

Engineering Data

RXQ6-20AYM

RXQ18-60AMYM

Cooling Only 50 / 60 Hz

R-410A



VRV *A SERIES*

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1. Basic Information

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1. Lineup








VRV A SERIES

Model name											Power supply
RXQ	6A	8A	10A	12A	14A	16A	18A	18AM	20A	20AM	YM
	22AM	24AM	26AM	28AM	30AM	32AM	34AM	36AM	38AM	40AM	
	42AM	44AM	46AM	48AM	50AM	52AM	54AM	56AM	58AM	60AM	
RXQ (for Thailand)	6A	8A	10A	12A	14A	16A	18A	18AM	20A	20AM	Y1S
	22AM	24AM	26AM	28AM	30AM	32AM	34AM	36AM	38AM	40AM	
	42AM	44AM	46AM	48AM	50AM	52AM	54AM	56AM	58AM	60AM	
RXQ (for Indonesia)	6A	8A	10A	12A	14A	16A	18A	18AM	20A	20AM	Y14
	22AM	24AM	26AM	28AM	30AM	32AM	34AM	36AM	38AM	40AM	
	42AM	44AM	46AM	48AM	50AM	52AM	54AM	56AM	58AM	60AM	

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

Y1S : 3 phase, 380-415 V, 50 Hz (for Thailand)

Y14 : 3 phase, 380-415 V, 50 Hz (for Indonesia)

6, 8, 10, 12 HP		14, 16, 18, 20 HP			
 <p>RXQ6AYM RXQ8AYM RXQ10AYM RXQ12AYM</p>		 <p>RXQ14AYM RXQ16AYM RXQ18AYM RXQ20AYM</p>			
18, 20, 22, 24 HP		26, 28, 30 HP		32, 34, 36, 38, 40 HP	
 <p>RXQ18AYM RXQ20AYM RXQ22AYM RXQ24AYM</p>		 <p>RXQ26AYM RXQ28AYM RXQ30AYM</p>		 <p>RXQ32AYM RXQ34AYM RXQ36AYM RXQ38AYM RXQ40AYM</p>	
42, 44 HP		46, 48, 50, 52, 54, 56, 58, 60 HP			
 <p>RXQ42AYM RXQ44AYM</p>		 <p>RXQ46AYM RXQ48AYM RXQ50AYM RXQ52AYM RXQ54AYM RXQ56AYM RXQ58AYM RXQ60AYM</p>			

2. Combination

VRV A SERIES

Capacity range	6 HP	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
Model name	RXQ6A	RXQ8A	RXQ10A	RXQ12A	RXQ14A	RXQ16A	RXQ18A	RXQ20A

Capacity range	18 HP	20 HP	22 HP	24 HP	26 HP	28 HP	30 HP	32 HP
Model name	RXQ18AM	RXQ20AM	RXQ22AM	RXQ24AM	RXQ26AM	RXQ28AM	RXQ30AM	RXQ32AM
Outdoor unit 1	RXQ8A	RXQ8A	RXQ10A	RXQ12A	RXQ12A	RXQ12A	RXQ12A	RXQ14A
Outdoor unit 2	RXQ10A	RXQ12A	RXQ12A	RXQ12A	RXQ14A	RXQ16A	RXQ18A	RXQ18A
Outdoor unit 3	-	-	-	-	-	-	-	-

Capacity range	34 HP	36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP
Model name	RXQ34AM	RXQ36AM	RXQ38AM	RXQ40AM	RXQ42AM	RXQ44AM	RXQ46AM	RXQ48AM
Outdoor unit 1	RXQ16A	RXQ18A	RXQ18A	RXQ20A	RXQ12A	RXQ12A	RXQ14A	RXQ14A
Outdoor unit 2	RXQ18A	RXQ18A	RXQ20A	RXQ20A	RXQ12A	RXQ12A	RXQ14A	RXQ16A
Outdoor unit 3	-	-	-	-	RXQ18A	RXQ20A	RXQ18A	RXQ18A

Capacity range	50 HP	52 HP	54 HP	56 HP	58 HP	60 HP
Model name	RXQ50AM	RXQ52AM	RXQ54AM	RXQ56AM	RXQ58AM	RXQ60AM
Outdoor unit 1	RXQ14A	RXQ16A	RXQ18A	RXQ18A	RXQ18A	RXQ20A
Outdoor unit 2	RXQ18A	RXQ18A	RXQ18A	RXQ18A	RXQ20A	RXQ20A
Outdoor unit 3	RXQ18A	RXQ18A	RXQ18A	RXQ20A	RXQ20A	RXQ20A

System capacity		Number of units	Module								Outdoor unit multi connection piping kit ★1
kW	HP		6	8	10	12	14	16	18	20	
16.0	6	1	●								-
22.4	8	1		●							
28.0	10	1			●						
33.5	12	1				●					
40.0	14	1					●				
45.0	16	1						●			
50.0	18	1							●		
56.0	20	1								●	
50.4	18	2		●	●						BHFP22P100
55.9	20	2		●		●					
61.5	22	2			●	●					
67.0	24	2				●●					
73.5	26	2				●	●				
78.5	28	2				●		●			
83.5	30	2				●			●		
90.0	32	2					●		●		
95.0	34	2						●	●		
100	36	2							●●		
106	38	2							●	●	
112	40	2								●●	
117	42	3				●●			●		BHFP22P151
123	44	3				●●				●	
130	46	3					●●		●		
135	48	3					●	●	●		
140	50	3					●		●●		
145	52	3						●	●●		
150	54	3							●●●		
156	56	3							●●	●	
162	58	3							●	●●	
168	60	3								●●●	

Note:

★1. For multiple connection, the outdoor unit multi connection piping kit (separately sold) is required.

3. Capacity Range

3.1 For VRV Indoor Units Only

3.1.1 Combination Ratio

Combination ratio = $\frac{\text{Total capacity index of the indoor units}}{\text{Capacity index of the outdoor units}}$
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Type	Min. combination ratio	Max. combination ratio						
		Types of connected indoor units			Type of connected air treatment equipment			
		FXDQ, FXSQ, FXMQ-PA, FXAQ, FXBQ, FXBPQ	Including FXFSQ25A, FXFQ25A and FXVQ at least one unit	Other indoor unit models	VKM		FXMQ-MF	
					When VKM and indoor units are connected	When FXMQ-MF is only connected	When FXMQ-MF and indoor units are connected	
Single outdoor units	50%	200%	130%	200%	130%	100%	100%*	
Double outdoor units				160%				
Triple outdoor units				130%				

Note:

* When outdoor-air processing units (FXMQ-MF) and standard indoor units are connected, the total connection capacity of the outdoor-air processing units (FXMQ-MF) must not exceed 30% of the capacity index of the outdoor units. And the connection ratio must not exceed 100%. Because connection is possible depending on conditions even when the capacity index of FXMQ-MF exceeds 30% of the capacity index of the outdoor units, contact your local distributor.

Note:

When outdoor-air processing mode of FXVQ is selected, be sure to connect as follows:

HP	Indoor unit	Outdoor unit
5 HP	FXVQ125NY1 × 1	RXQ6AYM × 1
8 HP	FXVQ200NY1 × 1	RXQ8AYM × 1
10 HP	FXVQ250NY1 × 1	RXQ10AYM × 1
16 HP	FXVQ400NY1 × 1	RXQ16AYM × 1
20 HP	FXVQ500NY1 × 1 FXVQ500NY16 × 1	RXQ20AYM × 1

3.1.2 Outdoor Unit Combinations

kW	HP	Capacity index	Model name	Combination	Total capacity index of connectable indoor units *1 *2	Maximum number of connectable indoor units *1
16.0	6 HP	150	RXQ6A	RXQ6A	75 to 195 (300)	9 (15)
22.4	8 HP	200	RXQ8A	RXQ8A	100 to 260 (400)	13 (20)
28.0	10 HP	250	RXQ10A	RXQ10A	125 to 325 (500)	16 (25)
33.5	12 HP	300	RXQ12A	RXQ12A	150 to 390 (600)	19 (30)
40.0	14 HP	350	RXQ14A	RXQ14A	175 to 455 (700)	22 (35)
45.0	16 HP	400	RXQ16A	RXQ16A	200 to 520 (800)	26 (40)
50.0	18 HP	450	RXQ18A	RXQ18A	225 to 585 (900)	29 (45)
56.0	20 HP	500	RXQ20A	RXQ20A	250 to 650 (1,000)	32 (50)
50.4	18 HP	450	RXQ18AM	RXQ8A + RXQ10A	225 to 585 (720)	29 (36)
55.9	20 HP	500	RXQ20AM	RXQ8A + RXQ12A	250 to 650 (800)	32 (40)
61.5	22 HP	550	RXQ22AM	RXQ10A + RXQ12A	275 to 715 (880)	35 (44)
67.0	24 HP	600	RXQ24AM	RXQ12A × 2	300 to 780 (960)	39 (48)
73.5	26 HP	650	RXQ26AM	RXQ12A + RXQ14A	325 to 845 (1,040)	42 (52)
78.5	28 HP	700	RXQ28AM	RXQ12A + RXQ16A	350 to 910 (1,120)	45 (56)
83.5	30 HP	750	RXQ30AM	RXQ12A + RXQ18A	375 to 975 (1,200)	48 (60)
90.0	32 HP	800	RXQ32AM	RXQ14A + RXQ18A	400 to 1,040 (1,280)	52 (64)
95.0	34 HP	850	RXQ34AM	RXQ16A + RXQ18A	425 to 1,105 (1,360)	55 (64)
100	36 HP	900	RXQ36AM	RXQ18A × 2	450 to 1,170 (1,440)	58 (64)
106	38 HP	950	RXQ38AM	RXQ18A + RXQ20A	475 to 1,235 (1,520)	61 (64)
112	40 HP	1,000	RXQ40AM	RXQ20A × 2	500 to 1,300 (1,600)	64 (64)
117	42 HP	1,050	RXQ42AM	RXQ12A × 2 + RXQ18A	525 to 1,365 (1,365)	
123	44 HP	1,100	RXQ44AM	RXQ12A × 2 + RXQ20A	550 to 1,430 (1,430)	
130	46 HP	1,150	RXQ46AM	RXQ14A × 2 + RXQ18A	575 to 1,495 (1,495)	
135	48 HP	1,200	RXQ48AM	RXQ14A + RXQ16A + RXQ18A	600 to 1,560 (1,560)	
140	50 HP	1,250	RXQ50AM	RXQ14A + RXQ18A × 2	625 to 1,625 (1,625)	
145	52 HP	1,300	RXQ52AM	RXQ16A + RXQ18A × 2	650 to 1,690 (1,690)	
150	54 HP	1,350	RXQ54AM	RXQ18A × 3	675 to 1,755 (1,755)	
156	56 HP	1,400	RXQ56AM	RXQ18A × 2 + RXQ20A	700 to 1,820 (1,820)	
162	58 HP	1,450	RXQ58AM	RXQ18A + RXQ20A × 2	725 to 1,885 (1,885)	
168	60 HP	1,500	RXQ60AM	RXQ20A × 3	750 to 1,950 (1,950)	

Notes:

- *1. Values inside brackets are based on connection of indoor units rated at maximum capacity, 200% for single outdoor units, 160% for double outdoor units, and 130% for triple outdoor units.
- *2. When outdoor-air processing units (FXMQ-MF) and standard indoor units are connected, the total connection capacity of the outdoor-air processing units (FXMQ-MF) must not exceed 30% of the capacity index of the outdoor units. And the connection ratio must not exceed 100%.
Because connection is possible depending on conditions even when the capacity index of FXMQ-MF exceeds 30% of the capacity index of the outdoor units, contact your local distributor.

3.2 For a System with Residential Indoor Units or VRV Mix Combination

3.2.1 Combination Ratio

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

Type	Min. combination ratio	Max. combination ratio		
		Type of connected indoor units	Type of connected air treatment equipment	
			VKM	FXMQ-MF
Single outdoor units	50%	Residential indoor units or VRV mix combination	When VKM and indoor units are connected	When FXMQ-MF and indoor units are connected
		130%	130%	100% *1

Note:

- *1. When outdoor-air processing units (FXMQ-MF) and standard indoor units are connected, the total connection capacity of the outdoor-air processing units (FXMQ-MF) must not exceed 30% of the capacity index of the outdoor units. And the connection ratio must not exceed 100%.
Because connection is possible depending on conditions even when the capacity index of FXMQ-MF exceeds 30% of the capacity index of the outdoor units, contact your local distributor.

3.2.2 Outdoor Unit Combinations

kW	HP	Capacity index	Model name *1	Total capacity index of connectable indoor units *2			Maximum number of connectable indoor units
				Combination ratio (%)			
				50%	100%	130%	
16.0	6	150	RXQ6A	75	150	195	9
22.4	8	200	RXQ8A	100	200	260	13
28.0	10	250	RXQ10A	125	250	325	16
33.5	12	300	RXQ12A	150	300	390	19
40.0	14	350	RXQ14A	175	350	455	22
45.0	16	400	RXQ16A	200	400	520	26
50.0	18	450	RXQ18A	225	450	585	29
56.0	20	500	RXQ20A	250	500	650	32

Notes:

- *1. Only single outdoor unit (RXQ6-20A) can be connected.
- *2. When outdoor-air processing units (FXMQ-MF) and standard indoor units are connected, the total connection capacity of the outdoor-air processing units (FXMQ-MF) must not exceed 30% of the capacity index of the outdoor units. And the connection ratio must not exceed 100%.
Because connection is possible depending on conditions even when the capacity index of FXMQ-MF exceeds 30% of the capacity index of the outdoor units, contact your local distributor.

2. Specification

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1. Specifications

1.1 Cooling Only 50/60 Hz VRV A SERIES (RXQ-A(M))

Model Name			RXQ6AYM	RXQ8AYM
Power supply			3 phase, 380-415/380 V, 50/60 Hz	3 phase, 380-415/380 V, 50/60 Hz
★1 Cooling capacity	kcal/h		13,800	19,300
	Btu/h		54,600	76,400
	kW		16.0	22.4
Casing color			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,657×930×765	1,657×930×765
Heat exchanger			Cross fin coil	Cross fin coil
Compressor	Type		Hermetically sealed scroll type	Hermetically sealed scroll type
	Motor output× Number of units	kW	2.3×1	3.4×1
	Starting method		Soft start	Soft start
Fan	Type		Propeller fan	Propeller fan
	Motor output	kW	0.55×1	0.55×1
	Airflow rate	m ³ /min	119	178
	Drive		Direct drive	Direct drive
Connecting pipes	Liquid pipe	mm	φ9.5 C1220T (Brazing connection)	φ9.5 C1220T (Brazing connection)
	Gas pipe	mm	φ19.1 C1220T (Brazing connection)	φ19.1 C1220T (Brazing connection)
Mass		kg	175	175
★2 Sound pressure level		dB(A)	56	56
Safety devices			High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector	High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector
Capacity control		%	25-100	20-100
Refrigerant	Refrigerant name		R410A	R410A
	Charge	kg	5.9	5.9
	Control		Electronic expansion valve	Electronic expansion valve
Refrigerator oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard accessories			Installation manual, Operation manual, Connection pipes, Clamps	Installation manual, Operation manual, Connection pipes, Clamps
Drawing No.	Specifications		C: 3D111543C	C: 3D111543C
	Sound level		—	—

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae

kcal/h=kW×860
Btu/h=kW×3412

Model Name			RXQ10AYM	RXQ12AYM
Power supply			3 phase, 380-415/380 V, 50/60 Hz	3 phase, 380-415/380 V, 50/60 Hz
★1 Cooling capacity	kcal/h		24,100	28,800
	Btu/h		95,500	114,000
	kW		28.0	33.5
Casing color			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,657×930×765	1,657×930×765
Heat exchanger			Cross fin coil	Cross fin coil
Compressor	Type		Hermetically sealed scroll type	Hermetically sealed scroll type
	Motor output× Number of units	kW	4.5×1	5.6×1
	Starting method		Soft start	Soft start
Fan	Type		Propeller fan	Propeller fan
	Motor output	kW	0.55×1	0.55×1
	Airflow rate	m ³ /min	178	191
	Drive		Direct drive	Direct drive
Connecting pipes	Liquid pipe	mm	φ9.5 C1220T (Brazing connection)	φ12.7 C1220T (Brazing connection)
	Gas pipe	mm	φ22.2 C1220T (Brazing connection)	φ28.6 C1220T (Brazing connection)
Mass		kg	185	185
★2 Sound pressure level		dB(A)	57	59
Safety devices			High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector	High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector
Capacity control		%	13-100	12-100
Refrigerant	Refrigerant name		R410A	R410A
	Charge	kg	6.7	6.8
	Control		Electronic expansion valve	Electronic expansion valve
Refrigerator oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard accessories			Installation manual, Operation manual, Connection pipes, Clamps	Installation manual, Operation manual, Connection pipes, Clamps
Drawing No.	Specifications		C: 3D111543C	C: 3D111543C
	Sound level		—	—

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name			RXQ14AYM	RXQ16AYM
Power supply			3 phase, 380-415/380 V, 50/60 Hz	3 phase, 380-415/380 V, 50/60 Hz
★1 Cooling capacity	kcal/h		34,400	38,700
	Btu/h		136,000	154,000
	kW		40.0	45.0
Casing color			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,657×1,240×765	1,657×1,240×765
Heat exchanger			Cross fin coil	Cross fin coil
Compressor	Type		Hermetically sealed scroll type	Hermetically sealed scroll type
	Motor output× Number of units	kW	6.4×1	(3.5×1)+(3.5×1)
	Starting method		Soft start	Soft start
Fan	Type		Propeller fan	Propeller fan
	Motor output	kW	0.75×2	0.75×2
	Airflow rate	m ³ /min	257	257
	Drive		Direct drive	Direct drive
Connecting pipes	Liquid pipe	mm	φ12.7 C1220T (Brazing connection)	φ12.7 C1220T (Brazing connection)
	Gas pipe	mm	φ28.6 C1220T (Brazing connection)	φ28.6 C1220T (Brazing connection)
Mass		kg	215	260
★2 Sound pressure level		dB(A)	60	60
Safety devices			High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector	High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector
Capacity control		%	11-100	10-100
Refrigerant	Refrigerant name		R410A	R410A
	Charge	kg	7.4	8.2
	Control		Electronic expansion valve	Electronic expansion valve
Refrigerator oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard accessories			Installation manual, Operation manual, Connection pipes, Clamps	Installation manual, Operation manual, Connection pipes, Clamps
Drawing No.	Specifications		C: 3D111543C	C: 3D111543C
	Sound level		—	—

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae

kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ18AYM		RXQ18AMYM		
Model Name (Independent Unit)		—		RXQ8AYM+RXQ10AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	43,000		43,300		
	Btu/h	171,000		172,000		
	kW	50.0		50.4		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	1,657×1,240×765	(1,657×930×765)+(1,657×930×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(4.0×1)+(4.0×1)		(3.4×1)+(4.5×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	0.75×2		(0.55×1)+(0.55×1)	
	Airflow rate	m ³ /min	257		178+178	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ15.9 C1220T (Brazing connection)		φ15.9 C1220T (Brazing connection)	
	Gas pipe	mm	φ28.6 C1220T (Brazing connection)		φ28.6 C1220T (Brazing connection)	
Mass		kg	260		175+185	
★2 Sound pressure level		dB(A)	61		60	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	10-100		7-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	8.4		5.9+6.7	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		C: 3D111543C		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae

kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ20AYM		RXQ20AMYM		
Model Name (Independent Unit)		—		RXQ8AYM+RXQ12AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	48,200		48,100		
	Btu/h	191,000		191,000		
	kW	56.0		55.9		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	1,657×1,240×765	(1,657×930×765)+(1,657×930×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(3.8×1)+(6.3×1)		(3.4×1)+(5.6×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	0.75×2		(0.55×1)+(0.55×1)	
	Airflow rate	m ³ /min	297		178+191	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ15.9 C1220T (Brazing connection)		φ15.9 C1220T (Brazing connection)	
	Gas pipe	mm	φ28.6 C1220T (Brazing connection)		φ28.6 C1220T (Brazing connection)	
Mass		kg	285		175+185	
★2 Sound pressure level		dB(A)	65		61	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	7-100		7-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	11.8		5.9+6.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		C: 3D111543C		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ22AYM		RXQ24AYM		
Model Name (Independent Unit)		RXQ10AYM+RXQ12AYM		RXQ12AYM+RXQ12AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	52,900		57,600		
	Btu/h	210,000		229,000		
	kW	61.5		67.0		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm (1,657×930×765)+(1,657×930×765)		mm (1,657×930×765)+(1,657×930×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(4.5×1)+(5.6×1)		(5.6×1)+(5.6×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.55×1)+(0.55×1)		(0.55×1)+(0.55×1)	
	Airflow rate	m³/min	178+191		191+191	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ15.9 C1220T (Brazing connection)		φ15.9 C1220T (Brazing connection)	
	Gas pipe	mm	φ28.6 C1220T (Brazing connection)		φ34.9 C1220T (Brazing connection)	
Mass		kg	185+185		185+185	
★2 Sound pressure level		dB(A)	61		62	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	6-100		6-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	6.7+6.8		6.8+6.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ26AYM		RXQ28AYM		
Model Name (Independent Unit)		RXQ12AYM+RXQ14AYM		RXQ12AYM+RXQ16AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	63,200		67,500		
	Btu/h	251,000		268,000		
	kW	73.5		78.5		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm (1,657×930×765)+(1,657×1,240×765)		mm (1,657×930×765)+(1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(5.6×1)+(6.4×1)		(5.6×1)+(3.5×1)+(3.5×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.55×1)+(0.75×2)		(0.55×1)+(0.75×2)	
	Airflow rate	m ³ /min	191+257		191+257	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ34.9 C1220T (Brazing connection)		φ34.9 C1220T (Brazing connection)	
Mass		kg	185+215		185+260	
★2 Sound pressure level		dB(A)	63		63	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	6-100		5-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	6.8+7.4		6.8+8.2	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ30AYM		RXQ32AYM		
Model Name (Independent Unit)		RXQ12AYM+RXQ18AYM		RXQ14AYM+RXQ18AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	71,800		77,400		
	Btu/h	285,000		307,000		
	kW	83.5		90.0		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm (1,657×930×765)+(1,657×1,240×765)		mm (1,657×1,240×765)+(1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type	Hermetically sealed scroll type		Hermetically sealed scroll type		
	Motor output× Number of units	kW	(5.6×1)+(4.0×1)+(4.0×1)		(6.4×1)+(4.0×1)+(4.0×1)	
	Starting method		Soft start		Soft start	
Fan	Type	Propeller fan		Propeller fan		
	Motor output	kW	(0.55×1)+(0.75×2)		(0.75×2)+(0.75×2)	
	Airflow rate	m³/min	191+257		257+257	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ34.9 C1220T (Brazing connection)		φ34.9 C1220T (Brazing connection)	
Mass		kg	185+260		215+260	
★2 Sound pressure level		dB(A)	63		64	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	5-100		5-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	6.8+8.4		7.4+8.4	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ34AYM		RXQ36AYM		
Model Name (Independent Unit)		RXQ16AYM+RXQ18AYM		RXQ18AYM+RXQ18AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	81,700		86,000		
	Btu/h	324,000		341,000		
	kW	95.0		100		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm (1,657×1,240×765)+(1,657×1,240×765)		mm (1,657×1,240×765)+(1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type	Hermetically sealed scroll type		Hermetically sealed scroll type		
	Motor output× Number of units	kW	(3.5×1)+(3.5×1)+(4.0×1)+(4.0×1)		(4.0×1)+(4.0×1)+(4.0×1)+(4.0×1)	
	Starting method		Soft start		Soft start	
Fan	Type	Propeller fan		Propeller fan		
	Motor output	kW	(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)	
	Airflow rate	m ³ /min	257+257		257+257	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ34.9 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	260+260		260+260	
★2 Sound pressure level		dB(A)	64		64	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	5-100		5-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	8.2+8.4		8.4+8.4	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ38AMYM		RXQ40AMYM		
Model Name (Independent Unit)		RXQ18AYM+RXQ20AYM		RXQ20AYM+RXQ20AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	91,200		96,300		
	Btu/h	362,000		382,000		
	kW	106		112		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm (1,657×1,240×765)+(1,657×1,240×765)		mm (1,657×1,240×765)+(1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(4.0×1)+(4.0×1)+(3.8×1)+(6.3×1)		(3.8×1)+(6.3×1)+(3.8×1)+(6.3×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)	
	Airflow rate	m ³ /min	257+297		297+297	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	260+285		285+285	
★2 Sound pressure level		dB(A)	66		68	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	4-100		3-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	8.4+11.8		11.8+11.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ42AMYM		RXQ44AMYM		
Model Name (Independent Unit)		RXQ12AYM+RXQ12AYM+RXQ18AYM		RXQ12AYM+RXQ12AYM+RXQ20AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	101,000		106,000		
	Btu/h	399,000		420,000		
	kW	117		123		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	(1,657×930×765)+(1,657×930×765)+ (1,657×1,240×765)	(1,657×930×765)+(1,657×930×765)+ (1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(5.6×1)+(5.6×1)+(4.0×1)+(4.0×1)		(5.6×1)+(5.6×1)+(3.8×1)+(6.3×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.55×1)+(0.55×1)+(0.75×2)		(0.55×1)+(0.55×1)+(0.75×2)	
	Airflow rate	m ³ /min	191+191+257		191+191+297	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	185+185+260		185+185+285	
★2 Sound pressure level		dB(A)	65		67	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	4-100		3-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	6.8+6.8+8.4		6.8+6.8+11.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ46AMYM		RXQ48AMYM		
Model Name (Independent Unit)		RXQ14AYM+RXQ14AYM+RXQ18AYM		RXQ14AYM+RXQ16AYM+RXQ18AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	112,000		116,000		
	Btu/h	444,000		461,000		
	kW	130		135		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(6.4×1)+(6.4×1)+(4.0×1)+(4.0×1)		(6.4×1)+(3.5×1)+(3.5×1)+(4.0×1)+(4.0×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.75×2)+(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)+(0.75×2)	
	Airflow rate	m³/min	257+257+257		257+257+257	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	215+215+260		215+260+260	
★2 Sound pressure level		dB(A)	65		65	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	3-100		3-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	7.4+7.4+8.4		7.4+8.2+8.4	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ50AYM		RXQ52AYM		
Model Name (Independent Unit)		RXQ14AYM+RXQ18AYM+RXQ18AYM		RXQ16AYM+RXQ18AYM+RXQ18AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	120,000		125,000		
	Btu/h	478,000		495,000		
	kW	140		145		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(6.4×1)+(4.0×1)+(4.0×1)+(4.0×1)+(4.0×1)		(3.5×1)+(3.5×1)+(4.0×1)+(4.0×1)+ (4.0×1)+(4.0×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.75×2)+(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)+(0.75×2)	
	Airflow rate	m³/min	257+257+257		257+257+257	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	215+260+260		260+260+260	
★2 Sound pressure level		dB(A)	65		65	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	3-100		3-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	7.4+8.4+8.4		8.2+8.4+8.4	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. 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.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ54AYM		RXQ56AYM		
Model Name (Independent Unit)		RXQ18AYM+RXQ18AYM+RXQ18AYM		RXQ18AYM+RXQ18AYM+RXQ20AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	129,000		134,000		
	Btu/h	512,000		532,000		
	kW	150		156		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(4.0×1)+(4.0×1)+(4.0×1)+(4.0×1)+ (4.0×1)+(4.0×1)		(4.0×1)+(4.0×1)+(4.0×1)+(4.0×1)+ (3.8×1)+(6.3×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.75×2)+(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)+(0.75×2)	
	Airflow rate	m ³ /min	257+257+257		257+257+297	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	260+260+260		260+260+285	
★2 Sound pressure level		dB(A)	66		68	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	3-100		3-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	8.4+8.4+8.4		8.4+8.4+11.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.

★2. 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.

Conversion formulae

kcal/h=kW×860
Btu/h=kW×3412

Model Name (Combination Unit)		RXQ58AMYM		RXQ60AMYM		
Model Name (Independent Unit)		RXQ18AYM+RXQ20AYM+RXQ20AYM		RXQ20AYM+RXQ20AYM+RXQ20AYM		
Power supply		3 phase, 380-415/380 V, 50/60 Hz		3 phase, 380-415/380 V, 50/60 Hz		
★1 Cooling capacity	kcal/h	139,000		144,000		
	Btu/h	553,000		573,000		
	kW	162		168		
Casing color		Ivory white (5Y7.5/1)		Ivory white (5Y7.5/1)		
Dimensions: (H×W×D)		mm	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)	(1,657×1,240×765)+(1,657×1,240×765)+ (1,657×1,240×765)		
Heat exchanger		Cross fin coil		Cross fin coil		
Compressor	Type		Hermetically sealed scroll type		Hermetically sealed scroll type	
	Motor output× Number of units	kW	(4.0×1)+(4.0×1)+(3.8×1)+(6.3×1)+ (3.8×1)+(6.3×1)		(3.8×1)+(6.3×1)+(3.8×1)+(6.3×1)+ (3.8×1)+(6.3×1)	
	Starting method		Soft start		Soft start	
Fan	Type		Propeller fan		Propeller fan	
	Motor output	kW	(0.75×2)+(0.75×2)+(0.75×2)		(0.75×2)+(0.75×2)+(0.75×2)	
	Airflow rate	m ³ /min	257+297+297		297+297+297	
	Drive		Direct drive		Direct drive	
Connecting pipes	Liquid pipe	mm	φ19.1 C1220T (Brazing connection)		φ19.1 C1220T (Brazing connection)	
	Gas pipe	mm	φ41.3 C1220T (Brazing connection)		φ41.3 C1220T (Brazing connection)	
Mass		kg	260+285+285		285+285+285	
★2 Sound pressure level		dB(A)	69		70	
Safety devices		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		High pressure switch, Fan driver overload protector, Over current relay, Inverter overload protector		
Capacity control		%	2-100		2-100	
Refrigerant	Refrigerant name		R410A		R410A	
	Charge	kg	8.4+11.8+11.8		11.8+11.8+11.8	
	Control		Electronic expansion valve		Electronic expansion valve	
Refrigerator oil		Refer to the nameplate of compressor		Refer to the nameplate of compressor		
Standard accessories		Installation manual, Operation manual, Connection pipes, Clamps		Installation manual, Operation manual, Connection pipes, Clamps		
Drawing No.	Specifications		—		—	
	Sound level		—		—	

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. 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.

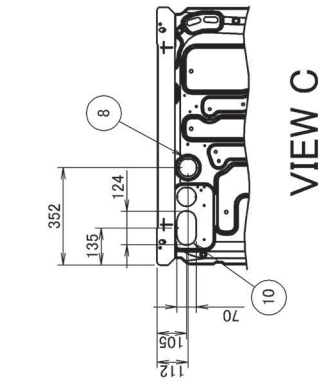
Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412

2. Dimensions

2.1 Independent Unit

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM

Unit: mm

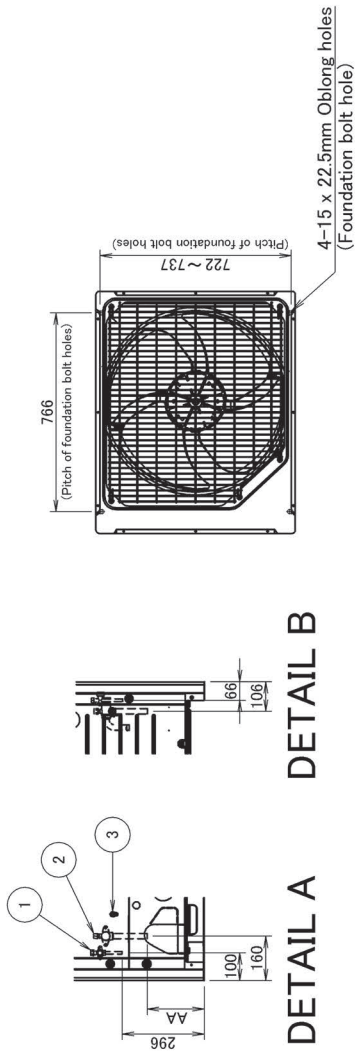


VIEW C

Model	AA
RX(Y)06 - 8, 10AY	167
RX(Y)Q12AY	171

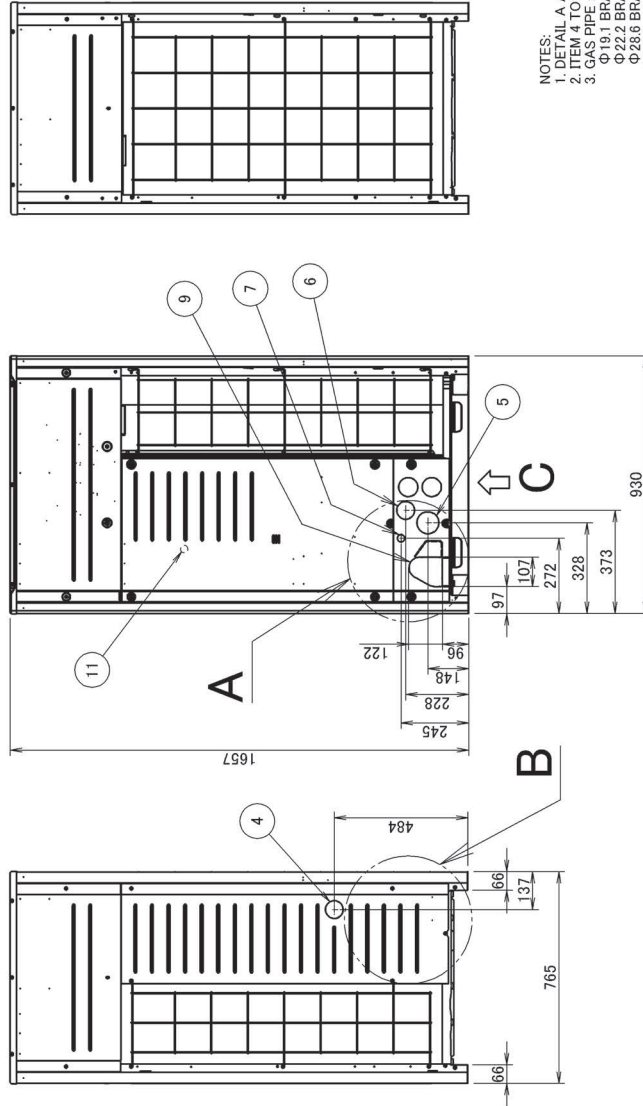
No.	Parts name	Remark
1	Liquid pipe connection port	See note 3.
2	Gas pipe connection port	See note 3.
3	Refrigerant charge port	See note 3.
4	Power cord routing hole (side)	Φ65
5	Power cord routing hole (front)	Φ80
6	Power cord routing hole (front)	Φ65
7	Transmission wire routing hole (front)	Φ27
8	Power cord routing hole (bottom)	Φ65
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	
11	Grounding terminal	Inside of switch box (M8)

NOTES:
 1. DETAIL A AND DETAIL B INDICATE THE DIMENSIONS AFTER FIXING THE ATTACHED PIPING.
 2. DETAIL 1: 10 KNOCK OUT HOLE.
 3. GAS PIPE.
 Φ19.1 BRAZING CONNECTION: RX(Y)06 - 8AY
 Φ22.2 BRAZING CONNECTION: RX(Y)Q10AY
 Φ28.6 BRAZING CONNECTION: RX(Y)Q12AY
 LIQUID PIPE :
 Φ9.5 BRAZING CONNECTION: RX(Y)06 - 8, 10AY
 Φ12.7 BRAZING CONNECTION: RX(Y)Q12AY



DETAIL A

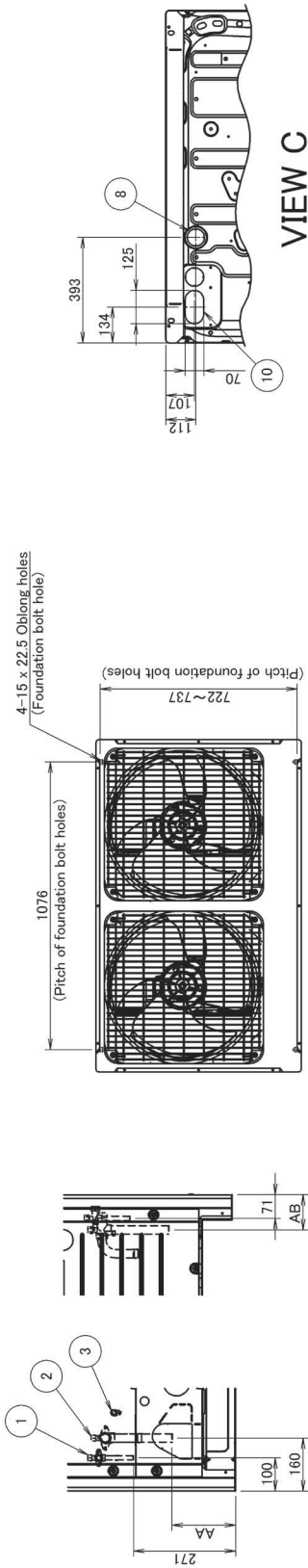
DETAIL B



3D111514A

RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM

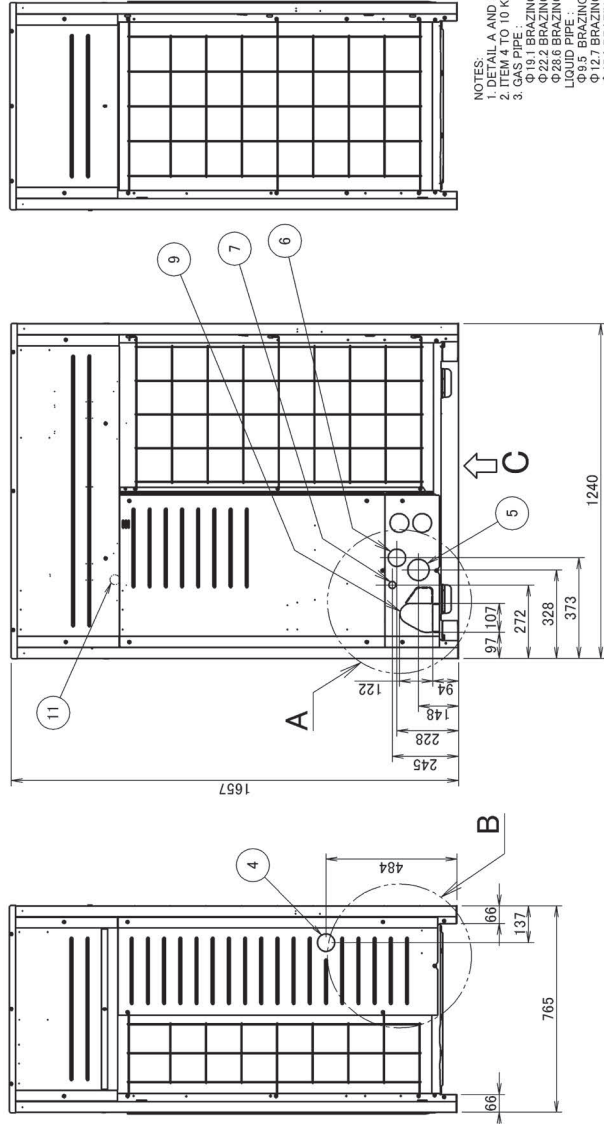
Unit: mm



DETAIL A DETAIL B

Model	AA	AB
RXQ14AYM, 16, 18AY	171	106
RXQ16, 18, 20AY	161	101

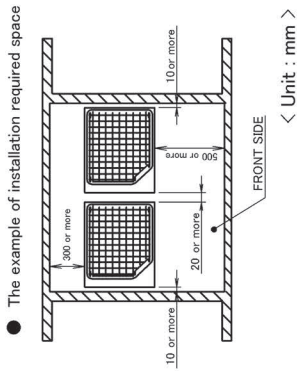
No.	Parts name	Remark
1	Liquid pipe connection port	See note 3.
2	Gas pipe connection port	See note 3.
3	Refrigerant charge port	See note 3.
4	Power cord routing hole (side)	Φ85
5	Power cord routing hole (front)	Φ80
6	Power cord routing hole (front)	Φ65
7	Transmission wire routing hole (front)	Φ27
8	Power cord routing hole (bottom)	Φ65
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	
11	Grounding terminal	Inside of switch box (M8)



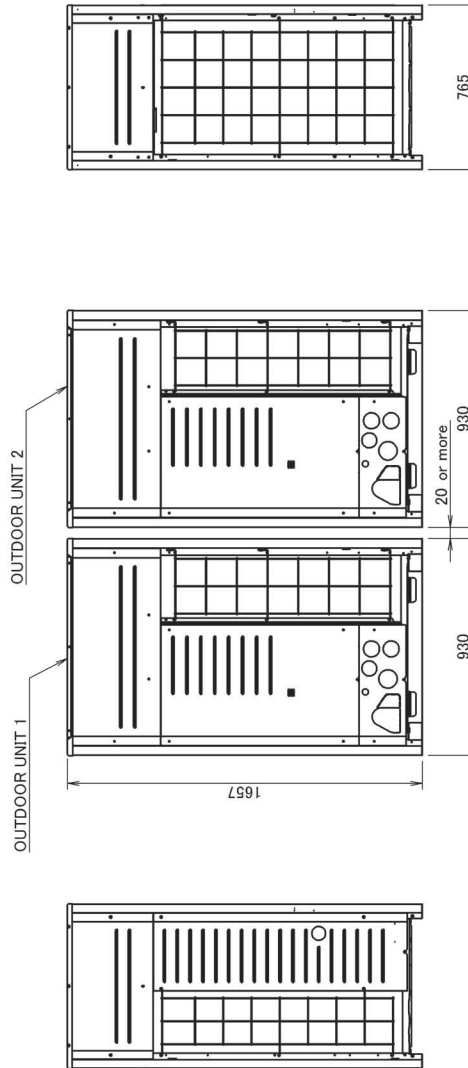
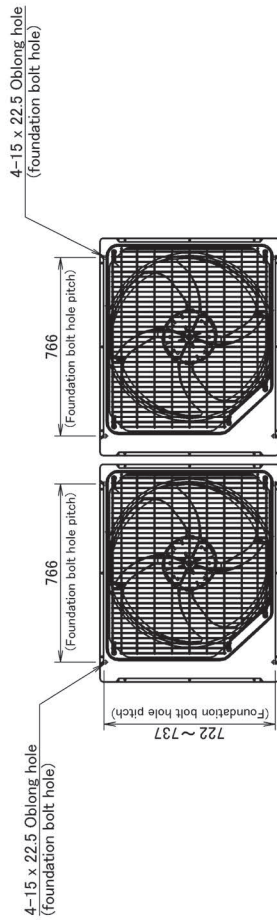
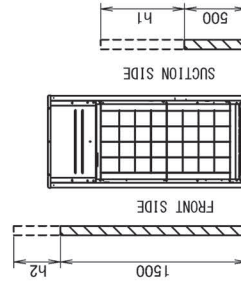
NOTES:
 1. DETAIL A AND DETAIL B INDICATE THE DIMENSIONS AFTER FIXING THE ATTACHED PIPING.
 2. ITEM 4 TO 10 KNOCK OUT HOLE.
 3. GAS PIPE:
 Φ19.1 BRAZING CONNECTION: RXU08AY
 Φ22.8 BRAZING CONNECTION: RXU10AY
 Φ27.1 BRAZING CONNECTION: RXU12, 14, 16, 18, 20AY
 LIQUID PIPE:
 Φ9.5 BRAZING CONNECTION: RXU08, 10AY
 Φ12.7 BRAZING CONNECTION: RXU14, 16AY, RXU12, 14, 16AY
 Φ15.9 BRAZING CONNECTION: RXU18, 20AY, RXU18, 20AY

3D111515A

2.2 Combination Unit RXQ18AYM / RXQ20AYM / RXQ22AYM / RXQ24AYM



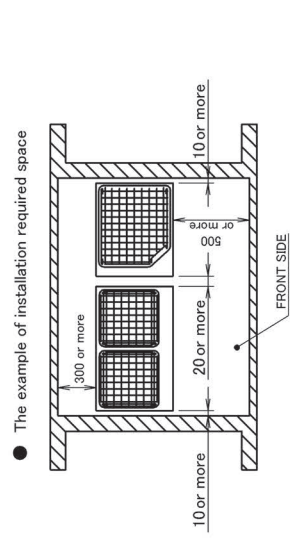
- Note: 1. For the wall height of the example for this installation required space area,
Front side: 1500 mm
Suction side: 500 mm
Lateral side: No height limitation
This installation required space example has the standard of cooling operation at outdoor unit, air temperature, 35°C.
In case the temperature is over 35°C of designed outdoor air temperature, or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.
2. In case of it is over the wall height as specified, make sure to add each dimension h2/2, h1/2 or more to the front side, suction side space as below diagram.
3. When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.
4. For front side space, make sure to install by considering the necessary space for refrigerant piping construction at the field.



SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.
RX(Y)Q18AYM	RX(Y)Q10AY	3D111514	RX(Y)Q8AY	3D111514
RX(Y)Q20AYM	RX(Y)Q12AY	3D111514	RX(Y)Q8AY	3D111514
RX(Y)Q22AYM	RX(Y)Q12AY	3D111514	RX(Y)Q10AY	3D111514
RX(Y)Q24AYM	RX(Y)Q12AY	3D111514	RX(Y)Q12AY	3D111514

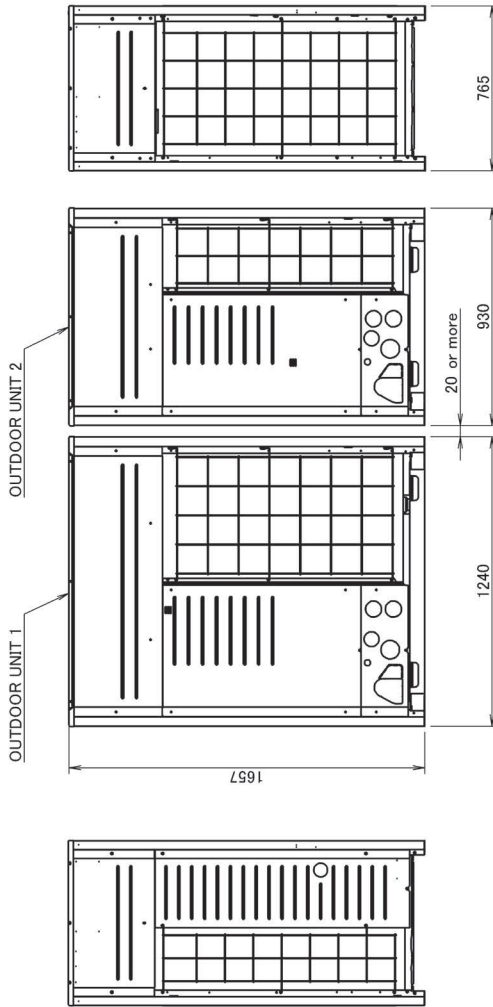
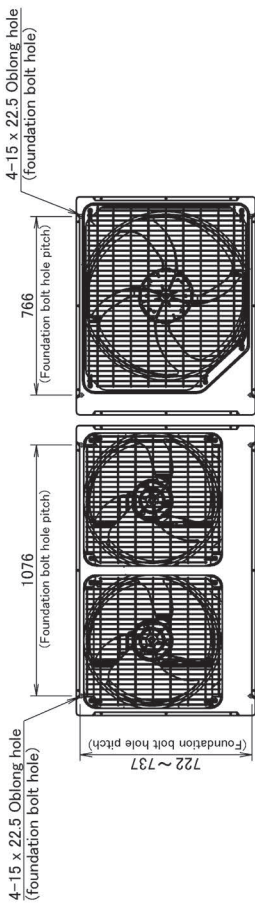
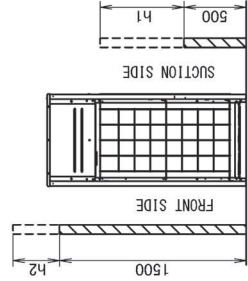
3D111519

RXQ26AMYM / RXQ28AMYM / RXQ30AMYM



< Unit : mm >

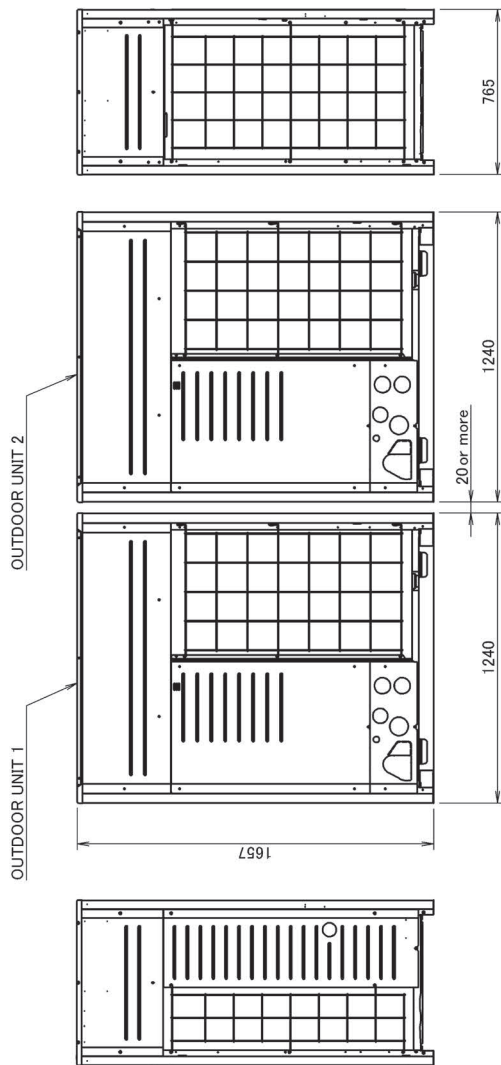
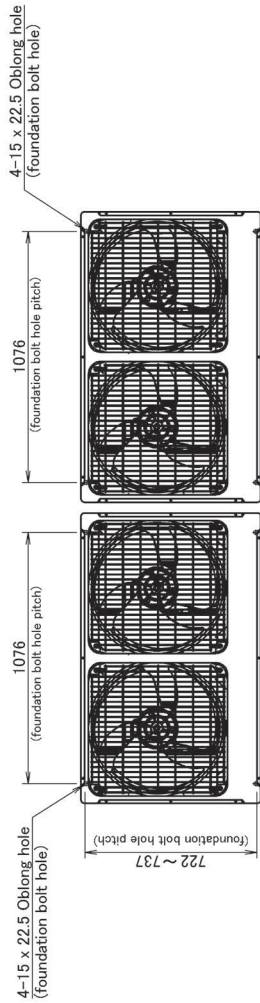
- Note: 1. For the wall height of the example for this installation required space area,
 Front side: 1500 mm
 Suction side: 500 mm
 Lateral side: No height limitation
 This installation required space example has the standard of cooling operation at outdoor unit air temperature 35°C.
 In case the temperature is over 35°C of designed outdoor air temperature, or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.
 2. In case of h_2 is over the wall height as specified, make sure to add each dimension $h_2/2$, $h_1/2$ or more to the front side, suction side space as below diagram.
 3. When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.
 4. For front side space, make sure to install by considering the necessary space for refrigerant piping construction at the field.



SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.
RX(Y)Q26AMY	RX(Y)Q14AY	3D111515	RX(Y)Q12AY	3D111514
RX(Y)Q28AMY	RX(Y)Q16AY	3D111515	RX(Y)Q12AY	3D111514
RX(Y)Q30AMY	RX(Y)Q18AY	3D111515	RX(Y)Q12AY	3D111514

3D111518

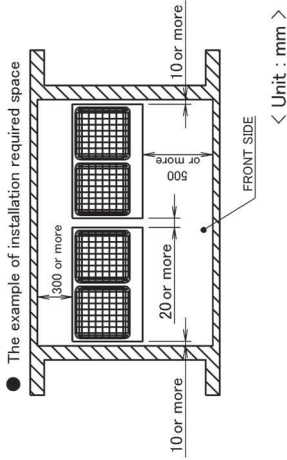
RXQ32AYM / RXQ34AYM / RXQ36AYM / RXQ38AYM / RXQ40AYM



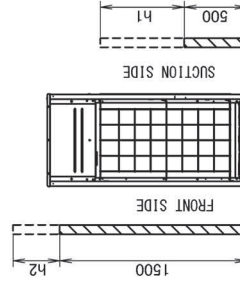
SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.
RX(Y)Q32AYM	RX(Y)Q18AY	3D111515	RX(Y)Q14AY	3D111515
RX(Y)Q34AYM	RX(Y)Q18AY	3D111515	RX(Y)Q16AY	3D111515
RX(Y)Q36AYM	RX(Y)Q18AY	3D111515	RX(Y)Q18AY	3D111515
RX(Y)Q38AYM	RX(Y)Q20AY	3D111515	RX(Y)Q18AY	3D111515
RX(Y)Q40AYM	RX(Y)Q20AY	3D111515	RX(Y)Q20AY	3D111515

SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.
RX(U)18AYM	RX(U)10AY	3D111515	RX(U)8AY	3D111515
RX(U)20AYM	RX(U)12AY	3D111515	RX(U)8AY	3D111515
RX(U)22AYM	RX(U)14AY	3D111515	RX(U)8AY	3D111515
RX(U)24AYM	RX(U)16AY	3D111515	RX(U)8AY	3D111515
RX(U)26AYM	RX(U)18AY	3D111515	RX(U)8AY	3D111515
RX(U)28AYM	RX(U)20AY	3D111515	RX(U)8AY	3D111515

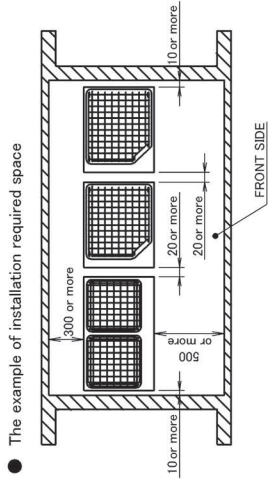
SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.
RX(U)30AYM	RX(U)18AY	3D111515	RX(U)12AY	3D111515
RX(U)32AYM	RX(U)20AY	3D111515	RX(U)12AY	3D111515
RX(U)34AYM	RX(U)18AY	3D111515	RX(U)16AY	3D111515
RX(U)36AYM	RX(U)18AY	3D111515	RX(U)18AY	3D111515
RX(U)38AYM	RX(U)20AY	3D111515	RX(U)18AY	3D111515
RX(U)40AYM	RX(U)20AY	3D111515	RX(U)20AY	3D111515



- Note: 1. For the wall height of the example for this installation required space area, Front side: 1500 mm
Suction side: 500 mm
Lateral side: No height limitation
This installation required space example has the standard of cooling operation at outdoor unit air temperature 35 °C.
In case the temperature is over 35 °C of designed outdoor air temperature, or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.
2. In case of it is over the wall height as specified, make sure to add each dimension h₂/2, h₁/2 or more to the front side, suction side space as below diagram.
3. When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.
4. For front side space, make sure to install by considering the necessary space for refrigerant piping construction at the field.



RXQ42AMYM / RXQ44AMYM



● The example of installation required space

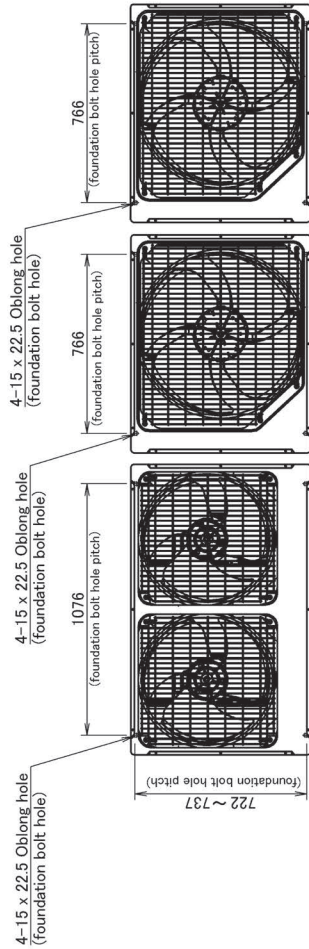
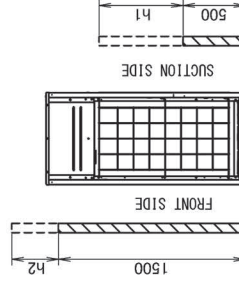
Note: 1. For the wall height of the example for this installation required space area.
 Front side: 1500 mm
 Suction side: 500 mm
 Lateral side: No height limitation

This installation required space example has the standard of cooling operation at outdoor unit air temperature 35°C.
 In case the temperature is over 35°C of designed outdoor air temperature or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.

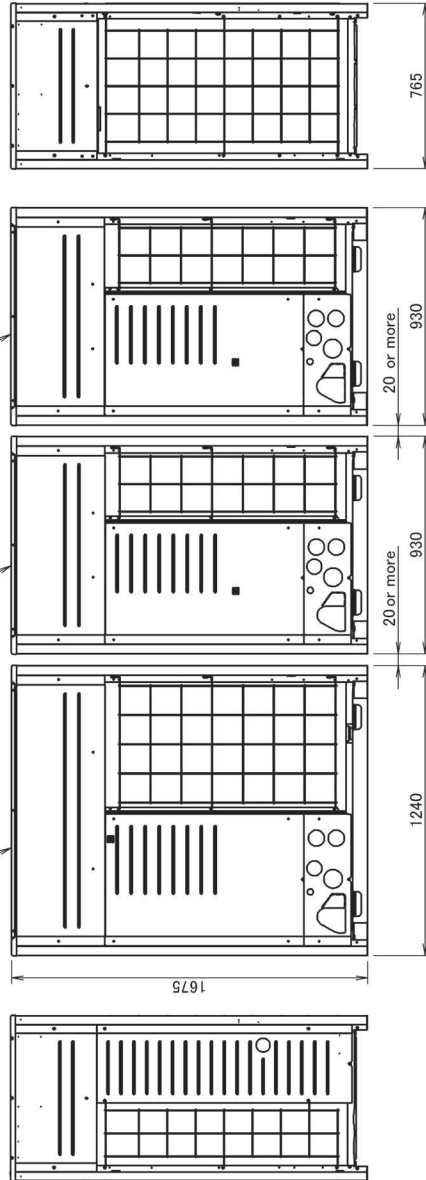
2. In case of it is over the wall height as specified, make sure to add each dimension h2/2, h1/2 or more to the front side, suction side space as below diagram.

3. When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.

4. For front side space, make sure to install by considering the necessary space for refrigerant piping construction at the field.

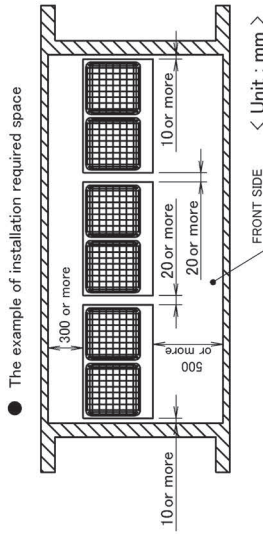


OUTDOOR UNIT 1
 OUTDOOR UNIT 2
 OUTDOOR UNIT 3

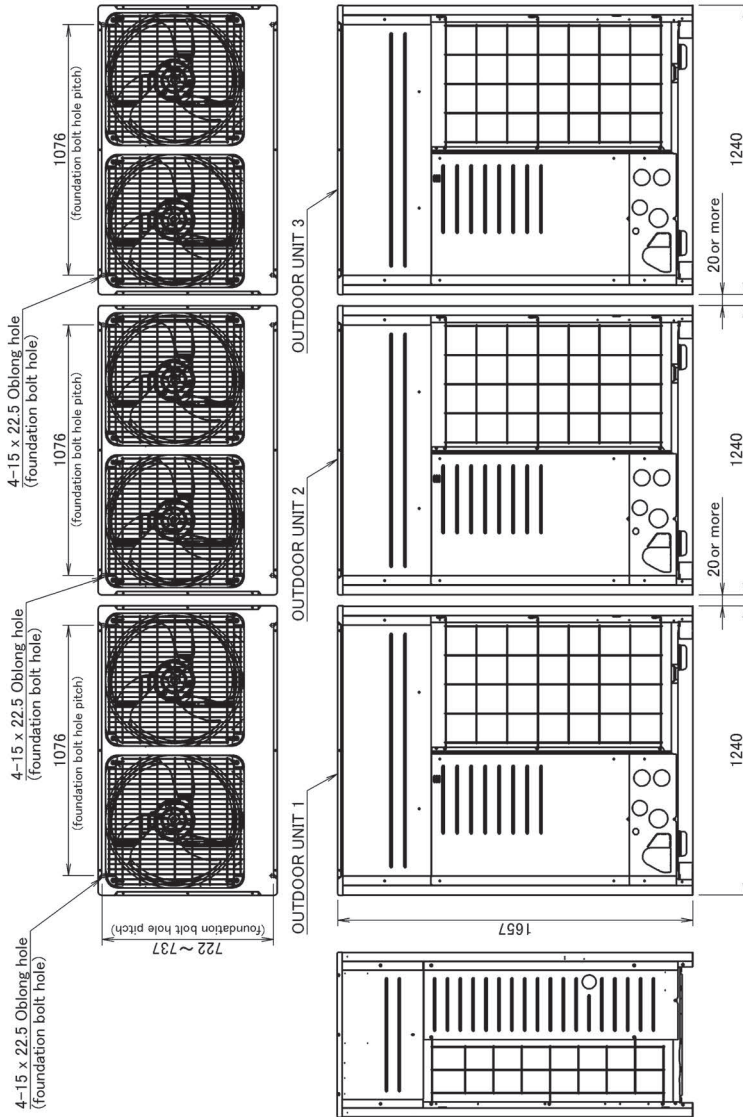
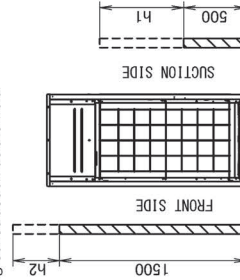


SYSTEM NAME	OUTDOOR UNIT1	DWG. No.	OUTDOOR UNIT2	DWG. No.	OUTDOOR UNIT3	DWG. No.
RX(Y)Q42AMY	RX(Y)Q18AY	3D111515	RX(Y)Q12AY	3D111514	RX(Y)Q12AY	3D111514
RX(Y)Q44AMY	RX(Y)Q20AY	3D111515	RX(Y)Q12AY	3D111514	RX(Y)Q12AY	3D111514

RXQ46AYM / RXQ48AYM / RXQ50AYM / RXQ52AYM / RXQ54AYM / RXQ56AYM / RXQ58AYM / RXQ60AYM



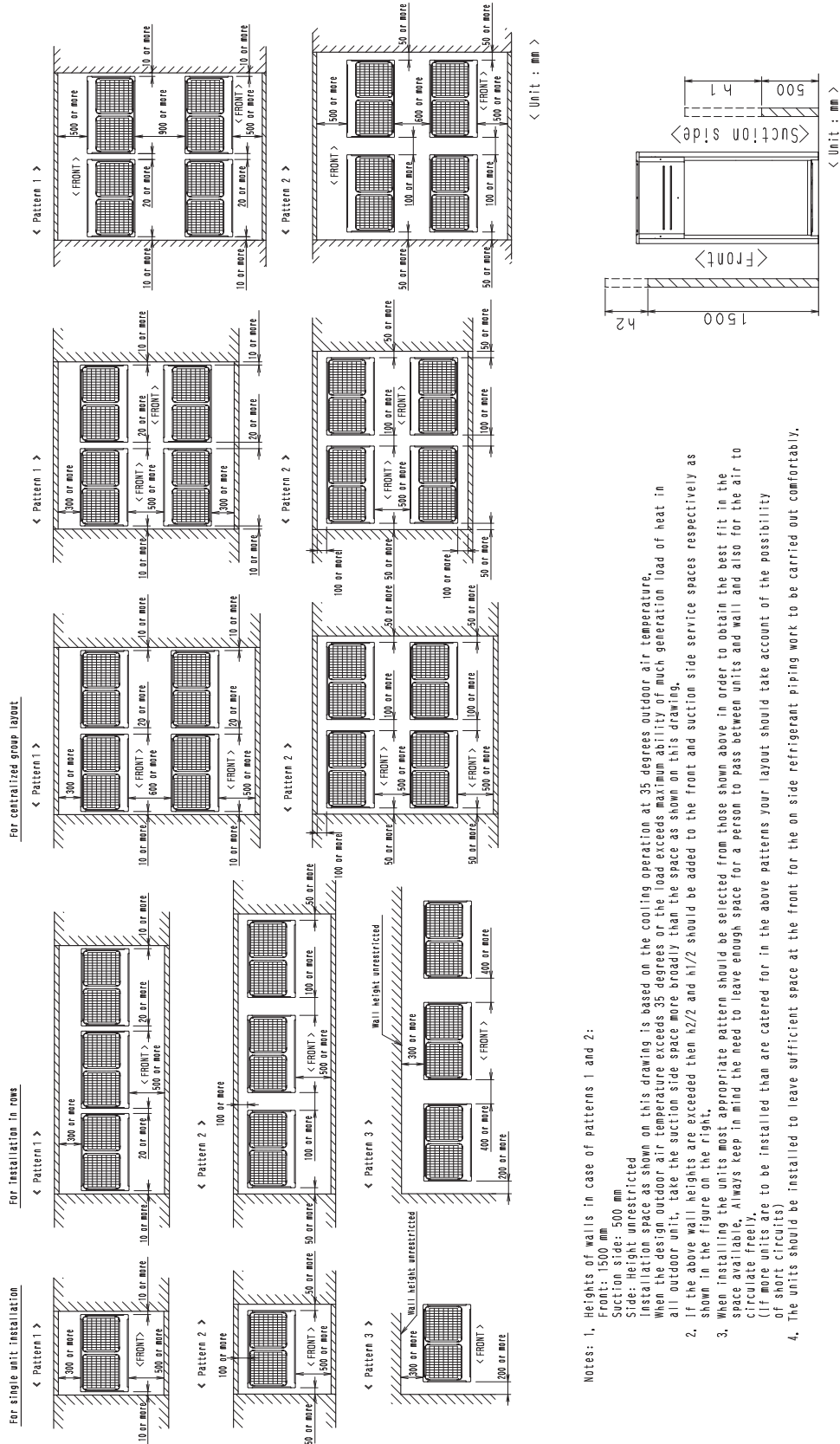
- Note:
- For the wall height of the example for this installation required space area.
Front side: 1500 mm
Suction side: 500 mm
Lateral side: No height limitation
This installation required space example has the standard of cooling operation at outdoor unit air temperature 35°C. In case the temperature is over 35°C of designed outdoor air temperature or there is much heat load on all outdoor unit which its operation load is over the maximum capacity, make sure to enlarge the suction side space to be more than the value details which specified in drawing.
 - In case of it is over the wall height as specified, make sure to add each dimension h₂/2, h₁/2 or more to the front side, suction side space as below diagram.
 - When installation, select the most suitable pattern of installation service space adapt to field space by considering pathway, ventilation.
 - For front side space, make sure to install by considering the necessary space for refrigerant piping construction at the field.



SYSTEM NAME	OUTDOOR UNIT1	OUTDOOR UNIT2	OUTDOOR UNIT3	OUTDOOR UNIT1	OUTDOOR UNIT2	OUTDOOR UNIT3	OUTDOOR UNIT1	OUTDOOR UNIT2	OUTDOOR UNIT3	DWG. No.
RXU42AYM	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	3D111515
RXU44AYM	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	3D111515
RXU46AYM	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	3D111515
RXU50AYM	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	3D111515
RXU52AYM	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	3D111515
RXU54AYM	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	RXUQ18AY	3D111515
RXU56AYM	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	3D111515
RXU58AYM	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	3D111515
RXU60AYM	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	RXUQ20AY	3D111515

3. Service Space

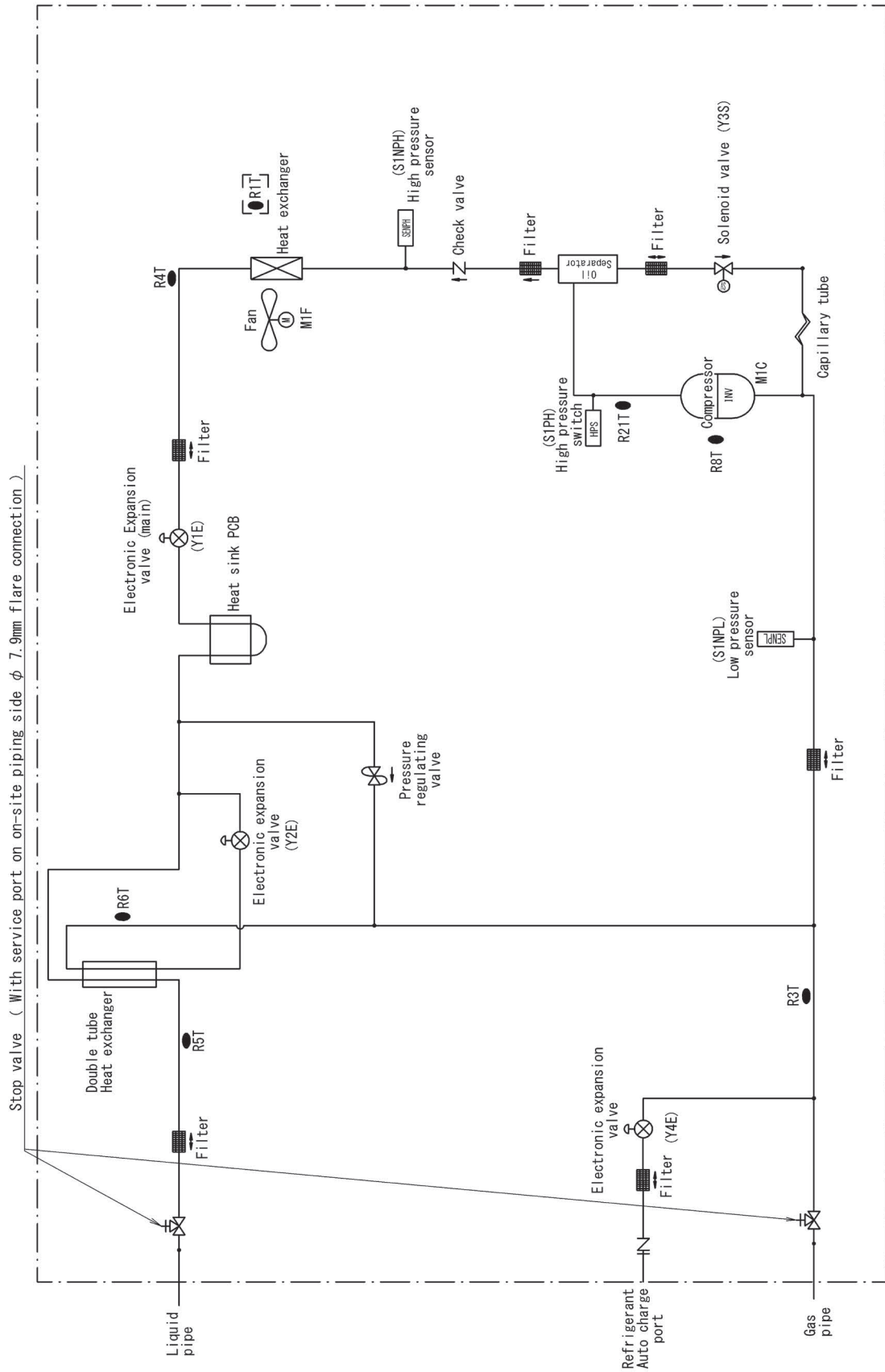
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3D084449C

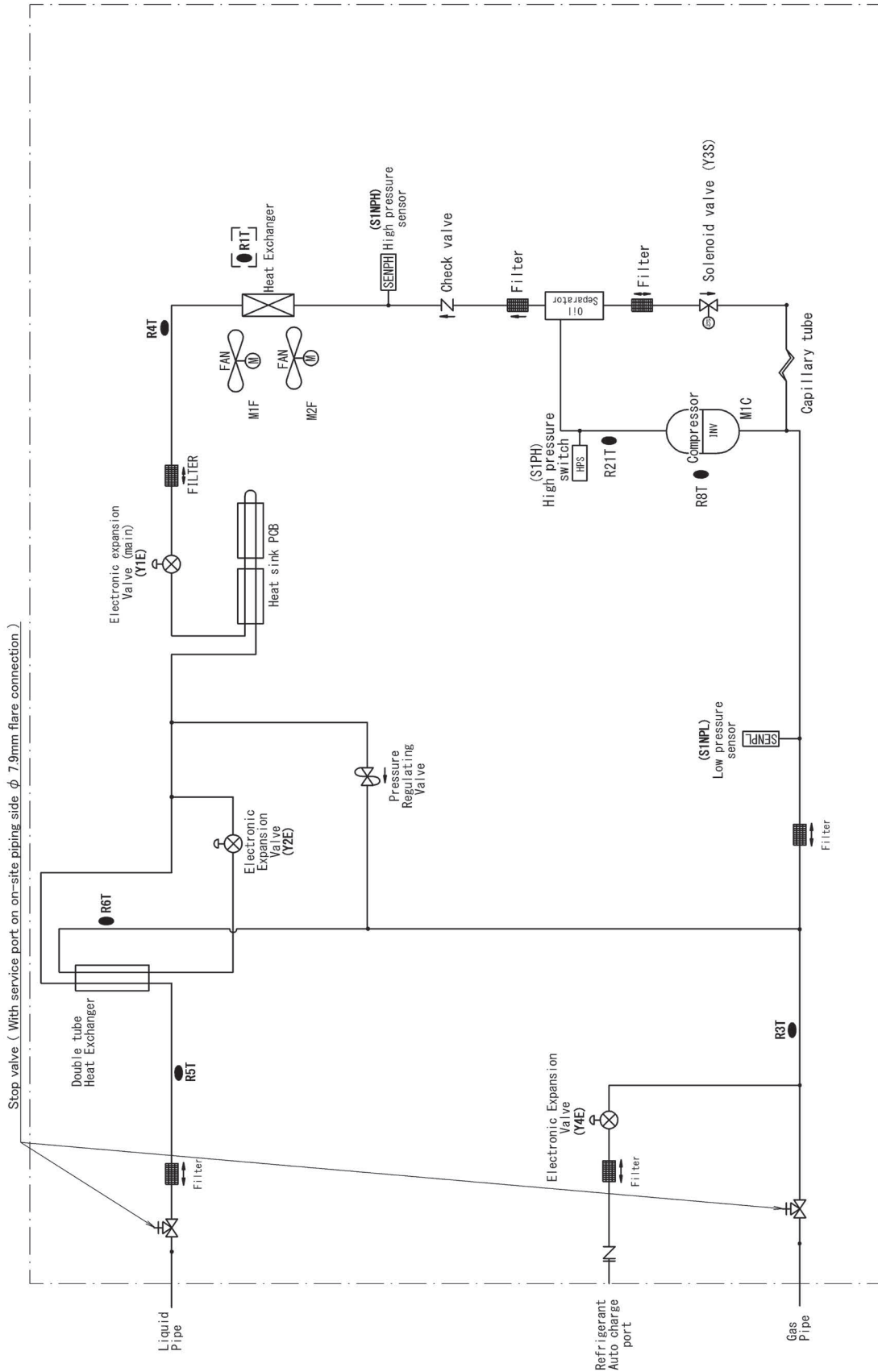
4. Piping Diagrams

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM



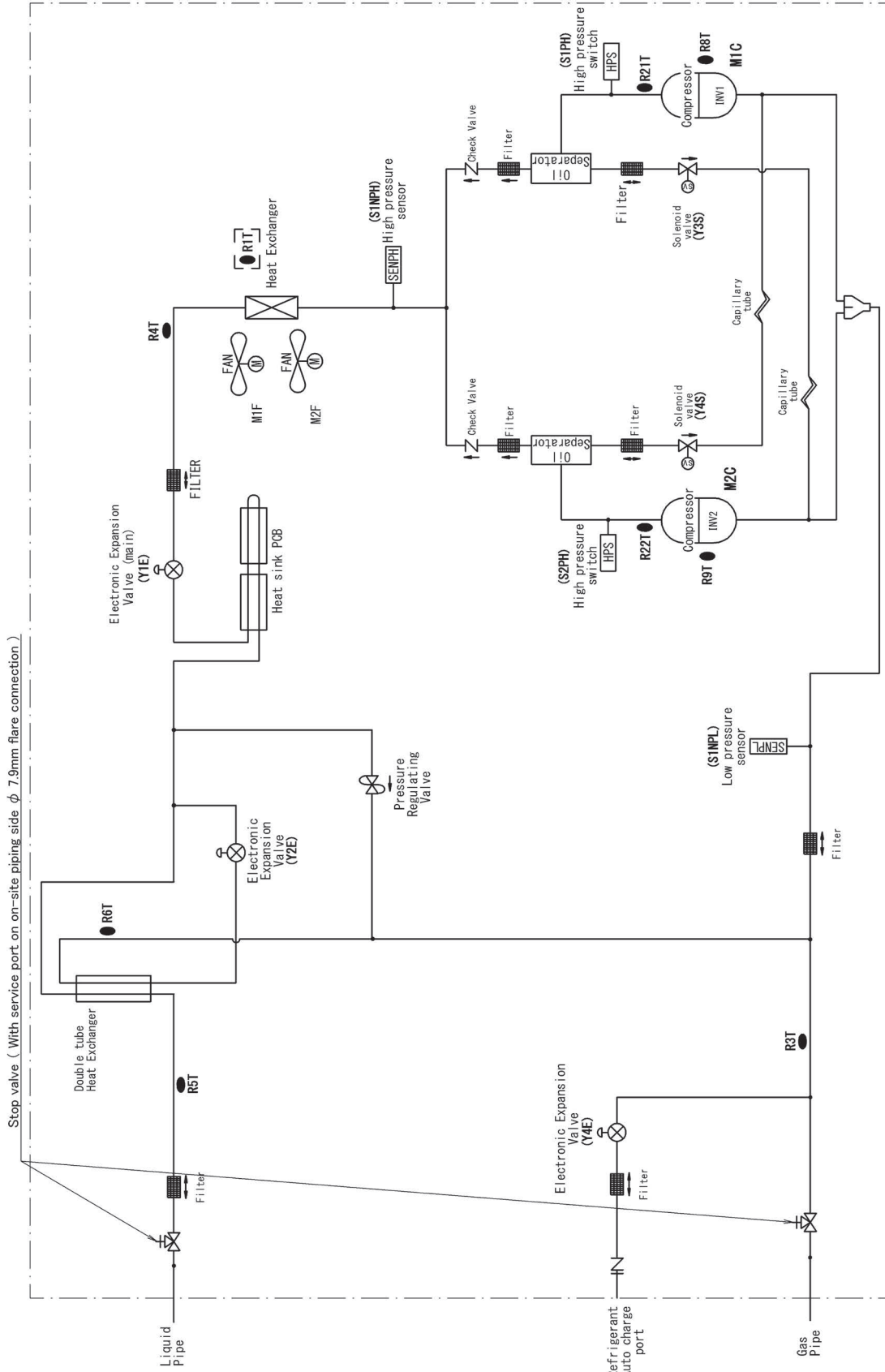
3D111780

RXQ14AYM



3D111855

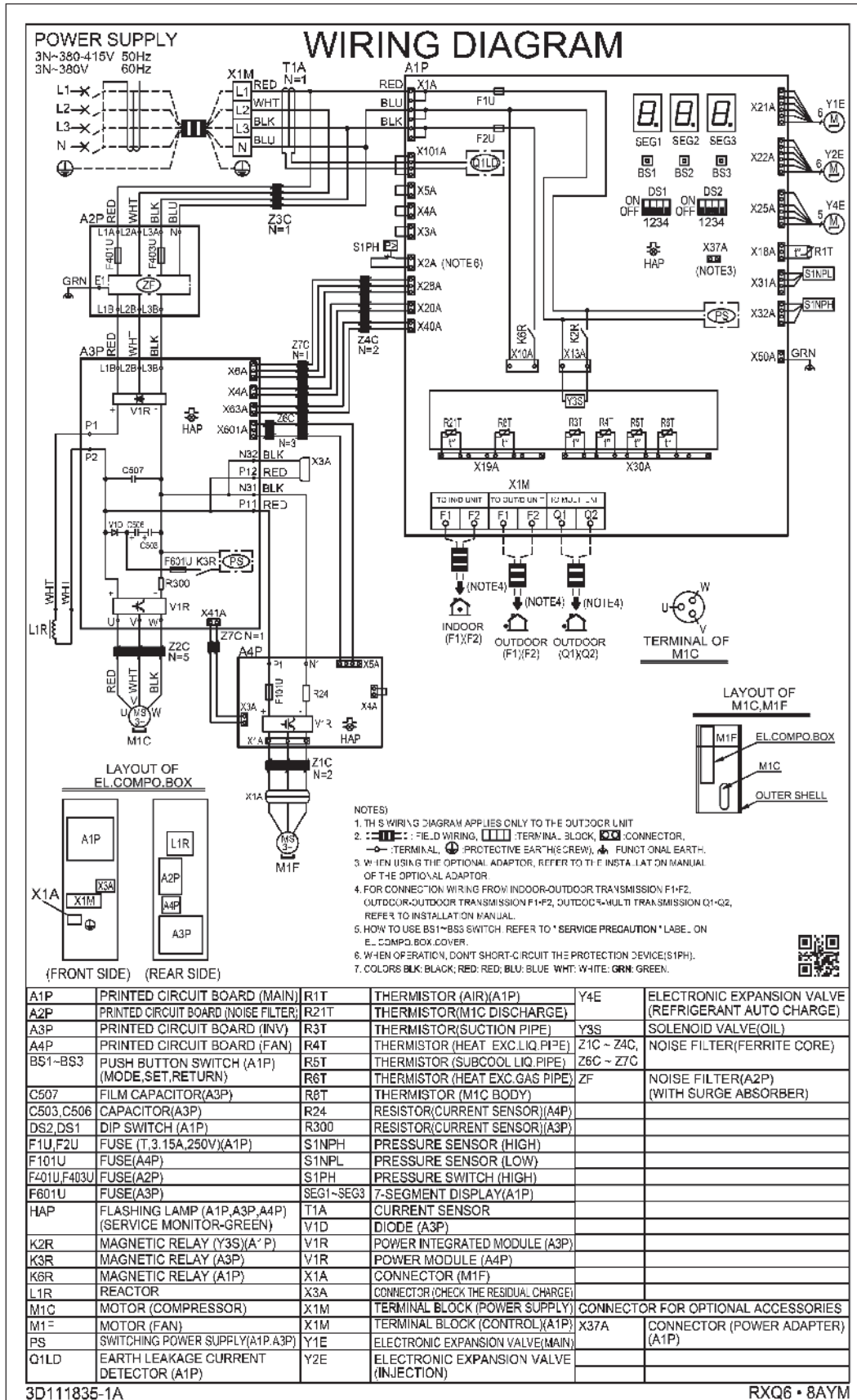
RXQ16AYM / RXQ18AYM / RXQ20AYM



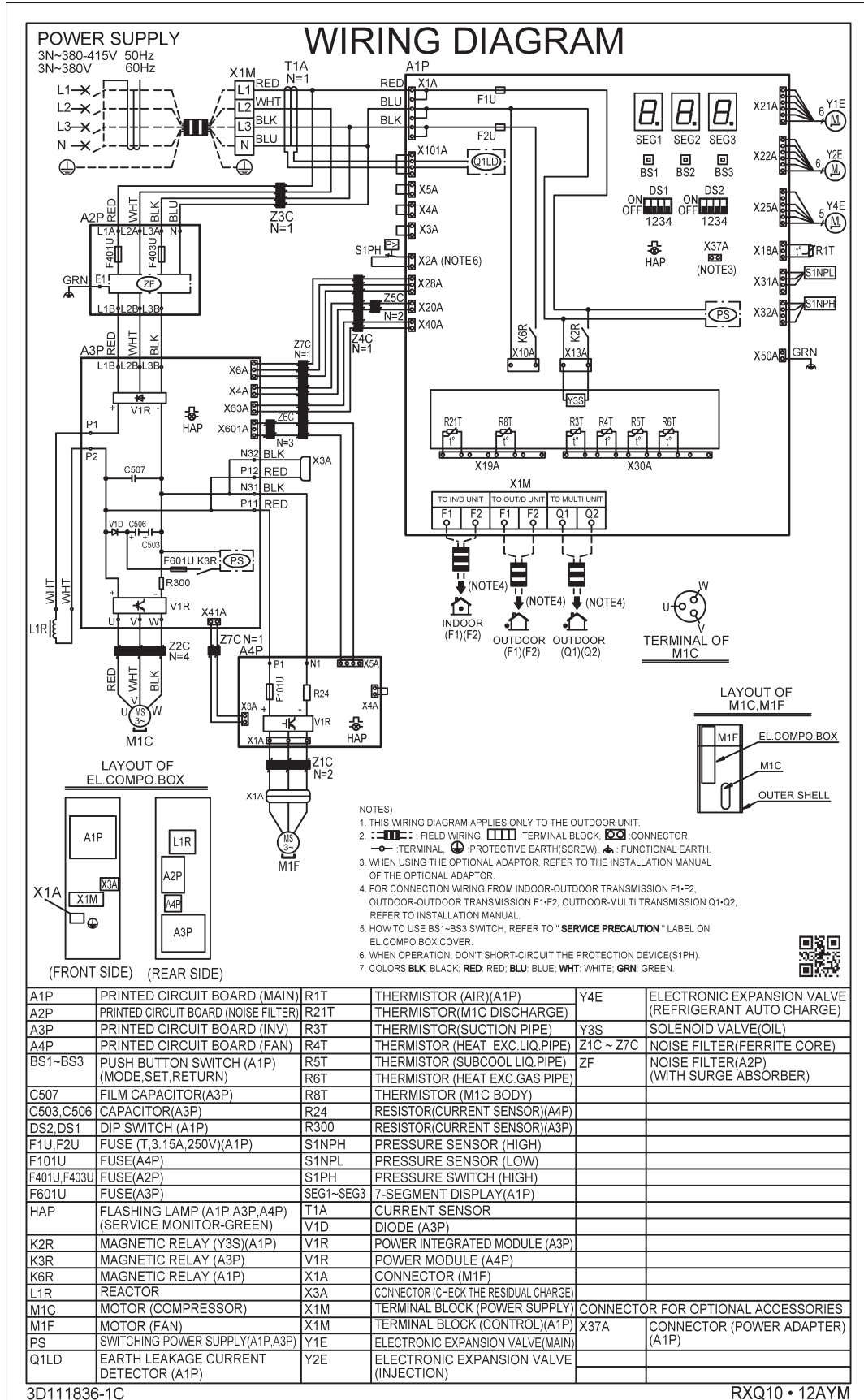
3D111854

5. Wiring Diagrams

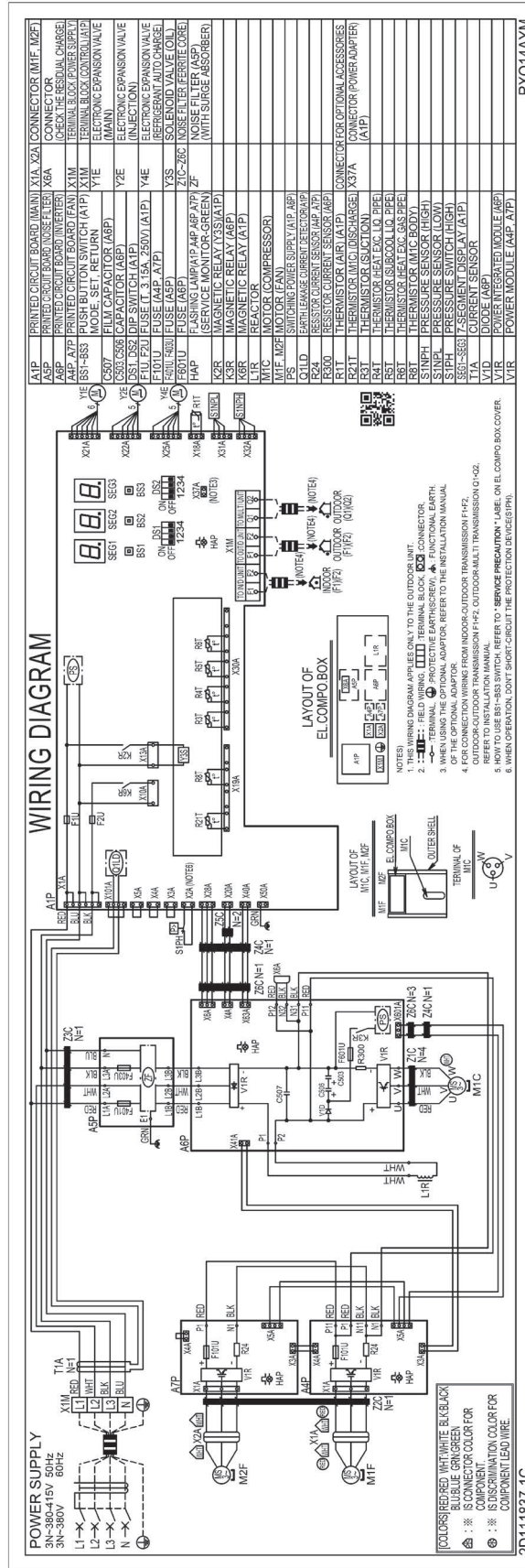
RXQ6AYM / RXQ8AYM



RXQ10AYM / RXQ12AYM



RXQ14AYM

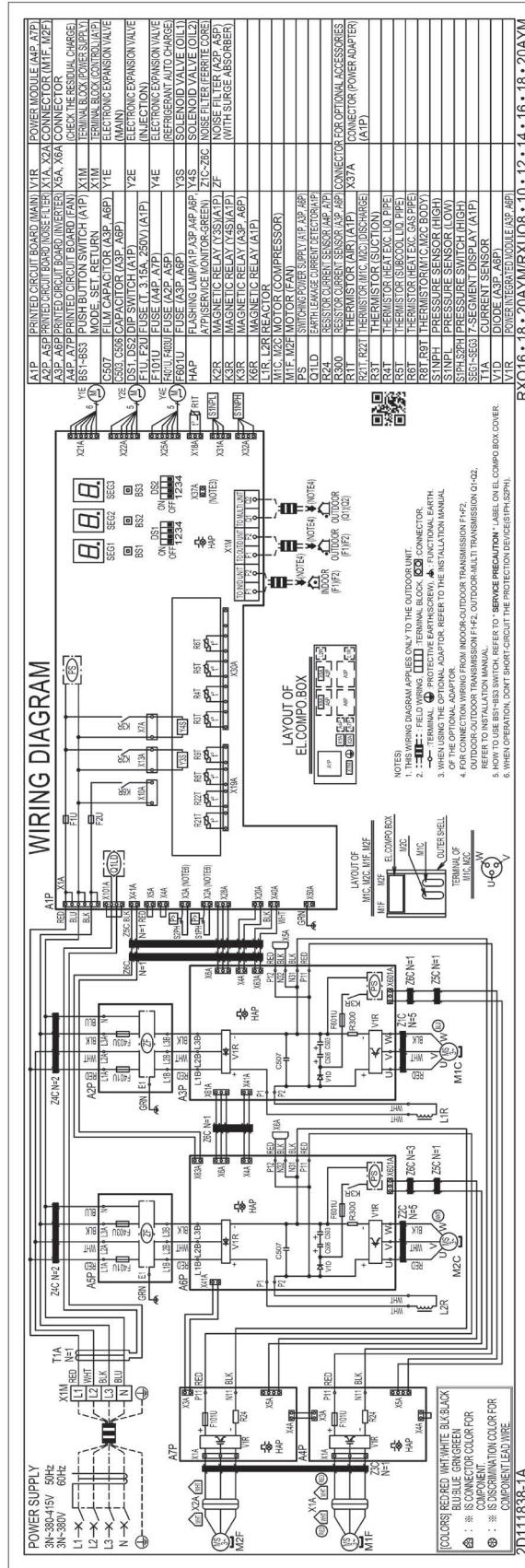


RXQ14AYM

2D111837-1C

2D111837C

RXQ16AYM / RXQ18AYM / RXQ20AYM

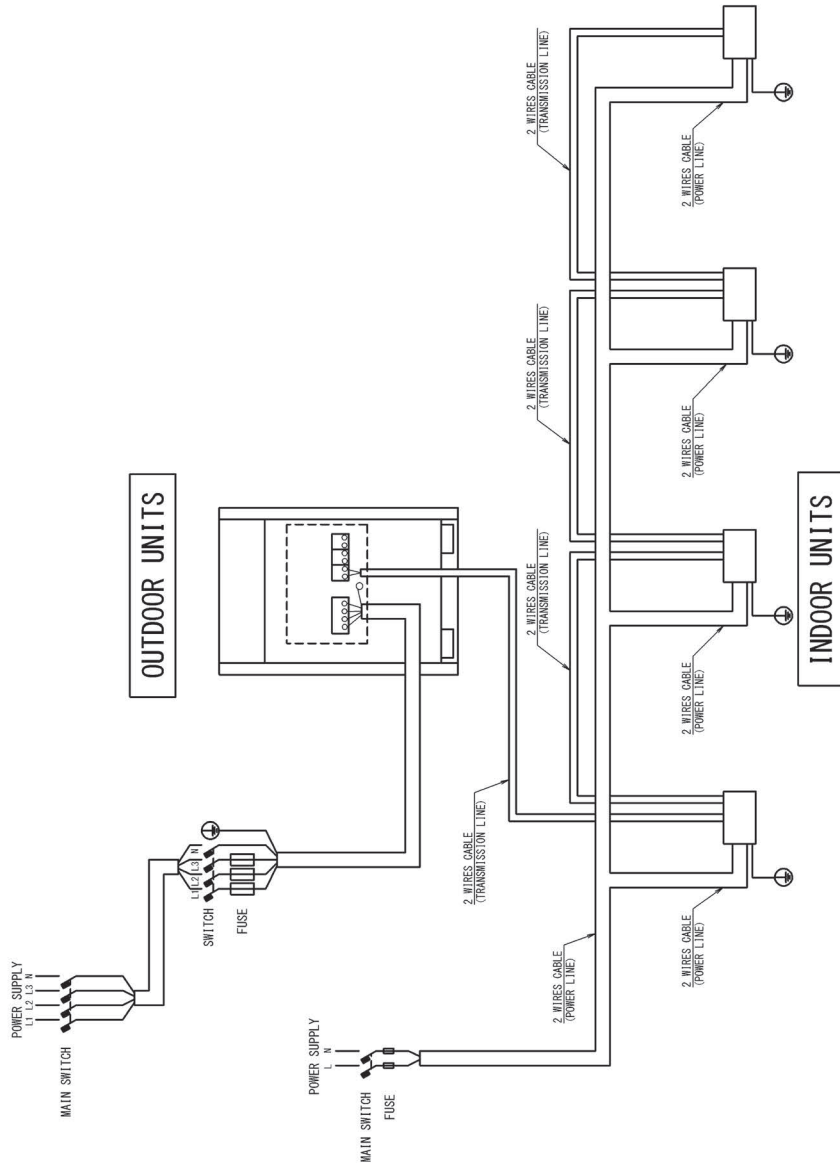


2D111838A

6. Field Wiring

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM / RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM

- 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) FOR INDOOR UNITS, INSTALL ONE SWITCH AND ONE FUSE PER SYSTEM, (NOT PER INDOOR UNIT)
 - 9) INSTALL THE MAIN SWITCH THAT CAN INTERRUPT ALL THE POWER SOURCES IN AN INTEGRATED MANNER BECAUSE THIS SYSTEM CONSISTS OF THE MULTIPLE POWER SOURCES.
 - 10) MUST INSTALL EARTH LEAKAGE CIRCUIT BREAKER.

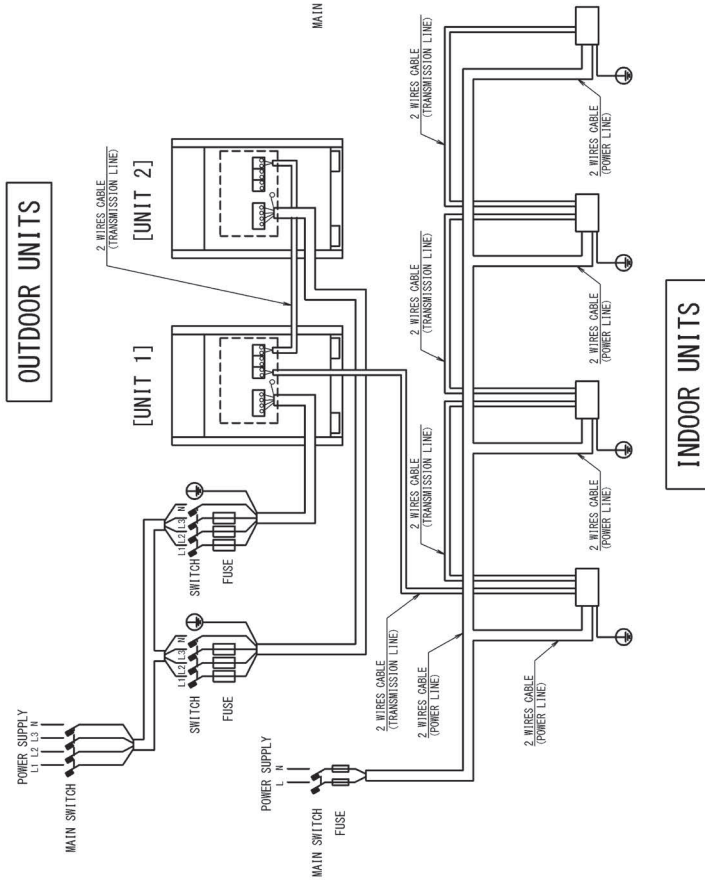


3D111511

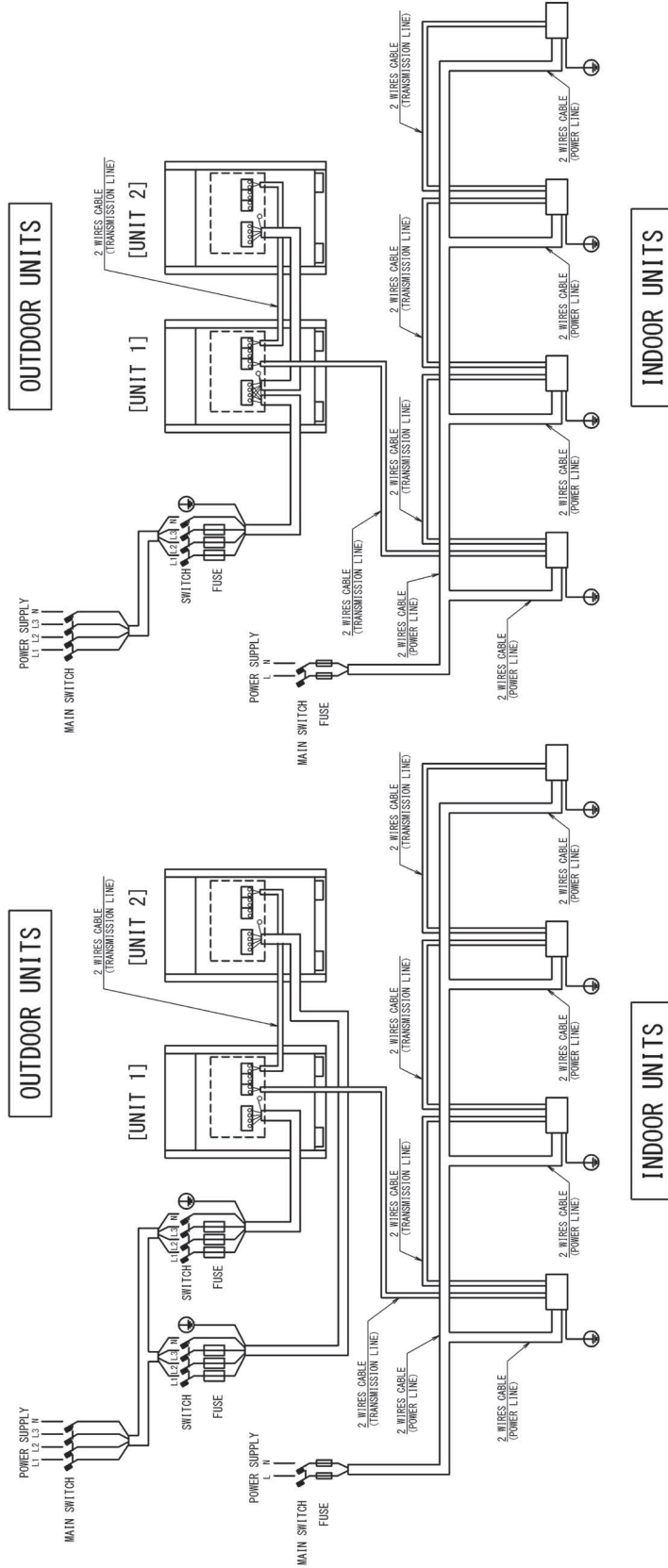
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- NOTES**
- 1) ALL WIRING COMPONENTS AND MATERIALS TO BE PROCURED ON THE SITE MUST COMPLY WITH THE APPLICABLE LOCAL AND NATIONAL CODES.
 - 2) USE COPPER CONDUCTORS ONLY.
 - 3) AS FOR DETAILS, SEE WIRING DIAGRAM.
 - 4) INSTALL CIRCUIT BREAKER FOR SAFETY.
 - 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) FOR INDOOR UNITS, INSTALL ONE SWITCH AND ONE FUSE PER SYSTEM (NOT PER INDOOR UNIT)
 - 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) THE CAPACITY OF UNIT 1 MUST BE LARGER THAN UNIT 2 WHEN THE POWER SOURCE IS CONNECTED IN SERIES BETWEEN THE UNITS.
 - 11) MUST INSTALL EARTH LEAKAGE CIRCUIT BREAKER.

◀ WHEN THE POWER SOURCE IS SUPPLIED TO EACH OUTDOOR UNIT INDIVIDUALLY ▶



◀ WHEN THE POWER SOURCE IS CONNECTED IN SERIES BETWEEN THE UNITS. ▶

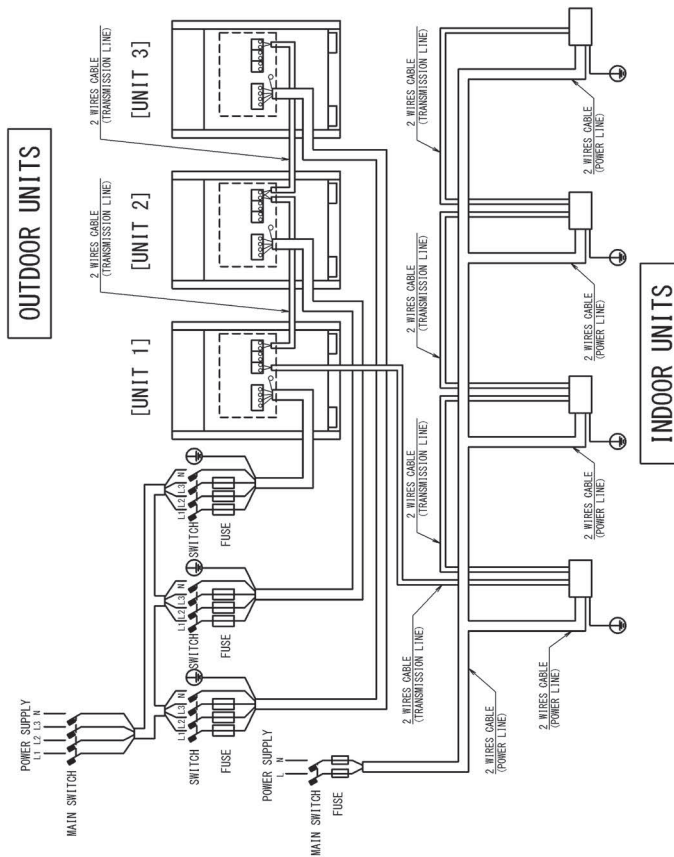


RXQ42AYM / RXQ44AYM / RXQ46AYM / RXQ48AYM / RXQ50AYM / RXQ52AYM / RXQ54AYM / RXQ56AYM / RXQ58AYM / RXQ60AYM

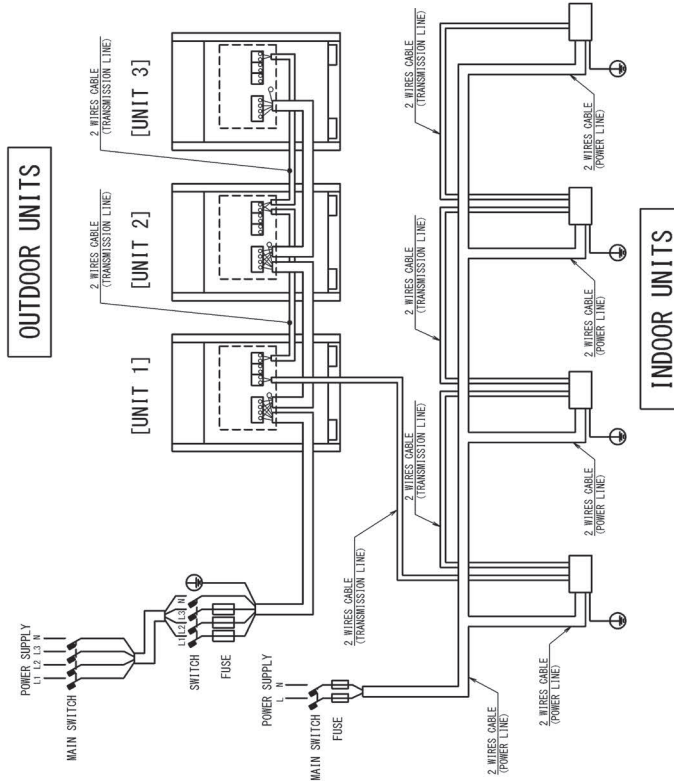
NOTES
 1) ALL WIRING COMPONENTS AND MATERIALS TO BE PROCURED ON THE SITE MUST COMPLY WITH THE APPLICABLE LOCAL AND NATIONAL CODES.
 2) USE COPPER CONDUCTORS ONLY.
 3) AS FOR DETAILS, SEE WIRING DIAGRAM.
 4) INSTALL CIRCUIT BREAKER FOR SAFETY.
 5) ALL FIELD WIRING AND COMPONENTS MUST BE PROVIDED BY LICENSED ELECTRICIAN.
 6) UNIT SHALL BE GROUNDED IN COMPLIANCE WITH THE APPLICABLE LOCAL AND NATIONAL CODES.
 7) WIRING SHOWN ARE GENERAL POINTS-OF-CONNECTION WITH THE APPLICABLE LOCAL AND NATIONAL CODES.
 8) FOR INDOOR UNITS, INSTALL ONE SWITCH AND ONE FUSE PER SYSTEM. (NOT PER INDOOR UNIT)
 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) THE CAPACITY OF UNIT 1 MUST BE LARGER THAN UNIT 2 AND UNIT 2 MUST BE LARGER THAN UNIT 3 WHEN THE POWER SOURCE IS CONNECTED IN SERIES BETWEEN THE UNITS.
 11) MUST INSTALL EARTH LEAKAGE CIRCUIT BREAKER.

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.
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 8) FOR INDOOR UNITS, INSTALL ONE SWITCH AND ONE FUSE PER SYSTEM. (NOT PER INDOOR UNIT)
 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) THE CAPACITY OF UNIT 1 MUST BE LARGER THAN UNIT 2 AND UNIT 2 MUST BE LARGER THAN UNIT 3 WHEN THE POWER SOURCE IS CONNECTED IN SERIES BETWEEN THE UNITS.
 11) MUST INSTALL EARTH LEAKAGE CIRCUIT BREAKER.

< WHEN THE POWER SOURCE IS SUPPLIED TO EACH OUTDOOR UNIT INDIVIDUALLY >



< WHEN THE POWER SOURCE IS CONNECTED IN SERIES BETWEEN THE UNITS >



7. Electric Characteristics

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM / RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM

Combination unit	Model name		Independent Unit			Units			Power supply			Compressor			OFM	
	Hz	Volts	Min.	Max.		MCA	TOCA	MFA	MSC	RLA	kW	FLA				
RXQ6AYM	50	380	342	456		16.1	19.3	20	-	4.7	0.55	0.8				
		400														
		415														
RXQ8AYM	60	380	342	418		16.1	19.3	20	-	7.4	0.55	1.4				
		400														
		415														
RXQ10AYM	50	380	342	456		21.2	29.8	25	-	9.2	0.55	1.4				
		400														
		415														
RXQ12AYM	60	380	342	418		22.5	29.8	25	-	12.1	0.55	1.6				
		400														
		415														
RXQ14AYM	50	380	342	456		26.9	32.5	30	-	13.2	0.75x2	1.1+1.2				
		400														
		415														
RXQ16AYM	60	380	342	418		30.2	39.0	35	-	14.4	0.75x2	1.1+1.2				
		400														
		415														
RXQ18AYM	50	380	342	456		30.2	39.0	35	-	9.5 + 9.5	0.75x2	1.1+1.2				
		400														
		415														
RXQ20AYM	60	380	342	456		38.9	49.5	45	-	11.8 + 11.8	0.75x2	1.4+1.9				
		400														
		415														

Notes :

1. RLA is based on the following conditions.
Indoor temp. 27°C DB / 19°C WB
Outdoor temp. 35°C DB
2. TOCA means the total value of each OC set.
3. MSC means the Max. current during the starting of compressor.
4. Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
5. Maximum allowable voltage variation between phases is 2%.
6. Select wire size based on the value of MCA.
7. MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).
8. Model RXQ-AY14AY1S are 50 Hz only.

Symbols :

- MCA : Min. Circuit Amps. (A)
- TOCA : Total Over-current Amps. (A)
- MFA : Max. Fuse Amps. (A)
- MSC : Max. Starting current
- RLA : Rated Load Amps. (A)
- OFM : Outdoor Fan motor
- FLA : Full load Amps. (A)
- kW : Rated Motor Output (kW)

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RXQ18AMYM / RXQ20AMYM / RXQ22AMYM / RXQ24AMYM / RXQ26AMYM / RXQ28AMYM / RXQ30AMYM / RXQ32AMYM

Combination unit	Model name		Independent Unit	Units			Power supply			Compressor		OFM		
				Hz	Volts	Min.	Max.	MCA	TOCA	MFA	MSC	RLA	kW	FLA
RXQ18AMYM	RXQ8AYM	RXQ10AYM		50	380	342	456	30.2	49.1	35	-	7.4 + 9.7	0.55 x 2	1.4 + 1.4
				400	342	456	7.0 + 9.2							
				415	342	418	6.8 + 8.9							
RXQ20AMYM	RXQ8AYM	RXQ12AYM		50	380	342	456	38.9	49.1	45	-	7.4 + 13.2	0.55 x 2	1.4 + 1.6
				400	342	456	7.0 + 12.6							
				415	342	418	6.8 + 12.1							
RXQ22AMYM	RXQ10AYM	RXQ12AYM		50	380	342	456	43.7	59.6	50	-	9.7 + 13.2	0.55 x 2	1.4 + 1.6
				400	342	456	9.2 + 12.6							
				415	342	418	8.9 + 12.1							
RXQ24AMYM	RXQ12AYM	RXQ12AYM		50	380	342	456	45.0	59.6	50	-	13.2 x 2	0.55 x 2	1.6 x 2
				400	342	456	12.6 x 2							
				415	342	418	12.1 x 2							
RXQ26AMYM	RXQ12AYM	RXQ14AYM		50	380	342	456	49.4	62.3	60	-	13.2 + 14.4	0.55 + 0.75x2	1.6+(1.1+1.2)
				400	342	456	12.6 + 13.7							
				415	342	418	12.1 + 13.2							
RXQ28AMYM	RXQ12AYM	RXQ16AYM		50	380	342	456	52.8	68.8	60	-	13.2 + 9.5 + 9.5	0.55 + 0.75x2	1.6+(1.1+1.2)
				400	342	456	12.6 + 9.0 + 9.0							
				415	342	418	12.1 + 8.7 + 8.7							
RXQ30AMYM	RXQ12AYM	RXQ18AYM		50	380	342	456	52.8	68.8	60	-	13.2 + 11.8 + 11.8	0.55 + 0.75x2	1.6+(1.1+1.2)
				400	342	456	12.6 + 11.2 + 11.2							
				415	342	418	12.1 + 10.8 + 10.8							
RXQ32AMYM	RXQ14AYM	RXQ18AYM		50	380	342	456	57.1	71.5	70	-	13.2 + 11.8 + 11.8	(0.75x2) x 2	(1.1+1.2) x 2
				400	342	456	13.7 + 11.2 + 11.2							
				415	342	418	13.2 + 10.8 + 10.8							

Notes :

1. RLA is based on the following conditions.
Indoor temp. 27°C DB / 19°C WB
Outdoor temp. 35°C DB
2. TOCA means the total value of each OC set.
3. MSC means the Max. current during the starting of compressor.
4. Voltage range
5. Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
6. Maximum allowable voltage variation between phases is 2%.
7. Select wire size based on the value of MCA.
8. MFA is used to select the circuit breaker and the ground fault interrupter (earth leakage circuit breaker).

Symbols :

- MCA : Min. Circuit Amps. (A)
- TOCA : Total Over-current Amps. (A)
- MFA : Max. Fuse Amps. (A)
- MSC : Max. Starting current
- RLA : Rated Load Amps. (A)
- OFM : Outdoor Fan motor
- FLA : Full load Amps. (A)
- kW : Rated Motor Output (kW)

RXQ34AMYM / RXQ36AMYM / RXQ38AMYM / RXQ40AMYM / RXQ42AMYM / RXQ44AMYM / RXQ46AMYM

Combination unit	Model name		Units			Power supply			Compressor			OFM	
	Independent Unit		Hz	Volts	Min.	Max.	MCA	TOCA	MFA	MSC	RLA	kW	FLA
RXQ34AMYM	RXQ16AYM	RXQ18AYM	50	380	342	456	60.5	78.0	70	-	9.5 + 9.5 + 11.8 + 11.8	(0.75 x 2) x 2	(1.1 + 1.2) x 2
				400						9.0 + 9.0 + 11.2 + 11.2			
				415						8.7 + 8.7 + 10.8 + 10.8			
RXQ36AMYM	RXQ18AYM	RXQ18AYM	50	380	342	418	60.5	78.0	70	-	(11.8 + 11.8) x 2	(0.75 x 2) x 2	(1.1 + 1.2) x 2
				400						(11.2 + 11.2) x 2			
				415						(10.8 + 10.8) x 2			
RXQ38AMYM	RXQ18AYM	RXQ20AYM	50	380	342	418	69.1	88.5	80	-	11.8 + 11.8 + 9.9 + 16.5	(0.75 x 2) x 2	1.1 + 1.2 + 1.4 + 1.9
				400						11.2 + 11.2 + 9.4 + 15.6			
				415						10.8 + 10.8 + 9.1 + 15.1			
RXQ40AMYM	RXQ20AYM	RXQ20AYM	50	380	342	418	77.7	99.0	90	-	(9.9 + 16.5) x 2	(0.75 x 2) x 2	(1.4 + 1.9) x 2
				400						(9.4 + 15.6) x 2			
				415						(9.1 + 15.1) x 2			
RXQ42AMYM	RXQ12AYM	RXQ18AYM	50	380	342	418	75.3	98.6	90	-	13.2 x 2 + 11.8 + 11.8	(0.55) x 2 + 0.75 x 2	(1.6) x 2 + 1.1 + 1.2
				400						12.6 x 2 + 11.2 + 11.2			
				415						12.1 x 2 + 10.8 + 10.8			
RXQ44AMYM	RXQ12AYM	RXQ12AYM	50	380	342	418	83.9	109.1	100	-	13.2 x 2 + 11.8 + 11.8	(0.55) x 2 + 0.75 x 2	(1.6) x 2 + 1.4 + 1.9
				400						13.2 x 2 + 9.9 + 16.5			
				415						12.6 x 2 + 9.4 + 15.6			
RXQ46AMYM	RXQ14AYM	RXQ14AYM	50	380	342	418	84.0	104.0	100	-	12.1 x 2 + 9.1 + 15.1	(0.75 x 2) x 2 + 0.75 x 2	(1.1 + 1.2) x 2 + 1.1 + 1.2
				400						(14.4) x 2 + 11.8 + 11.8			
				415						(13.7) x 2 + 11.2 + 11.2			
			60	380	342	418				(13.2) x 2 + 10.8 + 10.8			
			60	380	342	418				(14.4) x 2 + 11.8 + 11.8			

Notes :

1. RLA is based on the following conditions.
Indoor temp. 27°C DB / 19°C WB
Outdoor temp. 35°C DB
2. TOCA means the total value of each OC set.
3. MSC means the Max. current during the starting of compressor.
4. Voltage range
5. Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
6. Maximum allowable voltage variation between phases is 2%.
7. MFA is used to select the suitable breaker and the ground fault circuit interrupter (earth leakage circuit breaker).
8. Model RXQ-(A)(M)(Y)14(A)(M)(Y)IS are 50 Hz only.

Symbols :

- MCA : Min. Circuit Amps. (A)
- TOCA : Total Over-current Amps. (A)
- MFA : Max. Fuse Amps. (A)
- MSC : Max. Starting current
- RLA : Rated Load Amps. (A)
- OFM : Outdoor Fan motor
- FLA : Full load Amps. (A)
- kW : Rated Motor Output (kW)

RXQ48AMYM / RXQ50AMYM / RXQ52AMYM / RXQ54AMYM / RXQ56AMYM / RXQ58AMYM / RXQ60AMYM

Combination unit	Model name		Independent Unit		Hz	Units			Power supply			Compressor		OFM	
						Volts	Min.	Max.	MCA	TOCA	MFA	MSC	RLA	kW	FLA
RXQ48AMYM	RXQ14AYM	RXQ16AYM	RXQ18AYM	RXQ18AYM	50	380	342	456	87.4	110.5	100	-	14.4 + 9.5 + 9.5 + 11.8 + 11.8	(0.75 x 2) x 3	(1.1 + 1.2) x 3
					400	415	-	13.7 + 9.0 + 9.0 + 11.2 + 11.2							
					415	418	-	13.2 + 8.7 + 8.7 + 10.8 + 10.8							
RXQ50AMYM	RXQ14AYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	60	380	342	418	87.4	110.5	100	-	14.4 + 9.5 + 9.5 + 11.8 + 11.8	(0.75 x 2) x 3	(1.1 + 1.2) x 3
					400	415	-	14.4 + (11.8 + 11.8) x 2							
					415	418	-	13.7 + (11.2 + 11.2) x 2							
RXQ52AMYM	RXQ16AYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	60	380	342	418	90.7	117.0	100	-	14.4 + (11.8 + 11.8) x 2	(0.75 x 2) x 3	(1.1 + 1.2) x 3
					400	415	-	9.5 + 9.5 + (11.8 + 11.8) x 2							
					415	418	-	9.0 + 9.0 + (11.2 + 11.2) x 2							
RXQ54AMYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	60	380	342	418	90.7	117.0	100	-	8.7 + 8.7 + (10.8 + 10.8) x 2	(0.75 x 2) x 3	(1.1 + 1.2) x 3
					400	415	-	9.5 + 9.5 + (11.8 + 11.8) x 2							
					415	418	-	(11.8 + 11.8) x 3							
RXQ56AMYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	RXQ18AYM	60	380	342	418	99.4	127.5	110	-	(11.8 + 11.8) x 2 + 9.9 + 16.5	(0.75 x 2) x 3	(1.1 + 1.2) x 2 + 1.4 + 1.9
					400	415	-	(11.2 + 11.2) x 2 + 9.4 + 15.6							
					415	418	-	(10.8 + 10.8) x 2 + 9.1 + 15.1							
RXQ58AMYM	RXQ18AYM	RXQ20AYM	RXQ20AYM	RXQ20AYM	60	380	342	418	108.0	138.0	125	-	(11.8 + 11.8) x 2 + 9.9 + 16.5	(0.75 x 2) x 3	1.1 + 1.2 + (1.4 + 1.9) x 2
					400	415	-	11.8 + 11.8 + (9.4 + 15.6) x 2							
					415	418	-	10.8 + 10.8 + (9.1 + 15.1) x 2							
RXQ60AMYM	RXQ20AYM	RXQ20AYM	RXQ20AYM	RXQ20AYM	60	380	342	418	116.6	148.5	150	-	11.8 + 11.8 + (9.9 + 16.5) x 2	(0.75 x 2) x 3	(1.4 + 1.9) x 3
					400	415	-	(9.9 + 16.5) x 3							
					415	418	-	(9.4 + 15.6) x 3							

Notes :

1. RLA is based on the following conditions.
Indoor temp. 27°C DB / 19°C WB
Outdoor temp. 35°C DB
2. TOCA means the total value of each OC set.
3. MSC means the Max. current during the starting of compressor.
4. Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
5. Maximum allowable voltage variation between phases is 2%.
6. Select wire size based on the value of MCA.
7. MFA is used to select the circuit breaker and the ground fault interrupter (earth leakage circuit breaker).
8. Model RXQ-A(M)Y14(A)(M)Y1S are 50 Hz only.

Symbols :

- MCA : Min. Circuit Amps. (A)
- TOCA : Total Over-current Amps. (A)
- MFA : Max. Fuse Amps. (A)
- MSC : Max. Starting current
- RLA : Rated Load Amps. (A)
- OFM : Outdoor Fan motor
- FLA : Full load Amps. (A)
- kW : Rated Motor Output (kW)

8. Safety Devices Setting

Safety devices		RXQ6AYM	RXQ8AYM	RXQ10AYM	RXQ12AYM
Printed circuit board fuse	A1P	250 V, 3.15 A			
	A2P	500 V, 40 A		600 V, 63 A	
	A3P	650 V, 1 A			
	A4P	650 V, 8 A			
	A5P	—			
	A6P	—			
	A7P	—			
High pressure switch	S1PH	OFF 4.0 ⁺⁰ _{-0.12} MPa ON 3.0±0.15 MPa			
	S2PH	—			
Overload protector	M1C	17.0 A		27.5 A	
	M2C	—			
	M1F	2.27 A			
	M2F	—			
Electronic expansion valve (Main)	EV1	Fully closed : 0 pls Full open: 3000 pls			
Electronic expansion valve (Subcooled)	EV2	Fully closed : 0 pls Full open: 480 pls			
Electronic expansion valve (Auto charge)	EV3	Fully closed : 0 pls Full open: 480 pls			

Safety devices		RXQ14AYM	RXQ16AYM	RXQ18AYM	RXQ20AYM	
Printed circuit board fuse	A1P	250 V, 3.15 A				
	A2P	600 V, 63 A		500 V, 40 A		
	A3P	650 V, 1 A				
	A4P	650 V, 8 A				
	A5P	—		500 V, 40 A		600 V, 63 A
	A6P	—		650 V, 1 A		
	A7P	650 V, 8 A				
High pressure switch	S1PH	OFF 4.0 ⁺⁰ _{-0.12} MPa ON 3.0±0.15 MPa				
	S2PH	—		OFF 4.0 MPa ON 3.0±0.15 Mpa		
Overload protector	M1C	27.5 A		17.0 A		
	M2C	—		17.0 A		
	M1F	2.52 A				
	M2F	2.52 A				
Electronic expansion valve (Main)	EV1	Fully closed : 0 pls Full open: 3000 pls				
Electronic expansion valve (Subcooled)	EV2	Fully closed : 0 pls Full open: 480 pls				
Electronic expansion valve (Auto charge)	EV3	Fully closed : 0 pls Full open: 480 pls				

RXQ8AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows include capacity ratios of 130%, 120%, 110%, 100%, and 90%.

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows include capacity ratios of 70%, 60%, 50%, 40%, and 30%.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur. 2. [] shows rated condition.

RXQ10AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by 130%, 120%, 110%, 100%, and 90% capacity ratios.

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by 70%, 60%, 50%, 40%, and 30% capacity ratios.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ14AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) and rows for 130%, 120%, 110%, 100%, 90%, and 80% capacity ratios. Each row contains capacity (kW) and power input (kW) for various indoor air conditions.

Table with columns for Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) and rows for 70%, 60%, 50%, 40%, and 30% capacity ratios. Each row contains capacity (kW) and power input (kW) for various indoor air conditions.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ16AYM Cooling capacity for VRV indoor units only (VRT)

Table with multiple columns for Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB), and various conditions (14, 16, 18, 19, 20, 22, 24). The table is organized into sections for 130%, 120%, 110%, 100%, and 90% capacity ratios, each with sub-sections for 70%, 60%, and 50% conditions.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ18AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%).

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (70%, 60%, 50%, 40%, 30%).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. □ shows rated condition.

RXQ20AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (10 to 39 °CDB).

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (10 to 39 °CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ18AMYM Cooling capacity for VRV indoor units only (VRT)

Capacity ratio (%)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)															
		14		16		18		19		20		22		24			
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
130%	10	57.3	7.06	61.1	7.15	64.1	7.25	65.1	7.30	65.8	7.35	67.2	7.45	68.5	7.55		
	12	56.7	7.39	60.4	7.48	63.1	7.58	64.0	7.63	64.7	7.68	66.1	7.79	67.5	7.90		
	14	56.0	7.72	59.6	7.82	62.2	7.92	63.0	7.97	63.7	8.03	65.1	8.14	66.5	8.25		
	16	55.3	8.06	58.8	8.17	61.3	8.27	62.0	8.32	62.7	8.38	64.1	8.49	65.5	8.61		
	18	54.7	8.42	58.0	8.52	60.3	8.63	61.1	8.68	61.8	8.74	63.1	8.85	64.5	8.98		
	20	54.0	8.76	57.3	8.88	59.4	8.99	60.1	9.05	60.8	9.11	62.2	9.22	63.5	9.35		
	21	53.6	8.92	56.9	9.06	58.9	9.18	59.6	9.23	60.3	9.29	61.7	9.41	63.1	9.54		
	23	53.0	9.27	56.1	9.41	58.0	9.55	58.7	9.61	59.4	9.67	60.8	9.79	62.1	9.92		
	25	52.3	9.63	55.3	9.78	57.1	9.93	57.8	10.0	58.5	10.1	59.8	10.2	61.2	10.3		
	27	51.6	10.0	54.4	10.2	56.2	10.3	56.9	10.4	57.6	10.5	58.9	10.6	60.3	10.7		
	29	50.9	10.4	53.6	10.6	55.3	10.7	56.0	10.8	56.7	10.9	58.0	11.0	59.4	11.1		
	31	50.1	10.9	52.8	11.0	54.4	11.1	55.1	11.2	55.8	11.3	57.1	11.4	58.5	11.5		
33	49.4	11.3	51.9	11.4	53.5	11.6	54.2	11.6	54.9	11.7	56.2	11.8	57.6	11.9			
35	48.7	11.8	51.1	11.9	52.6	12.0	53.3	12.0	54.0	12.1	55.3	12.2	56.6	12.4			
37	47.9	12.2	50.2	12.3	51.7	12.4	52.5	12.5	53.2	12.5	54.4	12.7	55.7	12.8			
39	47.2	12.6	49.3	12.7	50.9	12.9	51.6	12.9	52.3	13.0	53.6	13.1	54.8	13.2			
120%	10	55.5	7.03	59.4	7.13	62.6	7.22	63.9	7.27	64.9	7.32	66.2	7.43	67.4	7.53		
	12	54.8	7.36	58.7	7.45	61.7	7.56	62.9	7.61	63.8	7.66	65.1	7.77	66.3	7.88		
	14	54.2	7.69	57.9	7.79	60.9	7.90	61.9	7.95	62.8	8.01	64.1	8.11	65.3	8.24		
	16	53.6	8.03	57.2	8.14	60.0	8.25	61.0	8.30	61.8	8.36	63.1	8.48	64.3	8.60		
	18	53.0	8.38	56.5	8.49	59.1	8.60	60.1	8.66	60.8	8.72	62.1	8.85	63.4	8.98		
	20	52.4	8.73	55.7	8.85	58.3	8.97	59.2	9.03	59.9	9.09	61.2	9.22	62.4	9.35		
	21	52.1	8.90	55.3	9.02	57.8	9.15	58.7	9.21	59.4	9.28	60.7	9.41	61.9	9.54		
	23	51.4	9.24	54.6	9.37	57.0	9.52	57.8	9.59	58.5	9.66	59.7	9.79	61.0	9.93		
	25	50.8	9.60	53.9	9.74	56.1	9.89	56.9	9.97	57.5	10.0	58.8	10.2	60.1	10.3		
	27	50.1	9.99	53.1	10.1	55.3	10.1	56.0	10.4	56.6	10.4	57.9	10.6	59.2	10.7		
	29	49.5	10.4	52.4	10.5	54.4	10.7	55.1	10.8	55.7	10.8	57.0	11.0	58.3	11.1		
	31	48.8	10.8	51.6	11.0	53.5	11.1	54.2	11.2	54.8	11.3	56.1	11.4	57.3	11.6		
33	48.1	11.2	50.9	11.4	52.7	11.5	53.3	11.6	53.9	11.7	55.2	11.8	56.4	12.0			
35	47.5	11.7	50.1	11.8	51.8	12.0	52.4	12.0	53.1	12.1	54.3	12.3	55.5	12.4			
37	46.7	12.1	49.3	12.3	50.9	12.4	51.5	12.5	52.2	12.5	53.4	12.7	54.6	12.8			
39	46.1	12.6	48.6	12.7	50.0	12.8	50.7	12.9	51.3	13.0	52.5	13.1	53.6	13.3			
110%	10	53.7	7.00	57.6	7.10	60.8	7.20	62.2	7.25	63.5	7.30	65.1	7.41	66.2	7.52		
	12	53.0	7.32	56.9	7.42	60.1	7.53	61.4	7.58	62.5	7.64	64.1	7.75	65.2	7.87		
	14	52.4	7.66	56.2	7.76	59.3	7.87	60.5	7.93	61.6	7.99	63.1	8.11	64.2	8.23		
	16	51.8	8.00	55.5	8.10	58.5	8.22	59.7	8.28	60.7	8.34	62.1	8.47	63.2	8.60		
	18	51.2	8.34	54.8	8.46	57.7	8.58	58.8	8.64	59.8	8.71	61.1	8.84	62.2	8.97		
	20	50.7	8.70	54.1	8.82	56.9	8.94	58.0	9.01	58.9	9.08	60.1	9.21	61.3	9.36		
	21	50.4	8.86	53.7	8.98	56.5	9.12	57.6	9.20	58.4	9.26	59.7	9.41	60.8	9.55		
	23	49.8	9.21	53.1	9.33	55.7	9.47	56.7	9.55	57.5	9.63	58.7	9.79	59.9	9.94		
	25	49.2	9.57	52.4	9.70	54.9	9.84	55.8	9.92	56.6	10.0	57.8	10.2	59.0	10.3		
	27	48.6	9.95	51.7	10.1	54.1	10.2	55.0	10.3	55.7	10.4	56.8	10.6	58.1	10.8		
	29	48.0	10.3	51.0	10.5	53.3	10.6	54.1	10.7	54.8	10.8	55.9	11.0	57.1	11.2		
	31	47.3	10.8	50.3	10.9	52.5	11.1	53.3	11.2	53.9	11.2	55.0	11.4	56.2	11.6		
33	46.7	11.2	49.6	11.4	51.7	11.5	52.4	11.6	53.0	11.7	54.1	11.8	55.3	12.0			
35	46.1	11.6	48.8	11.8	50.8	12.0	51.5	12.0	52.1	12.1	53.2	12.3	54.4	12.5			
37	45.4	12.1	48.1	12.2	50.0	12.4	50.6	12.5	51.2	12.6	52.3	12.7	53.4	12.9			
39	44.7	12.5	47.4	12.7	49.1	12.8	49.7	12.9	50.3	13.0	51.4	13.2	52.5	13.3			
100%	10	49.9	6.95	55.7	7.05	58.9	7.16	60.3	7.21	61.6	7.27	63.8	7.37	65.1	7.49		
	12	49.8	7.27	55.0	7.38	58.2	7.49	59.6	7.55	60.8	7.60	62.8	7.72	64.1	7.84		
	14	49.7	7.61	54.3	7.71	57.4	7.83	58.8	7.89	60.0	7.95	61.9	8.07	63.1	8.21		
	16	49.6	7.94	53.6	8.06	56.7	8.18	58.0	8.24	59.1	8.30	60.9	8.44	62.1	8.58		
	18	49.4	8.29	52.9	8.41	55.9	8.54	57.2	8.60	58.3	8.67	60.0	8.81	61.1	8.95		
	20	48.8	8.65	52.3	8.76	55.2	8.90	56.4	8.96	57.5	9.03	59.1	9.19	60.1	9.34		
	21	48.5	8.82	51.9	8.93	54.8	9.06	56.0	9.13	57.1	9.20	58.6	9.36	59.7	9.54		
	23	48.0	9.16	51.3	9.27	54.1	9.41	55.2	9.48	56.2	9.56	57.7	9.72	58.8	9.90		
	25	47.4	9.52	50.7	9.64	53.3	9.78	54.4	9.85	55.4	9.93	56.8	10.1	57.8	10.3		
	27	46.8	9.90	50.0	10.0	52.6	10.2	53.7	10.2	54.6	10.3	55.8	10.5	56.9	10.7		
	29	46.2	10.3	49.4	10.4	51.9	10.6	52.9	10.7	53.7	10.7	54.9	10.9	56.0	11.1		
	31	45.7	10.7	48.7	10.9	51.1	11.0	52.1	11.1	52.9	11.2	54.0	11.4	55.1	11.5		
33	45.1	11.2	48.0	11.3	50.4	11.5	51.2	11.5	52.0	11.6	53.1	11.8	54.2	12.0			
35	44.5	11.6	47.4	11.7	49.6	11.9	50.4	12.1	51.1	12.1	52.1	12.3	53.2	12.5			
37	43.9	12.0	46.7	12.2	48.8	12.4	49.6	12.5	50.2	12.5	51.2	12.7	52.3	12.9			
39	43.2	12.4	46.0	12.6	48.0	12.8	48.7	12.9	49.3	13.0	50.3	13.2	51.4	13.4			
90%	10	44.8	5.62	50.0	5.65	52.8	5.69	54.1	5.71	55.2	5.73	57.1	5.77	58.3	5.82		
	12	44.7	5.88	49.3	5.92	52.3	5.96	53.4	5.98	54.5	6.01	56.3	6.06	57.5	6.11		
	14	44.7	6.15	48.7	6.19	51.5	6.24	52.7	6.27	53.7	6.30	55.4	6.35	56.6	6.41		
	16	44.7	6.42	48.2	6.48	50.9	6.53	52.0	6.56	53.0	6.59	54.7	6.65	55.8	6.72		
	18	44.4	6.70	47.6	6.76	50.2	6.83	51.3	6.86	52.3	6.89	54.0	6.96	55.0	7.03		
	20	43.9	6.99	47.0	7.06	49.6	7.13	50.7	7.17	51.6	7.20	53.1	7.28	54.1	7.35		
	21	43.7	7.14	46.7	7.21	49.3	7.29	50.4	7.32	51.3	7.36	52.7	7.44	53.7	7.51		
	23	43.2	7.44	46.2	7.52	48.6	7.60	49.7	7.64	50.6	7.68	51.9	7.76	52.9	7.84		
	25	42.7	7.75	45.6	7.83	48.0	7.92	49.0	7.96	49.8	8.01	51.1	8.09	52.1	8.18		
	27	42.1	8.07	45.0	8.16	47.4	8.25	48.3	8.29	49.1	8.34	50.3	8.43	51.2	8.52		
	29	41.6	8.39	44.4	8.48	46.7	8.58	47.6	8.63	48.3	8.68	49.4	8.77	50.4	8.87		
	31	41.1	8.72	43.9	8.82	46.0	8.92	46.9	8.97	47.6	9.02	48.6	9.12	49.6	9.23		
33	40.6	9.06	43.3	9.16	45.3	9.27	46.1	9.32	46.8	9.38	47.8	9.48	48.7	9.59			
35	40.1	9.40	42.7	9.51	44.7	9.62	45.4	9.68	45.9	9.74	46.9	9.85	47.9	9.96			
37	40.1	10.6	42.7	10.7	44.7	10.7	45.4	10.8	45.9	10.8	46.9	10.9	47.9	10.9			
39	40.1	11.6	42.7	11.7	44.7	11.8	45.4	11.8	45.9	11.8	46.9	11.9	47.9	11.9			
80%	10	39.8	4.40	44.4	4.39	47.0	4.38	48.0	4.38	49.0	4.38	50.7	4.39	51.1	4.40		
	12	39.8	4.62	43.9	4.61	46.4	4.62	47.4	4.62	48.4	4.62	49.9	4.63	51.1	4.65		
	14	39.8	4.84	43.3	4.85	45.8	4.86	46.8	4.87	47.7	4.87	49.3	4.89	50.3	4.90		
	16	39.7	5.07	42.8	5.09	45.2	5.11	46.2	5.12	47.1	5.12	48.6	5.14	49.6	5.16		
	18	39.5	5.31	42.3	5.34	44.6	5.36	45.6	5.37	46.5	5.38	48.0	5.40	48.9	5.43		
	20	39.1	5.56	41.8	5.59	44.1	5.62	45.1	5.63	45.9	5.65	47.2	5.67	48.1	5.70		
	21	3															

RXQ20AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) with sub-columns for 14, 16, 18, 19, 20, 22, 24 and sub-sub-columns for TC, PI, kW. Rows are categorized by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (°CDB).

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) with sub-columns for 14, 16, 18, 19, 20, 22, 24 and sub-sub-columns for TC, PI, kW. Rows are categorized by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (°CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ22AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 37, 39 °CDB).

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 37, 39 °CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ24AMYM Cooling capacity for VRV indoor units only (VRT)

Capacity ratio (%)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)															
		14		16		18		19		20		22		24			
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
130%	10	76.4	9.87	81.6	9.99	85.7	10.1	87.0	10.2	89.7	10.4	89.7	10.4	91.4	10.5	91.4	10.5
	12	75.5	10.4	80.6	10.6	84.3	10.7	85.5	10.7	86.5	10.8	88.3	10.9	89.9	11.1	89.9	11.1
	14	74.6	11.0	79.5	11.1	83.0	11.3	84.1	11.3	85.0	11.4	86.8	11.5	88.5	11.6	88.5	11.6
	16	73.7	11.6	78.4	11.7	81.7	11.8	82.7	11.9	83.7	11.9	85.4	12.1	87.1	12.2	87.1	12.2
	18	72.8	12.2	77.4	12.3	80.4	12.4	81.4	12.5	82.3	12.5	84.1	12.6	85.7	12.8	85.7	12.8
	20	71.8	12.7	76.3	12.8	79.1	13.0	80.1	13.0	81.0	13.1	82.8	13.2	84.4	13.3	84.4	13.3
	21	71.4	12.9	75.7	13.1	78.5	13.2	79.4	13.3	80.3	13.4	82.1	13.5	83.8	13.6	83.8	13.6
	23	70.4	13.4	74.7	13.6	77.3	13.8	78.2	13.9	79.1	13.9	80.8	14.1	82.6	14.2	82.6	14.2
	25	69.5	13.9	73.6	14.1	76.0	14.4	77.0	14.4	77.9	14.5	79.6	14.6	81.4	14.7	81.4	14.7
	27	68.6	14.5	72.5	14.7	74.9	14.9	75.8	15.0	76.6	15.1	78.3	15.2	80.2	15.3	80.2	15.3
29	67.6	15.1	71.4	15.3	73.7	15.5	74.6	15.6	75.5	15.6	77.1	15.8	78.9	15.9	78.9	15.9	
31	66.7	15.7	70.3	15.9	72.5	16.1	73.4	16.2	74.3	16.2	76.0	16.3	77.7	16.4	77.7	16.4	
33	65.7	16.3	69.2	16.6	71.4	16.7	72.3	16.7	73.2	16.8	74.8	16.9	76.5	17.0	76.5	17.0	
35	64.7	17.0	68.1	17.1	70.3	17.2	71.2	17.3	72.1	17.4	73.7	17.5	75.3	17.6	75.3	17.6	
37	63.8	17.6	67.0	17.7	69.2	17.8	70.1	17.9	71.0	17.9	72.5	18.0	74.0	18.1	74.0	18.1	
39	62.8	18.2	65.9	18.3	68.1	18.4	69.0	18.4	69.9	18.5	71.4	18.6	72.8	18.7	72.8	18.7	
120%	10	73.9	9.82	79.4	9.95	83.7	10.1	85.4	10.2	86.8	10.4	88.4	10.4	89.9	10.5	89.9	10.5
	12	72.9	10.4	78.3	10.5	82.4	10.7	84.0	10.7	85.3	10.8	86.9	10.9	88.4	11.1	88.4	11.1
	14	72.0	11.0	77.2	11.1	81.2	11.2	82.7	11.3	83.8	11.4	85.5	11.5	87.0	11.6	87.0	11.6
	16	71.2	11.5	76.1	11.7	80.0	11.8	81.3	11.9	82.4	11.9	84.1	12.1	85.6	12.2	85.6	12.2
	18	70.4	12.1	75.1	12.2	78.8	12.4	80.0	12.4	81.1	12.5	82.7	12.7	84.2	12.8	84.2	12.8
	20	69.6	12.6	74.1	12.8	77.6	12.9	78.8	13.0	79.7	13.1	81.4	13.3	82.9	13.4	82.9	13.4
	21	69.2	12.9	73.6	13.1	77.0	13.2	78.1	13.3	79.1	13.4	80.7	13.5	82.3	13.7	82.3	13.7
	23	68.4	13.4	72.6	13.6	75.8	13.8	76.9	13.9	77.8	14.0	79.5	14.1	81.1	14.3	81.1	14.3
	25	67.5	13.9	71.6	14.1	74.7	14.3	75.7	14.4	76.6	14.5	78.2	14.7	79.9	14.8	79.9	14.8
	27	66.6	14.4	70.6	14.7	73.5	14.9	74.5	15.0	75.3	15.1	77.0	15.3	78.7	15.4	78.7	15.4
29	65.8	15.0	69.6	15.2	72.4	15.5	73.3	15.6	74.2	15.7	75.7	15.8	77.4	16.0	77.4	16.0	
31	64.9	15.6	68.6	15.9	71.3	16.1	72.2	16.2	73.0	16.3	74.6	16.4	76.2	16.6	76.2	16.6	
33	64.0	16.3	67.7	16.5	70.1	16.7	71.0	16.8	71.8	16.8	73.4	17.0	75.0	17.2	75.0	17.2	
35	63.1	16.9	66.7	17.1	69.0	17.2	69.9	17.3	70.7	17.4	72.2	17.6	73.8	17.7	73.8	17.7	
37	62.1	17.5	65.8	17.7	67.9	17.8	68.8	17.9	69.6	18.0	71.1	18.2	72.5	18.3	72.5	18.3	
39	61.2	18.0	64.8	18.2	66.8	18.4	67.7	18.5	68.5	18.6	70.0	18.7	71.3	18.9	71.3	18.9	
110%	10	71.5	9.77	77.0	9.91	81.4	10.1	83.2	10.1	84.9	10.2	87.1	10.3	88.4	10.5	88.4	10.5
	12	70.5	10.3	75.9	10.5	80.2	10.6	82.0	10.7	83.5	10.8	85.6	10.9	86.9	11.1	86.9	11.1
	14	69.6	10.9	74.8	11.1	79.1	11.2	80.8	11.3	82.2	11.4	84.1	11.5	85.5	11.7	85.5	11.7
	16	68.9	11.5	73.8	11.6	77.9	11.8	79.6	11.9	80.9	11.9	82.7	12.1	84.1	12.3	84.1	12.3
	18	68.1	12.0	72.8	12.2	76.8	12.4	78.4	12.4	79.6	12.5	81.4	12.7	82.7	12.9	82.7	12.9
	20	67.3	12.6	71.9	12.8	75.7	12.9	77.2	13.0	78.4	13.1	80.0	13.3	81.4	13.5	81.4	13.5
	21	67.0	12.8	71.4	13.0	75.2	13.2	76.6	13.2	77.7	13.4	79.4	13.6	80.8	13.8	80.8	13.8
	23	66.2	13.3	70.6	13.5	74.1	13.7	75.4	13.8	76.5	13.9	78.1	14.2	79.6	14.3	79.6	14.3
	25	65.4	13.8	69.6	14.0	73.0	14.2	74.3	14.4	75.3	14.5	76.8	14.7	78.4	14.9	78.4	14.9
	27	64.6	14.4	68.7	14.6	71.9	14.8	73.1	14.9	74.1	15.1	75.5	15.3	77.2	15.5	77.2	15.5
29	63.7	15.0	67.8	15.2	70.8	15.4	72.0	15.5	72.9	15.7	74.3	15.9	75.9	16.1	75.9	16.1	
31	62.9	15.6	66.8	15.8	69.8	16.0	70.8	16.1	71.7	16.3	73.1	16.5	74.7	16.7	74.7	16.7	
33	62.1	16.2	65.9	16.4	68.7	16.7	69.7	16.8	70.5	16.9	71.9	17.1	73.5	17.3	73.5	17.3	
35	61.2	16.8	64.9	17.0	67.6	17.3	68.6	17.4	69.4	17.5	70.8	17.7	72.3	17.9	72.3	17.9	
37	60.3	17.4	64.0	17.6	66.5	17.8	67.4	17.9	68.2	18.1	69.6	18.3	71.0	18.5	71.0	18.5	
39	59.4	17.9	63.2	18.2	65.6	18.4	66.3	18.5	67.1	18.6	68.5	18.9	69.8	19.1	69.8	19.1	
100%	10	66.6	9.72	74.5	9.87	78.9	10.0	80.7	10.1	82.4	10.2	85.2	10.3	86.9	10.5	86.9	10.5
	12	66.4	10.3	73.4	10.4	77.8	10.6	79.6	10.7	81.2	10.8	83.8	10.9	85.4	11.1	85.4	11.1
	14	66.2	10.8	72.4	11.0	76.7	11.2	78.5	11.3	80.0	11.4	82.5	11.5	84.0	11.7	84.0	11.7
	16	66.0	11.4	71.4	11.6	75.6	11.8	77.3	11.9	78.9	11.9	81.2	12.1	82.6	12.3	82.6	12.3
	18	65.6	12.0	70.4	12.2	74.5	12.3	76.2	12.4	77.7	12.5	79.9	12.7	81.2	12.9	81.2	12.9
	20	64.9	12.5	69.5	12.7	73.5	12.9	75.1	13.0	76.5	13.1	78.6	13.3	79.9	13.5	79.9	13.5
	21	64.5	12.8	69.0	12.9	72.9	13.1	74.6	13.2	75.9	13.3	77.9	13.6	79.3	13.8	79.3	13.8
	23	63.8	13.3	68.2	13.4	71.9	13.6	73.5	13.8	74.8	13.9	76.7	14.1	78.1	14.4	78.1	14.4
	25	63.0	13.8	67.4	14.0	70.9	14.2	72.4	14.3	73.6	14.4	75.4	14.7	76.9	14.9	76.9	14.9
	27	62.2	14.3	66.5	14.5	69.9	14.7	71.3	14.9	72.5	15.0	74.2	15.2	75.7	15.5	75.7	15.5
29	61.5	14.9	65.6	15.1	68.9	15.3	70.3	15.5	71.4	15.6	73.0	15.8	74.4	16.1	74.4	16.1	
31	60.7	15.5	64.8	15.7	67.9	16.0	69.2	16.1	70.3	16.2	71.7	16.5	73.2	16.7	73.2	16.7	
33	59.9	16.1	63.9	16.4	66.9	16.6	68.1	16.7	69.0	16.9	70.5	17.1	72.0	17.4	72.0	17.4	
35	59.1	16.7	62.9	17.0	65.9	17.3	67.0	17.4	67.9	17.5	69.3	17.8	70.8	18.1	70.8	18.1	
37	58.3	17.3	62.0	17.6	64.9	17.8	65.9	18.0	66.7	18.1	68.1	18.4	69.5	18.7	69.5	18.7	
39	57.5	17.8	61.1	18.1	63.9	18.4	64.9	18.6	65.6	18.7	66.9	19.0	68.3	19.3	68.3	19.3	
90%	10	59.6	7.65	66.6	7.69	70.5	7.72	72.1	7.74	73.6	7.76	76.0	7.80	77.5	7.84	77.5	7.84
	12	59.5	8.11	65.7	8.15	69.5	8.20	71.1	8.22	72.5	8.25	74.8	8.29	76.4	8.34	76.4	8.34
	14	59.4	8.57	64.9	8.62	68.6	8.67	70.1	8.70	71.5	8.73	73.7	8.78	75.3	8.83	75.3	8.83
	16	59.4	9.03	64.0	9.09	67.7	9.15	69.2	9.18	70.5	9.21	72.7	9.27	74.2	9.33	74.2	9.33
	18	59.0	9.49	63.2	9.55	66.8	9.62	68.2	9.66	69.6	9.69	71.7	9.76	73.1	9.83	73.1	9.83
	20	58.4	9.95	62.5	10.0	65.9	10.1	67.4	10.1	68.6	10.2	70.6	10.2	72.0	10.3	72.0	10.3
	21	58.0	10.2	62.1	10.3	65.5	10.3	66.9	10.4	68.2	10.4	70.1	10.5	71.4	10.6	71.4	10.6
	23	57.4	10.6	61.4	10.7	64.7	10.8	66.0	10.9	67.2	10.9	69.0	11.0	70.3	11.1	70.3	11.1
	25	56.7	11.1	60.6	11.2	63.8	11.3	65.1	11.4	66.3	11.4	67.9	11.5	69.2	11.6	69.2	11.6
	27	56.0	11.6	59.9	11.7	62.9	11.8	64.2	11.8	65.3	11.9	66.8	12.0	68.1	12.1	68.1	12.1
29	55.3	12.0	59.1														

RXQ26AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 37, 39 °CDB).

Table with columns for Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 37, 39 °CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ28AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and include numerical data for TC and PI values.

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are categorized by capacity ratio (70%, 60%, 50%, 40%, 30%) and include numerical data for TC and PI values.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ30AYM Cooling capacity for VRV indoor units only (VRT)

Table with columns: Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 39 °CDB).

Table with columns: Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and Capacity ratio (%). Rows are grouped by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 39 °CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ36AMYM Cooling capacity for VRV indoor units only (VRT)

Table with 3 main sections for capacity ratios 130%, 120%, and 110%. Each section includes a table with columns for Outdoor air temp (°CDB) and Indoor air temp (°CWB) at various levels (14, 16, 18, 19, 20, 22, 24) and rows for Capacity ratio (%) from 10 to 39.

Table with 3 main sections for capacity ratios 70%, 60%, and 50%. Each section includes a table with columns for Outdoor air temp (°CDB) and Indoor air temp (°CWB) at various levels (14, 16, 18, 19, 20, 22, 24) and rows for Capacity ratio (%) from 10 to 39.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ38AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and rows for capacity ratios 130%, 120%, 110%, 100%, 90%, and 80%.

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and rows for capacity ratios 70%, 60%, 50%, 40%, 30%, and 80%.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. □ shows rated condition.

RXQ40AMYM Cooling capacity for VRV indoor units only (VRT)

Capacity ratio (%)	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	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	kW	kW													
130%	10	128	21.7	136	22.0	143	22.3	145	22.3	147	22.4	150	22.5	153	22.6	156	22.7	160	22.8	164	22.9	168	23.0	172	23.1	176	23.2	180	23.3	184	23.4												
	120%	10	124	21.7	133	22.0	140	22.3	144	22.4	148	22.5	152	22.6	156	22.7	160	22.8	164	22.9	168	23.0	172	23.1	176	23.2	180	23.3	184	23.4	188	23.5											
		110%	10	120	21.6	129	21.9	136	22.2	139	22.3	142	22.5	146	22.8	148	22.9	152	23.0	156	23.1	160	23.2	164	23.3	168	23.4	172	23.5	176	23.6	180	23.7										
			100%	10	111	21.5	125	21.8	132	22.1	135	22.2	138	22.4	142	22.6	145	22.9	148	23.1	152	23.2	156	23.3	160	23.4	164	23.5	168	23.6	172	23.7	176	23.8									
				90%	10	99.7	16.5	111	16.6	118	16.7	121	16.8	123	16.9	127	17.0	129	17.1	133	17.2	137	17.3	141	17.4	145	17.5	149	17.6	153	17.7	157	17.8	161	17.9								
					80%	10	88.8	12.4	99.0	12.5	105	12.5	107	12.6	109	12.6	113	12.6	115	12.7	119	12.7	123	12.7	127	12.7	131	12.7	135	12.7	139	12.7	143	12.7	147	12.7							
						70%	10	77.6	9.66	86.5	9.64	91.4	9.61	93.4	9.60	95.2	9.58	98.3	9.55	101	9.53	104	9.5	107	9.48	110	9.46	113	9.44	116	9.42	119	9.4	122	9.38	125	9.36						
							60%	10	66.3	8.14	73.9	8.05	78.9	8.01	81.5	7.99	83.5	7.97	85.5	7.96	87.1	7.95	88.6	7.94	90.0	7.93	91.3	7.92	92.5	7.91	93.7	7.9	94.8	7.89	95.9	7.88	97.0	7.87					
								50%	10	55.4	6.71	61.4	6.64	64.9	6.65	66.5	6.68	67.9	6.73	70.2	6.88	71.9	7.11	73.6	7.34	75.1	7.51	76.4	7.67	77.6	7.82	78.7	7.97	79.8	8.11	80.8	8.25	81.8	8.39				
									40%	10	44.3	4.63	48.4	4.51	50.6	4.38	51.7	4.32	52.8	4.25	55.0	4.13	56.9	4.00	58.6	3.88	60.1	3.76	61.4	3.64	62.6	3.52	63.7	3.4	64.8	3.28	65.9	3.16	67.0	3.04			
										30%	10	35.7	3.24	37.3	3.11	39.3	2.99	40.4	2.93	41.7	2.87	44.4	2.75	46.1	2.63	47.6	2.51	48.9	2.39	50.1	2.27	51.3	2.15	52.5	2.03	53.7	1.91	54.9	1.79	56.1	1.67		
											20%	10	26.6	2.32	27.8	2.2	29.4	2.08	30.5	2.02	31.7	1.96	33.4	1.84	35.0	1.72	36.4	1.6	37.7	1.48	38.9	1.36	40.1	1.24	41.3	1.12	42.5	1.0	43.7	0.88	44.9	0.76	
												10%	10	18.5	1.67	19.4	1.6	20.4	1.54	21.3	1.48	22.2	1.42	23.1	1.36	24.0	1.3	24.9	1.24	25.8	1.18	26.7	1.12	27.6	1.06	28.5	1.0	29.4	0.94	30.3	0.88	31.2	0.82

TC: Total capacity: kW
 PI: Power input: kW (Compressor+Outdoor fan motor)
 Capacity ratio
 130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
 90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
 2. 112 shows rated condition.

RXQ44AMYM Cooling capacity for VRV indoor units only (VRT)

Main data table for RXQ44AMYM units. Columns include Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) for 14, 16, 18, 19, 20, 22, 24. Rows show capacity and power input for various indoor/outdoor temperature combinations at 130%, 120%, 110%, 100%, 90%, and 80% capacity ratios.

Main data table for RXQ6-20AYM and RXQ18-60AMYM units. Columns include Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) for 14, 16, 18, 19, 20, 22, 24. Rows show capacity and power input for various indoor/outdoor temperature combinations at 70%, 60%, 50%, 40%, and 30% capacity ratios.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [Symbol] shows rated condition.

RXQ50AMYM Cooling capacity for VRV indoor units only (VRT)

Capacity ratio (%)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)																		
		14		16		18		19		20		22		24						
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI					
130%	10	159	24.9	169	25.2	177	25.5	180	25.7	182	25.9	186	26.3	190	26.7					
	120%	10	154	24.8	165	25.1	173	25.4	177	25.6	180	25.8	183	26.2	187	26.6				
		110%	10	149	24.7	160	25.0	168	25.3	172	25.5	176	25.7	180	26.1	184	26.5			
			100%	10	138	24.5	154	24.8	163	25.2	167	25.4	170	25.6	177	26.0	180	26.4		
				90%	10	124	20.1	138	20.3	146	20.4	150	20.5	153	20.6	158	20.8	162	21.0	
					80%	10	110	16.2	123	16.2	130	16.2	133	16.2	136	16.2	141	16.3	144	16.4

TC: Total capacity: kW
 PI: Power input: kW (Compressor+Outdoor fan motor)
 Capacity ratio
 130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
 90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
 2. [Shaded box] shows rated condition.

RXQ52AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) at 14, 16, 18, 19, 20, 22, 24. Rows include capacity ratios of 130%, 120%, 110%, 100%, and 90%.

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), Indoor air temp. (°CWB) at 14, 16, 18, 19, 20, 22, 24. Rows include capacity ratios of 70%, 60%, 50%, 40%, and 30%.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [Symbol] shows rated condition.

RXQ54AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), and Indoor air temp. (°CWB) for 14, 16, 18, 19, 20, 22, 24. Rows include capacity ratios of 130%, 120%, 110%, 100%, and 80%.

Table with columns for Capacity ratio (%), Outdoor air temp. (°CDB), and Indoor air temp. (°CWB) for 14, 16, 18, 19, 20, 22, 24. Rows include capacity ratios of 70%, 60%, 50%, 40%, and 30%.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. [] shows rated condition.

RXQ56AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and kW values. Rows are grouped by capacity ratio (130%, 120%, 110%, 100%, 90%, 80%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 39 °CDB).

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) (14, 16, 18, 19, 20, 22, 24), and kW values. Rows are grouped by capacity ratio (70%, 60%, 50%, 40%, 30%) and outdoor air temperature (10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 39 °CDB).

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)
Capacity ratio
130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
2. shows rated condition.

RXQ58AMYM Cooling capacity for VRV indoor units only (VRT)

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) [14, 16, 18, 19, 20, 22, 24]. Rows include capacity ratios 130%, 120%, 110%, 100%, and 80%.

Table with columns: Capacity ratio (%), Outdoor air temp., Indoor air temp. (°CWB) [14, 16, 18, 19, 20, 22, 24]. Rows include capacity ratios 70%, 60%, 50%, 40%, and 30%.

TC: Total capacity: kW
PI: Power input: kW (Compressor+Outdoor fan motor)

Capacity ratio

130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)

90-30%: Part load ratio (Operation capacity / 100% combination capacity)

Notes: 1. This table shows the average value of conditions which may occur.

2. [] shows rated condition.

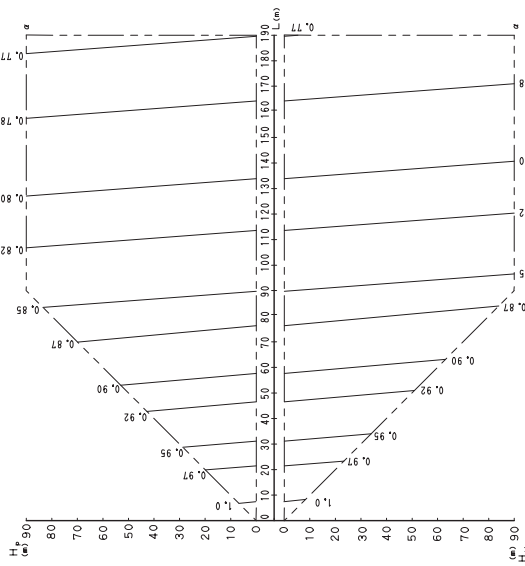
RXQ60AMYM Cooling capacity for VRV indoor units only (VRT)

Capacity ratio (%)	Outdoor air temp. °CDB	Indoor air temp. (°CWB)																																			
		14		16		18		19		20		22		24																							
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI																						
130%	10	192	32.6	205	33.0	215	33.4	218	33.5	221	33.5	225	33.7	229	33.9			10	116	14.5	130	14.5	137	14.4	140	14.4	143	14.4	147	14.3	151	14.3					
	23	177	39.4	187	41.5	194	42.2	196	42.6	198	42.9	203	43.7	207	44.6			23	112	19.9	120	19.9	126	20.0	129	20.0	131	20.1	135	20.1	137	20.2					
	120%	10	185	32.5	199	32.9	210	33.4	214	33.9	222	34.4	225	34.6					10	99.5	12.2	111	12.1	117	11.9	120	11.9	122	11.8	126	11.6	129	11.5				
		23	171	40.8	182	41.4	190	42.0	193	42.4	195	42.7	199	43.5	203	44.4			23	95.9	16.4	103	16.3	108	16.3	110	16.3	112	16.3	115	16.3	118	16.2				
		110%	10	179	32.4	193	32.8	204	33.2	209	33.5	213	33.7	218	34.2	222	34.8			10	83.1	10.1	92.1	9.96	97.4	9.97	99.7	10.0	102	10.1	105	10.3	108	10.7			
			23	166	40.7	177	41.2	186	41.8	188	42.2	192	42.5	196	43.0	200	44.1			23	79.9	12.7	85.5	12.5	90.1	12.4	92.0	12.3	93.6	12.3	96.1	12.1	97.9	12.0			
			100%	10	167	32.2	187	32.6	198	33.1	202	33.3	207	33.5	214	34.0	218	34.3			10	66.5	6.95	72.5	6.76	75.9	6.57	77.5	6.48	79.2	6.38	82.4	6.19	85.3	6.00		
				23	152	47.3	162	48.0	170	48.7	174	49.1	176	49.4	180	50.2	184	51.1			23	58.9	16.2	63.0	16.1	66.1	16.1	67.2	16.1	68.0	16.0	69.3	16.0	70.4	15.9		
				90%	10	150	24.7	167	24.9	177	25.1	181	25.2	184	25.3	191	25.5	194	25.7			10	53.5	4.85	55.9	4.67	58.9	4.49	60.0	4.40	62.5	4.31	66.7	4.13	71.4	3.95	
					23	142	34.0	152	34.4	162	34.8	163	35.0	166	35.2	170	35.6	174	36.0			23	47.7	6.89	50.6	6.74	53.7	6.58	55.3	6.51	57.0	6.43	60.6	6.28	64.5	6.13	
					80%	10	133	18.7	149	18.7	157	18.8	161	18.8	164	18.9	169	18.9	173	19.0			10	52.6	5.17	55.1	4.99	58.1	4.81	59.8	4.72	61.7	4.64	65.7	4.46	70.3	4.28
						23	125	27.4	134	27.6	140	27.9	143	28.0	145	28.1	149	28.4	152	28.6			23	45.8	11.1	45.6	11.1	48.8	11.0	50.4	10.9	52.0	10.9	55.1	10.8	58.1	10.7

TC: Total capacity: kW
 PI: Power input: kW (Compressor+Outdoor fan motor)
 Capacity ratio
 130-100%: Combination ratio (Total capacity index of indoor units / Capacity index of outdoor units)
 90-30%: Part load ratio (Operation capacity / 100% combination capacity)
Notes: 1. This table shows the average value of conditions which may occur.
 2. shows rated condition.

9.2 Capacity Correction Factor RXQ6AYM / RXQ8AYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 Hp : Level difference (m) between indoor and outdoor units where indoor unit in inferior position
 Hm : Level difference (m) between indoor and outdoor units where indoor unit in superior position
 L : Equivalent Pipe length (m)
 α : Rate of change in cooling Capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ6, 8A	φ 19.1	φ 9.5
RXQ8A		
RXQ6, 8T		
RWQ6, 8T		

[Temper grade and Thickness]

Temper grade	0 Type	1/2H Type
Outer diameter	φ 9.5	φ 12.7
Minimum Wall Thickness	0.80	0.80

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{A/C \text{ capacity of outdoor units}}{\text{Maximum A/C capacity of indoor units}} \times \text{A/C capacity of indoor units}$$
 • Condition: Indoor unit combination ratio exceeds 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{A/C \text{ capacity of outdoor units}}{\text{Maximum A/C capacity of indoor units}} \times \text{A/C capacity of indoor units}$$

[Diameter of above case]

Model	gas	liquid
RXQ6, 8A	φ 22.2	φ 12.7
RXQ8A		
RXQ6, 8T		
RWQ6, 8T		

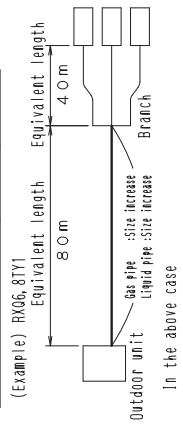
- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.

- Read cooling capacity rate of change in the above figures based on the following equivalent length.

Overall equivalent length = (Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size

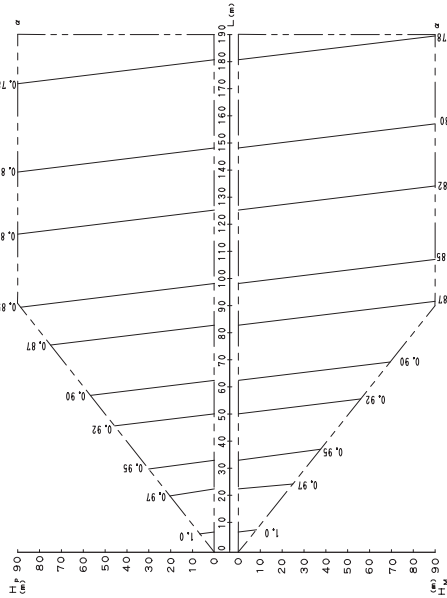
Rate of change (Object Piping)	Correction factor
Cooling (gas pipe)	1.0
	0.5



In the above case
 (Cooling) Overall equivalent length = 80m × 0.5 + 40m = 80m
 The rate of change in cooling capacity when Hp = 0m is thus approximately 0.86

RXQ10AYM

1. Rate of change in cooling capacity



[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 is carried out.
- Method of calculating A/C capacity:
The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
Calculating A/C capacity of outdoor units
- Condition: Indoor unit combination ratio does not exceed 100%.
[Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination
x [Capacity change rate due to piping length to the farthest indoor unit]
- Condition: Indoor unit combination ratio exceeds 100%.
[Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the combination
x [Capacity change rate due to piping length to the farthest indoor unit]
- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased, when level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
[Diameter of above case]

Model	gas	liquid
RXQ10A	φ 25.4 *	φ 12.7
RXQ10A		
RXQ10T		
RXQ10T		

* If available on the site, use this size. Otherwise, not increased.

[Explanation of symbols]
 HP : Level difference between indoor and outdoor units
 where indoor unit in inferior position
 HW : Level difference between indoor and outdoor units
 where indoor unit in superior position
 L : Equivalent pipe length
 α : Rate of change in cooling capacity
 [Diameter of the main pipes(standard size)]

Model	gas	liquid
RXQ10A	φ 22.2	φ 9.5
RXQ10A		
RXQ10T		
RXQ10T		

[Temper grade and Thickness]

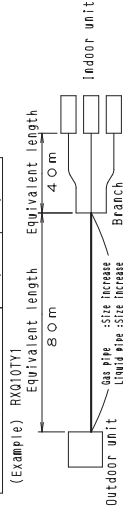
Temper grade	○ Type	1/2H Type
Outer diameter	φ 9.5, φ 12.7, φ 22.2, φ 25.4	
Minimum Wall Thickness	0.80	0.80, 0.88

5. Read cooling capacity rate of change in the above figures based on the following equivalent length.

Overall equivalent length = (Equivalent length to main pipe) × Correction factor ± (Equivalent length after branching)

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size

Rate of change (Object)	Correction factor (Cooling gas pipe)	Standard size increase (Cooling gas pipe)
(Example) RXQ10T	1.0	0.5



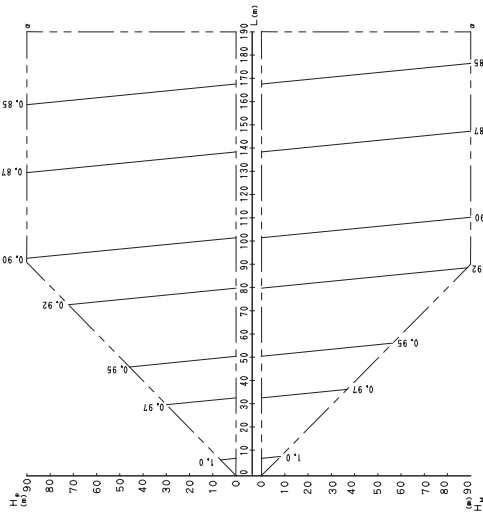
In the above case

(Cooling) Overall equivalent length = 80m × 0.5 + 40m = 80m

The rate of change in cooling capacity when HP = 0m is thus approximately 0.87

RXQ12AYM / RXQ14AYM / RXQ24AYM / RXQ36AYM

1. Rate of change in cooling capacity



[Explanation of symbols]

- HP : Level difference (between indoor and outdoor units where indoor unit in inferior position)
- HM : Level difference (between indoor and outdoor units where indoor unit in superior position)
- L : Equivalent pipe length (m)
- α : Rate of change in cooling capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ12, 14A		
RXU012, 14A	φ 28.6	φ 12.7
RXQ12, 14T		
RWU012, 14T		
RXQ12, 14T		
RXU024A	φ 34.9	φ 15.9
RXQ24T		
RWU024T		
RO024T		
RXQ36A	φ 41.3	φ 19.1
RXU036A		
RXQ36T		
RWU036T		
RO036T		

[Temper grade and Thickness]

Temper grade	□ Type	1/2H Type
Outer diameter	φ 12.7 φ 15.9 φ 19.1 φ 22.2 φ 28.6 φ 34.9 φ 41.3	
Minimum Wall Thickness	0.80 0.99 0.80 0.80 0.99 1.21 1.43	

[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 is carried out.
- Method of calculating A/C capacity:
The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
Calculating A/C capacity of outdoor units
• Condition: Indoor unit combination ratio does not exceed 100%.
Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination

X Capacity change rate due to piping length to the farthest indoor unit

• Condition: Indoor unit combination ratio exceeds 100%.

Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the combination

X Capacity change rate due to piping length to the farthest indoor unit

- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.

[Diameter of above case]

Model	gas	liquid	Model	gas	liquid
RXQ12, 14A			RXQ36A	Not increased	φ 22.2
RXU012, 14A			RXU036A		
RXQ12, 14T			RXQ36T		
RWU012, 14T			RWU036T		
RO012, 14T			RO036T		
RXQ24A	Not increased				
RXU024A					
RXQ24T					
RWU024T					
RO024T					

- Read cooling capacity rate of change in the above figures based on the following equivalent length.

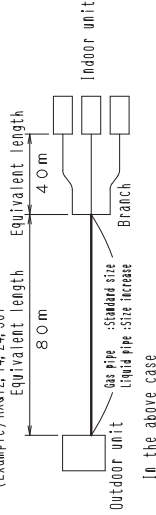
Overall equivalent length=

(Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table.
When cooling capacity is calculated: gas pipe size

Rate of change (object piping)	Correction factor	
	Standard size	Size increase (2×HP) design
Cooling (gas pipe)	1.0	

(Example) RXQ12, 14, 24, 36T

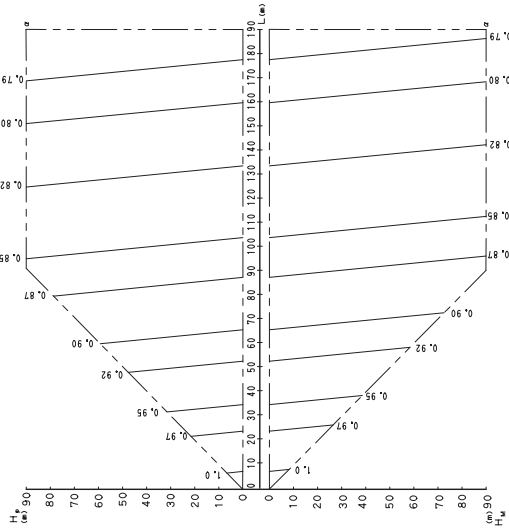


In the above case (Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m

The rate of change in cooling capacity when Hp=0m is thus approximately 0.88

RXQ16AYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 HP : Level difference (between indoor and outdoor units where indoor unit is inferior position)
 HM : Level difference (between indoor and outdoor units where indoor unit is superior position)
 L : Equivalent pipe length (m)
 α : Rate of change in cooling capacity

[Diameter of the main pipes (standard size)]

Model	Gas	Liquid
RXQ16A		
RXQ16A	φ 28.6	φ 12.7
RXQ16T		
RXQ16T		

[Temper, grade and Thickness]

Temper grade	□ Type	1/2H Type
Outer diameter	φ 12.7	φ 15.9 / φ 28.6 / φ 31.8
Minimum Wall Thickness	0.80	0.99 / 0.99 / 1.10

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%.
 Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination
 X Capacity change rate due to piping length to the farthest indoor unit
 • Condition: Indoor unit combination ratio exceeds 100%.
 Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the combination
 X Capacity change rate due to piping length to the farthest indoor unit

- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

Model	Gas	Liquid
RXQ16A		
RXQ16A	φ 31.8*	φ 15.9
RXQ16T		
RXQ16T		

* If available on the site, use this size. Otherwise, not increased.

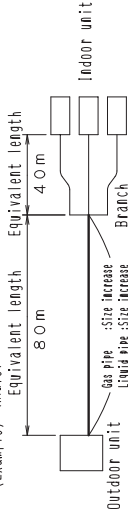
- Read cooling capacity rate of change in the above figures based on the following equivalent length.

Overall equivalent length = (Equivalent length to main pipe) X Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size

Rate of change (Object piping) Cooling (gas pipe)	Correction factor Standard size size increase
	1.0 / 0.5

(Example) RXQ16T



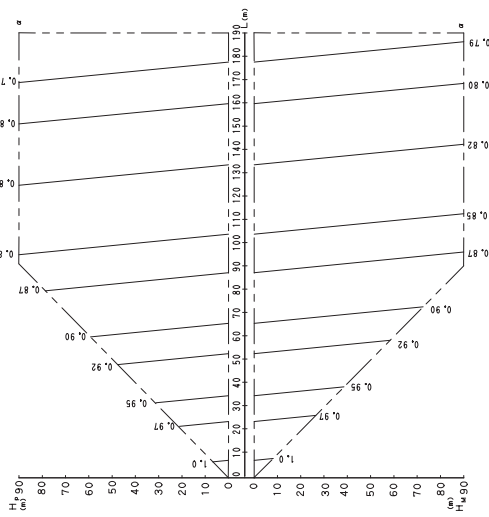
In the above case

(Cooling) Overall equivalent length = 80m X 0.5 + 40m = 80m

The rate of change in cooling capacity when HP=0m is thus approximately 0.88

RXQ18AYM / RXQ18AMYM / RXQ26AYM / RXQ28AYM / RXQ30AYM / RXQ38AYM / RXQ40AYM / RXQ42AYM / RXQ44AYM

1. Rate of change in cooling capacity



[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 is carried out.
3. Method of calculating A/C capacity: The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller. Calculating A/C capacity of outdoor units.
 - Condition: Indoor unit combination ratio does not exceed 100%.
 - [Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination
 - X [Capacity change rate due to piping length to the farthest indoor unit]
 - Condition: Indoor unit combination ratio exceeds 100%.
 - [Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the combination
 - X [Capacity change rate due to piping length to the farthest indoor unit]

4. When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased. When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased. [Diameter of above case]

Model	gas	liquid	Model	gas	liquid
RXQ18A			RXQ38, 40, 42, 44A		
RXQ18A			RXUQ38, 40, 42, 44A		
RXQ18T	φ 31.8*	φ 19.1	RXQ38, 40, 42, 44T	Not Increased	φ 22.2
RWQ18T			RWQ38, 40, 42, 44T		
RQQ18T			RQQ38, 40, 42, 44T		
RXQ26, 28, 30A			RXUQ26, 28, 30A		
RXQ26, 28, 30A			RXQ26, 28, 30T		
RXQ26, 28, 30T			RWQ26, 28, 30T		
RWQ26, 28, 30T			RQQ26, 28, 30T		
RQQ26, 28, 30T					

* If available on the site, use this size, otherwise, not increased.

[Explanation of symbols]

- Hp : level difference (between indoor and outdoor units where indoor unit in inferior position)
- Hm : level difference (between indoor and outdoor units where indoor unit in superior position)
- L : Equivalent pipe length (m)
- Q : Rate of change in cooling Capacity
- φ : Diameter of the main pipes (standard size)

Model	gas	liquid
RXQ18A		
RXUQ18A		
RXQ18T	φ 28.6	φ 15.9
RWQ18T		
RQQ18T		
RXQ26, 28, 30A		
RXUQ26, 28, 30A		
RXQ26, 28, 30T	φ 34.9	φ 19.1
RWQ26, 28, 30T		
RQQ26, 28, 30T		
RXQ38, 40, 42, 44A		
RXUQ38, 40, 42, 44A		
RXQ38, 40, 42, 44T	φ 41.3	φ 19.1
RWQ38, 40, 42, 44T		
RQQ38, 40, 42, 44T		

[Temper grade and Thickness]

Temper grade	Q Type	1/2H Type
Outer diameter	φ 15.9 φ 19.1 φ 22.2 φ 28.6 φ 31.8 φ 34.9 φ 38.1 φ 41.3	
Minimum Wall Thickness	0.99 0.80 0.80 0.80 0.99 1.10 1.21 1.32 1.43	

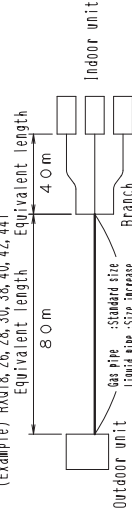
5. Read cooling capacity rate of change in the above figures based on the following equivalent length,

Overall equivalent length = (Equivalent length to main pipe) X Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size

Rate of change (object piping)	Correction factor	
	Standard size	Size Increase
(Cooling Gas pipe)	1.0	0.5

(Example) RXQ18, 26, 28, 30, 38, 40, 42, 44T



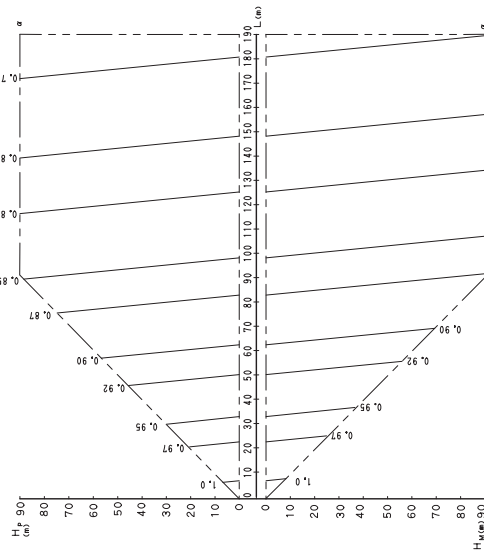
In the above case

(Cooling) Overall equivalent length = 80m X 1.0 + 40m = 120m

The rate of change in cooling capacity when Hp=0m is thus approximately 0.83

RXQ20AYM / RXQ20AYM / RXQ32AYM / RXQ34AYM

1. Rate of change in cooling capacity



[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 is carried out.
- Method of calculating A/C capacity:
The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
Calculating A/C capacity of outdoor units
 - Condition: Indoor unit combination ratio does not exceed 100%.

Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination

× [Capacity change rate due to piping length to the farthest indoor unit]

Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the combination

× [Capacity change rate due to piping length to the farthest indoor unit]

- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.

[Diameter of above case]

Model	gas	liquid	Model	gas	liquid
RXQ20A			RXQ32, 34A		
RXQ20A	φ 31.8*	φ 19.1	RXQ32, 34A		
RXQ20T			RXQ32, 34T	φ 38.1*	φ 22.2
RXQ20T			RXQ32, 34T		
			RXQ32, 34T		

* If available on the site, use this size. Otherwise, not increased.

[Explanation of symbols]

- HP : Level difference between indoor and outdoor units
- Where indoor unit in inferior position
- HPM : Level difference between indoor and outdoor units
- Where indoor unit in superior position
- L : Equivalent pipe length
- α : Rate of change in cooling capacity
- [Diameter of the main pipes(standard size)]

Model	gas	liquid
RXQ20A		
RXQ20A	φ 28.6	φ 15.9
RXQ20T		
RXQ20T		
RXQ32, 34A		
RXQ32, 34A	φ 34.9	φ 19.1
RXQ32, 34T		
RXQ32, 34T		

[Temper grade and Thickness]

Temper grade	□ Type	1/2H Type
Outer diameter	φ 15.9	φ 19.1, φ 22.2, φ 28.6, φ 31.9, φ 34.9, φ 38.1
Minimum Wall Thickness	0.99	0.80, 0.80, 0.99, 1.10, 1.21, 1.32

- Read cooling capacity rate of change in the above figures based on the following equivalent length,

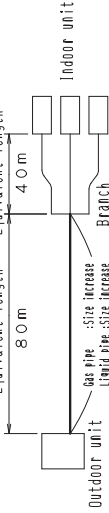
Overall equivalent length = [Equivalent length to main pipe] × Correction factor + [Equivalent length after branching]

When cooling capacity is calculated, gas pipe size
Choose a correction factor from the following table.

Rate of change (Object piping)	Correction factor
Standard size	1.0
Size increase	0.5

Cooling (gas pipe)

(Example) RXQ20, 32, 34T



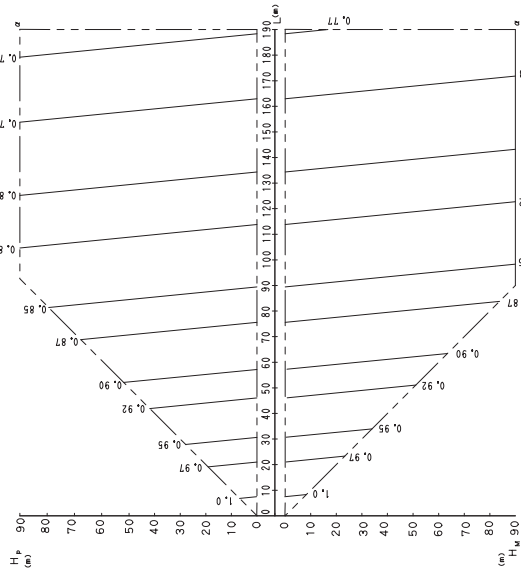
In the above case

(Cooling) Overall equivalent length = 80m × 0.5 + 40m = 80m

The rate of change in cooling capacity when HP=0m is thus approximately 0.87

RXQ22AYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 Hp : Level difference between indoor and outdoor units
 Where indoor unit in inferior position
 Hm : Level difference between indoor and outdoor units
 Where indoor unit in superior position
 L : Equivalent pipe length(m)
 α : Rate of change in cooling Capacity

[Diameter of the main pipes(standard size)]

Model	gas	liquid
RXQ22A		
RXU022A	φ 28,6	φ 15,9
RXQ22T		
RWH022T		
RQ022T		

[Temper grade and Thickness]

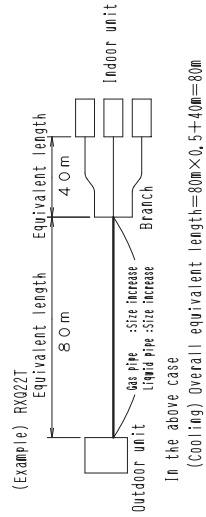
Temper grade	0 Type	1/2H Type
Outer diameter	φ 15,9	φ 19,1
Minimum Wall Thickness	0,99	0,80
	0,99	1,10

5. Read cooling capacity rate of change in the above figures based on the following equivalent length,

Overall equivalent length = (Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table, When cooling capacity is calculated: gas pipe size

Rate of change (Object piping) Cooling (Gas pipe)	Correction factor Standard size	Size increase
	1,0	0,5



The rate of change in cooling capacity when Hp=0m is thus approximately 0,86

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%
 [Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination
 X [Capacity change rate due to piping length to the farthest indoor unit]
 • Condition: Indoor unit combination ratio exceeds 100%
 [Maximum A/C capacity of outdoor units] = A/C capacity of outdoor units obtained from capacity characteristic table at the combination
 X [Capacity change rate due to piping length to the farthest indoor unit]

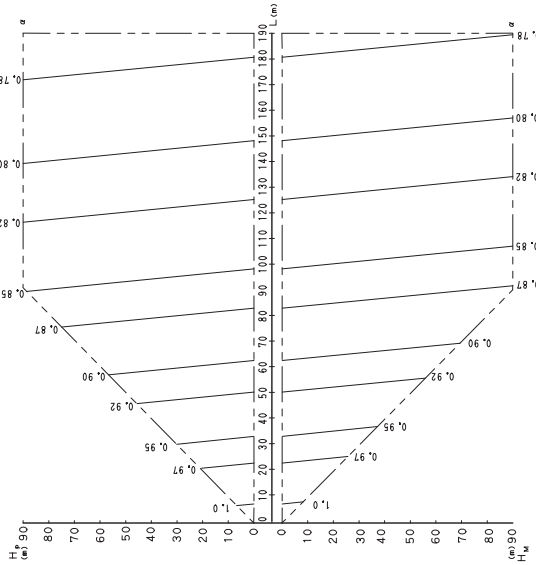
- When overall equivalent pipe length is 90m or more, the diameter of the main, gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

Model	gas	liquid
RXQ22A		
RXU022A	φ 31,8*	φ 19,1
RXQ22T		
RWH022T		
RQ022T		

* If available on the site, use this size. Otherwise, not increased.

RXQ46AMYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 H_{IP} : Level difference (between indoor and outdoor units where indoor unit is inferior position)
 H_{IM} : Level difference (between indoor and outdoor units where indoor unit is superior position)
 L : Equivalent pipe length (m)
 C_p : Rate of change in cooling capacity
 [Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ46A	φ 41.3	φ 19.1
RXQ46A		
RXQ46T		
RWHQ46T		
ROQ46T		

[Temper grade and Thickness]

Temper grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 * Condition: Indoor unit combination ratio does not exceed 100%.

$$\frac{\text{Maximum A/C capacity of outdoor units}}{\text{Maximum A/C capacity of outdoor units}} = \frac{A/C \text{ capacity of outdoor units obtained from capacity characteristic table at the 100\% combination}}{X} \times [\text{Capacity change rate due to piping length to the farthest indoor unit}]$$

 * Condition: Indoor unit combination ratio exceeds 100%.

$$\frac{\text{Maximum A/C capacity of outdoor units}}{\text{Maximum A/C capacity of outdoor units}} = \frac{A/C \text{ capacity of outdoor units obtained from capacity characteristic table at the combination}}{X} \times [\text{Capacity change rate due to piping length to the farthest indoor unit}]$$

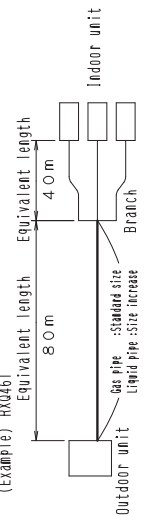
4. When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

Model	gas	liquid
RXQ46A	Not	
RXQ46A	Increased	φ 22.2
RXQ46T		
RWHQ46T		
ROQ46T		

- Read cooling capacity rate of change in the above figures based on the following equivalent length,
 Overall equivalent length = (Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)
 Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size
 Rate of change (object piping) Correction factor
 Standard size Size increase
 Cooling (gas pipe) 1.0

(Example) RXQ46T

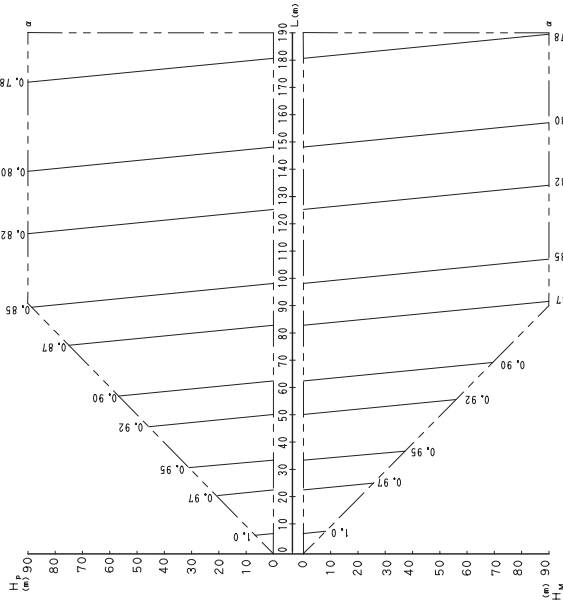
Rate of change (object piping)	Correction factor
Standard size	1.0
Size increase	



In the above case
 (Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m
 The rate of change in cooling capacity when H_{IP} = 0m is thus approximately 0.82

RXQ48AYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 Hp : Level difference (m) between indoor and outdoor units where indoor unit is inferior position
 Hw : Level difference (m) between indoor and outdoor units where indoor unit is superior position
 L : Equivalent pipe length (m)
 α : Rate of change in cooling Capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ48A		
RXU048A	φ 41.3	φ 19.1
RXQ48T		
RWH048T		
RQ048T		

[Temper grade and Thickness]

Temper grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 * Condition: Indoor unit combination ratio does not exceed 100%.
 Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the 100% combination
 X (Capacity change rate due to piping length to the farthest indoor unit)
 * Condition: Indoor unit combination ratio exceeds 100%.
 Maximum A/C capacity of outdoor units = A/C capacity of outdoor units obtained from capacity characteristic table at the combination
 X (Capacity change rate due to piping length to the farthest indoor unit)

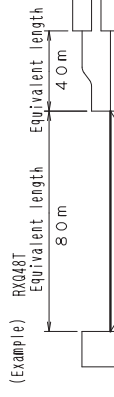
- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

Model	gas	liquid
RXQ48A		
RXU048A	Not	φ 22.2
RXQ48T	Increased	
RWH048T		
RQ048T		

- Read cooling capacity rate of change in the above figures based on the following equivalent length,
 Overall equivalent length = (Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size

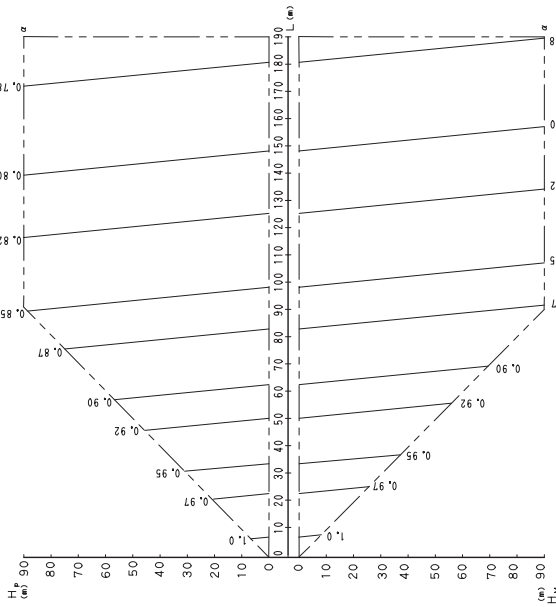
Rate of change (Object Piping)	Correction factor
Cooling (gas pipe)	Standard size 1.0
	Site increase



In the above case
 (Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m
 The rate of change in cooling capacity when Hp = 0m is thus approximately 0.82

RXQ50AMYM

1. Rate of change in cooling capacity



[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 is carried out.
- The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
Calculating A/C capacity of outdoor units
 - Condition: Indoor unit combination ratio does not exceed 100%.
 $\text{Maximum A/C capacity of outdoor units} = \text{A/C capacity of outdoor units obtained from capacity characteristic table at the 100\% combination}$
 $\times [\text{Capacity change rate due to piping length to the farthest indoor unit}]$
 - Condition: Indoor unit combination ratio exceeds 100%.
 $\text{Maximum A/C capacity of outdoor units} = \text{A/C capacity of outdoor units obtained from capacity characteristic table at the combination}$
 $\times [\text{Capacity change rate due to piping length to the farthest indoor unit}]$
- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
[Diameter of above case]

Model	gas	liquid
RXQ50A	Not	Increased
RXQ50B	Not	Increased
RWHQ50T	Not	Increased

[Explanation of symbols]

- HP: Level difference (m) between indoor and outdoor units where indoor unit in inferior position
- HW: Level difference (m) between indoor and outdoor units where indoor unit in superior position
- L: Equivalent pipe length (m)
- α: Rate of change in cooling capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ50A	φ 41.3	φ 19.1
RXUQ50A	φ 41.3	φ 19.1
RXQ50T	φ 41.3	φ 19.1
RWHQ50T	φ 41.3	φ 19.1

[Temper. grade and Thickness]

Temper. grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

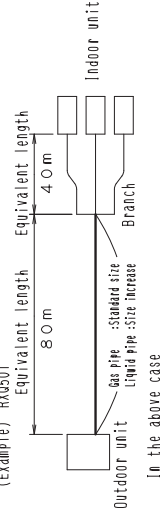
- Read cooling capacity rate of change in the above figures based on the following equivalent length.

$$\text{Overall equivalent length} = \text{Equivalent length to main pipe} \times \text{Correction factor} + \text{Equivalent length after branching}$$

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size

Rate of change (object piping)	Correction factor
Standard size	1.0
Size increase	1.0

(Example) RXQ50T



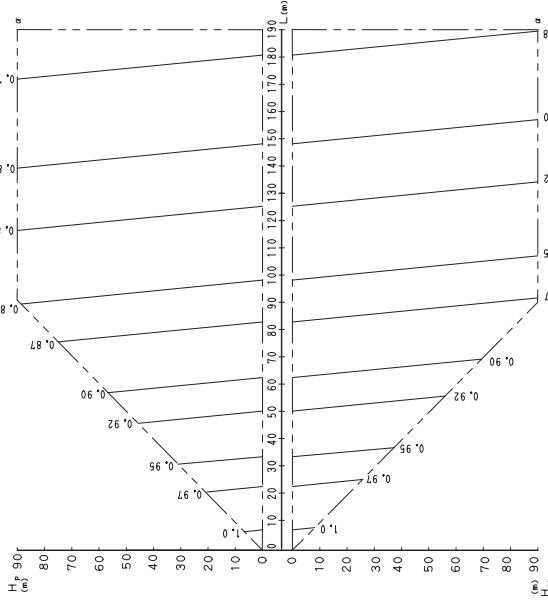
In the above case

$$\text{(Cooling) Overall equivalent length} = 80\text{m} \times 1.0 + 40\text{m} = 120\text{m}$$

The rate of change in cooling capacity when HP=0m is thus approximately 0.82

RXQ52AMYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 Hp : Level difference between indoor and outdoor units where indoor unit is inferior position
 Hm : Level difference between indoor and outdoor units where indoor unit is superior position
 L : Equivalent pipe length(m)
 α : Rate of change in cooling capacity

[Diameter of the main pipes(standard size)]

Model	gas	liquid
RXQ52A	φ 41.3	φ 19.1
RXU052A		
RXQ52T		
RWH052T		

[Temper grade and Thickness]

Temper. grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%.

$$\text{Maximum A/C capacity of outdoor units} = \text{A/C capacity of outdoor units obtained from capacity characteristic table at the 100\% combination} \times \text{Capacity change rate due to piping length to the farthest indoor unit}$$
 • Condition: Indoor unit combination ratio exceeds 100%.

$$\text{Maximum A/C capacity of outdoor units} = \text{A/C capacity of outdoor units obtained from capacity characteristic table at the combination} \times \text{Capacity change rate due to piping length to the farthest indoor unit}$$
 • Condition: Capacity change rate due to piping length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

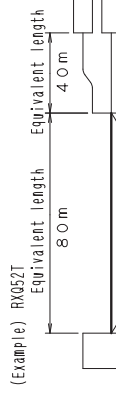
Model	gas	liquid
RXQ52A	Not	Increased
RXU052A		
RXQ52T		
RWH052T		

- Read cooling capacity rate of change in the above figures based on the following equivalent length,

$$\text{Overall equivalent length} = (\text{Equivalent length to main pipe}) \times \text{Correction factor} + (\text{Equivalent length after branching})$$

Choose a correction factor from the following table, when cooling capacity is calculated: gas pipe size

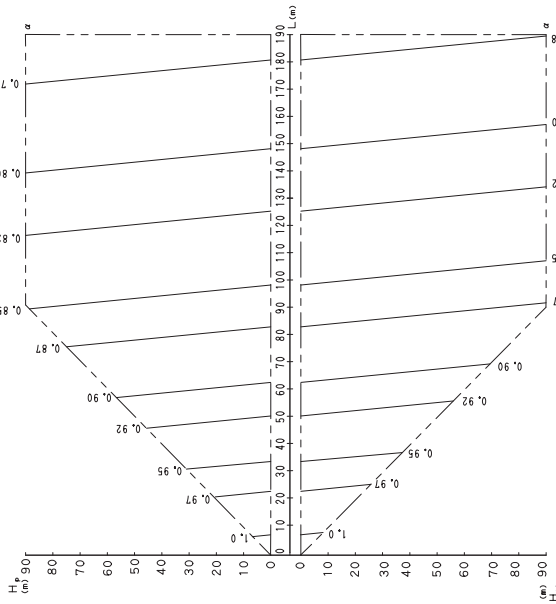
Rate of change (Object piping) Cooling (gas pipe)	Correction factor Standard size Size increase
(Example) RXQ52T	1.0



In the above case
 (Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m
 The rate of change in cooling capacity when Hp=0m is thus approximately 0.82

RXQ54AMYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 HP : Level difference between indoor and outdoor units where indoor unit in inferior position
 HM : Level difference between indoor and outdoor units where indoor unit in superior position
 L : Equivalent pipe length(m)
 α : Rate of change in cooling capacity

[Diameter of the main pipes(standard size)]

Model	gas	liquid
RXQ54A	φ 41.3	φ 19.1
RXU054A		
RXQ54T		
RWH054T		

[Temper grade and Thickness]

Temper grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the 100\% combination}}{\text{X [Capacity change rate due to piping length to the farthest indoor unit]}}$$

 • Condition: Indoor unit combination ratio exceeds 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the combination}}{\text{X [Capacity change rate due to piping length to the farthest indoor unit]}}$$

- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased, when level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

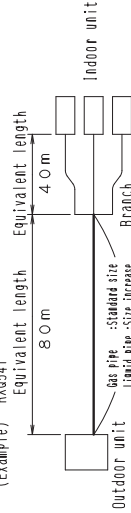
Model	gas	liquid
RXQ54A	Not	φ 22.2
RXU054A	Increased	
RXQ54T		
RWH054T		

- Read cooling capacity rate of change in the above figures based on the following equivalent length,

Overall equivalent length = (Equivalent length to main pipe) × Correction factor + (Equivalent length after branching)

Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size

Rate of change (Object Piping)	Correction factor
Cooling (gas pipe)	Standard size
	Size increase
(Example) RXQ54T	1.0



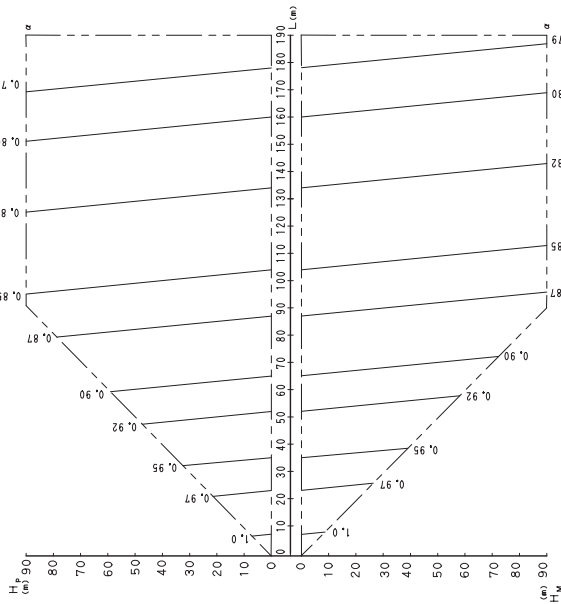
In the above case

(Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m

The rate of change in cooling capacity when Hp=0m is thus approximately 0.82

RXQ56AMYM / RXQ58AMYM

1. Rate of change in cooling capacity



[Explanation of symbols]
 Hp : Level difference (between indoor and outdoor units where indoor unit in inferior position)
 Hw : Level difference (between indoor and outdoor units where indoor unit in superior position)
 L : Equivalent pipe length (m)
 α : Rate of change in cooling Capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ56, 58A	φ 41.3	φ 19.1
RXQ56, 58A		
RXQ56, 58T		
RWHQ56, 58T		

[Temper grade and Thickness]

Temper grade	1/2H Type
Outer diameter	φ 19.1 / φ 22.2 / φ 41.3
Minimum Wall Thickness	0.80 / 0.80 / 1.43

[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 is carried out.
- Method of calculating A/C capacity:
 The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
 Calculating A/C capacity of outdoor units
 • Condition: Indoor unit combination ratio does not exceed 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the 100\% combination}}{\text{X (Capacity change rate due to piping length to the farthest indoor unit)}}$$
 • Condition: Indoor unit combination ratio exceeds 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the combination}}{\text{X (Capacity change rate due to piping length to the farthest indoor unit)}}$$

- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
 When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
 [Diameter of above case]

Model	gas	liquid
RXQ56, 58A / RXQ56, 58A	Not Increased	φ 22.2
RXQ56, 58T / RWHQ56, 58T		

- Read cooling capacity rate of change in the above figures based on the following equivalent length.

$$\text{Overall equivalent length} = \frac{\text{Equivalent length to main pipe}}{\text{Correction factor}} \times \text{Correction factor} + \text{Equivalent length after branching}$$

Choose a correction factor from the following table.

When cooling capacity is calculated: gas pipe size

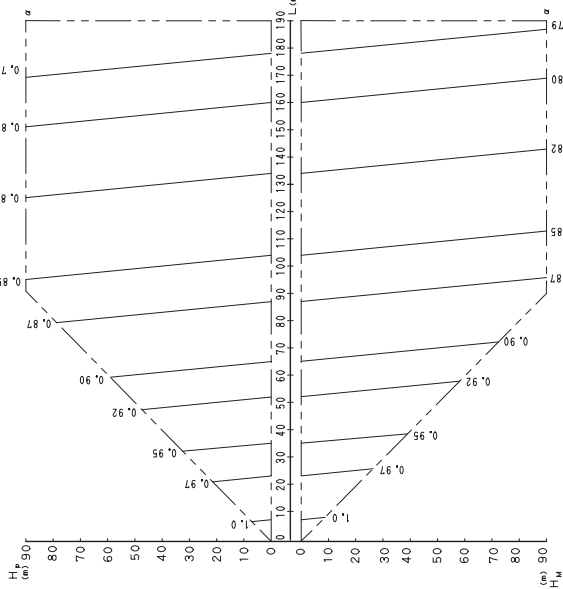
Rate of change (object piping)	Correction factor
Cooling (gas pipe)	Standard size
	Size increase
	1.0



In the above case
 (Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m
 The rate of change in cooling capacity when Hp = 0m is thus approximately 0.83

RXQ60AMYM

1. Rate of change in cooling capacity



[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 is carried out.
- Method of calculating A/C capacity:
The maximum A/C capacity of the system will be either the total A/C capacity of the indoor units obtained from capacity characteristic table or the maximum A/C capacity of outdoor units as mentioned below, whichever smaller.
Calculating A/C capacity of outdoor units
 - Condition: Indoor unit combination ratio does not exceed 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the 100\% combination}}{\text{Capacity change rate due to piping length to the farthest indoor unit}}$$
 - Condition: Indoor unit combination ratio exceeds 100%.

$$\text{Maximum A/C capacity of outdoor units} = \frac{\text{A/C capacity of outdoor units obtained from capacity characteristic table at the combination}}{\text{Capacity change rate due to piping length to the farthest indoor unit}}$$
- When overall equivalent pipe length is 90m or more, the diameter of the main gas and liquid pipes (outdoor unit-branch sections) must be increased.
When level difference is 50m or more, the diameter of the main liquid pipe (outdoor unit-branch sections) must be increased.
[Diameter of above case]

Model	gas	liquid
RXQ60A / RXU60A	Not Increased	φ 22.2
RXQ60T / RWH60T		

[Explanation of symbols]
 HP : Level difference (m) between indoor and outdoor units
 Where indoor unit in inferior position
 HW : Level difference (m) between indoor and outdoor units
 Where indoor unit in superior position
 L : Equivalent pipe length (m)
 α : Rate of change in cooling capacity

[Diameter of the main pipes (standard size)]

Model	gas	liquid
RXQ60A	φ 41.3	φ 19.1
RXU60A		
RXQ60T		
RWH60T		

[Temper grade and Thickness]

Temper grade	1/2H Type
Outer diameter	φ 19.1 φ 22.2 φ 41.3
Minimum Wall Thickness	0.80 0.80 1.43

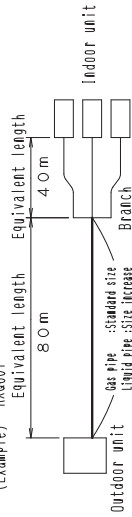
- Read cooling capacity rate of change in the above figures based on the following equivalent length.

$$\text{Overall equivalent length} = \text{Equivalent length to main pipe} \times \text{Correction factor} + \text{Equivalent length after branching}$$

Choose a correction factor from the following table.
 When cooling capacity is calculated: gas pipe size

Rate of change (object piping) cooling (gas pipe)	Correction factor	Standard size increase
	1.0	

(Example) RXQ60T



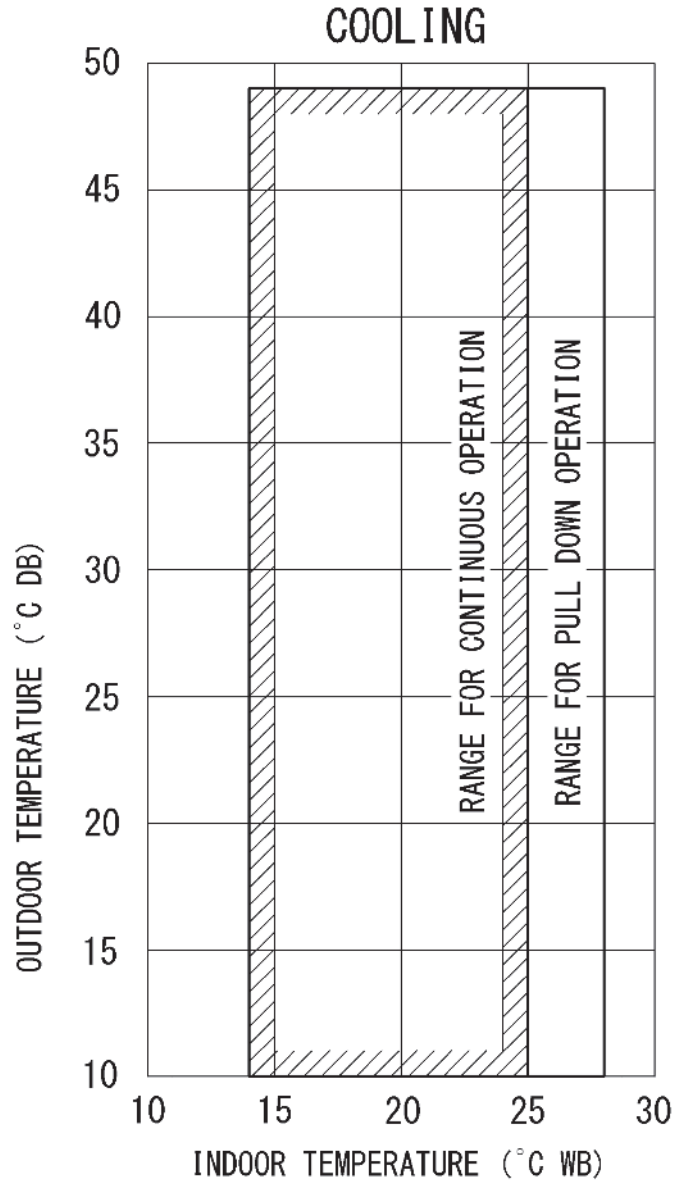
In the above case

(Cooling) Overall equivalent length = 80m × 1.0 + 40m = 120m

The rate of change in cooling capacity when HP = 0m is thus approximately 0.83

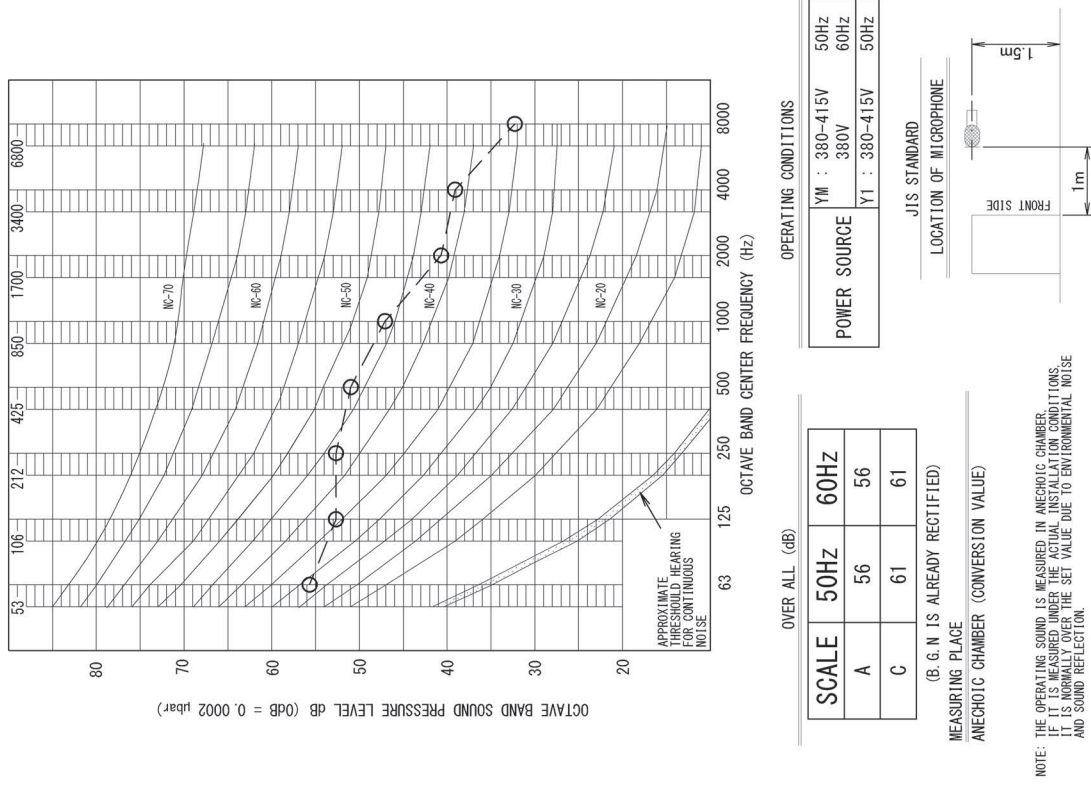
10. Operation Limits

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM / RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM / RXQ18AMYM / RXQ20AMYM / RXQ22AMYM / RXQ24AMYM / RXQ26AMYM / RXQ28AMYM / RXQ30AMYM / RXQ32AMYM / RXQ34AMYM / RXQ36AMYM / RXQ38AMYM / RXQ40AMYM / RXQ42AMYM / RXQ44AMYM / RXQ46AMYM / RXQ48AMYM / RXQ50AMYM / RXQ52AMYM / RXQ54AMYM / RXQ56AMYM / RXQ58AMYM / RXQ60AMYM



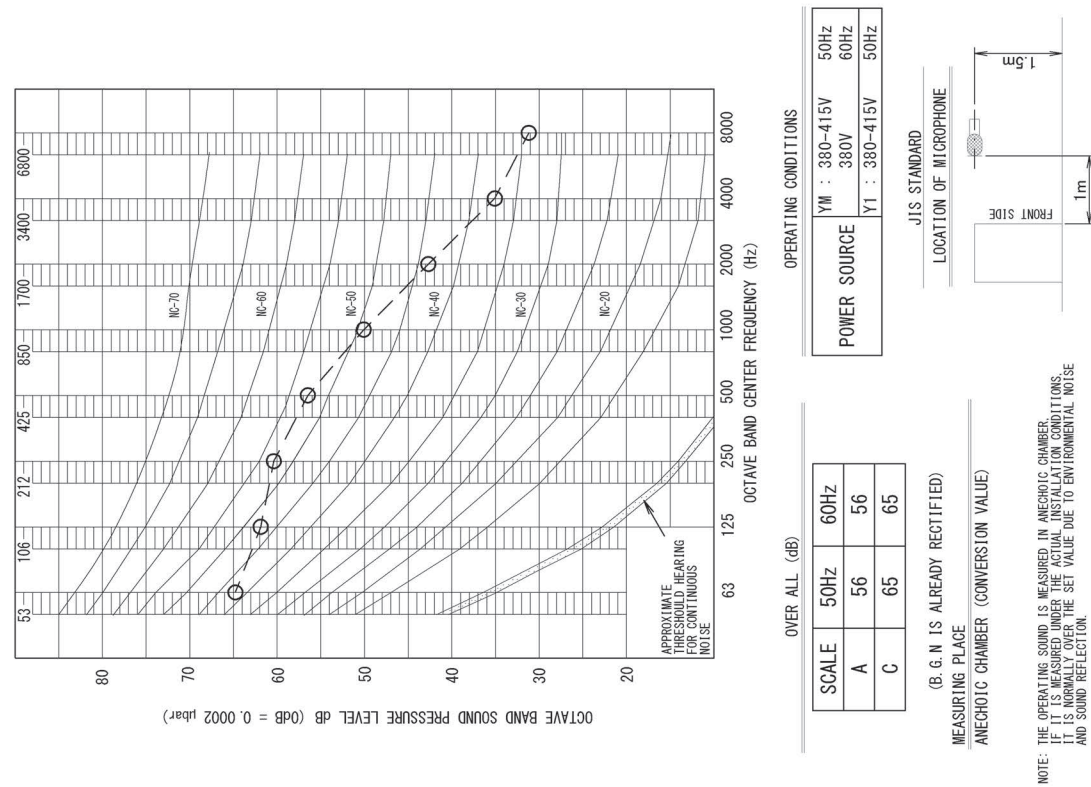
11. Sound Levels

RXQ6AYM



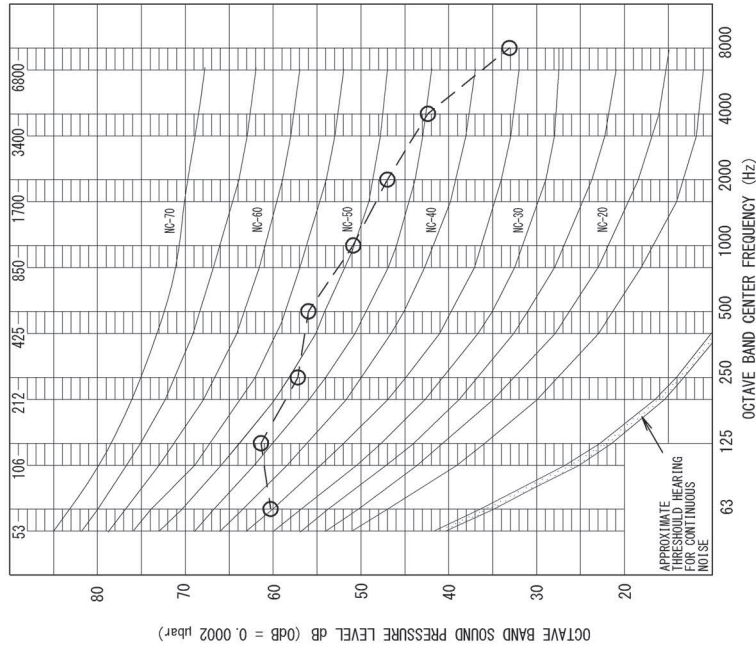
4D112438

RXQ8AYM



4D112439

RXQ10AYM

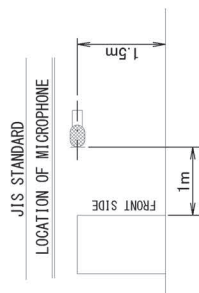


OPERATING CONDITIONS

YM	: 380-415V	50Hz
POWER SOURCE	380V	60Hz
Y1	: 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	57	57
C	65	65



(B. G. N IS ALREADY RECTIFIED)

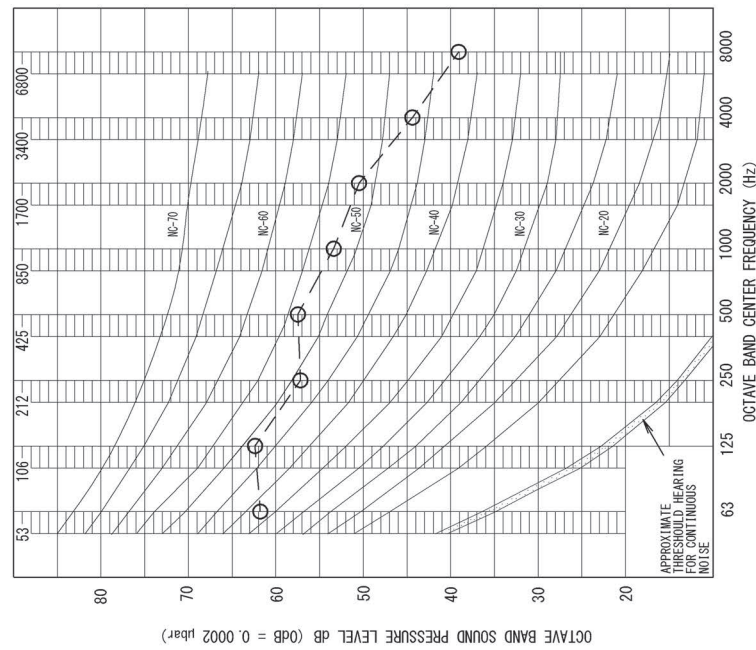
MEASURING PLACE

ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER. IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS. IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE AND SOUND REFLECTION.

4D112440

RXQ12AYM

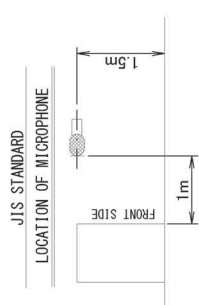


OPERATING CONDITIONS

YM	: 380-415V	50Hz
POWER SOURCE	380V	60Hz
Y1	: 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	59	59
C	67	67



(B. G. N IS ALREADY RECTIFIED)

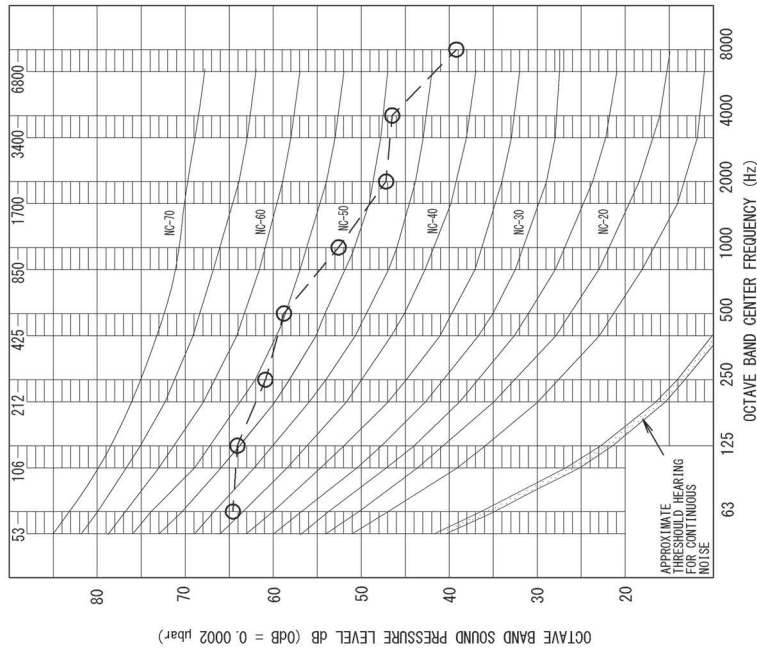
MEASURING PLACE

ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER. IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS. IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE AND SOUND REFLECTION.

4D112441

RXQ14AYM

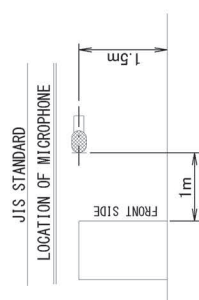


OPERATING CONDITIONS

POWER SOURCE	YM : 380-415V 380V	50Hz 60Hz
	Y1 : 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	60	60
C	68	68

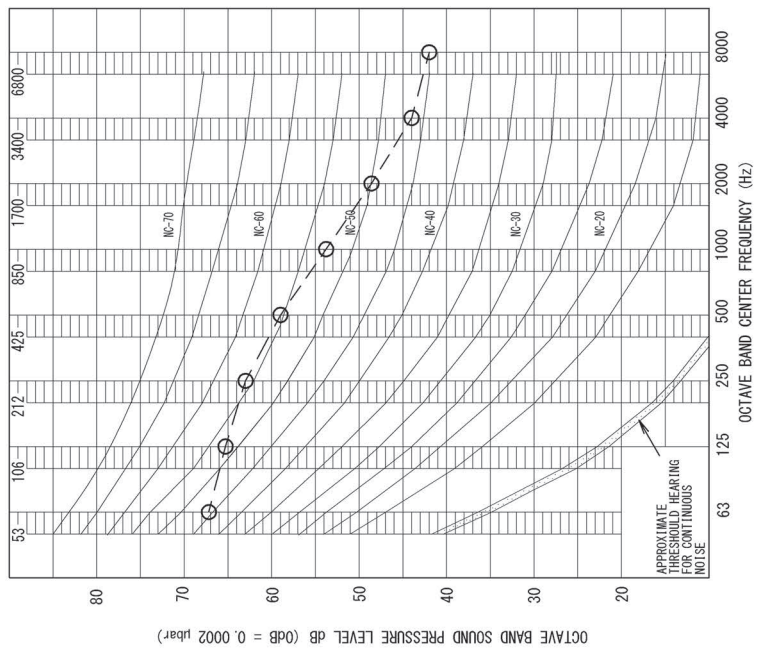


(B. G. N IS ALREADY RECTIFIED)
MEASURING PLACE
ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER.
IF IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS,
IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE
AND SOUND REFLECTION.

4D112442

RXQ16AYM

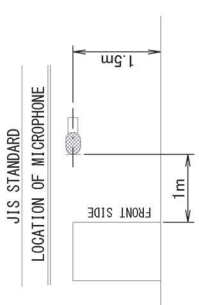


OPERATING CONDITIONS

POWER SOURCE	YM : 380-415V 380V	50Hz 60Hz
	Y1 : 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	60	70
C	70	70

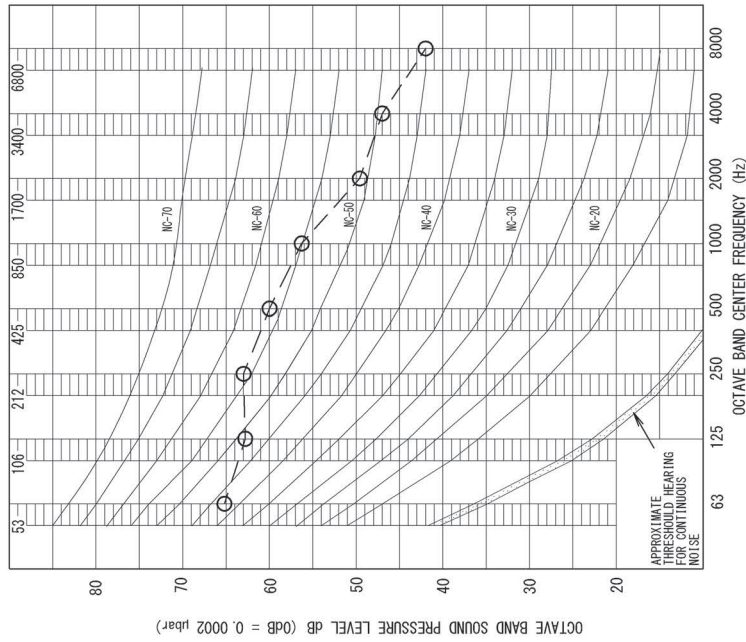


(B. G. N IS ALREADY RECTIFIED)
MEASURING PLACE
ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER.
IF IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS,
IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE
AND SOUND REFLECTION.

4D112443

RXQ18AYM

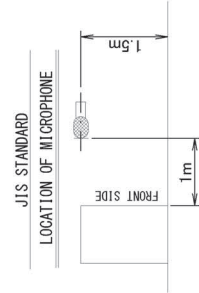


OPERATING CONDITIONS

POWER SOURCE	YM : 380-415V	50Hz
	380V	60Hz
	Y1 : 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	61	61
C	69	69



(B. G. N. IS ALREADY RECTIFIED)

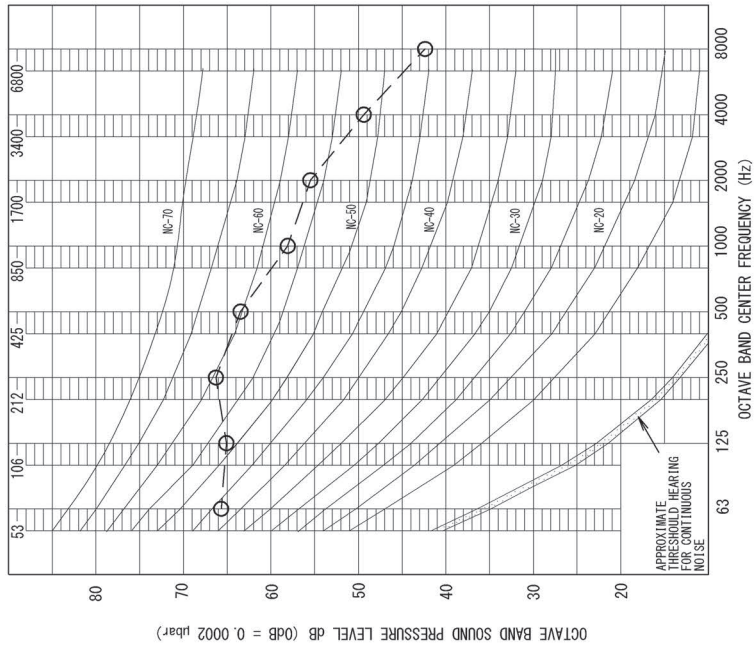
MEASURING PLACE

ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER. IF IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS, IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE AND SOUND REFLECTION.

4D112444

RXQ20AYM

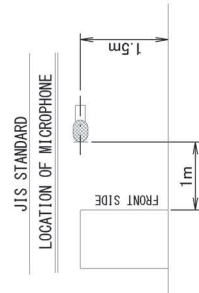


OPERATING CONDITIONS

POWER SOURCE	YM : 380-415V	50Hz
	380V	60Hz
	Y1 : 380-415V	50Hz

OVER ALL (dB)

SCALE	50Hz	60Hz
A	65	65
C	71	71



(B. G. N. IS ALREADY RECTIFIED)

MEASURING PLACE

ANECHOIC CHAMBER (CONVERSION VALUE)

NOTE: THE OPERATING SOUND IS MEASURED IN ANECHOIC CHAMBER. IF IT IS MEASURED UNDER THE ACTUAL INSTALLATION CONDITIONS, IT IS NORMALLY OVER THE SET VALUE DUE TO ENVIRONMENTAL NOISE AND SOUND REFLECTION.

4D112445

12. Optional Accessories

Optional accessories		RXQ6AYM	RXQ8AYM	RXQ10AYM
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H (Max. 4 branch) (Max. 8 branch)		
	REFNET joint	KHRP26A22T, KHRP26A33T		
Option printed circuit board	DIII-NET expand adaptor	DTA109A51		
	External control adaptor	DTA104A61		
	Home Automation Interface Adaptor	DTA116A51		

C: 3D111833

Optional accessories		RXQ12AYM		
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H, KHRP26M72H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch)		
	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T		
Option printed circuit board	DIII-NET expand adaptor	DTA109A51		
	External control adaptor	DTA104A61		
	Home Automation Interface Adaptor	DTA116A51		

C: 3D111833

Optional accessories		RXQ14AYM	RXQ16AYM	RXQ18AYM	RXQ20AYM
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H, KHRP26M72H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch)			
	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T			
Option printed circuit board	DIII-NET expand adaptor	DTA109A51			
	External control adaptor	DTA104A61			
	Home Automation Interface Adaptor	DTA116A51			
	Option plate for control adaptor	BKS26A ★1			

C: 3D111833

Optional accessories		RXQ18AMYM	RXQ20AMYM	RXQ22AMYM
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H, KHRP26M72H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch)		
	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T		
Outdoor unit multi connection piping kit		BHFP22P100		
Option printed circuit board	DIII-NET expand adaptor	DTA109A51		
	External control adaptor	DTA104A61		
	Home Automation Interface Adaptor	DTA116A51		

C: 3D111833

Optional accessories		RXQ24AMYM	RXQ26AMYM	RXQ28AMYM	RXQ30AMYM	RXQ32AMYM	RXQ34AMYM	RXQ36AMYM	RXQ38AMYM	RXQ40AMYM
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)								
	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T, KHRP26A73T								
Pipe size reducer		KHRP26M73TP, KHRP26M73HP								
Outdoor unit multi connection piping kit		BHFP22P100								
Option printed circuit board	DIII-NET expand adaptor	DTA109A51								
	External control adaptor	DTA104A61								
	Home Automation Interface Adaptor	DTA116A51								
	Option plate for control adaptor	-				BKS26A ★1				

C: 3D111833

Optional accessories		RXQ42AMYM	RXQ44AMYM	RXQ46AMYM	RXQ48AMYM	RXQ50AMYM	RXQ52AMYM	RXQ54AMYM	RXQ56AMYM	RXQ58AMYM	RXQ60AMYM
Distributive Piping	REFNET header	KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)									
	REFNET joint	KHRP26A22T, KHRP26A33T, KHRP26A72T, KHRP26A73T									
Pipe size reducer		KHRP26M73TP, KHRP26M73HP									
Outdoor unit multi connection piping kit		BHFP22P151									
Option printed circuit board	DIII-NET expand adaptor	DTA109A51									
	External control adaptor	DTA104A61									
	Home Automation Interface Adaptor	DTA116A51									
	Option plate for control adaptor	-				BKS26A ★1					

C: 3D111833

Note:

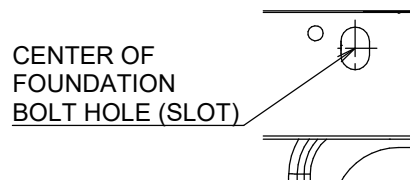
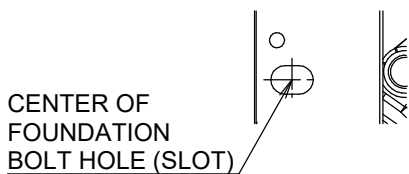
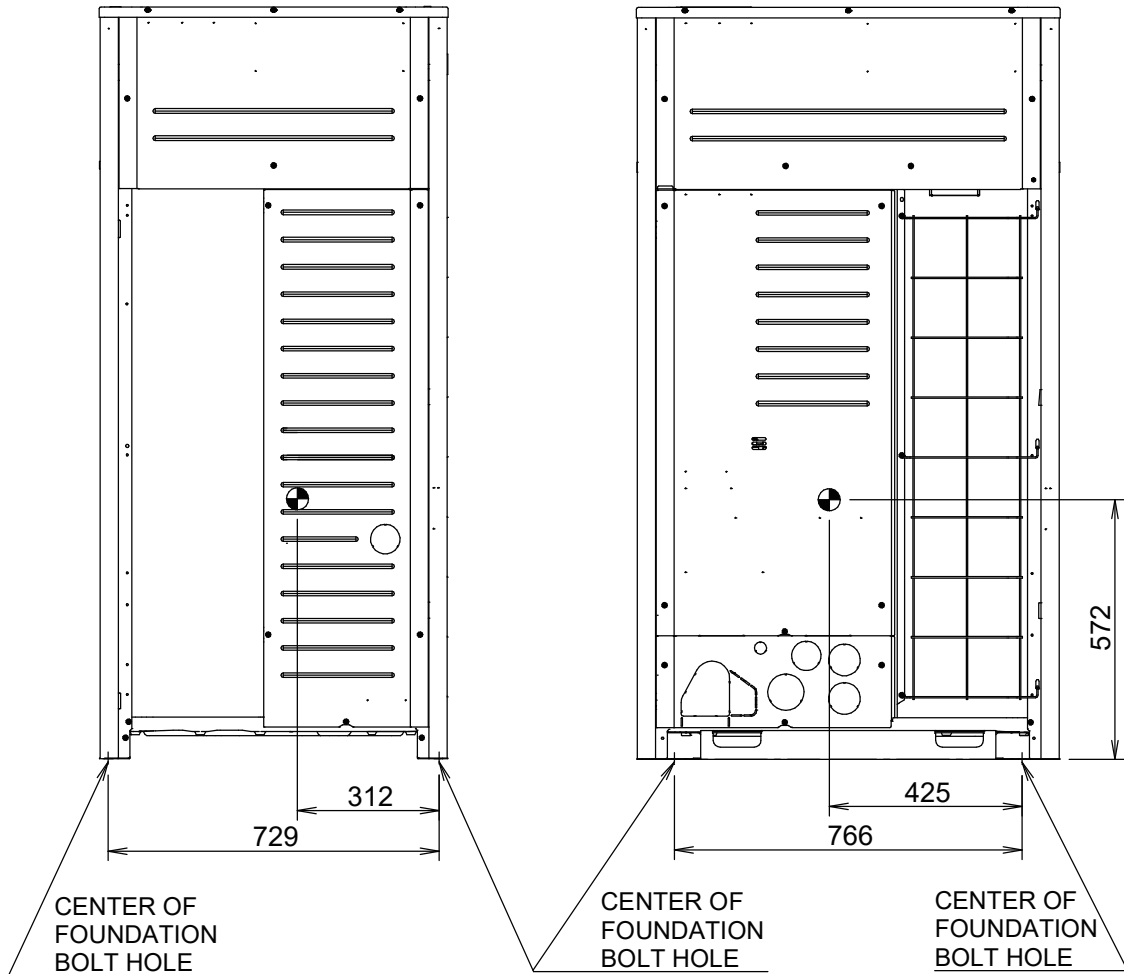
★1. This plate is necessary for DTA109A51, DTA104A61 and DTA116A51.

3. Installation

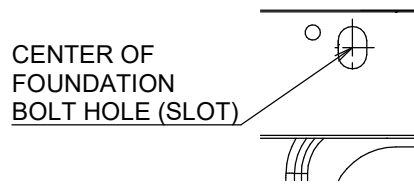
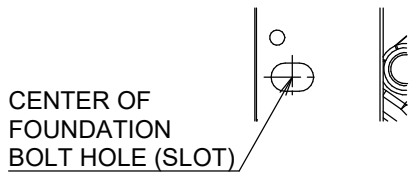
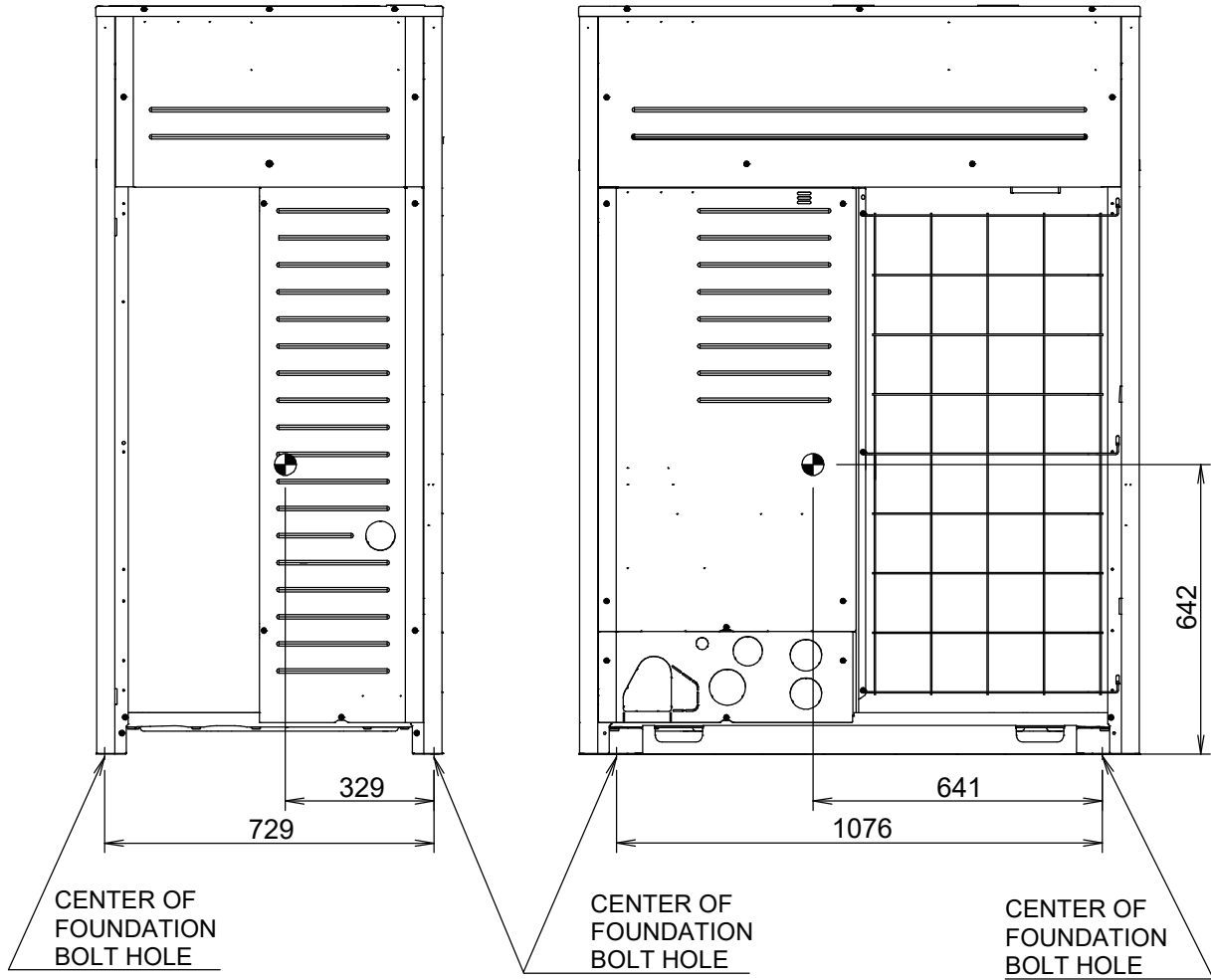
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1. Centre of Gravity

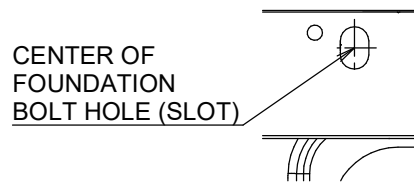
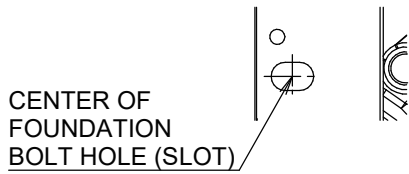
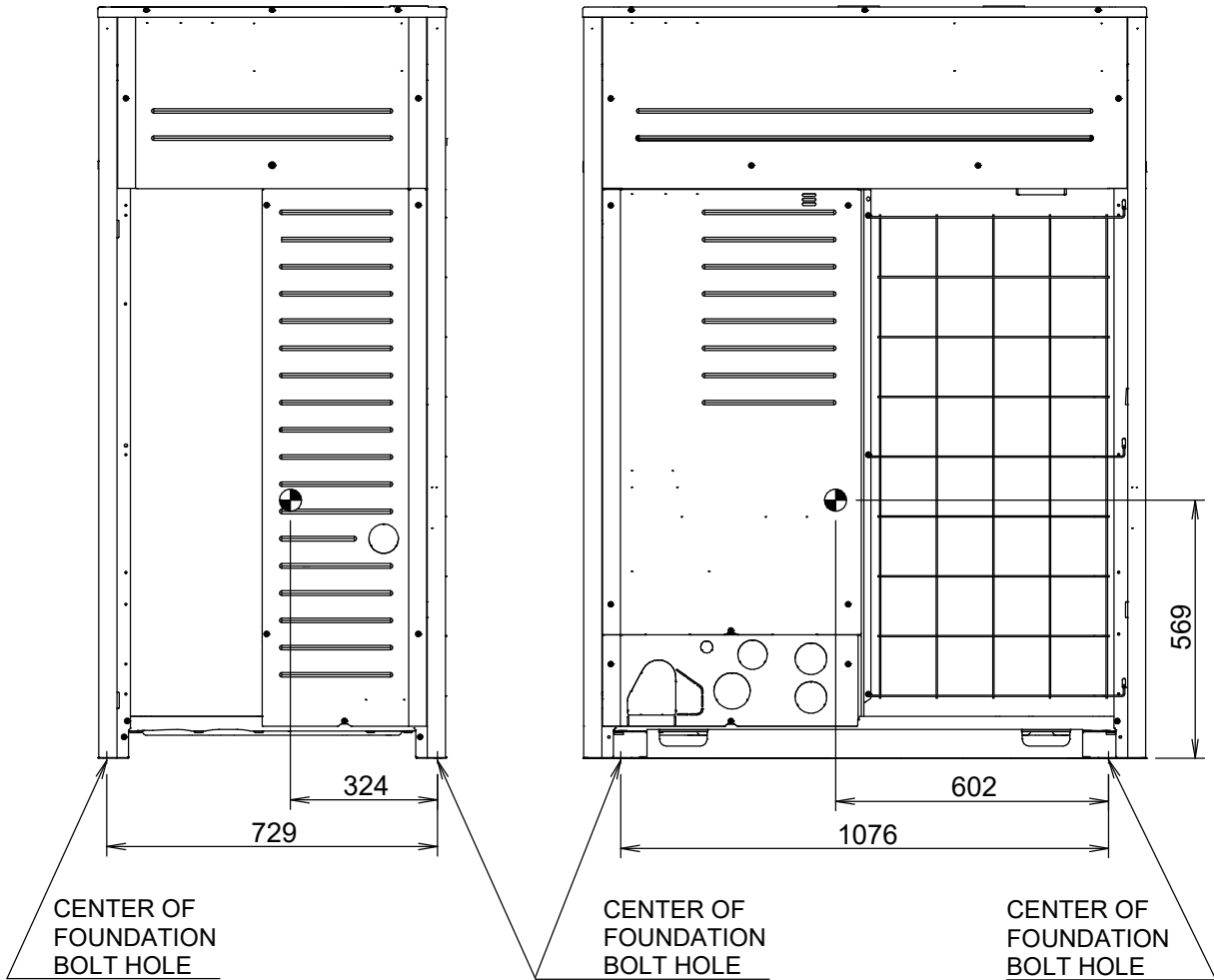
RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM



RXQ14AYM

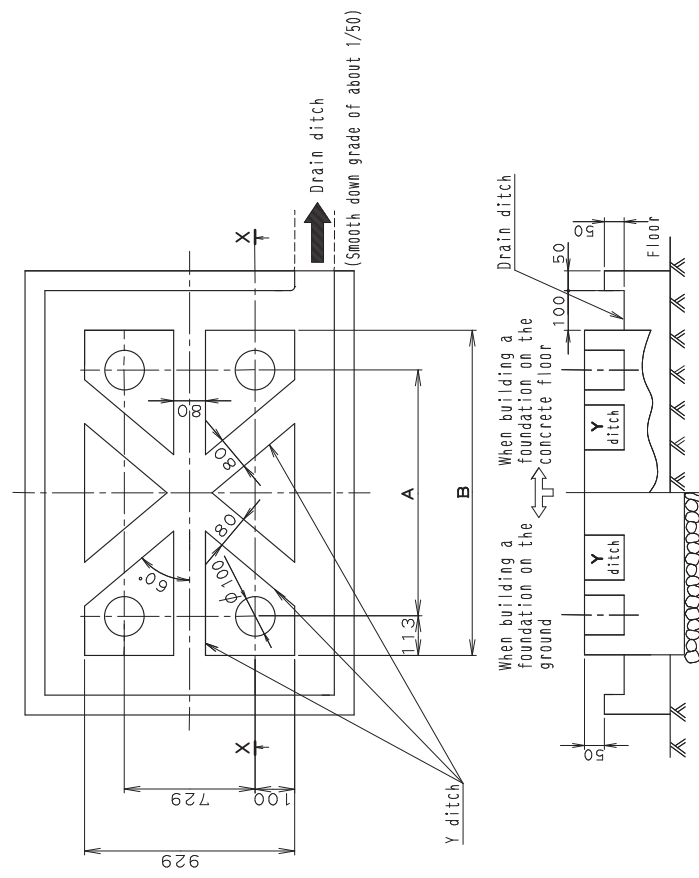
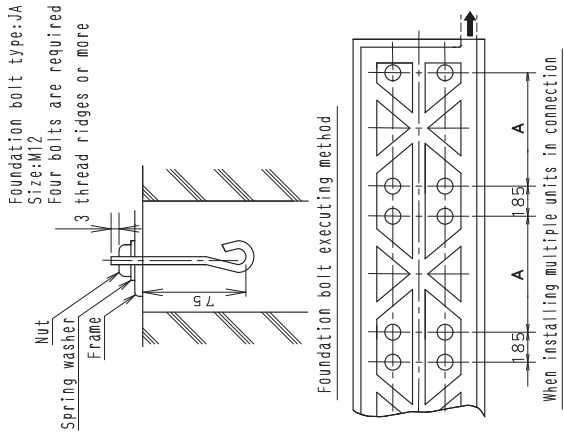


RXQ16AYM / RXQ18AYM / RXQ20AYM



2. Foundation of Units

RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM / RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM / RXQ18AMYM / RXQ20AMYM / RXQ22AMYM / RXQ24AMYM / RXQ26AMYM / RXQ28AMYM / RXQ30AMYM / RXQ32AMYM / RXQ34AMYM / RXQ36AMYM / RXQ38AMYM / RXQ40AMYM / RXQ42AMYM / RXQ44AMYM / RXQ46AMYM / RXQ48AMYM / RXQ50AMYM / RXQ52AMYM / RXQ54AMYM / RXQ56AMYM / RXQ58AMYM / RXQ60AMYM



X-X cross section

MODEL	A	B
RX(Y)06 • 8 • 10 • 12T	766	992
RX(Y)014 • 16 • 18 • 20T	1076	1302
RQ(Y)06 • 8 • 10 • 12T	766	992
RQ(Y)014 • 16 • 18 • 20T	1076	1302

- (Notes)
1. The proportions of cement:sand:gravel for the concrete shall be 1:2:4, and the reinforcement bars that their diameter are 10mm. (approx. 300mm intervals) shall be placed.
 2. The surface shall be finished with mortar. The corner edges shall be chamfered.
 3. When the foundation is built on a concrete floor, rubble is not necessary. However, the surface of the section on which the foundation is built shall have rough finish.
 4. A drain ditch shall be made around the foundation to thoroughly drain water from the equipment installation area.
 5. When installing the equipment on a roof, the floor strength shall be checked, and water-proofing measures shall be taken.

3D084454C

3. Installation Manual


Installation manual

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Thank you for purchasing this Daikin VRV system.


The original instructions are written in English. All other languages are translations of the original instructions.


 **CAREFULLY READ THESE INSTRUCTIONS BEFORE INSTALLATION. THEY WILL TELL YOU HOW TO INSTALL AND HOW TO CONFIGURE THE UNIT PROPERLY. KEEP THIS MANUAL IN A HANDY PLACE FOR FUTURE REFERENCE.**


1. Definitions


1.1 Meaning of warnings and symbols


Warnings in this manual are classified according to their severity and probability of occurrence.

 **DANGER**
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.


 **CAUTION**
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **NOTICE**
Indicates situations that may result in equipment or property-damage accidents only.

 **INFORMATION**
This symbol identifies useful tips or additional information.

Some types of danger are represented by special symbols:

 **Electric current.**

 **Danger of burning and scalding.**

1.2 Meaning of used terms

Installation manual:

Instruction manual specified for a certain product or application, explaining how to install, configure and maintain it.

Operation manual:

Instruction manual specified for a certain product or application, explaining how to operate it.

Maintenance instructions:

Instruction manual specified for a certain product or application, which explains (if relevant) how to install, configure, operate and/or maintain the product or application.

Dealer:

Sales distributor for products as per the subject of this manual.

Installer:

Technical skilled person who is qualified to install products as per the subject of this manual.

User:

Person who is owner of the product and/or operates the product.

Service company:

Qualified company which can perform or coordinate the required service to the unit.

Applicable legislation:

All international, European, national and local directives, laws, regulations and/or codes which are relevant and applicable for a certain product or domain.

Accessories:

Equipment which is delivered with the unit and which needs to be installed according to instructions in the documentation.

Optional equipment:

Equipment which can optionally be combined to the products as per the subject of this manual.

Field supply:

Equipment which needs to be installed according to instructions in this manual, but which are not supplied by Daikin.

2. General safety precautions

The precautions listed here are divided into the following four types. They all cover very important topics, so be sure to follow them carefully.



DANGER: ELECTRICAL SHOCK

Switch off all power supply before removing the electrical component box service panel or before making any connections or touching electrical parts.

Do not touch any switch with wet fingers. Touching a switch with wet fingers can cause electrical shock. Before touching electrical parts, turn off all applicable power supply.

To avoid electric shock, be sure to disconnect the power supply 1 minute or more before servicing the electrical parts. Even after 1 minute, always measure the voltage at the terminals of the main terminal, main circuit capacitors or electrical parts and, before touching, be sure that those voltages are 50 V DC or less.

When service panels are removed, live parts can easily be touched by accident. Never leave the unit unattended during installation or servicing when the service panel is removed.



DANGER: DO NOT TOUCH PIPING AND INTERNAL PARTS

Do not touch the refrigerant piping, water piping or internal parts during and immediately after operation. The piping and internal parts may be hot or cold depending on the working condition of the unit.

Your hand may suffer burns or frostbite if you touch the piping or internal parts. To avoid injury, give the piping and internal parts time to return to normal temperature or, if you must touch them, be sure to wear protective gloves.

Also, at least, following information shall be provided at an accessible place of the system:

- Instructions for shutting down the system in case of an emergency.
- Name and address of fire department, police and hospital.
- Name, address and day and night telephone numbers for obtaining service.

FIRST OF ALL

- This document is an installation manual for the Daikin RXQ Series VRV Inverter. Before installing the unit, read this manual thoroughly, and following the instructions contained in it. After installation, do a test run to make sure the unit runs properly, and then explain how to operate and take care of the unit to the customer, using the operation manual.
- Lastly, make sure the customer keeps this manual, along with the operation manual, in a safe place. This manual does not describe how to install the indoor unit.
- Refer to the installation manual included with the indoor unit for that.

2.1 Safety precautions

Please read 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.

Also, inform customers that they should store this installation manual along with the operation manual for future reference.

After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate the air conditioner and take care of it with the aid of operation manual. Ask the customer to store the installation manual along with the operation manual for future reference.

This air conditioner comes under the term "appliances not accessible to the general public".

Please instruct the customer on how to operate the unit and keep it maintained.

Meaning of WARNING and CAUTION notices



WARNING Failure to follow these instructions properly may result in personal injury or loss of life.



CAUTION Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

**WARNING**

- Ask your dealer or qualified personnel to carry out installation work. Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.
- Consult your local authority 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 leakage. Otherwise, this may lead to an accident due to oxygen depletion.
- Install the air conditioner in accordance with the instructions in this installation manual. Improper installation may result in water leakage, electric shocks or fire.
- When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage. Contact the place of purchase for more information. Excessive refrigerant in a closed ambient can lead to oxygen deficiency.
- Be sure to use only the specified accessories and parts for installation work. Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.
- Install the air conditioner on a foundation strong enough to withstand the weight of the unit. A foundation of insufficient strength may result in the equipment falling and causing injury.
- Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes. Failure to do so during installation work may result in the unit falling and causing accidents.
- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual. An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires. Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the EL.COMPO.BOX lid can be securely fastened. Improper positioning of the EL.COMPO.BOX lid may result in electric shocks, fire or the terminals overheating.
- If refrigerant gas leaks during installation, ventilate the area immediately. Toxic gas may be produced if the refrigerant comes into contact with fire.
- After completing installation, check for refrigerant gas leakage. Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooler.
- Do not directly touch refrigerant that has leaked from refrigerant pipes or other areas, as there is a danger of frostbite.
- Be sure to switch off the unit before touching any electrical parts.
- 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.
- Be sure to earth the air conditioner. Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.
- Be sure to install an earth leakage breaker. Failure to install an earth leakage breaker may result in electric shocks or fire.

**CAUTION**

- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation. Improper drain piping may result in indoor water leakage and property damage.
- Install the indoor and outdoor units, power cord and connecting wires at least 1 meter away from televisions or radios to prevent picture interference and noise. (Depending on the incoming signal strength, a distance of 1 meter may not be sufficient to eliminate noise.)
- 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:
 1. Where there is a high concentration of mineral oil spray or vapour (e.g. a kitchen). Plastic parts will deteriorate, parts may fall off and water leakage could result.
 2. Where corrosive gas, such as sulphurous acid gas, is produced. Corroding of copper pipes or soldered parts may result in refrigerant leakage.
 3. Near machinery emitting electromagnetic radiation. Electromagnetic radiation may disturb the operation of the control system and result in a malfunction of the unit.
 4. Where flammable gas may leak, where there is carbon fibre or ignitable dust suspensions in the air, or where volatile flammables such as paint thinner or gasoline are handled. Operating the unit in such conditions may result in fire.
- In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

2.2 Special notice of product**[REFRIGERANT]****VRV System use R410A refrigerant.**

- The refrigerant R410A requires that strict precautions be observed for keeping the system clean, dry and tightly sealed. Read the chapter "REFRIGERANT PIPING" carefully and follow these procedures correctly.
 - A. 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.
 - B. Tight sealed
Take care to keep the system tight when installing. 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.

[DESIGN PRESSURE]

Since design pressure is 4.0 MPa or 40 bar (for R407C units : 3.3 MPa or 33 bar) the thickness of pipes must be greater than previously. Since R410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state. (If the system is charged with refrigerant in its gaseous state, due to composition change, the system will not function normally). The indoor units is designed for R410A use. See the catalogue for indoor unit models that can be connected. (Normal operation is not possible when connecting units that are originally designed for other refrigerants)

2.3 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.

3. Introduction

3.1 General information

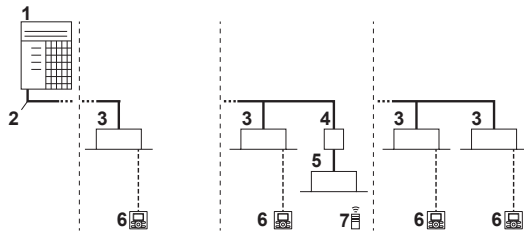
This installation manual concerns the VRV, full inverter driven, cooling only system.

Depending on the type of outdoor unit which is chosen, some functionality will or will not exist. It will be indicated throughout this installation manual and brought to your attention. Certain features have exclusive model rights.

These units are intended for outdoor installation and aimed for cooling only applications including air to air applications.

These units have (in single use) cooling capacities rating from 16 to 56 kW. In multi combination cooling on go up till 168 kW.

The outdoor unit is designed to work in cooling mode at ambient temperatures from 10°C to 49°C.



- 1 VRV Cooling only outdoor unit
- 2 Refrigerant piping
- 3 VRV indoor unit
- 4 BP unit (required to connect Residential Air (RA) indoor units)
- 5 Residential Air (RA) indoor units
- 6 User interface (dedicated depending on indoor unit type)
- 7 User interface (wireless, dedicated depending on indoor unit type)

3.2 Combination

The indoor units can be installed in the following range.

(Outdoor unit)	(Combination)	(Total capacity of indoor units)
RXQ6A	Single unit	75 ~ 195
RXQ8A	Single unit	100 ~ 260
RXQ10A	Single unit	125 ~ 325
RXQ12A	Single unit	150 ~ 390
RXQ14A	Single unit	175 ~ 455
RXQ16A	Single unit	200 ~ 520
RXQ18A/AM	Single unit, Multi unit ^(a)	225 ~ 585
RXQ20A/AM	Single unit, Multi unit ^(a)	250 ~ 650
RXQ22AM	Multi unit	275 ~ 715
RXQ24AM	Multi unit	300 ~ 780
RXQ26AM	Multi unit	325 ~ 845
RXQ28AM	Multi unit	350 ~ 910
RXQ30AM	Multi unit	375 ~ 975
RXQ32AM	Multi unit	400 ~ 1,040
RXQ34AM	Multi unit	425 ~ 1,105
RXQ36AM	Multi unit	450 ~ 1,170
RXQ38AM	Multi unit	475 ~ 1,235
RXQ40AM	Multi unit	500 ~ 1,300
RXQ42AM	Multi unit	525 ~ 1,365
RXQ44AM	Multi unit	550 ~ 1,430
RXQ46AM	Multi unit	575 ~ 1,495
RXQ48AM	Multi unit	600 ~ 1,560
RXQ50AM	Multi unit	625 ~ 1,625
RXQ52AM	Multi unit	650 ~ 1,690
RXQ54AM	Multi unit	675 ~ 1,755
RXQ56AM	Multi unit	700 ~ 1,820
RXQ58AM	Multi unit	725 ~ 1,885
RXQ60AM	Multi unit	750 ~ 1,950

Note

- Be sure to connect an R410A indoor unit.
 - See the catalog for indoor unit models which can be connected.
 - Refer to the technical engineering data for multi unit combinations.
- ^(a) Outdoor unit can be connected combination in single unit or multi unit, see more details in the technical engineering data.

NOTICE

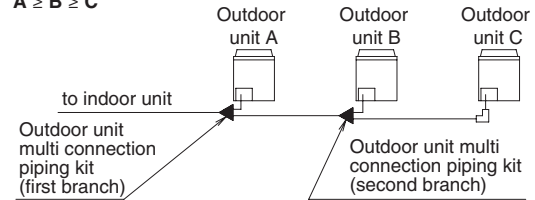
When selecting the total capacity higher than mentioned in above, cooling capacity will drop.
For additional information see technical engineering data.

- If the total capacity of the connected indoor units exceeds the capacity of the outdoor unit, cooling performance may drop when running the indoor units. See the capacity table in the Engineering Data Book for details.
- There are restrictions on the refrigerant pipe connecting order between outdoor unit in the case of the multi system. Install so that the following restrictions are satisfied.

<Restrictions>

The capacities of outdoor units A, B and C must fulfill the following conditions.

$$A \geq B \geq C$$



3.3 Scope of the manual

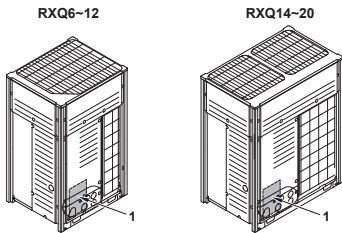
This manual describes the procedures for handling, installing and connecting the VRV outdoor units. This manual has been prepared to ensure adequate maintenance of the unit, and it will provide help in case problems occur.

INFORMATION

The installation of the indoor unit(s) is described in the indoor unit installation manual provided with the indoor units.

4. Accessories

4.1 Accessories supplied with this unit



See location 1 in the figure above for reference to where following accessories are supplied with the unit.

Name	Tie wrap (1)	Tie wrap (2)	Tie wrap (3)	Gas accessory pipe (1)
Quantity	9 pcs.	1 pcs.	1 pc.	1 pc.
Shape				 6-18 HP
	Small		Large	 20 HP ^(a)

Name	Gas accessory pipe (2)	Liquid accessory pipe (1)	Liquid accessory pipe (2)	Others
Quantity	1 pc.	1 pc.	1 pc.	<ul style="list-style-type: none"> • Operation manual • Installation manual • Caution label (Addition refrigerant charge record)
Shape	 Bottom connection			
	 6-8HP, 20HP	 10HP	 12HP, 14-18HP	 Bottom connection

Note

^(a) For RXQ20, Front connection pipe require the combination of gas accessory pipe(1) and gas accessory pipe(2).

Do not leave any accessories supplied with this unit, until installation finished.

4.2 Option accessory

To install the outdoor units, the following optional parts are also required. To select an optimum kit, refer to "9.3 Selection of refrigerant branch kits."

• Refrigerant branching kit

REFNET header	KHRP26M22H	KHRP26M33H	KHRP26M72H	KHRP26M73H
REFNET joint	KHRP26A22T	KHRP26A33T	KHRP26A72T	KHRP26A73T

• Outdoor unit multi connection piping kit

Number of outdoor units connected	2 units	3 units
Kit name	BHFP22P100	BHFP22P151

• Pipe size reducer

Kit name	KHRP26M73TP	KHRP26M73HP
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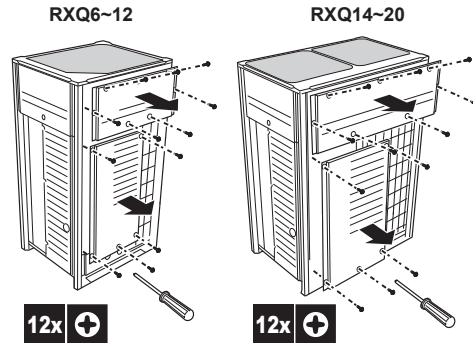
Note

Make sure that any separate purchased accessories are designed for use with R410A.

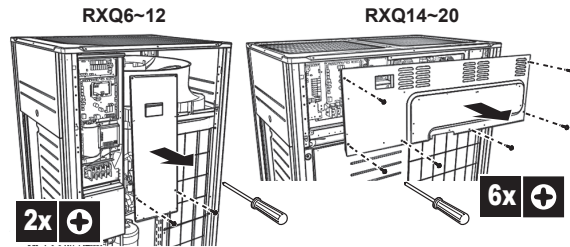
5. Overview of unit

5.1 Opening the unit

To gain access to the unit, front plates need to be opened as follows:



Once the front plates open, the electrical component box can be accessed by removing the electrical component box cover as follows.



For service purposes, the push buttons on the main PCB need to be accessed. To access these push buttons, the electrical component box cover does not need to be opened. See "13.Making field settings".



DANGER: Electrical shock

See "2.General safety precautions".



DANGER: Do not touch piping and internal parts.

See "2.General safety precautions".

5.2 Main components in the unit

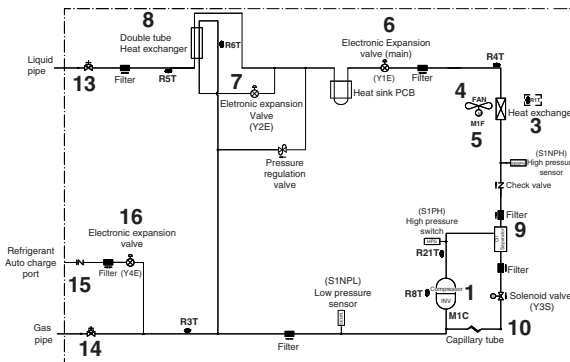
For all the models a piping diagram and outlook drawing are available. Depending on the model type some components in the main component list may not be existing in the unit.

Main components (see 5.2.1, 5.2.2, 5.2.3)

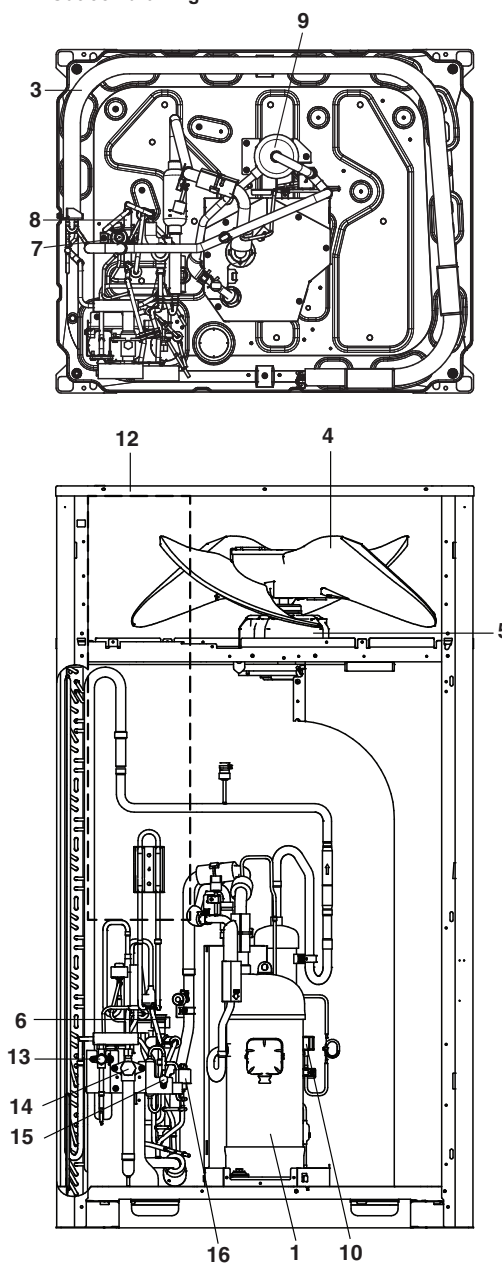
- 1 Compressor (M1C)
- 2 Compressor (M2C)
- 3 Heat exchanger
- 4 Fan
- 5 Fan motor (M1F, M2F)
- 6 Expansion valve, main (Y1E)
- 7 Expansion valve, subcool heat exchanger (Y2E)
- 8 Subcool heat exchanger
- 9 Oil separator
- 10 Solenoid valve, oil separator 1 (Y3S)
- 11 Solenoid valve, oil separator 2 (Y4S)
- 12 Electrical component box
- 13 Stop valve, liquid
- 14 Stop valve, gas
- 15 Stop valve, refrigerant auto charge
- 16 Expansion valve, refrigerant auto charge (Y4E)

5.2.1 RXQ (6~12 HP)

Piping diagram

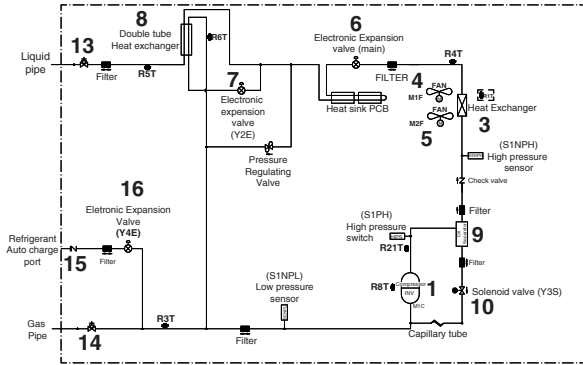


Outlook drawing



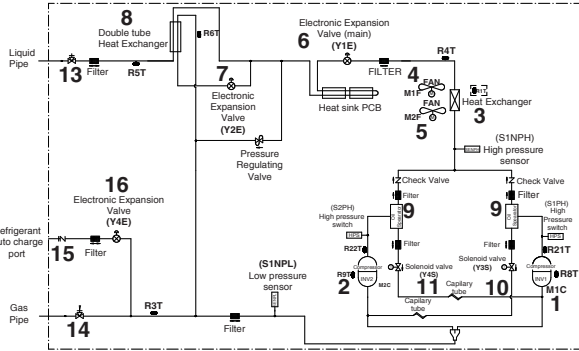
5.2.2 RXQ (14 HP)

Piping diagram

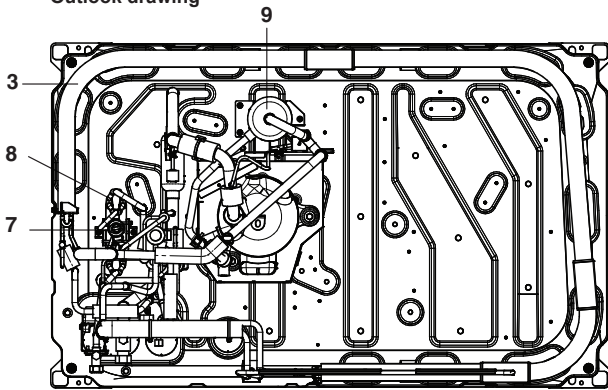


5.2.3 RXQ (16~20 HP)

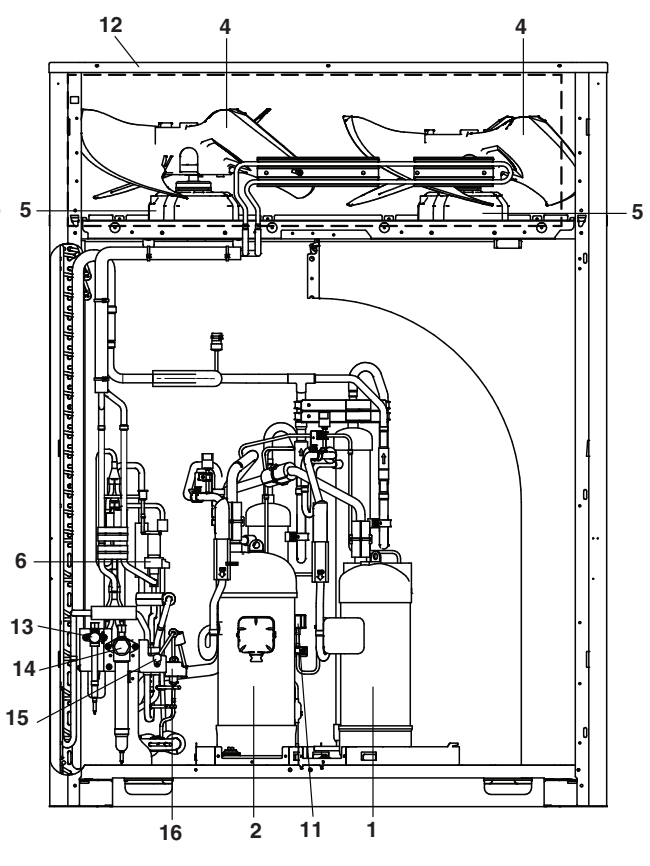
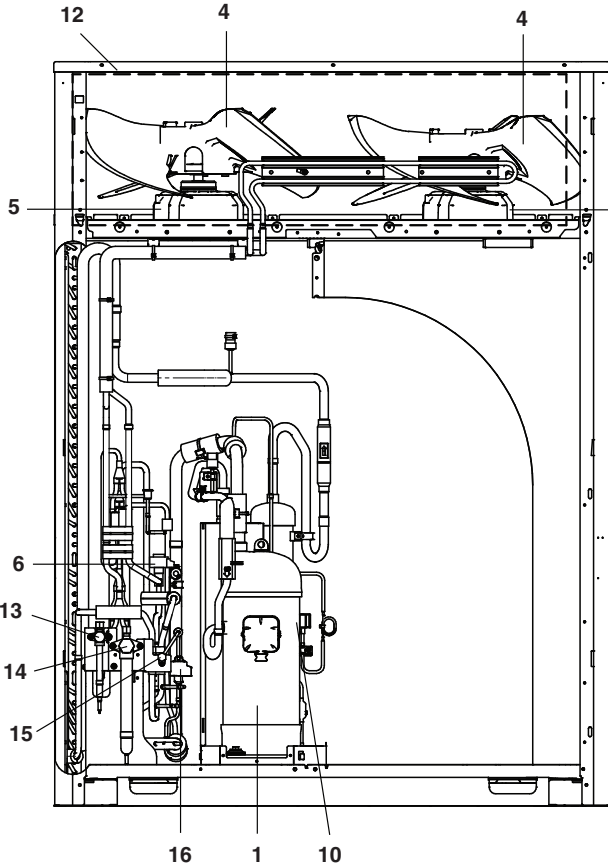
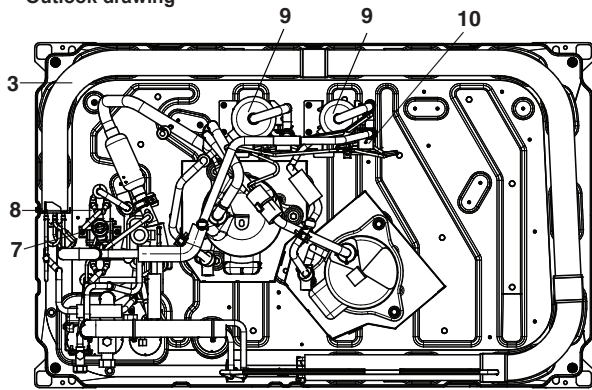
Piping diagram



Outlook drawing

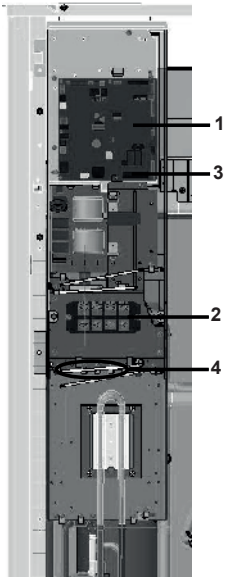


Outlook drawing

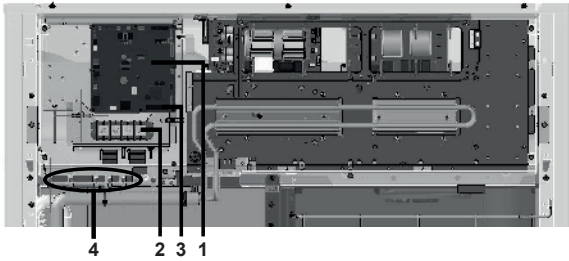


5.3 Main components in the electrical component box

RXQ6-12



RXQ14-20



- 1 Main PCB.
- 2 Terminal block X1M: main terminal block which allows easy connection of field wiring for power supply.
- 3 Terminal X1M on main PCB: terminal block for transmission wiring.
- 4 Cable tie mountings: the cable tie mountings allow to fix the field wiring with cable ties to the electrical component box to ensure strain relief.



INFORMATION

For more details refer to the wiring diagram of the units. The wiring diagram is located on the inside of the electrical component box.

6. Selecting an installation location



CAUTION

Appliance not accessible to the general public, install it in a secured area, protected from easy access.

This unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment.

6.1 General precautions on installation

Select an installation site that meets the following requirements:

- The foundation must be strong enough to support the weight of the unit. The floor is flat to prevent vibrations and noise generation and to have sufficient stability.
- The space around the unit is adequate for maintenance and servicing. The space around the unit allows for sufficient air circulation.
- There is no danger of fire due to leakage of flammable gas.
- The equipment is not intended for use in a potentially explosive atmosphere.
- Select the location of the unit in such a way that the sound generated by the unit does not disturb anyone, and the location is selected according the applicable legislation.
- All piping lengths and distances have been taken into consideration.
- Take care that in the event of a water leak, water cannot cause any damage to the installation space and surroundings.
- When installing the unit in a smallroom, take measures in order to keep the refrigerant concentration from exceeding allowable safety limits in the event of a refrigerant leak.



CAUTION

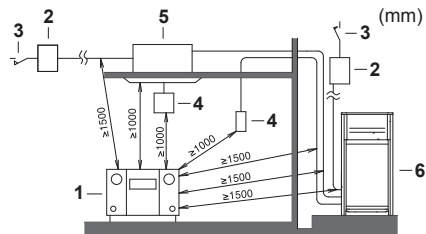
Excessive refrigerant concentrations in a closed room can lead to oxygen deficiency.



NOTICE

The equipment described in this manual may cause electronic noise generated from radio-frequency energy. The equipment complies to specifications that are designed to provide reasonable protection against such interference. However, there is no guarantee that interference will not occur in a particular installation.

It is therefore recommended to install the equipment and electric wires keeping proper distances away from stereo equipment, personal computers, etc.



- 1 Personal computer or radio
- 2 Fuse
- 3 Earth leakage protector
- 4 User interface
- 5 Indoor unit
- 6 Outdoor unit

In places with weak reception, keep distances of 3 m or more to avoid electromagnetic disturbance of other equipment and use conduit tubes for power and transmission lines.

- The refrigerant R410A itself is nontoxic, non-flammable and is safe. If the refrigerant should leak however, its concentration may exceed the allowable limit depending on room size. Due to this, it could be necessary to take measures against leakage. (See "18. Caution for refrigerant leaks").
- Do not install in the following locations:
 - Locations where sulphurous acids and other corrosive gases may be present in the atmosphere. Copper piping and soldered joints may corrode, causing refrigerant to leak.
 - Locations where a mineral oil mist, spray or vapour may be present in the atmosphere. Plastic parts may deteriorate and fall off or cause water leakage.
 - Locations where equipment that produces electromagnetic waves is found. The electromagnetic waves may cause the control system to malfunction, preventing normal operation.
 - Locations where flammable gases may leak, where thinner, gasoline and other volatile substances are handled, or where carbon dust and other incendiary substances are found in the atmosphere. Leaked gas may accumulate around the unit, causing an explosion.
- When installing, take strong winds, typhoons or earthquakes into account, improper installation may result in the unit turning over.

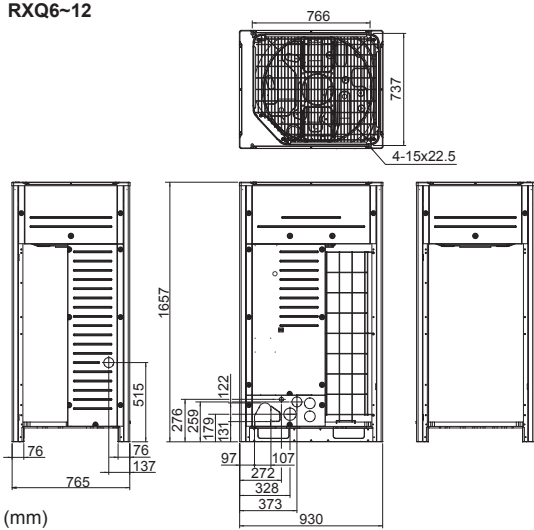
6.2 Weather related precautions

- Select a place where the rain can be avoided as much as possible.
- Be sure that the air inlet of the unit is not positioned towards the main wind direction. Frontal wind will disturb the operation of the unit. If necessary, use a screen to block the wind.
- Ensure that water cannot cause any damage to the location by adding water drains to the foundation and prevent water traps in the construction.
- Do not install the unit in areas where the air contains high levels of salt such as that near the ocean.

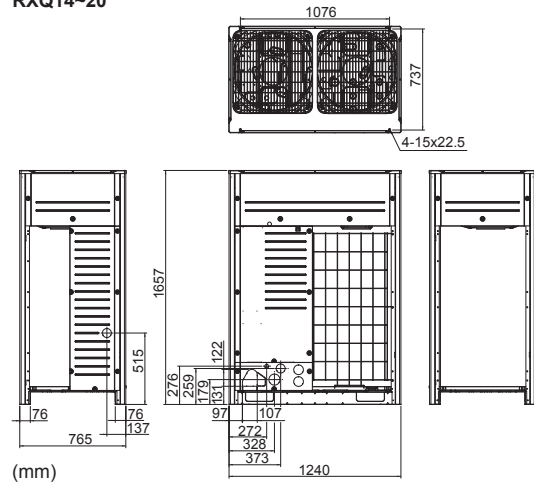
7. Dimensions and service space

7.1 Dimensions of outdoor unit

RXQ6-12

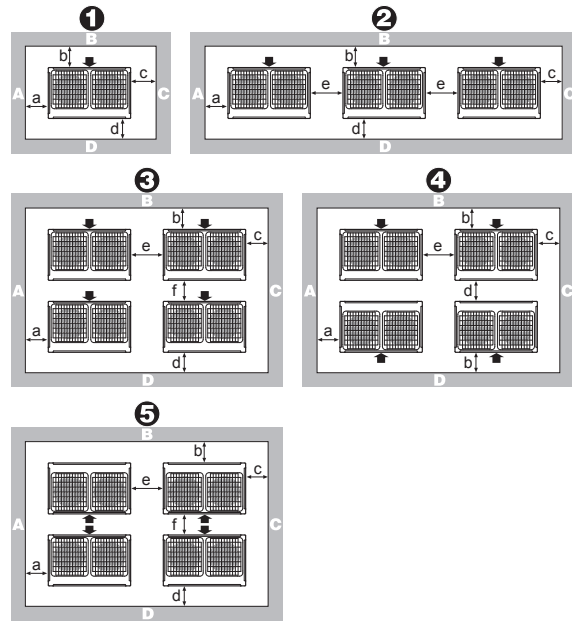


RXQ14-20

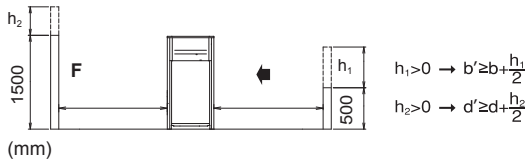


7.2 Service space

The space around the unit is adequate for servicing and the minimum space for air inlet and air outlet is available (refer to the figure below and choose one of the possibilities).



	A+B+C+D		A+B
①	a≥10 mm b≥300 mm c≥10 mm d≥500 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm	a≥200 mm b≥300 mm
②	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm	a≥200 mm b≥300 mm e≥400 mm
③	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm f≥600 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm f≥500 mm	
④	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm	
⑤	a≥10 mm b≥500 mm c≥10 mm d≥500 mm e≥20 mm f≥900 mm	a≥50 mm b≥500 mm c≥50 mm d≥500 mm e≥100 mm f≥600 mm	



ABCD Sides along the installation site with obstacles
 F Front side
 Suction side

- In case of an installation site where sides A+B+C+D have obstacles, the wall heights of sides A+C have no impact on service space dimensions. Refer to the figure above for impact of wall heights of sides B+D on service space dimensions, calculate new b,d by refer above formulars.
- In case of an installation site where only the sides A+B have obstacles, the wall heights have no influence on any indicated service space dimensions.

i INFORMATION

- The service space dimensions in above figure are based on cooling operation at 35°C ambient temperature (standard conditions).
- Further specifications can be found in the technical engineering data.

8. Inspecting and handling the unit

8.1 Inspection

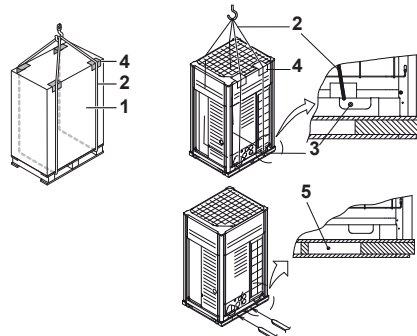
At delivery, the unit must be checked and any damage must be reported immediately to the carrier's claims agent.

8.2 Handling

1 When handling the unit, take into account the following:

- Fragile, handle the unit with care.
- Keep the unit upright in order to avoid compressor damage.

- Choose on beforehand the path along which the unit is to be brought in.
- Bring the unit as close as possible to its final installation position in its original package to prevent damage during transport.



1 Packaging material
 2 Belt sling
 3 Product opening
 4 Protector
 5 Skit base opening

- If use a forklift, insert the forks into the opening (large) of skid base.
- Lift the unit preferably with a crane and 2 belts of at least 8 m long as shown in the figure above. Always use protectors to prevent belt damage and pay attention to the position of the unit's centre of gravity.

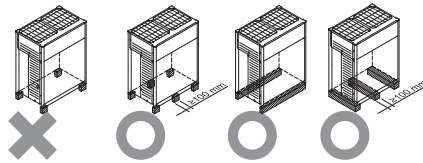
A forklift can only be used for transport as long as the unit remains on its pallet as shown above.

8.3 Installing the unit

Make sure the unit is installed level on a sufficiently strong base to prevent vibration and noise.

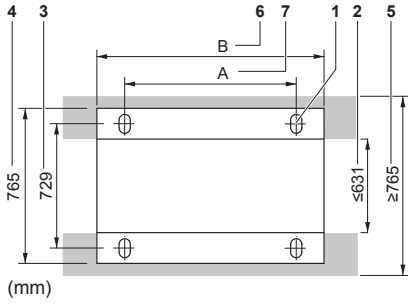
NOTICE

When the installation height of the unit needs to be increased, do not use stands to only support the corners.



X Not allowed
 O Allowed

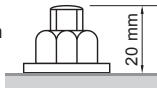
- The height of the foundation must at least be 150 mm from the floor.
- The unit must be installed on a solid longitudinal foundation (steel beam frame or concrete) and make sure the base under the unit is larger than the grey marked area.



- 1 Hole for foundation bolt (Ø15 dia. : 4 positions)
- 2 Inner dimension of the base
- 3 Distance between foundation bolt holes
- 4 Depth of unit
- 5 Outer dimension of the base
- 6 Longitudinal foundation dimension
- 7 Distance between foundation bolt holes

Model	A	B
6 · 8 · 10 · 12HP type	766	930
14 · 16 · 18 · 20HP type	1076	1240

- Fasten the unit in place using four foundation bolts M12. It is best to screw in the foundation bolts until their length remains 20mm above the foundation surface.



NOTICE

- When installed in a corrosive environment, use a nut with plastic washer to protect the nut tightening part from rust.



9. Refrigerant pipe size and allowable pipe length

9.1 Selection of piping material



NOTICE

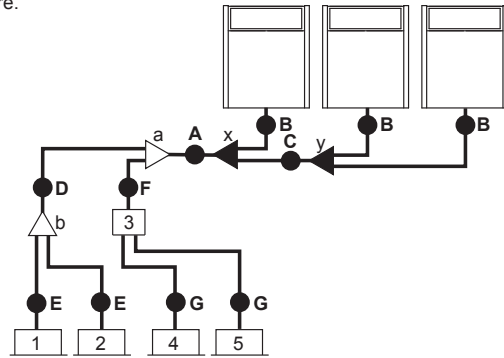
- Jointless phosphor-deoxidized copper pipe
- Select a thickness for the refrigerant piping which complies with national and local laws.
- Installation shall be done by a licensed installer, the choice of materials and installation shall conform completely with the applicable national and international codes.

- Foreign materials inside pipes (including oils for fabrication) must be ≤30 mg/10 m.
- Temper grade: use piping with temper grade in function of the pipe diameter as 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)

9.2 Selection of piping size

Determine the proper size referring to following tables and reference figure.



- 1,2 VRV indoor unit
- 3 BP box
- 4,5 RA indoor unit
- a,b Indoor branch kit
- x,y Outdoor multi connection kit

9.2.1 Piping between outdoor unit and (first) refrigerant branch kit: A, B, C

Choose from the following table in accordance with the outdoor unit total capacity type, connected downstream.

Outdoor unit capacity type (HP)	Piping outer diameter size (mm)	
	Gas pipe	Liquid pipe
6~8	Ø 19.1 (3/4")	Ø 9.5 (3/8")
10	Ø 22.2 (7/8")	
12~16	Ø 28.6 (1 1/8")	Ø 12.7 (1/2")
18~22		Ø 15.9 (5/8")
24	Ø 34.9 (1 3/8")	Ø 19.1 (3/4")
26~34		
36~60	Ø 41.3 (1 5/8")	

9.2.2 Piping between refrigerant branch kits: D

Choose from the following table in accordance with the indoor unit total capacity type, connected downstream. Do not let the connection piping exceed the refrigerant piping size chosen by the general system model name.

Indoor unit capacity index	Piping outer diameter size (mm)	
	Gas pipe	Liquid pipe
<150	Ø 15.9 (5/8")	Ø 9.5 (3/8")
150≤x<200	Ø 19.1 (3/4")	
200≤x<290	Ø 22.2 (7/8")	
290≤x<420	Ø 28.6 (1 1/8")	Ø 12.7 (1/2")
420≤x<640		Ø 15.9 (5/8")
640≤x<920	Ø 34.9 (1 3/8")	Ø 19.1 (3/4")
≥920	Ø 41.3 (1 5/8")	

Example:

Downstream capacity for E=capacity index of unit 1
Downstream capacity for D=capacity index of unit 1+capacity index of unit 2

9.2.3 Piping between refrigerant branch kit and BP unit: F

Pipe size for direct connection on BP unit must be based on the total capacity of the connected indoor units (only in case RA indoor units are connected).

Total capacity index of connected indoor units	Gas pipe (mm)	Liquid pipe (mm)
20-62	Ø12.7 (1/2")	Ø 6.4 (1/4")
63-149	Ø15.9 (5/8")	
150-208	Ø19.1 (3/4")	Ø 9.5 (3/8")
~250	Ø 22.2 (7/8")	

Example:

Downstream capacity for F=capacity index of unit 4+capacity index of unit 5

9.2.4 Piping between BP unit and RA indoor unit: G

Only in case RA indoor units are connected.

Indoor unit capacity index	Gas pipe (mm)	Liquid pipe (mm)
20, 25, 30, 35	Ø 9.5 (3/8")	Ø 6.4 (1/4")
50	Ø12.7 (1/2")	
60		Ø15.9 (5/8")
71 (c)		

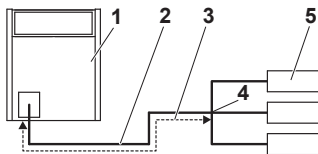
(c) In some indoor units, the piping size is difference. Choose from the size of each indoor units.

9.2.5 Piping between refrigerant branch kit and indoor unit: E

Pipe size for direct connection to indoor unit must be the same as the connection size of the indoor unit (in case indoor unit is VRV Indoor).

Indoor unit capacity index	Piping outer diameter size (mm)	
	Gas pipe	Liquid pipe
20, 25, 32, 40, 50	Ø12.7 (1/2")	Ø 6.4 (1/4")
63, 80, 100, 125, 140	Ø15.9 (5/8")	Ø 9.5 (3/8")
200	Ø19.1 (3/4")	
250	Ø22.2 (7/8")	
400	Ø28.6 (1 1/8")	Ø 12.7 (1/2")
500		Ø 15.9 (5/8")

- When the equivalent pipe length between outdoor and indoor units is 90 m or more, the size of the main pipes (both gas side and liquid side) must be increased. Depending on the length of the piping, the capacity may drop, but even in such a case it is possible to increase the size of the main pipes.



- Outdoor unit
- Main pipes
- Increase
- First refrigerant branch kit
- Indoor unit

Size up		
HP Class	Gas side (mm)	Liquid size (mm)
6~8	Ø19.1 (3/4") → Ø22.2 (7/8")	Ø9.5 (3/8") → Ø12.7 (1/2")
10	Ø22.2 (7/8") → Ø25.4 (1") ^(a)	
12~14	Ø28.6 (1 1/8") ^(b)	Ø12.7 (1/2") → Ø15.9 (5/8")
16	Ø28.6 (1 1/8") → Ø31.8 (1 1/4") ^(a)	
18~22	Ø34.9 (1 3/8") ^(b)	Ø15.9 (5/8") → Ø19.1 (3/4")
24		
26~34	Ø34.9 (1 3/8") → Ø38.1 (1 1/2") ^(a)	Ø19.1 (3/4") → Ø22.2 (7/8")
36~60	Ø41.3 (1 5/8") ^(b)	

- (a) If this pipe diameter is unobtainable on site, please do not size up a pipe diameter. (Without size up the pipe diameter, capacity will great decreased, but equivalent piping length can be extended up to 190m)
- (b) Please use this pipe diameter only. (Without size up the pipe diameter, equivalent piping length can be extended up to 190m)

- 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.

Pipe Ø (mm)	Minimal thickness t (mm)
Ø 6.4 (1/4")	0.80
Ø 9.5 (3/8")	
Ø12.7 (1/2")	
Ø15.9 (5/8")	0.99
Ø19.1 (3/4")	0.80
Ø22.2 (7/8")	
Ø25.4 (1")	0.88
Ø28.6 (1 1/8")	0.99
Ø31.8 (1 1/4")	1.10
Ø34.9 (1 3/8")	1.21
Ø38.1 (1 1/2")	1.32
Ø41.3 (1 5/8")	1.43

In this case, the additional refrigerant calculation has to be adjusted as mentioned in "14. Charging refrigerant".

9.3 Selection of refrigerant branch kits

Refrigerant REFNETS

For piping example, refer to "9.2. Selection of piping size".

- When using REFNET joints at the first branch counted from the outdoor unit side, choose from the following table in accordance with the capacity of the outdoor unit (example: REFNET joint a).

Outdoor unit capacity type (HP)	Model refrigerant branch kits
6~10	KHRP26A33T
12~22	KHRP26A72T
24~60	KHRP26A73T + KHRP26M73TP

- For REFNETS joints other than the first branch (example REFNET joint b), select the proper branch kit model based on the total capacity index of all indoor units connected after the refrigerant branch.

Indoor unit capacity index	Model refrigerant branch kits
<200	KHRP26A22T
200≤x<290	KHRP26A33T
290≤x<640	KHRP26A72T
≥640	KHRP26A73T + KHRP26M73TP

- Concerning REFNET headers, choose from the following table in accordance with the total capacity of all the indoor units connected below the REFNET header.

Indoor unit capacity index	Model refrigerant branch kits
<200	KHRP26M22H
200≤x<290	KHRP26M33H
290≤x<640	KHRP26M72H ^(a)
≥640	KHRP26M73H + KHRP26M73HP

(a) If the pipe size above the REFNET header is Ø34.9 or more, KHRP26M73HP is required.



INFORMATION

Maximum 8 branches can be connected to a header.

- How to choose an outdoor multi connection piping kit. Choose from the following table in accordance with the number of outdoor units.

Number of outdoor units	Branch kit name
2	BHFP22P100
3	BHFP22P151



NOTICE

Refrigerant branch kits can only be used with R410A.

9.4 System piping (length) limitations

9.4.1 Piping length restrictions

Make sure to perform the piping installation within the range of the maximum allowable pipe length, allowable level difference and allowable length after branching as indicated below. The pattern will be discussed, including VRV indoor units combined with RA indoor units.

Definitions

Actual piping length: pipe length between outdoor⁽¹⁾ and indoor units.

Equivalent piping length⁽²⁾ : pipe length between outdoor⁽¹⁾ and indoor units.

Total piping length: total piping length from the outdoor⁽¹⁾ to all indoor units.

Difference in height between outdoor and indoor units: H1.

Difference in height between indoor and indoor units: H2.

Difference in height between outdoor and outdoor units: H3.

Difference in height between outdoor and BP unit: H4.

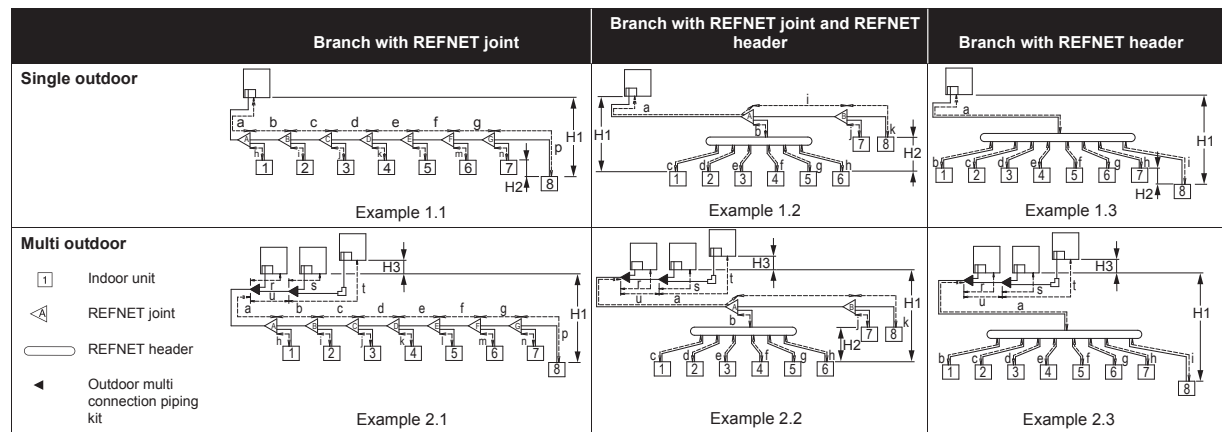
Difference in height between BP unit and BP unit: H5.

Difference in height between BP unit and RA indoor unit: H6.

- (1) In case of multi outdoor system, re-read to the first outdoor unit multi connection piping kit as seen from the indoor unit.
- (2) Assume equivalent piping length of REFNET joint=0.5 m and REFNET header=1 m (for calculation purposes).

9.4.2 System only containing VRV indoor units

System setup



Maximum allowable length

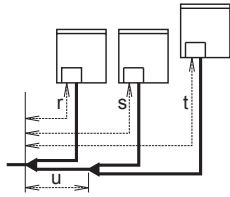
- Between outdoor and indoor units (refer the recommend combination type in Engineering data book).

		Example 1.1	Example 1.2	Example 1.3
Actual piping length	165 m	unit 8: a+b+c+d+e+f+g+p≤165 m	unit 6: a+b+h≤165 m unit 8: a+i+k≤165 m	unit 8: a+i≤165 m
Equivalent length ⁽²⁾	190 m	—	—	—
Total piping length	1000 m	a+b+c+d+e+f+g+h+i+j+k+l+m+n+p≤1000 m	—	—

- Between outdoor and indoor units (free multi combinations).

		Example 2.1	Example 2.2	Example 2.3
Actual piping length	135 m	unit 8: a+b+c+d+e+f+g+p≤135 m	unit 6: a+b+h≤135 m unit 8: a+i+k≤135 m	unit 8: a+i≤135 m
Equivalent length ⁽²⁾	160 m	—	—	—
Total piping length	500 m	a+b+c+d+e+f+g+h+i+j+k+l+m+n+p≤500 m	—	—

Example 3 : with standard multi layout



- Between outdoor branch and outdoor unit.

Actual piping length	10 m	Example 3 r, s, t ≤ 10 m; u ≤ 5 m
Equivalent length	13 m	—

Maximum allowable height difference

H1	≤ 50 m ^(a)
H2	≤ 30 m
H3	≤ 5 m

(a) Conditional extension up till 90 m is possible.
 In case the outdoor location is higher than indoor: extension is possible up till 90 m and following 2 conditions must be fulfilled:

- Liquid piping size up (see table "Size up").
- Dedicated setting on outdoor unit is required (see [2-49] in Monitoring function and field settings)

In case the outdoor location is lower than indoor: extension is possible up till 90 m and following 1 condition must be fulfilled:

- Liquid piping size up (see table "Size up").

Maximum allowable length after branch

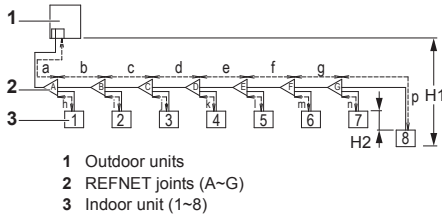
The pipe length from the first refrigerant branch kit to the indoor unit ≤ 40 m.

Example 1.1: unit 8: $b+c+d+e+f+g+p \leq 40$ m

Example 1.2: unit 6: $b+h \leq 40$ m, unit 8: $i+k \leq 40$ m

Example 1.3: unit 8: $i \leq 40$ m

However, extension is possible if all below conditions are met. In this case limitation can be extended up to 90 m.



- a. The piping length between all indoor to the nearest branch kit is ≤ 40 m.

Example: h, l, j ... $p \leq 40$ m

- b. It is necessary to increase the pipe size of the gas and liquid piping if the pipe length between the first branch kit and the farthest indoor unit is over 40 m.

If the increased pipe size is larger than the pipe size of the main pipe, then the pipe size of the main pipe has to be increased as well.

Increase the pipe size as follows:
 9.5 → 12.7; 12.7 → 15.9; 15.9 → 19.1; 19.1 → 22.2; 22.2 → 25.4⁽³⁾; 28.6 → 31.8⁽³⁾; 34.9 → 38.1⁽³⁾

Example: unit 8: $b+c+d+e+f+g+p \leq 90$ m; increase the pipe size of b, c, d, e, f, g.

(3) If this pipe diameter is unobtainable on site, the piping length limitation cannot be extended.

- c. When the piping size is increased (step b), the piping length has to be counted as double (except for the main pipe and the pipes that are not increased in pipe size).

The total piping length has to be within limitations (see table above).

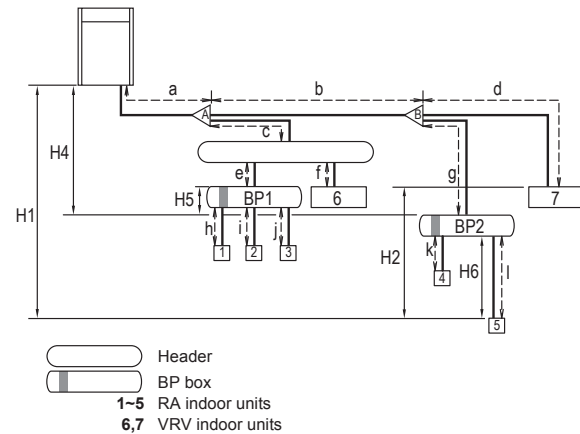
Example:
 $a+b*2+c*2+d*2+e*2+f*2+g*2+h+i+j+k+l+m+n+p \leq 1000$ m (500 m).

- d. The piping length difference between the nearest indoor from first branch to the outdoor unit and farthest indoor to the outdoor unit is ≤ 40 m.

Example: The farthest indoor unit 8. The nearest indoor unit 1 → $(a+b+c+d+e+f+g+p)-(a+h) \leq 40$ m.

9.4.3 System containing VRV indoor units and RA indoor units

System setup



Maximum allowable length

- Between outdoor unit and indoor unit.

Actual piping length	100 m	Example: $a+b+g+l \leq 100$ m
Equivalent length ^(a)	120 m	—
Total piping length	250 m	Example: $a+b+d+g+l+k+c+e+f+h+i+j \leq 250$ m

(a) Assume equivalent piping length of REFNET joint=0.5 m and REFNET header=1 m (for calculation purposes).

- Between BP unit and indoor unit.

Indoor unit capacity index	Pipe length
<60	2~15 m
60	2~12 m
71	2~8 m

Remark: **Minimum allowable length** between outdoor unit and first refrigerant branch kit > 5 m (the refrigerant noise from the outdoor unit can be transmitted).

Example: $a > 5$ m

Maximum allowable height difference

H1	≤ 50 m (40 m) (if outdoor is located below indoor units)
H2	≤ 15 m
H4	≤ 40 m
H5	≤ 15 m
H6	≤ 5 m

Maximum allowable length after branch

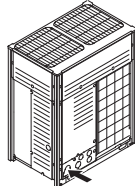
The pipe length from the first refrigerant branch kit to the indoor unit ≤ 50 m.

Example: $b+g+l \leq 50$ m

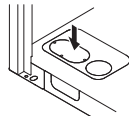
If the piping length between the first branch and BP unit or VRV indoor unit is over 20m, it is necessary to increase the gas and liquid piping size between the first branch and BP unit or VRV indoor unit. If the piping diameter of the sized up piping exceeds the diameter of the piping before the first branch kit, than the latter also requires a liquid piping and gas piping size up.

9.5 Multi system piping installation

- Front connection
Remove the front plate knock out holes to connect (see figure below).



- Bottom connection
Remove the knock out holes on the bottom frame and route the piping under the bottom frame (see figure below).

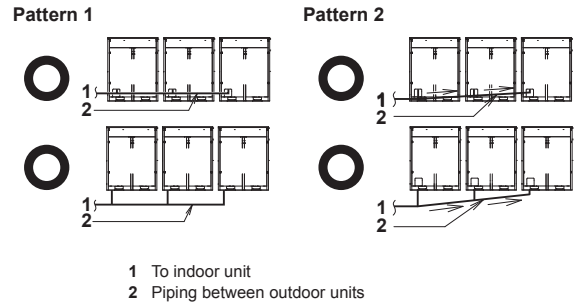


9.5.1 Precautions when connecting piping between outdoor units (multiple outdoor unit system)

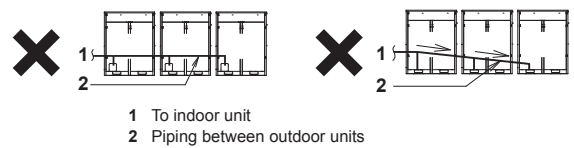
- To connect the piping between outdoor units, an optional multi connection piping kit BHFP22P100/151 is always required. When installing the piping, follow the instructions in the installation manual that comes with the kit.
- Only proceed with piping work after considering the limitations on installing listed here and in the chapter "10.2. Connecting the refrigerant piping" always referring to the installation manual delivered with the kit.

9.5.2 Possible installation patterns and configurations

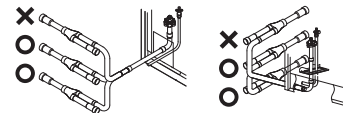
- The piping between the outdoor units must be routed level or slightly upward to avoid the risk of oil retention into the piping.



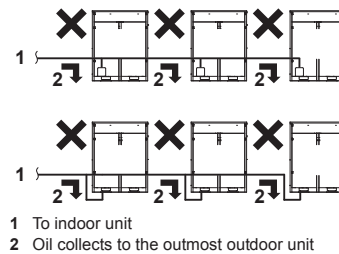
Prohibited patterns: change to pattern 1 or 2.



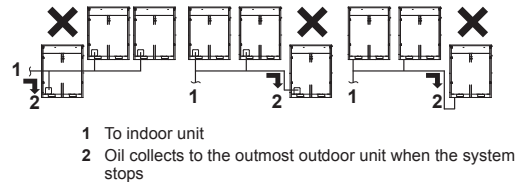
- To avoid the risk of oil retention to the outmost outdoor unit, always connect the stop valve and the piping between outdoor units as shown in the 4 correct possibilities of the figure below.



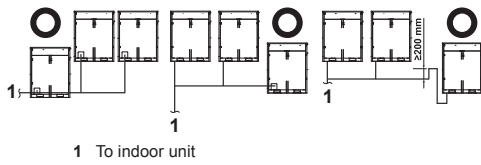
Prohibited patterns: change to pattern 1 or 2.



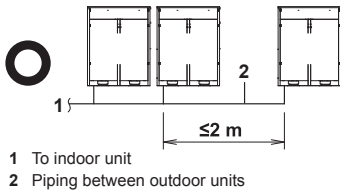
Change to configuration as in figures below



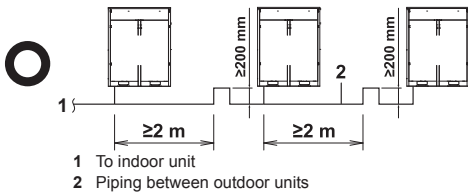
Correct configuration



- If the piping length between the outdoor units exceeds 2m, create a rise of 200mm or more in the gas line within a length of 2m from the kit.
If ≤ 2 m



If > 2 m



10. Precautions on refrigerant piping

- Do not allow anything other than the designated refrigerant to get mixed into the refrigerant cycle, such as air, nitrogen, etc. If any refrigerant gas leaks while working on the unit, ventilate the room thoroughly right away.
- Use R410A only when adding refrigerant
- Installation tools: Make sure to use installation tools (gauge manifold, charge hose, etc.) that are exclusively used for R410A installations to withstand the pressure and to prevent foreign materials (e.g., mineral oils and moisture) from mixing into the system.
- Vacuum pump:
 - Use a 2-stage vacuum pump with a non-return valve.
 - Make sure the pump oil does not flow oppositely into the system while the pump is not working.
 - Use a vacuum pump which can evacuate to -100.7 kPa (5Torr, -755 mm Hg).

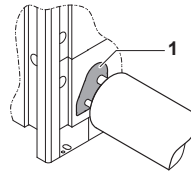
Protection against contamination when installing pipes

Take measures to prevent foreign materials like moisture and contamination from mixing into the system.

Place	Installation period	Protection method
	More than a month	Pinch the pipe
	Less than a month	
	Regardless of the period	Pinch or tape the pipe

Block all gaps in the holes for passing out piping and wiring using sealing material (field supply) (the capacity of the unit will drop and small animals may enter the machine).

Example: passing piping out through the front.



- 1 Close the areas marked with "■". (When the piping is routed from the front panel.)

- Use clean pipes only.
- Hold the pipe end downwards when removing burrs.
- Cover the pipe end when inserting it through a wall so that no dust or dirt enters the pipe.

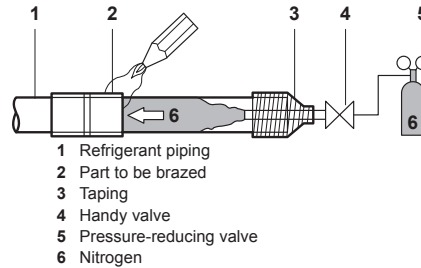


NOTICE

After all the piping has been connected, make sure there is no gas leak. Use nitrogen to perform a gas leak detection.

10.1 Caution for brazing

- Make sure to blow through with nitrogen when brazing. Blowing through with nitrogen prevents the creation of large quantities of oxidized film on the inside of the piping. An oxidized film adversely affects valves and compressors in the refrigerating system and prevents proper operation.
- The nitrogen pressure should be set to 0.02MPa (i.e., just enough so it can be felt on the skin) with a pressure-reducing valve.



Do not use anti-oxidants when brazing the pipe joints. Residue can clog pipes and break equipment:

- Do not use flux when brazing copper-to-copper refrigerant piping. Use phosphor copper brazing filler alloy (BCuP) which does not require flux.
- Flux has an extremely harmful influence on refrigerant piping systems. For instance, if chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will deteriorate the refrigerant oil.

10.2 Connecting the refrigerant piping

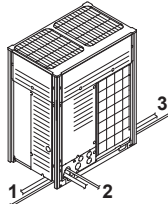


NOTICE

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation.

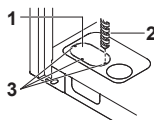
10.2.1 Decide front or side (bottom) connection

Installation of refrigerant piping is possible as front connection or side connection (when taken out from the bottom) as shown in the figure below.



- 1 Left-side connection
- 2 Front connection
- 3 Right-side connection

For side connections, the knockout hole on the bottom plate should be removed:



- 1 Large knockout hole
- 2 Drill
- 3 Points for drilling



NOTICE

Precautions when knocking out knockout holes:

- Be sure to avoid damaging the casing.
- After knocking out the knockout holes, we recommend you remove the burrs and paint the edges and areas around the edges using repair paint to prevent rusting.



- When passing electrical wiring through the knockout holes, wrap the wiring with protective tape to prevent damage as shown above.

10.2.2 Remove the pinched pipes



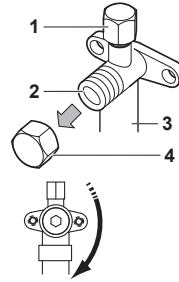
WARNING

Any gas or oil remaining inside the stop valve may blow off the pinched piping.

Failure to observe the instructions in procedure below properly may result in property damage or personal injury, which may be serious depending on the circumstances.

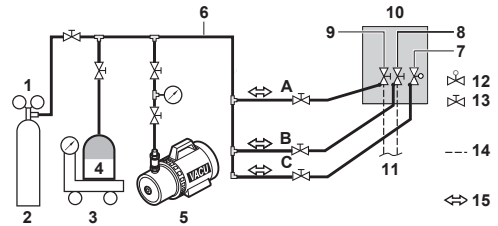
Use the following procedure to remove the pinched piping:

- 1 Remove the valve cover and make sure that the stop valves are fully closed.



- 1 Service port and service port cover
- 2 Stop valve
- 3 Field piping connection
- 4 Stop valve cover

- 2 Connect the vacuuming/recovery unit to service ports of all stop valves.



- 1 Gauge manifold
- 2 Nitrogen
- 3 Measuring instrument
- 4 Refrigerant R410A tank (siphon system)
- 5 Vacuum pump
- 6 Charge hose
- 7 Refrigerant auto charge valve
- 8 Gas pipe stop valve
- 9 Liquid pipe stop valve
- 10 Outdoor unit
- 11 To indoor unit
- 12 Needle valve
- 13 Stop valve
- 14 Field piping
- 15 Gas flow
- A Valve A
- B Valve B
- C Valve C

- 3 Recover gas and oil from the pinched piping by using a recovery unit.

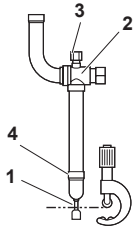


CAUTION

Do not vent gases into the atmosphere.

- 4 When all gas and oil is recovered from the pinched piping, disconnect the charge hose and close the service ports.

- 5 Cut off the lower part of the smaller pinched piping with an appropriate tool (e.g., pipe cutter, a pair of nippers, ...). Let the remaining oil drip out in case the recovery was not complete.



- 1 Pinched piping (small)
- 2 Stop valve
- 3 Service port
- 4 Pinched piping (large)

Wait until all oil is dripped out.

- 6 Remove the pinched piping (large)



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.

- 7 Wait until all oil is dripped out before continuing with the connection of the field piping in case the recovery was not complete.

10.2.3 Connecting refrigerant piping to the outdoor unit



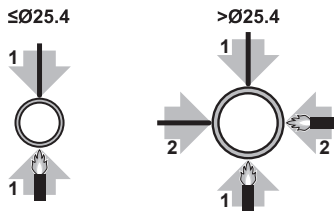
INFORMATION

All local inter unit piping are field supplied except the accessory pipes.



NOTICE

Precautions when connecting field piping. Add brazing material as shown in the figure.



NOTICE

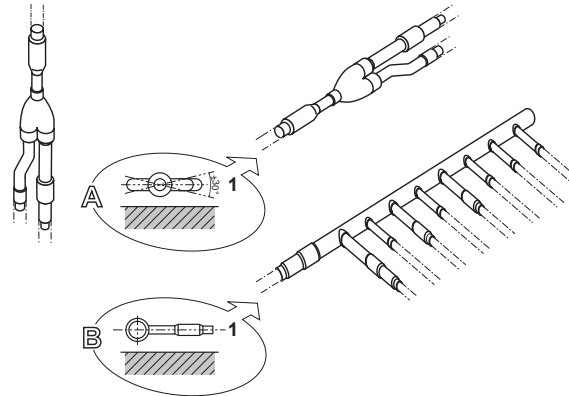
- Be sure to use the supplied accessory pipes when carrying out piping work in the field.
- Be sure that the field installed piping does not touch other pipes, the bottom panel or side panel. Especially for the bottom and side connection, be sure to protect the piping with suitable insulation, to prevent it from coming into contact with the casing.

Connection from the stop valves to the field piping can be done by using accessory pipes supplied as accessory.

The connections to the branch kits are the responsibility of the installer (field piping).

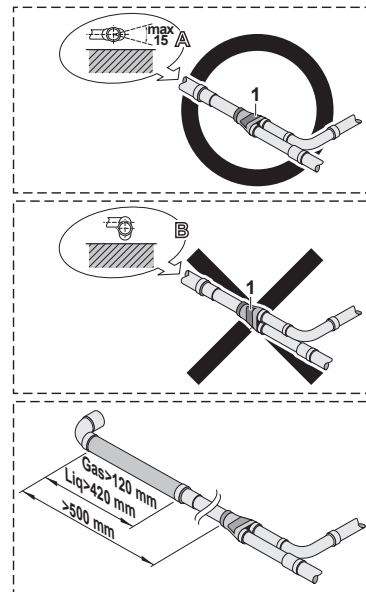
10.2.4 Branching the refrigerant piping

- For installation of the refrigerant branching kit, refer to the installation manual delivered with the kit.



1 Horizontal surface

- 1 Mount the REFNET joint so that it branches either horizontally or vertically.
 - 2 Mount the REFNET header so that it branches horizontally.
- Installation of the multi connection piping kit.

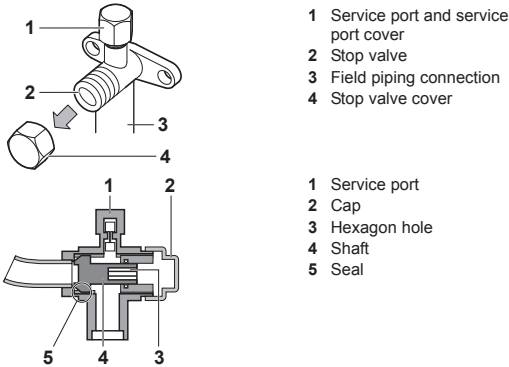


- 1 Install the joints horizontally, so that the caution label (1) attached to the joint comes to the top.
 - Do not tilt the joint more than 15° (see view A).
 - Do not install the joint vertically (see view B).
- 2 Make sure that the total length of the piping connected to the joint is absolute straight for more than 500 mm. Only if a straight field pipe length.
 - Gas field pipe length > 120 mm.
 - Liquid field pipe length > 420 mm.
- 3 Improper installation may lead to malfunction of the outdoor unit.

10.3 Guidelines for handling stop valve

10.3.1 Cautions on handling the stop valve

- Make sure to keep both stop valves open during operation.
- The figure below shows the name of each part required in handling the stop valve.
- The stop valve is factory closed.

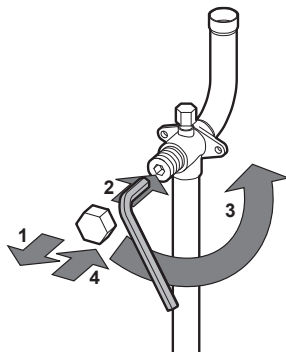


10.3.2 How to use the stop valve

Opening the stop valve

- 1 Remove the valve cover.
- 2 Insert a hexagon wrench into the stop valve and turn the stop valve counterclockwise.
- 3 When the stop valve cannot be turned any further, stop turning. The valve is now open.

To fully open the $\varnothing 19.1$ or $\varnothing 25.4$ gas line stop valve, turn the hexagonal wrench until a torque between 27 and 33 N·m is achieved. Inadequate torque may cause leakage of refrigerant and breakage of the stop valve cap.



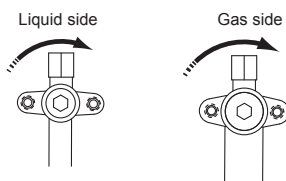
NOTICE

Pay attention that mentioned torque range is applicable for opening $\varnothing 19.1$ and $\varnothing 25.4$ gas line stop valves only.

Closing the stop valve

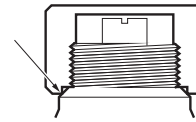
- 1 Remove the valve cover.
- 2 Insert a hexagon wrench into the stop valve and turn the stop valve clockwise.
- 3 When the stop valve cannot be turned any further, stop turning. The valve is now closed.

Closing direction



10.3.3 Cautions on handling the stop valve cover

- The stop valve cover is sealed where indicated by the arrow. Take care not to damage it.
- After handling the stop valve, make sure to tighten the stop valve cover securely. For the tightening torque, refer to the table below.
- Check for refrigerant leaks after tightening the stop valve cover.



10.3.4 Cautions on handling the service port

- Always use a charge hose equipped with a valve depressor pin, since the service port is a Schrader type valve.
- After handling the service port, make sure to tighten the service port cover securely. For the tightening torque, refer to the table below.
- Check for refrigerant leaks after tightening the service port cover.

10.3.5 Tightening torques

[Tightening torque]

The sizes of the shutoff valves on each model and the tightening torque for each size are listed in the table below.

<Size of Shutoff Valve>

	6 • 8 • 10HP type	12HP type	14HP type	16HP type	18HP type	20HP type
Liquid side shutoff valve	$\varnothing 9.5$ The 12HP type corresponds to the 12.7-diameter onsite piping using the included piping.		$\varnothing 12.7$ The 18~20HP type corresponds to the 15.9-diameter onsite piping using the accessory piping.			
Gas side shutoff valve	$\varnothing 19.1$ The 10HP type corresponds to the 22.2-diameter onsite piping using the accessory piping.	$\varnothing 25.4$ The 12~18HP type corresponds to the 28.6-diameter onsite piping using the accessory piping.		$\varnothing 28.6$		

<Tightening torque>

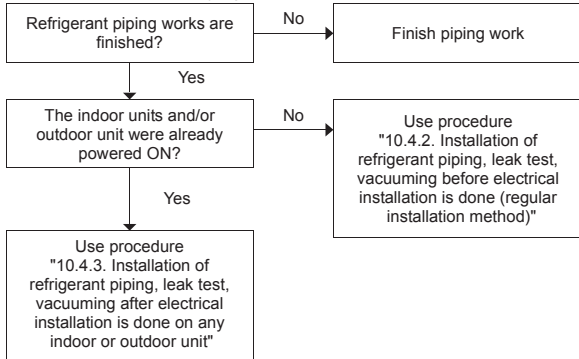
Shutoff valve size	Stop Valve Seal Structure	Tighten torque N·m (Turn clockwise to close)			
		Shaft (valve body)	Cap (valve lid)	Service port	
$\varnothing 9.5$	Front - Seal Type	6.0±0.6	Hexagonal wrench 4 mm	15.0±1.5	
$\varnothing 12.7$		9.0±0.9		20.0±2.0	
$\varnothing 15.9$	Front - Seal Type + Back - Seal Type	15.0±1.5	Hexagonal wrench 6 mm	25.0±2.5	
$\varnothing 19.1$		30.0±3.0			Hexagonal wrench 8 mm
$\varnothing 25.4$					
$\varnothing 28.6$					

10.4 Leak test and vacuum drying

It is very important that all refrigerant piping work is done before the units (outdoor or indoor) are powered on.

When the units are powered on, the expansion valves will initialize. This means that they will close. Leak test and vacuum drying of field piping and indoor units is impossible when this happens.

Therefore, there will be explained 2 methods for initial installation, leak test and vacuum drying.



10.4.1 General guidelines

- Use a 2-stage vacuum pump with a non-return valve which can evacuate to a gauge pressure of -100.7 kPa (5 Torr absolute, -755 mm Hg).
- Connect the vacuum pump to the service port of all 3 stop valves to increase efficiency (refer to "10.4.4.Setup").



NOTICE

Do not purge the air with refrigerants. Use a vacuum pump to evacuate the installation.

10.4.2 Installation of refrigerant piping, leak test, vacuuming before electrical installation is done (regular installation method)

When all piping work is complete, it is necessary to:

- Check for any leakages in the refrigerant piping.
- Perform vacuum drying to remove all moisture, air or nitrogen in the refrigerant piping.

If there is a possibility of moisture being present in the refrigerant piping (for example, rainwater may have entered the piping), carry out the vacuum drying procedure below until all moisture has been removed.

All piping inside the unit has been factory tested for leaks.

Only field installed refrigerant piping needs to be checked. Therefore, make sure that all the outdoor unit stop valves are firmly closed before performing leak test or vacuum drying.



NOTICE

Make sure that all (field supplied) field piping valves are OPEN (not outdoor unit stop valves!) before you start leak test and vacuuming.

10.4.3 Installation of refrigerant piping, leak test, vacuuming after electrical installation is done on any indoor or outdoor unit

Apply outdoor unit setting [2-21]=1 before starting leak test and vacuuming. This setting will open field expansion valves to guarantee a R410A piping pathway.



NOTICE

- Make sure that all (field supplied) field piping valves are OPEN (not outdoor unit stop valves!) before you start leak test and vacuuming.
- Make sure that all indoor units connected to the outdoor unit are powered on.
- Wait until the outdoor unit has finished the initialisation to apply setting [2-21].

When all piping work is complete, it is necessary to:

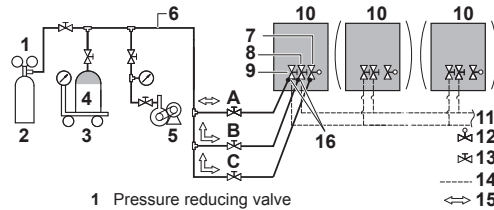
- Check for any leakages in the refrigerant piping.
- Perform vacuum drying to remove all moisture, air or nitrogen in the refrigerant piping.

If there is a possibility of moisture being present in the refrigerant piping (for example, rainwater may have entered the piping), first carry out the vacuum drying procedure below until all moisture has been removed.

All piping inside the unit has been factory tested for leaks.

Only installed refrigerant piping needs to be checked. Therefore, make sure that all the stop valves are firmly closed before performing leak test or vacuum drying. (See "10.4.4 Set up" and "10.4 Leak test and vacuum drying")

10.4.4 Setup



- 1 Pressure reducing valve
- 2 Nitrogen
- 3 Measuring instrument
- 4 Refrigerant R410A tank (siphon system)
- 5 Vacuum pump
- 6 Charge hose
- 7 Refrigerant auto charge valve
- 8 Gas line stop valve
- 9 Liquid line stop valve
- 10 Outdoor unit
- 11 To indoor unit
- 12 Needle valve
- 13 Stop valve
- 14 Field piping
- 15 Gas flow
- 16 Stop valve service port
- A Valve A
- B Valve B
- C Valve C

Which valves?	State of valves
State of the valves A and B and the stop valve	Performing the airtightness test and vacuum drying (Valve A always close, if not may be cause of refrigerant leakage)
Valve A	Open
Valve B	Open
Valve C	Close
Liquid side stop valve	Close
Gas side stop valve	Close



NOTICE

The connections to the indoor units and all indoor units should also be leak and vacuum tested. Keep any possible (field supplied) field piping valves open as well.

Refer to the indoor unit installation manual for more details. Leak test and vacuum drying should be done before the power supply is set to the unit. If not, see also the flow chart earlier described in this chapter (see "10.4.Leak test and vacuum drying").

10.4.5 Leak test

The leak test must satisfy the specifications of EN 378-2:

1 Vacuum leak test:

- 1.1 Evacuate the system from the liquid and gas piping to -100.7 kPa (5 Torr) for more than 2 hours.
- 1.2 Once reached, turn off the vacuum pump and check that the pressure does not rise for at least 1 minute.
- 1.3 Should the pressure rise, the system may either contain moisture (see vacuum drying below) or have leaks.

2 Pressure leak test:

- 2.1 Break the vacuum by pressurizing with nitrogen gas to a minimum gauge pressure of 0.2 MPa (2 bar). Never set the gauge pressure higher than the maximum operation pressure of the unit, i.e. 4.0 MPa (40 bar).
- 2.2 Test for leaks by applying a bubble test solution to all piping connections.
- 2.3 Discharge all nitrogen gas.



NOTICE

Make sure to use a recommended bubble test solution from your wholesaler. Do not use soap water, which may cause cracking of flare nuts (soap water may contain salt, which absorbs moisture that will freeze when the piping gets cold), and/or lead to corrosion of flared joints (soap water may contain ammonia which causes a corrosive effect between the brass flare nut and the copper flare).

10.4.6 Vacuum drying

To remove all moisture from the system, proceed as follows:

- 1 Evacuate the system for at least 2 hours to a target vacuum of -100.7 kPa.
- 2 Check that, with the vacuum pump turned off, the target vacuum is maintained for at least 1 hour.
- 3 Should you fail to reach the target vacuum within 2 hours or maintain the vacuum for 1 hour, the system may contain too much moisture.
- 4 In that case, break the vacuum by pressurizing with nitrogen gas to a gauge pressure of 0.05 MPa (0.5 bar) and repeat steps 1 to 3 until all moisture has been removed.
- 5 The outdoor stop valves can now be opened, and/or additional refrigerant can be charged (see "14.3 Method for adding refrigerant").



INFORMATION

After opening the stop valve, it is possible that the pressure in the refrigerant piping does not rise. This might be caused by e.g., the closed state of the expansion valve in the outdoor unit circuit, but does not present any problem for correct operation of the unit.



NOTICE

The connections to the indoor units and all indoor units should also be leak and vacuum tested. Keep, if existing, all (field supplied) field valves to the indoor units open as well.

Leak test and vacuum drying should be done before the power supply is set to the unit. If not, see "10.4 Leak test and vacuum drying" for more information.

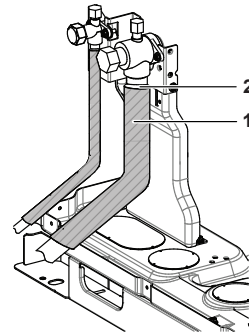
11. Pipe insulation

After finishing the leak test and vacuum drying, the piping must be insulated. Take into account the following points:

- Make sure to insulate the connection piping and refrigerant branch kits entirely.
- Be sure to insulate the liquid and gas piping (for all units).
- Use heat resistant polyethylene foam which can withstand a temperature of 70°C for liquid piping and gas piping.
- 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

- If there is a possibility that condensation on the stop valve might drip down into the indoor unit through gaps in the insulation and piping because the outdoor unit is located higher than the indoor unit, this must be prevented by sealing up the connections. See below figure.



1 Insulation material
2 Caulking etc.

12. Electrical wiring work

12.1 Precautions on electrical wiring work



WARNING

Electrical installation. All field wiring and components must be installed by a licensed electrician and must comply with the applicable legislation.



NOTICE

Electrical wiring work recommendations. To persons in charge of electrical wiring work: Do not operate the unit until the refrigerant piping is complete. "10.4 Leak test and vacuum drying". Running the unit before the piping is ready will break the compressor.



DANGER: Electrical shock

See "2. General safety precautions".



WARNING

- A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in the fixed wiring in accordance with the applicable legislation.
- Use only copper wires.
- All field wiring must be carried out in accordance with the wiring diagram supplied with the unit and the instructions given below.
- Never squeeze bundled cables and be sure that it does not come in contact with the non-insulated piping and sharp edges. Be sure no external pressure is applied to the terminal connections.
- Power supply wires must be attached securely.
- If the power supply has a missing or wrong N-phase, equipment will break down.
- Be sure to establish an earth. Do not earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earth may cause electrical shock.
- Be sure to install an earth leakage protector in accordance with the applicable legislation. Failure to do so may cause electric shock or fire.
- Be sure to use a dedicated power circuit, never use a power supply shared by another appliance.



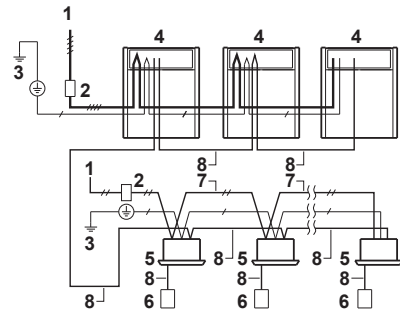
WARNING

- When installing the earth leakage protector be sure that it is compatible with the inverter (resistant to high frequency electric noise) to avoid unnecessary opening of the earth leakage protector.
- As this unit is equipped with an inverter, installing a phase advancing capacitor not only will deteriorate power factor improvement effect, but also may cause a capacitor abnormal heating accident due to high-frequency waves. Therefore, never install a phase advancing capacitor.
- Be sure to install the required fuses or circuit breakers.
- Do not operate until refrigerant piping work is completed. (If operated before completion of the piping work, the compressor may break down.)
- Never remove a thermistor, sensor, etc., when connecting power wiring and transmission wiring. (If operated without thermistor, sensor, etc., the compressor may break down.)
- The reversed phase protection detector of this product only functions when the product starts up. Consequently reversed phase detection is not performed during normal operation of the product.
- The reversed phase protection detector is designed to stop the product in the event of an abnormality when the product is started up.
- Replace two of the three phases (L1, L2, and L3) during reverse-phase protection abnormality.
- If there exists the possibility of reversed phase after a momentary black out and the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase can break the compressor and other parts.

12.2 System overview of field wiring

Field wiring consists of power supply (always including earth) and indoor-outdoor communication (= transmission) wiring.

Examples:



- 1 Field power supply (with earth leakage protector)
- 2 Main switch
- 3 Earth connection
- 4 Outdoor unit
- 5 Indoor unit
- 6 User interface
- 7 Power supply wiring (sheathed cable)
- 8 Transmission wiring (sheathed cable) (16V)
- Power supply 3N~ 50/60 Hz
- - - Power supply 1~ 50/60 Hz
- Earth wiring

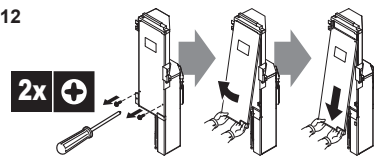
12.3 Opening and closing the electrical component box



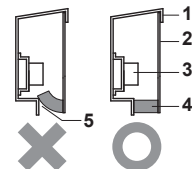
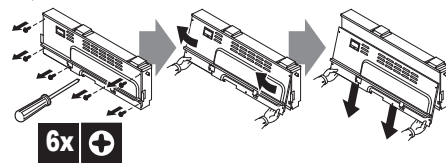
CAUTION

- Do not apply excessive force when opening the electronic component box cover. Excessive force can deform the cover, resulting in entering of water to cause equipment failure.
- When closing the electrical component box cover, make sure that the sealing material on the lower back side of the cover is not caught and bend towards the inside.

RXQ6~12



RXQ14~20



- 1 Electrical component box cover
- 2 Front side
- 3 Power supply terminal block
- 4 Sealing material
- 5 Moisture and dirt could enter
- X Not allowed
- O Allowed

12.4 Requirements

The power supply must be protected with the required safety devices, i.e. a main switch, a slow blow fuse on each phase and an earth leakage protector in accordance with the applicable legislation.

Selection and sizing of the wiring should be done in accordance with the applicable legislation based on the information mentioned in the table below.

Standard Model

Model	Minimum circuit ampere	Recommended fuses	Wire Size
RXQ6A	16.1 A	20 A	Select and install the power supply wiring in accordance with IEC 60335-1
RXQ8A	16.1 A	20 A	
RXQ10A	21.2 A	25 A	
RXQ12A	22.5 A	25 A	
RXQ14A	26.9 A	30 A	
RXQ16A	30.2 A	35 A	
RXQ18A/AM	30.2 A	35 A	
RXQ20A/AM	38.9 A	45 A	
RXQ22AM	43.7 A	50 A	
RXQ24AM	45.0 A	50 A	
RXQ26AM	49.4 A	60 A	
RXQ28AM	52.8 A	60 A	
RXQ30AM	52.8 A	60 A	
RXQ32AM	57.1 A	70 A	
RXQ34AM	60.5 A	70 A	
RXQ36AM	60.5 A	70 A	
RXQ38AM	69.1 A	80 A	
RXQ40AM	77.7 A	90 A	
RXQ42AM	75.3 A	90 A	
RXQ44AM	83.9 A	100 A	
RXQ46AM	84.0 A	100 A	
RXQ48AM	87.4 A	100 A	
RXQ50AM	87.4 A	100 A	
RXQ52AM	90.7 A	100 A	
RXQ54AM	90.7 A	100 A	
RXQ56AM	99.4 A	110 A	
RXQ58AM	108.0 A	125 A	
RXQ60AM	116.6 A	150 A	

For all models:
 Phase and frequency: 3N~50/60 Hz
 Voltage: 380-415 V / 380 V
 Transmission line section: 0.75~1.25mm², maximum length is 1000 m.
 Remark: For other model please see detail in Engineering Data.
 Note: Insulation of supply wiring must not lighter than 60245 IEC 57.

If the total transmission wiring exceeds these limits, it may result in communication error.

NOTICE
 When using residual current operated circuit breakers, be sure to use a high-speed type 200 mA rated residual operating current.

12.5 Routing

It is important to keep the power supply and the transmission wiring separated from each other. In order to avoid any electrical interference the distance between both wiring should always be at least 50 mm.

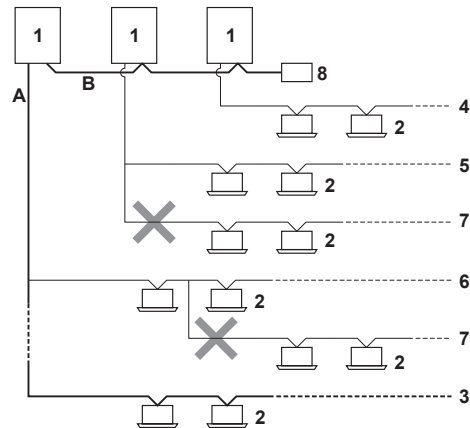
12.5.1 Transmission wiring routing

The transmission wiring outside the unit should be wrapped and routed together with the field piping.

Field piping can be routed from front or bottom of the unit (going left or right). Refer to "10.2.Connecting the refrigerant piping".

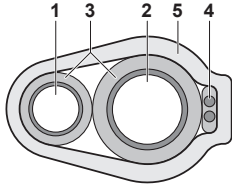
Rules for transmission wiring routing

- Be sure to follow the limits below. If the unit-to-unit cables are beyond these limits, it may result in malfunction of transmission:
 - Maximum wiring length: 1000 m.
 - Total wiring length: 2000 m.
 - Maximum inter unit wiring length between outdoor units: 30 m.
 - Maximum number of branches: 16.
 - Maximum number of independent interconnectable systems: 10.
- Up to 16 branches are possible for unit-to-unit cabling. No branching is allowed after branching (see figure below).



- 1 Outdoor unit
- 2 Indoor unit
- 3 Main line
- 4 Branch line 1
- 5 Branch line 2
- 6 Branch line 3
- 7 No branch is allowed after branch
- 8 Central user interface (etc...)
- A Transmission wiring between outdoor unit and indoor unit(s)
- B Transmission wiring between outdoor units

- Never connect the power supply to transmission wiring terminal block. Otherwise the entire system may break down.
- Never connect 400 V to the terminal block of the transmission wiring. Doing so will break the entire system:
 - The wiring from the indoor units must be connected to the F1/F2 (In-Out) terminals on the PC board in the outdoor unit.
 - After installing the transmission wires inside the unit, wrap them along with the on-site refrigerant pipes using finishing tape, as shown in figure below.



- 1 Liquid pipe
- 2 Gas pipe
- 3 Insulator
- 4 Transmission wiring (F1/F2)
- 5 Finishing tape

For the above wiring, always use vinyl cords with 0.75 to 1.25mm² sheathed or cables (2-core wires).



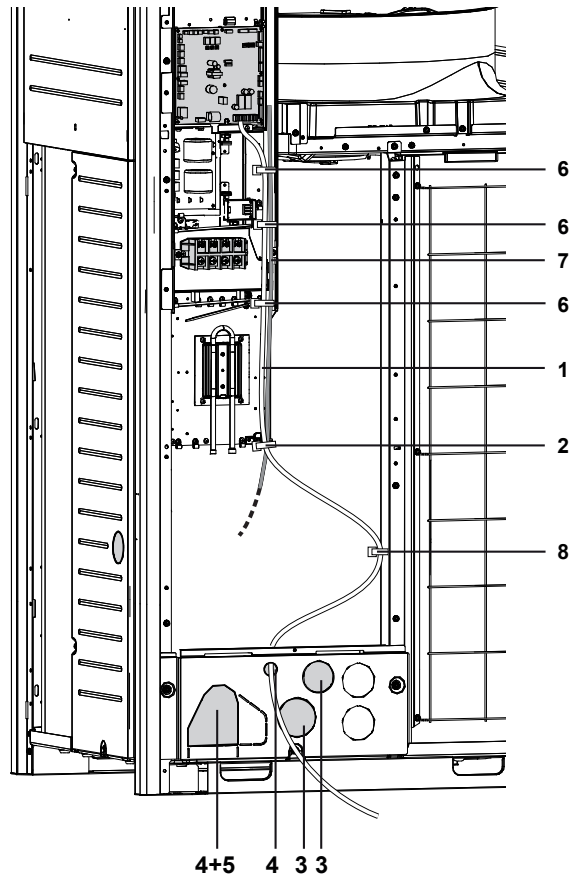
NOTICE

- Be sure to keep the power line and transmission line apart from each other. Transmission wiring and power supply wiring may cross, but may not run parallel.
- Transmission wiring and power supply wiring may not touch internal piping (except INV PCB cooling pipe) in order to avoid wire damage due to high temperature piping.
- Firmly close the lid and arrange the electrical wires so as to prevent the lid or other parts from coming loose.

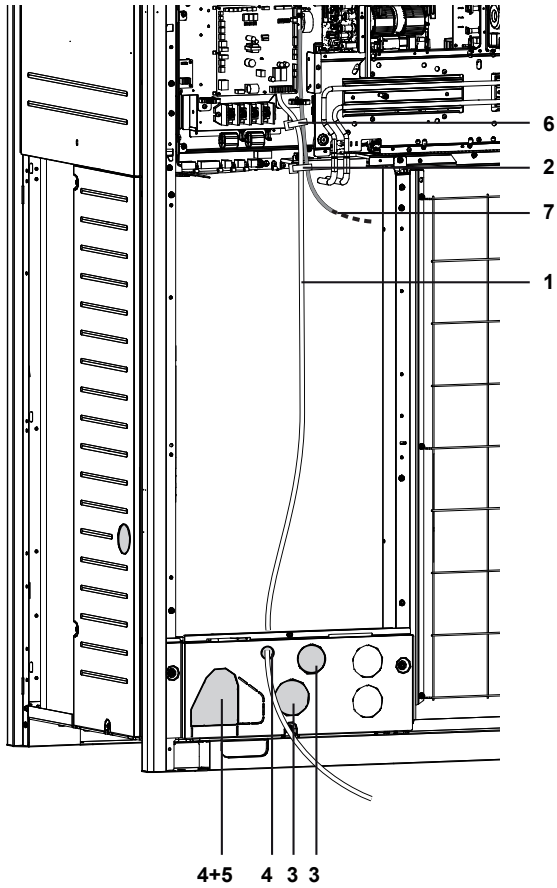
Transmission wiring routing to the unit and inside the unit.
Transmission wiring can be routed through the front side only:

- Fix transmission wire with tie wrap (1) to low voltage wiring. See figures below, item 6.
- Possible transmission wire entrance hole (close hole to avoid bugs/dirt from entering). See figures below, item 4.
- Possible transmission wire entrance hole (close hole to avoid bugs/dirt from entering). Fix transmission wiring to pipe insulation with tie wraps. See figures below, item 5.
- Inside the electronic component box, the transmission wire should be fixed on several locations with tie wraps to low voltage wiring. See figures below, items 2 and 6.
- Fix transmission wire with tie wrap (2) to heat exchanger fixing plate (hole). See figures below, item 8.

RXQ6~12



RXQ14~20



- 1 Transmission wiring
- 2 Fix wiring with tie wrap
- 3 Possible power supply wire entrance hole^(a)
- 4 Possible transmission wire entrance hole^(a)
- 5 Possible transmission wire entrance hole.^(a) Fix wiring to pipe insulation with tie wraps
- 6 Inside the electronic component box, the wiring should be fixed on several locations with tie wraps to the factory mounted low voltage wiring.
- 7 Factory mounted low voltage wiring
- 8 Fix wiring with tie wrap (2) to heat exchanger fixing plate (hole).

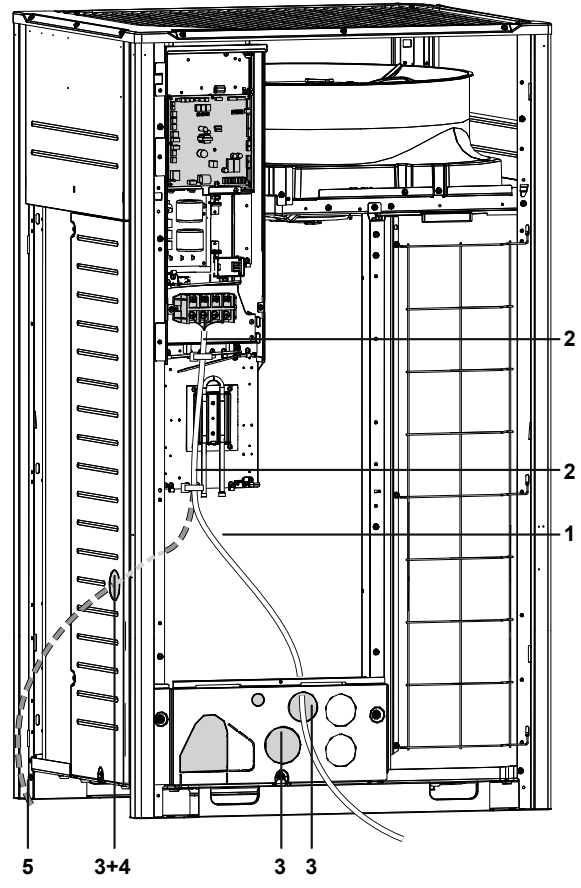
(a) Knockout hole has to be removed. Close the hole to avoid small animals or dirt from entering.

12.5.2 Power supply wiring routing

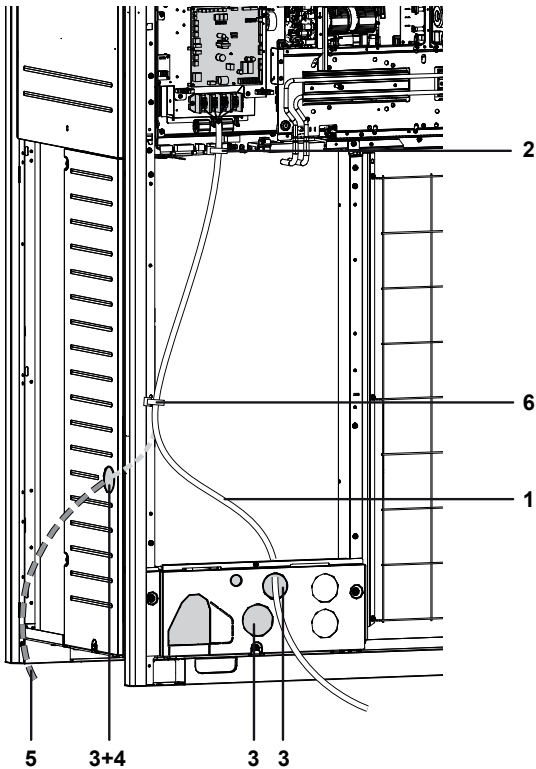
Power supply wire routing to the unit and inside the unit. The power supply wiring can be routed from the front and left side.

- Front side. In order to route the power supply from the front side, the available knockout holes can be used:
 - Fix the power supply cable to the foreseen wire clips with a tie wrap. See figures below, item 2.
 - Front plate: possible power supply wire entrance hole (close hole to avoid bugs/dirt from entering). See figures below, item 3.
 - Side plate: possible power supply wire entrance hole (close hole to avoid bugs/dirt from entering). Use conduit. See figures below, item 4.

RXQ6~12



RXQ14~20

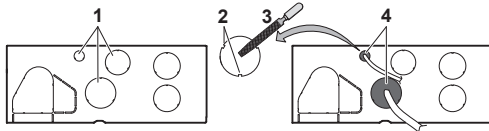


- 1 Power supply wire
- 2 Fix wiring with tie wrap
- 3+4 Possible power supply wire entrance hole^(a)
- 5 Alternative power supply routing
- 6 Fix wiring with tie wrap to support plate.

(a) Knockout hole has to be removed. Close the hole to avoid small animals or dirt from entering.

12.5.3 Precautions when knocking out knockout holes

- To punch a knockout hole, hit on it with a hammer.
- After knocking out the holes, we recommend removing any burrs and paint the edges and areas around the holes using repair paint to prevent rusting.
- When passing electrical wiring through the knockout holes, prevent damage to the wires by wrapping the wiring with protective tape, putting the wires through field supplied protective wire conduits at that location, or install suitable field supplied wire nipples or rubber bushings into the knockout holes.



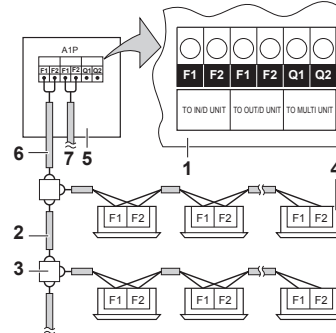
- 1 Knockout hole
- 2 Burr
- 3 Remove burrs
- 4 If there are any possibilities that small animals enter the system through the knockout holes, plug the holes with packing materials (to be prepared on-site)

12.6 Connection

This chapter gives an explanation how to route and connect the wiring within the unit.

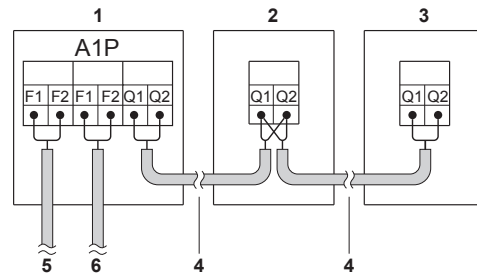
12.6.1 Connection of transmission wiring to the system

In case of single outdoor unit installation



- 1 Outdoor unit PCB board (A1P)
- 2 Use the conductor of sheathed wire (2 wire) (no polarity)
- 3 Terminal board (field supply)
- 4 Indoor unit
- 5 Outdoor unit
- 6 Outdoor - indoor unit transmission (F1/F2)
- 7 Outdoor - other system transmission (F1/F2)

In case of multi outdoor unit installation

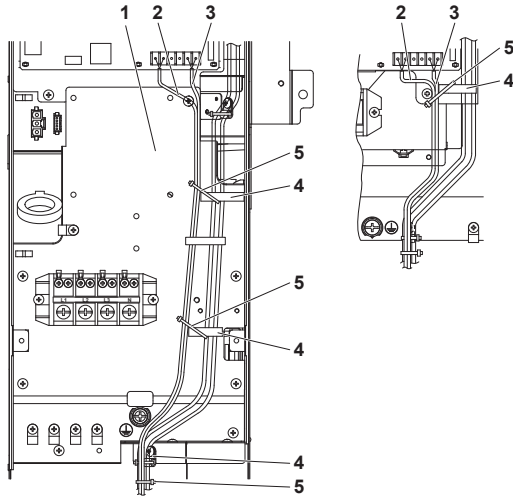


- 1 Unit A (master unit)
- 2 Unit B (slave unit)
- 3 Unit C (slave unit)
- 4 Inter unit transmission wiring (Q1/Q2)
- 5 Outdoor-indoor unit transmission (F1/F2)
- 6 Outdoor-other system transmission (F1/F2)

- The interconnecting wiring between the outdoor units in the same piping system must be connected to the Q1/Q2 (Out Multi) (4) terminals. Connecting the wires to the F1/F2 terminals results in system malfunction.
- The wiring for the other systems must be connected to the F1/F2 (Out-Out) (6) terminals of the PCB board in the outdoor unit to which the interconnecting wiring for the indoor units is connected.
- The base unit is the outdoor unit to which the interconnecting wiring for the indoor units is connected.

12.6.2 Connection of wiring to terminals

Transmission wiring in outdoor unit



- 1 Fix to the indicated plastic brackets using field supplied clamping material
- 2 Wiring between the units (indoor-outdoor) (F1/F2 left)
- 3 Internal transmission wiring (Q1/Q2)
- 4 Plastic bracket
- 5 Field supplied clamps

Care should be taken for connecting the wires to the terminal block.

See the table below for the tightening torque of the transmission wiring terminals.

Screw size	Tightening torque (N·m)
M3.5 (A1P)	0.88±0.08

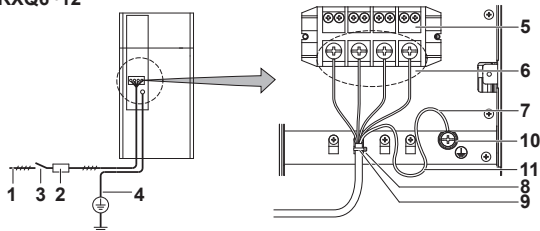
- Never connect the power supply to transmission wiring terminal block. Otherwise the entire system may break down.
- Be careful about polarity of the transmission wiring.

Power supply

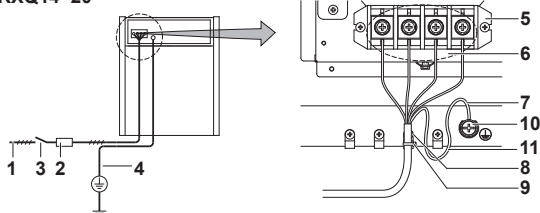
The power supply must be clamped to the plastic bracket using field supplied clamp material.

The green and yellow striped wire must be used for earthing only (refer to the figure below).

RXQ6~12



RXQ14~20



- 1 Power supply (380~415 V - 3N~ 50 Hz / 380 V - 3N~60 Hz)
- 2 Fuse
- 3 Earth leakage protector
- 4 Earth wire
- 5 Power supply terminal block
- 6 Connect each power wire: RED to L1, WHT to L2, BLK to L3 and BLU to N

- 7 Earth wire (GRN/YLW)
- 8 Clamp the power supply to the plastic bracket using a field supplied clamp to prevent external force being applied to the terminal.
- 9 Clamp (field supplied)
- 10 Cup washer
- 11 When connecting the earth wire, it is recommended to perform curling.



NOTICE

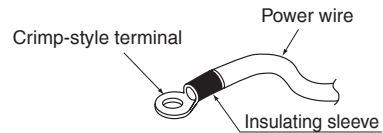
- When routing earth wires, secure clearance of 25 mm or more away from compressor lead wires. Failure to observe this instruction properly may adversely affect correct operation of other units connected to the same earth.
- When connecting the power supply, the earth connection must be made before the current-carrying connections are established. When disconnecting the power supply, the current-carrying connections must be separated before the earth connection is. The length of the conductors between the power supply stress relief and the terminal block itself must be as such that the current-carrying wires are tightened before the earth wire is in case the power supply is pulled loose from the stress relief.



NOTICE

Precautions when laying power wiring:

- Do not connect wiring of different thicknesses to the power terminal block (slack in the power wiring may cause abnormal heat).
- Be sure to use crimp-style terminal with insulating sleeves for connections. (See the figure below.)



- When connecting wiring which is the same thickness, do as shown in the figure below.



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

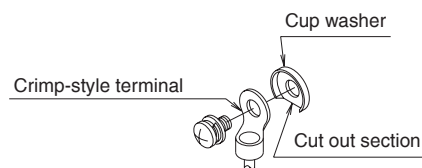
Tightening torque (N·m)	
M8 (Power terminal block)	6.3±0.6
M8 (Ground)	
M3.5 (Inter-unit wiring terminal block)	0.88±0.08



NOTICE

Recommendations when connecting the earth wire

Wire it so that it comes through the cut out section of the cup washer. (An improper earth connection may prevent a good earthing from being achieved.) (See the figure below.)

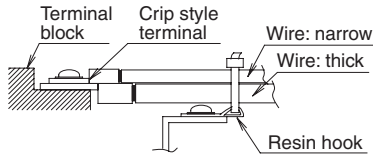


Connecting the power supply to multiple outdoor units

To connect the power supply for multiple outdoor units to each other, ring tongues have to be used. No bare cable can be used.

The ring washer which is standard provided should be removed in that case.

Attaching both cables to the power supply terminal should be done as indicated.



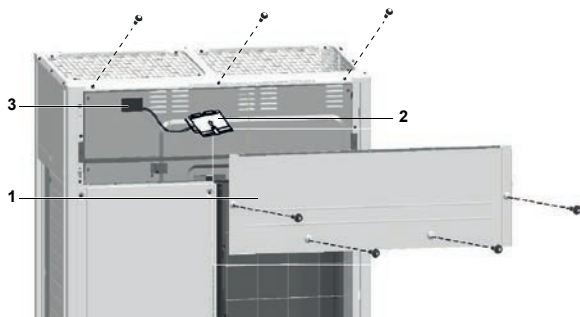
13. Making field settings

To continue the configuration of the VRV cooling only system, it is required to give some input to the logic board of the unit. This chapter will describe how manual input is possible by operating the push buttons/DIP switches on the logic board and reading the feedback from the 7 segment displays.

13.1 Accessing the push buttons on the logic board

It is not required to open the complete electronic component box to access the push buttons on the logic board and read out the 7 segment display(s).

To access you can remove the front plate (see figure). Now you can open the inspection cover of the electrical component box front plate (see figure). You can see the three push buttons and the three 7 segment displays and DIP switches.

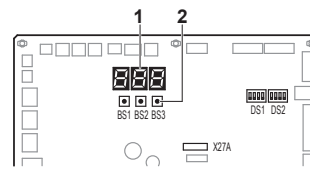


- 1 Front plate
- 2 Inspection cover
- 3 Main PCB with 3 seven segment display and 3 push buttons

Operate the switches and push buttons with an insulated stick (such as a closed ball-point pen) to avoid touching of live parts.



Location of the 7 segment displays, buttons and DIP switches:



- BS1 MODE** for changing the set mode
- BS2 SET** for field setting
- BS3 RETURN** for field setting
- DS1, DS2** DIP switches
- 1** 7 segment displays (3x)
- 2** Push buttons

Segment display indications:



13.2 Operating the push buttons and DIP switches on the logic board

13.2.1 Operating the push buttons

By operating the push buttons it is possible to:

- Perform special actions (test run, etc).
- Perform field settings (demand operation, low noise, etc).

Below procedure explains how to operate the push buttons to reach the required mode in the menu, select the correct setting and modify the value of the setting. This procedure can be used any time special settings and regular field setting are discussed in this manual.

Setting definition: [A-B]=C; A=mode; B=setting; C=setting value. A, B and C are numerical values for field settings. Parameter C has to be defined. It can be a chosen from a set (0, 1, 2, 3, 4, 5, ...) or regarded as an ON/OFF (1 or 0) depending on the contents. This is informed when the field setting is explained.

INFORMATION

During special operation (e.g., test run, etc.) or when an malfunction happened, information will contain letters and numerical values.

Functions of the push button switches which are located on the outdoor PCB (A1P)

Turn on the power supply of the outdoor unit and all indoor units. When the communication between indoor units and outdoor unit(s) is established and normal, the segment indication state will be as below (default situation when shipped from factory).

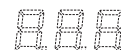
When turning on the power supply: flashing as indicated. First checks on power supply are executed (1~2 min).



When no trouble occurs: lighted as indicated (8~10 min).



Ready for operation: blank display indication as indicated.



When above situation cannot be confirmed after 12 min, the malfunction code can be checked on the indoor unit user interface and the outdoor unit segment display. Solve the malfunction code accordingly. The communication wiring should be checked at first.

Accessing modes

BS1 is used to change the mode you want to access.

- **Access mode 1**
Push BS1 one time. Segment indication changes to:



- **Access mode 2**
Push BS1 for at least 5 seconds. Segment indication changes to:



INFORMATION

If you get confused in the middle of the process, push BS1. Then it returns to idle situation (no indication on segment displays: blank)

Mode 1

Mode 1 is used to set basic settings and to monitor the status of the unit.

- Changing and access the setting in mode 1:
Once mode1 is selected (push BS1 1 time), you can select the wanted setting. It is done by pushing BS2. Accessing the selected setting's value is done by pushing BS3 1 time.
- To quit and return to the initial status, press BS1.

Example:

Checking the content of parameter [1-10] (to know how many indoor units are connected to the system).

[A-B]=C in this case defined as: A=1; B=10; C=the value we want to know/monitor:

- Make sure the segment indication is as during normal operation (default situation when shipped from factory).
- Push BS1 1 time; result segment display:



Result: mode 1 is accessed.

- Push BS2 10 times; result segment display:



Result: mode 1 setting 10 is addressed.

- Push BS3 1 time; the value which is returned (depending on the actual field situation), is the amount of indoor units which are connected to the system.
Result: mode1 setting 10 is addressed and selected, return value is monitored information
- To leave the monitoring function, push BS1 1 time, you will return to the default situation when shipped from factory.

Mode 2

Mode2 is used to set field settings of the outdoor unit and system.

- Changing and access the setting in mode 2:
Once mode 2 is selected (push BS1 for more than 5 seconds), you can select the wanted setting. It is done by pushing BS2. Accessing the selected setting's value is done by pushing BS3 1 time.
- To quit and return to the initial status, press BS1.
- Changing the value of the selected setting in mode 2:
 - Once mode 2 is selected (push BS1 for more than 5 seconds) you can select the wanted setting. It is done by pushing BS2.
 - Accessing the selected setting's value is done by pushing BS3 1 time.
 - Now BS2 is used to select the required value of the selected setting.
 - When the required value is selected, you can define the change of value by pushing BS3 1 time.
 - Press BS3 again to start operation according to the chosen value.

Example:

Checking the content of parameter [2-18] (to define the high static pressure setting of the outdoor unit's fan).

[A-B]=C in this case defined as: A=2; B=18; C=the value we want to know/change

- Make sure the segment indication is as during normal operation (default situation when shipped from factory).
- Push BS1 for over 5 seconds; result segment display:



Result: mode 2 is accessed.

- Push BS2 18 times; result segment display:



Result: mode 2 setting 18 is addressed.

- Push BS3 1 time; the value which is returned (depending on the actual field situation), is the status of the setting. In the case of [2-18], default value is "0", which means the function is not active.
Result: mode2 setting 18 is addressed and selected, return value is the current setting situation.
- To change the value of the setting, push BS2 till the required value appears on the segment indication. When achieved, define the setting value by pushing BS3 1 time. To start operation according to the chosen setting, confirm again by pushing BS3.
- To leave the monitoring function, push BS1 2 times, you will return to the default situation when shipped from factory.

13.2.2 Operating the DIP switches

By operating the DIP switches it is possible to:

What to do with DIP switch DS1	
1	OFF=not installed=factory setting
2-4	NOT USED DO NOT CHANGE THE FACTORY SETTING
What to do with DIP switch DS2	
1-4	NOT USED DO NOT CHANGE THE FACTORY SETTING

14. Charging refrigerant

14.1 Precautions



NOTICE

- Refrigerant cannot be charged until field wiring has been completed.
- Refrigerant may only be charged after performing the leak test and the vacuum drying.
- When charging a system, care shall be taken that its maximum permissible charge is never exceeded, in view of the danger of liquid hammer.
- Charging with an unsuitable substance may cause explosions and accidents, so always ensure that the appropriate refrigerant R410A is charged.
- Refrigerant containers shall be opened slowly.
- Always use protective gloves and protect your eyes when charging refrigerant.
- When the refrigerant system is to be opened, refrigerant must be treated according to the applicable legislation.



DANGER: Electrical shock

See "2. General safety precautions".

- To avoid compressor breakdown. Do not charge the refrigerant more than the specified amount.
- This outdoor unit is factory charged with refrigerant and depending on pipe sizes and pipe lengths some systems require additional charging of refrigerant.
- In case re-charge is required, refer to the nameplate of the unit. It states the type of refrigerant and necessary amount.

14.2 Calculating the additional refrigerant charge

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.

$$R=[(X_1 @ \text{Ø}22.2) \times 0.36+(X_2 @ \text{Ø}19.1) \times 0.26+(X_3 @ \text{Ø}15.9) \times 0.17+(X_4 @ \text{Ø}12.7) \times 0.11+(X_5 @ \text{Ø}9.5) \times 0.057+(X_6 @ \text{Ø}6.4) \times 0.022]+A$$

X_{1...6} =Total length (m) of liquid piping size at Øa

A parameter (kg)	Total indoor unit capacity CR ^(a)	HP			
		6~8	10~12	14~18	20
Piping length≤30 m	50%≤CR≤105%	0			0.5
	105%<CR≤130%	0.5			1.0
	130%<CR≤160%	0.5			1.3
	160%<CR≤200%	0.5	0.7	1.0	1.5
Piping length>30 m	50%≤CR≤70%	0			0.5
	70%<CR≤85%	0.3	0.5		1.0
	85%<CR≤105%	0.7	1.0		1.5
	105%<CR≤130%	1.2	1.5		2.0
	130%<CR≤160%	1.2	1.5		2.3
	160%<CR≤200%	1.2	1.7	2.0	2.5

(a) CR=Connection ratio.

Piping length is considered the distance from the outdoor unit to the farthest indoor unit.

When using metric piping, please take into account following table concerning the weight factor to be allocated. It should be substituted in the formula for R.

Inch piping	
size (Ø) (mm)	Weight factor
Ø6.4 (1/4")	0.022
Ø9.5 (3/8")	0.057
Ø12.7 (1/2")	0.11
Ø15.9 (5/8")	0.17
Ø19.1 (3/4")	0.26
Ø22.2 (7/8")	0.36

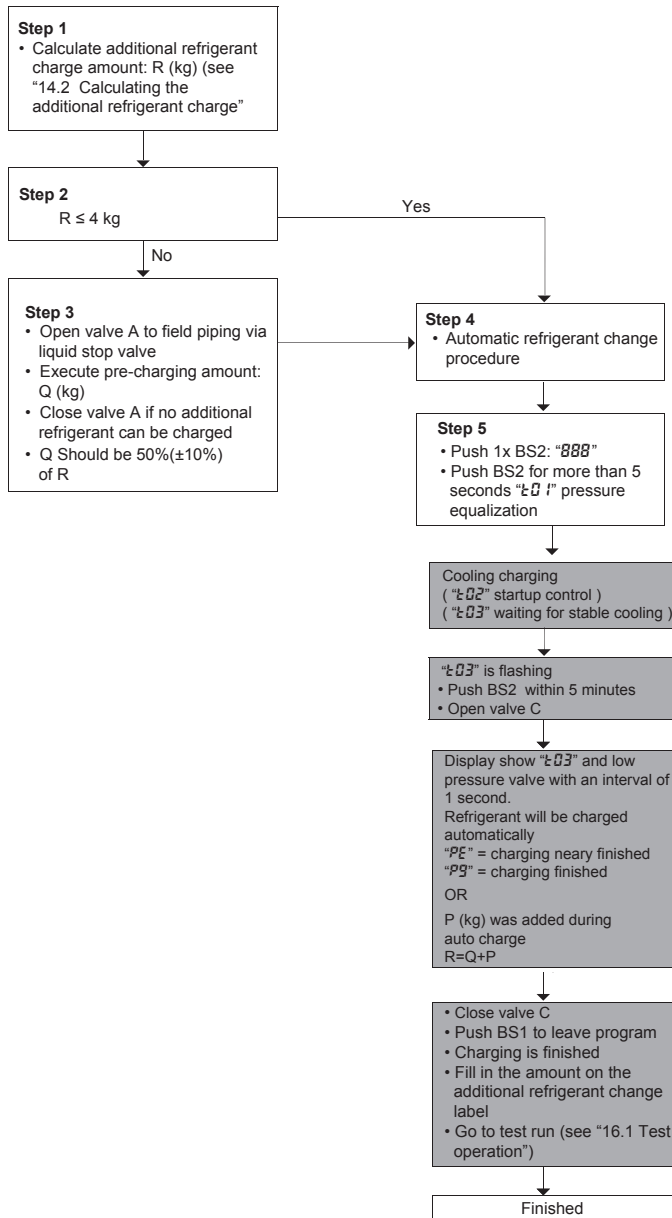
When selecting indoor unit, following table with connection ratio limitation has to be respected. More detailed information can be found in technical engineering data.

Used indoor units	Total capacity CR ^(a)	Allowable capacity connection ratio	
		VRV	RA
VRV	50~200%	50~200%	—
VRV + RA	50~130%	0~130%	0~130%
RA	50~130%	—	50~130%

(a) Connection ratio.

14.3 Method for adding refrigerant

14.3.1 Flow chart

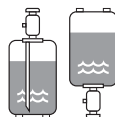


See figure "Location of valves" ; for more information refer to the text in this chapter.

Be sure to charge the specified amount of refrigerant in liquid state. Since this refrigerant is a mixed refrigerant, adding it in gas form may cause the refrigerant composition to change, preventing normal operation.

- Before charging, check whether the refrigerant cylinder is equipped with a siphon tube or not.

Charge the liquid refrigerant with the cylinder in upright position.



Charge the liquid refrigerant with the cylinder in upside-down position.



NOTICE

Charging with an unsuitable substance may cause explosions and accidents, so always make sure that the appropriate refrigerant (R410A) is charged. Refrigerant containers must be opened slowly.

- Be sure to use tools exclusively for R410A to ensure required pressure resistance and to prevent foreign materials from mixing into the system.

**CAUTION**

- If charge refrigerant without automatic charging procedure, refrigerant amount might over the permissible quantity and result to liquid hammer.
- Always use protective gloves and protect your eyes when charging refrigerant.
- When the refrigerant charging procedure is done or when pausing, close the valve of the refrigerant tank immediately. If the tank is left with the valve open, the amount of refrigerant which is properly charged may get off point. More refrigerant may be charged by any remaining pressure after the unit has stopped.

**NOTICE**

- If the power of some units is turned off, the charging procedure cannot be finished properly.
- In case of a multiple outdoor system, turn on the power of all outdoor units.
- Make sure to turn ON the power 6 hours before starting the operation. This is necessary to warm the crankcase by per-heating operation (automatic)
- If operation is performed within 12 minutes after the indoor and outdoor units are turned on, the compressor will not operate before the communication is established in a correct way between outdoor unit(s) and indoor units.
- Before starting charging procedures, check if the segment display indication of the outdoor unit A1P PCB is as normal (see "Functions of the push button switches which are located on the outdoor PCB (A1P)"). If a malfunction code is present, see "16.2. Malfunction code list".
- Make sure all connected indoor units are recognised
- Close the front panel before any refrigerant charge operation is executed. Without the front panel attached the unit cannot judge correctly whether it is operating properly or not.

**NOTICE**

In case of maintenance and the system (outdoor unit+field piping+indoor units) does not contain any refrigerant any more (e.g., after refrigerant reclaim operation), the unit has to be charged with its original amount of refrigerant (refer to the nameplate on the unit) by pre-charging before the automatic charging function can be started.

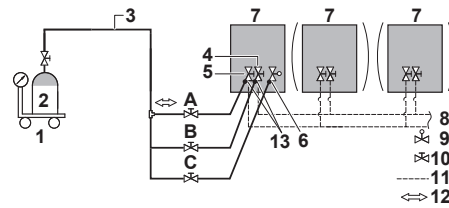
14.3.2 Charging method

As explained during vacuum drying method, once vacuum drying is finished, additional refrigerant charging can start.

A flow chart is available which gives an overview of the possibilities and actions to be taken (see "14.3.1 Flow chart").

Follow the steps as described below and take into account whether you use the automatic charge function or pre-charging.

- 1 Calculate the additional amount of refrigerant to be added using the formula mentioned in "14.2 Calculating the additional refrigerant charge"
- 2 Check the additional refrigerant amount R (kg)
 - Total additional refrigerant is 4 kg or less ($R \leq 4$ kg) perform the automatic refrigerant charging procedure as explained in step 4.
 - Total additional refrigerant amount more than 4 kg ($R > 4$ kg) perform the per-charging procedure as explained in step 3.
- 3 The first 50% ($\pm 10\%$) of additional refrigerant can be charged without outdoor unit operation.
 - Pre-charging can be done without compressor running by connecting the refrigerant bottle only to the liquid stop valve service port (open valve A). Make sure that the stop valves are closed (valve C and valve B+gas line stop valve)

Location of valves

- 1 Measuring instrument
- 2 Refrigerant R410A tank (siphon system)
- 3 Charge hose
- 4 Gas line stop valve
- 5 Liquid line stop valve
- 6 Refrigerant auto change valve
- 7 Outdoor unit
- 8 To indoor unit
- 9 Needle valve
- 10 Stop valve
- 11 Field piping
- 12 Gas flow
- 13 Stop valve service port
- A Valve A
- B Valve B
- C Valve C

- After pre-charging, perform the refrigerant charge operation as shown below an charge the remaining refrigerant of the additional charging amount through valve C. Open the liquid and gas side stop valves. Valves A and B and C must remain closed !

**INFORMATION**

For a multi outdoor unit system, it is not required to connect all charge ports to a refrigerant tank.

The refrigerant will be charged with 22 kg in 1 hour time at an outdoor temperature of 30°C DB or with 6 kg at an outdoor temperature of 0°C DB.

If you need to speed up in case of a multiple outdoor system, connect the refrigerant tanks to each outdoor unit.

**NOTICE**

- The unit's internal piping is already factory charged with refrigerant, so be careful when connecting the charge hose.
- After adding the refrigerant, do not forget to close the lid of the refrigerant charging port. The tightening torque for the lid is 11.5 to 13.9 N•m.
- In order to ensure uniform refrigerant distribution, it may take the compressor ± 10 minutes to start up after the unit has started operation. This is not a malfunction.

4 Adding refrigerant by using the automatic charging function**INFORMATION**

The automatic refrigerant charging has limits as described below.

- Outdoor temperature: 0°C DB~43°C DB.
- Indoor temperature: 10°C DB~32°C DB.

5 The remaining additional refrigerant charge can be charged by operating the outdoor unit depending on the ambient limitation conditions (see above).**Procedure**

- Idle (default) screen is shown.
- Push BS2 once, indication "888".
- Push BS2 for more than 5 seconds, wait while the unit is preparing for operation. Segment display indication: "EG!" (pressure control is executed):
 - Cooling operation is started: indication "EG2" till "EG3" will be displayed (start up control; waiting stable cooling operation).

- When “ŁŁŁ” starts flashing (ready for charging), push BS2 within 5 minutes. Open valve C. If BS2 is not pushed within 5 minutes, a malfunction code will appear:
 - Cooling operation: malfunction code “P2” will appear. Push BS1 to abort and restart the procedure.

Cooling (middle segment indicates “Ł”)

Automatic charging will continue, the segment indication shows the current low pressure value and the status indication “ŁŁŁ” intermittent.

If the segment indication/user interface of indoor unit shows “PE” code, charging is almost finished. When the unit stops operating, close valve C and check whether the segment indication/user interface of indoor unit shows “P9”.

This indicates the automatic charging in cooling program was finished successfully.



INFORMATION

When the charging amount is little, the “PE” code may not be displayed, but instead the “P9” code will be displayed immediately.

When the required (calculated) additional refrigerant amount is already charged before “PE” or “P9” indication appears, close valve C and wait till “P9” is displayed.



INFORMATION

- When a malfunction is detected during the procedure (e.g. in case of closed stop valve), a malfunction code will be displayed. In that case, refer to “16.2 Malfunction code list” and solve the malfunction accordingly. Resetting the malfunction can be done by pushing BS1. The procedure can be restarted from 5).

- Aborting the automatic refrigerant charge is possible by pushing BS1. The unit will stop and return to idle condition.

Information which may occur during additional refrigerant charging procedures:

PB: Indoor unit freeze up prevention

Action: Close valve C . Reset malfunction by pushing BS1. Retry auto charge procedure.

P2: Abnormal low pressure drop

Action: Close valve C . Reset malfunction by pushing BS1. Check following items before retry auto charge procedure:

- Check if the gas side stop valve is opened correctly.
- Check if the valve of the refrigerant cylinder is opened.
- Check if the air inlet and outlet of the indoor units are not obstructed.

Other malfunction code: close valve C . Confirm the malfunction code and take corresponding action, “16.2 Malfunction code list”.

14.3.3 Checks after adding refrigerant

- Are the stop valves for liquid and gas open?
- Is the amount of refrigerant, that has been added, recorded on the refrigerant charge label?



NOTICE

Make sure to open all stop valves after (pre-) charging the refrigerant.

Operating with the stop valves closed will damage the compressor.

15. Monitoring function and field settings

The operation of the outdoor unit can further be defined by changing some field settings. Next to making field settings it is also possible to confirm the current operation parameters of the unit.

Below relevant Monitoring mode (mode 1) and Field setting mode (mode 2) settings are explained in detail. How to access them, how to change the value of the settings and how to confirm them is explained in “13. Making field settings” . In that chapter, an example is given on how to make a setting. It is advised to check this procedure before accessing, checking and changing below settings.

Once the default situation of the segment indication is confirmed (see “13. Making field settings”), the mode 1 and mode 2 can be accessed.

Making settings is done via the master outdoor unit.

15.1 Mode 1

Mode 1 can be used to monitor the current situation of the outdoor unit. Some field setting contents can be monitored as well.

Below the settings in mode 1 are explained.

[1-0]= shows whether the unit you check is a master, slave 1 or slave 2 unit

- No indication=undefined situation
- 0=outdoor unit is master unit
- 1=outdoor unit is slave 1 unit
- 2=outdoor unit is slave 2 unit

Master, slave 1 and slave 2 indications are relevant in multiple outdoor unit system configurations. The allocation of which outdoor unit is master, slave 1 or slave 2 are decided by the unit’s logic.

The master unit should be used to input field settings in mode 2

[1-1]= shows the status of low noise operation

- 1=unit is currently operating under low noise restrictions
- 0= unit is currently not operating under low noise restrictions

Low noise operation reduces the sound generated by the unit compared to nominal operating conditions.

Low noise operation can be set in mode 2. There are two methods to activate low noise operation of the outdoor unit system.

The first method is to enable an automatic low noise operation during night time by field setting. The unit will operate at the selected low noise level during the selected time frames.

The second method is to enable low noise operation based on an external input. For this operation an optional accessory is required.

[1-2]= shows the status of power consumption limitation operation

- 1=unit is currently operating under power consumption limitation
- 0=unit is currently not operating under power consumption limitations

Power consumption limitation reduces the power consumption of the unit compared to nominal operating conditions.

Power consumption limitation can be set in mode 2. There are two methods to activate power consumption limitation of the outdoor unit system.

The first method is to enable a forced power consumption limitation by field setting. The unit will always operate at the selected power consumption limitation.

The second method is to enable power consumption limitation based on an external input. For this operation an optional accessory is required.

[1-5]= shows the current T_e target parameter position.

Refer to “15.3 Energy saving and optimum operation” for more details about the contents of this value

[1-10]= shows the total number of connected indoor units.

It can be convenient to check if the total number of indoor units which are installed match the total number of indoor units which are recognized by the system. In case there is a mismatch, it is advised to check the communication wiring path between outdoor and indoor units (F1/F2 communication line).

[1-13]= shows the total number of connected outdoor units (in case of multiple outdoor system).

It can be convenient to check if the total number of outdoor units which are installed matches the total number of outdoor units which are recognized by the system. In case there is a mismatch, it is advised to check the communication wiring path between outdoor and outdoor units (Q1/Q2 communication line).

[1-17]= shows the latest malfunction code.

[1-18]= shows the malfunction code which occurred 1 time before current malfunction code.

[1-19]= shows the malfunction code which occurred 2 time before current malfunction code.

When the latest malfunction codes were reset by accident on an indoor unit user interface, they can be checked again through this monitoring settings. For the content or reason behind the malfunction code see "16.2 Malfunction code list", where most relevant malfunction codes are explained. Detailed information about malfunction codes can be consulted in the service manual of this unit.

[1-38]= shows the number of RA indoor units connected to the system.

[1-40]= shows the current cooling comfort setting. See "15.3 Energy saving and optimum operation" for more details about this setting.

15.2 Mode 2

Mode 2 is used to change the field settings of the system. Consulting the current field setting value and changing the current field setting value is possible.

In general, normal operation can be resumed without special intervention after changing field settings.

Some field settings are used for special operation (e.g., 1 time operation, recovery/vacuuming setting, manual adding refrigerant setting, etc.). In such a case, it is required to abort the special operation before normal operation can restart. It will be indicated in below explanations.

[2-8]= T_e target temperature T_e fix control
Default value=2

Value [2-8]	T _e target
2	6 (Default)
3	7
4	8
5	9
6	10
7	11

Change [2-8]=2~7 in function of required operation method during cooling.

[2-11]= Activation VRT control and VRT Smart control via External control adaptor (Optional).

Value [2-11]	Meaning
0	Inactive (Default)
1	VRT Smart active by demand terminal short-circuit
2	VRT Smart active by low noise terminal short-circuit

VRT Smart can be activated by short circuit the terminal on External control adaptor (Optional) according to [2-11] setting.

If the terminal on external control adaptor is not connected by short circuit with [2-11]≠0, the system operates according to [2-8] setting.

[2-12]= Enable the low noise function and/or power consumption limitation via external control adaptor (DTA104A61/62)

If the system needs to be running under low noise operation or under power consumption limitation conditions when an external signal is sent to the unit, this setting should be changed. This setting will only be effective when the optional external control adaptor (DTA104A61/62) is installed.

Default value=0
To activate this function change [2-12]=1.

[2-18]= Fan high static pressure setting

In order to increase the static pressure the outdoor unit fan is delivering, this setting should be activated. For details about this setting, see technical specifications.

Default value=0.
To activate this function change [2-18]=1.

[2-21]= Refrigerant recovery/vacuuming mode

In order to achieve a free pathway to reclaim refrigerant out of the system or to remove residual substances or to vacuum the system it is necessary to apply a setting which will open required valves in the refrigerant circuit so the reclaim of refrigerant or vacuuming process can be done properly.

Default value=0
To activate function charge [2-21]=1

To stop the refrigerant recovery/vacuuming mode, push BS3. If BS3 is not pushed, the system will remain in refrigerant recovery/vacuuming mode.

[2-22]= Night time low noise setting and level.

By changing this setting, you activate the automatic low noise operation function of the unit and define the level of operation. Depending on the chosen level, the noise level will be lowered (4:Level4<3:Level3<2:Level2<1:Level1). The start and stop moments for this function are defined under setting [2-26] and [2-27].

Default value=0.
To activate function change [2-22]=1,2,3 or 4.

[2-23]= Activate T_e fix control.

In order to operate T_e fix control, it is necessary to apply a setting below. T_e value depends on [2-8] setting.

Default value=0.
T_e fix control [2-23]=1

[2-25]= Low noise operation level via the external control adaptor.

If the system needs to be running under low noise operation conditions when an external signal is sent to the unit, this setting defines the level of low noise that will be applied (4:Level4<3:Level3<2:Level2<1:Level1).

This setting will only be effective when the optional external control adaptor (DTA104A61/62) is installed and the setting [2-12] was activated.

Default value=2
To activate function change [2-25]=1,2,3 or 4.

[2-26]= Low noise operation start time
Change [2-26]=1,2 or 3 in function of required timing.

Default value=2.

Value [2-26]	Start time automatic low noise operation (approximately)
1	20:00
2	22:00 (default)
3	24:00

This setting is used in conjunction with setting [2-22].

[2-27]= Low noise operation stop time
Default value=3

Value [2-27]	Stop time automatic low noise operation (approximately)
1	6:00
2	7:00
3	8:00 (default)

This setting is used in conjunction with setting [2-22].

[2-30]= Power consumption limitation level (step 1) via the external control adaptor (DTA104A61/62).

If the system needs to be running under power consumption limitation conditions when an external signal is sent to the unit, this setting defines the level power consumption limitation that will be applied for step 1. The level is according to the table.

Default value=3
Change [2-30]=1,2,3,4,5,6,7 or 8 in function of required limitation.

Value [2-30]	Power consumption limitation (approximately)
1	60%
2	65%
3	70% (default)
4	75%
5	80%
6	85%
7	90%
8	95%

[2-31]= Power consumption limitation level (step 2) via the external control adaptor (DTA104A61/62).

If the system needs to be running under power consumption limitation conditions when an external signal is sent to the unit, this setting defines the level power consumption limitation that will be applied for step 2. The level is according to the table.

Default value=1
Change [2-31]=1,2 or 3 in function of required limitation.

Value [2-31]	Power consumption limitation (approximately)
1	40% (default)
2	50%
3	55%

[2-32]= Forced, all time, power consumption limitation operation (no external control adaptor is required to perform power consumption limitation).

If the system always needs to be running under power consumption limitation conditions, this setting activates and defines the level power consumption limitation that will be applied continuously. The level is according to the table.

Default value=0 (OFF)

Value [2-32]	Restriction reference
0	Function not active (default)
1	Follows [2-30] setting
2	Follows [2-31] setting

Change [2-32]=0,1 or 2 in function of required limitation.

[2-49]= Max, level difference setting
In case the outdoor location is higher than indoor, extension is possible up till 90 m, Refer to [2-49] for dedicated setting.

Value [2-49]	Max, level difference setting
0	OFF(default)
1	ON

[2-81]= Cooling comfort setting for VRT control
Default value=1

Value [2-81]	Cooling comfort setting
0	Eco
1	Mild (default)
2	Quick
3	Powerful

Change [2-81]=0,1,2 or 3 in function of required limitation.

For more information and advice about the impact of these settings, see "15.3 Energy saving and optimum operation".

[2-83]= Master user interface allocation in case VRV indoor units and RA indoor units are used at the same time.

By changing setting [2-83], you can allow the VRV indoor unit to be the operation mode selector (system power OFF/ON is required after applying this setting).

- [2-83]=1 RA indoor unit has mode selection right (default setting).
- [2-83]=0 VRV indoor unit has mode selection right.

[2-95]= Eco level setting for VRT smart control.

Default value =0

Value [2-95]	Eco level setting
0	Standard (Default)
1	Middle
2	High

15.3 Energy saving and optimum operation

This VRV cooling only system is equipped with two kinds of advanced energy saving functionality (VRT and VRT smart control). Detecting all connected indoor units type, advanced energy saving functionality type is selected automatically. Depending on the priority, emphasises can be put on energy saving or comfort level. Several parameters can be selected, resulting in the optimal balance between energy consumption and comfort for the particular application.

Several patterns are available and explained below. Modify the parameters to the needs of your building and to realize the best balance between energy consumption and comfort.

15.3.1 Four main operation methods are available:

- **Basic**
The refrigerant temperature is fixed independent from the situation. It corresponds to the standard operation which is known and can be expected from/under previous VRV systems:
 - To activate this operation method under cooling operation: change field setting [2-23]=1 or disconnect the circuit between terminal on external control adaptor with [2-11]≠0.
- **Automatic for VRT control**
The refrigerant temperature is set depending on the outdoor ambient conditions. As such adjusting the refrigerant temperature to match the required load (which is also related to the outdoor ambient conditions).
E.g., when your system is operating in cooling, you do not need as much cooling under low outdoor ambient temperatures (e.g., 25°C) as under high outdoor ambient temperatures (e.g., 35°C). Using this idea, the system automatically starts increasing its refrigerant temperature, automatically reducing the delivered capacity and increasing the system's efficiency.
 - This operation is selected automatically with checking connected indoor unit type.
- **Automatic for VRT smart control**
The refrigerant temperature is set depending on the required capacity sent from every indoor unit.
 - This operation is selected automatically with checking connected indoor unit type.
- **Hi-sensible**
The refrigerant temperature is set higher (cooling) compared to basic operation. The focus under high sensible mode is comfort feeling for the customer. The selection method of indoor units is important and has to be considered as the available capacity is not the same as under basic operation. For details concerning to Hi-sensible applications, please contact your dealer.
 - To activate this setting under cooling operation: change field setting [2-8] to the appropriate value, matching the requirements of the pre-designed system containing a high sensible solution.

Value [2-8]	T _e target
3	7
4	8
5	9
6	10
7	11

15.3.2 Several comfort settings are available in VRT control

For each of above modes, automatic and hi-sensible, a comfort level can be selected. The comfort level is related to the timing and the effort (energy consumption) which is put in achieving a certain room temperature by temporarily changing the refrigerant temperature to different values in order to achieve requested conditions more quickly.

- **Powerful**
Undershoot (during cooling operation) is allowed compared to the requested refrigerant temperature, in order to achieve the required room temperature very fast. The undershoot is allowed from the start up moment.
In case of cooling operation the evaporating temperature is allowed to go down to 3°C on temporary base depending on the situation.

When the request from the indoor units becomes more moderate, the system will eventually go to the steady state condition which is defined by the operation method above.
 - To activate the powerful comfort setting under cooling operation, change field setting [2-81]=3.
- **Quick**
Undershoot (during cooling operation) is allowed compared to the requested refrigerant temperature, in order to achieve the required room temperature very fast. The undershoot is allowed from the start up moment.
In case of cooling operation the evaporating temperature is allowed to go down to 6°C on temporary base depending on the situation.

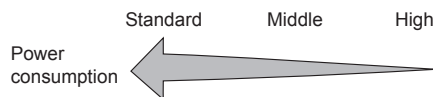
When the request from the indoor units becomes more moderate, the system will eventually go to the steady state condition which is defined by the operation method above.
 - To activate the quick comfort setting under cooling operation, change field setting [2-81]=2.
- **Mild**
Undershoot (during cooling operation) is allowed compared to the requested refrigerant temperature, in order to achieve the required room temperature very fast. The undershoot is not allowed from the start up moment. The start up occurs under the condition which is defined by the operation mode above.
In case of cooling operation the evaporating temperature is allowed to go down to 6°C on temporary base depending on the situation.

When the request from the indoor units becomes more moderate, the system will eventually go to the steady state condition which is defined by the operation method above.
The start up condition is different from the powerful and quick comfort setting.
 - To activate the mild comfort setting under cooling operation, change field setting [2-81]=1.
- **Eco**
The original refrigerant temperature target, which is defined by the operation method (see above) is kept without any correction, unless for protection control.
 - To activate the eco comfort setting under cooling operation, change field setting [2-81]=0.

No matter which control is selected, variations on the behaviour of the system are still possible due to protection controls to keep the unit operating under reliable conditions. The intentional target, however, is fixed and will be used to obtain the best balance between energy consumption and comfort, depending on the application type.

15.3.3 Several Eco-level setting are available for VRT Smart control

Eco level can be selected by field setting [2-95] and according this setting, target T_e is decided using capacity requirement from all indoor units.



16. Test run

16.1 Test operation

After installation and once the field settings are defined, the installer is obliged to verify correct operation. Therefore a test run must be performed according to the procedures described below.

16.1.1 Precautions before starting test operation

During test operation, the outdoor unit and the indoor units will start up:

- Make sure that the preparations of all indoor units are finished (field piping, electrical wiring, air purge, ...). See installation manual of the indoor units for details.



CAUTION

Do not insert fingers, rods or other objects into the air inlet or outlet. When the fan is rotating at high speed, it will cause injury.



CAUTION

Do not perform the test operation while working on the indoor units.

When performing the test operation, not only the outdoor unit, but the connected indoor unit will operate as well. Working on an indoor unit while performing a test operation is dangerous.



CAUTION

- During tests never pressurize the appliances with a pressure higher than the maximum allowable pressure (as indicated on the nameplate of the unit).
- If refrigerant gas leaks, ventilate the area immediately. Toxic gas may be produced if refrigerant gas comes into contact with fire.
- Never directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.



DANGER: Do not touch piping and internal parts.

See "2. General safety precautions".



DANGER: Electrical shock

See "2. General safety precautions".



INFORMATION

Note that during the first running period of the unit, required power input may be higher. This phenomenon originates from the compressor that requires a 50 hour run elapse before reaching smooth operation and stable power consumption. Reason is that the scroll is made out of iron and that it takes some time to smooth the surfaces that make contact.

16.1.2 Test operation

The procedure below describes the test operation of the complete system. This operation checks and judges following items:

- Check of wrong wiring (communication check with indoor units).
- Check of the stop valves opening.
- Judgement of piping length.

On top of this system test operation, indoor units operation should also be checked separately.

- Make sure to carry out the system test operation after the first installation. Otherwise, the malfunction code U3 will be displayed on the user interface and normal operation or individual indoor unit test run cannot be carried out.
- Abnormalities on indoor units cannot be checked for each unit separately. After the test operation is finished, check the indoor units one by one by performing a normal operation using the user interface. Refer to the indoor unit installation manual for more details concerning the individual test run.



INFORMATION

- It may take 10 minutes to achieve a uniform refrigerant state before the compressor starts.
- During the test operation, the refrigerant running sound or the magnetic sound of a solenoid valve may become loud and the display indication may change. These are not malfunctions.

Procedure

- 1 Close all front panels in order to not let it be the cause of misjudgement (except the electrical component box inspection opening service cover).
- 2 Make sure all field settings you want are set.
- 3 Turn ON the power to the outdoor unit and the connected indoor units.



NOTICE

Be sure to turn on the power 6 hours before operation in order to have power running to the crankcase heater and to protect the compressor.

- 4 Make sure the default (idle) situation is existing; see "13.2 Operating the push buttons and DIP switches on the logic board". 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 "E01" 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:

- "E01": control before start up (pressure equalization)
- "E02": cooling start up control
- "E03": cooling stable condition
- "E04": communication check
- "E05": stop valve check
- "E06": pipe length check
- "E07": refrigerant amount check
- "E08": in case [2-88]=0, detailed refrigerant situation check
- "E09": pump down operation
- "E10": unit stop

- During the test operation, it is not possible to stop the unit operation from a user interface. To abort the operation, press BS3. The unit will stop after ±30 seconds.

- 5 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 "16.1.3 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.

16.1.3 Correcting after abnormal completion of the test operation

The test operation is only completed if there is no malfunction code displayed on the user interface or outdoor unit segment display. 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.

16.2 Malfunction code list

In case of a displayed malfunction code, perform correcting actions as explained in the malfunction code table.

After correcting the abnormality, press BS3 to reset the malfunction code and retry operation.

The malfunction code which is displayed on the outdoor unit will indicate a main malfunction code and a sub code. The sub code indicates more detailed information about the malfunction code. The malfunction code will be displayed intermittent.

Example:

Main code	Sub code
E3-	001

With an interval of 1second, the display will switch between main code and sub code.

Below table gives an overview of the malfunction codes which may appear.

Main code	Malfunction code			Contents	Solution
	Sub code				
	Master	Slave 1	Slave 2		
E3	01	03	05	High pressure switch was activated (S1PH) - A1P(X2A).	Check stop valve situation or abnormalities in (field) piping or airflow over air cooled coil.
	02	04	06	<ul style="list-style-type: none"> Refrigerant overcharge. Stop valve closed. 	<ul style="list-style-type: none"> Check refrigerant amount+recharge unit. Open stop valve.
	13	14	15	Stop valve closed (liquid).	Open liquid stop valve.
	20	21	22	High pressure switch was activated (S2PH) - A1P(X3A).	Check stop valve situation or abnormalities in (field) piping or airflow over air cooled coil.
E4	01	02	03	Low pressure malfunction : <ul style="list-style-type: none"> Stop valve closed. Refrigerant shortage. Indoor unit malfunction. 	<ul style="list-style-type: none"> Open stop valve. Check refrigerant amount+recharge unit. Check the user interface's display or Transmission wiring between the outdoor unit and the indoor unit.
E9	01	05	08	Electronic expansion valve malfunction (main) (Y1E) - A1P(X21A).	Check connection on PCB or actuator.
	03	06	09	Electronic expansion valve malfunction (subcool) (Y2E) - A1P(X22A).	Check connection on PCB or actuator.
	26	27	28	Electronic expansion valve malfunction (refrigerant auto charge) (Y4E) - A1P(X25A).	Check connection on PCB or actuator.
F3	01	03	05	Discharge temperature too high (R21T/R22T) : <ul style="list-style-type: none"> Stop valve closed. Refrigerant shortage. 	<ul style="list-style-type: none"> Open stop valve. Check refrigerant amount+recharge unit.
	20	21	22	Compressor casing temperature too high (R8T/R9T) : <ul style="list-style-type: none"> Stop valve closed. Refrigerant shortage. 	<ul style="list-style-type: none"> Open stop valve. Check refrigerant amount+recharge unit.
F6		02		<ul style="list-style-type: none"> Refrigerant overcharge. Stop valve closed. 	<ul style="list-style-type: none"> Check refrigerant amount+recharge unit. Open stop valve.
H9	01	02	03	Ambient temperature sensor malfunction (R1T) - A1P(X18A).	Check connection on PCB or actuator.
J3	16	22	28	Discharge temperature sensor malfunction (R21T): open circuit - A1P (X19A).	Check connection on PCB or actuator.
	17	23	29	Discharge temperature sensor malfunction (R21T): short circuit - A1P (X19A).	Check connection on PCB or actuator.
	18	24	30	Discharge temperature sensor malfunction (R22T): open circuit - A1P (X19A).	Check connection on PCB or actuator.
	19	25	31	Discharge temperature sensor malfunction (R22T): short circuit - A1P (X19A).	Check connection on PCB or actuator.
	38	42	44	Compressor casing temperature sensor malfunction (R9T): open circuit - A1P (X19A).	Check connection on PCB or actuator.
	39	43	45	Compressor casing temperature sensor malfunction (R9T): short circuit - A1P (X19A).	Check connection on PCB or actuator.
	47	49	51	Compressor casing temperature sensor malfunction (R8T): open circuit - A1P (X19A).	Check connection on PCB or actuator.
	48	50	52	Compressor casing temperature sensor malfunction (R8T): short circuit - A1P (X19A).	Check connection on PCB or actuator.
J5	01	03	05	Suction temperature sensor malfunction (R3T) - A1P (X30A).	Check connection on PCB or actuator.
J7	06	07	08	Liquid temperature sensor (after subcool HE) malfunction (R5T) - A1P (X30A).	Check connection on PCB or actuator.
J8	01	02	03	Liquid temperature sensor (coil) malfunction (R4T) - A1P (X30A).	Check connection on PCB or actuator.
J9	01	02	03	Gas temperature sensor (after subcool HE) malfunction (R6T) - A1P (X30A).	Check connection on PCB or actuator.
	06	08	10	High pressure sensor malfunction (S1NPH): open circuit - A1P (X32A).	Check connection on PCB or actuator.
JR	07	09	11	High pressure sensor malfunction (S1NPH): short circuit - A1P (X32A).	Check connection on PCB or actuator.
	06	08	10	Low pressure sensor malfunction (S1NPL): open circuit - A1P (X31A).	Check connection on PCB or actuator.
JC	07	09	11	Low pressure sensor malfunction (S1NPL): short circuit - A1P (X31A).	Check connection on PCB or actuator.
	14	15	16	Transmission outdoor unit - inverter: INV1 transmission trouble - A1P (X20A, X28A, X40A).	Check connection.
LC	19	20	21	Transmission outdoor unit - inverter: FAN1 transmission trouble - A1P (X20A, X28A, X40A).	Check connection.
	24	25	26	Transmission outdoor unit - inverter: FAN2 transmission trouble - A1P (X20A, X28A, X40A).	Check connection.
	30	31	32	Transmission outdoor unit - inverter: INV2 transmission trouble - A1P (X20A, X28A, X40A).	Check connection.

Malfunction code				Contents	Solution
Main code	Sub code				
	Master	Slave 1	Slave 2		
P1	01	02	03	INV1 unbalanced power supply voltage.	Check if power supply is within range.
	07	08	09	INV2 unbalanced power supply voltage.	Check if power supply is within range.
U2	01	08	11	INV1 voltage power shortage.	Check if power supply is within range.
	22	25	28	INV2 voltage power shortage.	Check if power supply is within range.
U3	03			Malfunction code: System test run not yet executed (system operation not possible).	Execute system test run.
	10			Malfunction code: System refrigerant auto charge run not yet executed.	Execute auto charge function (see manual).
	04			System test run abnormal ending.	Execute test run again.
U4	01			Faulty wiring to indoor - outdoor.	Check (F1/F2) wiring.
	03			Faulty indoor system.	Check indoor system transmissions wire.
U7	01			Warning: faulty wiring to Q1/Q2.	Check (Q1/Q2) wiring.
	02			Malfunction code: faulty wiring to Q1/Q2.	Check (Q1/Q2) wiring.
	11			<ul style="list-style-type: none"> • Too many indoor units are connected to F1/F2 line. • Bad wiring between outdoor and indoor units. 	Check indoor unit amount and total capacity connected.
U9	01			<ul style="list-style-type: none"> • System mismatch. Wrong type of indoor units combined (R410A, R407C, RA). • Indoor unit malfunction. 	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
UR	03			Connection malfunction over indoor units or type mismatch (R410A, R407C, RA).	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
	18			Connection malfunction over indoor units or type mismatch (R410A, R407C, RA).	Check if other indoor units have malfunction and confirm indoor unit mix is allowed.
	31			Wrong unit combination (multi system).	Check if unit types are compatible.
UF	01			Auto address malfunction (inconsistency).	Check if transmission wired unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.
	05			Stop valve closed or wrong (during system test run).	Open stop valves.
UH	01			Auto address malfunction (inconsistency).	Check if transmission wired unit amount matches with powered unit amount (by monitor mode) or wait till initialization is finished.



INFORMATION

References can be found on the wiring diagram.

Information code		Contents	Solution
Main code			
<i>Auto charging related.</i>			
P2		Unusual low pressure on suction line.	Close valve C immediately. Push BS3 to reset. Check following items before retrying auto charge procedure: <ul style="list-style-type: none"> • Check if the gas side stop valve is opened correctly. • Check if the valve of the refrigerant cylinder is opened. • Check if the air inlet and outlet of the indoor unit are not obstructed.
P8		Freeze-up prevention indoor unit.	Close valve C immediately. Push BS3 to reset. Retry auto charge procedure.
PE		Automatic charging nearly finished.	Prepare for auto charge stopping.
P9		Automatic charging finished.	Finish auto charge mode.

17. Operation of the unit

Once the unit is installed and test operation of outdoor unit and indoor units is finished, the operation of the system can start.

For operating the indoor unit, the user interface of the indoor unit should be switched ON. Refer to the indoor unit operation manual for more details.

18. Caution for refrigerant leaks

18.1 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.

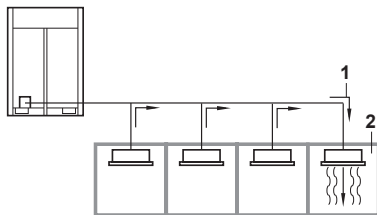
This system uses R410A as refrigerant. R410A itself is an entirely safe non-toxic, non-combustible refrigerant. Nevertheless care must be taken to ensure that air conditioning facilities are installed in a room which is sufficiently large. This assures that the maximum concentration level of refrigerant 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.

18.2 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/m³ (the weight in kg of the refrigerant gas in 1m³ 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.

18.3 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.

Amount of refrigerant in a single unit system (amount of refrigerant with which the system is charged before leaving the factory)	+	Additional charging amount (amount of refrigerant added locally in accordance with the length or diameter of the refrigerant piping)	=	Total amount of refrigerant (kg) in the system
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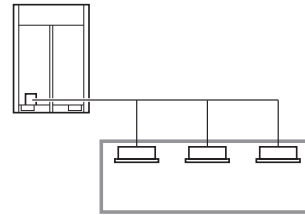


NOTICE

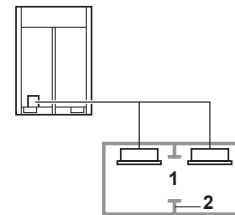
Where a single refrigerant facility is divided into 2 entirely independent refrigerant systems, use the amount of refrigerant with which each separate system is charged.

- 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.

4. REFNET Pipe System

4.1 Layout Example

4.1.1 Heat Pump / Cooling Only

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.

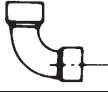
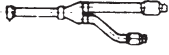

Type of fitting	Sample systems
Line branch fitting (Pipes containing REFNET joints only)	
Header branch fitting (Piping consists of REFNET headers only)	
Mixed branch fittings (Piping including both headers and joints)	

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

Notes:

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.

4.1.2 Equivalent Piping Length of Joints and Header (Reference)

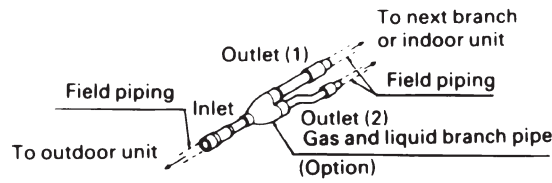
Pipe Size* (mm)	φ6.4	φ9.5	φ12.7	φ15.9	φ19.1	φ22.2	φ25.4	φ31.8	φ34.9	φ38.1	φ41.3
L Joints  (m)	0.16	0.18	0.20	0.25	0.35	0.40	0.45	0.55	0.60	0.65	0.75
REFNET Joint  (m)	0.5										
REFNET Header  (m)	1.0										

* 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.

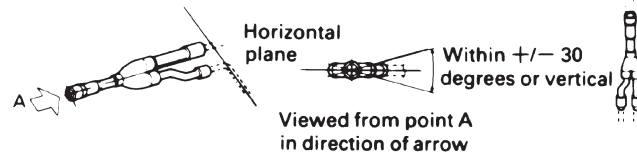
4.2 REFNET Joints and Headers

4.2.1 REFNET Joints

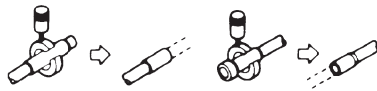
For gas and liquid branch pipes



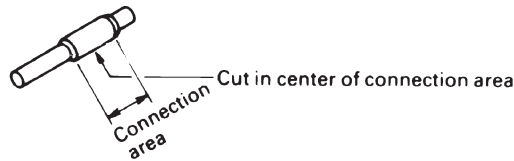
- Make sure that all branch pipes are fitted such that they branch either horizontally or vertically.



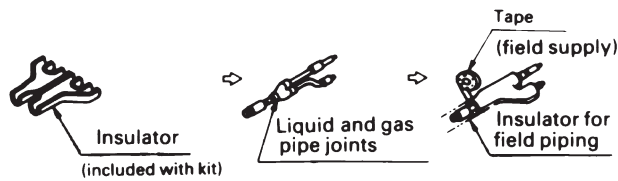
- When the size of the selected field piping is different from that of branch pipe then the connecting section should be cut with a pipe cutter as shown in the figure below.



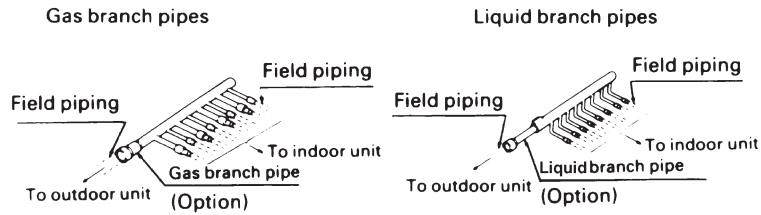
- When you are cutting an inlet or outlet pipe with a pipe cutter make sure that you make the cut in the center of the connection area.



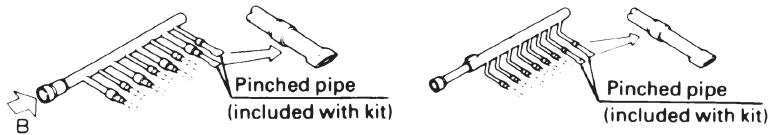
- Branch pipes must be insulated in accordance with the handbook which comes with each kit.



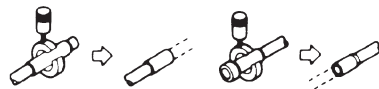
REFNET Headers



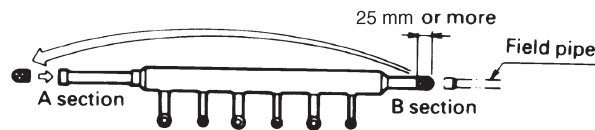
- When the number of indoor units to be connected to the branch pipes is less than the number of branch pipes available for connection then cap pipes should be fitted to the surplus branches.



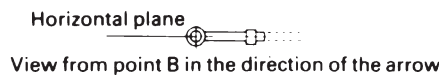
- When the size of the selected field piping is different from that of branch pipe then the connecting section should be cut with a pipe cutter as shown in the figure below.



- When field piping is connected to the B section of the inlet/outlet pipe on the outdoor unit side of the liquid pipe header.
- Cut the B section with a pipe cutter as shown below and connect it to the A section.
- Connect the flared section of the field pipe to the B section.

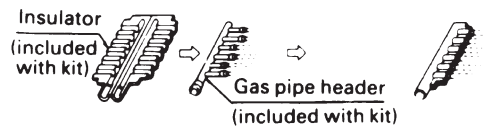


- Fit the branch pipe so that the branch lies in a horizontal plane.

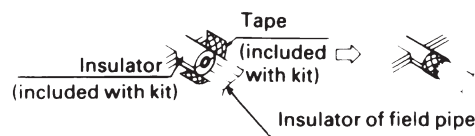


- The branch pipe must be insulated in accordance with the instruction manual which comes with each kit.

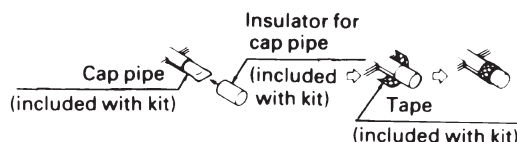
1. Use the insulator included in the kit to insulate the header.



2. Joints between insulators included in the kit and those already applied to the field piping should be sealed with the tape which is also included in each kit.



3. Any cap pipes should also be insulated using the insulator provided with each kit and then taped as described above.

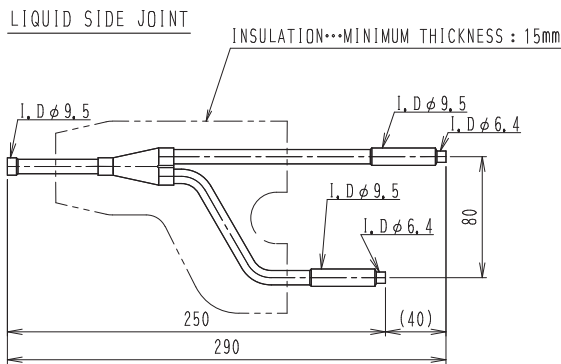
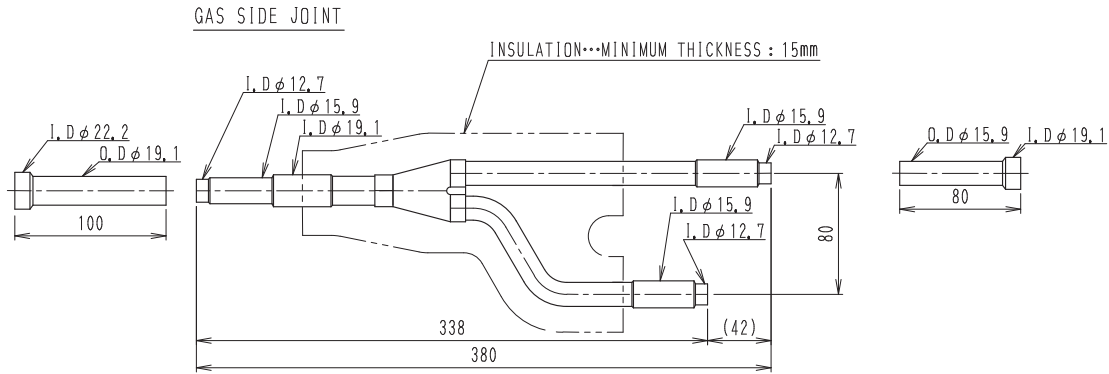


5. REFNET Joint and Header

5.1 REFNET Joint (Branch Kit)

KHRP26A22T

Unit: mm

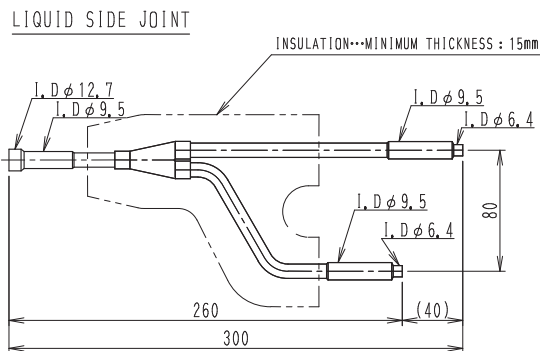
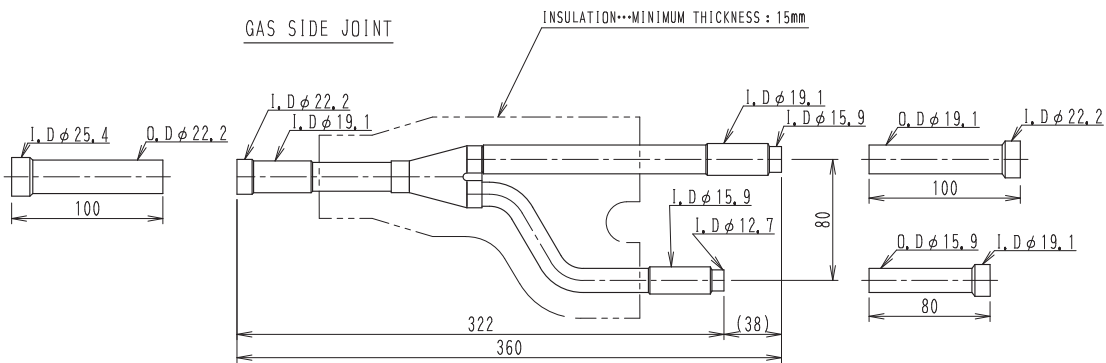


ACCESSORY
 REDUCER : GAS SIDE : 2 pcs
 INSULATION : 2 pcs
 INSTALLATION MANUAL

C: D3K05234B

KHRP26A33T

Unit: mm

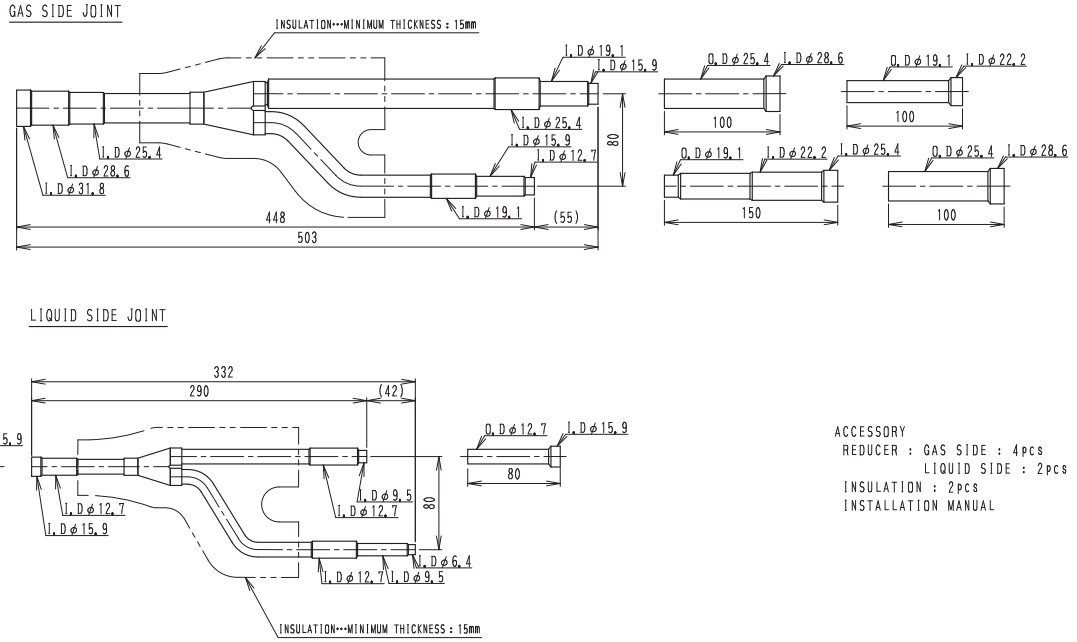


ACCESSORY
 REDUCER : GAS SIDE : 3 pcs
 INSULATION : 2 pcs
 INSTALLATION MANUAL

C: D3K05235C

KHRP26A72T

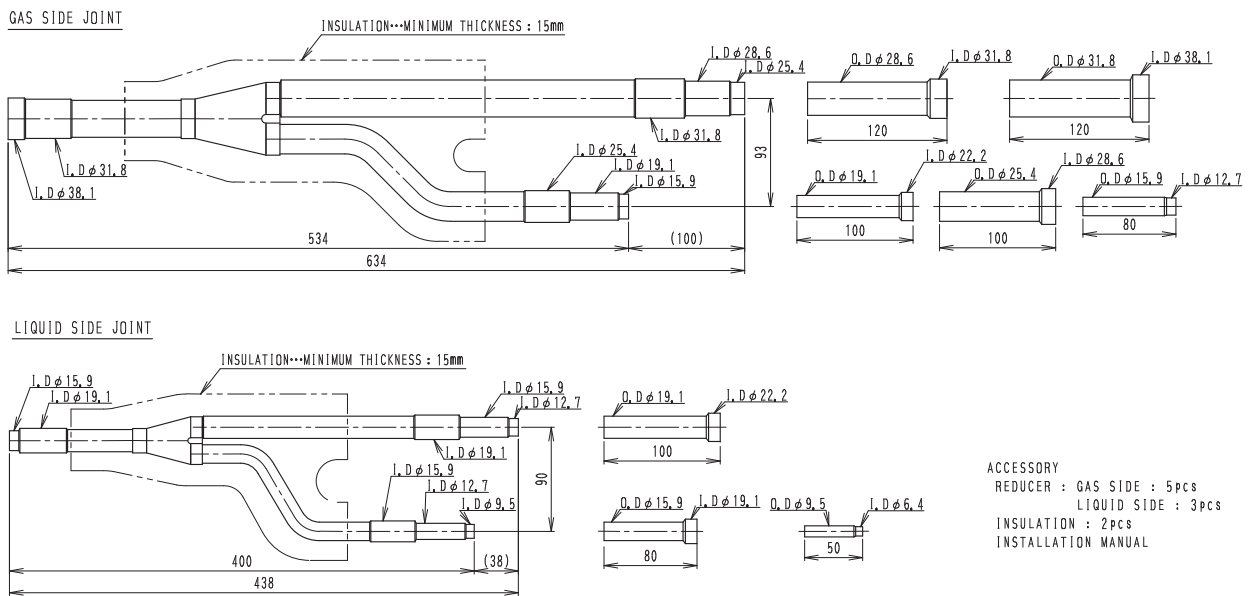
Unit: mm



C: D3K05236B

KHRP26A73T

Unit: mm



C: D3K05237B

KHRP26A22T / KHRP26A33T / KHRP26A72T / KHRP26A73T

REFNET JOINT INSTALLATION MANUAL(Except for JAPAN)
KHRP26A22T • 33T • 72T • 73T(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)
KHRP26A 22T			 2 pcs,	 φ 19,1 φ 22,2	
KHRP26A 33T			 2 pcs,	 φ 19,1 φ 22,2 φ 25,4	
KHRP26A 72T			 2 pcs,	 φ 22,2 φ 25,4/φ 22,2 φ 28,6 2 PCS,	 φ 15,9 φ 19,1
KHRP26A 73T			 2 pcs,	 φ 12,7 φ 22,2 φ 28,6 φ 31,8 φ 38,1	 φ 6,4 φ 19,1 φ 22,2

*...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

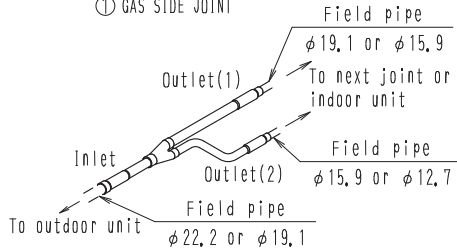
① The pipe size of each parts are shown below.

KIT NAME	GAS SIDE JOINT	LIQUID SIDE JOINT
KHRP26A 22T		
KHRP26A 33T		
KHRP26A 72T		
KHRP26A 73T		

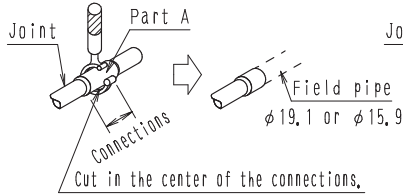
2 According to SELECTION PROCEDURE, cut the pipe with a pipe cutter for use.

• (Ex.) FOR KHRP26A33T

① GAS SIDE JOINT

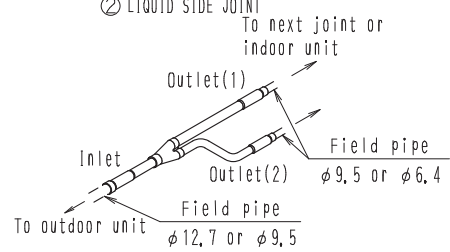


Note) For the size of inlet is φ19.1 or the size of outlet(1) is φ19.1, the size of outlet(2) is φ15.9.
• Cut the pipe with a pipe cutter,

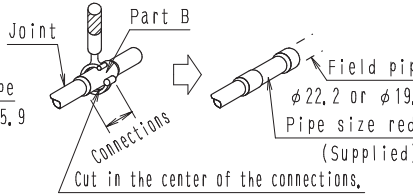


Cut in the center of the part A and connect a field pipe.

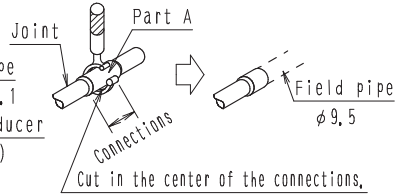
② LIQUID SIDE JOINT



Note) For the size of inlet is φ9.5 or the size of outlet(1) is φ9.5, the size of outlet(2) is φ9.5.
• Cut the pipe with a pipe cutter,



Cut in the center of the part B, use Pipe size reducer (supplied) and connect a field pipe.



Cut in the center of the part A and connect a field pipe.

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

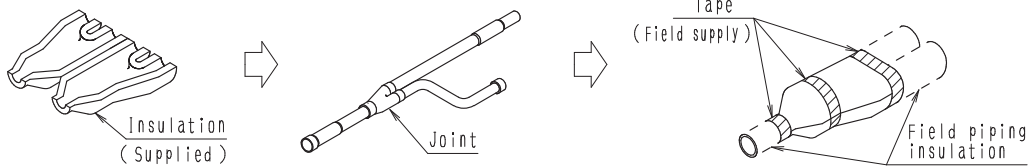
3 Insulation of Joint

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,

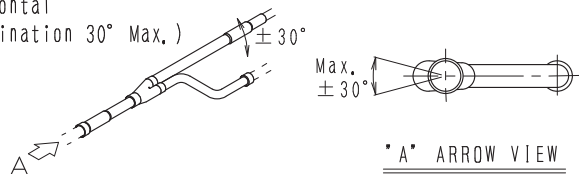
LIQUID SIDE • Insulate by the same method as gas side joint.



INSTALLATION PRECAUTIONS

• Install the Joint so that it is branched vertically or horizontally.

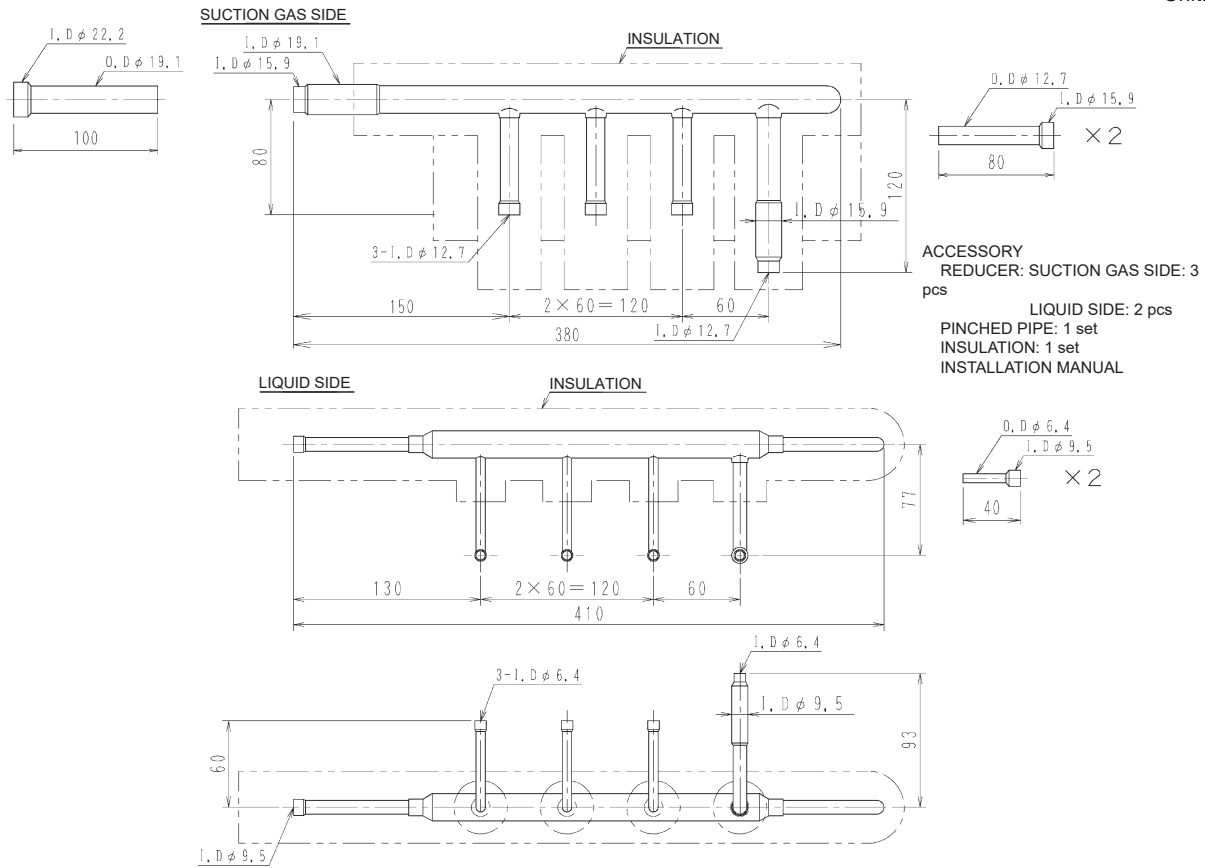
Horizontal (Inclination 30° Max.)



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

5.2 REFNET Header (Branch Kit) KHRP26M22H

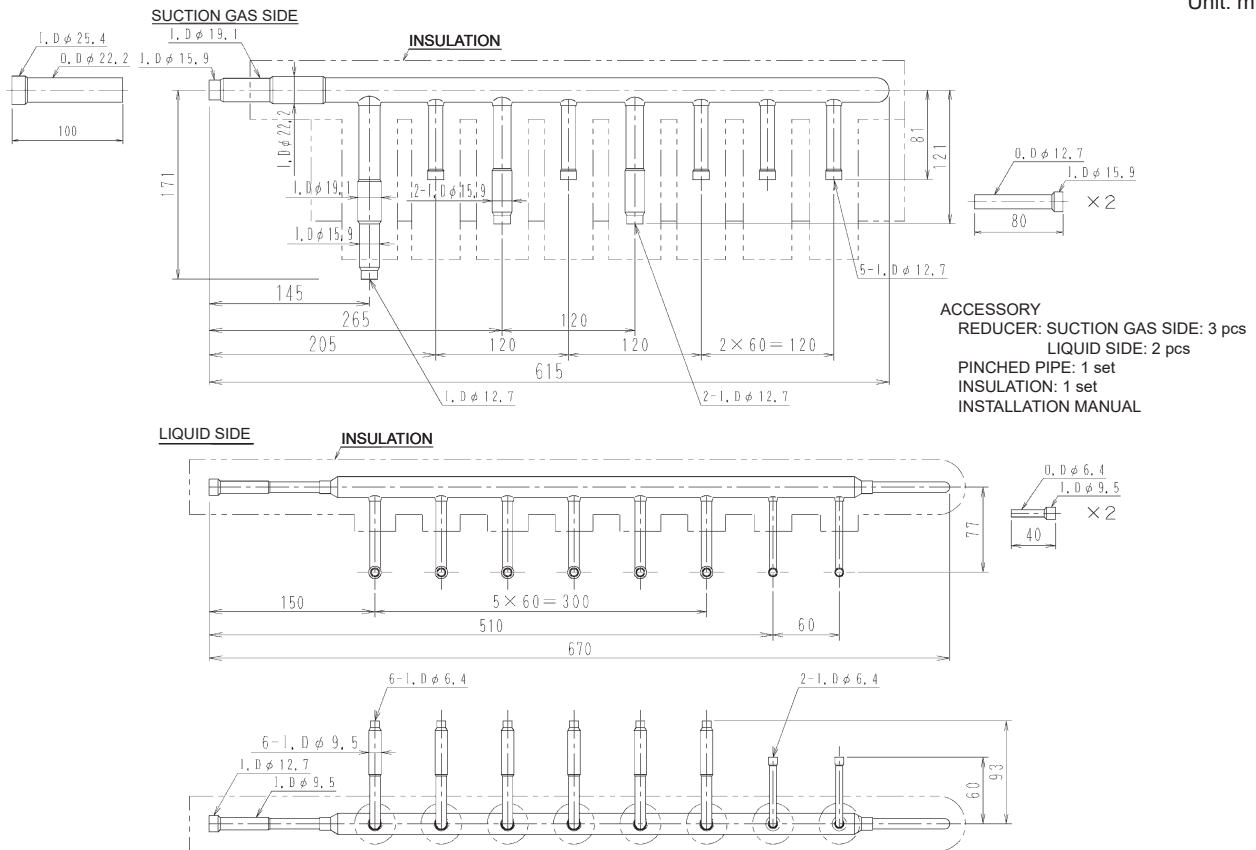
Unit: mm



J: D3K03629C

KHRP26M33H

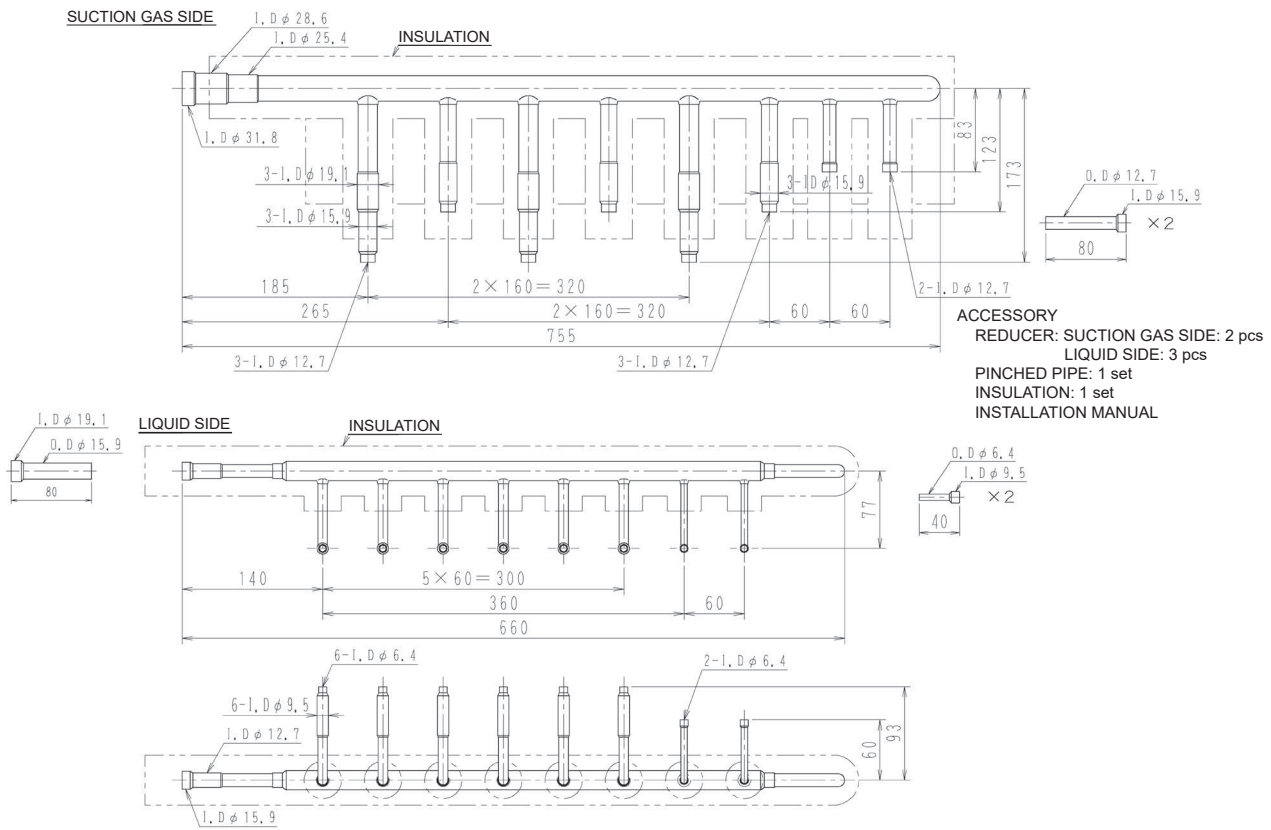
Unit: mm



J: D3K03630C

KHRP26M72H

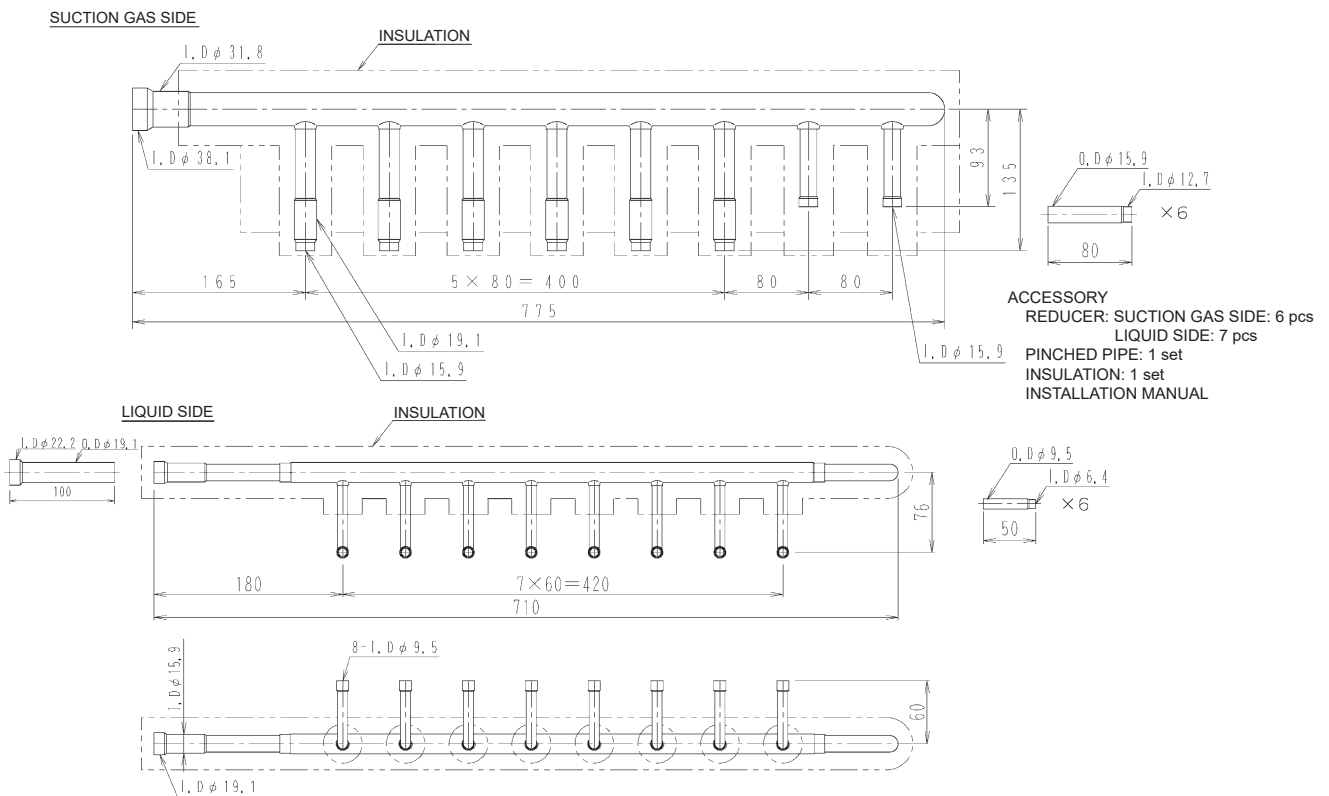
Unit: mm



J: D3K03631C

KHRP26M73H

Unit: mm

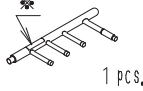
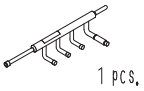
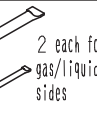
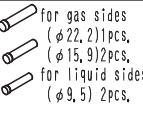
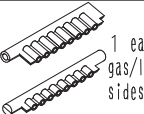


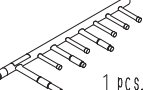
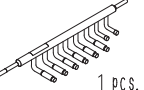

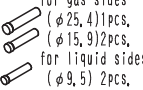



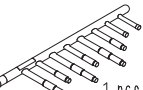
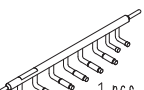

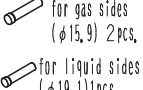
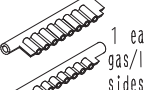

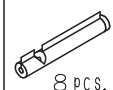

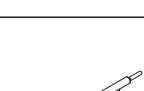

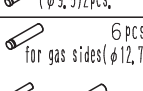
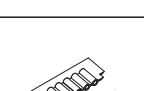

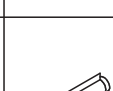


J: D3K03632C

KHRP26M22H / KHRP26M33H / KHRP26M72H / KHRP26M73H

REFNET HEADER INSTALLATION MANUAL(Except for JAPAN)
KHRP26M22H • 33H • 72H • 73H(FOR R-410A)

■ THIS KIT INCLUDES THE FOLLOWING PARTS.

KIT NAME	S H A P E						
	GAS SIDE HEADER	LIQUID SIDE HEADER	PLUGGING TUBES	REDUCER	INSULATION FOR HEADER	INSULATION FOR GAS SIDE ENCLOSED PIPING	INSULATION FOR LIQUID SIDE PIPING
KHRP 26M22H 4branches	 1 pcs.	 1 pcs.	 2 each for gas/liquid sides	 for gas sides (φ22,2)1pcs, (φ15,9)2pcs, for liquid sides (φ9,5)2pcs.	 1 each for gas/liquid sides	 2 pcs.	 4 pcs.
KHRP 26M33H 8branches	 1 pcs.	 1 pcs.	 6 each for gas/liquid sides	 for gas sides (φ25,4)1pcs, (φ15,9)2pcs, for liquid sides (φ9,5)2pcs.	 1 each for gas/liquid sides	 6 pcs.	 8 pcs.
KHRP 26M72H 8branches	 1 pcs.	 1 pcs.	 6 each for gas/liquid sides	 for gas sides (φ15,9)2pcs, for liquid sides (φ19,1)1pcs, (φ9,5)2pcs.	 1 each for gas/liquid sides	 6 pcs.	 8 pcs.
KHRP 26M73H 8branches	 1 pcs.	 1 pcs.	 6 each for gas/liquid sides	 6 pcs. for gas sides(φ12,7) for liquid sides (φ6,4)6pcs, (φ22,2)1pcs.	 1 each for gas/liquid sides	 6 pcs.	 8 pcs.

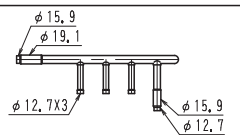
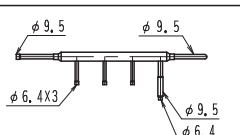
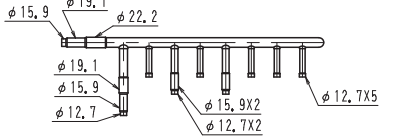
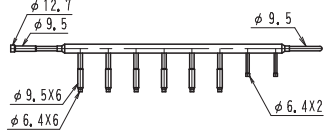
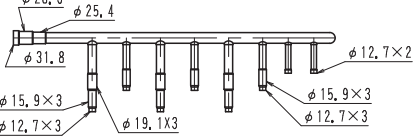
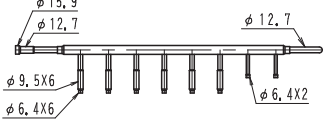
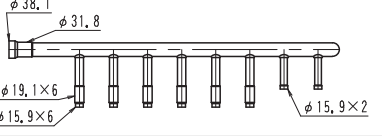
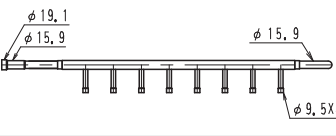
*...Make sure gas side header and liquid side header are for R-410A, (Label for R-410A is attached on each part.)

SELECTION PROCEDURE

According to the INSTALLATION MANUAL of outdoor unit.

INSTALLATION PROCEDURE

① The pipe size of each parts are shown below.

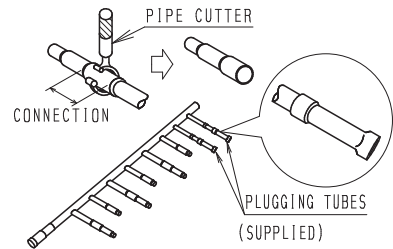
KIT NAME	GAS SIDE HEADER	LIQUID SIDE HEADER
KHRP26M22H 4branches	 φ15,9 φ19,1 φ12,7X3 φ15,9 φ12,7	 φ9,5 φ9,5 φ6,4X3 φ9,5 φ6,4
KHRP26M33H 8branches	 φ15,9 φ19,1 φ22,2 φ19,1 φ15,9 φ12,7 φ15,9X2 φ12,7X2	 φ12,7 φ9,5 φ9,5 φ9,5X6 φ6,4X6 φ6,4X2
KHRP26M72H 8branches	 φ28,6 φ25,4 φ31,8 φ15,9X3 φ12,7X3 φ19,1X3 φ15,9X3 φ12,7X3	 φ15,9 φ12,7 φ12,7 φ9,5X6 φ6,4X6 φ6,4X2
KHRP26M73H 8branches	 φ38,1 φ31,8 φ19,1X6 φ15,9X6 φ15,9X2	 φ19,1 φ15,9 φ15,9 φ9,5X8

2 For the outlet/inlet pipings which can be connected in several piping sizes, cut the connections of piping diameter to be used with a pipe cutter according to the left lower table.

NOTE) 1. Cut in the center of the connections,

2. PIPE SIDE REDUCER

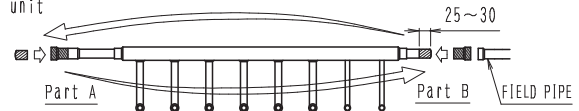
ex) When connecting the field pipe (φ22, 2) to inlet liquid side pipe of KHRP26M73H, use PIPE SIDE REDUCER.



3 For non-connected outlet pipings at the indoor unit side for refrigerant branching, install the supplied plugging tube.

When connecting the field piping to inlet piping part B at the outdoor unit of liquid side header,

- Cut part B as shown with a pipe cutter and install it to part A.
- Connect the flared field piping to part B.



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

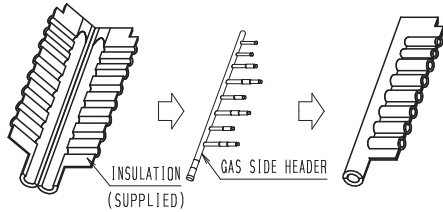
4 Insulation of HEADER

• Be sure to insulate the gas and liquid side HEADER,

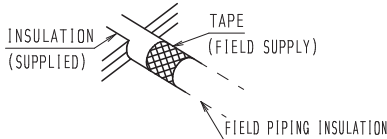
Note) The insulation of the refrigerant piping must be reinforced based on the environment of installation. Otherwise, dew may condensate on the surface of the insulation. For details, see Engineering Data.

GAS SIDE HEADER

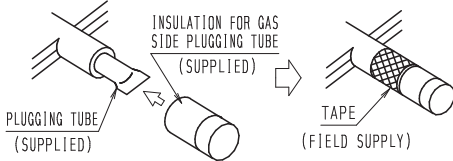
i) Insulate the gas side header with the supplied insulation.



ii) Seal the supplied insulation and field piping insulation junction with the field supplied tape.

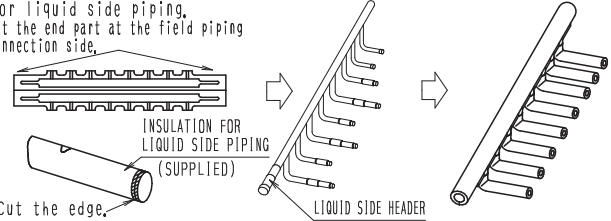


iii) Seal the plugging tube mounting part with the field supplied tape after installing the supplied insulation for the supplied plugging tube.



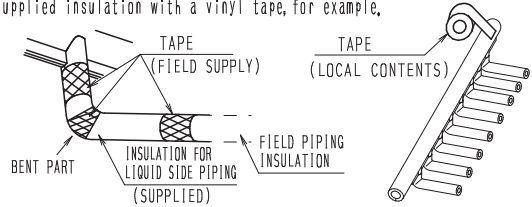
LIQUID SIDE HEADER

i) Insulate the header using the insulation for header and the insulation for liquid side piping. Cut the end part at the field piping connection side.

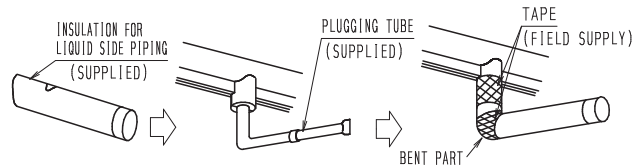


Cut the edge.

ii) Seal the supplied insulation and liquid side piping insulation joint, the supplied liquid side piping insulation bending part, and the joint with the field piping insulation, using the field supplied tape. Seal the supplied insulation with a vinyl tape, for example.



iii) Using the field supplied tape, seal the plugging tube mounting part after installing the insulation for liquid side piping (supplied).

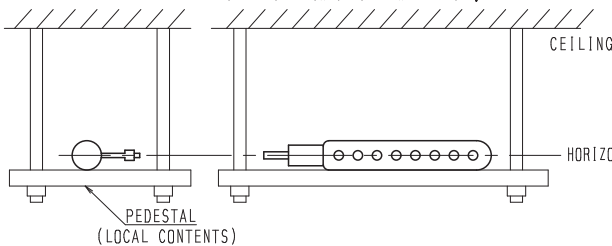


INSTALLATION PRECAUTIONS

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

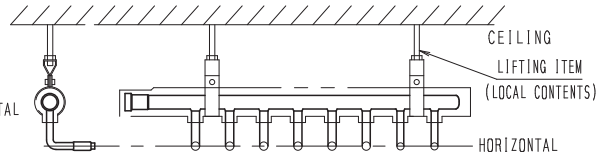
GAS SIDE HEADER

• Place the header on the pedestal and install it so that it is horizontal.



LIQUID SIDE HEADER

• 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.



5.3 Reducer KHRP26M73TP / KHRP26M73HP

PIPE SIZE REDUCER (For R410A) KHRP26M73TP • 73HP KHRP25M72TP • 73TP • 72HP

■ THIS KIT INCLUDES THE FOLLOWING PARTS.

		PIPE SIZE REDUCER ①	PIPE SIZE REDUCER ②	PIPE SIZE REDUCER ③	PIPE SIZE REDUCER ④	PIPE SIZE REDUCER ⑤
SHAPE						
QUANTITY	KHRP26M73TP	1 pc.	1 pc.	2 pc.	—	—
	KHRP26M73HP	1 pc.	—	1 pc.	—	—
	KHRP25M72TP	—	—	—	1 pc.	1 pc.
	KHRP25M72HP	—	—	1 pc.	—	1 pc.
	KHRP25M73TP	1 pc.	1 pc.	3 pc.	1 pc.	—

■ THIS KIT IS THE REDUCER OF THE BRANCH PIPING KIT(REFNET JOINT • HEADER), CHECK THE PROPER MODEL OF THE BRANCH PIPING KIT.

KIT NAME	BRANCH PIPING KIT
KHRP26M73TP	KHRP26M73T(GAS SIDE)
KHRP26M73HP	KHRP26M73H(GAS SIDE) • KHRP25M73H(SUCTION GAS SIDE)
KHRP25M72TP	KHRP25M72T(DISCHARGE GAS SIDE)
KHRP25M72HP	KHRP25M72T(DISCHARGE GAS SIDE) • KHRP25M72H(SUCTION, DISCHARGE, HP/LP GAS SIDE)
KHRP25M73TP	KHRP25M73T(SUCTION, DISCHARGE GAS SIDE)

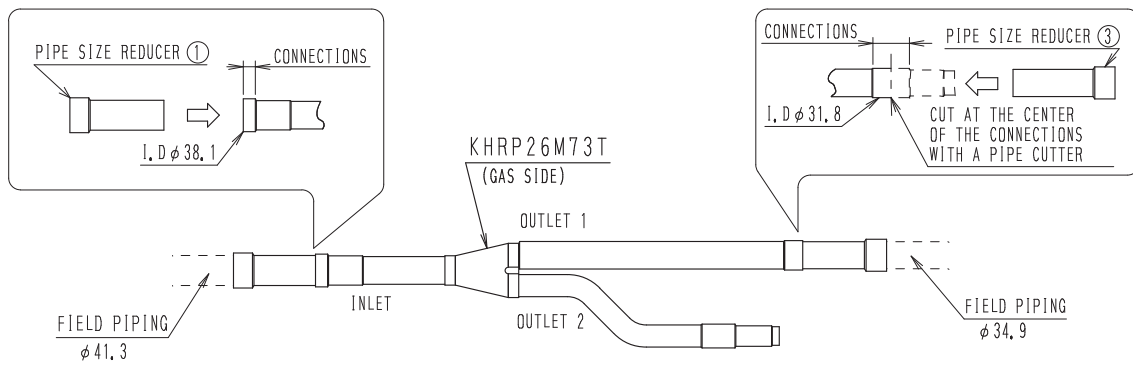
INSTALLATION PROCEDURE

REFER TO THE INSTALATION MANUAL OF THE BRANCH PIPING KIT.

■ JOINT SIZE ARE AS FOLLOWS,

PIPE SIZE REDUCER ① 	PIPE SIZE REDUCER ② 	PIPE SIZE REDUCER ③
PIPE SIZE REDUCER ④ 	PIPE SIZE REDUCER ⑤ 	

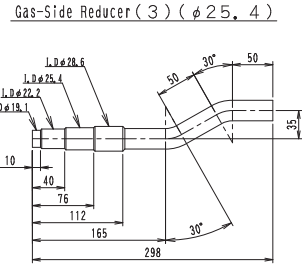
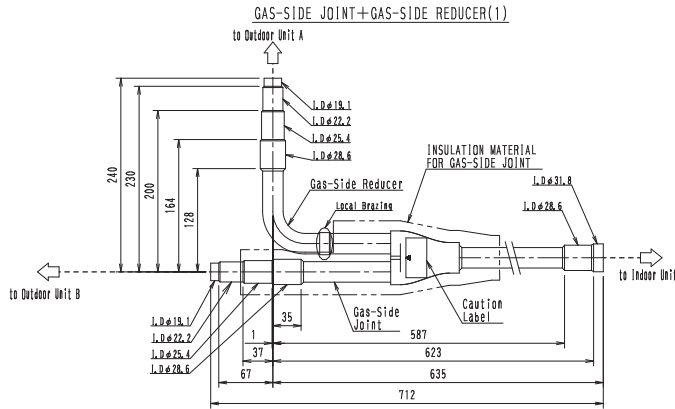
- (1) Select the field piping size according to the installation manual of the outdoor unit.
 - (2) Connect the PIPE SIZE REDUCER suitable for the field piping size to the branch piping kit.
- ex.) Connect the reducers to the branch piping kit, KHRP26M73T.
• For inlet piping size is $\phi 41.3$ and outlet 1 piping size is $\phi 34.9$.



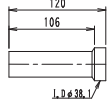
5.4 Outdoor Unit Multi Connection Piping Kit BHFP22P100

Gas side

Unit: mm

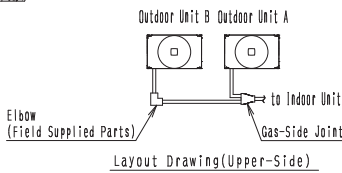


GAS-SIDE REDUCER (2) (φ 31, 8)

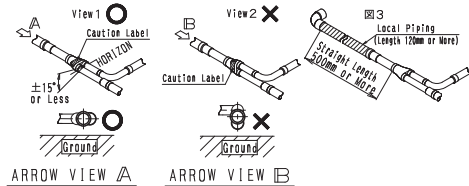


Accessory

- GAS-SIDE JOINT : 1
- LIQUID-SIDE JOINT : 1
- GAS-SIDE REDUCER (1) : 1
- GAS-SIDE REDUCER (2) : 1
- GAS-SIDE REDUCER (3) : 1
- GAS-SIDE REDUCER (7) : 1
- GAS-SIDE REDUCER (9) : 1
- LIQUID-SIDE REDUCER (1) : 1
- LIQUID-SIDE REDUCER (5) : 1
- LIQUID-SIDE REDUCER (5) : 1
- INSULATION MATERIAL FOR GAS-SIDE JOINT : 1
- INSULATION MATERIAL FOR LIQUID-SIDE JOINT : 1
- INSULATION MATERIAL FOR GAS-SIDE PIPE : 1
- INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 1
- INSTALLATION MANUAL



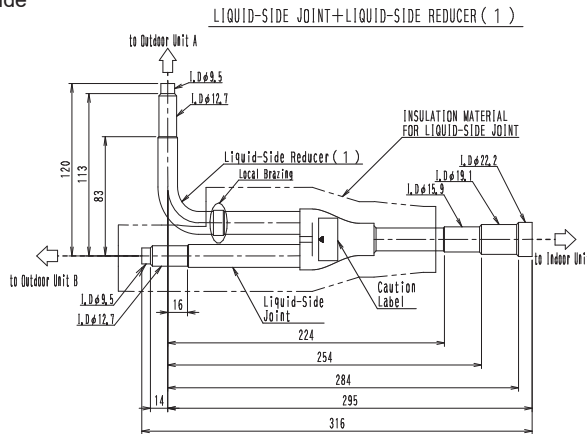
- NOTE) 1. "-----" in the figure show field supply piping.
 2. About size of connection pipe refer the "engineering data of VRV III".
 3. In case of install this kit observe follow conditions,
 • Do not tilt the joint more than ±15°. Install the joint horizontally so that the caution label attached to joint comes to the top.
 • Do not install the joint vertically why it may cause the malfunction of outdoor unit.
 • Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.



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Liquid side

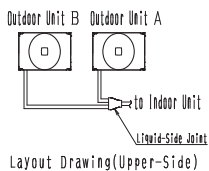
Unit: mm



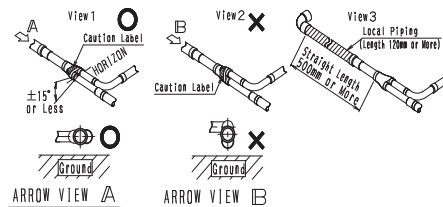
LIQUID-SIDE JOINT+LIQUID-SIDE REDUCER (1)

Accessory

- GAS-SIDE JOINT : 1
- LIQUID-SIDE JOINT : 1
- GAS-SIDE REDUCER (1) : 1
- GAS-SIDE REDUCER (2) : 1
- GAS-SIDE REDUCER (3) : 1
- GAS-SIDE REDUCER (7) : 1
- GAS-SIDE REDUCER (9) : 1
- LIQUID-SIDE REDUCER (1) : 1
- LIQUID-SIDE REDUCER (3) : 1
- LIQUID-SIDE REDUCER (5) : 1
- INSULATION MATERIAL FOR GAS-SIDE JOINT : 1
- INSULATION MATERIAL FOR LIQUID-SIDE JOINT : 1
- INSULATION MATERIAL FOR GAS-SIDE PIPE : 1
- INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 1
- INSTALLATION MANUAL



- NOTE) 1. "-----" in the figure show field supply piping.
 2. About size of connection pipe refer the "engineering data of VRV III".
 3. In case of install this kit observe follow conditions,
 • Do not tilt the joint more than ±15°. Install the joint horizontally so that the caution label attached to joint comes to the top.
 • Do not install the joint vertically why it may cause the malfunction of outdoor unit.
 • Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.

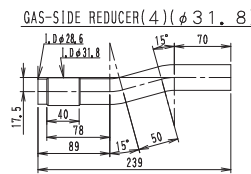
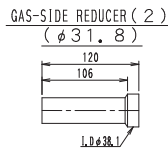
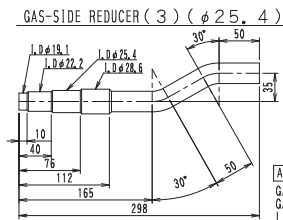
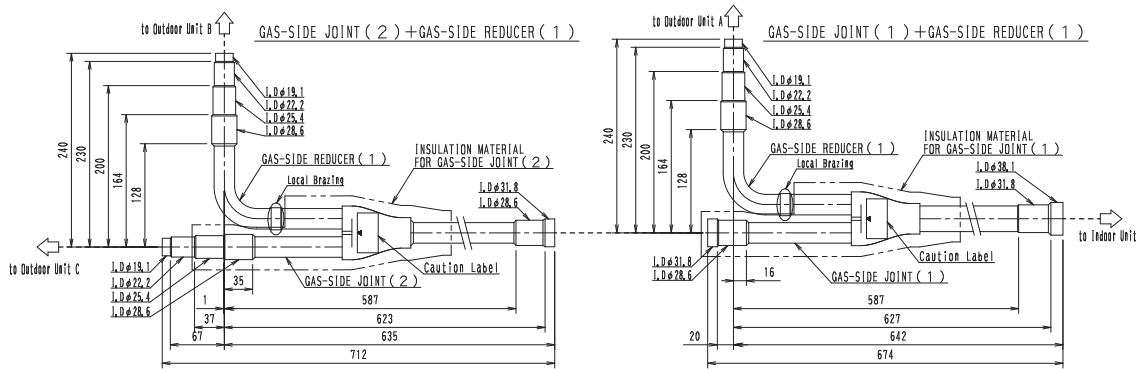


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BHFP22P151

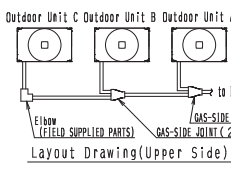
Gas side

Unit: mm

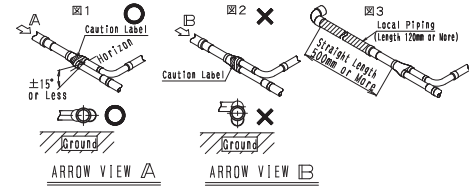


Accessory

- GAS-SIDE JOINT (1) : 1
- GAS-SIDE JOINT (2) : 1
- LIQUID-SIDE JOINT (1) : 1
- LIQUID-SIDE JOINT (2) : 1
- GAS-SIDE REDUCER (1) : 2
- GAS-SIDE REDUCER (2) : 1
- GAS-SIDE REDUCER (3) : 1
- GAS-SIDE REDUCER (4) : 1
- GAS-SIDE REDUCER (5) : 1
- GAS-SIDE REDUCER (6) : 1
- GAS-SIDE REDUCER (7) : 2
- GAS-SIDE REDUCER (8) : 1
- GAS-SIDE REDUCER (9) : 2
- GAS-SIDE REDUCER (10) : 1
- LIQUID-SIDE REDUCER (1) : 2
- LIQUID-SIDE REDUCER (2) : 1
- LIQUID-SIDE REDUCER (3) : 2
- LIQUID-SIDE REDUCER (4) : 1
- LIQUID-SIDE REDUCER (5) : 1
- FOR GAS-SIDE JOINT (1) : 1
- INSULATION MATERIAL FOR GAS-SIDE JOINT (2) : 1
- INSULATION MATERIAL FOR LIQUID-SIDE JOINT (1) : 1
- INSULATION MATERIAL FOR GAS-SIDE PIPE : 2
- INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 2
- INSTALLATION MANUAL



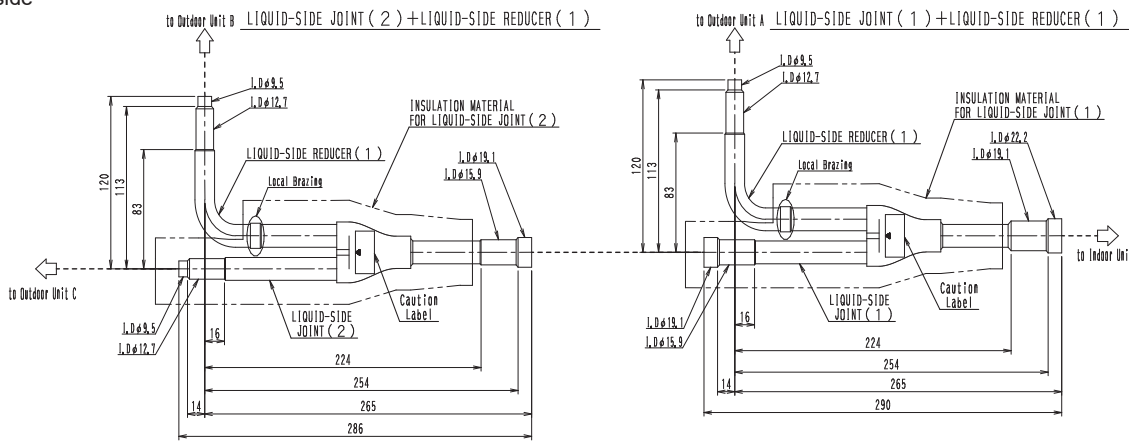
NOTE)1, "-----" in the figure show field supply piping,
 2, About size of connection pipe refer the "engineering data of VRV III".
 3, In case of install this kit observe follow conditions.
 • Do not tilt the joint more than ±15°
 Install the joint horizontally so that the caution label attached to joint comes to the top.
 • Do not install the joint vertically why it may cause the malfunction of outdoor unit.
 • Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.



3D052314

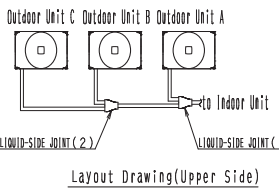
Liquid side

Unit: mm

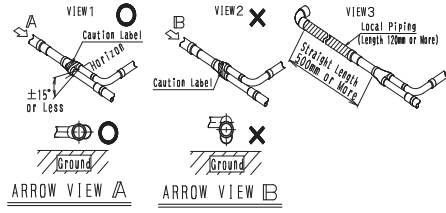


Accessory

- GAS-SIDE JOINT (1) : 1
- GAS-SIDE JOINT (2) : 1
- LIQUID-SIDE JOINT (1) : 1
- LIQUID-SIDE JOINT (2) : 1
- GAS-SIDE REDUCER (1) : 2
- GAS-SIDE REDUCER (2) : 1
- GAS-SIDE REDUCER (3) : 1
- GAS-SIDE REDUCER (4) : 1
- GAS-SIDE REDUCER (5) : 1
- GAS-SIDE REDUCER (6) : 1
- GAS-SIDE REDUCER (7) : 2
- GAS-SIDE REDUCER (8) : 1
- GAS-SIDE REDUCER (9) : 2
- GAS-SIDE REDUCER (10) : 1
- LIQUID-SIDE REDUCER (1) : 2
- LIQUID-SIDE REDUCER (2) : 1
- LIQUID-SIDE REDUCER (3) : 2
- LIQUID-SIDE REDUCER (4) : 1
- LIQUID-SIDE REDUCER (5) : 1
- INSULATION MATERIAL FOR GAS-SIDE JOINT (1) : 1
- INSULATION MATERIAL FOR GAS-SIDE JOINT (2) : 1
- INSULATION MATERIAL FOR LIQUID-SIDE JOINT (1) : 1
- INSULATION MATERIAL FOR LIQUID-SIDE JOINT (2) : 1
- INSULATION MATERIAL FOR GAS-SIDE PIPE : 2
- INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 2
- INSTALLATION MANUAL



NOTE)1, "-----" in the figure show field supply piping,
 2, About size of connection pipe refer the "engineering data of VRV III".
 3, In case of install this kit observe follow conditions.
 • Do not tilt the joint more than ±15°
 Install the joint horizontally so that the caution label attached to joint comes to the top.
 • Do not install the joint vertically why it may cause the malfunction of outdoor unit.
 • Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.



3D052279

BHFP22P100 / BHFP22P151

VRV III Series

Please be sure to read before installation and follow the instructions carefully when performing installation work.

1P173261-1A

Outdoor unit Multi Connection Piping Kit Installation Manual

BHFP22P100 • BHFP22P151

Component parts

This kit contains the following parts. **<Do not throw away any of the accessories until installation is complete.>**

Kit Name	SHAPE				Quantity (case for gas pipe)	Installation case for liquid pipe
	Gas-side joint	Liquid-side joint	Gas-side reducer	Liquid-side reducer		
BHFP 22 P100	(1)	(1)	(1)	(1)	1pc	Big Small 1pc
	(2)	(2)	(2)	(2)	1pc	
	(3)	(3)	(3)	(3)	1pc	
	(4)	(4)	(4)	(4)	1pc	
	(5)	(5)	(5)	(5)	1pc	
	(6)	(6)	(6)	(6)	1pc	
	(7)	(7)	(7)	(7)	1pc	
	(8)	(8)	(8)	(8)	1pc	
	(9)	(9)	(9)	(9)	1pc	
	(10)	(10)	(10)	(10)	1pc	
BHFP 22 P151	(1)	(1)	(1)	(1)	2pc	Big Small 2pc
	(2)	(2)	(2)	(2)	2pc	
	(3)	(3)	(3)	(3)	2pc	
	(4)	(4)	(4)	(4)	2pc	
	(5)	(5)	(5)	(5)	2pc	
	(6)	(6)	(6)	(6)	2pc	
	(7)	(7)	(7)	(7)	2pc	
	(8)	(8)	(8)	(8)	2pc	
	(9)	(9)	(9)	(9)	2pc	
	(10)	(10)	(10)	(10)	2pc	

Caution Please be sure to read this manual before installation and follow the instruction carefully when performing installation work.
 • See the outdoor unit's installation manual for outdoor unit installation.
 • Installation of interconnecting piping between the outdoor and indoor units, REFNET joint or REFNET header will be needed separately.

Selection Procedure

Number of outdoor units connected	2 units	3 units
Outdoor unit Multi Connection Piping Kit	BHFP22P100	BHFP22P151

• 2 or 3 outdoor units can be connected.
 • There are restrictions on the combination and the installation order of outdoor units, so please refer to "the Engineering Data of VRV III" and "the installation manual" (attached sheet of outdoor unit) for details.

Field supply parts

The following parts are needed to connect this kit and are not included.

Name	Q'ty	Selection Procedure
Insulation for piping	1set	See the "Connecting Pipe Sizes and Location of Cutting the Joint" for details on the necessary size.
Connection piping	1set	Prepare a gas pipe diameter for the upper outdoor unit as listed in "Connecting Pipe Sizes and Location of Cutting the Joint."
Elbow	1pc	For insulation materials
Tape	1set	For insulation materials

Caution
 • Quantity and selection procedure of elbow only applies to a front or bottom connection.
 • For a lower front connection, the quantity and selection procedure are different, so please refer to the instructions for a lower front connection.
 • A joint for the same diameter pipes is needed only for a bottom connection.
 • See the instructions for the bottom connection for details on quantity and specifications.
 • The min. thickness of the pipes in this manual shows the requirements of Japanese High Pressure Gas Control Law (No. 2003).
 And the temper grade (C, 1/2H) shows the material type of JIS H 3300. The thickness and material shall be selected in accordance with local code for the design pressure 4,0MPa(40bar). (Unit: mm)

Temper grade	O type	1/2H type
Copper tube (φ)	φ6, φ8, φ10, φ12, φ15, φ18, φ21, φ25, φ28, φ31, φ34, φ38, φ41, φ45	
Copper line (φ)	φ8, φ10, φ12, φ15, φ18, φ21, φ25, φ28, φ31, φ34, φ38, φ41, φ45	
(Minimum requirement)	φ8, φ10, φ12, φ15, φ18, φ21, φ25, φ28, φ31, φ34, φ38, φ41, φ45	φ10, φ12, φ15, φ18, φ21, φ25, φ28, φ31, φ34, φ38, φ41, φ45

To the piping installer

When installing this kit, please apply the following restrictions.

Restrictions on Installing Multi Connection Piping Kit

- Install the joint horizontally so that the caution label attached to joint comes to the top. Do not tilt the joint more than ±15°. (See Fig. 1). In addition, do not install the joint vertically. (See Fig. 2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not use the field piping within this range. ±15°
- If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See Fig. 3)
- Improper installation may lead to malfunction of the outdoor unit.

Installation examples

The figure at the lower shows a typical front connection. Make sure to follow the installation restrictions and carry out installation taking the field requirements into consideration.
 • For 2-unit installation on Ex. of construction 5 and 6, in some cases the reducers (5), (6) or (10) for gas piping and the reducers (2) and (3) for liquid piping may be used on the 1st joint (section shown with ←). See the figure at the right for details of connection.
 • When the size of the gas-side pipe between the gas-side joint (1) and gas-side joint (2) on the 2-unit system or the size of the main pipe is φ41.3 or φ34.8, gas-side reducer (7), (8) and (9) will be used. See the figure at the right for details of connection.
 • When the size of the liquid-side pipe between the liquid-side joint (1) and liquid-side joint (2) on the 3-unit system is φ12.7, liquid-side reducer (3) will be used. See the figure at the right for details of connection.
 • See the figure at the right for details of connection.

BHFP22P100 Installation Instructions

Caution There are some restrictions on the interconnecting piping between the outdoor units. See the installation manual attached to the outdoor units and make sure to carry out proper piping, if the piping restrictions are not observed, it may result in malfunction of the unit.

Connecting pipe sizes and location of cutting the joint

Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Outdoor unit capacity type	Gas pipe	Liquid pipe
8HP	φ19.1X0.80[1/2H]	φ9.5X0.80[0]
10HP	φ22.2X0.80[1/2H]	φ12.7X0.80[0]
12-18HP	φ28.6X0.99[1/2H]	φ15.9X0.99[0]

Cutting procedure
 • Use pipe cutter for cutting pipe cutter.
 • Cut near the center of the connection area.
 • Cut in the center of connection area by pipe cutter.

1 Installation examples Procedure for Front Connection

1-1 Exterior view

1-2 Finished dimensions

For installations where the A dimensions exceed 250mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.

A = 290mm (standard installation)
 A > 290mm (extended installation)

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

• Cut the pipes according to Table 1.
Caution This table shows the case when the A dimension shown in 1-2 Finished dimensions is 250mm. If the A dimension exceeds 250mm, see Table 1 and adjust the dimensions of the gas pipe 1 and 2.
 • The B dimension of the gas pipe 2 in Table 1 show those when the field supply elbows have B dimension in Table 2. If the B dimension is not same with Table 2, see Table 1 and 2, and adjust them accordingly.

Model type	Gas pipe 1 (field supply) (mm)	Gas pipe 2 (field supply) (mm)
8HP	75	287
10HP	81	257
12-18HP	125	223

Model type	Elbow (field supply) (mm)
8HP	17
10HP	23
12-18HP	29

2-2 Connection of pipes

• Connect the gas and liquid pipes as shown in the figure at the right. When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).
 • See 1-2 Finished dimensions for the location (height) of the joint.
 • See the caution section in the installation manual attached to the outdoor unit for connecting pipes and connecting pipes with flare nuts.
 • Install the joint in such a way that the attached face of the caution label becomes horizontal.

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

- (1) Fit the insulation to the reducer and temporarily keep it in place with tape.
- (2) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces. (See the figure at the right.)
- (3) Seal the seam between the insulation and the field supply piping insulation with the Field supply tape.
- (4) Wrap the tape around the insulation attached to the joint without leaving a gap. (Hatched section shown in the figure at the right.)

1 Installation examples Procedure for Lower Front Connection

1-1 Exterior view

1-2 Finished dimensions

A standard installation has the following dimensions.
 * When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint (field supply).

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 to 4

• Cut the pipes according to Table 3

CAUTION - The L dimensions of the gas pipe 1 to 4 in Table 3 show those when the field supply elbows have 90 degree in Table 2 shown in Procedure for Front Connection. 2 Connection of gas and liquid pipes. If the 90 degree dimensions are not same with Table 2, see Table 2 and 3, and adjust them accordingly.

Model type	Gas pipe 1 (field supply) L (mm)	Gas pipe 2 (field supply) L (mm)	Gas pipe 3 (field supply) L (mm)	Gas pipe 4 (field supply) L (mm)
8HP	130	165	59	237
10HP	100	135	83	225
12-18HP	66	101	149	213

2-2 Connection of pipes

- Connect the gas and liquid pipes as shown in the figure at the right. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
- Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the View A).

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

- (1) Fit the insulation to the reducer and temporarily keep it in place with tape.
- (2) Cut insulation tube along the slit. (See the figure at the right.)
- (3) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
- (4) Seal the seam between the insulation and the field supply piping insulation with the Field supply tape.
- (5) Wrap the tape around the insulation attached to the joint without leaving a gap. (Hatched section shown in the figure at the right.)

1 Installation examples Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized drain pan kit and/or vibration proof base are used, the dimensions marked with * in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view

1-2 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the gas and liquid pipe as shown in the figure below. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
- Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A)
- Connect the liquid side reducer (1) (tilting approx. 10°) and bend the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the View A)
- CAUTION** - If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.

Separately-sold item also used	*dimensions
Central drain pan kit	139
Vibration absorption stand	233
Vibration absorption stand+ central drain pan kit	233

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 and 2, and the Gas-side accessory pipe(3) attached to the outdoor unit

• Cut the pipes according to Table 4 or 5.

CAUTION - The "L" dimensions of the gas pipe 1 in Table 4 and the gas pipe 2 in Table 5 are identical to the "B" dimensions in table 2. Those of "field supply elbow" shown in the procedure of front connection, which are equivalent to "straight size joint" without stopper. If the "B" dimensions are not identical to table 2 or "straight size joint" is with stopper, adjust them as Table 4, 4 and 5 show.

Model type	Gas-side accessory pipe(3) B (mm)			Gas pipe 1 (field supply) L (mm)		
	For 100	For 139	For 233	For 100	For 139	For 233
8HP	102	63	48	79	86	133
10HP	72	33	25	unecessary	92	133
12HP	0	53	0			
18HP	(no cutting)		(no cutting)			

Model type	Gas-side accessory pipe(3) B (mm)			Gas pipe 2 (field supply) L (mm)		
	For 100	For 139	For 233	For 100	For 139	For 233
8HP	0 (no cutting)	0 (no cutting)	0 (no cutting)	76	115	209
10HP	18	0 (no cutting)	0 (no cutting)	88	109	203
12HP	32	0 (no cutting)	0 (no cutting)	96	103	197
18HP						

2-2 Connection of pipes

- Connect the gas and liquid pipe as shown in the figure below. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
- Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A)
- Connect the liquid side reducer (1) (tilting approx. 10°) and bend the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the View A)
- CAUTION** - If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.

continue to reverse side

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

- (1) Fit the insulation to the reducer and temporarily keep it in place with tape.
- (2) Cut insulating tube along the slit. (See the figure at the right.) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
- (3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
- (4) Wrap the tape around the insulation attached to the joint without leaving a gap. (Section shown in the figure at the right.)

BHFP22P151 Installation Instructions

Caution There are some restrictions on the interconnecting piping between the outdoor units. See the installation manual attached to the outdoor unit and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in malfunction of the unit.

Connecting Pipe Sizes and location of cutting the joint Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Cutting procedure
- Use pipe cutter for cutting.
- Pipe cutter

Outdoor Unit Multi-Connecting Piping Kit
Follow "Restrictions on Installing Multi-Connecting Piping Kit"

Outdoor unit capacity type	Pipe size (O.D. x min. thickness (temper grade)) (units:mm)	
	Gas pipe	Liquid pipe
8HP	φ19.1x0.80(1/2H)	φ9.5x0.80(0)
10HP	φ22.2x0.80(1/2H)	φ12.7x0.80(0)
12-16HP	φ28.6x0.99(1/2H)	φ15.9x0.99(0)
18HP	φ34.9x1.21(1/2H)	φ19.1x0.80(1/2H)

Outdoor unit total capacity (unit A, B, C) or the total capacity of the outdoor unit to be connected upstream (unit B, C)

Outdoor unit total capacity (unit A, B, C) or the total capacity of the outdoor unit to be connected upstream (unit B, C)	Pipe size (O.D. x min. thickness (temper grade)) (units:mm)	
	Gas pipe	Liquid pipe
16HP	φ28.6x0.99(1/2H)	φ12.7x0.80(0)
18-22HP	φ28.6x0.99(1/2H)	φ15.9x0.99(0)
24HP	φ34.9x1.21(1/2H)	φ15.9x0.99(0)
26-34HP	φ41.3x1.43(1/2H)	φ19.1x0.80(1/2H)
36HP	φ41.3x1.43(1/2H)	φ19.1x0.80(1/2H)

1 Installation examples Procedure for Front Connection

1-1 Exterior view

1-2 Finished dimensions *For installations where the A dimension exceeds 284 mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

• Cut the pipes according to Table 6.

Caution - This table shows the case when the A dimension shown in "1-2 Finished dimensions" is 284mm. If the A dimension exceeds 284mm, see Table 6 and adjust the dimensions of the gas pipe 1 and 2 and 3.

- The L dimensions of the pipe 3 in Table 6 show those when the field supply elbows have B dimension in Table 2 shown in BHFP22P151 Installation Instruction, 2 connection of gas and liquid pipes.

If the B dimensions are not same with Table 2, see Table 2 and 6, and adjust them accordingly.

Model type	Gas pipe 1 (field supply) L (mm)	Gas pipe 2 (field supply) L (mm)	Gas pipe 3 (field supply) L (mm)
8HP	51	69	282
10HP	57	75	252
12-18HP	101	119	218

2-2 Connection of pipes

• Connect the gas and liquid pipes as shown in the figure at the right. When connecting the pipes, first connect the gas-side joint and the gas-side reducer(1), the liquid-side joint and the liquid-side reducer(1).
• See "1-2 Finished dimensions" for the location(height) of the joint.
• See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
• Install the joint in such a way that the attached face of the caution label becomes horizontal (See the View A).

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

• See "The work after the kit is connected" for a front connection in "BHFP22P151 Installation Instructions."

1 Installation examples Procedure for Lower Front Connection

1-1 Exterior view

1-2 Finished dimensions

1-2 Finished dimensions

- A standard installation has the following dimensions.
- When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint. (field supply)

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

Cut the pipes according to Table 7.

Caution The L dimensions of the gas pipe 1 to 5 in Table 7 show those when the field supply elbows have B dimension in Table 2 shown in BHP22P100 Installation Instruction. 2 Connection of gas and liquid pipes and the field supply joint for the same diameter pipes are without stopper. If the B dimensions are not same with Table 2 or the joint for the same diameter pipes have stopper, see Table 2 and 7, and adjust them accordingly.

Table 7 Pipes have stopper, see Table 2 and 7, and adjust them accordingly.

Model type	Gas pipe 1 (field supply) L (mm)	Gas pipe 2 (field supply) L (mm)	Gas pipe 3 (field supply) L (mm)
8HP	130	147	182
10HP	100	117	152
12-18HP	66	83	118

Model type	Gas pipe 4 (field supply) L (mm)	Gas pipe 5 (field supply) L (mm)
8HP	59	237
10HP	83	225
12-18HP	149	213

2-2 Connection of pipes

Connect the gas and liquid pipes as shown in the figure at the left. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)

See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.

Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A.)

View A

Max. ±15°

Max. ±15°

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

See "The work after the kit is connected" for a lower front connection of "BHP22P100 Installation Instructions."

1 Installation examples Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized drain pan kit and/or vibration proof base are used, the dimensions marked with "*" in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view

Separately-sold item also used	Dimensions
Central drain pan kit	139
Vibration absorption stand	
Vibration absorption stand+central drain pan kit	233

2 Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 and 2, and the Gas-side accessory pipe(3) attached to the outdoor unit

Cut the pipes according to Table 8 or 9.

Caution The "L" dimensions of the gas pipe 1 in Table 8 and the gas pipe 2 in Table 9 are identical to the "B" dimensions in table 2, those of "field supply elbows" shown in the procedure of front connection, which are equivalent to "straight size joint" without stopper. If the "B" dimensions are not identical to table 2 or "straight size joint" is with stopper, adjust them as table 2, 8 and 9 show.

Table 8 (For Outdoor unit A, B Side)

Model type	Gas-side accessory pipe(3) B (mm)			Gas pipe 1 (field supply) L (mm)	
	For 100	For 139	For 233	For 100	For 139
8HP	102	63	48	79	86
10HP	72	33	25	92	133
12HP	0 (no cutting)	53	0 (no cutting)		
18HP	0 (no cutting)	0 (no cutting)	0 (no cutting)		

Table 9 (For Outdoor unit C Side)

Model type	Gas-side accessory pipe(3) B (mm)			Gas pipe 2 (field supply) L (mm)		
	For 100	For 139	For 233	For 100	For 139	For 233
8HP	0 (no cutting)	0 (no cutting)	0 (no cutting)	76	115	209
10HP	18	0 (no cutting)	0 (no cutting)	88	109	203
12HP	32	0 (no cutting)	0 (no cutting)	96	103	197
18HP	0 (no cutting)	0 (no cutting)	0 (no cutting)			

2-2 Connection of pipes

Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit.)

Connect the gas and liquid pipes as shown in the figure below. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)

See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.

Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A.)

Connect the liquid-side reducer (1) (tilting approx. 10°) and bond the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the view A.)

Caution If the liquid-side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.

View A

Max. ±15°

3 The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

See "The work after the kit is connected" for a front connection in "BHP22P100 Installation Instructions."

6. Caution Label

6.1 RXQ6AYM / RXQ8AYM / RXQ10AYM / RXQ12AYM

Service Precautions

Touch the non-coating metal part (Ex. standard type : the EL.Compo.Box cover , anti-corrosion treatment types: the fixing bolt of EL.Compo.Box) to eliminate static electricity before performing service.

After finish service, make sure to close service cover. (water soaking and foreign object may cause failure)

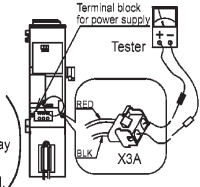
Caution when performing service inside the EL.COMPO.BOX

- Make sure to turn off power supply before remove the EL.COMPO.BOX cover. (Touching electric parts may cause electric shock.)
- Do not open the EL.COMPO.BOX cover for 10 minute after the power supply is turned off.
- Measure the voltage between terminals on the terminal block for power supply with a tester and confirm that the power supply is turned off. In addition, measure the points shown in the right figure with a tester and confirm that the voltage of the capacitor in the main circuit is less than DC50V.
- To prevent a damage of the PC board touch the non-coating metal part and make sure to eliminate static electricity before pulling out or plugging in the connector.

continue

WARNING Caution to ELECTRIC SHOCK

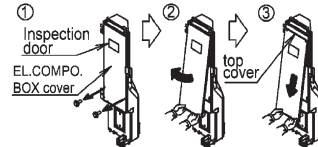
- The work must be started after pulling out the junction connector X1A for the fan motor in the outdoor unit and be careful not to touch the live parts. (If the fan rotates by strong wind, it may cause storage of electricity in the capacitor in the main circuit and electric shock.)
- After the service is finished, plug in the junction connector.
 - For details, see the wiring diagram labeled on the back of the EL.COMPO.BOX cover.
 - Otherwise, abnormal code "E7" will be displayed on 7 segment display of outdoor unit PC board(A1P) and in the remote controller due to wrong connection, and normal operation will not be performed.



CAUTION for removing and installing the EL.COMPO.BOX cover

[Method of removal]

- Remove the 2 screw fixing the cover.
- Remove the cover towards you.
- Pull the cover downward till its top shows.

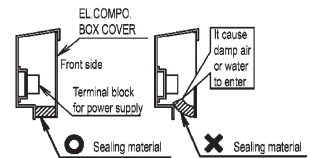


[Method of installation]

For installing the cover follow the procedures in the reverse order.

[Caution]

- Do not remove the cover by force, If the cover is deformed, water may enter inside, which may cause failure.
- Install the cover so that the sealing material labeled on the lower part on its back side may not get caught in the EL.COMPO.BOX inside (See as shown on the right)

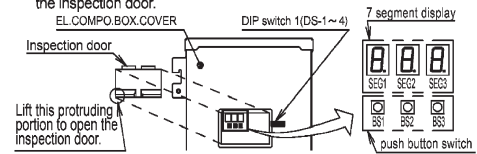


Field Setting

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

1. How to operate

- When setting the DIP switch, make sure to turn off the power supply and open the EL.COMPO.BOX cover.
- For operating the push button switch, open the inspection door as shown in the below figure with the power supply turned on and use a resin ballpoint or non-conducting object. After the work is finished, make sure to close the inspection door.



2. DIP switch setting (for RXYQ Model)

No.	Setting item	Setting value
DS1-1	Cool/Heat switching setting (Note)	ON (when connecting COOL/HEAT selector) OFF (Factory setting)
DS1-2~4		No change of factory set (OFF)

(Note) COOL/HEAT selector (optional accessory) installing in outdoor unit is enable to switch operation mode (cooling/heating). For details of COOL/HEAT selector installation method, see its installation manual.

3. Setting by the push button switch (BS1~3)

● Function of the push switch

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

● Normal Mode, Setting Mode, Confirmation Mode change method

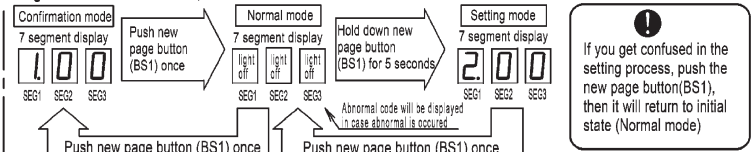
Push new page button(BS1) it can be switched to as right upper shown confirmation mode, normal mode, setting mode.

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

Confirmation mode can use for confirmation of (1)~(K) items as shown in right table.

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

continue



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

- For each type setting, make sure to set master unit. Slave unit setting is invalid.
- Outdoor unit which connect with indoor units by transmission wiring is master unit, other are slave units.
- Master unit and slave unit can be distinguished by 7 segment display according to operation below.

(1)	In Normal mode push new page button (BS1) once then make it as Confirmation mode to confirm 7 segment display as show right description.	7 segment display			
		SEG1	SEG2	SEG3	
		1	0	0	
(2)	To confirm master unit or slave unit, push confirmation button(BS3)	Master unit	light off	light off	0
		Slave unit1	light off	light off	1
		Slave unit2	light off	light off	2

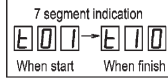
Set [Setting mode] or [Confirmation mode] first, then perform procedure as below.	Details of setting	7 Segment display		
		SEG1	SEG2	SEG3
① Push the operation button (BS2) following to setting items (A)~(H) and adjust the 7 segment display to require mode shown in the right.	① Cool/Heat selection setting (※1) ② Refrigerant recovery / Evacuation mode setting ③ Night time low noise setting ④ External low noise level setting (※1) ⑤ Demand level setting (※1) ⑥ External low noise demand setting (※1) ⑦ High static pressure setting ⑧ VRT smart setting (※1)	2	0	0
② Push the confirmation button (BS3) (The present setting will be indicated).		2	2	2
③ Push the operation button (BS2) and adjust the 7 segment display to required mode, shown in the right.	For (A) For perform individual cool/heat switching For (B) For cool/heat switching by master unit For (C) For cool/heat switching by slave unit For (D) ON For (E) OFF (Factory setting) For (F) OFF (Factory setting) For (G) level A (※3) For (H) level B (※4)	light off	light off	0
④ Push confirmation button (BS3)	The setting in (D) is defined.	light off	light off	1
⑤ Push confirmation button again (BS3)	The system start the operation according to the setting.	light off	light off	2
⑥ Push new page button (BS1)	Return to normal mode	1	0	1
⑦ Push operation button (BS2) according to confirmation item (1)~(K) and adjust the 7 segment display to required mode, shown in the right.	① low noise operation ② demand operation ③ For during setting operation ④ For during normal operation	1	0	2
⑧ Push confirmation button (BS3) (The present setting will be indicated)		light off	light off	1
		light off	light off	0

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.

- For multi system, make sure to confirm setting and result indication by master unit.
- 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.



[Operation procedure]

- ① To protect the compressor, make sure to turn on 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 misjudgment.)
- 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 upward)

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 finish]

- 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 Installation manual, Operation manual, Service 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.

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 **ⓑ** refrigerant recovery/evacuation mode (X)
- ② Evacuate the system with a vacuum pump.
- ③ Push confirm button(BS3) after finish evacuation and reset the evacuation mode.
- ④ Push new page button (BS1) and reset **[SETTING MODE]**
(X) The expansion valves in the indoor and outdoor units will be opened completely
7 segment display will be changed as shown in the right and "Test operation" and "Under centralized control" will be displayed in the remote controller. The operation will be rejected.



Additional refrigerant charging operation

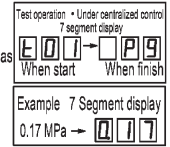
- When installation was finished, make sure to charge the refrigerant by using this procedure. If the refrigerant quantity is insufficient, the unit may malfunction.

Setting procedure
[Refrigerant charging function]

- ① Calculate the additional refrigerant charging amount (see additional refrigerant charge label on back side of front panel). If the calculation refrigerant charging amount is more than 4kg, follow procedure as below.
- ② Connect the refrigerant charge hose to the shutoff valve service port; only liquid side.
- ③ Make sure to completely close shutoff valve on the gas side and the liquid side.
- ④ Turn ON the power of the indoor unit and the outdoor unit. To protect the compressor, make sure to turn on the power supply for 6 hours before starting operation.
- ⑤ In the stopped status.
 1. Open refrigerant cylinder valve and charge 50%(±10%) of calculated additional refrigerant charge amount before start the automatic refrigerant method.
 2. Connect charge hose to autocharge valve and open shutoff valve on gas side and liquid side.
 3. Perform the automatic refrigerant method (for procedure see in "Installation manual").

Note) If the calculation refrigerant charging amount is 4 kg or less, pass step ②, ③ and ⑤ - 1

 - The operation is automatically started, 7 segment display will be charged 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.
- ⑥ After charging the specified quantity of refrigerant, close refrigerant cylinder valve, press confirmation button (BS3). The operation will be stopped. The operation is automatically stopped within 30 minutes.



Caution for piping work and additional refrigerant charge

- Use the charging hose and gauge manifold designed exclusive use R410A in order to withstand the pressure and prevent impurities (such as SUNISO oil) from mixing into.
- Carry out a nitrogen blow when brazing.
- Charge the additional refrigerant in liquid state.
- Perform the air tightness and the vacuum drying certainly. (Test pressure 4.0MPa)

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

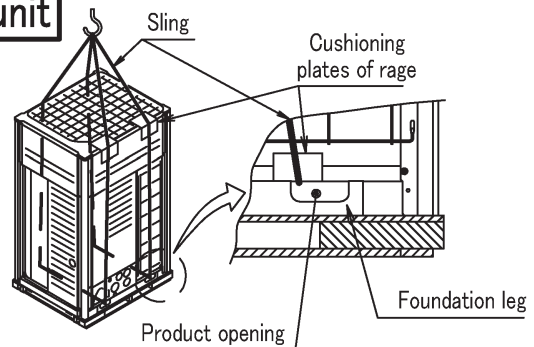
- ① When the unit is at stand still and under the **[SETTING MODE]** set the **ⓑ** Refrigerant recovery / Evacuation mode to ON.
- ② Recovery the refrigerant by a refrigerant reclaimar. (For details, see the manual attached in refrigerant recovery operation method).
- ③ After completed, push the confirm button (BS3) and reset the refrigerant recovery mode.
- ④ Push new page button (BS1) and reset **[SETTING MODE]**

R410A

To those who install or move the unit

1. When lifting the unit

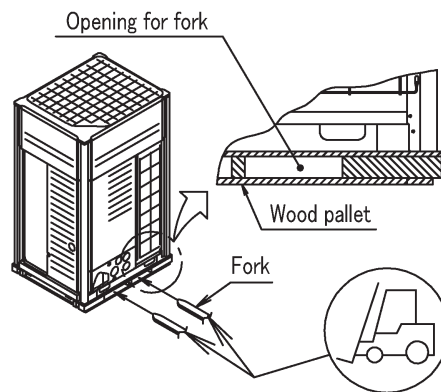
- To hang the unit, use 2 slings of at least 8 m long, Put the belt slings into the product openings of foundation legs.
- Put cushioning plates of rags where the slings contact the casing in order to prevent the casing from being damaged.



2. When carrying the unit by forklift

	<p>Prohibition</p> <p>Do not put the fork into the product openings of foundation legs.</p> <p>※ Product could get damaged due to put fork into product openings of foundation legs.</p>
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- If a forklift is used for carrying the unit, Put the fork into wood pallet openings by let the tip out of the opposite side sufficiently.



3. Electrical work

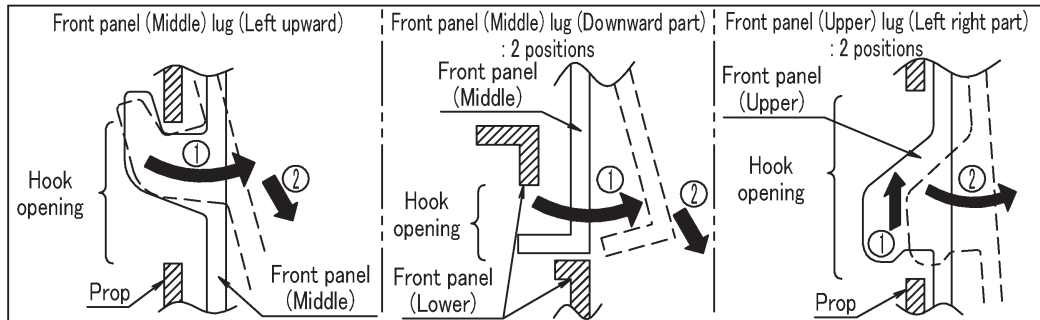
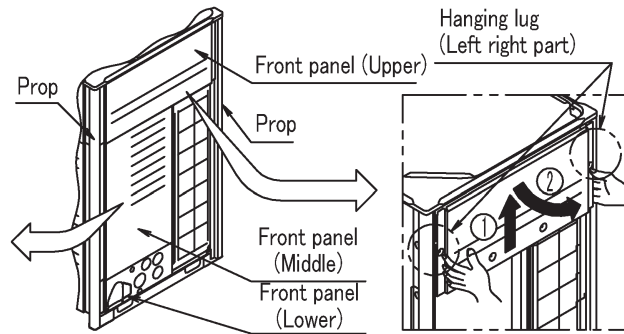
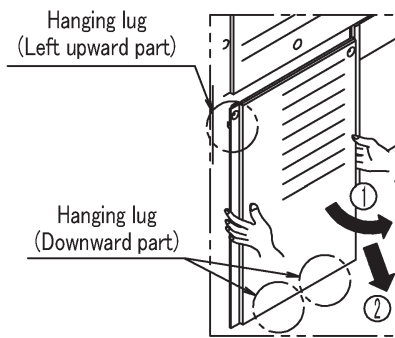
- To prevent electric shock and fire accident, be sure to perform grounding and install an earth leak breaker. To perform grounding and install an earth leak breaker, be sure electrical work must be carried out by a licensed electrician.
- To confirm the insulation of main power supply circuit before open shutoff valve. If shutoff valve remains open without charge power supply, insulation resistance may decline due to refrigerant is accumulated in compressor.

To those who carry out service and maintenance

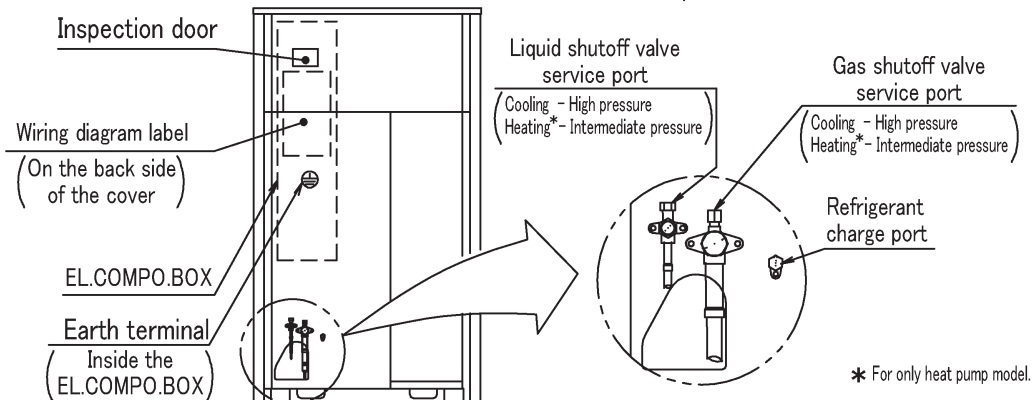
	<p>WARNING</p>	<ul style="list-style-type: none"> ● Beware the fan running when inspect. ● Do not touch the charged part when inspect.
	<p>Caution to electric shock</p>	

<Front panel (Middle) remove method>
 ● Pull front panel (down) and a prop out of left upward part and hanging lug downward part towards you (①), Then slide in a slope downward direction (②).

<Front panel (Upper) remove method>
 ● Lift the panel a little (①), remove left right hanging lug by raise panel from hook opening towards you (②).



● For the location of the EL.COMPO.BOX and the service part, see as shown below.



* For only heat pump model.

6.2 RXQ14AYM / RXQ16AYM / RXQ18AYM / RXQ20AYM

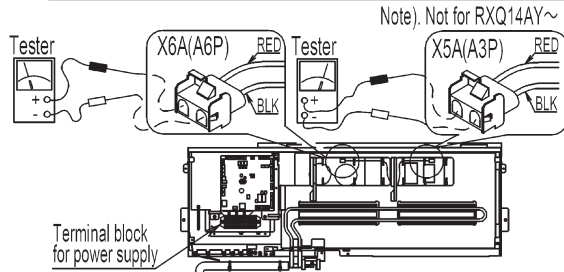
Service Precautions (1/2)

(Touch the noncoating metal part (Ex. standard type:the EL.COM.BOX cover, anti-corrosion treatment types : the fixing bolt of EL.COMPO.BOX) to eliminate static electricity before performing service.)

⚠ WARNING ⚠ Caution to ELECTRIC SHOCK

1. Make sure to turn off power supply before remove the EL.COMPO.BOX cover.
(Touching electric parts may cause electric shock.)
2. Do not open the EL.COMPO.BOX cover for 10 minutes after the power supply is turned off.
3. Measure the voltage between terminals on the terminal block for power supply with a tester and confirm that the power supply is turned off. In addition, measure the points shown in the right figure with a tester and confirm that the voltage of the capacitor in the main circuit is less than DC 50V.
4. To prevent a damage of the PC board, touch the non coating metal part and make sure to eliminate static electricity before pulling out or plugging in the connector.
5. The work must be started after pulling out the junction connector X1A · X2A for the fan motor in the outdoor unit and be careful not to touch the live parts.
(If the fan rotates by strong wind, it may cause storage of electricity in the capacitor in the main circuit and electric shock.)
6. After the service is finished, plug in the junction connector.
(For details, see the wiring diagram label on the back of the EL.COMPO.BOX cover.)
(Otherwise, abnormal code "E7" will be displayed on 7 segment display of outdoor unit PC board (A1P) and in the remote controller due to wrong connection, and normal operation will not be performed.)

❗ After finish service, make sure to close EL.COMPO BOX cover.
(water soaking and foreign object may cause failure.)



Caution for piping work and addition refrigerant charge

- Use the charging hose and gauge manifold designed exclusive use R410A in order to withstand the pressure and prevent impurities (such as SUNISO oil) from mixing into.
- Carry out a nitrogen blow brazing.
- Charge the additional refrigerant in liquid state.
- Perform the air tightness test and the vacuum drying certainly.(Test pressure 4.0 MPa.)

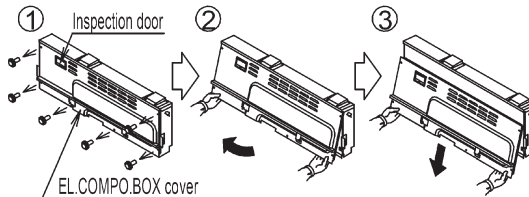
Caution in check operation

- Make sure to turn ON the power to the connected units (indoor and outdoor) at first.
- The operation must be performed with the all outer plates closed.
Otherwise, the operation will malfunction, and the system cannot check properly.

Caution for install and remove EL.COMPO.BOX cover

[Method of removal]

- ① Remove the 6 screws fixing the cover.
- ② Pull the cover towards you.
- ③ Slide the cover downward until can see the upper tip.

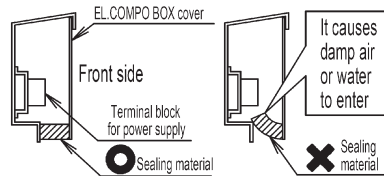


[Method of installation]

For installing the cover, follow the [Method of removal] in the reverse order.

[CAUTION]

- Do not remove the cover by force, if the cover is deformed, water may enter inside, which may cause failure.
- Install the cover so that the sealing material label on the lower part on its back side may not get caught in the EL.COMPO.BOX inside.
(see as shown on the right figure)



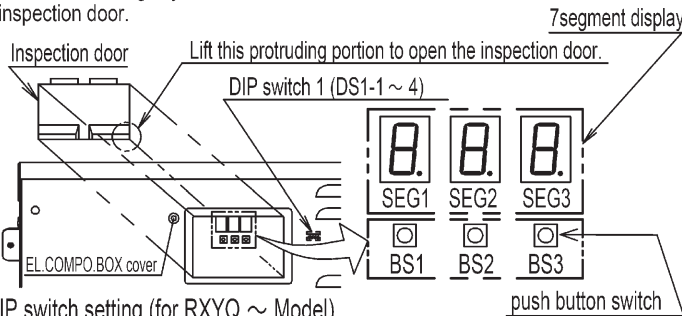
Service precautions (2/2)

Field setting

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

1. How to operate

- When setting the DIP switch, make sure to turn off the power supply and open the EL.COMPO.BOX cover.
- For operating the push button switch, open the inspection door as shown in the below figure with the power supply turned on, and use a resin ballpoint or non-conducting object. After the work is finished make sure to close the inspection door.



2. DIP switch setting (for RXYQ ~ Model)

No.	Setting item	Setting value
DS1-1	Cool/Heat switching setting (Note)	ON (when connecting COOL/HEAT selector) OFF (Factory setting)
DS1-2 ~ 4		No change of Factory set (OFF)

(Note) COOL/HEAT selector (optional accessory) installing indoor unit is enable to switch operation mode (cooling/heating). For details of COOL/HEAT selector installation method, see its installation manual.

3. Setting by the push button switch (BS1~3)

• Function of the push switch

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

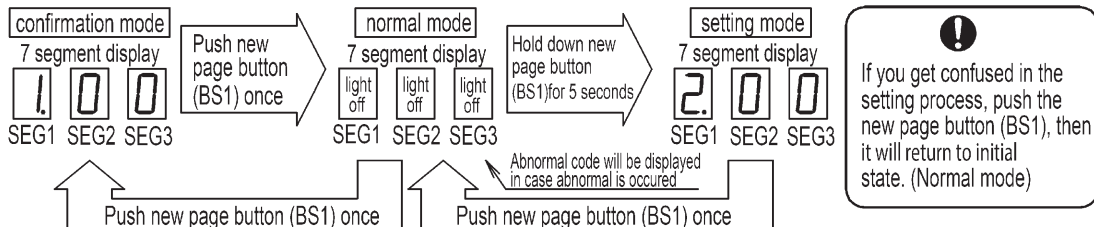
• Normal Model, Setting Mode, Confirm mode change method

Push new page button (BS1). It can be switched to as right upper shown confirmation mode, normal mode, setting mode.

Setting mode can use for setting (A) ~ (H) as shown in right table.

Confirmation mode can for confirmation of (J) • (K) items as shown in right table.

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



- For each type setting, make sure to set master unit. Slave unit setting is invalid.
- Outdoor unit which connect with indoor unit by transmission wiring is master unit, other are slave units.
- Master unit and Slave unit, can be distinguished by 7 segment display according to operation below.

		7 segment display			
		SEG1	SEG2	SEG3	
(1)	In Normal mode push new page button (BS1) once then make it as confirmation mode to confirm 7 segment display as shown in right description.	1	0	0	
(2)	To confirm master unit or slave unit, and push confirmation button (BS3).	Master unit	light off	light off	0
		Slave unit 1	light off	light off	1
		Slave unit 2	light off	light off	2

Set [setting mode] and [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 items (A)~(H) and adjust the 7 segment display to required mode, shown in the right. (※1) For selecting low noise operation or demand operation by outside order or performing cool/heat setting by cool/heat central remote control (for RXYQ ~ Model) or VRT smart setting by external control adapter for outdoor unit (optional accessory) is required. For details, see the instruction attached to the adapter.	(A) Cool/Heat selection setting (※1)	2	0	0													
		(B) Refrigerant recovery / Evacuation mode setting	2	2	1													
		(C) Night time low noise setting	2	2	2													
		(D) External low noise level setting (※1)	2	2	5													
		(E) Demand level setting (※1)	2	3	0													
		(F) External low noise demand setting (※1)	2	1	2													
		(G) High static pressure setting	2	1	8													
		(H) VRT smart setting (※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 example. Shown on the right according to the required mode. (※2) Setting level efficiency <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>For (C) and (D)</td> <td>Setting value</td> <td>level 1~ level 4</td> </tr> <tr> <td></td> <td>Noise value</td> <td>————> low noise</td> </tr> <tr> <td>For (E)</td> <td>Setting value</td> <td>level 1 ~ level 8</td> </tr> <tr> <td></td> <td>Power consumption</td> <td>less power <————</td> </tr> </table> For details, see the service manual.	For (C) and (D)	Setting value	level 1~ level 4		Noise value	————> low noise	For (E)	Setting value	level 1 ~ level 8		Power consumption	less power <————	For (A)	For perform individual cool/heat switching	light off	light off	0
		For (C) and (D)	Setting value	level 1~ level 4														
			Noise value	————> low noise														
		For (E)	Setting value	level 1 ~ level 8														
			Power consumption	less power <————														
			For cool/heat switching by master unit	light off	light off	1												
		For cool/heat switching by slave unit	light off	light off	2													
For (B) (F) (G)		ON	light off	light off	1													
		OFF (Factory setting)	light off	light off	0													
For (C) (※2)		OFF (Factory setting)	light off	light off	0													
	level A (※3) (※3) A is a number of 1~ 4	light off	light off	A (※3)														
For (D) (※2)	level A (※3) (※3) A is a number of 1~ 4 (Factory setting:2)	light off	light off	A (※3)														
For (E) (※2)	level B (※4) (※4) B is a number of 1~ 8 (Factory setting:3)	light off	light off	B (※4)														
For (H)	OFF (Factory setting)	light off	light off	0														
	VRT smart setting by connecting "low noise sound" terminal	light off	light off	1														
	VRT smart setting by connecting "demand input" 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 operation button (BS2) according to confirmation item (J), (K) and adjust the 7 segment display to required mode, shown in the right.	(J) low noise operation	1	0	1													
		(K) 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														

Additional refrigerant charging operation

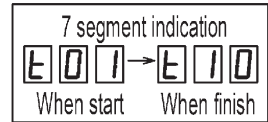
- When installation was finished, make sure to charge the refrigerant by using this procedure. If the refrigerant quantity is insufficient, the unit may malfunction.

Setting procedure [Refrigerant charging function]	
① Calculate the additional refrigerant charging amount (see additional refrigerant charge label on back side of front panel). If the calculation refrigerant charging amount is more than 4kg, follow procedure as below.	
② Connect the refrigerant charge hose to the shutoff valve service port ; only liquid side.	
③ Make sure to completely close shutoff valve on the gas side and the liquid side.	
④ Turn ON the power of the indoor unit and the outdoor unit. To protect the compressor, make sure to turn on the power supply for 6 hours before starting operation.	
⑤ In the stopped status, <ol style="list-style-type: none"> 1. open refrigerant cylinder valve and charge 50%(±10%) of calculated additional refrigerant charge amount before start the automatic refrigerant method. 2. Connect charge hose to autocharge valve and open shutoff valve on gas side and liquid side. 3. Perform the automatic refrigerant charging method (for procedure see in "Installation manual"). <p>Note) If the calculation refrigerant charging amount is 4 kg or less, pass step ②, ③ and ⑤ - 1</p> <ul style="list-style-type: none"> ● The operation is automatically started, 7 segment display will be charged 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. 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Test operation • Under centralized control 7 segment display  When start When finish </div> <div style="border: 1px solid black; padding: 5px;"> Example 7 Segment display 0.17MPa  </div>
⑥ After charging the specified quantity of refrigerant, close refrigerant cylinder valve, press confirmation button (BS3). The operation will be stopped. The operation is automatically stopped within 30 minutes.	

Check operation method

! Make sure to open the gas side and liquid side shutoff valve before starting operation

- The items below will be automatically checked by check operation.
 - ◆ Check of miswiring ◆Check of shutoff valve opening ◆Check of refrigerant overcharge ◆Judgement of piping length.
- Make sure to carry out the check operation after the first installation. otherwise, the abnormal code "U3" will be displayed in the remote controller and normal operation can be carried out after 5 minutes.
- For multi system, make sure to confirm setting • result indication by master unit.
- The check operation is automatically carried out in a cooling mode. the 7 segment will be indicate 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.



【Operation procedure】

- ① To protect the compressor, make sure to turn on the power supply for 6 hour before starting operation.
(After turning on the power supply, the unit cannot 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 below.)

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

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

【Countermeasure for abnormal finish】

- 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 installation manual • Operation manual • Service 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.

Service mode operation method

- After turning on the power supply, the unit cannot 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 cannot be evacuated or recovered the refrigerant.)

[**Evaluation 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 **(B)** refrigerant recovery/evacuation mode. (※)
- ② Evacuate the system with a vacuum pump.
- ③ Push confirmation button (BS3) after finish evacuation 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 reclaim)

- ① When the unit is at stand still and under the **SETTING MODE** set the **(B)** refrigerant recovery/Evacuation mode to ON.
- ② Recover the refrigerant by a refrigerant reclaim. (For details, see the installation manual)
- ③ After completed, push the confirmation 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 below and "Test operation" and "Under centralized control" will be displayed in the remote controller. The operation will be rejected.

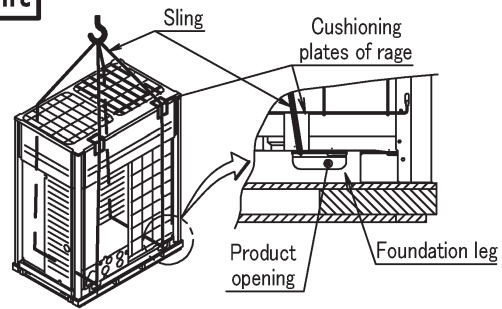
7 Segment display **E 0 1**

R410A

To those who install or move the unit

1. When lifting the unit

- To hang the unit, use 2 slings of at least 8 m long. Put the slings into the product openings of foundation legs.
- Put cushioning plates of rags where the slings contact the casing in order to prevent the casing from being damaged.



2. When carrying the unit by forklift

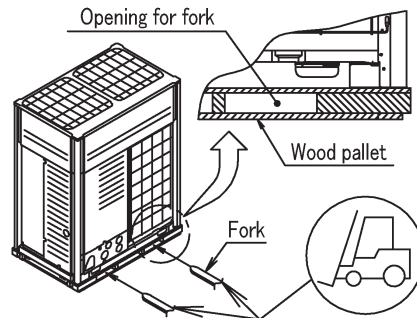


Prohibition

Do not put the fork into the product openings of foundation legs.

※ Product could get damaged due to put fork into product openings of foundation legs.



- If a forklift is used for carrying the unit, Put the fork into wood pallet openings by let the tip out of the opposite side sufficiently.



3. Electrical work

- To prevent electric shock and fire accident, be sure to perform grounding and install an earth leak breaker. To perform grounding and install an earth leak breaker, be sure electrical work must be carried out by a licensed electrician.
- To confirm the insulation of main power supply circuit before open shutoff valve. If shutoff valve remains open without charge power supply, insulation resistance may decline due to refrigerant is accumulated in compressor.

To those who carry out service and maintenance

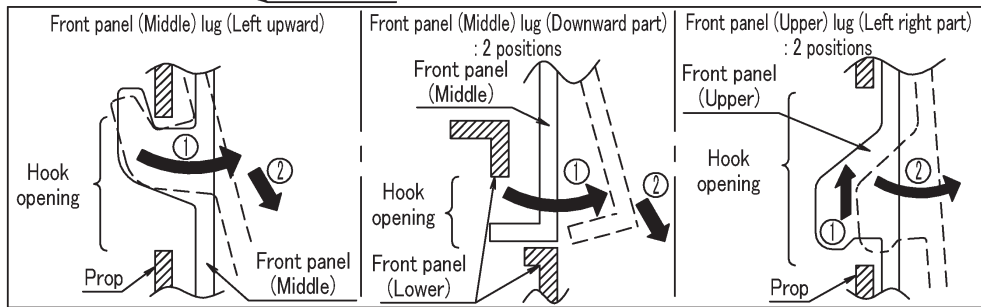
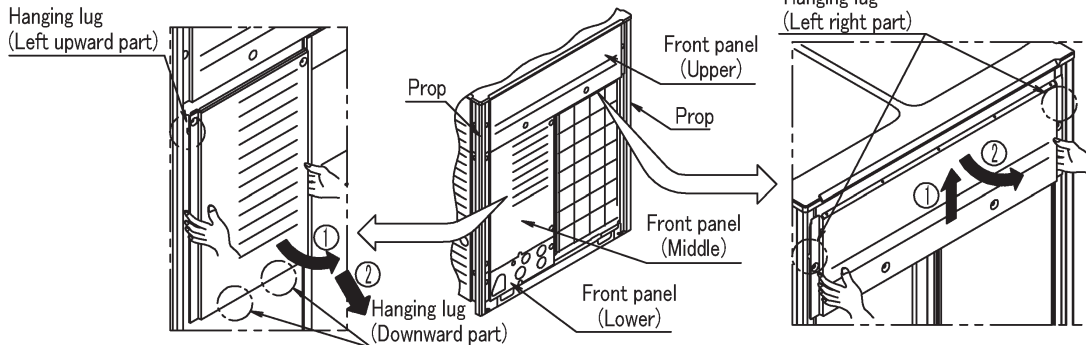
	<p>WARNING</p>	<ul style="list-style-type: none"> ● Beware the fan running when inspect. ● Do not touch the charged part when inspect.
	<p>Caution to electric shock</p>	

<Front panel (Middle) remove method>

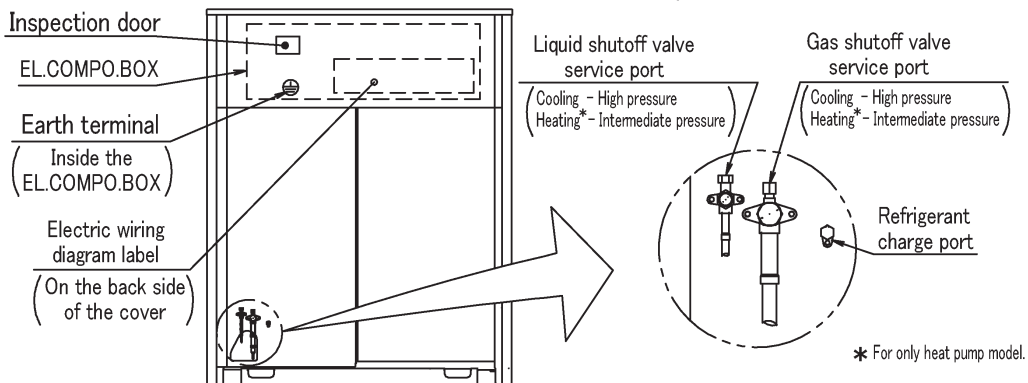
- Pull front panel (down) and a prop out of left upward part and hanging lug downward part towards you (①), Then slide in a slope downward direction (②).

<Front panel (Upper) remove method>

- Lift the panel a little (①), remove left right hanging lug by raise panel from hook opening towards you (②).



- For the location of the EL.COMPO.BOX and the service part, see as shown below.



4. Appendix

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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.

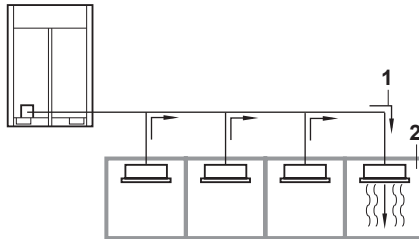
This system uses R410A as refrigerant. R410A itself is an entirely safe non-toxic, non-combustible refrigerant. Nevertheless care must be taken to ensure that air conditioning facilities are installed in a room which is sufficiently large. This assures that the maximum concentration level of refrigerant 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.

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



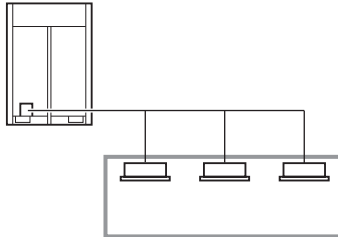
NOTICE

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.

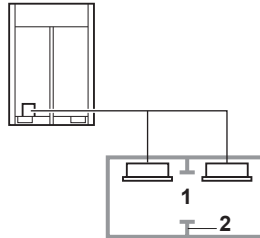
2 Calculate the volume of the room (m³) where the indoor unit is installed.

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."