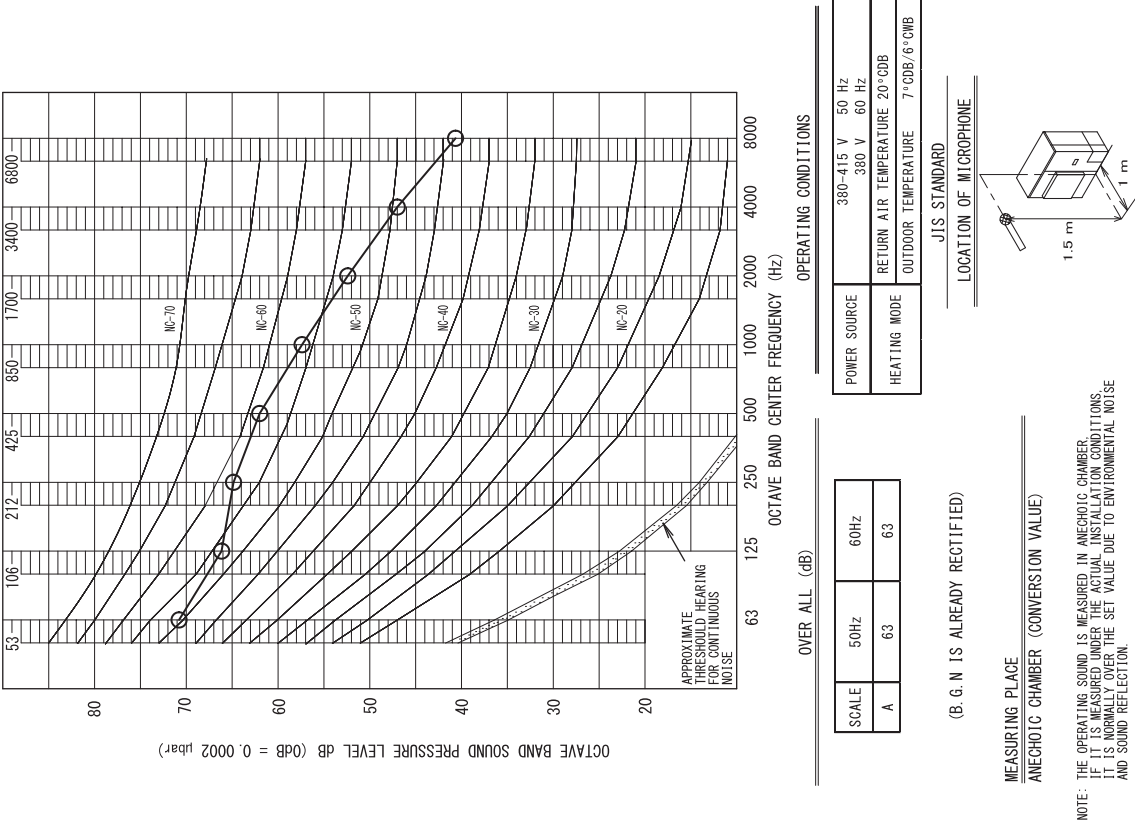
4D135532

RXYMQ6AYFK (cooling)



4D135355

RXYMQ6AYFK (heating)



4D135532

12. Optional Accessories

Optional accessories		1 phase	RXYMQ4AVMK	—	—	—
		3 phase	—	RXYMQ4AYFK	RXYMQ5AYFK	RXYMQ6AYFK
Distributive piping	HEADER PACK	BHF6RHP6Z (max. 4 branch), BHF6ARHP6Z (max. 6 branch), BHF8RHP6Z (max. 6 branch), BHF10RHP6Z (max. 6 branch)				
	REFNET joint	KHRP26A22T6				KHRP26A22T6, KHRP26A33T6
Drain plug		BKP082A41				
Air direction adjustment grille		KPW082A41 ★2				
Option PCB	DIII-NET expand adaptor	DTA109A51				
	External control adaptor	DTA104A61				
	Home Automation Interface Adaptor	DTA116A51				
	Option plate for control adaptor ★1	BKS26B	BKS26C			

C: 3D135530

Note:

- ★1. This plate is necessary for DTA109A51, DTA104A61 and DTA116A51 when installing into outdoor units.
 ★2. Air direction adjustment grille KPW082A41 is not used in India. If required, then need to procure it from Japan.

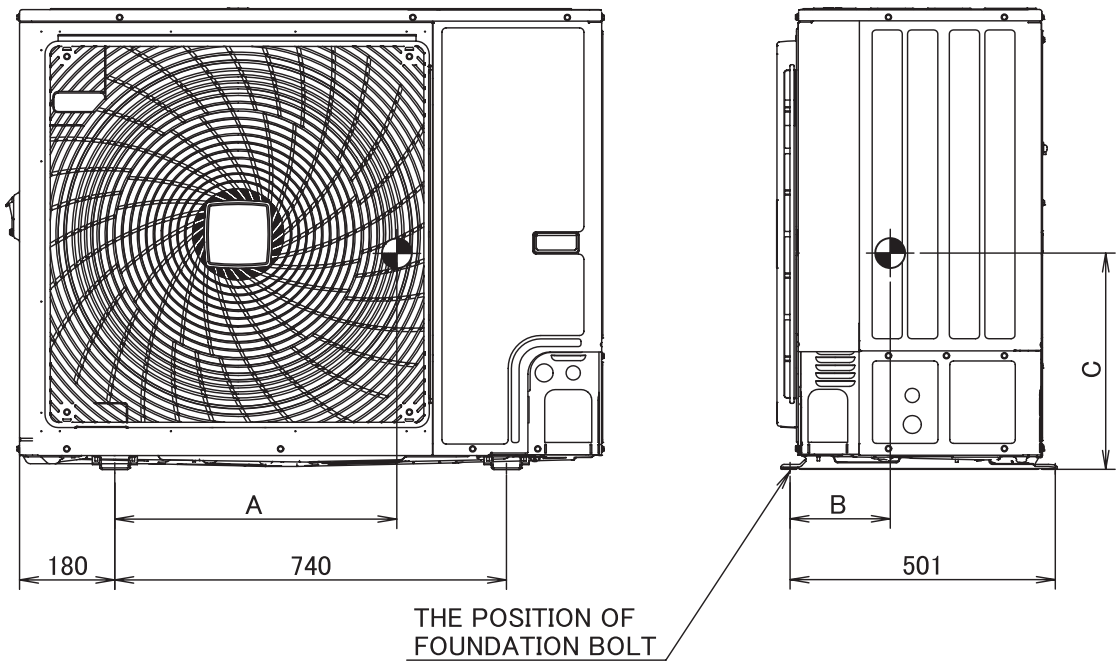
3. Installation

1. Centre of Gravity	44
2. Installation Manual	46
2.1 RXYMQ4AVMK	46
2.2 RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK	68
3. REFNET Pipe System	91
3.1 Layout Example	91
3.2 Equivalent Piping Length (Reference)	92
4. Branch Kit	93
4.1 REFNET Joint (Branch Kit)	93
4.2 HEADER PACK (Branch Kit)	96
5. Caution Label	101
5.1 RXYMQ4AVMK	101
5.2 RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK	108

1. Centre of Gravity

RXYMQ4AVMK

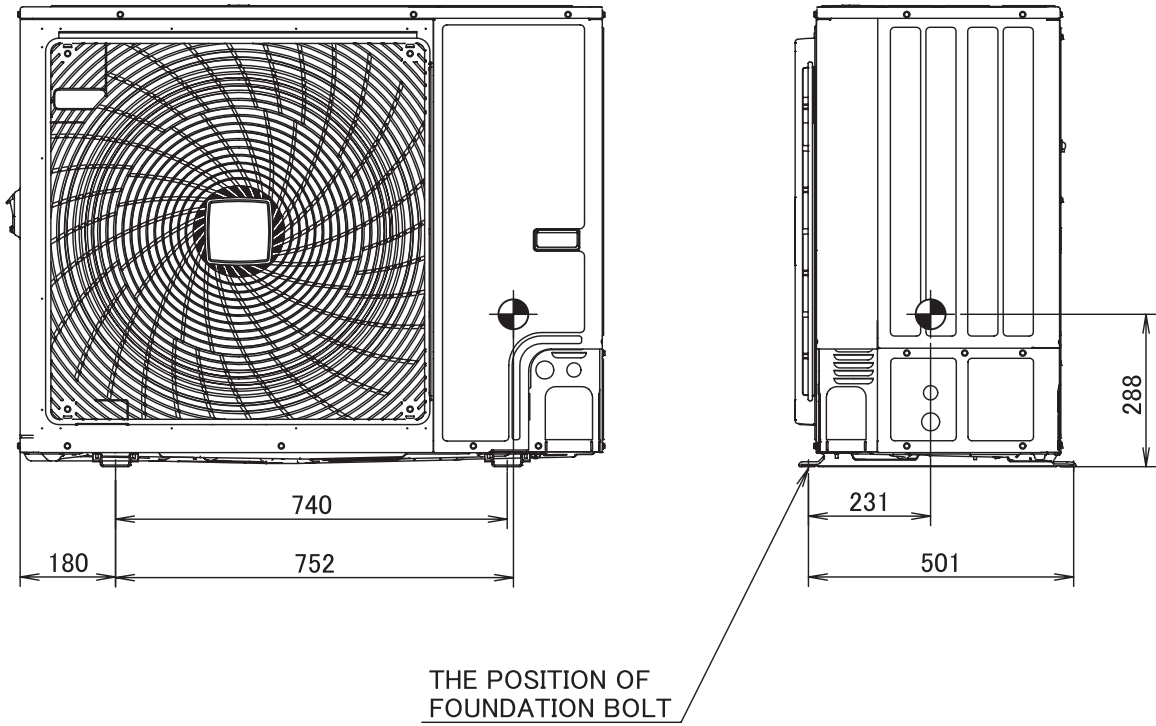
Unit: mm



DIMENSION MODEL NAME	A (mm)	B (mm)	C (mm)
RX(Y)MQ6ARV16	590	225	365
RXYMQ4AVMK	590	225	365

RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK

Unit: mm



2. Installation Manual

2.1 RXYMQ4AVMK



INSTALLATION MANUAL (1) RXYMQ4AVMK

1P660678-1



The two-dimensional bar code
is a manufacturing code.

Be sure to read this manual before installation and conduct installation according to this manual.

1. This series air conditioner uses R410A refrigerant. Strictly observe the precautions under the **6 Refrigerant piping connection** as there are strict requirements for how to prevent entry of impurities (mineral oils such as specialized lubricating oil and moisture) for R410A.
 - **Clean and dry**
Strict measures must be taken to keep impurities (including SUNISO oil and other mineral oils as well as moisture) out of the system.
 - **Tightly sealed**
R410A contains no chlorine, does not destroy the ozone layer and so does not reduce the earth's protection against harmful ultraviolet radiation. R410A will contribute only slightly to the greenhouse effect if released into the atmosphere.
2. Since the design pressure is 4.0MPa, refer to the **6 Refrigerant piping connection** for selection of pipe thickness.
3. Since R410A is a mixed refrigerant, it must be charged in liquid phase. (If the refrigerant is charged in gaseous phase, its composition can change and the system may not work properly.)
4. Be sure to connect a special indoor unit for R410A. Refer to the product catalogue for the model names of the indoor units which can be connected with this unit. (If connected with other indoor units, the air conditioning system will not operate normally.)
5. Power voltage of this series product is single-phase 220-240V, 50/60Hz.

Please read the these "SAFETY PRECAUTIONS" carefully before installing air conditioning unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.

- Please instruct the customer on how to operate the unit and keep it maintained.
- The precautions described herein are classified as WARNING and CAUTION, following which is the important safety information, it is strongly recommended to observe.
- This air conditioner comes under the term "appliances not accessible to the general public".
- Meaning of WARNING and CAUTION notices.



WARNING

Improper handling may result in major accidents such as death and serious injury.



CAUTION

Improper handling may result in injury or property damage, or even serious consequence under some circumstances.

- After completing installation, perform a test run to check for normal operation and explain to the customer how to operation and maintain the air conditioner.
In addition, ask the customer to keep this installation manual together with the operation manual for future reference.
- Also, inform customers that they should store this installation manual along with the operation manual for future reference.



WARNING

Ask the dealer or specialized personnel to carry out the installation work.
Do not install the machine by yourself. Otherwise, it may result in water leakage, electric shocks or fire hazards.

Perform installation work following the instructions contained in this manual.
Improper installation may result in water leakage, electric shocks or fire hazards.

When installing the units in a small room, take proper measures to ensure the amount of any leaked refrigerant under the concentration limit in the event of refrigerant leakage. Contact your dealer for appropriate measures.
Excessive refrigerant concentration in a closed ambient space may result in oxygen deficiency.

Be sure to use the specified accessories and parts for installation.
Failure to use the specified parts may result in water leakage, electric shocks, fire hazards or the unit failing to operate normally.

Install the unit on a solid foundation which can withstand the weight of the unit.
A foundation of insufficient strength may result in the unit falling and causing injuries.

Install the unit at designated places by taking into consideration strong winds such as typhoons and earthquakes.
Improper installation may result in the unit falling and causing accidents.

Make sure that all electrical work is carried out by the specialized personnel in accordance with local laws and regulations and this manual, and a special power supply circuit is provided for the unit.
An insufficient power supply circuit capacity or improper electrical operation may lead to electric shocks or fire hazards.

Use the specified wires and attach them securely, with no external forces acting on the terminal connections or wires.
Improper connections or securing of wire may result in abnormal heat build-up or fire hazards.

When connecting the indoor and outdoor units and the power supply wiring, to avoid the service lid being protruded and deformed, lay the wires in a smooth and regular way to attach the shell plate properly.
Otherwise, the terminals will give out heat and may result in electric shocks and fire hazards.

If refrigerant leakage occurs during installation, immediately open the windows and doors for ventilation.
Gaseous refrigerant will produce toxic gas if it comes into contact with fire.

After installation is completely finished, check for refrigerant leakage.
If the refrigerant leaks inside the room, it may generate noxious gas if in contact with the fire of an air heater, burner or cooker, etc.

Do not touch the electrical parts when the unit is powered on.

After completing installation, make sure that no residual voltage exists on the live parts (such as the terminals of earth leakage circuit breakers and terminal blocks) before operating the breakers such as changing.

Consult your local dealer regarding what to do in case of refrigerant leakage.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
Otherwise, this may lead to an accident due to oxygen depletion.

Do not directly touch refrigerant that has leaked from refrigerant pipes or other areas, as there is a danger of frostbite.

Do not allow children to climb on the outdoor unit and avoid placing objects on the unit.
Injury may result if the unit becomes loose and falls.

CAUTION

Be sure to earth the unit.

Do not connect the earth wire to gas pipes, water pipes, lightning rods or telephone earth wires.

- Gas pipes – gas leaks can cause explosion or fire.
- Water pipes – cannot be grounded if hard vinyl pipes are used.
- Lightning rods or telephone earth wires – the ground potential when struck by lightning gets extremely high.



Be sure to install a branch circuit breaker, over current circuit breaker (fuse) and earth leakage circuit breaker. Failure to do so may result in electric shocks and fire hazards.

Install the drain piping according to the installation manual to ensure proper drainage, then insulate the piping to prevent condensation from accumulating. Improper drain piping installation may result in water leakage and household items wet.

Keep the indoor unit, outdoor unit, power wiring and transmission wiring at least 1m away from televisions and radios to prevent image or noise interference. (A distance of 1m or more may not be sufficient to eliminate the noise in the case of strong radio wave.)

Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit as far away from fluorescent lamps as possible.

Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.

Do not install the air conditioner in the following locations:

- Where mineral oil mist, oil spray or vapour is produced, for example, in a kitchen.
Plastic parts may be aged and damaged, and result in water leakage.
- Where corrosive gas, such as sulphurous acid gas, is produced.
Corroding copper pipes or soldered parts may result in refrigerant leakage.
- Near machinery emitting electromagnetic waves.
Electromagnetic waves may disturb the operation of the control system and cause the unit malfunction.
- Where flammable gas may leak, where there is air borne carbon fibre or ignitable dust, or where volatile flammables such as gasoline or thinner are placed. Operating the unit in such conditions may result in fire hazards.
- Do not install the outdoor unit at the place where there is a shelter of the small animals.
Once in the unit, leaves and small animals making contact with the electrical parts can cause malfunction, smoke or fire.
Ask the customer to maintain a clean and tidy environment around the outdoor unit.

Do not climb up the outdoor unit or place objects on it. Falling or tumbling may result in injury.

Do not wash the outdoor or indoor units with water. Otherwise, it may cause electric shocks and fire hazards.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Disposal requirements

Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

[Note]

- For how to install the indoor unit and the remote controller, refer to the installation manual of each equipment.

1 Introduction

Combination

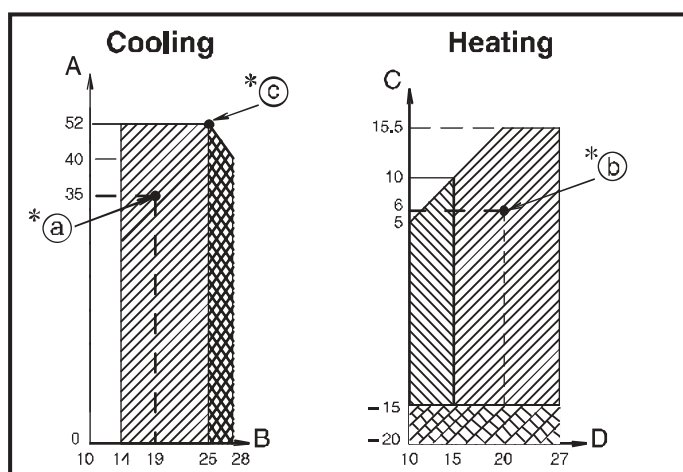
The indoor units can be connected in the following range.

- Be sure to install the dedicated indoor units.
Refer to the product catalogue for the model names of the indoor units which can be connected with this unit.
- Combination capacity ratio and number of the indoor units.

Outdoor unit	Combination	Combination capacity ratio (%)	Maximum number of indoor unit
RXYMQ4AVMK	VRV only	50~130	6

Standard operation range

The values below are the supposed working environment for the outdoor and indoor units:



Equivalent piping length...7.5m

Difference in height.....0m

A Outdoor temperature (°CDB)

B Indoor temperature (°CWB)

C Outdoor temperature (°CWB)

D Indoor temperature (°CDB)

Range for continuous operation

Range for pull down operation

Range for warming up operation

Possible operation range
(Out of unit capability guaranteed)

Technical specifications

For operation conditions*^(a), *^(b) in the table below, refer to the operation range (above figure).

Model		RXYMQ4AVMK	Remark
Refrigerant		R410A	
Cooling capacity	kW	11.3	* ^(a)
Heating capacity	kW	12.6	* ^(b)
Cooling input	kW	2,750	* ^(a)
Heating input	kW	2,680	* ^(b)
Dimensions (H × W × D)		mm	870 × 1100 × 460
Connection piping	Gas side	inch mm	5/8 Ø15.9
	Liquid side	inch mm	3/8 Ø9.5

Electrical specifications

For operation conditions * in the table below, refer to the operation range (above figure).

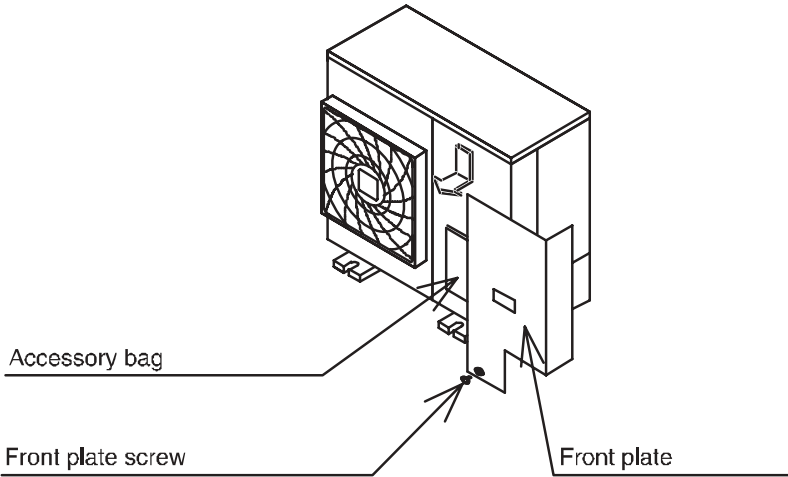
Model			RXYMQ4AVMK	Remark
Power supply	Phase		~	
	Voltage	V	220-240	
	Frequency	Hz	50/60	
	Allowable voltage fluctuation	%	±10	
	Fuse rated current	A	30	
Outdoor unit maximum running current		A	27.0	*

Accessories

Check if the following accessories are supplied with the unit.
(Remove the front plate and they are in the accessory bag)

Operation manual	Buckle	Ferrite core
 (1 pc.)	 (1 pc.)	 (1 pc.)

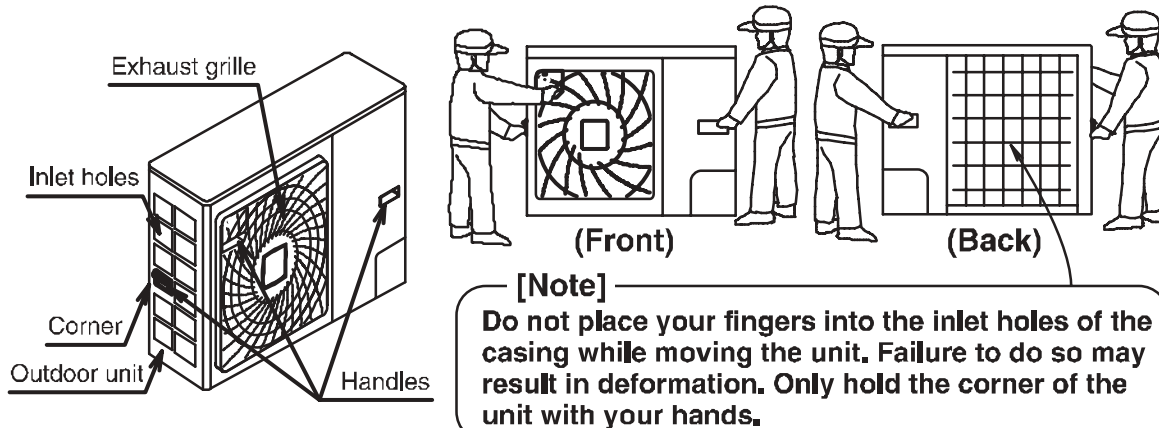
Others
• Installation manual (3 pcs.) • Screw (1 pc.)



2 Before installation

[About carrying]

Hold the 2 handles at both sides as shown in the figure below and move it slowly.
(Pay attention not to touch the fins at the back.)



- Use the accessories or the specified parts to install the required parts.

3 Selecting installation location

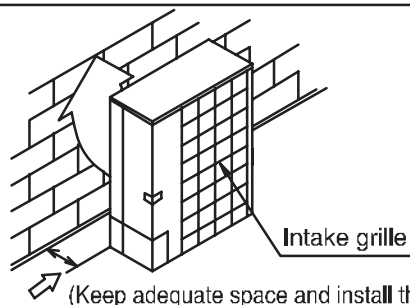
1) Select a location for installation that meets the following conditions and get the customer's approval.

- Good ventilation.
- Not disturbing the neighbours.
- No shelters of the small animals.
- Solid enough to support the weight and vibration of the unit which can be placed horizontally.
- Able to avoid raining as much as possible.
- Adequate space kept around the unit for installation.
- Outdoor piping and wiring within the allowable length range.
- No risk of flammable gas leaks.

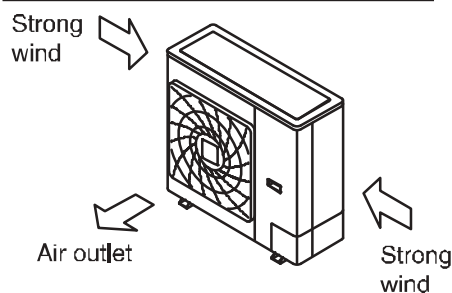
2) When installing in locations where there is a possibility of strong wind, take the following measures.

- If the strong wind with speed over 5m/s blowing to the exhaust side of the outdoor unit, the decreased air flow rate and re-absorbed exhausted gas (short circuit) etc. by the outdoor unit will lead to:
 - Decreased capability
 - Increased frost during heating
 - Operation stopped as high pressure increases
- Excessive strong wind continually blowing to the front exhaust side of the outdoor unit will result in the fan reversing at a high speed and being damaged. Refer to the figure below for installation.

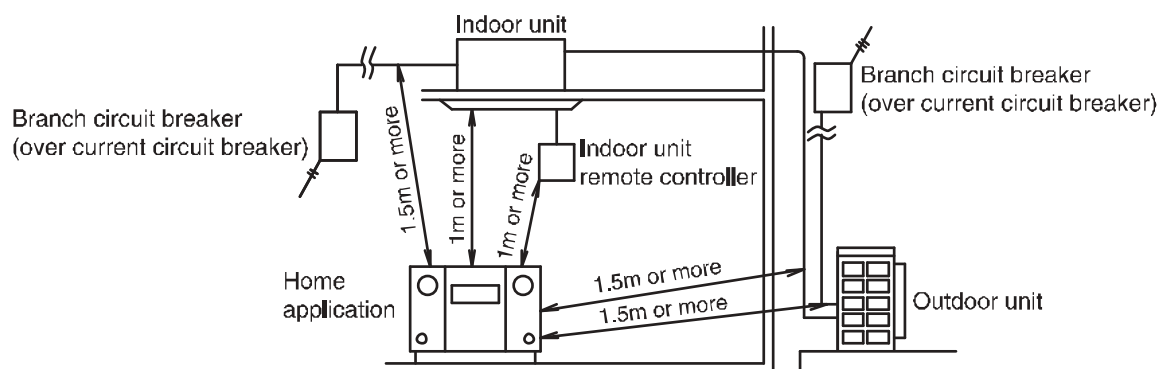
Install the outdoor unit with the air outlet facing the building wall, closure or wind shutter.



Make the exhaust direction perpendicular to the wind direction.



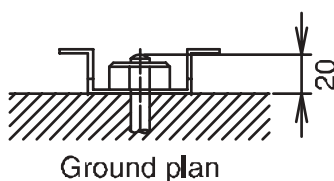
- 3) When installing in locations where there is heavy snowfall, take the following measures.
- Block up the base.
 - Install snow hoods (field supply).
 - Remove the rear suction grille to prevent snow from accumulating on the fins.
- 4) If there is a risk of short circuit for the outdoor unit in the ambient environment, use air flow direction adjustment plate (optional accessory).
- 5) The refrigerant gas (R410A) is nontoxic, non-flammable and safe. It is necessary to take measures against to keep refrigerant concentration from exceeding allowable safety limits in a small room in the event of refrigerant leakage.
- 6) An inverter air conditioner may cause home appliances produce noise. When selecting the location for installation, keep the air conditioner and wiring a proper distance away from radios, computers and stereo equipment as shown in the following figure. Particularly for location with weak wave reception, be sure to keep a distance of at least 3m between the indoor unit and the remote controllers and place the power supply wiring and transmission wiring in conduits, and connect the conduits to the ground. In addition, use the shielded wires for all electric wires between units.



- 7) For the installation locations, refer to the installation manual (2).

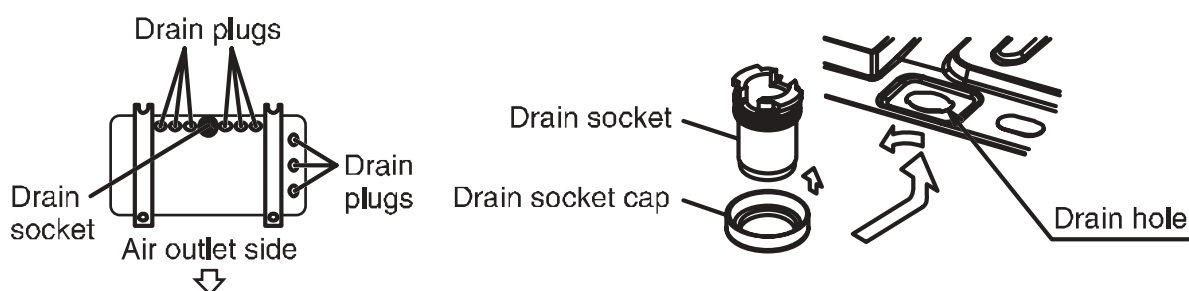
4 Precautions during installation

- To prevent vibration and noise, check the foundation is solid and level before installation.
- As shown in the following figure, firmly secure the unit to a stable base using anchor bolts. (Use four sets of commercially-available W12 anchor bolts, nuts and washers.)
- The section of the anchor bolts above the base 20mm in length is the most appropriate. (Refer to the figure below)



[About drainage handling]

- Perform drain pipe installation work using the optional drain plug if the drainage from the outdoor unit may lead to problems (such as water drained from the outdoor unit dripping down to the pedestrians).
 - It is necessary to keep an interspace 100mm or more under the air conditioner leg in order to handle the drainage.
 - Make sure the drain functions properly.
(Beware of water leaks if the piping is brought out from the bottom.)
- Drain plugs are not supplied with the unit. They are commercially-available, so you can purchase them separately.



- 1) Insert the drain plugs into the drain holes of the bottom frame.
- 2) Attach drain socket cap to drain socket.
- 3) Insert drain socket to drain hole by turning about 40° to install it to the bottom frame.

5 Electrical wiring

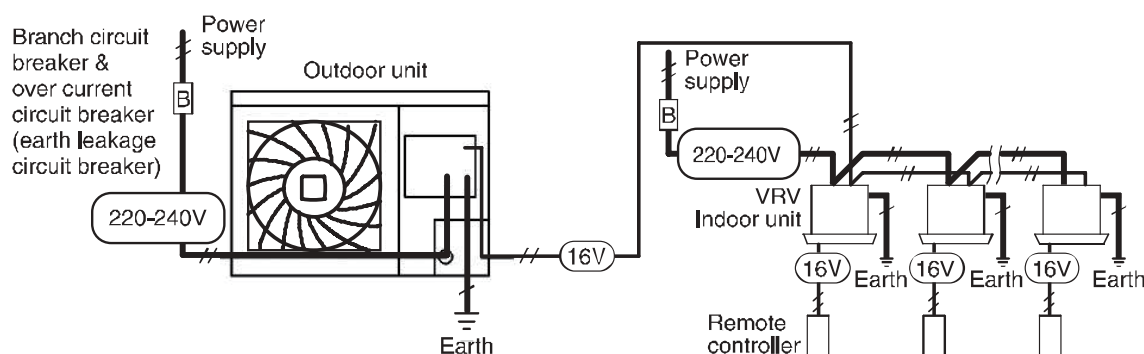


CAUTION To those doing electrical work

- Do not operate the unit before completing refrigerant piping connection. (Failure to do so will result in compressor malfunction.)
- Install the earth leakage circuit breaker. (Since this unit is equipped with an inverter, to prevent malfunction of the earth leakage circuit breaker itself, select the breaker that be capable of handling high harmonics.)

5-1. Example of whole system wiring connection

If connected to a system without a BP unit



- Transmission wiring (shielded wire) (16V)
- Power supply wiring (sheathed cable) (~220-240V)

5-2. Precautions for routed power wiring and transmission wiring

Route the power wiring (including the earth wire) from the wiring outlets (knockout holes) on the sides, front, or back of the units.

Route the electric wires between units from the piping outlet, or from the wiring outlets (knockout holes) on the sides, front, or back of the units.

[Precautions when punching through the knockout holes]

- Punch through the knockout holes with a hammer.
- After punching through the holes, it is recommended to coat the holes at the edge and the area around them with anti-corrosion paint to prevent rusting.
- Before leading the electric wires through the knockout holes, scrape the burrs around the holes and wrap the wires with the protective tape.



If small animals might enter the unit, block off the knockout holes with sealing material (field supply)

5-3. Precautions for power wiring connection

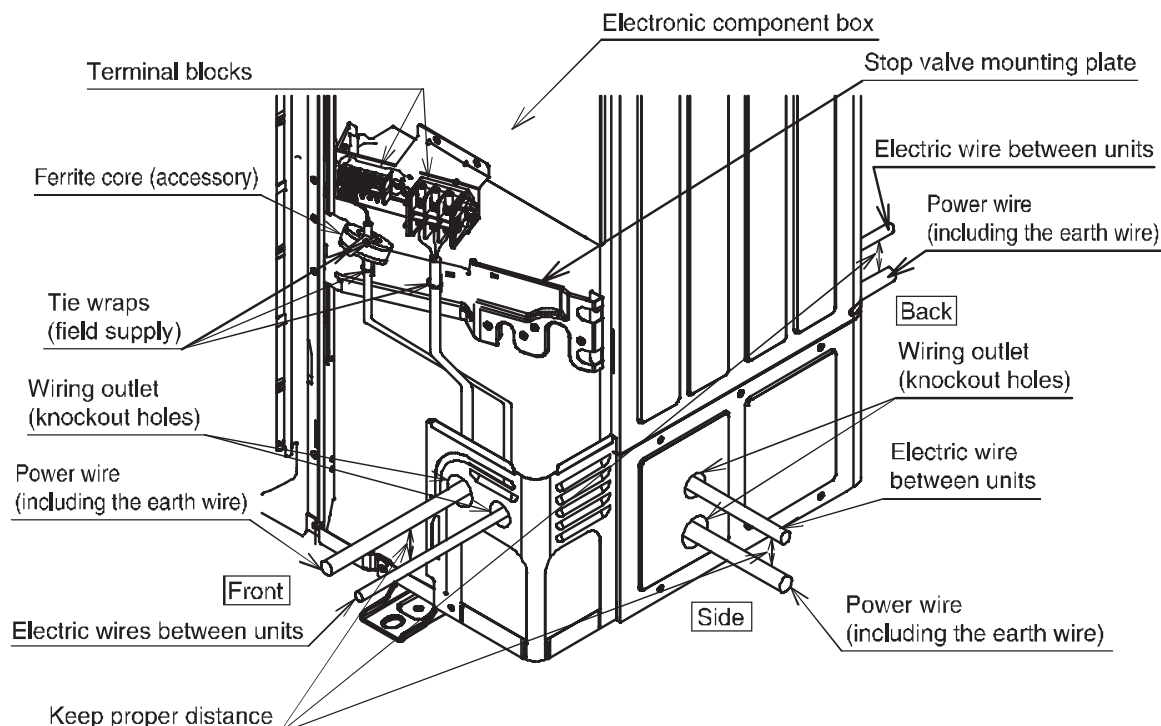


NOTICE

When using residual current operated circuit breakers, be sure to use a high-speed type 100 mA rated residual.

[Note]

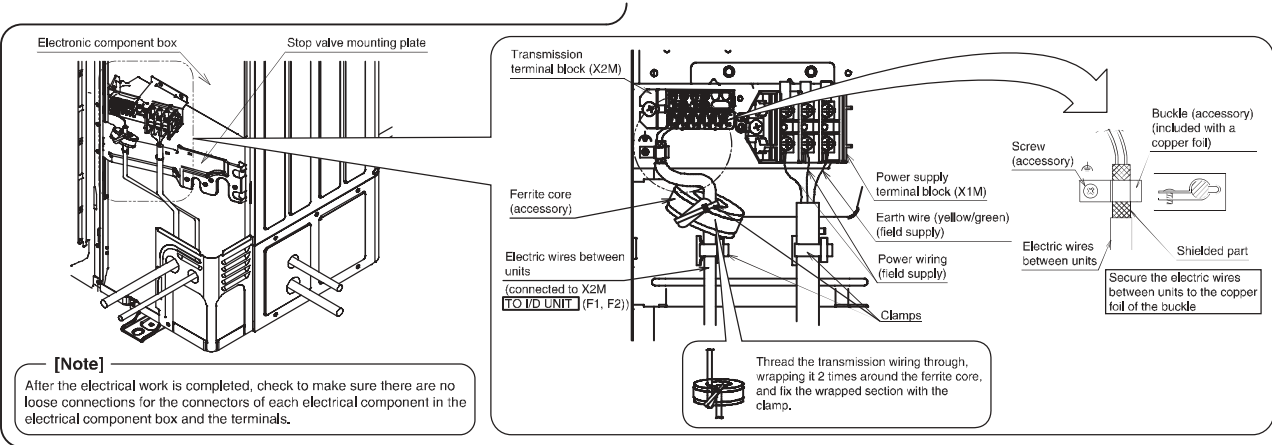
- Select the power wiring in accordance with the local and national regulations in your area by referring to the above table.
- Specifications of the field power wiring should be in compliance with IEC60245.
- Use wire type H05VV when the protective conduits are used for the power wiring.
- Use wire type H07RNF when the protective conduits are not used.
- Only proceed with wiring work after turning off all the power.
- Always earth the unit in accordance with the local and national regulations in your area.
- The electrical wiring must be installed by the trained electricians.
- Perform wiring connection in accordance with "Wiring Diagram Label".
Only conduct the wiring connection after turning of the branch circuit breaker and the over current circuit breaker.
- The grounding impedance must be 4Ω or less.
- Set the earth leakage circuit breaker.
- Earth the indoor and outdoor units.
- Do not connect the earth wire to the gas pipes, water pipes, lightning rods or telephone earth wires.
 - Gas pipes – gas leaks can cause explosion or fire.
 - Water pipes – cannot be grounded if hard vinyl pipes are used.
 - Telephone earth wires or lightning rods – the ground potential when struck by lightning may get extremely high.
- Only use the copper wires.
- Be sure to turn off the power supply before performing the electrical wiring work.
Do not switch on the breakers until all wiring work being completed.



⚠ WARNING:

**After the fuse is blown, ask the serving agency to replace it.
Do not replace the fuse by yourself. Otherwise, it may cause
accidents such as electric shock.**

- Install the earth leakage circuit breaker.
(Since this unit is equipped with an inverter, to prevent malfunction of the earth leakage circuit breaker itself, select the breaker that be capable of handling high harmonics.)
- Since this product is equipped with an inverter, harmonics will be generated. If local laws require the suppression of harmonics on the building, please take harmonic suppression measures on the electrical equipment side. Connect the power wiring and the power supply terminal blocks as shown in the following figure and tighten the clamps.
Fuse models of the outdoor unit see "Wiring Diagram label" for details:
F2U, F3U (T6.3A/250V)
- The unit is equipped with an inverter. Always connect the earth wire to discharge the unit and eliminate the impact on other devices by reducing the noise generated from the inverter, and to prevent the unit casing from being live due to electric leakage.
- Never install a phase advancing capacitor to improve the power factor. (Installing a phase advancing capacitor will not improve the power factor, but may cause the capacitor abnormal heating and accidents.)
- For the wiring, use the designated electric wires and connect firmly, then secure them with the accessory clamps to prevent outside force from being applied to the terminal area (terminals of the transmission wiring and earth wire connected on site).
For details, please refer to **5-3. Precautions for power wiring connection** .
- Do not tie the remaining wires in a bunch and tuck into the unit.
- Place the electric wires in the conduits or plastic sleeves to prevent them from being scratched by the edge of the knockout hole.
- Secure the electric wires with the accessory buckles to prevent it from touching the piping and stop valves.
(Refer to **5-3. Precautions for power wiring connection**)



[Note]

- Use the sheathed wires for the power wiring.
- Do not route the weak electric wiring (remote controller wire and wiring between units) together with the strong one outside the air conditioner, keeping them at least 25mm apart. Otherwise, being affected by the electrical noise (external noise) may result in malfunction or breakdown.
- Be sure to connect the power wiring to the power supply terminal blocks and hold it in place in accordance with **5-3. Precautions for power wiring connection**.
- Hold the wiring between air conditioner units in place in accordance with **5-4. Precautions for wiring connection between units**.
- Secure the electric wires using the accessory clamps to prevent it from touching the piping etc.
- After connecting the electric wires, lay the wires in a smooth and regular way to avoid the electronic component box cover being protruded, then close the cover tightly.

[Precautions for routing power wiring]

- Never connect two electric wires of different sizes to one power supply terminal. (Phenomenons such as loose electric wire connection may cause abnormal heating.)
- For the electric wires connected to the power supply terminals, use the crimp-style terminal with insulation sleeve. Otherwise, connect the wires of the same size to the sides respectively as shown in the figure.

Phenomenons such as loose electric wire connection may cause abnormal heating. Strictly follow the instructions below.

- Use the specified electric wires and secure them firmly without applying external stress to the terminal block.
- Tighten the terminal screws with a suitable screwdriver. Use of small screwdriver would damage the screw head and could not achieve the proper tightening effect.
- Secure the terminal screws overtight may break them.



Connect the wires of the same size to the sides respectively.



Never connect two wires together.



Never connect two wires of different size.

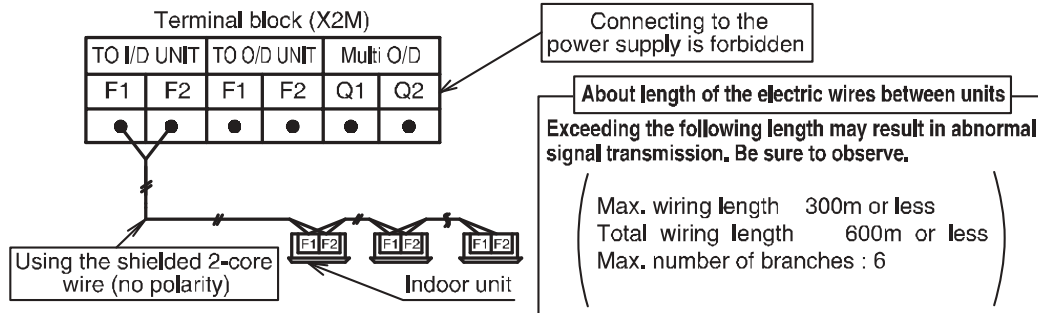


- Refer to the table below for the tightening torque of the terminal screws.

Tightening torque (N • m)		
M5	(power supply terminal)	2.2~2.7
M4	(shield earthing)	1.18~1.44
M3.5	(Internal unit wiring terminal)	0.8~0.97

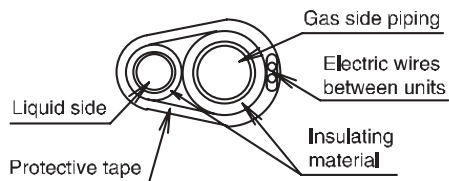
5-4. Precautions for wiring connection between units

- Connected the wiring between units of the single system as shown in the figure below.
(No polarity)



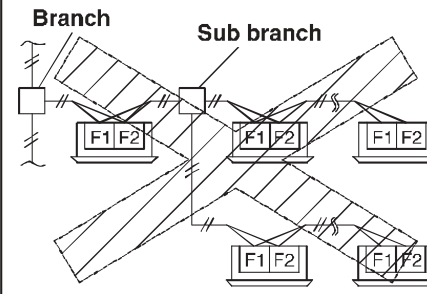
Precautions for wiring connection between units

- Do not connection the power supply to the single-phase wiring terminals.
Otherwise, the whole system will be damaged.
- The wiring from the indoor unit must be connected to the PC board terminal F1/F2 (TO I/D UNIT) of the outdoor unit.
- For the electric wires between units, after being secured within the unit, wrap them together with the refrigerant piping connected locally using the protective tape as shown in the figure below.



Precautions when branching the wiring between units

- The electric wires between units can hold up to the number of branches noted in "Max. number of branches" shown above. The wires after being branched can't be branched again.



- Use 0.75~1.25 mm² shielded 2-core wire for the above wiring.
(For how to earth the shielded part, refer to the figure on the left.)
- All electric wire between units are field supply.

6 Refrigerant piping connection

6-1. Installation tools

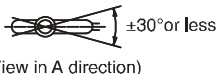
To withstand the pressure and prevent entry of any impurities into the air conditioning system, always use the special installation tools for R410A.

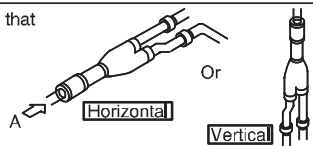
Multi-purpose gauge hose	To withstand the pressure and prevent entry of any impurities (mineral oils such as specialized lubricating oil and moisture), be sure to use the special installation tools for R410A. (Screw specifications for R410A and R407C are different.)
Vacuum pump	- Make sure that the engine oil in the pump will not flow backward into the air conditioner system when the pump stops. - Use the vacuum pump able to lower the pressure to -100.7Pa (5Torr, -755mmHg).

6-2. Selecting piping material

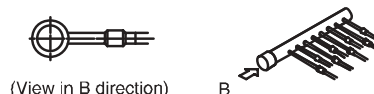
- Do not use the pipes covered with sulphur, iron oxide, dust, cutting oil, moisture or other contamination inside. (Better not to exceed 30mg/10m for the oil inside the pipes).
- Determine the thickness and size of refrigerant piping based on the precautions for piping size selection on the back, while also taking into account local laws and regulations. For R410A, the design pressure is 4.0 MPa.
- Be sure to use REFNET joint or header for the piping branches.
- While performing the piping work, make sure that the piping is within the maximum allowable ranges for length, height in difference and branch piping length.
- When using REFNET joint or header, pay attention to the following items and install it by referring to the installation manual included with the kits.

- Install the REFNET joint in such a direction that can ensure horizontal or vertical branch.

(Horizontal line)  ±30° or less
(View in A direction)



- Install the REFNET header so that it splits horizontally.



6-3. Piping protection

- Maintain and protect the piping to prevent moisture from getting into and the entry of the impurities and dust, etc.
- Pay special caution when penetrating the copper pipes through the walls till outside.

Location	Installation schedule	Protection measure
Outdoor	More than a month	Pinch
	Less than a month	Pinch or seal with tape
Indoor	Random	

6-4. Pipe connection

- For how to use the stop valves, refer to the **Stop valve operation procedure** under **6-7. Air tight test and vacuum drying**.
- Use the accessory flaring nuts only.

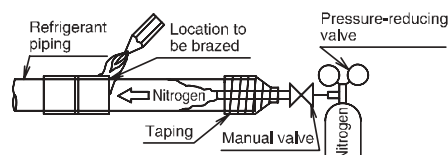
Adopting other flaring nuts may result in the refrigerant leakage.

- Be sure to charge nitrogen into the pipe when brazing.

(Be sure to perform nitrogen purge or nitrogen charge when brazing. Failure to do this will create large quantities of oxide film on the inside surface of the pipes, which would adversely affect the valves and compressors in the refrigerating system and prevent the normal operation.)

Note) When charging nitrogen before brazing, the pressure-reducing valve must be set to 0.02 MPa (0.2 kg · f/cm² or less: as a slight breeze on your cheek).

- Do not charge other refrigerant other than the specified one for the refrigerating system.
- Do not charge the air for the refrigerating system.



[Note]

Do not use flux when brazing the refrigerant piping.

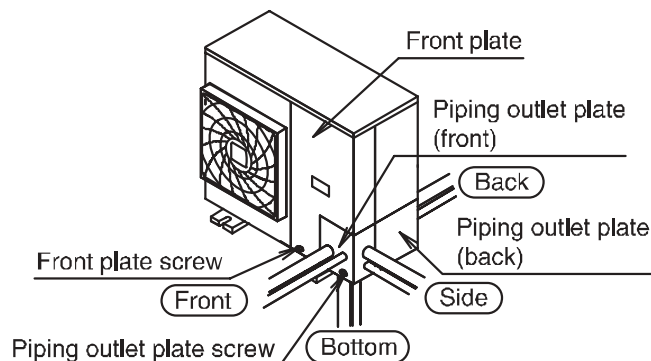
Use the phosphor copper electrode which does not require flux (BCu93P-710/795:ISO 3677).

(Flux has extremely harmful influence on refrigerant piping system. 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 and adversely affect the refrigerant piping system.)

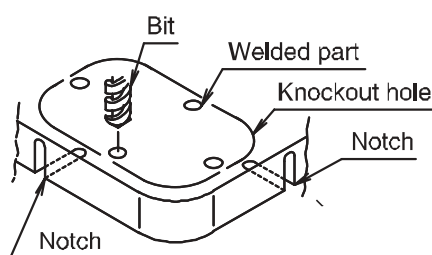
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6-5. Precautions for refrigerant piping connection

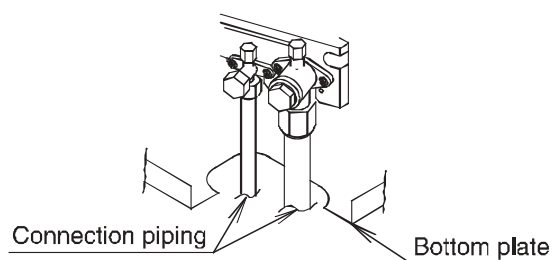
- The field piping can be connected in 4 directions.



- While connecting downward, open up a round hole (knockout hole) by drilling holes near the welded part of the knockout hole (4 places) with a Ø6mm bit.



- Cutting out the 2 notches makes it possible to carry out installation as shown in the figure below. Use a metal saw when cutting out the notches.



- After drilling through the knockout hole, it is recommended to coat the edges of the notches and the area around them with anti-corrosion paint to prevent rusting.

[Precaution for piping connection]

- For machining the flaring part, refer to the following table.
- To install the flaring nut, only coat the refrigerant oil to the inside surface of the flaring (ester or ether oil), then turn the nut 3~4 circles with your hands.

Do not coat the refrigerant oil to the outside surface.

Coat the refrigerant oil to the inside surface of the flaring.

Do not let the nut touch the refrigerant oil to prevent from being screwed overtight.



- To prevent gas leakage, coat the refrigerant oil (ester or ether oil) to the inside surface of the flaring part.
- Refer to the following table for the tightening torque. (Being screwed overtight will damage the flaring part.)

Piping size	Tightening torque	Machining size A	Type
Ø9.5	32.7~39.9N•m	12.8~13.2mm	
Ø15.9	61.8~75.4N•m	19.3~19.7mm	
Ø19.1	97.2~118.8N•m	23.6~24.0mm	

- If there is no torque wrench, tighten the flaring nut with a normal wrench instead of it.
- When tightening the nut, there is a possibility that the tightening torque is suddenly increased. In this case, tighten it again based on the angles in the table below from this position.

Piping size	Tightening angle (reference)	Recommended tool arm length
Ø9.5	60°~90°	Around 200mm
Ø15.9	30°~60°	Around 300mm
Ø19.1	20°~35°	Around 450mm

- After piping connection is finished, perform gas leak inspection with nitrogen for the piping connection parts.

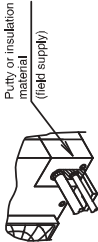
6 Refrigerant piping connection

Precautions to piping connection

- If there is a possibility that the condensed water on the stop valve might flow into the indoor unit through gaps between the stop valve and piping, the stop valve and piping should be caulked from the indoor unit side.

[How to prevent entry of small animals]

- Caulk the piping through holes with putty or insulation material (field supply) as shown in the right figure to prevent gaps.



6-6. Piping insulation

- The connection piping (liquid side, gas side) and the refrigerant branch kit must be insulated. (Otherwise, it may cause water dripping.)
- Reinforce the insulation on the refrigerant piping according to the installation environment.

Ambient temperature	Humidity	Minimum thickness
≤30°C	75% to 80% RH	15 mm
>30°C	≥80% RH	20 mm

(Be sure to use heat resistant polyethylene foam which can withstand a temperature of 70°C for liquid piping and polyethylene foam which can withstand a temperature of 120°C for gas piping.)

For piping connected locally, wrap the insulation material till the piping connections.



Example of connection (Connecting 4 indoor units)		
Max. allowable length	Between outdoor unit and indoor unit: Equivalent length Total piping length	Piping length between outdoor unit and indoor unit: ≤120m Take connection of 4 indoor units as example: a + b + c + d ≤120m. (In case of manual refrigerant charging, piping length will be decreased to ≤90m.) Equivalent piping length between outdoor unit and indoor unit: ≤150m (Assume equivalent piping length of REFNET joint to be 0.5m that of REFNET header to be 1m.)
Allowable height difference	Between outdoor unit and indoor unit: Between indoor units	Total piping length from outdoor unit to all indoor units: ≤300m Difference in height between outdoor unit and indoor unit (H1) ≤50m (Max 40m if the outdoor unit is in the lower part) Difference in height between indoor units (H2) ≤10m.
Allowable length after the branch	Actual piping length	Piping length from the first refrigerant branch kit (REFNET joint or header) to indoor unit: ≤40m (Example) $\frac{4}{4} : b + c + d \leq 40m$
Selecting the piping size [Precautions to select connection piping] - If the equivalent piping length between outdoor and indoor units is over 90m, size of the main pipe on the gas side must be increased. - In addition, depending on the distance of the refrigerant piping, size of the main pipe also can be increased if capacity decreased. (Gas side) Ø15.9 → Ø19.1 (RXYMQ4AVMK)		
Note To increase the size of the piping joint, connect it using joints of different apertures (field supply). Connection part is beside the outdoor unit (behind the 1st bending outside the unit).		
How to calculate the additional refrigerant to be charged Additional refrigerant to be charged: R(kg) (R should be rounded off in units of 0.1 kg.)		
Piping between outdoor unit and refrigerant branch kit Should correspond to the size of the connection piping of outdoor unit.		
Piping size (outer diameter × minimum thickness) (Unit: mm)		
Gas side piping		Ø15.9×0.99
Liquid side piping		Ø19.1×0.80
Ø22.2×0.80		Ø9.5×0.80
Piping between refrigerant branch kit and indoor unit Should correspond to the size of the connection piping of indoor unit.		
Piping size (outer diameter × minimum thickness) (Unit: mm)		
Gas side piping		Ø15.9×0.99
Liquid side piping		Ø9.5×0.80
Ø12.7×0.80		Ø8.4×0.80
Ø15.9×0.99		Ø9.5×0.80
Indoor unit capacity type		≤50
≥53		Ø12.7×0.80
≥53		Ø15.9×0.99
≥53		Ø8.4×0.80
≥53		Ø9.5×0.80
For refrigerant branch piping with REFNET joint Example: $R = \frac{25 \times 0.054}{a+b+c+d} + \frac{15 \times 0.022}{e+f} = 1.98$		
$R = \frac{(\text{Total length of liquid side piping size at } \text{Ø}9.5) \times 0.059}{a+b+c+d} + \frac{(\text{Total length of liquid side piping size at } \text{Ø}6.4) \times 0.022}{e+f}$		
a: Ø9.5×10m		d: Ø6.4×5m
b: Ø9.5×5m		e: Ø6.4×5m
c: Ø9.5×5m		f: Ø9.5×5m
g: Ø6.4×5m		

Pipe size selection

Symbol	Piping size (Outer diameter × minimum thickness)	Choose from the following table in accordance with outdoor unit total capacity type, connected downstream.	
		Gas pipe	Liquid pipe
Between outdoor and first refrigerant branch kit	a	RXYMQ4AVMK	Ø15.9×0.99
Piping between refrigerant branch kits	b, c	Total capacity index of connected indoor units	Liquid pipe
Choose from the following table in accordance with the total capacity index of all units connected below this.		Ø15.9×0.99	Ø15.9×0.80
Do not let the connection piping exceed the refrigerant piping size chosen by general system model name.		Ø19.1×0.80	

- (a) The refrigerant sound from the outdoor unit can be transmitted.
- (b) A liquid/gas size up is required for all the piping between the branch kit and VRV unit. If the piping diameter of the sized up piping exceeds the diameter of the piping before the first refrigerant branch kit, then the latter also requires a liquid/gas size up.
- (c) In some indoor units, the piping size is different. Choose from the size of each indoor units.

CAUTION

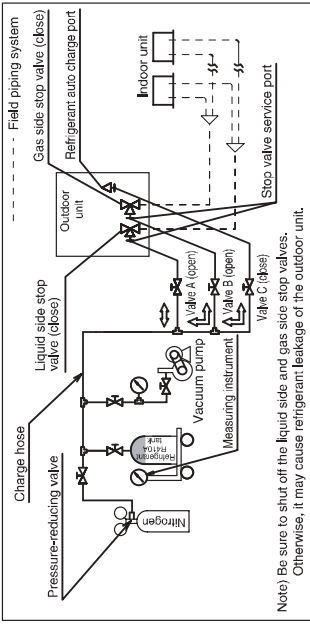
To those doing piping work

• Be sure to open the stop valves after completing wiring connection.
(Operation with the stop valve closed will result in compressor malfunction.)

6-7. Air tight test and vacuum drying

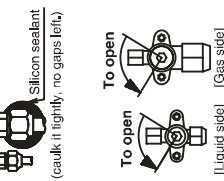
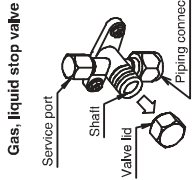
Check the following after piping connection is finished.

- **Air tight test** - Always use nitrogen. (Refer to **Stop valve operation procedure** for service port's position.)
[Procedure] : Pressurize the liquid side piping and the gas side piping to 4.0MPa (do not exceed 4.0 MPa). If the pressure does not drop within 24 hours, the system passes the test.
If there is a pressure drop, check for leaks. (Discharge the nitrogen after confirming there is no leakage.)
- **Vacuum drying** - Use a vacuum pump able to evacuate the system to -100.7 kPa (5Torr, -755mmHg) or less.
[Procedure] : Evacuate the system from the liquid side piping and gas side piping using a vacuum pump for more than 2 hours to -100.7 kPa or less.
Keep the system under this condition for more than 1 hour, check if the vacuum gauge indication rises or not.
(If it rises, the system may either contain moisture inside or have gas leak.)
- **If moisture might enter the piping** (e.g. if doing work during the rainy season, if the actual work takes long enough that condensation may form on the inside of the pipes, if rain might enter the pipes during work, etc.)
After performing the vacuum drying for 2 hours, pressurize to 0.05 MPa (vacuum breakdown) with nitrogen gas, then depressurize down to -100.7 kPa or less and hold for an hour using the vacuum pump (vacuum drying).
(If the pressure does not reach -100.7 kPa even after depressurizing for at least 2 hours, repeat the vacuum breakdown-vacuum drying process.) After vacuum drying, maintain the vacuum for an hour and make sure the pressure does not rise by monitoring with a vacuum gauge.



Stop valve operation procedure

- Precautions to stop valve operation**
 - Name of each part should be known before operating the stop valve (as shown in the right figure). When shipped, the stop valve is left closed.
 - Simply using a torque wrench to loosen or tighten the flaring nut may cause deformation of the side panel. Be sure to fix the flaring nut with a normal wrench, then operate it with the torque wrench.
 - To prevent flaring nut on the stop valve gas side from freezing since the operation pressure becomes low during cooling operation under low outdoor temperature, caulk it completely with silicon sealant.
 - When opening or closing the stop valve lid and flaring nut, make sure that the tool does not touch the PCB. It may cause an electric shock or a fire, and cause damage to electrical components.
- [Stop valve operation procedure]**
Prepare two inner hexagon wrenches: size 4mm, 6mm.
- To open**
 1. Put the inner hexagon wrench to the valve shaft and turn it counterclockwise.
 2. Turn it until the shaft stops. The valve is opened.
- To close**
 1. Put the inner hexagon wrench to the valve shaft and turn it clockwise.
 2. Turn it until the shaft stops. The valve is closed.



About valve lid

- Position indicated by the arrow has been caulked.
- Pay attention not to damage it.
- Be sure to tighten the valve lid after valve operation is completed.

About service port

- Operate with the charge hose with a pushing stick.
- Be sure to tighten the valve lid after operating.
- Tightening torque.....11.5-13.9 N·m

Liquid side tightening torque	Gas side tightening torque
13.5-16.5N·m	22.5-27.5N·m

9 About test run

To start smoothly, be sure to turn on the power supply to the heating compressor crankcase 6 hours before operation.



Be sure to inform other installers or attach the front panel well before leaving with the power supply turned on for the outdoor unit.

Before powering on

- Protect the electronic components with insulating tape in accordance with the "Service Precautions" label attached to the front panel.
- All indoor units connected with the outdoor unit will operate automatically after powering on.
- To ensure safety, check the indoor unit installation has been completed.

9-1. Powering on - test run

- Make sure to perform a test run first after installation. (If the unit is operated with the indoor unit's remote controller but without performing test run, the remote controller will not be able to operate the unit.)
- After the test run is completed, the unit will start the test run.
- PC board (ATP). For positions of the button switches (BS1-3) and DIP switches (DS1, 2) on PC board, refer to the "Service Precautions" label.
- Check the state of the outdoor unit and fault wiring with the operation.

① Attach the front panel of the outdoor unit.

② Turn on the power supply of the outdoor and indoor units.

③ Make sure all field settings you want are set.

④ Turn ON the power to the outdoor unit and the connected indoor units.

- Make sure the default (factory) situation is existing. Push BS2 for 5 seconds or more. The unit will start test operation.
- The test operation is automatically carried out. The outdoor unit display will indicate "U" and the indication "Test operation" and "Unit centralized control" will display on the user interface of indoor units.

Steps during the automatic system test run procedure:

- "U" F: control before start up (pressure equalization)
- "-U2": cooling start up control
- "-U3": cooling stable condition
- "-U4": communication check
- "-U5": stop valve check
- "-U6": stop valve closed
- "-U7": refrigerant amount check
- "-U8": in case (2-88) 0, detailed refrigerant situation check
- "-U9": pump down operation
- "-U10": unit stop

④ INFORMATION

- If the automatic test run change function has been used, "U2" and "U3" will not be displayed during the test run.
- If the test run is not completed during the automatic refrigerant charge operation, the test run will stop.
- During test operation, it is not possible to stop operation of the unit from a user interface. To abort operation, press BS3. The unit will stop after 30 seconds.
- Check the test operation results on the outdoor unit segment display.
 - Normal completion: no indication on the segment display (Idle)
 - Abnormal completion: indication of malfunction code on the segment display
- Refer to "Correcting after abnormal completion of the test operation" to take action for correcting the abnormality.
- When the test operation is fully completed, normal operation will be possible after 5 minutes.
- After the test operation is completed, the test run will stop.
- The test run will stop after 30 seconds.
- In case of a displayed malfunction code, perform correcting actions as explained in the malfunction code table.
- Carry out the test operation again and confirm that the abnormality is properly corrected.

⑤ INFORMATION

Refer to the installation manual of the indoor unit for other detailed malfunction codes related to indoor units.

⑥ Be sure to attach the front panel of the outdoor unit after test run is completed.

[About test run]

- In case of normal refrigerant distribution, it may take up to around 10 minutes for the compressor to start up after the power supply on. This is not malfunction.
- Meaning of operation check is not to check individual indoor unit. After completing operation check, operate the system normally with the remote controller.
- Test run can't be performed when the unit is in other mode such as refrigerant recycling mode.
- Never perform test run with discharge pipe thermometer (R27), suction pipe thermometer (R37) and pressure sensor (S1NPH, S1NPL) removed. Failure to do so will result in compressor damage.

9-2. For normal operation

[Set the master unit (the indoor unit with cooling and heating option rights).]

For wired remote controller

- After test run is completed, symbol " " flashes on all remote controllers connected here.
- Set the master unit as customer's request. It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changeover button on the remote controller of the master unit.
- Conduct cool/heating changeover with this remote controller and the symbol " " vanishes.
- For other remote controllers excluding the above, symbol " " lights up.

For wireless remote controller

- After test run is completed, timer lamps flash on all indoor units connected here.
- Set the master unit as customer's request. It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changeover button on the remote controller of the master unit. Then a sound of beeps can be heard and the timer lamps on all indoor units go out.
- The indoor unit has the option rights to change over to cooling/heating operation.

For details, refer to the installation manual included with the indoor unit.



To those doing piping work
To those doing electrical work

- After test run is completed, check whether the casing of the units has been attached and whether the screws have been tightened before transferring the air conditioner to your customer.

- After test run is completed, operate the unit normally.
- Check indoor and outdoor units are in normal operation.
- When the system operation is stopped by the remote controller, the outdoor unit may continue operating for further 1 minute at maximum.
- If any check operation was not performed through test run at first installation, the malfunction code "U3" will be displayed. In this case, perform check operation in accordance with [9-1. Powering on - test run].

[About normal operation check]

- The compressor will not restart in about 5 minutes even if the ON/OFF button of the remote controller is pressed.
- When the system operation is stopped by the remote controller, the outdoor unit may continue operating for further 1 minute at maximum.
- If any check operation was not performed through test run at first installation, the malfunction code "U3" will be displayed. In this case, perform check operation in accordance with [9-1. Powering on - test run].

Malfunction codes displayed on the remote controller (check the remote controller connected with the indoor unit)

Malfunction code	Meaning	Contents	Solution
U3	High pressure switch was activated (S1PH) - A1P (X32A).	Check stop valve status. A stop valve is fully open or fully closed at outdoor unit.	Check stop valve status. A stop valve is fully open or fully closed at outdoor unit.
U4	High pressure switch was activated (S1PH) - A1P (X32A).	Check stop valve status. A stop valve is fully open or fully closed at outdoor unit.	Check stop valve status. A stop valve is fully open or fully closed at outdoor unit.
U5	Stop valve closed (liquid).	Stop valve closed (liquid).	Open liquid stop valve.
U6	Low pressure malfunction.	Low pressure malfunction.	Open stop valve.
U7	Refrigerant shortage.	Refrigerant shortage.	Check the refrigerant amount and recharge unit.
U8	Indoor unit malfunction.	Indoor unit malfunction.	Check the connection between the outdoor unit and the indoor unit.
U9	Electronic expansion valve malfunction (main) (Y1E) - A1P (X32A).	Electronic expansion valve malfunction (main) (Y1E) - A1P (X32A).	Check connection on PCB or actuator.
U10	Electronic expansion valve malfunction (inverter coding) (Y2E) - A1P (X32A).	Electronic expansion valve malfunction (inverter coding) (Y2E) - A1P (X32A).	Check connection on PCB or actuator.
U11	Electronic expansion valve malfunction (refrigerant auto charge) (Y4E) - A1P (X32A).	Electronic expansion valve malfunction (refrigerant auto charge) (Y4E) - A1P (X32A).	Check connection on PCB or actuator.
U12	Stop valve closed.	Stop valve closed.	Open stop valve.
U13	Refrigerant shortage.	Refrigerant shortage.	Check refrigerant amount and recharge unit.
U14	Refrigerant overcharge.	Refrigerant overcharge.	Check refrigerant amount and recharge unit.
U15	Stop valve closed.	Stop valve closed.	Open stop valve.
U16	Ambient temperature sensor malfunction (RT) - A1P (X32A).	Ambient temperature sensor malfunction (RT) - A1P (X32A).	Check connection on PCB or actuator.
U17	Discharge temperature sensor malfunction (R27) - A1P (X32A).	Discharge temperature sensor malfunction (R27) - A1P (X32A).	Check connection on PCB or actuator.
U18	Suction temperature sensor malfunction (R37) - A1P (X32A).	Suction temperature sensor malfunction (R37) - A1P (X32A).	Check connection on PCB or actuator.
U19	Deciding temperature sensor malfunction (R7) - A1P (X32A).	Deciding temperature sensor malfunction (R7) - A1P (X32A).	Check connection on PCB or actuator.
U20	Liquid temperature sensor (after subcool HE) malfunction (R57) - A1P (X32A).	Liquid temperature sensor (after subcool HE) malfunction (R57) - A1P (X32A).	Check connection on PCB or actuator.
U21	Gas temperature sensor (after subcool HE) malfunction (R67) - A1P (X32A).	Gas temperature sensor (after subcool HE) malfunction (R67) - A1P (X32A).	Check connection on PCB or actuator.
U22	High pressure sensor malfunction (S1NPH) - A1P (X32A).	High pressure sensor malfunction (S1NPH) - A1P (X32A).	Check connection on PCB or actuator.
U23	Low pressure sensor malfunction (S1NPL) - A1P (X32A).	Low pressure sensor malfunction (S1NPL) - A1P (X32A).	Check connection on PCB or actuator.
U24	Low pressure sensor malfunction (S1NPL) - A1P (X32A).	Low pressure sensor malfunction (S1NPL) - A1P (X32A).	Check connection on PCB or actuator.
U25	Transmission outdoor unit - inverter PWT transmission trouble - A1P	Transmission outdoor unit - inverter PWT transmission trouble - A1P	Check connection
U26	Transmission outdoor unit - inverter PWT transmission trouble - A1P	Transmission outdoor unit - inverter PWT transmission trouble - A1P	Check connection
U27	Unbalanced power supply voltage.	Unbalanced power supply voltage.	Check if power supply is within range.
U28	INV1 voltage power shortage.	INV1 voltage power shortage.	Check if power supply is within range.
U29	INV1 power phase loss.	INV1 power phase loss.	Check if power supply is within range.
U30	Malfunction code: System test not yet executed (system operation not possible).	Malfunction code: System test not yet executed (system operation not possible).	Execute system test run.
U31	Malfunction code: System refrigerant auto charge run not yet executed.	Malfunction code: System refrigerant auto charge run not yet executed.	Execute auto charge function (see manual).
U32	System test run abnormal ending.	System test run abnormal ending.	Execute test run again.
U33	Faulty wiring to indoor - outdoor.	Faulty wiring to indoor - outdoor.	Check (F1F2) wiring.
U34	Faulty indoor system.	Faulty indoor system.	Check indoor system transmissions wire.
U35	Too many indoor units are connected to F1F2 line.	Too many indoor units are connected to F1F2 line.	Check indoor unit amount and total capacity connected.
U36	Indoor unit malfunction.	Indoor unit malfunction.	Check if other indoor units have malfunction and confirm indoor unit max is allowed.
U37	Indoor unit malfunction.	Indoor unit malfunction.	Check if other indoor units have malfunction and confirm indoor unit max is allowed.
U38	Connection mismatch over indoor units or type mismatch (R410A, R407C, R410A, R407C, R410A).	Connection mismatch over indoor units or type mismatch (R410A, R407C, R410A, R407C, R410A).	Check if transmission wire unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.
U39	Refrigerant type mismatch (Refrigerant error).	Refrigerant type mismatch (Refrigerant error).	Check if transmission wire unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.
U40	Auto address malfunction (Inconsistency).	Auto address malfunction (Inconsistency).	Open stop valves.
U41	Stop valve closed or wrong (during system test run).	Stop valve closed or wrong (during system test run).	Check if transmission wire unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.
U42	Auto address malfunction (Inconsistency).	Auto address malfunction (Inconsistency).	Open stop valves.

For the case with centralized controller used, refer to the installation manual included with it under service manual.

No display on the remote controller

- Connection and communication error occurred between the indoor unit and the remote controller. Check wiring connection for the broken and loose.

Note

- In the event that there is any conflict in the interpretation of this manual and any translation of the same in any language, the English version of this manual shall prevail.
- The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.





2P660918-1

Installation Manual (2)

Be sure to read this manual before installation and follow the instructions contained in it



The two-dimensional bar code is a manufacturing code.

Installation location

<Precautions to side-by-side installation>

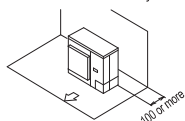
- In the figure below, the connection piping is lead out from the front, the bottom, or the side.
- An interspace of over 100mm should be kept when installing side-by-side. To lead out the piping from the back, the interspace of over 250mm should be kept on the right side of the outdoor unit.

(A) Where there is an obstacle on the suction side:

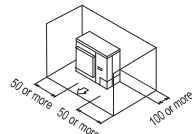
• No obstacle above

① Stand-alone installation

- Obstacle on the suction side only

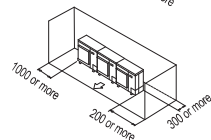


- Obstacle on both sides



② Series installation (2 or more)

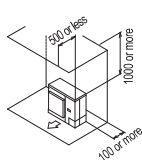
- Obstacle on both sides



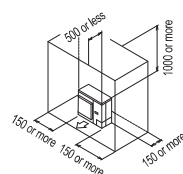
• Obstacle above, too

① Stand-alone installation

- Obstacle on the suction side, too

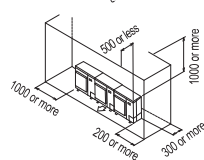


- Obstacle on the suction side and both sides



② Series installation (2 or more)

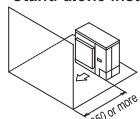
- Obstacle on the suction side and both sides



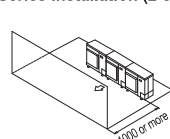
(B) Where there is an obstacle on the discharge side:

• No obstacle above

① Stand-alone installation

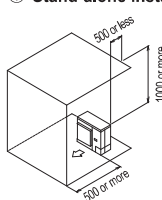


② Series installation (2 or more)

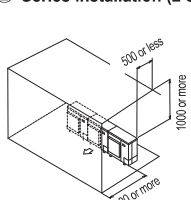


• Obstacle above, too

① Stand-alone installation



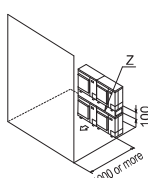
② Series installation (2 or more)



(D) Double-decker installation

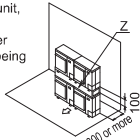
① Obstacle on the discharge side

- (Note 1) Up to 2 layers can be overlapped.
- (Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
- (Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.



② Obstacle on the suction side

- (Note 1) Up to 2 layers can be overlapped.
- (Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
- (Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.

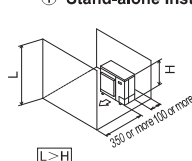


(C) Where there are obstacles on both suction and discharge sides:

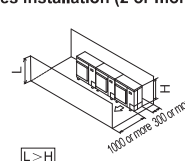
Pattern 1 Where the obstacles on the discharge side is higher than the unit. (There is no height limit for obstructions on the intake side.)

• No obstacle above

① Stand-alone installation



② Series installation (2 or more)



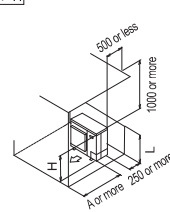
• Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	750
	$1/2H < L \leq H$	1000
$H < L$	Set the stand as: $L \leq H$.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.



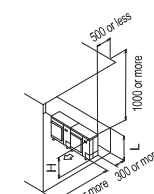
② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	1000
	$1/2H < L \leq H$	1250
$H < L$	Set the stand as: $L \leq H$.	

(Note1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

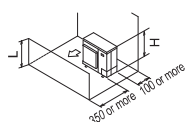
(Note2) Only two units can be installed for this series.



Pattern 2 Where the obstacles on the discharge side is lower than the unit. (There is no height limit for obstructions on the intake side.)

• No obstacle above

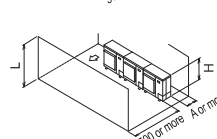
① Stand-alone installation



② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300



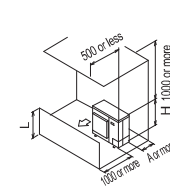
• Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	100
	$1/2H < L \leq H$	200
$H < L$	Set the stand as: $L \leq H$.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.



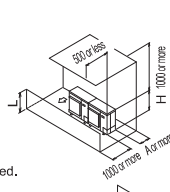
② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300
$H < L$	Set the stand as: $L \leq H$.	

(Note1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

(Note2) Only two units can be installed for this series.



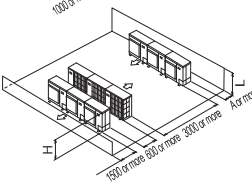
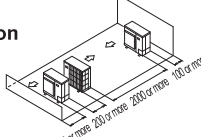
(E) Multiple rows of series installation (on the rooftop, etc.)

① One row of stand-alone installation

② Rows of series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300
$H < L$	Cannot be installed.	



NOTE

- In the event that there is any conflict in the interpretation of this manual and any translation of the same in any language, the English version of this manual shall prevail.
- The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.

2.2 RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK



1P660656-1



The two-dimensional bar code is a manufacturing code.

INSTALLATION MANUAL (1)

RXYMQ4AYFK, RXYMQ5AYFK, RXYMQ6AYFK

Be sure to read this manual before installation and conduct installation according to this manual.

1. This series air conditioner uses R410A refrigerant. Strictly observe the precautions under the **6 Refrigerant piping connection** as there are strict requirements for how to prevent entry of impurities (mineral oils such as specialized lubricating oil and moisture) for R410A.
 - Clean and dry
Strict measures must be taken to keep impurities (including SUNISO oil and other mineral oils as well as moisture) out of the system.
 - Tightly sealed
R410A contains no chlorine, does not destroy the ozone layer and so does not reduce the earth's protection against harmful ultraviolet radiation. R410A will contribute only slightly to the greenhouse effect if released into the atmosphere.
2. Since the design pressure is 4.0MPa, refer to the **6 Refrigerant piping connection** for selection of pipe thickness.
3. Since R410A is a mixed refrigerant, it must be charged in liquid phase. (If the refrigerant is charged in gaseous phase, its composition can change and the system may not work properly.)
4. Be sure to connect a special indoor unit for R410A. Refer to the product catalogue for the model names of the indoor units which can be connected with this unit. (If connected with other indoor units, the air conditioning system will not operate normally.)
5. Power voltage of this series product is 3N~ 380-415/400V, 50/60Hz.

Please read the these "SAFETY PRECAUTIONS" carefully before installing air conditioning unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.

- Please instruct the customer on how to operate the unit and keep it maintained.
- The precautions described herein are classified as WARNING and CAUTION, following which is the important safety information, it is strongly recommended to observe.
- This air conditioner comes under the term "appliances not accessible to the general public".
- Meaning of WARNING and CAUTION notices.

 WARNING	Improper handling may result in major accidents such as death and serious injury.
 CAUTION	Improper handling may result in injury or property damage, or even serious consequence under some circumstances.

- After completing installation, perform a test run to check for normal operation and explain to the customer how to operate and maintain the air conditioner.
In addition, ask the customer to keep this installation manual together with the operation manual for future reference.
- Also, inform customers that they should store this installation manual along with the operation manual for future reference.



WARNING

Ask the dealer or specialized personnel to carry out the installation work.
Do not install the machine by yourself. Otherwise, it may result in water leakage, electric shocks or fire hazards.

Perform installation work following the instructions contained in this manual.
Improper installation may result in water leakage, electric shocks or fire hazards.

When installing the units in a small room, take proper measures to ensure the amount of any leaked refrigerant under the concentration limit in the event of refrigerant leakage. Contact your dealer for appropriate measures.
Excessive refrigerant concentration in a closed ambient space may result in oxygen deficiency.

Be sure to use the specified accessories and parts for installation.
Failure to use the specified parts may result in water leakage, electric shocks, fire hazards or the unit failing to operate normally.

Install the unit on a solid foundation which can withstand the weight of the unit.
A foundation of insufficient strength may result in the unit falling and causing injuries.

Install the unit at designated places by taking into consideration strong winds such as typhoons and earthquakes.
Improper installation may result in the unit falling and causing accidents.

Make sure that all electrical work is carried out by the specialized personnel in accordance with local laws and regulations and this manual, and a special power supply circuit is provided for the unit.
An insufficient power supply circuit capacity or improper electrical operation may lead to electric shocks or fire hazards.

Use the specified wires and attach them securely, with no external forces acting on the terminal connections or wires.
Improper connections or securing of wire may result in abnormal heat build-up or fire hazards.

When connecting the indoor and outdoor units and the power supply wiring, to avoid the service lid being protruded and deformed, lay the wires in a smooth and regular way to attach the shell plate properly.
Otherwise, the terminals will give out heat and may result in electric shocks and fire hazards.

If refrigerant leakage occurs during installation, immediately open the windows and doors for ventilation.
Gaseous refrigerant will produce toxic gas if it comes into contact with fire.

After installation is completely finished, check for refrigerant leakage.
If the refrigerant leaks inside the room, it may generate noxious gas if in contact with the fire of an air heater, burner or cooker, etc.

Do not touch the electrical parts when the unit is powered on.

After completing installation, make sure that no residual voltage exists on the live parts (such as the terminals of earth leakage circuit breakers and terminal blocks) before operating the breakers such as changing.

Consult your local dealer regarding what to do in case of refrigerant leakage.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
Otherwise, this may lead to an accident due to oxygen depletion.

Do not directly touch refrigerant that has leaked from refrigerant pipes or other areas, as there is a danger of frostbite.

Do not allow children to climb on the outdoor unit and avoid placing objects on the unit.
Injury may result if the unit becomes loose and falls.

CAUTION

Be sure to earth the unit.

Do not connect the earth wire to gas pipes, water pipes, lightning rods or telephone earth wires.

- Gas pipes – gas leaks can cause explosion or fire.
- Water pipes – cannot be grounded if hard vinyl pipes are used.
- Lightning rods or telephone earth wires – the ground potential when struck by lightning gets extremely high.



Be sure to install a branch circuit breaker, over current circuit breaker (fuse) and earth leakage circuit breaker. Failure to do so may result in electric shocks and fire hazards.

Install the drain piping according to the installation manual to ensure proper drainage, then insulate the piping to prevent condensation from accumulating. Improper drain piping installation may result in water leakage and household items wet.

Keep the indoor unit, outdoor unit, power wiring and transmission wiring at least 1m away from televisions and radios to prevent image or noise interference. (A distance of 1m or more may not be sufficient to eliminate the noise in the case of strong radio wave.)

Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit as far away from fluorescent lamps as possible.

Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.

Do not install the air conditioner in the following locations:

- Where mineral oil mist, oil spray or vapour is produced, for example, in a kitchen.
Plastic parts may be aged and damaged, and result in water leakage.
- Where corrosive gas, such as sulphurous acid gas, is produced.
Corroding copper pipes or soldered parts may result in refrigerant leakage.
- Near machinery emitting electromagnetic waves.
Electromagnetic waves may disturb the operation of the control system and cause the unit malfunction.
- Where flammable gas may leak, where there is air borne carbon fibre or ignitable dust, or where volatile flammables such as gasoline or thinner are placed. Operating the unit in such conditions may result in fire hazards.
- Do not install the outdoor unit at the place where there is a shelter of the small animals.
Once in the unit, leaves and small animals making contact with the electrical parts can cause malfunction, smoke or fire.
Ask the customer to maintain a clean and tidy environment around the outdoor unit.

Do not climb up the outdoor unit or place objects on it. Falling or tumbling may result in injury.

Do not wash the outdoor or indoor units with water. Otherwise, it may cause electric shocks and fire hazards.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Disposal requirements

Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

[Note]

- For how to install the indoor unit and the remote controller, refer to the installation manual of each equipment.

1 Introduction

Combination

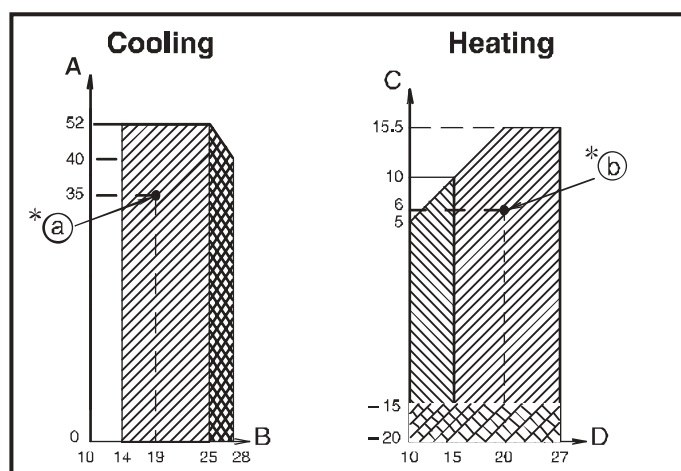
The indoor units can be connected in the following range.

- **Be sure to install the dedicated indoor units.**
Refer to the product catalogue for the model names of the indoor units which can be connected with this unit.
- Combination capacity ratio and number of the indoor units.

Outdoor unit	Combination	Combination capacity ratio (%)	Maximum number of indoor unit
RXYMQ4AYFK RXYMQ5AYFK RXYMQ6AYFK	VRV only	50~130	RXYMQ4: 6 RXYMQ5: 8 RXYMQ6: 9

Standard operation range

The values below are the supposed working environment for the outdoor and indoor units:



Equivalent piping length...7.5m

Difference in height.....0m

A Outdoor temperature (°CDB)

B Indoor temperature (°CWB)

C Outdoor temperature (°CWB)

D Indoor temperature (°CDB)

Range for continuous operation

Range for pull down operation

Range for warming up operation

Possible operation range
(Out of unit capability guaranteed)

Technical specifications

For operation conditions *^(a), *^(b) in the table below, refer to the operation range (above figure).

Model		RXYMQ4AYFK	RXYMQ5AYFK	RXYMQ6AYFK	Remark
Refrigerant		R410A			
Cooling capacity	kW	11.3	14.1	16.0	* ^(a)
Heating capacity	kW	12.6	16.0	18.0	* ^(b)
Cooling input	kW	2.770	3.595	4.097	* ^(a)
Heating input	kW	2.797	3.670	4.240	* ^(b)
Dimensions (H × W × D)		870 × 1100 × 460			
Connection piping	Gas side	inch mm	5/8 Ø15.9	3/4 Ø19.1	
	Liquid side	inch mm	3/8 Ø9.5	3/8 Ø9.5	

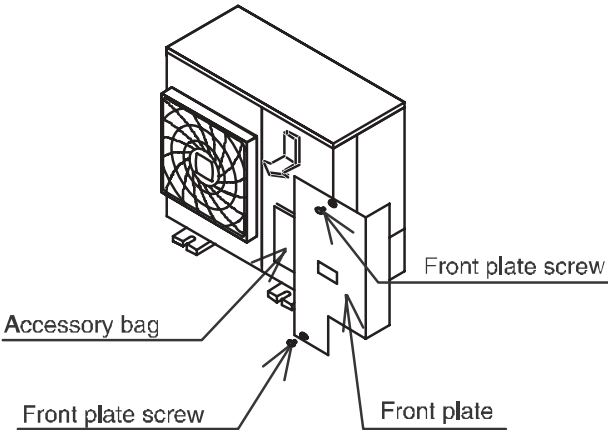
Electrical specifications

Model			RXYMQ4AYFK	RXYMQ5AYFK	RXYMQ6AYFK
Power supply	Phase		3N~		
	Voltage	V	380-415/400		
	Frequency	Hz	50/60		
	Allowable voltage fluctuation	%	±10		
	Fuse rated current	A	25		
Outdoor unit maximum running current		A	18.9		

Accessories

Check if the following accessories are supplied with the unit.
(Remove the front plate and they are in the accessory bag)

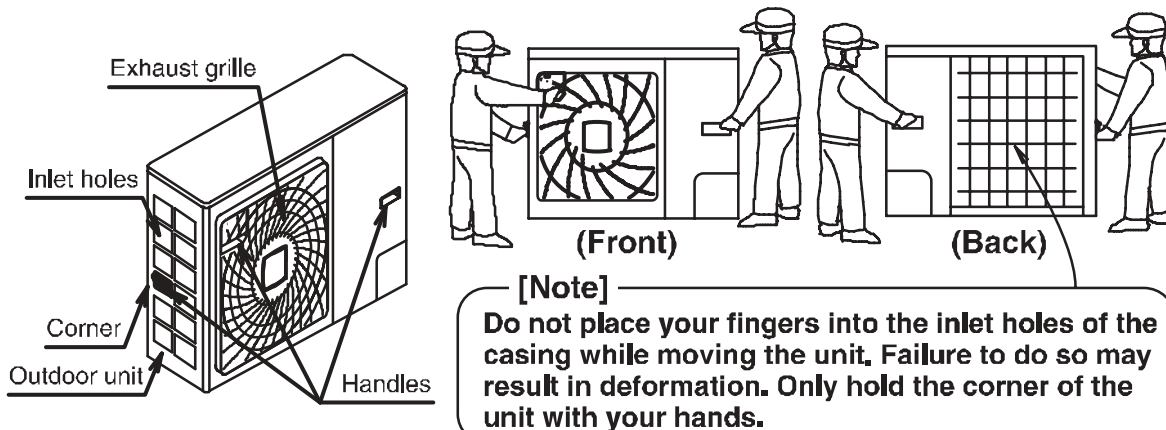
Operation manual	Auxiliary pipe (1)	Others
 (1 pc.)	 (1 pc.)	• Installation manual (3 pcs.)



2 Before installation

[About carrying]

Hold the 2 handles at both sides as shown in the figure below and move it slowly.
(Pay attention not to touch the fins at the back.)



- Use the accessories or the specified parts to install the required parts.

3 Selecting installation location

1) Select a location for installation that meets the following conditions and get the customer's approval.

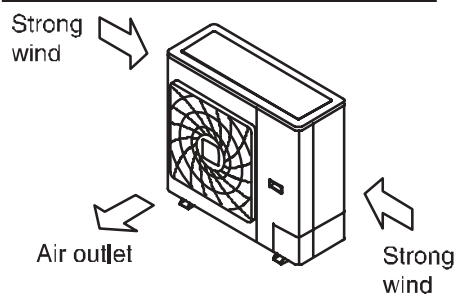
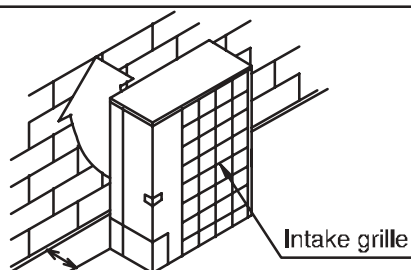
- Good ventilation.
- Not disturbing the neighbours.
- No shelters of the small animals.
- Solid enough to support the weight and vibration of the unit which can be placed horizontally.
- Able to avoid raining as much as possible.
- Adequate space kept around the unit for installation.
- Outdoor piping and wiring within the allowable length range.
- No risk of flammable gas leaks.

2) When installing in locations where there is a possibility of strong wind, take the following measures.

- If the strong wind with speed over 5m/s blowing to the exhaust side of the outdoor unit, the decreased air flow rate and re-absorbed exhausted gas (short circuit) etc. by the outdoor unit will lead to:
 - Decreased capability
 - Increased frost during heating
 - Operation stopped as high pressure increases
- Excessive strong wind continually blowing to the front exhaust side of the outdoor unit will result in the fan reversing at a high speed and being damaged. Refer to the figure below for installation.

Install the outdoor unit with the air outlet facing the building wall, closure or wind shutter.

Make the exhaust direction perpendicular to the wind direction.



3) When installing in locations where there is heavy snowfall, take the following measures.

- Block up the base.
- Install snow hoods (field supply).
- Remove the rear suction grille to prevent snow from accumulating on the fins.

4) If there is a risk of short circuit for the outdoor unit in the ambient environment, use air flow direction adjustment plate (optional accessory).

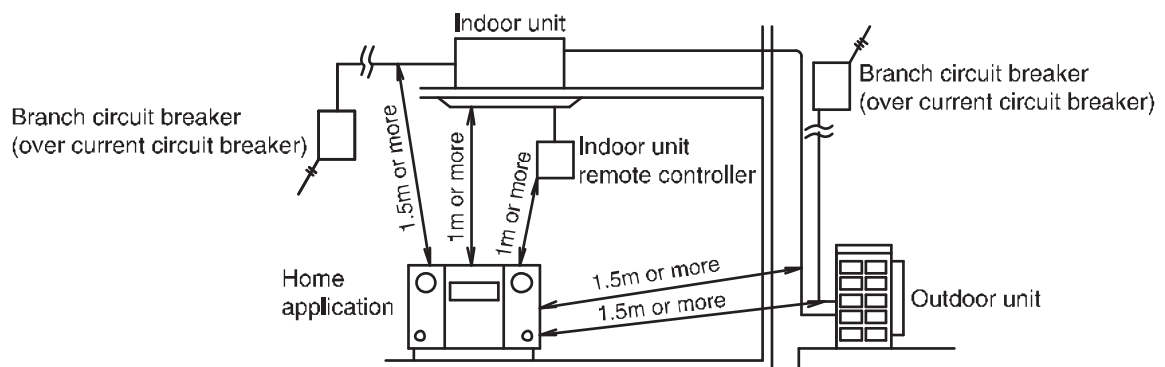
5) The refrigerant gas (R410A) is nontoxic, non-flammable and safe. It is necessary to take measures against to keep refrigerant concentration from exceeding allowable safety limits in a small room in the event of refrigerant leakage.

6) An inverter air conditioner may cause home appliances produce noise.

When selecting the location for installation, keep the air conditioner and wiring a proper distance away from radios, computers and stereo equipment as shown in the following figure.

Particularly for location with weak wave reception, be sure to keep a distance of at least 3m between the indoor unit and the remote controllers and place the power supply wiring and transmission wiring in conduits, and connect the conduits to the ground.

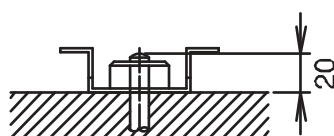
In addition, use the shielded wires for all electric wires between units.



7) For the installation locations, refer to the installation manual (2).

4 Precautions during installation

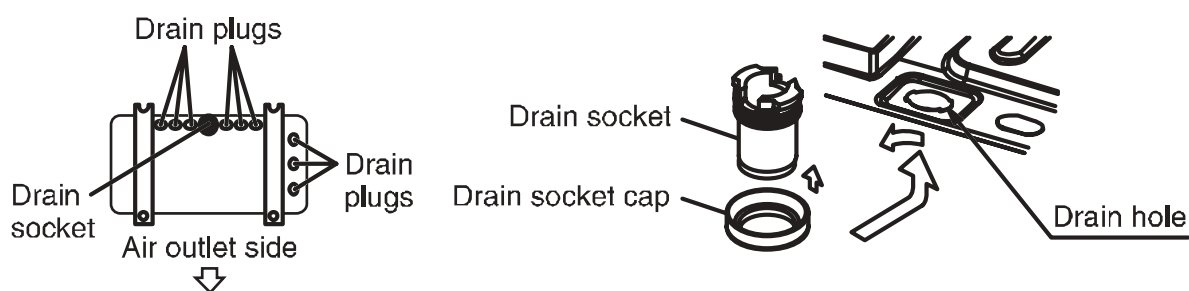
- To prevent vibration and noise, check the foundation is solid and level before installation.
- As shown in the following figure, firmly secure the unit to a stable base using anchor bolts. (Use four sets of commercially-available W12 anchor bolts, nuts and washers.)
- The section of the anchor bolts above the base 20mm in length is the most appropriate. (Refer to the figure below)



Ground plan

[About drainage handling]

- Perform drain pipe installation work using the optional drain plug if the drainage from the outdoor unit may lead to problems (such as water drained from the outdoor unit dripping down to the pedestrians).
- It is necessary to keep an interspace 100mm or more under the air conditioner leg in order to handle the drainage.
- Make sure the drain functions properly.
(Beware of water leaks if the piping is brought out from the bottom.)
- Drain plugs are not supplied with the unit. They are commercially-available, so you can purchase them separately.



- 1) Insert the drain plugs into the drain holes of the bottom frame.
- 2) Attach drain socket cap to drain socket.
- 3) Insert drain socket to drain hole by turning about 40° to install it to the bottom frame.

5 Electrical wiring

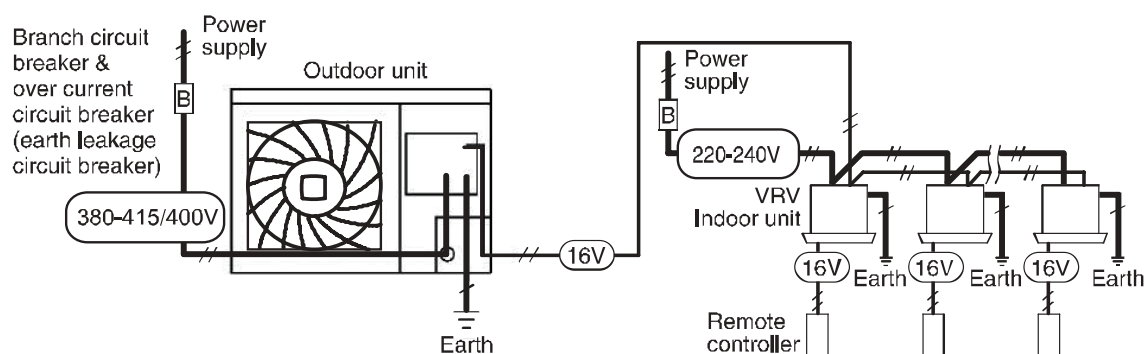


CAUTION To those doing electrical work

- Do not operate the unit before completing refrigerant piping connection. (Failure to do so will result in compressor malfunction.)
- Install the earth leakage circuit breaker. (Since this unit is equipped with an inverter, to prevent malfunction of the earth leakage circuit breaker itself, select the breaker that be capable of handling high harmonics.)

5-1. Example of whole system wiring connection

If connected to a system without a BP unit



- Transmission wiring (shielded wire) (16V)
- Power supply wiring (sheathed cable) (3N~ 380-415/400V, ~220-240V)

5-2. Precautions for routed power wiring and transmission wiring

Route the power wiring (including the earth wire) from the wiring outlets (knockout holes) on the sides, front, or back of the units.

Route the electric wires between units from the piping outlet, or from the wiring outlets (knockout holes) on the sides, front, or back of the units.

[Precautions when punching through the knockout holes]

- Punch through the knockout holes with a hammer.
- After punching through the holes, it is recommended to coat the holes at the edge and the area around them with anti-corrosion paint to prevent rusting.
- Before leading the electric wires through the knockout holes, scrape the burrs around the holes and wrap the wires with the protective tape.



If small animals might enter the unit, block off the knockout holes with sealing material (field supply)

5-3. Precautions for power wiring connection

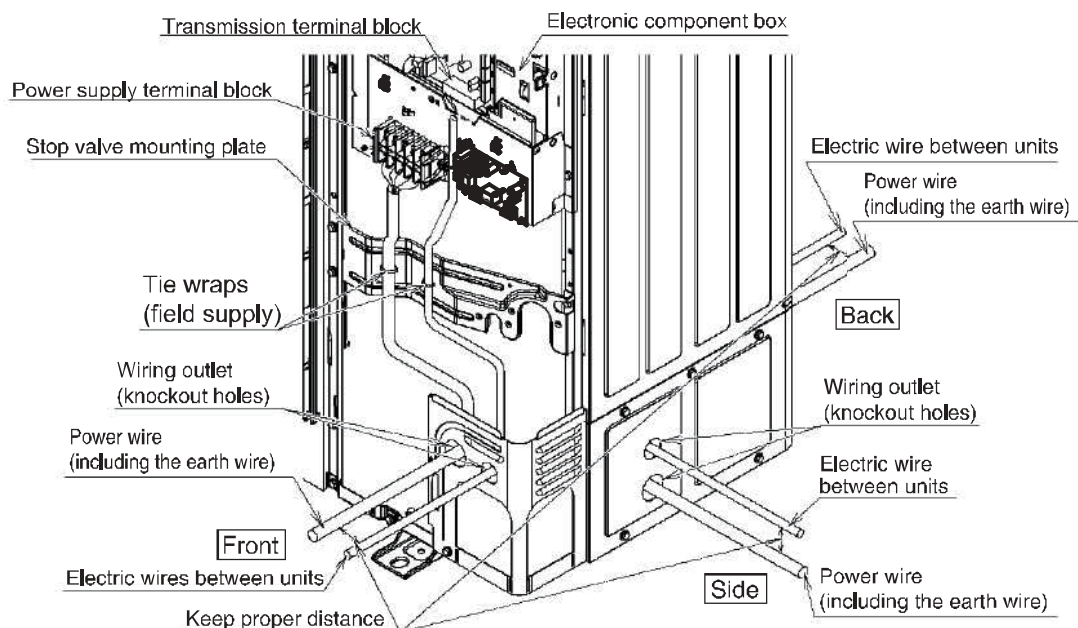


NOTICE

When using residual current operated circuit breakers, be sure to use a high-speed type 100 mA rated residual.

[Note]

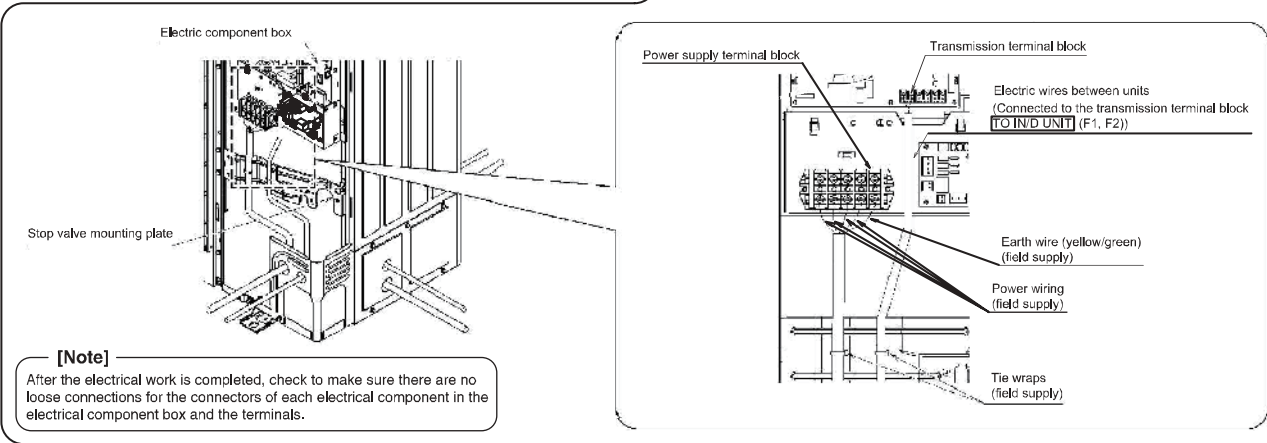
- Select the power wiring in accordance with the local and national regulations in your area.
- Specifications of the field power wiring should be in compliance with IEC60245.
- Use wire type H05VV when the protective conduits are used for the power wiring.
- Use wire type H07RNF when the protective conduits are not used.
- Only proceed with wiring work after turning off all the power.
- Always earth the unit in accordance with the local and national regulations in your area.
- The electrical wiring must be installed by the trained electricians.
- Perform wiring connection in accordance with "Wiring Diagram Label".
Only conduct the wiring connection after turning of the branch circuit breaker and the over current circuit breaker.
- The grounding impedance must be 4Ω or less.
- Set the earth leakage circuit breaker.
- Earth the indoor and outdoor units.
- Do not connect the earth wire to the gas pipes, water pipes, lightning rods or telephone earth wires.
 - Gas pipes – gas leaks can cause explosion or fire.
 - Water pipes – cannot be grounded if hard vinyl pipes are used.
 - Telephone earth wires or lightning rods – the ground potential when struck by lightning may get extremely high.
- Only use the copper wires.
- Be sure to turn off the power supply before performing the electrical wiring work.
Do not switch on the breakers until all wiring work being completed.



⚠ WARNING:

After the fuse is blown, ask the serving agency to replace it. Do not replace the fuse by yourself. Otherwise, it may cause accidents such as electric shock.

- Install the earth leakage circuit breaker.
(Since this unit is equipped with an inverter, to prevent malfunction of the earth leakage circuit breaker itself, select the breaker that be capable of handling high harmonics.)
- Since this product is equipped with an inverter, harmonics will be generated. If local laws require the suppression of harmonics on the building, please take harmonic suppression measures on the electrical equipment side. Connect the power wiring and the power supply terminal blocks as shown in the following figure and tighten the clamps.
Fuse models of the outdoor unit see "Wiring Diagram label" for details:
F1U, F2U (T, 3.15A, 250V)
- The unit is equipped with an inverter. Always connect the earth wire to discharge the unit and eliminate the impact on other devices by reducing the noise generated from the inverter, and to prevent the unit casing from being live due to electric leakage.
- Never install a phase advancing capacitor to improve the power factor. (Installing a phase advancing capacitor will not improve the power factor, but may cause the capacitor abnormal heating and accidents.)
- For the wiring, use the designated electric wires and connect firmly, then secure them with the accessory clamps to prevent outside force from being applied to the terminal area (terminals of the transmission wiring and earth wire connected on site).
For details, please refer to **5-3. Precautions for power wiring connection**.
- Do not tie the remaining wires in a bunch and tuck into the unit.
- Place the electric wires in the conduits or plastic sleeves to prevent them from being scratched by the edge of the knockout hole.
- Secure the electric wires with the accessory buckles to prevent it from touching the piping and stop valves.
(Refer to **5-3. Precautions for power wiring connection**)



[Note]

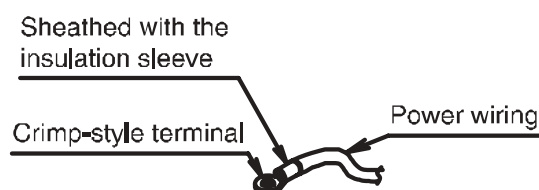
- Use the sheathed wires for the power wiring.
- Do not route the weak electric wiring (remote controller wire and wiring between units) together with the strong one outside the air conditioner, keeping them at least 25mm apart. Otherwise, being affected by the electrical noise (external noise) may result in malfunction or breakdown.
- Be sure to connect the power wiring to the power supply terminal blocks and hold it in place in accordance with **5-3. Precautions for power wiring connection**.
- Hold the wiring between air conditioner units in place in accordance with **5-4. Precautions for wiring connection between units**.
- Secure the electric wires using the tie wraps to prevent it from touching the piping etc.
- After connecting the electric wires, lay the wires in a smooth and regular way to avoid the electronic component box cover being protruded, then close the cover tightly.

[Precautions for routing power wiring]

- Never connect two electric wires of different sizes to one power supply terminal.
(Phenomenons such as loose electric wire connection may cause abnormal heating.)
- For the electric wires connected to the power supply terminals, use the crimp-style terminal with insulation sleeve. Otherwise, connect the wires of the same size to the sides respectively as shown in the figure.

Phenomenons such as loose electric wire connection may cause abnormal heating. Strictly follow the instructions below.

- Use the specified electric wires and secure them firmly without applying external stress to the terminal block.
- Tighten the terminal screws with a suitable screwdriver. Use of small screwdriver would damage the screw head and could not achieve the proper tightening effect.
- Secure the terminal screws overtight may break them.



Connect the wires of the same size to the sides respectively.



Never connect two wires together.



Never connect two wires of different size.

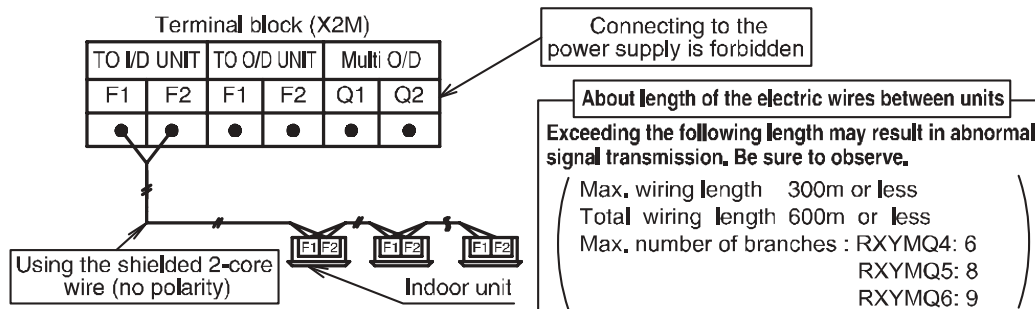


- Refer to the table below for the tightening torque of the terminal screws.

Tightening torque (N • m)		
M5	(power supply terminal)	2.39~2.91
M4	(shield earthing)	1.18~1.44
M3.5	(Internal unit wiring terminal)	0.8~0.97

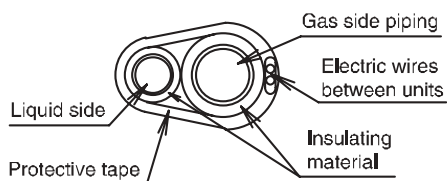
5-4. Precautions for wiring connection between units

- Connected the wiring between units of the single system as shown in the figure below.
(No polarity)



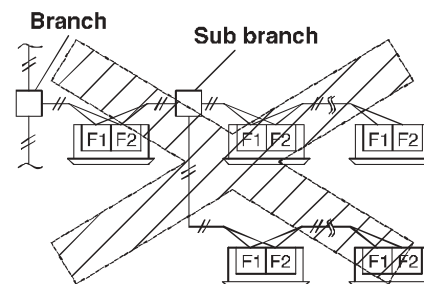
Precautions for wiring connection between units

- Do not connect the power supply to the single-phase wiring terminals. Otherwise, the whole system will be damaged.
- The wiring from the indoor unit must be connected to the PC board terminal F1/F2 (TO I/D UNIT) of the outdoor unit.
- For the electric wires between units, after being secured within the unit, wrap them together with the refrigerant piping connected locally using the protective tape as shown in the figure below.



Precautions when branching the wiring between units

- The electric wires between units can hold up to the number of branches noted in "Max. number of branches" shown above. The wires after being branched can't be branched again.



- Use 0.75~1.25 mm² shielded 2-core wire for the above wiring.
(For how to earth the shielded part, refer to the figure on the left.)
- All electric wire between units are field supply.

6 Refrigerant piping connection

6-1. Installation tools

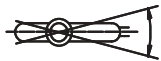
To withstand the pressure and prevent entry of any impurities into the air conditioning system, always use the special installation tools for R410A.

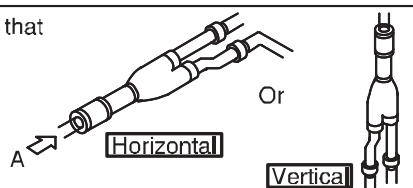
Multi-purpose gauge hose	To withstand the pressure and prevent entry of any impurities (mineral oils such as specialized lubricating oil and moisture), be sure to use the special installation tools for R410A. (Screw specifications for R410A and R407C are different.)
Vacuum pump	- Make sure that the engine oil in the pump will not flow backward into the air conditioner system when the pump stops. - Use the vacuum pump able to lower the pressure to -100.7Pa (5Torr, -755mmHg).

6-2. Selecting piping material

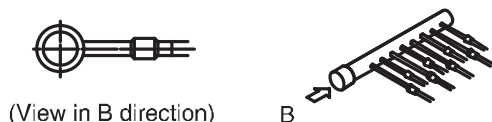
- Do not use the pipes covered with sulphur, iron oxide, dust, cutting oil, moisture or other contamination inside. (Better not to exceed 30mg/10m for the oil inside the pipes).
- Determine the thickness and size of refrigerant piping based on the precautions for piping size selection on the back, while also taking into account local laws and regulations. For R410A, the design pressure is 4.0 MPa.
- Be sure to use REFNET joint or header for the piping branches.
- While performing the piping work, make sure that the piping is within the maximum allowable ranges for length, height in difference and branch piping length.
- When using REFNET joint or header, pay attention to the following items and install it by referring to the installation manual included with the kits.

- Install the REFNET joint in such a direction that can ensure horizontal or vertical branch.

(Horizontal line)  $\pm 30^\circ$ or less
(View in A direction)



- Install the REFNET header so that it splits horizontally.



6-3. Piping protection

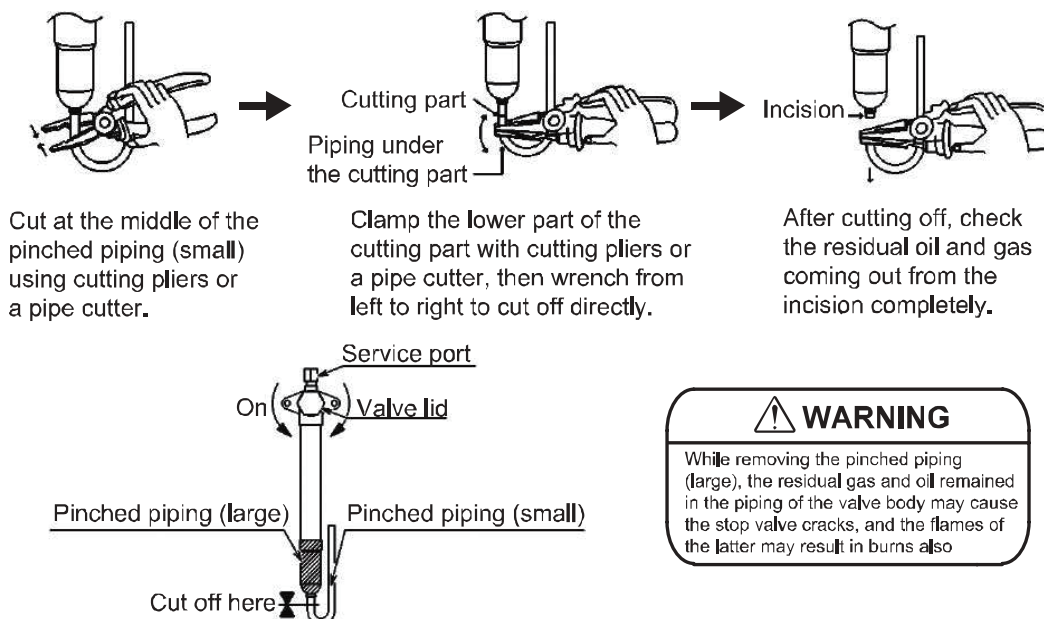
- Maintain and protect the piping to prevent moisture from getting into and the entry of the impurities and dust, etc.
- Pay special caution when penetrating the copper pipes through the walls till outside.

Location	Installation schedule	Protection measure
Outdoor	More than a month	Pinch
	Less than a month	Pinch or seal with tape
Indoor	Random	

6-4. Pipe connection

- For how to use the stop valves, refer to the **Stop valve operation procedure** under **6-7. Air tight test and vacuum drying**.
- Before removing the pinched piping (large)
 - Remove the valve lid, and check the stop valve is completely closed.
 - Connect a vacuum gauge to the service port, and check there is no residual pressure.
 - Cut off the pinched piping (small) with cutting pliers or a pipe cutter, and check that there is no residual pressure again.

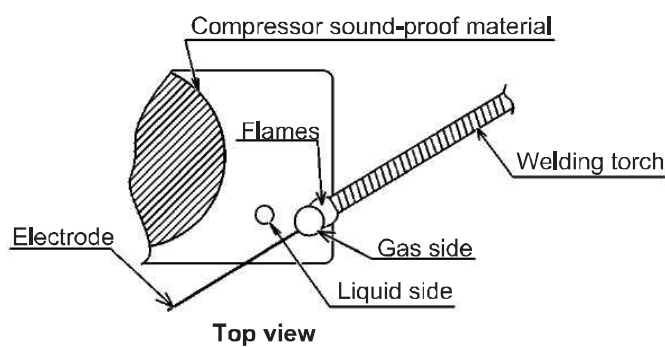
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- **Before brazing the removed pinched piping (large) and field piping connection.**
Take cooling measures for the stop valves (such as wrapping a wet and dripless cloth to them). Failure to do so will result in damage to the valve body and cause the system leaks.

- **Brazing piping locally (gas side)**

- 1) Remove the two piping outlets plates.
- 2) When brazing, it is necessary to penetrate the electrode from the front of the unit and the welding torch from the right side to braise with the flames facing outside and avoid the compressor sound-proof material and other piping. (Refer to the figure below)

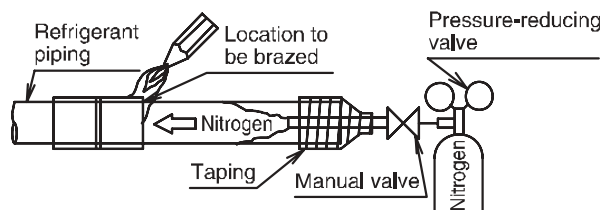


- **Be sure to charge nitrogen into the pipe when brazing.**

(Be sure to perform nitrogen purge or nitrogen charge when brazing. Failure to do this will create large quantities of oxide film on the inside surface of the pipes, which would adversely affect the valves and compressors in the refrigerating system and prevent the normal operation.)

Note) When charging nitrogen before brazing, the pressure-reducing valve must be set to 0.02 MPa (0.2 kg · f/cm² or less: as a slight breeze on your cheek).

- Do not charge other refrigerant other than the specified one for the refrigerating system.
- Do not charge the air for the refrigerating system.



[Note]

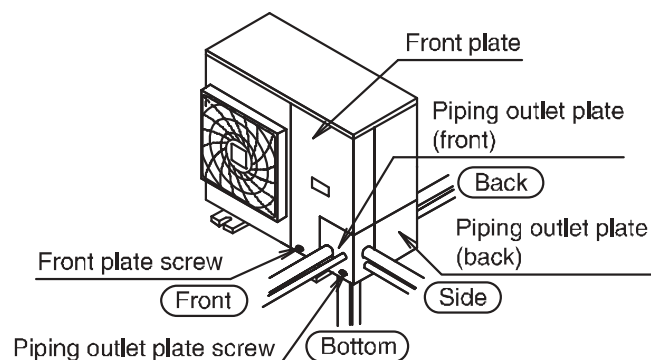
Do not use flux when brazing the refrigerant piping.

Use the phosphor copper electrode which does not require flux (BCu93P-710/795:ISO 3677).

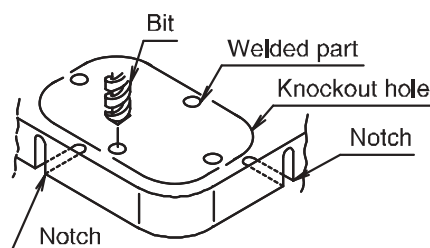
(Flux has extremely harmful influence on refrigerant piping system. If the chlorine based flux is used, it will cause pipe corrosion or in particular if the flux contains fluorine, it will damage the refrigerant oil and adversely affect the refrigerant piping system.)

6-5. Precautions for refrigerant piping connection

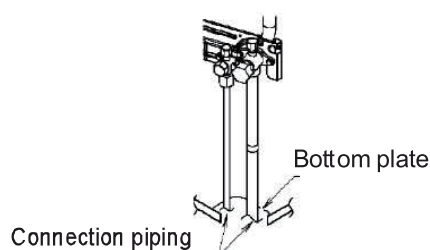
- The field piping can be connected in 4 directions.



- While connecting downward, open up a round hole (knockout hole) by drilling holes near the welded part of the knockout hole (4 places) with a $\varnothing 6\text{mm}$ bit.



- Cutting out the 2 notches makes it possible to carry out installation as shown in the figure below. Use a metal saw when cutting out the notches.



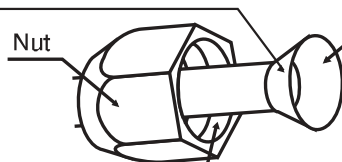
- After drilling through the knockout hole, it is recommended to coat the edges of the notches and the area around them with anti-corrosion paint to prevent rusting.

[Precaution for piping connection]

- For machining the flaring part, refer to the following table.
- To install the flaring nut, only coat the refrigerant oil to the inside surface of the flaring (ester or ether oil), then turn the nut 3~4 circles with your hands.

Do not coat the refrigerant oil to the outside surface.

Coat the refrigerant oil to the inside surface of the flaring.



Do not let the nut touch the refrigerant oil to prevent from being screwed overtight.

- To prevent gas leakage, coat the refrigerant oil (ester or ether oil) to the inside surface of the flaring part.
- Refer to the following table for the tightening torque. (Being screwed overtight will damage the flaring part.)

Piping size	Tightening torque	Machining size A	Type
Ø9,5	32,7~39,9N•m	12,8~13,2mm	
Ø15,9	61,8~75,4N•m	19,3~19,7mm	
Ø19,1	97,2~118,8N•m	23,6~24,0mm	

- If there is no torque wrench, tighten the flaring nut with a normal wrench instead of it.
- When tightening the nut, there is a possibility that the tightening torque is suddenly increased. In this case, tighten it again based on the angles in the table below from this position.

Piping size	Tightening angle (reference)	Recommended tool arm length
Ø9,5	60°~90°	Around 200mm
Ø15,9	30°~60°	Around 300mm
Ø19,1	20°~35°	Around 450mm

- After piping connection is finished, perform gas leak inspection with nitrogen for the piping connection parts.

6 Refrigerant piping connection

Precautions to piping connection

- If there is a possibility that the condensed water or the stop valve might be damaged by the refrigerant gas, the piping should be insulated and wrapped with the insulation material.
- For the outdoor unit, entry by insects could cause short circuit of the electrical component box.

[How to prevent entry of small animals]

- Caulk the piping through holes with putty or insulation material (field supply) as shown in the right figure to prevent gaps.
- For the outdoor unit, entry by insects could cause short circuit of the electrical component box.



Selection of piping material

NOTICE

- For the indoor unit, the piping should be made of copper pipe.
- Installation shall be done by a licensed installer. The choice of the material and installation shall conform completely with the applicable nation and international codes.
- Foreign materials inside pipes (including oils for lubrication) must be removed before use.
- For the outdoor unit, the piping with temper grade in function of the pipe diameter is listed in table below.

Pipe Ø (mm)	Temper grade of piping material
≤15.9 (5/8")	O (annealed)
≥19.1 (3/4")	1/2H (half hard)

Selection pipe thickness

- The pipe thickness of the refrigerant piping shall comply with the applicable legislation. The minimal pipe thickness for R410A piping must be in accordance with the table below.

Pipe Ø (mm)	Minimal thickness t (mm)
Ø6.4 (1/4")	0.80
Ø9.5 (3/8")	0.80
Ø12.7 (1/2")	0.99
Ø15.9 (5/8")	0.80
Ø19.1 (3/4")	0.80
Ø22.2 (7/8")	0.88
Ø25.4 (1")	0.88

6-6. Piping insulation

- The connection piping (liquid side, gas side) and the refrigerant branch kit must be insulated. (Otherwise, it may cause water dripping.)
- Reinforce the insulation on the refrigerant piping according to the installation environment.

Ambient temperature	Humidity	Minimum thickness
≤30°C	75% to 80% RH	15 mm
>30°C	>80% RH	20 mm

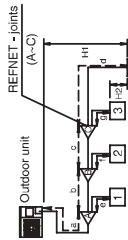
(Be sure to use heat resistant polyethylene foam which can withstand a temperature of 70°C for liquid piping and polyethylene foam which can withstand a temperature of 120°C for gas piping.)



For piping connected locally, wrap the insulation material till the piping connections. The naked piping may result in condensation and burns.

Example of connection

(Connecting 4 indoor units)



	Between outdoor unit and indoor unit	Actual piping length
Max. allowable length		Equivalent piping length
		Total piping length
Allowable height difference	Between outdoor unit and indoor unit	Difference in height
	Between indoor units	Difference in height
Allowable length after the branch		Actual piping length

Selecting refrigerant branch kit

Selecting the piping size

- If the equivalent piping length between outdoor and indoor units is over 90m, size of the main pipe on the gas side must be increased.
- In addition, depending on the distance of the refrigerant piping, size of the main pipe also can be increased if capacity is decreased.
- (Gas side) Ø15.9 (5/8") → Ø19.1 (3/4") (RXYMQ4.5AYFK)
- (Gas side) Ø15.9 (5/8") → Ø22.2 (7/8") (RXYMQ6.5AYFK)



Note: To increase the size of the piping joint, connect it using joints of different apertures (field supply). Connection part is beside the outdoor unit (behind the 1st bending outside the unit).

How to calculate the additional refrigerant to be charged

Additional refrigerant to be charged: R(kg)
(R should be rounded off in units of 0.1 kg.)

$$R = \left(\frac{\text{Total length of liquid side piping}}{\text{size at } \phi 9.5} \right) \times 0.059 + \left(\frac{\text{Total length of liquid side piping}}{\text{size at } \phi 6.4} \right) \times 0.022$$

INFORMATION

The refrigerant amount that can be automatically charged may differ from the additional refrigerant amount that is provided from calculations, but there are no problems in performance and quality.

- Piping between outdoor unit and indoor unit
- Should correspond to the size of the connection piping of indoor unit.

Indoor unit capacity type	Piping size (outer diameter)
≤50	Ø12.7 (1/2")
≥63	Ø15.9 (5/8")

- Piping between outdoor unit and indoor unit
- Should correspond to the size of the connection piping of outdoor unit.

Outdoor unit capacity type (HP)	Piping size (outer diameter)	Gas pipe	Liquid pipe
4	Ø15.9 (5/8")	Ø15.9 (5/8")	Ø9.5 (3/8")
5	Ø15.9 (5/8")	Ø15.9 (5/8")	Ø19.1 (3/4")
6	Ø19.1 (3/4")	Ø19.1 (3/4")	Ø22.2 (7/8")

$$\text{For refrigerant branch piping with REFINET joint}$$
$$\text{Example: } R = \left(\frac{25 \times 0.059}{1.3} \right) + \left(\frac{15 \times 0.022}{1.3} \right) = 1.805$$

a: Ø9.5×10m	d: Ø6.4×5m	g: Ø6.4×5m
b: Ø9.5×5m	e: Ø6.4×5m	
c: Ø9.5×5m	f: Ø9.5×5m	

Pipe size selection

Symbol	Piping size (Outer diameter)	
	Gas pipe	Liquid pipe
Between outdoor and first refrigerant branch kit	RXYMQ4AYFK Ø15.9 (5/8")	RXYMQ5AYFK Ø9.5 (3/8")
Piping between refrigerant branch kits	RXYMQ6AYFK Ø19.1 (3/4")	RXYMQ6AYFK Ø9.5 (3/8")
- Choose from the following table in accordance with the total capacity index of all units connected below this. - Do not let the connection piping exceed the indicated piping size chosen by general system model name.	Total capacity index of connected indoor units	Liquid pipe
	X×150	Ø15.9 (5/8")
	150×X×200	Ø19.1 (3/4")
	X×200	Ø22.2 (7/8")

- (a) The refrigerant sound from the outdoor unit can be transmitted.
- (b) A liquid gas size up is required for all the piping between the branch kit and VRV unit. If the piping diameter of the sized up piping exceeds the diameter of the piping before the first refrigerant branch kit, then the latter also requires a liquid gas size up.
- (c) In some indoor units, the piping size is different. Choose from the size of each indoor units.

6-7. Air tight test and vacuum drying

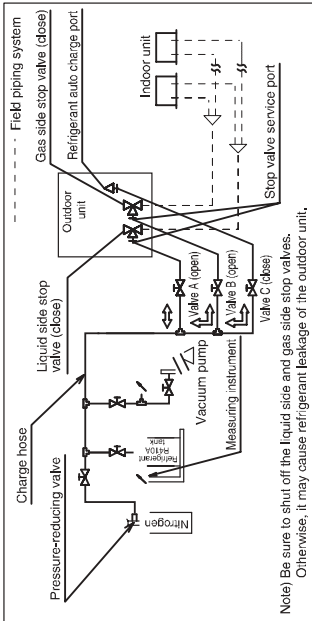
Check the following after piping connection is finished.

- CAUTION

To those doing piping work

 - Air tight test** - Always use nitrogen. (Refer to Stop valve operation procedure for service port's position.)
[Procedure] : Pressurize the liquid side piping and the gas side piping to 4.0MPa (do not exceed 4.0 MPa). If the pressure does not drop within 24 hours, the system passes the test.
If there is a pressure drop, check for leaks. (Discharge the nitrogen after confirming there is no leakage.)
 - Vacuum drying** - Use a vacuum pump able to evacuate the system to -100.7 kPa (5Torr, -755mmHg) or less.
[Procedure] : Evacuate the system from the liquid side piping and gas side piping using a vacuum pump for more than 2 hours to +100.7 kPa or less.
Keep the system under this condition for more than 1 hour, check if the vacuum gauge indication rises or not.
(If it rises, the system may either contain moisture inside or have gas leak.)

If moisture might enter the piping (e.g. if doing work during the rainy season, if the actual work takes long enough that condensation may form on the inside of the pipes, if rain might enter the pipes during work, etc.)
After performing the vacuum drying for 2 hours, pressurize to 0.05 MPa (vacuum breakdown) with nitrogen gas, then depressurize down to -100.7 kPa or less and hold for an hour using the vacuum pump (vacuum drying).
(If the pressure does not reach -100.7 kPa even after depressurizing for at least 2 hours, repeat the vacuum breakdown-vacuum drying process.) After vacuum drying, maintain the vacuum for an hour and make sure the pressure does not rise by monitoring with a vacuum gauge.



Note) Be sure to shut off the liquid side and gas side stop valves. Otherwise, it may cause refrigerant leakage of the outdoor unit.

Stop valve operation procedure

- Precautions to stop valve operation**
- Name of each part should be known before operating the stop valve (as shown in the right figure). When shipped, the stop valve is left closed.
 - Simply using a torque wrench to loosen or tighten the flaring nut may cause deformation of the side panel. Be sure to fix the flaring nut with a normal wrench, then operate it with the torque wrench.
 - When opening or closing the stop valve lid and flaring nut, make sure that the tool does not touch the PCB. It may cause an electric shock or a fire, and cause damage to electrical components.
- [Stop valve operation procedure]**
Prepare two inner hexagon wrenches: size 4mm, 6mm.
- To open**
- Put the inner hexagon wrench to the valve shaft and turn it clockwise.
 - Turn it until the shaft stops. The valve is opened.
- To close**
- Put the inner hexagon wrench to the valve shaft and turn it clockwise.
 - Turn it until the shaft stops. The valve is closed.

Liquid stop valve

Gas stop valve

To open

To open

[Liquid side]

[Gas side]

About valve lid

About service port

Stop valve (mounting position of the valve lid)

Liquid side tightening torque	Gas side tightening torque
13.5~16.5Nm	22.5~27.5Nm

9 About test run

To start smoothly, be sure to turn on the power supply to the heating compressor crankcase 6 hours before operation.



Be sure to inform other installers or attach the front panel well before leaving with the power supply turned on for the outdoor unit.

Before powering on

- Protect the electronic components with insulating tape in accordance with the "Service Precautions" label attached to the front panel.
- All indoor units connected with the outdoor unit will operate automatically after powering on.
- To ensure safety, check the indoor unit installation has been completed.

9-1. Powering on ~ test run

- Make sure to perform a test run first after installation. If the unit is operated with the indoor unit's remote controller but without performing test run, malfunction codes will be displayed on the display of the indoor unit and the outdoor unit will not operate normally.
- After the test run is completed, the indoor unit will display the test run status on the display of the indoor unit and the outdoor unit.
- PC board (A/P), PCB positions of the button switches (BS1-3) and DIP switches (DS1, 2) on PCB board, refer to the "Service Precautions" label.
- Check the state of the outdoor units and test wiring with this operation.

- Attach the front panel of the outdoor unit.
- Turn on the power supply of the outdoor and indoor units.
- Make sure all field settings you want are set.
- Turn ON the power to the outdoor unit and the connected indoor units.

- Make sure the default (factory) situation is existing. Push BS2 for 5 seconds or more. The unit will start test operation. The test operation is automatically carried out, the outdoor unit display will indicate "U1" and the indication "Test operation" and "Under centralized control" will display on the user interface of indoor units.
- Steps during the automatic system test run procedure:
 - "U1": control before start up (pressure equalization)
 - "L1": coding start up control
 - "L2": coding stable condition
 - "L3": communication check
 - "L4": stop valve check
 - "L5": stop valve closed
 - "L6": refrigerant amount check
 - "L7": pump down operation
 - "L8": unit stop

INFORMATION

- Electronic refrigerant charge function has been used. "L7" will not be displayed during the test run, as they have been completed during the automatic refrigerant charge operation.
- During test operation, it is not possible to stop operation of the unit from a user interface. To abort operation, press BS3. The unit will stop after ~30 seconds.
- Check the test operation results on the outdoor unit segment display.
 - Normal condition: no indication on the segment display (d8)
 - Abnormal condition: indication of malfunction code on the segment display
- Refer to "Connecting after abnormal completion of the test operation" to take action for correcting the abnormality. When the test operation is fully completed, normal operation will be possible after 5 minutes.
- The test run status is displayed on the display of the indoor unit and the outdoor unit.
- In case of a displayed malfunction code, perform correcting actions as explained in the malfunction code table. Carry out the test operation again and confirm that the abnormality is properly corrected.

INFORMATION

- Refer to the installation manual of the indoor unit for other detailed malfunction codes related to indoor units.
- Be sure to attach the front panel of the outdoor unit after test run is completed.

About test run

- In the test run, the refrigerant distribution, it may take up to 60 minutes for the compressor to start up after the power supply on. This is not malfunction.
- Meaning of operation check is not to check individual indoor unit. After completing operation check, operate the system normally with the remote controller.
- Test run can't be performed when the unit is in other mode such as refrigerant recycling mode.
- Never perform test run with discharge pipe thermometer (DPT), suction pipe thermometer (SPT) and pressure sensor (SNPH, SNPL) removed.
- Failure to do so will result in compressor damage.

9-2. For normal operation

[Set the master unit (the indoor unit with cooling and heating option rights).]

For wired remote controller

- After test run is completed, symbol " " flashes on all remote controllers connected here.
- Set the master unit as customer's request. (It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changer button on the remote controller of the master unit.
- Conduct cool/heal changer over with this remote controller and the symbol " " vanishes.
- For other remote controllers excluding the above, symbol " " lights up.

For wireless remote controller

- After test run is completed, timer lamps flash on all indoor units connected here.
- Set the master unit as customer's request. (It is recommended to set the indoor unit with highest frequency of use as the master unit.)
- Press the operation mode changer button on the remote controller of the master unit. Then a sound of beeps can be heard and the timer lamps on all indoor units go out.
- The indoor unit has the option rights to change over to cooling/heating operation.

For details, refer to the installation manual included with the indoor unit.



To those doing piping work
To those doing electrical work

After test run is completed, check whether the casing of the units has been attached and whether the screws have been tightened before transferring the air conditioner to your customer.

- After test run is completed, operate the unit normally.
 - Check the indoor and outdoor units are in normal operation.
 - Operate each indoor unit one by one and check the corresponding outdoor unit is also in operation.
 - Check to see if cold (or hot) air is coming out from the indoor unit.
 - Press the fan direction and strength buttons of the indoor unit to see if they operate properly.

About normal operation check

- The compressor will not restart in about 5 minutes even if the ON/OFF button of the remote controller is pressed.
- When the system operation is stopped by the remote controller, the outdoor unit may continue operating for further 1 minute at maximum.
- If any check operation was not performed through test run at first installation, the malfunction code "U3" will be displayed. In this case, perform check operation in accordance with [9-1. Powering on ~ test run].

(check the remote controller connected with the indoor unit)

Malfunction code	Meaning	Contents	Solution
U3	High pressure switch valve activated (S1PH) - A1P (X2A).	Check stop valve situation of all indoor units in piping > allow over air cooled out.	Check refrigerant amount/recharge unit.
U4	High pressure switch valve closed.	Stop valve closed.	Open stop valve.
U5	Stop valve closed (L4).	Stop valve closed.	Open stop valve.
U6	Low pressure malfunction.	Low pressure malfunction.	Check refrigerant amount/recharge unit.
U7	Refrigerant shortage.	Refrigerant shortage.	Check the user interface's display of transmission wiring between the outdoor unit and the indoor unit.
U8	Indoor unit malfunction.	Indoor unit malfunction.	Check connection on PCB or actuator.
U9	Electronic expansion valve malfunction (main) (Y1E) - A1P (X21A).	Electronic expansion valve malfunction (main) (Y1E) - A1P (X21A).	Check connection on PCB or actuator.
U10	Electronic expansion valve malfunction (subcool) (Y2E) - A1P (X22A).	Electronic expansion valve malfunction (subcool) (Y2E) - A1P (X22A).	Check connection on PCB or actuator.
U11	Electronic expansion valve malfunction (inverter coding) (Y3E) - A1P (X23A).	Electronic expansion valve malfunction (inverter coding) (Y3E) - A1P (X23A).	Check connection on PCB or actuator.
U12	Electronic expansion valve malfunction (refrigerant auto charge) (Y4E) - A1P (X24A).	Electronic expansion valve malfunction (refrigerant auto charge) (Y4E) - A1P (X24A).	Check connection on PCB or actuator.
U13	Stop valve closed (L4).	Stop valve closed.	Open stop valve.
U14	Refrigerant shortage.	Refrigerant shortage.	Check refrigerant amount/recharge unit.
U15	Stop valve closed.	Stop valve closed.	Open stop valve.
U16	Ambient temperature sensor malfunction (RT1) - A1P (X18A).	Ambient temperature sensor malfunction (RT1) - A1P (X18A).	Check connection on PCB or actuator.
U17	Discharge temperature sensor malfunction (D21T) - open circuit - A1P (X19A).	Discharge temperature sensor malfunction (D21T) - open circuit - A1P (X19A).	Check connection on PCB or actuator.
U18	Suction temperature sensor malfunction (S21T) - A1P (X20A).	Suction temperature sensor malfunction (S21T) - A1P (X20A).	Check connection on PCB or actuator.
U19	Discharge temperature sensor malfunction (R21T) - A1P (X20A).	Discharge temperature sensor malfunction (R21T) - A1P (X20A).	Check connection on PCB or actuator.
U20	Liquid temperature sensor (after subcool HE) malfunction (RST) - A1P (X30A).	Liquid temperature sensor (after subcool HE) malfunction (RST) - A1P (X30A).	Check connection on PCB or actuator.
U21	Liquid temperature sensor (after subcool HE) malfunction (RST) - A1P (X30A).	Liquid temperature sensor (after subcool HE) malfunction (RST) - A1P (X30A).	Check connection on PCB or actuator.
U22	High pressure sensor malfunction (SNPH): open circuit - A1P (X32A).	High pressure sensor malfunction (SNPH): open circuit - A1P (X32A).	Check connection on PCB or actuator.
U23	Low pressure sensor malfunction (SNPL): open circuit - A1P (X32A).	Low pressure sensor malfunction (SNPL): open circuit - A1P (X32A).	Check connection on PCB or actuator.
U24	Low pressure sensor malfunction (SNPL): short circuit - A1P (X33A).	Low pressure sensor malfunction (SNPL): short circuit - A1P (X33A).	Check connection on PCB or actuator.
U25	Transmission outdoor unit - inverter (INV) transmission trouble - A1P (X34A).	Transmission outdoor unit - inverter (INV) transmission trouble - A1P (X34A).	Check connection
U26	INV1 undervoltage power supply voltage.	INV1 undervoltage power supply voltage.	Check if power supply is within range.
U27	INV1 power phase loss.	INV1 power phase loss.	Check if power supply is within range.
U28	Malfunction code: System test run not yet executed (system operation not possible).	Malfunction code: System test run not yet executed (system operation not possible).	Execute system test run.
U29	Malfunction code: System refrigerant auto charge run not yet executed.	Malfunction code: System refrigerant auto charge run not yet executed.	Execute auto charge function (see manual).
U30	System test run abnormal ending.	System test run abnormal ending.	Check (F1F2) wiring.
U31	Faulty indoor system.	Faulty indoor system.	Check indoor system transmissions wire.
U32	Too many indoor units are connected to F1F2 line.	Too many indoor units are connected to F1F2 line.	Check indoor unit amount and total capacity connected.
U33	System mismatch. Wrong type of indoor units combined (R410A, R407C, R4).	System mismatch. Wrong type of indoor units combined (R410A, R407C, R4).	Check if other indoor units have malfunction and confirm
U34	Indoor unit malfunction.	Indoor unit malfunction.	Indoor unit mix is allowed.
U35	Connection mismatch (field setting error).	Connection mismatch (field setting error).	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
U36	Refrigerant type mismatch (field setting error).	Refrigerant type mismatch (field setting error).	Check if transmission wired unit amount matches with powered indoor unit (by monitor mode) or wall fill initialization is finished.
U37	Stop valve closed or wrong (during system test run).	Stop valve closed or wrong (during system test run).	Open stop valves.
U38	Auto address malfunction (inconsistency).	Auto address malfunction (inconsistency).	Check if transmission wired unit amount matches with powered unit amount (by monitor mode) or wall fill initialization is finished.

For the case with centralized controller used, refer to the installation manual included with it under service manual.

No display on the remote controller

- Connection and communication error occurred between the indoor unit and the remote controller. Check wiring connection for the broken and loose.

Note

- In the event that there is any conflict in the interpretation of this manual and any translation of the same in any language, the English version of this manual shall prevail.
- The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.



The QR code is for the manual.



2P660918-1

Installation Manual (2)
 Be sure to read this manual before installation and follow the instructions contained in it



The two-dimensional bar code is a manufacturing code.

Installation location

<Precautions to side-by-side installation>

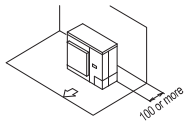
- In the figure below, the connection piping is lead out from the front, the bottom, or the side.
- An interspace of over 100mm should be kept when installing side-by-side. To lead out the piping from the back, the interspace of over 250mm should be kept on the right side of the outdoor unit.

(A) Where there is an obstacle on the suction side:

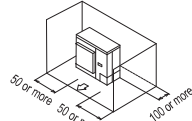
• No obstacle above

① Stand-alone installation

- Obstacle on the suction side only

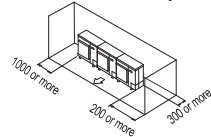


- Obstacle on both sides



② Series installation (2 or more)

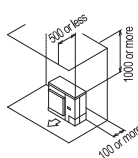
- Obstacle on both sides



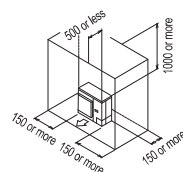
• Obstacle above, too

① Stand-alone installation

- Obstacle on the suction side, too

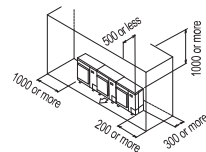


- Obstacle on the suction side and both sides



② Series installation (2 or more)

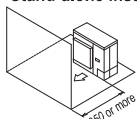
- Obstacle on the suction side and both sides



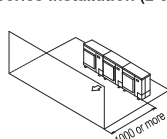
(B) Where there is an obstacle on the discharge side:

• No obstacle above

① Stand-alone installation

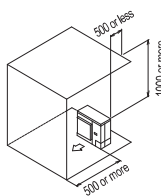


② Series installation (2 or more)

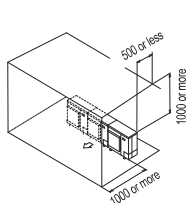


• Obstacle above, too

① Stand-alone installation



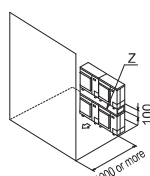
② Series installation (2 or more)



(D) Double-decker installation

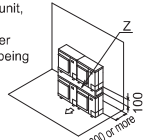
① Obstacle on the discharge side

- (Note 1) Up to 2 layers can be overlapped.
- (Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
- (Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.



② Obstacle on the suction side

- (Note 1) Up to 2 layers can be overlapped.
- (Note 2) For the drain pipe installation of the upper outdoor unit, the interspace of 100mm around is needed.
- (Note 3) Seal Z part (interspace between the upper and lower outdoor units) to prevent the exhaust bypass from being formed.

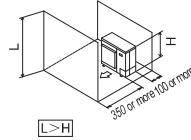


(C) Where there are obstacles on both suction and discharge sides:

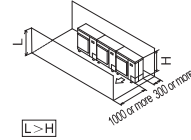
Pattern 1 Where the obstacles on the discharge side is higher than the unit. (There is no height limit for obstructions on the intake side.)

• No obstacle above

① Stand-alone installation



② Series installation (2 or more)



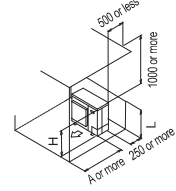
• Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	750
	$1/2H < L \leq H$	1000
$H < L$	Set the stand as: $L \leq H$.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.



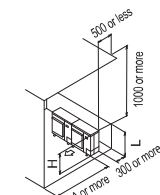
② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	1000
	$1/2H < L \leq H$	1250
$H < L$	Set the stand as: $L \leq H$.	

(Note1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

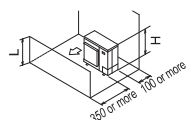
(Note2) Only two units can be installed for this series.



Pattern 2 Where the obstacles on the discharge side is lower than the unit. (There is no height limit for obstructions on the intake side.)

• No obstacle above

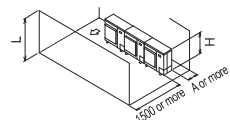
① Stand-alone installation



② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300



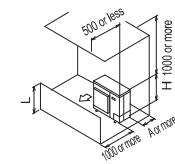
• Obstacle above, too

① Stand-alone installation

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	100
	$1/2H < L \leq H$	200
$H < L$	Set the stand as: $L \leq H$.	

(Note) Close the bottom of the installation frame to prevent the discharged air from being bypassed.



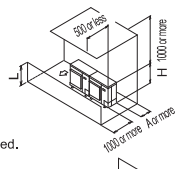
② Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300
$H < L$	Set the stand as: $L \leq H$.	

(Note1) Close the bottom of the installation frame to prevent the discharged air from being bypassed.

(Note2) Only two units can be installed for this series.



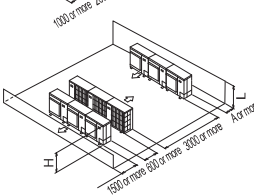
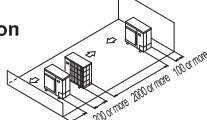
(E) Multiple rows of series installation (on the rooftop, etc.)

① One row of stand-alone installation

② Rows of series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
$L \leq H$	$0 < L \leq 1/2H$	250
	$1/2H < L \leq H$	300
$H < L$	Cannot be installed.	



NOTE

- In the event that there is any conflict in the interpretation of this manual and any translation of the same in any language, the English version of this manual shall prevail.
- The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.

3. REFNET Pipe System

3.1 Layout Example

3.1.1 Heat Pump

Use of the particular branch fitting appropriate to each individual unit type not only permits the pipes to be laid with ease but also increases the reliability of the system as a whole.

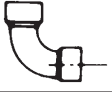
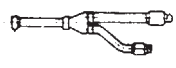
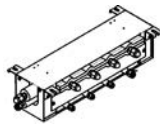
Type of fitting	Sample systems
Line branch fitting (Pipes containing only REFNET joints)	
Header branch fitting (Piping consists of only HEADER PACK)	
Mixed branch fittings (Piping including both REFNET joints and HEADER PACK)	

Units can be added by connecting them directly to the REFNET joint or HEADER PACK. Further branches cannot be included in the system below the HEADER PACK branch.

Note:

1. When the capacity ratio of the indoor system to the outside unit is more than 100% and when all the indoor units are in operation at the same time then the rated capacity of each unit will be somewhat reduced.
2. Special purpose REFNET pipe components must be used for all the pipe work. For further details concerning choosing components, see the installation manual.
3. The Daikin REFNET kits are supplied with insulation intended to fit over the main body of the REFNET joint after installation of the REFNET kit is complete.

3.2 Equivalent Piping Length (Reference)

Pipe Size* (mm)	φ6.4	φ9.5	φ12.7	φ15.9	φ19.1	φ22.2	φ25.4	φ31.8	φ34.9	φ38.1	φ41.3
L Joints 	0.16	0.18	0.20	0.25	0.35	0.40	0.45	0.55	0.60	0.65	0.75
REFNET Joint 	0.5										
HEADER PACK 	1.0										

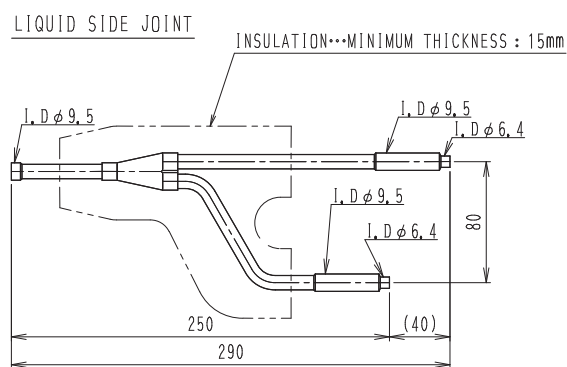
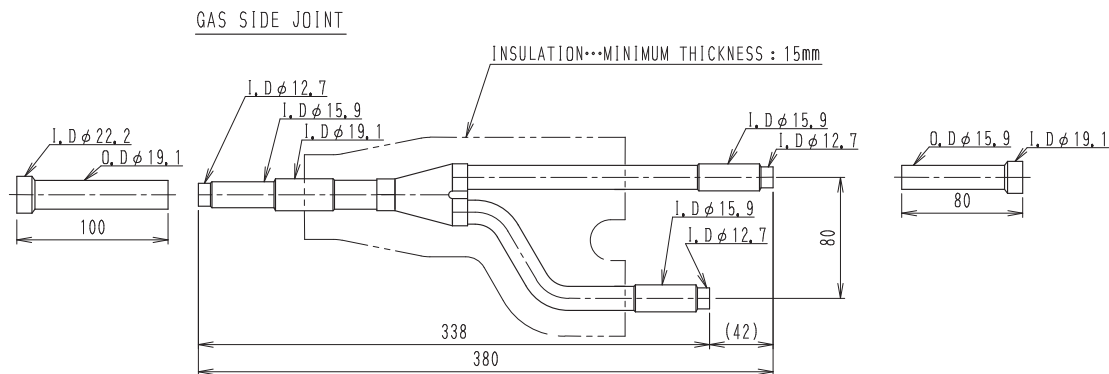
* When the equivalent piping length in cooling operation is calculated, the gas pipe size is selected.
 When the equivalent piping length in heating operation is calculated, the liquid pipe size is selected.

4. Branch Kit

4.1 REFNET Joint (Branch Kit)

KHRP26A22T6

Unit: mm

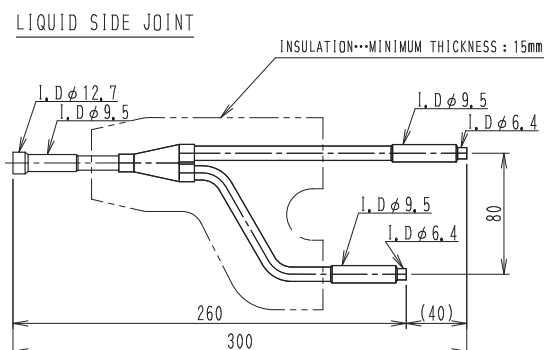
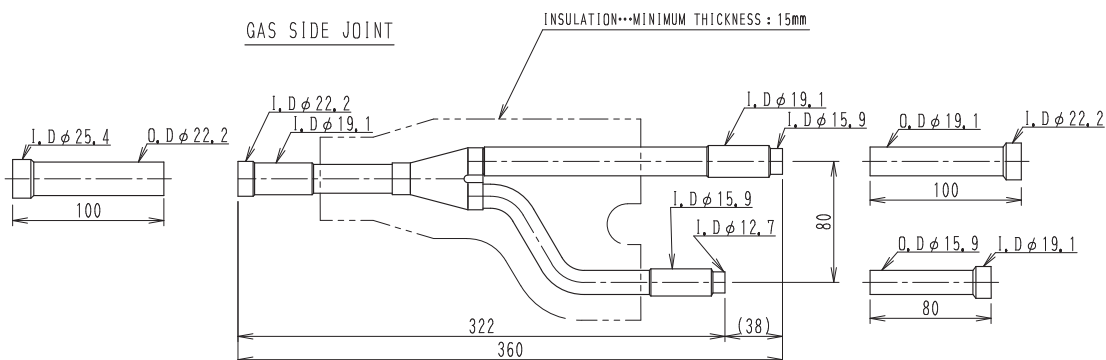


ACCESSORY
REDUCER : GAS SIDE : 2 pcs
INSULATION : 2 pcs
INSTALLATION MANUAL

C: D3K05234B

KHRP26A33T6

Unit: mm



ACCESSORY
REDUCER : GAS SIDE : 3 pcs
INSULATION : 2 pcs
INSTALLATION MANUAL

C: D3K05235C

KHP26A22T6 / KHP26A33T6

REFNET JOINT INSTALLATION MANUAL

KHP26A22T6 • 33T6 • 72T6 • 73T6(FOR R410A)

THIS KIT INCLUDES THE FOLLOWING PARTS.

KIT NAME	S H A P E						
	GAS SIDE JOINT	LIQUID SIDE JOINT	INSULATION		REDUCER(FOR GAS PIPE)		REDUCER(FOR LIQUID PIPE)
GAS			LIQUID				
KHRP26A 22T							
KHRP26A 33T						 	
KHRP26A 72T					 		 
KHRP26A 73T					  	  	  

*---Make sure gas side joint and liquid side joint are for R410A. (Label for R410A is attached on each part.)

SELECTION PROCEDURE

According to the INSTALLATION MANUAL of outdoor unit.

INSTALLATION PROCEDURE

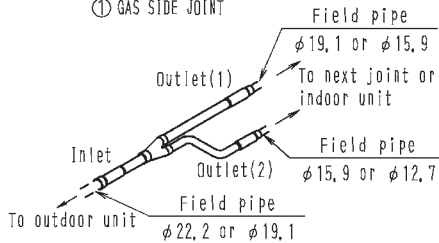
1 The pipe size of each parts are shown below.

KIT NAME	GAS SIDE JOINT	LIQUID SIDE JOINT
KHP26A 22T		
KHP26A 33T		
KHP26A 72T		
KHP26A 73T		

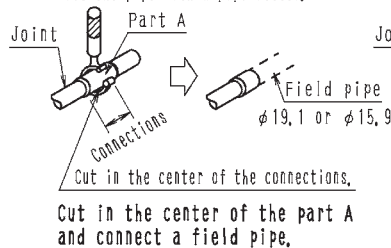
② According to SELECTION PROCEDURE, cut the pipe with a pipe cutter for use.

• (Ex.) FOR KHRP26A33T

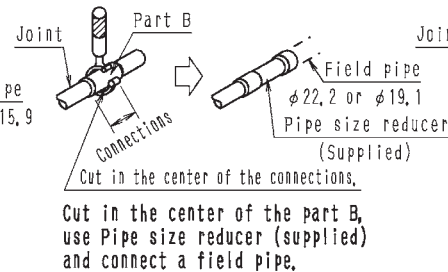
① GAS SIDE JOINT



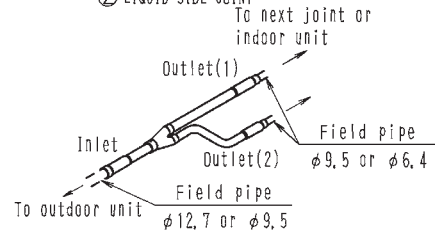
Note) For the size of inlet is $\phi 19,1$ or the size of outlet(1) is $\phi 19,1$, the size of outlet(2) is $\phi 15,9$.
 • Cut the pipe with a pipe cutter.



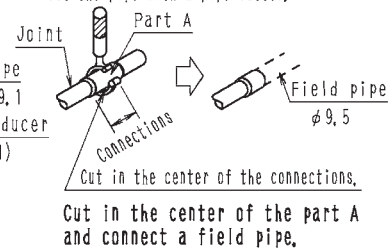
Note) For the size of outlet(1) is $\phi 22,2$ or the size of outlet(2) is $\phi 19,1$.



② LIQUID SIDE JOINT



Note) For the size of inlet is $\phi 9,5$ or the size of outlet(1) is $\phi 9,5$, the size of outlet(2) is $\phi 9,5$.
 • Cut the pipe with a pipe cutter.



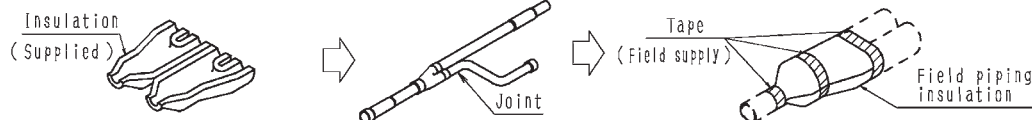
• Make sure to flow nitrogen gas through the pipe when brazing.

③ Insulation of Joint - Be sure to insulate the gas and liquid side Joint.

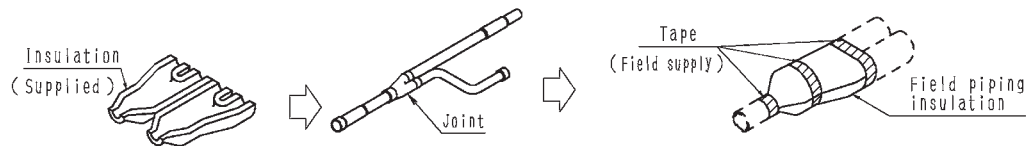
Note) The insulation of the refrigerant piping must be reinforced based on the environment of installation. Otherwise, dew may condensate on the surface of the insulation. For details, see Engineering Data.

GAS SIDE

- Set the insulation matching the joint and wind the field supplied tape from the center without any clearances on the matching face of insulation.
- Seal the insulation and field piping insulation joint with the field supplied tape.

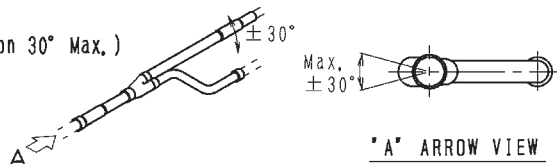


LIQUID SIDE • Insulate by the same method as gas side joint.



INSTALLATION PRECAUTIONS

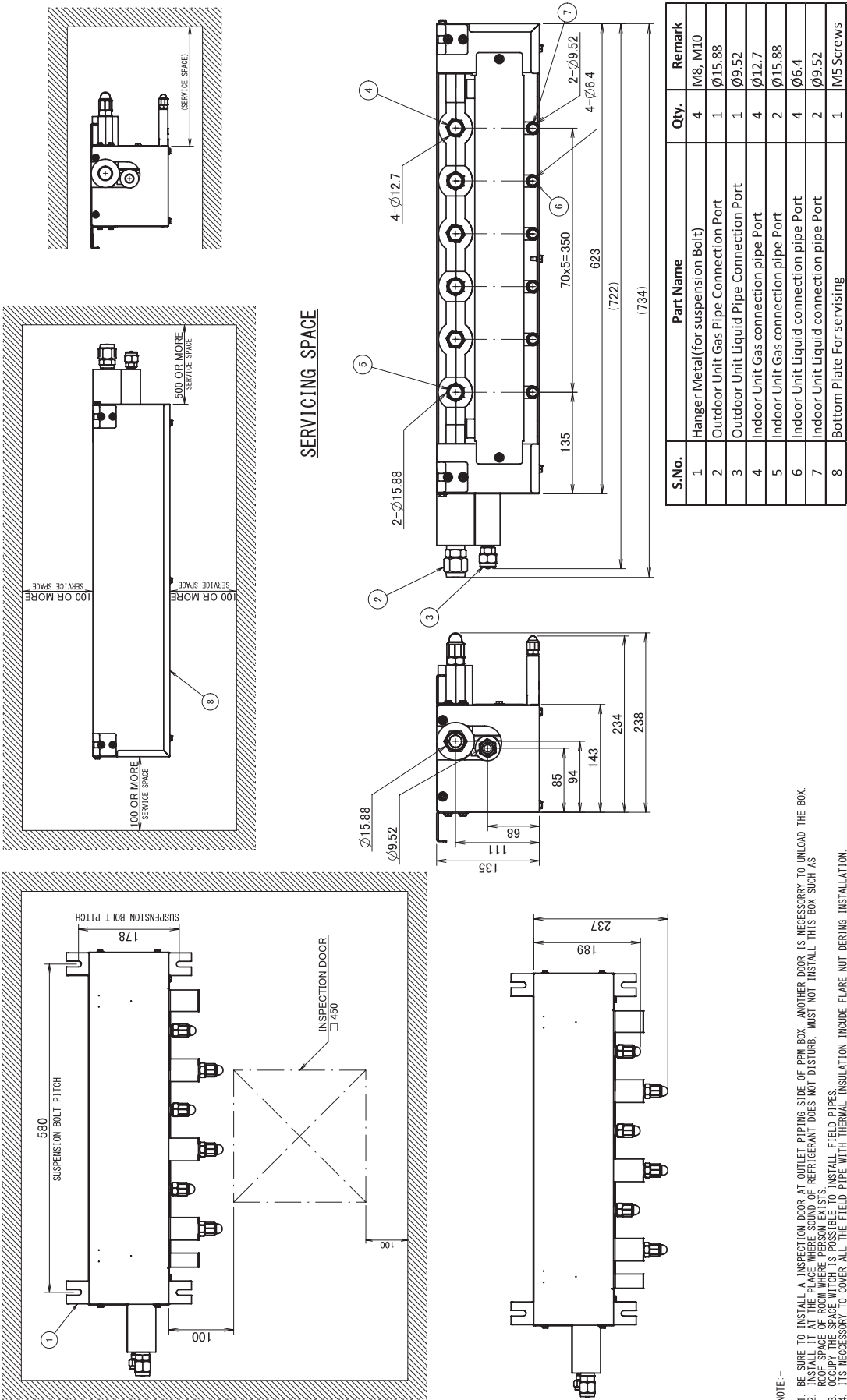
- Install the Joint so that it is branched vertically or horizontally.
 Horizontal
 (Inclination 30° Max.)



- Do not apply extra force on the piping part. The brazed part may be damaged and it may result in gas leakage.

BHF6ARHP6Z

Unit: mm

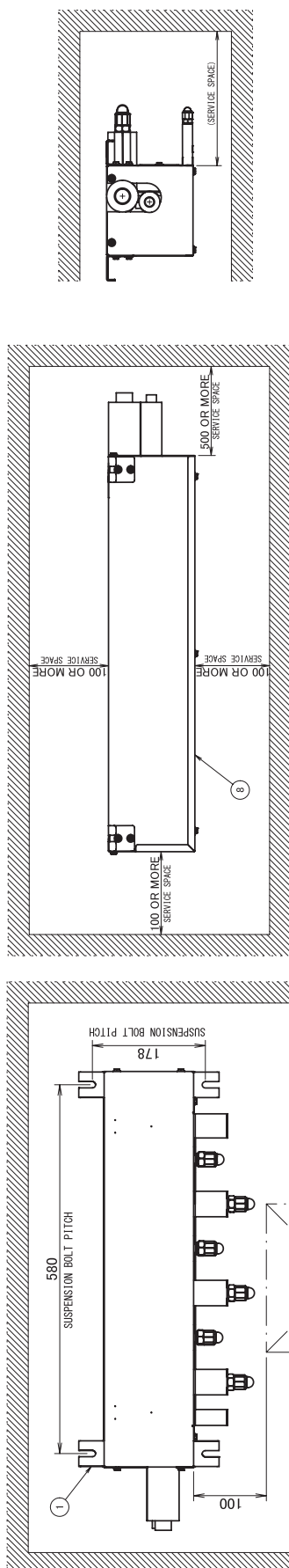


NOTE :-
1. BE SURE TO INSTALL A INSPECTION DOOR AT OUTLET PIPING SIDE OF PPW BOX. ANOTHER DOOR IS NECESSARY TO UNLOAD THE BOX.
2. INSTALL IT AT THE PLACE WHERE SOUND OF REFRIGERANT DOES NOT DISTURB. MUST NOT INSTALL THIS BOX SUCH AS ROOF SPACE OF ROOM WHERE PERSON EXISTS.
3. OCCUPY THE SPACE WITH IS POSSIBLE TO INSTALL FIELD PIPES.
4. ITS NECESSARY TO COVER ALL THE FIELD PIPE WITH THERMAL INSULATION. INCLUDE FLARE NUT DURING INSTALLATION.
5. REMOVE BOTTOM PLATE OF BOX FOR INSIDE SERVICING BY REMOVING M5 SCREWS.

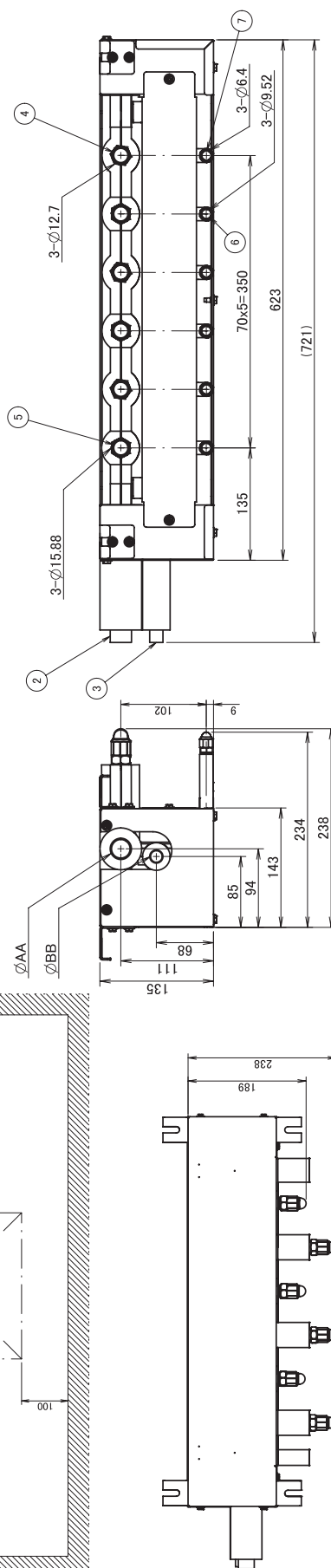
3D125137

BHF8RHP6Z / BHF10RHP6Z

Unit: mm



SERVICING SPACE



S.No.	Part Name	Qty.	Remark
1	Hanger Metal(For suspension Bolt)	4	M8, M10
2	Outdoor Unit Gas Pipe Connection Port	1	ØAA
3	Outdoor Unit Liquid Pipe Connection Port	1	ØBB
4	Indoor Unit Gas connection pipe Port	3	Ø12.7
5	Indoor Unit Gas connection pipe Port	3	Ø15.88
6	Indoor Unit Liquid connection pipe Port	3	Ø9.52
7	Indoor Unit Liquid connection pipe Port	3	Ø6.4
8	Bottom Plate For servicing	1	M5 Screws

MODEL	AA	BB
BHF8RHP6(Z)	19.1	9.52
BHF10RHP6(Z)	22.2	9.52
BHF16RHP6(Z)	28.6	12.7

NOTE:-

1. BE SURE TO INSTALL AN INSPECTION DOOR AT OUTLET PIPING SIDE OF PHM BOX. ANOTHER DOOR IS NECESSARY TO UNLOAD THE BOX.
2. INSURE THAT THE PLACE WHERE SOUND OF REFRIGERANT DOES NOT DISTURB, MUST NOT INSTALL THIS BOX SUCH AS
3. NEAR THE WALL, CORNER, ETC.
4. OCCUPY THE SPACE WHICH IS POSSIBLE TO INSTALL FIELD PIPES
5. IT'S NECESSARY TO COVER ALL THE FIELD PIPE WITH THERMAL INSULATION INSIDE FLARE NUT DURING INSTALLATION
6. REMOVE BOTTOM PLATE OF BOX FOR INSIDE SERVICING BY REMOVING 8X6 SCREWS.

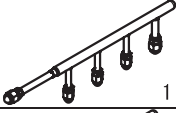
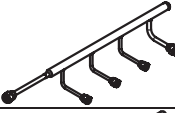
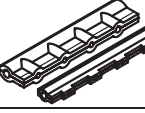
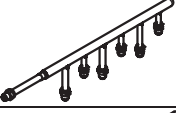
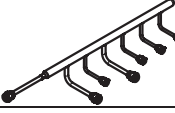
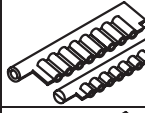
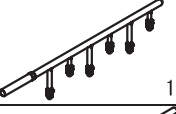
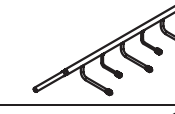
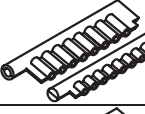
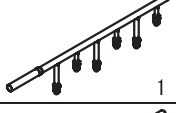
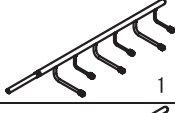
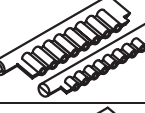
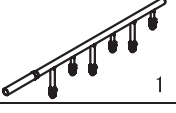
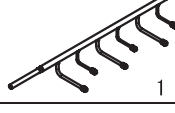
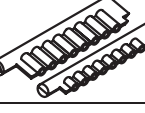
3D125136A

BHF6RHP6Z / BHF6ARHP6Z / BHF8RHP6Z / BHF10RHP6Z

REFNET HEADER INSTALLATION MANUAL

BHF6ARHP6(Z), BHF6RHP6(Z), BHF8RHP6(Z), BHF10RHP6(Z), BHF16RHP6(Z) (R-410A)

◆ THIS KIT INCLUDES THE FOLLOWING PARTS

KIT NAME	SHAPE		
	GAS SIDE HEADER	LIQUID SIDE HEADER	HEADER INSULATION
BHF6RHP6 BHF6RHP6Z	 1 PCS.	 1 PCS.	 1 each for Gas & Liquid
BHF6ARHP6 BHF6ARHP6Z	 1 PCS.	 1 PCS.	 1 each for Gas & Liquid
BHF8RHP6 BHF8RHP6Z	 1 PCS.	 1 PCS.	 1 each for Gas & Liquid
BHF10RHP6 BHF10RHP6Z	 1 PCS.	 1 PCS.	 1 each for Gas & Liquid
BHF16RHP6 BHF16RHP6Z	 1 PCS.	 1 PCS.	 1 each for Gas & Liquid

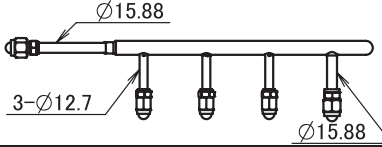
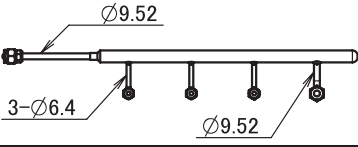
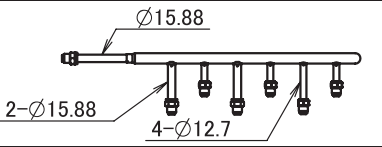
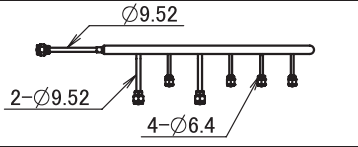
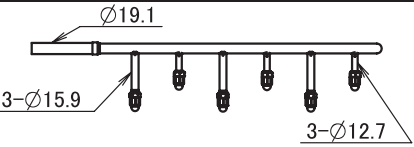
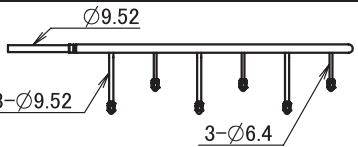
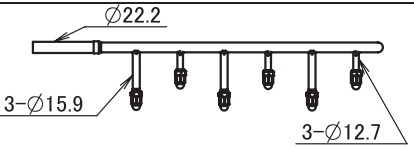
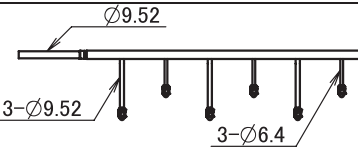
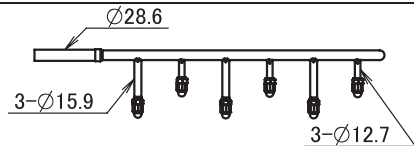
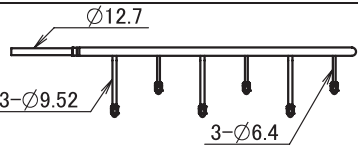
★ Make sure gas side header & liquid side header are for R-410A. (label for R-410A is attached on box)

SELECTION PROCEDURE

According to the INSTALLATION MANUAL of outdoor unit.

INSTALLATION PROCEDURE

① The pipe size of each part are shown below.

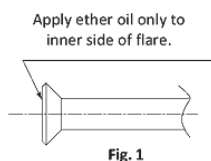
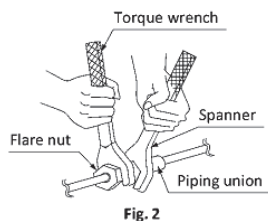
KIT NAME	GAS SIDE HEADER	LIQUID SIDE HEADER
BHF6RHP6 BHF6RHP6Z		
BHF6ARHP6 BHF6ARHP6Z		
BHF8RHP6 BHF8RHP6Z		
BHF10RHP6 BHF10RHP6Z		
BHF16RHP6 BHF16RHP6Z		

2P534054-1F

2P534054-1F

- ② For the Outlet/ inlet Piping which can be connected to several piping sizes, Flare the Field Pipe according to the Pipe size connected to header Outlet, according to the table 2.

- When connecting or disconnecting piping to or from the unit, **be sure to use two spanners and two torque wrenches.** (Refer to Fig. 2)
- Apply ether oil or ester oil **only to inner side of the flare** and screw in the flare nut three to four turns first by hand at the time of connecting the flare nut. (Refer to Fig. 1)



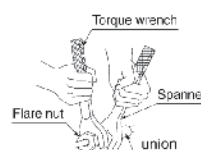
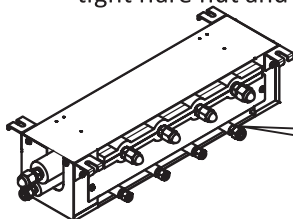
- Perform the curing of the piping with pinching or taping of the piping in order to prevent the intrusion of dirt, dust, and moisture into the piping.
- Do not excessively tighten the flare nut.
- Refer to Table 2 for the corresponding tightening torque.

Table 2

Pipe size	Tightening torque	Flare dimensions A (mm)	Flare shape
φ 6.4	14.2 – 17.2N·m	8.7 – 9.1	
φ 9.5	32.7 – 39.9N·m	12.8 – 13.2	
φ 12.7	49.5 – 60.3N·m	16.2 – 16.6	
φ 15.9	61.8 – 75.4N·m	19.3 – 19.7	

③ Flare Nut Tightning During Installation

Refnet header box union and flare nut are only tight by hand so tight flare nut and union properly if not connected to field pipe as shown in below.



●Capacity Index Table

Model Code	Piping Connections(Liquid/Gas) mm		Indoor Unit Total Capacity Index
	Outdoor Unit Side	Indoor Unit Side	
BHF6RHP6(Z)	Ø9.5/Ø15.9	(Ø9.5/Ø15.9)X1, (Ø6.4/Ø12.7)X3	<150
BHF6ARHP6(Z)	Ø9.5/Ø15.9	(Ø9.5/Ø15.9)X2, (Ø6.4/Ø12.7)X4	<150
BHF8RHP6(Z)	Ø9.5/Ø19.1	(Ø9.5/Ø15.9)X3, (Ø6.4/Ø12.7)X3	150 ≤ X < 200
BHF10RHP6(Z)	Ø9.5/Ø22.2	(Ø9.5/Ø15.9)X3, (Ø6.4/Ø12.7)X3	200 ≤ X < 290
BHF16RHP6(Z)	Ø12.7/Ø28.6	(Ø9.5/Ø15.9)X3, (Ø6.4/Ø12.7)X3	290 ≤ X < 420

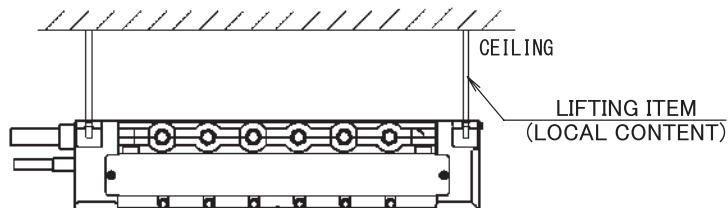
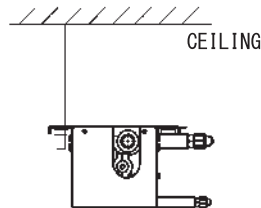
- Only one size up is possible for connection piping (Ø6.4/Ø12.7) . But, within 100mm from the Union edge (Indoor side).

INSTALLATION PRECAUTIONS

Do not apply extra force on the header pipe . The brazed part may be damage & it may result gas leakage.

PPM BOX KIT

- Suspend the header from the ceiling and be sure to install it so that the outlet/inlet pipings at the header indoor unit side are horizontal at the lower side as shown below.



2P534054-1F

2P534054-1F

5. Caution Label

5.1 RXYMQ4AVMK

Service Precautions


WARNING

Caution to ELECTRIC SHOCK

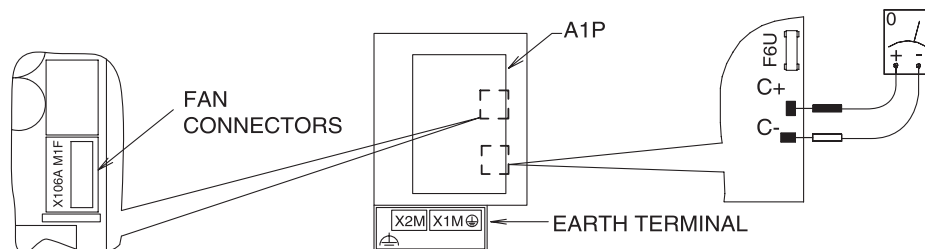

When service with PCB, make sure to close the PCB with insulation sheet.

Caution when performing service with EL.COMPO.BOX

(Touch the non-coating metal part to eliminate static electricity before performing service.)

1. Before servicing, always measure the power terminal (X1M) with multimeter to confirm that the power has been switched off.
2. Be careful when touching the high-temperature components. There is a possibility that each component box can generate high temperature.
3. Be careful when touching a live part.
Do not touch any live part until confirming that the residual voltage is lower than 50 V.
 - ① After switching off the power, put the unit aside for 10 minutes.
 - ② Always touch the grounding terminal with your hands to discharge the static electricity on your body (preventing damage to PCB).
 - ③ Do not touch any live parts. Always measure the voltage at the measuring point of residual voltage.
 - ④ After confirming the residual voltage, immediately unplug the connector of the exterior unit fan motor (when the fan of exterior unit rotates against a strong wind, the capacitor may accumulate electricity resulting in potential electric shock).

✖ **After completing service work, plug in the connector for the fan motor in the outdoor unit.**



Caution when performing other service

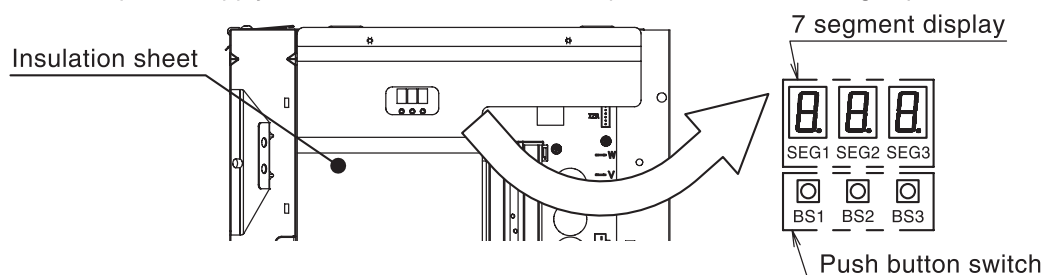
Do never connect power supply cables to compressors (U, V, W) or fan motor directly.
(Failure to connect the power supply to the PCB may cause the compressor or fan motor is burned out.)

Field setting

If required, carry out the field setting according to the following instruction,
For details, see the service manual.

1. How to operate

- For operation the push button switch, perform under covering with insulation sheet as shown in the below figure with the power supply turned on and use a resin ballpoint or non-conducting object.



2. Setting by the push button switch (BS1 ~ BS3)

- Function of the push switch

Push button	Button types	Using
BS1	New page button	For changing setting mode
BS2	Operation button	For changing field setting
BS3	Confirm button	
BS2 long push	Operation button	For checking operation
BS3 long push	Confirm button	Resetting the address when the wiring is changed or an additional indoor unit is installed



When performing the operation such as inspection, to prevent electric shocks, protect the shaded area of the electrical component using the insulating tape.

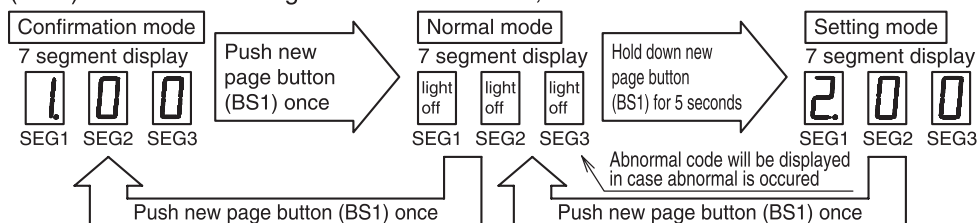
- Normal mode, Setting mode, Confirmation mode change method

Push new page button (BS1) it can be switched to as below shown Confirmation mode, Normal mode, Setting mode.

Setting mode can use for setting (A) ~ (G) items as shown in below table.

Confirmation mode can use for confirmation of (H) • (I) items as shown in below table.

(Note) About other settings and abnormal code, see service manual.



If you get confused in the setting process, push the new page button (BS1), then it will return to initial state (Normal mode)

	Set Setting mode or Confirmation mode first, then perform procedure as below	Details of setting	7 Segment display													
			SEG1	SEG2	SEG3											
Setting procedure	① Push the operation button (BS2) following to setting item (A) – (G) and adjust the 7 segment display to require mode shown in the right. (※ 1) For selecting low noise operation or demand operation or VRT smart setting, the external control adapter for outdoor unit (optional accessory) is required. For details, see the instruction attached to the adaptor.	Ⓐ Refrigerant recovery / Evacuation mode setting	2	2	1											
		Ⓑ Night time low noise setting	2	2	2											
		Ⓒ Low noise level setting (※1)	2	2	5											
		Ⓓ Demand level setting (※1)	2	3	0											
		Ⓔ External low noise and demand control setting (※1)	2	1	2											
		Ⓕ High static pressure setting	2	1	8											
		Ⓖ VRT smart setting by external control (※1)	2	1	1											
	② Push the confirmation button (BS3) (The present setting will be indicated).		Either of ③													
	③ Push the operation button (BS2) and adjust the 7 segment display to required mode, shown in the right. (※ 2) Setting level efficiency <table><tr><td rowspan="2">For Ⓑ and Ⓒ</td><td>Setting value</td><td>level 1~3</td></tr><tr><td>Noise value</td><td>→ low noise</td></tr><tr><td rowspan="2">For Ⓓ</td><td>Setting value</td><td>level 1~8</td></tr><tr><td>Power consumption</td><td>Less power ←</td></tr></table> For details, see the service manual.	For Ⓑ and Ⓒ	Setting value	level 1~3	Noise value	→ low noise	For Ⓓ	Setting value	level 1~8	Power consumption	Less power ←	For Ⓐ Ⓔ	ON	light off	light off	1
			For Ⓑ and Ⓒ	Setting value	level 1~3											
		Noise value		→ low noise												
		For Ⓓ	Setting value	level 1~8												
			Power consumption	Less power ←												
			OFF (Factory setting)	light off	light off	0										
		For Ⓑ (※ 2)	OFF (Factory setting)	light off	light off	0										
			Level A (※3) (※3) A is a number of 1~3	light off	light off	A (※3)										
		For Ⓒ (※ 2)	Level B (※3) (※3) B is a number of 1~3 (Factory setting: 2)	light off	light off	B (※3)										
			Level C (※4) (※4) C is a number of 1~8 (Factory setting: 3)	light off	light off	C (※4)										
		For Ⓕ	Enable re-adjust level when supply powered (Factory setting)	light off	light off	0										
			Disable re-adjust level when supply powered	light off	light off	1										
		For Ⓖ	OFF	light off	light off	0										
			VRT smart activate by “Low Noise” terminal	light off	light off	1										
			VRT smart activate by “Demand” terminal	light off	light off	2										
	④ Push confirmation button (BS3)		The setting in ③ is defined	If will turn to light ON.												
	⑤ Push confirmation button again (BS3)		The system start the operation according to the setting	2	0	0										
	⑥ Push new page button (BS1)		Return to Normal mode	light off	light off	light off										
Confirmation procedure	① Push new page button (BS1) according to confirmation item (Ⓕ, ①) and adjusts the 7 segment display to required mode, shown in the right by push operation button (BS2).	Ⓕ low noise operation	1	0	1											
		① Demand operation	1	0	2											
	② Push confirmation button (BS3) (The present setting will be indicated)	For during setting operation	light off	light off	1											
		For during normal operation	light off	light off	0											

Continue



Check operation method

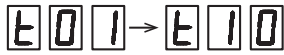


Make sure to open the gas side and liquid side shut off valve before starting operation.



- Make sure to turn on the power supply of all connect unit (indoor • outdoor) before operation.
- Make sure to close all outside panels, then operate. If not, the system cannot be checked properly.

- Make sure to carry out the check operation after the first installation. Otherwise, the abnormal code. "U3" will be displayed in the remote controller. Normal operation can be carried out after 5 minutes from check operation.
- The check operation is automatically carried out in a cooling mode.
The 7 segment will be indicated as shown in right, and "Test operation" and "under centralized control" will be displayed in the remote controller.
- During the check operation, it is impossible to stop the unit from the remote controller.
When discontinue the operation, push the confirmation button (BS3).
The system will stop after behind operation for 30 seconds.
- It may takes 5 minutes to bring the state of refrigerant uniform before the compressor starts.
Moreover, during the check operation, the refrigerant running sound, the magnetic sound of a solenoid valve may become loud during operation, but these are not malfunctions.
- The abnormality of each indoor unit cannot be checked. After the check operation is finished, check the indoor units individually by normal operation using the remote controller.

7 segment indication

 When start When finish

[Operation procedure]

- ① To protection the compressor, make sure to turn the power supply for 6 hours before starting operation.
After turning on the power supply, the unit can not start the operation until 7 segment goes off. (Maximum 12 minutes)
- ② In stop condition, set to **Normal mode**
- ③ Push the operation button (BS2) for 5 second or more (Then the unit will start the check operation)
- ④ Close the front panel. (Otherwise, it may cause a misjudgement.)
- ⑤ When the checks are completed (unit run for 30 ~ 40 min.), the system will stop automatically.
Check the operation results by the outdoor unit 7 segment display. (see the table shown above)

Result	7 segment display
Normally finished	Light off
Abnormally finished	Abnormal code



Push new page button (BS1) in case taking a wrong operation, then follow procedure since ② again.

[Countermeasure for abnormal finished]

- ① Confirm the abnormal code by the remote controller and 7 segment display, and correct the abnormality.
(For how to correct abnormality and correction method, see the Service manual, Installation manual, Operation manual.)
- ② After correcting the abnormality, push the confirmation button (BS3) and reset the abnormal code.
- ③ Carry out the check operation again and confirm that the abnormality is properly corrected.

Additional refrigerant charging operation

- When installation was finished, make sure to charge the refrigerant by using this procedure.
If the refrigerant quantity is insufficient, the unit may malfunction.

Setting procedure [Refrigerant charging function] see detail in installation manual.	
① Select refrigerant charging method (A or B) Note) A : Automatic refrigerant charging method. B : Manual refrigerant charging method.	
② Calculate the additional refrigerant charging amount (see Record 2) as shown below. Note) For A method, this process can be skip.	
A Method (Automatic refrigerant charging method)	B Method (Manual refrigerant charging method)
③ Connect the refrigerant charge hose to the refrigerant auto charge port.	③ Make sure to completely close stop valve gas and liquid side then connect the refrigerant charge hose to the liquid stop valve service port.
④ Open gas and liquid stop valve and perform automatic refrigerant charge. • The operation is automatically started, 7 segment display will be changed as shown in right (up) and "Test operation" and "Under centralized control" are displayed in the remote controller. • Low pressure indication may display on 7 segment display (as shown in right (down)), however operation can be carried out continuously.	④ Open refrigerant cylinder valve for charge refrigerant as calculated amount in ②. ※ If cannot reach, the operation charging is required. Please see the procedure in installation manual.
⑤ After charging the specified quantity of refrigerant, close refrigerant cylinder valve, press confirmation button (BS3). • The operation is automatically stopped within 30 minutes, if charging is not complete, set and perform the additional refrigerant charging operation again. • If the additional refrigerant charging operation is stopped soon, the refrigerant may be overcharged. Stop additional charging, make sure to confirm charged amount again.	⑤ After charging the specified quantity of refrigerant, close refrigerant cylinder valve.

Record 1) For setting contents.

For the setting contents of ③ ~ ⑤ in the Setting mode, mark ○ in the below table.

③ Night time low noise setting	OFF • LEVEL1 • LEVEL2 • LEVEL3	④ Demand level setting	LEVEL1 • LEVEL2 • LEVEL3
④ Low noise level setting	LEVEL1 • LEVEL2 • LEVEL3	⑤ External demand setting	OFF • ON
⑤ High static pressure setting	Enable • Disable high static pressure level re-adjustment		

Record 2) For additional refrigerant charging amount.

Additional charging amount	=	Total length of Ø9.5 Liquid pipe x 0.054	+	Total length of Ø6.4 Liquid pipe x 0.022
(kg)		(m) x 0.054		(m) x 0.022

Service mode operation method

- After turning on the power supply, the unit can not start until the 7 segment indication goes off for maximum 12 minutes.
- Do not shut off the power and do not reset the **[Setting mode]** when evacuating or recovering the refrigerant.
(The expansion valves will close and the system can not be evacuated or recovered the refrigerant).

[Evacuation method] (At the first installation this evacuation is not required. It is only required for service).

- ① When the unit is in stopping condition and under the **[Setting mode]** set the ① Refrigerant recovery/Evacuation mode to ON (※).
- ② Evacuate the system with a vacuum pump.
- ③ After finish evacuation, push confirm button (BS3) and reset the Evacuation mode.
- ④ Push new page button (BS1) and reset **[Setting mode]**.

[Refrigerant recovery operation method] (Make sure to use a refrigerant reclaimer)

- ① When the unit is at stand still and under the **[Setting mode]** set the ① Refrigerant recovery/Evacuation mode to ON (※).
- ② Recovery the refrigerant by a refrigerant reclaimer.
- ③ After completed, push the confirm button (BS3) and reset the Refrigerant recovery mode.
- ④ Push new page button (BS1) and reset **[Setting mode]**.

(※) The expansion valves in the indoor and outdoor units will be opened completely 7 segment display will be changed as shown in the below and "Test operation" and "Under centralized control" will be displayed in the remote controller, The operation will be rejected.

7 segment display 

The two-dimensional bar code is a manufacturing code.

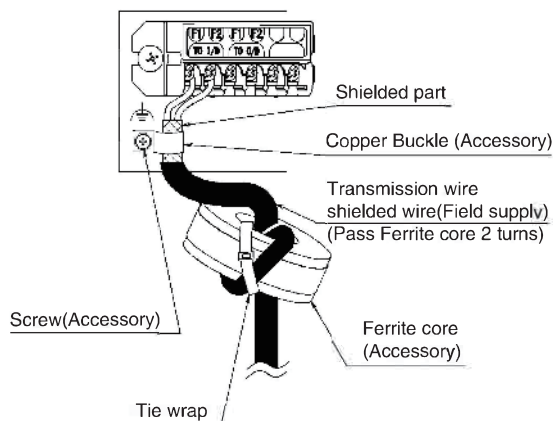


2P637757-1

CAUTION

- Be sure to use shielded wire(field supply) for transmission wiring (F1•F2, To I/D)
- Be sure to clamp transmission wire at shielded part with buckle(Accessory)
- Be sure to attach ferrite core(accessory) for transmission wire by pass 2 turns

See details in the installation manual
"ELECTRIC WIRING WORK"



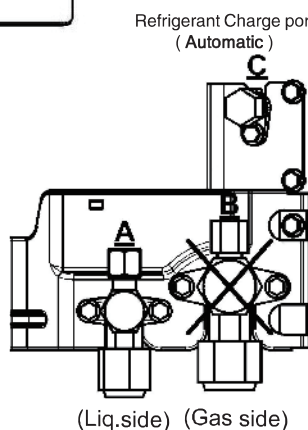
For RXYMQ series

WARNING

Do not charge refrigerant into service port **B**.

Request

Please charge refrigerant into port **C**.
Charging refrigerant into service port **B** causes refrigerant overcharge and abnormal operation.

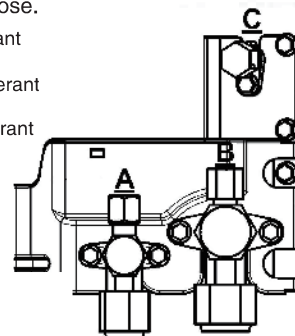


For RXYMQ series

CAUTION

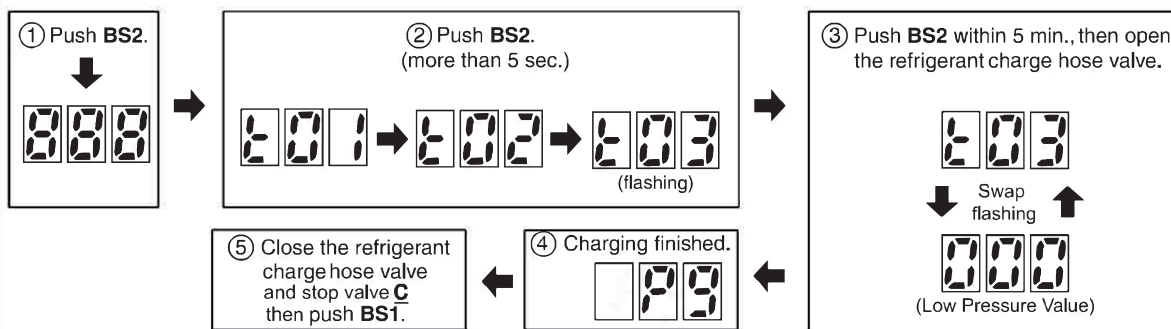
- Open stop valve when refrigerant charge hose was connected only.
- Be sure to close stop valve before remove refrigerant charge hose.

A : Manual Refrigerant Charge port
B : Operation Refrigerant Charge port
C : Automatic Refrigerant Charge port



For more details, please refer to the installation manual.

Simple Procedure of Automatic Refrigerant Charge



Note In case refrigerant is charged to proper amount, it is impossible to charge.

3P637762-1 B

FOR STOP VALVE OPERATION SEE THE BACK SIDE ➡

⚠ CAUTION

■ To those who carry out the piping work :

- Caution for handling the stop valve

Be sure to tighten with the specified torque.

Refer to the installation manual for details.

Do not apply force to the valve cap.

Do not apply force to the valve cap or the valve body,

This may result in a refrigerant leak.

- After completing the piping work and evacuation,

Be sure to open the stop valve.

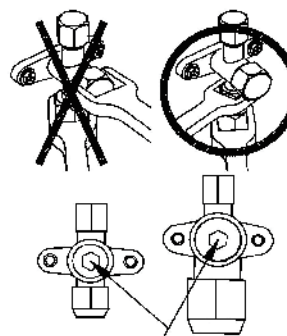
If the system is operated with the valve closed, the compressor will be damaged.

Even if no sound is heard from the valve when operated with the valve being opened, nothing is wrong with the unit.

- Be sure to pass this caution label to the person who performs the test run.

■ To those who perform the Test run :

- Before performing the test run, check that the stop valve A and B is opened.
- If the stop valve is closed, The malfunction code, such as **(E3)**, **(E4)**, **(E5)**, **(U0)**, **(L8)** is displayed on the remote controller or a compressor may cause an unusual vibration and may stop. In that case, please stop the operation with the remote controller immediately. Open the stop valve, and operate again.
- Be sure to close stop valve **C** after refrigerant automatic charge was finished.



Remove the cap, and use a hex wrench to turn the valve counterclockwise until it stops.

When the insulation resistance is low.

- When the insulation resistance is 1 MΩ or more, the unit is normal.

If the refrigerant remains in the compressor after being installed, the insulation resistance may be low. In this case, turn on the power and check if the insulation resistance of the compressor rises or not after being energized for 6 hours, the refrigerant in the compressor evaporated by heating with the crankcase heater or energizing the compressor.

When the earth leakage breaker(GFCI^{*1}) operates.

- For the inverter models, check if the earth leakage breaker (GFCI) has protection against the harmonics. To prevent the earth leakage breaker(GFCI) being mis-operated, be sure to use the one that can correspond to the harmonic component.

*1 : Ground Fault Circuit Interrupter

5.2 RXYMQ4AYFK / RXYMQ5AYFK / RXYMQ6AYFK

Service Precautions


WARNING

Caution to ELECTRIC SHOCK

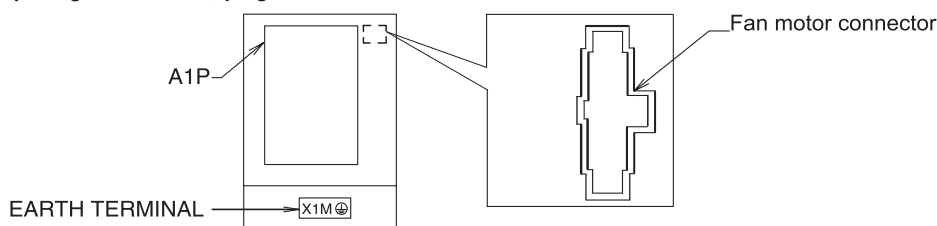

When servicing with PCB, make sure to cover the PCB with an insulation sheet.

Caution when performing service with EL.COMPO.BOX

(Touch the non-coated metal part to eliminate static electricity before performing service.)

1. Before servicing, always measure the power terminal (X1M) with multimeter to confirm that the power has been switched off.
2. Be careful when touching the high-temperature components. There is a possibility that each component can generate high temperature.
3. Be careful when touching a live parts.
 - ① After switching off the power, put the unit aside for 10 minutes.
 - ② Always touch the grounding terminal with your hands to discharge the static electricity on your body (preventing damage to PCB).
 - ③ After 10 minutes, immediately unplug the connector of the outdoor unit fan motor (when the fan of outdoor unit rotates against a strong wind, the capacitor may accumulate electricity resulting in potential electric shock).

※ After completing service work, plug in the connector for the fan motor in the outdoor unit.



Caution when performing other service

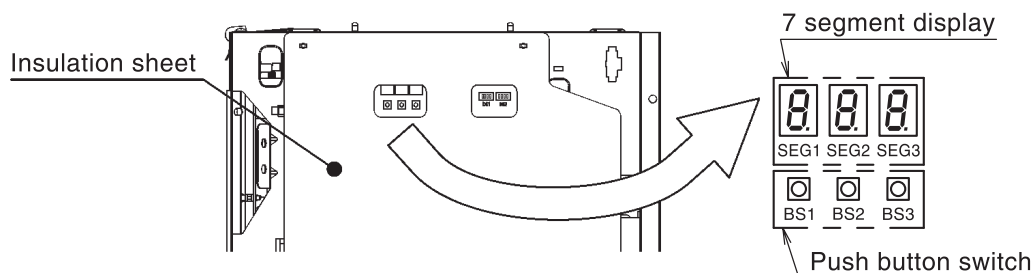
Never connect power supply cables to compressors (U, V, W) or fan motor directly.
(Failure to connect the power supply to the PCB may cause the compressor or fan motor to burn out.)

Field setting

If required, carry out the field setting according to the following instructions.
For details, see the service manual.

1. How to operate

- When operating the push button switch, perform under cover of the insulation sheet as shown in the figure below with the power supply turned on, and use a plastic ballpoint or other non-conducting object when operating.



2. Setting by the push button switch (BS1 to BS3)

- Function of the push button switch

Push button	Button types	Usage
BS1	New page button	For changing setting mode
BS2	Operation button	For changing field setting
BS3	Confirm button	
BS2 long push	Operation button	For checking operation
BS3 long push	Confirm button	For resetting the address when the wiring is changed or an additional indoor unit is installed



When doing things such as performing inspections, to prevent electric shocks, protect the electrical component using insulating tape.

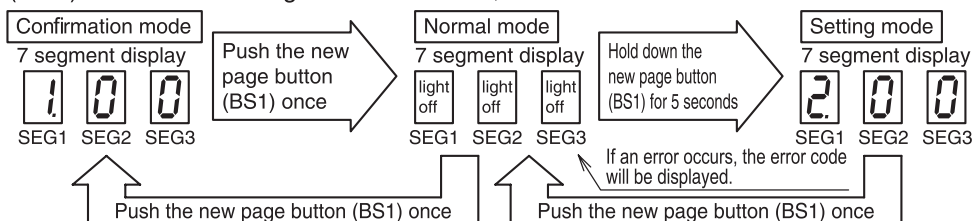
- How to change between Normal mode, Setting mode, Confirmation mode

The mode can be switched between Confirmation mode, Normal mode, and Setting mode by pushing the new page button (BS1), as shown below.

Setting mode can be used for setting ① to ⑥ items as shown in the table below.

Confirmation mode can be used for confirmation of ④ and ⑤ items as shown in the table below.

(Note) About other settings and error codes, see the service manual.



If you get confused in the setting process, push the new page button (BS1), then it will return to the initial state (Normal mode).

	Set Setting mode or Confirmation mode first, then perform the procedure as below.	Details of setting	7 Segment display													
			SEG1	SEG2	SEG3											
Setting procedure	① Push the operation button (BS2) following to setting item (A – G) and adjust the 7 segment display to the required mode shown in the right. (※1) For selecting low noise operation or demand operation or VRT smart setting, the external control adapter for outdoor unit (optional accessory) is required. For details, see the instruction manual attached to the adapter.	Ⓐ Refrigerant recovery / Evacuation mode setting	2	2	1											
		Ⓑ Night time low noise setting	2	2	2											
		Ⓒ Low noise level setting (※1)	2	2	5											
		Ⓓ Demand level setting (※1)	2	3	0											
		Ⓔ External low noise and demand control setting (※1)	2	1	2											
		Ⓕ High static pressure setting	2	1	8											
		Ⓖ VRT smart setting by external control (※1)	2	1	1											
	② Push the confirmation button (BS3) (The present setting will be indicated).		Either of ③													
	③ Push the operation button (BS2) and adjust the 7 segment display to the required mode, as shown on the right. (※2) Setting level efficiency <table border="1"><tr><td rowspan="2">For Ⓑ and Ⓒ</td><td>Setting value</td><td>level 1 to 3</td></tr><tr><td>Noise value</td><td>→ low noise</td></tr><tr><td rowspan="2">For Ⓓ</td><td>Setting value</td><td>level 1 to 8</td></tr><tr><td>Power consumption</td><td>Less power ←</td></tr></table> For details, see the service manual.	For Ⓑ and Ⓒ	Setting value	level 1 to 3	Noise value	→ low noise	For Ⓓ	Setting value	level 1 to 8	Power consumption	Less power ←	For Ⓐ Ⓔ	ON	light off	light off	1
			For Ⓑ and Ⓒ	Setting value	level 1 to 3											
		Noise value		→ low noise												
		For Ⓓ	Setting value	level 1 to 8												
			Power consumption	Less power ←												
		For Ⓑ (※2)	OFF (Factory setting)	light off	light off	0										
			Level A (※3) (※3) A is a number between 1 and 3	light off	light off	A (※3)										
		For Ⓒ (※2)	Level B (※3) (※3) B is a number between 1 and 3 (Factory setting: 2)	light off	light off	B (※3)										
		For Ⓓ (※2)	Level C (※4) (※4) C is a number between 1 and 8 (Factory setting: 3)	light off	light off	C (※4)										
		For Ⓕ	Enable level readjustment when power is supplied (Factory setting)	light off	light off	0										
			Disable level readjustment when power is supplied	light off	light off	1										
		For Ⓖ	OFF	light off	light off	0										
VRT smart activate by “Low Noise” terminal	light off		light off	1												
		VRT smart activate by “Demand” terminal	light off	light off	2											
④ Push the confirmation button (BS3)		The setting in ③ is defined	If the light turns on													
⑤ Push the confirmation button again (BS3)		The system starts operating according to the setting	2	0	0											
⑥ Push the new page button (BS1)		Return to Normal mode	light off	light off	light off											
Con rmation procedure	① Push the new page button (BS1) according to confirmation item (Ⓗ, ①) and adjust the 7 segment display to required mode shown on the right by pushing the operation button (BS2).	Ⓗ Low noise operation	1	0	1											
		① Demand operation	1	0	2											
	② Push the confirmation button (BS3) (The present setting will be indicated)	For during setting operation	light off	light off	1											
		For during normal operation	light off	light off	0											

Continued



Test operation method



Make sure to open the gas side and liquid side shut off valves before starting operation.



- Make sure to turn on the power supply of all connect units (indoor and outdoor) before operation.
- Make sure to close all outside panels before operation. If not closed, the system cannot be checked properly.

- Make sure to carry out test operation after the first installation. Otherwise, an error code will appear. "U3" will be displayed on the remote controller. Normal operation can be carried out after 5 minutes from test operation.

- Test operation is automatically carried out in a cooling mode.

The 7 segment display will be as shown on the right, and "Test operation" and "under centralized control" will be displayed on the remote controller.

- During test operation, it is impossible to stop the unit from the remote controller.

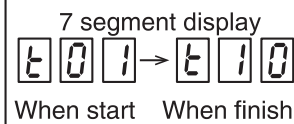
To stop test operation, push the confirmation button (BS3).

Test operation will continue for 30 seconds, then the system will stop.

- It may take 5 minutes to bring the state of refrigerant uniform before the compressor starts.

Moreover, during test operation, the sound of refrigerant running, or the magnetic sound of a solenoid valve operation, may become loud. However, this does not indicate a malfunction.

- The abnormality of each indoor unit cannot be checked. After the test operation is finished, check the indoor units individually by normal operation using the remote controller.



[Operation procedure]

- ① To protect the compressor, make sure to turn on the power supply 6 hours before starting operation. After turning on the power supply, the unit cannot start the operation until the 7 segment display goes off. (Maximum 12 minutes)
- ② While stopped, set to **Normal mode**
- ③ Push the operation button (BS2) for 5 second or more, and the unit will start test operation.
- ④ Close the front panel. (Otherwise, the results of the test may not be accurate.)
- ⑤ When the test is completed (the unit runs for 30 to 40 min.), the system will stop automatically. Check the operation results on the outdoor unit 7 segment display. (see the table shown above)

Result	7 segment display
Normally finished	Light off
Abnormally finished	Abnormal code



Push the new page button (BS1) in case there was a problem with operation, then follow procedure from ② again.

[In case of an abnormal finish]

- ① Confirm the error code on the remote controller and 7 segment display, and correct the abnormality. (For how to correct abnormalities and correction methods, see the service manual, installation manual, and operation manual.)
- ② After correcting the abnormality, push the confirmation button (BS3) and reset the error code.
- ③ Carry out test operation again and confirm that the abnormality is properly corrected.

Additional refrigerant charging operation

- When installation is finished, make sure to charge refrigerant using this procedure.
If the refrigerant quantity is insufficient, the unit may malfunction.

Setting procedure (See [Refrigerant charging function] in the installation manual for details.)	
Select refrigerant charging method (A or B) Note) A : Automatic refrigerant charging method. B : Manual refrigerant charging method.	
Calculate the additional refrigerant charging amount (see Record 2) as shown below. Note) For A method, this process can be skip.	
A Method (Automatic refrigerant charging method)	B Method (Manual refrigerant charging method)
Connect the refrigerant charge hose to the refrigerant auto charge port.	Make sure to completely close the gas and liquid side stop valves, then connect the refrigerant charge hose to the liquid stop valve service port.
Open gas and liquid stop valve and perform automatic refrigerant charge. • The operation is automatically started, 7 segment display will be changed as shown in right (up) and "Test operation" and "Under centralized control" are displayed in the remote controller. • Low pressure indication may display on 7 segment display (as shown in right (down)), however operation can be carried out continuously.	Open the refrigerant cylinder valve and charge the amount of refrigerant which was as calculated in step②. ※ If the charge is still insufficient, performing charging operation is required. Please see the procedure in the installation manual.
After charging the specified quantity of refrigerant, close refrigerant cylinder valve, press confirmation button (BS3). • The operation is automatically stopped within 30 minutes, if charging is not complete, set and perform the additional refrigerant charging operation again. • If the additional refrigerant charging operation is stopped soon, the refrigerant may be overcharged. Stop additional charging, make sure to confirm charged amount again.	After charging the calculated amount of refrigerant, close the refrigerant cylinder valve.

Record 1) For setting contents

For the setting contents of ③ to ⑥ in the Setting mode, mark ○ in the below table.

③ Night time low noise setting	OFF • LEVEL1 • LEVEL2 • LEVEL3	④ Demand level setting	LEVEL1 • LEVEL2 • LEVEL3
⑤ Low noise level setting	LEVEL1 • LEVEL2 • LEVEL3	⑥ External demand setting	OFF • ON
⑦ High static pressure setting	Enable • Disable high static pressure level re-adjustment		

Record 2) For the additional refrigerant charging amount

Additional charging amount (kg)	$= \left(\text{Total length of liquid side piping size at } \varnothing 12.7 \right) \times 0.12 + \left(\text{Total length of liquid side piping size at } \varnothing 9.5 \right) \times 0.059 + \left(\text{Total length of liquid side piping size at } \varnothing 6.4 \right) \times 0.022$		
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Service mode operation method

- After turning on the power supply, the unit cannot start until the 7 segment display goes off, which may take a maximum 12 minutes.
- Do not shut off the power and do not reset the **Setting mode** when evacuating or recovering the refrigerant.
(The expansion valves will close and the refrigerant cannot be evacuated or recovered from the refrigerant).

[Evacuation method] (At the first installation, this evacuation is not required. It is only required for service).

- ① When the unit is at stand still and under the **Setting mode**, set the ① Refrigerant recovery/Evacuation mode to ON (※).
- ② Evacuate the system with a vacuum pump.
- ③ After finishing evacuation, push the confirm button (BS3) and reset the Evacuation mode.
- ④ Push the new page button (BS1) and reset **Setting mode**.

[Refrigerant recovery operation method] (Make sure to use a refrigerant reclaimer)

- ① When the unit is at stand still and under the **Setting mode**, set the ① Refrigerant recovery/Evacuation mode to ON (※).
- ② Recover the refrigerant by a refrigerant reclaimer.
- ③ After completion, push the confirm button (BS3) and reset the Refrigerant recovery mode.
- ④ Push the new page button (BS1) and reset **Setting mode**.

(※) The expansion valves in the indoor and outdoor units will be opened completely, the 7 segment display will become as shown below, and "Test operation" and "Under centralized control" will be displayed on the remote controller. During this process, it is not possible to operate the unit in any other mode.

7 segment display 



2P642328-1

CAUTION

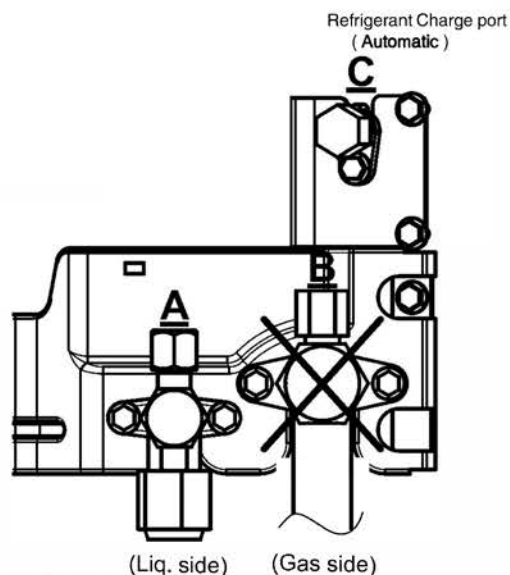
For RXYMQ series

WARNING

Do not charge refrigerant into service port **B**.

Request

Please charge refrigerant into port **C**.
Charging refrigerant into service port **B** causes refrigerant overcharge and abnormal operation.



For RXYMQ series

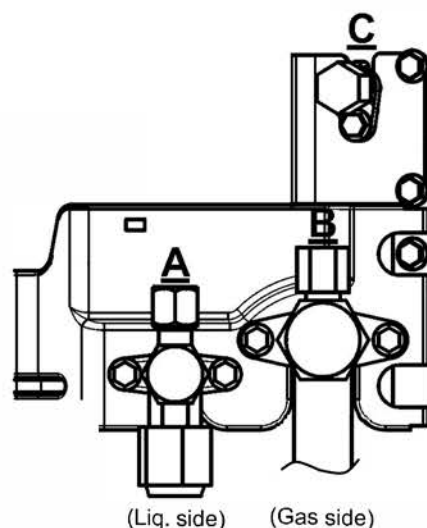
CAUTION

- Open stop valve when refrigerant charge hose was connected only.
- Be sure to close stop valve before remove refrigerant charge hose.

A : Manual Refrigerant Charge port

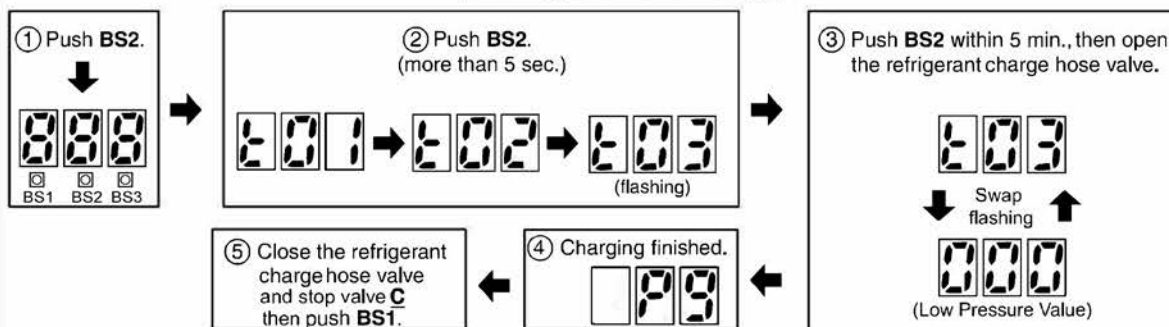
B : Operation Refrigerant Charge port

C : Automatic Refrigerant Charge port



For more details, please refer to the installation manual.

Simple Procedure of Automatic Refrigerant Charge



Note. In case refrigerant is charged to proper amount, it is impossible to charge.

3P637762-2 B

FOR STOP VALVE OPERATION SEE THE BACK SIDE ➡

⚠ CAUTION

■ To those who carry out the piping work :

- Caution for handling the stop valve

Be sure to tighten with the specified torque.

Refer to the installation manual for details.

Do not apply force to the valve cap.

Do not apply force to the valve cap or the valve body,
This may result in a refrigerant leak.

- After completing the piping work and evacuation,

Be sure to open the stop valve.

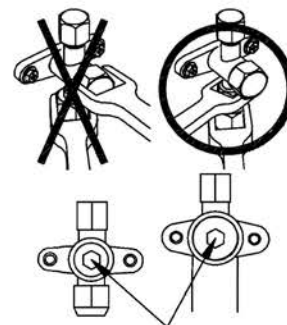
If the system is operated with the valve closed,
the compressor will be damaged.

Even if no sound is heard from the valve
when operated with the valve being opened,
nothing is wrong with the unit.

- Be sure to pass this caution label to the person who performs the test run.

■ To those who perform the Test run

- Before performing the test run, check that the stop valve A and B is opened.
- If the stop valve is closed, The malfunction code, such as **E3**, **E4**, **E5**, **U0**, **L8** is displayed on the remote controller or a compressor may cause an unusual vibration and may stop. In that case, please stop the operation with the remote controller immediately. Open the stop valve, and operate again.
- Be sure to close stop valve **C** after refrigerant automatic charge was finished.



Remove the cap, and use a hex wrench to turn the valve counterclockwise until it stops.

When the insulation resistance is low.

- When the insulation resistance is 1 MΩ or more, the unit is normal. If the refrigerant remains in the compressor after being installed, the insulation resistance may be low. In this case, turn on the power and check if the insulation resistance of the compressor rises or not after being energized for 6 hours, the refrigerant in the compressor evaporated by heating with the crankcase heater or energizing the compressor.

When the earth leakage breaker(GFCI*1) operates.

- For the inverter models, check if the earth leakage breaker (**GFCI**) has protection against the harmonics. To prevent the earth leakage breaker(GFCI) being mis-operated, be sure to use the one that can correspond to the harmonic component.

*1 : Ground Fault Circuit Interrupter

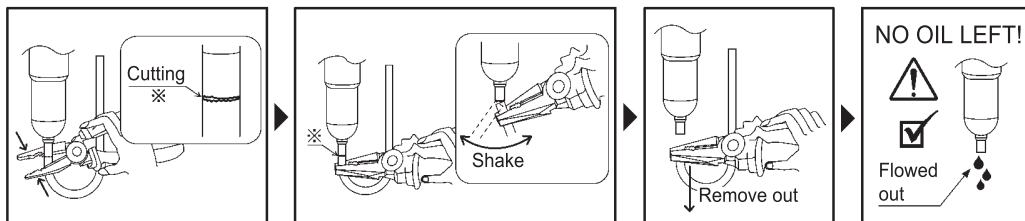
⚠ CAUTION

■ Notes for pipe installers

- Before removing the flattened pipe (large).

- ① Remove the valve cap and confirm that the shutoff valve is fully closed.
- ② Connect a vacuum gauge on the service port and confirm that there is no residual pressure.

Completely cut off the flattened pipe (small) using pliers etc., and confirm again that there is no residual pressure.



⚠ WARNING

If there is residual oil or gas in the valve piping, removing the flattened pipe (large) can crack the shutoff valve and injure human body due to the flame caused by residual oil.

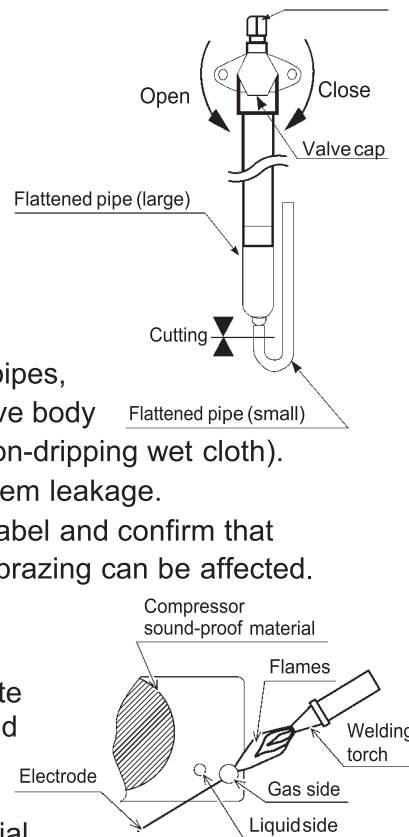
- ④ Remove the flattened pipe (large)

- Before performing brazing on the removed flattened pipe (large) and connecting field pipes, Cool down the shutoff valve body or the valve body (for example, wrap the shutoff valve with non-dripping wet cloth). Otherwise it can be damaged, causing system leakage.

Note: Before brazing, remove the caution label and confirm that no residual bonding tape is left. Otherwise brazing can be affected.

- Brazing piping locally (gas side).

- ① Remove the lower cover plate.
- ② When brazing, it is necessary to penetrate the electrode from the front of the unit and the welding torch from the right side to braze with the flames facing outside and avoid the compressor sound-proof material and other piping. (Refer to the right figure.)



4P642729-1

4. Appendix

1. Caution for Refrigerant Leaks

1.1 Introduction

1.2 Maximum Concentration Level

1.3 Procedure for Checking Maximum Concentration

118

118

118

119

1. Caution for Refrigerant Leaks

1.1 Introduction

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

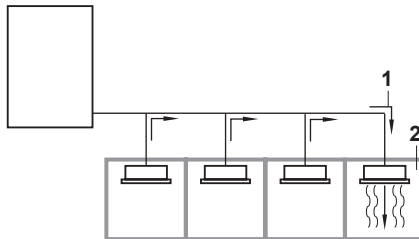
This system uses R410A as refrigerant. R410A itself is an entirely safe non-toxic, non-combustible refrigerant. Nevertheless care must be taken to ensure that air conditioning facilities are installed in a room which is sufficiently large. This assures that the maximum concentration level of refrigerant gas is not exceeded, in the unlikely event of major leak in the system and this in accordance to the local applicable regulations and standards.

1.2 Maximum Concentration Level

The maximum charge of refrigerant and the calculation of the maximum concentration of refrigerant is directly related to the humanly occupied space in to which it could leak.

The unit of measurement of the concentration is kg/m^3 (the weight in kg of the refrigerant gas in 1m^3 volume of the occupied space).

Compliance to the local applicable regulations and standards for the maximum allowable concentration level is required.



- 1 Direction of the refrigerant flow
- 2 Room where refrigerant leak has occurred (outflow of all the refrigerant from the system)

Pay special attention to places, such as basements etc., where refrigerant can stay, since refrigerant is heavier than air.

1.3 Procedure for Checking Maximum Concentration

Check the maximum concentration level in accordance with steps 1 to 4 below and take whatever action is necessary to comply.

- 1 Calculate the amount of refrigerant (kg) charged to each system separately.

$$\begin{array}{l} \text{Amount of refrigerant in a single unit system} \\ \text{(amount of refrigerant with which the system is} \\ \text{charged before leaving the factory)} \end{array} + \begin{array}{l} \text{Additional charging amount (amount of} \\ \text{refrigerant added locally in accordance with the} \\ \text{length or diameter of the refrigerant piping)} \end{array} = \text{Total amount of refrigerant (kg) in the system}$$



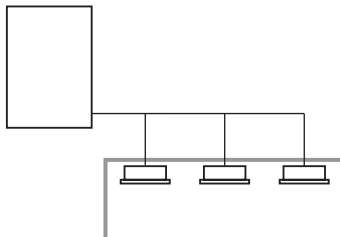
NOTICE

Where a single refrigerant facility is divided into 2 entirely independent refrigerant systems, use the amount of refrigerant with which each separate system is charged.

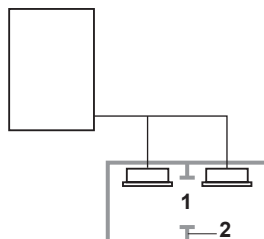
- 2 Calculate the volume of the room (m³) where the indoor unit is installed.

In a case such as the following, calculate the volume of (A), (B) as a single room or as the smallest room.

- A Where there are no smaller room divisions:



- B Where there is a room division, but there is an opening between the rooms sufficiently large to permit a free flow of air back and forth.



1 Opening between the rooms

2 Partition

(Where there is an opening without a door or where there are openings above and below the door which are each equivalent in size to 0.15% or more of the floor area.)

- 3 Calculating the refrigerant density using the results of the calculations in steps 1 and 2 above.

$$\frac{\text{Total volume of refrigerant in the refrigerant system}}{\text{Size (m}^3\text{) of smallest room in which there is an indoor unit installed}} \leq \text{Maximum concentration level (kg/m}^3\text{)}$$

If the result of the above calculation exceeds the maximum concentration level, a ventilation opening to the adjacent room shall be made.

- 4 After opening to the adjacent room are made, re-calculate.

If result of calculation exceeds the maximum concentration level. Room re-modified are required, please contact your dealer.

Warning

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

VRV is a trade mark of Daikin Industries, Ltd.

VRV Air Conditioning System is the world's first individual air conditioning system with variable refrigerant flow control and was commercialised by Daikin in 1982.

VRV is the trade mark of Daikin Industries, Ltd., which is derived from the technology we call "variable refrigerant volume."