

# 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				RZQS125C7V1B	RZQS140C7V1B	
For combination indoor units + outdoor units	Indoor Units			FCHQ125C7VEB	FCHQ140C7VEB	
Cooling capacity	Standard	kW		12.5	14.0	
Heating capacity	Standard	kW		14.0	16.0	
Power Input	Cooling	Standard	kW	3.88	4.98	
	Heating	Standard	kW	4.11	4.98	
For combination indoor units + outdoor units	EER	Nominal		3.22	2.81	
	COP	Nominal		3.41	3.21	
	Energy Label	Cooling			A	C
		Heating			B	C
	Annual energy consumption	kWh		1940	2490	
Indoor Units				FCQ125C7VEB	FCQ140C7VEB	
Cooling capacity	Standard	kW		12.5	14.0	
Heating capacity	Standard	kW		14.0	16.0	
Power Input	Cooling	Standard	kW	4.14	5.36	
	Heating	Standard	kW	4.52	5.69	
For combination indoor units + outdoor units	EER	Nominal		3.02	2.61	
	COP	Nominal		3.1	2.81	
	Energy Label	Cooling			B	D
		Heating				D
	Annual energy consumption	kWh		2070	2680	
Indoor Units				FBQ125B8V3B	FBQ140B8V3B	
Cooling capacity	Standard	kW		12.5	13.4	
Heating capacity	Standard	kW		14.0	15.5	
Power Input	Cooling	Standard	kW	4.40	4.77	
	Heating	Standard	kW	4.24	4.83	
For combination indoor units + outdoor units	EER	Nominal		2.84	2.81	
	COP	Nominal		3.30	3.21	
	Energy Label	Cooling				C
		Heating				C
	Annual energy consumption	kWh		2200	2385	
Indoor Units				FHQ125BVV1B		
Cooling capacity	Standard	kW		12.5		
Heating capacity	Standard	kW		14.0		
Power Input	Cooling	Standard	kW	4.58		
	Heating	Standard	kW	4.96		
For combination indoor units + outdoor units	EER	Nominal		2.73		
	COP	Nominal		2.82		
	Energy Label	Cooling			D	
		Heating			D	
	Annual energy consumption	kWh		2290		
Indoor Units				FDQ125B8V3B		
Cooling capacity	Standard	kW		12.5		
Heating capacity	Standard	kW		14.0		
Power Input	Cooling	Standard	kW	4.45		
	Heating	Standard	kW	4.08		

## 2 Specifications

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				RZQS125C7V1B	RZQS140C7V1B
For combination indoor units + outdoor units	EER	Nominal		2.81	
	COP	Nominal		3.43	
	Energy Label	Cooling		C	
		Heating		B	
Annual energy consumption		kWh	2225		

2-2 TECHNICAL SPECIFICATIONS				RZQS125C7V1B	RZQS140C7V1B	
Casing	Colour			Ivory White		
	Material			Painted galvanised steel		
Dimensions	Unit	Height	mm	1170	1170	
		Width	mm	900	900	
		Depth	mm	320	320	
	Packing	Height	mm	1349	1349	
		Width	mm	980	980	
		Depth	mm	420	420	
Weight	Unit		kg	103	103	
	Packed Unit		kg	114	114	
Heat Exchanger	Dimensions	Length	mm	857		
		Nr of Rows		2		
		Fin Pitch	mm	1.4		
		Nr of Passes		6		
		Face Area	m <sup>2</sup>	0.98		
		Nr of Stages		52		
	Tube type			Hi-XSS(8)		
	Fin	Type			WF fin	
Treatment			Anti-corrosion treatment (PE)			
Fan	Type			Direct Drive Propeller		
	Discharge direction			Horizontal		
	Quantity			2	2	
	Air Flow Rate (nominal at 230V)	Cooling	m <sup>3</sup> /min	100	97	
		Heating	m <sup>3</sup> /min	88	88	
	Motor	Quantity		2	2	
Model			Brushless DC Motor			
Motor	Speed (nominal)	Steps		8	8	
		Cooling	rpm	850	830	
		Heating	rpm	740	740	
Fan	Motor	Output	W	70	70	
Compressor	Quantity			1	1	
	Motor	Model			JT100G-VD	
		Model			Inverter	
		Type			Hermetically sealed scroll compressor	
		Motor Output	W	2200	2200	
	Crankcase Heater	W	33	33		
Operation Range	Cooling	Min	°CDB	-5	-5	
		Max	°CDB	46	46	
	Heating	Min	°CWB	-15	-15	
		Max	°CWB	15.5	15.5	
Sound Level (nominal)	Cooling	Sound Power	dBA	67	68	
		Sound Pressure	dBA	51	52	
	Heating	Sound Pressure	dBA	53	54	
Sound Level (Night quiet)	Sound Pressure		dBA	49	50	

## 2 Specifications

2-2 TECHNICAL SPECIFICATIONS			RZQS125C7V1B	RZQS140C7V1B	
Refrigerant	Type		R-410A		
	Charge	kg	3.7	3.7	
	Control		Expansion valve (electronic type)		
	Nr of Circuits		1	1	
Refrigerant Oil	Type		Daphne FVC68D		
	Charged Volume	l	1.0	1.0	
Piping connections	Liquid (OD)	Quantity		1	1
		Type		Flare connection	
		Diameter (OD)	mm	9.52	9.52
	Gas	Quantity		1	1
		Type		Flare connection	
		Diameter (OD)	mm	15.9	15.9
	Drain	Quantity		3	3
		Type		Hole	
		Diameter (OD)	mm	26	26
	Piping Length	Minimum	m	5	5
		Maximum	m	50	50
		Equivalent	m	95	95
		Chargeless	m	30	30
	Additional Refrigerant Charge		kg/m	see installation manual 4PW34874-1	
	Installation height difference	Maximum	m	30.0	30.0
Max. internunit level difference		m	0.5	0.5	
Heat Insulation		Both liquid and gas pipes			
Defrost Method			Pressure equalising		
Defrost Control			Sensor for outdoor heat exchanger temperature		
Capacity Control Method			Inverter controlled		
Safety Devices			High pressure switch		
			Fan motor thermal protector		
			Fuse		
Standard Accessories	Item		Tie-wraps		
	Quantity		2	2	
	Item		Installation manual		
Quantity		1	1		
Notes			Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 7.5m, level difference : 0m.		
			Nominal heating capacities are based on : indoor temperature : 20°CDB, outdoor temperature : 7°CDB, 6°CWB, equivalent refrigerant piping : 7.5m, level difference : 0m		

2-3 ELECTRICAL SPECIFICATIONS			RZQS125C7V1B	RZQS140C7V1B
Power Supply	Name		V1	
	Phase		1	1
	Frequency	Hz	50	50
	Voltage		230	230
	Voltage range	Minimum	V	-10%
Maximum		V	+10%	
Current	Recommended fuses	A	32	32
Wiring connections	For Power Supply	Remark	See installation manual 4PW34874-1	
	For connection with indoor	Remark	See installation manual 4PW34874-1	
Power Supply Intake			Outdoor unit only	
Notes			See separate drawings for electrical data	

### 3 Electrical data

#### RZQS125-140C

Unit combination		Power supply				Comp.		OFM		IFM				
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	TOCA	MFA	MSC	RLA	kW	FLA	kW	FLA		
FCQH125C7VEB	RZQS125C7V1B	50-220 50-230 50-240	Max. 50Hz 264V Min. 50Hz 198V	25.4	25.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.120	1.4		
FCQ125C7VEB	RZQS125C7V1B			25.0	25.0	32	23.4	23.4	0.07+0.07	0.3+0.3	0.120	1.0		
FCQ60C7VEBx2	RZQS125C7V1B			24.8	24.8	32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x2	0.4x2		
FCQ50C7VEBx3	RZQS125C7V1B			24.9	24.9	32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x3	0.3x3		
FCQ35C7VEBx4	RZQS125C7V1B			25.2	25.2	32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x4	0.3x4		
FFQ60BV1Bx2	RZQS125C7V1B			25.4	25.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.055x2	0.7x2		
FFQ50BV1Bx3	RZQS125C7V1B			26.1	26.1	32	23.4	23.4	0.07+0.07	0.3+0.3	0.055x3	0.7x3		
FFQ35BV1Bx4	RZQS125C7V1B			26.4	26.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.055x4	0.6x4		
FBQ125B7V3B	RZQS125C7V1B			25.4	25.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.225	1.4		
FBQ60B7V1x2	RZQS125C7V1B			25.8	25.8	32	23.4	23.4	0.07+0.07	0.3+0.3	0.125x2	0.9x2		
FBQ50B7V1x3	RZQS125C7V1B			26.1	26.1	32	23.4	23.4	0.07+0.07	0.3+0.3	0.085x3	0.7x3		
FBQ35B7V1x4	RZQS125C7V1B			26.0	26.0	32	23.4	23.4	0.07+0.07	0.3+0.3	0.065x4	0.5x4		
FHQ125BUV1B	RZQS125C7V1B			24.7	24.7	32	23.4	23.4	0.07+0.07	0.3+0.3	0.130	0.7		
FHQ60BUV1Bx2	RZQS125C7V1B			25.2	25.2	32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x2	0.6x2		
FHQ50BUV1Bx3	RZQS125C7V1B			25.8	25.8	32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x3	0.6x3		
FHQ35BUV1Bx4	RZQS125C7V1B			26.4	26.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x4	0.6x4		
FDQ125B7V3B	RZQS125C7V1B			28.2	28.2	32	23.4	23.4	0.07+0.07	0.3+0.3	0.500	4.2		
FCQH140C7VEB	RZQS140C7V1B			50-220 50-230 50-240	Max. 50Hz 264V Min. 50Hz 198V	25.4	25.4	32	23.4	23.4	0.07+0.07	0.3+0.3	0.120	1.4
FCQ140C7VEB	RZQS140C7V1B					25.0	25.0	32	23.4	23.4	0.07+0.07	0.3+0.3	0.120	1.0
FCQ71C7VEBx2	RZQS140C7V1B					25.0	25.0	32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x2	0.5x2
FCQ50C7VEBx3	RZQS140C7V1B	24.9	24.9			32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x3	0.3x3		
FCQ35C7VEBx4	RZQS140C7V1B	25.2	25.2			32	23.4	23.4	0.07+0.07	0.3+0.3	0.056x4	0.3x4		
FFQ50BV1Bx3	RZQS140C7V1B	26.1	26.1			32	23.4	23.4	0.07+0.07	0.3+0.3	0.055x3	0.7x3		
FFQ35BV1Bx4	RZQS140C7V1B	26.4	26.4			32	23.4	23.4	0.07+0.07	0.3+0.3	0.055x4	0.6x4		
FBQ71B7V3Bx2	RZQS140C7V1B	25.8	25.8			32	23.4	23.4	0.07+0.07	0.3+0.3	0.125x2	0.9x2		
FBQ50B7V1x3	RZQS140C7V1B	26.1	26.1			32	23.4	23.4	0.07+0.07	0.3+0.3	0.085x3	0.7x3		
FBQ35B7V1x4	RZQS140C7V1B	26.0	26.0			32	23.4	23.4	0.07+0.07	0.3+0.3	0.065x4	0.5x4		
FHQ71BUV1Bx2	RZQS140C7V1B	25.2	25.2			32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x2	0.6x2		
FHQ50BUV1Bx3	RZQS140C7V1B	25.8	25.8			32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x3	0.6x3		
FHQ35BUV1Bx4	RZQS140C7V1B	26.4	26.4			32	23.4	23.4	0.07+0.07	0.3+0.3	0.062x4	0.6x4		
FAQ71BUV1Bx2	RZQS140C7V1B	24.6	24.6			32	23.4	23.4	0.07+0.07	0.3+0.3	0.043x2	0.3x2		

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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 - 230V  
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 RZQS100-140C7V1B

Name of option		Kit name	
		RZQS125C7V1B	RZQS140C7V1B
Central drain pan kit		KKPJ5F180	
Refrigerant branch piping	Twin	KHRQ22M20TA	
	Triple	KHRQ127H	
	Double twin	KHRQ22M20TA (3x)	
Demand adaptor		KRP58M51	
3TW26739-1E			

## 5 Capacity tables

### 5 - 1 Combination table

#### RZQS 125-140C Possible combinations and standard capacity for twin, triple and double twin operation

Outdoor models	Possible indoor combination		
	Simultaneous operation		
	Twin	Triple	Double twin
RZQS125C7V1B	60-60 (KHRQ22M20TA)	50-50-50 (KHRQ127H)	35-35-35-35 (3x KHRQ22M20TA)
RZQS140C7V1B	71-71 (KHRQ22M20TA)	50-50-50 (KHRQ127H)	35-35-35-35 (3x KHRQ22M20TA)

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#### NOTES

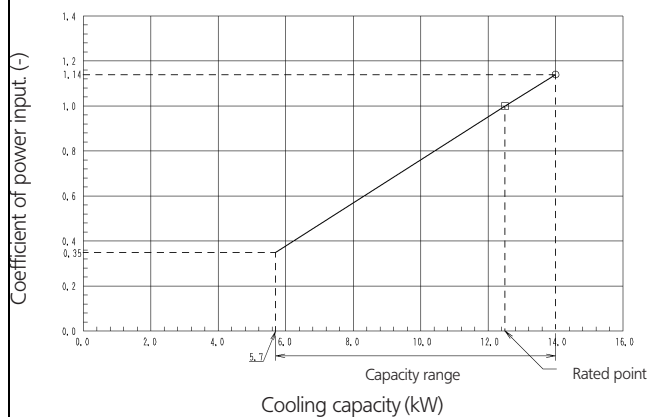
- 1 Possible indoor units: FCQH71C, FCQ35-71C, FFQ35-60BV, FHQ35-71B, FBQ35-71B, FAQ71B
- 2 Individual indoor capacities are not given because the combinations are for simultaneous operation (=indoor units installed in same room).
- 3 When different indoor models are used in combination, designate the infrared remote controller that is equipped with the most functions as the main unit. In note 1 are the indoor units mentioned in order of the possible function (most functions are on FCQ, less functions are on FAQ).
- 4 Between brackets are the required Refnet kits mentioned, that are necessary to install the combination.

# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQS125C (Pair + twin/triple/double twin)

#### Cooling



#### Cooling capacity

Indoor		Outdoor temp. (°CDB)											
EWB (°C)	EDB (°C)	25			30			35			40		
		TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	11.4	7.73	0.76	11.4	7.81	0.89	11.7	8.14	0.99	11.3	7.90	1.09
18.0	25	13.1	8.48	0.83	12.7	8.32	0.91	12.2	8.12	1.00	11.8	7.88	1.10
19.0	27	13.3	8.45	0.84	12.9	8.29	0.91	12.5	8.09	1.00	12.0	7.86	1.10
19.5	27	13.5	8.44	0.84	13.1	8.28	0.91	12.6	8.08	1.00	12.1	7.85	1.10
22.0	30	14.2	8.33	0.85	13.8	8.18	0.92	13.3	7.99	1.01	12.8	7.76	1.11
24.0	32	14.7	8.21	0.85	14.3	8.06	0.93	13.8	7.88	1.02	13.3	7.67	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 ○ show the max. at standard conditions.  
On the figure the mark □ show rated capacity and rated coefficient of power input.  
However the max. capacity is not guaranteed, except at standard condition.
- 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 : 5.0 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

Model	FCQH125C	FCQ125C	FBQ125	FHQ125	FDQ125
AFR	32.5	27.5	35	30	45
(BF)	(0.19)	(0.19)	(0.14)	(0.13)	(0.25)

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
AFR	12.5x3	12x3	14x3	13x3
(BF)	(0.21x3)	(0.16x3)	(0.15x3)	(0.1x3)

- Rated power input of each model is tabulated below.

(Pair)

Model	FCQH125C	FCQ125C	FBQ125	FHQ125	FDQ125
Cooling	3.88	4.14	4.40	4.58	4.45
Heating	4.11	4.52	4.24	4.96	4.08

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
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

(Twin)

Model	FCQ60Cx2	FFQ60x2	FBQ60x2	FHQ60x2
AFR	13.5x2	15x2	19x2	17x2
(BF)	(0.21x2)	(0.11x2)	(0.11x2)	(0.2x2)

(Double twin)

Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
AFR	10.5x4	10x4	11.5x4	13x4
(BF)	(0.28x4)	(0.25x4)	(0.15x4)	(0.2x4)

(Twin)

Model	FCQ60Cx2	FFQ60x2	FBQ60x2	FHQ60x2
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

(Double twin)

Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

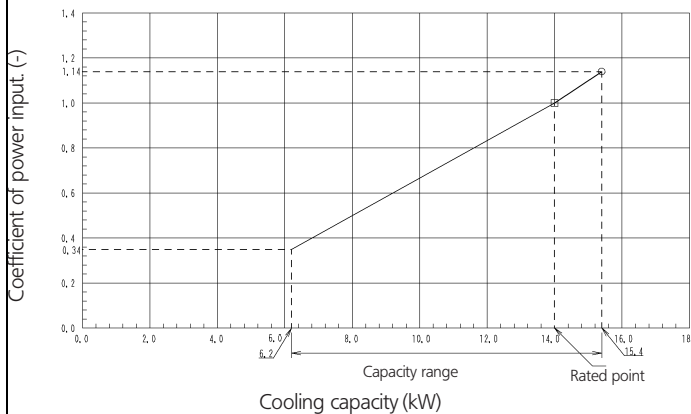


# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQS140C (Pair + twin/triple/double twin)

#### Cooling



#### Cooling capacity

Indoor		Outdoor temp. (°CDB)											
EWB (°C)	EDB (°C)	25			30			35			40		
		TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	12.8	8.66	0.76	12.7	8.74	0.89	13.1	9.12	0.99	12.6	8.84	1.09
18.0	25	14.6	9.50	0.83	14.2	9.31	0.91	13.7	9.09	1.00	13.2	8.82	1.10
19.0	27	15.0	9.47	0.84	14.5	9.29	0.91	14.0	9.07	1.00	13.4	8.80	1.10
19.5	27	15.1	9.45	0.84	14.7	9.27	0.91	14.1	9.05	1.00	13.6	8.79	1.10
22.0	30	15.9	9.33	0.85	15.4	9.16	0.92	14.9	8.95	1.01	14.3	8.69	1.11
24.0	32	16.5	9.20	0.85	16.0	9.03	0.93	15.5	8.83	1.02	14.9	8.59	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 ○ show the max. at standard conditions.  
On the figure the mark □ show rated capacity and rated coefficient of power input.  
However the max. capacity is not guaranteed, except at standard condition.
- 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 : 5.0 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

Model	FCQH140C	FCQ140C
AFR	32.5	27.5
(BF)	(0.20)	(0.22)

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
AFR	12.5x3	12x3	14x3	13x3
(BF)	(0.21x3)	(0.16x3)	(0.15x3)	(0.1x3)

- Rated power input of each model is tabulated below.

(Pair)

Model	FCQH140C	FCQ140C
Cooling	4.98	5.36
Heating	4.98	5.69

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
Cooling	5.36	5.12	5.21	5.25
Heating	5.55	5.70	5.64	5.70

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
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

(Twin)

Model	FCQ71Cx2	FBQ71x2	FHQ71x2	FAQ71x2
AFR	15.5x2	19x2	17x2	19x2
(BF)	(0.19x2)	(0.11x2)	(0.1x2)	(0.08x2)

(Double twin)

Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
AFR	10.5x4	10x4	11.5x4	13x4
(BF)	(0.28x4)	(0.25x4)	(0.15x4)	(0.2x4)

(Twin)

Model	FCQ71Cx2	FBQ71x2	FHQ71x2	FAQ71x2
Cooling	5.36	5.21	5.25	5.25
Heating	5.55	5.64	5.70	5.63

(Double twin)

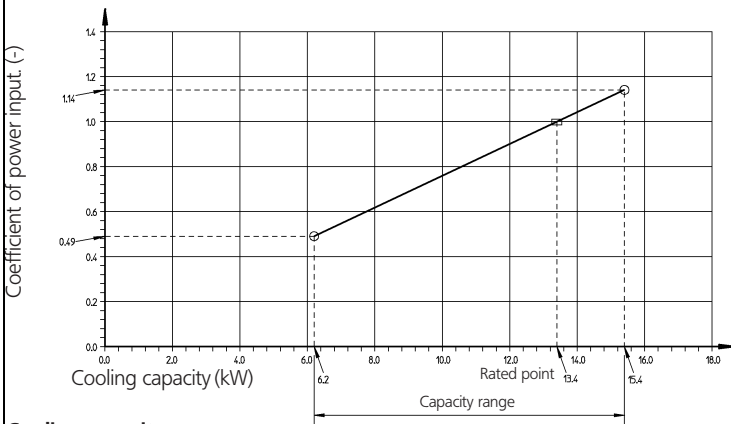
Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
Cooling	5.36	5.12	5.21	5.25
Heating	5.55	5.70	5.64	5.70

# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQS140C (Pair)

#### Cooling



#### Cooling capacity

Indoor		Outdoor temp. (°CDB)											
EWB (°C)	EDB (°C)	25			30			35			40		
		TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	12.3	8.29	0.76	12.2	8.37	0.89	12.5	8.73	0.99	12.1	8.46	1.09
18.0	25	14.0	9.09	0.83	13.6	8.91	0.91	13.1	8.70	1.00	12.6	8.44	1.10
19.0	27	14.4	9.06	0.84	13.9	8.89	0.91	13.4	8.68	1.00	12.8	8.42	1.10
19.5	27	14.5	9.05	0.84	14.1	8.87	0.91	13.5	8.66	1.00	13.0	8.41	1.10
22.0	30	15.2	8.93	0.85	14.7	8.77	0.92	14.3	8.57	1.01	13.7	8.32	1.11
24.0	32	15.8	8.81	0.85	15.3	8.64	0.93	14.8	8.45	1.02	14.3	8.22	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 ○ show the max. at standard conditions.  
On the figure the mark □ show rated capacity and rated coefficient of power input.  
However the max. capacity is not guaranteed, except at standard condition.
- 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  
 $SHC^* = 0.02 \times AFR (m^3/min.) \times (1-BF) \times (DB^* - EDB)$   
 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 : 7.5 m  
 Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

	FBQ140
AFR	35
(BF)	(0.14)

- Rated power input of each model is tabulated below.

(Pair)

Outdoor	RZQS140C7
Indoor	FBQ140B8
Cooling	4.97kW
Heating	4.99kW

#### SYMBOLS

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

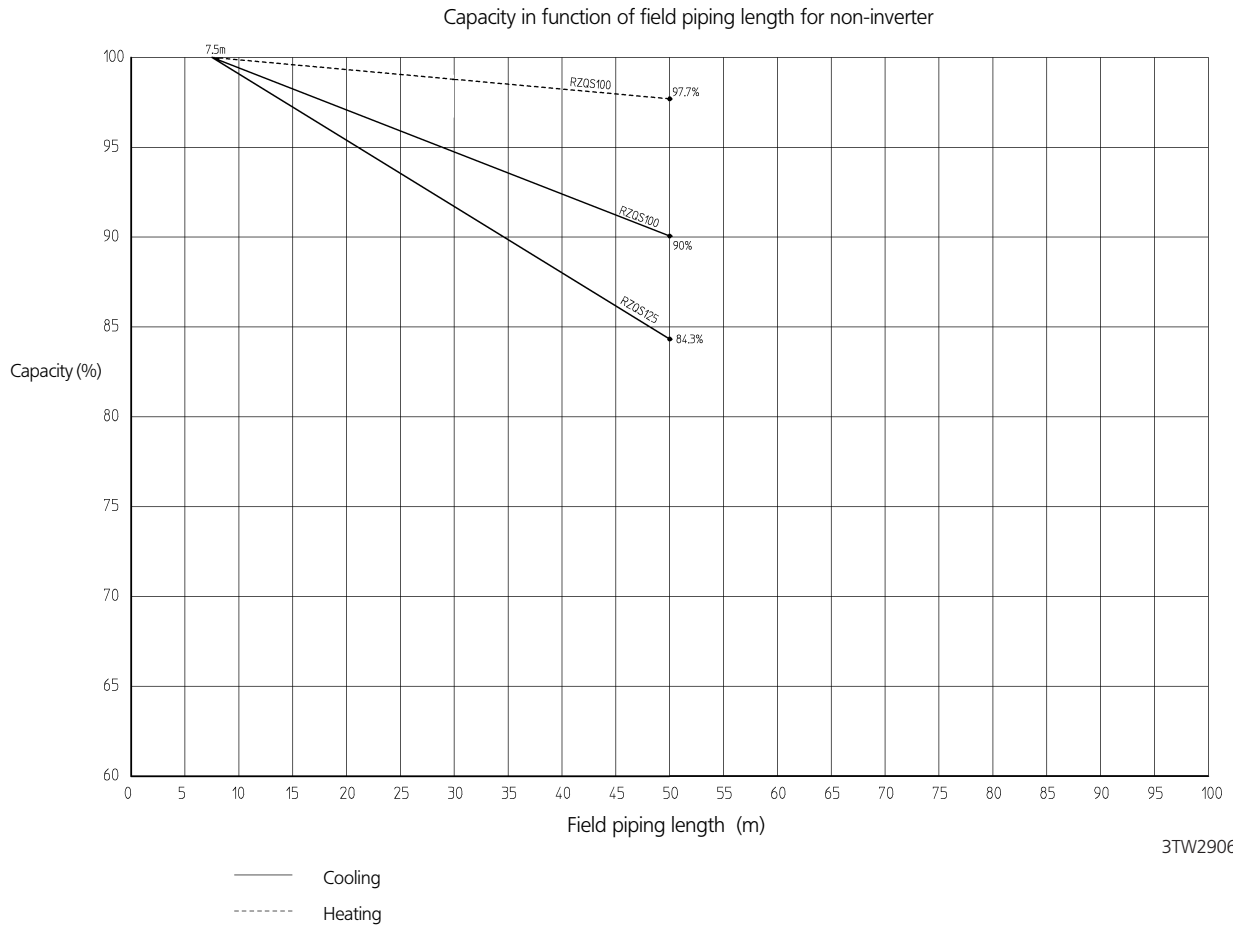
#### Caution:

TC and SHC are shown by kW

# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQS125-140C

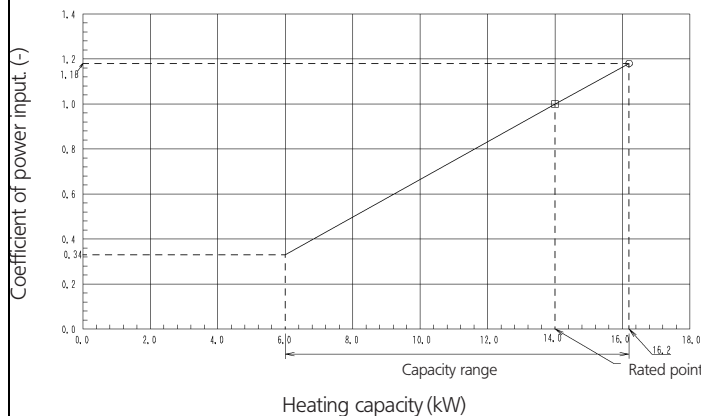


# 5 Capacity tables

## 5 - 3 Heating capacity tables

### RZQS125C (Pair + twin/triple/double twin)

#### Heating



#### Heating capacity

Indoor EDB (°C)	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 (-)
16.0	8.83	1.05	9.76	1.11	10.7	1.16	11.6	1.22	14.0	0.92	15.1	0.97
18.0	8.82	1.10	9.74	1.15	10.7	1.21	11.6	1.27	14.0	0.96	15.1	1.01
20.0	8.81	1.14	9.73	1.20	10.7	1.26	11.6	1.32	14.0	1.00	15.1	1.05
21.0	8.81	1.16	9.73	1.22	10.6	1.28	11.6	1.34	14.0	1.02	15.1	1.07
22.0	8.80	1.18	9.72	1.24	10.6	1.31	11.6	1.37	14.0	1.04	15.1	1.09
24.0	8.79	1.22	9.71	1.29	10.6	1.35	11.5	1.42	14.0	1.08	15.0	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 the max. capacity is not guaranteed, except at standard condition.
- 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 : 5.0 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

Model	FCQH125C	FCQ125C	FBQ125	FHQ125	FDQ125
AFR	32.5	27.5	35	30	45
(BF)	(0.19)	(0.19)	(0.14)	(0.13)	(0.25)

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
AFR	12.5x3	12x3	14x3	13x3
(BF)	(0.21x3)	(0.16x3)	(0.15x3)	(0.1x3)

- Rated power input of each model is tabulated below.

(Pair)

Model	FCQH125C	FCQ125C	FBQ125	FHQ125	FDQ125
Cooling	3.88	4.14	4.40	4.58	4.45
Heating	4.11	4.52	4.24	4.96	4.08

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
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

(Twin)

Model	FCQ60Cx2	FFQ60x2	FBQ60x2	FHQ60x2
AFR	13.5x2	15x2	19x2	17x2
(BF)	(0.21x2)	(0.11x2)	(0.11x2)	(0.2x2)

(Double twin)

Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
AFR	10.5x4	10x4	11.5x4	13x4
(BF)	(0.28x4)	(0.25x4)	(0.15x4)	(0.2x4)

(Twin)

Model	FCQ60Cx2	FFQ60x2	FBQ60x2	FHQ60x2
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

(Double twin)

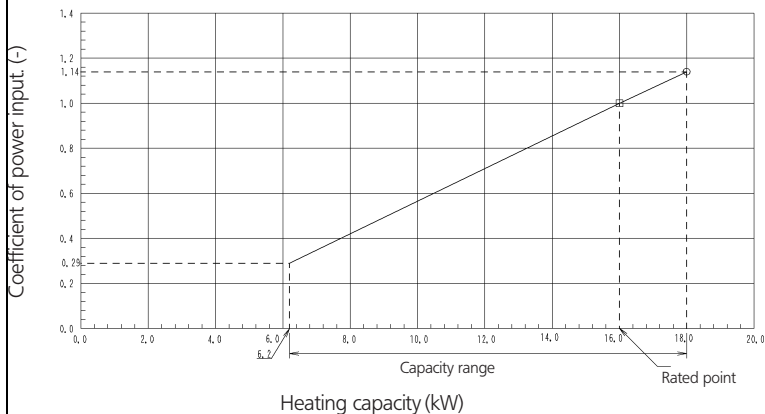
Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
Cooling	4.36	4.41	4.48	4.76
Heating	4.76	4.42	4.42	4.92

# 5 Capacity tables

## 5 - 3 Heating capacity tables

### RZQS140C (Pair + twin/triple/double twin)

#### Heating



#### Heating capacity

EDB (°C)	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 (-)
16.0	9.82	1.05	10.8	1.11	11.9	1.16	12.9	1.22	16.0	0.92	17.3	0.97
18.0	9.80	1.10	10.8	1.15	11.8	1.21	12.9	1.27	16.0	0.96	17.2	1.01
20.0	9.79	1.14	10.8	1.20	11.8	1.26	12.9	1.32	16.0	1.00	17.2	1.05
21.0	9.79	1.16	10.8	1.22	11.8	1.28	12.8	1.34	16.0	1.02	17.2	1.07
22.0	9.78	1.18	10.8	1.24	11.8	1.31	12.8	1.37	16.0	1.04	17.2	1.09
24.0	9.77	1.22	10.8	1.29	11.8	1.35	12.8	1.42	16.0	1.08	17.2	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 the max. capacity is not guaranteed, except at standard condition.
- 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 : 5.0 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

Model	FCQH140C	FCQ140C
AFR	32.5	27.5
(BF)	(0.20)	(0.22)

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
AFR	12.5x3	12x3	14x3	13x3
(BF)	(0.21x3)	(0.16x3)	(0.15x3)	(0.1x3)

- Rated power input of each model is tabulated below.

(Pair)

Model	FCQH140C	FCQ140C
Cooling	4.98	5.36
Heating	4.98	5.69

(Triple)

Model	FCQ50Cx3	FFQ50x3	FBQ50x3	FHQ50x3
Cooling	5.36	5.12	5.21	5.25
Heating	5.55	5.70	5.64	5.70

#### SYMBOLS

AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
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

(Twin)

Model	FCQ71Cx2	FBQ71x2	FHQ71x2	FAQ71x2
AFR	15.5x2	19x2	17x2	19x2
(BF)	(0.19x2)	(0.11x2)	(0.1x2)	(0.08x2)

(Double twin)

Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
AFR	10.5x4	10x4	11.5x4	13x4
(BF)	(0.28x4)	(0.25x4)	(0.15x4)	(0.2x4)

(Twin)

Model	FCQ71Cx2	FBQ71x2	FHQ71x2	FAQ71x2
Cooling	5.36	5.21	5.25	5.25
Heating	5.55	5.64	5.70	5.63

(Double twin)

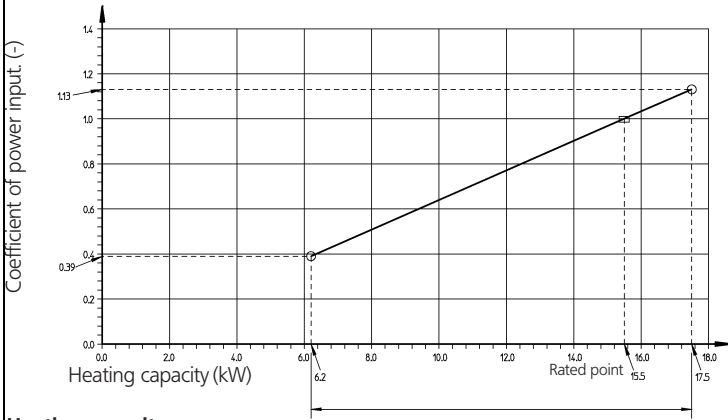
Model	FCQ35Cx4	FFQ35x4	FBQ35x4	FHQ35x4
Cooling	5.36	5.12	5.21	5.25
Heating	5.55	5.70	5.64	5.70

# 5 Capacity tables

## 5 - 3 Heating capacity tables

### RZQS140C (Pair)

#### Heating



#### Heating capacity

Indoor EDB (°C)	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 (-)
16.0	9.51	1.05	10.5	1.11	11.5	1.16	12.5	1.22	15.5	0.92	16.8	0.97
18.0	9.49	1.10	10.5	1.15	11.4	1.21	12.5	1.27	15.5	0.96	16.7	1.01
20.0	9.48	1.14	10.5	1.20	11.4	1.26	12.5	1.32	15.5	1.00	16.7	1.05
21.0	9.48	1.16	10.5	1.22	11.4	1.28	12.4	1.34	15.5	1.02	16.7	1.07
22.0	9.47	1.18	10.5	1.24	11.4	1.31	12.4	1.37	15.5	1.04	16.7	1.09
24.0	9.46	1.22	10.5	1.29	11.4	1.35	12.4	1.42	15.5	1.08	16.7	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 the max. capacity is not guaranteed, except at standard condition.
- 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 : 7.5 m  
Level difference : 0 m
- Coefficient of power input is the percentage when the rated valve is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and BF are tabulated below.

(Pair)

	FBQ140
AFR	35
BF	(0.14)

- Rated power input of each model is tabulated below.

(Pair)

Outdoor	RZQS140C7
Indoor	FBQ140B8
Cooling	4.97kW
Heating	4.99kW

#### SYMBOLS

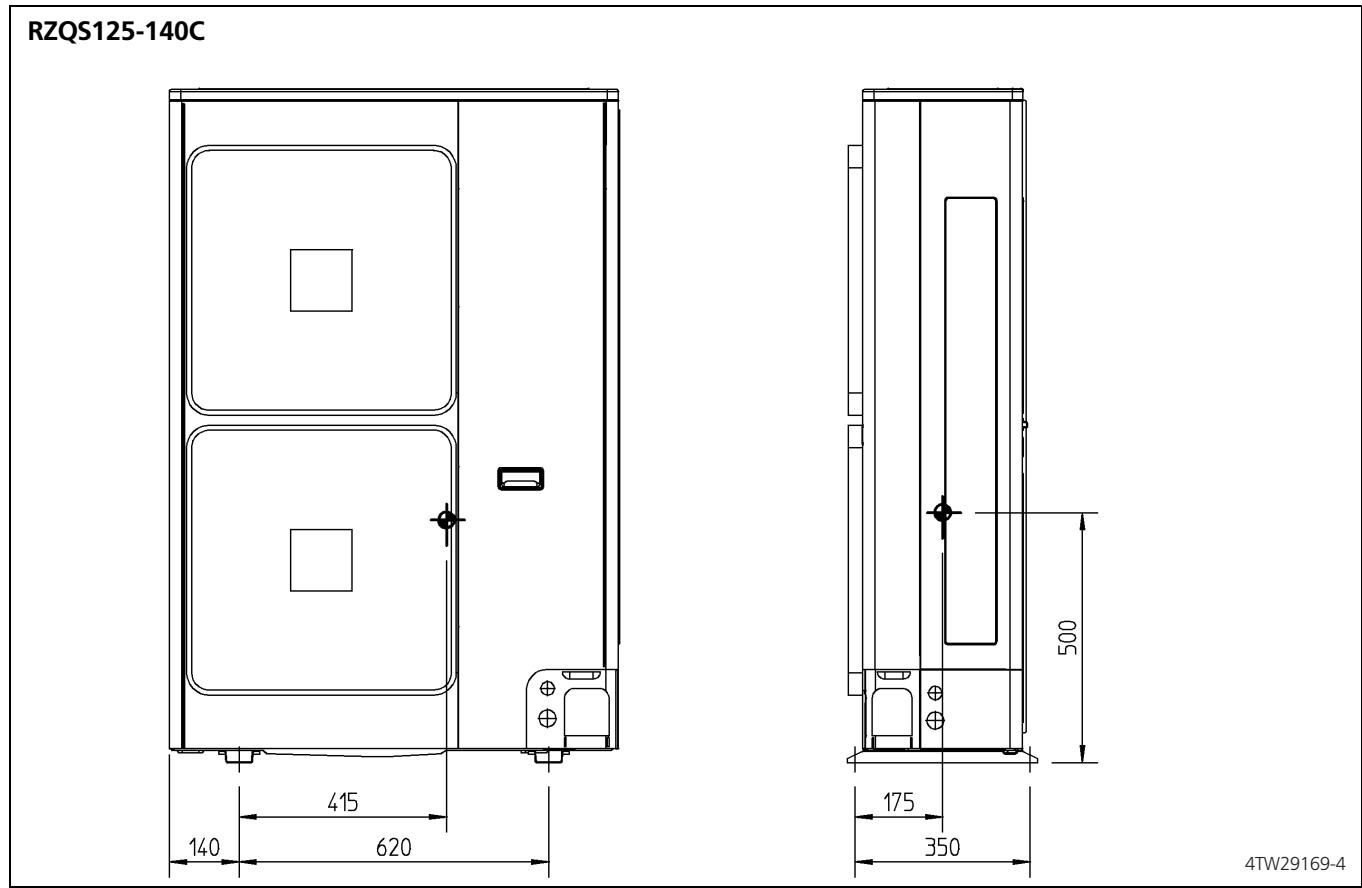
AFR:	Air flow rate	(m <sup>3</sup> /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total cooling/heating capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)
	(comp.+indoor+outdoor fan motor)	
CPI:	Coefficient of power input.	(-)

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



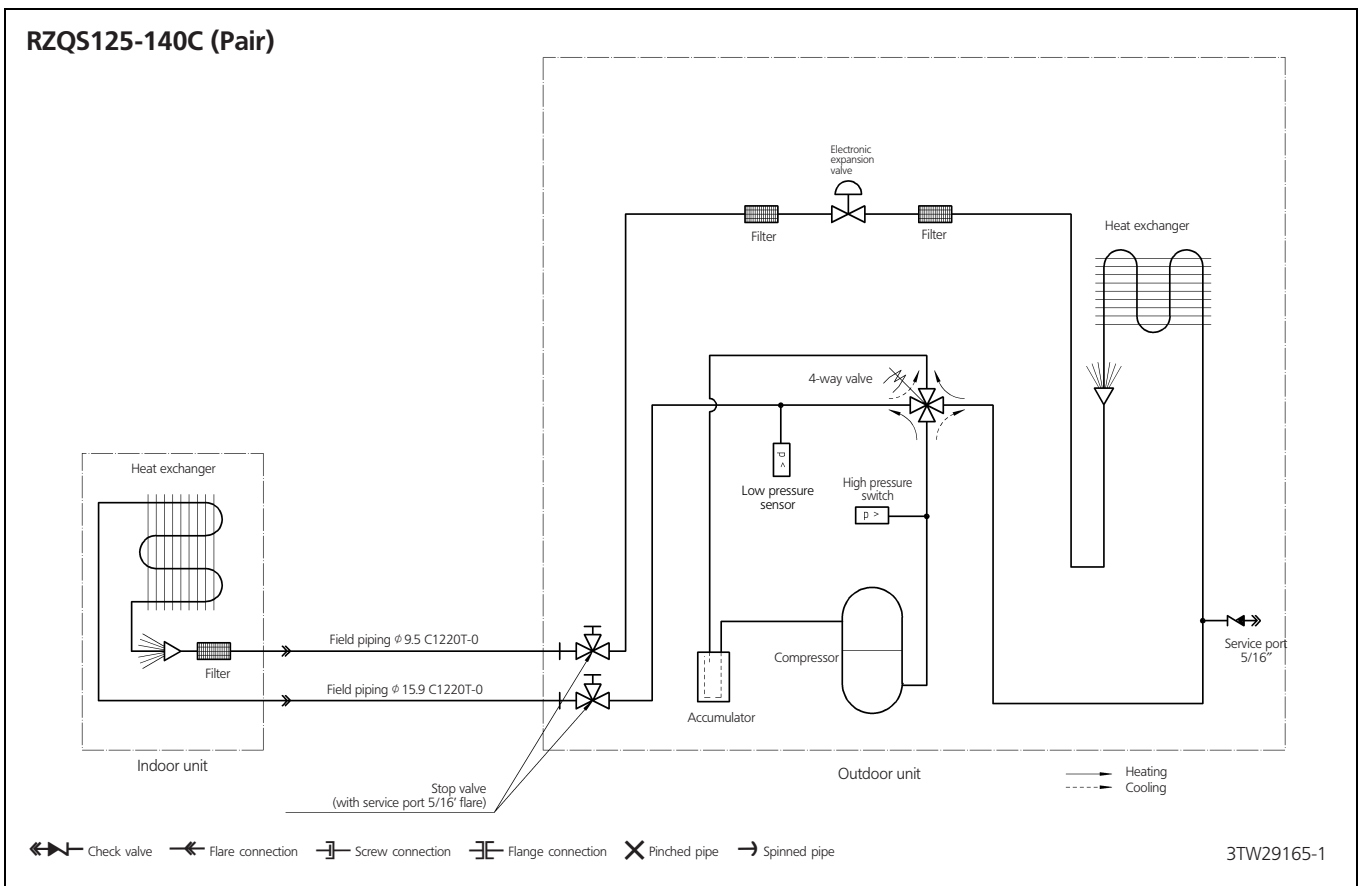
## 6 Dimensional drawing & centre of gravity

### 6 - 2 Centre of gravity



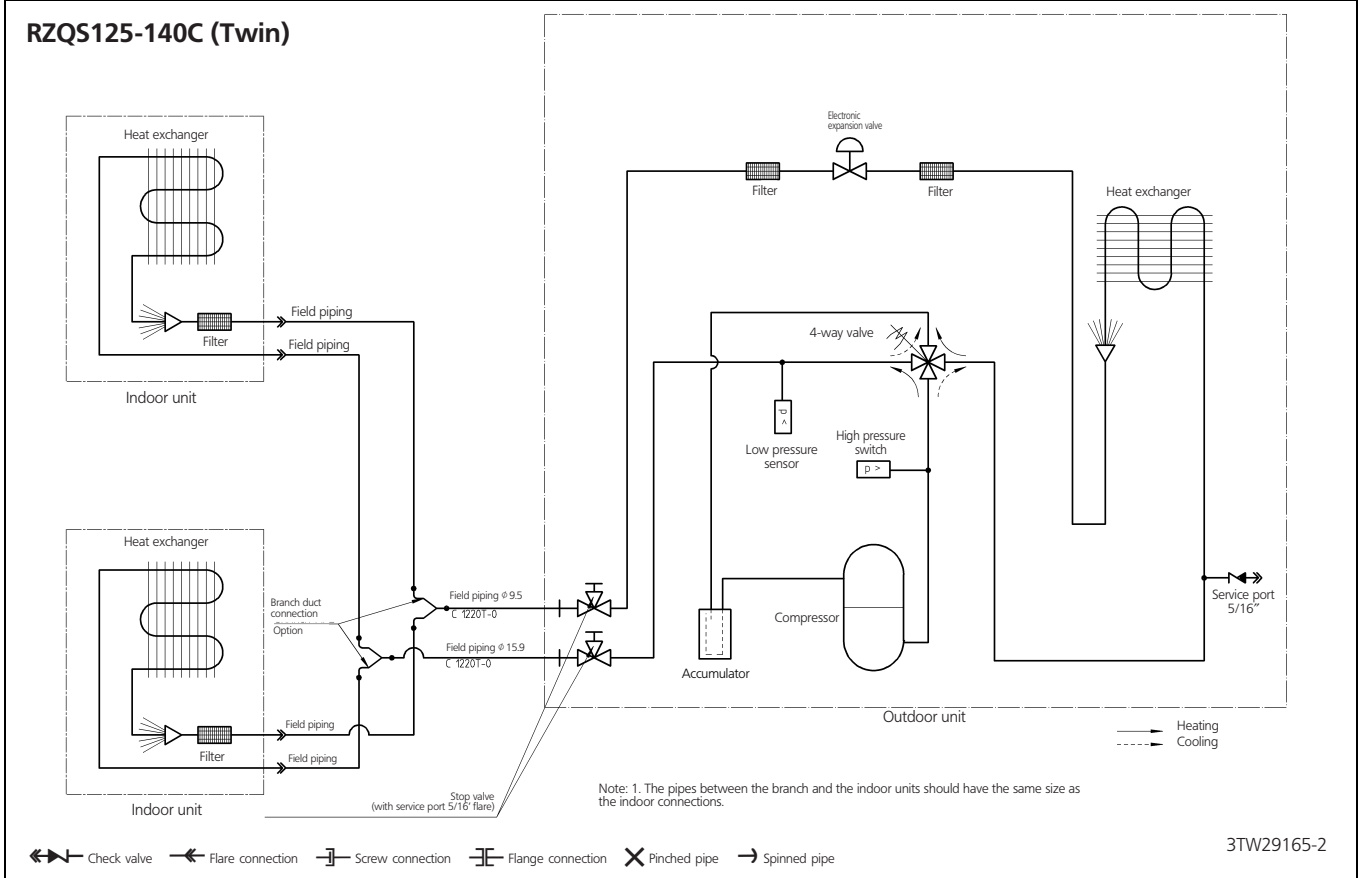


# 7 Piping diagram

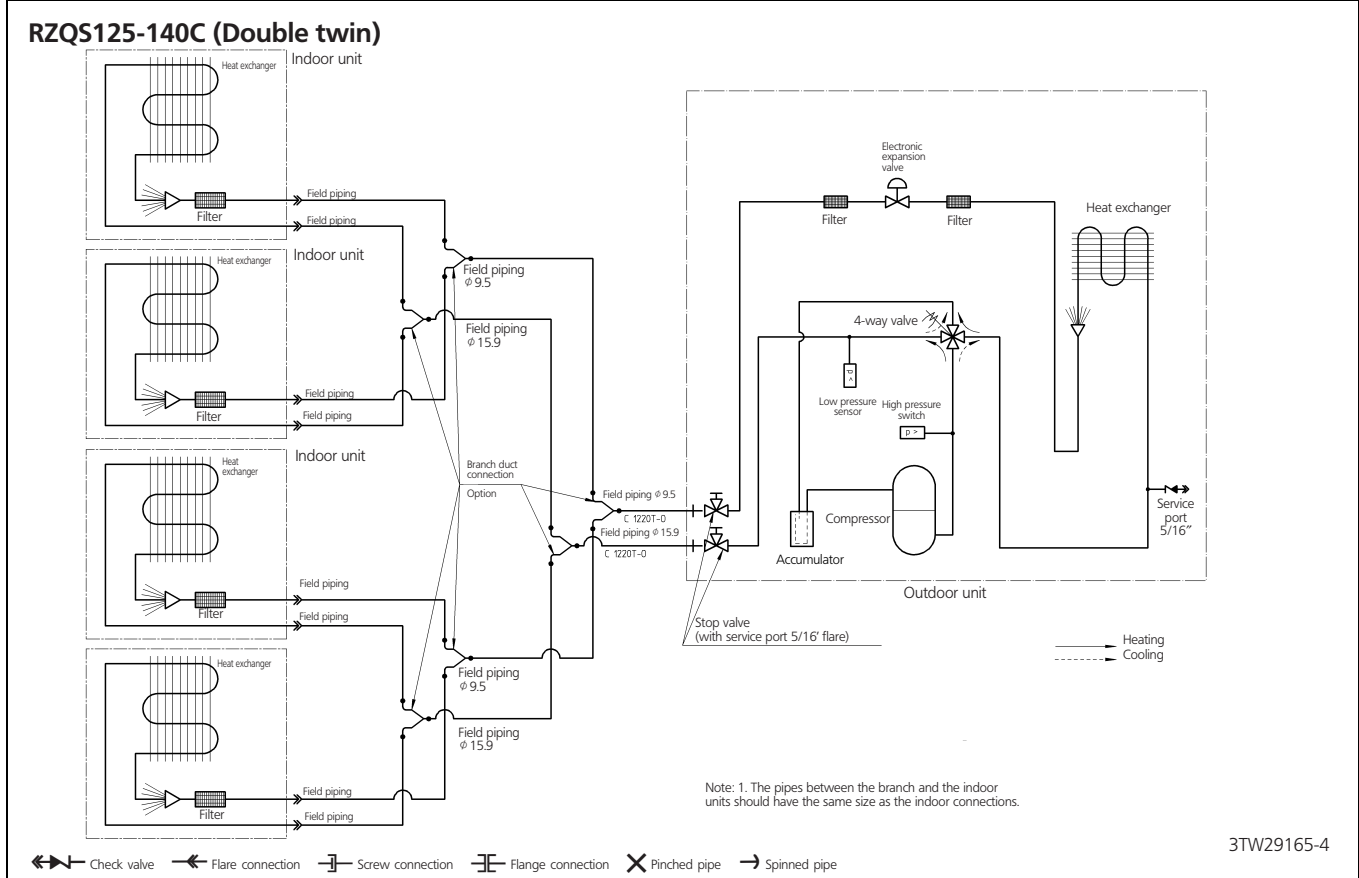
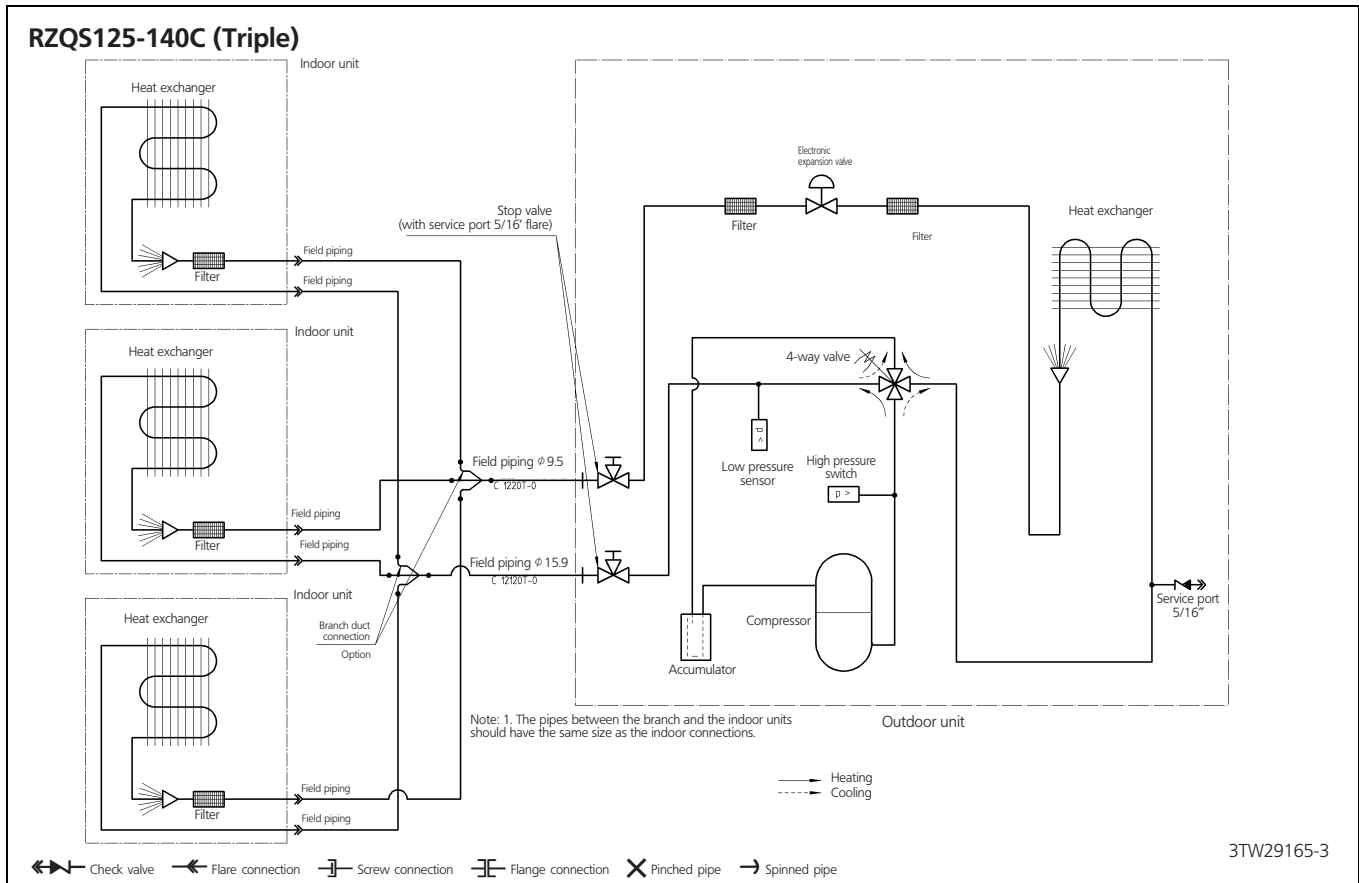


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# 7 Piping diagram

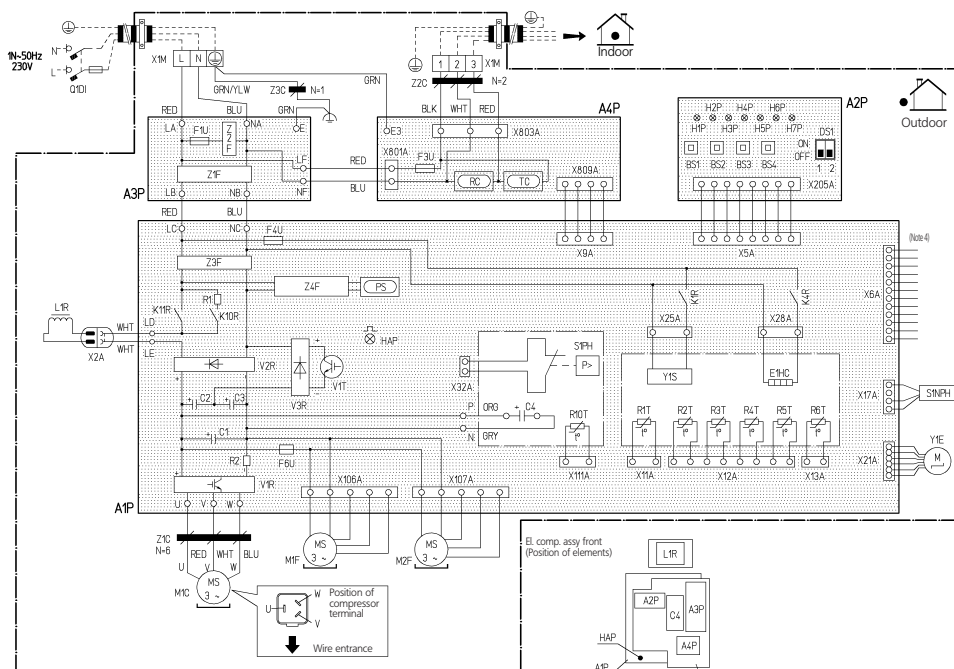


# 8 Wiring diagram

## 8 - 1 Wiring diagram

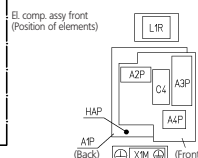
### RZQS125-140C

- A1P : Printed circuit board (Main)
- A2P : Printed circuit board (INV.)
- A3P : Printed circuit board (Noise filter)
- A4P : Printed circuit board (Noise filter)
- B51-B54 : Push button switch
- C1-C4 : Capacitor
- DS1 : Dip switch
- E1HC : Crankcase heater
- F1UF3U,F4U : Fuse (T 6.3A/250V)
- F6U : Fuse (T 5.0A/250V)
- F6U : Light emitting diode (service monitor orange)
- H1P-H7P : Prepare test ----- Flickering
- [H2P] : Malfunction detection--- Light up
- HAP : Light emitting diode (service monitor green)
- (A1P)
- K1R : Magnetic relay (Y1S)
- K4R : Magnetic relay (E1HC)
- K10R : Magnetic relay
- K11R : Magnetic relay
- L1R : Reactor
- M1C : Motor (compressor)
- M1F : Motor (fan) (upper)
- M2F : Motor (fan) (lower)
- PS : Switching power supply
- Q1DI : Field earth leak detector (30mA)
- R1 : Resistor
- R2 : Resistor
- R1T : Thermistor (Air)
- R2T : Thermistor (Discharge)
- R3T : Thermistor (Suction)
- R4T : Thermistor (Heat exchanger)
- R5T : Thermistor (heat exchanger middle)
- R6T : Thermistor (Liquid)
- RC : Signal receiver circuit
- R10T : Thermistor (fin)
- S1NPH : Pressure sensor(High)
- S1PH : Pressure switch (High)
- TC : Signal transmission circuit
- V1R : Power module
- V2R,V3R : Diode module
- V1T : IGBT
- X1M : Terminal strip (Power supply)
- Y1E : Electronic expansion valve
- Y1S : Solenoid valve (4 way valve)
- Z1C-Z3C : Noise filter (fermite core)
- Z1F-Z4F : Noise filter



Notes:

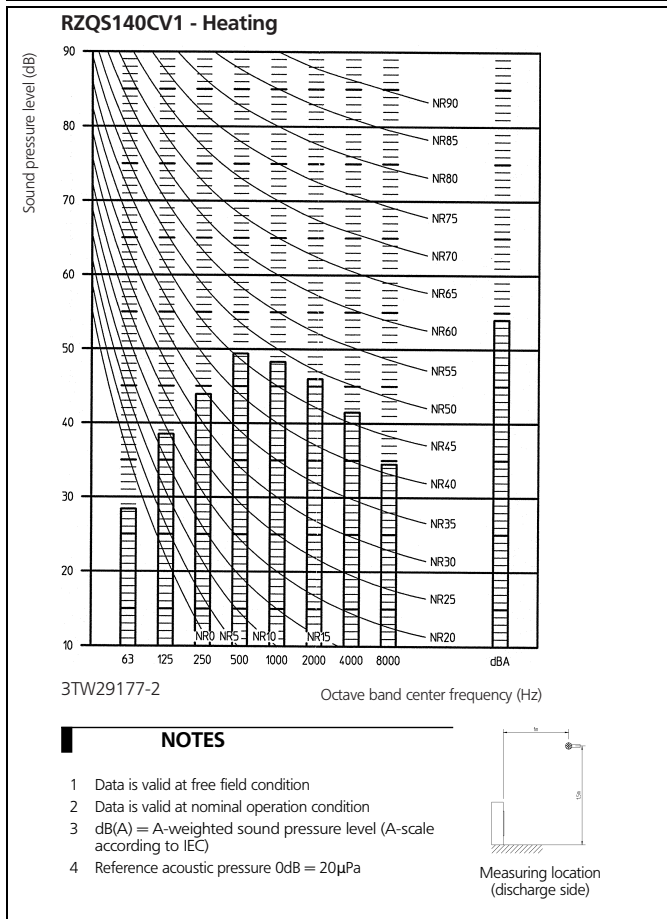
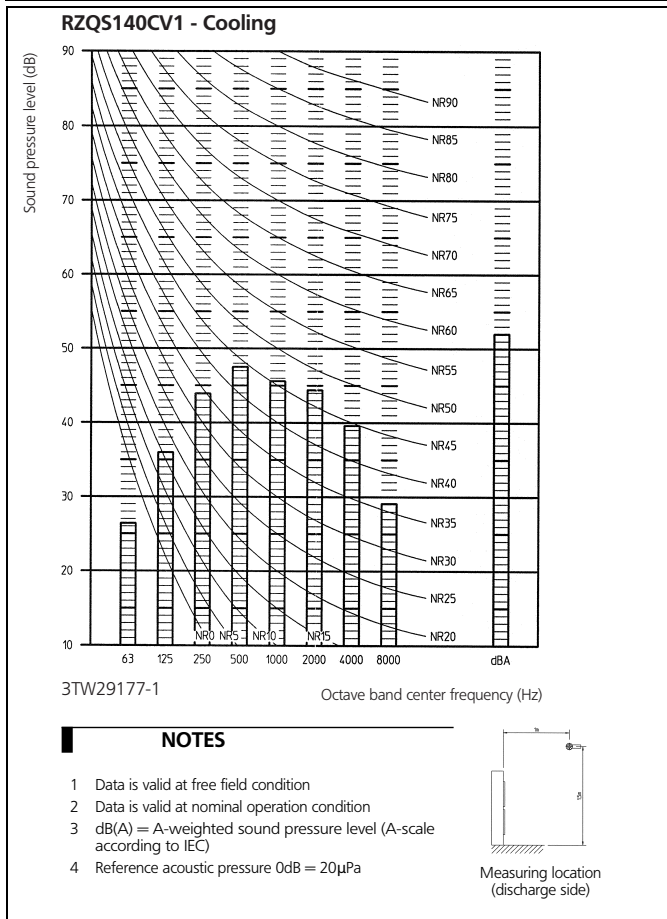
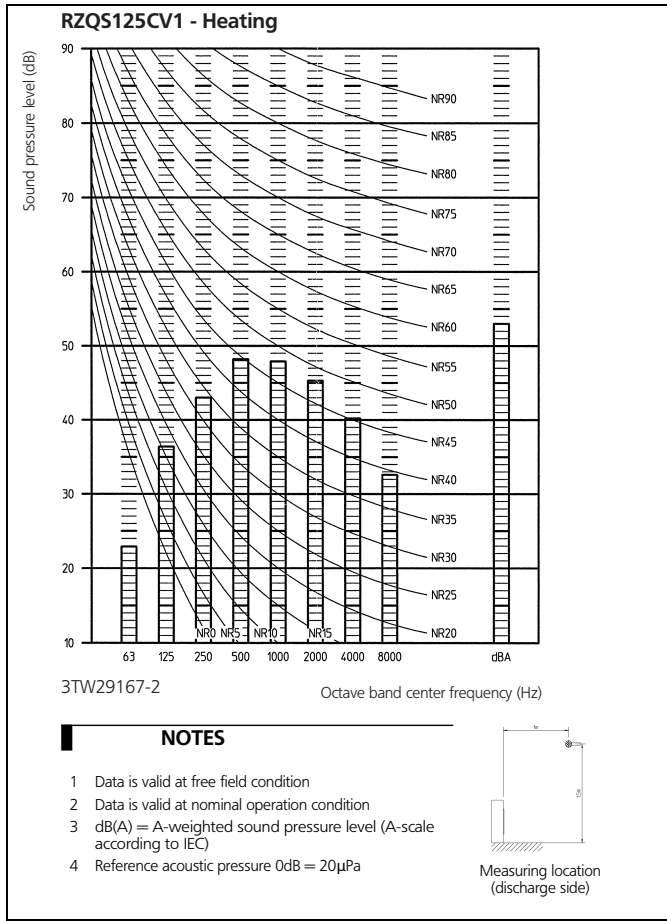
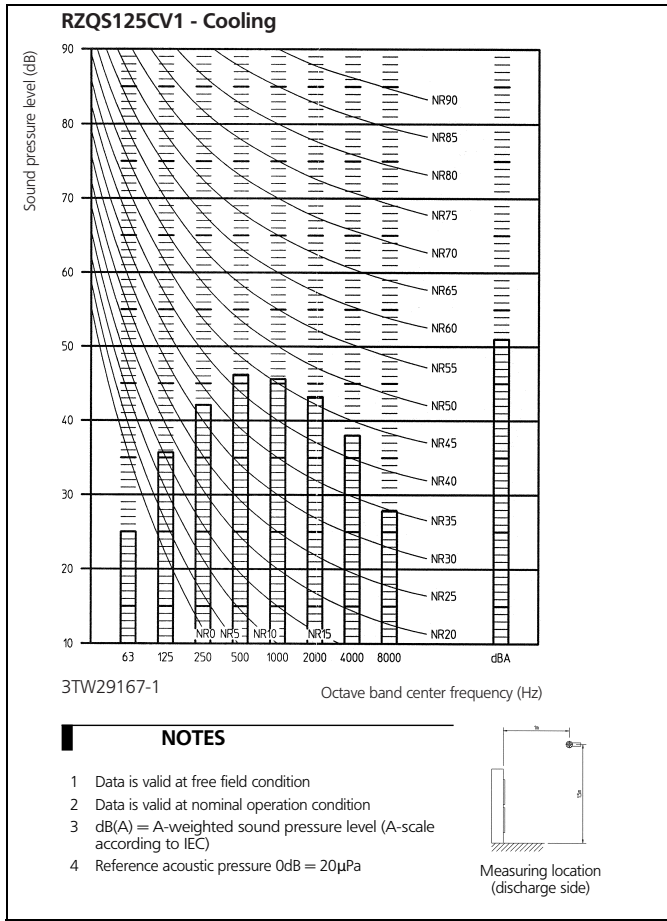
1. This wiring diagram only applies to the outdoor unit
2. L: Live; N: Neutral; Field wiring
3. Terminal strip Connector Connection
4. Protective earth (screw) Relay connector
5. Noiseless earth Terminal
6. Refer to the optional manual, for connection wiring to X6A.
7. Do not operate the unit by short-circuiting protection device S1PH.
8. Colours: WHT: White / RED: Red / BLU: Blue / BRN: Brown / GRN: Green / YLW: Yellow / ORG: Orange / BLK: Black.
9. Confirm the method of setting the selector switches (DS1) by service manual. When the unit is shipped by factory all switches are set to be off.



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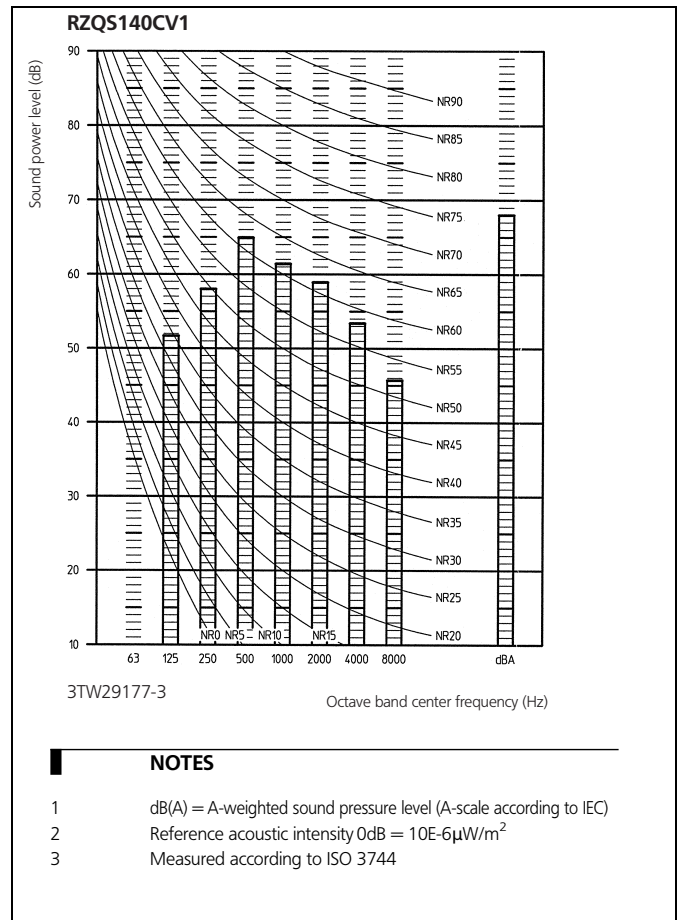
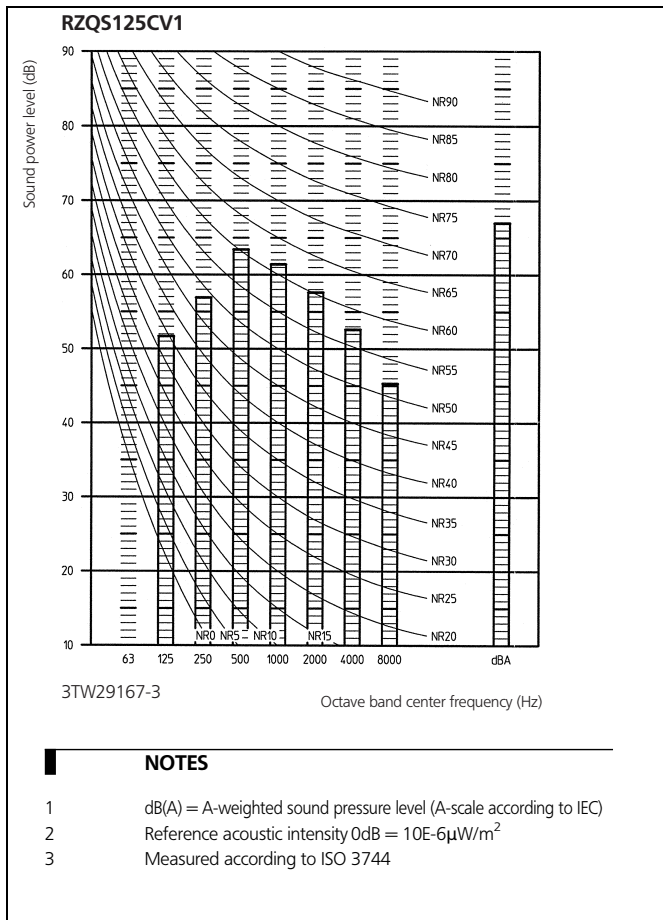
# 9 Sound data

## 9 - 1 Sound pressure spectrum



## 9 Sound data

### 9 - 2 Sound power spectrum

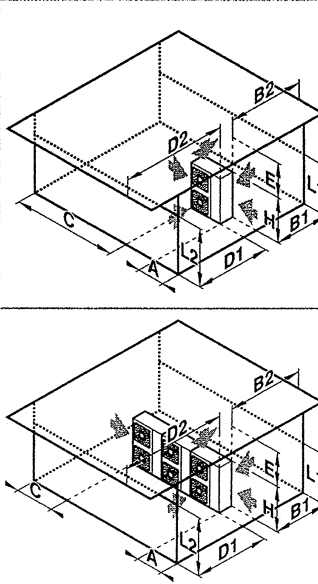


# 10 Installation

## 10 - 1 Installation method

### RZQS125~140C

#### A. Non stacked installation




					A	B1	B2	C	D1	D2	E	L1/L2
✓	✓	✓	✓	✓	≥100	≥50(100)			≥100			
✓		✓	✓	✓		≥100				≤500	≥1000	
✓	✓	✓	✓	✓	≥150	≥150		≥150		≤500	≥1000	
✓	✓			✓					≥500			
✓	✓			✓					≥500		≥1000	
✓	✓			✓	L1<L2	≥50(100)			≥500			
✓	✓			✓	L2<L1	≥50(100)			≥500			
✓	✓			✓	L1<L2	L1≤H	≥150(250)	≤500		≥750	≥1000	0<L1≤1/2H
✓	✓			✓	L2≤H	≥50(100)			≥500	≥1000	≥1000	0<L1≤1/2H
✓	✓			✓	L2<L1	≥100(200)			≥500	≥1000	≥1000	0<L2≤1/2H
✓	✓			✓	L2<L1	≥200(300)			≥1000	≥1000	≥1000	1/2H<L2≤H
✓	✓			✓	L1<L2	≥200(300)			≥1000	≥1000	≥1000	0<L2≤1/2H
✓	✓			✓	L2<L1	≥150(250)			≥1000	≥1000	≥1000	1/2H<L2≤H
✓	✓			✓	L2<L1	≥200(300)			≥1000	≥1000	≥1000	1/2H<L2≤H
✓	✓			✓	L1<L2	L1≤H	≥200(300)	≤500		≥1000	≥1000	0<L1≤1/2H
✓	✓			✓	L2≤H	≥150(250)			≥1000	≥1000	≥1000	0<L2≤1/2H
✓	✓			✓	L2<L1	≥200(300)			≥1000	≥1000	≥1000	1/2H<L2≤H
✓	✓			✓	L1<L2	L1≤H	≥200(300)	≤500		≥1250	≥1000	0<L1≤1/2H
✓	✓			✓	L2≤H	≥150(250)			≥1000	≥1000	≥1000	0<L2≤1/2H
✓	✓			✓	L2<L1	≥200(300)			≥1000	≥1000	≥1000	1/2H<L2≤H

Legend

- Suction side obstacle
- Discharge side obstacle
- Left side obstacle
- Right side obstacle
- Top side obstacle
- ✓ Obstacle is present

In these cases, close the bottom of the installation frame to prevent discharged air from being bypassed.

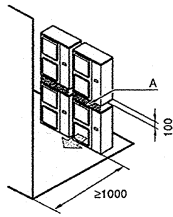
In these cases, only 2 units can be installed.

 This situation is not allowed.

Figures between ( ) indicate the dimensions only for the 100-125-140 class models.

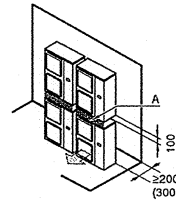
#### B. Stacked installation

##### 1. Obstacles exist in front of the outlet side



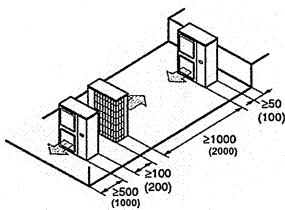
Do not stack more than one unit.  
About 100mm is required as the dimension for laying the upper outdoor unit's drain pipe.  
Get the portion A sealed so that air from the outlet does not bypass.

##### 2. Obstacles exist in front of the air inlet

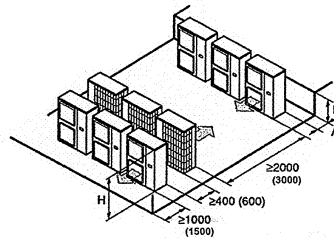


#### C. Multiple-row installation

##### 1. Installation of one unit per row



##### 2. Installing multiple units (2 units or more) in lateral connection per row



Relation of dimensions of H, A, and L are shown in the table below.

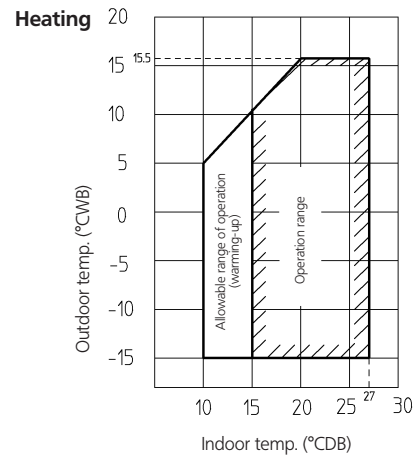
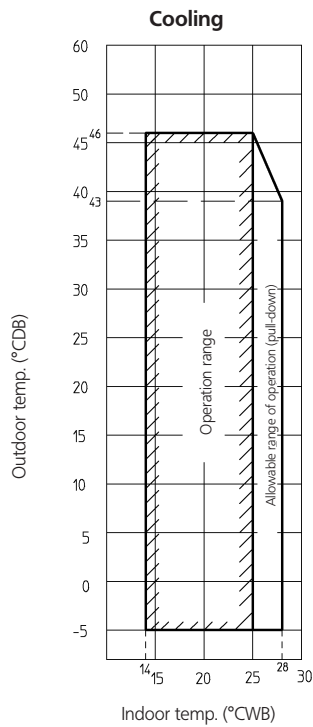
	L	A
L ≤ H	0 < L ≤ 1/2 H	150 (250)
	1/2 H < L	200 (300)
H < L	Installation impossible	

3TW26739-4

# 11 Operation range

## RZQS125-140C

Model name
RZQS125C7V1B
RZQS140C7V1B



**Notes:**

- Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
- 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.

3TW29063-1A