

VRV IV S-series heat pump Technical data book RXYSQ-TY9



RXYSQ4T8YB9 RXYSQ5T8YB9 RXYSQ6T8YB9



Table of contents

RXYSQ-TY9

1	Features RXYSQ-TY9	4 4
2	Specifications	5
3	Options	8
4	Combination table	9
5	Capacity tables Capacity Table Legend Capacity Correction Factor	11 11 12
6	Dimensional drawings	14
7	Centre of gravity	15
8	Piping diagrams	16
9	Wiring diagrams Notes & Legend Wiring Diagrams - Three Phase	17 17 18
10	External connection diagrams	19
11	Sound data Sound Power Spectrum Sound Pressure Spectrum	20 20 22
12	Installation Installation Method Refrigerant Pipe Selection	24 24 26
13	Operation range	28
14	Appropriate Indoors	29





1 Features

1 - 1 RXYSQ-TY9

Space saving solution without compromising on efficiency

- 1
- By choosing a LOOP by Daikin product you support the reuse of refrigerant, for more information visit www.daikin.eu/loop-bydaikin
- > 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, 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, extented lifetime and immediate service support thanks to failure prediction







Specifications1 - 1 RXYSQ-TY9

Technical Spe		ns		RXYSQ4TY9	RXYSQ5TY9	RXYSQ6TY9		
Recommended cor	mbination			3 x FXSQ25A2VEB + 1 x	4 x FXSQ32A2VEB	2 x FXSQ32A2VEB + 2 >		
				FXSQ32A2VEB		FXSQ40A2VEB		
Cooling capacity	Prated,c		kW	12.1 (1)	14.0 (1)	15.5 (1)		
leating capacity	Nom.	6°CWB	kW	12.1 (2)	14.0 (2)	15.5 (2)		
	Prated,h		kW	8.0	9.2	10.2		
	Max.	6°CWB	kW	14.2 (2)	16.0 (2)	18.0 (2)		
ower input - 50Hz	Heating	Nom. 6°CWB	kW	2.68 (2)	3.27 (2)	3.97 (2)		
COP at nom.	6°CWB		kW/kW	4.52	4.28	3.90		
SEER - Automatic				7.89	7.49	6.73		
SEER - Standard								
				6.18	5.77	5.23		
COP				3.9	4.2	4.4		
SEER			-	6.8	6.6	6.8		
ls,c			%	269.2	260.5	268.3		
ıs,h			%	154.4	164.5	174.1		
pace cooling	A Condition (35°C			3.1		2.6		
	- 27/19)	Pdc	kW	12.1	14.0	15.5		
	B Condition (30°C	EERd		5.2		4.8		
	- 27/19)	Pdc	kW	8.9	10.3	11.4		
	C Condition (25°C	EERd		9.3	8.9	9.1		
	- 27/19)	Pdc	kW	5.7	6.6	7.3		
	D Condition	EERd		13.0	14.2	15.1		
	(20°C - 27/19)	Pdc	kW	4.3	4.5	4.6		
naco hoatir -			17.4.4					
pace heating	ı bıvaient	COPd (declared COP)	134/	2.4		2.5		
Average climate)		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)		8.0	9.2	10.2		
		Tol (temperature operating limit)	°C		-10			
	A	COPd (declared COP)		2.7	2.8	2.9		
		Pdh (declared heating cap)	F/W	7.0	8.1	9.0		
	(-7°C)		KVV					
	В	COPd (declared COP)		3.6	3.8	4.0		
	Condition (2°C)	Pdh (declared heating cap)	kW	4.3	5.0	5.5		
	<u>(2 c)</u>	COPd (declared COP)		5.7	6.1	6.5		
	Condition	Pdh (declared heating cap)	kW	3.4	3.5	3.6		
	(7°C)	COD I (I - I - I - I COD)		70	7.	0.1		
	Condition	COPd (declared COP) Pdh (declared heating cap)	kW	7.0 4.3	7.6 1	8.1 4.3		
	(12°C)							
Capacity range			HP	4	5	6		
PED	Category				Category I			
	Most	Name			Compressor			
	critical	Ps*V	Bar*l		167			
	part				-			
Maximum number		able indoor units			64 (3)			
ndoor index	Min.	=::::==	-	50.0	62.5	70.0		
onnection	Max.			130.0	162.5	182.0		
Dimensions	Unit	Height	mm	150.0	1,345	102.0		
,,,,,,C1131U113	OTIIL				·			
		Width	mm		900			
		Depth	mm		320			
	Packed	Height	mm		1,524			
	unit	Width	mm		980			
		Depth	mm		420			
Veight	Unit		kg		104			
3	Packed un	it	kg		114			
acking	Material	·	·9		Carton			
acking	Weight		kg		3.9			
lacking 2			кy					
acking 2	Material		. +	Wood 5.6				
	Weight		kg					
acking 3	Material				Plastic			
	Weight		kg		0.5			
Casing	Colour				Daikin White			
-	Material				Painted galvanized steel plate			
leat exchanger	Туре		-		Cross fin coil			
icat excitatiget		2	-					
	Indoor sid				Air			
	Outdoor s		3		Air			
	Air flow	Cooling Rated	m³/h		6,360			
	rate	Heating Rated	m³/h		6,360			





2 Specifications

1 - 1 RXYSQ-TY9

Technical Spe	cificatio	ns			RXYSQ4TY9	RXYSQ5TY9	RXYSQ6TY9		
Fan motor	an motor Quantity				2				
	Туре				DC motor				
	Output			W		70			
Compressor	Quantity					1			
•	Туре				He	ermetically sealed swing compres	sor		
	Crankcase	heater		w		33			
Operation range	Cooling	Min.		°CDB		-5.0			
.,	J	Max.		°CDB		46.0			
	Heating	Min.		°CWB		-20.0			
Operation range	Heating	Max.		°CWB		15.5			
Sound power level		Nom.		dBA	68.0 (4)	69.0 (4)	70.0 (4)		
Sound pressure	Cooling	Nom.		dBA	50.0 (5)		.0 (5)		
level	2009			4571	5616 (5)	3	(5)		
Refrigerant	Туре					R-410A			
3	GWP					2,087.5			
	Charge			TCO2Eq					
	Charge			kg		7.5 3.6			
Refrigerant oil	Type					Synthetic (ether) oil FVC50K			
Piping connections		Туре				Flare connection			
p.i.ig comiccitons	Liquid	OD		mm	9,52				
	Gas	Туре			Flare cor	nnection	Braze connection		
	OD mm		mm	15		19.1			
	Total piping	System	Actual	m		15.1			
	length	5,510	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Defrost method						Reversed cycle			
Capacity control	Method					Inverter controlled			
Indication if the hea		ned with	a sunnlement	ary heater		no			
Supplementary	Back-up	Heating	elbu	kW	0.0				
heater	capacity					0.0			
Power	Crankcase	Cooling	PCK	kW		0.000			
consumption in	heater	Heating	PCK	kW		0.049			
other than active	mode					5.5 .5			
mode	Off mode	Cooling	POFF	kW		0.039			
		Heating	POFF	kW		0.049			
	Standby	Cooling	PSB	kW		0.039			
	mode	Heating	PSB	kW		0.049			
		Cooling	PTO	kW		0.000			
	mode	Heating	PTO	kW		0.049			
Cooling	Cdc (Degra			KVV		0.25			
Heating	Cdh (Degr					0.25			
Safety devices	Item	01	.aanig/			High pressure switch			
Surety devices	item	02				Fan driver overload protector			
		03				Inverter overload protector			
					PC board fuse				

 $Standard\ accessories: Installation\ manual; Quantity: 1;$

Standard accessories: Operation manual; Quantity: 1;

 ${\it Standard\ accessories: Connection\ pipes; Quantity: 1;}$

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

(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. |





Specifications

1 - 1 RXYSQ-TY9

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

(9)MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker). | (10)TOCA means the total value of each OC set. |

(III)FLA means the nominal running current of the fan |

MSC means the maximum current during start up of the compressor. VRV IV uses only inverter compressors. Starting current is always

max. running current. |

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 all Plaus leads on control to the compressor is 200. |

Maximum all Plaus leads on control to the compressor is 200. |

Sound values are measured in a semi-anecroic 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-TY1 RXYSQ-TY9 RXYSQ-TV9

> VRV4-S Heat pump Option list

Nr.	Item	RXYSCQ4~6TMV1B	RXYSQ4~6T7V1B RXYSQ4~6T8VB(9)	RXYSQ4~6T7Y1B RXYSQ4~6T8YB(9)	RXYSQ8~12TMY1B	RXYSQ6T7Y1B9 RXYSQ6T8Y1B9	RXYSQ6TMYFK		
	Refnet header		K	HRQ22M29H					
1.	Keniet neader	-	-	-	KHRQ22M64H	-	KHRQ22M64H		
			•	KHRQ22M20)T				
II.	Refnet joint	-	-	-	KHRQ22M29T9	-	KHRQ22M29T9		
		-			KHRQ22M64T	-	KHRQ22M64T		
1a.	Cool/heat selector (switch)	-	KRC19	-26	-	KRC19-26	-		
1b.	Cool/heat selector (fixing box)	-	KJB11	1A	-	KJB111A	-		
1c.	Cool/heat selector (PCB)	-	EBRP2B	-	-	-	-		
1d.	Cool/heat selector (cable)	-	-	EKCHSC	-	EKCHSC	-		
2.	Drain plug kit	-	EKDK	04	-	EKDK04	-		
3.	VRV configurator			EKPCCAB*	•				
4.	Demand PCB	DTA104A61/62*							
5.	Branch provider - ·2· rooms		врмк5967А2						
6.	Branch provider - · 3· rooms		BPMKS96	7A3		-	-		

<u>Notes</u>

- 1. All options are kits
- 2. To mount option $\cdot 1a \cdot$, option $\cdot 1b \cdot$ is required.
- 3. For ·RXYSQ4~6T7V1B·

For ·RXYSQ4~6T8VB·

To operate the cool/heat selector function, options $\cdot 1a \cdot$ and $\cdot 1c \cdot$ are both required.

4. For ·RXYSQ4~6T7Y1B·

For ·RXYSQ4~6T8YB·

To operate the cool/heat selector function, options $\cdot 1a \cdot$ and $\cdot 1d \cdot$ are both required.

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4 Combination table

4 - 1 Combination Table

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

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

	Configura	Indoor unit type	
	Wall-mounted	Emura	FTXJ20M (W/S)
			FTXJ25M (W/S)
			FTXJ35M (W/S)
			FTXJ50M (W/S)
		FTXM	FTXM20N
			FTXM25N
			FTXM35N
			FTXM42N
			FTXM50N
			FTXM60N
			FTXM71N
		CTXM	CTXM15M
		Stylish	FTXA20
			FTXA25
Ħ			FTXA35
			FTXA42
5			FTXA50
RA· indoor unit	Floor-standing	Flex	FLXS25B
<u>2</u>	Ceiling-mounted		FLXS35B
Ā	_		FLXS50B
÷			FLXS60B
	Floor-standing	FVXM	FVXM25F
			FVXM35F
			FVXM50F
			CVXM20A
			FVXM25A
			FVXM35A
			FVXM50A
			FVXM60A
		Nexura	FVXG25K
			FVXG35K
			FVXG50K
	Duct	FDXM	FDXM25F
	1		FDXM35F
	1		FDXM50F
	1		FDXM60F

Configur	Indoor unit type		
Cassette	Fully Flat 2x2	FFA25A	
		FFA35A	
		FFA50A	
		FFA60A	
	Roundflow 3x3	FCAG35A	
		FCAG50A	
		FCAG60A	
=			
Ceiling-suspended	Ceiling-suspended		
0		FHA50A	
2		FHA60A	
Ceiling-suspended		FHA71A	
Duct	Duct		
		FBA50A	
		FBA60A	
		FBA71A	
Floor-standing	FNA	FNA25A	
		FNA35A	
		FNA50A	
		FNA60A	

Remark

 $1. \ \ \, \text{The limitations on the use of } \cdot \text{RA/SA} \cdot \text{indoor units with the } \cdot \text{VRV4-S} \cdot \text{Heat Pump are subject to the rules set out in drawings } \cdot 3\text{D097983} \cdot \text{and } \cdot 3\text{D097984} \cdot$

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RXYSQ-TY9 RXYSQ-TV9 RXYSQ-TY1

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) (1)
·VRV* DX· indoor unit	0	Х	Х	0
·RA DX· indoor unit	X	0	Х	Х
Hydrobox unit	Х	X	Х	Х
Air handling unit (AHU) (1)	0	X	Х	0,

- O: Allowed
- X: Not allowed

Notes

- 1. O₁
 - Combination of \cdot AHU \cdot only + control box \cdot EKEQFA \cdot (not combined with \cdot VRV DX \cdot indoor units)
 - → X·-control is possible [·EKEXV+EKEQFA*· boxes]. No Variable Refrigerant Temperature control possible.
 - $\rightarrow \text{`Y--control is possible [-EKEXV+EKEQFA*-boxes]. No Variable Refrigerant Temperature control possible.}$
 - ightarrow ·W·-control is possible [·EKEXV+EKEQFA*· boxes]. No Variable Refrigerant Temperature control possible.
 - Combination of \cdot AHU \cdot only + control box \cdot EKEQMA \cdot (not combined with \cdot VRV DX \cdot 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
 - ightarrow ·Biddle· air curtain
 - \rightarrow ·FXMQ_MF· units

<u>Information</u>

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

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4 Combination table

4 - 1 Combination Table

RXYSQ-TY9 RXYSQ-TV9 RXYSQ-TY1

VRV4-S

Heat pump

Indoor unit combination restrictions

Combination table	RXYSCQ4~6TMV1B	RXYSQ4~6T7V1B	RXYSQ4~6T7Y1B	RXYSQ8~12TMY1B
·VRV* DX· indoor unit	0	0	0	0
·RA DX· indoor unit	0	0	0	0
Hydrobox unit	Х	Х	Х	Х
Air handling unit (AHU) (2)	0	0	0	0

O: Allowed

X: Not allowed

<u>Notes</u>

(2) The following units are considered AHUs:

- → ·EKEXV + EKEQ(MA/FA) + AHU· coil
- ightarrow ·Biddle· air curtain
- \rightarrow ·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:

- <u>Capacity table database:</u> 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 <u>all software tools</u> that we offer can be found here: https://my.daikin.eu/denv/en_US/home/applications/software-finder.html

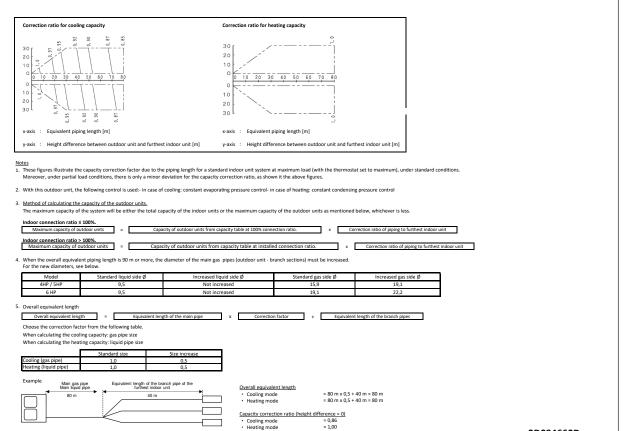




5 Capacity tables

5 - 2 Capacity Correction Factor

RXYSQ4-6TV RXYSQ4-6TV1 RXYSQ4-6TV1 RXYSQ4-6TV1 RXYSQ4-6TV9 RXYSQ4-6TV9



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Capacity tables

5 - 2 Capacity Correction Factor

RXYSQ-TY1 **RXYSQ-TY9 RXYSQ-TV9**

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:

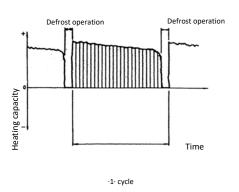
Formula

- 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

mict all 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 RXYSQ5T7V1B RXYSQ5T7V1B RXYSQ5T7V1B RXYSQ5T7V1B RXYSQ6T7Y1B RXYSQ6T7Y1B RXYSQ6T7Y1B RXYSQ6T7V1B RXYSQ4T8VB RXYSQ4T8VB RXYSQ4T8VB RXYSQ5T8VB RXYSQ6T8VB RXYSQ6T8VB RXYSQ5T8VB RXYSQ5T8VB RXYSQ5T8VB RXYSQ5T8VB RXYSQ5T8VB9 RXYSQ4T8VB9 RXYSQ4T8VB9 RXYSQ4T8VB9 RXYSQ4T8VB9 RXYSQ4T8VB9 RXYSQ5T8VB9 RXYSQ5T8VB9 RXYSQ5T8VB9	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.

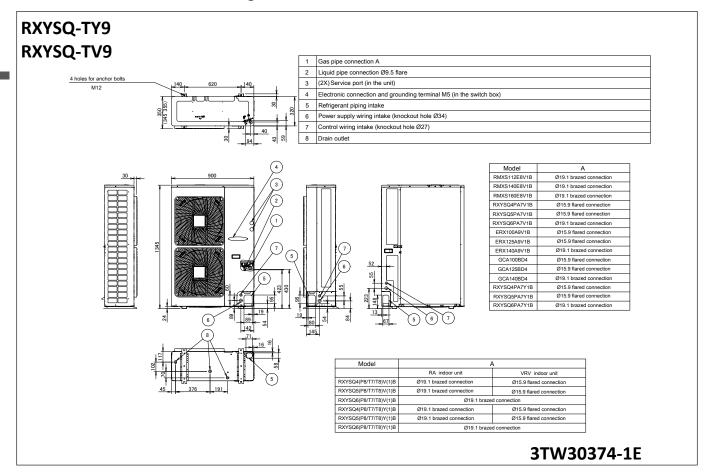
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13



6 Dimensional drawings

6 - 1 Dimensional Drawings

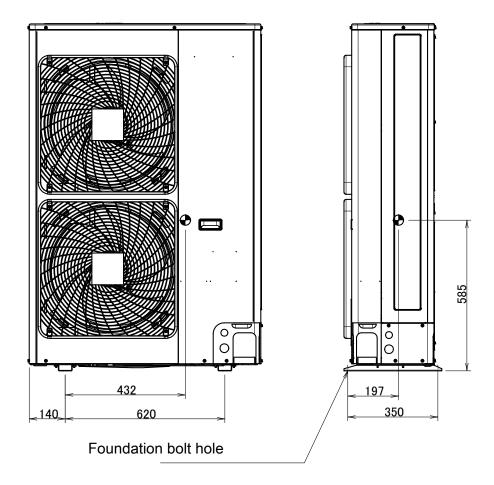




7 Centre of gravity

7 - 1 Centre of Gravity

RXYSQ-TY9



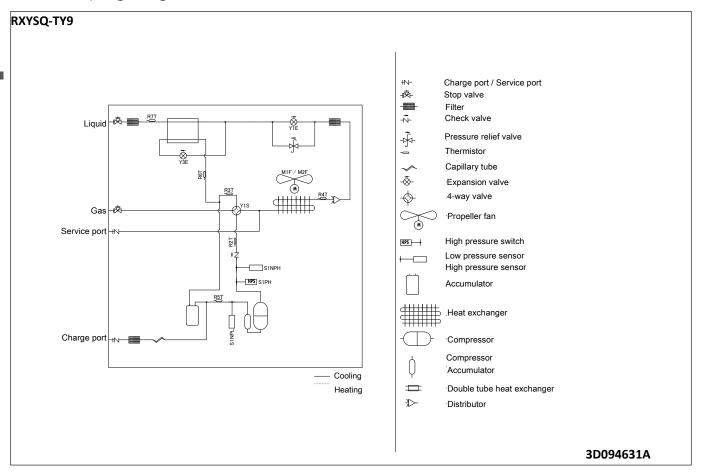
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8 Piping diagrams

8 - 1 Piping Diagrams





Wiring diagrams 9

Notes & Legend 9 - 1

RXYSQ-TY9

NOTES to go through before starting the unit

1. Symbols:

X1M : Main terminal : Earth wiring : Wire number 15 _ : Field wire

: Field cable

→ **/12.2 : Connection ** continues on page 12 column 2

(1)

: Several wiring possibilities



: Wiring depending on model

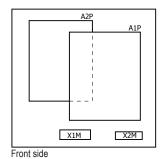


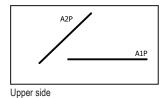
Not mounted in switch box



- 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





LEGEND

Part n°		Description	Part n°		Description
A1P		main PCB	R3T		thermistor (suction1)
A2P		inverter PCB	R4T		thermistor (heat exchanger)
BS* (A1P)		push buttons (mode, set, return, test ,reset)	R5T		thermistor (suction 2)
C* (A2P)		capacitors	R6T		thermistor (subcool heat ex)
DS1 (A1P)		dipswitch	R7T		thermistor (liquid)
E1HC		crankcase heater	R10T		thermistor (fin)
F1U (A1P)		fuse T 31,5 A 500 V	S1NPH		high pressure sensor
F2U (A1P)		fuse T 31,5 A 500 V	S1NPL		low pressure sensor
F1U (A2P)		fuse T 5 A 250 V	S1PH		high pressure switch
F3U (A1P)		fuse T 6.3 A 250 V	S1S	*	air control switch
F4U (A1P)		fuse T 6.3 A 250 V	S2S	*	cool / heat switch
F5U (A1P)		fuse T 6.3 A 250 V	V1R (A2P)		IGBT power module
HAP (A*P)		running LED (service monitor-green)	V2R (A2P)		diode module
H*P (A1P)		LED (service monitor-orange)	V3R (A2P)		diode module
K1M (A2P)		magnetic contactor	X37A		connector (power supply for option PCB)
K4R (A1P)		magnetic relay (E1HC)	X*A		PCB connector
K*R (A*P)		magnetic relay	X*M		terminal strip
L1R		reactor	X*Y		connector
M1C		motor (compressor)	Y1E		electronic expansion valve (main)
M1F		fan motor (upper)	Y3E		electronic expansion valve (subcool)
M2F		fan motor (lower)	Y1S		solenoïd valve (4-way valve)
PS (A2P)		power supply	Z*C		noise filter (ferrit core)
Q1DI	#	earth leakage circuit breaker	Z*F		noise filter
R* (A2P)		resistor	* . antianal		
R1T		thermistor (air)	* : optional # : field supr	dv	

thermistor (discharge)

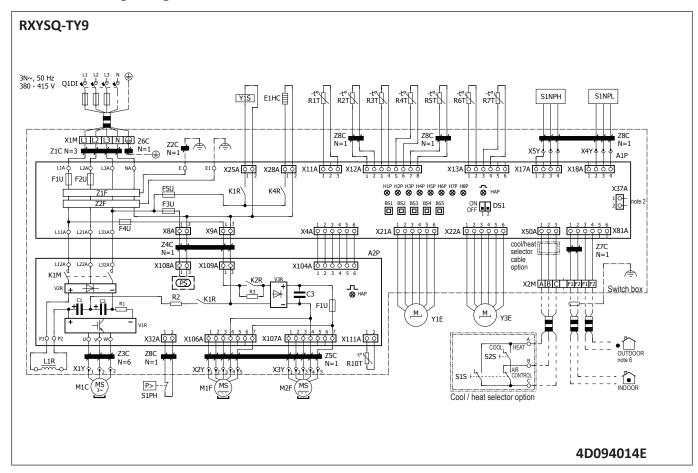
R2T

4D094014E



9 Wiring diagrams

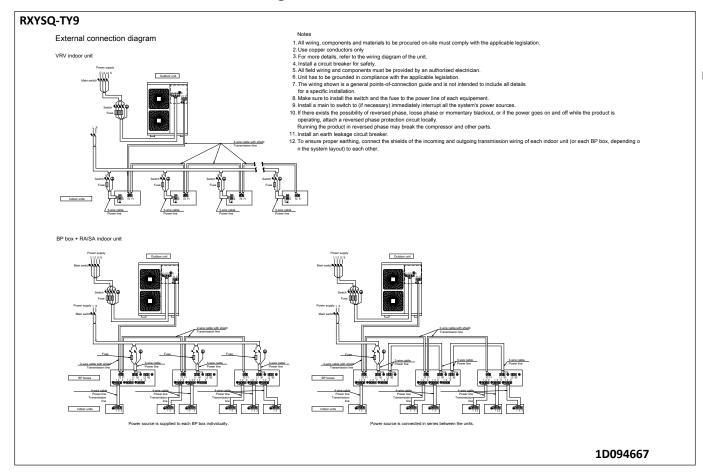
9 - 2 Wiring Diagrams - Three Phase





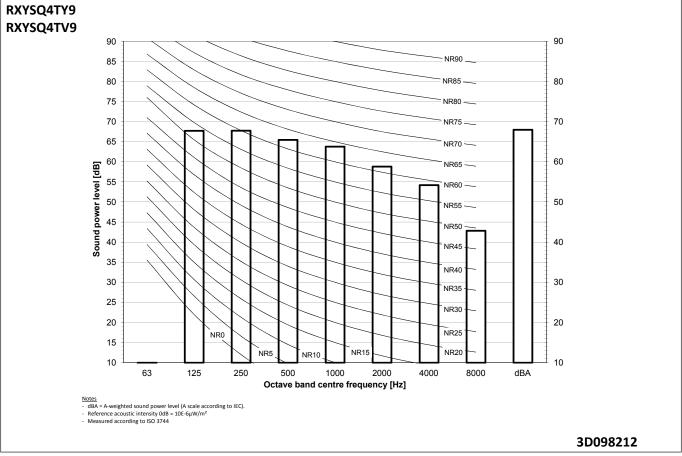
10 External connection diagrams

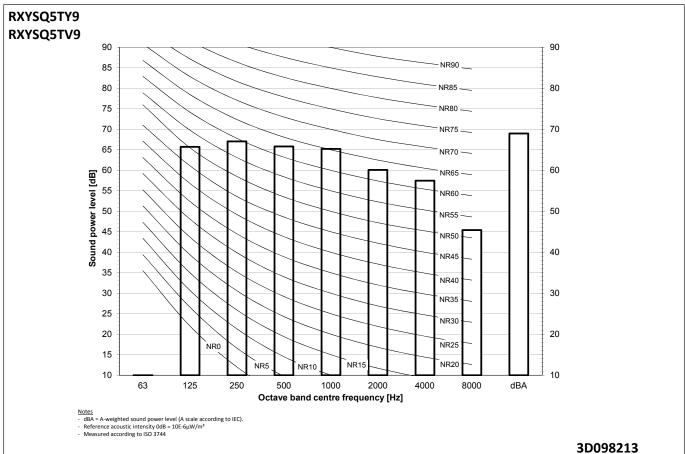
10 - 1 External Connection Diagrams





11 - 1 Sound Power Spectrum

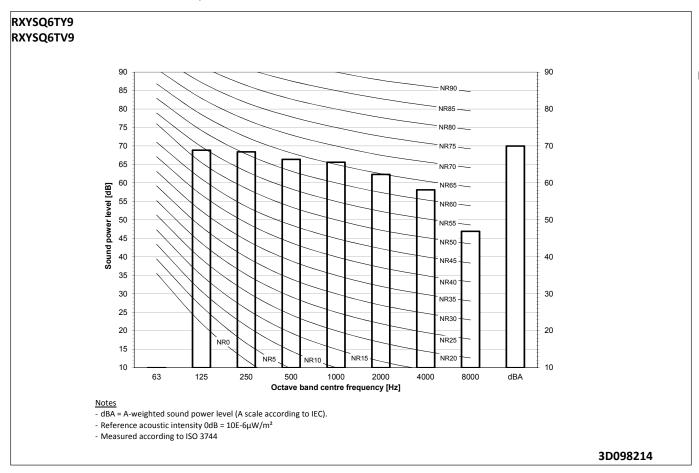




20

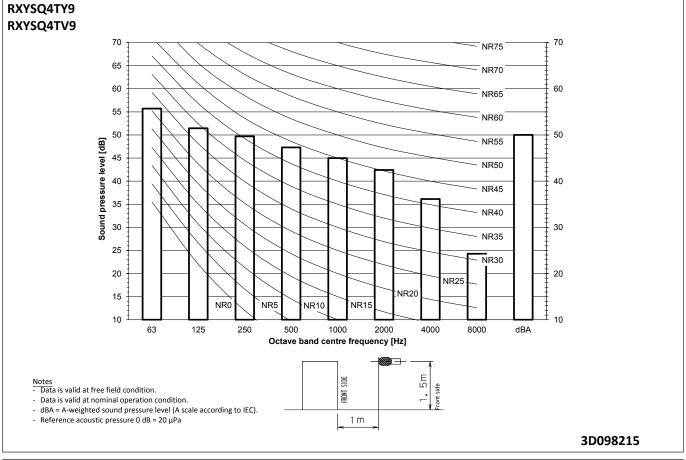


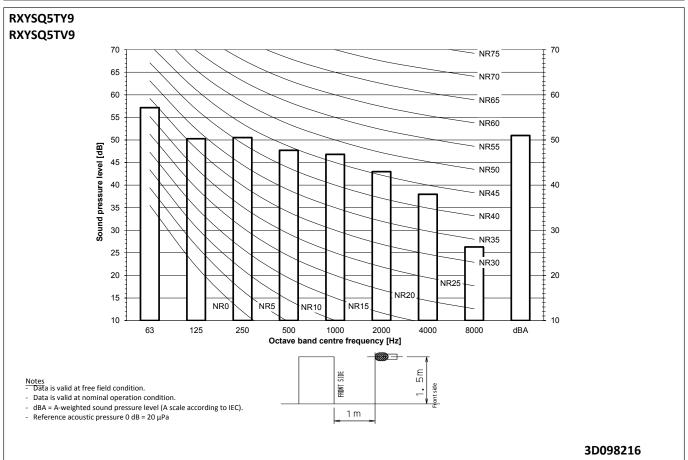
11 - 1 Sound Power Spectrum





11 - 2 Sound Pressure Spectrum

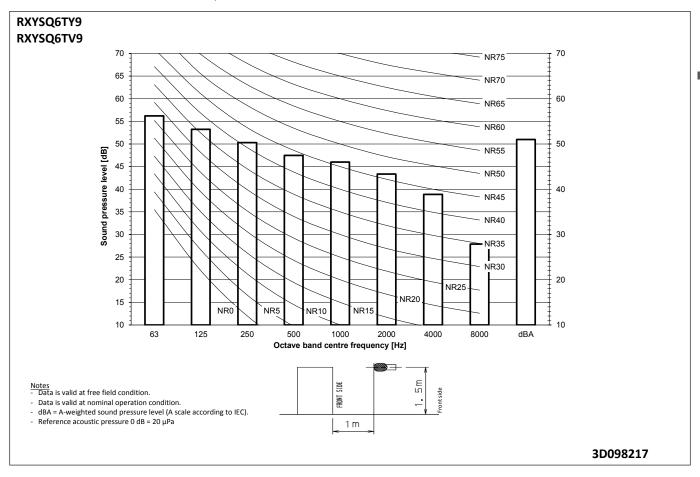




22



11 - 2 Sound Pressure Spectrum





12 - 1 Installation Method

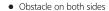
RXYSQ-TY9 RXYSQ-TV9

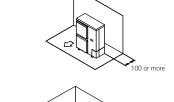
Required installation space

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

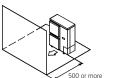




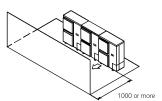
(B) When there are obstacles on discharge sides.

• No obstacle above

① Stand-alone installation

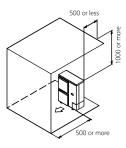


② Series installation (2 or more)



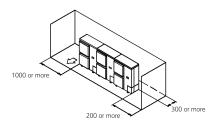
Obstacle above, too

① Stand-alone installation

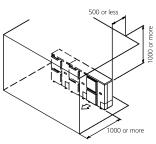


②Series installation (2 or more)

Obstacle on both sides



② Series installation (2 or more)

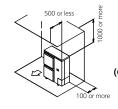


• Obstacle above, too.

① Stand-alone installation

Obstacle on the suction side, too

Obstacle on the suction side and both

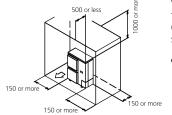


When there are obstacles on both suction and discharge sides.:



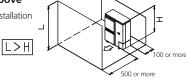
When the obstacles on the discharge side is higher than the unit.

(There is no height limit for obstructions on the intake

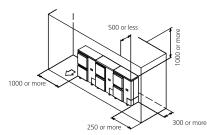


No obstacle above

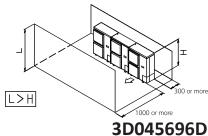
① Stand-alone installation



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



② Series installation (2 or more)





Installation Method 12 - 1

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		
Lan	1/2 H < L ≦ H	1000		
H <l< th=""><th colspan="4">Set the stand as : L ≦ H</th></l<>	Set the stand as : L ≦ H			

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

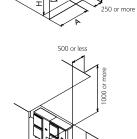
② Series installation (2 or more)

The relations between H, A and L are as follows

ı		L	A	
	l≤H	0 < L ≦ 1/2 H	1000	
	L = n	1/2 H < L ≦ H	1250	
	H <l< th=""><th colspan="3">Set the stand as : L ≦ H</th></l<>	Set the stand as : L ≦ H		

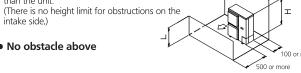
Close the bottom of the installation frame to prevent the discharged air from being bypassed.

Only two units can be installed for this



Pattern 2

When the obstacle on the discharge side is lower



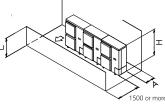
No obstacle above

① Stand-alone installation $\mathsf{L} \leq \mathsf{H}$



The relations between H A and L are as follows.

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



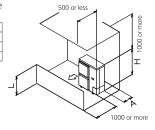
Obstacle above, too

① Stand-alone installation

The relations between H, A and L are

		L	A					
	I≤H	0 < L ≦ 1/2 H	100					
ı	L⊇n	1/2 H < L ≦ H	200					
	H <l< th=""><th colspan="4">Set the stand as : L ≦ H</th></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

	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.

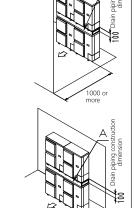
(D) Double-decker installation

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.



500 or le

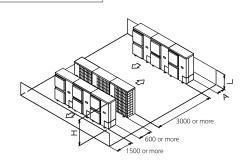
(E) Multiple rows of series installation (on the rooftop, etc.)



② Rows of series installation (2 or more)

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

The relations between 11, A and E are as follows							
	L	A					
L≦H	0 < L ≦ 1/2 H	250					
L = n	1/2 H < L ≦ H	300					
1121	C	inetalod					



1000 or more

3D045696D





Refrigerant Pipe Selection 12 - 2

RXYSQ-TY9 RXYSQ-TV9

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

For the reference drawing, see page \cdot 2/3 \cdot .		Maximum p	iping length	Maximum height difference		
		Longest pipe	After first branch	Indoor-to-outdoor	Indoor-to-indoor	
		(A+[B,D+E,H]) Actual / (Equivalent)	(B,D+E,H) Actual	(H1) Outdoor above indoor / (indoor above outdoor)	(H2)	Total piping length
Standard	RXYSCQ4~6TMV1B	70/(90)m	40m	30/(30)m	15m	300m
	RXYSQ4~6T7(V/Y)1B	120/(150)m	40m 50/(40)m	15m	300m	
·VRV DX· indoor units only	RXYSQ4~6T8(V/Y)B	* * *		* * *	13111	
VICE DX IIIGOOI GIIIG OIIIy	RXYSQ8TMY1B	100/(130)m	40m	50/(40)m	15m	300m
	RXYSQ10~12TMY1B	120/(150)m	40m	50/(40)m	15m	300m
	RXYSCQ4~6TMV1B	35/(45)m	40m	30/(30)m	15m	140m
	RXYSQ4~6T7(V/Y)1B	65/(85)m	40m	30/(30)m	15m	140m
·RA· connection	RXYSQ4~6T8(V/Y)B	03/(83/111				140111
	RXYSQ8TMY1B	80/(100)m	40m	30/(30)m	15m	140m
	RXYSQ10~12TMY1B	80/(100)m	40m	30/(30)m	15m	140m
At a base of the access of A LULL	Pair	50/(55)m (1)	-	40/(40)m		-
Air handling unit (-AHU-)	Multi (2)	50/(55)m (1)	40m	40/(40)m	15m	300m
connection	Mix (3)	50/(55)m ⁽¹⁾	40m	40/(40)m	15m	300m

- Notes

 1. The allowable minimum length is ·5· m.

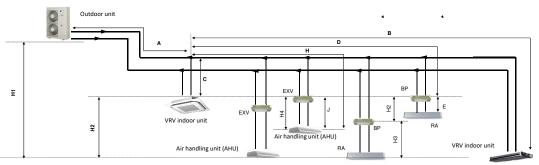
 2. Multiple air handling units (·AHU·)(·EKEXV· + ·EKEQ· kits).
- 3. Mix of air handling units (·AHU·) and ·VRV DX· indoor units.

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RXYSQ-TY9 RXYSQ-TV9

VRV4-S **Heat pump**

Piping restrictions ·2/3·



- Illustrations may differ from the actual appearance of the unit.

 This is only to illustrate piping length limitations.
- Refer to combination table ·3D097983· for details about the allowed combinations.

		Allowed pi	ping length	Maximum he	ight difference
		·BP· to ·RA· (E)	·EXV· to ·AHU· (J)	·BP· to ·RA· (H3)	·EXV· to ·AHU· (H4)
·RA· connection		2~15m	1	5m	-
Pair		=	≤5m	=	5m
Air handling unit (AHU) Connection Multi (1) Mix (2)		-	≤5m	-	5m
		-	≤5m	-	5m

- Multiple air handling units (\cdot AHU \cdot)(\cdot EKEXV \cdot + \cdot EKEQ \cdot kits).
- Mix of air handling units (-AHU-) and -VRV DX- indoor units.

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Refrigerant Pipe Selection 12 - 2

RXYSQ-TY9 RXYSQ-TV9

VRV4-S **Heat pump**

Piping restrictions ·3/3·

System pattern		Total	Allowed capacity		
Allowed connection ratio (CR) Other combinations are not allowed.	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·	-	-	90~110%

- There is no restriction on the number of connectable -BP- boxes.
 EKEXV- kits are also considered indoor units.
- 3. 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

 1. ·FXMQ_MF· units are considered air handling units, following air handling unit limitations.
 - Maximum connection ratio when combined with ·VRV DX· indoor units: ·CR \leq 30·%.

 - Maximum connection ratio when only air handling units are connected: $\cdot CR \leq 100 \%.$ Minimum connection ratio when only $\cdot FXMQ_MF \cdot units are connected: \cdot CR \geq 50 \%$
 - For information on the operation range, refer to the documentation of the $\cdot FXMQ_MF \cdot unit$.
- 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 \cdot EKEXV-EKEQ \cdot unit.
- V. ·VKM· units are considered to be regular ·VRV DX· indoor units.
 - For information on the operation range, refer to the documentation of the $\cdot VKM \cdot unit.$
- 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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Operation range

13 - 1 Operation Range

RXYSQ-TY9 **RXYSQ-TV9**

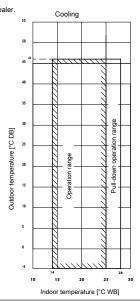
Notes

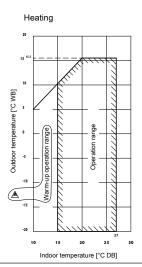
1. These figures assume the following operation conditions

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.
- 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-TY1 RXYSQ-TY9 RXYSQ-TV9 RXYSCQ-TV1

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

·· HP	4	5	6	8	10	12
	3xFXSQ25	4xFXSQ32	2xFXSQ32	4xFXMQ50	4xFXMQ63	6xFXMQ50
	1xFXSQ32	4XFX3Q32	2xFXSQ40	4XFXIVIQ50	4XFXIVIQ03	DXFXIVIQSU

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

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

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 FBA35-50-60-71 CVXM20A FVXM-25A-35A-50A-60A

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