

# 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       |                           |          |    | RZQ71B9V3B1 |   |
|--|---------------------------|----------|----|-------------|---|
| For combination indoor units + outdoor units | Indoor Units              |          |    | FCQ71C7VEB  |   |
| Cooling capacity                             | Standard                  | kW       |    | 7.1         |   |
| Heating capacity                             | Standard                  | kW       |    | 8.0         |   |
| Power Input                                  | Cooling                   | Standard | kW | 2.16        |   |
|  | Heating                   | Standard | kW | 2.56        |   |
| For combination indoor units + outdoor units | EER                       | Nominal  |    | 3.29        |   |
|  | COP                       | Nominal  |    | 3.13        |   |
|  | Energy Label              | Cooling  |    |             | A |
|  |                           | Heating  |    |             | D |
|  | Annual energy consumption | kWh      |    | 1080        |   |
| Indoor Units                                 |                           |          |    | FBQ71B8V3B  |   |
| Cooling capacity                             | Standard                  | kW       |    | 7.1         |   |
| Heating capacity                             | Standard                  | kW       |    | 8.0         |   |
| Power Input                                  | Cooling                   | Standard | kW | 2.21        |   |
|  | Heating                   | Standard | kW | 2.09        |   |
| For combination indoor units + outdoor units | EER                       | Nominal  |    | 3.21        |   |
|  | COP                       | Nominal  |    | 3.83        |   |
|  | Energy Label              | Cooling  |    |             | A |
|  |                           | Heating  |    |             | A |
|  | Annual energy consumption | kWh      |    | 1105        |   |
| Indoor Units                                 |                           |          |    | FHQ71BUIV1B |   |
| Cooling capacity                             | Standard                  | kW       |    | 7.1         |   |
| Heating capacity                             | Standard                  | kW       |    | 8.0         |   |
| Power Input                                  | Cooling                   | Standard | kW | 2.46        |   |
|  | Heating                   | Standard | kW | 2.67        |   |
| For combination indoor units + outdoor units | EER                       | Nominal  |    | 2.89        |   |
|  | COP                       | Nominal  |    | 3.00        |   |
|  | Energy Label              | Cooling  |    |             | A |
|  |                           | Heating  |    |             | D |
|  | Annual energy consumption | kWh      |    | 1230        |   |
| Indoor Units                                 |                           |          |    | FUQ71BUIV1B |   |
| Cooling capacity                             | Standard                  | kW       |    | 7.1         |   |
| Heating capacity                             | Standard                  | kW       |    | 8.0         |   |
| Power Input                                  | Cooling                   | Standard | kW | 2.21        |   |
|  | Heating                   | Standard | kW | 2.34        |   |
| For combination indoor units + outdoor units | EER                       | Nominal  |    | 3.21        |   |
|  | COP                       | Nominal  |    | 3.42        |   |
|  | Energy Label              | Cooling  |    |             | A |
|  |                           | Heating  |    |             | B |
|  | Annual energy consumption | kWh      |    | 1105        |   |
| Indoor Units                                 |                           |          |    | FAQ71BUIV1B |   |
| Cooling capacity                             | Standard                  | kW       |    | 7.1         |   |
| Heating capacity                             | Standard                  | kW       |    | 8.0         |   |
| Power Input                                  | Cooling                   | Standard | kW | 2.36        |   |
|  | Heating                   | Standard | kW | 2.42        |   |

## 2 Specifications

| 2-1 NOMINAL CAPACITY AND NOMINAL INPUT       |                           |             |     | RZQ71B9V3B1 |  |
|--|---------------------------|-------------|-----|-------------|--|
| For combination indoor units + outdoor units | EER                       | Nominal     |     | 3.01        |  |
|  | COP                       | Nominal     |     | 3.31        |  |
|  | Energy Label              | Cooling     |     | B           |  |
|  |                           | Heating     |     | C           |  |
|  | Annual energy consumption | kWh         |     | 1180        |  |
| Indoor Units                                 |                           | FCQH71C7VEB |     |             |  |
| Cooling capacity                             | Standard                  | kW          |     | 7.1         |  |
| Heating capacity                             | Standard                  | kW          |     | 8.0         |  |
| Power Input                                  | Cooling                   | Standard    | kW  | 1.98        |  |
|  | Heating                   | Standard    | kW  | 1.97        |  |
| For combination indoor units + outdoor units | EER                       | Nominal     |     | 3.58        |  |
|  | COP                       | Nominal     |     | 4.06        |  |
|  | Energy Label              | Cooling     |     | A           |  |
|  |                           | Heating     |     | A           |  |
| Annual energy consumption                    | kWh                       |             | 990 |             |  |

| 2-2 TECHNICAL SPECIFICATIONS |                                 |                               |                     | RZQ71B9V3B1                          |  |
|------------------------------|---------------------------------|-------------------------------|---------------------|--------------------------------------|--|
| Casing                       | Colour                          |                               |                     | Ivory White                          |  |
|                              | Material                        |                               |                     | Painted galvanised steel             |  |
| Dimensions                   | Unit                            | Height                        | mm                  | 770                                  |  |
|                              |                                 | Width                         | mm                  | 900                                  |  |
|                              |                                 | Depth                         | mm                  | 320                                  |  |
|                              | Packing                         | Height                        | mm                  | 900                                  |  |
|                              |                                 | Width                         | mm                  | 980                                  |  |
|                              |                                 | Depth                         | mm                  | 420                                  |  |
| Weight                       | Unit                            |                               | kg                  | 68                                   |  |
|                              | Packed Unit                     |                               | kg                  | 72                                   |  |
| Heat Exchanger               | Dimensions                      | Length                        | mm                  | 857                                  |  |
|                              |                                 | Nr of Rows                    |                     | 2                                    |  |
|                              |                                 | Fin Pitch                     | mm                  | 1.40                                 |  |
|                              |                                 | Nr of Passes                  |                     | 3                                    |  |
|                              |                                 | Face Area                     | m <sup>2</sup>      | 0.641                                |  |
|                              | Nr of Stages                    |                               | 34                  |                                      |  |
|                              | Tube type                       |                               | Hi-XSS(8)           |                                      |  |
| Fin                          | Type                            | WF fin                        |                     |                                      |  |
|                              | Treatment                       | Anti-corrosion treatment (PE) |                     |                                      |  |
| Fan                          | Type                            |                               |                     | Propeller                            |  |
|                              | Discharge direction             |                               |                     | Horizontal                           |  |
|                              | Quantity                        |                               |                     | 1                                    |  |
|                              | Air Flow Rate (nominal at 230V) | Cooling                       | m <sup>3</sup> /min | 54.50                                |  |
|                              |                                 | Heating                       | m <sup>3</sup> /min | 48.10                                |  |
|                              | Motor                           | Quantity                      |                     | 1                                    |  |
| Model                        |                                 | KFD-325-70-8A                 |                     |                                      |  |
| Motor                        | Speed (nominal)                 | Steps                         | 8                   |                                      |  |
|                              |                                 | Cooling                       | rpm                 | 818                                  |  |
|                              |                                 | Heating                       | rpm                 | 715                                  |  |
| Fan                          | Motor                           | Output                        | W                   | 70                                   |  |
| Compressor                   | Quantity                        |                               |                     | 1                                    |  |
|                              | Motor                           | Model                         |                     | 2YC63BXD                             |  |
|                              |                                 | Type                          |                     | Hermetically sealed swing compressor |  |
|                              |                                 | Motor Output                  | W                   | 1800                                 |  |

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## 2 Specifications

| 2-2 TECHNICAL SPECIFICATIONS |                                  |   |                     | RZQ71B9V3B1                        |  |
|------------------------------|----------------------------------|---|---------------------|------------------------------------|--|
| Operation Range              | Cooling                          | Min   | °CDB                | -15.0                              |  |
|                              |                                  | Max   | °CDB                | 50.0                               |  |
|                              | Heating                          | Min   | °CWB                | -20.0                              |  |
|                              |                                  | Max   | °CWB                | 15.5                               |  |
| Sound Level (nominal)        | Cooling                          | Sound Power   | dBA                 | 63.0                               |  |
|                              |                                  | Sound Pressure  | dBA                 | 47.0                               |  |
|                              | Heating                          | Sound Pressure  | dBA                 | 49.0                               |  |
| Sound Level (Night quiet)    | Sound Pressure                   |   | dBA                 | 43.0                               |  |
| Refrigerant                  | Type                             |   |                     | R-410A                             |  |
|                              | Charge                           |   | kg                  | 2.80                               |  |
|                              | Control                          |   |                     | Expansion valve (electronic type)  |  |
|                              | Nr of Circuits                   |   |                     | 1                                  |  |
| Refrigerant Oil              | Type                             |   |                     | Daphne FVC50K                      |  |
|                              | Charged Volume                   |   | l                   | 0.8                                |  |
| Piping connections           | Liquid (OD)                      | Quantity  |                     | 1                                  |  |
|                              |                                  | Type  |                     | Flare connection                   |  |
|                              |                                  | Diameter (OD)   | mm                  | 9.52                               |  |
|                              | Gas                              | Quantity  |                     | 1                                  |  |
|                              |                                  | Type  |                     | Flare connection                   |  |
|                              |                                  | Diameter (OD)   | mm                  | 15.9                               |  |
|                              | Drain                            | Quantity  |                     | 3                                  |  |
|                              |                                  | Type  |                     | Hole                               |  |
|                              |                                  | Diameter (OD)   | mm                  | 26                                 |  |
|                              | Piping Length                    | Minimum   | m                   | 5                                  |  |
|                              |                                  | Maximum   | m                   | 50                                 |  |
|                              |                                  | Equivalent  | m                   | 70                                 |  |
|                              |                                  | Chargeless  | m                   | 30                                 |  |
|                              | Additional Refrigerant Charge    |   | kg/m                | see installation manual 4PW21412-1 |  |
|                              | Installation height difference   | Maximum   | m                   | 30.0                               |  |
|                              | Max. internunit level difference |   | m                   | 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                   |                                    |  |
|                              | Item                             |   | Installation manual |                                    |  |
|                              | Quantity                         |   | 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 Specifications

| 2-3 ELECTRICAL SPECIFICATIONS |                            |         | RZQ71B9V3B1                               |      |
|-------------------------------|----------------------------|---------|---|------|
| Power Supply                  | Name                       |         | V3  |      |
|                               | Phase                      |         | 1   |      |
|                               | Frequency                  | Hz      | 50  |      |
|                               | Voltage                    |         | V   |      |
|                               | Voltage range              | Minimum | V   | -10% |
|                               |                            | Maximum | V   | +10% |
| Current                       | Recommended fuses          | A       | 20  |      |
| Wiring connections            | For Power Supply           | Remark  | see installation manual 4PW21412-1        |      |
|                               | For connection with indoor | Remark  | see installation manual 4PW21412-1        |      |
| Power Supply Intake           |                            |         | Outdoor unit only                         |      |
| Notes                         |                            |         | See separate drawings for electrical data |      |

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### 3 Electrical data

#### RZQ71B8V3

| Unit combination |              | Power supply |               |      |      | Comp. |      | OFM  |      | IFM |         |       |
|------------------|--------------|--------------|---------------|------|------|-------|------|------|------|-----|---------|-------|
| Indoor unit      | Outdoor unit | Hz-volts     | Voltage range | MCA  | TOCA | MFA   | MSC  | RLA  | kW   | FLA | kW      | FLA   |
| FCQH71C7VEB      | RZQ71B9V3B1  | 50-230       |               | 17.0 | 17.0 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.120   | 0.5   |
| FCQ71C7VEB       | RZQ71B9V3B1  | 50-230       |               | 17.0 | 17.0 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.056   | 0.5   |
| FCQ35C7VEBx2     | RZQ71B9V3B1  | 50-230       |               | 17.1 | 17.1 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.056x2 | 0.3x2 |
| FCQ71DV3B        | RZQ71B8V3B   | 50-230       |               | 16.8 | 16.8 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.030   | 0.3   |
| FCQ71B7V3B       | RZQ71B8V3B   | 50-230       |               | 17.1 | 17.1 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.045   | 0.6   |
| FCQ35B7V1x2      | RZQ71B8V3B   | 50-230       | Max, 50Hz253V | 17.7 | 17.7 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.045x2 | 0.6x2 |
| FFQ35BV1Bx2      | RZQ71B8V3B   | 50-230       | Min, 50Hz207V | 17.7 | 17.7 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.055x2 | 0.6x2 |
| FBQ71B7V3B       | RZQ71B8V3B   | 50-230       |               | 17.4 | 17.4 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.125   | 0.9   |
| FBQ35B7V1x2      | RZQ71B8V3B   | 50-230       |               | 17.5 | 17.5 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.065x2 | 0.5x2 |
| FHQ71BUV1B       | RZQ71B8V3B   | 50-230       |               | 17.1 | 17.1 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.062   | 0.6   |
| FHQ35BUV1Bx2     | RZQ71B8V3B   | 50-230       |               | 17.7 | 17.7 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.062x2 | 0.6x2 |
| FAQ71BUV1B       | RZQ71B8V3B   | 50-230       |               | 16.8 | 16.8 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.043   | 0.3   |
| FUQ71BUV1B       | RZQ71B8V3B   | 50-230       |               | 17.2 | 17.2 | 20    | 16.2 | 16.2 | 0.07 | 0.3 | 0.045   | 0.7   |

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#### SYMBOLS

- MCA : Min. Circuit Amps (A)
- TOCA : Total Over Current Amps (A)
- MFA : Max. Fuse Amps (See note 7) (A)
- 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 Heating  
 Indoor temperature 27°CDB/19°CWB Indoor temperature 20.0°CDB  
 Outdoor temperature 35°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.daikin.europa.com>, select "E-Data Books". Finally, click on the document title of your choice.

## 4 Options

### Available option for RZQ71B

| Name of option            |             | Kit name                  |
|---------------------------|-------------|---------------------------|
|                           |             | RZQ71B8V3B<br>RZQ71B9V3B1 |
| Central drain plug        |             | KKPJ5F180                 |
| Refrigerant branch piping | Twin        | KHRQ22M20TA               |
|                           | Triple      | -                         |
|                           | Double twin | -                         |
| Demand adapter kit        |             | KRP58M51                  |

3TW26739-1E

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## 5 Capacity tables

### 5 - 1 Combination table

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

| Outdoor models | Possible indoor combination |        |             |
|----------------|-----------------------------|--------|-------------|
|                | Simultaneous operation      |        |             |
|                | Twin                        | Triple | Double twin |
|                |                             |        |             |
| RZQ71B8V3B     | 35-35<br>(KHRQ22M20TA8)     |        |             |

3TW26739-2A

#### NOTES

- 1 Possible indoor units: FCQ35-71, FFQ35-60, FHQ35-71, FBQ35-71, FAQ71, FUQ71
- 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.

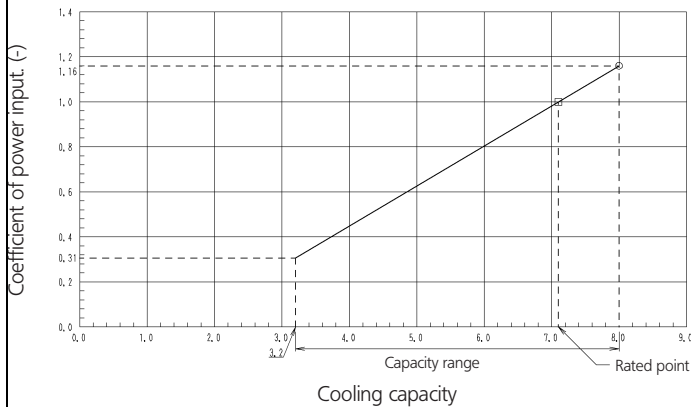


# 5 Capacity tables

## 5 - 2 Cooling capacity tables

### RZQ71B8V3 (Pair + Multi)

#### Cooling



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#### Cooling capacity

230V [50Hz]

| Indoor      |             | Outdoor temp. (°CDB) |             |            |            |             |            |            |             |            |            |             |            |
|-------------|-------------|----------------------|-------------|------------|------------|-------------|------------|------------|-------------|------------|------------|-------------|------------|
| EWB<br>(°C) | EDB<br>(°C) | 25                   |             |            | 30         |             |            | 35         |             |            | 40         |             |            |
|             |             | TC<br>(kW)           | SHC<br>(kW) | CPI<br>(-) | TC<br>(kW) | SHC<br>(kW) | CPI<br>(-) | TC<br>(kW) | SHC<br>(kW) | CPI<br>(-) | TC<br>(kW) | SHC<br>(kW) | CPI<br>(-) |
| 16.0        | 22          | 6.47                 | 4.39        | 0.76       | 6.46       | 4.43        | 0.89       | 6.66       | 4.62        | 0.99       | 6.39       | 4.49        | 1.09       |
| 18.0        | 25          | 7.43                 | 4.82        | 0.83       | 7.20       | 4.72        | 0.91       | 6.95       | 4.61        | 1.00       | 6.67       | 4.47        | 1.10       |
| 19.0        | 27          | 7.58                 | 4.80        | 0.84       | 7.35       | 4.71        | 0.91       | 7.10       | 4.60        | 1.00       | 6.82       | 4.46        | 1.10       |
| 19.5        | 27          | 7.66                 | 4.79        | 0.84       | 7.43       | 4.70        | 0.91       | 7.17       | 4.59        | 1.00       | 6.89       | 4.46        | 1.10       |
| 22.0        | 30          | 8.05                 | 4.73        | 0.85       | 7.81       | 4.64        | 0.92       | 7.55       | 4.54        | 1.01       | 7.26       | 4.41        | 1.11       |
| 24.0        | 32          | 8.37                 | 4.66        | 0.85       | 8.12       | 4.58        | 0.93       | 7.85       | 4.48        | 1.02       | 7.55       | 4.35        | 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 value 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

#### 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

#### Multi

| Model | FCQH71C | FCQ71C | FCQ71D | FCQ71B | FBQ71  | FHQ71  | FAQ71  | FUQ71  |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|
| AFR   | 20      | 15.5   | 19     | 18     | 19     | 17     | 19     | 19     |
| (BF)  | (0.17)  | (0.19) | (0.10) | (0.10) | (0.11) | (0.10) | (0.08) | (0.07) |

| Model | FCQ35Cx2 | FCQ35Bx2 | FFQ35x2  | FBQ35x2  | FHQ35x2 |
|-------|----------|----------|----------|----------|---------|
| AFR   | 10.5     | 14x2     | 10x2     | 11.5x2   | 13x2    |
| (BF)  | (0.28x2) | (0.16x2) | (0.25x2) | (0.15x2) | (0.2x2) |

- Rated power input of each model is tabulated below.

#### Pair

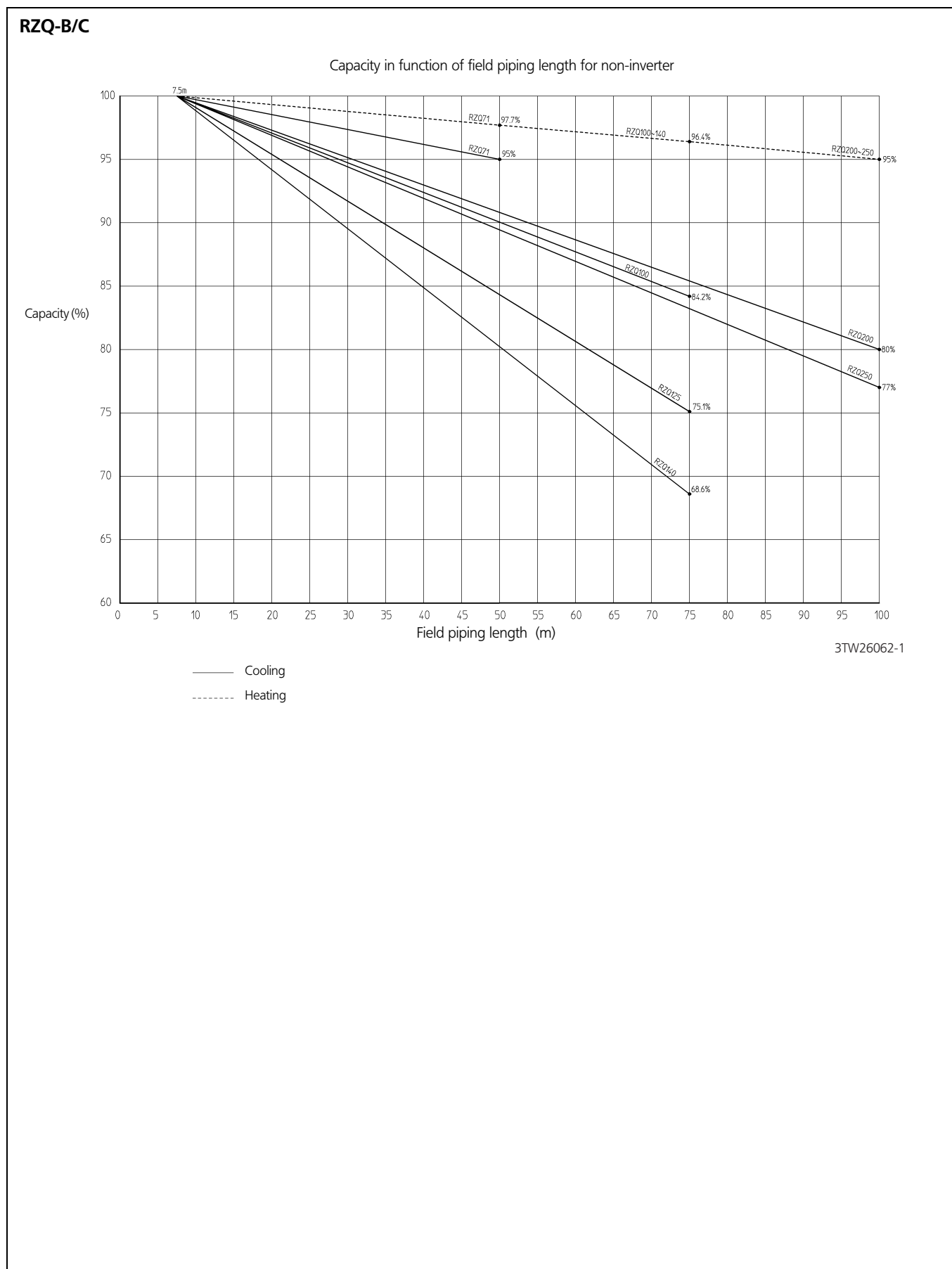
| Model   | FCQH71C | FCQ71C | FCQ71D | FCQ71B | FBQ71 | FHQ71 | FAQ71 | FUQ71 |
|---------|---------|--------|--------|--------|-------|-------|-------|-------|
| Cooling | 1.98    | 2.11   | 1.98   | 2.16   | 2.14  | 2.46  | 2.36  | 2.21  |
| Heating | 1.97    | 2.21   | 1.97   | 2.56   | 2.09  | 2.67  | 2.42  | 2.34  |

#### Multi

| Model   | FCQ35Cx2 | FCQ35Bx2 | FFQ35x2 | FBQ35x2 | FHQ35x2 |
|---------|----------|----------|---------|---------|---------|
| Cooling | 2.27     | 2.27     | 2.29    | 2.25    | 2.53    |
| Heating | 2.69     | 2.69     | 2.64    | 2.20    | 2.81    |

# 5 Capacity tables

## 5 - 2 Cooling capacity tables

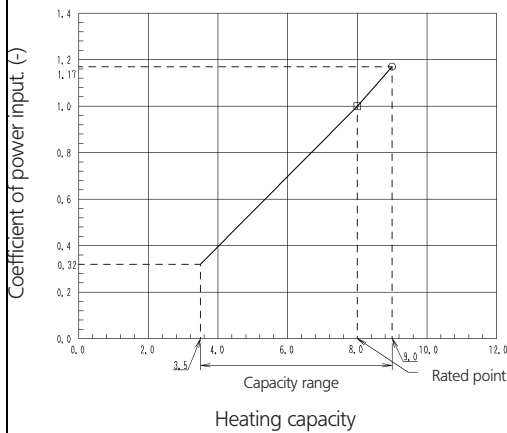


# 5 Capacity tables

## 5 - 3 Heating capacity tables

### RZQ71B8V3 (Pair + Multi)

#### Heating



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#### Heating capacity

230V [50Hz]

| EDB<br>(°C) | Outdoor temp. (°CWB) |            |            |            |            |            |            |            |            |            |            |            |
|-------------|----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|             | -15                  |            | -10        |            | -5         |            | 0          |            | 6          |            | 10         |            |
|             | TC<br>(kW)           | CPI<br>(-) | TC<br>(kW) | CPI<br>(-) | TC<br>(kW) | CPI<br>(-) | TC<br>(kW) | CPI<br>(-) | TC<br>(kW) | CPI<br>(-) | TC<br>(kW) | CPI<br>(-) |
| 16.0        | 5.14                 | 1.06       | 5.68       | 1.12       | 6.22       | 1.17       | 6.75       | 1.23       | 8.02       | 0.92       | 8.64       | 0.97       |
| 18.0        | 5.14                 | 1.10       | 5.67       | 1.16       | 6.21       | 1.22       | 6.74       | 1.28       | 8.01       | 0.96       | 8.62       | 1.01       |
| 20.0        | 5.13                 | 1.15       | 5.67       | 1.21       | 6.20       | 1.27       | 6.74       | 1.33       | 8.00       | 1.00       | 8.61       | 1.05       |
| 21.0        | 5.13                 | 1.17       | 5.66       | 1.23       | 6.20       | 1.29       | 6.73       | 1.35       | 8.00       | 1.02       | 8.61       | 1.07       |
| 22.0        | 5.12                 | 1.19       | 5.66       | 1.25       | 6.19       | 1.32       | 6.73       | 1.38       | 7.99       | 1.04       | 8.60       | 1.09       |
| 24.0        | 5.12                 | 1.23       | 5.65       | 1.30       | 6.19       | 1.36       | 6.72       | 1.43       | 7.98       | 1.08       | 8.59       | 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

#### 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)
- CPI: Coefficient of power input (-)

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

| Model | FCQH71C | FCQ71C | FCQ71D | FCQ71B | FBQ71  | FHQ71  | FAQ71  | FUQ71  |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|
| AFR   | 20      | 15.5   | 19     | 18     | 19     | 17     | 19     | 19     |
| (BF)  | (0.17)  | (0.19) | (0.10) | (0.10) | (0.11) | (0.10) | (0.08) | (0.07) |

#### Multi

| Model | FCQ35Cx2 | FCQ35Bx2 | FFQ35x2  | FBQ35x2  | FHQ35x2 |
|-------|----------|----------|----------|----------|---------|
| AFR   | 10.5     | 14x2     | 10x2     | 11.5x2   | 13x2    |
| (BF)  | (0.28x2) | (0.16x2) | (0.25x2) | (0.15x2) | (0.2x2) |

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

#### Pair

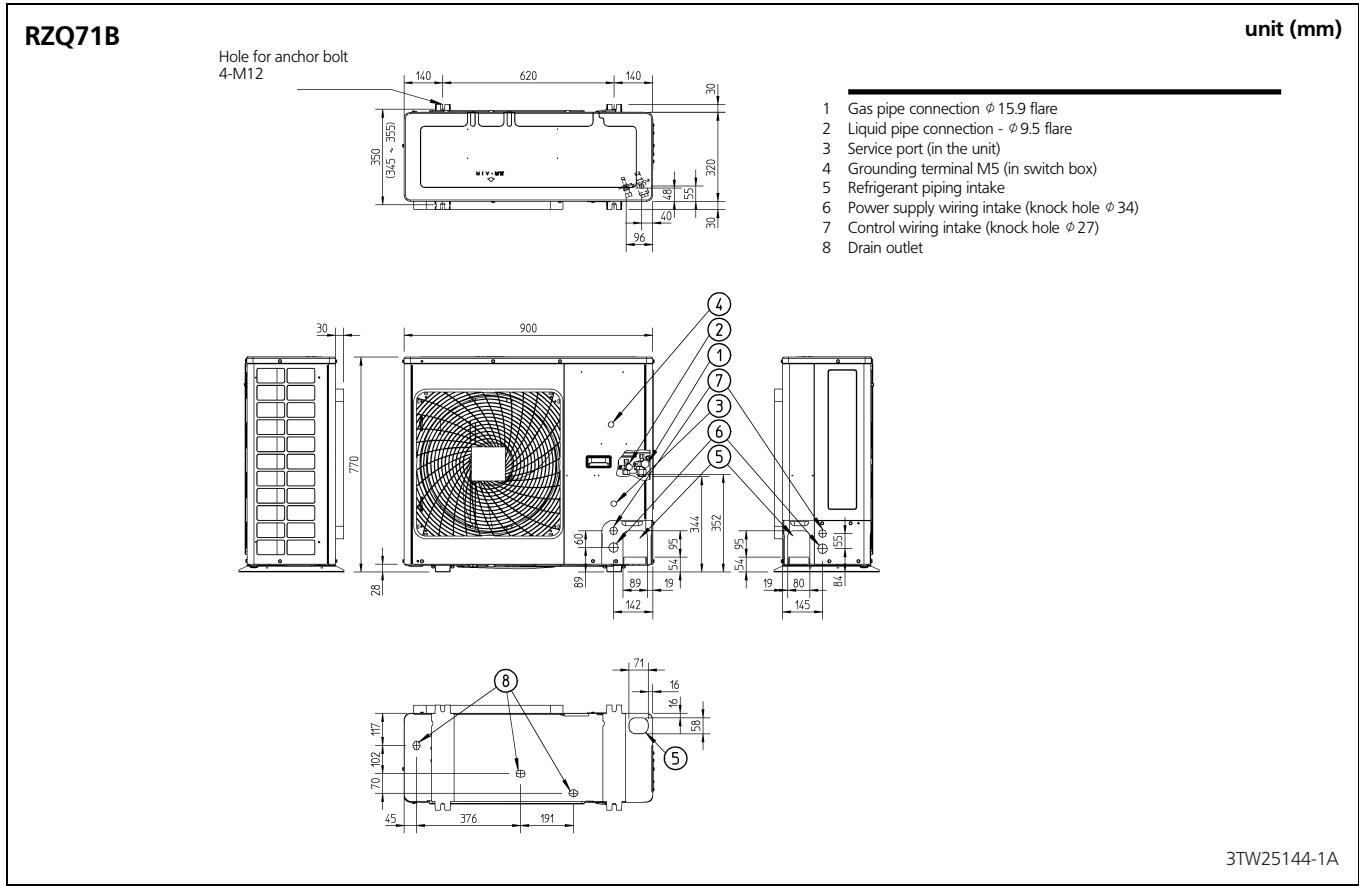
| Model   | FCQH71C | FCQ71C | FCQ71D | FCQ71B | FBQ71 | FHQ71 | FAQ71 | FUQ71 |
|---------|---------|--------|--------|--------|-------|-------|-------|-------|
| Cooling | 1.98    | 2.11   | 1.98   | 2.16   | 2.14  | 2.46  | 2.36  | 2.21  |
| Heating | 1.97    | 2.21   | 1.97   | 2.56   | 2.09  | 2.67  | 2.42  | 2.34  |

#### Multi

| Model   | FCQ35Cx2 | FCQ35Bx2 | FFQ35x2 | FBQ35x2 | FHQ35x2 |
|---------|----------|----------|---------|---------|---------|
| Cooling | 2.27     | 2.27     | 2.29    | 2.25    | 2.53    |
| Heating | 2.69     | 2.69     | 2.64    | 2.20    | 2.81    |

# 6 Dimensional drawing & centre of gravity

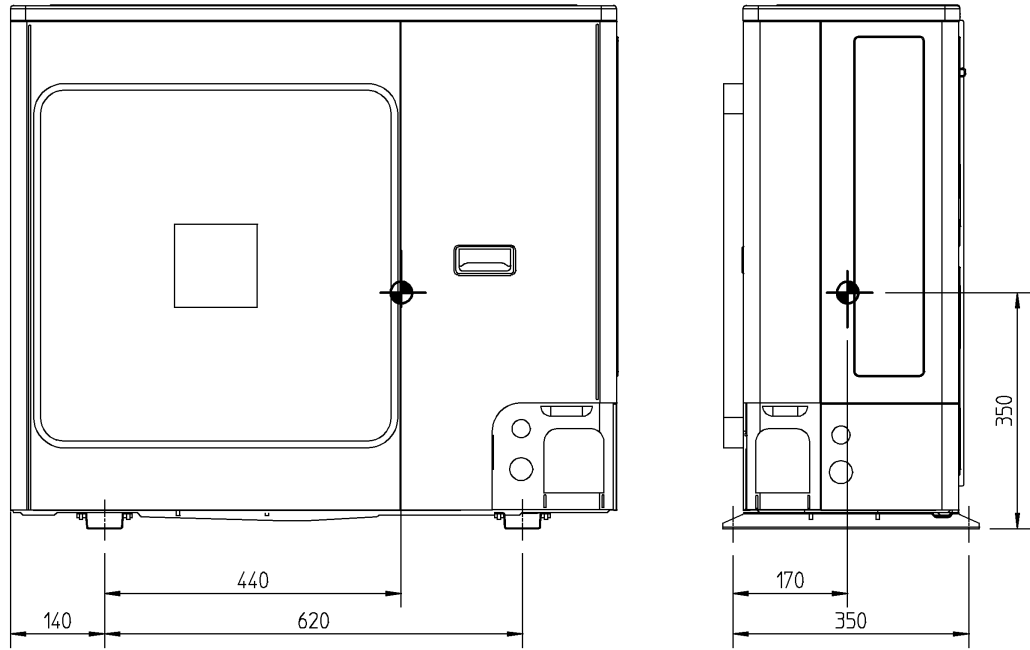
## 6 - 1 Dimensional drawing



## 6 Dimensional drawing & centre of gravity

### 6 - 2 Centre of gravity

RZQ71B8V3

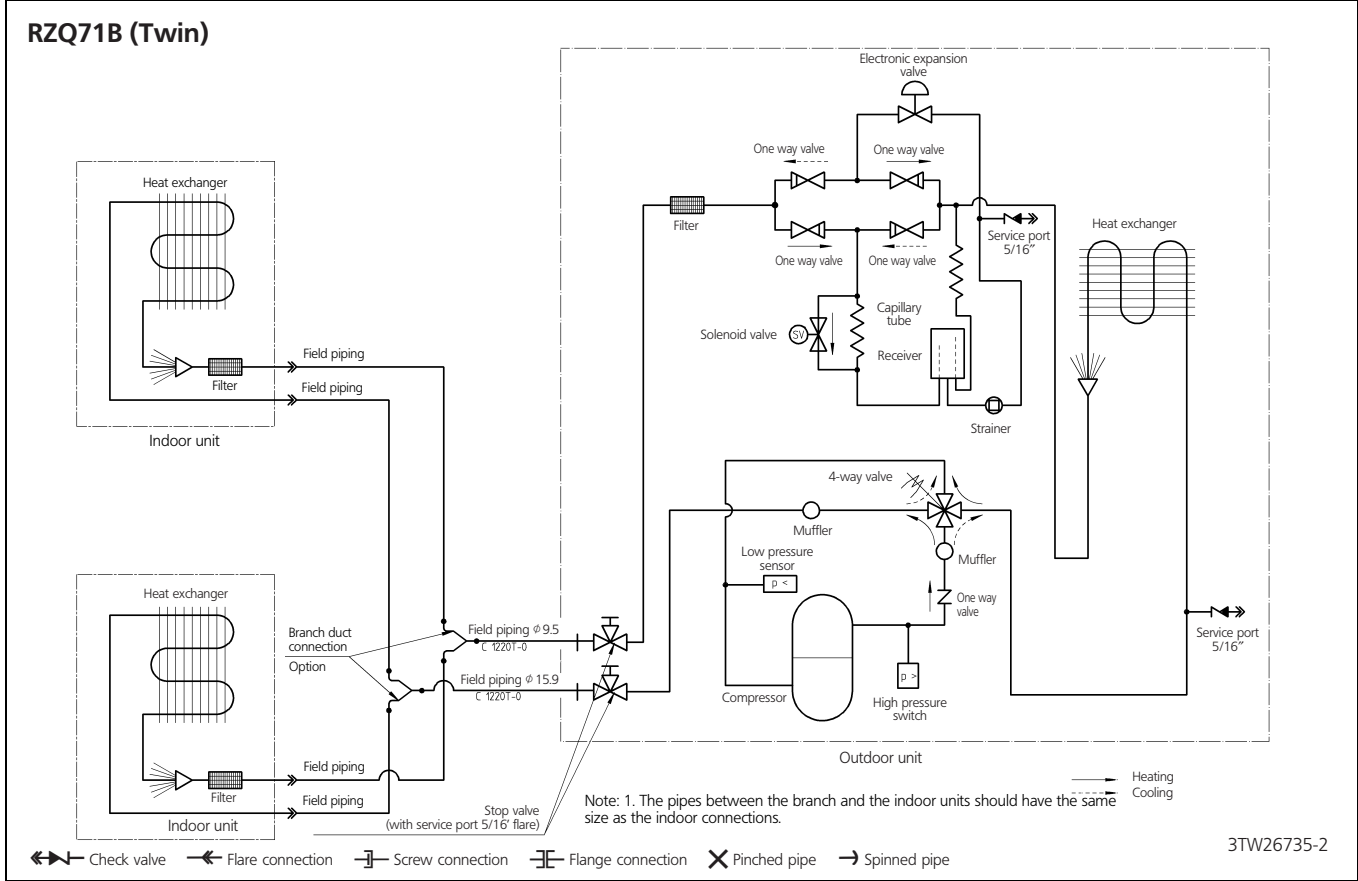
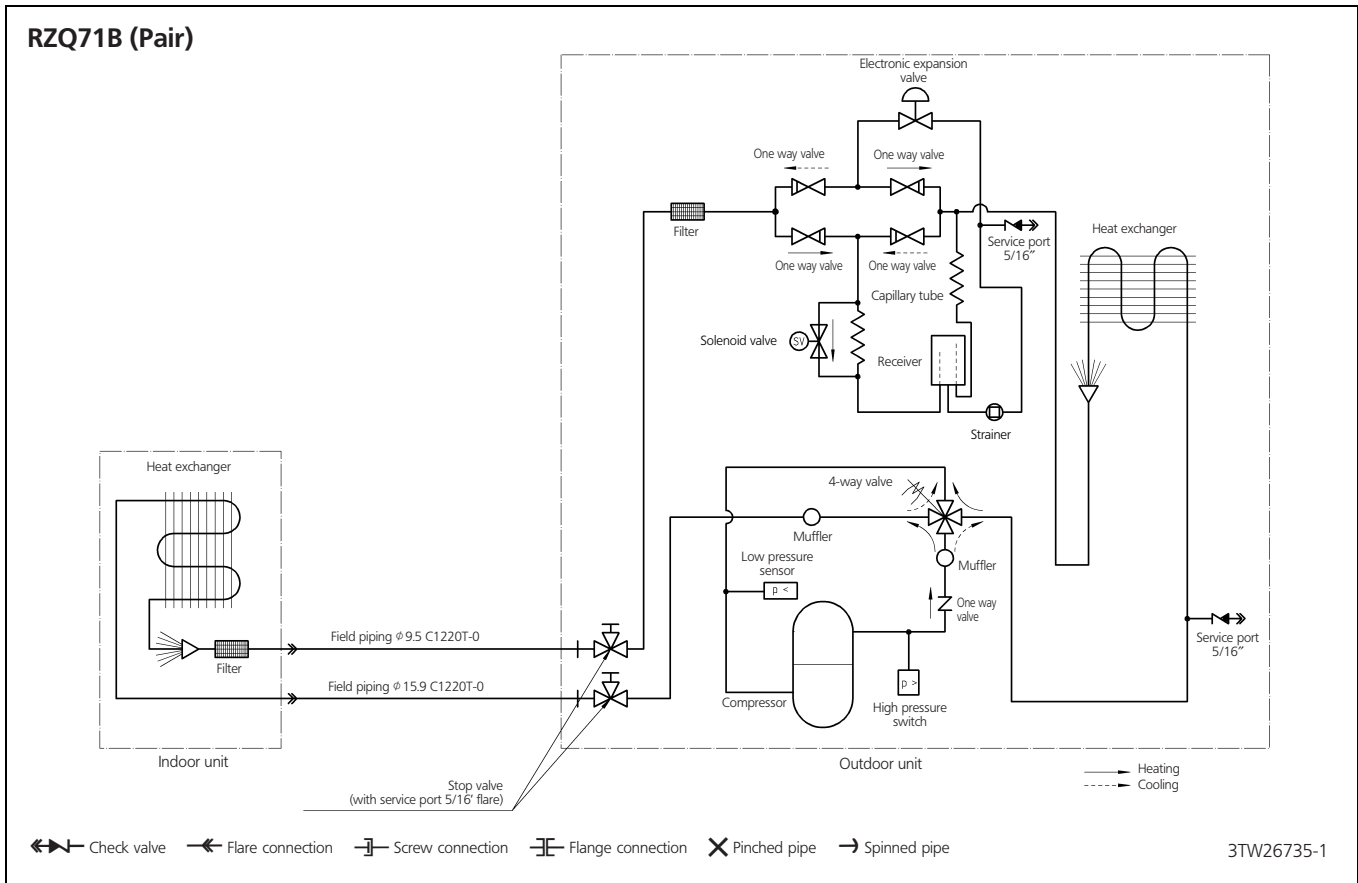


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# 7 Piping diagram



# 8 Wiring diagram

## 8 - 1 Wiring diagram

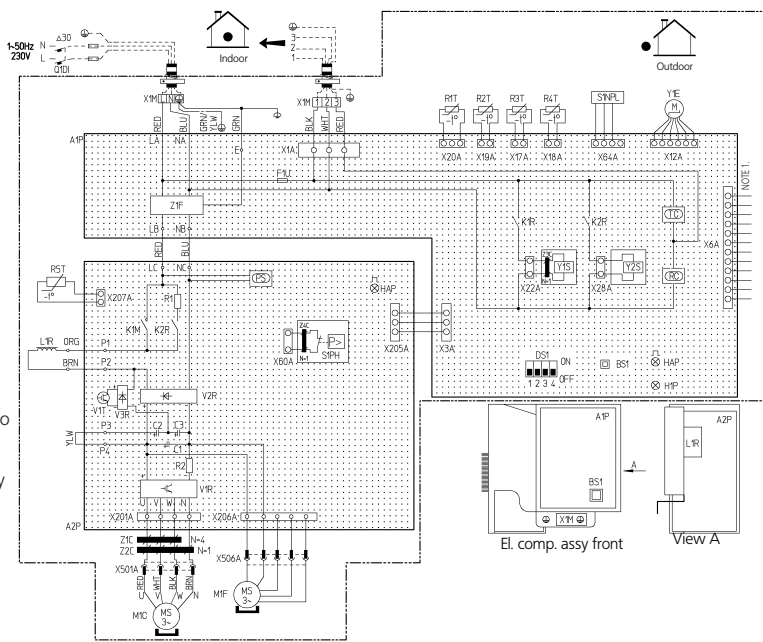
### RZQ71B8V3

- L : Live
- N : Neutral
- : Field wiring
- ⊕ : Protective earth (screw)
- : Wire clamp
- : Terminal
- ⊞ : Connector
- ⤴ : Relay connector

Colours  
 BLK: Black / ORG: Orange / BLU: Blue /  
 WHT: White / RED: Red / YLW: Yellow /  
 BRN: Brown / GRN: Green

NOTES:

1. Refer to the optional manual, for connection wiring to X6A.
2. 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.



|           |  |
|-----------|--|
| A1P       | Printed circuit board                        |
| A2P       | Printed circuit board (INV)                  |
| BS1       | Push button switch (forced def. / pump down) |
| C1-C2-C3  | Capacitor                                    |
| DS1       | Dip switch                                   |
| F1U       | Fuse (T6, 3A/250V)                           |
| HAP (A1P) | Light emitting diode (service monitor green) |
| HAP (A2P) | Light emitting diode (service monitor green) |
| H1P (A1P) | Light emitting diode (service monitor red)   |

|          |                              |
|----------|------------------------------|
| K1M(A2P) | Magnetic contactor           |
| K1R(A1P) | Magnetic relay (Y1S)         |
| K2R(A1P) | Magnetic relay (Y2S)         |
| K2R(A2P) | Magnetic relay               |
| L1R      | Reactor                      |
| M1C      | Motor compressor             |
| M1F      | Motor fan                    |
| PS       | Power circuit                |
| Q1D1     | Earth leakage breaker (30mA) |
| R1-R2    | Resistor                     |
| R1T      | Thermistor (air)             |
| R2T      | Thermistor (coil)            |
| R3T      | Thermistor (discharge pipe)  |
| R4T      | Thermistor (suction pipe)    |
| R5T      | Thermistor (power module)    |
| S1PH     | Pressure switch (high)       |
| S1NPL    | Pressure sensor (low)        |
| RC       | Signal receiver circuit      |
| TC       | Signal transmission circuit  |
| V1R      | Power module                 |

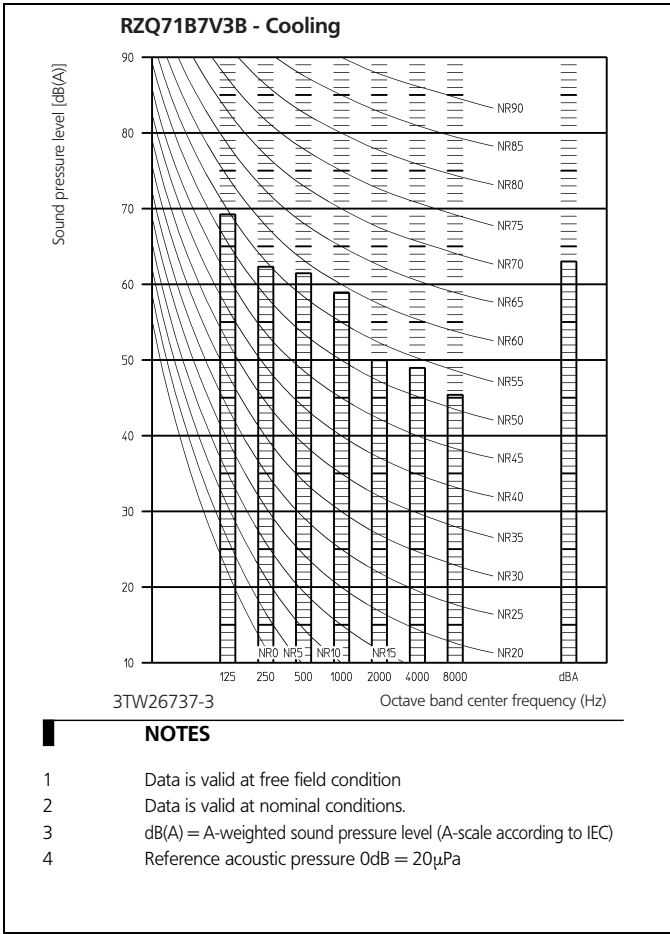
|          |                                    |
|----------|------------------------------------|
| V2R-V3R  | Diode module                       |
| V1T      | IGBT                               |
| X6A      | Connector (Option)                 |
| X1M      | Terminal strip                     |
| Y1E      | Expansion valve                    |
| Y1S      | 4-way valve                        |
| Y2S      | Solenoid valve                     |
| Z1C, Z2C | Noise filter                       |
| Z3C, Z4C | Noise filter (with surge absorber) |
| Z1F      | Noise filter (with surge absorber) |

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# 9 Sound data

## 9 - 1 Sound level data

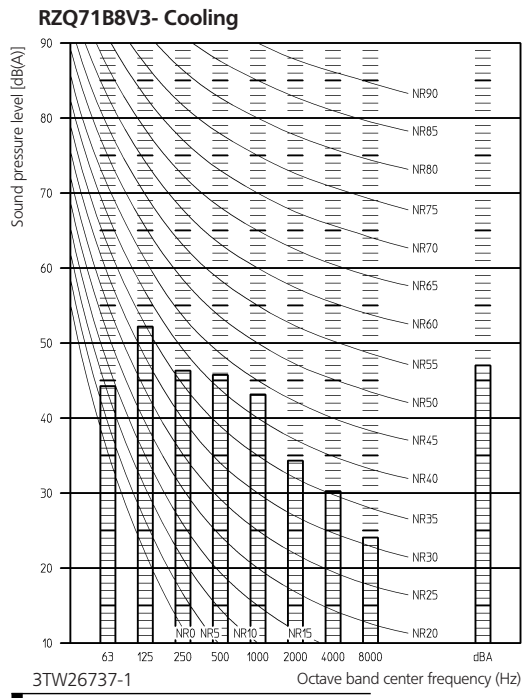




# 9 Sound data

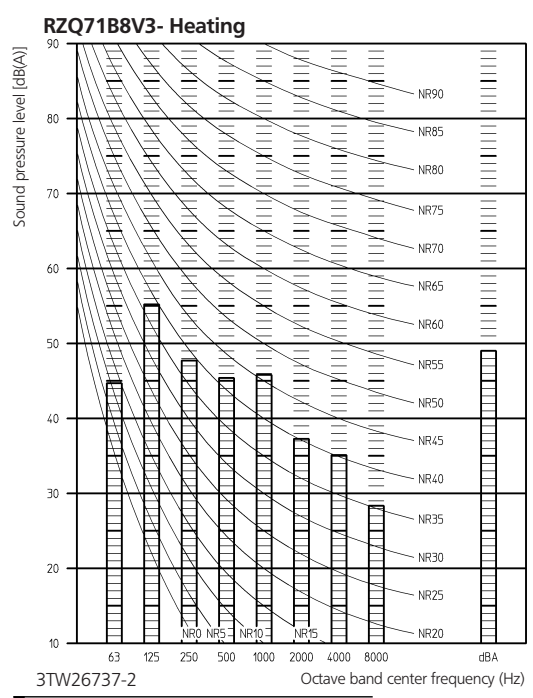
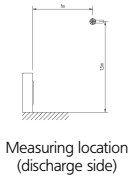
## 9 - 2 Sound pressure spectrum

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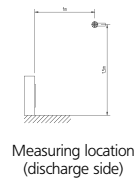
**NOTES**

- 1 Data is valid at free field condition
- 2 Data is valid at nominal conditions.
- 3 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20μPa



**NOTES**

- 1 Data is valid at free field condition
- 2 Data is valid at nominal conditions.
- 3 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20μPa



# 10 Installation

## 10 - 1 Installation method

RZQ71~140B

### A. Non stacked installation

|  |   | ↖ | ↗ | ↘ | ↙ | ↕ | A        | B1                     | B2                     | C     | D1    | D2                  | E     | L1/L2 |                        |
|--|---|---|---|---|---|---|----------|------------------------|------------------------|-------|-------|---------------------|-------|-------|------------------------|
|  | ✓ |   |   |   |   |   | ≥50(100) |                        |                        |       |       |                     |       |       |                        |
|  | ✓ |   | ✓ | ✓ |   |   | ≥100     | ≥100                   | ≥100                   |       |       |                     |       |       |                        |
|  | ✓ |   |   |   | ✓ |   |          | ≥100                   |                        |       |       | ≤500                | ≥1000 |       |                        |
|  | ✓ |   | ✓ | ✓ | ✓ |   | ≥150     | ≥150                   |                        | ≥150  |       | ≤500                | ≥1000 |       |                        |
|  |   | ✓ |   |   |   |   |          |                        |                        |       |       | ≥500                |       |       |                        |
|  | ✓ | ✓ |   |   | ✓ |   |          |                        | ≤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<br>0<L1≤1/2H |
|  |   |   |   |   |   |   | L2<L1    | L2≤H                   | ≥50(100)<br>≥100(200)  |       |       | ≥500<br>≥1000(1500) | ≥500  | ≥1000 | 0<L2≤1/2H<br>1/2H<L2≤H |
|  | ✓ |   | ✓ | ✓ |   |   | ≥200     | ≥200(300)              |                        | ≥1000 |       |                     |       |       |                        |
|  | ✓ |   | ✓ | ✓ | ✓ |   | ≥200     | ≥200(300)              |                        | ≥1000 |       | ≤500                | ≥1000 |       |                        |
|  |   | ✓ |   |   | ✓ |   |          |                        |                        |       |       | ≥1000               |       |       |                        |
|  | ✓ | ✓ |   |   | ✓ |   |          |                        | ≤500                   |       | ≥1000 |                     | ≥1000 |       |                        |
|  |   |   |   |   |   |   | L1<L2    | ≥200(300)              |                        |       |       | ≥1000               |       |       |                        |
|  |   |   |   |   |   |   | L2<L1    | ≥150(250)<br>≥200(300) |                        |       |       | ≥1000<br>(1500)     |       |       | 0<L1≤1/2H<br>1/2H<L2≤H |
|  |   |   |   |   |   |   | L1<L2    | L1≤H                   | ≥200(300)              | ≤500  |       |                     | ≥1000 | ≥1000 | 0<L1≤1/2H<br>1/2H<L1≤H |
|  |   |   |   |   |   |   | L2<L1    | L2≤H                   | ≥150(250)<br>≥200(300) |       |       | ≥1000<br>(1500)     | ≤500  | ≥1000 | 0<L2≤1/2H<br>1/2H<L2≤H |
|  |   |   |   |   |   |   | L1<L2    | L1≤H                   | ≥200(300)              | ≤500  |       |                     | ≥1250 | ≥1000 | 0<L1≤1/2H<br>1/2H<L1≤H |
|  |   |   |   |   |   |   | L2<L1    | L2≤H                   | ≥150(250)<br>≥200(300) |       |       | ≥1000<br>(1500)     | ≤500  | ≥1000 | 0<L2≤1/2H<br>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.

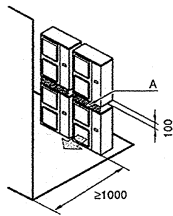
In these cases, only 2 units can be installed.

This situation is not allowed.

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

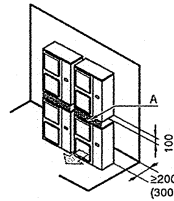
### B. Stacked installation

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



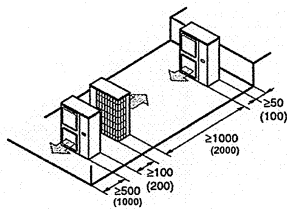
Do not stack more than one unit.  
About 100mm is required as the dimension for laying the upper outdoor unit's drain pipe.  
Get the portion A sealed so that air from the outlet does not bypass.

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

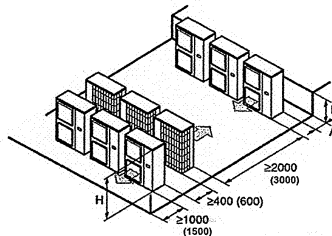


### C. Multiple-row installation

#### 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.

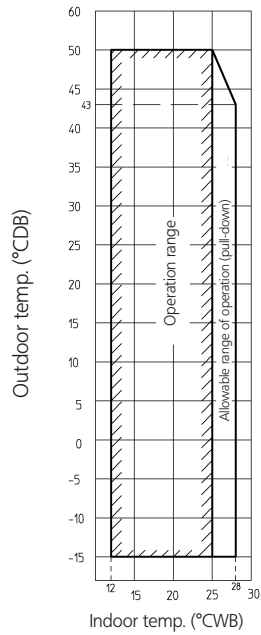
|       | L                       | A         |
|-------|-------------------------|-----------|
| L ≤ H | 0 < L ≤ 1/2 H           | 150 (250) |
|       | 1/2 H < L               | 200 (300) |
| H < L | Installation impossible |           |

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# 11 Operation range

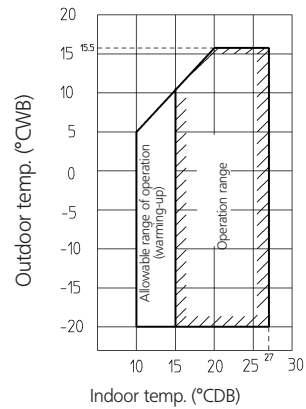
RZQ71B8V3

## Cooling



|            |
|------------|
| Model name |
| RZQ71B8V3B |

## Heating



**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.

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