



# Air Conditioning Technical Data

VRV IV S-series heat pump



EEDEN16-200\_2

RXYSQ-TY1



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# 1 Features

## Space saving solution without compromising on efficiency

- Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units and Biddle air curtains
- Wide range of indoor units: either connect VRV or stylish indoor units such as Daikin Emura, Nexura ...
- Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors
- Customize your VRV for best seasonal efficiency & comfort with the weather dependant Variable Refrigerant Temperature function. Increased seasonal efficiency with up to 28%. No more cold draft by supply of high outblow temperatures
- VRV configurator software for the fastest and most accurate commissioning, configuration and customisation
- 3 steps in night quiet mode: step 1: 47dBA, step 2: 44 dBA, step 3: 41 dBA
- Possibility to limit peak power consumption between 30 and 80%, for example during periods with high power demand
- Connectable to all VRV control systems
- Keep your system in top condition via our i-Net service: 24/7 monitoring for maximum efficiency, extended lifetime, immediate service support thanks to failure prediction and a clear understanding of operability and usage



Inverter

## 2 Specifications

2-1 Technical Specifications				RXYSQ4TY1	RXYSQ5TY1	RXYSQ6TY1	RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1	
Capacity range			HP	4	5	6	8	10	12	
Cooling capacity	Nom.	35°CDB		kW	12.1 (1)	14.0 (1)	15.5 (1)	22.4 (1)	28.0 (1)	33.5 (1)
Heating capacity	Nom.	6°CWB		kW	12.1 (2)	14.0 (2)	15.5 (2)	22.4 (2)	28.0 (2)	33.5 (2)
	Max.	6°CWB		kW	14.2 (2)	16.0 (2)	18.0 (2)	25.0 (2)	31.5 (2)	37.5 (2)
Power input - 50Hz	Cooling	Nom.	35°CDB	kW	3.03 (1)	3.73 (1)	4.56 (1)	6.12 (1)	8.24 (1)	10.2 (1)
		Heating	Nom.	6°CWB	kW	2.68 (2)	3.27 (2)	3.97 (2)	5.20 (2)	6.60 (2)
		Max.	6°CWB	kW	3.43 (2)	4.09 (2)	5.25 (2)	6.22 (2)	8.33 (2)	10.2 (2)
Capacity control	Method			Inverter controlled						
EER at nom. capacity	35°C AHRI			kW/kW	4.00 (1)	3.75 (1)	3.40 (1)	3.66 (1)	3.40 (1)	3.30 (1)
COP at nom. capacity	6°CWB			kW/kW	4.52 (2)	4.28 (2)	3.90 (2)	4.31 (2)	4.24 (2)	4.09 (2)
COP at max. capacity	6°CWB			kW/kW	4.14 (2)	3.91 (2)	3.43 (2)	4.02 (2)	3.78 (2)	3.66 (2)
Maximum number of connectable indoor units				64 (3)						
Indoor index connection	Min.			50	62.5	70	100	125	150	
	Nom.			-						
	Max.			130	162.5	182	260	325	390	
Dimensions	Unit	Height	mm	1,345			1,430	1,615		
		Width	mm	900			940			
		Depth	mm	320				460		
	Packed unit	Height	mm	1,524			1,615	1,745		
		Width	mm	980			1,030	1,015		
		Depth	mm	420				575		
Weight	Unit		kg	104			144	175	180	
	Packed unit		kg	114			158	191	196	
Packing	Material			Carton						
	Weight			kg	3.9			5.6	8.2	
Packing 2	Material			Wood						
	Weight			kg	5.6			5.5	8.8	
Packing 3	Material			Plastic						
	Weight			kg	0.5			0.3	0.4	
Casing	Colour			Daikin White						
	Material			Painted galvanized steel plate						
Heat exchanger	Type			Cross fin coil						
	Fin	Treatment		Anti-corrosion treatment						
Compressor	Quantity			1						
	Type			Hermetically sealed swing compressor			Hermetically sealed scroll compressor			
	Crankcase heater			W	-			33		
	Model			Inverter						
Fan	Quantity			2						
	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	106			140	182	
	External static pressure	Max.		Pa	-					
	Discharge direction			Horizontal						
	Type			Propeller fan						
Fan motor	Quantity			2						
	Output			W	70			200		
	Model			Brushless DC motor						
Sound power level	Cooling	Nom.	dB(A)	68 (4)	69 (4)	70 (4)	73 (4)	74 (4)	76 (4)	
Sound pressure level	Cooling	Nom.	dB(A)	50 (5)	51 (5)		55 (5)		57 (5)	
Operation range	Cooling	Min.~Max.		°CDB	-5~46			-5~52		
	Heating	Min.~Max.		°CWB	-20~15.5					
Refrigerant	Type			R-410A						
	GWP			2,087.5						
	Charge	TCO <sub>2</sub> eq			7.5			9.4	14.6	16.7
		kg			3.6			4.5	7	8
Refrigerant oil	Type			Synthetic (ether) oil FVC50K			Synthetic (ether) oil FVC68D			
	Charged volume			l	1.4			2.6	3.2	3.4

## 2 Specifications

2

2-1 Technical Specifications				RXYSQ4TY1	RXYSQ5TY1	RXYSQ6TY1	RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1
Piping connections	Liquid	Type		Flare connection			Braze connection		
		OD	mm	9.52			12.7		
	Gas	Type		Flare connection			Braze connection		
		OD	mm	15.9			19.1	22.2	25.4
	Total piping length	System	Actual	m	-				
	Level difference	OU - IU	Outdoor unit in highest position	m	-				
			Indoor unit in highest position	m	-				
Heat insulation				Both liquid and gas pipes					
Piping length	OU - IU	Max.	m	300					
Defrost method				Reversed cycle					
Safety devices	Item	01		High pressure switch					
		02		Fan driver overload protector					
		03		Inverter overload protector					
		04		PC board fuse					
PED	Category			Category I			Category II		
	Most critical part	Name		Compressor			Accumulator		
		Ps*V	Bar*1	167			202	279	

Standard Accessories : Installation manual;

Standard Accessories : Operation manual;

Standard Accessories : Connection pipes;

2-2 Electrical Specifications				RXYSQ4TY1	RXYSQ5TY1	RXYSQ6TY1	RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1	
Power supply	Name		Y1							
	Phase		3N~							
	Frequency	Hz	50							
	Voltage	V	380-415							
Voltage range	Min.		%							
	Max.		%							
Current	Nominal running current (RLA) - 50Hz	Cooling	A	4.44 (6)	5.55 (6)	6.84 (6)	9.6 (6)	10.7 (6)	13.4 (6)	
Current - 50Hz	Zmax	List	No requirements						-	
	Minimum Ssc value		kVa	-			910	564	615	
	Minimum circuit amps (MCA)		A	14.1			18.5	22.0	24.0	
	Maximum fuse amps (MFA)		A	16			25		32	
	Total overcurrent amps (TOCA)		A	14.1 (7)			16.5 (7)	25.0 (7)	27.0 (7)	
	Full load amps (FLA)	Total	A	0.6			1.4			
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

### Notes

(1) Nominal cooling capacities are based on: indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent refrigerant piping: 5m, level difference: 0m. Data for standard efficiency series. Eurovent 2015 tolerances are used.

(2) Actual number of units depends on the indoor unit type (VRV DX indoor, RA DX indoor, etc.) and the connection ratio restriction for the system (being;  $50\% \leq CR \leq 130\%$ ).

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

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

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

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

(7) FLA: nominal running current fan

For detailed contents of standard accessories, see installation/operation manual

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

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

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

TOCA means the total value of each OC set.

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

Maximum allowable voltage range variation between phases is 2%.

Nominal heating capacities are based on: indoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m. Data for standard efficiency series. Eurovent 2015 tolerances are used.

FLA means the nominal running current of the fan

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  $Z_{sys} \leq Z_{max}$ , respectively  $S_{sc} \geq$  minimum  $S_{sc}$  value.

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  $\leq 75A$

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  $\leq 75A$  per phase

$S_{sc}$ : Short-circuit power

$Z_{sys}$ : system impedance

# 3 Options

## 3 - 1 Options

3

RXYSQ-TV1  
 RXYSQ-TV1  
 RXYSQ-TY1

Nr.	Item	RXYSQ4~5TMV1B	RXYSQ4~6T7V1B	RXYSQ4~6T7Y1B	RXYSQ8~12TMY1B	RXYSQ6T7Y1B9
I.	Refnet header	KHRQ22M29H				
		-	-	-	KHRQ22M64H	-
II.	Refnet joint	KHRQ22M20T				
		-	-	-	KHRQ22M29T9	-
		-	-	-	KHRQ22M64T	-
Ia.	Cool/heat selector (switch)	-	KRC19-26		-	KRC19-26
Ib.	Cool/heat selector (fixing box)	-	KJB111A		-	KJB111A
Ic.	Cool/heat selector (PCB)	-	EBRP2B	-	-	-
Id.	Cool/heat selector (cable)	-	-	EKCHSC	-	EKCHSC
2.	Drain plug kit	-	EKDK04		-	EKDK04
3.	VRV configurator	EKPCAB*				
4.	Demand PCB	DTA104A61/62*				
5.	Branch provider - 2 rooms	BPMKS967A2				-
6.	Branch provider - 3 rooms	BPMKS967A3				-

**Notes**

1. All options are kits
2. To mount option 1a, option 1b is required.
3. For RXYSQ4~6T7Y1B  
 To operate the cool/heat selector function, options 1a and 1c are both required.
4. For RXYSQ4~6T7Y1B  
 To operate the cool/heat selector function, options 1a and 1d are both required.

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# 4 Combination table

## 4 - 1 Combination Table

RXYSCQ-TV1  
 RXYSQ-TV1  
 RXYSQ-TY1

Configuration		Indoor unit type	
RA box + indoor unit	Wall-mounted	<i>Emura</i>	FTXG20L (W/S)
			FTXG25L (W/S)
			FTXG35L (W/S)
			FTXG50L (W/S)
		<i>FTXS</i>	FTXS20K
			FTXS25K
			FTXS35K
			FTXS42K
			FTXS50K
			FTXS60G
			FTXS71G
			CTXS15K
			CTXS35K
			<i>CTXS</i>
		Floor-standing	<i>Flex</i>
	FLXS35B		
	FLXS50B		
	FLXS60B		
	Ceiling-mounted		
	Floor-standing	<i>FVXS</i>	FVXS25F
			FVXS35F
			FVXS50F
			FVXS60F
		<i>Nexura</i>	FVXG25K
			FVXG35K
			FVXG50K
Duct	<i>FDXS</i>	FDXS25F	
		FDXS30F	
		FDXS50F9	
		FDXS60F	

Configuration		Indoor unit type	
SA box + indoor unit	Cassette	<i>Fully Flat 2x2</i>	FFQ25C
			FFQ35C
			FFQ50C
			FFQ60C
		<i>Roundflow 3x3</i>	FCQG35F
			FCQG50F
			FCQG60F
			FCQG71F
	Ceiling-suspended		FHQ35C
			FHQ50C
			FHQ60C
			FHQ71C
	Duct		FBQ35D
			FBQ50D
			FBQ60D
			FBQ71D

**Remark**

- The limitations on the use of RA/SA indoor units with the VRV4-S Heat Pump are subject to the rules set out in drawings 3D097983 and 3D097984.

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# 4 Combination table

## 4 - 1 Combination Table

4

**RXYSCQ-TV1**  
**RXYSQ-TV1**  
**RXYSQ-TY1**

Indoor unit combination pattern	VRV* DX box + indoor unit	RA DX box + indoor unit	Hydrobox unit	Air handling unit (AHU) <sup>(1)</sup>
VRV* DX box + indoor unit	O	X	X	O
RA DX box + indoor unit	X	O	X	X
Hydrobox unit <sup>(1)</sup>	X	X	X	X
Air handling unit (AHU)	O <sub>1</sub>	X	X	O <sub>1</sub>

O: Allowed  
 X: Not allowed

**Notes**

- O<sub>1</sub>
  - Combination of AHU only + control box EKEQFA (not combined with VRV DX indoor units)
    - X-control is possible (up to 3x [EKEV+EKEQFA\* boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
    - Y-control is possible (up to 3x [EKEV+EKEQFA\* boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
    - W-control is possible (up to 3x [EKEV+EKEQFA\* boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
  - Combination of AHU only + control box EKEQMA (not combined with VRV DX indoor units)
    - Z-control is possible (the allowed number of [EKEV + EKEQMA boxes] is determined by the connection ratio (90-110%) and the capacity of the outdoor unit.
- Combination of AHU and VRV DX indoor units
  - Z-control is possible ([EKEQMA\* boxes] are allowed, but with a limited connection ratio).
- <sup>(1)</sup> The following units are considered AHUs:
  - EKEV + EKEQ(MA/FA) + AHU coil
  - Biddle air curtain
  - FXMQ\_MF units

**Information**

- W/M units are considered to be regular VRV DX indoor units.

3D097983

**RXYSCQ-TV1**  
**RXYSQ-TV1**  
**RXYSQ-TY1**

Combination table	RXYSCQ4~5TMV1B	RXYSQ4~6T7V1B	RXYSQ4~6T7Y1B	RXYSQ8~12TMY1B
VRV* DX box + indoor unit	O	O	O	O
RA DX box + indoor unit	O	O	O	O
Hydrobox unit	X	X	X	X
Air handling unit (AHU) <sup>(2)</sup>	O	O	O	O

O: Allowed  
 X: Not allowed

**Notes**

- <sup>(2)</sup> The following units are considered AHUs:
  - EKEV + EKEQ(MA/FA) + AHU coil
  - Biddle air curtain
  - FXMQ\_MF units

3D097983

8

## 5 Capacity tables

### 5 - 1 Capacity Table Legend

In order to fulfill more your requirements on quick access of data in the format you require, we have developed a tool to consult capacity tables.

Below you can find the link to the capacity table database and an overview of all the tools we have to help you select the correct product:

- Capacity table database: lets you find back and export quickly the capacity information you are looking for based upon unit model, refrigerant temperature and connection ratio.

→ <http://extranet.daikineurope.com/captab>

- E-data app: gives a complete overview of the Daikin products available in your country, with all engineering data and commercial info in your own language. Download the app now!

→ <https://itunes.apple.com/us/app/daikin-e-data/id565955746?mt=8>



- Selection software: allows you to do load calculations, equipment selections and energy simulations for our VRV, Daikin Altherma, refrigeration and applied systems products.

→ <http://extranet.daikineurope.com/en/software/downloads/default.jsp>

# 5 Capacity tables

## 5 - 2 Integrated Heating Capacity Correction Factor

5

RXYSQ-TV1  
 RXYSQ-TV1  
 RXYSQ-TY1

### Integrated heating capacity coefficient

The heating capacity tables do not take into account the capacity reduction in case of frost accumulation or defrost operation. The capacity values that take these factors into account, or in other words, the integrated heating capacity values, can be calculated as follows:

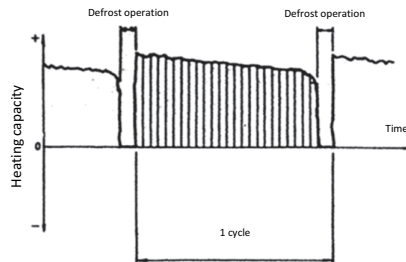
Formula

- A = Integrated heating capacity
- B = Capacity characteristics value
- C = Integrated correction factor for frost accumulation (see table)

$$A = B * C$$

Inlet air temperature of heat exchanger

[°CDB/°CWB]	-7/-7.6	-5/-5.6	-3/-3.7	0/-0.7	3/2.2	5/4.1	7/6
RXYSQ4TMV1B							
RXYSQ5TMV1B							
RXYSQ4TV1B							
RXYSQ5TV1B							
RXYSQ6TV1B	0,88	0,86	0,80	0,75	0,76	0,82	1,00
RXYSQ4TY1B							
RXYSQ5TY1B							
RXYSQ6TY1B							
RXYSQ6TY1B9							
RXYSQ8TMY1B	0,95	0,93	0,88	0,84	0,85	0,90	1,00
RXYSQ10TMY1B	0,95	0,93	0,87	0,79	0,80	0,88	1,00
RXYSQ12TMY1B	0,95	0,92	0,87	0,75	0,76	0,85	1,00



Notes

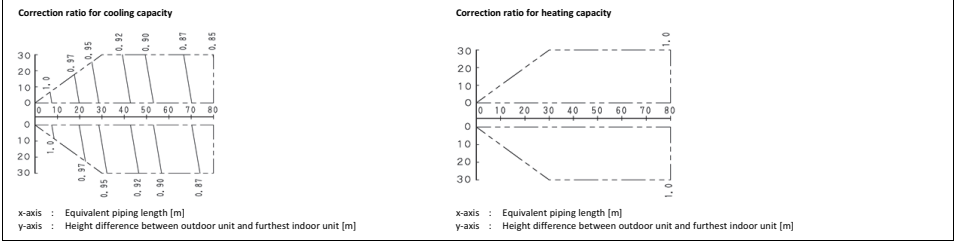
- (1) The figure shows the integrated heating capacity for a single cycle (from one defrost operation to the next).
- (2) When there is an accumulation of snow against the outdoor unit heat exchanger, there will always be a temporary reduction in capacity depending on the outdoor temperature (°C DB), relative humidity (RH) and the amount of frosting which occurs.

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# 5 Capacity tables

## 5 - 3 Capacity Correction Factor

**RXYSQ-TV1  
RXYSQ4-6TY1**



- Notes**
- These figures illustrate the capacity correction factor due to the piping length 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, as shown in the above figures.
  - With this outdoor unit, the following control is used:
    - in case of cooling: constant evaporating pressure control
    - in case of heating: constant condensing pressure control

**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 less.

**Indoor connection ratio ≤ 100%.**  
 Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at 100% connection ratio. × Correction ratio of piping to furthest indoor unit

**Indoor connection ratio > 100%.**  
 Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio. × Correction ratio of piping to furthest indoor unit

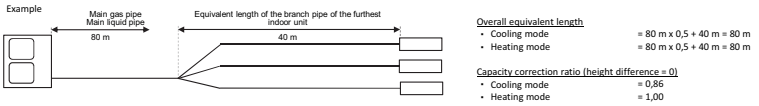
4. When the overall equivalent piping length is 90 m or more, the diameter of the main gas pipes (outdoor unit - branch sections) must be increased. For the new diameters, see below.

Model	Standard liquid side Ø	Increased liquid side Ø	Standard gas side Ø	Increased gas side Ø
4HP / SHP	9,5	Not increased	15,9	19,1
6 HP	9,5	Not increased	19,1	22,2

5. Overall equivalent length  
 Overall equivalent length = Equivalent length of the main pipe × Correction factor + Equivalent length of the branch pipes

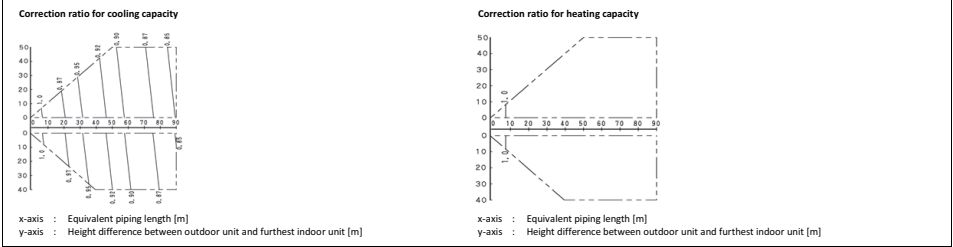
Choose the correction factor from the following table.  
 When calculating the cooling capacity: gas pipe size  
 When calculating the heating capacity: liquid pipe size

	Standard size	Size increase
Cooling (gas pipe)	1,0	0,5
Heating (liquid pipe)	1,0	0,5



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**RXYSQ8TY1**



- Notes**
- These figures illustrate the capacity correction factor due to the piping length 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, as shown in the above figures.
  - With this outdoor unit, the following control is used:
    - in case of cooling: constant evaporating pressure control
    - in case of heating: constant condensing pressure control

**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 less.

**Indoor connection ratio ≤ 100%.**  
 Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at 100% connection ratio. × Correction ratio of piping to furthest indoor unit

**Indoor connection ratio > 100%.**  
 Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio. × Correction ratio of piping to furthest indoor unit

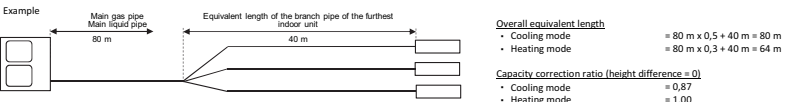
4. When the overall equivalent piping length is 90 m or more, the diameter of the main gas pipes (outdoor unit - branch sections) must be increased. For the new diameters, see below.

Model	Standard liquid side Ø	Increased liquid side Ø	Standard gas side Ø	Increased gas side Ø
RXYSQ8TY1B	9,5	12,7	19,1	22,2

5. Overall equivalent length  
 Overall equivalent length = Equivalent length of the main pipe × Correction factor + Equivalent length of the branch pipes

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

	Standard size	Size increase
Cooling (gas pipe)	1,0	0,5
Heating (liquid pipe)	1,0	0,3



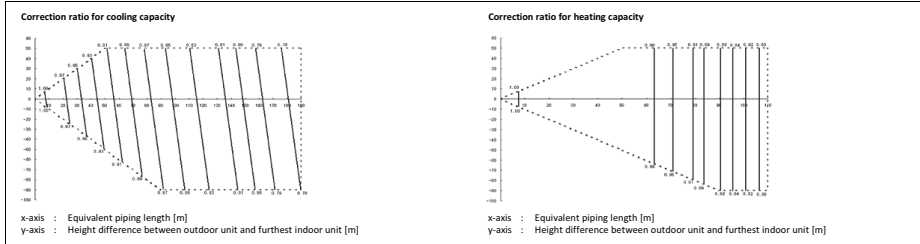
3D094660

# 5 Capacity tables

## 5 - 3 Capacity Correction Factor

5

### RXYSQ10TY1



**Notes**

1. These figures illustrate the capacity correction factor due to the piping length 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, as shown in the above figures.

2. With this outdoor unit, the following control is used:  
- in case of cooling: constant evaporating pressure control  
- in case of heating: constant condensing pressure control

**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 less.

**Indoor connection ratio ≤ 100%.**

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at 100\% connection ratio.} \times \text{Correction ratio of piping to furthest indoor unit}$$

**Indoor connection ratio > 100%.**

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio.} \times \text{Correction ratio of piping to furthest indoor unit}$$

4. When the overall equivalent piping length is 90 m or more, the diameter of the main gas pipes (outdoor unit - branch sections) must be increased. For the new diameters, see below.

Model	Standard liquid side Ø	Increased liquid side Ø	Standard gas side Ø	Increased gas side Ø
RXYSQ8TMY1B	9,5	12,7	22,2	25,4 *

\* If not available on-site, do not increase the piping diameter.  
If not increased, do not apply a correction factor to the equivalent piping length (see note 5).

**5. Overall equivalent length**

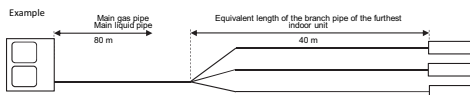
$$\text{Overall equivalent length} = \text{Equivalent length of the main pipe} \times \text{Correction factor} + \text{Equivalent length of the branch pipes}$$

Choose the correction factor from the following table.

When calculating the cooling capacity: gas pipe size

When calculating the heating capacity: liquid pipe size

	Standard size	Size increase
Cooling (gas pipe)	1,0	0,5
Heating (liquid pipe)	1,0	0,2



**Overall equivalent length**

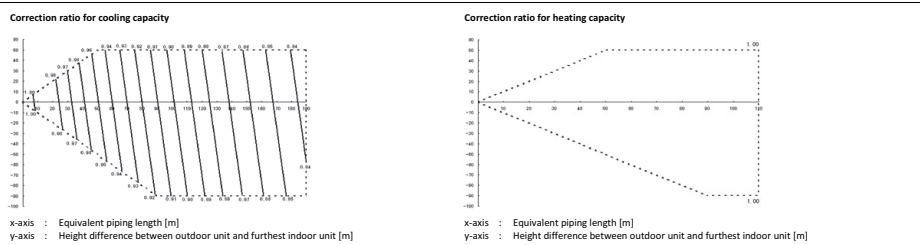
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,2 + 40 m = 56 m

**Capacity correction ratio (height difference = 0)**

- Cooling mode = 0,87
- Heating mode = 0,99

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### RXYSQ12TY1



**Notes**

1. These figures illustrate the capacity correction factor due to the piping length 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, as shown in the above figures.

2. With this outdoor unit, the following control is used:  
- in case of cooling: constant evaporating pressure control  
- in case of heating: constant condensing pressure control

**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 less.

**Indoor connection ratio ≤ 100%.**

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at 100\% connection ratio.} \times \text{Correction ratio of piping to furthest indoor unit}$$

**Indoor connection ratio > 100%.**

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio.} \times \text{Correction ratio of piping to furthest indoor unit}$$

4. When the overall equivalent piping length is 90 m or more, the diameter of the main gas pipes (outdoor unit - branch sections) must be increased. For the new diameters, see below.

Model	Standard liquid side Ø	Increased liquid side Ø	Standard gas side Ø	Increased gas side Ø
RXYSQ8TMY1B	12,7	15,9	25,4	28,6

**5. Overall equivalent length**

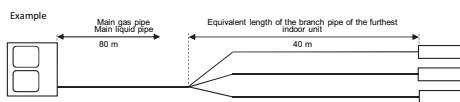
$$\text{Overall equivalent length} = \text{Equivalent length of the main pipe} \times \text{Correction factor} + \text{Equivalent length of the branch pipes}$$

Choose the correction factor from the following table.

When calculating the cooling capacity: gas pipe size

When calculating the heating capacity: liquid pipe size

	Standard size	Size increase
Cooling (gas pipe)	1,0	0,5
Heating (liquid pipe)	1,0	0,3



**Overall equivalent length**

- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,2 + 40 m = 64 m

**Capacity correction ratio (height difference = 0)**

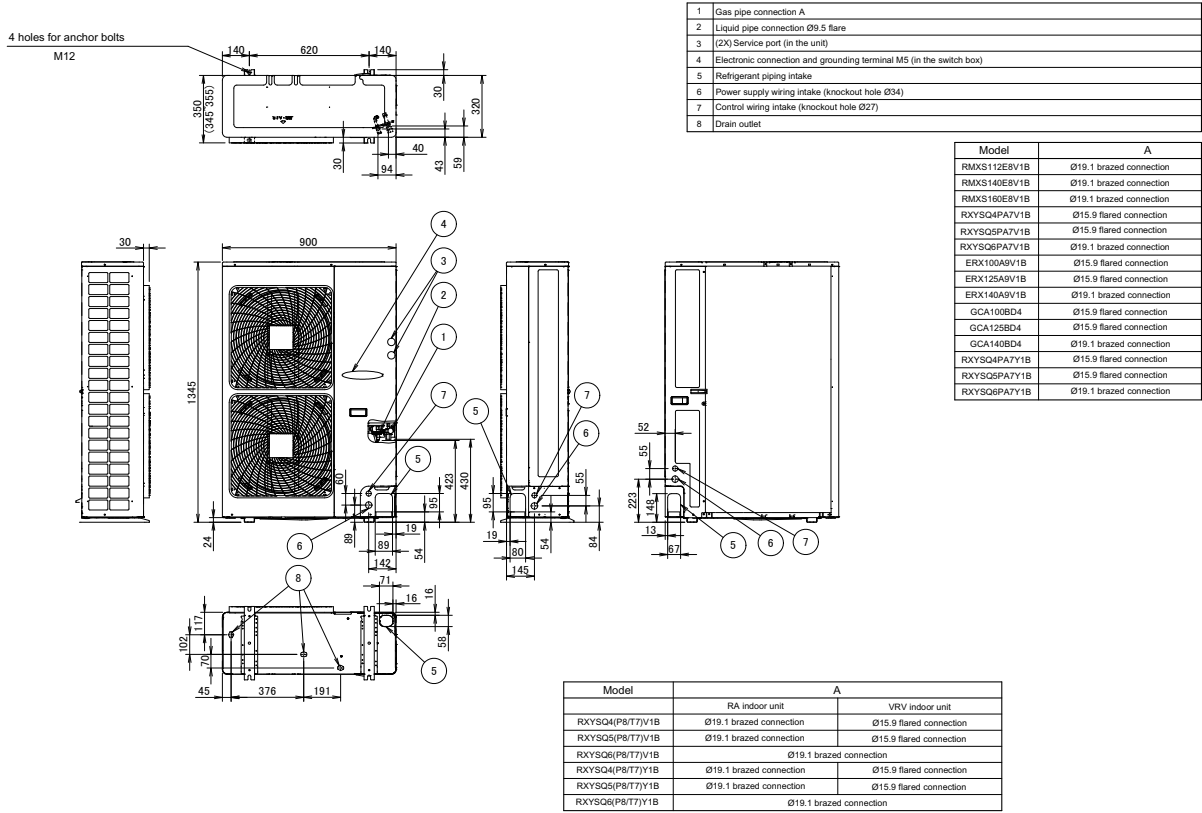
- Cooling mode = 0,92
- Heating mode = 1,00

3D094660

# 6 Dimensional drawings

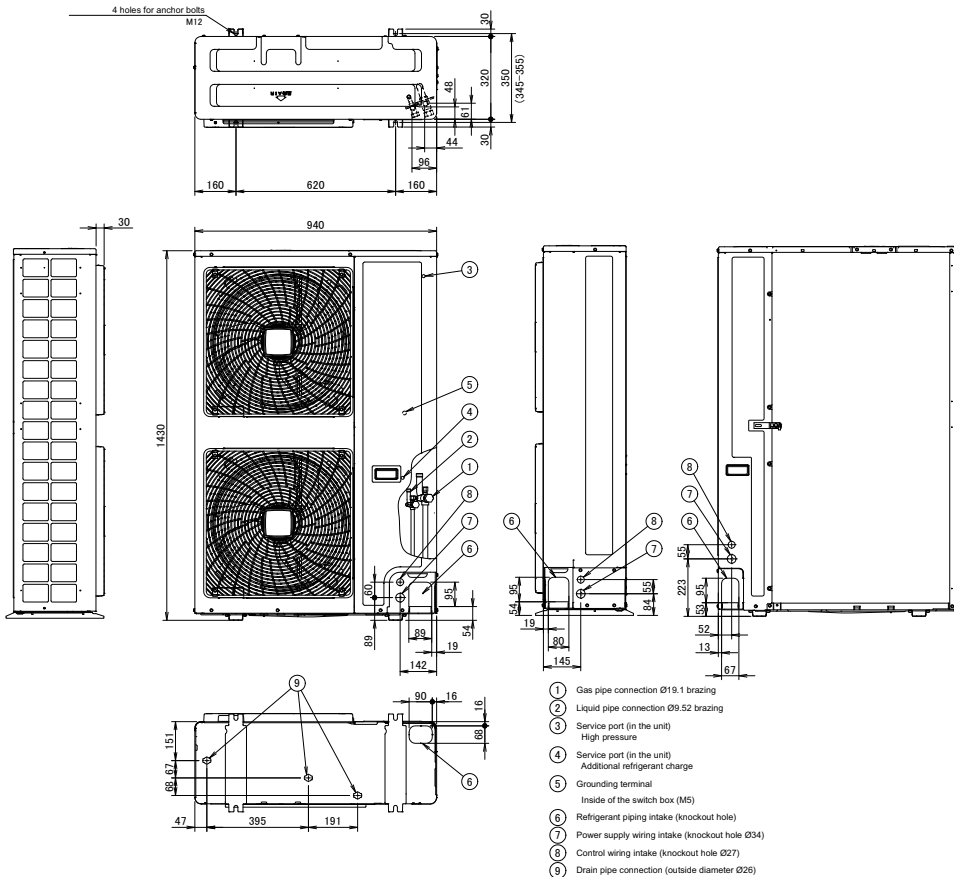
## 6 - 1 Dimensional Drawings

RXYSQ4-6TV1  
RXYSQ4-6TY1



3TW30374-1D

RXYSQ8TY1



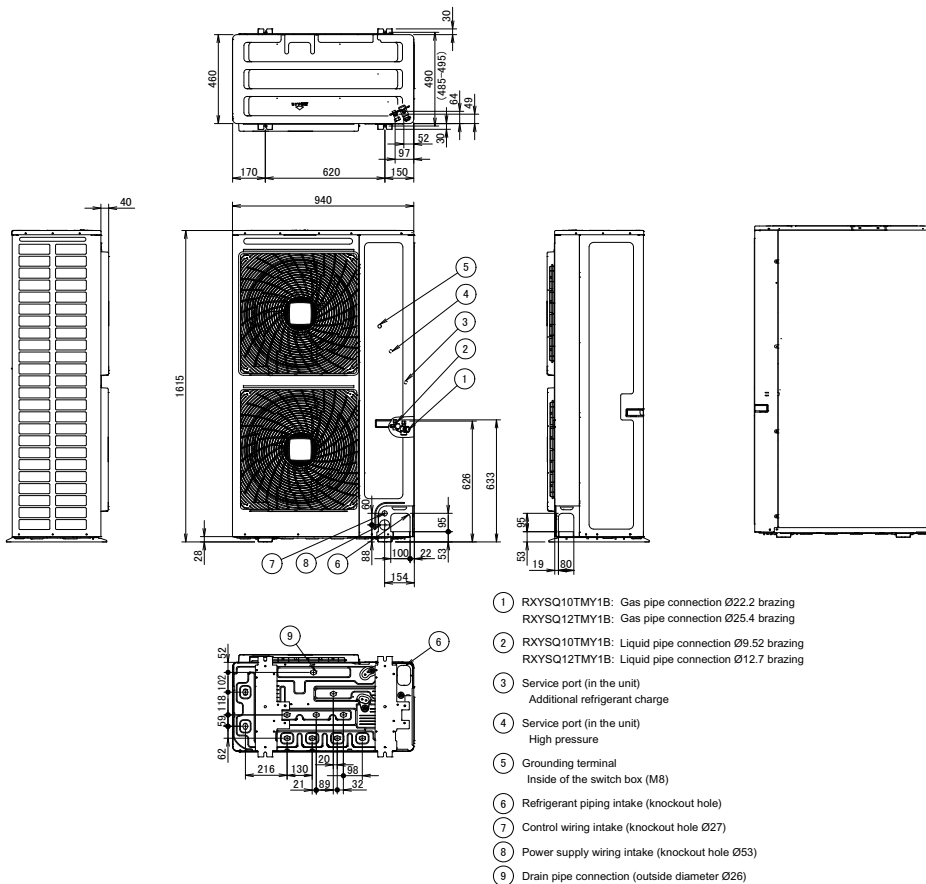
3D098108

# 6 Dimensional drawings

## 6 - 1 Dimensional Drawings

6

RXYSQ10-12TY1



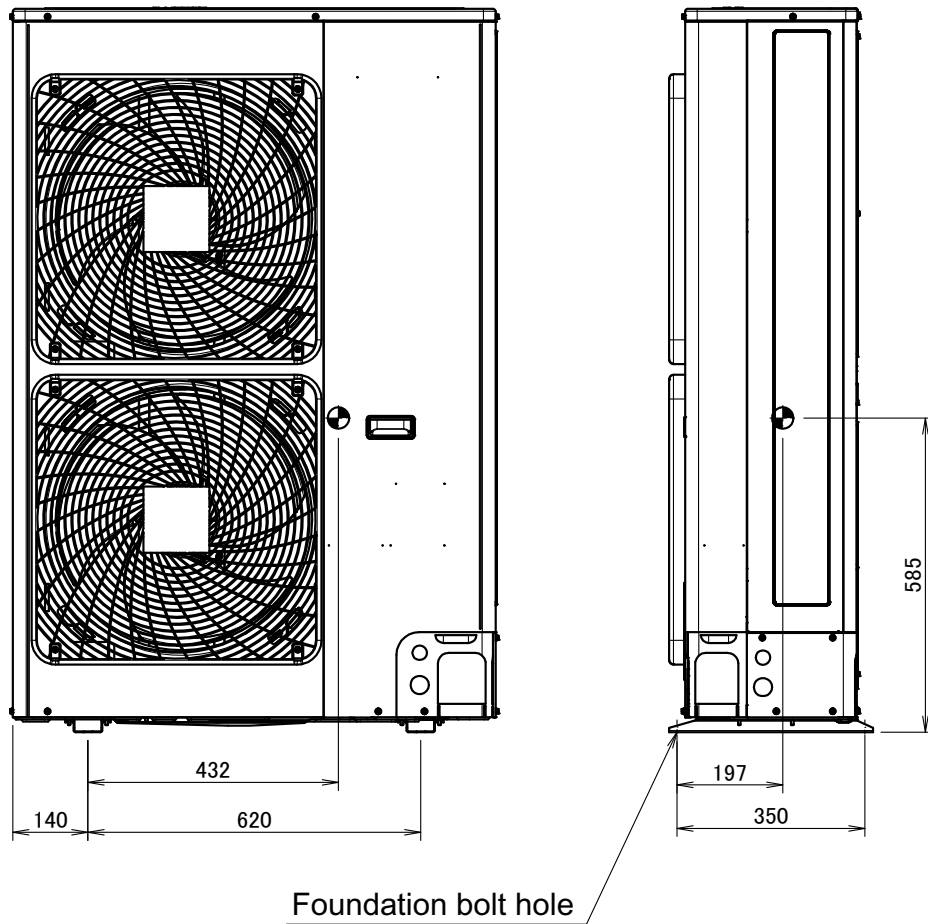
3D098109



## 7 Centre of gravity

### 7 - 1 Centre of Gravity

RXYSQ4-6TY1

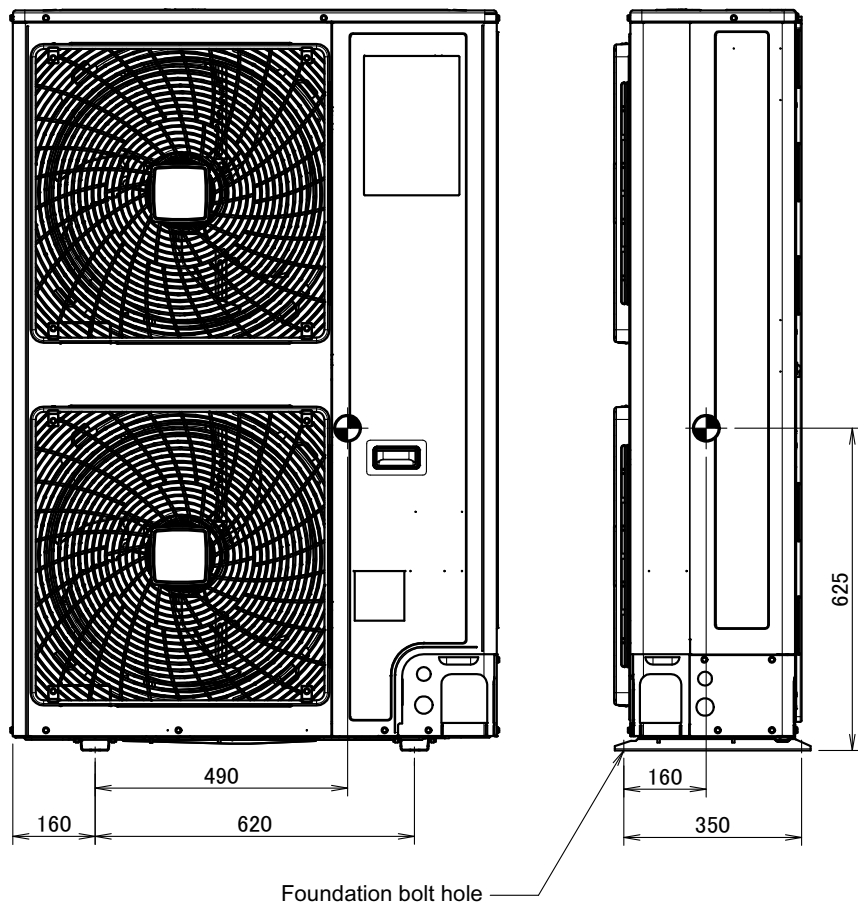


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## 7 Centre of gravity

### 7 - 1 Centre of Gravity

RXYSQ8TY1

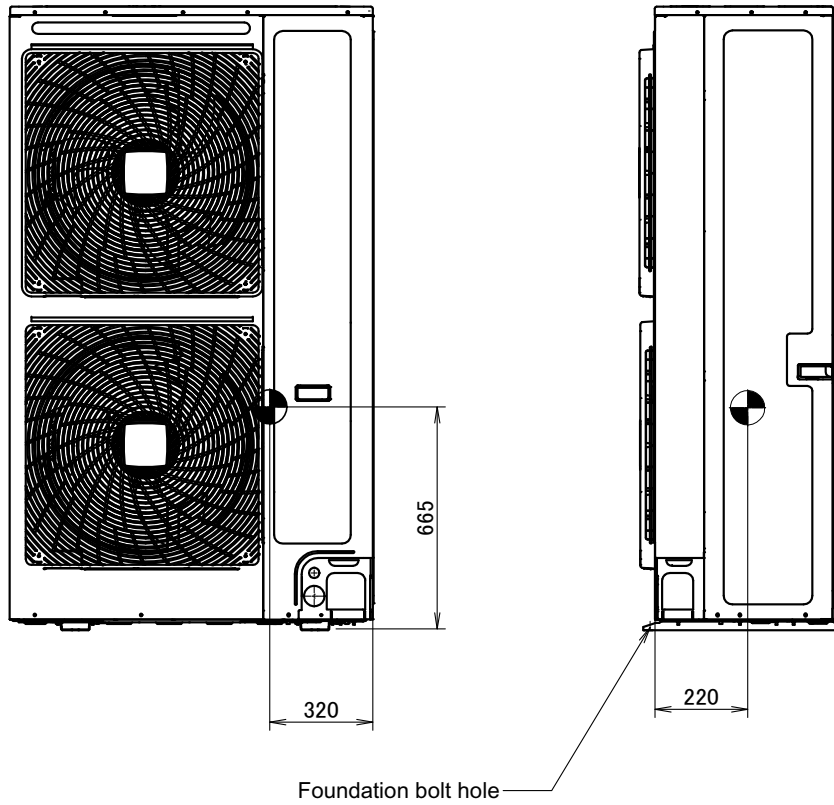


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# 7 Centre of gravity

## 7 - 1 Centre of Gravity

RXYSQ10-12TY1



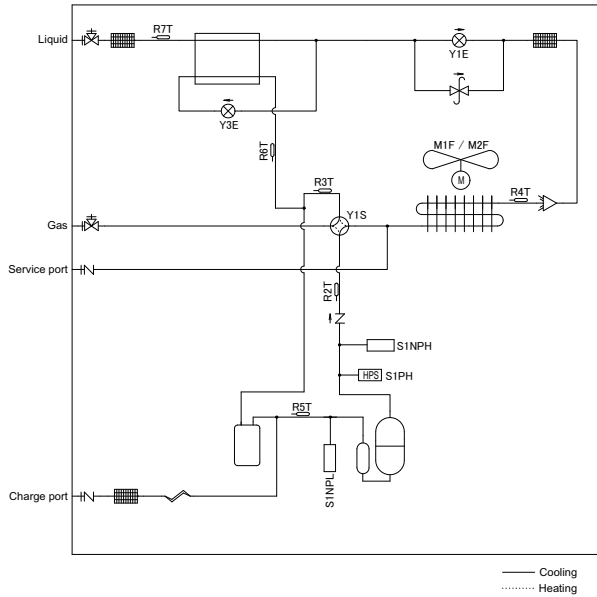
4D098085

# 8 Piping diagrams

## 8 - 1 Piping Diagrams

8

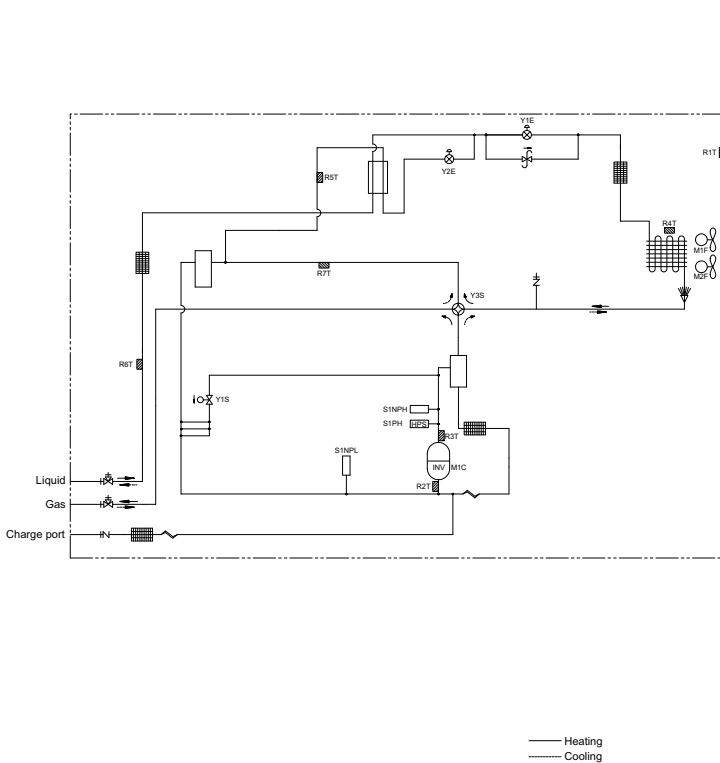
RXYSQ4-6TY1



- Charge port / Service port
- Stop valve
- Filter
- Check valve
- Pressure relief valve
- Thermistor
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Compressor-Accumulator
- Double tube heat exchanger
- Distributor

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RXYSQ8TY1



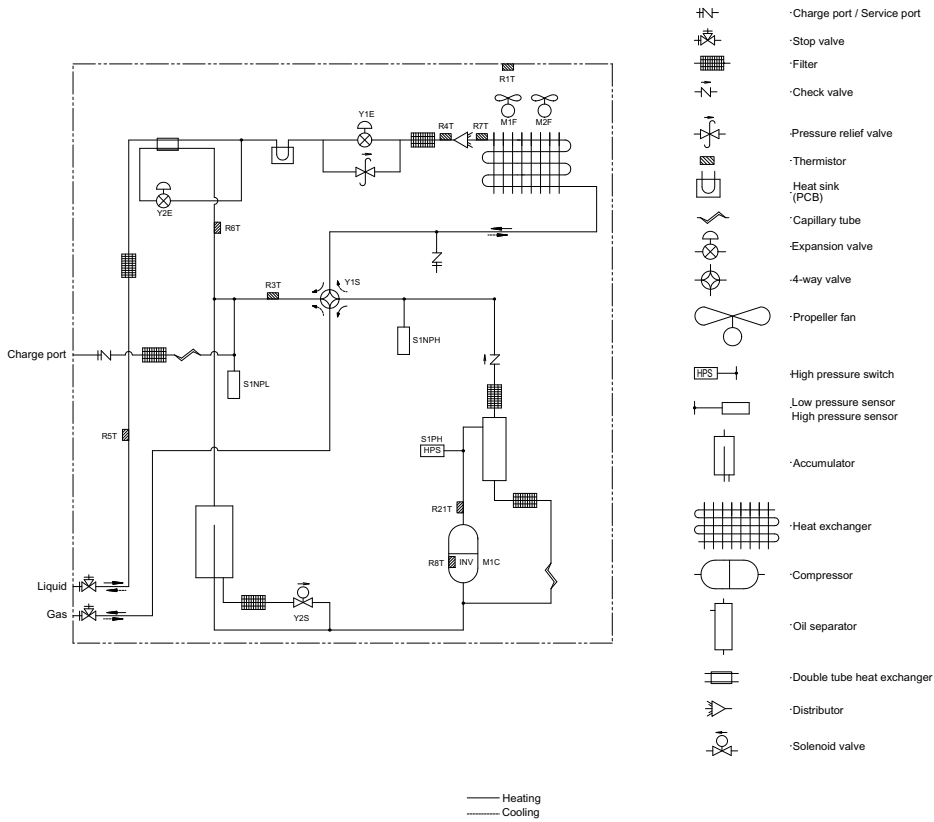
- Charge port / Service port
- Stop valve
- Filter
- Pressure relief valve
- Thermistor
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Oil separator
- Double tube heat exchanger
- Distributor
- Solenoid valve

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# 8 Piping diagrams

## 8 - 1 Piping Diagrams

RXYSQ10-12TY1



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# 9 Wiring diagrams

## 9 - 1 Wiring Diagrams - Three Phase

9

### RXYSQ4-6TY1

#### NOTES TO GO THROUGH BEFORE STARTING THE UNIT

- 1: Symbols  
 X1M : Main terminal  
 --- : Earth wiring  
 15 : Wire number 15  
 - - - - - : Field wire  
 - - - - - : Field cable  
 → \*\*/12.2 : Connection \*\* continues on page 12 column 2  
 ① : Several wiring possibilities



: Option



: Wiring depending on model



: Not mounted in switchbox



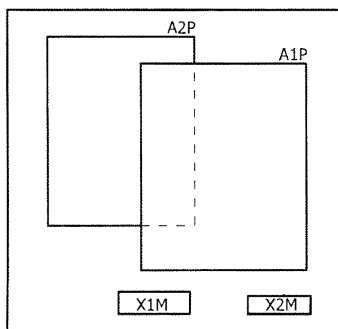
: PCB

- 2: For X37A refer to the installation manual of the option.  
 3: Refer to the installation or service manual on how to use BS1-BS4 push buttons and DS1-1 - DS1-2 DIP switches.  
 4: Do not operate the unit by short-circuiting protection device S1PH.  
 5: Refer to the installation manual for indoor-outdoor transmission F1-F2 wiring.  
 6: When using the central control system, connect outdoor-outdoor transmission F1-F2.

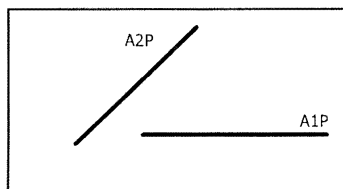
#### LEGEND

- \* : Optional  
 # : Field supply  
 A1P : Main PCB  
 A2P : filter PCB  
 BS\* (A1P) : Push buttons (Mode, set, return, test, reset)  
 C\* (A2P) : Capacitor  
 DS1 (A1P) : Dipswitch  
 F1U (A1P) : Fuse T31,5A 500V  
 F2U (A1P) : Fuse T31,5A 500V  
 F1U (A2P) : Fuse T5A 250V  
 F3U (A2P) : Fuse T6,3A 250V  
 F4U (A2P) : Fuse T6,3A 250V  
 F5U (A1P) : Fuse T6,3A 250V  
 HAP (A\*P) : running LED (Service monitor-green)  
 H\*P (A1) : LED (Service monitor-orange)  
 K11M (A2P) : Magnetic contactor  
 K\*R (A\*P) : Magnetic relay  
 L1R : Reactor  
 M1C : Motor (compressor)  
 M1F : Fan motor (upper)  
 M2F : Fan motor (lower)  
 PS (A2P) : POWER SUPPLY  
 Q1DI # : Earth leakage circuit breaker  
 R\* (A2P) : Resistor  
 R1T : Thermistor (Air)  
 R2T : Thermistor (Discharge)  
 R3T : Thermistor (Suction 1)  
 R4T : Thermistor (Heat exchanger)  
 R5T : Thermistor (Suction 2)  
 R6T : Thermistor (subcool heat exchanger)  
 R7T : Thermistor (Liquid)  
 R10T : Thermistor (Fin)  
 S1NPH : High pressure sensor  
 S1NPL : Low pressure sensor  
 S1PH : High pressure switch  
 S1S \* : Air control switch  
 S2S \* : Cool / heat switch  
 V1R (A2P) : IGBT power module  
 V2R (A2P) : Diode module  
 V3R (A2P) : Diode module  
 X37A : Connector (power supply for option PCB)  
 X\*A : PCB connector  
 X\*M : Terminal strip  
 X\*Y : Connector  
 Y1E : Electronic expansion valve (Main)  
 Y3E : Electronic expansion valve (Subcool)  
 Y1S : Solenoid valve (4-way valve)  
 Z\*C : Noise filter (ferrite core)  
 Z\*F : Noise filter

#### POSITION IN SWITCHBOX



front side



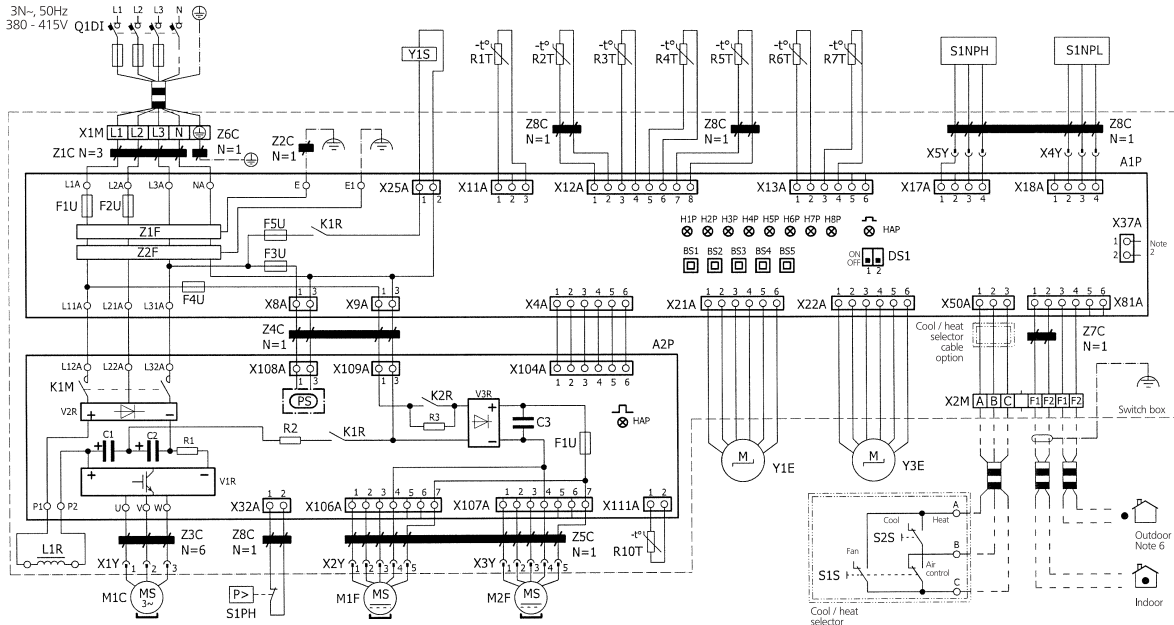
Upper side

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# 9 Wiring diagrams

## 9 - 1 Wiring Diagrams - Three Phase

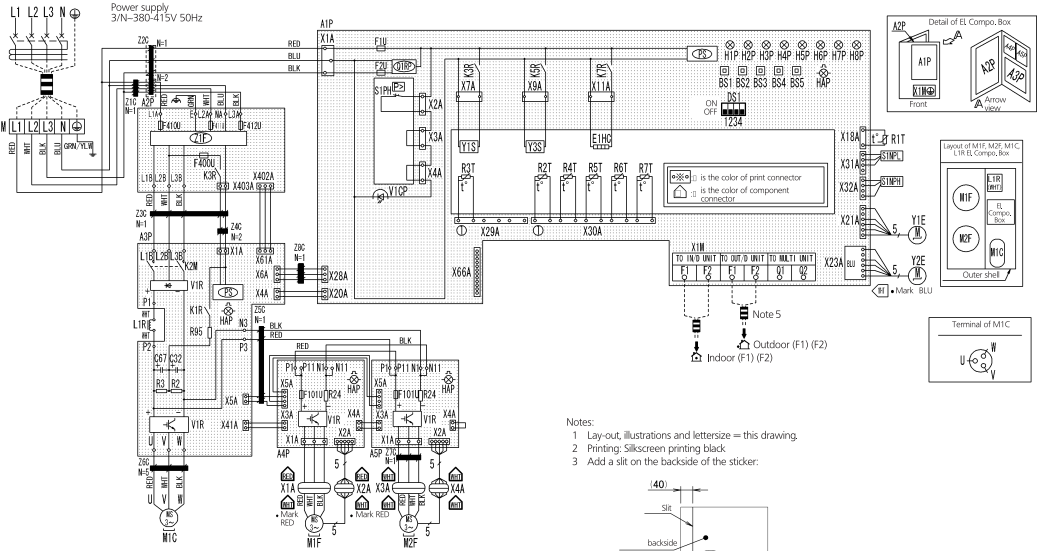
### RXYSQ4-6TY1



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### RXYSQ8TY1

- A1P : Printed circuit board (Main)
- A2P : Printed circuit board (Noise filter)
- A3P : Printed circuit board (INV)
- A4P : Printed circuit board (Fan 1)
- A5P : Printed circuit board (Fan 2)
- B51-B55 : Push button switch (Mode, set, return, test, reset)
- C3, C67 : Capacitor
- DS1 : Dip switch
- E1HC : Crankcase heater
- F10IU : Fuse (5A, DC650V) (A4P) (A5P)
- F1U, F2U : Fuse (T 3.15A / 250V) (A1P)
- F400U : Fuse (T 6.3A / 250V) (A2P)
- H1P-H8P : Pilot lamp (service monitor-orange) (H2P) Prepare, Test Malfunction Detection - Light up
- HAP : Pilotlamp (service monitor - green)
- K1R : Magnetic relay (A3P)
- K2M : Magnetic contactor (M1C) (A3P)
- K3R : Magnetic relay (A2P)
- K3R : Magnetic relay (Y1S)
- K5R : Magnetic relay (Y3S)
- K7R : Magnetic relay (E1HC)
- L1R : Reactor
- M1C : Motor (compressor)
- M1F, M2F : Motor (fan)
- PS : Switching power supply (A1P) (A3P)
- Q1RP : Reverse phase protector
- R24 : Resistor (current sensor) (A4P) (A5P)
- R2, R3 : Resistor
- R95 : Resistor (current limiting)
- R1T : Thermistor (Air)
- R2T : Thermistor (Suction)
- R3T : Thermistor (M1C Discharge)
- R4T : Thermistor (heat exchanger deicer)
- R5T : Thermistor (heat exchanger outlet)
- R6T : Thermistor (Liquid pipe)
- R7T : Thermistor (Accumulator)
- S1NPH : Pressure sensor (High)
- S1NPL : Pressure sensor (low)
- S1PH : High pressure switch
- V1CP : Safety devices input
- V1R : IGBT Module (A4P) (A5P)
- V1R : Diode bridge IGBT Module (A3P)
- X1A, X2A : Connector (M1F)
- X3A, X4A : Connector (M2F)
- X1M : Terminal strip (Power supply)
- X1M : Terminal strip (Control) (A1P)
- Y1E : Electronic expansion valve (Main)
- Y2E : Electronic expansion valve (Subcool)
- Y1S : Solenoid valve (hot gas)
- Y3S : Solenoid valve (4 way valve)
- Z1C-8C : Noise filter (ferrite core)
- Z1F : Noise filter (with surge absorber)



- Notes:
1. This wiring diagram only applies to the outdoor unit.
  2. Field wiring
  3. Terminal, Connector, Movable connector, Fixed connector, Terminal strip, Protective earth (screw), Noiseless earth
  4. Refer to the installation manual, for connection wiring to indoor-outdoor transmission F1 - F2, outdoor-outdoor transmission F1 - F2.
  5. Refer to 'installation manual' (on back front plate). How to use B51-B55 and DS1 switch.
  6. When operating, do not short circuit for protection device. (S1PH)
  7. Colours: BLK: Black, RED: Red, BLU: Blue, WHT: White, GRN: Green, BRN: Brown, YLW: Yellow

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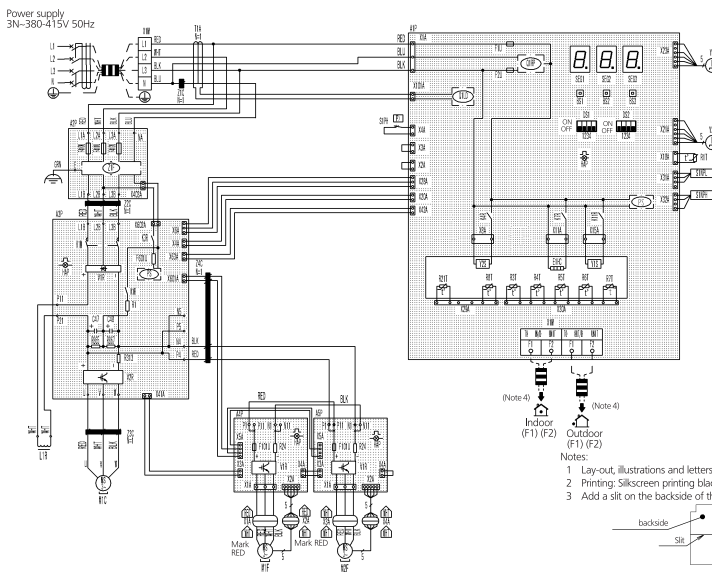
# 9 Wiring diagrams

## 9 - 1 Wiring Diagrams - Three Phase

9

### RXYSQ10-12TY1

- A1P : Printed circuit board (Main)
- A2P : Printed circuit board (Noise filter)
- A3P : Printed circuit board (INV)
- A4P : Printed circuit board (Fan 1)
- A5P : Printed circuit board (Fan 2)
- BS1-B3S : Push button switch (Mode, Set, Return)
- C47, C48 : Capacitor (A3P)
- DS1, DS2 : Dip switch (A1P)
- F1H : Crankcase heater
- F1U, F2U : Fuse (T 3.15A / 250V) (A1P)
- F101U : Fuse (A4P) (A5P)
- F411U-F412U : Fuse (A2P)
- F601U : Fuse (A3P)
- HAP : Pilotlamp (service monitor - green) (A1P) (A3P) (A4P) (A5P)
- K1M : Magnetic contactor (A3P)
- K1R : Magnetic relay (A3P)
- K3R : Magnetic relay (A3P)
- K4R : Magnetic relay (Y2S) (A1P)
- K7R : Magnetic relay (E1HC) (A1P)
- K11R : Magnetic relay (Y1S) (A1P)
- L1R : Reactor
- M1C : Motor (compressor)
- M1F, M2F : Motor (fan)
- PS : Switching power supply (A1P) (A3P)
- Q1LD : Leakage detection circuit (A1P)
- Q1RP : Phase reversal detect circuit (A1P)
- R1T : Thermistor (Air) (A1P)
- R21T : Thermistor (M1C Discharge)
- R3T : Thermistor (Accumulator)
- R4T : Thermistor (Heat exchanger liq. Pipe)
- R5T : Thermistor (Subcool liq. Pipe)
- R6T : Thermistor (Heat exchanger gas pipe)
- R7T : Thermistor (heat exchanger deicer)
- R8T : Thermistor (M1C body)
- R1 : Resistor (current limiting) (A3P)
- R24 : Resistor (current sensor) (A4P)
- R313 : Resistor (current sensor) (A3P)
- R865, R867 : Resistor (A3P)
- S1NPH : Pressure sensor (High)
- S1NPL : Pressure sensor (low)
- S1PH : High pressure switch
- SEG1-SEG3 : 7-segment display (A1P)
- T1A : current sensor
- V1R : Power module (A3P) (A4P) (A5P)
- V2R : Power module (A3P)
- X1A, X2A : Connector (M1F)
- X3A, X4A : Connector (M2F)
- X1M : Terminal block (Power supply)
- X1M : Terminal block (Control) (A1P)
- Y1E : Electronic expansion valve (Main)
- Y2E : Electronic expansion valve (injection)
- Y1S : Solenoid valve (Main)
- Y2S : Solenoid valve (Accumulator oil return)
- Z1C-Z4C : Noise filter (ferrite core)
- Z1F : Noise filter (with surge absorber) (A2P)



- Notes:
1. This wiring diagram only applies to the outdoor unit.
  2. : Field wiring : Terminal block, : Connector, : Terminal, : Protective earth (screw)
  3. Refer to the installation manual, for connection wiring to indoor-outdoor transmission F1 - F2, outdoor-outdoor transmission F1 - F2.
  4. How to use BS1-BS3 switch, refer to the installation manual.
  5. When operating, do not short circuit for protection device. (S1PH)
  6. Colours: BLK: Black, RED: Red, BLU: Blue, WHT: White, GRN: Green
- Notes:
- 1 Lay-out, illustrations and lettersize = this drawing.
  - 2 Printing: Silkscreen printing black
  - 3 Add a slit on the backside of the sticker.
- 4 Unspecified tolerances: +/- 1  
5 For material specifications refer to: AD150142

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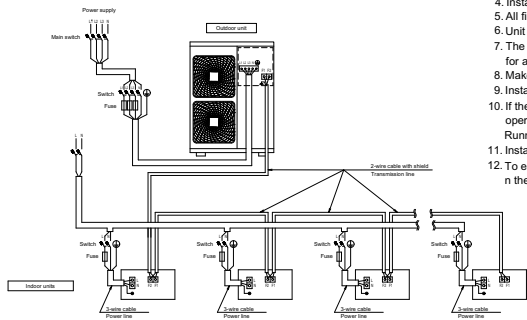
# 10 External connection diagrams

## 10 - 1 External Connection Diagrams

RXYSQ4-6TY1

### External connection diagram

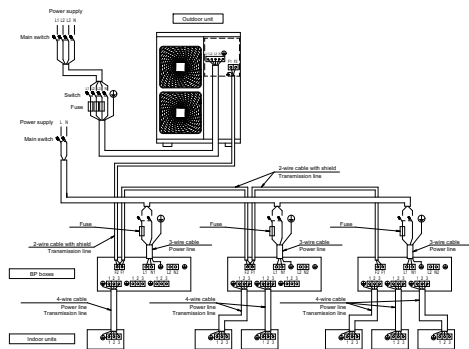
VRV indoor unit



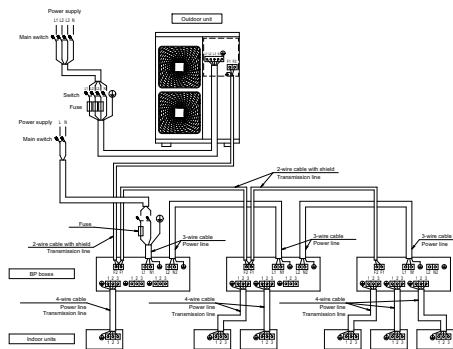
Notes

1. All wiring, components and materials to be procured on-site must comply with the applicable legislation.
2. Use copper conductors only.
3. For more details, refer to the wiring diagram of the unit.
4. Install a circuit breaker for safety.
5. All field wiring and components must be provided by an authorised electrician.
6. Unit has to be grounded in compliance with the applicable legislation.
7. The wiring shown is a general points-of-connection guide and is not intended to include all details for a specific installation.
8. Make sure to install the switch and the fuse to the power line of each equipment.
9. Install a main to switch to (if necessary) immediately interrupt all the system's power sources.
10. If there exists the possibility of reversed phase, loose phase or momentary blackout, or if the power goes on and off while the product is operating, attach a reversed phase protection circuit locally.
11. Running the product in reversed phase may break the compressor and other parts.
12. Install an earth leakage circuit breaker.
12. To ensure proper earthing, connect the shields of the incoming and outgoing transmission wiring of each indoor unit (or each BP box, depending on the system layout) to each other.

BP box + RA/SA indoor unit



Power source is supplied to each BP box individually.



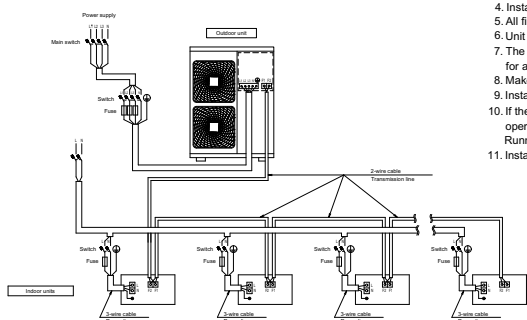
Power source is connected in series between the units.

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RXYSQ8-12TY1

### External connection diagram

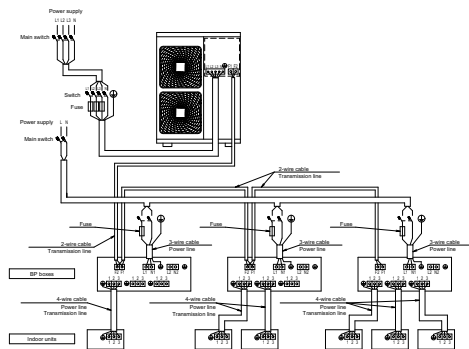
VRV indoor unit



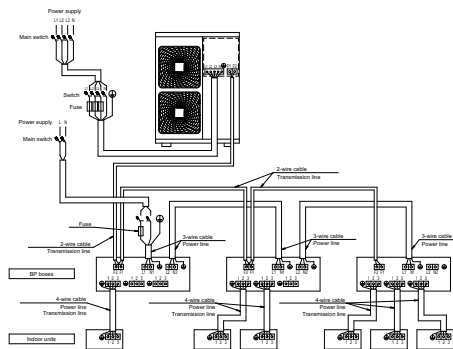
Notes

1. All wiring, components and materials to be procured on-site must comply with the applicable legislation.
2. Use copper conductors only.
3. For more details, refer to the wiring diagram of the unit.
4. Install a circuit breaker for safety.
5. All field wiring and components must be provided by an authorised electrician.
6. Unit has to be grounded in compliance with the applicable legislation.
7. The wiring shown is a general points-of-connection guide and is not intended to include all details for a specific installation.
8. Make sure to install the switch and the fuse to the power line of each equipment.
9. Install a main to switch to (if necessary) immediately interrupt all the system's power sources.
10. If there exists the possibility of reversed phase, loose phase or momentary blackout, or if the power goes on and off while the product is operating, attach a reversed phase protection circuit locally.
11. Running the product in reversed phase may break the compressor and other parts.
12. Install an earth leakage circuit breaker.

BP box + RA/SA indoor unit



Power source is supplied to each BP box individually.



Power source is connected in series between the units.

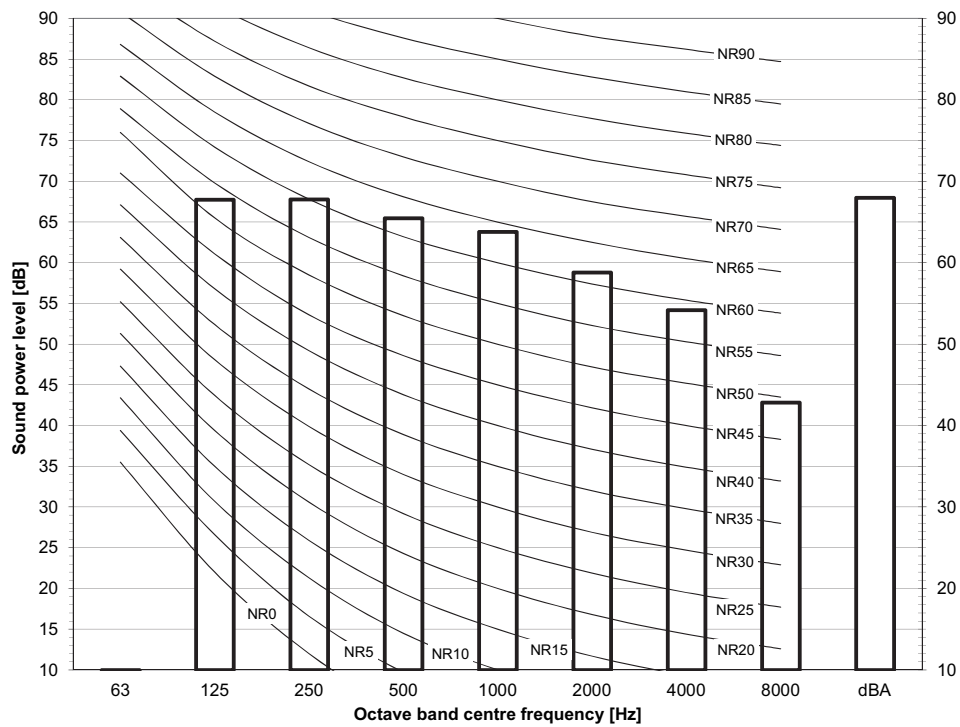
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# 11 Sound data

## 11 - 1 Sound Power Spectrum

11

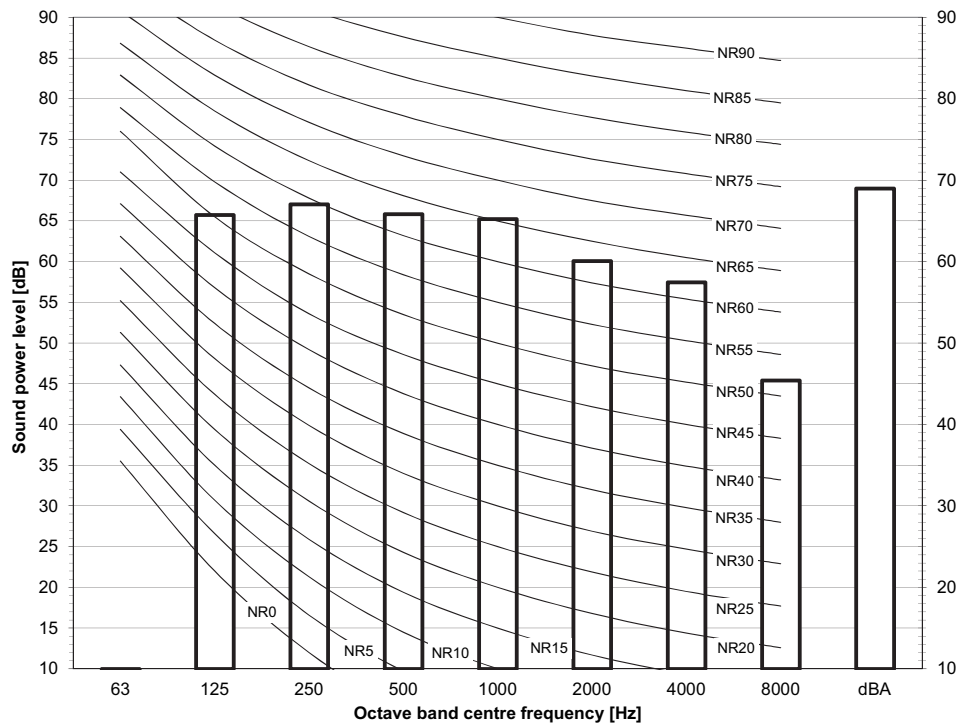
RXYSQ4TV1  
RXYSQ4TY1



Notes  
 - dBA = A-weighted sound power level (A scale according to IEC).  
 - Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$   
 - Measured according to ISO 3744

3D098212

RXYSQ5TV1  
RXYSQ5TY1

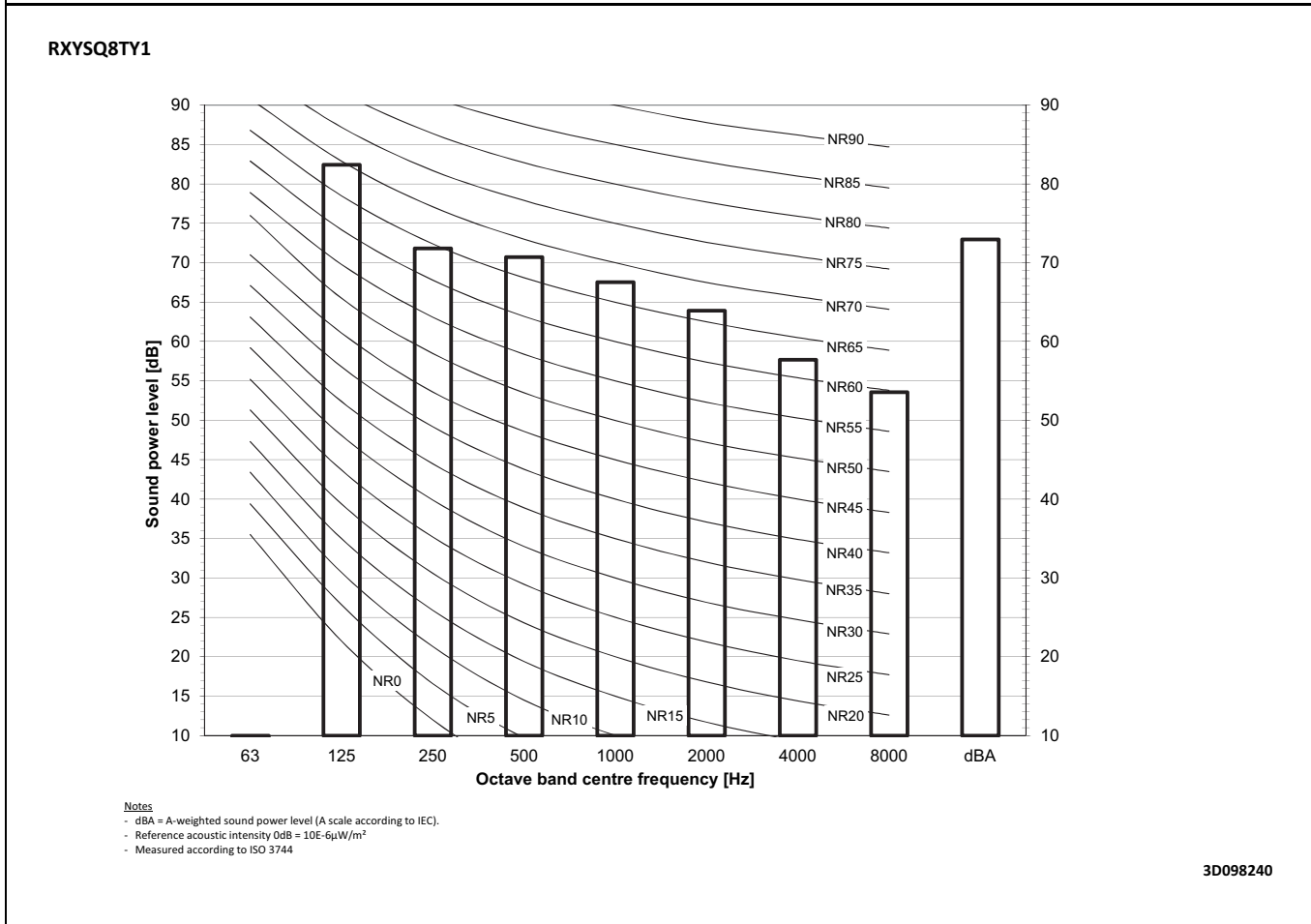
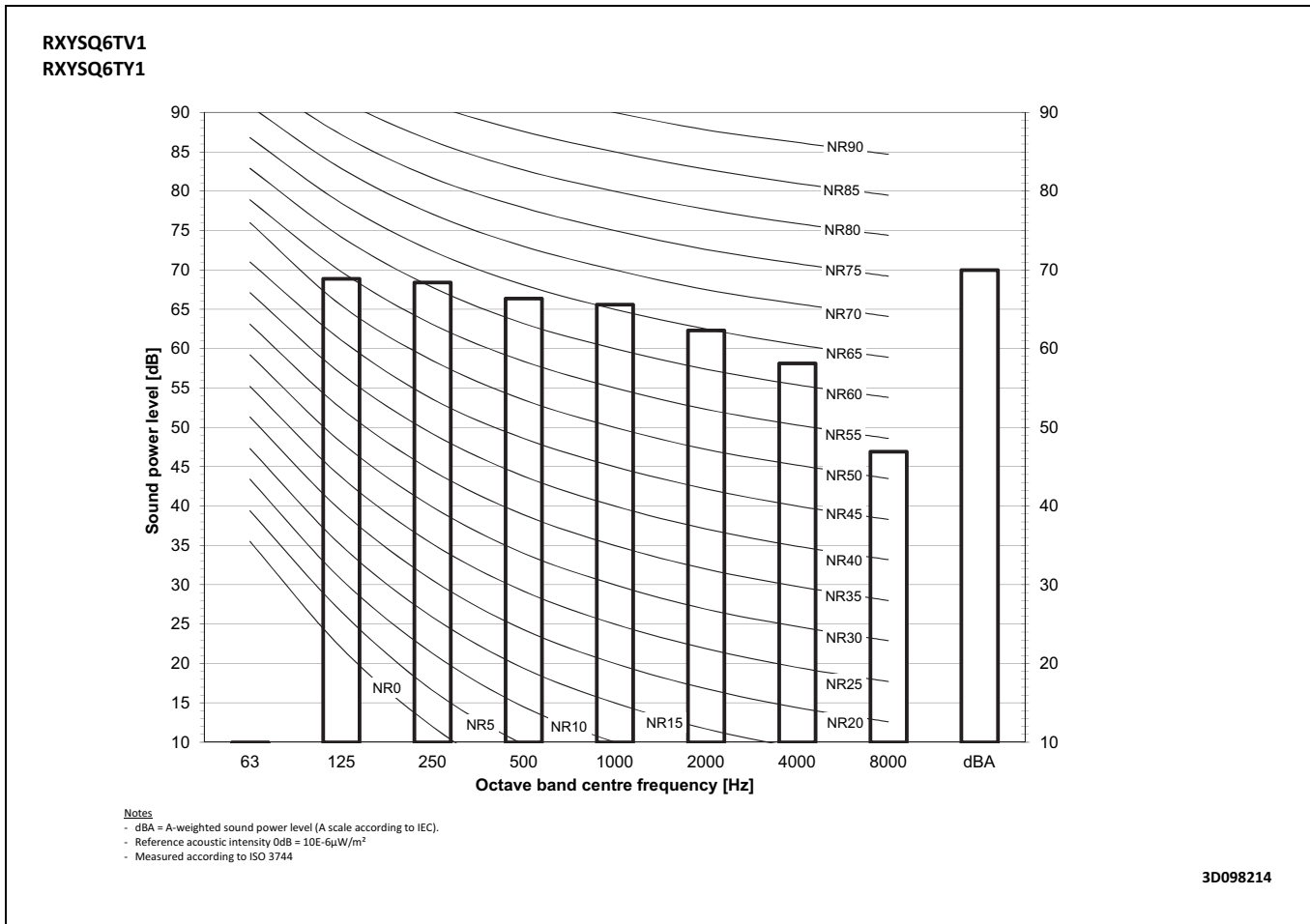


Notes  
 - dBA = A-weighted sound power level (A scale according to IEC).  
 - Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$   
 - Measured according to ISO 3744

3D098213

# 11 Sound data

## 11 - 1 Sound Power Spectrum

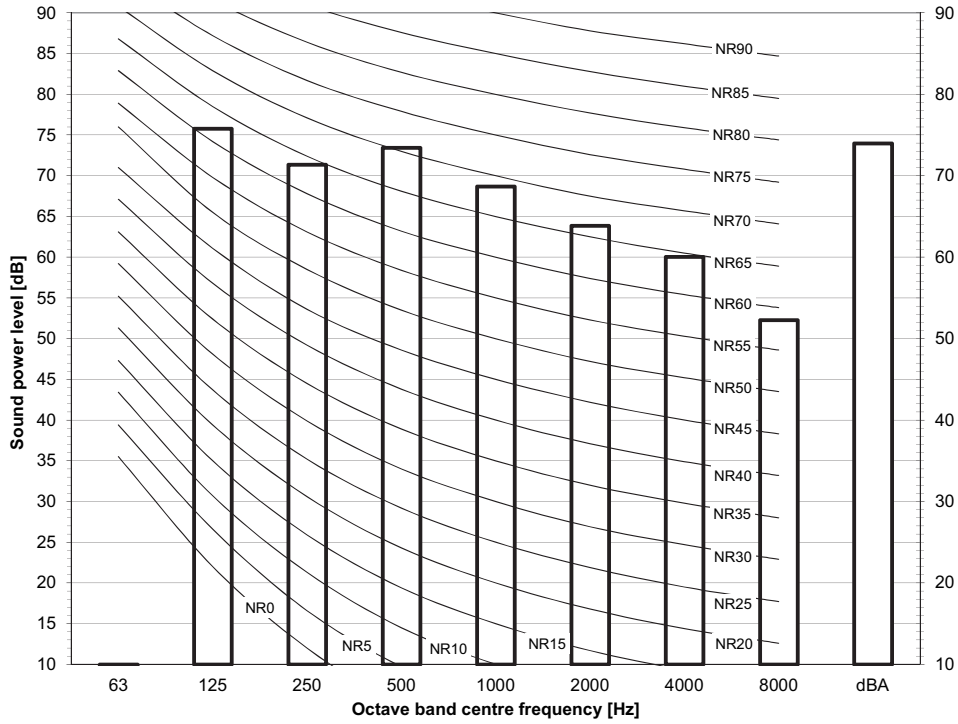


# 11 Sound data

## 11 - 1 Sound Power Spectrum

11

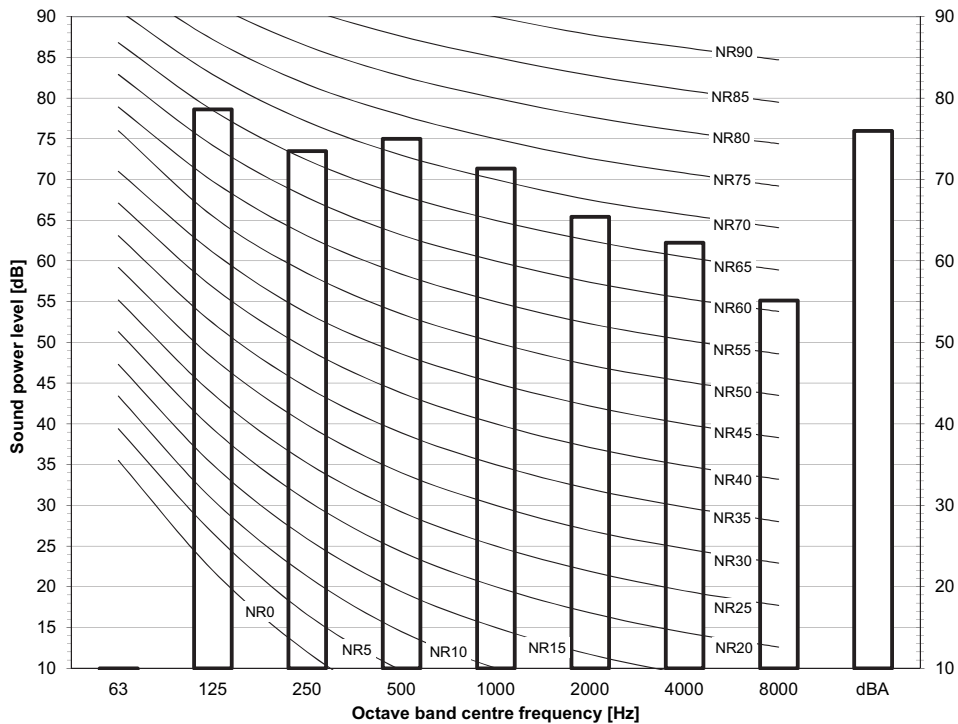
RXYSQ10TY1



Notes  
 - dBA = A-weighted sound power level (A scale according to IEC).  
 - Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$   
 - Measured according to ISO 3744

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RXYSQ12TY1



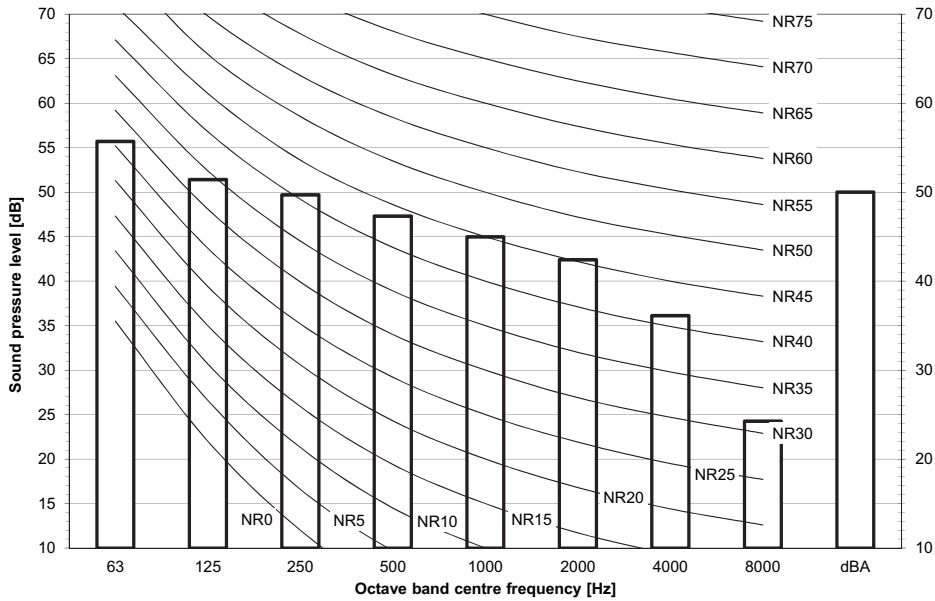
Notes  
 - dBA = A-weighted sound power level (A scale according to IEC).  
 - Reference acoustic intensity  $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$   
 - Measured according to ISO 3744

3D098242

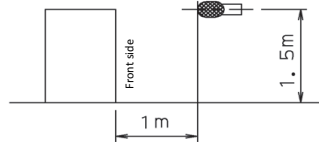
# 11 Sound data

## 11 - 2 Sound Pressure Spectrum

RXYSQ4TV1  
RXYSQ4TY1

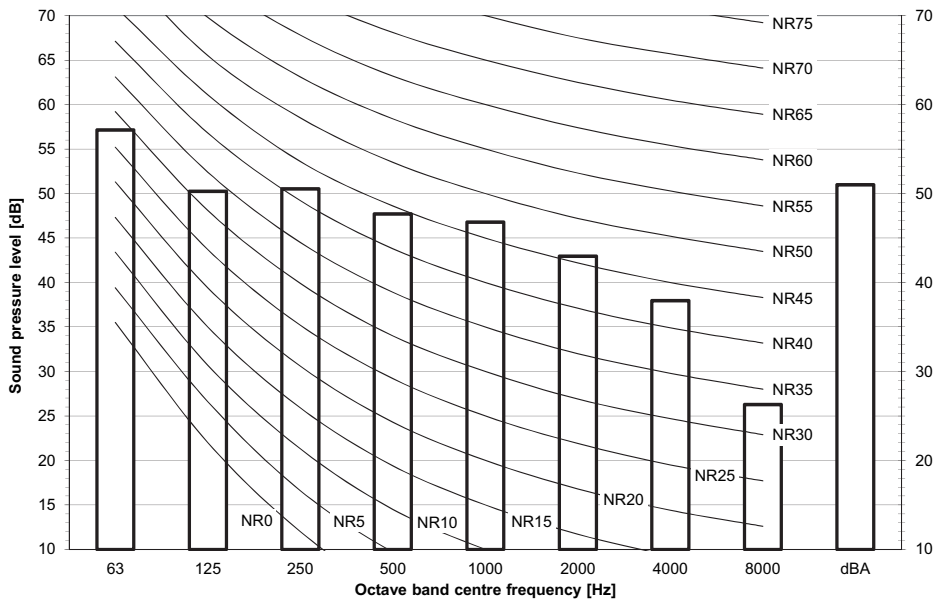


- Notes**
- Data is valid at free field condition.
  - Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Reference acoustic pressure 0 dB = 20 µPa

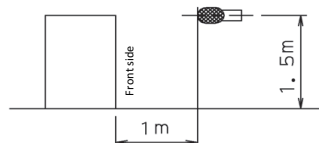


3D098215

RXYSQ5TV1  
RXYSQ5TY1



- Notes**
- Data is valid at free field condition.
  - Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Reference acoustic pressure 0 dB = 20 µPa



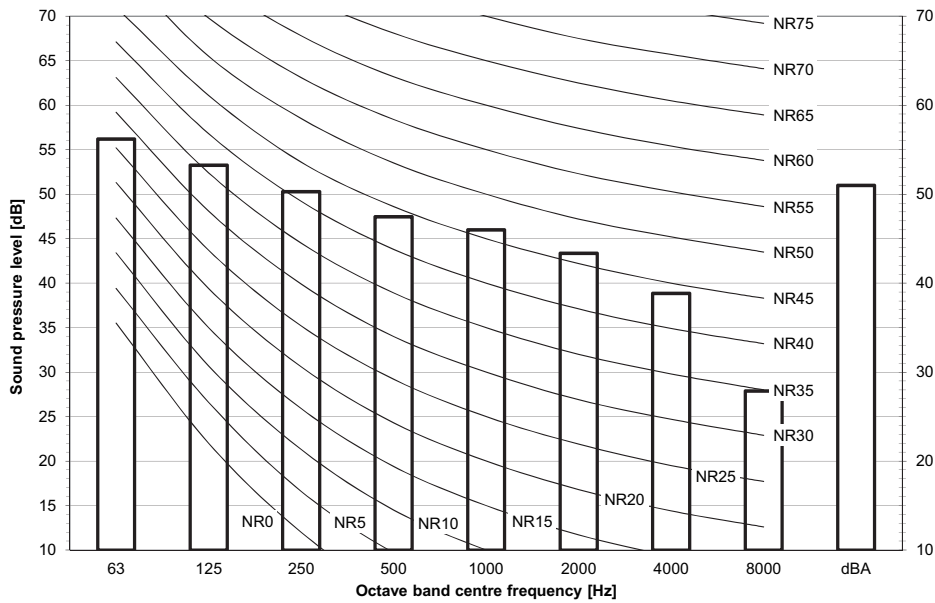
3D098216

# 11 Sound data

## 11 - 2 Sound Pressure Spectrum

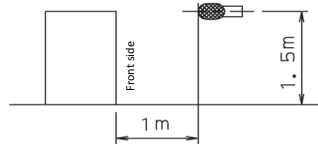
11

RXYSQ6TV1  
RXYSQ6TY1



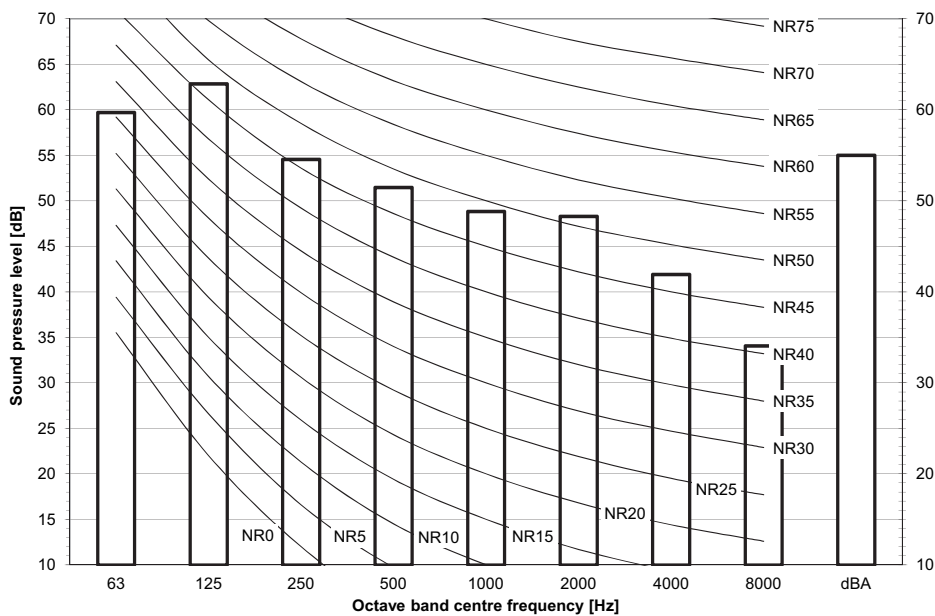
**Notes**

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa



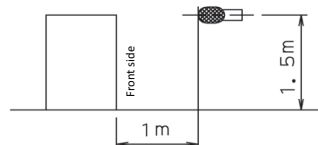
3D098217

RXYSQ8TY1



**Notes**

- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

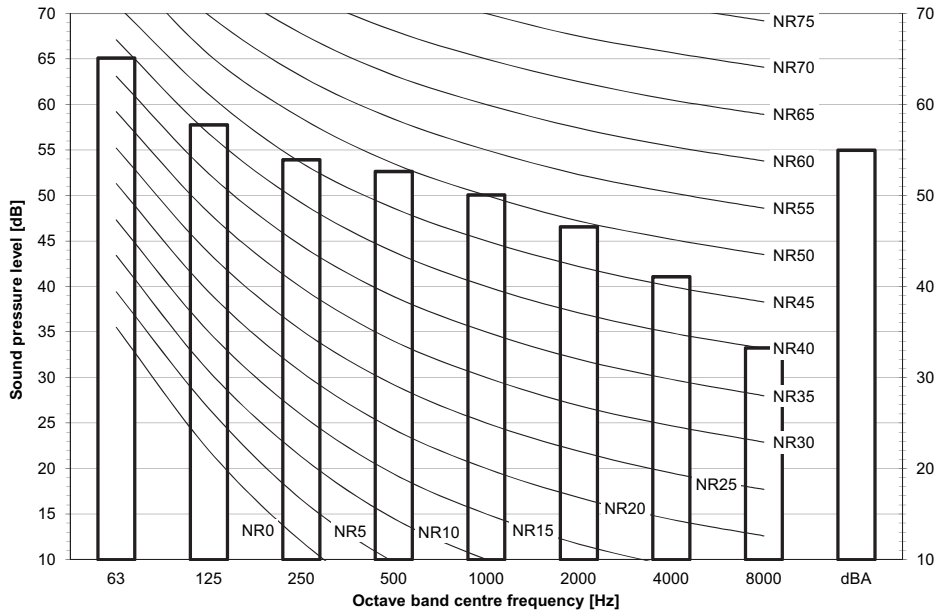


3D098245

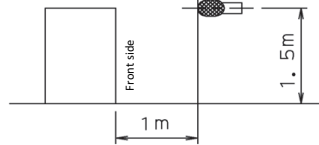
# 11 Sound data

## 11 - 2 Sound Pressure Spectrum

RXYSQ10TY1

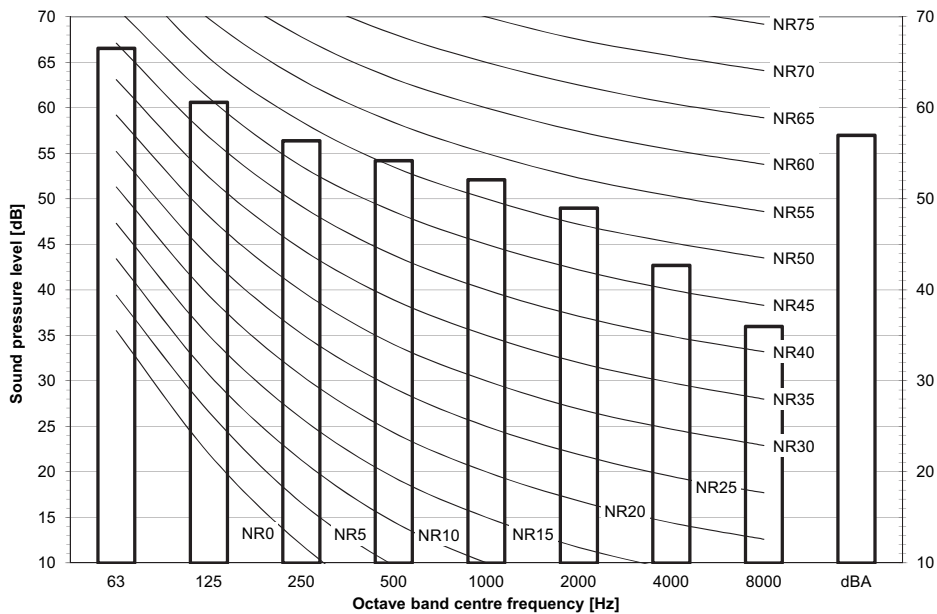


- Notes**
- Data is valid at free field condition.
  - Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Reference acoustic pressure 0 dB = 20 µPa

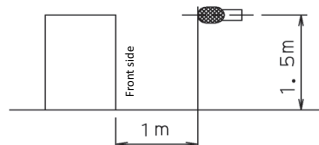


3D098246

RXYSQ12TY1



- Notes**
- Data is valid at free field condition.
  - Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Reference acoustic pressure 0 dB = 20 µPa



3D098247

# 12 Installation

## 12 - 1 Installation Method

12

### RXYSQ-TV1

### RXYSQ4-6TY1

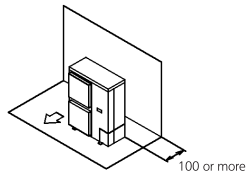
### Required installation space

The unit of the values is mm.

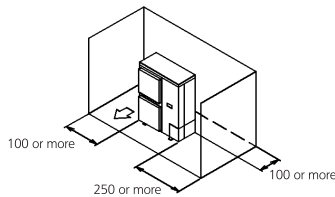
#### (A) When there are obstacles on suction sides.

##### • No obstacle above

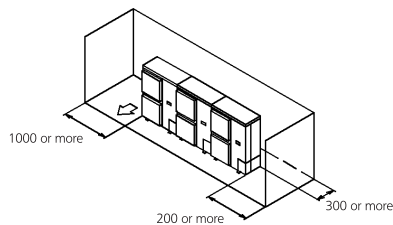
- ① Stand-alone installation
  - Obstacle on the suction side only



- Obstacle on both sides

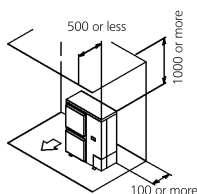


- ② Series installation (2 or more)
  - Obstacle on both sides

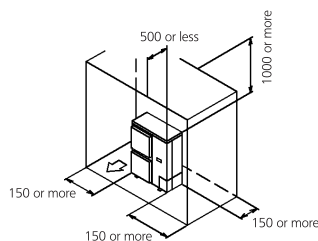


##### • Obstacle above, too.

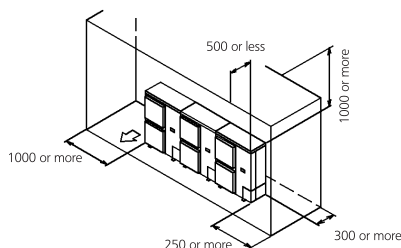
- ① Stand-alone installation
  - Obstacle on the suction side, too



- Obstacle on the suction side and both sides



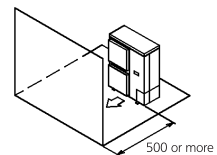
- ② Series installation (2 or more)
  - Obstacle on the suction side and both sides



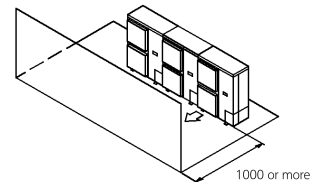
#### (B) When there are obstacles on discharge sides.

##### • No obstacle above

- ① Stand-alone installation

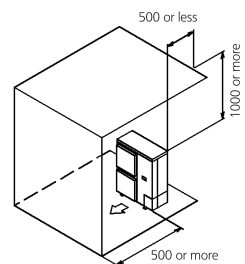


- ② Series installation (2 or more)

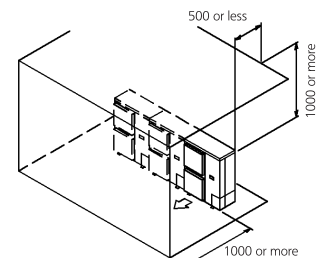


##### • Obstacle above, too

- ① Stand-alone installation



- ② Series installation (2 or more)



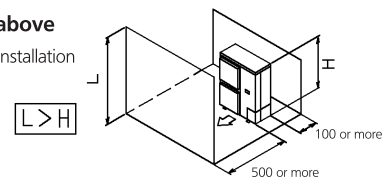
#### (C) When there are obstacles on both suction and discharge sides.:

##### Pattern 1

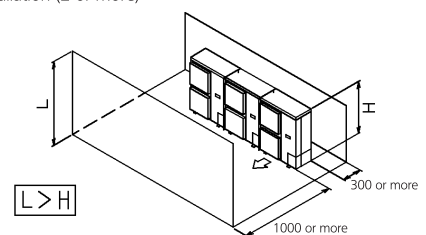
When the obstacles on the discharge side is higher than the unit.  
(There is no height limit for obstructions on the intake side.)

##### • No obstacle above

- ① Stand-alone installation



- ② Series installation (2 or more)



3D045696D



# 12 Installation

## 12 - 1 Installation Method

### RXYSQ-TV1 RXYSQ4-6TY1

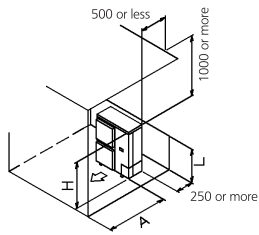
● **Obstacle above, too**

① Stand-alone installation

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

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

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

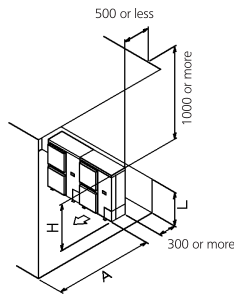


② Series installation (2 or more)

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

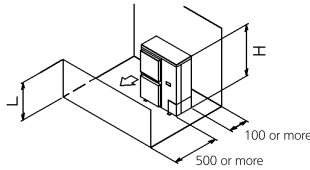
	L	A
$L \leq H$	$0 < L \leq 1/2 H$	1000
	$1/2 H < L \leq H$	1250
$H < L$	Set the stand as: $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.



**Pattern 2**

When the obstacle on the discharge side is lower than the unit:  
(There is no height limit for obstructions on the intake side.)



● **No obstacle above**

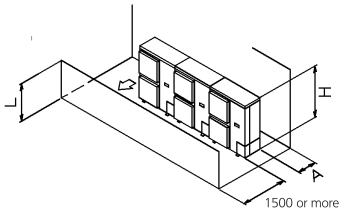
① Stand-alone installation

$L \leq H$

② Series installation (2 or more)

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

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



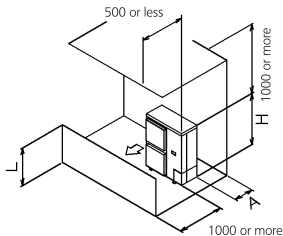
● **Obstacle above, too**

① Stand-alone installation

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

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

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



② Series installation

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

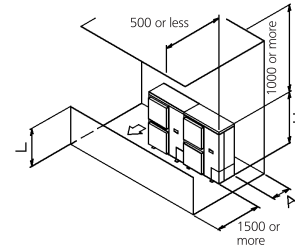
	L	A
$L \leq H$	$0 < L \leq 1/2 H$	250
	$1/2 H < L \leq H$	300
$H < L$	Set the stand as: $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.

**(D) Double-decker installation**

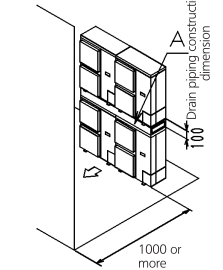
① Obstacle on the discharge side.

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit.



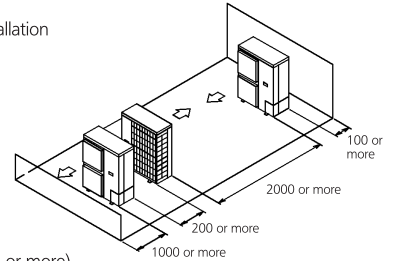
② Obstacle on the suction side.

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit.



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

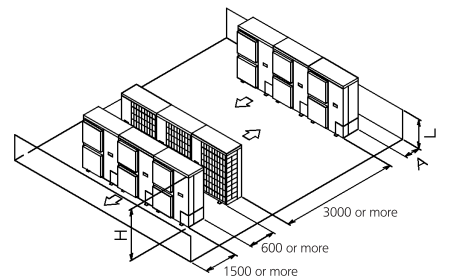
① One row of stand-alone installation



② Rows of series installation (2 or more)

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

	L	A
$L \leq H$	$0 < L \leq 1/2 H$	250
	$1/2 H < L \leq H$	300
$H < L$	Can not be installed	



3D045696D

# 12 Installation

## 12 - 1 Installation Method

12

### RXYSQ8TY1

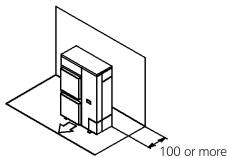
#### Required installation space

The unit of the values is mm.

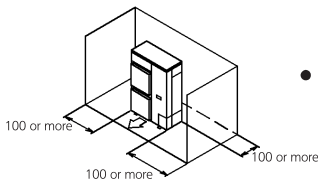
#### (A) When there are obstacles on suction sides.

##### • No obstacle above

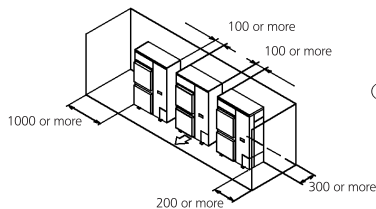
- ① Stand-alone installation
  - Obstacle on the suction side only



- Obstacle on both sides

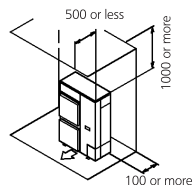


- ② Series installation (2 or more) (Note)
  - Obstacle on both sides

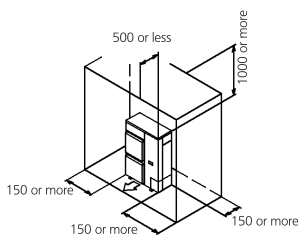


##### • Obstacle above, too.

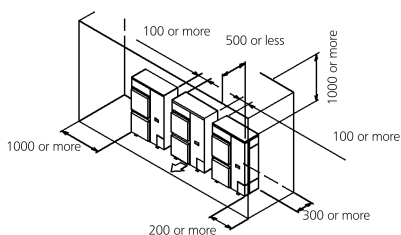
- ① Stand-alone installation
  - Obstacle on the suction side, too



- Obstacle on the suction side and both sides



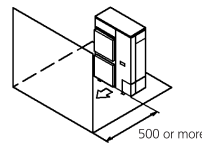
- ② Series installation (2 or more) (Note)
  - Obstacle on the suction side and both sides



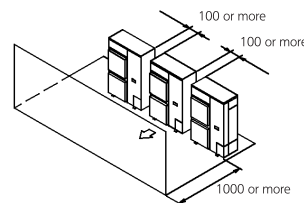
#### (B) When there are obstacles on discharge sides.

##### • No obstacle above

- ① Stand-alone installation

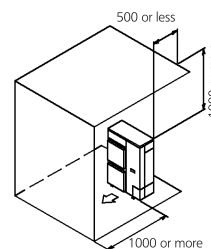


- ② Series installation (2 or more) (Note)

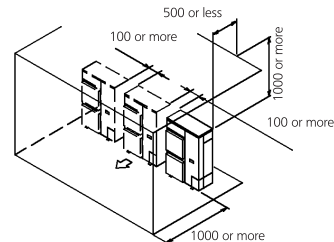


##### • Obstacle above, too

- ① Stand-alone installation



- ② Series installation (2 or more) (Note)



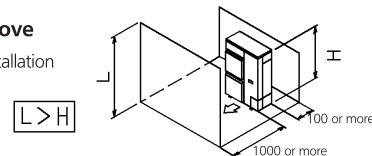
#### (C) When there are obstacles on both suction and discharge sides.:

##### Pattern 1

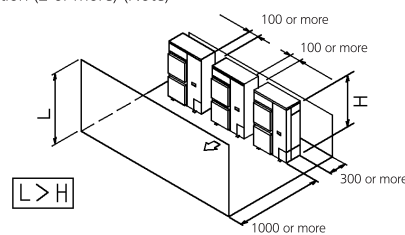
When the obstacles on the discharge side is higher than the unit.  
(There is no height limit for obstructions on the intake side.)

##### • No obstacle above

- ① Stand-alone installation



- ② Series installation (2 or more) (Note)



3D068442K

# 12 Installation

## 12 - 1 Installation Method

### RXYSQ8TY1

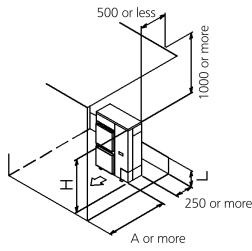
● Obstacle above, too

① Stand-alone installation

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

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

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

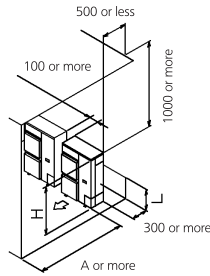


② Series installation (2 or more) (Note)

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

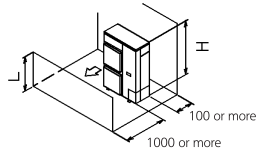
	L	A
$L \leq H$	$0 < L \leq 1/2 H$	1000
	$1/2 H < L \leq H$	1250
$H < L$	Set the stand as : $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.



**Pattern 2**

When the obstacle on the discharge side is lower than the unit: (There is no height limit for obstructions on the intake side.)



● No obstacle above

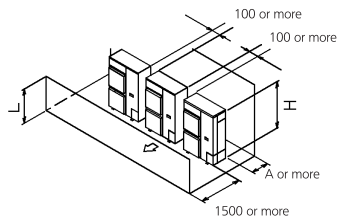
① Stand-alone installation

$L \leq H$

② Series installation (2 or more) (Note)

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

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



● Obstacle above, too

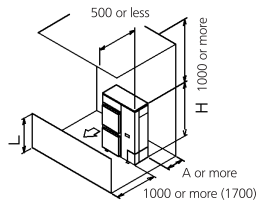
① Stand-alone installation

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

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

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

If the distance exceeds the figure in te ( ), then there's no need to set the stand.



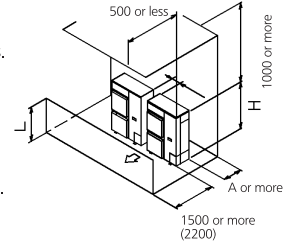
② Series installation (Note)

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

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

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.

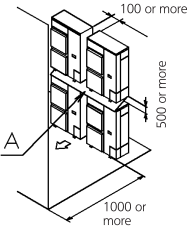
If the distance exceeds the figure in te ( ), then there's no need to set the stand.



(D) Double-decker installation

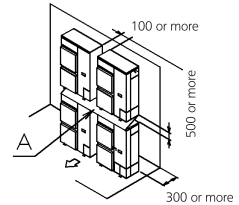
① Obstacle on the discharge side. (Note)

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit. Set the board (field supply) as the detail A between two units to prevent the drainage from freezing. Leave enough space between the layer one and the board.



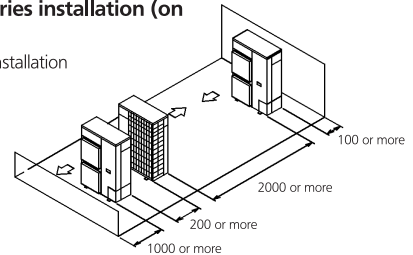
② Obstacle on the suction side. (Note)

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit. Set the board (field supply) as the detail A between two units to prevent the drainage from freezing. Leave enough space between the layer one and the board.



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

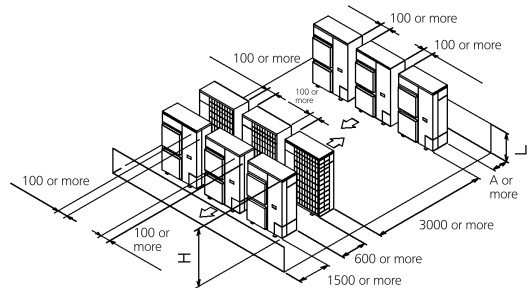
① One row of stand-alone installation



② Rows of series installation (2 or more)

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

	L	A
$L \leq H$	$0 < L \leq 1/2 H$	250
	$1/2 H < L \leq H$	300
$H < L$	Can not be installed	



Note: When installing the units in a line, have to leave the distance over 100mm between the two units.

3D068442K

# 12 Installation

## 12 - 1 Installation Method

12

### RXYSQ10-12TY1

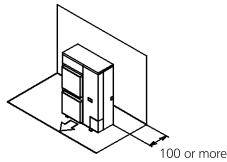
#### Required installation space

The unit of the values is mm.

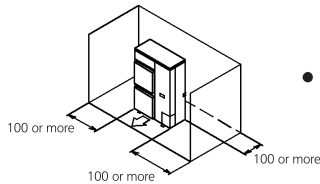
#### (A) When there are obstacles on suction sides.

##### • No obstacle above

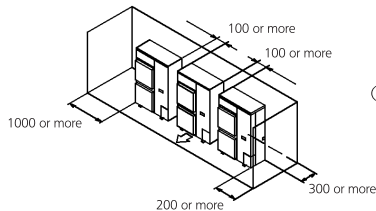
- ① Stand-alone installation
  - Obstacle on the suction side only



- Obstacle on both sides

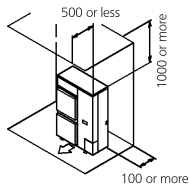


- ② Series installation (2 or more) (Note)
  - Obstacle on both sides

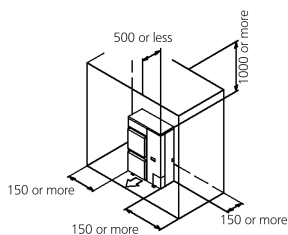


##### • Obstacle above, too.

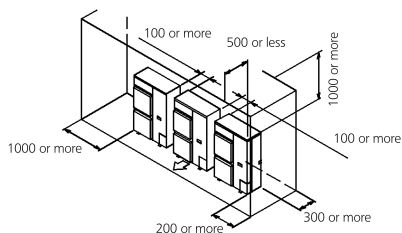
- ① Stand-alone installation
  - Obstacle on the suction side, too



- Obstacle on the suction side and both sides



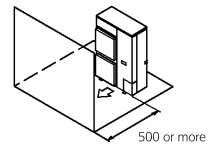
- ② Series installation (2 or more) (Note)
  - Obstacle on the suction side and both sides



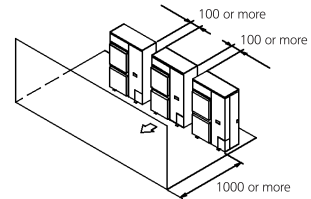
#### (B) When there are obstacles on discharge sides.

##### • No obstacle above

- ① Stand-alone installation

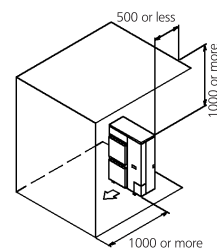


- ② Series installation (2 or more) (Note)

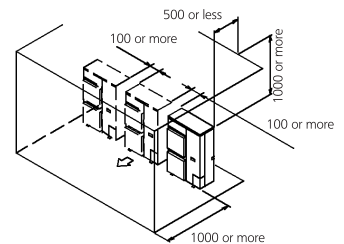


##### • Obstacle above, too

- ① Stand-alone installation



- ② Series installation (2 or more) (Note)



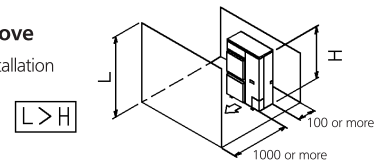
#### (C) When there are obstacles on both suction and discharge sides.:

##### Pattern 1

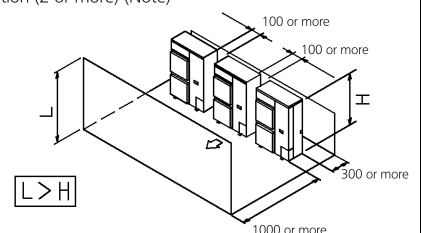
When the obstacles on the discharge side is higher than the unit.  
(There is no height limit for obstructions on the intake side.)

##### • No obstacle above

- ① Stand-alone installation



- ② Series installation (2 or more) (Note)



3D083122E

# 12 Installation

## 12 - 1 Installation Method

### RXYSQ10-12TY1

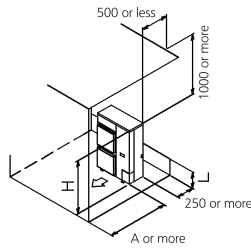
#### ● Obstacle above, too

##### ① Stand-alone installation

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

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

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

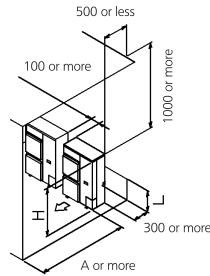


##### ② Series installation (2 or more) (Note)

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

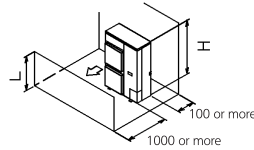
	L	A
$L \leq H$	$0 < L \leq 1/2 H$	1000
	$1/2 H < L \leq H$	1250
$H < L$	Set the stand as : $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.



#### Pattern 2

When the obstacle on the discharge side is lower than the unit:  
(There is no height limit for obstructions on the intake side.)



#### ● No obstacle above

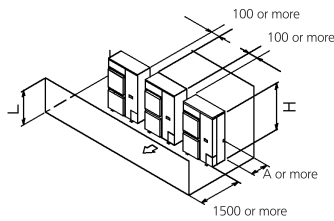
##### ① Stand-alone installation

$$L \leq H$$

##### ② Series installation (2 or more) (Note)

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

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



#### ● Obstacle above, too

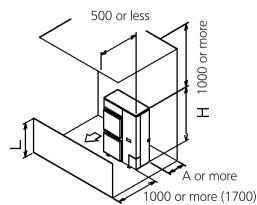
##### ① Stand-alone installation

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

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

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

If the distance exceeds the figure in te ( ), then there's no need to set the stand.



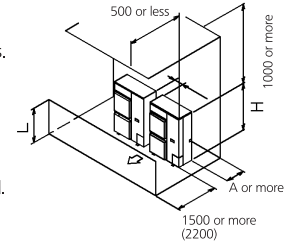
##### ② Series installation (Note)

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

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

Close the bottom of the installation frame to prevent the discharged air from being bypassed. Only two units can be installed for this series.

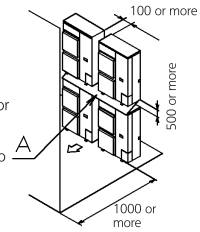
If the distance exceeds the figure in te ( ), then there's no need to set the stand.



#### (D) Double-decker installation

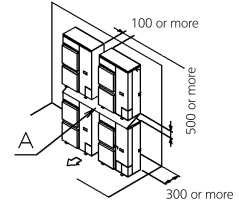
##### ① Obstacle on the discharge side. (Note)

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit. Set the board (field supply) as the detail A between two units to prevent the drainage from freezing. Leave enough space between the layer one and the board.



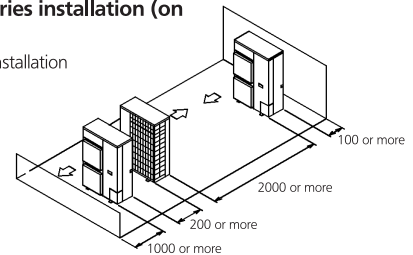
##### ② Obstacle on the suction side. (Note)

Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed. Do not stack more than two unit. Set the board (field supply) as the detail A between two units to prevent the drainage from freezing. Leave enough space between the layer one and the board.



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

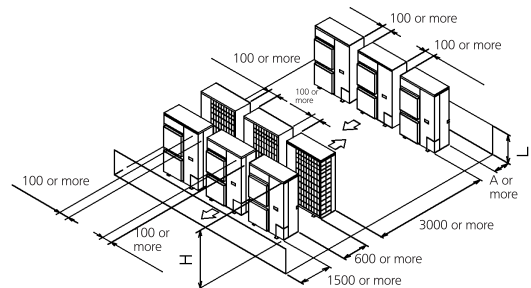
##### ① One row of stand-alone installation



##### ② Rows of series installation (2 or more)

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

	L	A
$L \leq H$	$0 < L \leq 1/2 H$	250
	$1/2 H < L \leq H$	300
$H < L$	Can not be installed	



#### Note:

When installing the units in a line, have to leave the distance over 100mm between the two units.

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# 12 Installation

## 12 - 2 Refrigerant Pipe Selection

12

RXYSQ-TV1  
RXYSQ-TV1  
RXYSQ-TY1

For the reference drawing, see page -2/3-.

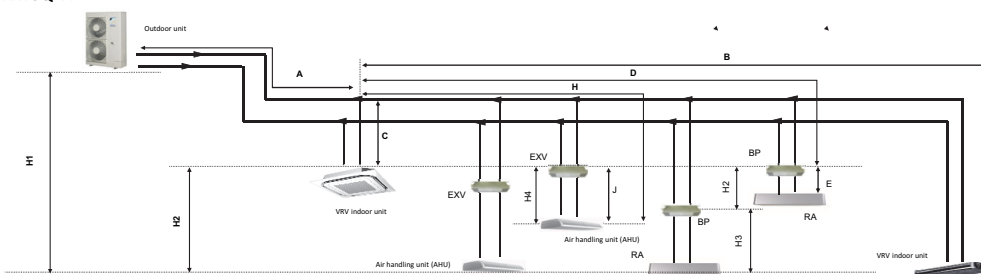
		Maximum piping length		Maximum height difference		Total piping length
		Longest pipe (A+[B,D+E,H]) Actual / (Equivalent)	After first branch (B,D+E,H) Actual	Indoor-to-outdoor (H1) Outdoor above indoor / (indoor above outdoor)	Indoor-to-indoor (H2)	
Standard -VRV DX- indoor units only	RXYSQ4~5TMV1B	70/(90)m	40m	30/(30)m	15m	300m
	RXYSQ4~6T7(V/Y)1B	120/(150)m	40m	50/(40)m	15m	300m
	RXYSQ8TMY1B	100/(130)m	40m	50/(40)m	15m	300m
	RXYSQ10~12TMY1B	120/(150)m	40m	50/(40)m	15m	300m
-RA- connection	RXYSQ4~5TMV1B	35/(45)m	40m	30/(30)m	15m	140m
	RXYSQ4~6T7(V/Y)1B	65/(85)m	40m	30/(30)m	15m	140m
	RXYSQ8TMY1B	80/(100)m	40m	30/(30)m	15m	140m
	RXYSQ10~12TMY1B	80/(100)m	40m	30/(30)m	15m	140m
Air handling unit (-AHU-) connection	Pair	50/(55)m (1)	-	40/(40)m	-	-
	Multi (2)	50/(55)m (1)	40m	40/(40)m	15m	300m
	Mix (3)	50/(55)m (1)	40m	40/(40)m	15m	300m

**Notes**

1. The allowable minimum length is 5- m.
2. Multiple air handling units (-AHU-)(-EKEV- + -EKEQ- kits).
3. Mix of air handling units (-AHU-) and -VRV DX- indoor units.

3D097984

RXYSQ-TV1  
RXYSQ-TV1  
RXYSQ-TY1



**Notes**

1. Schematic indication. Illustrations may differ from the actual appearance of the unit.
2. This is only to illustrate piping length limitations. Refer to combination table -3D097983- for details about the allowed combinations.

		Allowed piping length		Maximum height difference	
		-BP- to -RA- (E)	-EXV- to -AHU- (J)	-BP- to -RA- (H3)	-EXV- to -AHU- (H4)
-RA- connection		2~15m	-	5m	-
Air handling unit (AHU) connection	Pair (1)	-	≤5m	-	5m
	Multi (2)	-	≤5m	-	5m
	Mix (3)	-	≤5m	-	5m

**Notes**

1. Multiple air handling units (-AHU-)(-EKEV- + -EKEQ- kits).
2. Mix of air handling units (-AHU-) and -VRV DX- indoor units.

3D097984

# 12 Installation

## 12 - 2 Refrigerant Pipe Selection

RXYSQ-TV1

RXYSQ-TY1

RXYSQ-TY1

System pattern Allowed connection ratio (CR)	Total		Allowed capacity		
	Capacity	Maximum allowed amount of connectable indoor units (-VRV, RA, AHU) Excluding -BP- units and including -EXV- kits.	VRV DX indoor unit	-RA DX- indoor unit	Air handling unit (AHU)
Other combinations are not allowed.					
-VRV DX- indoor units only	50~130%	Maximum -64-	50~130%	-	-
-RA DX- indoor units only	80~130%	Maximum -32- (1)	-	80~130%	-
-VRV DX- indoor unit + -AHU- Mix	50~110% (3)	Maximum -64- (2)	50~110%	-	0~110%
-AHU- only Pair + multi (4)	90~110% (3)	Maximum -64- (2)	-	-	90~110%

**Notes**

1. There is no restriction on the number of connectable -BP- boxes.
2. -EKEXV- kits are also considered indoor units.
3. Restrictions regarding the air handling unit capacity
4. Pair AHU = system with 1 air handling unit connected to one outdoor unit  
Multi AHU = system with multiple air handling units connected to one outdoor unit

**About ventilation applications**

- I. -FXMQ\_MF- units are considered air handling units, following air handling unit limitations.
  - Maximum connection ratio when combined with -VRV DX- indoor units: -CR ≤ 30%.
  - Maximum connection ratio when only air handling units are connected: -CR ≤ 100%.
  - Minimum connection ratio when only -FXMQ\_MF- units are connected: -CR ≥ 50%.
 For information on the operation range, refer to the documentation of the -FXMQ\_MF- unit.
- II. -Biddle- air curtains are considered air handling units, following air handling unit limitations:  
For information on the operation range, refer to the documentation of the -Biddle- unit.
- III. -EKEXV + EKEQ- units combined with an air handling unit are considered air handling units, following air handling unit limitations.  
For information on the operation range, refer to the documentation of the -EKEXV-EKEQ- unit.
- IV. -VKM- units are considered to be regular -VRV DX- indoor units.  
For information on the operation range, refer to the documentation of the -VKM- unit.
- V. Because there is no refrigerant connection with the outdoor unit (only communication F1/F2), -VAM- units do not have connection limitations.  
However, since there is communication via F1/F2, count them as regular indoor unit when calculating the maximum allowed number of connectable indoor units.

3D097984

# 13 Operation range

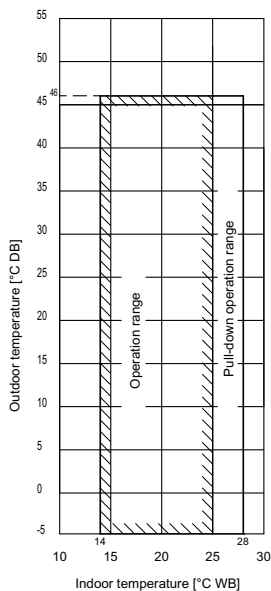
## 13 - 1 Operation Range

13

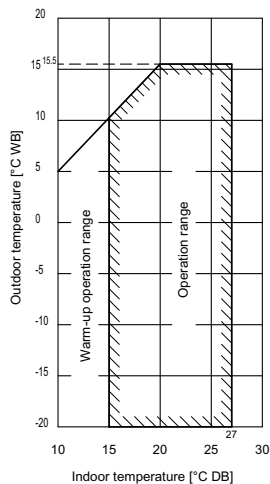
RXYSQ-TV1  
RXYSQ-TV1  
RXYSQ4-6TY1

- Notes
- These figures assume the following operation conditions  
Indoor and outdoor units  
Equivalent piping length: 5m  
Level difference: 0m
  - Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
  - 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.
  - Operation range is valid in case direct expansion indoor units are used.  
If other indoor units are used, refer to the documentation of the respective indoor units.
  - If the unit is selected to operate at ambient temperatures <-5°C for 5 days or more, with relative humidity levels >95%, it is recommended to apply a Daikin range specifically designed for such application.  
For more information, contact your dealer.

### Cooling



### Heating

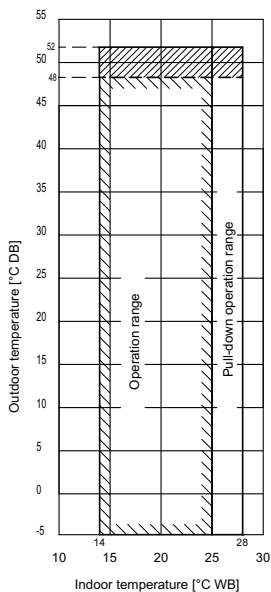


3D094664A

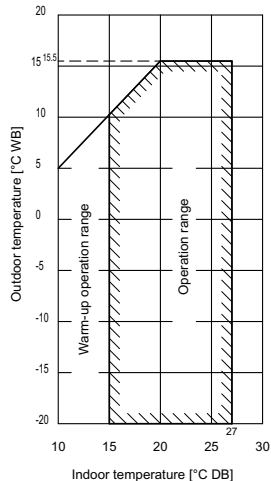
## RXYSQ8-12TY1

- Notes
- These figures assume the following operation conditions  
Indoor and outdoor units  
Equivalent piping length: 5m  
Level difference: 0m
  - Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
  - 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.
  - Operation range is valid in case direct expansion indoor units are used.  
If other indoor units are used, refer to the documentation of the respective indoor units.
  - //////: Unit operation is possible, but no guaranteed capacity
  - If the unit is selected to operate at ambient temperatures <-5°C for 5 days or more, with relative humidity levels >95%, it is recommended to apply a Daikin range specifically designed for such application.  
For more information, contact your dealer.

### Cooling



### Heating



3D094665A





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