DAIKIN

Air Conditioning

Technical Data

Replacement VRV

EEDEN14-202

RXYQQ-T

TABLE OF CONTENTS

RXYQQ-T

1 Features

- Cost effective and fast upgrade for R-22 systems as only the outdoor unit needs to be replaced, meaning no work has to be carried out inside your building
- Efficiency gains of more than 70% can be realized, by virtue of technological developments in heat pump technology and the more efficient R-410A refrigerant
- Possibility to add indoor units and increase capacity without changing the refrigerant piping
- Less intrusive and time consuming installation compared to installing a new system, as the refrigerant piping can be maintained in most cases
- Possibility to spread the various stages of repclacement thanks to the modular design of the VRV system
- Customize your VRV for best seasonal efficiency & comfort with the weather dependant Variable Refrigerant Temperature function
- Best comfort, no cold draft by supply of a high outblow air temperature thanks to Variable Refrigerant Temperature and all inverter technology
- VRV configurator software for the fastest and most accurate commissioning, configuration and customisation
- Accurate temperature control, fresh air provision, air handling units and Biddle air curtains all integrated in a single system requiring only one single point of contact
- Outdoor unit display for quick on-site settings and easy read out of errors together with the indication of service parameters for checking basic functions.
- Fits any building as also indoor installation is possible as a result of high external static pressure of up to 78.4 Pa. Indoor installation leads to less piping length, lower installation costs, increased efficiency and better visual aesthetics
- Simplified installation & guaranteed optimal efficiency with automatic charging & testing
- Easy compliance with F-gas regulation thanks to automated refrigerant containment check
- The ability to control each conditioned zone individually keeps VRV system running costs to an absolute minimum
- Keep your system in top condition via our ACNSS service: 24/7 monitoring for maximum efficiency, extended lifetime, immediate service support thanks to failure prediction and a clear understanding of operability and usage
- European-optimised design and manufactured in Europe for short lead-in times

Inverter

2 Specifications

2-1 Technical Specifications					RXYQQ12T	RXYQQ8T	RXYQQ10T	RXYQQ14T	RXYQQ22T	RXYQQ18T	RXYQQ16T	RXYQQ20T	RXYQQ26T
System	Outdoor unit module 1				-				RXYQQ10T	-			RXYQQ12T
	Outdoor unit module 2				-				RXYQQ12T	-			RXYQQ14T
Capacity range				HP	12	8	10	14	22	18	16	20	26
Cooling capacity	Nom.			kW	33.5 (1)	22.4 (1)	28.0 (1)	40.0 (1)	61.5 (1)	50.0 (1)	45.0 (1)	56.0 (1)	73.5 (1)
Heating capacity	Nom.			kW	37.5 (2)	25.0 (2)	31.5 (2)	45.0 (2)	69.0 (2)	56.0 (2)	50.0 (2)	63.0 (2)	82.5 (2)
Power input - 50Hz	Cooling	Nom.		kW	8.98	5.21	7.29	11.0	16.27	14.7	13.0	18.5	19.98
	Heating	Nom.		kW	9.10	5.51	7.38	11.2	16.48	14.4	12.8	17.0	20.30
Capacity control	Method				Inverter controlled				-	Inverter controlled			-
EER					3.73	4.30	3.84	3.64	3.78	3.40	3.46	3.03	3.68
ESEER					5.50 (3) / 6.96 (4)	6.37 (3) / 7.53 (4)	5.67 (3) / 7.20 (4)	5.31 (3) / 6.83 (4)	5.58 (17) / 7.07 (18)	4.97 (3) / 6.38 (4)	5.05 (3) / 6.50 (4)	4.42 (3) / 5.67 (4)	5.39 (17) / 6.89 (18)
COP					4.12	4.54	4.27	4.02	4.19	3.89	3.91	3.71	4.06
Maximum number of connectable indoor units					64 (5)				64 (6)	64 (5)			64 (6)
Indoor index connection	Min.				150	100	125	175	275	225	200	250	325
	Nom.				300	200	250	350	550	450	400	500	650
	Max.				390	260	325	455	715	585	520	650	845
Sound power level	Cooling	Nom.		dBA	81	78	79	81	-	86		88	-
Sound pressure level	Cooling	Nom.		dBA	61	58		61	-	65	64	66	-
Piping connections	Liquid	Type			Braze connection								
		OD		mm	12.7	9.52		12.7	15.9		12.7	15.9	19.1
	Gas	Type			Braze connection								
		OD		mm	28.6	19.1	22.2	28.6					34.9
	Piping length	OU - IU	Max.	m	120								
		After branch	Max.	m	90 (10)				90 (8)	90 (10)			90 (8)
	Total piping length	System	Actual	m	300								
	Level difference	OU - IU	Outdoor unit in highest position	m	50								
			Indoor unit in highest position	m	40								
		IU - IU	Max.	m	15								
Defrost method					Reversed cycle				-	Reversed cycle			-
PED	Category				Category II								

Standard Accessories : Connection pipes;

Standard Accessories : Operation manual;

Standard Accessories : Installation manual;

2-2 Technical Specifications				RXYQQ38T	RXYQQ30T	RXYQQ34T	RXYQQ28T	RXYQQ40T	RXYQQ36T	RXYQQ24T	RXYQQ32T	RXYQQ42T
System	Outdoor unit module 1			RXYQQ8T	RXYQQ12T	RXYQQ16T	RXYQQ12T	RXYQQ10T	RXYQQ16T	RXYQQ8T	RXYQQ16T	RXYQQ10T
	Outdoor unit module 2			RXYQQ10T	RXYQQ18T		RXYQQ16T	RXYQQ12T	RXYQQ20T	RXYQQ16T		
Capacity range			HP	38	30	34	28	40	36	24	32	42
Cooling capacity	Nom.		kW	106.4 (1)	83.5 (1)	95.0 (1)	78.5 (1)	111.5 (1)	101.0 (1)	67.4 (1)	90.0 (1)	118.0 (1)
Heating capacity	Nom.		kW	119.5 (2)	93.5 (2)	106.0 (2)	87.5 (2)	125.0 (2)	113.0 (2)	75.0 (2)	100.0 (2)	131.5 (2)
Power input - 50Hz	Cooling	Nom.	kW	31.00	23.68	27.7	21.98	30.97	31.5	18.21	26.0	33.29
	Heating	Nom.	kW	29.89	23.50	27.2	21.90	30.88	29.8	18.31	25.6	32.98
Capacity control	Method			-								
EER				3.43	3.53	3.4	3.57	3.60	3.2	3.70	3.5	3.54

2 Specifications

2-2 Technical Specifications					RXYQQ38T	RXYQQ30T	RXYQQ34T	RXYQQ28T	RXYQQ40T	RXYQQ36T	RXYQQ24T	RXYQQ32T	RXYQQ42T
ESEER					5.03 (17) / 6.36 (18)	5.17 (17) / 6.60 (18)	5.01 (17) / 6.44 (18)	5.23 (17) / 6.69 (18)	5.29 (17) / 6.74 (18)	4.68 (17) / 6.02 (18)	5.42 (17) / 6.81 (18)	5.05 (17) / 6.50 (18)	5.19 (17) / 6.65 (18)
COP					4.00	3.98	3.9	4.00	4.05	3.8	4.10	3.9	3.99
Maximum number of connectable indoor units					64 (6)								
Indoor index connection	Min.				475	375	425	350	500	450	300	400	525
	Nom.				950	750	850	700	1,000	900	600	800	1,050
	Max.				1,235	975	1,105	910	1,300	1,170	780	1,040	1,365
Sound power level	Cooling	Nom.		dBA	-								
Sound pressure level	Cooling	Nom.		dBA	-								
Piping connections	Liquid	Type			Braze connection								
		OD		mm	19.1						15.9	19.1	
	Gas	Type			Braze connection								
		OD		mm	41.3	34.9			41.3		34.9		41.3
	Piping length	OU - IU	Max.	m	120								
		After branch	Max.	m	90 (8)								
	Total piping length	System	Actual	m	300								
	Level difference	OU - IU	Outdoor unit in highest position	m	50								
			Indoor unit in highest position	m	40								
		IU - IU	Max.	m	15								
Defrost method					-								
PED	Category				Category II								

Standard Accessories : Connection pipes;

Standard Accessories : Operation manual;

Standard Accessories : Installation manual;

2-3 Electrical Specifications				RXYQQ12T	RXYQQ8T	RXYQQ10T	RXYQQ14T	RXYQQ22T	RXYQQ18T	RXYQQ16T	RXYQQ20T	RXYQQ26T
Current	Nominal running current (RLA) - 50Hz	Cooling	A	12.7	7.2	10.2	15.4	22.9	20.8	18.0	26.9	28.1
		Heating	A	-				22.9	-			28.1
Current - 50Hz	Minimum Ssc value		kVa	615	1,216	564	917	1,179	873	924	970	1,532
	Minimum circuit amps (MCA)		A	24.0	16.1	22.0	27.0	46.0	35.0	31.0	39.0	51.0
	Maximum fuse amps (MFA)		A	32	20	25	32	63	40		50	63
	Total overcurrent amps (TOCA)		A	24.6	17.3	24.6	35.4	-	42.7	35.4	42.7	-
	Full load amps (FLA)	Total	A	1.5	1.2	1.3	1.8	-	2.6			-
Wiring connections - 50Hz	For power supply	Quantity		5G								
	For connection with indoor	Quantity		2								
		Remark		F1,F2								
Power supply intake				Both indoor and outdoor unit								

2 Specifications

2-4 Electrical Specifications				RXYQQ38T	RXYQQ30T	RXYQQ34T	RXYQQ28T	RXYQQ40T	RXYQQ36T	RXYQQ24T	RXYQQ32T	RXYQQ42T
Current	Nominal running current (RLA) - 50Hz	Cooling	A	44.3	33.5	38.8	30.7	43.7	44.9	25.2	36.0	46.2
		Heating	A	44.3	33.5	38.8	30.7	43.7	44.9	25.2	36.0	46.2
Current - 50Hz	Minimum Ssc value		kVa	2,750	1,488	1,797	1,539	2,052	1,894	2,140	1,848	2,412
	Minimum circuit amps (MCA)		A	76.0	59.0	66.0	55.0	81.0	70.0	46.0	62.0	84.0
	Maximum fuse amps (MFA)		A	100	80		63	100	80	63	80	100
	Total overcurrent amps (TOCA)		A	-								
	Full load amps (FLA)	Total	A	-								
Wiring connections - 50Hz	For power supply	Quantity		5G								
	For connection with indoor	Quantity		2								
		Remark		F1,F2								
Power supply intake				Both indoor and outdoor unit								

Notes

(1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 5m; level difference: 0m

(2) Heating: indoor temp. 20°CDB, outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 5m; level difference: 0m. High fan speed indoor unit

(3) The STANDARD ESEER value corresponds with normal VRV4 Heat Pump operation, not taking into account advanced energy saving operation functionality

(4) The AUTOMATIC SEER value corresponds with normal VRV4 Heat Pump operation, taking into account advanced energy saving operation functionality (variable refrigerant temperature control operation)

(5) Actual number of connectable indoor units depends on the indoor unit type (VRV indoor, Hydrobox, RA indoor, etc.) and the connection ratio restriction for the system (50% \<= CR \<= 130%)

(6) Sound power level is an absolute value that a sound source generates.

(7) Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.

(8) Sound values are measured in a semi-anechoic room.

(9) For more details on standard accessories refer to Installation/operation manual

(10) Refer to refrigerant pipe selection or installation manual

(11) RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB

(12) MSC means the maximum current during start up of the compressor. VRV IV uses only inverter compressors. Starting current is always ≤ max. running current.

(13) MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current.

(14) MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).

(15) TOCA means the total value of each OC set.

(16) FLA: nominal running current fan

(17) Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.

(18) Maximum allowable voltage range variation between phases is 2%.

(19) In accordance with EN/IEC 61000-3-11, respectively EN/IEC 61000-3-12, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply with Zsys ≤ Zmax, respectively Ssc ≥ minimum Ssc value.

(20) EN/IEC 61000-3-11: European/international technical standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated ≤ 75A

(21) EN/IEC 61000-3-12: European/international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current \> 16A and ≤ 75A per phase

(22) Ssc: Short-circuit power

(23) system impedance

(24) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 5m; level difference: 0m

(25) Multi combination (22~54HP) data is corresponding with the standard multi combination as mentioned on 3D079534

(26) Soundpressure system [dBA] = 10*log[10^(A/10)+10^(B/10)+10^(C/10)] , with Unit A = A dBA, Unit B = B dBA, Unit C = C dBA

2-5 Technical Specifications				RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T
Casing	Colour			Daikin White						
	Material			Painted galvanized steel plate						
Dimensions	Unit	Height	mm	1,685						
		Width	mm	930			1,240			
		Depth	mm	765						
	Packed unit	Height	mm	1,820						
		Width	mm	1,000			1,310			
		Depth	mm	835						
Weight	Unit		kg	187	194		305		314	
	Packed unit		kg	205	212		325		334	

2 Specifications

2-5 Technical Specifications					RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T
Packing	Material				Carton						
	Weight			kg	2.00			3.00			
Packing 2	Material				Wood						
	Weight			kg	17.00			18.50			
Packing 3	Material				Plastic						
	Weight			kg	0.50						
Heat exchanger	Type				Cross fin coil						
	Fin	Treatment			Anti-corrosion treatment						
Compressor	Quantity				1			2			
	Model				Inverter						
	Type				Hermetically sealed scroll compressor						
	Crankcase heater			W	33						
Compressor 2	Model				-			Inverter			
	Type				-			Hermetically sealed scroll compressor			
	Crankcase heater			W	-			33			
Fan	Type				Propeller fan						
	Quantity				1			2			
	Air flow rate	Cooling	Nom.	m³/min	162	175	185	223	260	251	261
	External static pressure	Max.		Pa	78						
	Discharge direction				Vertical						
Fan motor	Quantity				1			2			
	Model				Brushless DC motor						
	Output			W	750						
Fan motor 2	Model				-			Brushless DC motor			
	Output			W	-			750.00			
Sound power level	Cooling	Nom.		dBA	78	79	81		86		88
Sound pressure level	Cooling	Nom.		dBA	58		61		64	65	66
Operation range	Cooling	Min.~Max.		°CDB	-5~43						
	Heating	Min.~Max.		°CWB	-20~15.5						
Refrigerant	Type				R-410A						
	Charge			kg	5.9	6	6.3	10.3	10.4	11.7	11.8
Refrigerant oil	Type				Synthetic (ether) oil						
	Charged volume			l	1	1.2	1.4	2.4	3.3		
Piping connections	Heat insulation				Both liquid and gas pipes						
Safety devices	Item	01			High pressure switch						
		02			Fan driver overload protector						
		03			Inverter overload protector						
		04			PC board fuse						

2-6 Electrical Specifications				RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T
Power supply	Name			Y1						
	Phase			3N~						
	Frequency		Hz	50						
	Voltage		V	380-415						
Voltage range	Min.		%	-10						
	Max.		%	10						
Current	Nominal running current (RLA) - 50Hz	Cooling	A	7.2	10.2	12.7	15.4	18.0	20.8	26.9
Current - 50Hz	Minimum Ssc value		kVa	1,216	564	615	917	924	873	970
	Minimum circuit amps (MCA)		A	16.1	22.0	24.0	27.0	31.0	35.0	39.0
	Maximum fuse amps (MFA)		A	20	25	32		40		50
	Total overcurrent amps (TOCA)		A	17.3	24.6		35.4		42.7	
	Full load amps (FLA)	Total	A	1.2	1.3	1.5	1.8	2.6		
Notes				system impedance						

3 Options

RXYQQ-T

VRV4 Heat Pump Option list

No.	Item.	RXYQQ8T	RXYQQ10-12T	RXYQQ14-18T	RXYQQ20T	RXYQQ22~42T
I.	Refnet heater	KHRQ22M29H				
		---	KHRQ22M64H			
		---	---	---	KHRQ22M75H	
II.	Refnet Joint	KHRQ22M20T				
		KHRQ22M29T9				
		---	KHRQ22M64T			
		---	---	---	KHRQ22M75T	
III.	Outdoor multi connection kit (see note 2)	---	---	---	---	BHFQ22P1007
IV.	Outdoor multi connection kit (see note 2)	---	---	---	---	BHFQ22P1517

No.	Item.	8HP	10HP	12HP	14HP	16HP	18HP	20HP
1a	Cool/heat selector (switch)	KRC19-26A						
1b	Cool/heat selector (PCB)	BRP2A81						
1c	Cool/heat selector (SWB mounting plate)	---			KKSA26A560*			
1d	Cool/heat selector (fixing box)	KJB111A						
2	VRV configurator	EKPCCAB*						
3	Heater tape kit *(see note 6)*	EKBPH012T*			EKBPH020T*			
4	Heater tape kit PCB	EKBPHPCBT*						
5	Demand PCB *(see note 7)*	DTA104A61/62*						
6	Demand PCB (mounting plate)	---			KKSB26B1*			

NOTES

1. All options are kits
2. Only for multi units
3. Option **1a** and **1b** are both required to operate the COOL/HEAT SELECTOR function on a VRV4 Heat Pump system
4. Option **1d** is required to mount **1a**
5. **1c** is only required when combining **1b** with **3** on a VRV4 Heat Pump system
6. To install the HEATER TAPE KIT, a HEATER TAPE KIT PCB is required
7. To install the DEMAND PCB on the Large casing type, the DEMAND PCB (MOUNTING PLATE) is required

Medium casing type VRV4 Heat Pump: modules 8~12HP
Large casing type VRV4 Heat Pump: modules 14~20HP

3D079531F

4 Combination table

RXYQQ-T

↱ See **Notes** concerning base model type

		8HP	10HP	12HP	14HP	16HP	18HP	20HP
Heat PUMP	RXYQQ8T	1						
	RXYQQ10T		1					
	RXYQQ12T			1				
	RXYQQ14T				1			
	RXYQQ16T					1		
	RXYQQ18T						1	
	RXYQQ20T							1
Multi combination with 2 outdoor units	RXYQQ22T		1	1				
	RXYQQ24T	1				1		
	RXYQQ26T			1	1			
	RXYQQ28T			1		1		
	RXYQQ30T			1			1	
	RXYQQ32T					2		
	RXYQQ34T					1	1	
	RXYQQ36T					1		1
Multi combination with 3 outdoor units	RXYQQ38T	1	1					1
	RXYQQ40T		1	1			1	
	RXYQQ42T		1			2		

NOTES

1. RXYQQ8-20T = single non-continuous heating replacement model (VRV4-Q)
2. RXYQQ22-42T = multi non-continuous heating replacement model (VRV4-Q)
3. Multi "non-continuous heating" replacement models only consist out of RXYQQ8-20 modules. Eg. RXYQQ36 = RXYQQ16 + RXYQQ20
4. Replacement models can never be combined with other models

3D079534B

4 Combination table

RXYQQ-T

VRV4 Heat Pump Indoor unit combination Restrictions

Indoor unit combination pattern	VRV* DX indoor	AHU
VRV* DX indoor	0	X
AHU	X	0

0: Allowed
X: Not allowed

NOTES

1) VRV* DX indoor
The non-R410A VRV DX indoor units that can be connected are mentioned in 3D085036

2) Connection of air handling unit through EKEQ* and EKEXV* kit to outdoor unit
Pair combination only

3D084966

RXYQQ-T

VRV4-Q Heat Pump non-R410A DX indoor unit compatibility list

Type of indoor unit	Unified models	R22 models
Conceiled Ceiling	FXYBP*K7V19	FXYB*K*
	FXYSP*KA7V19	FXYS*K*
	FXYMP*KV19	FXYM*K*
Ceiling Mounted - 2way blow	FXYCP*K7V19	FXYC*K*
Ceiling Mounted - 4way blow	FXYFP*KB7V19	FXYF*K*
Ceiling Mounted - corner cassette	FXYKP*KV19	FXYK*K*
Ceiling Suspended	FXYHP*KVE9	FXYH*K*
Floor Standing	FXYL(M)P*KV19	FXYL(M)*K*
Wall Mounted	FXYAP*KV19	FXYA*K*

NOTES

Restrictions towards indoor unit connection:
(1) Only possible to use VRV4-Q if all the indoor units are corresponding to one of the following model groups:
- All R410A DX models
- All Unified models: refer to the limited table above. For some models special setting is required. Please contact your dealer for more information.
- All R22 DX models only models → connection only allowed upon SPN request

(2) If the indoor units are non-R410A models, a special setting on the outdoor unit is required (explained in the installation manual)
(3) Combination of
- Unified models with R410A models is not allowed
- Unified models with R22 models is not allowed
- R410A models with R22 models is not allowed

(4) Replacement of non-R410A AHU systems is possible, only if below requirements are met:
- in case of an existing ERX* system
- if AHU coil and field piping can cope with a design pressure of 33bar
- replacement of control box (EKEQ*) and expansion valve kit (EKEXV*) to R410A type is done
- AHU-installation in pair (1 outdoor to 1 AHU) is used

(5) Limitations on use of DX indoor units with VRV4 -Q Heat Pump is subject to rules mentioned in 3D084965 and 3D084966.

3D085036

5 Capacity tables

5 - 1 Integrated Heating Capacity Correction Factor

RXYQQ-T

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

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

Formula:

Integrated heating capacity = A
Value given in table of capacity characteristics - B
Integrating correction factor for frost accumulation (kW) = C
A = B *C

Inlet air temperature of heat exchanger

[*CBD/*CWB]	-7/-7.6	-5/-5.6	-3/-3.7	0/-0.7	3/2.2	5/4.1	7/6

NOTES

1. The figure shows that the integrated heating capacity expresses the integrated capacity for a single cycle (from defrost operation to defrost operation) in terms or time.
2. Note that, when there is an accumulation of snow against the outside surface of the outdoor unit heat exchanger, there will always be a temporary reduction in capacity, although this will of course vary in degree in accordance with a number of other factors, such as the outdoor temperature (°CDB), relative humidity (RH) and the amount of frosting which occurs.
3. Multi combination (22~42HP) data is corresponding with the standard multi combination as mentioned on 30079534

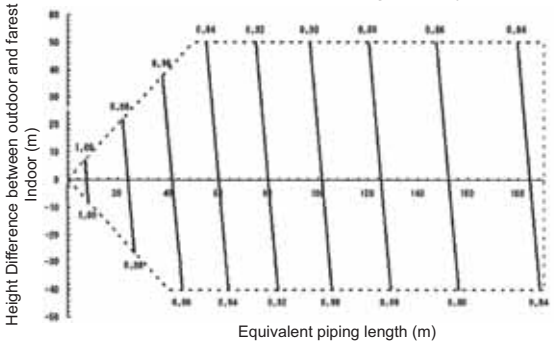
3D079898

5 Capacity tables

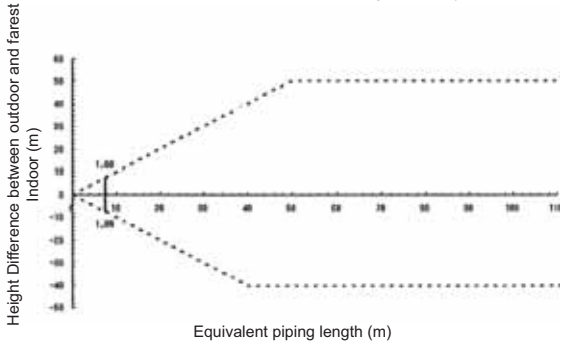
5 - 2 Capacity Correction Factor

RXYQQ12,14,24,36T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.
2. With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
3. Method of calculating the capacity of the outdoor units
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor
4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
12 HP	28.6	15.9
14 HP	28.6	15.9
24 HP	34.9	19.1
36 HP	41.3	22.2

5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

   Diameter of main pipes (standard size)

Model	Gas	Liquid
12 HP	28.6	12.7
14 HP	28.6	12.7
24 HP	34.9	15.9
36 HP	41.3	19.1

6. Equivalent length used in the above figures is based upon the following equivalent length

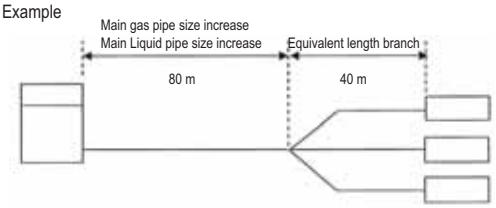
   Equivalent piping length =

   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	
Heating (liquid pipe)	1.0	0.5

   Example



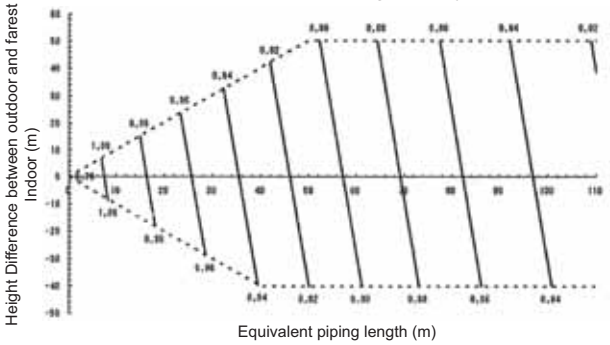
   In the above case (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 120 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rate of change in cooling capacity when height difference = 0 is thus approximately 0.89
   heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

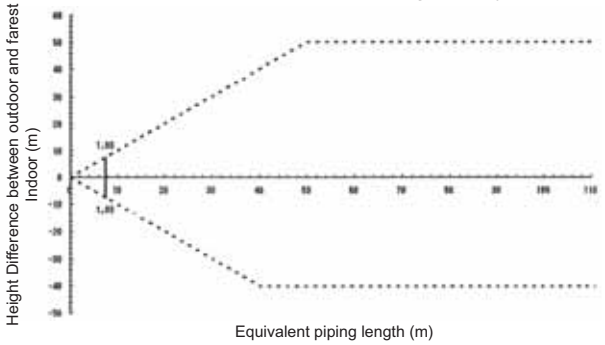
5 - 2 Capacity Correction Factor

RXYQQ8T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.

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

3. Method of calculating the capacity of the outdoor units
The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor

4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
For new diameters, see below.

Model	Gas	Liquid
8HP	22.2	12.7

5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
*Refer to the installation manual for allowed system setups and rules for deicated indoor connection types.

   Diameter of main pipes (standard size)

Model	Gas	Liquid
8HP	19.1	9.5

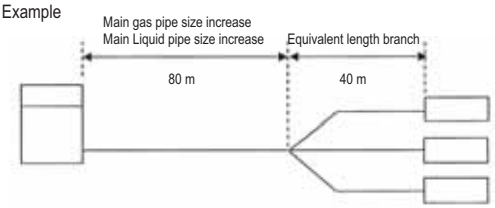
6. Equivalent length used in the above figures is based upon the following equivalent length

   Equivalent piping length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

   Example



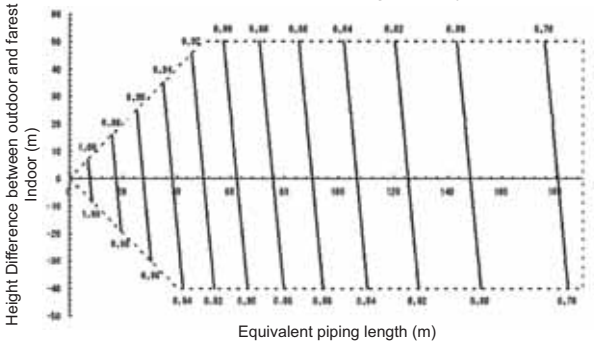
   In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rete of change in cooling capacity when height difference = 0 is thus approximately 0.86
   heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

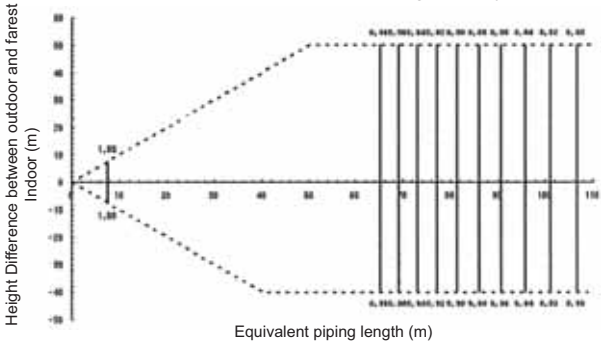
5 - 2 Capacity Correction Factor

RXYQQ10T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.

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

3. Method of calculating the capacity of the outdoor units
The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor

4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
RXYQQ10P	25.4*	12.7

   *If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).

5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.
   Diameter of main pipes (standard size)

Model	Gas	Liquid
10 HP	22.2	9.5

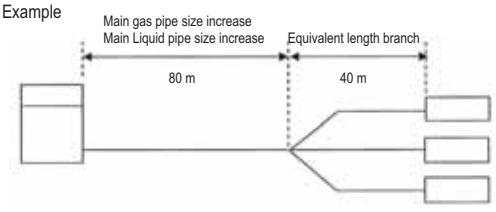
6. Equivalent length used in the above figures is based upon the following equivalent length

   Equivalent piping length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

   Example



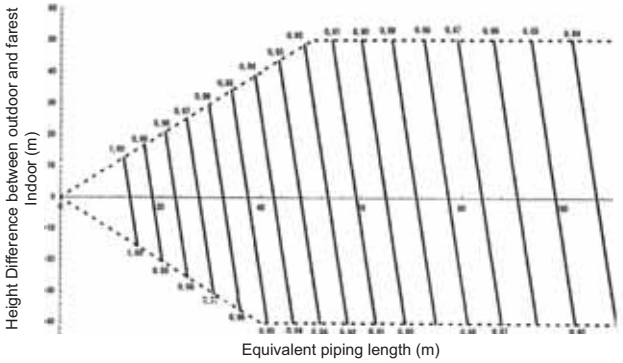
   In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rete of change in cooling capacity when height difference = 0 is thus approximately 0.87
   heating capacity when height difference = 0 is thus approximately 0.90

5 Capacity tables

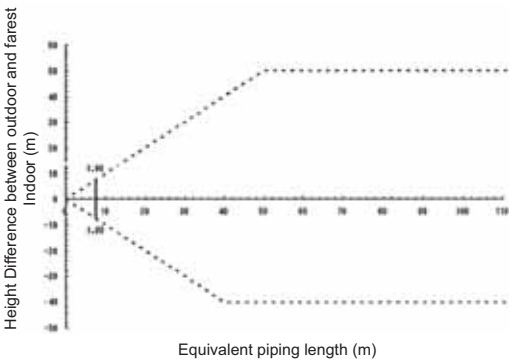
5 - 2 Capacity Correction Factor

RXYQQ22T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.
2. With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
3. Method of calculating the capacity of the outdoor units
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor
4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
   For new diameters, see below.

Model	Gas	Liquid
22 HP	31.8*	19.1

   * If not available on site, do not increase, if not increased, no correction factor should be applied to the equivalent length (see note 6).
5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.
   Diameter of main pipes (standard size)

Model	Gas	Liquid
22 HP	28.6	15.9

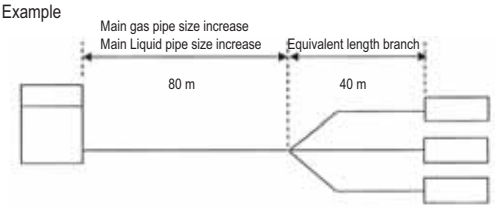
6. Equivalent length used in the above figures is based upon the following equivalent length

   Overal equivalent length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

   Example



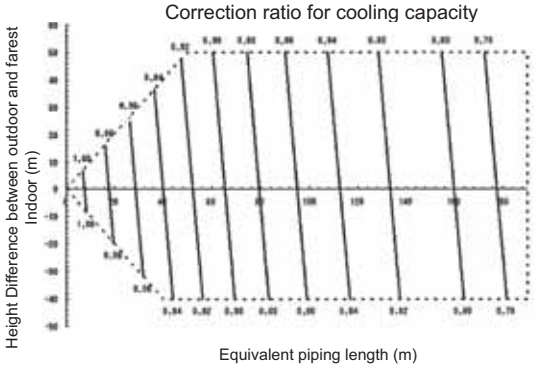
   In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
   heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

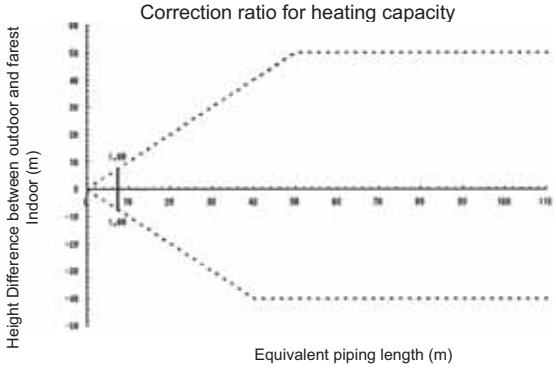
5 - 2 Capacity Correction Factor

RXYQQ18,26,28,30,38,40,42T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.
2. With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
3. Method of calculating the capacity of the outdoor units
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor
4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
   For new diameters, see below.

Model	Gas	Liquid
18 HP	31.8*	19.1
26~30 HP	38.1*	22.2
38~42 HP	41.3	22.2

   *If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).
5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.
   Diameter of main pipes (standard size)

Model	Gas	Liquid
18 HP	28.6	15.9
26~30 HP	34.9	19.1
38~42 HP	41.3	19.1

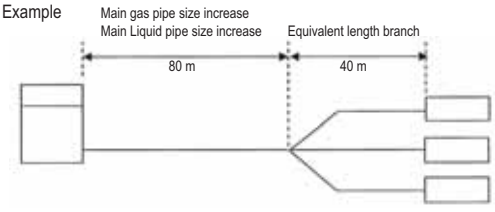
6. Equivalent length used in the above figures is based upon the following equivalent length

   Equivalent piping length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example



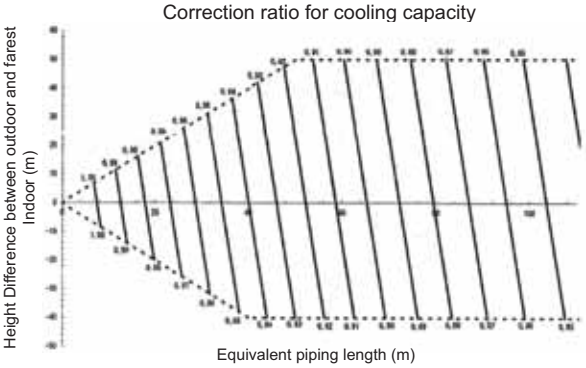
In the above case (for RXYQ38-42) (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 120 m
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
The rate of change in cooling capacity when height difference = 0 is thus approximately 0.83
heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

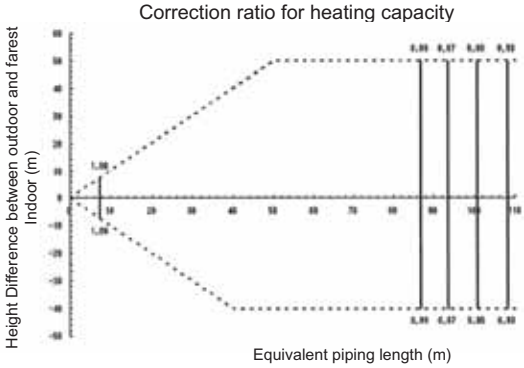
5 - 2 Capacity Correction Factor

RXYQQ16T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.
2. With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
3. Method of calculating the capacity of the outdoor units
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor
4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
16 HP	31.8*	15.9

   *If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).
5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

   Diameter of main pipes (standard size)

Model	Gas	Liquid
16 HP	28.6	12.7

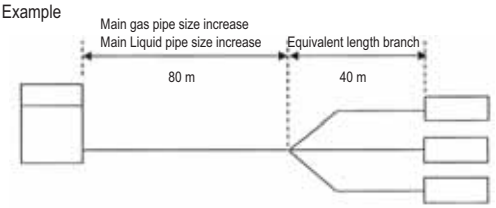
6. Equivalent length used in the above figures is based upon the following equivalent length

   Equivalent piping length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

   Example



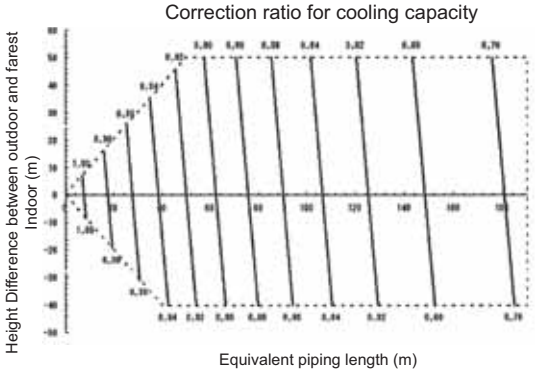
   In the above case (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 80 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
   heating capacity when height difference = 0 is thus approximately 0.99

5 Capacity tables

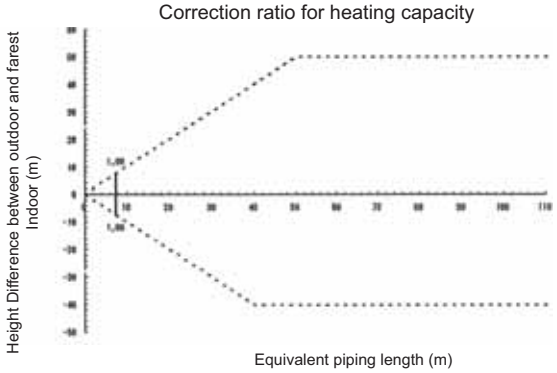
5 - 2 Capacity Correction Factor

RXYQQ20,32,34T

Correction ratio for cooling capacity



Correction ratio for heating capacity



3D079897A

NOTES

1. These figures illustrate the correction ratio for piping length in capacity for 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 for the capacity correction ratio, shown it the above figures.
2. With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
3. Method of calculating the capacity of the outdoor units
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is smaller.

   Condition: Indoor connection ratio does not exceed 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at the 100% connection ratio
   x Correction ratio of piping to furthest indoor

   Condition: Indoor connection ratio exceeds 100%.

   Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio
   x Correction ratio of piping to furthest indoor
4. When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
   For new diameters, see below.

Model	Gas	Liquid
20 HP	31.8*	19.1
32/34 HP	38.1*	22.2

   *If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).
5. When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
   *Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.
   Diameter of main pipes (standard size)

Model	Gas	Liquid
20 HP	28.6	15.9
32/34 HP	34.9	19.1

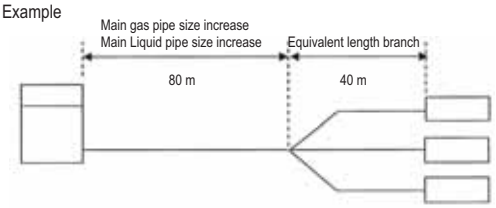
6. Equivalent length used in the above figures is based upon the following equivalent length

   Equivalent piping length =
   Equivalent length of main pipe x Correction factor
   +
   Equivalent length of branch pipes

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

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

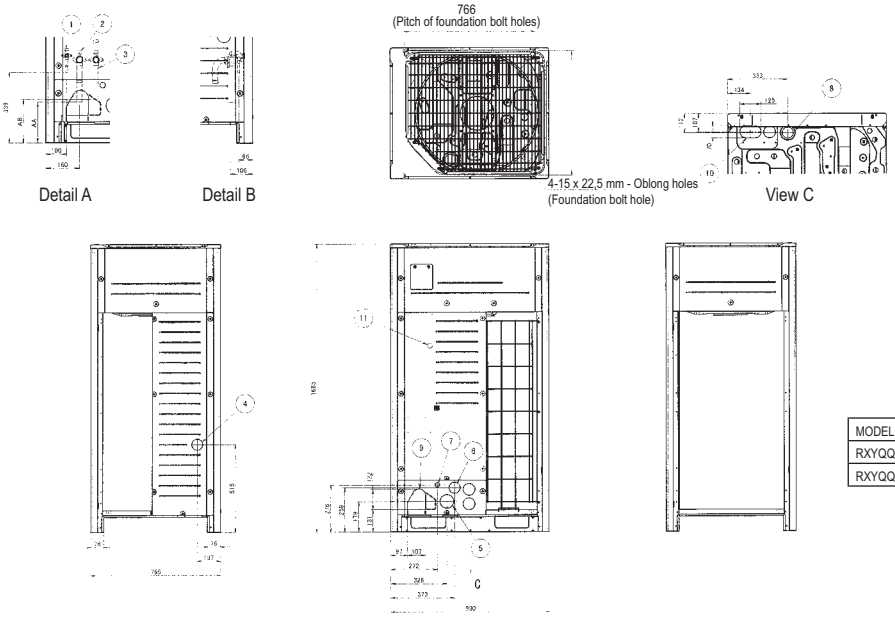
   Example



   In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   (Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
   The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
   heating capacity when height difference = 0 is thus approximately 1.0

6 Dimensional drawings

RXYQQ8-12T



MODEL	AA	AB	AC
RXYQQ8T	248	-	-
RXYQQ10-12T	195	-	-

2D079532A

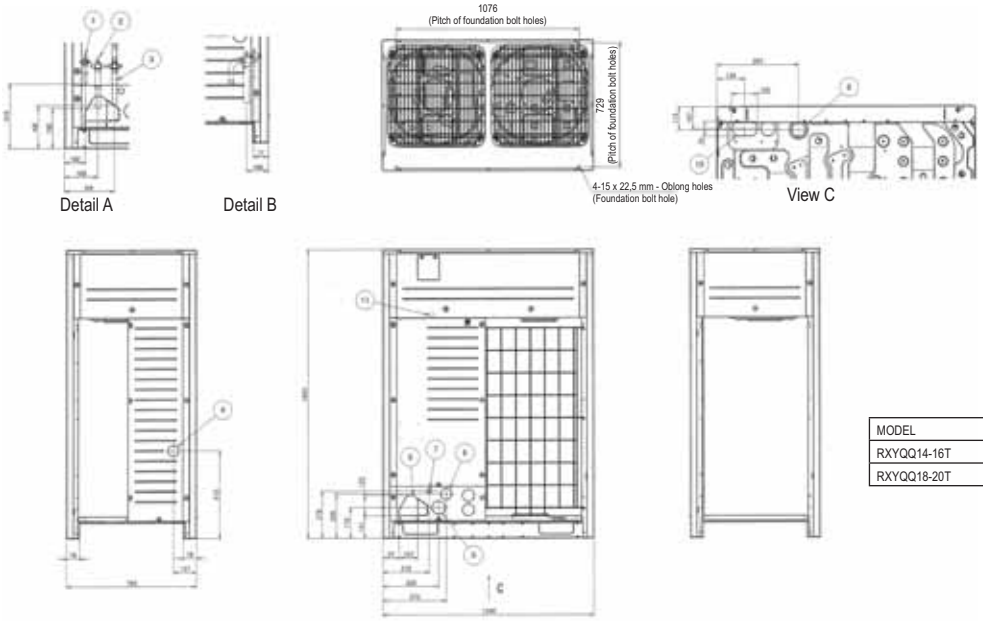
No.	Parts name	Remarks
1	Liquid pipe connection port	See note 3
2	Gas pipe connection port	See note 3
3	Equalizing pipe connection port	See note 3
4	Power cord routing hole (side)	ø 65
5	Power cord routing hole (front)	ø 80
6	Power cord routing hole (front)	ø 65
7	Power cord routing hole (front)	ø 27
8	Power cord hole (bottom)	ø 65
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. Items 4 tot 10: knock out hole.
3. Gas pipe:
   Ø 19.1 brazing connection: RXYQQ8T
   Ø 22.2 brazing connection: RXYQQ10T
   Ø 28.6 brazing connection: RXYQQ12T
   Liquid pipe:
   Ø 9.5 brazing connection: RXYQQ8-10T
   Ø 12.7 brazing connection: RXYQQ12T

6 Dimensional drawings

RXYQQ14-20T



MODEL	AA	AB
RXYQQ14-16T	240	205
RXYQQ18-20T	240	210

2D079533A

No.	Parts name	Remarks
1	Liquid pipe connection port	See note 3
2	Gas pipe connection port	See note 3
3	Equalizing pipe connection port	See note 3
4	Power cord routing hole (side)	ø 65
5	Power cord routing hole (front)	ø 80
6	Power cord routing hole (front)	ø 65
7	Power cord routing hole (front)	ø 27
8	Power cord routing hole (bottom)	ø 65
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	
11	Grounding terminal	Inside of switch box (M8)

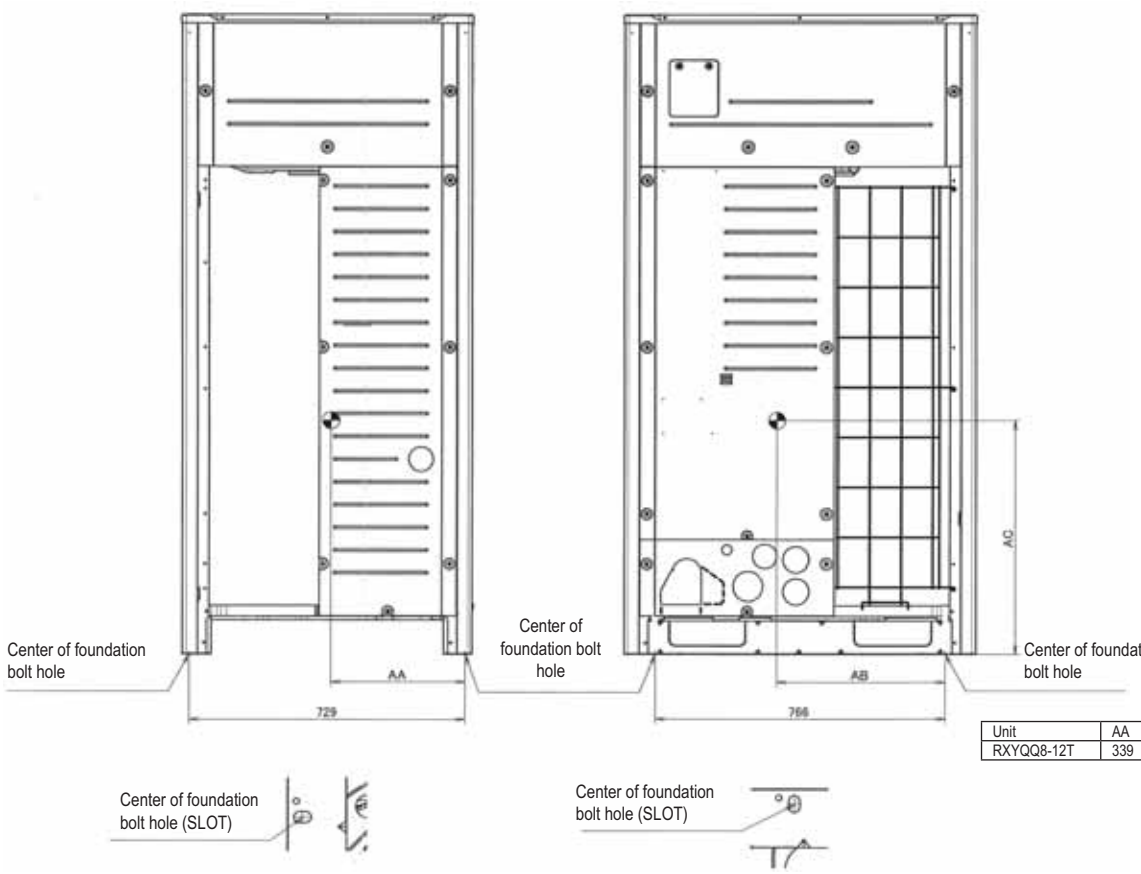
NOTES

1. Detail A and detail B indicate the dimensions after fixing the attached piping.
2. Items 4 tot 10: knock out hole.
3. Gas pipe:
   Ø 28.6 brazing connection: RXYQQ14-20T

   Liquid pipe:
   Ø 12.7 brazing connection: RXYQQ14-16T
   Ø 15.9 brazing connection: RXYQQ18-20T

7 Centre of gravity

RXYQQ8-12T

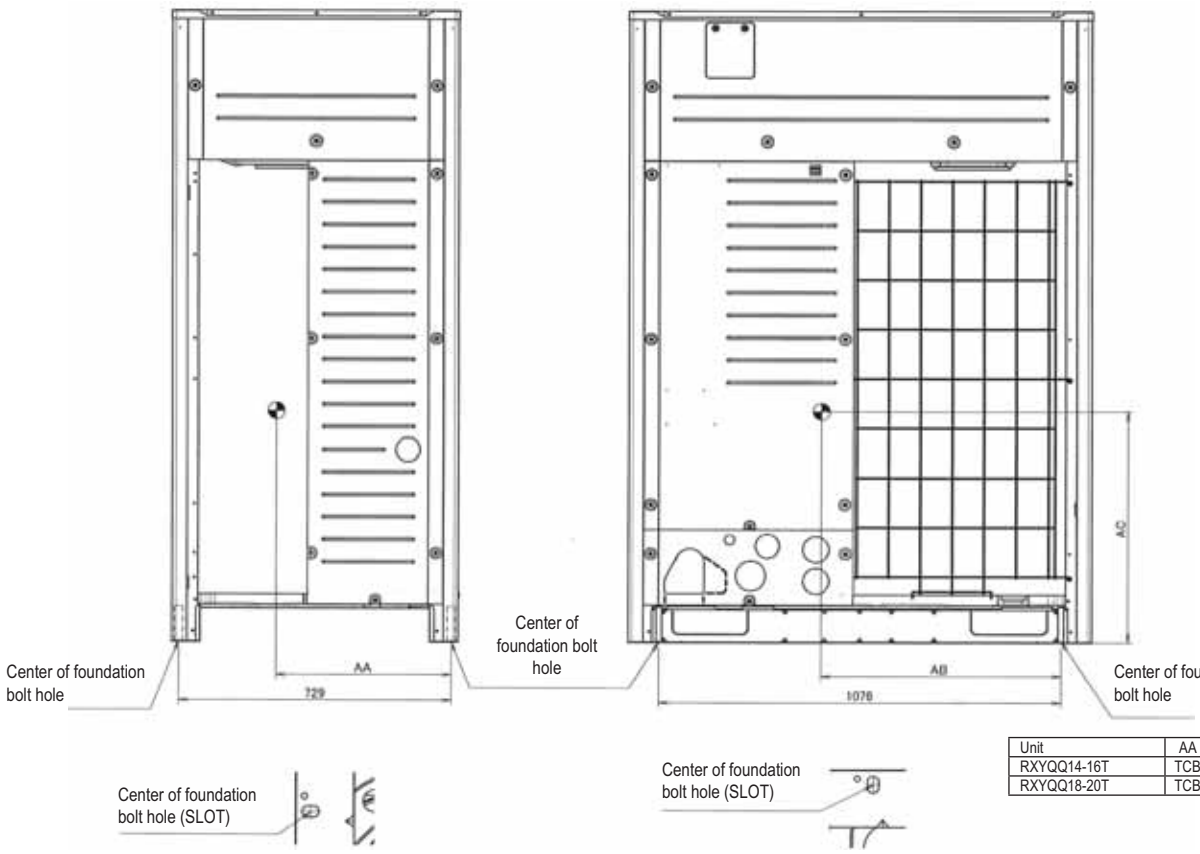


Unit	AA	AB	AC
RXYQQ8-12T	339	448	565

3D079582A

7 Centre of gravity

RXYQQ14-20T

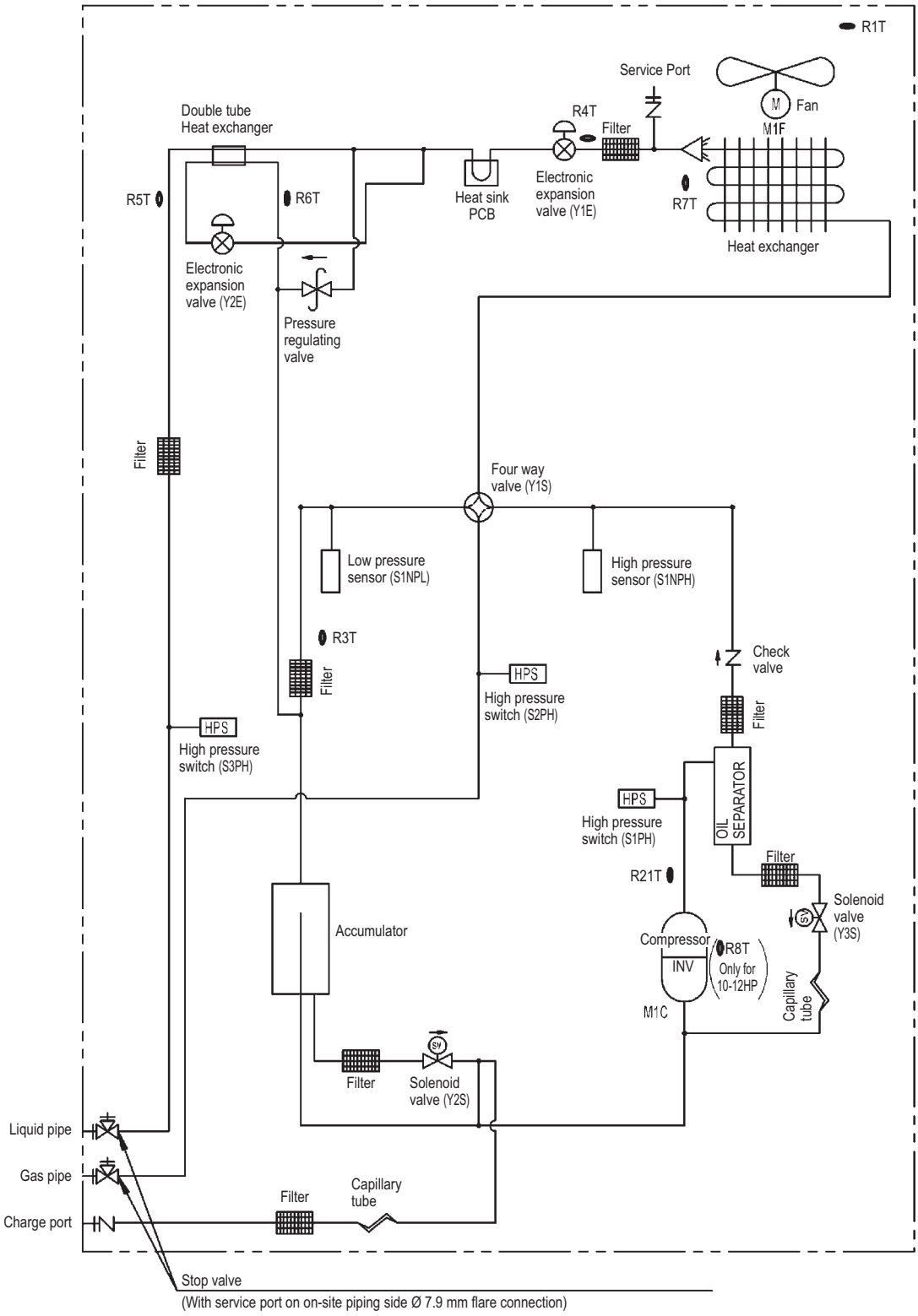


Unit	AA	AB	AC
RXYQQ14-16T	TCB	TCB	TCB
RXYQQ18-20T	TCB	TCB	TCB

3D079583A

8 Piping diagrams

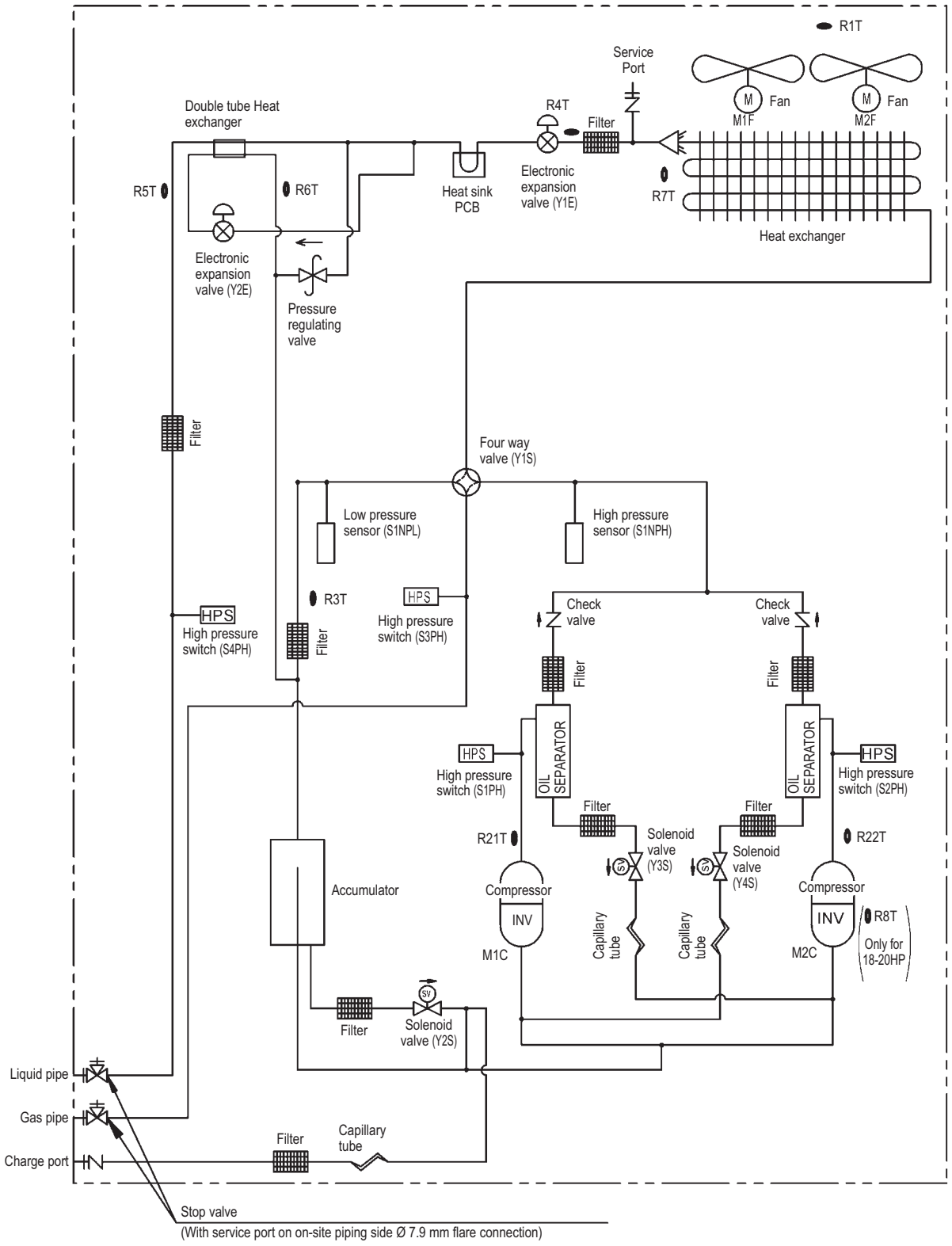
RXYQQ8-12T



3D082145

8 Piping diagrams

RXYQQ14-20T

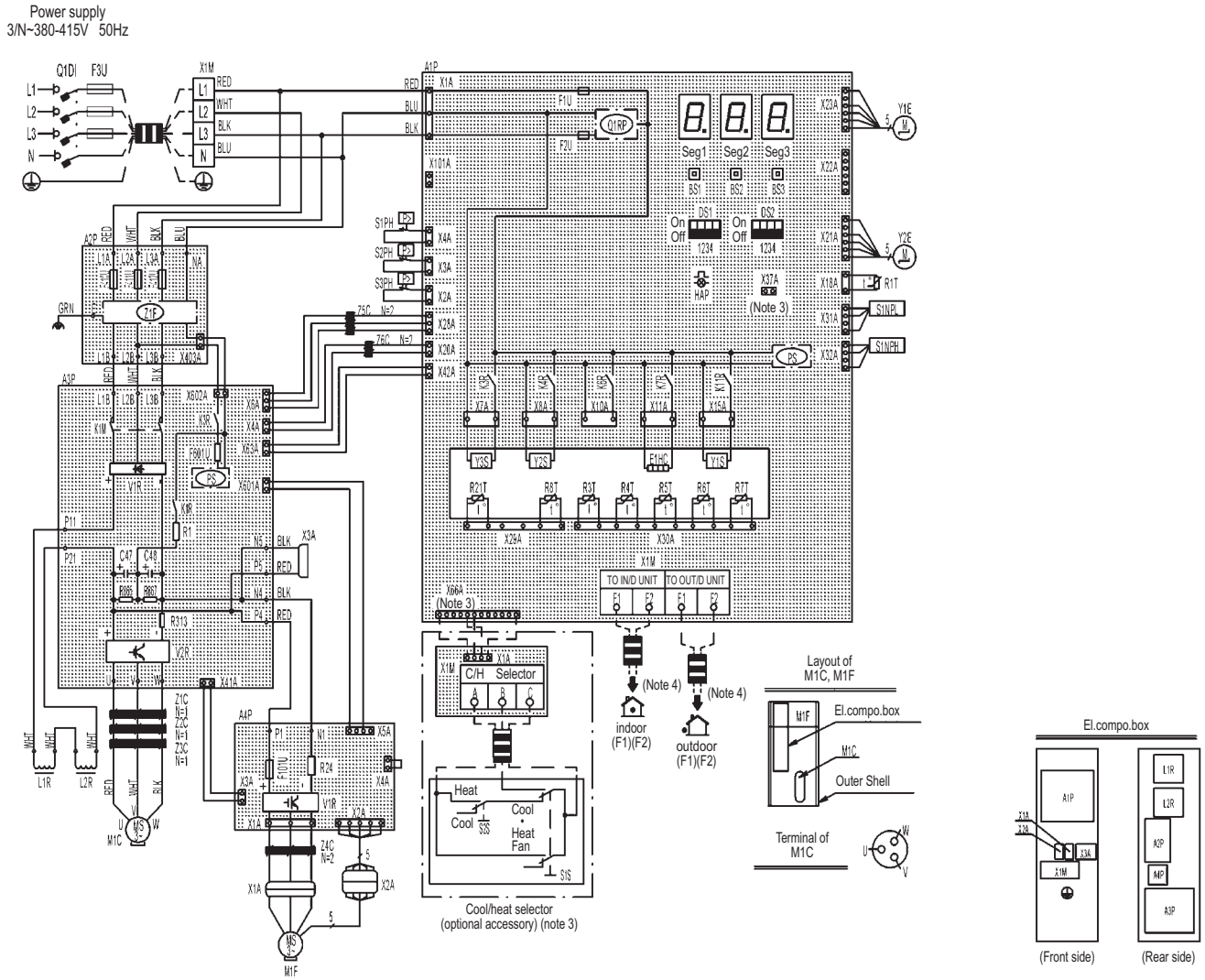


3D082146

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ10-12T



A1P	Printed circuit board (main)	L1R, L2R	Reactor	S2PH	Pressure switch (gas)
A2P	Printed circuit board (noise filter)	M1C	Motor (compressor)	S3PH	Pressure switch (liquid)
A3P	Printed circuit board (inv)	M1F	Motor (fan)	SEG1~SEG3	7-segment display (A1P)
A4P	Printed circuit board (fan)	PS	Switching power supply (A1P, A3P)	V1R	Power module (A3P) (A4P)
BS1~3	Push button, switch (A1P) (mode, set, return)	Q1DI	Field earth leakage breaker	V2R	Power module (A3P)
C47, C48	Capacitor (A3P)	Q1RP	Phase reversal detect circuit (A1P)	X1A, X2A	Connector (M1F)
DS1, DS2	Dip switch (A1P)	R1T	Thermistor (AIR) (A1P)	X3a	Connector (check the residual charge)
E1HC	Crankcase heater	R21T	Thermistor (M1C discharge)	X1M	Terminal block (power supply)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R3T	Thermistor (accumulator)	X1M	Terminal block (control) (A1P)
F3U	Field fuse	R4T	Thermistor (heat exc, liq, pipe)	Y1E	Electronic expansion valve (main)
F101U	Fuse (A4P)	R5T	Thermistor (subcool liq, pipe)	Y2E	Electronic expansion valve (injection)
F410U ~ F412U	Fuse (A2P)	R6T	Thermistor (heat exc, gas pipe)	Y1S	Solenoid valve (main)
F601U	Fuse (A3P)	R7T	Thermistor (heat exc, deicer)	Y2S	Solenoid valve (accumulator oil return)
HAP	Pilotlamp (service monitor-green) (A1P)	R8T	Thermistor (M1C body)	Y3S	Solenoid valve (OIL1)
K1M	Magnetic contactor (A3P)	R1	Resistor (current limiting) (A3P)	Z1C~Z6C	Noise filter (ferrite core)
K1R	Magnetic relay (A3P)	R24	Resistor (current sensor) (A4P)	Z1F	Noise filter (A2P) (with surge absorber)
K3R	Magnetic relay (A3P)	R313	Resistor (current sensor) (A3P)		
K3R	Magnetic relay (Y3S) (A1P)	R865, R867	Resistor (A3P)		
K4R	Magnetic relay (Y2S) (A1P)	S1NPH	Pressure sensor (high)	Connector for optional accessories	
K7R	Magnetic relay (E1HC) (A1P)	S1NPL	Pressure sensor (low)	X37A	Connector (power adapter)
K11R	Magnetic relay (Y1S) (A1P)	S1PH	Pressure switch (disch)	X66A	Connector (remote switching cool/heat selector)

NOTES

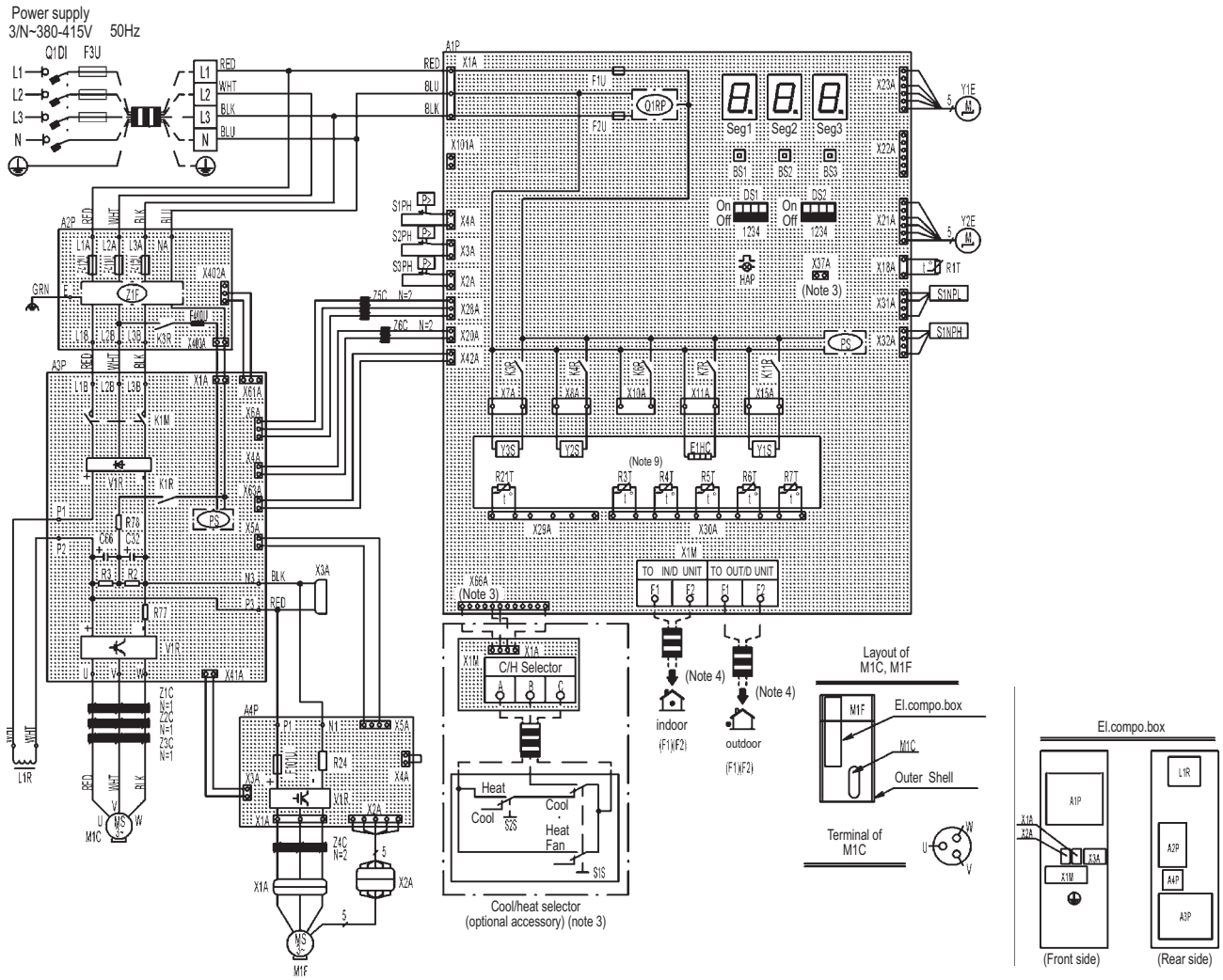
1. This wiring diagram applies only to the outdoor unit.
2. ▬▮▮▬ :field wiring, ☐☐☐ : terminal block, ⊡ : connector, –○– : terminal, ⏚ : Protective earth (SREW)
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el. compo. box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH ~ S3PH).
7. Colors BLK: Black; RED: Red; BLU: Blue, WHT: White; GRN: Green.

2D082298A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RYYQQ8T



A1P	Printed circuit board (main)	M1C	Motor (compressor)	V1R	Power module (A3P) (A4P)
A2P	Printed circuit board (noise filter)	M1F	Motor (fan)	X1A, X2A	Connector (M1F)
A3P	Printed circuit board (inv)	PS	Switching power supply (A1P, A3P)	X3A	Connector (check the residual charge)
A4P	Printed circuit board (fan)	Q1DI	Field earth leakage breaker	X1M	Terminal block (power supply)
BS1~3	Push button, switch (A1P) (mode, set, return)	QR1P	Phase reversal detect circuit (A1P)	X1M	Terminal block (control) (A1P)
C32, C66	Capacitor (A3P)	R1T	Thermistor (AIR) (A1P)	Y1E	Electronic expansion valve (main)
DS1, DS2	Dip switch (A1P)	R21T	Thermistor (M1C discharge)	Y2E	Electronic expansion valve (injection)
E1HC	Crankcase heater	R3T	Thermistor (accumulator)	Y1S	Solenoid valve (main)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R4T	Thermistor (heat exc, liq, pipe)	Y2S	Solenoid valve (accumulator oil return)
F3U	Field fuse	R5T	Thermistor (subcool liq, pipe)	Y3S	Solenoid valve (OIL1)
F101U	Fuse (A4P)	R6T	Thermistor (heat exc, gas pipe)	Z1C~Z6C	Noise filter (ferrite core)
F400U	Fuse (A2P)	R7T	Thermistor (heat exc, deicer)	Z1F	Noise filter (A2P) (with surge absorber)
F410U ~ F412U	Fuse (A2P)	R2, R3	Resistor (A3P)		
HAP	Pilotlamp (service monitor-green)	R24	Resistor (current sensor) (A4P)		
K1M	Magnetic relay (A3P)	R77	Resistor (current sensor) (A3P)		
K1R	Magnetic relay (A3P)	R78	Resistor (current limiting) (A3P)		
K3R	Magnetic relay (A2P)	S1NPH	Pressure sensor (high)		
K3R	Magnetic relay (Y3S) (A1P)	S1NPL	Pressure sensor (low)		
K4R	Magnetic relay (Y2S) (A1P)	S1PH	Pressure switch (disch)	Connector for optional accessories	
K7R	Magnetic relay (E1HC) (A1P)	S2PH	Pressure switch (gas)	X37A	Connector (power adapter)
K11R	Magnetic relay (Y1S) (A1P)	S3PH	Pressure switch (liquid)	X66A	Connector (remote switching cool/heat selector)
L1R	Reactor	SEG1~SEG3	7-segment display (A1P)		

NOTES

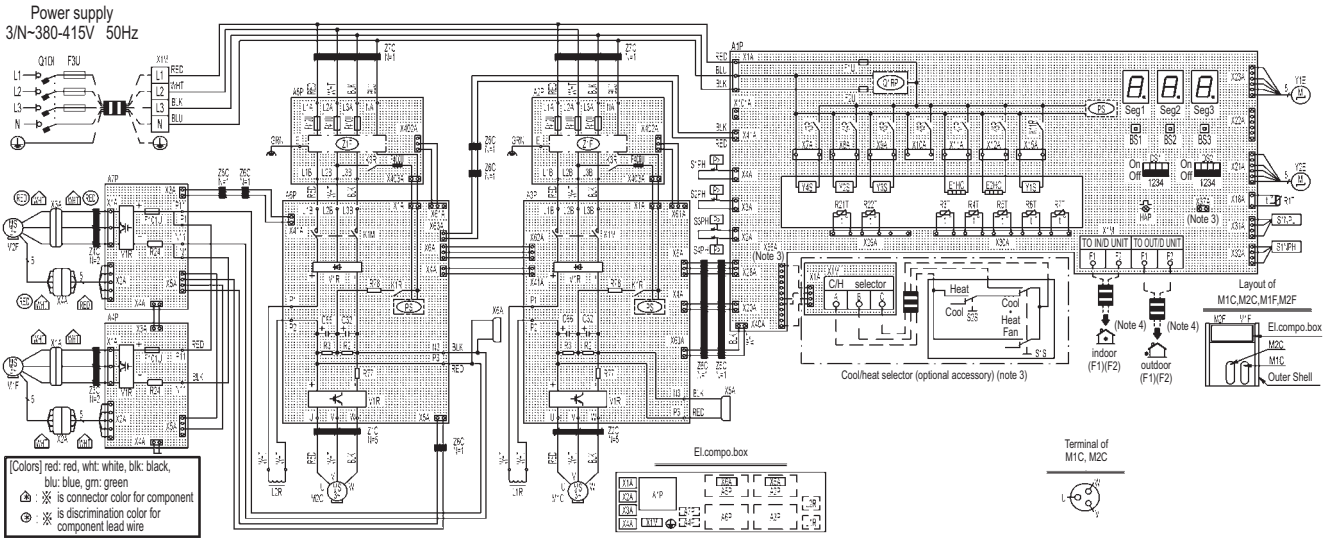
1. This wiring diagram applies only to the outdoor unit.
2. --▮▮▮-- :field wiring, ☐☐☐☐ : terminal block, ⊙⊙ : connector, –○– : terminal, ⏚ : Protective earth (SREW)
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el. compo. box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH~S3PH)
7. Colors blk: black, red: red, blu: blue, wht: white, grn: green.

2D082299A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ14-16T



A1P	Printed circuit board (main)	K11R	Magnetic relay (Y1S) (A1P)	S4PH	Pressure switch (liquid)
A2P, A5P	Printed circuit board (noise filter)	L1R, L2R	Reactor	SEG1~SEG3	7-segment display (A1P)
A3P, A6P	Printed circuit board (inv)	M1C, M2C	Motor (compressor)	V1R	Power module (A3P, A6P)
A4P, A7P	Printed circuit board (fan)	M1F, M2F	Motor (fan)	V1R	Power module (A4P, A7P)
BS1~3	Push button, switch (A1P) (mode, set, return)	PS	Switching power supply (A1P, A3P, A6P)	X1A~4A	Connector (M1F, M2F)
C32, C66	Capacitor (A3P), (A6P)	Q1DI	Field earth leakage breaker	X5A~X6A	Connector (check the residual charge)
DS1, DS2	Dip switch (A1P)	Q1RP	Phase reversal detect circuit (A1P)	X1M	Terminal block (power supply)
E1HC, E2HC	Crankcase heater	R2, R3	Resistor (A3P, A6P)	X1M	Terminal block (control) (A1P)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R24	Resistor (current sensor) (A4P, A7P)	Y1E	Electronic expansion valve (main)
F3U	Field fuse	R77	Resistor (current sensor) (A3P, A6P)	Y2E	Electronic expansion valve (injection)
F101U	Fuse (A4P, A7P)	R78	Resistor (current limiting) (A3P, A6P)	Y1S	Solenoid valve (main)
F400U	Fuse (A2P, A5P)	R1T	Thermistor (AIR) (A1P)	Y2S	Solenoid valve (accumulator oil return)
F410U ~ F412U	Fuse (A2P, A5P)	R21T, R22T	Thermistor (M1C, MC2 discharge)	Y3S	Solenoid valve (OIL1)
HAP	Pilotlamp (service monitor-green)	R3T	Thermistor (accumulator)	Y4S	Solenoid valve (OIL2)
K1M	Magnetic contactor (A3P, A6P)	R4T	Thermistor (heat exc, liq, pipe)	Z1C~Z7C	Noise filter (ferrite core)
K1R	Magnetic relay (A3P, A6P)	R5T	Thermistor (subcool liq, pipe)	Z1F	Noise filter (A2P, A5P) (with surge absorber)
K3R	Magnetic relay (A2P, A5P)	R6T	Thermistor (heat exc, gas pipe)		
K3R	Magnetic relay (Y4S) (A1P)	R7T	Thermistor (heat exc, deicer)		
K4R	Magnetic relay (Y2S) (A1P)	S1NPH	Pressure sensor (high)		
K5R	Magnetic relay (Y3S) (A1P)	S1NPL	Pressure sensor (low)	Connector for optional accessories	
K7R	Magnetic relay (E1HC) (A1P)	S1PH, S2PH	Pressure switch (disch)	X37A	Connector (power adapter)
K8R	Magnetic relay (E2HC) (A1P)	S3PH	Pressure switch (gas)	X66A	Connector (remote switching cool/heat selector)

NOTES

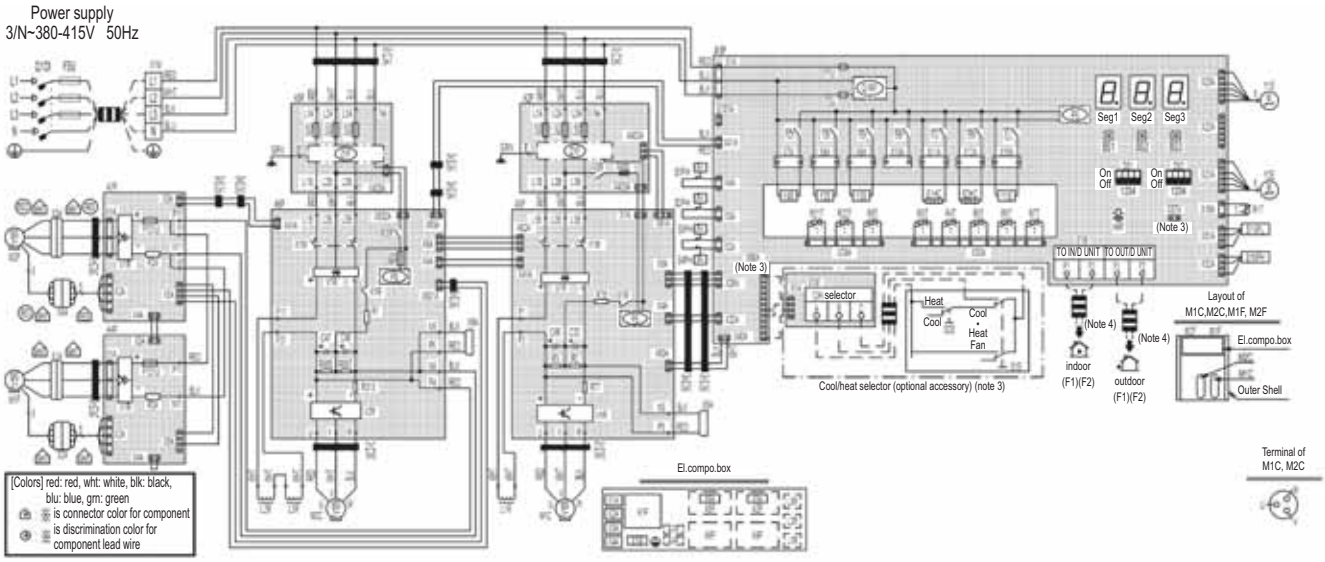
1. This wiring diagram applies only to the outdoor unit.
2. ▬▮▮▬ :field wiring, ☐☐☐ : terminal block, ⊙⊙ : connector, –○– : terminal, ⏚ : Protective earth (SREW)
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el, compo, box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH ~ S4PH).

2D082296A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ18-20T



A1P	Printed circuit board (main)	L1R ~ L3R	Reactor	S4PH	Pressure switch (liquid)
A2P, A5P	Printed circuit board (noise filter)	M1C, M2C	Motor (compressor)	SEG1~SEG3	7-segment display (A1P)
A3P, A6P	Printed circuit board (inv)	M1F, M2F	Motor (fan)	V1R	Power module (A3P, A6P)
A4P, A7P	Printed circuit board (fan)	PS	Switching power supply (A1P, A3P, A6P)	V1R	Power module (A4P, A7P)
BS1~3	Push button, switch (A1P) (mode, set, return)	Q1DI	Field earth leakage breaker	V2R	Power module (A6P)
C32, C66	Capacitor (A3P)	Q1RP	Phase reversal detect circuit (A1P)	X1A~4A	Connector (M1F, M2F)
C47, C48	Capacitor (A6P)	R1	Resistor (current limiting) (A6P)	X5A~X6A	Connector (check the residual charge)
DS1, DS2	Dip switch (A1P)	R2, R3	Resistor (A3P)	X1M	Terminal block (power supply)
E1HC, E2HC	Crankcase heater	R24	Resistor (current sensor) (A4P, A7P)	X1M	Terminal block (control) (A1P)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R77	Resistor (current sensor) (A3P)	Y1E	Electronic expansion valve (main)
F101U	Fuse (A4P, A7P)	R78	Resistor (current limiting) (A3P)	Y2E	Electronic expansion valve (injection)
F3U	Field fuse	R313	Resistor (current censor) (A6P)	Y1S	Solenoid valve (main)
F400U	Fuse (A2P)	R865, R867	Resistor (A6P)	Y2S	Solenoid valve (accumulator oil return)
F410U ~ F412U	Fuse (A2P, A5P)	R1T	Thermistor (AIR) (A1P)	Y3S	Solenoid valve (OIL1)
F601U	Fuse (A6P)	R21T, R22T	Thermistor (M1C, MC2 discharge)	Y4S	Solenoid valve (OIL2)
HAP	Pilotlamp (A1P) (service monitor-green)	R3T	Thermistor (accumulator)	Z1C~Z7C	Noise filter (ferrite core)
K1M	Magnetic contactor (A3P, A6P)	R4T	Thermistor (heat exc, liq, pipe)	Z1F	Noise filter (A2P, A5P) (with surge absorber)
K1R	Magnetic relay (A3P, A6P)	R5T	Thermistor (subcool liq, pipe)		
K3R	Magnetic relay (A2P, A6P)	R6T	Thermistor (heat exc, gas pipe)		
K3R	Magnetic relay (Y4S) (A1P)	R7T	Thermistor (heat exc, deicer)		
K4R	Magnetic relay (Y2S) (A1P)	R8T	Thermistor (M2C, body)		
K5R	Magnetic relay (Y3S) (A1P)	S1NPH	Pressure sensor (high)		
K7R	Magnetic relay (E1HC) (A1P)	S1NPL	Pressure sensor (low)	Connector for optional accessories	
K8R	Magnetic relay (E2HC) (A1P)	S1PH, S2PH	Pressure switch (disch)	X37A	Connector (power adapter)
K11R	Magnetic relay (Y1S) (A1P)	S3PH	Pressure switch (gas)	X66A	Connector (remote switching cool/heat selector)

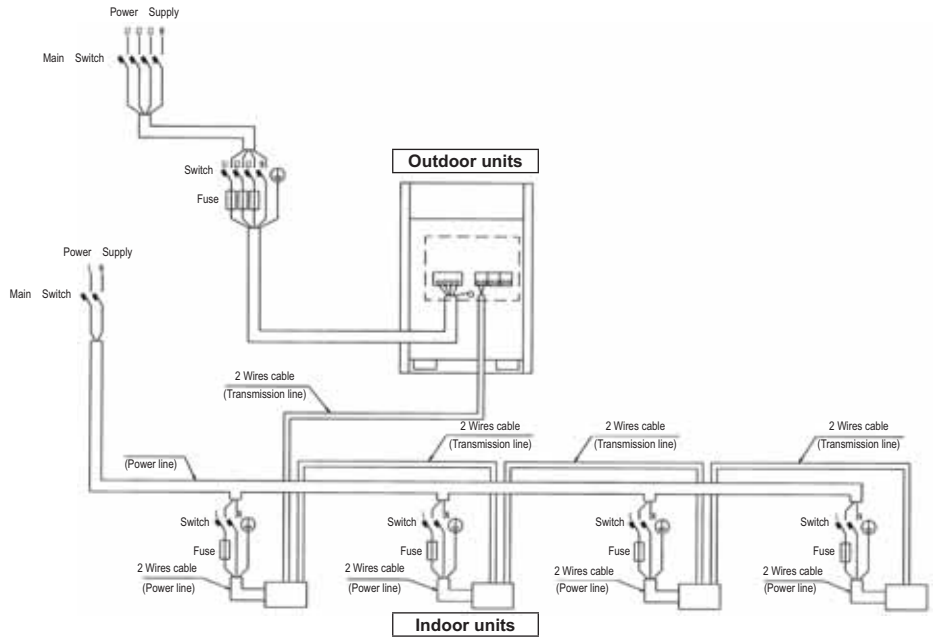
NOTES

1. This wiring diagram applies only to the outdoor unit.
2. :field wiring, : terminal block, : connector, : terminal, : Protective earth (SREW)
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el. compo. box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH ~ S4PH).

2D082295A

10 External connection diagrams

RXYQQ8-20T



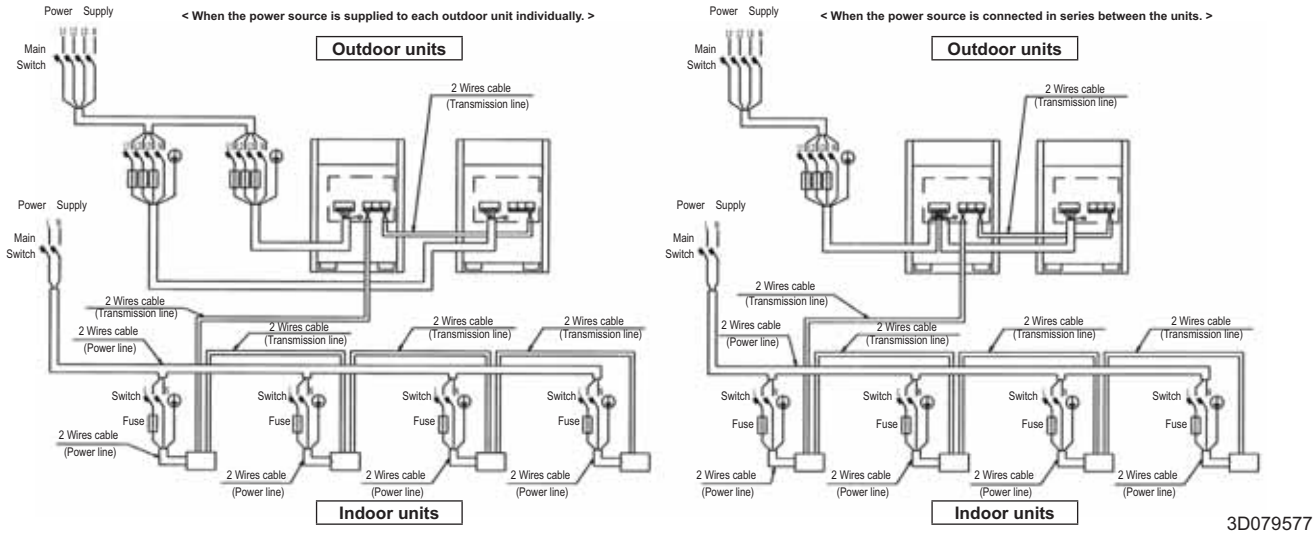
3D079576

NOTES

1. All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
2. Use copper conductors only.
3. As for details, see wiring diagram.
4. Install circuit breaker for safety.
5. All field wiring and components must be provided by licensed electrician.
6. Unit shall be grounded in compliance with the applicable local and national codes.
7. Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipement.
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. If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase may break the compressor and other parts.
11. Must install earth leakage circuit breaker.

10 External connection diagrams

RXYQQ22-36T

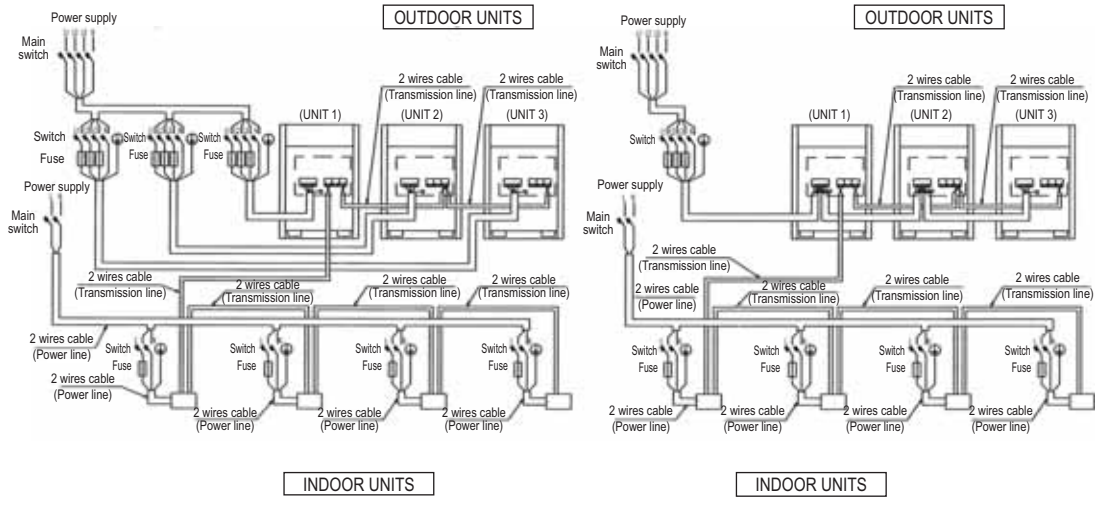


3D079577

NOTES

1. All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
2. Use copper conductors only.
3. As for details, see wiring diagram.
4. Install circuit breaker for safety.
5. All field wiring and components must be provided by licensed electrician.
6. Unit shall be grounded in compliance with the applicable local and national codes.
7. Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipement.
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 UNIT1 must be larger than UNIT2 when the power source is connected in series between the units.
11. If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase may break the compressor and other parts.
12. Must install earth leakage circuit breaker.

RYYQQ38-42T <When the power source is supplied to each outdoor unit individaully> <When the power sourse is connected in series between the units>



3D079578

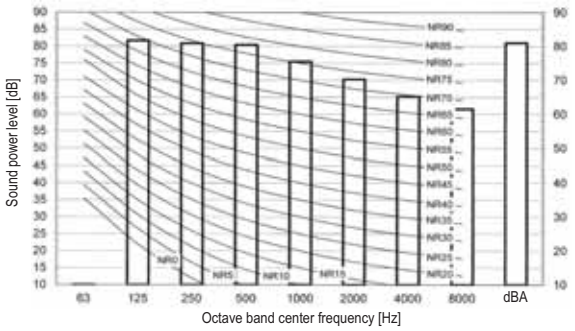
NOTES

1. All wiring, components and materials to be produced 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 nog intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipement.
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 UNIT1 must be larger than UNIT2 when the power source is connected in series between the units.
11. If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase may break the compressor and other parts.
12. Must install earth leakage circuit breaker.

11 Sound data

11 - 1 Sound Power Spectrum

RXYQQ12T

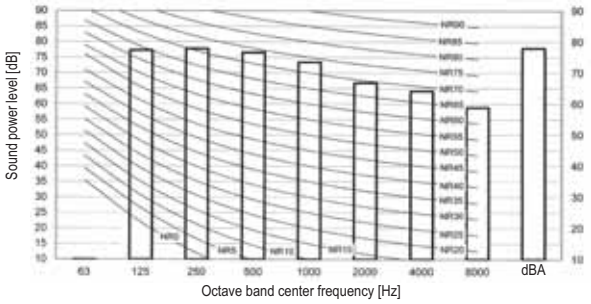


3D079909A

NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

RXYQQ8T

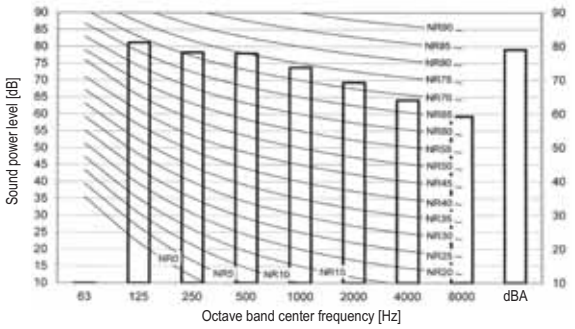


3D079537A

NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

RXYQQ10T

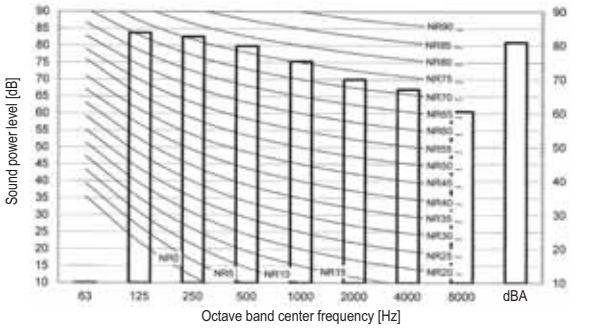


3D079908A

NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

RXYQQ14T



3D079910A

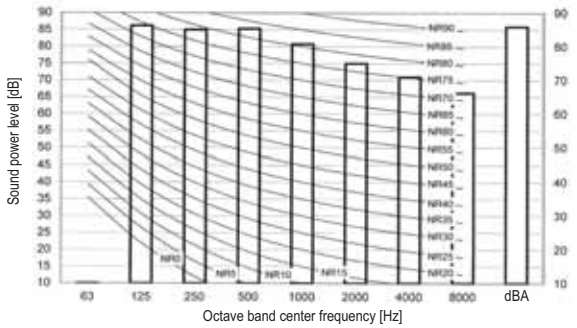
NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

11 Sound data

11 - 1 Sound Power Spectrum

RXYQQ18T

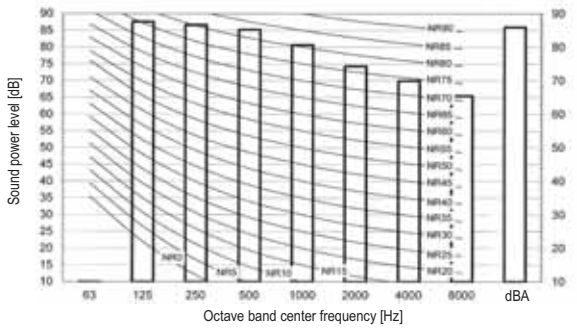


3D079912A

NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

RXYQQ16T

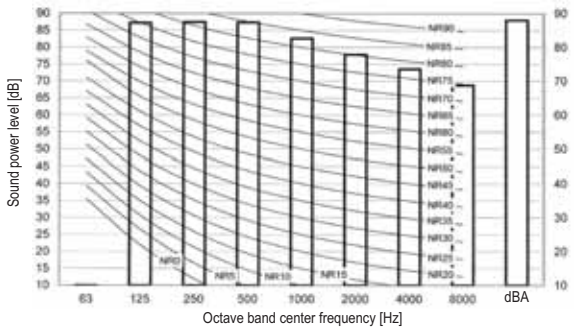


3D079911A

NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

RXYQQ20T



3D079913A

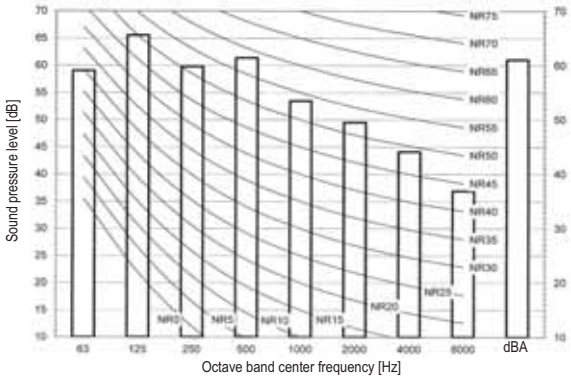
NOTES

1. dBA = A-weighted sound power level (A-scale according to IEC)
2. Reference acoustic intensity 0dB = 10E-6µW/m²
3. Measured according to ISO 3744

11 Sound data

11 - 2 Sound Pressure Spectrum

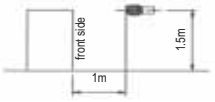
RXYQQ12T



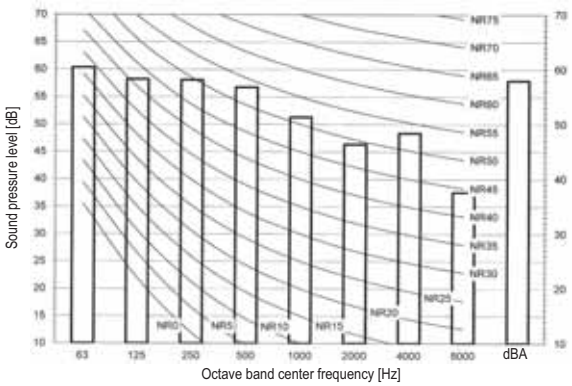
3D079903A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



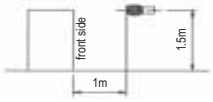
RXYQQ8T



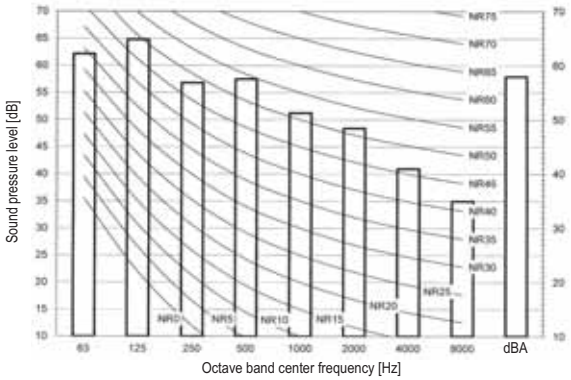
3D079536A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



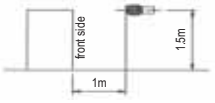
RXYQQ10T



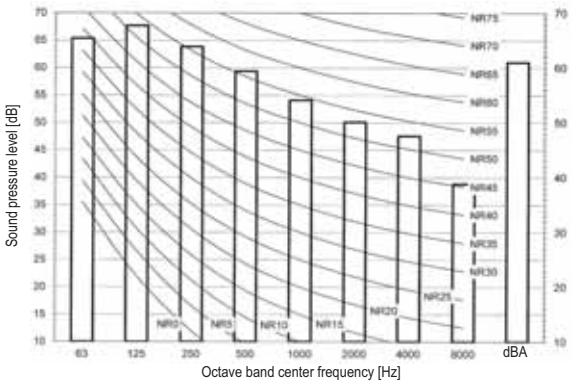
3D079902A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



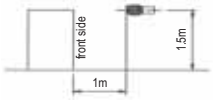
RXYQQ14T



3D079904A

NOTES

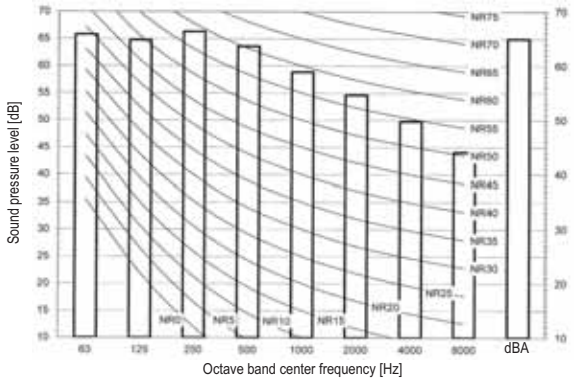
1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



11 Sound data

11 - 2 Sound Pressure Spectrum

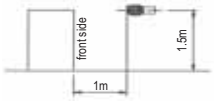
RXYQQ18T



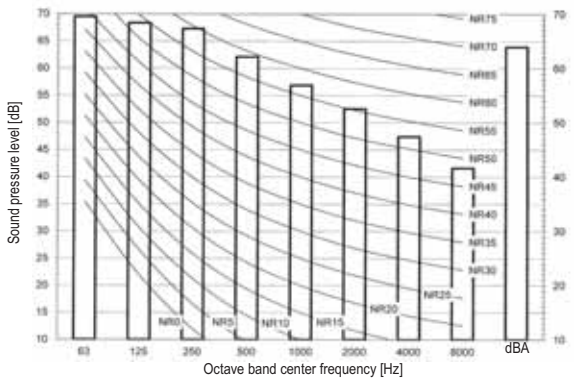
3D079906A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



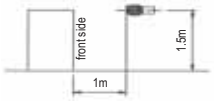
RXYQQ16T



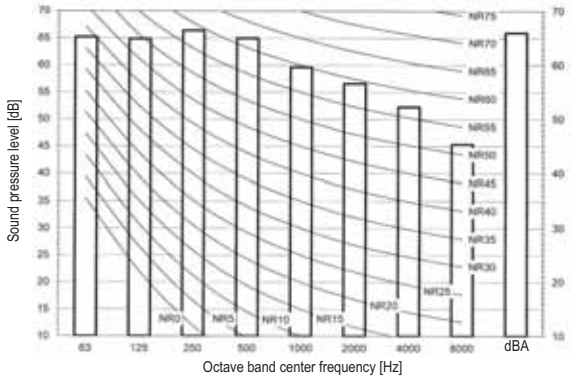
3D079905A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.



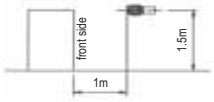
RXYQQ20T



3D079907A

NOTES

1. Data is valid at free field condition
2. Data is valid at nominal operation condition
3. dBA = A-weighted sound pressure level (A-scale according to IEC)
4. Reference acoustic pessures 0dB = 20µPa
5. Measuring position.

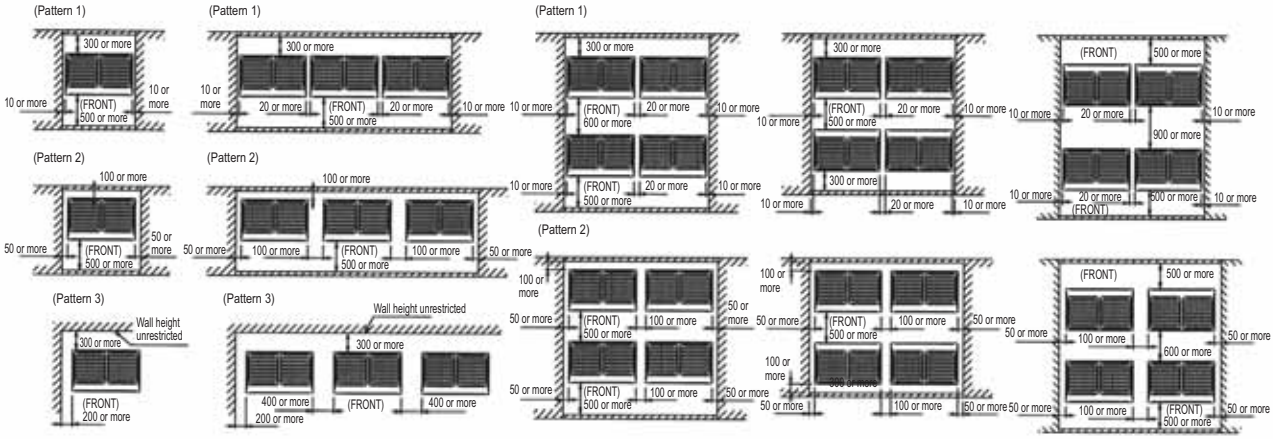


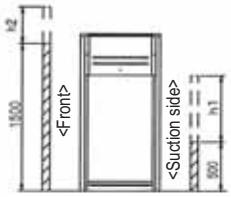
12 Installation

12 - 1 Installation Method

RXYQQ-T

For single unit installation | For installation in rows | For centralized group layout





NOTES

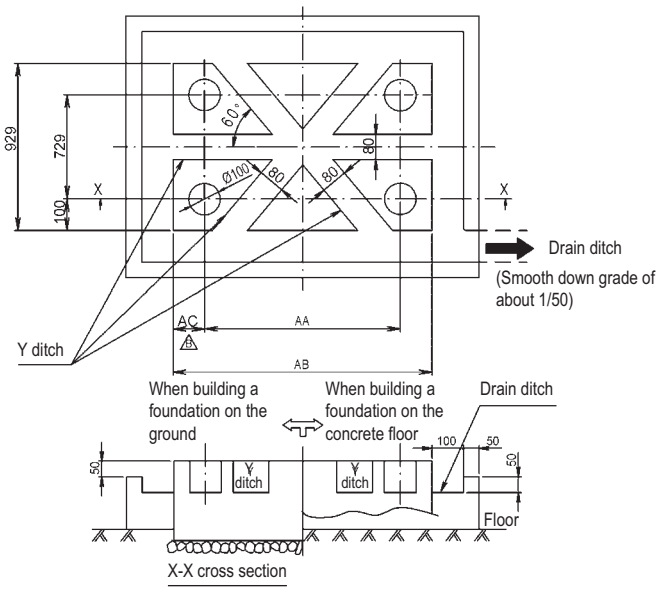
1. Heights of walls in case of patterns 1 and 2:
   Front: 1500mm
   Suction side: 500mm
   Side: Height unrestricted
   Installation space as shown on this drawing is based on the cooling operation at 35 degrees outdoor air temperature.
   When the design outdoor air temperature exceeds 35 degrees or the load exceeds maximum ability of much generation load of heat in all outdoor unit, take the suction side space more broadly than the space as shown on this drawing.
2. If the above wall heights are exceeded then h2/2 and h1/2 should be added to the front and suction side service spaces respectively as shown in the figure on the right.
3. When installing the units most appropriate pattern should be selected from those shown above in order to obtain the best fit in the space available. Always keep in mind the need to leave enough space for a person to pass between units and wall and also for the air to circulate freely.
   (If more units are to be installed than are catered for in the above patterns your layout should take account of the possibility of short circuits).
4. The units should be installed to leave sufficient space at the front for the on site refrigerant piping work to be carried out comfortably.

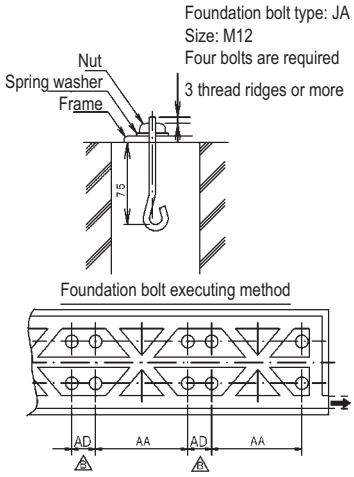
3D079542

12 Installation

12 - 2 Fixation and Foundation of Units

RXYQQ-T





Model	AA	AB	AC	AD
RXYQQ8-12T	766	992	113	185
RYYQQ14-20T	1076	1302		

NOTES

1. The proportions of cement:sand:gravel for the concrete shall be 1:2:4 and the reinforcement bars with a diameter of 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 wich the foundation is built shall have a 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 strenght shall be checked, and water-proofing measures shall be taken.

3D079547C

12 Installation

12 - 3 Refrigerant Pipe Selection

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (1/3)

Reference drawing see Page 2/3		Maximum piping length			Maximum height difference			Total Piping Length
		Longest pipe (A+[B,J]) Actual / (Equivalent)	After first branch (B,J) Actual	After first branch for outdoor multi (D) Actual / (Equivalent)	Indoor to outdoor (H1) outdoor above indoor / (indoor above outdoor)	Indoor to indoor (H2)	Outdoor to outdoor (H3)	
Standard Only VRV DX indoor connected Standard multi combination		120/(150)m	FXYS*K*	10/(13)m	50/(40)m	15m	5m	300m
AHU connection	Pair	50/(55)m(2)	-	-	40/(40)m	-	-	-

NOTES

For standard multi combinations; see 3D079534

(1) Extension is possible if all below conditions are met (limitation can be extended up to 90m)
   a. The piping length between all indoor to the nearest branch kit is ≤ 40m.
   b. It is necessary to increase the pipe size of the gas and liquid piping if the pipe length between the first and the final branch kit is over 40m
      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
   c. When the piping size is increased (b), the piping length has to be counted as double. The total piping length has to be within limitations (see table above).
   d. The piping length difference between the nearest indoor from first branch to the outdoor unit and farthest indoor to the outdoor unit is ≤ 40m

(2) The allowable minimum length is 5 m.

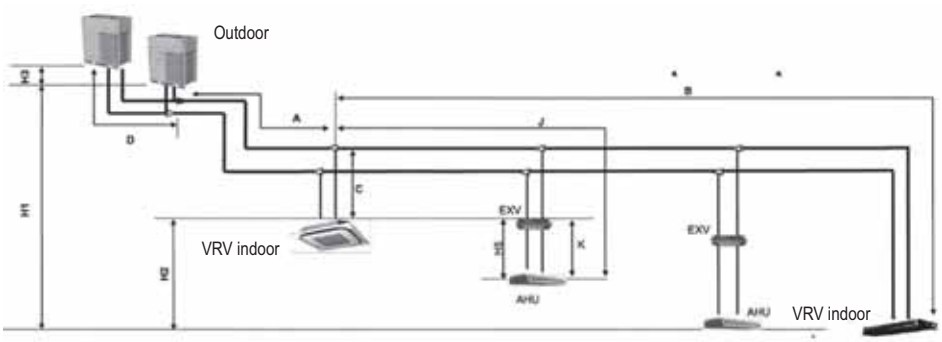
3D084965(1/3)

12 Installation

12 - 3 Refrigerant Pipe Selection

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (2/3)



NOTES

1. Schematic indication: illustrations may vary from real unit outlook.
2. Displayed system is only to illustrate piping length limitations ! Combination of displayed indoor unit types is not allowed. See 3D084966 for allowed combinations.

		Allowable piping length	Max. height difference
		EXV to AHU (K)	EXV to AHU (H5)
AHU connection	**Pair**	≤5m	5m

3D084965(2/3)

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (3/3)

System pattern Allowed connection ratio (CR) * Other combinations are N.A.	Total		Allowable capacity	
	capacity	Indoor unit quantity (VRV, RA, AHU, Hydrobox) (excl. BP box and EXV kits)	VRV DX indoor	AHU
Only VRV DX indoor	50~130%	Max. 64	50~130%	-
Only AHU (pair AHU)[3]	90~110%	1	-	90~110%

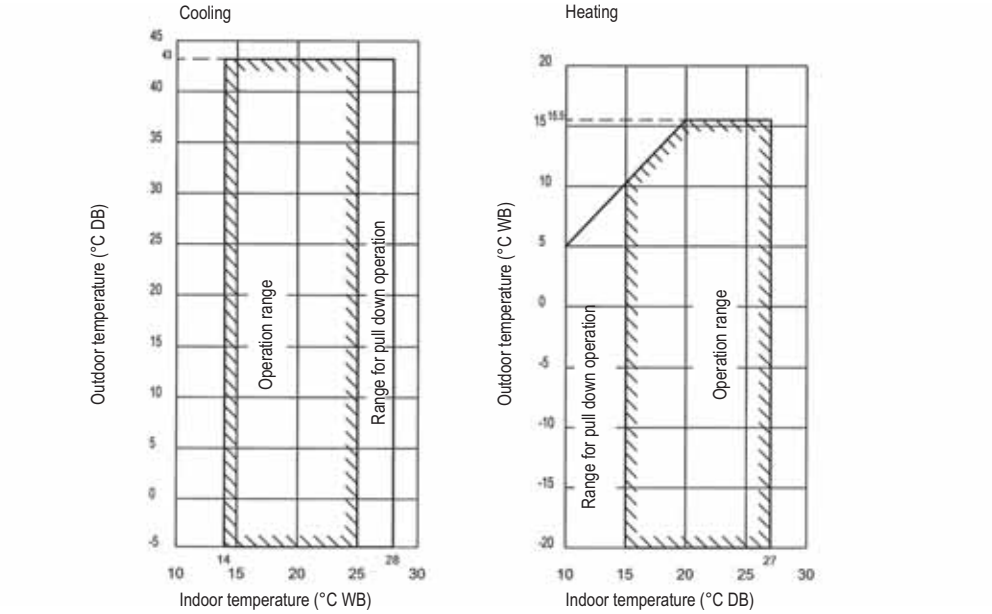
NOTES

1. When using AHU connection: see EKEXV kit as an indoor unit for counting the total number of indoor units
2. Restrictions by air handling unit capacity
3. Pair AHU = system with 1 AHU connected to one outdoor unit

3D084965(3/3)

13 Operation range

RXYQQ-T



NOTES

1. These figures assume the following operation conditions:
   Indoor and outdoor units:
   Equivalent pipe length: 5m
   Level difference: 0m
2. Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
3. To reduce the freeze-up operation (indoor de-icing) frequency it is recommended to install the outdoor unit in a location not exposed to wind.
4. Operation range is valid in case direct expansion indoor units are used. In case special indoor units are used, (eg. Hydrobox), refer to technical specs of dedicaded unit.

3D079544

These products are not within the scope of the Eurovent certification program

BARCODE

Daikin products are distributed by:

DAIKIN EUROPE N.V. Naamloze Vennootschap - Zandvoordestraat 300, B-8400 Oostende - Belgium - www.daikin.eu - BE 0412 120 336 - RPR Oostende

EEDEN14-202 • 09/13 • Copyright Daikin
The present publication supersedes EEDEN13-202