

# VRV IV S-series heat pump Air Conditioning Technical Data RXYSQ-TY1



RXYSQ8TMY1B RXYSQ10TMY1B RXYSQ12TMY1B



# TABLE OF CONTENTS RXYSQ-TY1

1	Features RXYSQ-TY1	<b>4</b>
2	Specifications	5
3	Options	8
4	Combination table	9
5	Capacity tables Capacity Table Legend Capacity Correction Factor	<b>11</b> 11
5	Dimensional drawings	15
7	Centre of gravity	16
3	Piping diagrams	18
9	Wiring diagrams Wiring Diagrams - Three Phase	<b>19</b>
10	External connection diagrams	20
11	Sound data Sound Power Spectrum Sound Pressure Spectrum	<b>21</b> 23
12	Installation Installation Method Refrigerant Pipe Selection	25 25 29
13	Operation range	31
14	Appropriate Indoors	32





# 1 Features

#### 1 - 1 RXYSQ-TY1

- > 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 ...
- > Wide range of units (4 to 12HP) suitable for projects up to 200m² with space limitations
- > Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors
- Customize your VRV for best seasonal efficiency & comfort with the weather dependant Variable Refrigerant Temperature function.
   Increased seasonal efficiency with up to 28%. No more cold draft by supply of high outblow temperatures

- > VRV configurator software for the fastest and most accurate commissioning, configuration and customisation
- > 3 steps in night quiet mode: step 1: 47dBA, step 2: 44 dBA, step 3: 41 dBA
- > Possibility to limit peak power consumption between 30 and 80%, for example during periods with high power demand
- > Connectable to all VRV control systems
- Keep your system in top condition via the Daikin Cloud Service:
   24/7 monitoring for maximum efficiency, extented lifetime and immediate service support thanks to failure prediction





Inverter



# Specifications1 - 1 RXYSQ-TY1

Technical Spe		ns		RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1
Recommended cor				4 x FXMQ50P7VEB	4 x FXMQ63P7VEB	6 x FXMQ50P7VEB
Cooling capacity	Prated,c		kW	22.4 (1)	28.0 (1)	33.5 (1)
	Test	35°C AHRI	Btu/h	76,400 (2)	95,500 (2)	114,300 (2)
	setup 1	35°C AHRI	kW	22.4 (2)	28.0 (2)	33.5 (2)
		46°C ISO	Btu/h	58,000 (3)	68,200 (3)	81,850 (3)
		46°C ISO	kW	17.0 (3)	20.0 (3)	24.0 (3)
		48°C AHRI	Btu/h	51,150 (4)	58,000 (4)	68,200 (4)
		48°C AHRI	kW	15.0 (4)	17.0 (4)	20.0 (4)
Heating capacity	Nom.	6°CWB	kW	22.4 (5)	28.0 (5)	33.5 (5)
	Prated,h		kW	22.4 (5)	28.0 (5)	33.5 (5)
Power input - 50Hz	Cooling	Test 35°C AHRI	kW	6.78 (2)	8.54 (2)	10.20 (2)
		setup 1 46°C ISO	kW	5.80 (3)	7.02 (3)	8.60 (3)
		48°C AHRI	kW	5.34 (4)	6.80 (4)	7.97 (4)
	Heating	Nom. 6°CWB	kW	5.82 (5)	6.60 (5)	8.19 (5)
EER	Test	35°C AHRI	Btu/	11.30 (2)	11.2	0 (2)
	setup 1		h/W			
		35°C AHRI	kW/kW	3.30 (2)	3.2	8 (2)
		46°C ISO	Btu/	10.00 (3)	9.72 (3)	9.52 (3)
			h/W		_ (-,	
		46°C ISO	kW/kW	2.93 (3)	2.85 (3)	2.79 (3)
		48°C AHRI	Btu/	9.58 (4)	8.53 (4)	8.56 (4)
		2/11111	h/W	3.55 (1)	5.55 (1)	0.50 (1)
		48°C AHRI	kW/kW	2.81 (4)	2.50 (4)	2.51 (4)
COP at nom.	6°CWB		kW/kW	3.85	4.24	4.09
capacity	Test	6°CWB	Btu/	5.05	-	1.07
capacity	setup 1	CIVD	h/W		-	
	scrup i	6°CWB	kW/kW		-	
CSPF	Test setup		KVV/ KVV		_	
SCOP	rest setup	0.2		4.2	4.1	4.3
SEER					5.3	6.5
			0/		1	
ηs,c			%	247.3	247.4	256.5
ηs,h	۸. ۲.	550 I	%	165.8	162.4	169.6
Space cooling	A Condi-			2.6	2.8	2.7
	tion (35°C	Pdc	kW	22.4	28.0	33.5
	- 27/19)					_
	B Condi-			4.2		.3
	tion (30°C	Pdc	kW	16.5	20.6	24.7
	- 27/19)					
	C Condi-				7.7	7.9
	tion (25°C	Pdc	kW	10.6	13.3	15.9
	- 27/19)					
	D Condi-			13.7	12.2	13.6
	tion (20°C	Pdc	kW	6.4	7.1	7.3
	- 27/19)					
Space heating	TBivalent	COPd (declared COP)		2.4	1	.2
(Average climate)		Pdh (declared heating cap)	kW	14.9	19.6	23.5
		Tbiv (bivalent temperature)	°C		-10	
	TOL	COPd (declared COP)		2.4	2	.2
		Pdh (declared heating cap)	kW	14.9	19.6	23.5
		Tol (temperature operating	°C		-10	
		limit)				
	A Con-	COPd (declared COP)		2.6		.4
	dition	Pdh (declared heating cap)	kW	13.2	17.4	20.8
	(-7°C)					
	B Condi-	COPd (declared COP)		4.0	4.1	4.3
		Pdh (declared heating cap)	kW	8.0	10.6	12.7
		COPd (declared COP)			5.9	6.3
		Pdh (declared heating cap)	kW	5.0	6.8	8.1
	D Con-	COPd (declared COP)	-	7.8	6.3	6.7
	dition	Pdh (declared heating cap)	kW	5.8	6.4	6.6
	(12°C)	(acciding cap)		3.0	5.1	3.0
Capacity range	(12 0)		HP	8	10	12
PED	Category		111	υ	Category II	IZ
LU		Name			Accumulator	
	Most critical	Ps*V	Dar*I	202		70
		L2 A	Bar*l	202	2	79
Maximum	part	abla indogramita			(4/6)	
Maximum number		able indoor units		1000	64 (6)	4500
Indoor index	Min.			100.0	125.0	150.0
connection	Max.			260.0	325.0	390.0



# Specifications1 - 1 RXYSQ-TY1

Technical Spe					RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1
Dimensions	Unit	Height		mm	1,430	1,615	i
		Width		mm		940	
		Depth		mm	320	460	
	Packed	Height		mm	1,615	1,745	
	unit	Width		mm	1,030	1,015	
		Depth		mm	420	575	
Weight	Unit			kg	144	175	180
	Packed ur	nit		kg	158	191	196
Packing	Material					Carton	
	Weight			kg	5.6	8.2	
Packing 2	Material					Wood	
	Weight			kg	5.5	8.8	
Packing 3	Material					Plastic	
	Weight			kg	0.3	0.4	
Casing	Colour					Daikin White	
	Material					Painted galvanized steel plate	
Heat exchanger	Туре					Cross fin coil	
	Indoor sid					Air	
	Outdoors			3.0	0.400	Air	•
	Air flow	Cooling	Rated	m³/h	8,400	10,92	
	rate	Heating	Rated	m³/h	8,400	10,92	U
Fan	Quantity					2	
Fan motor	Quantity					2	
	Туре					DC motor	
	Output			W		200	
Compressor	Quantity					1	
	Туре				Н	ermetically sealed scroll compressor	
	Crankcase			W		33	
Operation range	Cooling	Min.		°CDB		-5.0	
		Max.		°CDB		52.0	
	Heating	Min.		°CWB		-20.0	
		Max.		°CWB		15.5	
Sound power level	Cooling	Nom.		dBA	73.0 (7)	74.0 (7)	76.0 (7)
	Heating	Prated,h		dBA	73.0 (7)	74.0 (7)	76.0 (7)
Sound pressure level	Cooling	Nom.		dBA	55.0	0 (8)	57.0 (8)
Refrigerant	Туре					R-410A	
	GWP					2,087.5	
	Charge			TCO2Eq	11.5	14.6	16.7
	Charge			kg	5.5	7.0	8.0
Refrigerant oil	Type					Synthetic (ether) oil FVC68D	
Piping connections	s Liquid	Туре				Braze connection	
		OD		mm	1	0	13
	Gas	Туре				Braze connection	
		OD		mm	19.1		
					19.1	22.2	25.4
	Total	System	Actual	m	19.1	22.2 300 (9)	25.4
	Total piping		Actual	m	19.1		25.4
			Actual	m	1.61		25.4
Capacity control	piping length Method	System			15.1		25.4
Capacity control Indication if the he	piping length Method ater is equi	System  pped with	n a supplementa		19.1	300 (9)  Inverter controlled no	25.4
Indication if the he	piping length Method	System	n a supplementa		19.1	300 (9) Inverter controlled	25.4
Indication if the he Supplementary heater	piping length Method ater is equi	System  pped with  Heating	n a supplementa elbu	ry heater kW	19.1	300 (9)  Inverter controlled  no  0.0	25.4
Indication if the he Supplementary heater	piping length Method ater is equi Back-up	System  pped with	n a supplementa	ry heater	19.1	300 (9)  Inverter controlled no	25.4
Indication if the he Supplementary heater Power consump- tion in other than	piping length Method ater is equi Back-up capacity	System  pped with  Heating	n a supplementa elbu	ry heater kW	0.040	300 (9)  Inverter controlled  no  0.0	
Indication if the he Supplementary heater Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank-	System  pped with  Heating  Cooling	n a supplementa elbu PCK	ry heater kW kW		300 (9)  Inverter controlled no 0.0 0.000	
Indication if the he Supplementary heater Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank- case heater mode	System  Spped with Heating  Cooling Heating	n a supplementa elbu PCK	ry heater kW kW		300 (9)  Inverter controlled no 0.0 0.000	
ndication if the he Supplementary neater Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank- case heater	System  Spped with Heating  Cooling Heating	n a supplementa elbu PCK	ry heater kW kW		300 (9)  Inverter controlled no 0.0 0.000	6
ndication if the he Supplementary neater Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank- case heater mode	System  Spped with Heating  Cooling Heating	n a supplementa elbu PCK PCK	ry heater kW kW kW	0.040	300 (9)  Inverter controlled  no 0.0  0.000	6
ndication if the he Supplementary neater Power consump- cion in other than	piping length Method ater is equi Back-up capacity Crank- case heater mode	pped with Heating Cooling Heating Cooling	elbu  PCK PCK POFF	ry heater kW kW kW kW	0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046	6 6 6
ndication if the he Supplementary neater Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank- case heater mode Off mode Standby mode	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Cooling	POFF	ry heater kW kW kW kW kW	0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046	6 6 6
ndication if the he Supplementary neater Power consump- tion in other than active mode	piping length Method ater is equi Back-up capacity Crank- case heater mode Off mode	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Cooling	POFF	ry heater kW kW kW kW kW	0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046	6 6 6 6
ndication if the he Supplementary neater Power consump- tion in other than active mode	piping length Method ater is equi Back-up capacity Crank- case heater mode Off mode Standby mode	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Cooling	POFF POFF PSB	ry heater kW kW kW kW kW kW	0.040 0.035 0.040 0.035	300 (9)  Inverter controlled  no 0.0  0.000  0.044  0.044  0.044	6 6 6 6
ndication if the he Supplementary neater Power consump- tion in other than active mode Power consump- tion in other than	piping length Method ater is equi Back-up capacity Crank- case heater mode Off mode Standby mode	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating	POFF POFF PSB	ry heater kW kW kW kW kW kW	0.040 0.035 0.040 0.035	300 (9)  Inverter controlled  no 0.0  0.000  0.044  0.044  0.044	6 6 5 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode	piping length Method ater is equi Back-up capacity Crank-case heater mode Off mode Standby mode Standby mode	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating	POFF POFF PSB PTO	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled no 0.0  0.000  0.040  0.040  0.040  0.040	6 6 6 6 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode	piping length Method ater is equi Back-up capacity Crank-case heater mode Off mode Standby mode Standby mode Thermo-	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling  Heating  Cooling  Cooling	POFF POFF PSB PTO	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.044  0.044  0.044  0.044  0.044  0.044	6 6 6 6 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than	piping length Method ater is equited aterial a	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating	POFF POFF PSB PTO PTO	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.044  0.044  0.044  0.044  0.044  0.044	6 6 6 6 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode  Cooling	piping length Method ater is equited aterial a	System  Speed with Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating  Cooling Heating	POFF POFF PSB PTO PTO pooling)	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046  0.046  0.046  0.046  0.046  0.055	6 6 6 6 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode  Cooling Heating	piping length Method ater is equited aterial a	ipped with Heating Cooling Heating Cooling Heating Cooling Heating Cooling Heating Cooling Theating Cooling Theating Cooling Theating Cooling Theating Cooling Theating Cooling Theating	POFF POFF PSB PTO PTO pooling)	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046  0.046  0.046  0.046  0.059  0.25  0.25	6 6 6 6 6
Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode  Cooling Heating	piping length Method ater is equited aterial a	pped with Heating  Cooling Heating	POFF POFF PSB PTO PTO pooling)	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046  0.046  0.046  0.046  0.055  0.25  0.25  High pressure switch	6 6 6 6 6
Capacity control Indication if the he Supplementary heater Power consumption in other than active mode  Power consumption in other than active mode  Cooling Heating Safety devices	piping length Method ater is equited aterial a	ipped with Heating Cooling Heating Cooling Heating Cooling Heating Cooling Heating Cooling Theating Cooling Theating Cooling Theating Cooling Theating Cooling Theating Cooling Theating	POFF POFF PSB PTO PTO pooling)	ry heater kW kW kW kW kW kW kW	0.040 0.035 0.040 0.035 0.040	300 (9)  Inverter controlled  no 0.0  0.000  0.046  0.046  0.046  0.046  0.059  0.25  0.25	6 6 6 6 6

Standard accessories: Installation manual; Quantity: 1;

Standard accessories: Operation manual; Quantity: 1;





# **Specifications**

#### RXYSQ-TY1

Standard accessories: Connection pipes; Quantity: 1;

<b>Electrical Sp</b>	pecifications		RXYSQ8TY1	RXYSQ10TY1	RXYSQ12TY1		
Power supply	Name		-	Y1			
	Phase		3N~				
	Frequency	Hz		50			
	Voltage ower supply intake			380-415			
Power supply intake Voltage range Min.			Both indoor and outdoor unit				
Voltage range			-10				
	Max.	%		10			
Current	Nominal Cooling running	A	9.6 (10)	10.7 (10)	13.4 (10)		
	current						
	(RLA)						
Current - 50Hz	Starting current (MSC) - remark		See note 11				
	Zmax List		No requirements				
	Minimum Ssc value	kVa	910 (12)	564 (12)	615 (12)		
	Minimum circuit amps (MCA)	Α	18.5 (13)	22.0 (13)	24.0 (13)		
	Maximum fuse amps (MFA)	Α	25	(14)	32 (14)		
	Total overcurrent amps (TOCA)	Α	16.5 (15)	25.0 (15)	27.0 (15)		
	Full load Total	A		1.4 (16)			
	amps						
	(FLA)						
Wiring connec-	For Quantity			5G			
tions - 50Hz	power						
	supply						
	For Quantity		2				
	connec- Remark			F1,F2			
	tion with						
	indoor						

- (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°CB, AHRI 1230:2010, power input indoor units (duct type) included | (3)Cooling: T3: indoor temp. 29,0°CDB, 19,0°CWB, outdoor temp. 46°CB, ISO15042:2011, power input indoor units (duct type) included | (4)Cooling: T2: indoor temp. 26,6°CDB, 19,4°CWB, outdoor temp. 48°CB, 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 wih 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)EM/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

#### RXYSQ-TY1

#### VRV4-S Heat pump Option list

Nr.	Item					RXYSQ6T7Y1B9 RXYSQ6T8Y1B9	RXYSQ6TMYFK
	Refnet header		KHRQ22M29H				
l'.	Internet rieduel				KHRQ22M64H	-	KHRQ22M64H
			KHRQ22M20T				
П.	Refnet joint	-	-	-	KHRQ22M29T9	-	KHRQ22M29T9
		-			KHRQ22M64T	-	KHRQ22M64T
1a.	Cool/heat selector (switch)	- KRC19-26 - 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			DTA104A61/6	2*		
5.	Branch provider - ·2· rooms		BPMKS96	7A2		-	-
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.

3D097778E



#### **Combination table** 4

#### Combination Table 4 - 1

#### 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	x	Х	Х	Х
Air handling unit (AHU) (2)	0	0	0	0

O: Allowed

X: Not allowed

#### Notes

(2) The following units are considered AHUs:

- $\rightarrow$  ·EKEXV + EKEQ(MA/FA) + AHU· coil
- ightarrow ·Biddle· air curtain
- $\rightarrow \cdot \mathsf{FXMQ} \_\mathsf{MF} \cdot \mathsf{units}$

3D097983A

#### 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	x	Х	Х	x
Air handling unit (AHU) (1)	0	X	X	0,

O: Allowed

X: Not allowed

#### Notes

1. O<sub>1</sub>

- 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.
  → ·Y--control is possible [-EKEXV+EKEQFA\*- boxes]. No Variable Refrigerant Temperature control possible.
- $\rightarrow \cdot \text{W} \cdot \text{-control is possible [-EKEXV+EKEQFA*- boxes]. No Variable Refrigerant Temperature control possible Properties of the proper$
- 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
  - ightarrow 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
  - $\rightarrow$  ·FXMQ\_MF· units

#### Information

 $\cdot VKM \cdot units \ are \ considered \ regular \cdot VRV \ DX \cdot \ indoor \ units.$ 

3D097983A



# 4 Combination table

#### 4 - 1 Combination Table

#### RXYSQ-TY1

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

Units in scope:  $\cdot FXZQ15A \cdot and \cdot FXAQ15A \cdot.$ 

- 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  $\leq$  105% -> CR1 · of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·70·%. 
      \* 105% < CR  $\leq$  110% -> CR1 · of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·60·%. 
      \* 110% < CR  $\leq$  115% -> CR1 · of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·40·%. 
      \* 120% < CR  $\leq$  120% -> CR1 · of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·25·%. 
      \* 120% < CR  $\leq$  130% -> FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·10·%. 
      \* FXZQ15A· and ·FXAQ15A· and/or ·FXAQ15A· indoor units in the system must be  $\leq$  ·10·%.

#### 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.

3D104665A

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

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

	Configura	Indoor	Indoor unit type		
			FTXJ20M (\	N/S)	
		Fmura	FTXJ25M (W/S)		
		Emuru	FTXJ35M (W/S)		
			FTXJ50M (\	N/S)	
			FTXM20N	FTXM20R	
			FTXM25N	FTXM25R	
	Wall-mounted		FTXM35N	FTXM35R	
		FTXM	FTXM42N	FTXM42R	
			FTXM50N	FTXM50R	
			FTXM60N	FTXM60R	
			FTXM71N	FTXM71R	
		CTXM	CTXM15N	CTXM15R	
	r unit		FTXA20		
RA· indoor unit			FTXA25		
		Stylish	FTXA35		
			FTXA42		
8			FTXA50		
ğ	Floor-standing		FLXS25B		
=	Ceiling-mounted	Flex	FLXS35B		
ġ	_		FLXS50B		
÷			FLXS60B		
	Floor-standing	FVXM	FVXM25F		
	_		FVXM35F		
			FVXM50F		
			CVXM20A		
			FVXM25A FVXM35A		
			FVXM50A		
			FVXM50A FVXG25K		
		Nexura	FVXG35K		
		IVEXUIU	FVXG50K		
			FDXM25F		
			FDXM35F		
	Duct	FDXM	FDXM50F		
			FDXM50F FDXM60F		
	l .	1	LDVIAIONE		

Cassette Fully Flat 2x2 FFA35A FFA35A FFA35DA FFA35DA FFA35DA FCAG5DA FCAG5DA FCAG5DA FCAG71A FHA35A FHA5DA	Configura	ition	Indoor unit type		
Fully Flat 2x2 FFASOA FFAGOA FCAG3SA FCAG5OA Roundflow 3x3 FCAGFOA			FFA25A		
Cassette FCAG35A FCAG50A Roundflow 3x3 FCAG50A		Fully Flat 2v2			
Cassette FCAG35A FCAG50A Roundflow 3x3 FCAG60A		Tully Tlut ZXZ			
Roundflow 3x3 FCAGSOA	Cassette				
Roundflow 3x3 FCAG60A					
		0	FCAG50A		
FCAG71A FHA35A FHA50A FHA60A		Rounajiow 3x3			
FHA35A FHA50A FHA60A			FCAG71A		
Ceiling-suspended FHA50A FHA60A			FHA35A		
G Ceiling-suspended FHA60A	Ō				
	E  Celling-suspende	Ceiling-suspended			
110021					
FBA35A FBA50A	ė .		FBA35A		
Puct FBA50A		D			
FBA60A	Duct				
FBA71A			FBA71A		
FNA25A			FNA25A		
FNA35A		5444	FNA35A		
Floor-standing FNA FNA50A	Floor-standing	FNA	FNA50A		
FNA60A			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.

3D097777H





# 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: <a href="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</a>



• 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 - 2 Capacity Correction Factor

#### RXYSQ-TY1

#### 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:

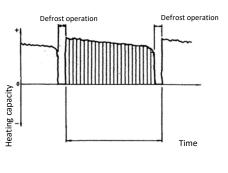
#### Formula

- 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	0.05	0.02	0.07	0.70	0.00	0.00	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
,	1,55	5,52	2,07	2,75	2,70	2,00	_,00



·1· cycle

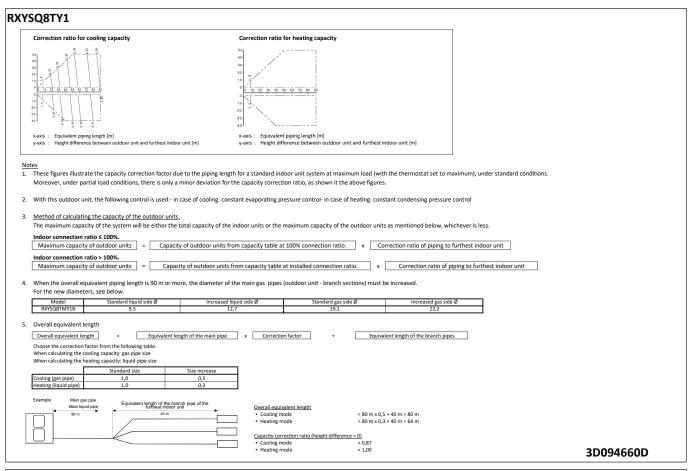
#### Notes

- (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.

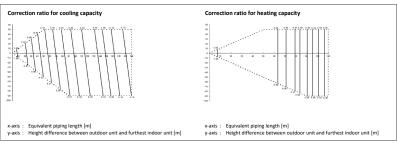
3D09659D



#### 5 - 2 Capacity Correction Factor



#### RXYSQ10TY1



- 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 

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

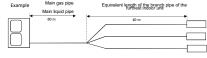
Choose the correction factor from the following table.

 
 Model
 Standard liquid side Ø
 Increased liquid side Ø

 RYISQ8TMY1B
 9,5
 12,7

 \* If not available on-site, do not increase the piping diameter.
 If not increased, do not apply a correction factor to the equivalent piping length (see note '5-).
 5. Overall equivalent length Equivalent length of the main pipe x Correction factor + Equivalent length of the branch pipes

When calculating the cooling capacity: gas pipe size When calculating the heating capacity: liquid pipe size Main gas pipe



Overall equivalent length

Cooling mode

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

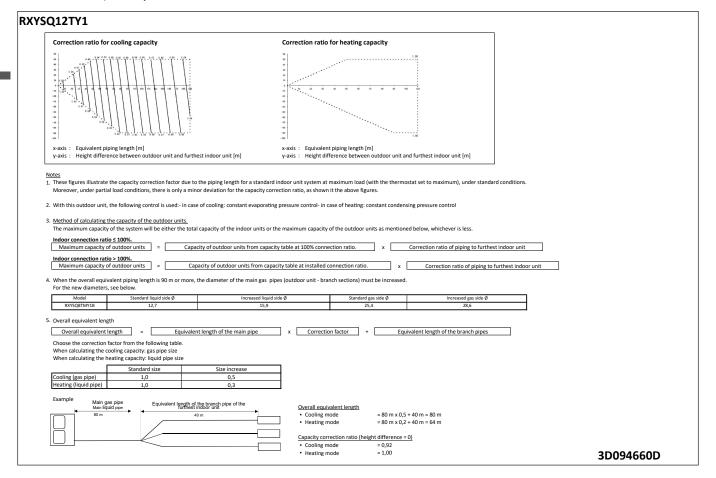
Capacity correction ratio (height difference = 0)

3D094660D





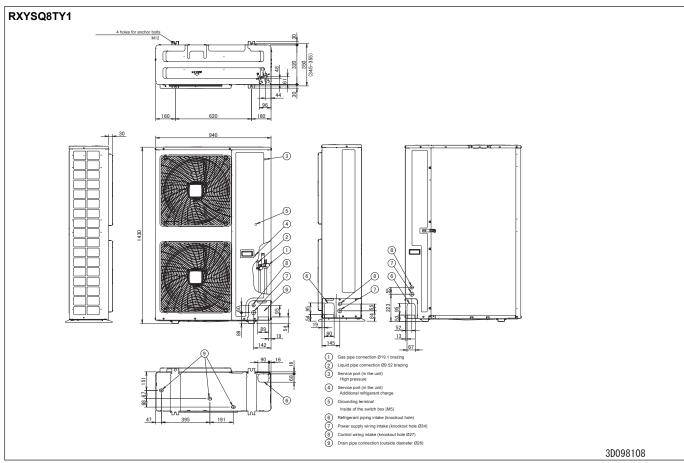
# 5 - 2 Capacity Correction Factor

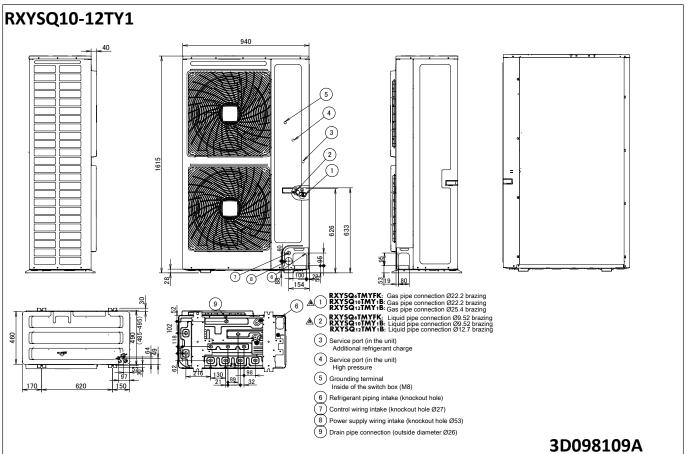




# 6 Dimensional drawings

# 6 - 1 Dimensional Drawings





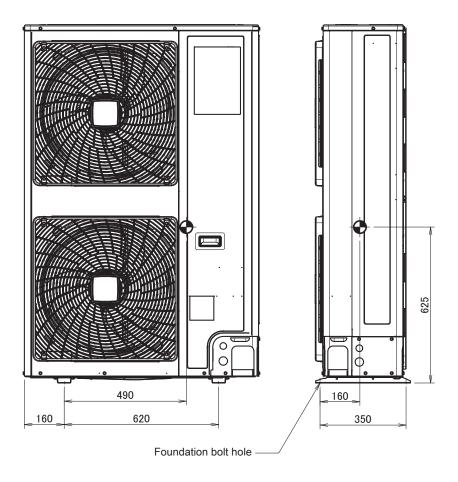
7



# 7 Centre of gravity

7 - 1 Centre of Gravity

# RXYSQ8TY1



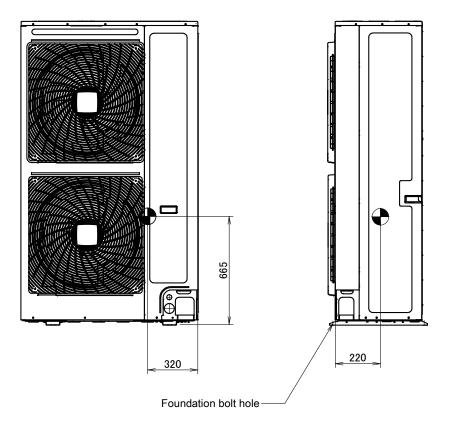
4D098084



# 7 Centre of gravity

# 7 - 1 Centre of Gravity

# RXYSQ10-12TY1

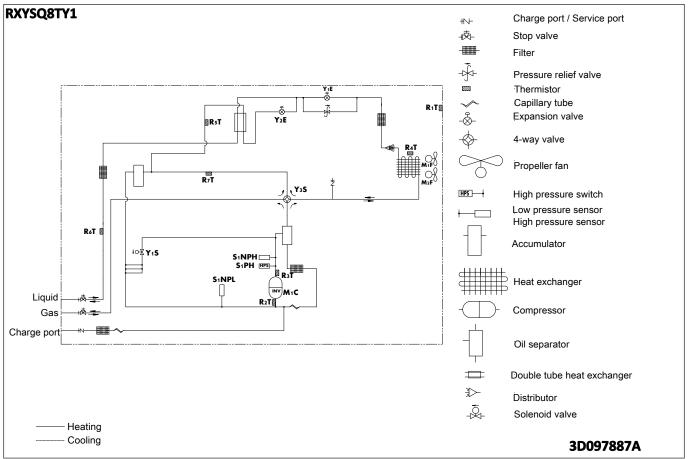


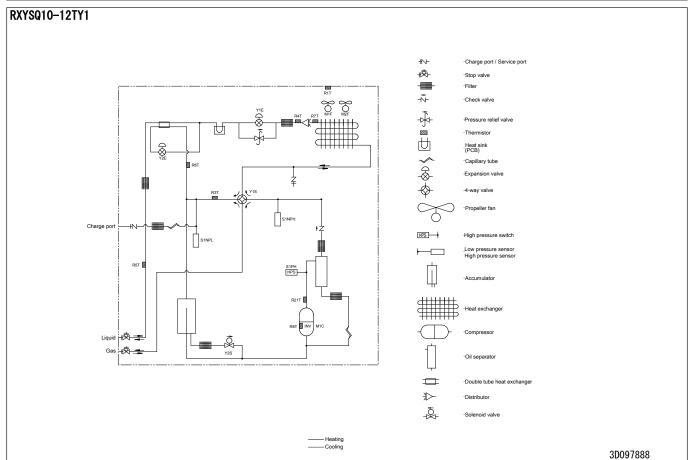
4D098085



# **Piping diagrams**

#### 8 - 1 Piping Diagrams



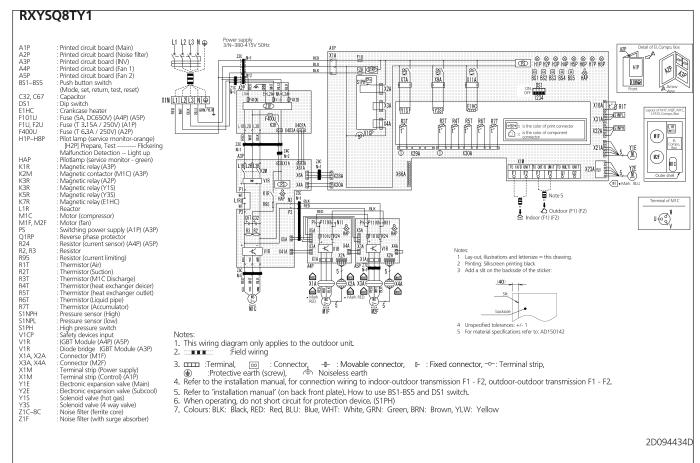


18



# 9 Wiring diagrams

### 9 - 1 Wiring Diagrams - Three Phase

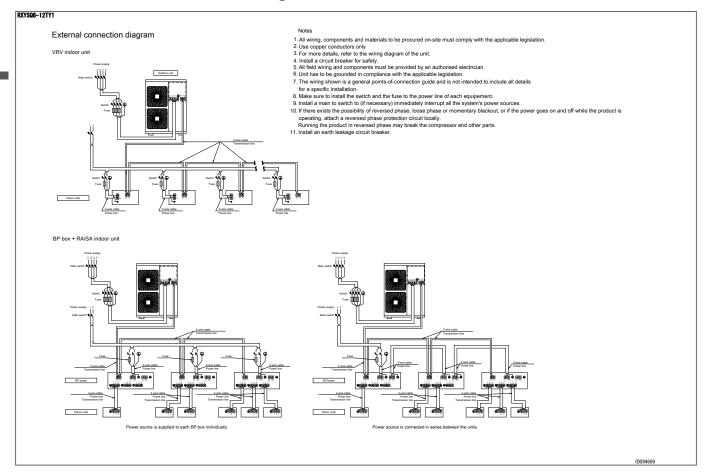


RXYSQ10-12TY1 Power supply 3N-380-415V 50Hz Printed circuit board (Main)
Printed circuit board (Noise filter)
Printed circuit board (Noise filter)
Printed circuit board (Roise filter)
Printed circuit board (Fan 1)
Printed circuit board (Fan 2)
Push button switch
(Mode, Set, Return)
Capactor (A3P)
Dip switch (A1P)
Carakcase heater
Fuse (T.3.15A / 250V) (A1P)
Fuse (A4P)
Fuse (A3P)
Flouse (A3P)
Magnetic relay (C3P)
Magnetic relay (C3P)
Magnetic relay (M3P)
Magneti A1P A2P A3P A4P A5P BS1~B3S 8. 8. 8. 0 0 @ C47, C48 DS1, DS2 DS1, DS2 E1HC F1U, F2U F101U F411U-F412U F601U HAP K1M K1R e 4) Indoor (F1) (F2) Motor (compressor)
Motor (fan)
Worthing power supply (A1P) (A3P)
Leakage detection circuit (A1P)
Phase reversal detect circuit (A1P)
Themistor (Air) (A1P)
Themistor (M1C Discharge)
Thermistor (M1C Discharge)
Thermistor (Heat exchanger liq. Pipe)
Thermistor (Heat exchanger gas pipe)
Thermistor (Beat exchanger deicer)
Thermistor (Heat exchanger deicer)
Thermistor (M1C body)
Resistor (current limiting) (A3P)
Resistor (current sensor) (A4P)
Resistor (current sensor) (A3P)
Pressure sensor (High)
Pressure sensor (High)
Pressure sensor (High) ¥ M1F, M2F PS Q1LD Q1RP R1T R21T R3T R4T R5T R6T R7T R8T R8T R8T R1 R24 R313 R865, R867 Lav-out illustrations and lettersize = this drawing 4 Unspecified tolerances: +/- 1 5 For material specifications refer to: AD150142 Pressure sensor (low)
High pressure switch
'7-segment display (A1P)
current sensor
Power module (A3P) (A4P) (A5P)
Power module (A3P)
Connector (M1P)
Connector (M1P)
Connector (M2P)
Terminal block (Power supply)
Terminal block (Control) (A1P)
Electronic expansion valve (injection)
Solenoid valve (Main)
Solenoid valve (Accumulator oil return)
Noise filter (ferrite core)
Noise filter (ferrite core) 1. This wiring diagram only applies to the outdoor unit. Y2S Z1C~Z4C Z1F 3D094435D



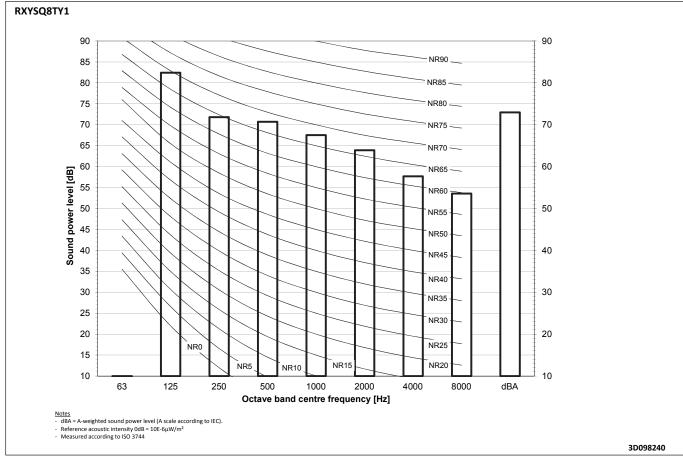
# 10 External connection diagrams

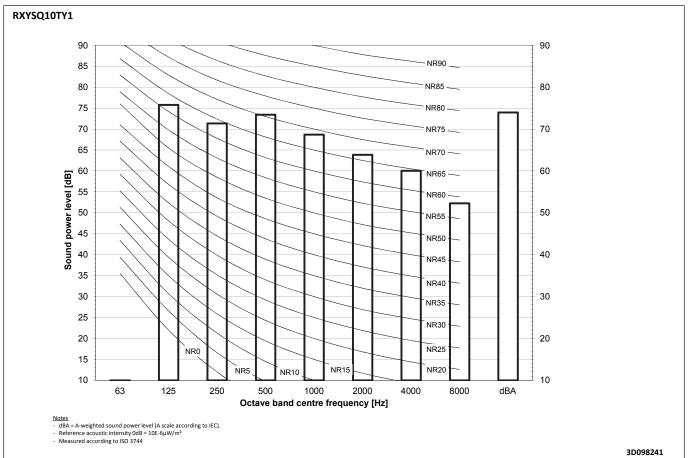
# 10 - 1 External Connection Diagrams





# 11 - 1 Sound Power Spectrum

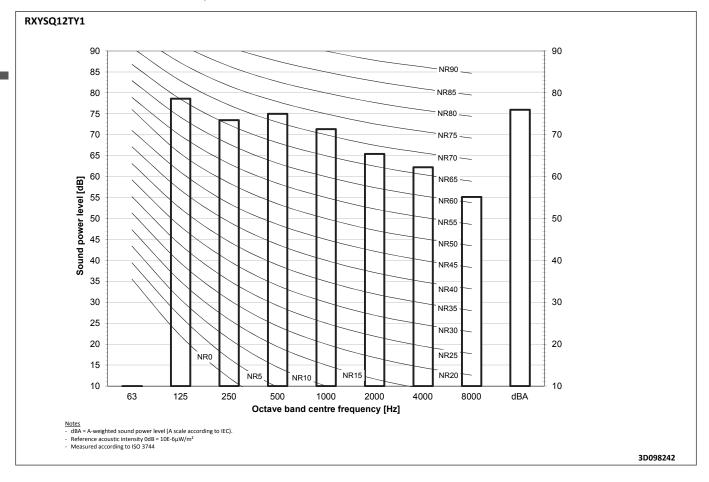






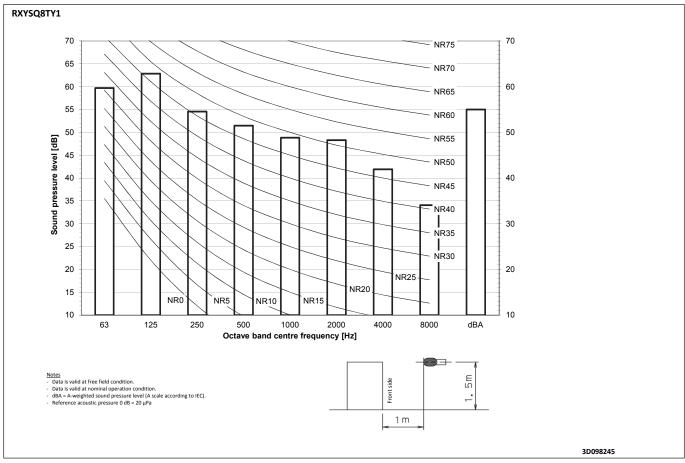


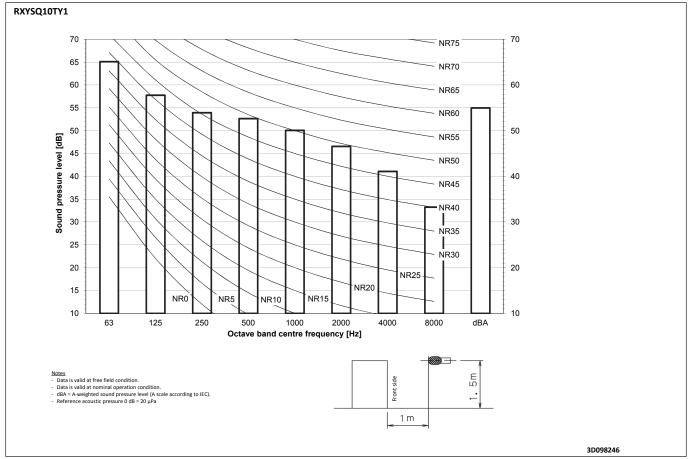
#### Sound Power Spectrum 11 - 1





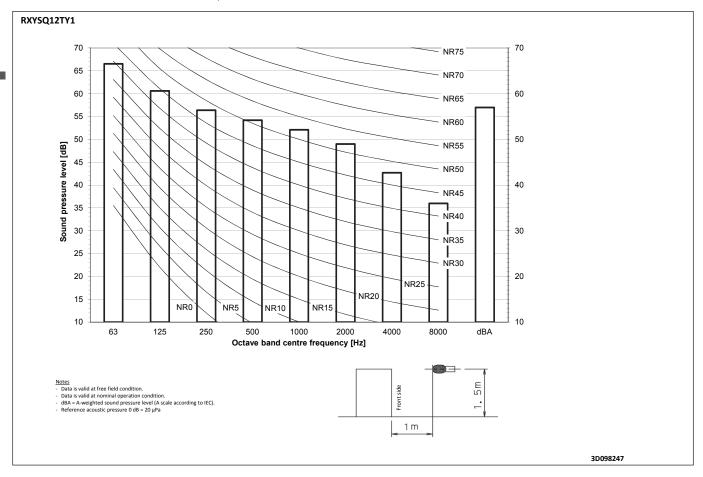
# 11 - 2 Sound Pressure Spectrum







# 11 - 2 Sound Pressure Spectrum





#### 12 - 1 Installation Method

#### RXYSQ8TY1

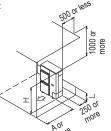
#### (b) Obstacle above, too

(1) Stand-alone installation

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

		L	А		
L	≤H	0 < L ≤ 1/2H	1000		
		1/2H < L ≤ H 1250			
Н	< L	Set the stand as:	L≤H.		

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



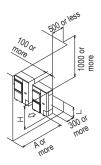
(2) Series installation (2 or more) (note)

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

	L	А	
L≤H	0 < L ≤ 1/2H	1000	
	1/2H < 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



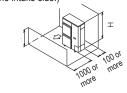
#### Pattern 2

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

L≤H

#### (c) No obstacle above

(1) Stand-alone installation



(2) Series installation (2 or more) (note)

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

L	А	700-
0 < L ≤ 1/2H	250	100 or more
1/2H < L ≤ H	300	700 or
	[ــ	Total of work

#### (d) Obstacle above, too

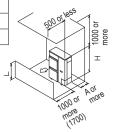
(1) Stand-alone installation

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

	L	Α			
L≤H	0 < L ≤ 1/2H	100			
	1/2H < L ≤ H	200			
H < L	Set the stand as: L ≤ H.				
0					

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

If the distance exceed the figure in the ( ), then it's no need to set the stand.



(2) Series installation (note)

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

	L	A		
L≤H	0 < L ≤ 1/2H	250	500 or 1855	1.
	1/2H < L ≤ H	300		1000 or more
H < L	Set the stand as:	L≤H.	nore or	P E
	bottom of the insta t the discharged air			Ţ
Only two series.	units can be installe	ed for this		A or
If the dista	ance exceed the fig	ure in the ( ).	10000	(11-

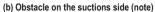
#### 4. Double-decker installation

(a) Obstacle on the discharge side (note)

then it's no need to set the stand

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

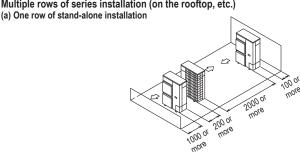
Leave the enough space between the layer one and the board.



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

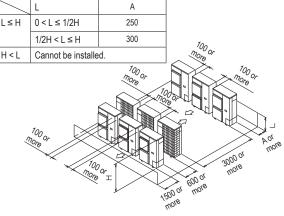
Leave the enough space between the layer one and the board.





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

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



OUTDOOR UNIT FOR VRV SYSTEM

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

3D068442T





#### 12 - 1 Installation Method

# RXYSQ8TY1 2. Where there is an obstacle on the discharge side: Required installation space (a) No obstacle above The unit of the values is mm. (1) Stand-alone installation 1. Where there is an obstacle on the suction side: (a) No obstacle above (1) Stand-alone installation · Obstacle on the suction side only (2) Series installation (2 or more) (note) · Obstacle on both sides (b) Obstacle above, too (1) Stand-alone installation (2) Series installation (2 or more) (note) Obstacle on both sides (2) Series installaton (2 or more) (note) (b) Obstacle above, too (1) Stand-alone installation · Obstacle on the suction side, too • Obstacle on the suction side and both sides 3. Where there are obstacles on both suction and discharge sides: 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 (2) Series installation (2 or more) (note) Obstacle on the suction side and both sides L > H (2) Series installation (2 or more) (note) L>H

26

3D068442T



#### 12 - 1 Installation Method

#### RXYSQ10-12TY1

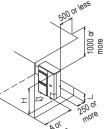
#### (b) Obstacle above, too

(1) Stand-alone installation

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

	L	А	
L≤H	0 < L ≤ 1/2H	1000	
	1/2H < 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.

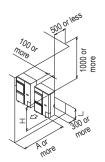


(2) Series installation (2 or more) (note) The relations between H, A and L are as follows:

	L	Α	
L≤H	0 < L ≤ 1/2H	1000	
	1/2H < 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

Only two units can be installed for this



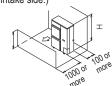
#### Pattern 2

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

L≤H

#### (c) No obstacle above

(1) Stand-alone installation



(2) Series installation (2 or more) (note)

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

L	A	100
0 < L ≤ 1/2H	250	100 or more
1/2H < L ≤ H	300	100 or
	_]	TEGO OF MORE

#### (d) Obstacle above, too

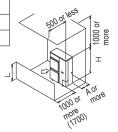
(1) Stand-alone installation

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

,					
A					
100					
200					
Set the stand as: L ≤ H.					

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

If the distance exceed the figure in the ( ), then it's no need to set the stand.



(2) Series installation (note)

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

	L	Α	
L≤H	0 < L ≤ 1/2H	250	
	1/2H < L ≤ H	300	
H <l< td=""><td colspan="3">Set the stand as: L ≤ H.</td></l<>	Set the stand as: L ≤ H.		
	COLUMN CALLE TIL		

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

Only two units can be installed for this series.

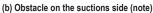
If the distance exceed the figure in the ( ), then it's no need to set the stand.

#### 4. Double-decker installation

(a) Obstacle on the discharge side (note)

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

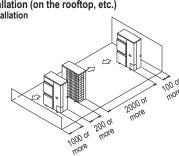
Leave the enough space between the layer one and the board.



Close the gap A (the gap between the upper and lower outdoor units) to prevent the discharge air from being bypassed. Do not stack more than two unit. Set the board (field supply) as the detail A between two units to prevent the drainage from frozing.

Leave the enough space between the layer one and the board.

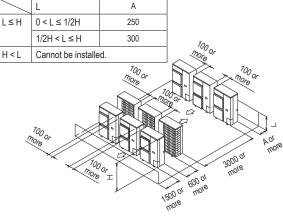




1000 or r

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

The relations between H, A and L are as follows



OUTDOOR UNIT FOR VRV SYSTEM

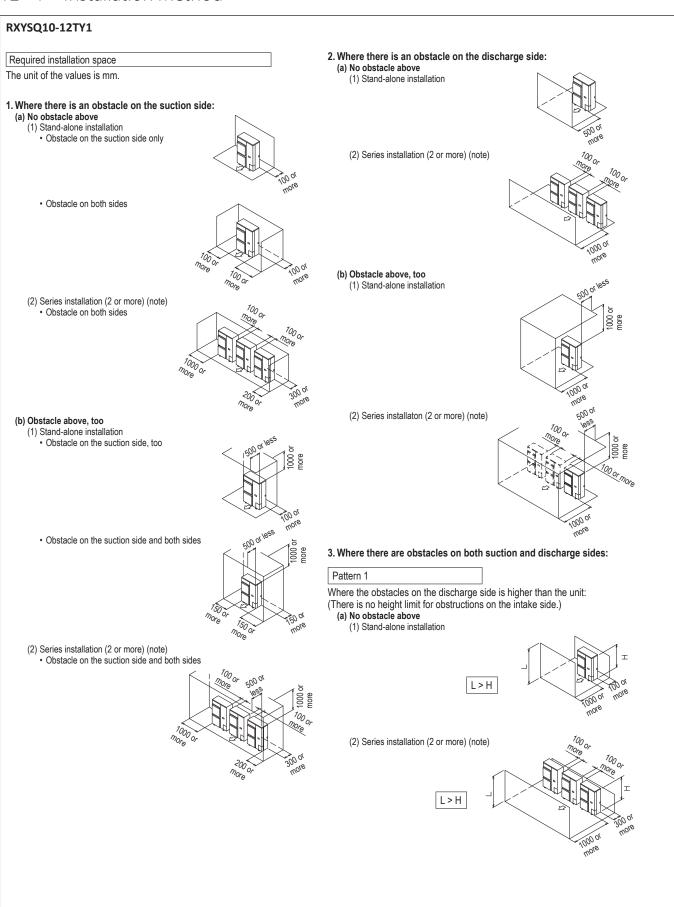
When install the units in a line, have to leave the distance over 100mm between the two units.

3D083122P





#### 12 - 1 Installation Method



3D083122P



#### Refrigerant Pipe Selection 12 - 2

#### RXYSQ-TY1

#### 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% <sup>(3)</sup>	Maximum ·64· (2)	50~110%	=	0~110%
·AHU· only Pair + multi (4)	90~110% (3)	Maximum ·64·	-	-	90~110%

- 1. There is no restriction on the number of connectable  $\cdot BP \cdot$  boxes.
- 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

  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 ≤ 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.

3D097984B

#### RXYSQ-TY1

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

		Maximum p	iping length	Maximum height difference		
For the reference drawing, see page ·2/3·.		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
VDV DV indeed with only	RXYSQ4~6T8(V/Y)B	120/(130)111	40111	30/(40)111	13111	300111
·VRV DX· indoor units only	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
·RA· connection	RXYSQ4~6T7(V/Y)1B RXYSQ4~6T8(V/Y)B	65/(85)m	40m	30/(30)m	15m	140m
	RXYSQ8TMY1B	80/(100)m	40m	30/(30)m	15m	140m
	RXYSQ10~12TMY1B	80/(100)m	40m	30/(30)m	15m	140m
	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

- 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.

3D097984B



#### 12 - 2 Refrigerant Pipe Selection

# RXYSQ-TY1 VRV4-S **Heat pump** Piping restrictions ·2/3· VRV indoor unit £ VRV indoor unit Air handling unit (AHU)

- 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 piping 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	-	5m	-
Pair		-	≤5m	-	5m
Air handling unit (AHU) 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.

3D097984B



# 13 Operation range

# 13 - 1 Operation Range

Outdoor temperature [°C DB]

10

10

15 20 25

Indoor temperature [°C WB]

# RXYSQ8-12TY1 Notes 1. These figures assume the following operation conditions indoor and outdoor units Equivalent priping length: 5m Level difference: 6m 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, first for the documentation of the respective indoor units. 5. //// Unit operation is possible, but no guaranteed capacity 6. 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 Dalkin range specifically designed for such application. Cooling Heating

25

Indoor temperature [°C DB]

Outdoor temperature [°C WB]

-5

10 15





# 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 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

FXSQ15-20-25-32-40-50-63-80-100-1; FXMQ50-63-80-100-125-200-250 FXAQ15-20-25-32-40-50-63 FXHQ32-63-100 FXUQ71-100 FXMQ20-25-32-40-50-63 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

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 FVXM25-35-50 CVXM20A FVXM25A-35A-50A

3D113977E

Daikin Europe N.V.       Naamloze Vennootschap · Zandvoordestraat 300 · 8400 Oostende · Belgium · www.daikin.eu · BE 0412 120 336 · RPR Oostende (Responsible Editor)							
	EEDEN22 02/2022	The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V. / Daikin Central Europe HandelsGmbH. Daikin Europe N.V. / Daikin Central Europe HandelsGmbH have compiled the content of this publication to the best of their knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. / Daikin Central Europe HandelsGmbH explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Daikin Europe N.V.					