



# technical data

RZQ200-250C7Y1B

air conditioning systems

Split  
Sky Air

**R-410A**

# Split - Sky Air

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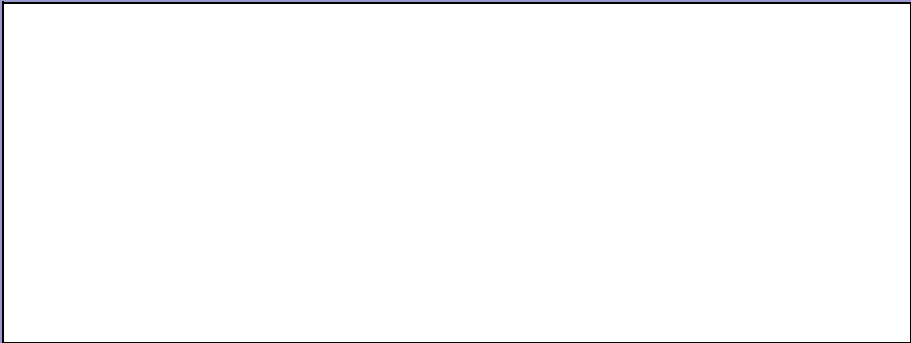
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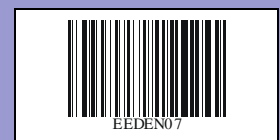


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# 1 Features

- Outdoor units for pair, twin, triple, double twin application
- The Sky Air Inverter is developed for use in shops, restaurants and small offices. This innovative Daikin unit provides a more comfortable environment and offers great savings in energy consumption to shop and office owners.
- The use of inverter type outdoor units results in an air conditioning system with a high energy efficiency and very low sound level
- An inverter driven compressor allows the capacity to be adjusted precisely to match variations in room and outside temperatures.
- During start up, the room can be cooled down or heated very quickly. Once the temperature in the room has reached its set point, the low power operation starts to save energy.
- Daikin outdoor units are neat and sturdy and can be mounted easily on a roof or terrace or simply placed against an outside wall.
- Outdoor units are fitted with either a swing or scroll compressor, renowned for low noise and high energy efficiency
- A special acryl precoated fin for anti-corrosion treatment on the heat exchanger ensures greater resistance against severe weather conditions

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## 2 Specifications

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				RZQ200C7Y1B	RZQ250C7Y1B
For combination indoor units + outdoor units	Indoor Units			FDQ200B8V3B	FDQ250B8V3B
Nominal Capacity	Cooling	Standard	kW	20.0	24.1
	Heating capacity	Standard	kW	23.0	26.4
Nominal input	Cooling	Standard	kW	6.23	8.58
	Heating	Standard	kW	6.74	8.22
For combination indoor units + outdoor units	EER	Nominal		3.21	2.81
	COP	Nominal		3.41	3.21

2-2 TECHNICAL SPECIFICATIONS				RZQ200C7Y1B	RZQ250C7Y1B	
Casing	Colour			Daikin White		
	Material			Painted galvanised steel		
Dimensions	Unit	Height	mm	1680	1680	
		Width	mm	930	930	
		Depth	mm	765	765	
	Packing	Height	mm	1855	1855	
		Width	mm	1055	1055	
		Depth	mm	860	860	
Weight	Unit		kg	183	184	
	Packed Unit		kg	217	218	
Packing	Material			Carton		
	Weight		kg	4.02	4.02	
	Material			Wood		
	Weight		kg	20.85	20.85	
	Material			Plastic		
	Weight		kg	0.265	0.265	
Heat Exchanger	Dimensions	Length	mm	1778	1778	
		Nr of Rows		54	54	
		Fin Pitch	mm	2.00	2.00	
		Nr of Passes		18	18	
		Face Area	m <sup>2</sup>	2.112	2.112	
		Nr of Stages		2	2	
	Tube type			Hi-XSS(8)		
	Fin	Type			Non-symmetric waffle louvre	
		Treatment			Hydrophilic and corrosion resistant	
	Fan	Type			Propeller	
Discharge direction			Vertical			
Quantity			1	1		
Air Flow Rate (nominal at 230V)		Cooling	m <sup>3</sup> /min	171	171	
		Heating	m <sup>3</sup> /min	171	171	
Max		Pa	78 Pa in high static pressure			
Motor		Quantity			1	1
		Model			Brushless DC	
	Output	W	750	750		
Compressor	Quantity			1	1	
	Motor	Model			Inverter	
		Type			Hermetically sealed scroll compressor	
		Speed	rpm	7980	7980	
		Motor	W	3.08	3.08	
		Output	W	33	33	
		Crankcase Heater	W	33	33	

## 2 Specifications

2

2-2 TECHNICAL SPECIFICATIONS				RZQ200C7Y1B		RZQ250C7Y1B		
Operation Range	Cooling	Min	°CDB	-5.0		-5.0		
		Max	°CDB	46.0		46.0		
	Heating	Min	°CWB	-15.0		-15.0		
		Max	°CWB	15.0		15.0		
Sound Level (nominal)	Sound power		dBA	78		78		
	Sound pressure		dBA	57		57		
Refrigerant	Type			R-410A				
	Charge		kg	8.3		9.3		
	Control			Expansion valve (electronic type)				
	Nr of Circuits			1		1		
Refrigerant Oil	Type			Synthetic (ether) oil				
	Charged Volume		l	0,3				
Piping connections	Liquid (OD)	Quantity		1		1		
		Type			Braze connection			
		Diameter (OD)	mm	9.5		12.7		
	Gas	Quantity		1		1		
		Type			Braze connection			
		Diameter (OD)	mm	22,2				
	Piping Length	Maximum	m	100		100		
	Heat Insulation			Both liquid and gas pipes				
Defrost Method			Reversed cycle					
Defrost Control			Sensor for outdoor heat exchanger temperature					
Capacity Control Method			Inverter controlled					
Safety Devices			High pressure switch					
			Fan motor driver overload protector					
			Overcurrent relay					
			Inverter overload protector					
			PC board fuse					
Standard Accessories	Item			Installation manual				
	Quantity		1		1			
	Item			Connection pipes				
	Quantity		4		4			
Notes			Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 5m, level difference : 0m.					
			Nominal heating capacities are based on : indoor temperature : 20°CDB, outdoor temperature : 7°CDB, 6°CWB, equivalent refrigerant piping : 5m, level difference : 0m					
			The sound power level is an absolute value indicating the power which a sound source generates.					
			Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to sound level drawings of this chapter.					
			Sound values are measured in a semi-anechoic room.					

## 2 Specifications

2-3 ELECTRICAL SPECIFICATIONS				RZQ200C7Y1B	RZQ250C7Y1B
Power Supply	Name			Y1	
	Phase			3N	
	Frequency	Hz	50	50	
	Voltage		V	380-415	
	Voltage range	Minimum	V	-10%	
		Maximum	V	+10%	
Current	Nominal running current (RLA)	Cooling (A)	A	Refer to electrical data indoor-outdoor combination	
		Heating (A)	A	Refer to electrical data indoor-outdoor combination	
	Starting current (cooling/heating)		A	Refer to electrical data indoor-outdoor combination	
	Z-max	List		No requirements	
	Maximum Running Current		A	Refer to electrical data indoor-outdoor combination	
	Recommended fuses		A	25	25
	Wiring connections	For Power Supply	Quantity	5	5
Remark			Earth wire included		
For connection with indoor		Quantity	4	4	
		Remark	Earth wire included		
Power Supply Intake			Outdoor unit only		
Notes			Power supply to the FDQ indoor unit is separate		
			See separate drawings for electrical data		



### 3 Electrical data

3

Unit combination		Power supply					Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	TOCA	MFA	MSC	RLA	kW	FLA	kW	FLA
FCQ50B8V1 ×4	RZQ200C7Y1B	50 - 400	Max. 50Hz 415V Min. 50Hz 380V	17.8	19.8	20	-	14.7	0.75	0.7	0.045×4	0.6×4
FCQ60B8V1 ×3	RZQ200C7Y1B	50 - 400		17.2	19.2	20	-	14.7	0.75	0.7	0.045×3	0.6×3
FCQ71B8V3B ×3	RZQ200C7Y1B	50 - 400		17.2	19.2	20	-	14.7	0.75	0.7	0.045×3	0.6×3
FCQ100B8V3B ×2	RZQ200C7Y1B	50 - 400		17.4	19.4	20	-	14.7	0.75	0.7	0.090×2	1.0×2
FCQ50C7VEB ×4	RZQ200C7Y1B	50 - 400		16.6	18.6	20	-	14.7	0.75	0.7	0.056×4	0.3×4
FCQ60C7VEB ×3	RZQ200C7Y1B	50 - 400		16.6	18.6	20	-	14.7	0.75	0.7	0.056×3	0.4×3
FCQ71C7VEB ×3	RZQ200C7Y1B	50 - 400		16.9	18.9	20	-	14.7	0.75	0.7	0.056×3	0.5×3
FCQ100C7VEB ×2	RZQ200C7Y1B	50 - 400		16.8	18.8	20	-	14.7	0.75	0.7	0.120×2	0.7×2
FFQ50BV1B ×4	RZQ200C7Y1B	50 - 400		18.2	20.2	25	-	14.7	0.75	0.7	0.055×4	0.7×4
FFQ60BV1B ×3	RZQ200C7Y1B	50 - 400		17.5	19.5	20	-	14.7	0.75	0.7	0.055×3	0.7×3
FBQ50B7V1 ×4	RZQ200C7Y1B	50 - 400		18.2	20.2	25	-	14.7	0.75	0.7	0.085×4	0.7×4
FBQ60B7V1 ×3	RZQ200C7Y1B	50 - 400		18.1	20.1	25	-	14.7	0.75	0.7	0.125×3	0.9×3
FBQ71B7V3B ×3	RZQ200C7Y1B	50 - 400		18.1	20.1	25	-	14.7	0.75	0.7	0.125×3	0.9×3
FBQ100B7V3B ×2	RZQ200C7Y1B	50 - 400		17.4	19.4	20	-	14.7	0.75	0.7	0.135×2	1.0×2
FHQ50BUBV1B ×4	RZQ200C7Y1B	50 - 400		17.8	19.8	20	-	14.7	0.75	0.7	0.062×4	0.6×4
FHQ60BUBV1B ×3	RZQ200C7Y1B	50 - 400		17.2	19.2	20	-	14.7	0.75	0.7	0.062×3	0.6×3
FHQ71BUBV1B ×3	RZQ200C7Y1B	50 - 400		17.2	19.2	20	-	14.7	0.75	0.7	0.062×3	0.6×3
FHQ100BUBV1B ×2	RZQ200C7Y1B	50 - 400		16.8	18.8	20	-	14.7	0.75	0.7	0.130×2	0.7×2
FUQ71BUBV1B ×3	RZQ200C7Y1B	50 - 400		17.5	19.5	20	-	14.7	0.75	0.7	0.045×3	0.7×3
FUQ100BUBV1B ×2	RZQ200C7Y1B	50 - 400		17.6	19.6	20	-	14.7	0.75	0.7	0.090×2	1.1×2
FAQ71BUBV1B ×3	RZQ200C7Y1B	50 - 400	16.3	18.3	20	-	14.7	0.75	0.7	0.043×3	0.3×3	
FAQ100BUBV1B ×2	RZQ200C7Y1B	50 - 400	16.2	18.2	20	-	14.7	0.75	0.7	0.049×2	0.4×2	
FDQ200B7V3B	RZQ200C7Y1B	50 - 400	15.4	17.4	20	-	14.7	0.75	0.7	0.650	6.8	
FCQ60B8V1 ×4	RZQ250C7Y1B	50 - 400	Max. 50Hz 415V Min. 50Hz 380V	17.8	19.8	20	-	14.7	0.75	0.7	0.045×4	0.6×4
FCQ125B8V3B ×2	RZQ250C7Y1B	50 - 400		17.4	19.4	20	-	14.7	0.75	0.7	0.090×2	1.0×2
FCQ60C7VEB ×4	RZQ250C7Y1B	50 - 400		17.0	19.0	20	-	14.7	0.75	0.7	0.056×4	0.4×4
FCQ125C7VEB ×2	RZQ250C7Y1B	50 - 400		17.4	19.4	20	-	14.7	0.75	0.7	0.120×2	1.0×2
FFQ60BV1B ×4	RZQ250C7Y1B	50 - 400		18.2	20.2	25	-	14.7	0.75	0.7	0.055×4	0.7×4
FBQ60B7V1 ×4	RZQ250C7Y1B	50 - 400		19.0	21.0	25	-	14.7	0.75	0.7	0.125×4	0.9×4
FBQ125B7V3B ×2	RZQ250C7Y1B	50 - 400		18.2	20.2	25	-	14.7	0.75	0.7	0.225×2	1.4×2
FHQ60BUBV1B ×4	RZQ250C7Y1B	50 - 400		17.8	19.8	20	-	14.7	0.75	0.7	0.062×4	0.6×4
FHQ125BUBV1B ×2	RZQ250C7Y1B	50 - 400		16.8	18.8	20	-	14.7	0.75	0.7	0.130×2	0.7×2
FUQ125BUBV1B ×2	RZQ250C7Y1B	50 - 400		17.6	19.6	20	-	14.7	0.75	0.7	0.090×2	1.1×2
FDQ125B7V3B ×2	RZQ250C7Y1B	50 - 400		23.8	25.8	32	-	14.7	0.75	0.7	0.500×2	4.2×2
FDQ250B7V3B	RZQ250C7Y1B	50 - 400		15.4	17.4	20	-	14.7	0.75	0.7	1.000	7.6

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#### SYMBOLS

MCA	: Min. Circuit Amps (A)
TOCA	: Total Over Current Amps (A)
MFA	: Max. Fuse Amps (A) (See note 7)
MSC	: MSC means the max. current during the starting of compressor. (A)
RLA	: Rated Load Amps (A)
OFM	: Outdoor Fan Motor (A)
IFM	: Indoor Fan Motor
FLA	: Full Load Amps
kW	: Fan Motor Rated Output (kW)

#### NOTES

- 1 RLA is based on the following conditions:  
Power supply: 50Hz - 400V  
Cooling  
Indoor temperature 27°CDB/19°CWB  
Outdoor temperature 35°CDB  
Heating  
Indoor temperature 20.0°CDB  
Outdoor temperature 7.0°CDB/6.0°CWB
- 2 TOCA means the total value of each OC set
- 3 Voltage range  
Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed operation range limits
- 4 Maximum allowable voltage unbalance between phases is 2%
- 5 MCA represents maximum input current, MFA represents capacity which may accept MCA (next lower standard fuse rating, min.15A)
- 6 Select wire size based on the larger value of MCA or TOCA
- 7 MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker)
- 8 For more details concerning conditional connections, see <http://extranet.daikineurope.com>, select "E-Data Books". Finally, click on the document title of your choice.

## 4 Options

### Available options for RZQ200,250C

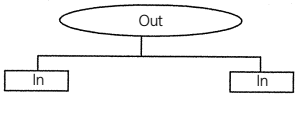
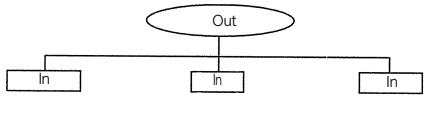
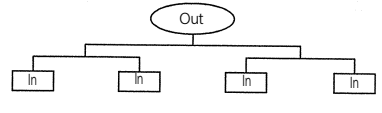
Name of option		Kit name	
		RZQ200C7Y1B	RZQ250C7Y1B
Central drain pan kit		KWC26B280	
Refrigerant branch piping	Twin	KHRQ22M20TA	
	Triple	KHRQ250H7	
	Double twin	KHRQ22M20TA (3x)	
Demand adaptor		KRP58M51	

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## 5 Capacity tables

### 5 - 1 Combination table

Possible combinations and standard capacity for twin, triple and double twin operation

	Possible indoor combination		
	Simultaneous operation		
Outdoor models	Twin	Triple	Double twin
			
RZQ200C7Y1B	100-100 (KHRQ22M20TA)	60-60-60 71-71-71 (KHRQ250H)	50-50-50-50 (3x KHRQ22M20TA)
RZQ250C7Y1B	125-125 (KHRQ22M20TA)	---	60-60-60-60 (3x KHRQ22M20TA)

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#### NOTES

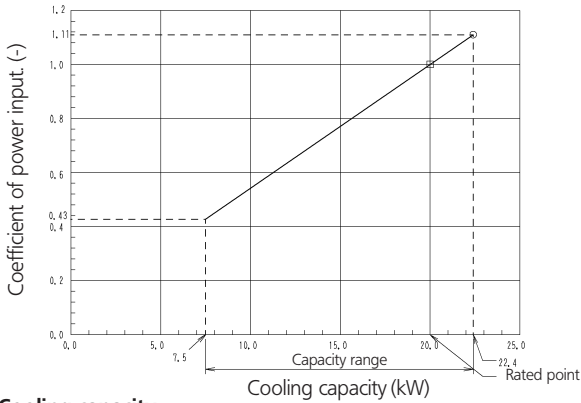
- 1 Possible indoor units: FCQ50-125, FFQ50,60, FHQ50-125, FBQ50-125, FAQ71,100, FUQ71-125, FDQ125
- 2 Individual indoor capacities are not given because the combinations are for simultaneous operation (=indoor units installed in same room).
- 3 No mix of different indoor types within the same installation is allowed.
- 4 Between brackets are the required Refnet kits mentioned, that are necessary to install the combination.

# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQ200C (Pair + Twin / triple / double twin)

#### Cooling



#### Cooling capacity

#### 400V [50Hz]

Indoor °CWB	Outdoor temp. (°CDB)											
	25			30			35			40		
	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16	20.2	17.0	0.82	19.4	16.3	0.90	18.6	15.5	0.98	17.7	14.8	1.06
18	21.3	17.1	0.83	20.4	16.4	0.91	19.5	15.7	0.99	18.6	14.9	1.07
19	21.8	17.1	0.84	20.9	16.4	0.92	20.0	15.6	1.00	19.1	14.9	1.08
20	22.3	17.1	0.84	21.4	16.4	0.92	20.5	15.6	1.01	19.6	14.9	1.09
22	23.4	17.0	0.85	22.4	16.3	0.94	21.4	15.6	1.02	20.5	14.9	1.10
24	24.4	16.8	0.86	23.4	16.1	0.95	22.4	15.4	1.03	21.4	14.7	1.12

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#### NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- On the figure the mark  $\square$  show the max. at standard conditions.  
On the figure the mark  $\circ$  show rated capacity and rated coefficient of power input.  
However, only rated capacity & CPI are guaranteed (maximal values NOT).
- On the tables  $\square$  show rated capacity and rated coefficient of power input.
- SHC is based on each EWB and EDB.  
SHC\* = SHC correction for other dry bulb  
SHC\* =  $0.02 \times \text{AFR} (\text{m}^3/\text{min.}) \times (1 - \text{BF}) \times (\text{DB}^* - \text{EDB})$   
Add SHC\* to SHC.
- Capacities are based on following conditions:  
Outdoor air : 85 % RH. however, the condition on nominal capacity is 7° CDB/6° CWB (heating)  
Corresponding refrigerant piping length : 5 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- Rated values are guaranteed. Other values are accurate within an error of 5%.
- Heating capacity includes capacity drop due to defrost operation.
- Air flow rate and BF are tabulated below.

#### SYMBOLS

- AFR: Air flow rate (m<sup>3</sup>/min)
- BF: Bypass factor
- EWB: Entering wet bulb temp. (°CDB)
- EDB: Entering dry bulb temp. (°CDB)
- TC: Total cooling/heating capacity (kW)
- SHC: Sensible heating capacity (kW)
- PI: Power input (kW)
- CPI: Coefficient of power input (-)

**Caution:**  
TC and SHC are shown by kW

(Pair)

Model	FDQ200
AFR	69
(BF)	(0.31)

(Twin)

Model	FCQ100Cx2	FCQ100Bx2	FBQ100x2	FHQ100x2	FUQ100x2	FAQ100x2
AFR	23.5x2	28x2	27x2	24x2	29x2	23x2
(BF)	(0.16x2)	(0.16x2)	(0.2x2)	(0.14x2)	(0.07x2)	(0.1x2)

(Triple)

Model	FCQ60Cx3	FCQ71Cx3	FCQ60Bx3	FCQ71Bx3	FFQ60x3	FBQ60x3	FBQ71x3	FHQ60x3	FHQ71x3	FUQ71x3	FAQ71x3
AFR	13.5x3	15.5x3	18x3	18x3	15x3	19x3	19x3	17x3	17x3	19x3	19x3
(BF)	(0.21x3)	(0.19x3)	(0.1x3)	(0.1x3)	(0.11x3)	(0.11x3)	(0.11x3)	(0.2x2)	(0.1x3)	(0.07x3)	(0.08x3)

(Double twin)

Model	FCQ50Cx4	FCQ50Bx4	FFQ50x4	FBQ50x4	FHQ50x4
AFR	12.5x4	15x4	12x4	14x4	14x4
(BF)	(0.21x4)	(0.16x4)	(0.16x4)	(0.15x4)	(0.1x4)

10. Rated power input of each model is tabulated below.

(Pair)

Model	FDQ200
Cooling	6.23
Heating	6.74

(Twin)

Model	FCQ100Cx2	FCQ100Bx2	FBQ100x2	FHQ100x2	FUQ100x2	FAQ100x2
Cooling	5.69	5.69	6.16	6.78	6.71	5.99
Heating	6.40	6.40	6.12	7.34	6.69	6.92

(Triple)

Model	FCQ60Cx3	FCQ71Cx3	FCQ60Bx3	FCQ71Bx3	FFQ60x3	FBQ60x3	FBQ71x3	FHQ60x3	FHQ71x3	FUQ71x3	FAQ71x3
Cooling	5.99	5.99	5.99	5.99	6.01	6.48	6.48	7.14	7.14	7.07	6.30
Heating	6.74	6.74	6.74	6.74	6.54	6.45	6.45	7.73	7.73	7.04	7.28

(Double twin)

Model	FCQ50Cx4	FCQ50Bx4	FFQ50x4	FBQ50x4	FHQ50x4
Cooling	5.99	5.99	6.01	6.48	7.14
Heating	6.74	6.74	6.54	6.45	7.73

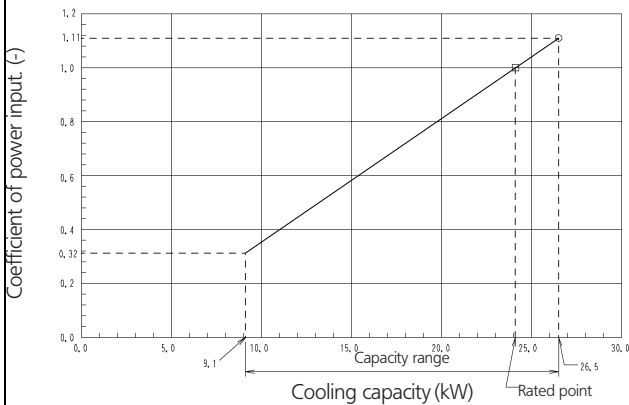
# 5 Capacity tables

## 5 - 2 Cooling capacity tables

5

### RZQ250C (Pair + Twin / Double twin)

#### Cooling



#### Cooling capacity

400V [50Hz]

Indoor °CWB	Outdoor temp. (°CDB)											
	25			30			35			40		
	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16	24.5	21.5	0.79	23.5	20.7	0.88	22.5	19.8	0.98	21.5	19.0	1.08
18	25.7	21.5	0.80	24.6	20.6	0.89	23.6	19.8	0.99	22.5	18.9	1.09
19	26.2	21.5	0.80	25.2	20.6	0.90	24.1	19.8	1.00	23.0	19.0	1.10
20	26.8	21.4	0.81	25.7	20.5	0.91	24.6	19.7	1.01	23.5	18.9	1.11
22	28.0	21.2	0.81	26.8	20.3	0.92	25.7	19.5	1.02	24.5	18.7	1.12
24	29.1	20.9	0.82	27.9	20.1	0.93	26.7	19.3	1.03	25.6	18.4	1.13

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#### NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- On the figure the mark ○ show the max. at standard conditions.  
On the figure the mark □ show rated capacity and rated coefficient of power input. However, only rated capacity & CPI are guaranteed (maximal values NOT).
- On the tables □ show rated capacity and rated coefficient of power input.
- SHC is based on each EWB and EDB  
SHC\* = SHC correction for other dry bulb  
SHC\* = 0.02 x AFR (m<sup>3</sup>/min.) x (1-BF) x (DB\*-EDB)  
Add SHC\* to SHC.
- Capacities are based on following conditions:  
Outdoor air : 85 % RH. however, the condition on nominal capacity is 7° CDB/6° CWB (heating)  
Corresponding refrigerant piping length : 5 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- Rated values are guaranteed. Other values are accurate within an error of 5%.
- Heating capacity includes capacity drop due to defrost operation.
- Air flow rate and BF are tabulated below.

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CDB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total cooling/heating capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input (comp.+indoor+outdoor fan motor)	(kW)
CPI:	Coefficient of power input.	(-)

**Caution:**  
TC and SHC are shown by kW

(Pair) (Twin)

Model	FDQ250
AFR	89
(BF)	(0.34)

Model	FCQ125Cx2	FCQ125Bx2	FBQ125x2	FHQ125x2	FUQ125x2	FAQ125x2
AFR	27.5x2	31x2	35x2	30x2	32x2	45x2
(BF)	(0.19x2)	(0.07x2)	(0.14x2)	(0.13x2)	(0.07x2)	(0.25x2)

(Double twin)

Model	FCQ60Cx4	FCQ60x4	FFQ60x4	FBQ60x4	FHQ60x4
AFR	13.5x4	18x4	15x4	19x4	17x4
(BF)	(0.21x4)	(0.1x4)	(0.11x4)	(0.11x4)	(0.2x4)

10. Rated power input of each model is tabulated below.

(Pair) (Twin)

Model	FDQ250
Cooling	8.58
Heating	8.22

Model	FCQ125Cx2	FCQ125Bx2	FBQ125x2	FHQ125x2	FUQ125x2	FAQ125x2
Cooling	8.91	8.91	9.14	10.22	9.30	9.53
Heating	8.68	8.68	7.94	8.95	8.68	7.35

(Double twin)

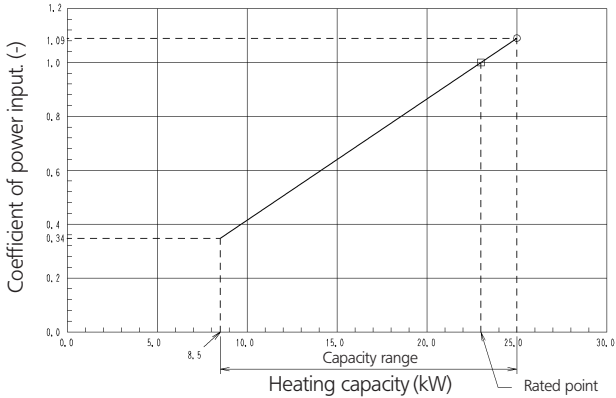
Model	FCQ60Cx4	FCQ60Bx4	FFQ60x4	FBQ60x4	FHQ60x4
Cooling	9.39	9.39	9.49	9.62	10.76
Heating	9.13	9.13	8.48	8.36	9.43

# 5 Capacity tables

## 5 - 3 Heating capacity tables

### RZQ200C (Pair + Twin / triple / double twin)

#### Heating



#### Heating capacity

#### 230V [50Hz]

Indoor °CWB	Outdoor temp. (°CWB)											
	-15		-10		-5		0		6		10	
	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)
16	10.8	0.83	12.2	0.87	13.9	0.91	15.5	0.96	23.3	0.97	25.4	1.01
18	10.8	0.84	12.2	0.88	13.8	0.93	15.4	0.97	23.2	0.98	25.3	1.03
20	10.7	0.85	12.1	0.90	13.7	0.94	15.3	0.99	23.0	1.00	25.1	1.04
22	10.6	0.87	12.0	0.91	13.6	0.96	15.2	1.01	22.8	1.02	24.9	1.06
24	10.5	0.88	11.9	0.93	13.5	0.98	15.1	1.02	22.7	1.03	24.7	1.08

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#### NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- On the figure the mark  $\square$  show the max. at standard conditions.  
On the figure the mark  $\square$  show rated capacity and rated coefficient of power input.  
However, only rated capacity & CPI are guaranteed (maximal values NOT).
- On the tables  $\square$  show rated capacity and rated coefficient of power input.
- SHC is based on each EWB and EDB  
 $SHC^* = SHC$  correction for other dry bulb  
 $SHC^* = 0.02 \times AFR (m^3/min) \times (1-BF) \times (DB^*-EDB)$   
 Add  $SHC^*$  to SHC.
- Capacities are based on following conditions:  
 Outdoor air : 85 % RH. however, the condition on nominal capacity is 7° CDB/6° CWB (heating)  
 Corresponding refrigerant piping length : 5 m  
 Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- Rated values are guaranteed. Other values are accurate within an error of 5%.
- Heating capacity includes capacity drop due to defrost operation.
- Air flow rate and BF are tabulated below.

#### SYMBOLS

- AFR: Air flow rate (m<sup>3</sup>/min)  
 BF: Bypass factor  
 EWB: Entering wet bulb temp. (°CDB)  
 EDB: Entering dry bulb temp. (°CDB)  
 TC: Total cooling/heating capacity (kW)  
 SHC: Sensible heating capacity (kW)  
 PI: Power input (kW)  
 CPI: Coefficient of power input (-)

**Caution:**  
 TC and SHC are shown by kW

(Pair)

Model	FDQ200
AFR	69
(BF)	(0.31)

(Twin)

Model	FCQ100Cx2	FCQ100Bx2	FBQ100x2	FHQ100x2	FUQ100x2	FAQ100x2
AFR	23.5x2	28x2	27x2	24x2	29x2	23x2
(BF)	(0.16x2)	(0.16x2)	(0.2x2)	(0.14x2)	(0.07x2)	(0.1x2)

(Triple)

Model	FCQ60Cx3	FCQ71Cx3	FCQ60Bx3	FCQ71Bx3	FFQ60x3	FBQ60x3	FBQ71x3	FHQ60x3	FHQ71x3	FUQ71x3	FAQ71x3
AFR	13.5x3	15.5x3	18x3	18x3	15x3	19x3	19x3	17x3	17x3	19x3	19x3
(BF)	(0.21x3)	(0.19x3)	(0.1x3)	(0.1x3)	(0.11x3)	(0.11x3)	(0.11x3)	(0.2x2)	(0.1x3)	(0.07x3)	(0.08x3)

(Double twin)

Model	FCQ50Cx4	FCQ50Bx4	FFQ50x4	FBQ50x4	FHQ50x4
AFR	12.5x4	15x4	12x4	14x4	14x4
(BF)	(0.21x4)	(0.16x4)	(0.16x4)	(0.15x4)	(0.1x4)

10. Rated power input of each model is tabulated below.

(Pair)

Model	FDQ200	Model	FCQ100Cx2	FCQ100Bx2	FBQ100x2	FHQ100x2	FUQ100x2	FAQ100x2
Cooling	6.23	Cooling	5.69	5.69	6.16	6.78	6.71	5.99
Heating	6.74	Heating	6.40	6.40	6.12	7.34	6.69	6.92

(Triple)

Model	FCQ60Cx3	FCQ71Cx3	FCQ60Bx3	FCQ71Bx3	FFQ60x3	FBQ60x3	FBQ71x3	FHQ60x3	FHQ71x3	FUQ71x3	FAQ71x3
Cooling	5.99	5.99	5.99	5.99	6.01	6.48	6.48	7.14	7.14	7.07	6.30
Heating	6.74	6.74	6.74	6.74	6.54	6.45	6.45	7.73	7.73	7.04	7.28

(Double twin)

Model	FCQ50Cx4	FCQ50Bx4	FFQ50x4	FBQ50x4	FHQ50x4
Cooling	5.99	5.99	6.01	6.48	7.14
Heating	6.74	6.74	6.54	6.45	7.73

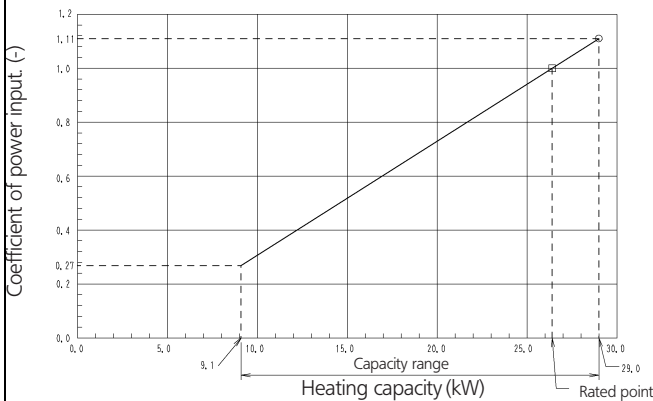
# 5 Capacity tables

## 5 - 3 Heating capacity tables

5

### RZQ250C (Pair + Twin / Double twin)

#### Heating



#### Heating capacity 230V [50Hz]

Indoor °CWB	Outdoor temp. (°CWB)											
	-15		-10		-5		0		6		10	
	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)
16	13.2	0.77	14.7	0.82	16.6	0.87	18.4	0.91	26.9	0.92	29.2	0.98
18	13.1	0.80	14.6	0.85	16.4	0.90	18.2	0.95	26.6	0.96	28.9	1.02
20	12.9	0.84	14.5	0.88	16.3	0.94	18.0	0.99	26.4	1.00	28.7	1.06
22	12.8	0.87	14.3	0.92	16.1	0.97	17.9	1.03	26.2	1.04	28.4	1.10
24	12.7	0.90	14.2	0.95	16.0	1.01	17.7	1.06	25.9	1.08	28.2	1.14

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#### NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- On the figure the mark ○ show the max. at standard conditions.  
On the figure the mark □ show rated capacity and rated coefficient of power input. However, only rated capacity & CPI are guaranteed (maximal values NOT).
- On the tables □ show rated capacity and rated coefficient of power input.
- SHC is based on each EWB and EDB  
SHC\* = SHC correction for other dry bulb  
SHC\* = 0.02 x AFR (m<sup>3</sup>/min.) x (1-BF) x (DB\*-EDB)  
Add SHC\* to SHC.
- Capacities are based on following conditions:  
Outdoor air : 85 % RH, however, the condition on nominal capacity is 7° CDB/6° CWB (heating)  
Corresponding refrigerant piping length : 5 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- Rated values are guaranteed. Other values are accurate within an error of 5%.
- Heating capacity includes capacity drop due to defrost operation.
- Air flow rate and BF are tabulated below.

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CDB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total cooling/heating capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input (comp.+indoor+outdoor fan motor)	(kW)
CPI:	Coefficient of power input	(-)

**Caution:**  
TC and SHC are shown by kW

(Pair) (Twin)

Model	FDQ250	Model	FCQ125Cx2	FCQ125Bx2	FBQ125x2	FHQ125x2	FUQ125x2	FAQ125x2
AFR	89	AFR	27.5x2	31x2	35x2	30x2	32x2	45x2
(BF)	(0.34)	(BF)	(0.19x2)	(0.07x2)	(0.14x2)	(0.13x2)	(0.07x2)	(0.25x2)

(Double twin)

Model	FCQ60Cx4	FCQ60x4	FFQ60x4	FBQ60x4	FHQ60x4
AFR	13.5x4	18x4	15x4	19x4	17x4
(BF)	(0.21x4)	(0.1x4)	(0.11x4)	(0.11x4)	(0.2x4)

10. Rated power input of each model is tabulated below.

(Pair) (Twin)

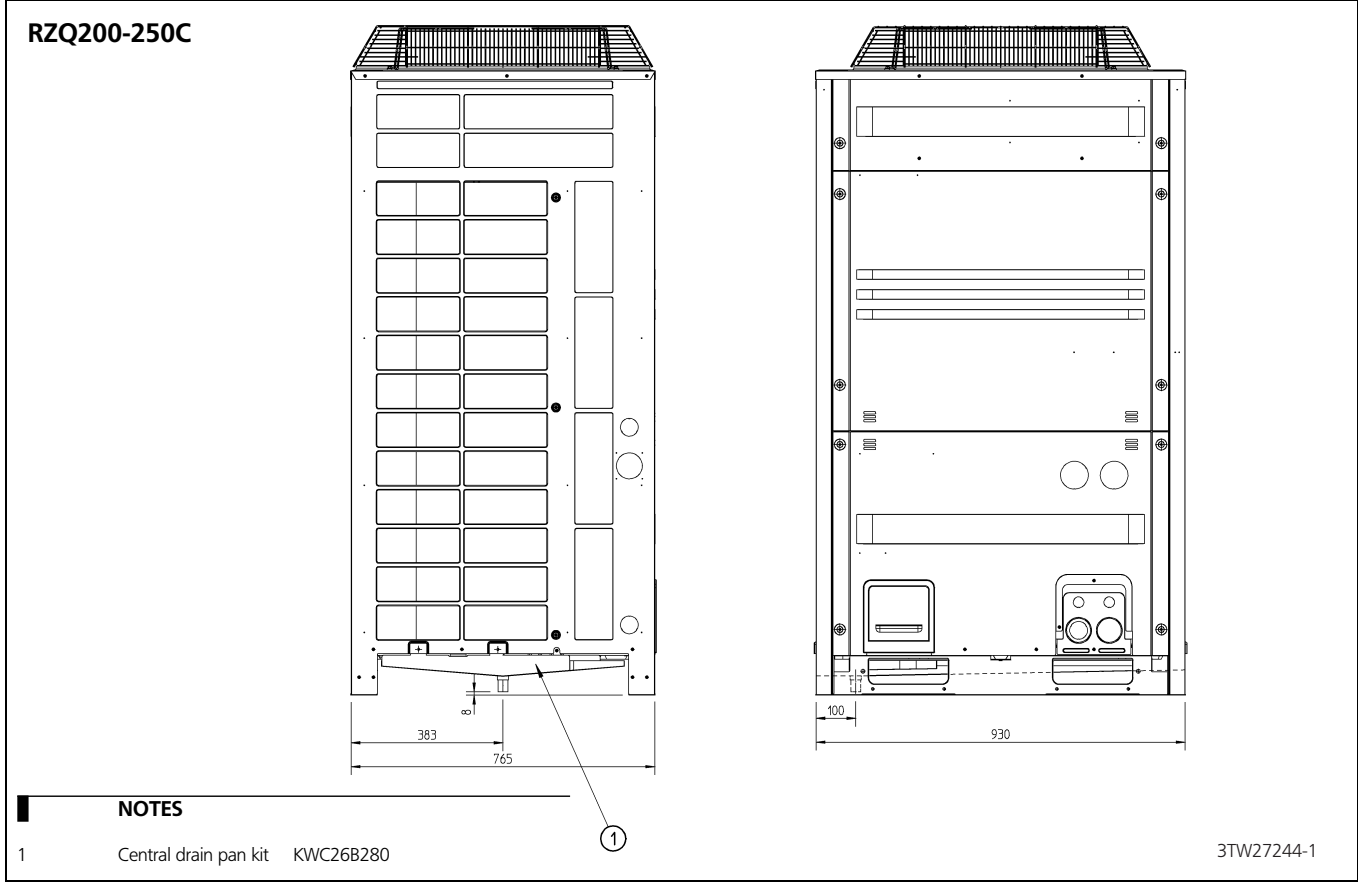
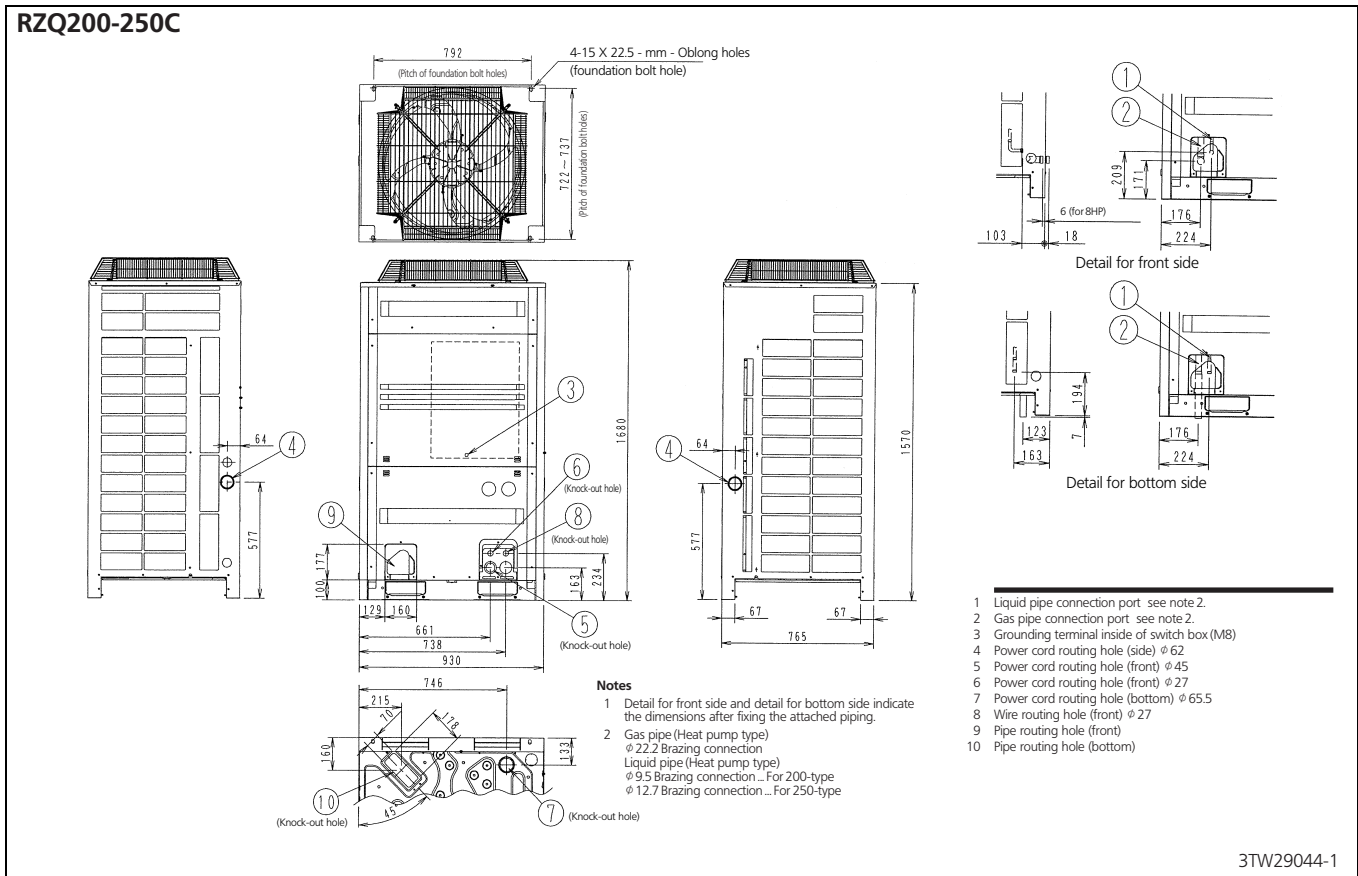
Model	FDQ250	Model	FCQ125Cx2	FCQ125Bx2	FBQ125x2	FHQ125x2	FUQ125x2	FAQ125x2
Cooling	8.58	Cooling	8.91	8.91	9.14	10.22	9.30	9.53
Heating	8.22	Heating	8.68	8.68	7.94	8.95	8.68	7.35

(Double twin)

Model	FCQ60Cx4	FCQ60Bx4	FFQ60x4	FBQ60x4	FHQ60x4
Cooling	9.39	9.39	9.49	9.62	10.76
Heating	9.13	9.13	8.48	8.36	9.43

# 6 Dimensional drawing & centre of gravity

## 6 - 1 Dimensional drawing

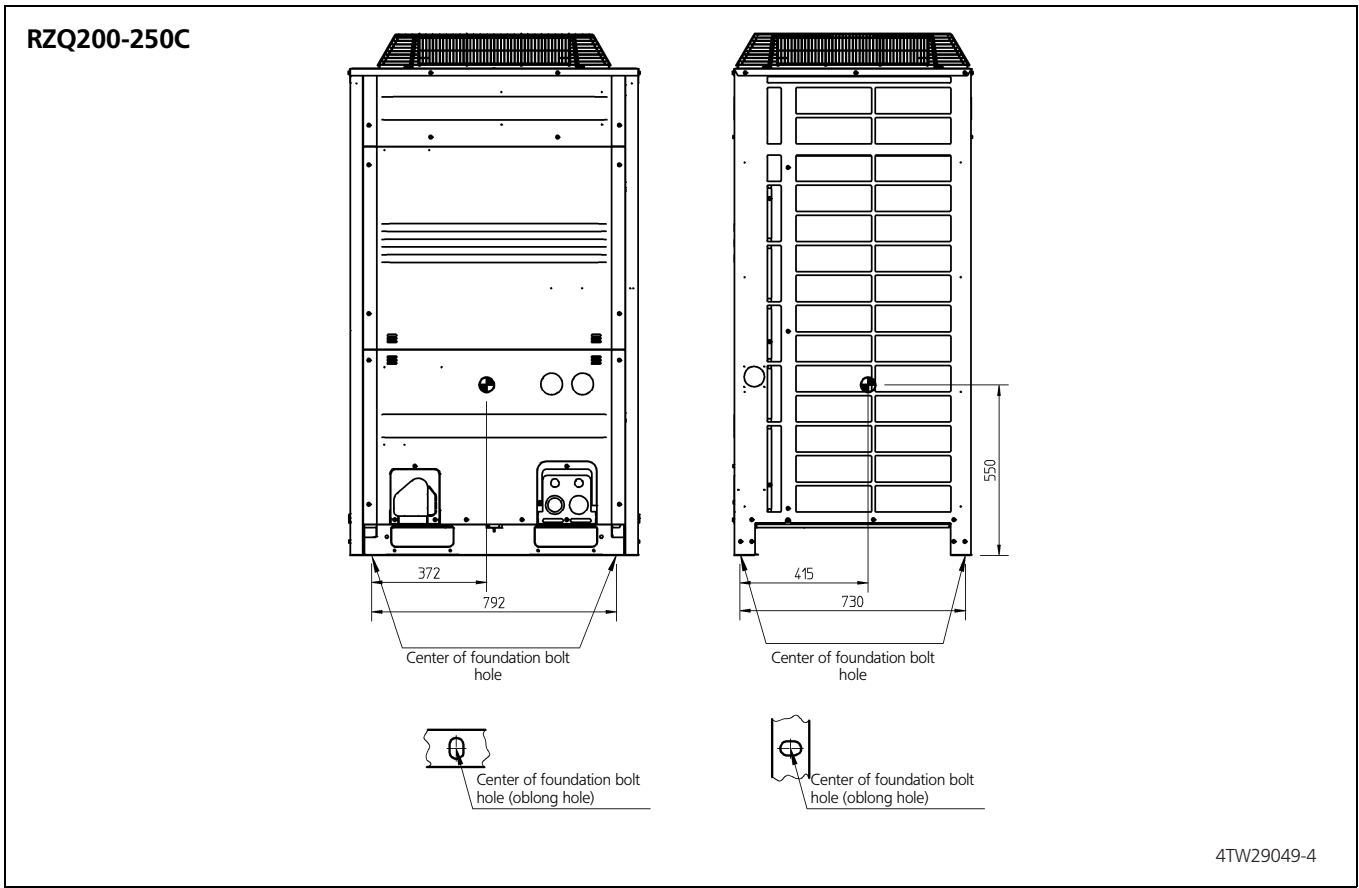




## 6 Dimensional drawing & centre of gravity

### 6 - 2 Centre of gravity

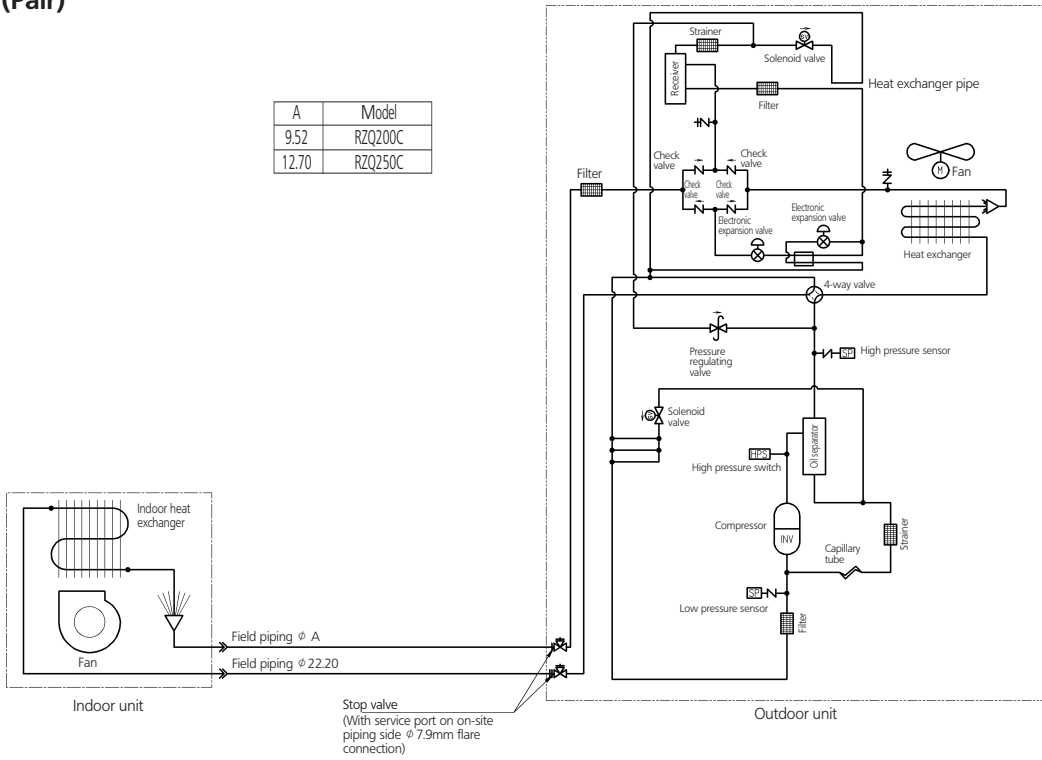
6



# 7 Piping diagram

## RZQ200-250C (Pair)

A	Model
9.52	RZQ200C
12.70	RZQ250C

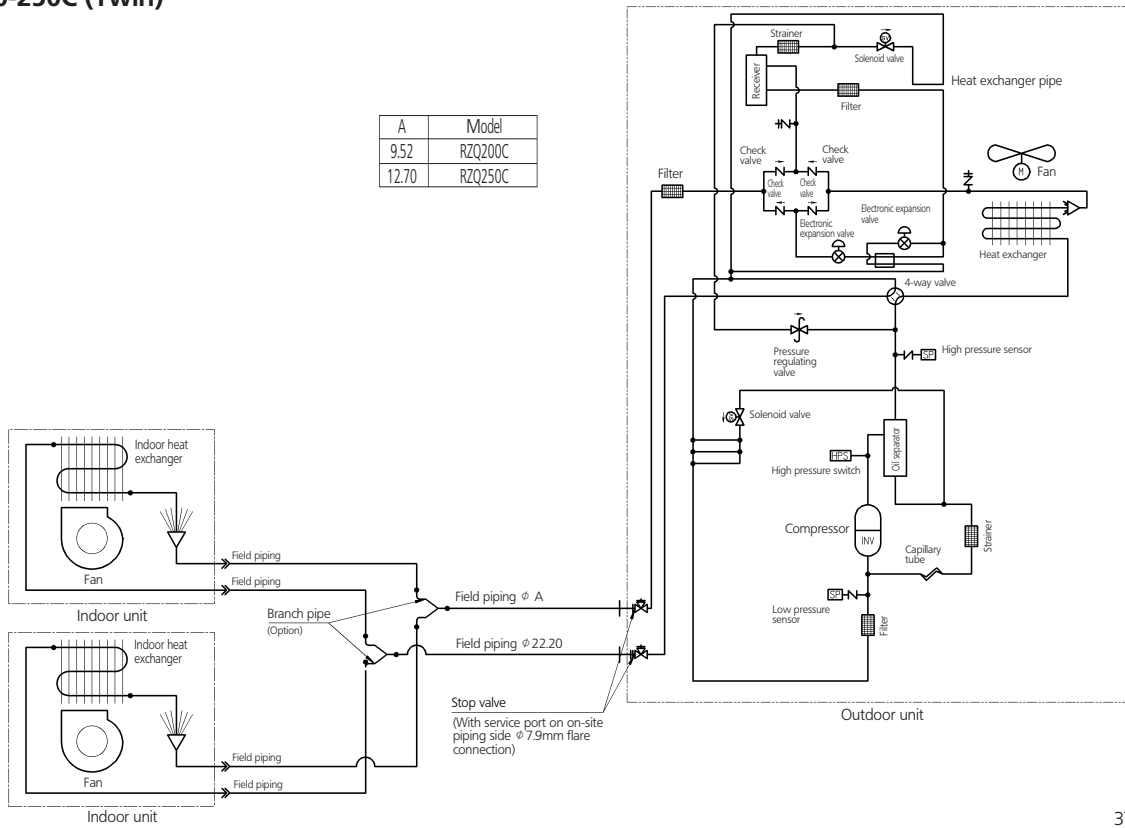


3TW29045-1

Check valve  
 Flare connection  
 Screw connection  
 Flange connection  
 Pinched pipe  
 Spinned pipe

## RZQ200-250C (Twin)

A	Model
9.52	RZQ200C
12.70	RZQ250C



3TW29045-2

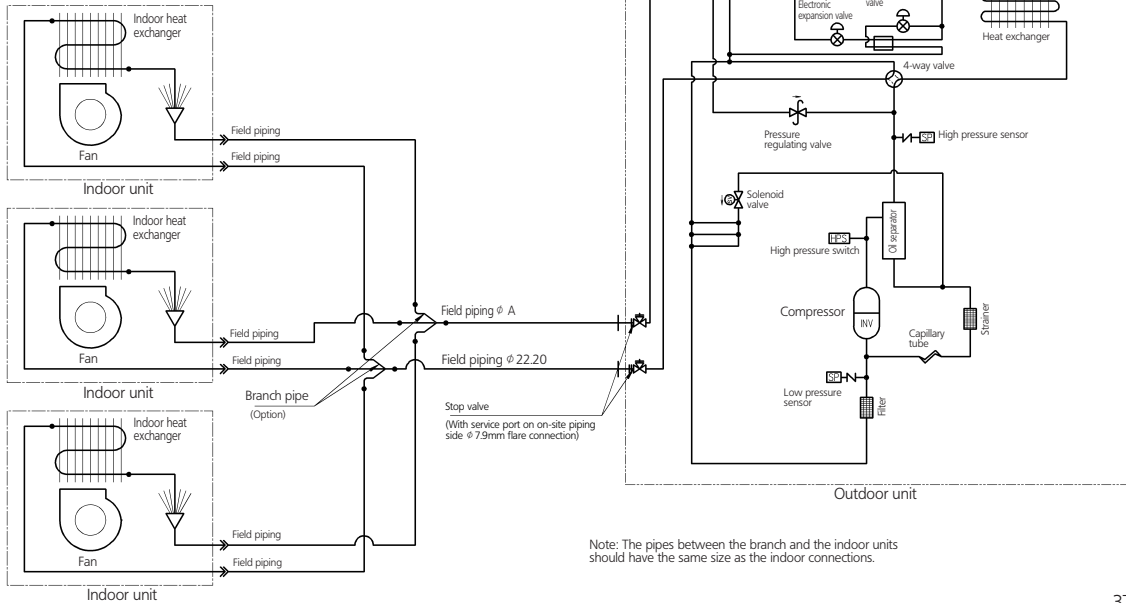
Check valve  
 Flare connection  
 Screw connection  
 Flange connection  
 Pinched pipe  
 Spinned pipe

# 7 Piping diagram

7

## RZQ200-250C (Triple)

A	Model
9.52	RZQ200C
12.70	RZQ250C



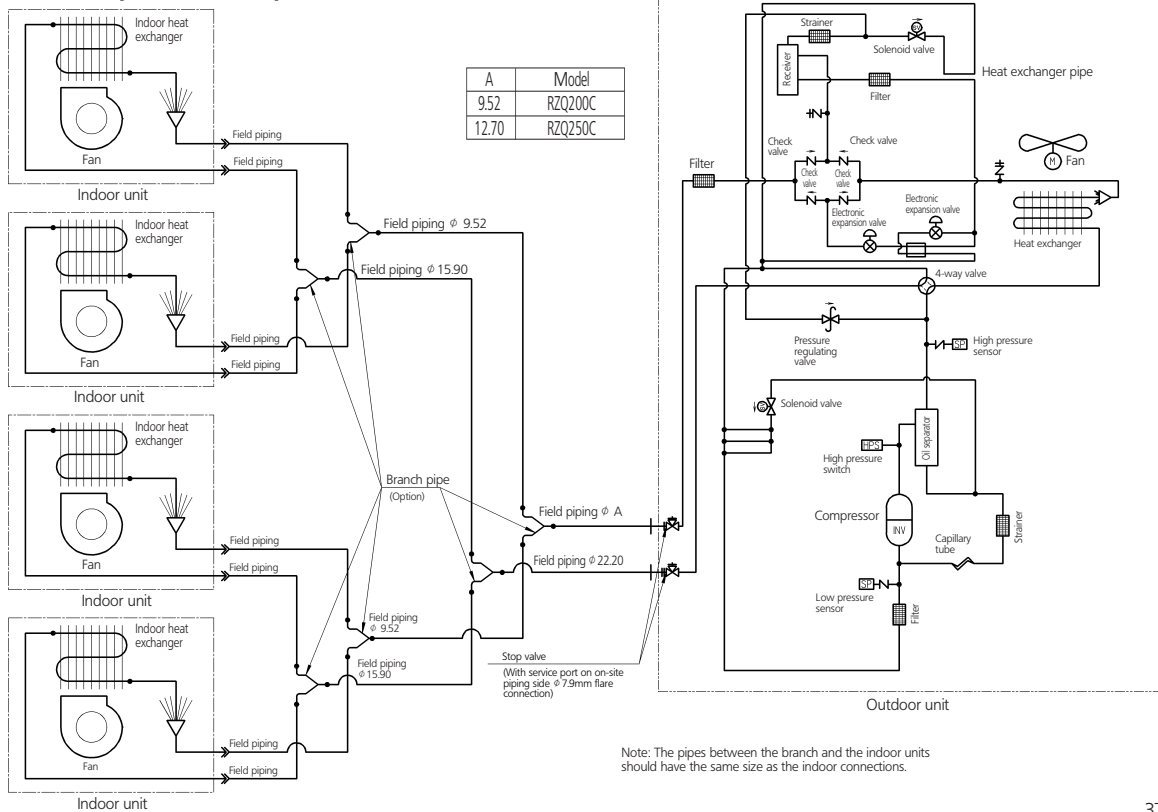
Note: The pipes between the branch and the indoor units should have the same size as the indoor connections.

3TW29045-3

Check valve  
 Flare connection  
 Screw connection  
 Flange connection  
 Pinched pipe  
 Spinned pipe

## RZQ200-250C (Double twin)

A	Model
9.52	RZQ200C
12.70	RZQ250C



Note: The pipes between the branch and the indoor units should have the same size as the indoor connections.

3TW29045-4

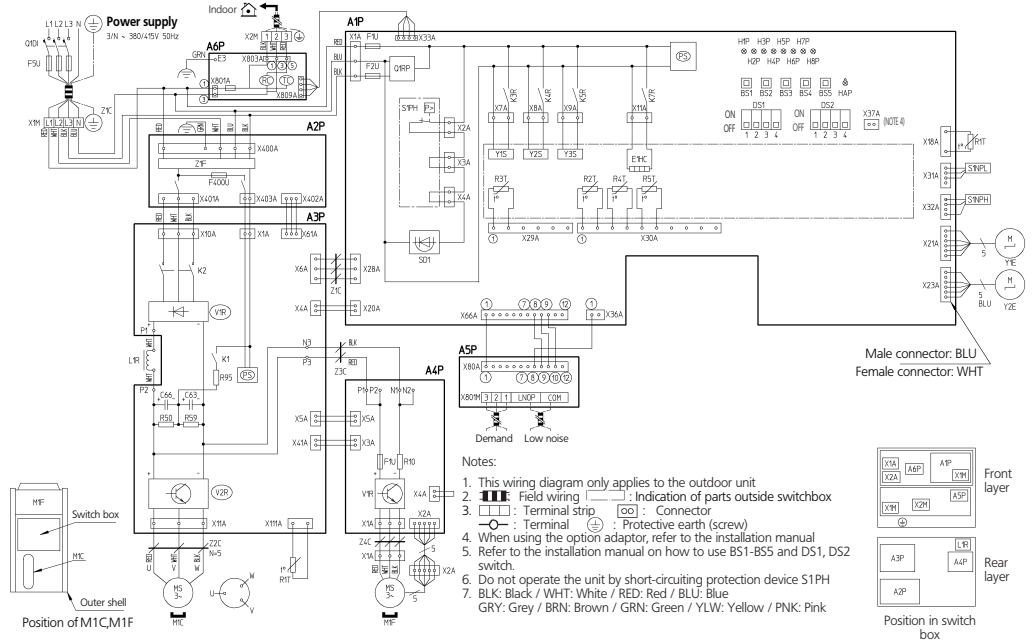
Check valve  
 Flare connection  
 Screw connection  
 Flange connection  
 Pinched pipe  
 Spinned pipe

# 8 Wiring diagram

## 8 - 1 Wiring diagram

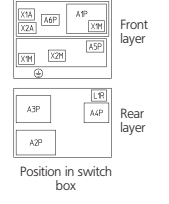
### RZQ200-250C

- A1P-A6P Printed circuit board
- A1P Main
- A2P Noise filter
- A3P Inverter
- A4P Fan motor
- A6P QA Transmission
- B51-B55 Push button switch
- C1 Mode, set, return, test, reset
- C1 Capacitor
- C63, C66 Dip switch
- D51, D52 Crankcase heater
- F1H Crankcase heater
- F1U Fuse (DC650V, 8A) (A4P)
- F1U, F2U Fuse (250V, 3.15A) (A1P)
- F400U Fuse (250V, 6.3A) (A2P)
- F400U (Pilot lamp service monitor - orange)
- H1P-H8P (H2P) Prepare test - flickering
- HAP Malfunction detection - Light up
- HAP (Pilot lamp service monitor - green)
- K1 Magnetic relay
- K2 Magnetic contactor(M1C)
- K3R-K7R Magnetic relay
- Y1S
- K4R Y2S
- K5R Y3S
- K7R E1HC
- L1R Reactor
- M1C Motor compressor
- M1F Motor fan
- PS Switching power supply (A1P, A3P)
- Q1DI Earth leakage breaker
- Q1RP Phase reversal detect circuit
- R10 Resistor (current sensor) (A4P)
- R50, R59 Resistor
- R55 Resistor (current limiting)
- R1T, R5T Thermistor
- R1T Air (A1P)
- R1T Fin type (A3P)
- R2T Suction
- R3T M1C Discharge
- R4T Heat exch. dischr
- R5T Sub cool outlet
- S1NH Pressure sensor (high)
- SINPL Pressure sensor (low)
- S1PH Pressure switch (high)
- SD1 Safety devices input
- Y1R Power module (A4P)
- Y1R, Y2R Power module (A3P)
- X1A, X2A M1C Connector (M1F)
- X1M Terminal strip (Power supply)
- X2M Terminal strip (Transmission)
- Y1E Electronic expansion valve (Main)
- Y2E Electronic expansion valve (Subcool)
- Y1S-Y3S Solenoid valve
- Y1S Hot gas
- Y2S oil return
- Y3S 4-way valve
- Z1C, 4C Noise filter (ferrite core)
- Z1F Noise filter (with surge absorber)
- Option
- ASP Printed circuit board (for demand)



- SINPL Pressure sensor (low)
- S1PH Pressure switch (high)
- SD1 Safety devices input
- Y1R Power module (A4P)
- Y1R, Y2R Power module (A3P)
- X1A, X2A M1C Connector (M1F)
- X1M Terminal strip (Power supply)
- X2M Terminal strip (Transmission)
- Y1E Electronic expansion valve (Main)
- Y2E Electronic expansion valve (Subcool)
- Y1S-Y3S Solenoid valve
- Y1S Hot gas
- Y2S oil return
- Y3S 4-way valve
- Z1C, 4C Noise filter (ferrite core)
- Z1F Noise filter (with surge absorber)
- Option
- ASP Printed circuit board (for demand)

- Notes:
1. This wiring diagram only applies to the outdoor unit.
  2. ■■■: field wiring □□□: Indication of parts outside switchbox
  3. □□□: Terminal strip ⊞: Connector
  - : Terminal ⊕: Protective earth (screw)
  4. When using the option adaptor, refer to the installation manual
  5. Refer to the installation manual on how to use BS1-B55 and DS1, DS2 switch.
  6. Do not operate the unit by short-circuiting protection device S1PH
  7. BLK: Black / WHT: White / RED: Red / BLU: Blue
- GRY: Grey / BRN: Brown / GRN: Green / YLW: Yellow / PNK: Pink

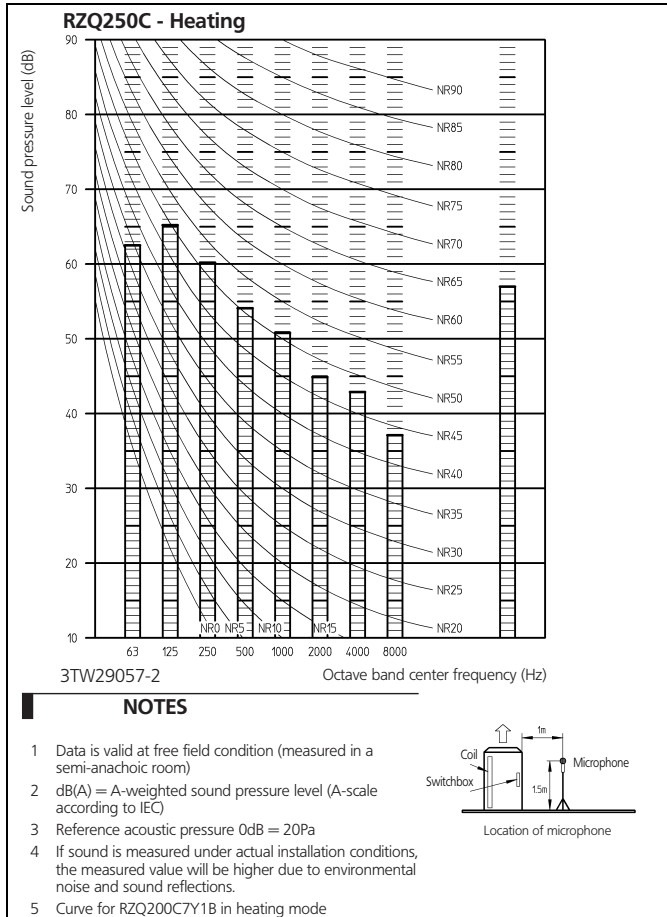
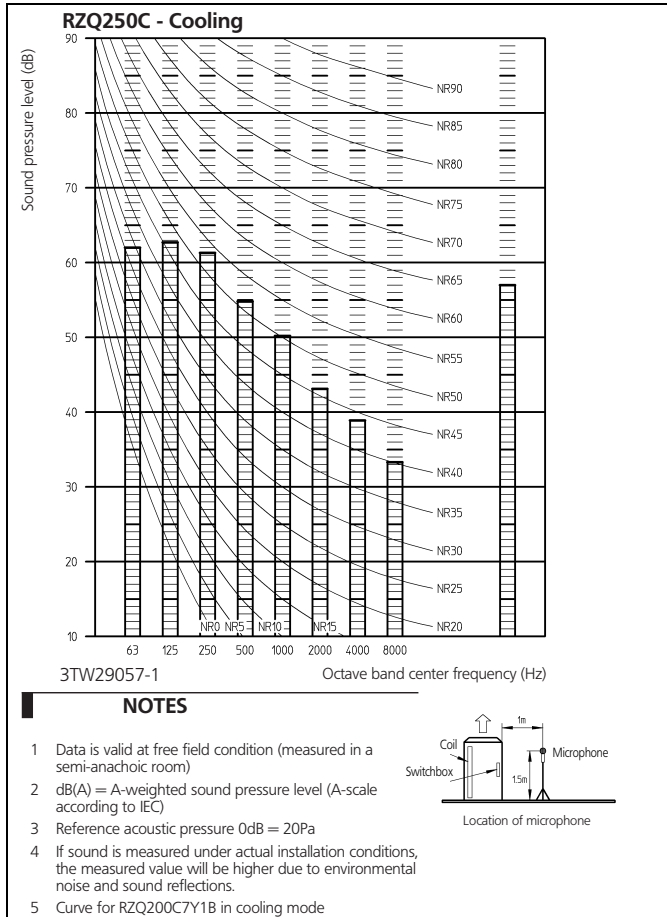
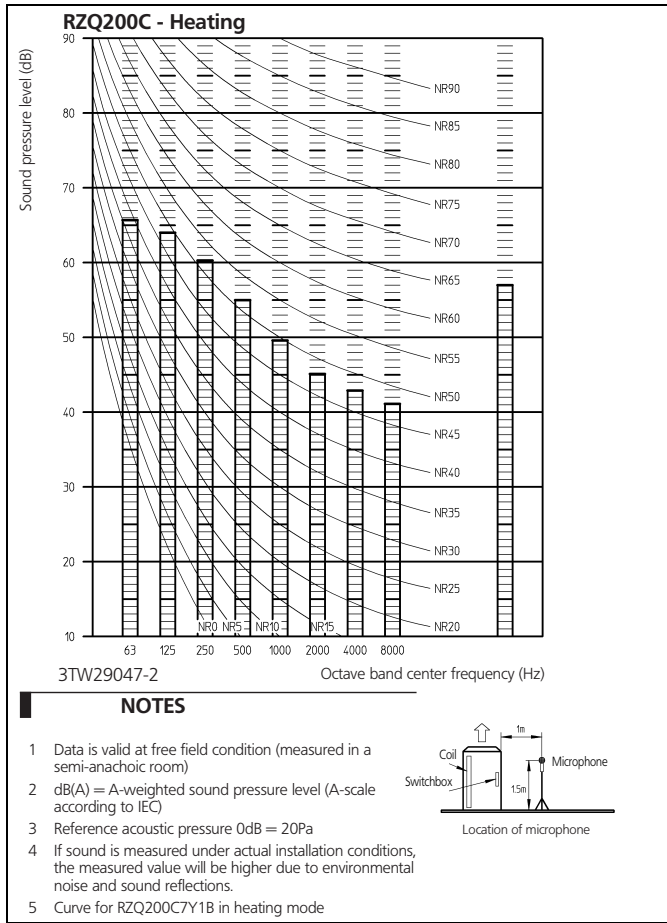
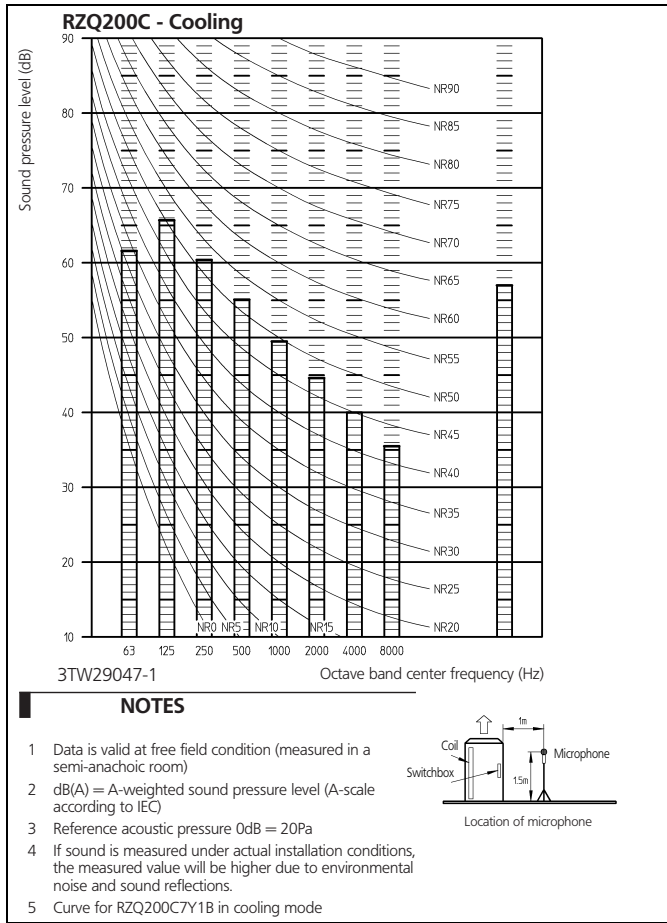


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# 9 Sound data

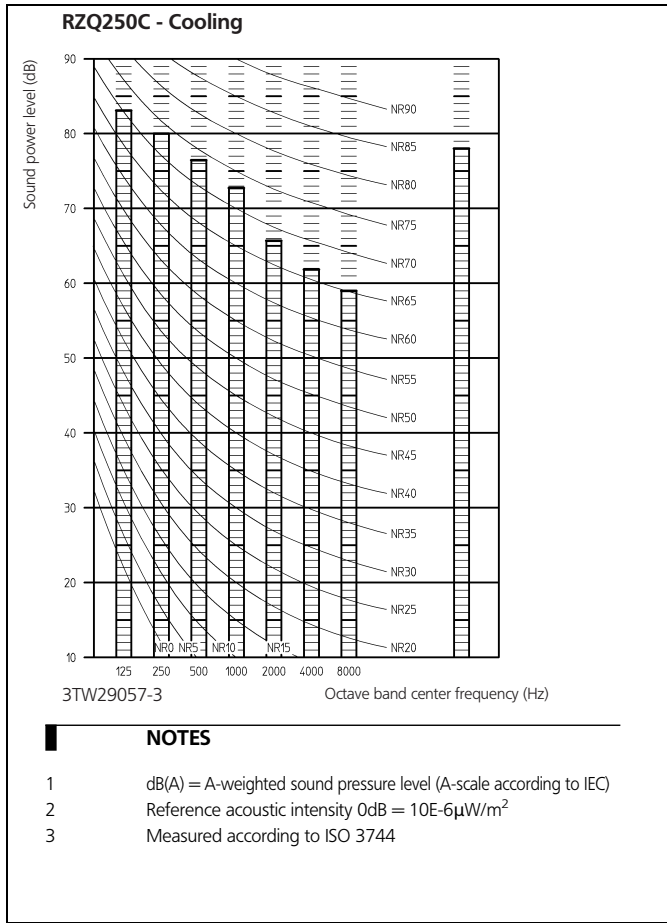
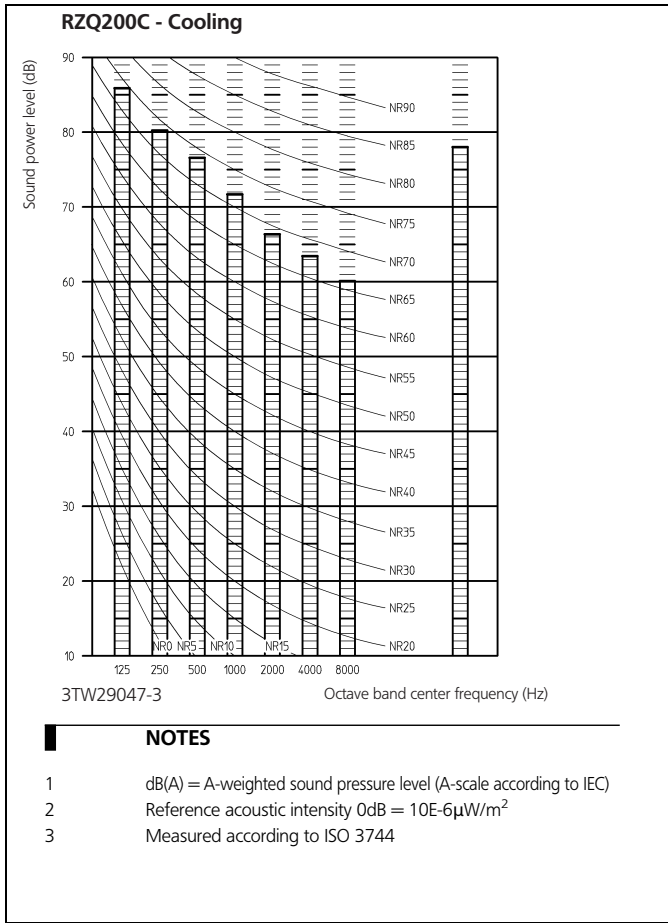
## 9 - 1 Sound pressure spectrum

9



# 9 Sound data

## 9 - 2 Sound power spectrum

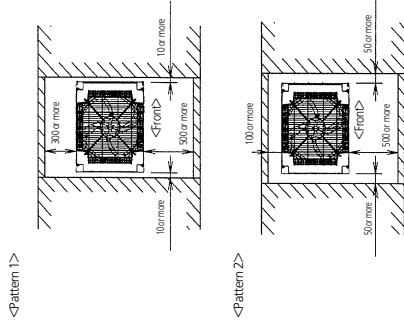


# 10 Installation

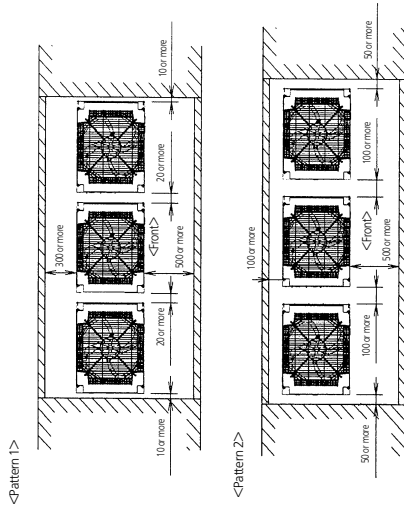
## 10 - 1 Installation method

### RZQ200-250C

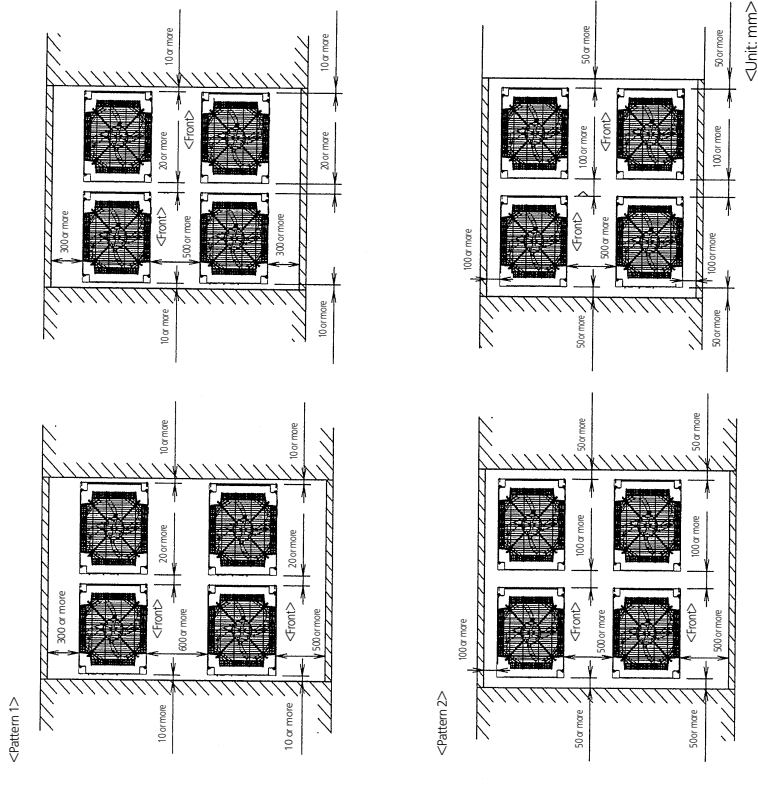
For single unit installation



For installation in rows

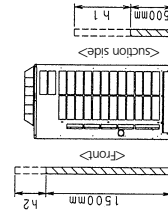


For centralized group layout



Notes:

- 1 Heights of walls in case of Patterns 1 and 2:  
Front: 1500 mm  
suction side: 500 mm  
Side: Height unrestricted.  
Installation space to be shown in this drawing is based on the cooling operation at 35 degrees outdoor air temperature. When the design outdoor air temperature exceeds 35 degrees or the load exceeds maximum ability because of much generation load of heat in all outdoor unit, take the suction side space more broadly than the space to be shown in this drawing.
- 2 If the above wall heights are exceeded then h1/2 and h2/2 should be added to the front and suction side service spaces respectively as shown in the figure on the right.
- 3 When installing the units most appropriate pattern should be selected from those shown above in order to obtain the best fit in the space available always bearing in mind the need to leave enough space for a person to pass between units and wall and for the air to circulate freely. (If more units are to be installed than are catered for in the above patterns your layout should take account of the possibility of short circuits.)
- 4 The units should be installed to leave sufficient space at the front for the on site refrigerant piping work to be carried out comfortably.



## 10 Installation

### 10 - 2 Fixation and foundation of units

**RZQ200-250C**

**Foundation bolt executing method**

**When installing multiple units in connection**

Model	A	B
RVC5M18 RVS MY1, VL, TL RSM Y1 RVC5MAY1, VL, TL RVC5P Y1, BP Y1	497	697
RVB8-10MY18 RVCB8-10MY18 RVS8-10MY1, VL, TL RVS8-10MY1 RVCB8-10MAY1, VL, TL RVS8-10MAY1 RVCB8-10MAY1 RVCB8-10PY1 RVCB8-10PY1 RZP35MAY1	792	992
RVCQ12-14-16MY18 RVCQ12-14-16MY18 RVS12-14-16MY1, VL, TL RVCQ12-14-16MY1 RVCQ12-14-16MAY1, VL, TL RVS12-14-16MY1 RVCQ12-14-16MAY1 RVCQ12-14-16-18PY1 RVC400PY1	1102	1302

**NOTES**

- 1 The proportions of cement: sand: gravel for the concrete shall be 1:2:4, and the reinforcement bars that their diameter are 10mm, (approx. 300mm intervals) shall be placed.
- 2 The surface shall be finished with mortar. The corner edges shall be chamfered.
- 3 When the foundation is built on a concrete floor, rubble is not necessary. However, the surface of the section on which the foundation is built shall have rough finish.
- 4 A drain ditch shall be made around the foundation to thoroughly drain water from the equipment installation area.
- 5 When installing the equipment on a roof, the floor strength shall be checked, and water-proofing measures shall be taken.
- 6 Y ditch is not necessary for SHP models.

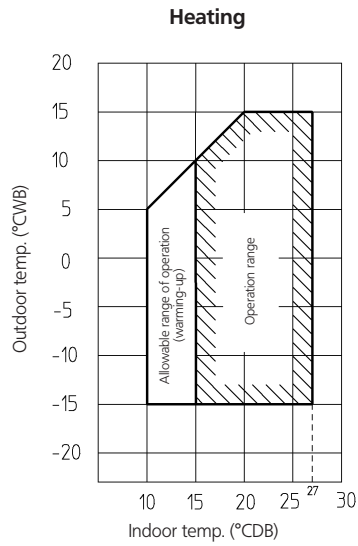
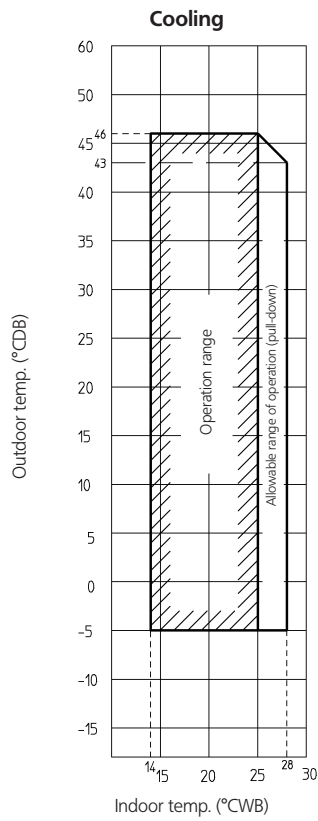
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# 11 Operation range

11

RZQ200-250C



4TW26566-1