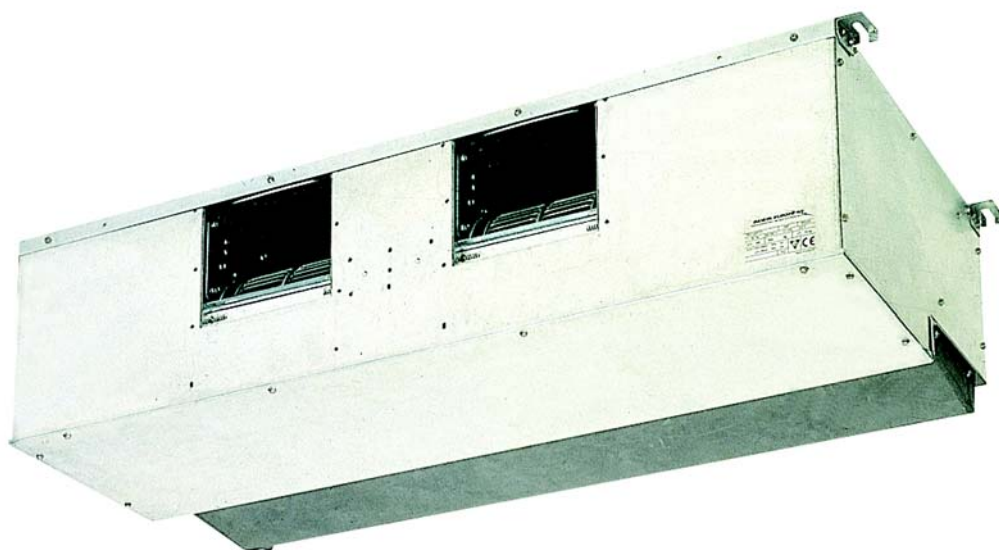




# Air Conditioning Technical Data

Large concealed ceiling unit



EEDEN14-100

FDQ-B



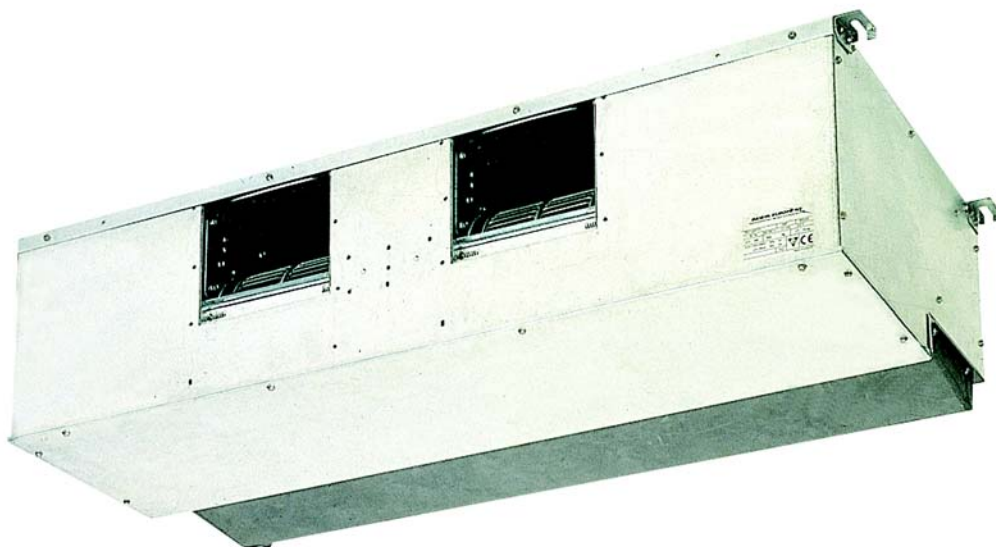
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## FDQ-B

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# 1 Features

- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- Up to 250Pa external static pressure allows extensive ductwork runs and flexible application: ideal for use in large areas
- Up to 26.4kW in heating mode



Home leave operation



Fan only



Auto cooling-heating changeover



Fan speed steps



Dry programme



Air filter



Weekly timer



Wired remote control



Centralised control



Auto-restart



Self diagnosis

## 2 Specifications

| 2-1 Technical Specifications |                          |                    |                |                     | FDQ200B                                           | FDQ250B               |
|------------------------------|--------------------------|--------------------|----------------|---------------------|---------------------------------------------------|-----------------------|
| Power input - 50Hz           | Cooling                  | Nom.               | kW             |                     | 1,340                                             |                       |
|                              | Heating                  | Nom.               | kW             |                     | 1,340                                             |                       |
| Casing                       | Colour                   |                    |                |                     | Unpainted                                         |                       |
|                              | Material                 |                    |                |                     | Galvanised steel                                  |                       |
| Dimensions                   | Unit                     | Height/Width/Depth | mm             |                     | 450/1,400/900                                     |                       |
|                              | Packed unit              | Height/Width/Depth | mm             |                     | 607/1,515/1,055                                   |                       |
| Required ceiling void >      |                          |                    | mm             |                     | 450                                               |                       |
| Weight                       | Unit                     |                    | kg             |                     | 89.0                                              | 94.0                  |
|                              | Packed unit              |                    | kg             |                     | 108.0                                             | 113.0                 |
| Heat exchanger               | Length                   |                    | mm             |                     | 1,200                                             |                       |
|                              | Rows                     | Quantity           |                |                     | 3                                                 |                       |
|                              | Fin pitch                |                    | mm             |                     | 2.00                                              |                       |
|                              | Passes                   | Quantity           |                |                     | 12                                                |                       |
|                              | Face area                |                    | m <sup>2</sup> |                     | 0.634                                             |                       |
|                              | Stages                   | Quantity           |                |                     | 24                                                |                       |
|                              | Empty tubeplate hole     | Quantity           |                |                     | 0                                                 |                       |
|                              | Tube type                |                    |                |                     | ø8 Hi-XSS                                         |                       |
|                              | Fin                      | Type               |                |                     | Non-symmetric fin                                 |                       |
|                              |                          | Treatment          |                |                     | Hydrophilic                                       |                       |
| Fan                          | Type                     |                    |                |                     | Sirocco fan                                       |                       |
|                              | Quantity                 |                    |                |                     | 2                                                 |                       |
|                              | Air flow rate            | Cooling            | Nom.           | m <sup>3</sup> /min | 69.0                                              | 89.0                  |
|                              |                          | Heating            | Nom.           | m <sup>3</sup> /min | 69.0                                              | 89.0                  |
|                              | External static pressure | High               |                | Pa                  | 250                                               |                       |
|                              |                          | Nom.               |                | Pa                  | 250                                               |                       |
|                              |                          | Low                |                | Pa                  | 250                                               |                       |
| Fan motor                    | Quantity                 |                    |                |                     | 1                                                 |                       |
|                              | Model                    |                    |                |                     | DPC241-241NB                                      |                       |
|                              | Drive                    |                    |                |                     | Direct drive                                      |                       |
|                              | Speed                    | Steps              |                |                     | 3                                                 | 2                     |
|                              | Output                   | High               | W              |                     | 650                                               | 1,000                 |
|                              |                          |                    |                |                     |                                                   |                       |
| Sound power level            | Cooling                  | /                  | dBA            |                     | 81                                                | 82                    |
| Sound pressure level         | Cooling                  | High               | dBA            |                     | 45.0                                              | 47.0                  |
|                              | Heating                  | Super high/Low     | dBA            |                     | -/45.0                                            | -/47.0                |
| Refrigerant                  | Type                     |                    |                |                     | R-410A                                            |                       |
| Piping connections           | Liquid                   | Type/OD            | mm             |                     | Flare connection/9.52                             | Flare connection/12.7 |
|                              | Gas                      | Type/OD            | mm             |                     | Braze connection/22.2                             |                       |
|                              | Drain                    |                    |                |                     | 25                                                |                       |
|                              | Heat insulation          |                    |                |                     | Both liquid and gas pipes                         |                       |
| Temperature control          |                          |                    |                |                     | Microprocessor thermostat for cooling and heating |                       |
| Air direction control        |                          |                    |                |                     | Up and downwards                                  |                       |
| Air filter                   | Type                     |                    |                |                     | Resin net with mold resistance                    |                       |
| Safety devices               | Item                     | 01                 |                |                     | Fan motor thermal fuse                            |                       |

Standard Accessories : Installation and operation manual; Quantity : 1;

| 2-2 Electrical Specifications |           |  |      |  | FDQ200B                      | FDQ250B |
|-------------------------------|-----------|--|------|--|------------------------------|---------|
| Power supply                  | Name      |  |      |  | V3                           |         |
|                               | Phase     |  |      |  | 1~                           |         |
|                               | Frequency |  | Hz   |  | 50                           |         |
|                               | Voltage   |  | V    |  | 230                          |         |
| Voltage range                 | Min.      |  | %    |  | -10                          |         |
|                               | Max.      |  | %    |  | 10                           |         |
| Current - 50Hz                | Zmax      |  | List |  | No requirements              |         |
| Power supply intake           |           |  |      |  | Both indoor and outdoor unit |         |

## 2 Specifications

### Notes

- (1) Sound values are measured in a semi-anechoic room with corrections.
- (2) The sound pressure level is measured via a microphone at 1m distance of the unit.
- (3) Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.
- (4) The sound power level is an absolute value indicating the power which a sound source generates.
- (5) For more details, please refer to wiring diagram, name plate and installation manual.

# 3 Options

## 3 - 1 Options

### FDQ-B

| Option                                                                  | Option name  | FDQ200B | FDQ250B |
|-------------------------------------------------------------------------|--------------|---------|---------|
| Wiring adapter for electrical appendices                                | KRP4A51      | X       | X       |
| Adapter for wiring (interlock for fresh air intake)                     | KRP1B54      | X       | X       |
| Interface adapter for Sky Air series                                    | DTA102A52    | -       | -       |
|                                                                         | DTA112B51    | X       | X       |
| Central remote controller                                               | DCS302C51    | X       | X       |
| Unified ON/OFF controller                                               | DCS301B51    | X       | X       |
| Schedule timer                                                          | DST301B51    | X       | X       |
| Option PCB for external electrical heater, humidifier and/or hour meter | EKRP1B2      | X       | X       |
| Wired remote controller                                                 | BRC1D52      | X       | X       |
| Wired remote controller                                                 | BRC1E51A7 *1 | X       | X       |
| Wired remote controller                                                 | BRC1E52A7 *2 | X       | X       |
| Wired remote controller                                                 | BRC1E52B7 *3 | X       | X       |
| Remote ON/OFF and FORCED OFF kit                                        | EKRORO       | X       | X       |

### NOTES

Connection with hour meter is possible by using the EKRP1B2.

\*1 Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian and Turkish.

\*2 Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish and Polish.

\*3 Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak and Slovenian.

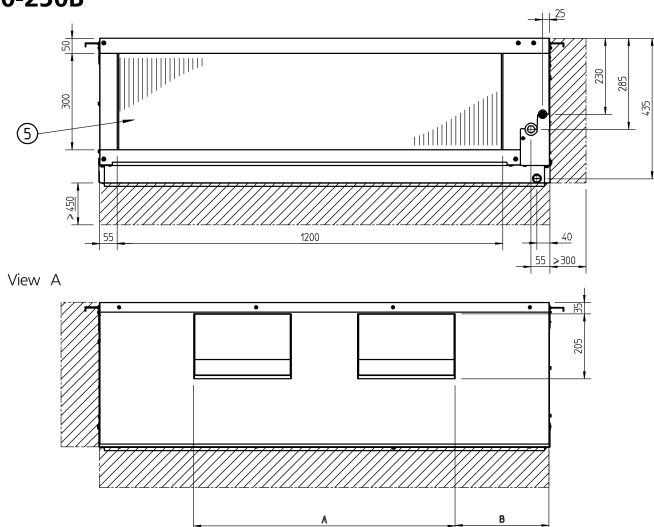
3TW22809-1H

## 4 Dimensional drawings

### 4 - 1 Dimensional Drawings

FDQ200-250B  
FDYP200-250B

unit (mm)

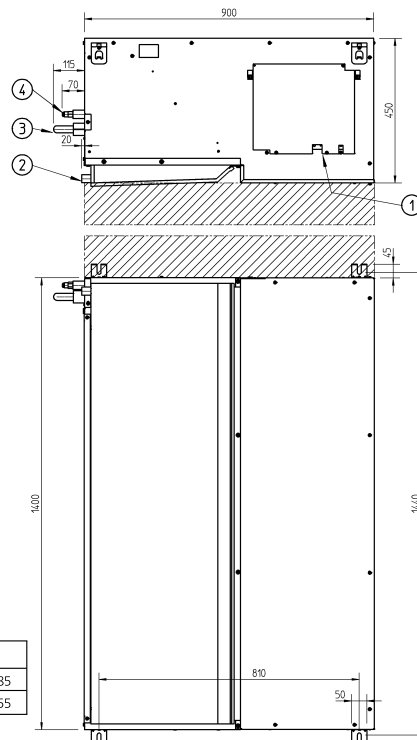


View A

- ① Power supply intake
- ② Drain connection  $\phi$  25 O.D.
- ③ Gas pipe connection  
FDYP200B/250B : 1 1/8" O.D. or 28,6 mm  
FDQ200/250 : 7/8" O.D. or 22,2 mm O.D.
- ④ Liquid pipe connection  
FDYP200B : Single union joint 1/2" or 12,7mm  
FDYP250B : Single union joint 5/8" or 15,9mm  
FDQ200 : Single union joint 3/8" or 9,52 mm  
FDQ250 : Single union joint 1/2" or 12,7mm
- ⑤ Filter

Notes:  
▨ : Service space

| Model                     | A   | B   |
|---------------------------|-----|-----|
| FDYP200B8V19/FDQ200B8V3B9 | 830 | 285 |
| FDYP250B8V19/FDQ250B8V3B9 | 890 | 255 |



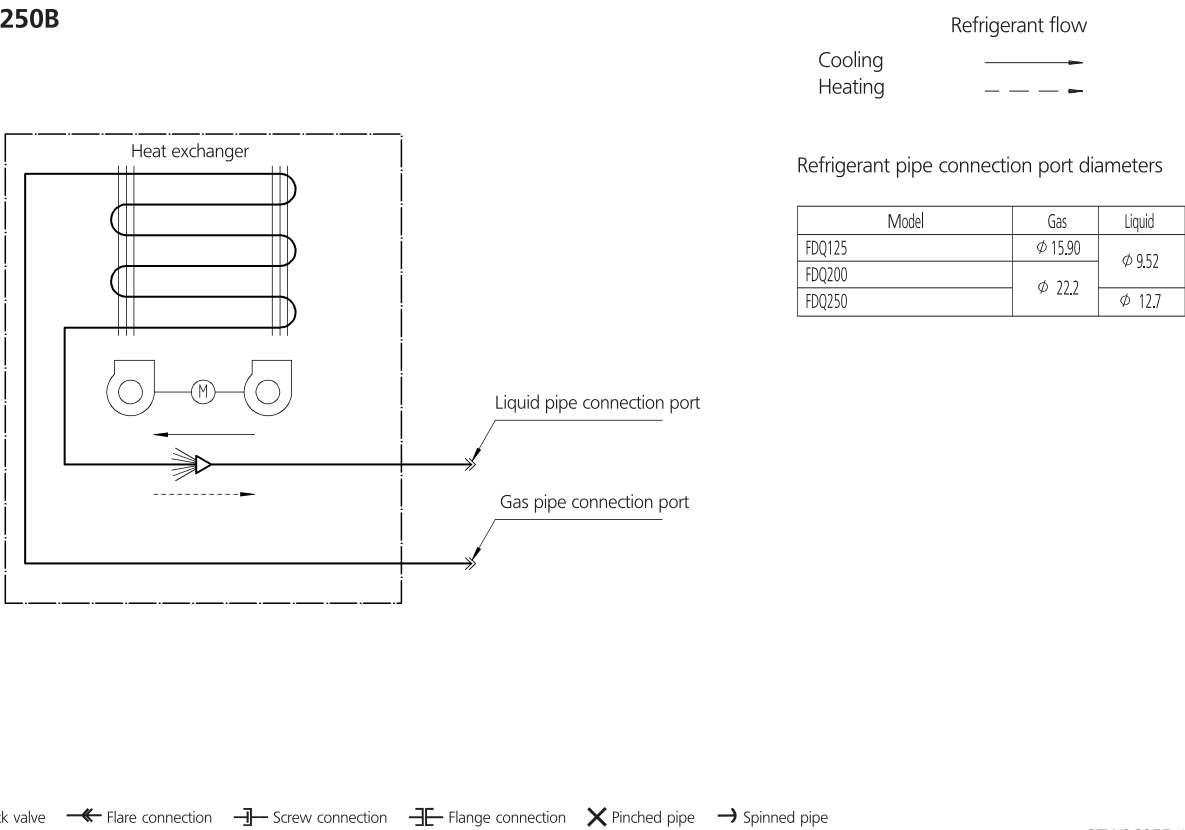
View A

3TW30844-1

# 5 Piping diagrams

## 5 - 1 Piping Diagrams

### FDQ125-250B



3TW26055-1A

## 6 Wiring diagrams

### 6 - 1 Wiring Diagrams - Single Phase

#### FDQ-B

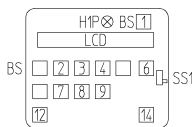
##### Notes

- When using the central remote control, see manual for connection to the unit.
- Be sure that the power supply is switched off before opening the switch box.

\* L-tap is not available for 250 class.

Field wiring Terminal  
Connector Protective earth (screw)  
Colours  
BLK: Black / BLU: Blue  
RED: Red / WHT: White / YLW: Yellow

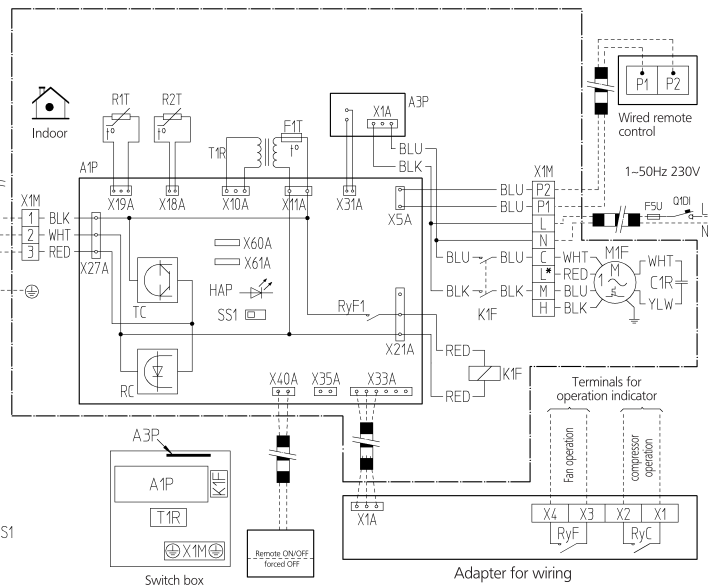
##### Details of wired remote control



|                      |                                  |
|----------------------|----------------------------------|
| Wired remote control |                                  |
| BS1                  | On/Off button                    |
| BS2                  | Timer mode start/stop button     |
| BS3,BS8              | Programming time button          |
| BS4                  | Temperature setting button up    |
| BS9                  | Temperature setting button down  |
| BS6                  | Operation mode selector button   |
| BS7                  | Timer on/off button              |
| BS12                 | Inspection/test operation button |

|     |                                              |
|-----|----------------------------------------------|
| A1P | Printed circuit board                        |
| T1R | Transformer(230V / 21.8V)                    |
| A3P | Printed circuit board                        |
| C1R | Capacitor (fan)                              |
| F1T | Thermal fuse (M1F embedded)                  |
| HAP | Light emitting diode (service monitor green) |
| K1F | Magnetic contactor (M1F)                     |
| M1F | Motor (Fan)                                  |

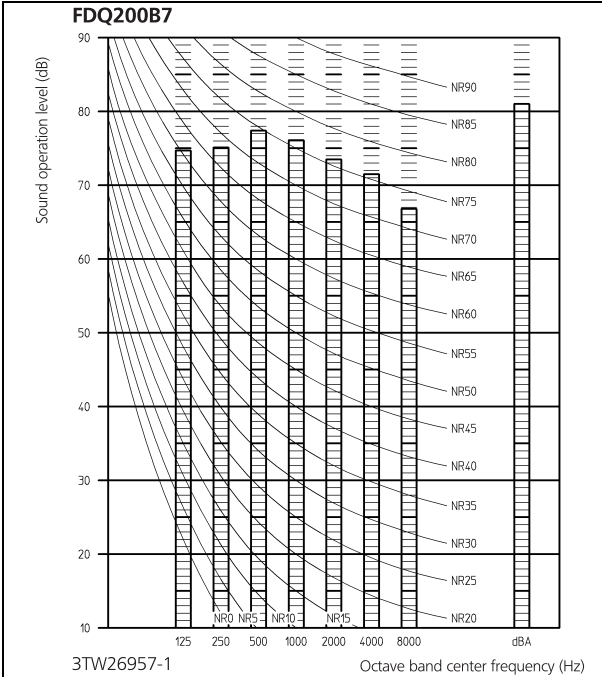
|      |                             |
|------|-----------------------------|
| R1T  | Thermistor (air)            |
| R2T  | Thermistor (coil)           |
| RyF1 | Magnetic relay (fan)        |
| SS1  | Selector switch (emergency) |
| X1M  | Terminal strip              |
| RC   | Signal receiver circuit     |
| TC   | Signal transmission circuit |
| F5U  | Fuse                        |
| Q1DI | Earth leakage breaker       |



2TW26036-1C

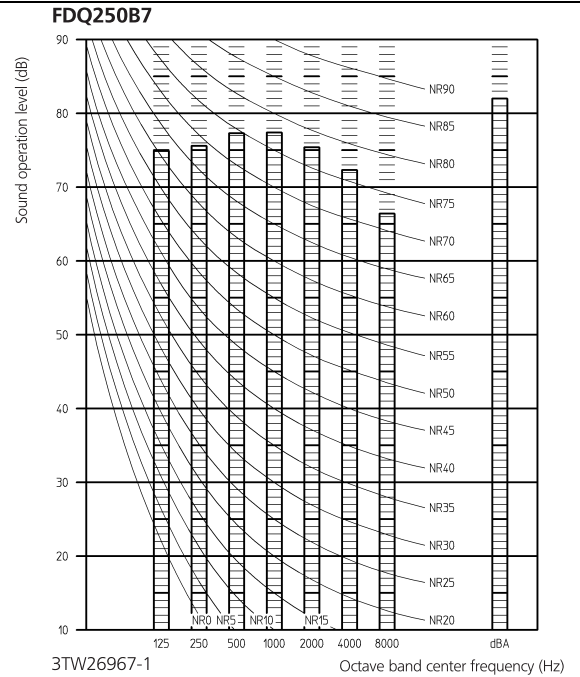
# 7 Sound data

## 7 - 1 Sound Power Spectrum



**NOTES**

- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition
- 3 dBA A-weighted sound operation level. (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20Pa
- 5 Curve for FDQ200B7V3B in cooling mode



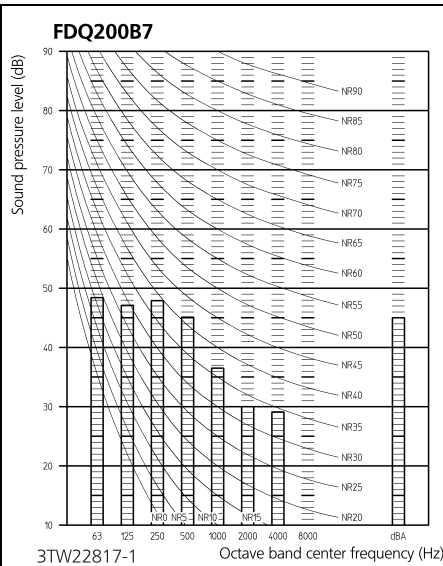
**NOTES**

- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition
- 3 dBA A-weighted sound operation level. (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20Pa
- 5 Curve for FDQ250B7V3B in cooling mode

## 7 Sound data

### 7 - 2 Sound Pressure Spectrum

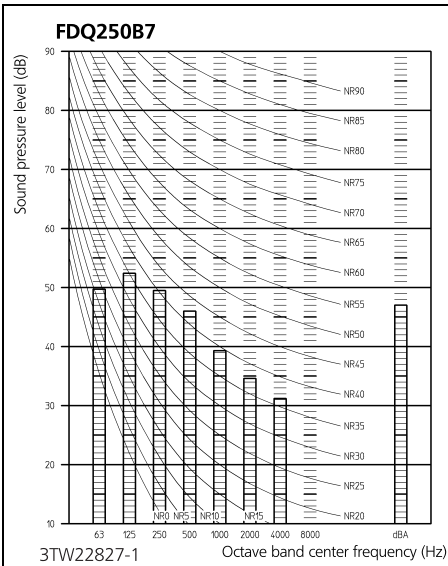
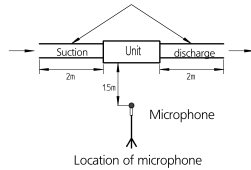
7



#### NOTES

- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition (50 Pa ESP, 72m<sup>3</sup>/min)
- 3 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20Pa
- 5 the indicated sound pressure is the casing radiated sound pressure.

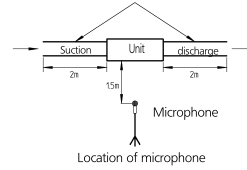
Metalducts insulated inside



#### NOTES

- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition (62 Pa ESP, 90m<sup>3</sup>/min)
- 3 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20Pa
- 5 the indicated sound pressure is the casing radiated sound pressure.

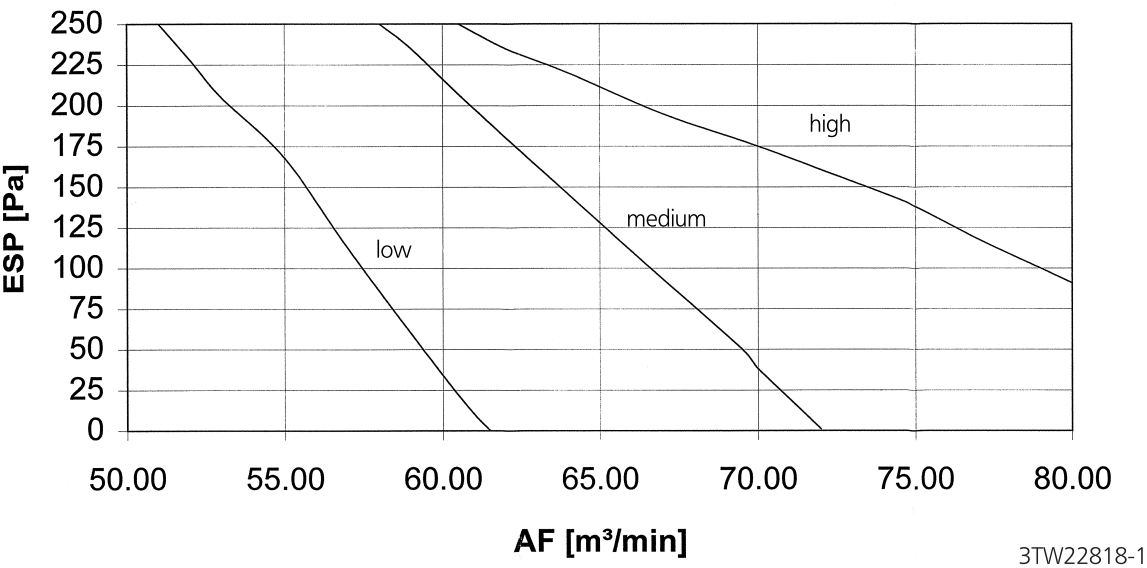
Metalducts insulated inside



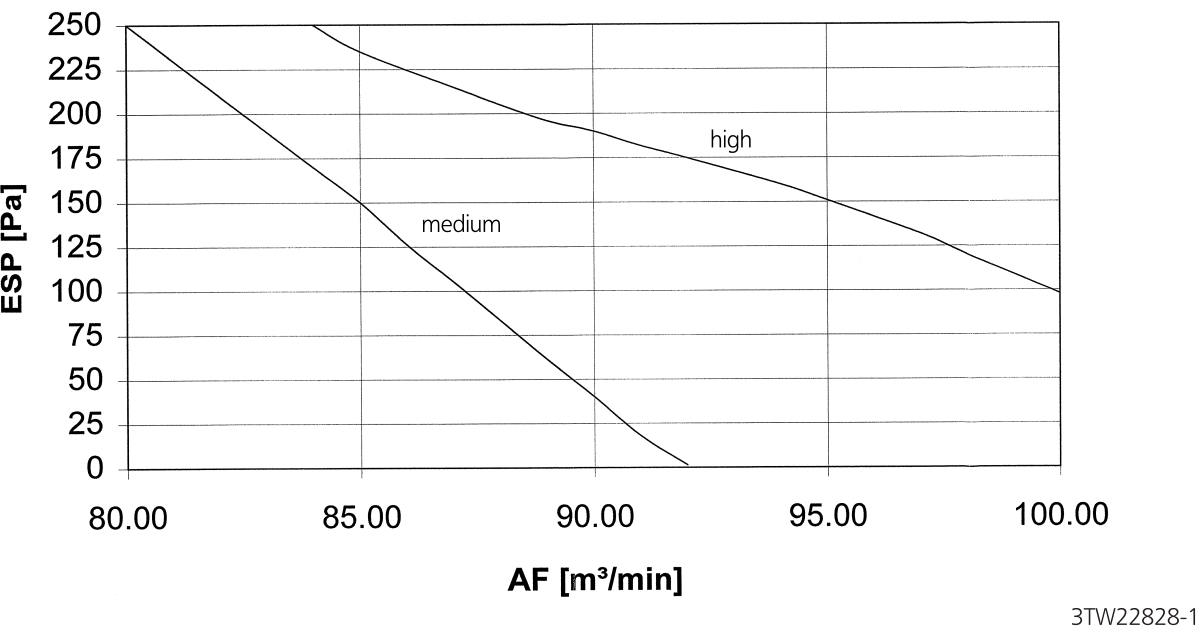
8 Fan characteristics

8 - 1 Fan Characteristics

Fan curve FDQ200B7



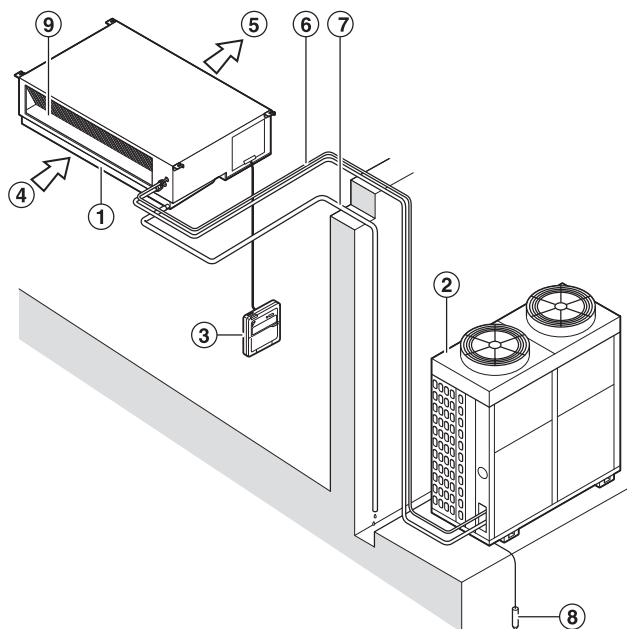
Fan curve FDQ250B7



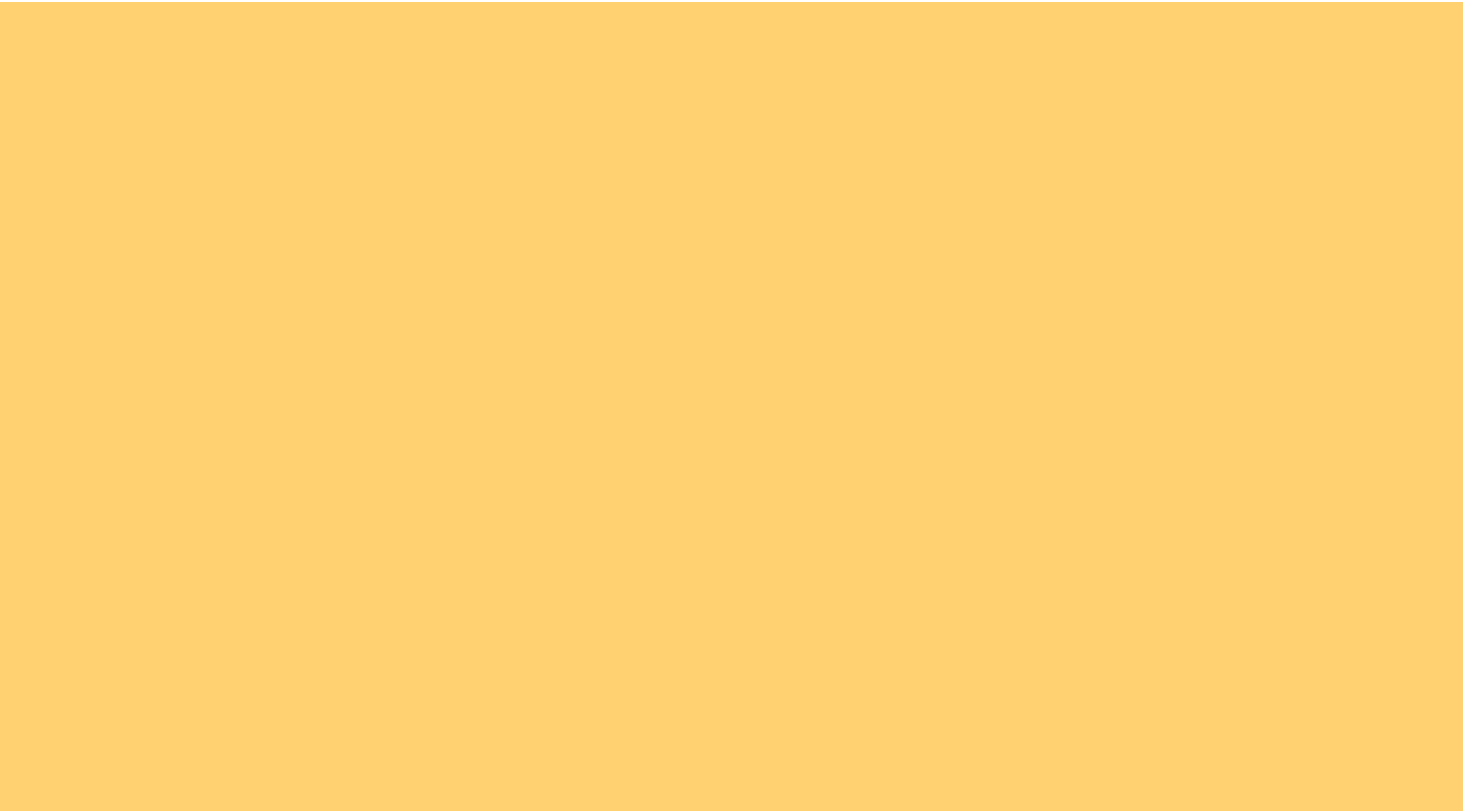
## 9 Installation

### 9 - 1 Installation Method

9



| Number | Description                                                                       |
|--------|-----------------------------------------------------------------------------------|
| 1      | Indoor unit                                                                       |
| 2      | Outdoor unit                                                                      |
| 3      | Remote control                                                                    |
| 4      | Inlet air                                                                         |
| 5      | Discharged air                                                                    |
| 6      | Refrigerant piping, connection electric wire                                      |
| 7      | Drain pipe                                                                        |
| 8      | Ground wire<br>Wire to ground from the outdoor unit to prevent electrical shocks. |
| 9      | Air filter                                                                        |



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