DAIKIN

Air Conditioning Technical Data

RXYSQ-TY9

> RXYSQ4T8YB9
> RXYSQ5T8YB9
> RXYSQ6T8YB9

TABLE OF CONTENTS

RXYSQ-TY9

1 Features

Space saving solution without compromising on efficiency

- Space saving trunk design for flexible installation
- Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units and Biddle air cutains
- 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
- 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, extented lifetime and immediate service support thanks to failure prediction

Inverter

2 Specifications

2-1 Technical Specifications					RXYSQ4TY9	RXYSQ5TY9	RXYSQ6TY9
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)
Heating capacity	Prated,h			kW	8.0	9.2	10.2
	Nom.	6°CWB		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	2.68 (2)	3.27 (2)	3.97 (2)
COP at nom. capacity	6°CWB			kW/kW	4.52	4.28	3.90
SEER					6.8	6.6	6.8
SCOP					3.9	4.2	4.4
ηs,c				%	269.2	260.5	268.3
ηs,h				%	154.4	164.5	174.1
Capacity range				HP	4	5	6
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	1,345		
		Width		mm	900		
		Depth		mm	320		
	Packed unit	Height		mm	1,524		
		Width		mm	980		
		Depth		mm	420		
Weight	Unit			kg	104		
	Packed unit			kg	114		
Packing	Material				Carton		
	Weight			kg	3.9		
Packing 2	Material				Wood		
	Weight			kg	5.6		
Packing 3	Material				Plastic		
	Weight			kg	0.5		
Capacity control	Method				Inverter controlled		
Casing	Colour				Daikin White		
	Material				Painted galvanized steel plate		
Heat exchanger	Type				Cross fin coil		
	Indoor side				Air		
	Outdoor side				Air		
	Air flow rate	Cooling	Rated	m^3/h	6,360		
		Heating	Rated	m^3/h	6,360		
Compressor	Quantity				1		
	Type				Hermetically sealed swing compressor		
	Crankcase heater			W	33		
Fan	Quantity				2		
Fan motor	Quantity				2		
	Type				DC motor		
	Output			W	70		
Sound power level	Cooling	Nom.		dBA	68.0 (4)	69.0 (4)	70.0 (4)
Sound pressure level	Cooling	Nom.		dBA	50.0 (5)	51.0 (5)	
Operation range	Cooling	Min.~Max.		°CDB	-5.0~46.0		
	Heating	Min.~Max.		°CWB	-20.0~15.5		
Refrigerant	Type				R-410A		
	GWP				2,087.5		
	Charge			TCO_2eq	7.5		
				kg	3.6		
Refrigerant oil	Type				Synthetic (ether) oil FVC50K		

2 Specifications

2-1 Technical Specifications					RXYSQ4TY9	RXYSQ5TY9	RXYSQ6TY9
Piping connections	Liquid	Type			Flare connection		
		OD		mm	9,52		
	Gas	Type			Flare connection		Braze connection
		OD		mm	15.9		19.1
	Total piping length	System	Actual	m	300 (6)		
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		
	Most critical part	Name			Compressor		
		Ps*V		Bar*l	167		
Space cooling	A Condition (35°C - 27/19)	EERd			3.1	2.6	
		Pdc		kW	12.1	14.0	15.5
	B Condition (30°C - 27/19)	EERd			5.2	4.8	
		Pdc		kW	8.9	10.3	11.4
	C Condition (25°C - 27/19)	EERd			9.3	8.9	9.1
		Pdc		kW	5.7	6.6	7.3
	D Condition (20°C - 27/19)	EERd			13.0	14.2	15.1
		Pdc		kW	4.3	4.5	4.6
Space heating (Average climate)	TBivalent	COPd (declared COP)			2.4		2.5
		Pdh (declared heating cap)		kW	8.0	9.2	10.2
		Tbiv (bivalent temperature)		°C	-10		
	TOL	COPd (declared COP)			2.4		2.5
		Pdh (declared heating cap)		kW	8.0	9.2	10.2
		Tol (temperature operating limit)		°C	-10		
	A Condition (-7°C)	COPd (declared COP)			2.7	2.8	2.9
		Pdh (declared heating cap)		kW	7.0	8.1	9.0
	B Condition (2°C)	COPd (declared COP)			3.6	3.8	4.0
		Pdh (declared heating cap)		kW	4.3	5.0	5.5
	C Condition (7°C)	COPd (declared COP)			5.7	6.1	6.5
		Pdh (declared heating cap)		kW	3.4	3.5	3.6
	D Condition (12°C)	COPd (declared COP)			7.0	7.6	8.1
		Pdh (declared heating cap)		kW	4.1		4.3
Cooling	Cdc (Degradation cooling)				0.25		
Heating	Cdh (Degradation heating)				0.25		
Power consumption in other than active mode	Crankcase heater mode	Cooling	PCK	kW	0.000		
		Heating	PCK	kW	0.049		
	Off mode	Cooling	POFF	kW	0.039		
		Heating	POFF	kW	0.049		
	Standby mode	Cooling	PSB	kW	0.039		
		Heating	PSB	kW	0.049		
	Thermostat-off mode	Cooling	PTO	kW	0.000		
		Heating	PTO	kW	0.049		
Indication if the heater is equipped with a supplementary heater					no		
Supplementary heater	Back-up capacity	Heating	elbu	kW	0.0		

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Connection pipes; Quantity : 1;

2 Specifications

2-2 Electrical Specifications				RXYSQ4TY9	RXYSQ5TY9	RXYSQ6TY9
Power supply	Name			Y1		
	Phase			3N~		
	Frequency		Hz	50		
	Voltage		V	380-415		
Voltage range	Min.		%	-10		
	Max.		%	10		
Current	Nominal running current (RLA) - 50Hz	Cooling	A	4.44 (7)	5.55 (7)	6.84 (7)
Current - 50Hz	Starting current (MSC) - remark			(8)		
	Zmax	List		No requirements		
	Minimum circuit amps (MCA)		A	14.1 (9)		
	Maximum fuse amps (MFA)		A	16 (10)		
	Total overcurrent amps (TOCA)		A	14.1 (11)		
	Full load amps (FLA)	Total	A	0.6 (12)		
Wiring connections - 50Hz	For power supply	Quantity		5G		
	For connection with indoor	Quantity		2		
		Remark		F1,F2		
Power supply intake				Both indoor and outdoor unit		

Notes

(1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m

(2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m

(3) 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%).

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

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

(6) Refer to refrigerant pipe selection or installation manual

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

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

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

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

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

(12) FLA means the nominal running current of the fan

The automatic ESEER value corresponds with normal VRV IV-S heat pump operation, including the advanced energy saving functionality (variable refrigerant temperature control).

The standard ESEER value corresponds with normal VRV IV-S heat pump operation, not taking into account the advanced energy saving functionality.

Sound values are measured in a semi-anechoic room.

Maximum allowable voltage range variation between phases is 2%.

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

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

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

Ssc: Short-circuit power

3 Options

3 - 1 Options

RXYSQ-TY9
RXYSQ-TV9

VRV4-S
Heat pump
Option list

Nr.	Item	RXYSCQ4~5TMV1B	RXYSQ4~6T7V1B RXYSQ4~6T8VB	RXYSQ4~6T7Y1B RXYSQ4~6T8YB	RXYSQ8~12TMY1B	RXYSQ6T7Y1B9 RXYSQ6T8Y1B9	RXYSQ6TMYFK
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	EKPCCAB*					
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 ·RXYSQ4~6T7V1B·
   For ·RXYSQ4~6T8VB·
   To operate the cool/heat selector function, options ·1a· and ·1c· are both required.
4. For ·RXYSQ4~6T7Y1B·
   For ·RXYSQ4~6T8YB·
   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

RXYSQ-TY9

RXYSQ-TV9

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

Configuration			Indoor unit type
·RA· indoor unit	Wall-mounted	*Emura*	FTXJ20M (W/S)
			FTXJ25M (W/S)
			FTXJ35M (W/S)
			FTXJ50M (W/S)
		FTXM	FTXM20M
			FTXM25M
			FTXM35M
			FTXM42M
			FTXM50M
			FTXM60M
			FTXM71M
		CTXM	CTXM15M
		Stylish	FTXA20
			FTXA25
			FTXA35
			FTXA42
			FTXA50
	Floor-standing Ceiling-mounted	*Flex*	FLXS25B
			FLXS35B
			FLXS50B
			FLXS60B
	Floor-standing	*FVXM*	FVXM25F
			FVXM35F
			FVXM50F
		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
		Roundflow 3x3	FCAG35A
			FCAG50A
			FCAG60A
			FCAG71A
	Ceiling-suspended		FHA35A
			FHA50A
			FHA60A
			FHA71A
	Duct		FBA35A
			FBA50A
			FBA60A
			FBA71A
	Floor-standing	*FNA*	FNA25A
			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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RXYSQ-TY9

RXYSQ-TV9

VRV4-S
Heat pump
Indoor unit combination restrictions
(1/2)

Indoor unit combination pattern	·VRV* DX· indoor unit	·RA DX· indoor unit	Hydrobox unit	Air handling unit (AHU) (1)
·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) (1)	O_1	X	X	O_1

O: Allowed
X: Not allowed

Notes
1. O_1
- *Combination of ·AHU· only + control box ·EKEQFA· (not combined with ·VRV DX· indoor units)*
  → ·X·-control is possible (up to ·3x· [·EKEXV+EKEQFA*· boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
  → ·Y·-control is possible (up to ·3x· [·EKEXV+EKEQFA*· boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
  → ·W·-control is possible (up to ·3x· [·EKEXV+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 [·EKEXV + 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:
→ ·EKEXV + EKEQ(MA/FA) + AHU· coil
→ ·Biddle· air curtain
→ ·FXMQ_MF· units

Information
- ·VKM· units are considered to be regular ·VRV DX· indoor units.

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4 Combination table

4 - 1 Combination Table

RXYSQ-TY9
RXYSQ-TV9

VRV4-S
Heat pump
Indoor unit combination restrictions
(2/2)

Combination table		RXYSCQ4~5TMV1B	RXYSQ4~6T7V1B	RXYSQ4~6T7Y1B	RXYSQ8~12TMY1B
·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)	(2)	O	O	O	O

O: Allowed
X: Not allowed

Notes
1. (2) The following units are considered AHUs:
→ ·EKEXV + EKEQ(MA/FA) + AHU· coil
→ ·Biddle· air curtain
→ ·FXMQ_MF· units

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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

- 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

5 Capacity tables

5 - 2 Integrated Heating Capacity Correction Factor

RXYSQ-TV9
RXYSQ-TY9

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:

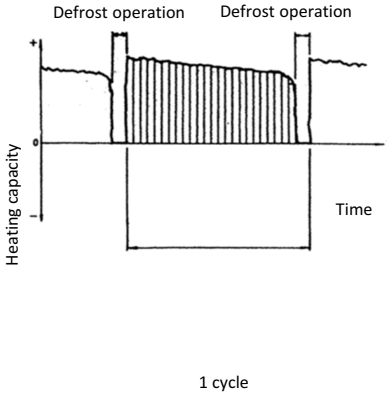
Formula

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 RXYSQ4T7V1B RXYSQ5T7V1B RXYSQ6T7V1B RXYSQ4T7Y1B RXYSQ5T7Y1B RXYSQ6T7Y1B RXYSQ6T7Y1B9 RXYSQ4T8VB RXYSQ5T8VB RXYSQ6T8VB RXYSQ4T8YB RXYSQ5T8YB RXYSQ6T8YB RXYSQ6T8Y1B9	0,88	0,86	0,80	0,75	0,76	0,82	1,00
RXYSQ8TMY1B	0,95	0,93	0,88	0,84	0,85	0,90	1,00
RXYSQ10TMY1B 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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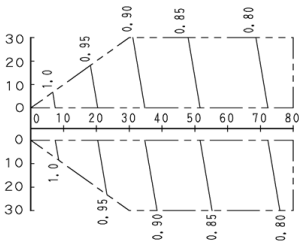
5 Capacity tables

5 - 3 Capacity Correction Factor

RXYSQ-TV9
RXYSQ-TY9

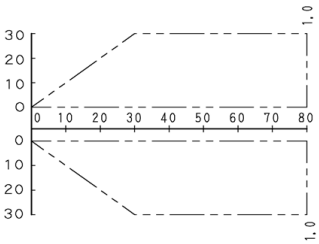
Correction ratio for cooling capacity



x-axis : Equivalent piping length [m]

y-axis : Height difference between outdoor unit and furthest indoor unit [m]

Correction ratio for heating capacity



x-axis : Equivalent piping length [m]

y-axis : Height difference between outdoor unit and furthest indoor unit [m]

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 it 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%.

Maximum capacity of outdoor units	=	Capacity of outdoor units from capacity table at 100% connection ratio.	x	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.	x	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
RXYSCQ4TMV1B RXYSCQ5TMV1B	9,5	Not increased	15,9	19,1

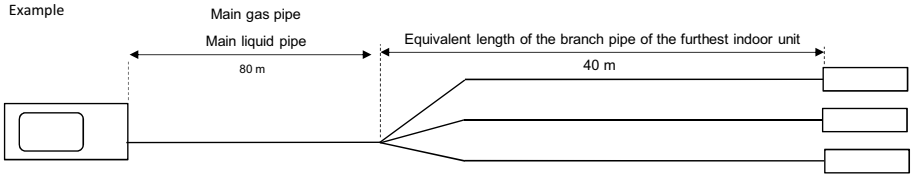
5. Overall equivalent length

Overall equivalent length	=	Equivalent length of the main pipe	x	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

Example



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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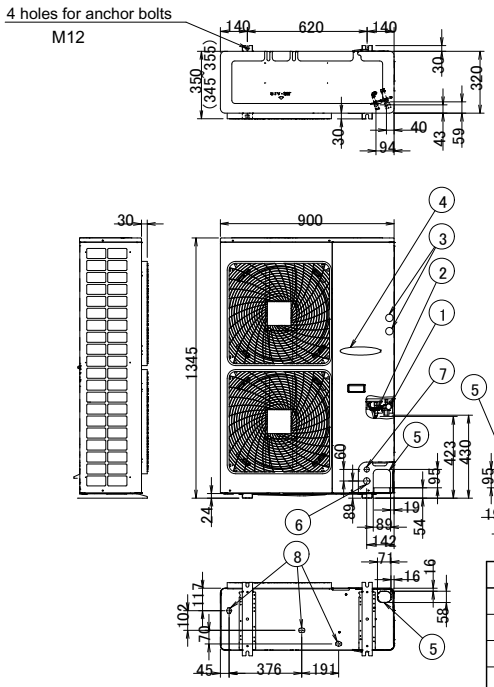
6 Dimensional drawings

6 - 1 Dimensional Drawings

RXYSQ-TY9
RXYSQ-TV9



1	Gas pipe connection A
2	Liquid pipe connection Ø9.5 flare
3	(2X) Service port (in the unit)
4	Electronic connection and grounding terminal M5 (in the switch box)
5	Refrigerant piping intake
6	Power supply wiring intake (knockout hole Ø34)
7	Control wiring intake (knockout hole Ø27)
8	Drain outlet

Model	A
RMXS112E8V1B	Ø19.1 brazed connection
RMXS140E8V1B	Ø19.1 brazed connection
RMXS160E8V1B	Ø19.1 brazed connection
RXYSQ4PA7V1B	Ø15.9 flared connection
RXYSQ5PA7V1B	Ø15.9 flared connection
RXYSQ6PA7V1B	Ø19.1 brazed connection
ERX100A9V1B	Ø15.9 flared connection
ERX125A9V1B	Ø15.9 flared connection
ERX140A9V1B	Ø19.1 brazed connection
GCA100BD4	Ø15.9 flared connection
GCA125BD4	Ø15.9 flared connection
GCA140BD4	Ø19.1 brazed connection
RXYSQ4PA7Y1B	Ø15.9 flared connection
RXYSQ5PA7Y1B	Ø15.9 flared connection
RXYSQ6PA7Y1B	Ø19.1 brazed connection

Model	A	
	RA indoor unit	VRV indoor unit
RXYSQ4(P8/T7/T8)V(1)B	Ø19.1 brazed connection	Ø15.9 flared connection
RXYSQ5(P8/T7/T8)V(1)B	Ø19.1 brazed connection	Ø15.9 flared connection
RXYSQ6(P8/T7/T8)V(1)B	Ø19.1 brazed connection	
RXYSQ4(P8/T7/T8)Y(1)B	Ø19.1 brazed connection	Ø15.9 flared connection
RXYSQ5(P8/T7/T8)Y(1)B	Ø19.1 brazed connection	Ø15.9 flared connection
RXYSQ6(P8/T7/T8)Y(1)B	Ø19.1 brazed connection	

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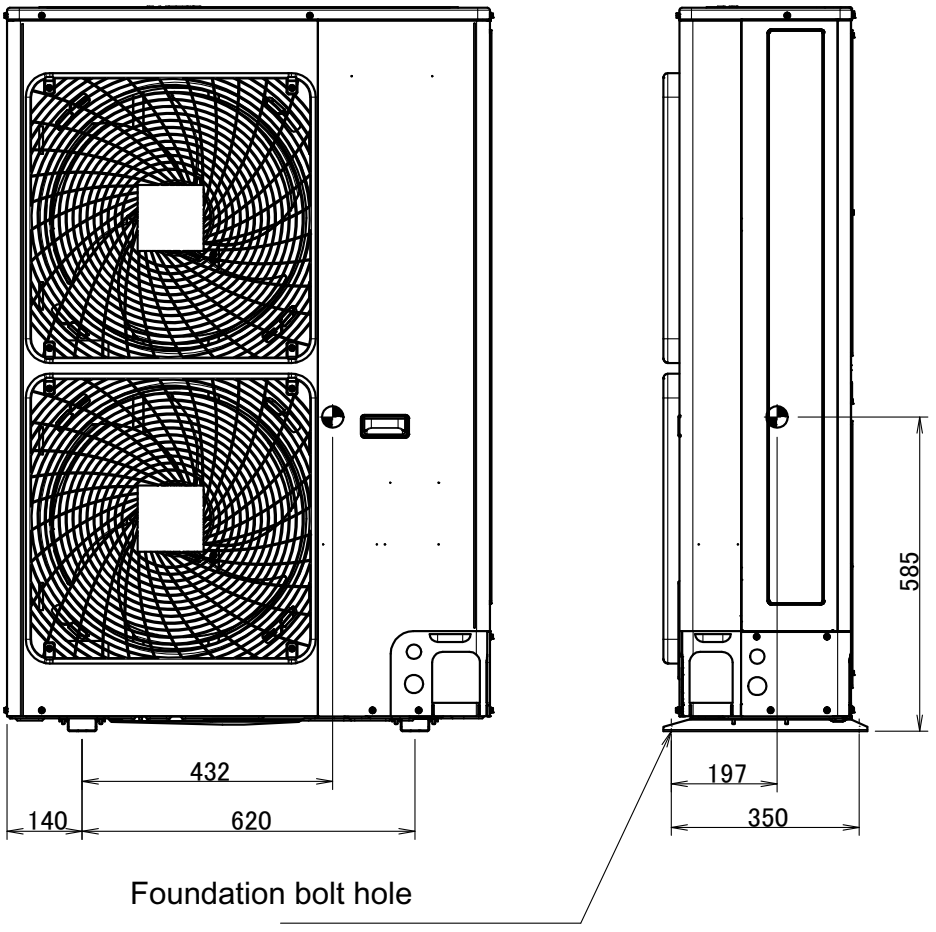
7 Centre of gravity

7 - 1 Centre of Gravity

RXYSQ-TY9

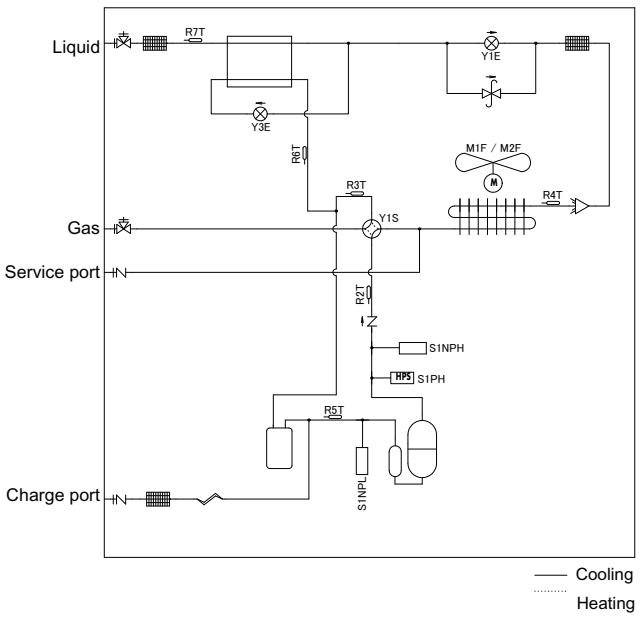


4D094635

8 Piping diagrams

8 - 1 Piping Diagrams

RXYSQ-TY9



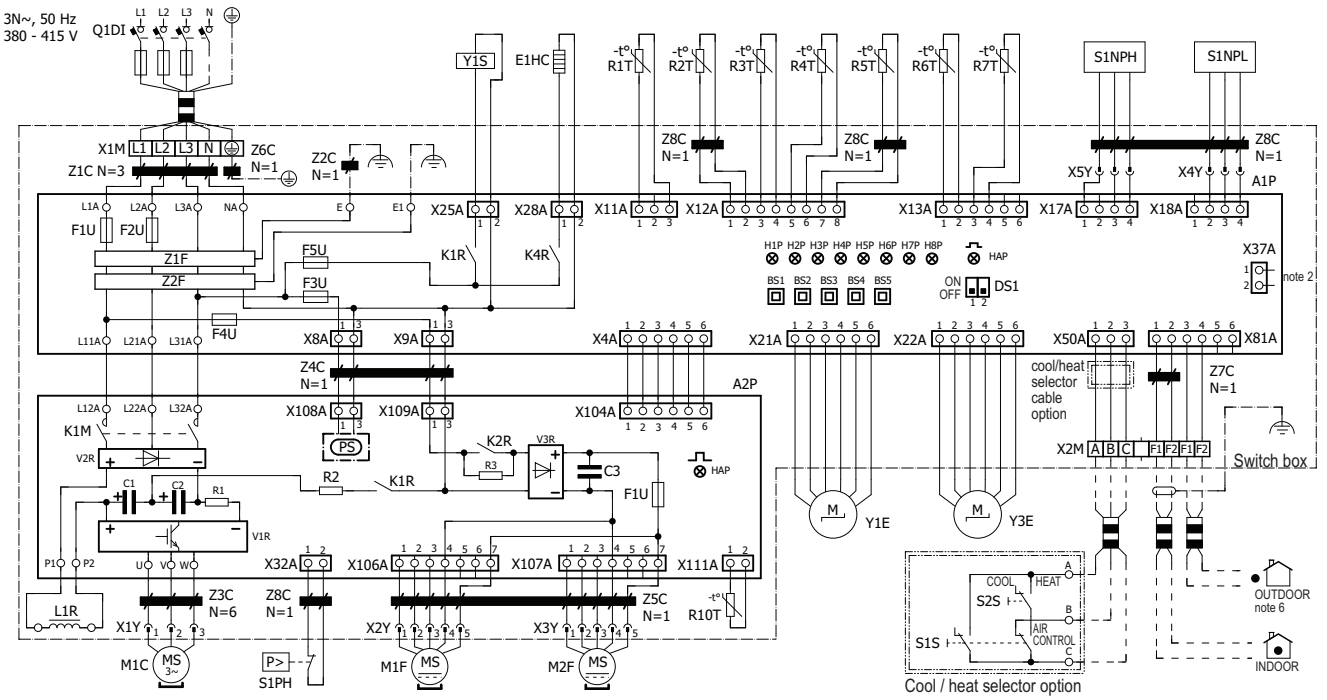
- Charge port / Service port
- Stop valve
- Filter
- Check valve
- Pressure relief valve
- Thermistor
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Compressor
- Accumulator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

3D094631A

9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

RXYSQ-TY9



4D094014E

9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

RXYSQ-TY9

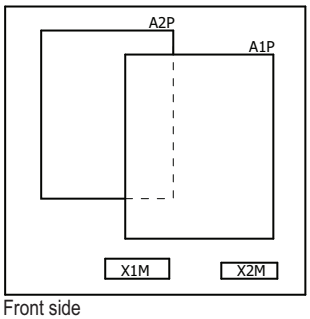
NOTES to go through before starting the unit

1. Symbols:

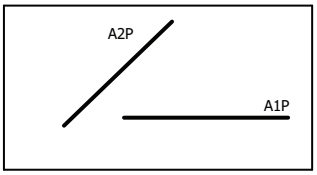
X1M : Main terminal
: Earth wiring
15 : Wire number 15
: Field wire
: Field cable
**/12.2 : Connection ** continues on page 12 column 2
1 : Several wiring possibilities
: Option
: Not mounted in switch box
: Wiring depending on model
: PCB

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.

POSITION IN SWITCH BOX



Front side



Upper side

LEGEND

Part n°		Description
A1P		main PCB
A2P		inverter PCB
BS* (A1P)		push buttons (mode, set, return, test ,reset)
C* (A2P)		capacitors
DS1 (A1P)		dipswitch
E1HC		crankcase heater
F1U (A1P)		fuse T 31,5 A 500 V
F2U (A1P)		fuse T 31,5 A 500 V
F1U (A2P)		fuse T 5 A 250 V
F3U (A1P)		fuse T 6.3 A 250 V
F4U (A1P)		fuse T 6.3 A 250 V
F5U (A1P)		fuse T 6.3 A 250 V
HAP (A*P)		running LED (service monitor-green)
H*P (A1P)		LED (service monitor-orange)
K1M (A2P)		magnetic contactor
K4R (A1P)		magnetic relay (E1HC)
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)

Part n°		Description
R3T		thermistor (suction1)
R4T		thermistor (heat exchanger)
R5T		thermistor (suction 2)
R6T		thermistor (subcool heat ex)
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		solenoïd valve (4-way valve)
Z*C		noise filter (ferrit core)
Z*F		noise filter

* : optional
# : field supply

4D094014E

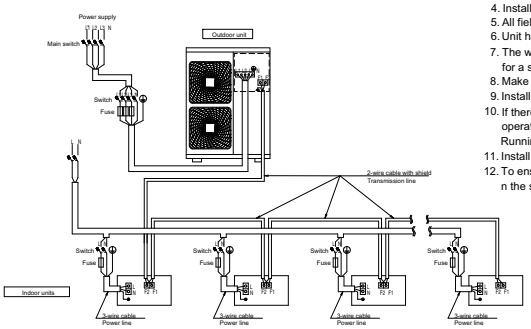
10 External connection diagrams

10 - 1 External Connection Diagrams

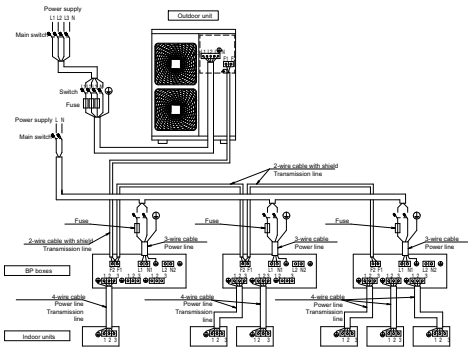
RXYSQ-TY9

External connection diagram

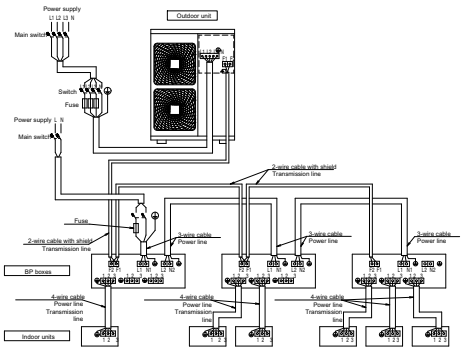
VRV indoor unit



BP box + RA/SA indoor unit



Power source is supplied to each BP box individually.



Power source is connected in series between the units.

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 equipement.
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.
    Running the product in reversed phase may break the compressor and other parts.
11. 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 o n the system layout) to each other.

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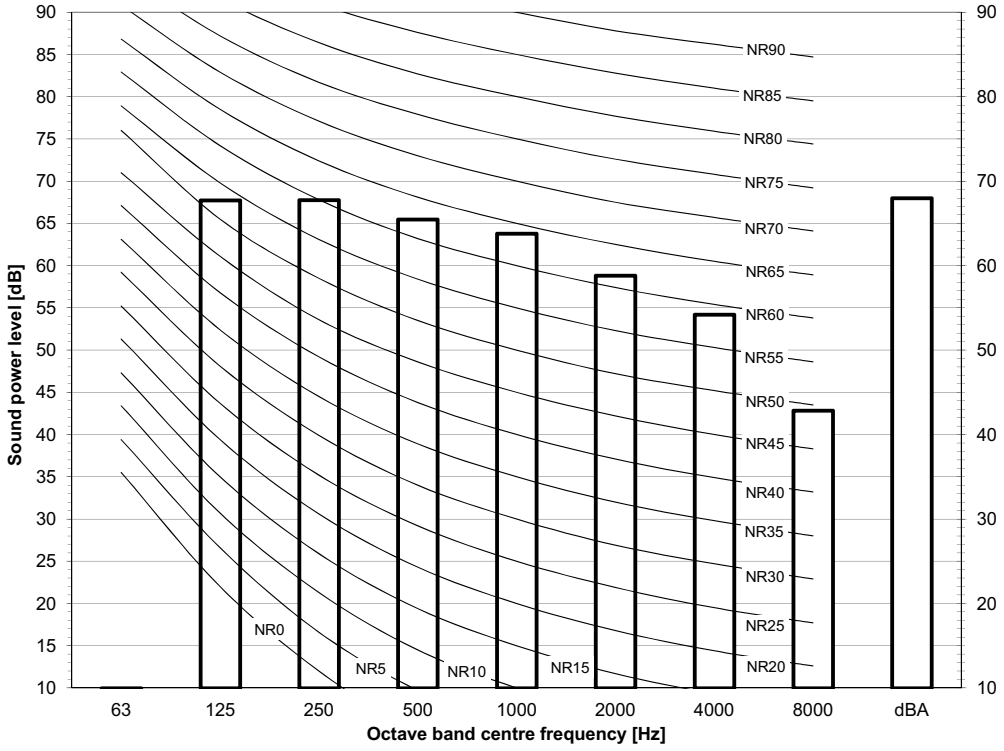
11 Sound data

11 - 1 Sound Power Spectrum

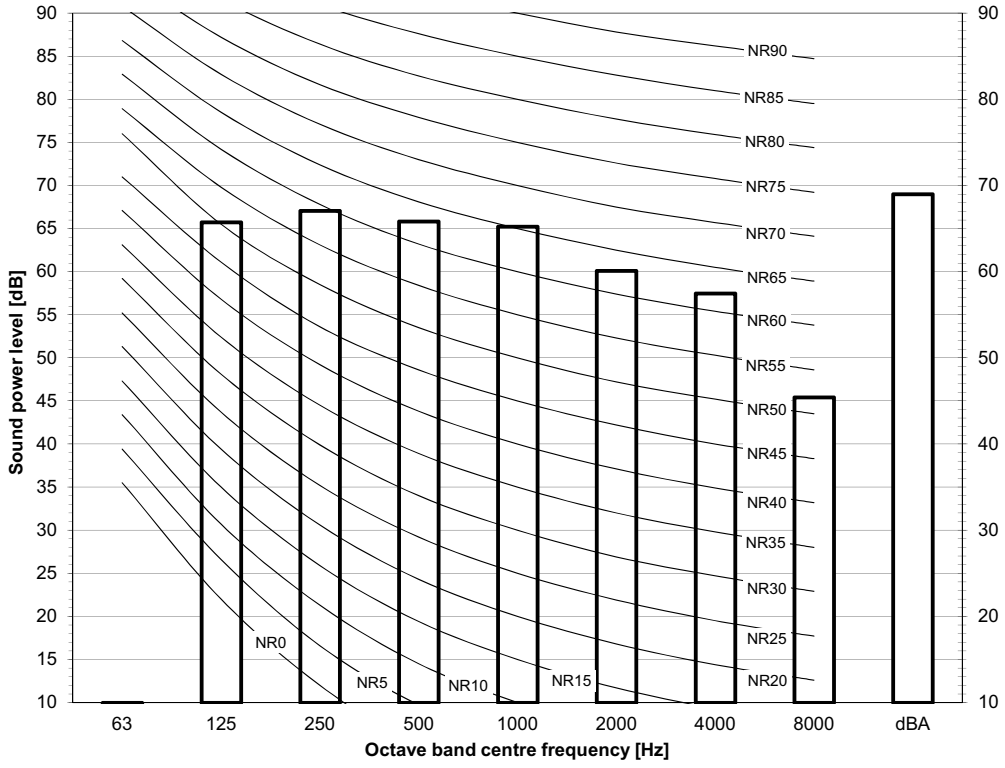
RXYSQ4TY9
RXYSQ4TV9



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

3D098212

RXYSQ5TY9
RXYSQ5TV9



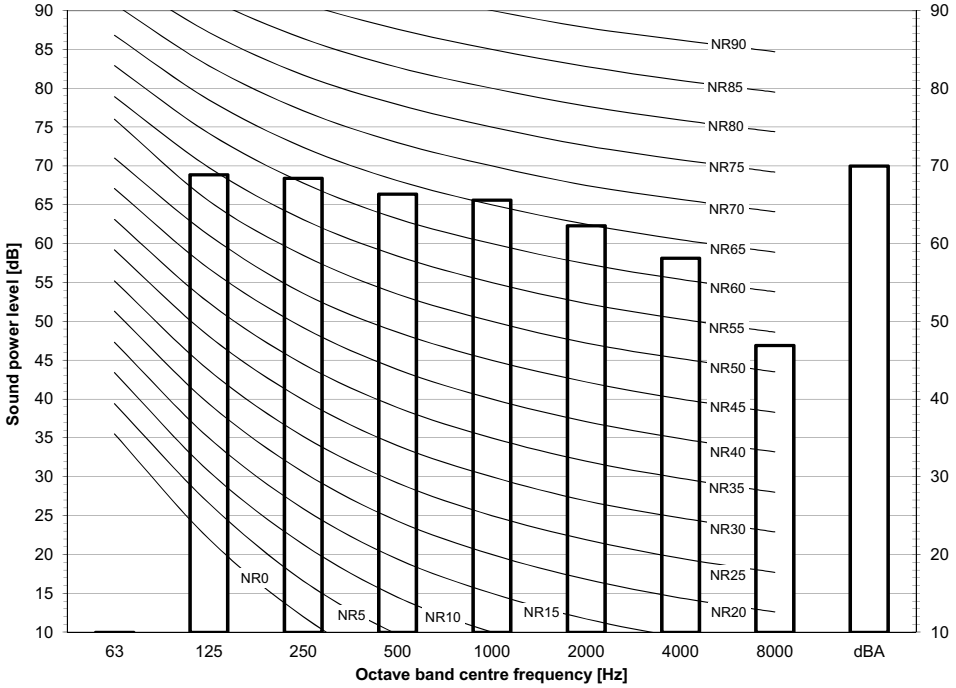
Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10E-6µW/m²
- Measured according to ISO 3744

3D098213

11 Sound data

11 - 1 Sound Power Spectrum

RXYSQ6TY9
RXYSQ6TV9



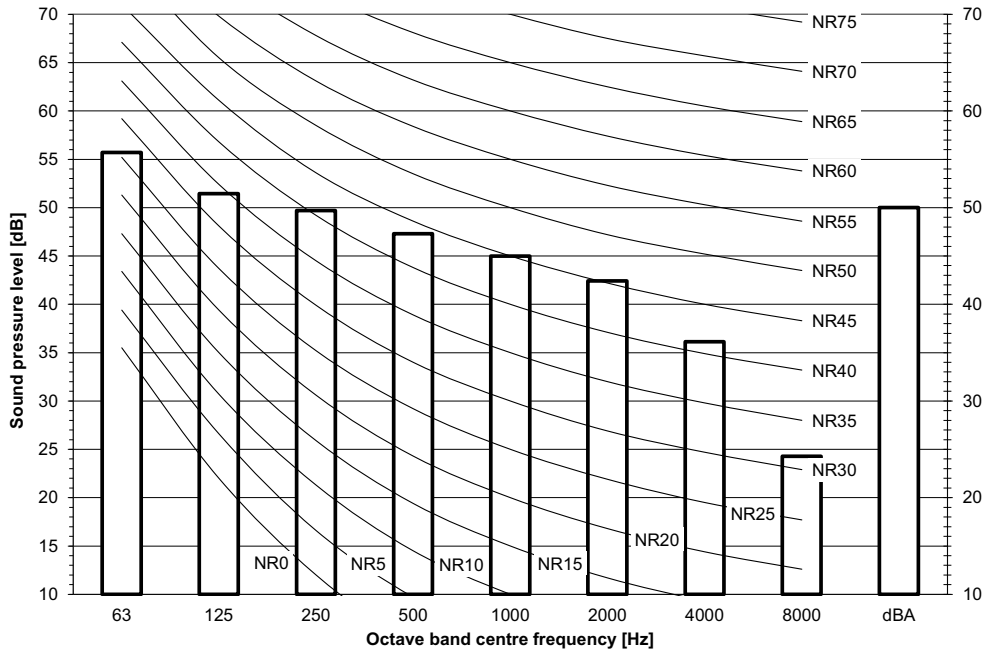
Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10E-6µW/m²
- Measured according to ISO 3744

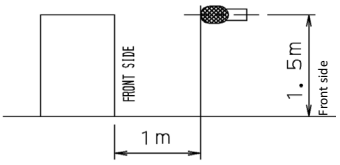
3D098214

11 Sound data

11 - 2 Sound Pressure Spectrum

RXYSQ4TY9
RXYSQ4TV9

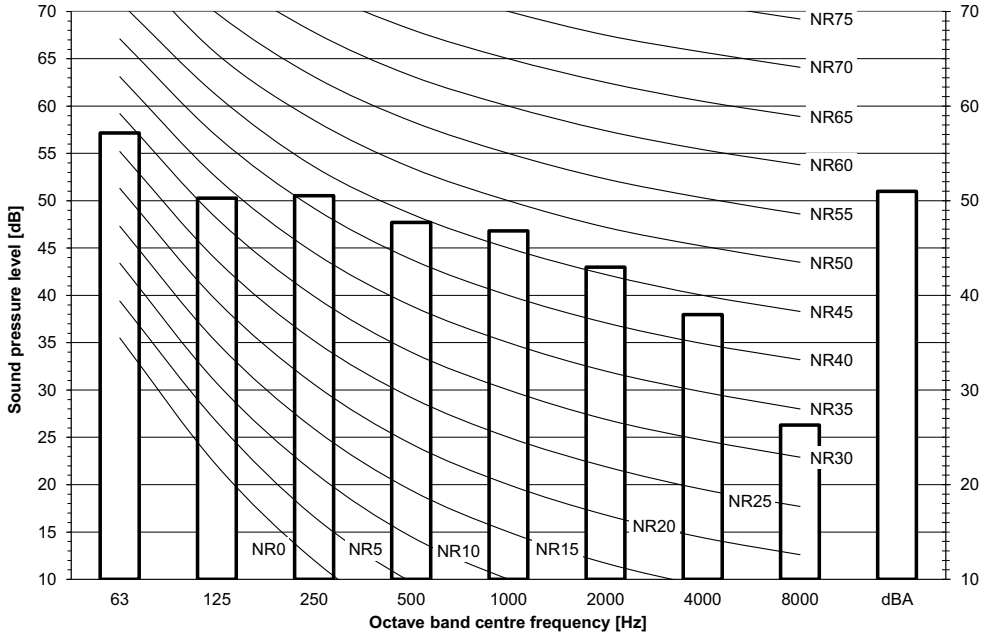


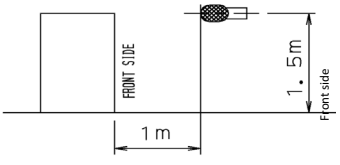


Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

3D098215

RXYSQ5TY9
RXYSQ5TV9





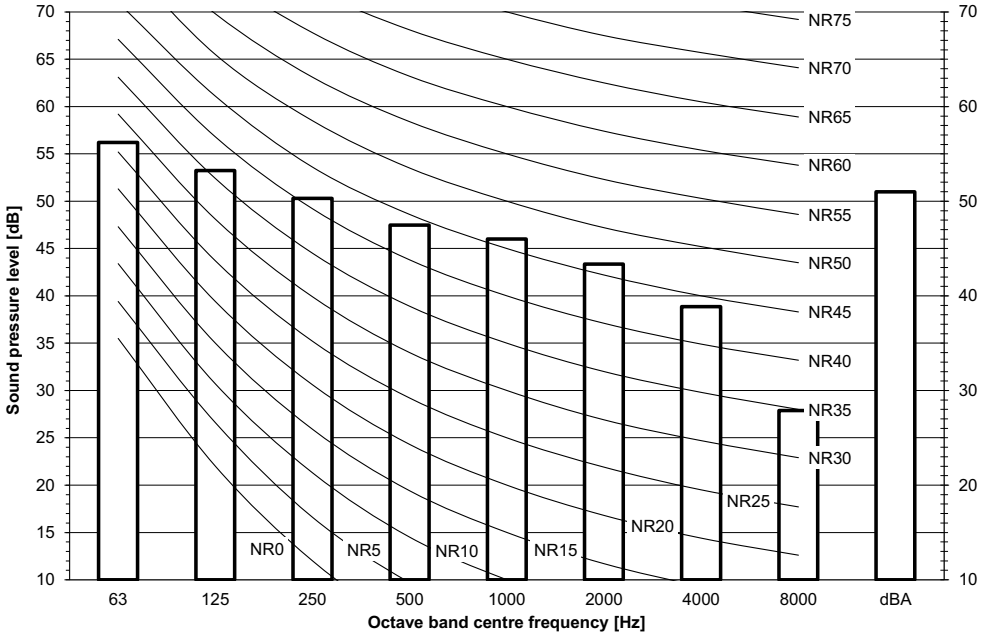
Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

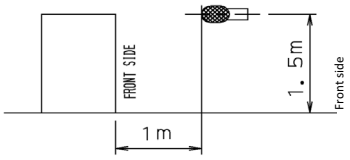
3D098216

11 Sound data

11 - 2 Sound Pressure Spectrum

RXYSQ6TY9
RXYSQ6TV9





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

12 Installation

12 - 1 Installation Method

RXYSQ-TY9
RXYSQ-TV9

Required installation space

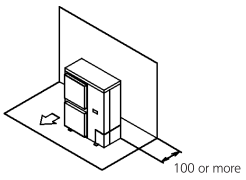
The unit of the values is mm.

(A) When there are obstacles on suction sides.

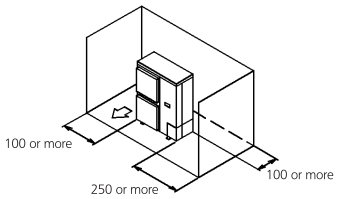
● **No obstacle above**

① Stand-alone installation

● Obstacle on the suction side only

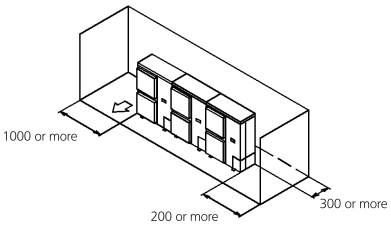


● Obstacle on both sides



②Series installation (2 or more)

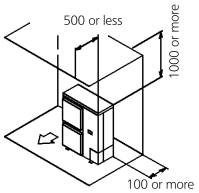
● Obstacle on both sides



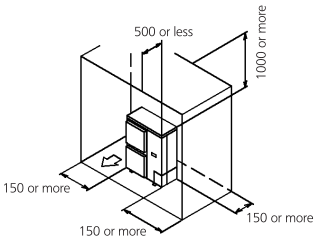
● **Obstacle above, too.**

① Stand-alone installation

● Obstacle on the suction side, too

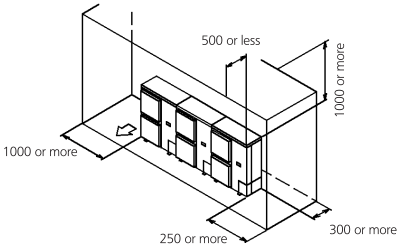


● Obstacle on the suction side and both sides



② Series installation (2 or more)

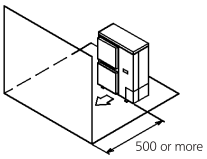
● Obstacle on the suction side and both sides



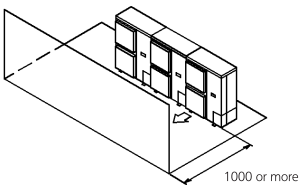
(B) When there are obstacles on discharge sides.

● **No obstacle above**

① Stand-alone installation

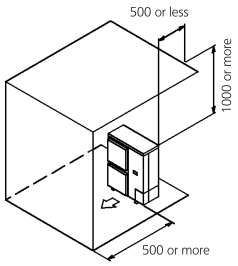


② Series installation (2 or more)

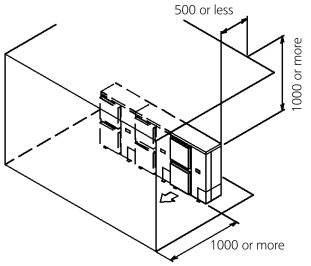


● **Obstacle above, too**

① Stand-alone installation



② Series installation (2 or more)



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

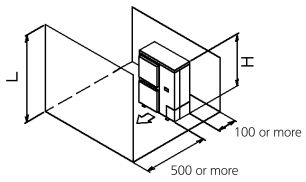
Pattern 1

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**

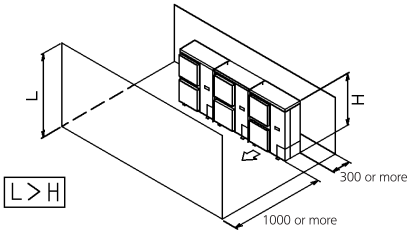
① Stand-alone installation

L > H



② Series installation (2 or more)

L > H



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12 Installation

12 - 1 Installation Method

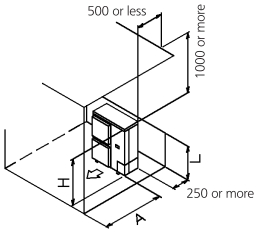
RXYSQ-TY9
RXYSQ-TV9

• Obstacle above, too

① Stand-alone installation

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

	L	A
L ≦ H	0 < L ≦ 1/2 H	750
	1/2 H < L ≦ H	1000
H < L	Set the stand as : L ≦ H	

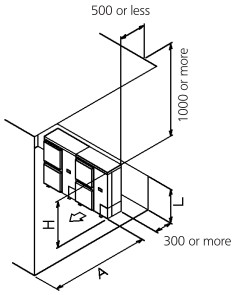


Close the bottom of the installation frame to prevent the discharged air from being bypassed.

② Series installation (2 or more)

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

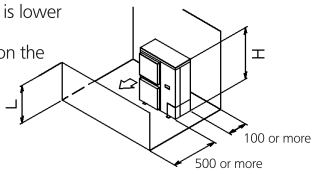
	L	A
L ≦ H	0 < L ≦ 1/2 H	1000
	1/2 H < L ≦ H	1250
H < L	Set the stand as : L ≦ H	



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.)



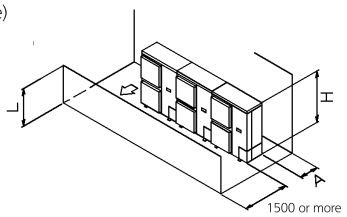
• No obstacle above

① Stand-alone installation
L ≦ H

② Series installation (2 or more)

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

L	A
0 < L ≦ 1/2 H	250
1/2 H < L ≦ H	300

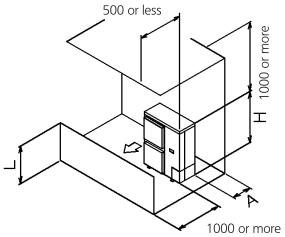


• Obstacle above, too

① Stand-alone installation

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

	L	A
L ≦ H	0 < L ≦ 1/2 H	100
	1/2 H < L ≦ H	200
H < L	Set the stand as : L ≦ H	

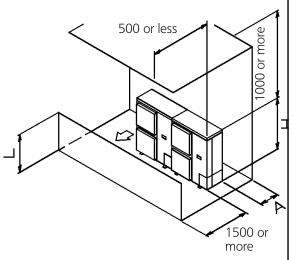


Close the bottom of the installation frame to prevent the discharged air from being bypassed.

② Series installation

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

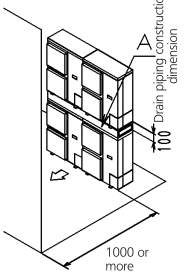
	L	A
L ≦ H	0 < L ≦ 1/2 H	250
	1/2 H < L ≦ H	300
H < L	Set the stand as : L ≦ H	



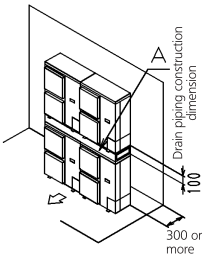
Close the bottom of the installation frame to prevent the discharged air from being bypassed.
Only two units can be installed for this series.

(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.

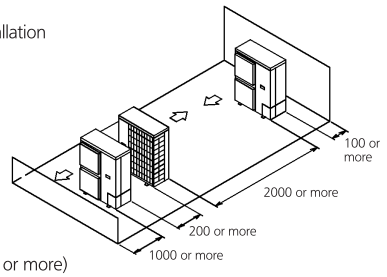


② Obstacle on the suction side.
Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharged air from being bypassed.
Do not stack more than two unit.



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

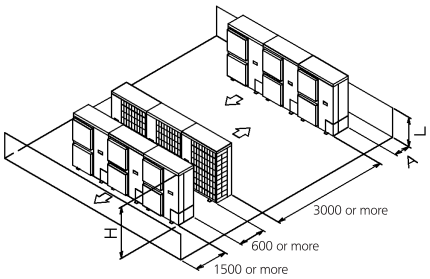
① One row of stand-alone installation



② Rows of series installation (2 or more)

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

	L	A
L ≦ H	0 < L ≦ 1/2 H	250
	1/2 H < L ≦ H	300
H < L	Can not be installed	



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12 Installation

12 - 2 Refrigerant Pipe Selection

RXYSQ-TY9
RXYSQ-TV9

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	RXYSCQ4~5TMV1B	70/(90)m	40m	30/(30)m	15m	300m
VRV DX indoor units only	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	RXYSCQ4~5TMV1B	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	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)(EKEXV + EKEQ kits).
3. Mix of air handling units (AHU) and VRV DX indoor units.

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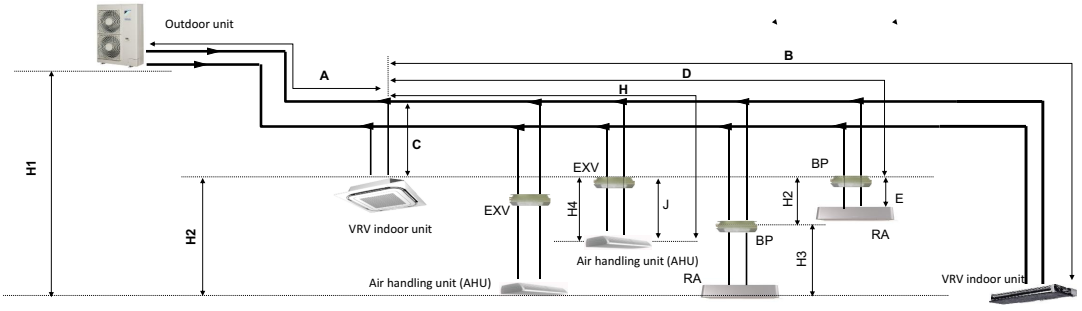
RXYSQ-TY9
RXYSQ-TV9



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	-	≤5m	-	5m
	Multi (1)	-	≤5m	-	5m
	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.

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12 Installation

12 - 2 Refrigerant Pipe Selection

RXYSQ-TY9
RXYSQ-TV9

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· (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.

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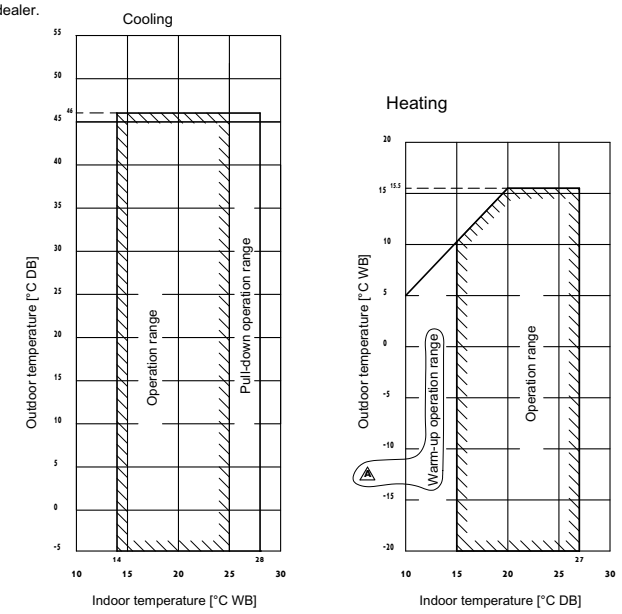
13 Operation range

13 - 1 Operation Range

RXYSQ-TY9
RXYSQ-TV9

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.
   For more information, contact your dealer.



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14 Appropriate Indoors

14 - 1 Appropriate Indoors

RXYSQ-TY9
RXYSQ-TV9

Recommended indoor units for ·RXYSQ*T* AND RXYSCQ*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 RXYSCQ*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

Covered by ·ENER LOT10·
FTXJ25-35-50
FTXA20-25-35-42-50
FTXM20-25-35-42-50-60-71
CTXM15
FLXS25-35-50-60
FVXM25-35-50
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

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

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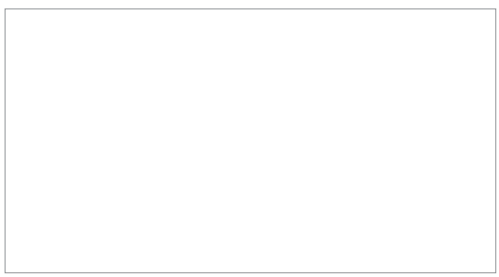

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