



# VRV IV S-series compact air-source heat pump Technical Data RXYSQC-TV1



RXYSQC4TMV1B  
RXYSQC5TMV1B  
RXYSQC6TMV1B



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# RXYSCQ-TV1

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# 1 Features

## 1 - 1 RXYSCQ-TV1

### The most compact VRV

1

- › Compact & lightweight single fan design makes the unit almost unnoticeable
- › 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, Perfera ...
- › 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
- › 3 steps in night quiet mode to reduce sound levels at night
- › 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 the Daikin Cloud Service: 24/7 monitoring for maximum efficiency, extended lifetime and immediate service support thanks to failure prediction



Inverter

## 2 Specifications

### 2 - 1 Specifications

Technical Specifications				RXYSCQ4TV1	RXYSCQ5TV1	RXYSCQ6TV1	
Recommended combination				3 x FXSQ25A2VEB + 1 x FXSQ32A2VEB	4 x FXSQ32A2VEB	2 x FXSQ32A2VEB + 2 x FXSQ40A2VEB	
Cooling capacity	Prated,c		kW	12.1 (1)	14.0 (1)	15.5 (1)	
	Nom.	6°CWB	kW	12.1 (2)	14.0 (2)	15.5 (2)	
Heating capacity	Prated,h		kW	12.1 (2)	14.0 (2)	15.5 (2)	
	Max.	6°CWB	kW	14.2 (2)	16.0 (2)	18.0 (2)	
Power input - 50Hz	Heating	Nom.	6°CWB	kW	2.82 (2)	3.44 (2)	4.18 (2)
	COP at nom. capacity	6°CWB	kW/kW	4.29	4.07	3.71	
SCOP				4.6		4.7	
SEER				8.1	7.7	7.1	
ηs,c				%	322.8	303.4	281.3
ηs,h				%	182.3	185.1	186.0
Space cooling	A Condition (35°C - 27/19)	EERd Pdc	kW	3.2		2.7	
			kW	12.1	14.0	15.5	
	B Condition (30°C - 27/19)	EERd Pdc	kW	5.5	5.0	4.5	
			kW	8.9	10.3	11.4	
	C Condition (25°C - 27/19)	EERd Pdc	kW	11.4	10.5	8.9	
kW			5.7	6.6	7.3		
D Condition (20°C - 27/19)	EERd Pdc	kW	18.6	19.9	21.2		
		kW	4.8	4.9	5.0		
Space heating (Average climate)	TBivalent	COPd (declared COP)		2.8		2.7	
		Pdh (declared heating cap)	kW	8.4	9.7	10.7	
		Tbiv (bivalent temperature)	°C		-10		
	TOL	COPd (declared COP)		2.8		2.7	
		Pdh (declared heating cap)	kW	8.4	9.7	10.7	
		Tol (temperature operating limit)	°C		-10		
	A Condition (-7°C)	COPd (declared COP)		3.2		3.1	
		Pdh (declared heating cap)	kW	7.4	8.5	9.5	
	B Condition (2°C)	COPd (declared COP)			4.5	4.4	
		Pdh (declared heating cap)	kW	4.5	5.2	5.8	
	C Condition (7°C)	COPd (declared COP)		6.3	6.4	6.6	
		Pdh (declared heating cap)	kW		3.4	3.7	
D Condition (12°C)	COPd (declared COP)		7.9	8.1	8.2		
	Pdh (declared heating cap)	kW		4.0			
Capacity range				HP	4	5	6
PED	Category			Category I			
	Most critical part	Name		Compressor			
PED	Most critical part	Ps*V	Bar*l	167			
Maximum number of connectable indoor units				64 (3)			
Indoor index connection	Min.			50.0	62.5	70.0	
	Max.			130.0	162.5	182.0	
Dimensions	Unit	Height	mm	823			
		Width	mm	940			
		Depth	mm	460			
	Packed unit	Height	mm	995			
		Width	mm	1,030			
		Depth	mm	580			
Weight	Unit			89			
	Packed unit			101			
Packing	Material			Carton			
	Weight			kg			3.8
Packing 2	Material			Wood			
	Weight			kg			5.8
Packing 3	Material			Plastic			
	Weight			kg			1.1
Casing	Colour			Daikin White			
	Material			Painted galvanized steel plate			

## 2 Specifications

### 2 - 1 Specifications

2

Technical Specifications					RXYSCQ4TV1	RXYSCQ5TV1	RXYSCQ6TV1
Heat exchanger	Type	Cross fin coil					
	Indoor side	Air					
	Outdoor side	Air					
	Air flow rate	Cooling	Rated	m <sup>3</sup> /h	5,460		
		Heating	Rated	m <sup>3</sup> /h	5,460		
Fan	Quantity	1					
Fan motor	Quantity	1					
	Type	DC motor					
	Output	W					
Compressor	Quantity	1					
	Type	Hermetically sealed swing compressor					
Operation range	Cooling	Min.	°CDB	33			
				-5.0			
	Heating	Min.	°CWB	46.0			
				-20.0			
Sound power level	Cooling	Nom.	dBA	68.0 (4)	69.0 (4)	70.0 (4)	
				Heating	Prated,h	dBA	69.0 (4)
Sound pressure level	Cooling	Nom.	dBA				51.0 (5)
				Refrigerant	Type	R-410A	
GWP	2,087.5						
Charge	kg						
Refrigerant oil	Type	Synthetic (ether) oil FVC50K					
	Piping connections	Liquid	Type	Flare connection			
OD			mm				
Gas		Type	Flare connection				
	OD	mm					
Total piping length	System	Actual	m	15.9	300 (6)	19.1	
				Reversed cycle			
Defrost method	Method	Inverter controlled					
Capacity control	Method	Indication if the heater is equipped with a supplementary heater					
Supplementary heater	Back-up capacity	Heating	elbu	kW	no		
					0.0		
Power consumption in other than active mode	Crankcase heater	Cooling	PCK	kW	0.000		
					Heating	PCK	kW
	Off mode	Cooling	POFF	kW			
					Heating	POFF	kW
	Standby mode	Cooling	PSB	kW			
					Heating	PSB	kW
	Thermo-stat-off mode	Cooling	PTO	kW			
					Heating	PTO	kW
	Cooling	Cdc (Degradation cooling)					
	Heating	Cdh (Degradation heating)				0.25	
Safety devices	Item	01	High pressure switch				
		02	Fan driver overload protector				
		03	Inverter overload protector				
		04	PC board fuse				

Standard accessories: Installation manual;Quantity: 1;

Standard accessories: Operation manual;Quantity: 1;

Standard accessories: Connection pipes;Quantity: 1;

Electrical Specifications					RXYSCQ4TV1	RXYSCQ5TV1	RXYSCQ6TV1
Power supply	Name	V1					
	Phase	1~					
	Frequency	Hz					
	Voltage	V					
Power supply intake	Both indoor and outdoor unit						
Voltage range	Min.	%					
	Max.	%					
Current	Nominal running current (RLA)	Cooling	A	19.0 (10)	10	23.2 (10)	



## 2 Specifications

### 2 - 1 Specifications

Electrical Specifications		RXYSCQ4TV1	RXYSCQ5TV1	RXYSCQ6TV1
Current - 50Hz	Nominal running current (RLA)	Combina- Cooling tion A	-	-
	(RLA)	Combina- Cooling tion B	-	-
	Starting current (MSC) - remark		See note 11	
	Zmax	List	No requirements	
	Minimum Ssc value	Remark	Equipment complies with EN/IEC 61000-3-12	
	Minimum circuit amps (MCA)	A	29.1 (13)	
	Maximum fuse amps (MFA)	A	32 (14)	
	Total overcurrent amps (TOCA)	A	29.1 (15)	
	Full load amps (FLA)	Total A	0.6 (16)	
	Power Performance	Power factor	Combina- 35°C ISO - Full load	-
tion B 46°C ISO - Full load			-	-
Wiring connections - 50Hz	For power supply	Quantity	3G	
	For connection with indoor	Quantity	2	
		Remark	F1,F2	

- (1)Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m |
- (2)Cooling: T1: indoor temp. 26,7°CDB, 19,4°CWB, outdoor temp. 35°CDB, AHRI 1230:2010, power input indoor units (duct type) included |
- (3)Cooling: T3: indoor temp. 29,0°CDB, 19,0°CWB, outdoor temp. 46°CDB, ISO15042:2011, power input indoor units (duct type) included |
- (4)Cooling: T2: indoor temp. 26,6°CDB, 19,4°CWB, outdoor temp. 48°CDB, AHRI 1230:2010, power input indoor units (duct type) included |
- (5)Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m |
- (6)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% ≤ CR ≤ 130%). |
- (7)Sound power level is an absolute value that a sound source generates. |
- (8)Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. |
- (9)Refer to refrigerant pipe selection or installation manual |
- (10)RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB |
- (11)MSC means the maximum current during start up of the compressor. This unit uses only inverter compressors. Starting current is always ≤ max. running current. |
- (12)In accordance with 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 Ssc ≥ minimum Ssc value |
- (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 means the nominal running current of the fan |
- (17)Maximum allowable voltage range variation between phases is 2%. |
- (18)Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits. |
- (19)The automatic ESEER value corresponds with normal VRV IV-S heat pump operation, including the advanced energy saving functionality (variable refrigerant temperature control). |
- (20)The standard ESEER value corresponds with normal VRV IV-S heat pump operation, not taking into account the advanced energy saving functionality. |
- (21)Sound values are measured in a semi-anechoic room. |
- (22)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 |
- (23)Ssc: Short-circuit power |
- (24)For detailed contents of standard accessories, see installation/operation manual

# 3 Options

## 3 - 1 Options

**3**
**RXYSCQ-TV1**

**VRV4-S  
Heat pump  
Option list**

Nr.	Item	RXYSCQ4~6TMV1B	RXYSQ4~6T7V1B RXYSQ4~6T8VB(9)	RXYSQ4~6T7Y1B RXYSQ4~6T8YB(9)	RXYSQ8~12TMY1B	RXYSQ6T7Y1B9 RXYSQ6T8Y1B9	RXYSQ6TMVFK
I.	Refnet header	KHRQ22M29H					
		-	-	-	KHRQ22M64H	-	KHRQ22M64H
II.	Refnet joint	KHRQ22M20T					
		-	-	-	KHRQ22M29T9	-	KHRQ22M29T9
		-	-	-	KHRQ22M64T	-	KHRQ22M64T
1a.	Cool/heat selector (switch)	-	KRC19-26		-	KRC19-26	-
1b.	Cool/heat selector (fixing box)	-	KJB111A		-	KJB111A	-
1c.	Cool/heat selector (PCB)	-	EBRP2B	-	-	-	-
1d.	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 -RXYSCQ4~6T7V1B-  
For -RXYSCQ4~6T8VB-  
To operate the cool/heat selector function, options -1a- and -1c- are both required.
4. For -RXYSCQ4~6T7Y1B-  
For -RXYSCQ4~6T8YB-  
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

VRV4-S  
Heat pump  
Indoor unit combination restrictions

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

O: Allowed  
X: Not allowed

#### Notes

#### 1. O<sub>1</sub>

- Combination of ·AHU· only + control box ·EKEQFA· (not combined with ·VRV DX· indoor units)
  - ·X·-control is possible [·EKEV+EKEQFA\*· boxes]. No Variable Refrigerant Temperature control possible.
  - ·Y·-control is possible [·EKEV+EKEQFA\*· boxes]. No Variable Refrigerant Temperature control possible.
  - ·W·-control is possible [·EKEV+EKEQFA\*· boxes]. 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).

#### 2. Combination of ·AHU· and ·VRV DX· indoor units

- Z-control is possible (·EKEQMA\*· boxes are allowed, but with a limited connection ratio).

#### 3. (1) The following units are considered AHUs:

- ·EKEV + EKEQ(MA/FA) + AHU· coil
- ·Biddle· air curtain
- ·FXMQ\_MF· units

#### Information

- ·VKM· units are considered regular ·VRV DX· indoor units.

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### RXYSCQ-TV1

VRV4-S  
Heat pump  
Indoor unit combination restrictions

Combination table	RXYSCQ4~6TMV1B	RXYSQ4~6T7V1B	RXYSQ4~6T7Y1B	RXYSQ8~12TMV1B
·VRV* DX· indoor unit	O	O	O	O
·RA DX· 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

#### (2) The following units are considered AHUs:

- ·EKEV + EKEQ(MA/FA) + AHU· coil
- ·Biddle· air curtain
- ·FXMQ\_MF· units

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# 4 Combination table

## 4 - 1 Combination Table

### RXYSQ-TV1

#### Unit combination restrictions: ·VRV4· outdoor units (all models) + ·15·-class indoor units

Units in scope: ·FXZQ15A· and ·FXAQ15A·.

1. In case the system contains these indoor units and the total connection ratio (-CR) ≤ ·100·%: no special restrictions. Follow the restrictions that apply to regular ·VRV DX· indoor units.
2. In case the system contains these indoor units and the total connection ratio (-CR) > ·100·%: special restrictions apply.
  - A. When the connection ratio (-CR1) of the sum of all ·FXZQ15A· and/or ·FXAQ15A· units in the system ≤ ·70·%, and ALL other ·VRV DX· indoor units have an individual capacity class > ·50·: no special restrictions.
  - B. When the connection ratio (-CR1) of the sum of all ·FXZQ15A· and/or ·FXAQ15A· units in the system ≤ ·70·%, and NOT ALL other ·VRV DX· indoor units have an individual capacity class > ·50·: the restrictions below apply.
    - ° 100% < CR ≤ 105% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·70·%.
    - ° 105% < CR ≤ 110% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·60·%.
    - ° 110% < CR ≤ 115% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·40·%.
    - ° 115% < CR ≤ 120% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·25·%.
    - ° 120% < CR ≤ 125% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·10·%.
    - ° 125% < CR ≤ 130% -> ·FXZQ15A· and ·FXAQ15A· cannot be used.

**Remark**

Only the ·15·-class indoor units explicitly mentioned on this page are in scope. Other indoor units follow the rules that apply to regular ·VRV DX· indoor units.

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### RXYSQ-TY1 RXYSQ-TY9 RXYSQ-TV9 RXYSQ-TV1

VRV4-S  
Heat pump  
·RA/SA DX· indoor unit  
Compatibility list

Configuration		Indoor unit type		
·RA· indoor unit	Wall-mounted	Emura	FTXJ20A	
			FTXJ25A	
			FTXJ35A	
			FTXJ42A	
			FTXJ50A	
		FTXM	FTXM20N	FTXM20R
			FTXM25N	FTXM25R
			FTXM35N	FTXM35R
			FTXM42N	FTXM42R
			FTXM50N	FTXM50R
	CTXM	Stylish	CTXM15N	CTXM15R
			FTXA20	
			FTXA25	
			FTXA35	
			FTXA42	
	Floor-standing Ceiling-mounted	Flex	FLXS25B	
			FLXS35B	
			FLXS50B	
			FLXS60B	
	Floor-standing	FVXM	FVXM25F	
FVXM35F				
FVXM50F				
CVXM20A				
FVXM25A				
FVXM35A				
FVXM50A				
Nexura		FVXG25K		
		FVXG35K		
		FVXG50K		
	Duct	FDXM	FDXM25F	
			FDXM35F	
FDXM50F				
FDXM60F				

Configuration		Indoor unit type	
·SA· indoor unit	Cassette	Fully Flat 2x2	FFA25A
			FFA35A
		FFA50A	
		FFA60A	
		FFA60A	
	Roundflow 3x3	FCAG35A	
		FCAG50A	
		FCAG60A	
	Ceiling-suspended	FCAG71A	
		FHA35A	
FHA50A			
FHA60A			
FHA71A			
Duct	FBA35A		
	FBA50A		
	FBA60A		
	FBA71A		
	FBA25A		
Floor-standing	FNA	FNA35A	
		FNA50A	
		FNA60A	

**Remark**

1. 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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## 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.
- You can access the capacity table viewer here:  
[https://my.daikin.eu/content/denv/en\\_US/home/applications/software-finder/capacity-table-viewer.html](https://my.daikin.eu/content/denv/en_US/home/applications/software-finder/capacity-table-viewer.html)



- An overview of **all software tools** that we offer can be found here:  
[https://my.daikin.eu/denv/en\\_US/home/applications/software-finder.html](https://my.daikin.eu/denv/en_US/home/applications/software-finder.html)



# 5 Capacity tables

## 5 - 2 Capacity Correction Factor

5

### RXYSCQ-TV1

#### MINI VRV

#### 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:

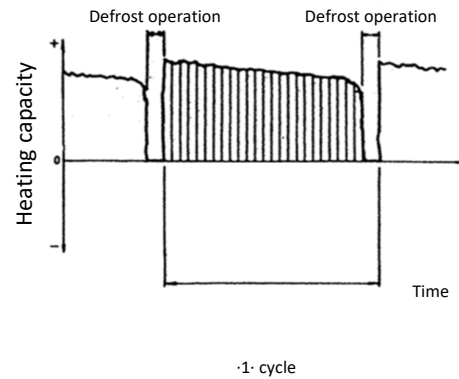
Formula

- 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
RXYSCQ4TMV1B							
RXYSCQ5TMV1B							
RXYSCQ6TMV1B							
RXYSQ4T7V1B							
RXYSQ5T7V1B							
RXYSQ6T7V1B							
RXYSQ4T7Y1B							
RXYSQ5T7Y1B							
RXYSQ6T7Y1B							
RXYSQ6T7Y1B9							
RXYSQ4T8VB							
RXYSQ5T8VB	0,88	0,86	0,80	0,75	0,76	0,82	1,00
RXYSQ6T8VB							
RXYSQ4T8YB							
RXYSQ5T8YB							
RXYSQ6T8YB							
RXYSQ6T8Y1B9							
RXYSQ4T8VB9							
RXYSQ5T8VB9							
RXYSQ6T8VB9							
RXYSQ4T8YB9							
RXYSQ5T8YB9							
RXYSQ6T8YB9							
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
RXYSQ6TMYFK	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

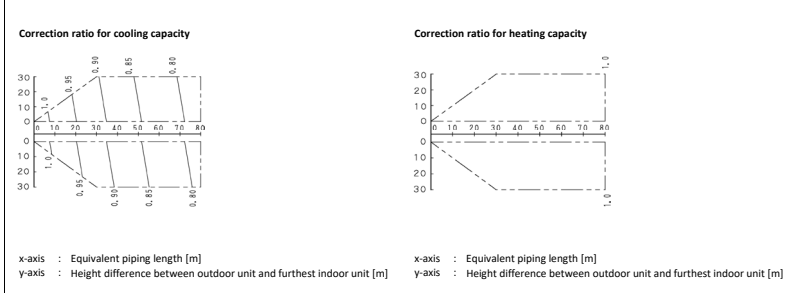
- (1) The figure shows the integrated heating capacity for a single cycle (from one defrost operation to the next).
- (2) When there is an accumulation of snow against the outdoor unit heat exchanger, there will always be a temporary reduction in capacity depending on the outdoor temperature (°C DB),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

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# 5 Capacity tables

## 5 - 2 Capacity Correction Factor

### RXYSCQ4-5TV1



Mini VRV  
Correction factor

**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

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 $\phi$	Increased liquid side $\phi$	Standard gas side $\phi$	Increased gas side $\phi$
RXYSCQ4TMV1B	9,5	Not increased	15,9	19,1
RXYSCQ5TMV1B				

5. Overall equivalent length

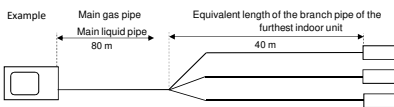
$$\text{Overall equivalent length} = \text{Equivalent length of the main pipe} \times \text{Correction factor} + \text{Equivalent length of the branch pipes}$$

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	0,5



**Overall equivalent length**

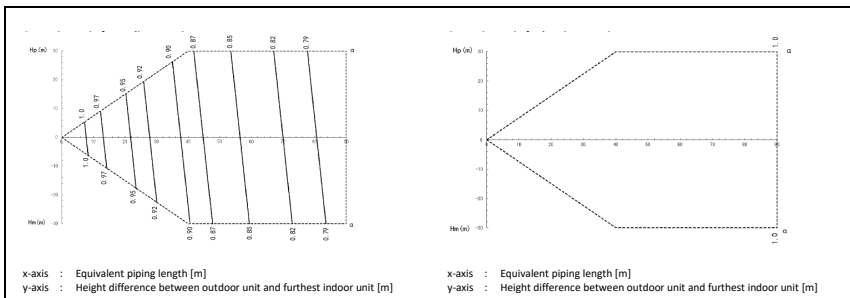
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

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

- Cooling mode = 0,78
- Heating mode = 1,0

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### RXYSCQ6TV1



Mini VRV  
Correction factor

**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 $\phi$	Increased liquid side $\phi$	Standard gas side $\phi$	Increased gas side $\phi$
RXYSCQ6TMV1B	9,5	Not increased	19,1	22,2

5. Overall equivalent length

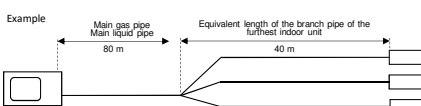
$$\text{Overall equivalent length} = \text{Equivalent length of the main pipe} \times \text{Correction factor} + \text{Equivalent length of the branch pipes}$$

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	0,5



**Overall equivalent length**

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

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

- Cooling mode = 0,79
- Heating mode = 1,0

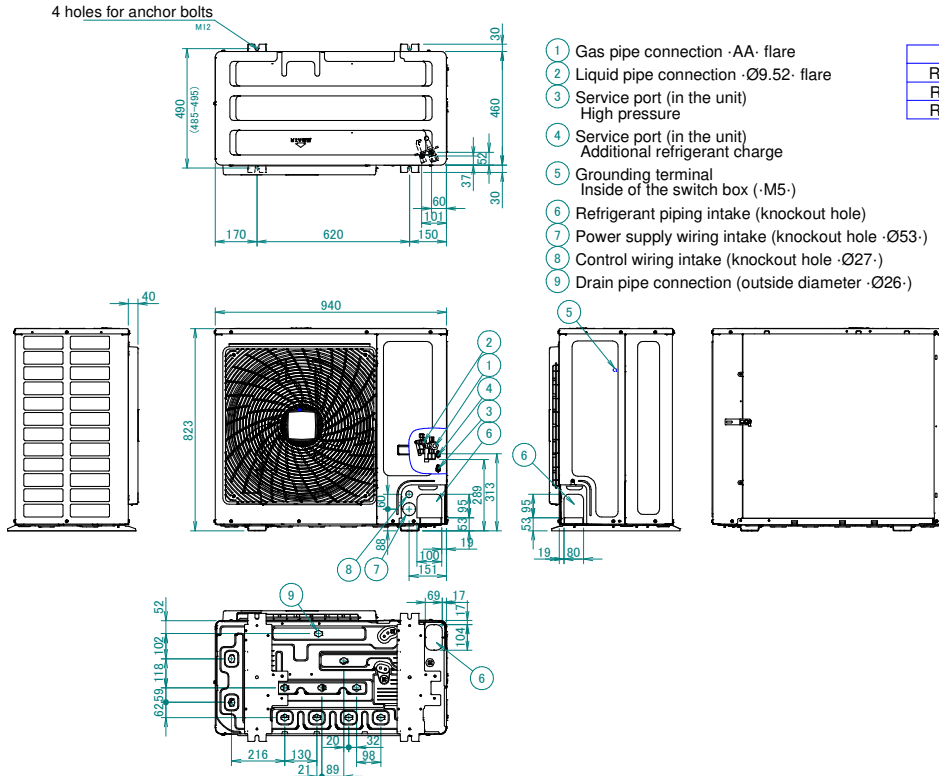
3D094660D

# 6 Dimensional drawings

## 6 - 1 Dimensional Drawings

6

### RXYSCQ-TV1

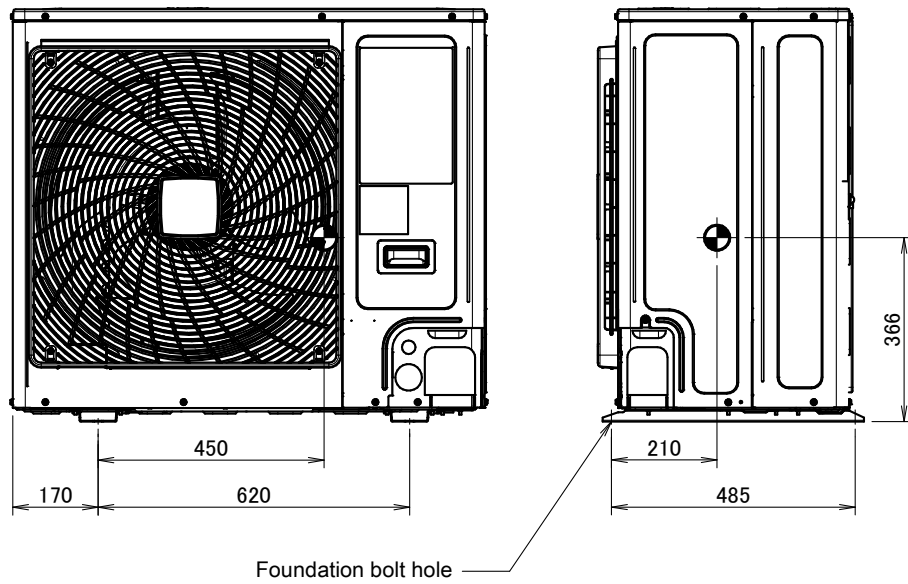


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# 7 Centre of gravity

7 - 1 Centre of Gravity

## RXYSCQ-TV1



4D098083

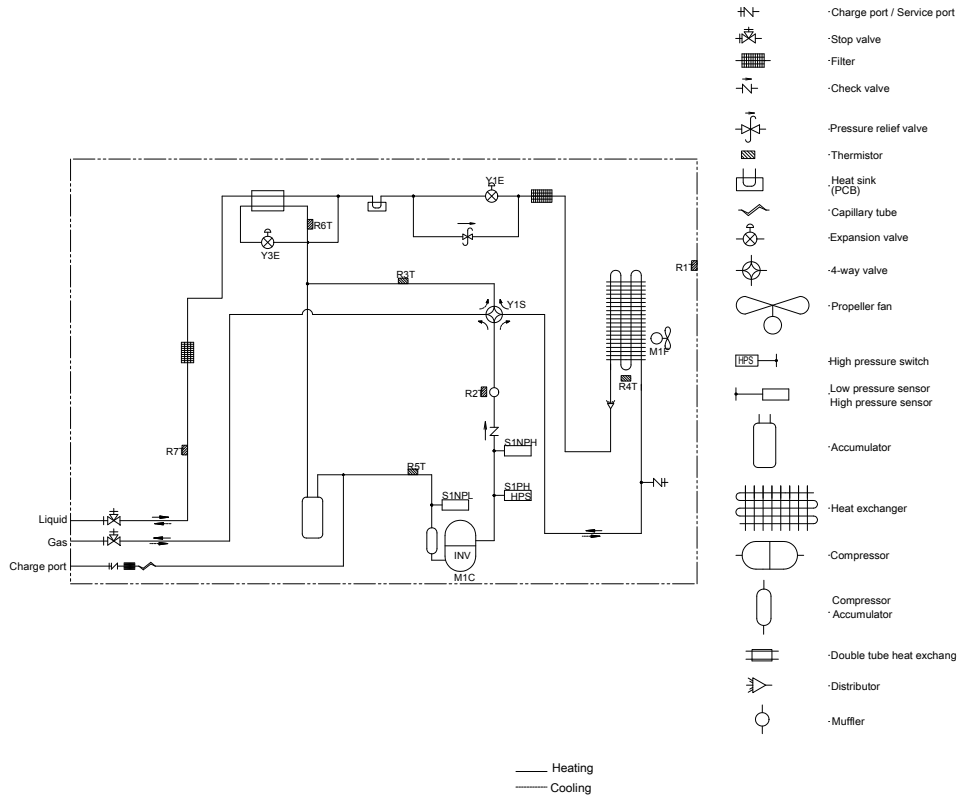


# 8 Piping diagrams

## 8 - 1 Piping Diagrams

8

RXYSCQ-TV1



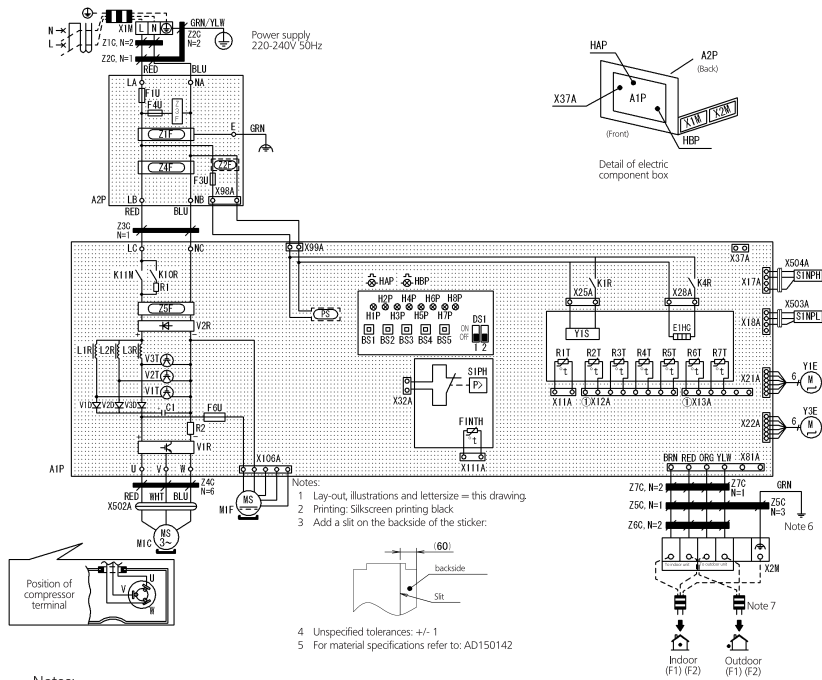
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# 9 Wiring diagrams

## 9 - 1 Wiring Diagrams - Single Phase

### RXYSCQ-TV1

- E1HC : Crankcase heater
- A1P : Printed circuit board (Main)
- A2P : Printed circuit board
- B51-B55 : Push button switch
- C1 : Capacitor
- DS1 : Dip switch
- F1U : Fuse
- F3U : Fuse (T 6.3A / 250V)
- F4U : Fuse (T 6.3A / 250V)
- F6U : Fuse (T 5A / 250V)
- H1P-H8P : Pilot lamp (service monitor-orange)
- [H2P] Prepare, Test ----- Flickering
- Malfunction Detection -- Light up
- HAP : Pilotlamp (service monitor - green)
- HBP : Pilotlamp (service monitor - green)
- K11M : Magnetic contactor
- K1R : Magnetic relay (Y1S)
- K4R : Magnetic relay (E1HC)
- K10R : Magnetic relay
- M1C : Motor (compressor)
- M1F : Motor (fan)
- PS : Switching power supply
- R1 : Resistor
- R2 : Resistor
- R1T : Thermistor (Air)
- R2T : Thermistor (Discharge)
- R3T : Thermistor (Suction 1)
- R4T : Thermistor (Heat exchanger)
- R5T : Thermistor (Suction 2)
- R6T : Thermistor (Subcooling H,Ex)
- R7T : Thermistor (Liquid pipe)
- R1NTH : Thermistor (Fin)
- S1NPH : Pressure sensor(High)
- S1NPL : Pressure sensor(low)
- S1PH : High pressure switch
- V1R : IGBT power module
- V2R : Diode module
- V1T-V3T : IGBT
- V1D-V3D : Diode
- L1R-L3R : Reactor
- X1M : Terminal strip
- X2M : Terminal strip
- Y1E : Electronic expansion valve
- Y3E : Electronic expansion valve
- Y1S : Solenoid valve (4 way valve)
- Z1C-Z7C : Noise filter (ferrite core)
- Z1F-Z5F : Noise filter
- X37A : Connector



**Notes:**

1. This wiring diagram only applies to the outdoor unit.
2. [Symbol] : Field wiring [Symbol] : Terminal block, [Symbol] : Connector, [Symbol] : Movable connector, [Symbol] : Fixed connector, [Symbol] : Terminal, [Symbol] : Protective earth (screw), [Symbol] : Noiseless earth
3. Refer to the installation manual on how to use BS1 - B55 and DS1, DS2 switch.
4. When operating, do not short circuit for protection device. (S1PH)
5. Colours: BLK: Black, RED: Red, BLU: Blue, WHT: White, GRN: Green, BRN: Brown, YLW: Yellow
6. Refer to the installation manual for connection wiring to indoor-outdoor transmission F1 - F2.
7. When using the central control system, connect outdoor-outdoor transmission F1-F2.

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# 10 External connection diagrams

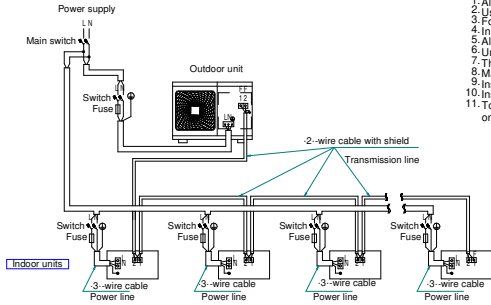
## 10 - 1 External Connection Diagrams

10

### RXYSCQ-TV1

#### External connection diagram

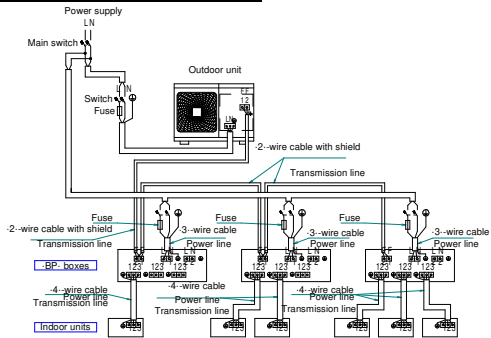
##### .VRV- indoor unit



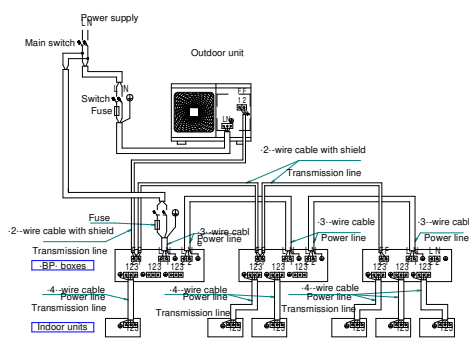
#### Notes

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 switch to (if necessary) immediately interrupt all the system's power sources.
10. Install an earth leakage circuit breaker.
11. 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.



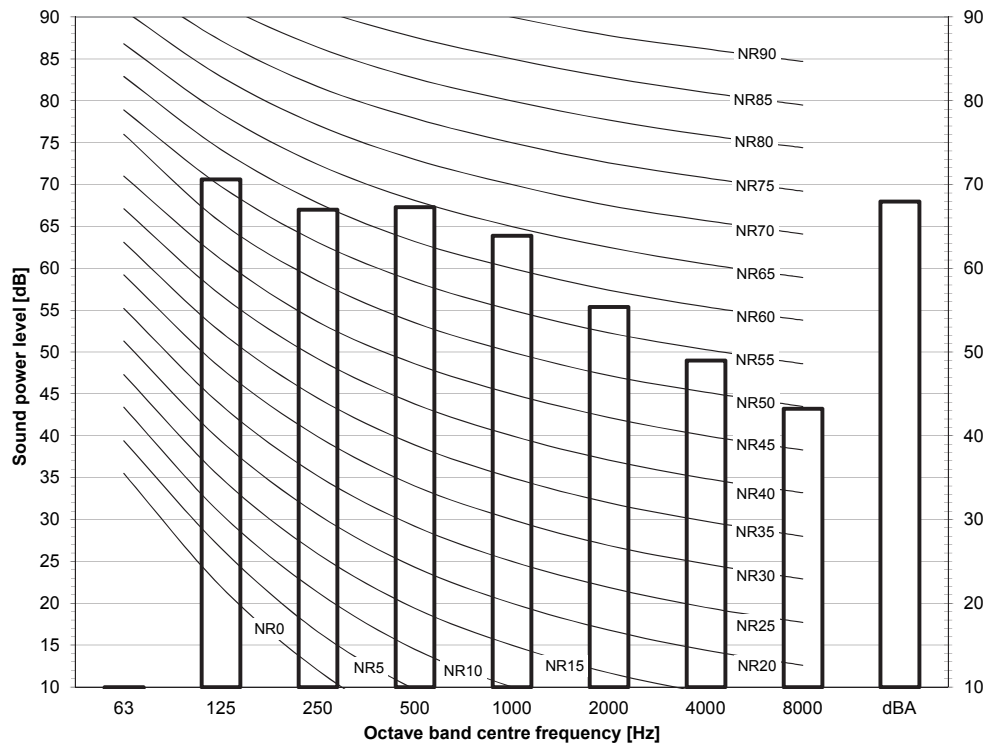
Power source is connected in series between the units.

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# 11 Sound data

## 11 - 1 Sound Power Spectrum

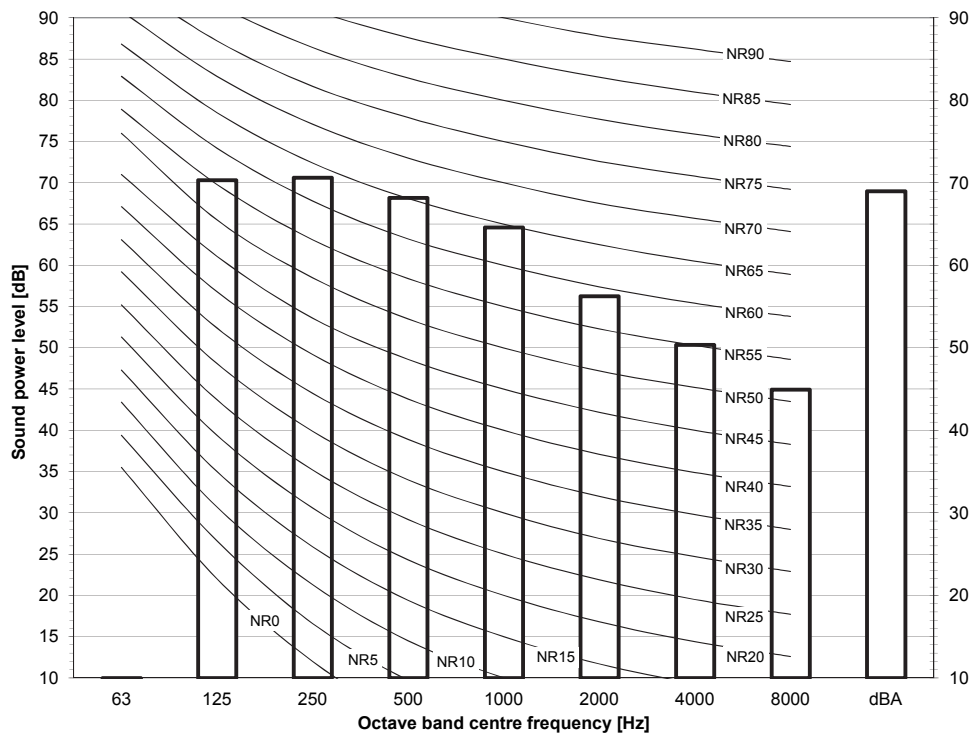
RXYSCQ4TV1



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

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RXYSCQ5TV1



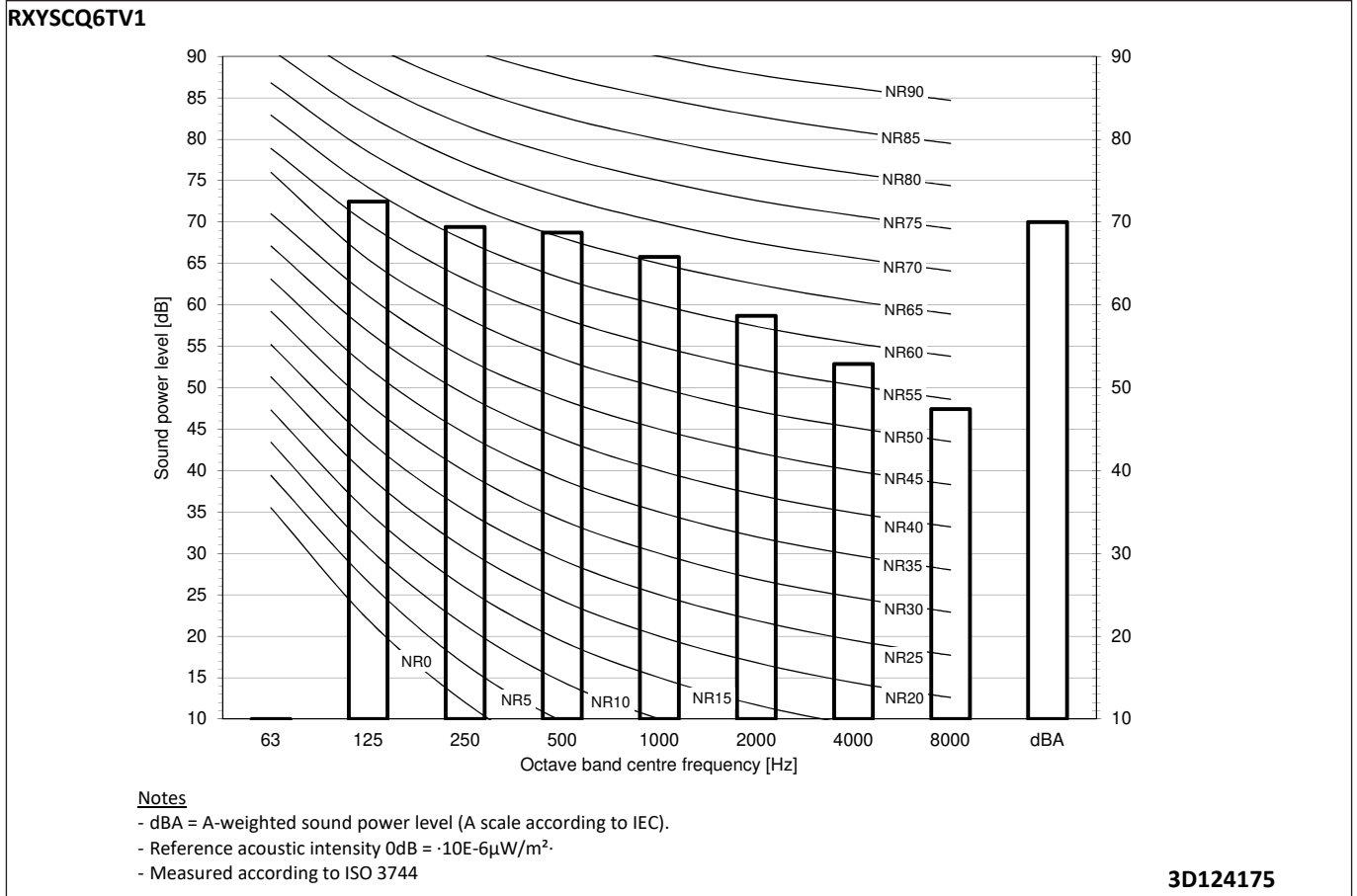
Notes  
 - dBA = A-weighted sound power level (A scale according to IEC).  
 - Reference acoustic intensity  $0dB = 10E-6\mu W/m^2$   
 - Measured according to ISO 3744

3D098239

# 11 Sound data

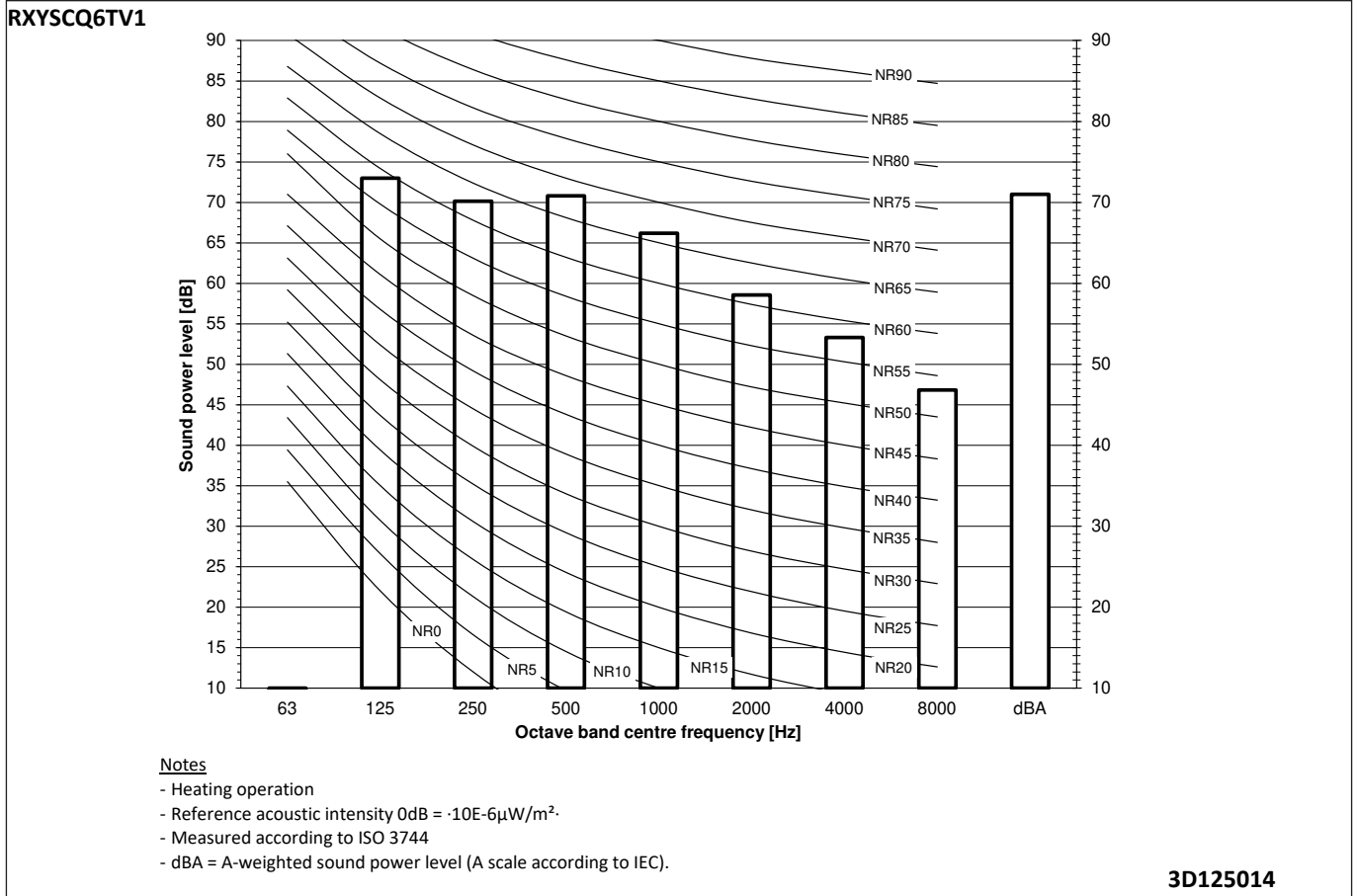
## 11 - 1 Sound Power Spectrum

11



# 11 Sound data

## 11 - 2 Sound Power Spectrum - Heating

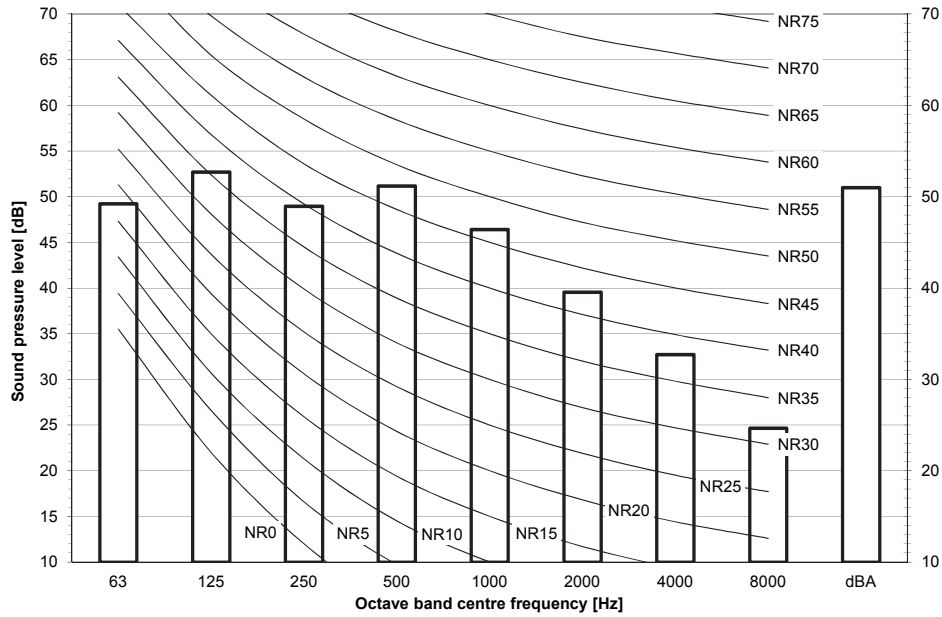


# 11 Sound data

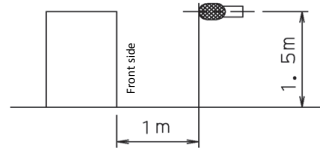
## 11 - 3 Sound Pressure Spectrum

11

RXYSCQ4TV1

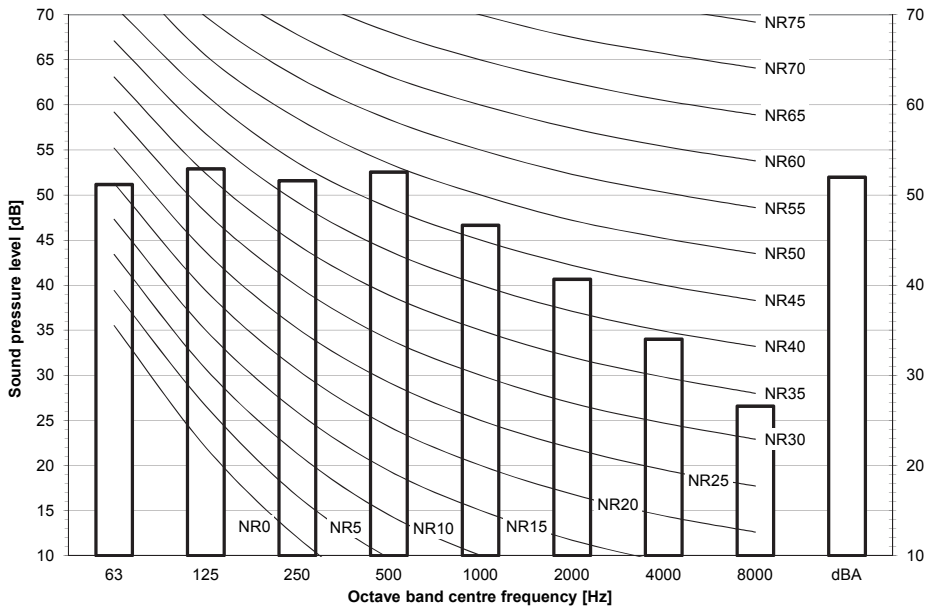


- Notes**
- Data is valid at free field condition.
  - Data is valid at nominal operation condition.
  - dBA = A-weighted sound pressure level (A scale according to IEC).
  - Reference acoustic pressure 0 dB = 20 μPa

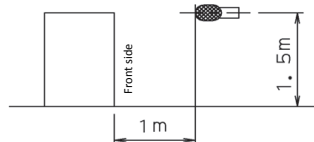


3D098243

RXYSCQ5TV1



- 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



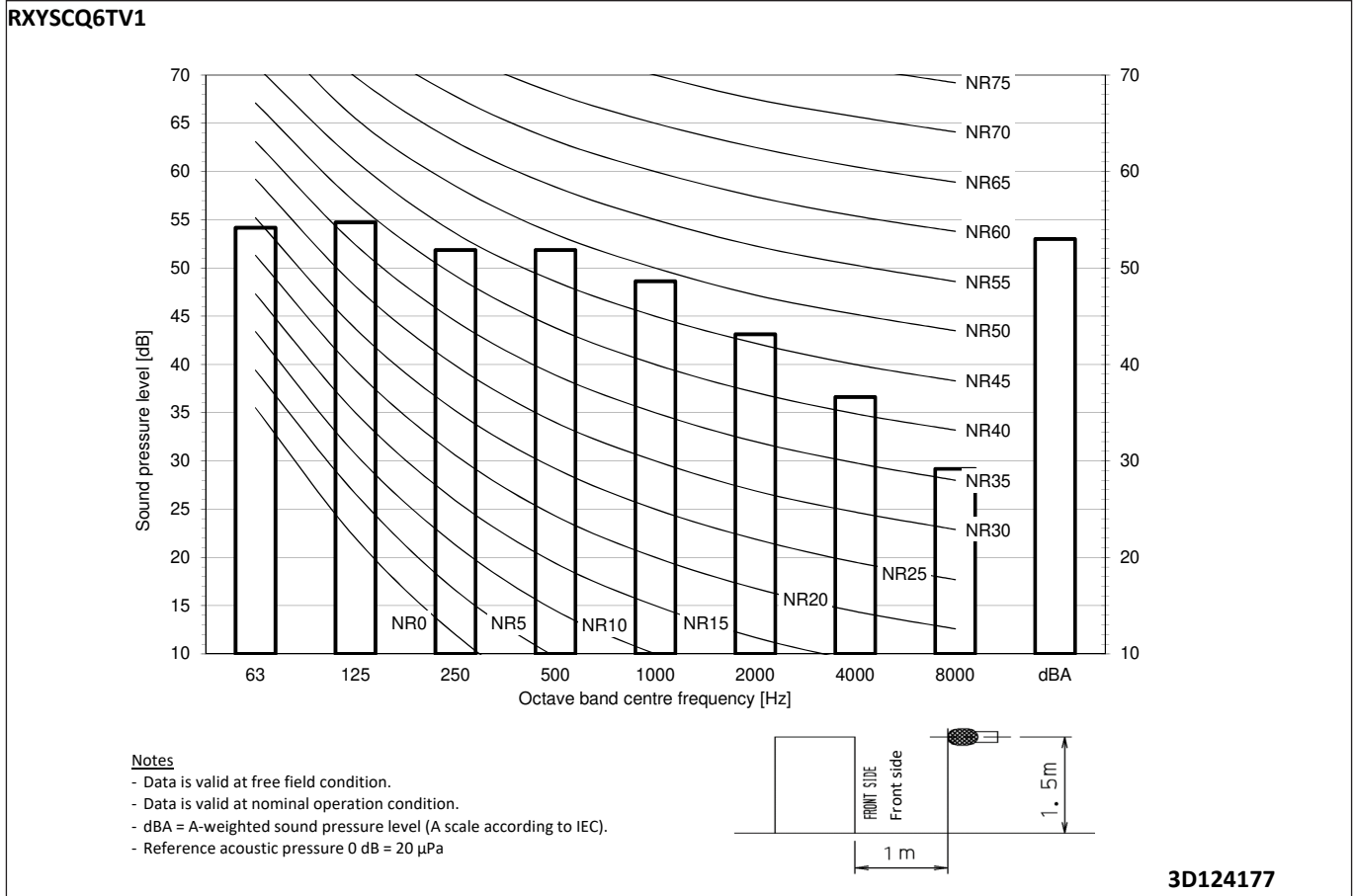
3D098244

22



# 11 Sound data

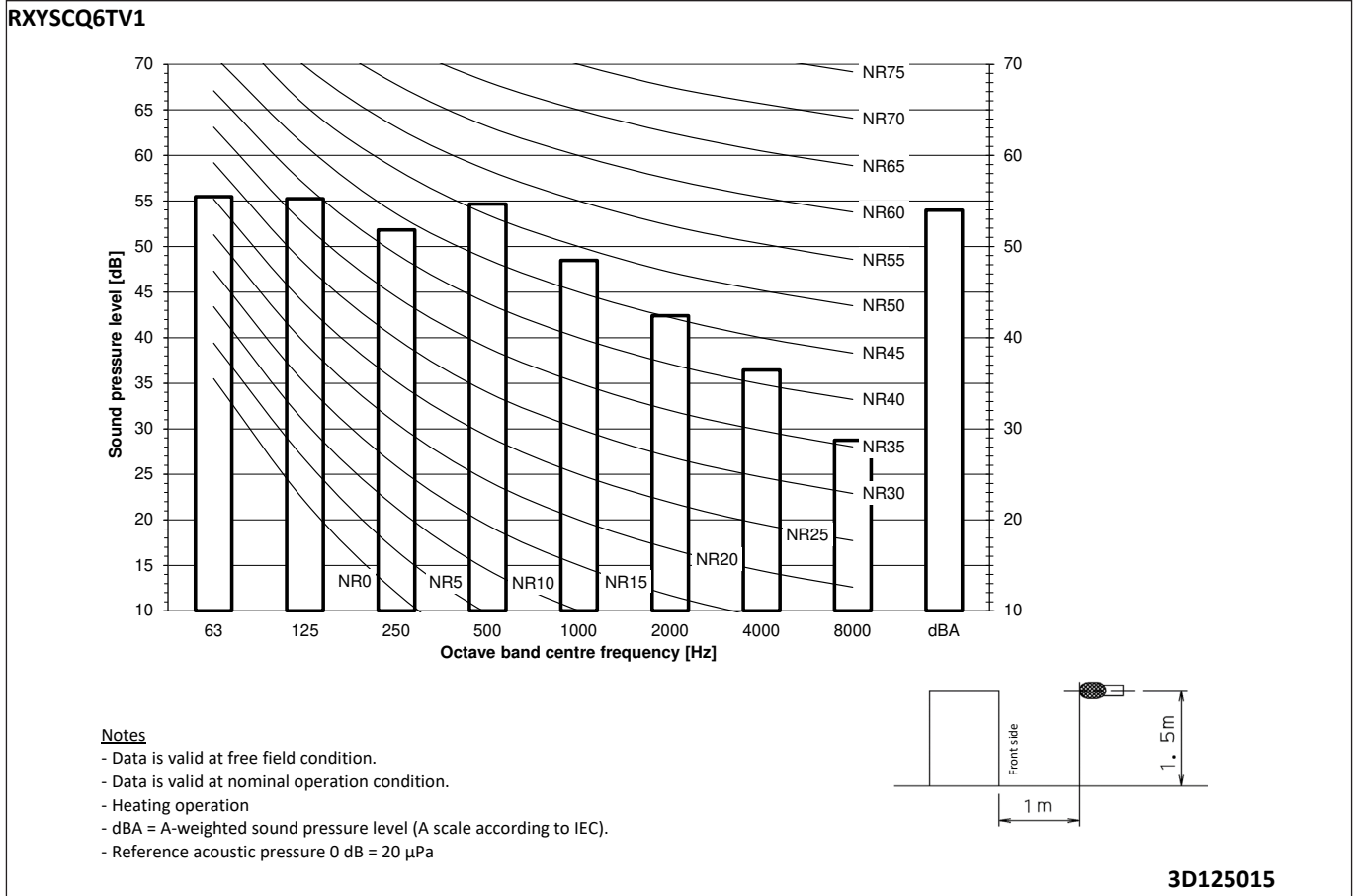
## 11 - 3 Sound Pressure Spectrum



# 11 Sound data

## 11 - 4 Sound Pressure Spectrum - Heating

11



# 12 Installation

## 12 - 1 Installation Method

### RXYSCQ-TV1

Required installation space

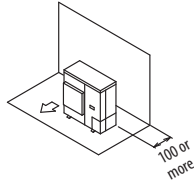
The unit of the values is mm.

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

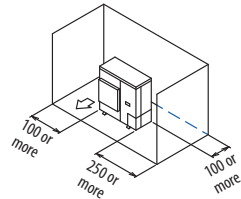
##### (a) No obstacle above

(1) Stand-alone installation

- Obstacle on the suction side only

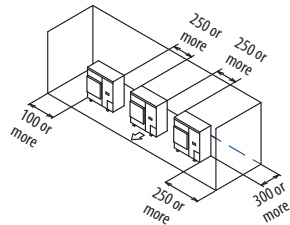


- Obstacle on both sides



(2) Series installation (2 or more)

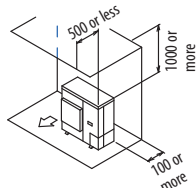
- Obstacle on both sides



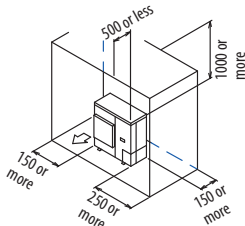
##### (b) Obstacle above, too

(1) Stand-alone installation

- Obstacle on the suction side, too

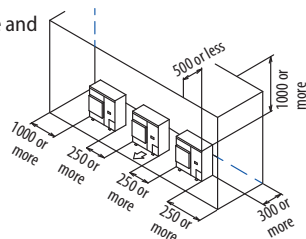


- Obstacle on the suction side and both sides



(2) Series installation (2 or more)

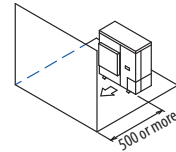
- Obstacle on the suction side and both sides



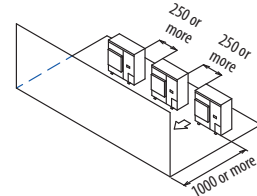
#### 2. Where there is an obstacle on the discharge side:

##### (a) No obstacle above

(1) Stand-alone installation

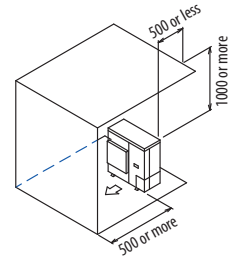


(2) Series installation (2 or more)

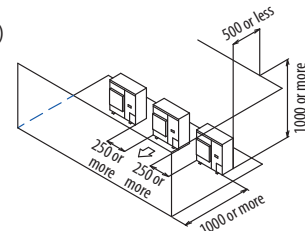


##### (b) Obstacle above, too

(1) Stand-alone installation



(2) Series installation (2 or more)



#### 3. Where there are obstacles on both suction and discharge sides:

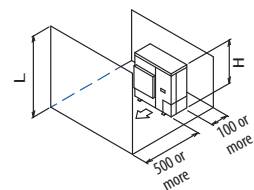
##### Pattern 1

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

##### (a) No obstacle above

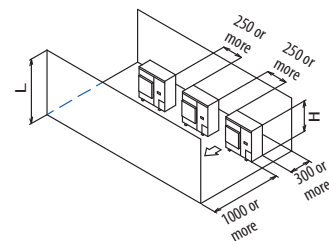
(1) Stand-alone installation

$L > H$



(2) Series installation (2 or more)

$L > H$



3D089310D

# 12 Installation

## 12 - 1 Installation Method

12

### RXYSQC-TV1

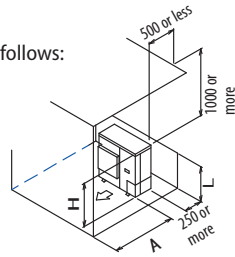
#### (b) Obstacle above, too

##### (1) Stand-alone installation

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

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

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



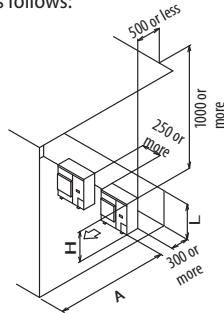
##### (2) Series installation (2 or more)

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

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

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

Only two units can be installed for this series.

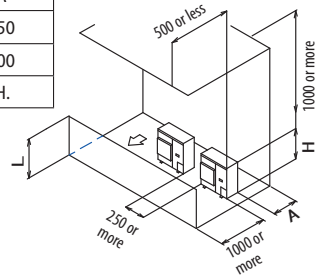


##### (2) Series installation

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

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

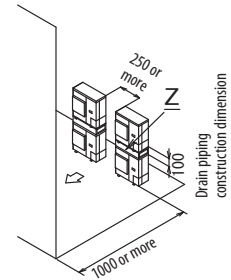
Close the bottom of the installation frame to prevent the discharged air from being bypassed.  
Only two units can be installed for this series.



#### 4. Double-decker installation

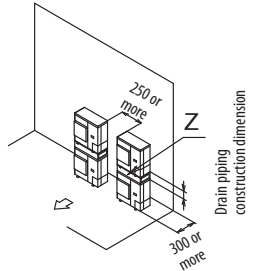
##### (a) Obstacle on the discharge side

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



##### (b) Obstacle on the suction side

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



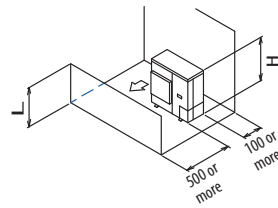
#### Pattern 2

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

##### (a) No obstacle above

##### (1) Stand-alone installation

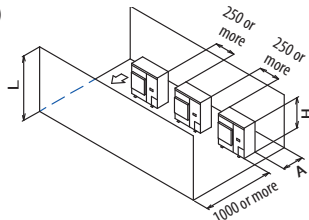
$L \leq H$



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

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

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



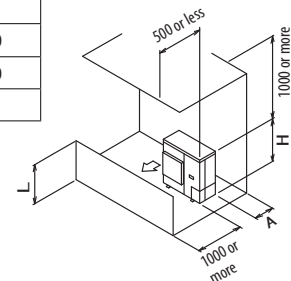
#### (b) Obstacle above, too

##### (1) Stand-alone installation

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

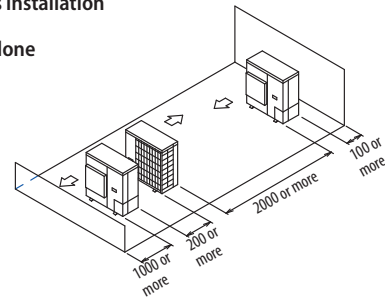
	L	A
$L \leq H$	$0 < L \leq 1/2H$	100
	$1/2H < L \leq H$	200
$H < L$	Set the stand as: $L \leq H$ .	

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



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

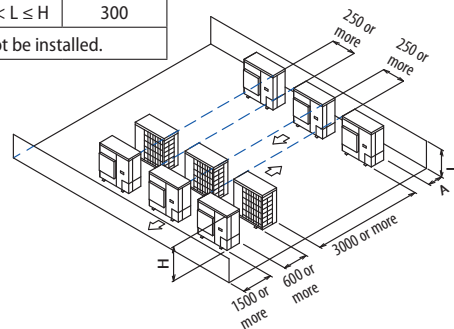
##### (a) One row of stand-alone installation



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

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

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



<HEAT PUMP AIR CONDITIONER>  
INVERTER TYPE

3D089310D

# 12 Installation

## 12 - 2 Refrigerant Pipe Selection

RXYSQ-TY1  
 RXYSQ-TY9  
 RXYSQ-TV9  
 RXYSQ-TV1

VRV4-S  
 Heat pump  
 Piping restrictions ·1/3·

For the reference drawing, see page ·2/3·.		Maximum piping length		Maximum height difference		Total piping length
		Longest pipe	After first branch	Indoor-to-outdoor	Indoor-to-indoor	
		(A+[B,D+E,H])	(B,D+E,H)	(H1)	(H2)	
	Actual / (Equivalent)	Actual	Outdoor above indoor / (indoor above outdoor)			
Standard ·VRV DX· indoor units only	RXYSQ4~6TMV1B	70/(90)m	40m	30/(30)m	15m	300m
	RXYSQ4~6T7(V/Y)1B	120/(150)m	40m	50/(40)m	15m	300m
	RXYSQ4~6T8(V/Y)B					
	RXYSQ8TMY1B	100/(130)m	40m	50/(40)m	15m	300m
	RXYSQ10~12TMY1B	120/(150)m	40m	50/(40)m	15m	300m
·RA· connection	RXYSQ4~6TMV1B	35/(45)m	40m	30/(30)m	15m	140m
	RXYSQ4~6T7(V/Y)1B	65/(85)m	40m	30/(30)m	15m	140m
	RXYSQ4~6T8(V/Y)B					
	RXYSQ8TMY1B	70/(90)m	40m	30/(30)m	15m	140m
	RXYSQ10~12TMY1B	70/(90)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

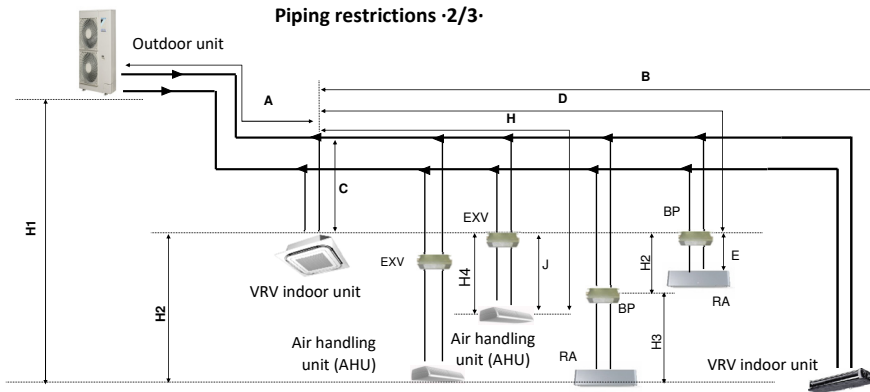
**Notes**

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

3D097984C

RXYSQ-TY1  
 RXYSQ-TY9  
 RXYSQ-TV9  
 RXYSQ-TV1

VRV4-S  
 Heat pump  
 Piping restrictions ·2/3·



**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)	Pair	-	≤5m	-	5m
	Multi (1)	-	≤5m	-	5m
Connection	Mix (2)	-	≤5m	-	5m

**Notes**

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

3D097984C

# 12 Installation

## 12 - 2 Refrigerant Pipe Selection

12

**RXYSQ-TY1**
**RXYSQ-TY9**
**RXYSQ-TV9**
**RXYSQ-TV1**
**VRV4-S**
**Heat pump**
**Piping restrictions :3/3:**

System pattern Allowed connection ratio (CR) Other combinations are not allowed.	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)
-VRV DX- indoor units only	50~130%	Maximum -64-	50~130%	-	-
-RA DX- indoor units only	80~130%	Maximum -32- <sup>(1)</sup>	-	80~130%	-
-VRV DX- indoor unit + -AHU- Mix	50~110% <sup>(3)</sup>	Maximum -64- <sup>(2)</sup>	50~110%	-	0~110%
-AHU- only <sup>(4)</sup> Pair + multi	90~110% <sup>(3)</sup>	Maximum -64- <sup>(2)</sup>	-	-	90~110%

**Notes**

- There is no restriction on the number of connectable -BP- boxes.
- EKEXV- kits are also considered indoor units.
- Restrictions regarding the air handling unit capacity
- 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**

- 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.
- 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.
- 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.
- 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.
- 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.

**3D097984C**

# 13 Operation range

## 13 - 1 Operation Range

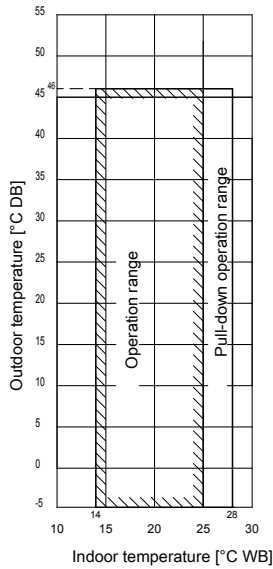
RXYSCQ-TV1  
 RXYSQ-TV1  
 RXYSQ4-6TY1

Notes

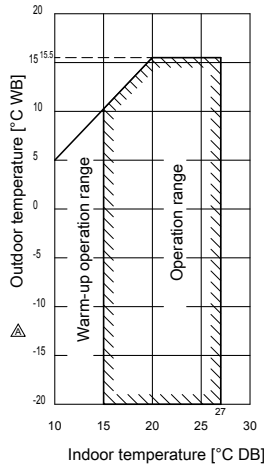
1. These figures assume the following operation conditions  
 Indoor and outdoor units  
 Equivalent piping length: 5m  
 Level difference: 0m
2. Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
3. To reduce the freeze-up operation (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.  
 If other indoor units are used, refer to the documentation of the respective indoor units.
5. 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.

Cooling

For more information, contact your dealer.



Heating



3D094664A



# 14 Appropriate Indoors

## 14 - 1 Appropriate Indoors

14

RXYSQ-TY1

RXYSQ-TY9

RXYSQ-TV9

RXYSQ-TV1

### Recommended indoor units for ·RXYSQ\*T\* AND RXYSQ\*T\*· outdoor units

· HP	4	5	6	8	10	12
	3xFXSQ25 1xFXSQ32	4xFXSQ32	2xFXSQ32 2xFXSQ40	4xFXMQ50	4xFXMQ63	6xFXMQ50

For details about the allowed combinations, see the engineering databook.

### Appropriate indoor units for ·RXYSQ\*T\* AND RXYSQ\*T\*· outdoor units

#### Covered by ·ENER LOT21·

FXFQ20-25-32-40-50-63-80-100-125  
 FXZQ15-20-25-32-40-50  
 FXCQ20-25-32-40-50-63-80-125  
 FXKQ25-32-40-63  
 FXDQ15-20-25-32-40-50-63  
 FXSQ15-20-25-32-40-50-63-80-100-125-140  
 FXMQ50-63-80-100-125-200-250  
 FXAQ15-20-25-32-40-50-63  
 FXHQ32-63-100  
 FXUQ71-100  
 FXNQ20-25-32-40-50-63  
 FXLQ20-25-32-40-50-63

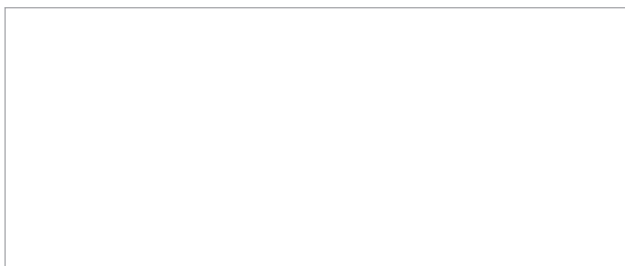
#### Outside the scope of ·ENER LOT21·

EKEXV50-63-80-100-125-140-200-250 + EKEQM / EKEQF  
 VKM50-80-100  
 CYVS100-150-200-250  
 CYVM100-150-200-250  
 CYVL100-150-200-250  
 EKVDX32-50-80-100 + VAMI8

#### Covered by ·ENER LOT10·

FTXJ25-35-50  
 FTXA20-25-35-42-50  
 FTXM20N-25N-35N-42N-50N-60N-71N  
 FTXM20R-25R-35R-42R-50R-60R-71R  
 CTXM15N  
 CTXM15R  
 FLXS25-35-50-60  
 FVXM25F-35F-50F  
 FVXG25-35-50  
 FNA25-35-50-60  
 FDXM25-30-50-60  
 FFA25-35-50-60  
 FCAG35-50-60-71  
 FHA35-50-60-71  
 FBA35-50-60-71  
 CVXM20A  
 FVXM25A-35A-50A

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10/2022



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