



Air Conditioning Technical Data

Concealed ceiling unit



EEEN14-100

FDXS-F(9)

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FDXS-F(9)

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1 Features

- Compact dimensions, can easily be mounted in a ceiling void of only 240mm
- Blends unobtrusively with any interior décor: only the suction and discharge grilles are visible
- Low energy consumption thanks to DC fan motor
- Medium external static pressure facilitates unit use with flexible ducts of varying lengths

1



Fan only



Fan speed steps



Dry programme



Air filter



Weekly timer



24 hour timer



Infrared remote control



Wired remote control



Centralised control



Auto-restart



Self diagnosis



Multi model application



Super Multi Plus

2 Specifications

| 2-1 Technical Specifications | | | | FDXS25F | FDXS35F | FDXS50F9 | FDXS60F | |
|------------------------------|--------------------------|--------------------------|-----------------|-------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Power input | Cooling | Nom. | kW | 0.036 | | 0.060 | | |
| | Heating | Nom. | kW | 0.036 | | 0.060 | | |
| Dimensions | Unit | Height/Width/Depth | mm | 200/750/620 | | 200/1,150/620 | | |
| | Packed unit | Height/Width/Depth | mm | 274/906/751 | | 266/1,306/751 | | |
| Weight | Unit | | kg | 21 | | 30 | | |
| | Packed unit | | kg | 29 | | 37 | | |
| Packing | Weight | | kg | - | | 7 | - | |
| Heat exchanger | Length | | mm | 500 | | 900 | | |
| | Rows | Quantity | | 3 | | 2 | | |
| | Fin pitch | | mm | 1.5 | | | | |
| | Stages | Quantity | | 12 | | | | |
| | Tube type | | | ø7 Hi-XD | | | | |
| | Fin | Type | | Multi slit fin | | | | |
| Fan | Type | | | Sirocco fan | | | | |
| | Air flow rate | Cooling | High | m³/min | 8.7 | | 12.0 | 16.0 |
| | | | | cfm | 307 | | 424 | 565 |
| | | | Nom. | m³/min | 8.7 | | 11.0 | 16.0 |
| | | Heating | High | m³/min | 7.3 | | 10.0 | 13.5 |
| | | | | cfm | 258 | | 353 | 477 |
| | | | Nom. | m³/min | 8.7 | | 16.0 | |
| | cfm | | | 307 | | 565 | | |
| | Low | | m³/min | 8.0 | | 14.8 | | |
| | | | cfm | 282 | | 523 | | |
| | External static pressure | Nom. | Pa | 30 | | 40 | | |
| | Fan motor | Model | | | KFD-280-44-8A | | KFD-280-65-8A | |
| | | Speed | Steps | | 3 | | | |
| Cooling | | | High/Medium/Low | rpm | 1,270/1,180/1,090 | | 1,270/1,180/1,080 | 1,280/1,160/1,040 |
| | | | Heating | High/Medium/Low | rpm | 1,270/1,180/1,090 | | 1,270/1,180/1,080 |
| Sound power level | Cooling | / | dBA | 53 | | 55 | 56 | |
| | Heating | / | dBA | 53 | | 55 | 56 | |
| Sound pressure level | Cooling | High/Nom./Low | dBA | 35/33/27 | | 38/36/30 | | |
| | Heating | Super high/High/Nom./Low | dBA | -/35/33/27 | | -/38/36/30 | | |
| Refrigerant | Type | | | R-410A | | | | |
| Piping connections | Liquid | OD | | 6.35 | | | | |
| | Gas | OD | | 9.5 | | 12.7 | | |
| | Drain | | | VP20 (I.D. 20/O.D. 26) | | | | |
| | Heat insulation | | | Both liquid and gas pipes | | | | |
| Temperature control | | | | Microcomputer control | | | | |
| Air filter | Type | | | Removable / washable / mildew proof | | | | |

Standard Accessories : Insulation for fitting; Quantity : 1;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Sealing pad; Quantity : 1;

Standard Accessories : Clamp metal; Quantity : 1;

Standard Accessories : Air filter; Quantity : 1;

Standard Accessories : Washer for hanger bracket; Quantity : 8;

Standard Accessories : Drain hose; Quantity : 1;

Standard Accessories : Screws for duct flanges; Quantity : 1;

2 Specifications

Standard Accessories : Washer fixing plate; Quantity : 4;

Standard Accessories : Clamps; Quantity : 6;

Standard Accessories : Sealing material; Quantity : 2;

2

| 2-2 Electrical Specifications | | | | FDXS25F | FDXS35F | FDXS50F9 | FDXS60F |
|-------------------------------|--------------------------------------|---------|----|---------|---------|----------|---------|
| Power supply | Name | | | VE | | | |
| | Phase | | | 1~ | | | |
| | Frequency | | Hz | 50 | | | |
| | Voltage | | V | 230 | | 220-240 | |
| Current | Nominal running current (RLA) - 50Hz | Cooling | A | 0.3 | | 0.5 | |
| | | Heating | A | 0.3 | | 0.5 | |

Notes

(1) Operating sound is based on the rear side suction inlet and ESP 40Pa. Operating sound for under side suction inlet: (operation sound for rear side suction inlet) +5dB. However, when installation to which the ESP becomes low is carried out, 5dB or more may go up

(2) When connected with multi-system outdoor unit, refer to the specifications of the multi outdoor unit to be connected.

3 Options

3 - 1 Options

FDXS-F(9)

| | Option name | FDXS25F | FDXS35F | FDXS50F9 | FDXS60F |
|-----------------------------|---|---------|--|----------|---------|
| Individual control systems | Wired remote control | | BRC1D52/BRC1D61 (1)/BRC1E51A | | |
| | Simplified remote controller Stylish remote controller | | BRC2C51/BRC1E52A/BRC1E52B (3) | | |
| | Remote control for hotel use | | BRC3A61 | | |
| | Infrared remote control (HIP) | | BRC4065 | | |
| Centralised control systems | Central remote controller | | DCS302CA51/DCS302CA61 (1) | | |
| | Unified ON/OFF control | | DCS301BA51/DCS301BA61(A) | | |
| | Schedule timer | | DST301BA51/DST301BA61 (1) | | |
| | Residential central remote control | | DCS303A51 (1) (2) | | |
| Other options | Adapter for wiring | | KRP1B56 | | |
| | Wiring adapter for electrical appendices 1 | | KRP2A53 | | |
| | Wiring adapter for electrical appendices 2 | | KRP4A54 | | |
| | Remote sensor | | KRC501-4B | | |
| | Installation box for adapter PCB | | KRP1BA101 | | |
| | Electric box with earth terminal - 2 blocks | | KRB212AA | | |
| | Electric box with earth terminal - 3 blocks | | KRB311AA | | |
| | Noise filter (for electromagnetic interface use only) Insulation kit for high humidity | | KEK26-1A KDT25N32/KDT25N50/KDT25N63 | | |

(1) For DAME only
 (2) For residential use only. Cannot be used together with other centralised control equipment.
 (3) Standard there is no remote controller delivered with this indoor unit. Wired and infrared control to be ordered separately.

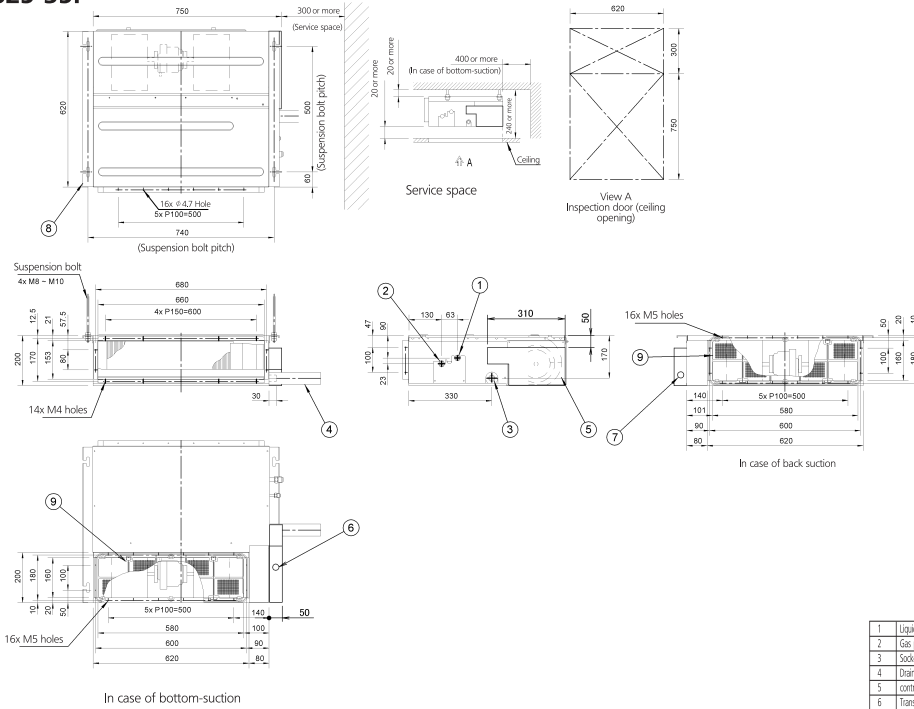
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4 Dimensional drawings

4 - 1 Dimensional Drawings

4

FDXS25-35F



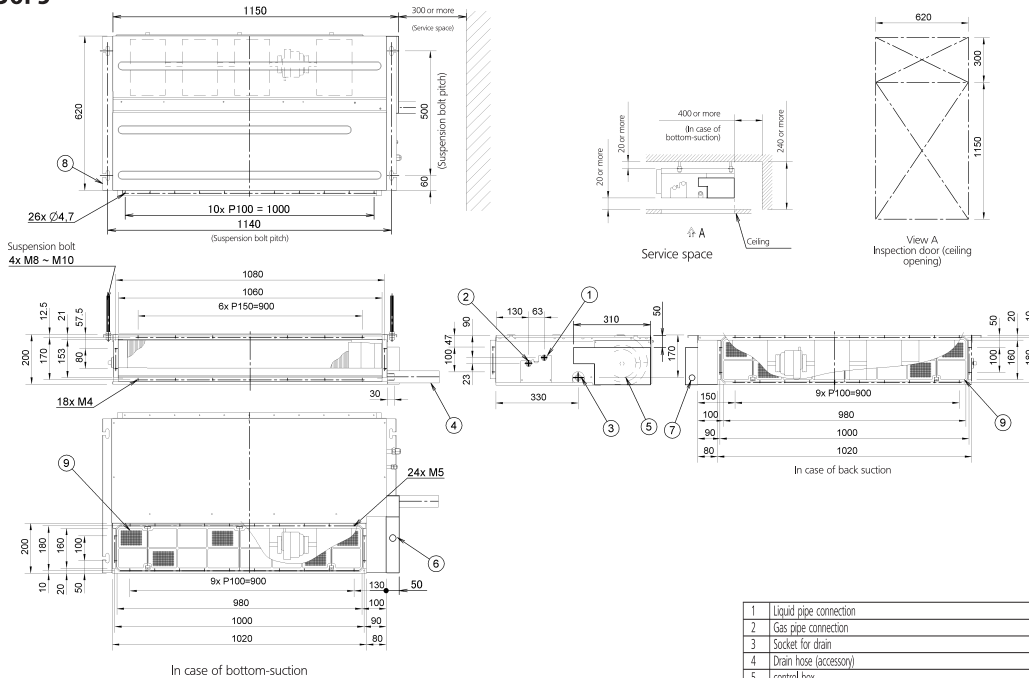
| | | |
|---|-------------------------|--------------------------|
| 1 | Liquid pipe connection | ∅ 6.4 flare connection |
| 2 | Gas pipe connection | ∅ 9.5 flare connection |
| 3 | Socket for drain | VP 20 (OD ∅ 26, ID ∅ 20) |
| 4 | Drain hose (accessory) | ID ∅ 25 (Outlet) |
| 5 | control box | |
| 6 | Transmission wiring | |
| 7 | Power supply connection | |
| 8 | Suspension bracket | |
| 9 | Air filter (accessory) | |

Note:

- In case of back-suction, mount chamber cover to bottom side of the unit.
In case of bottom-suction, mount chamber cover to back side of the unit.
- Location of unit's name plate: control box cover.
- Mount the air filter at the suction side. (Use an air filter whose dust collecting efficiency is at least 50% in a gravimetric technique.) It can not be equipped with air filter (accessory) when connecting duct to suction side.

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FDXS50F9



| | | |
|---|-------------------------|--------------------------|
| 1 | Liquid pipe connection | ∅ 6.4 flare connection |
| 2 | Gas pipe connection | ∅ 12.7 flare connection |
| 3 | Socket for drain | VP 20 (OD ∅ 26, ID ∅ 20) |
| 4 | Drain hose (accessory) | ID ∅ 25 (Outlet) |
| 5 | control box | |
| 6 | Transmission wiring | |
| 7 | Power supply connection | |
| 8 | Suspension bracket | |
| 9 | Air filter (accessory) | |

Note:

- In case of back-suction, mount chamber cover to bottom side of the unit.
In case of bottom-suction, mount chamber cover to back side of the unit.
- Location of unit's name plate: control box cover.
- Mount the air filter at the suction side. (Use an air filter whose dust collecting efficiency is at least 50% in a gravimetric technique.) It can not be equipped with air filter (accessory) when connecting duct to suction side.

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6

4 Dimensional drawings

4 - 1 Dimensional Drawings

FDXS60F

The drawings include:

- Top View:** Shows a rectangular unit with a width of 1150 mm and a height of 620 mm. It features 10x P100=1000 coils with a suspension bolt pitch of 1140 mm. A service space of 300 mm or more is indicated on the right side.
- Side View (Left):** Shows the unit's profile with a total height of 200 mm. It details the suspension bolt (4x M8 - M10) and coil spacing (1080 mm).
- Side View (Right):** Shows the unit's profile with a total height of 200 mm. It details the coil spacing (1080 mm) and the location of the service space.
- View A:** A top-down view of the inspection door (ceiling opening) with dimensions 620 mm by 1150 mm.
- Bottom View (Left):** Shows the unit's base with dimensions 1020 mm by 980 mm. It includes 9x P100=900 coils and 18x M4 mounting points.
- Bottom View (Right):** Shows the unit's base with dimensions 1020 mm by 980 mm. It includes 9x P100=900 coils and 24x M5 mounting points.
- Detail View:** A cross-sectional view of the unit's internal components, showing the liquid pipe connection (1), gas pipe connection (2), socket for drain (3), drain hose (4), control box (5), transmission wiring (6), power supply connection (7), suspension bracket (8), and air filter (9).

Note:

- In case of back-suction, mount chamber cover to bottom side of the unit.
- In case of bottom-suction, mount chamber cover to back side of the unit.
- Location of unit's name plate: control box cover.
- Mount the air filter at the suction side. (Use an air filter whose dust collecting efficiency is at least 50% in a gravimetric technique.) It can not be equipped with air filter (accessory) when connecting duct to suction side.

| | | |
|---|-------------------------|----------------------------|
| 1 | Liquid pipe connection | Φ 6.4 flare connection |
| 2 | Gas pipe connection | Φ 12.7 flare connection |
| 3 | Socket for drain | VP 20 (OD: Φ 26, ID: Φ 20) |
| 4 | Drain hose (accessory) | ID: Φ 25 (Outer) |
| 5 | control box | |
| 6 | Transmission wiring | |
| 7 | Power supply connection | |
| 8 | Suspension bracket | |
| 9 | Air filter (accessory) | |

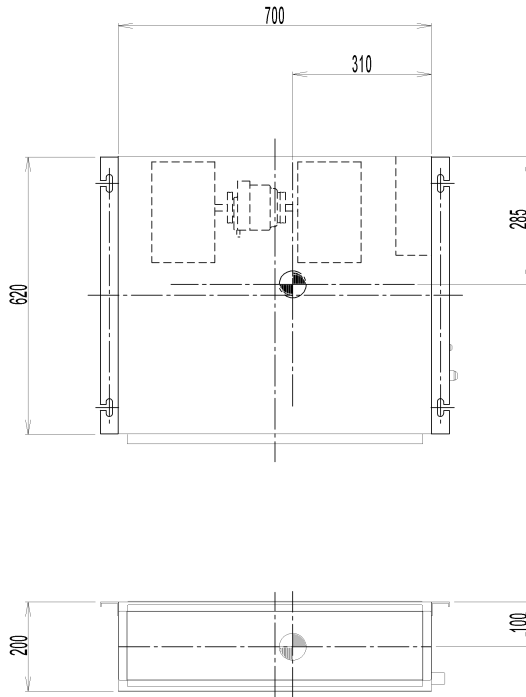
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5 Centre of gravity

5 - 1 Centre of Gravity

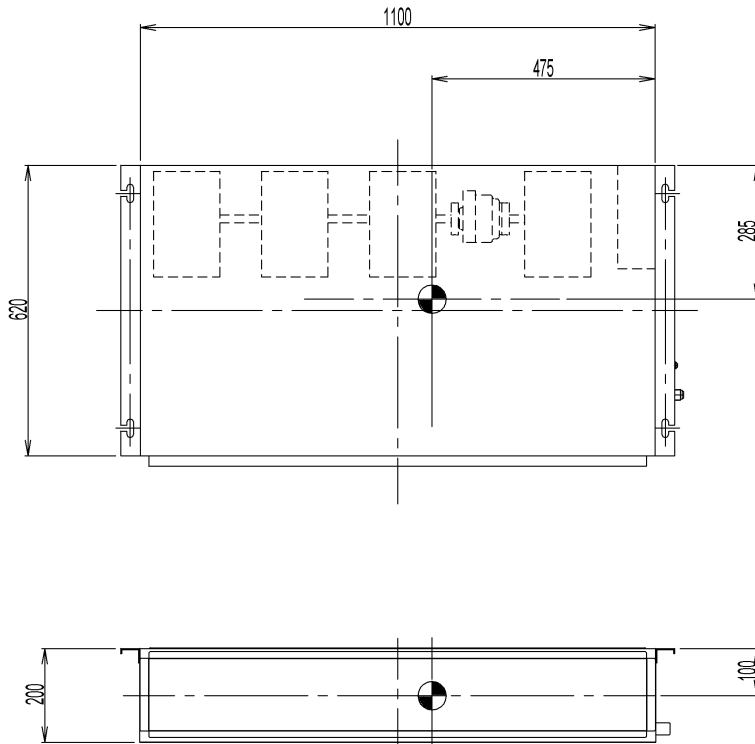
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FDXS25-35F



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FDXS50F9

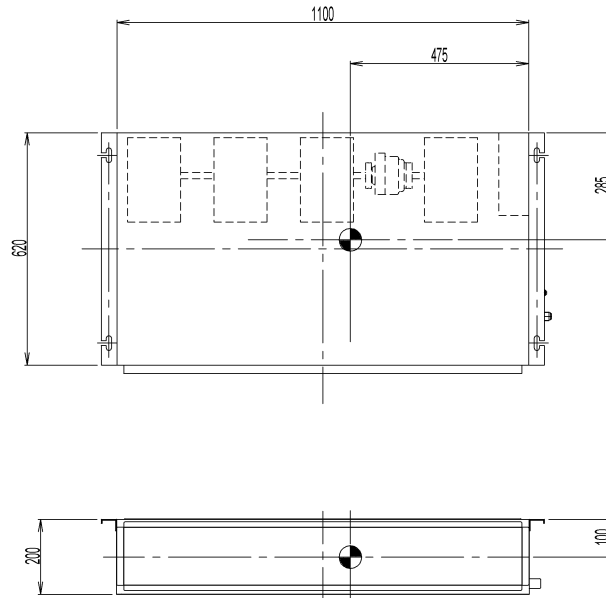


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5 Centre of gravity

5 - 1 Centre of Gravity

FDXS60F

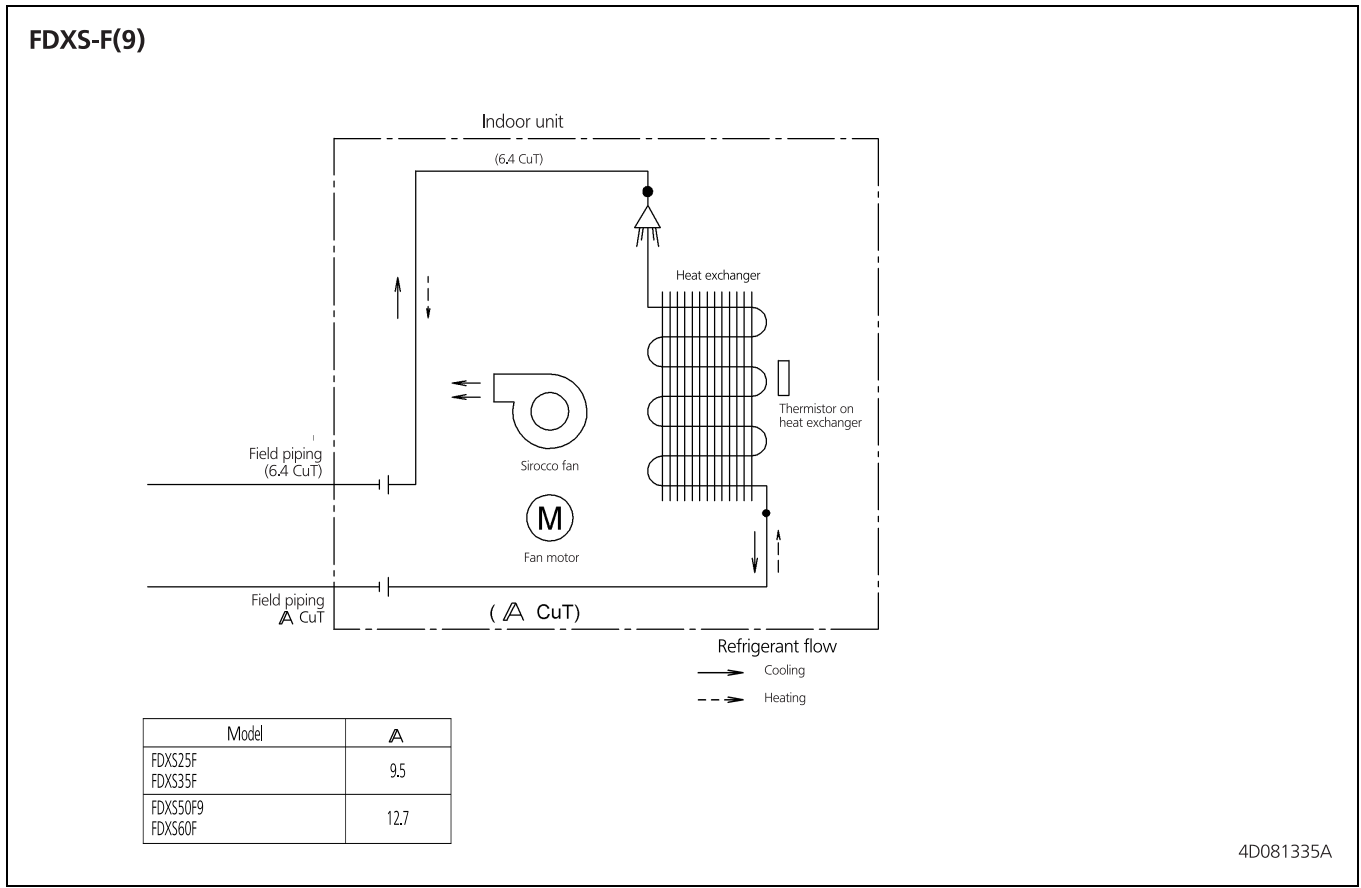


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6 Piping diagrams

6 - 1 Piping Diagrams

6



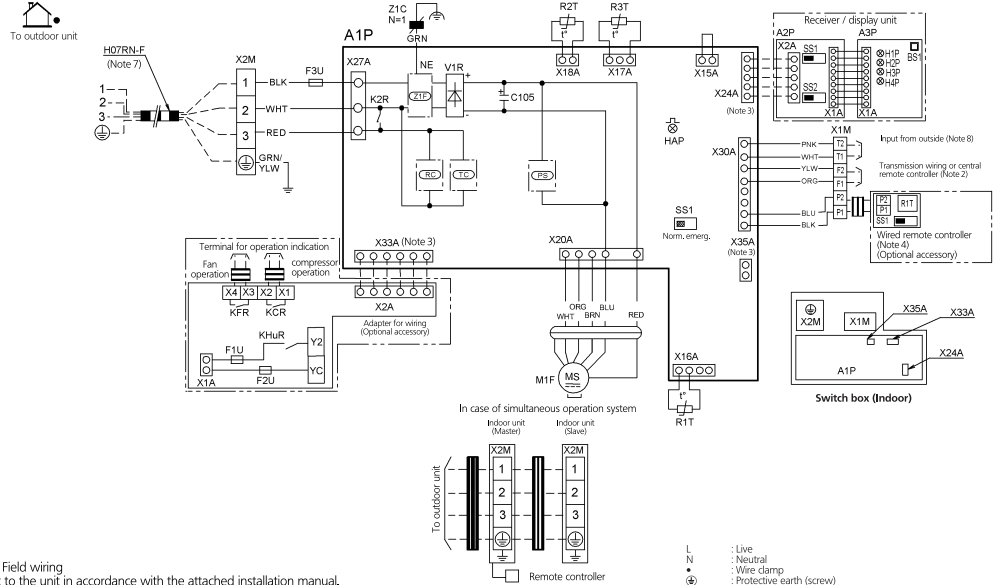
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7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

FDXS-F(9)

- Indoor unit**
- A1P : Printed circuit board
 - C105 : Capacitor
 - F3U : Fuse (F, 5A, 250V)
 - K2R : Magnetic relay
 - K2R : Power supply circuit
 - RECV : Receiving circuit
 - TRNS : Transmission circuit
 - HAP : Light emitting diode (Service monitor-green)
 - M1F : Motor (Fan)
 - R1T : Thermistor (Air)
 - R2T,R3T : Thermistor (Coil)
 - SS1 : Selector switch (Emergency)
 - V1R : Diode bridge
 - X1M : Terminal strip (Control)
 - X2M : Terminal strip (Power supply)
 - Z1C : Ferrite core (Noise filter)
 - Z1F : Noise filter
- Receiver / display unit**
- A2P : Printed circuit board
 - A3P : Printed circuit board
 - H1P : Light emitting diode (on-red)
 - H2P : Light emitting diode (filter sign-red)
 - H3P : Light emitting diode (filter-green)
 - H4P : Light emitting diode (defrost-orange)
 - SS1 : Selector switch (Main/Sub)
 - SS2 : Selector switch (Infrared address set)
 - BS1 : Push button (On/Off)
- Connector for optional parts**
- X24A : Connector (Infrared remote controller)
 - X33A : Connector (Adapter for wiring)
 - X35A : Connector (Adapter power supply)
- Wired remote controller**
- R1T : Thermistor (air)
 - SS1 : Select switch (Emergency)
- Adapter for wiring**
- F1U,F2U : Fuse ((B), 5A, 250V)
 - KFR, KCR, KHuR : Magnetic relay



- Notes**
- Terminal block, D-Connector, Field wiring
 - In case using central remote controller, connect it to the unit in accordance with the attached installation manual.
 - X24A, X33A, X35A are connected when the optional accessories are being used.
 - For change over of BRC1E type main/sub refer to manual attached to remote controller.
 - Symbols shows as follows: RED:Red BLK:Black WHT:White YLW:Yellow GRN:Green ORG:Orange BRN:Brown PNK:Pink GRY:Gray BLU:Blue
 - Shows only in case of protected pipes, use HO7RN-F in case of no protection.
 - For detail, see wiring diagram attached to outdoor unit.
 - When connecting the input wires from outside, forced OFF or ON/OFF control operation can be selected by the remote controller, see manual for detail.

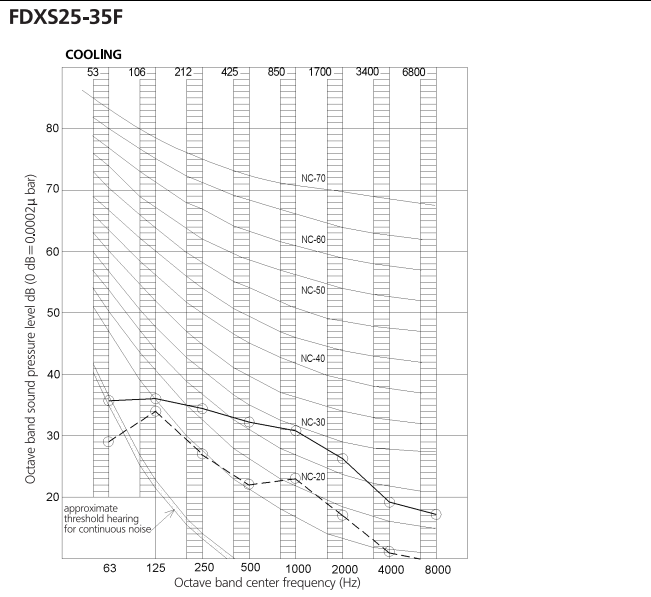
- L : Live
- N : Neutral
- : Wire clamp
- ⊕ : Protective earth (screw)

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8 Sound data

8 - 1 Sound Pressure Spectrum - Cooling

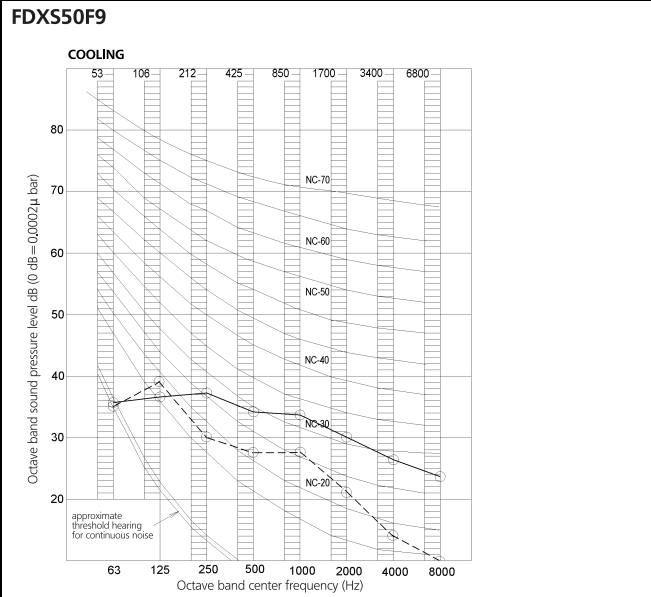
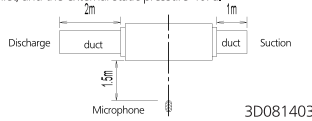
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NOTES

- Overall (dB)

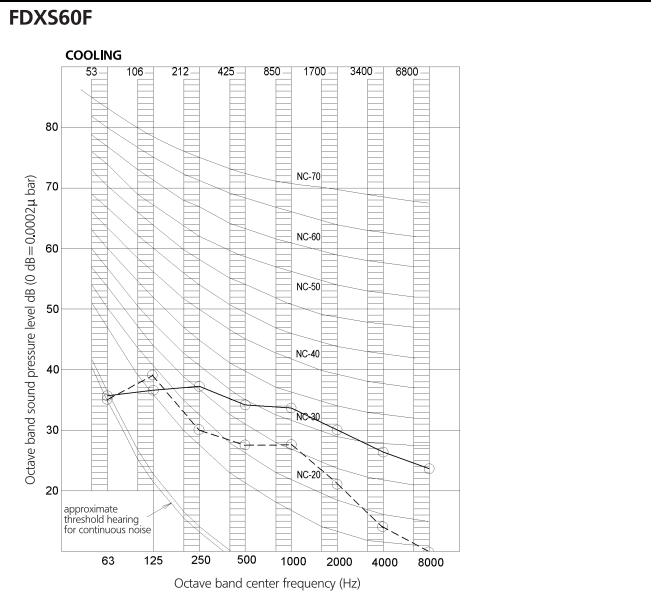
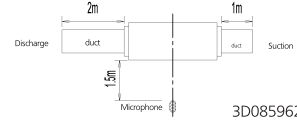
| Scale | 220-240V/50Hz 220-230V/60Hz | 220-240V/50Hz 220-230V/60Hz |
|-------|--------------------------------|--------------------------------|
| A | 35 | 27 |
- (B.G.N is already rectified)
- Measuring place: Measure in anechoic room
- Operation noise differs with operation and ambient conditions.
- The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.
- Operating conditions:
Power source 220-240V 50Hz/220-230V 60Hz
- Standard external static pressure
- JIS
○—○ (H) 220-240V 50Hz/220-230V 60Hz
○---○ (L) 220-240V 50Hz/220-230V 60Hz
- Location of microphone:



NOTES

- Overall (dB)

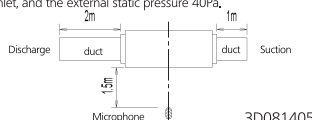
| Scale | 50Hz/230V 60Hz/220V | 50Hz/230V 60Hz/220V |
|-------|------------------------|------------------------|
| A | 38 | 30 |
- (B.G.N is already rectified)
- Measuring place: Measure in anechoic room
- Operation noise differs with operation and ambient conditions.
- The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.
- Operating conditions:
Power source 230V 50Hz/220V 60Hz
- Standard external static pressure
- JIS
○—○ (H) 230V 50Hz/220V 60Hz
○---○ (L) 230V 50Hz/220V 60Hz
- Location of microphone:



NOTES

- Overall (dB)

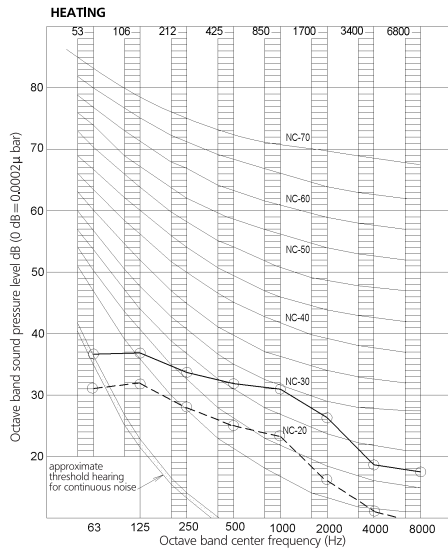
| Scale | 230V/50Hz 220V/60Hz | 230V/50Hz 220V/60Hz |
|-------|------------------------|------------------------|
| A | 38 | 30 |
- (B.G.N is already rectified)
- Measuring place: Measure in anechoic room
- Operation noise differs with operation and ambient conditions.
- The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.
- Operating conditions:
Power source 230V 50Hz/220V 60Hz
- Standard external static pressure
- JIS
○—○ (H) 230V 50Hz/220V 60Hz
○---○ (L) 230V 50Hz/220V 60Hz
- Location of microphone:



8 Sound data

8 - 2 Sound Pressure Spectrum - Heating

FDXS25-35F



NOTES

1 Overall (dB)

| Scale | 220-240V/50Hz 220-230V/60Hz (H) | 220-240V/50Hz 220-230V/60Hz (L) |
|-------|---------------------------------------|---------------------------------------|
| A | 35 | 27 |

(B.G.N is already rectified)

2 Measuring place: Measure in anechoic room

3 Operation noise differs with operation and ambient conditions.

4 The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.

5 Operating conditions:
Power source 220-240V 50Hz/220-230V 60Hz

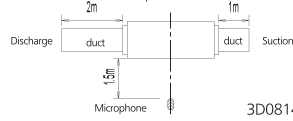
6 Standard external static pressure

JIS

○—○ (H) 220-240V 50Hz/220-230V 60Hz

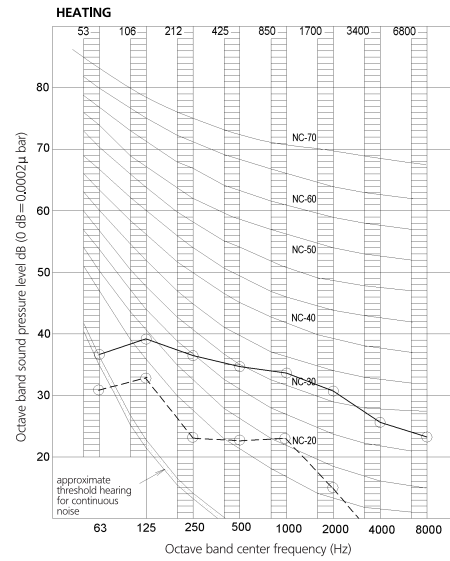
○---○ (L) 220-240V 50Hz/220-230V 60Hz

7 Location of microphone:



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FDXS50F9



NOTES

1 Overall (dB)

| Scale | 50Hz/230V 60Hz/220V (H) | 50Hz/230V 60Hz/220V (L) |
|-------|-------------------------------|-------------------------------|
| A | 38 | 30 |

(B.G.N is already rectified)

2 Measuring place: Measure in anechoic room

3 Operation noise differs with operation and ambient conditions.

4 The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.

5 Operating conditions:
Power source 230V 50Hz/220V 60Hz

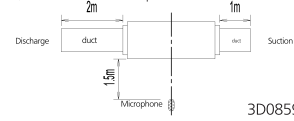
6 Standard external static pressure

JIS

○—○ (H) 230V 50Hz/220V 60Hz

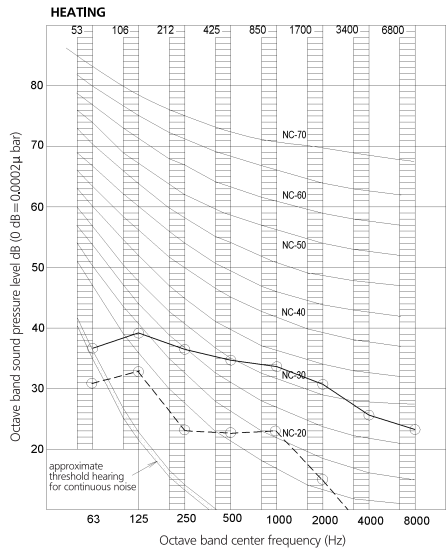
○---○ (L) 230V 50Hz/220V 60Hz

7 Location of microphone:



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FDXS60F



NOTES

1 Overall (dB)

| Scale | 230V/50Hz 220V/60Hz (H) | 230V/50Hz 220V/60Hz (L) |
|-------|-------------------------------|-------------------------------|
| A | 38 | 30 |

(B.G.N is already rectified)

2 Measuring place: Measure in anechoic room

3 Operation noise differs with operation and ambient conditions.

4 The operating sound is based on the rear side suction inlet, and the external static pressure 40Pa.

5 Operating conditions:
Power source 230V 50Hz/220V 60Hz

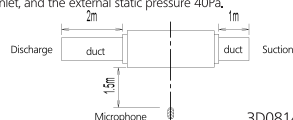
6 Standard external static pressure

JIS

○—○ (H) 230V 50Hz/220V 60Hz

○---○ (L) 230V 50Hz/220V 60Hz

7 Location of microphone:

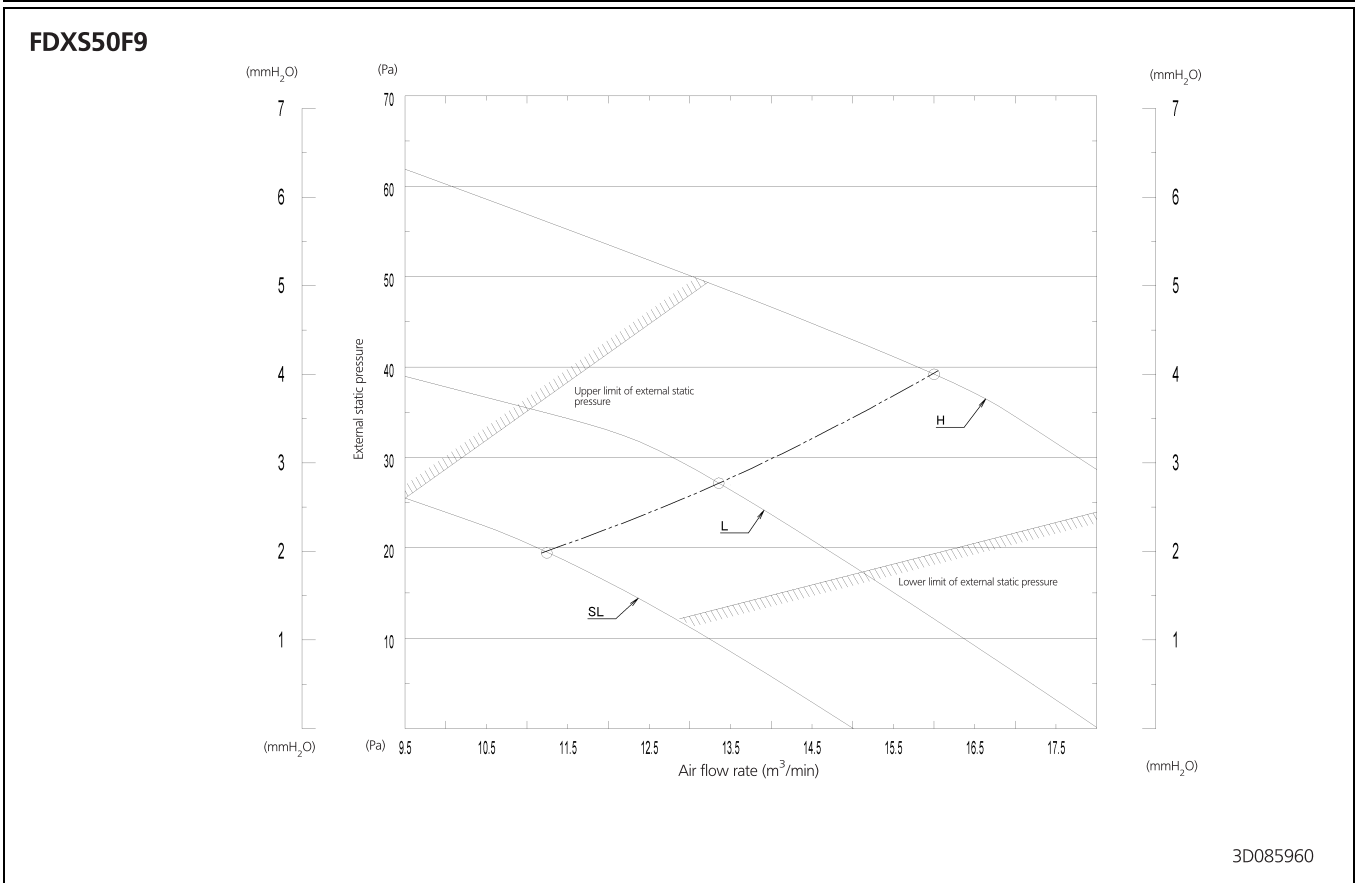
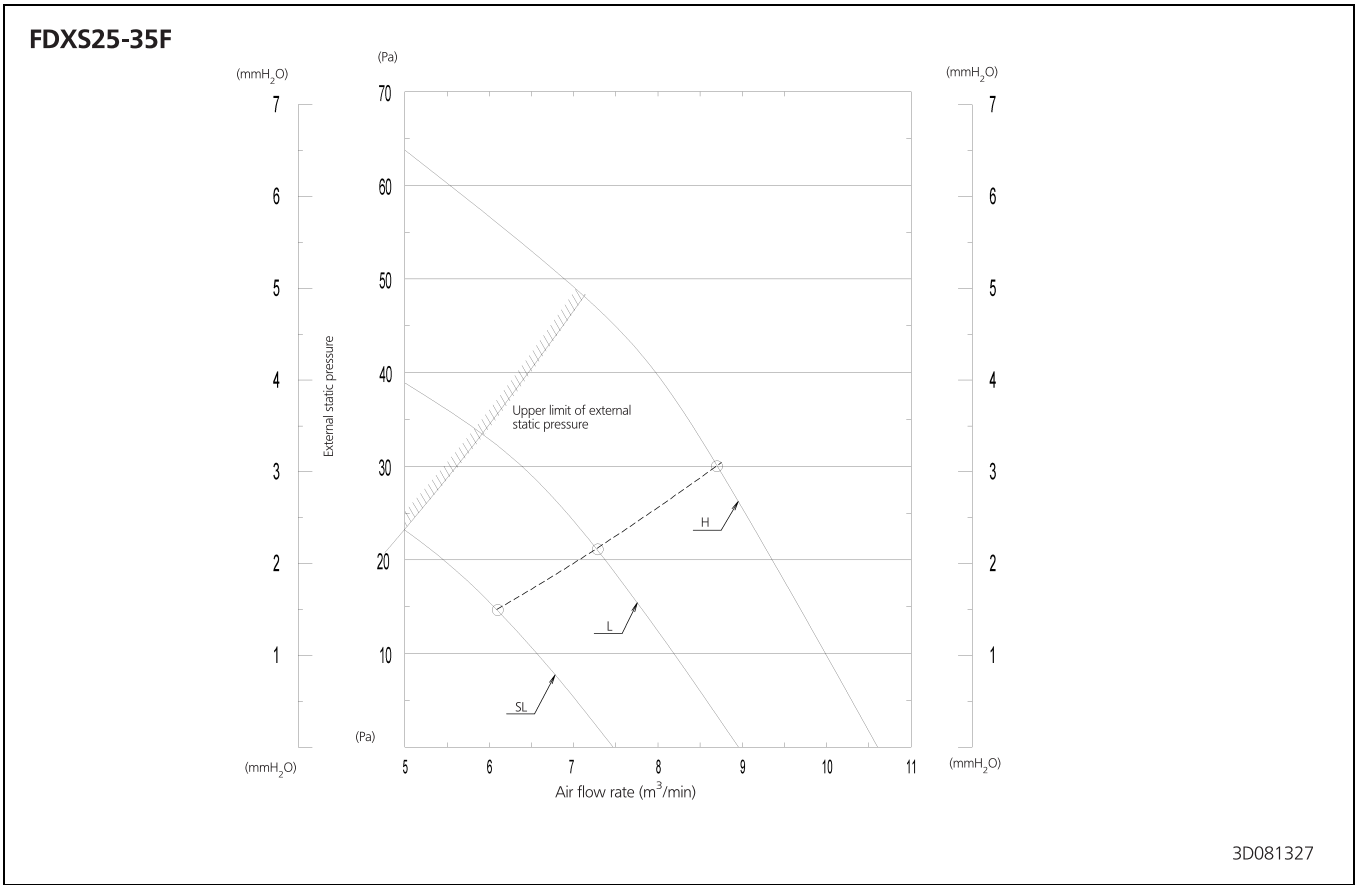


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9 Fan characteristics

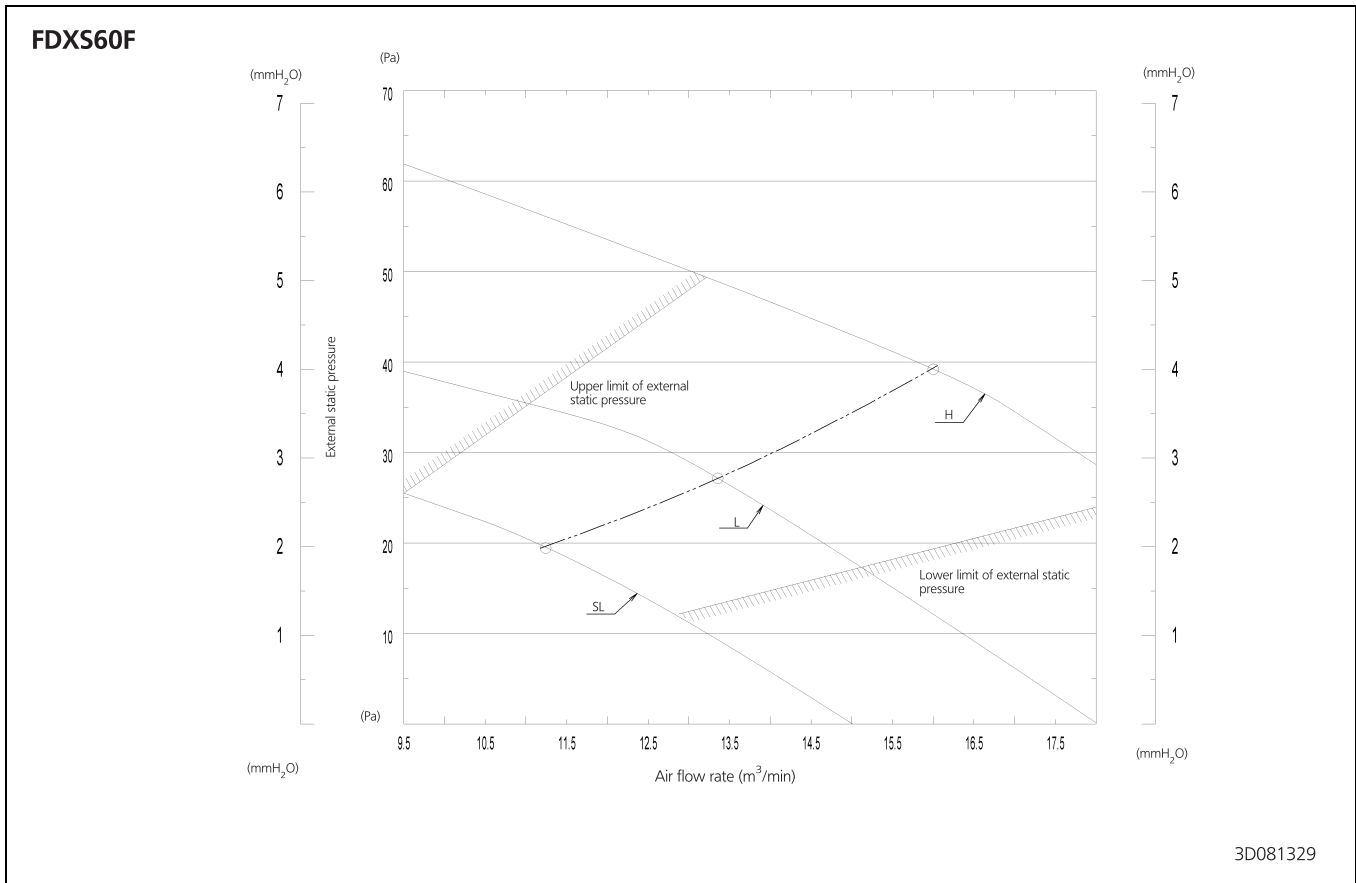
9 - 1 Fan Characteristics

9



9 Fan characteristics

9 - 1 Fan Characteristics





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