R410A

Commercial Air Conditioners

# Engineering Data

## Medium-high Static Pressure Duct VRF IDU

MI2-22T2DHN1(A)

MI2-28T2DHN1(A)

MI2-36T2DHN1(A)

MI2-45T2DHN1(A)

MI2-56T2DHN1(A)

MI2-71T2DHN1(A)

MI2-90T2DHN1(A)

MI2-112T2DHN1(A)

MI2-140T2DHN1(A)

MI2-160T2DHN1(A)

# Medium-high static pressure Duct

# 1 Specifications

## MI2-22T2DHN1(A)/ MI2-28T2DHN1(A) / MI2-36T2DHN1(A)

*Table 1.1: MI2-22(28, 36)T2DHN1(A) specifications*

| Model name | | | MI2-22T2DHN1(A) | MI2-28T2DHN1(A) | MI2-36T2DHN1(A) |
|---|---|---|---|---|---|
| Power supply | | | 1-phase, 220-240V, 50/60Hz | | |
| Cooling[1] | Capacity | kW | 2.2 | 2.8 | 3.6 |
| | | kBut/h | 7.5 | 9.6 | 12.3 |
| | Input (10pa) | W | 45 | 45 | 45 |
| Heating[2] | Capacity | kW | 2.6 | 3.2 | 4.0 |
| | | kBut/h | 8.2 | 10.9 | 13.6 |
| | Input(10pa) | W | 45 | 45 | 45 |
| Fan motor | Model | | ZKSP-30-8-3L | ZKSP-30-8-3L | ZKSP-30-8-3L |
| | Type | | DC | | |
| | Brand | | Nidec/Welling/Yongan | | |
| | Speed (H/M/L) | r/min | 1034/972/908/852/802/753/708 | | |
| Coil | Number of rows | | 2 | 2 | 2 |
| | Tube pitch × row pitch | mm | 21×13.37 | 21×13.37 | 21×13.37 |
| | Fin spacing | mm | 1.5 | 1.5 | 1.5 |
| | Fin type | | Hydrophilic aluminum | | |
| | Tube OD and type | mm | Φ7 Inner groove | | |
| | Dimensions (L×H ×W) | mm | 515×147×26.74 | 515×147×26.74 | 515×147×26.74 |
| | Number of circuits | | 4 | 4 | 4 |
| Airflow rate[3] | | $m^3/h$ | 580/540/500/460/430/400/370 | | |
| External static pressure[4] | | Pa | 10 (10~80) | | |
| Sound pressure level[5] | | dB(A) | 33/32/31/30/28/27/25 | | |
| Unit | Net dimensions[6] (W×H×D) | mm | 780x210x500 | | |
| | Packed dimensions (W×H×D) | mm | 870×285×525 | | |
| | Net/Gross weight | kg | 18/21 | | |
| Refrigerant type | | | R410A | | |
| Throttle | | Type | Electronic expansion valve | | |
| | | Model | D20MISZ-1R(L) | | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | | |
| Pipe connections | Liquid/Gas pipe | mm | Φ6.35/Φ12.7 | | |
| | Drain pipe | mm | OD Φ25 | | |

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
5. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
6. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

## MI2-45T2DHN1(A) / MI2-56T2DHN1(A)

*Table 1.2: MI2-45(56)T2DHN1(A) specifications*

| Model name | | | MI2-45T2DHN1(A) | MI2-56T2DHN1(A) |
|---|---|---|---|---|
| Power supply | | | 1-phase, 220-240V, 50/60Hz | |
| Cooling[1] | Capacity | kW | 4.5 | 5.6 |
| | | kBut/h | 15.4 | 19.1 |
| | Input(40pa) | W | 97 | 97 |
| Heating[2] | Capacity | kW | 5 | 6.3 |
| | | kBut/h | 17.1 | 21.5 |
| | Input(40pa) | W | 97 | 97 |
| Fan motor | Model | | WZDK150-38GS | WZDK150-38GS |
| | Type | | DC | |
| | Brand | | Pansonic/ Welling | |
| | Speed (H/M/L) | r/min | 963/912/856/801/747/696/644 | 1008/955/905/849/800/743/690 |
| Coil | Number of rows | | 4 | 4 |
| | Tube pitch × row pitch | mm | 21×13.37 | 21×13.37 |
| | Fin spacing | mm | 1.5 | 1.5 |
| | Fin type | | Hydrophilic aluminum | |
| | Tube OD and type | mm | Φ7 Inner groove | |
| | Dimensions (L×H×W) | mm | 733×252×26.74 | 733×252×26.74 |
| | Number of circuits | | 6 | 6 |
| Airflow rate[3] | | $m^3/h$ | 910 /850/790/730/670/610/550 | 1000/945/885/825/765/705/635 |
| External static pressure[4] | | Pa | 40 (30~150) | |
| Sound pressure level[5] | | dB(A) | 38/36/35/34/32/30/28 | 39/38/37/35/33/31/29 |
| Unit | Net dimensions[6] (W×H×D) | mm | 1010x270x635 | |
| | Packed dimensions (W×H×D) | mm | 1145x355x705 | |
| | Net/Gross weight | kg | 29/34 | |
| Refrigerant type | | | R410A | |
| Throttle | | Type | Electronic expansion valve | |
| | | Model | D20MISZ-1R(L) | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | |
| Pipe connections | Liquid/Gas pipe | mm | Φ6.35/ Φ12.7 | Φ9.53/Φ15.9 |
| | Drain pipe | mm | OD Φ25 | |

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
5. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
6. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

### MI2-71T2DHN1(A)/ MI2-90T2DHN1(A)

*Table 1.3: MI2-71(90)T2DHN1(A) specifications*

| Model name | | | MI2-71T2DHN1(A) | MI2-90T2DHN1(A) |
|---|---|---|---|---|
| Power supply | | | 1-phase, 220-240V, 50/60Hz | |
| Cooling[1] | Capacity | kW | 7.1 | 9 |
| | | kBut/h | 24.2 | 30.7 |
| | Input(40pa) | W | 103 | 150 |
| Heating[2] | Capacity | kW | 8 | 10 |
| | | kBut/h | 27.3 | 34.1 |
| | Input(40pa) | W | 103 | 150 |
| Fan motor | Model | | ZKFP-150-8-1 | ZKFP-150-8-12 |
| | Type | | DC | |
| | Brand | | Nidec/Welling/Match-Well | |
| | Speed (H/M/L) | r/min | 909/869/826/780/730/689/646 | 1034/972/915/853/795/732/684 |
| Coil | Number of rows | | 4 | 4 |
| | Tube pitch × row pitch | mm | 21×13.37 | 21×13.37 |
| | Fin spacing | mm | 1.5 | 1.5 |
| | Fin type | | Hydrophilic aluminum | |
| | Tube OD and type | mm | Φ7 Inner groove | |
| | Dimensions (L×H ×W) | mm | 955×336×58 | 955×336×58 |
| | Number of circuits | | 5 | 8 |
| Airflow rate[3] | | $m^3/h$ | 1270/1200/1130/1060/990/920/850 | 1710/1600/1490/1380/1270/1160/1060 |
| External static pressure[4] | | Pa | 40 (30~150) | |
| Sound pressure level[5] | | dB(A) | 38/36/34/32/31/29/28 | 41/40/38/37/35/33/32 |
| Unit | Net dimensions[6] (W×H×D) | mm | 1230×270×775 | |
| | Packed dimensions (W×H×D) | mm | 1355×350×795 | |
| | Net/Gross weight | kg | 36.5/44.5 | 37/45 |
| Refrigerant type | | | R410A | |
| Throttle | | Type | Electronic expansion valve | |
| | | Model | D20MISZ-1R(L) | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | |
| Pipe connections | Liquid/Gas pipe | mm | Φ9.53/Φ15.9 | Φ9.53/Φ15.9 |
| | Drain pipe | mm | OD Φ25 | |

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
5. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
6. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

## MI2-112T2DHN1(A)/ MI2-140T2DHN1(A)

*Table 1.4: MI2-112(140)T2DHN1(A) specifications*

| Model name | | | MI2-112T2DHN1(A) | MI2-140T2DHN1(A) |
|---|---|---|---|---|
| Power supply | | | 1-phase, 220-240V, 50/60Hz | |
| Cooling[1] | Capacity | kW | 11.2 | 14 |
| | | kBut/h | 38.2 | 47.8 |
| | Input(40pa) | W | 205 | 260 |
| Heating[2] | Capacity | kW | 12.5 | 15.5 |
| | | kBut/h | 42.7 | 52.9 |
| | Input(40pa) | W | 205 | 260 |
| Fan motor | Model | | ZKFP-240-8-1 | ZKFP-240-8-1 |
| | Type | | DC | |
| | Brand | | Nidec/Welling/Match-Well | |
| | Speed (H/M/L) | r/min | 1001/961/916/867/813/765/722 | 1120/1081/1041/998/956/910/860 |
| Coil | Number of rows | | 4 | 4 |
| | Tube pitch × row pitch | mm | 21×13.37 | 21×13.37 |
| | Fin spacing | mm | 1.5 | 1.5 |
| | Fin type | | Hydrophilic aluminum | |
| | Tube OD and type | mm | Φ7 Inner groove | |
| | Dimensions (L×H ×W) | mm | 1030×378×58 | 1030×378×58 |
| | Number of circuits | | 8 | 8 |
| Airflow rate[3] | | $m^3/h$ | 1870/1760/1660/1560/1460/1365/1275 | 2320/2210/2110/2010/1900/1800/1700 |
| External static pressure[4] | | Pa | 40 (30~150) | 40 (30~150) |
| Sound pressure level[5] | | dB(A) | 40/38/37/36/35/34/33 | 43/42/41/40/39/38/37 |
| Unit | Net dimensions[6] (W×H×D) | mm | 1290x300x865 | 1290x300x865 |
| | Packed dimensions (W×H×D) | mm | 1400x375x925 | 1400x375x925 |
| | Net/Gross weight | kg | 46.5/55.5 | 46.5/55.5 |
| Refrigerant type | | | R410A | |
| Throttle | | Type | Electronic expansion valve | |
| | | Model | D20MISZ-1R(L) | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | |
| Pipe connections | Liquid/Gas pipe | mm | Φ9.53/Φ15.9 | Φ9.53/Φ15.9 |
| | Drain pipe | mm | OD Φ25 | |

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
5. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
6. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

**MI2-160T2DHN1(A)**

*Table 1.5: MI2-160T2DHN1(A) specifications*

| Model name | | | MI2-160T2DHN1(A) |
|---|---|---|---|
| Power supply | | | 1-phase, 220-240V, 50/60Hz |
| Cooling[1] | Capacity | kW | 16.0 |
| | | kBut/h | 54.6 |
| | Input(40Pa) | W | 250 |
| Heating[2] | Capacity | kW | 18.0 |
| | | kBut/h | 61.4 |
| | Input(40Pa) | W | 250 |
| Fan motor | Type | | DC |
| | Speed (H/M/L) | r/min | 1020/950/900/860/810/750/690 |
| Coil | Number of rows | | 4<br>4 |
| | Tube pitch × row pitch | mm | 21×13.37 |
| | Fin spacing | mm | 1.5 |
| | Fin type | | Hydrophilic aluminum |
| | Tube OD and type | mm | Φ7 Inner groove |
| | Dimensions (L×H ×W) | mm | 1230×378×53.5 |
| | Number of circuits | | 8 |
| Airflow rate[3] | | $m^3/h$ | 2300/2100/2000/1900/1750/1600/1450 |
| External static pressure[4] | | Pa | 40 (30~150) |
| Sound pressure level[5] | | dB(A) | 42/41/39/38/37/35/34 |
| Unit | Net dimensions[6] (W×H×D) | mm | 1490×300×865 |
| | Packed dimensions (W×H×D) | mm | 1605×345×955 |
| | Net/Gross weight | kg | 54/63 |
| Refrigerant type | | | R410A |
| Throttle | | Type | Electronic expansion valve |
| | | Model | D20MISZ-1R(L) |
| Design pressure (H/L) | | MPa | 4.4/2.6 |
| Pipe connections | Liquid/Gas pipe | mm | Φ9.53/Φ15.9 |
| | Drain pipe | mm | OD Φ25 |

Notes:

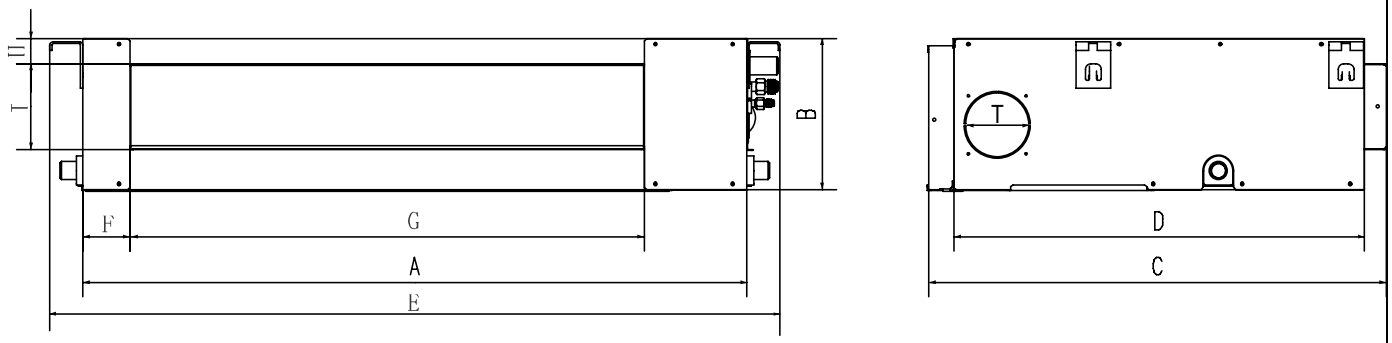
1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
5. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
6. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

# 2 Dimensions

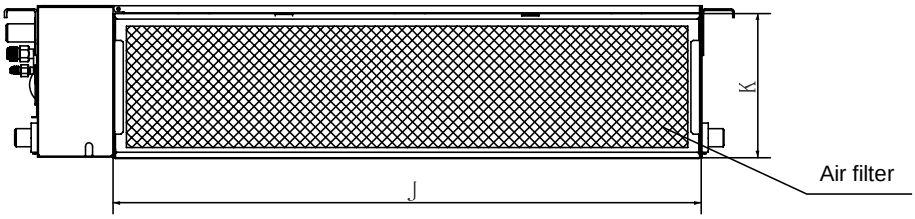
## 2.1 Unit Dimensions

*Figure 2.1: Medium Static Pressure Duct dimensions (unit: mm)*

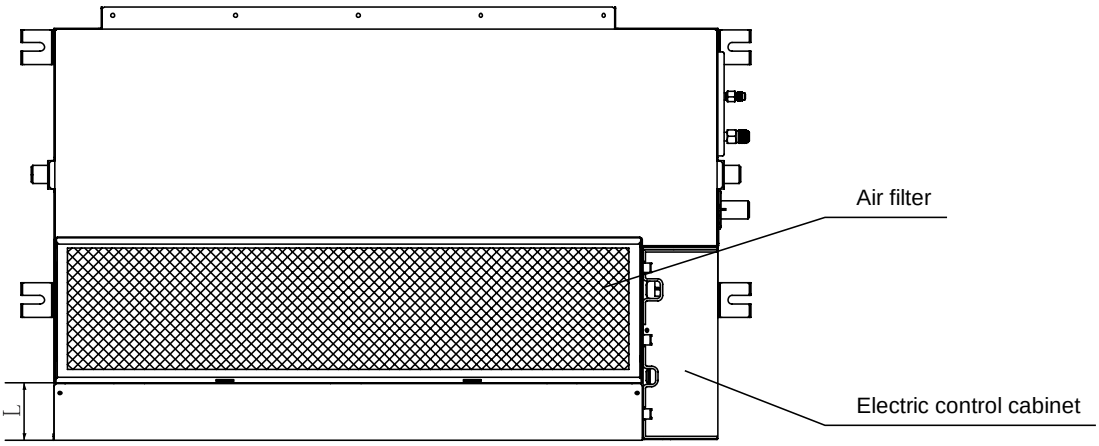
Outline dimension and air outlet opening size




Air return opening size




Position size of descensional ventilation opening



Size of mounted lug

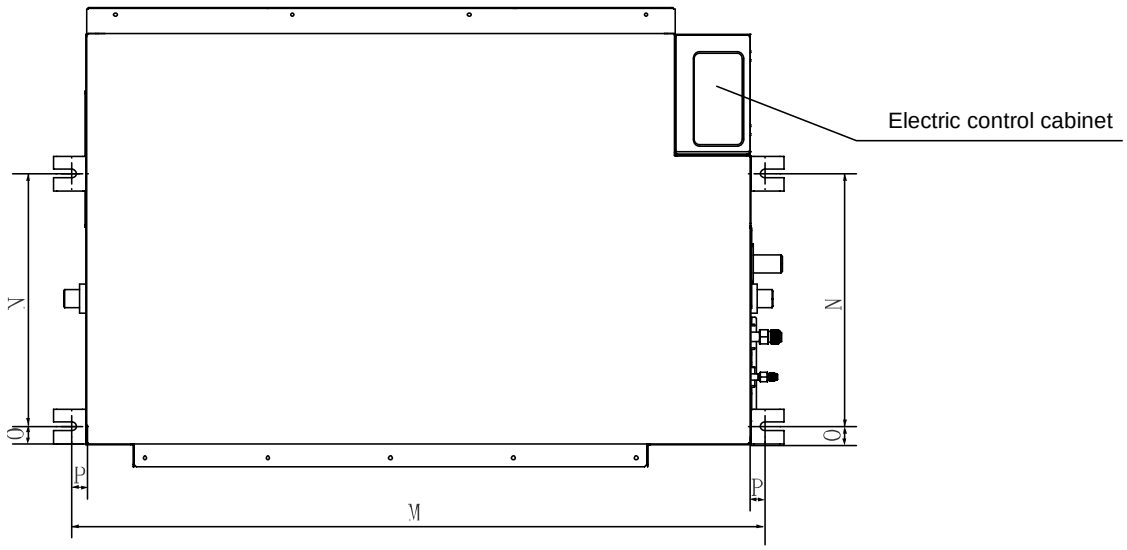



*Table 2.1: Medium Static Pressure Duct dimensions*

| Model names | Dimension (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H |
| MI2-22T2DHN1(A) - MI2-36T2DHN1(A) | 700 | 210 | 500 | 450 | 780 | 45 | 512 | 17 |
| MI2-45T2DHN1(A) - MI2-56T2DHN1(A) | 921 | 270 | 635 | 572 | 1010 | 67 | 711 | 35 |
| MI2-71T2DHN1(A) - MI2-90T2DHN1(A) | 1140 | 270 | 775 | 710 | 1230 | 65 | 933 | 35 |
| MI2-112T2DHN1(A) - MI2-140T2DHN1(A) | 1200 | 300 | 865 | 800 | 1290 | 85 | 969 | 40 |
| MI2-160T2DHN1(A) | 1400 | 300 | 865 | 800 | 1490 | 85 | 1169 | 40 |
| **Model names** | **Dimension (mm)** | | | | | | | |
| | I | J | K | L | M | N | O | P |
| MI2-22T2DHN1(A) - MI2-36T2DHN1(A) | 145 | 600 | 196 | - | 740 | 350 | 35 | 20 |
| MI2-45T2DHN1(A) - MI2-56T2DHN1(A) | 178 | 813 | 260 | 19 | 959 | 349 | 35 | 20 |
| MI2-71T2DHN1(A) - MI2-90T2DHN1(A) | 179 | 1035 | 260 | 20 | 1180 | 490 | 26 | 20 |
| MI2-112T2DHN1(A) - MI2-140T2DHN1(A) | 204 | 1094 | 288 | 45 | 1240 | 500 | 26 | 20 |
| MI2-160T2DHN1(A) | 204 | 1294 | 288 | | 1440 | 500 | 26 | 20 |

*Table 2.2: Medium Static Pressure Duct piping connections*

| Model names | Gas pipe (mm) | Liquid pipe (mm) |
|---|---|---|
| MI2-22T2DHN1(A) - MI2-45T2DHN1(A) | Φ12.7 | Φ6.35 |
| MI2-56T2DHN1(A) - MI2-160T2DHN1(A) | Φ15.9 | Φ9.53 |

# 3 Unit Placement

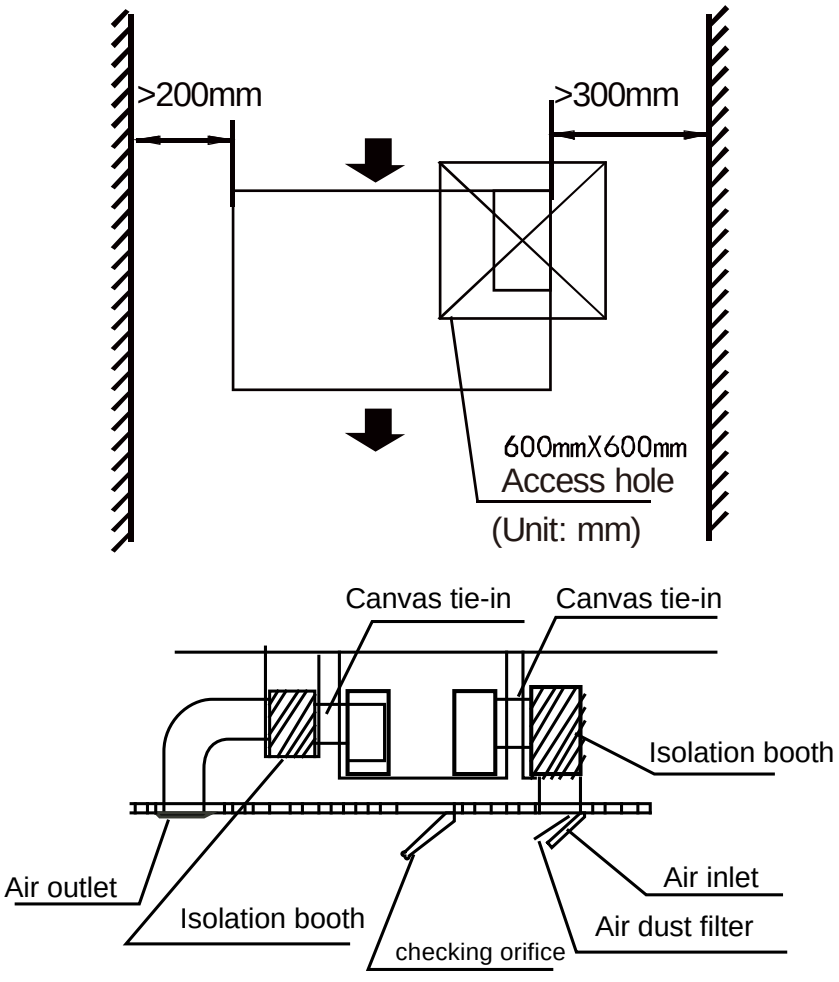
## 3.1 Placement Considerations

Unit placement should take account of the following considerations:

- Units should not be installed in the following locations:
  - Where exposure to direct radiation from a high-temperature heat source or to interference from a source of electromagnetic radiation may occur.
  - Where dust or dirt may affect heat exchangers.
  - Where exposure to oil or to corrosive or harmful gases, such as acidic or alkaline gases, may occur.
  - Where exposure to salinity may occur, such as seaside locations.
  - Where highly flammable materials are present.
  - Where exposure to oily air may occur, such as a kitchen.
  - Where exposure to very high humidity may occur, such as a laundry.
- Units should be installed in positions where:
  - The ceiling is horizontal and is able to bear the unit's weight.
  - There are no obstructions that could impede the airflow into and out of the unit.
  - The airflow out of the unit can reach throughout the room.
  - There is sufficient space for access during installation, servicing and maintenance.
  - The refrigerant piping and drain piping can be easily connected to the refrigerant piping and drain piping systems.
  - Short-circuit ventilation (where outlet air returns quickly to a unit's air inlet) will not occur.

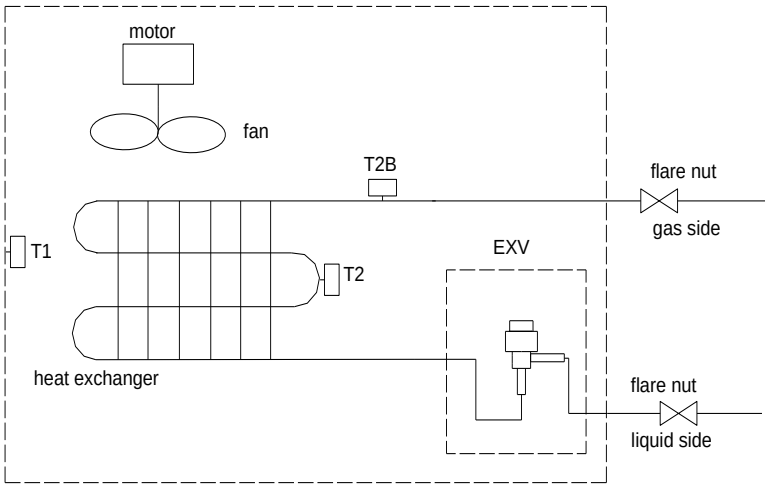
## 3.2 Space Requirements

*Figure 3.1: Medium Static Pressure Duct space requirements (unit: mm)*



# 4 Piping Diagram

*Figure 4.1: Medium Static Pressure Duct piping diagram*




| Legend | |
|---|---|
| T1 | Indoor ambient temperature sensor |
| T2 | Indoor heat exchanger mid-point temperature sensor |
| T2B | Indoor heat exchanger outlet temperature sensor |

## 5 Wiring Diagrams

*Figure 5.1: MI2-22T2DHN1(A)- MI2-140T2DHN1(A)*

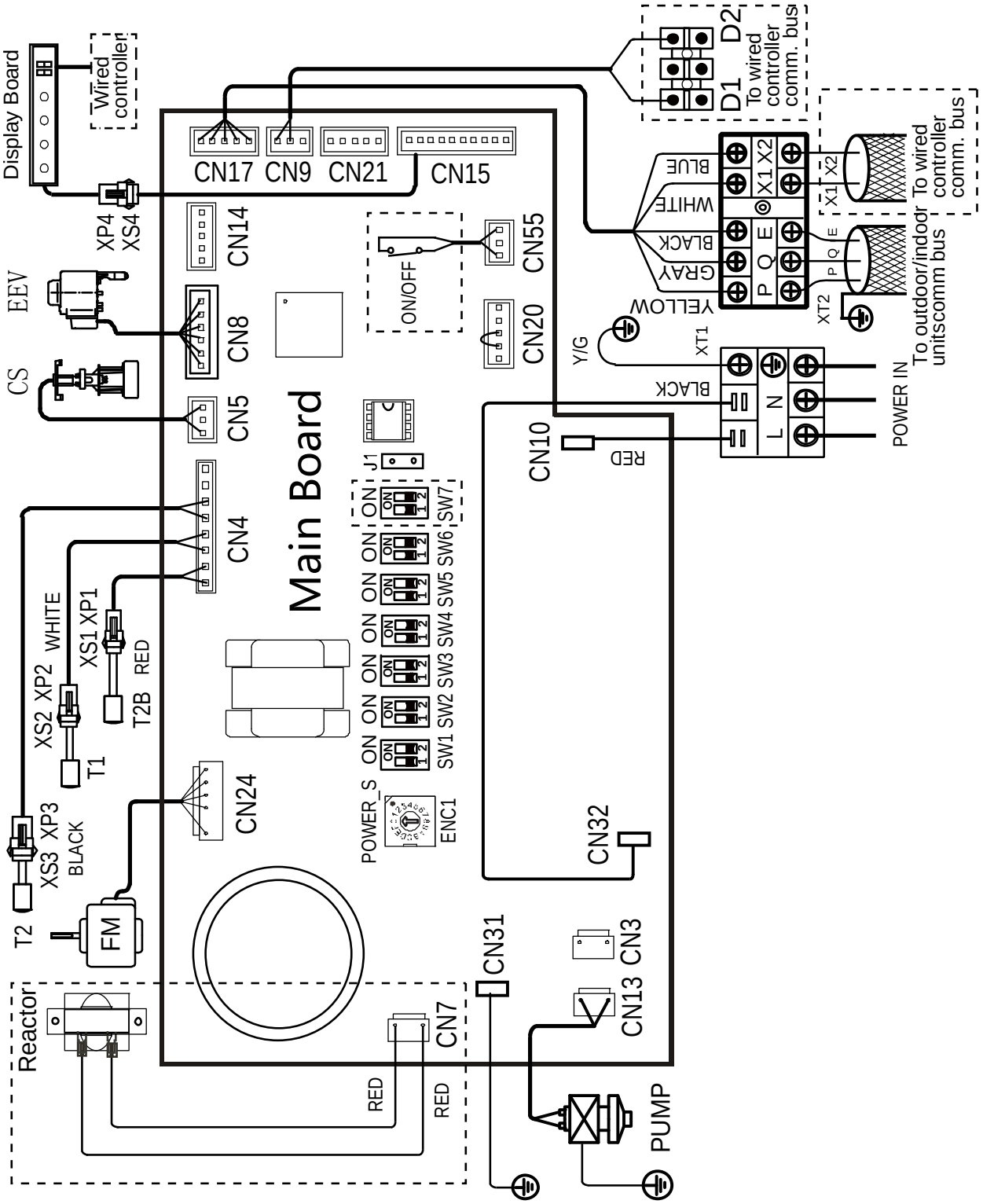
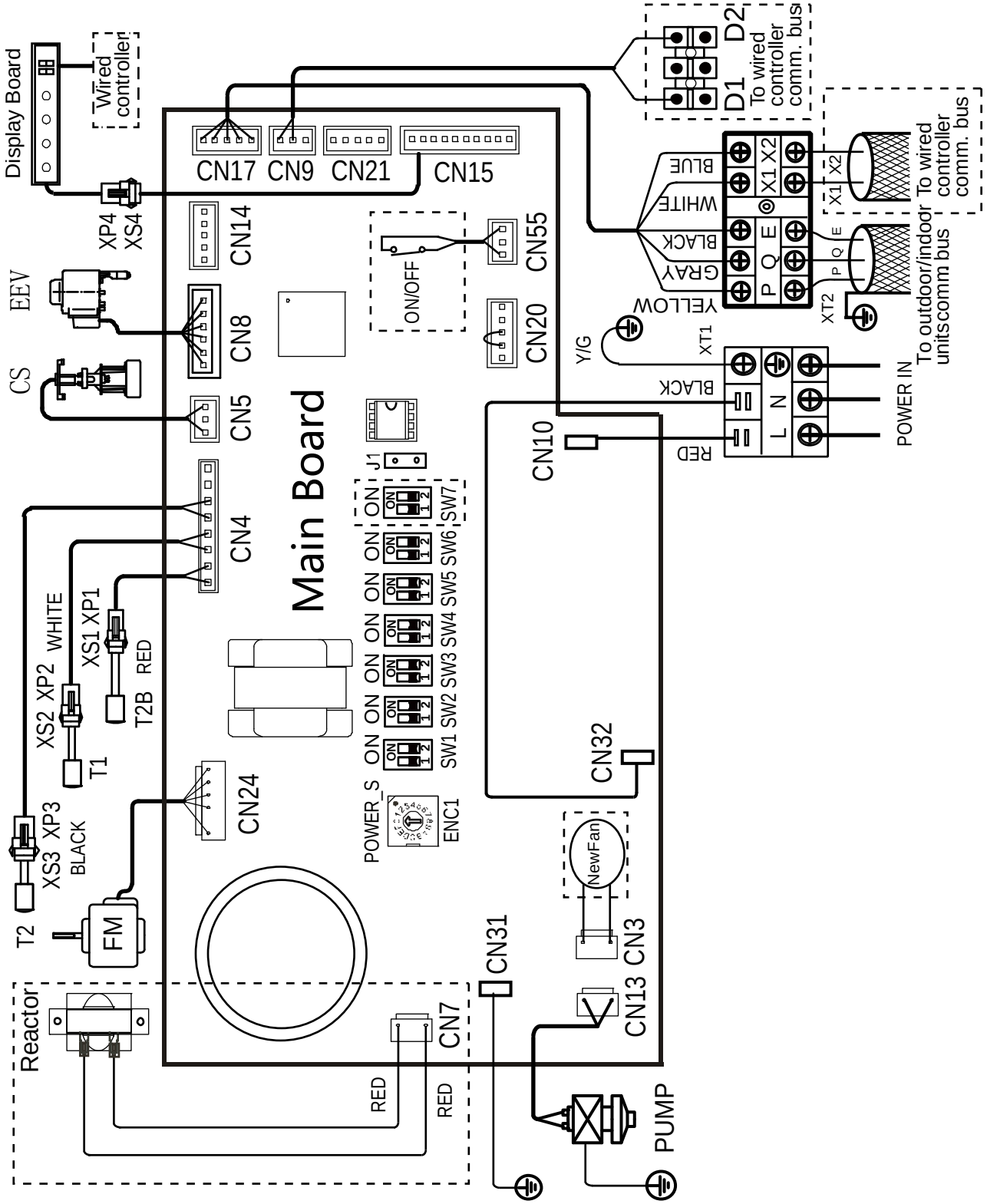


*Figure 5.2: MI2-160T2DHN1(A)*



## Notes for installers and service engineers

**Caution**

- All installation, servicing and maintenance must be carried out by competent and suitably qualified, certified and accredited professionals and in accordance with all applicable legislation.
- Units should be grounded in accordance with all applicable legislation. Metal and other conductive components should be insulated in accordance with all applicable legislation.
- Power supply wiring should be securely fastened at the power supply terminals – loose power supply wiring would represent a fire risk.
- After installation, servicing or maintenance, the electric control box cover should be closed. Failing to close the electric control box cover risks fire or electric shock.
- Switch ENC1 (indoor unit capacity setting) is factory-set and its setting should normally not be changed. The only circumstances in which a switch ENC1 might need to be set in the field is when replacing a main PCB. When replacing a main PCB, ensure that the capacity setting on switch ENC1 on the new PCB is consistent with the unit capacity given on the unit's nameplate.

## 6 Fan Performance

*Figure 6.1: MI2-22(28/36)T2DHN1(A) fan performance*

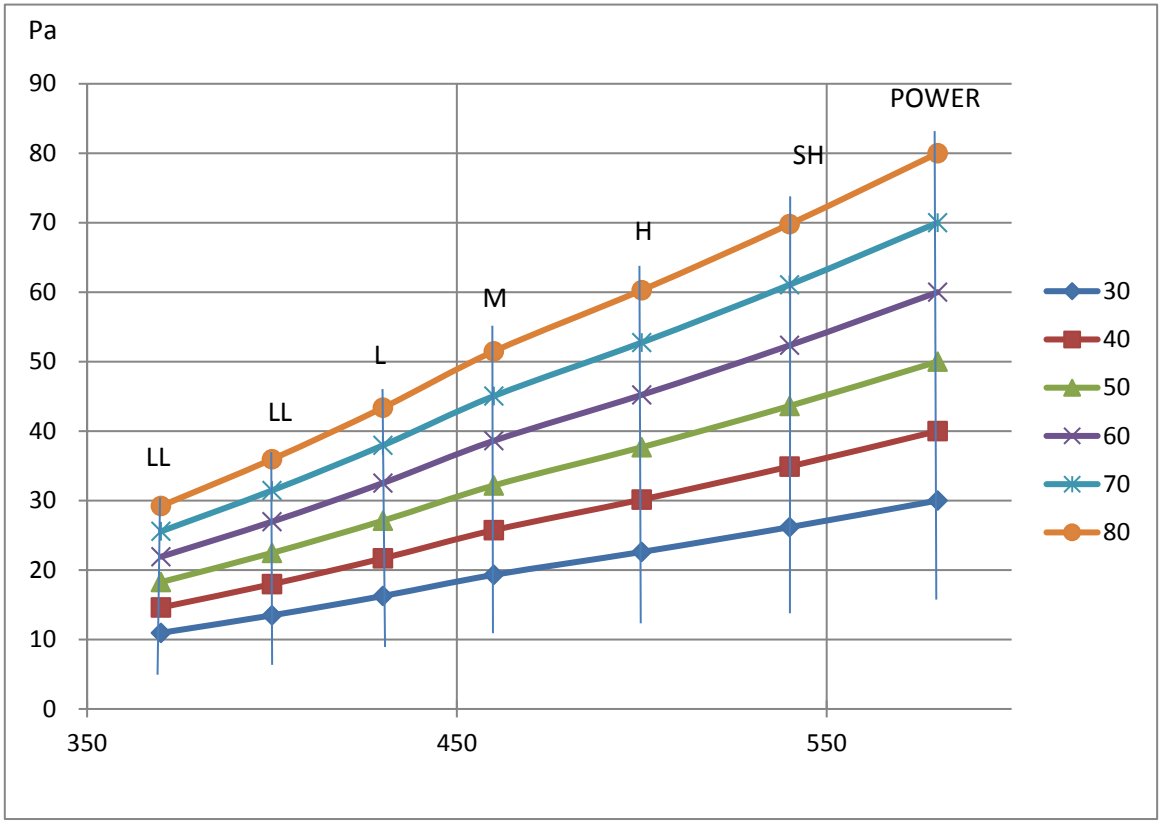



*Figure 6.2: MI2-45T2DHN1(A) fan performance*

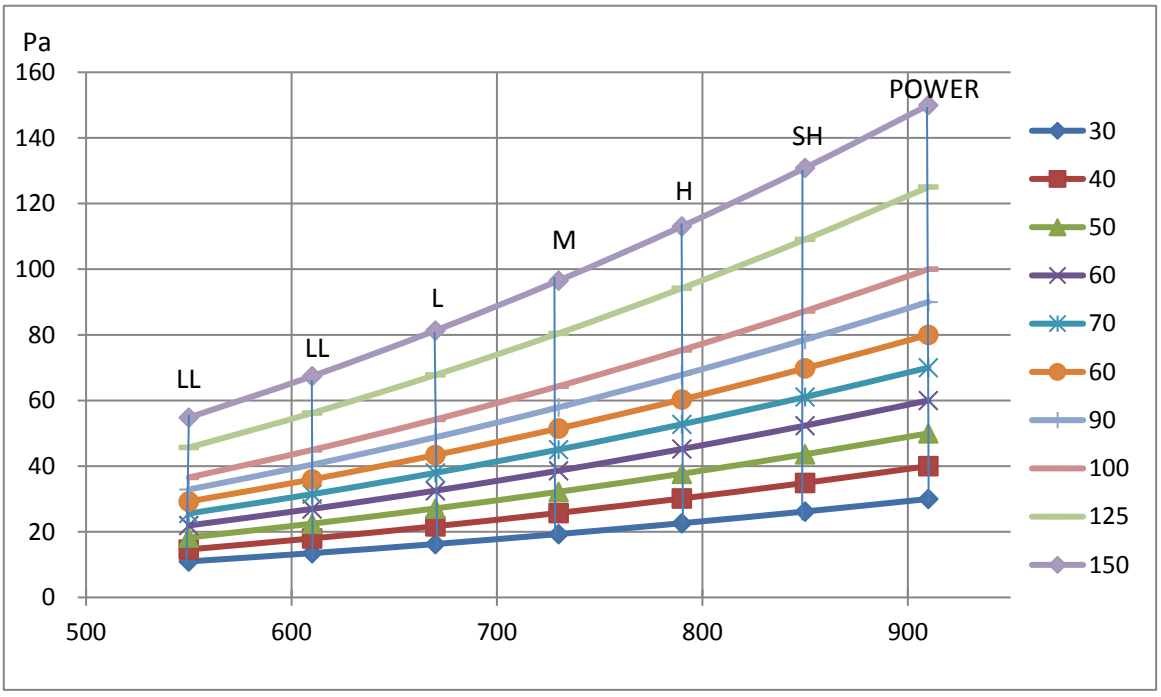


*Figure 6.3: MI2-56T2DHN1(A) fan performance*

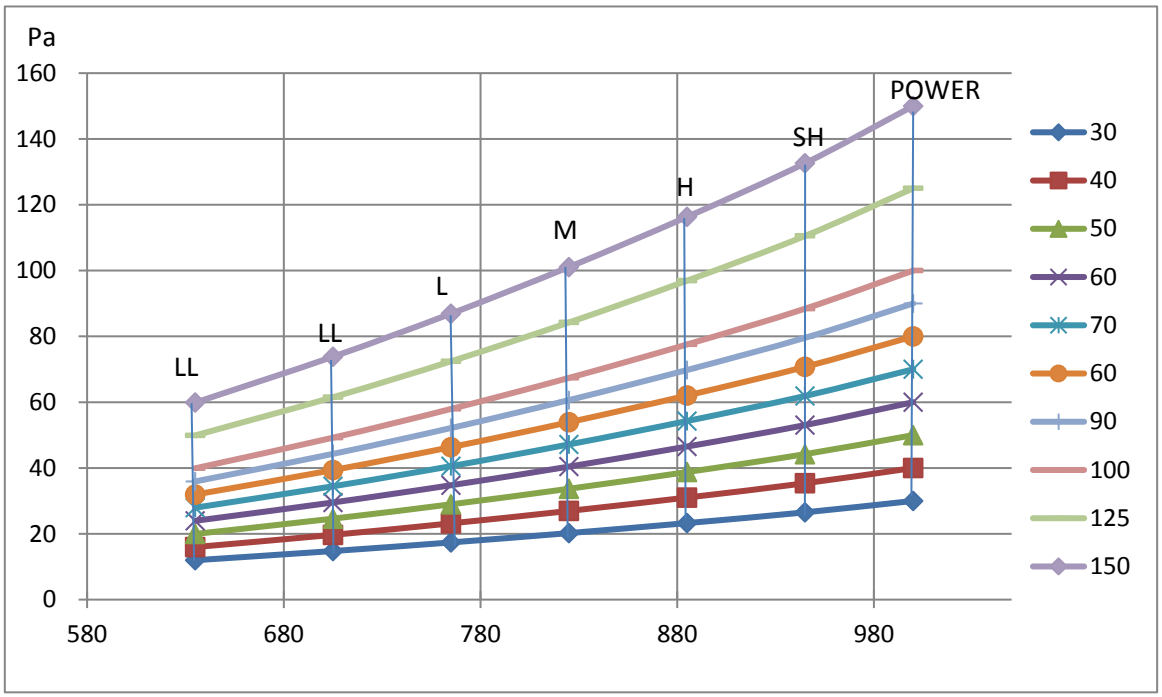



*Figure 6.4: MI2-71T2DHN1(A) fan performance*

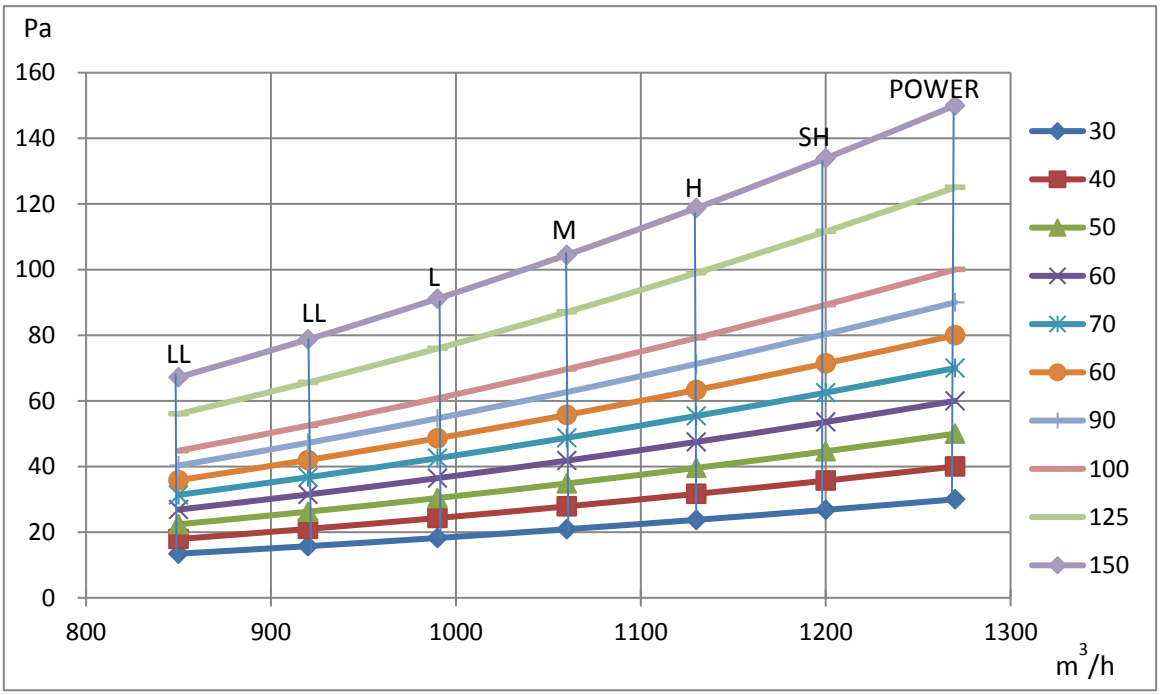


*Figure 6.5: MI2-90T2DHN1(A) fan performance*

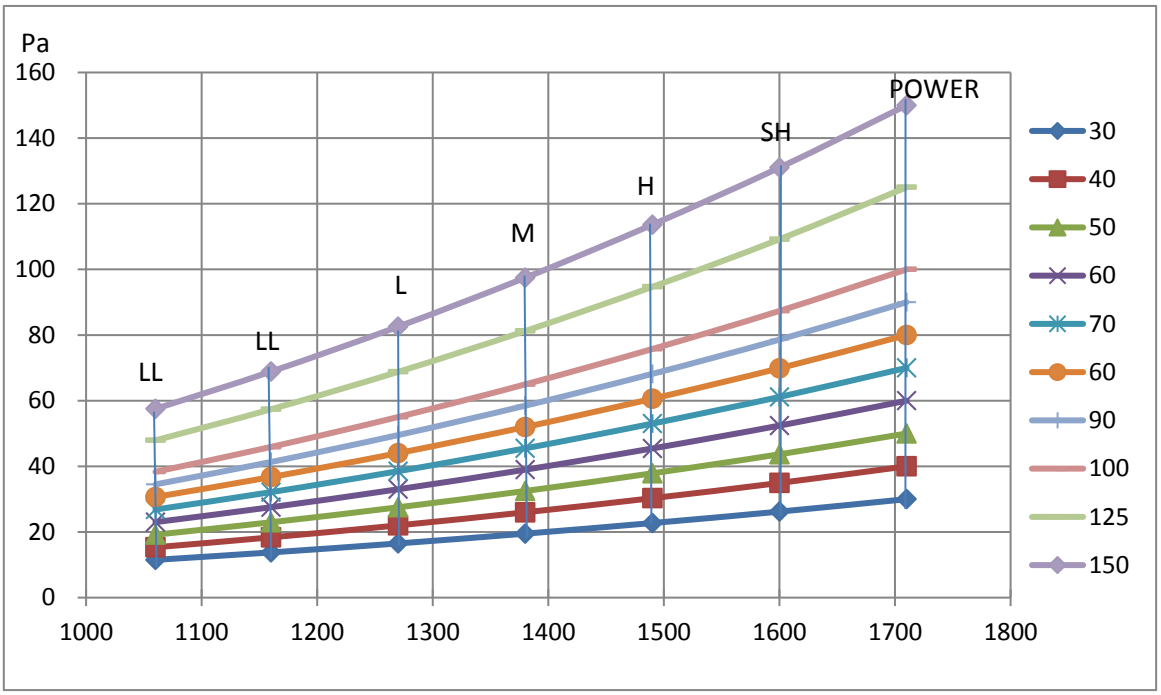



*Figure 6.6: MI2-112T2DHN1(A) fan performance*

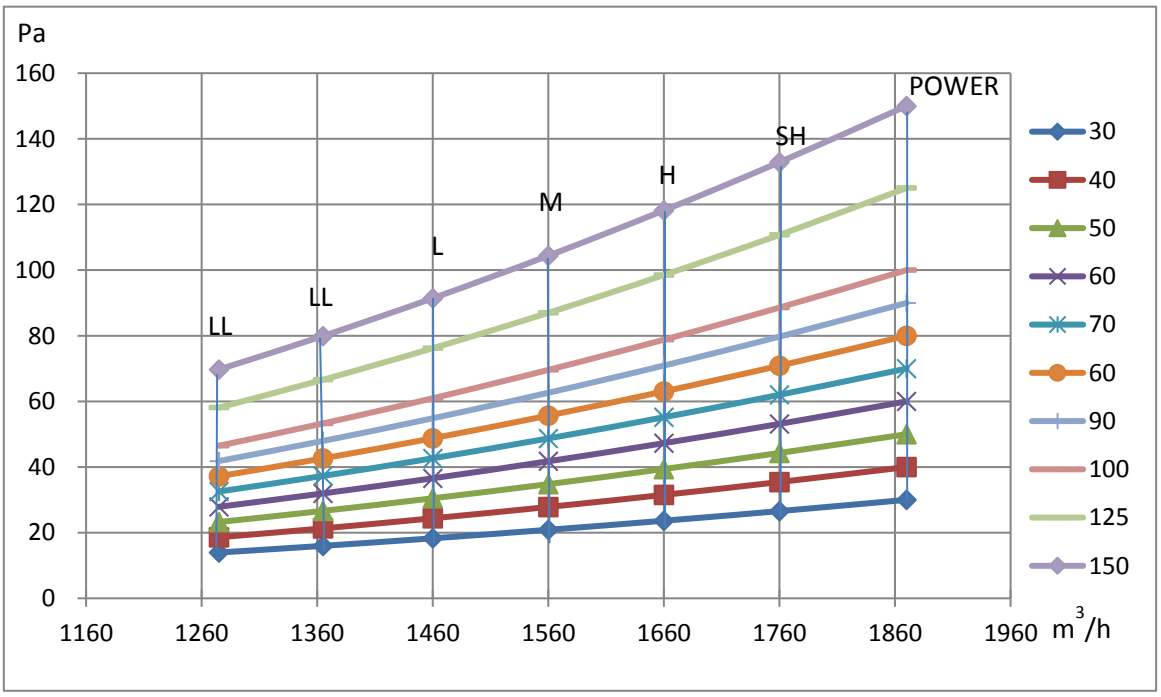


*Figure 6.7: MI2-140T2DHN1(A) fan performance*

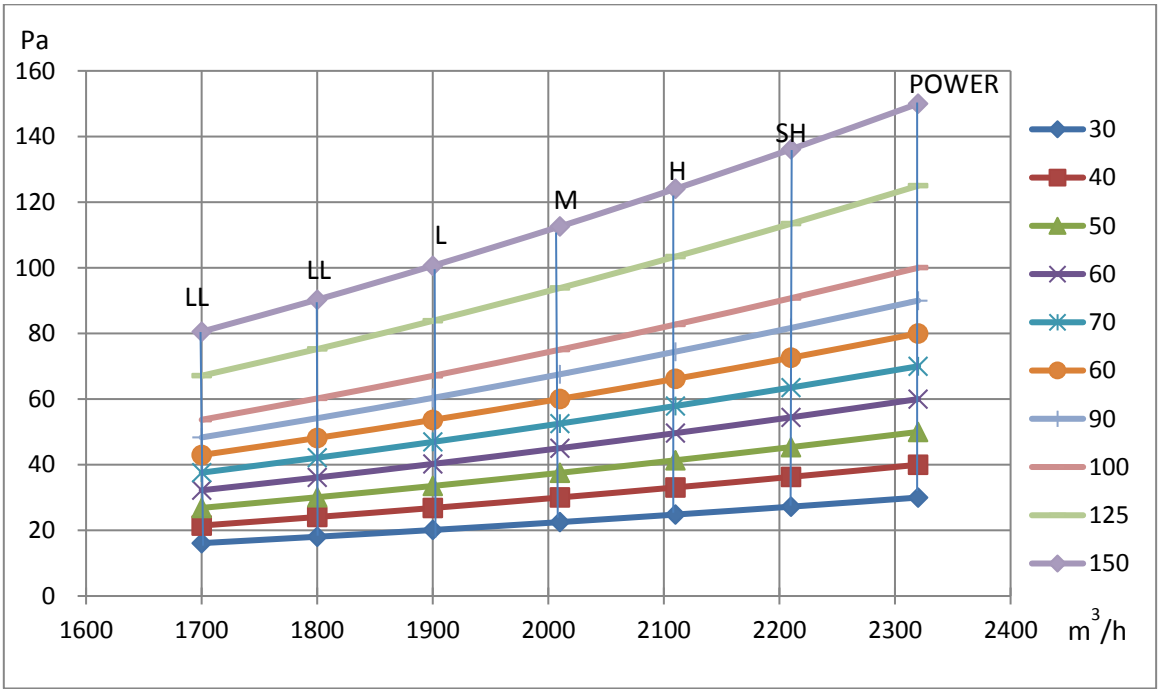



*Figure 6.8: MI2-160T2DHN1(A) fan performance*

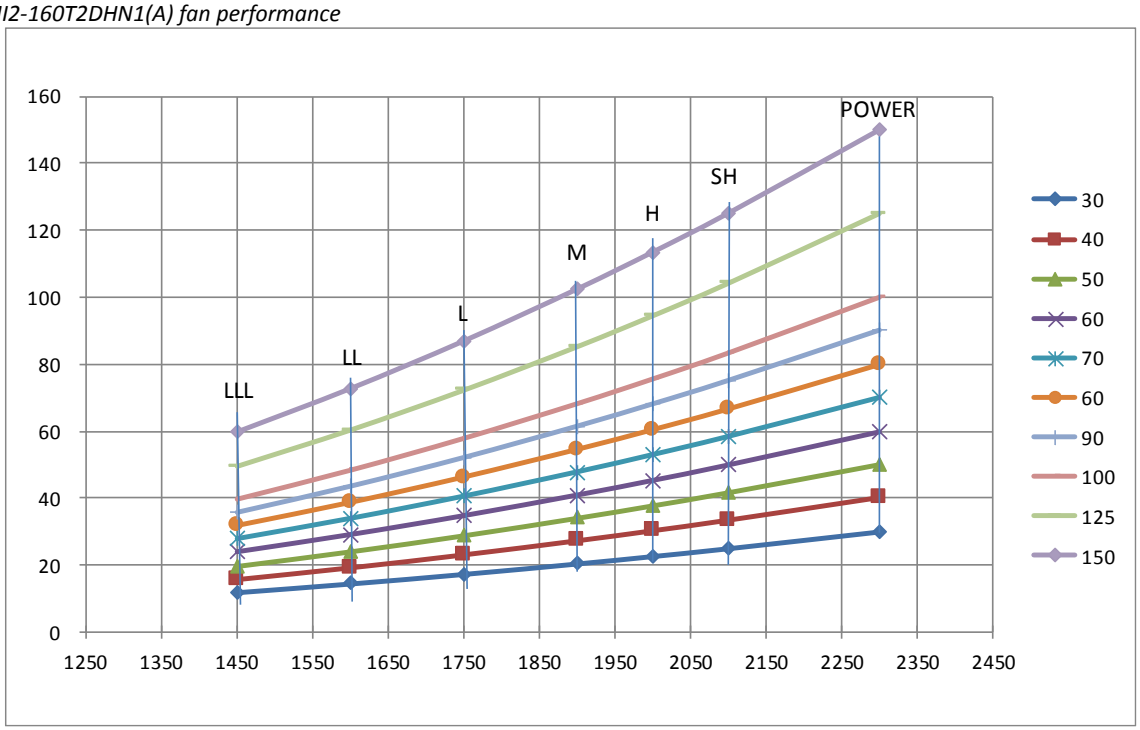


*Table 6.1: ESP settings through DIP switch SW2*

| Capacity | ESP1 | ESP2 | ESP3 | ESP4 |
|---|---|---|---|---|
| 2.2-3.6kW | 10Pa | 30Pa | 50Pa | 80Pa |
| 4.5-14kW | 40Pa | 70Pa | 100Pa | 150Pa |
| 16kW | 40Pa | 70Pa | 100Pa | 150Pa |

*Table 6.2: ESP settings through the new wired controller*

| Capacity | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.2-3.6kW | 0Pa | 10Pa | 20Pa | 30Pa | 40Pa | 50Pa | 60Pa | 70Pa | 80Pa | 80Pa |
| 4.5-14kW | 30Pa | 40Pa | 50Pa | 60Pa | 70Pa | 80Pa | 90Pa | 100Pa | 125Pa | 150Pa |

# 7 Capacity Tables

## 7.1 Cooling Capacity Table

*Table 7.1: Medium-high Static Pressure Duct cooling capacity*

| Model | Indoor air temperature (°C WB/DB) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 14/20 | | 16/23 | | 18/26 | | 19/27 | | 20/28 | | 22/30 | | 24/32 | |
| | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC |
| MI2-22T2DHN1(A) | 2.0 | 2.0 | 2.1 | 2.0 | 2.2 | 1.9 | 2.2 | 1.9 | 2.3 | 1.9 | 2.3 | 1.7 | 2.4 | 1.7 |
| MI2-28T2DHN1(A) | 2.5 | 2.5 | 2.7 | 2.5 | 2.8 | 2.5 | 2.8 | 2.3 | 2.9 | 2.3 | 2.9 | 2.2 | 3.0 | 2.1 |
| MI2-36T2DHN1(A) | 3.2 | 3.2 | 3.4 | 3.1 | 3.6 | 3.1 | 3.6 | 3.0 | 3.7 | 3.0 | 3.8 | 2.8 | 3.9 | 2.7 |
| MI2-45T2DHN1(A) | 4.0 | 3.8 | 4.3 | 3.8 | 4.5 | 3.8 | 4.5 | 3.7 | 4.6 | 3.6 | 4.7 | 3.4 | 4.8 | 3.3 |
| MI2-56T2DHN1(A) | 5.0 | 4.7 | 5.3 | 4.7 | 5.6 | 4.7 | 5.6 | 4.5 | 5.7 | 4.4 | 5.8 | 4.2 | 6.0 | 4.1 |
| MI2-71T2DHN1(A) | 6.3 | 5.9 | 6.7 | 6.0 | 7.0 | 5.9 | 7.1 | 5.7 | 7.2 | 5.6 | 7.4 | 5.4 | 7.6 | 5.2 |
| MI2-90T2DHN1(A) | 8.0 | 7.6 | 8.5 | 7.6 | 8.9 | 7.5 | 9.0 | 7.3 | 9.1 | 7.1 | 9.4 | 6.8 | 9.6 | 6.5 |
| MI2-112T2DHN1(A) | 9.9 | 9.3 | 10.6 | 9.4 | 11.1 | 9.4 | 11.2 | 9.1 | 11.3 | 8.8 | 11.6 | 8.4 | 11.9 | 8.1 |
| MI2-140T2DHN1(A) | 12.4 | 11.7 | 13.2 | 11.8 | 13.8 | 11.7 | 14.0 | 11.3 | 14.2 | 11.0 | 14.5 | 10.5 | 14.9 | 10.1 |
| MI2-160T2DHN1(A) | 14.2 | 13.4 | 15.1 | 13.4 | 15.8 | 13.3 | 16.0 | 12.9 | 16.2 | 12.6 | 16.6 | 12.0 | 17.0 | 11.5 |

Abbreviations:
TC: Total capacity (kW)
SC: Sensible capacity(kW)

Notes:
1.Shaded cells indicate rating condition

## 7.2 Heating Capacity Table

*Table 7.2: Medium-high Static Pressure Duct heating capacity*

| Model | Indoor air temperature (°C DB) | | | | | |
|---|---|---|---|---|---|---|
| | 16 | 18 | 20 | 21 | 22 | 24 |
| | TC | TC | TC | TC | TC | TC |
| MI2-22T2DHN1(A) | 2.8 | 2.8 | 2.6 | 2.5 | 2.4 | 2.3 |
| MI2-28T2DHN1(A) | 3.4 | 3.4 | 3.2 | 3.1 | 3.0 | 2.8 |
| MI2-36T2DHN1(A) | 4.2 | 4.2 | 4.0 | 3.8 | 3.8 | 3.5 |
| MI2-45T2DHN1(A) | 5.3 | 5.3 | 5.0 | 4.8 | 4.7 | 4.4 |
| MI2-56T2DHN1(A) | 6.7 | 6.6 | 6.3 | 6.1 | 5.9 | 5.5 |
| MI2-71T2DHN1(A) | 8.5 | 8.4 | 8.0 | 7.8 | 7.5 | 7.0 |
| MI2-90T2DHN1(A) | 10.6 | 10.5 | 10.0 | 9.7 | 9.4 | 8.8 |
| MI2-112T2DHN1(A) | 13.3 | 13.1 | 12.5 | 12.1 | 11.8 | 10.9 |
| MI2-140T2DHN1(A) | 17.0 | 16.8 | 16.0 | 15.5 | 15.0 | 13.9 |
| MI2-160T2DHN1(A) | 18.0 | 17.9 | 17.0 | 16.5 | 16.0 | 14.8 |

Abbreviations:
TC: Total capacity (kW)

Notes:
1.Shaded cells indicate rating condition

## 8 Electrical Characteristics

*Table 8.1: Medium Static Pressure Duct electrical characteristics*

| Model name | Power supply | | | | | | Indoor fan motors | |
|---|---|---|---|---|---|---|---|---|
| | Hz | Volts | Min. volts | Max. volts | MCA | MFA | Rated motor output (kW) | FLA |
| MI2-22T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 0.77 | 15 | 0.03 | 0.62 |
| MI2-28T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 0.77 | 15 | 0.03 | 0.62 |
| MI2-36T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 0.77 | 15 | 0.03 | 0.62 |
| MI2-45T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 1.4 | 15 | 0.15 | 1.1 |
| MI2-56T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 1.6 | 15 | 0.15 | 1.24 |
| MI2-71T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 2 | 15 | 0.15 | 1.52 |
| MI2-90T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 2.5 | 15 | 0.15 | 1.98 |
| MI2-112T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 2.54 | 15 | 0.24 | 1.91 |
| MI2-140T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 3.2 | 15 | 0.24 | 2.51 |
| MI2-160T2DHN1(A) | 50/60 | 220-240 | 198 | 264 | 2.6 | 15 | 0.24 | 1.92 |

Abbreviations:
MCA: Minimum Circuit Amps
MFA: Maximum Fuse Amps
FLA: Full Load Amps

# 9 Sound Levels

## 9.1 Overall

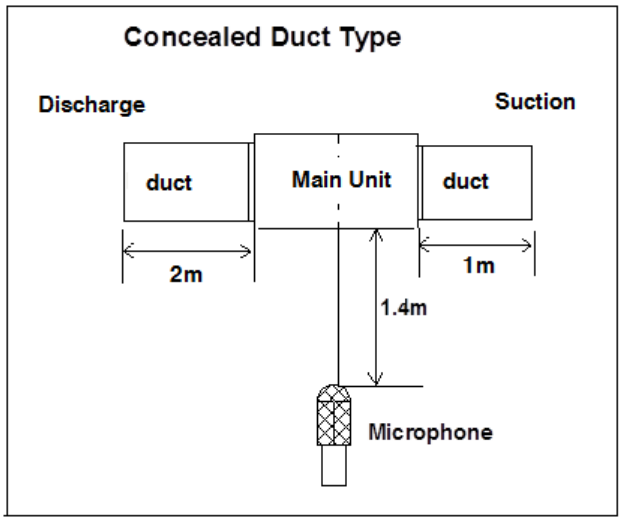
*Table 9.1: Medium Static Pressure Duct sound pressure levels[1]*

| Model name | Sound pressure levels dB(A) | | | | | | |
|---|---|---|---|---|---|---|---|
| | SSH | SH | H | M | L | SL | SSL |
| MI2-22T2DHN1(A) | 32 | 31 | 29 | 28 | 26 | 25 | 23 |
| MI2-28T2DHN1(A) | 32 | 31 | 29 | 28 | 26 | 25 | 23 |
| MI2-36T2DHN1(A) | 33 | 32 | 31 | 30 | 28 | 27 | 25 |
| MI2-45T2DHN1(A) | 38 | 36 | 34 | 33 | 31 | 30 | 28 |
| MI2-56T2DHN1(A) | 40 | 37 | 35 | 34 | 33 | 31 | 30 |
| MI2-71T2DHN1(A) | 37 | 35 | 33 | 32 | 30 | 29 | 28 |
| MI2-90T2DHN1(A) | 37 | 35 | 34 | 33 | 31 | 29 | 28 |
| MI2-112T2DHN1(A) | 39 | 38 | 38 | 37 | 35 | 34 | 33 |
| MI2-140T2DHN1(A) | 41 | 39 | 38 | 37 | 36 | 35 | 33 |
| MI2-160T2DHN1(A) | 42 | 41 | 39 | 38 | 37 | 35 | 34 |

Notes:

1. Sound pressure levels are measured 1.4m below the unit in a semi-anechoic chamber. During in-situ operation, sound pressure levels may be higher as a result of ambient noise.

*Figure 9.1: Medium Static Pressure Duct sound pressure level measurement*




## 9.2 Octave Band Levels

*Figure 9.2: MI2-22(28)T2DHN1(A) octave band levels*

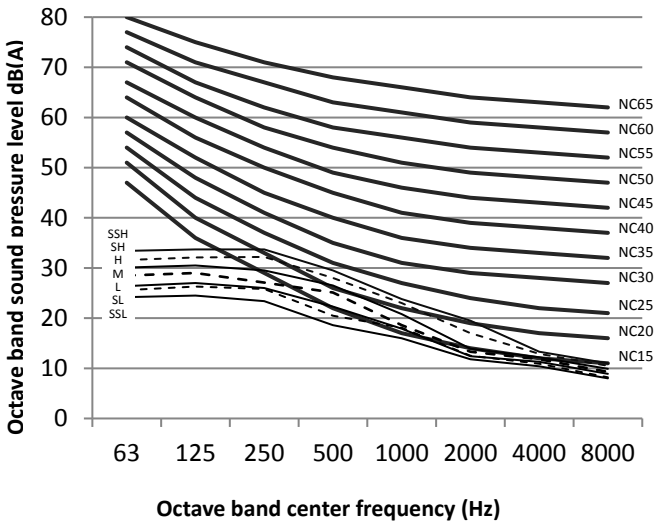



*Figure 9.3: MI2-36T2DHN1(A) octave band levels*

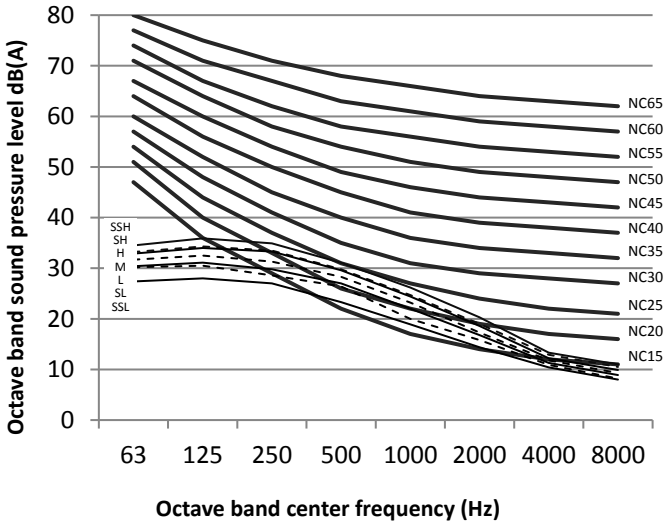


*Figure 9.4: MI2-45T2DHN1(A) octave band levels*

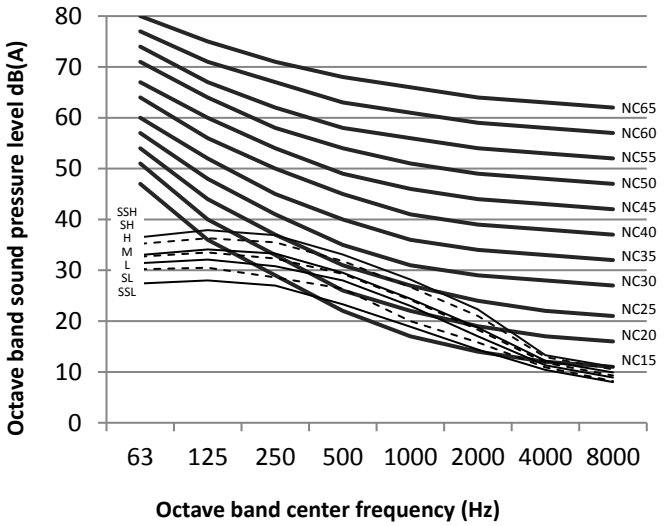



*Figure 9.5: MI2-56T2DHN1(A) octave band levels*

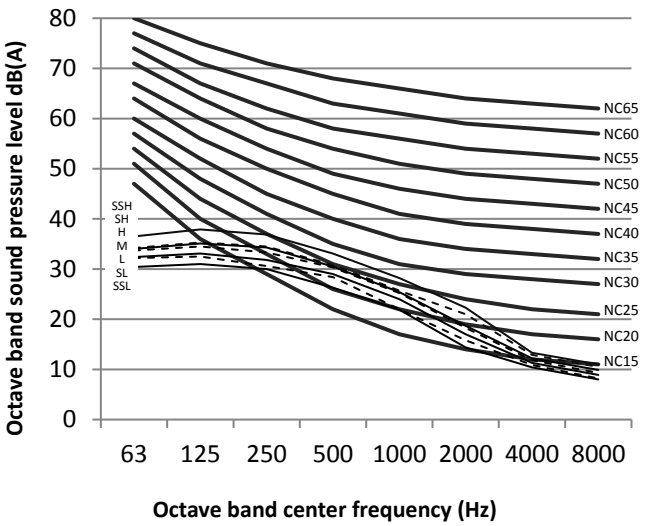



*Figure 9.6: MI2-71T2DHN1(A) octave band levels*

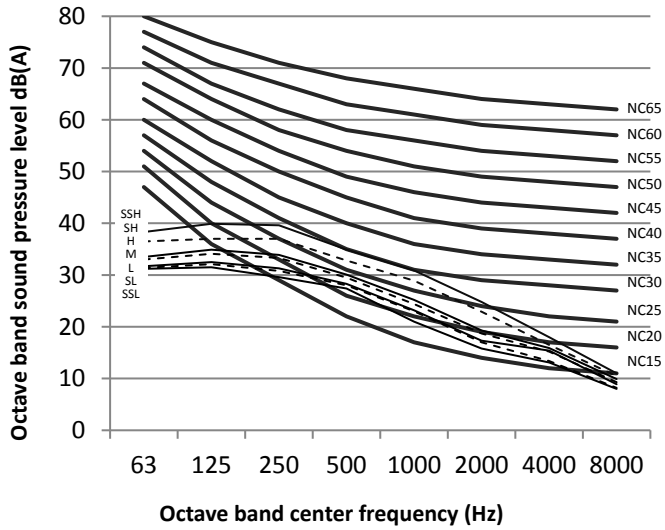



*Figure 9.7: MI2-90T2DHN1(A) octave band levels*

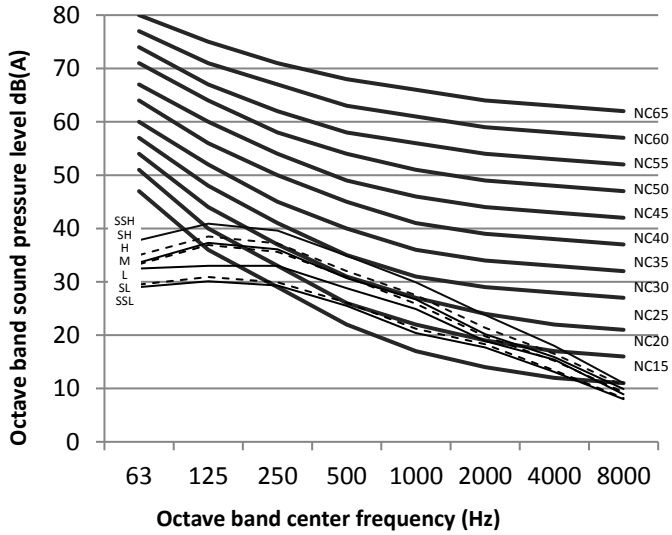



*Figure 9.8: MI2-112T2DHN1(A) octave band levels*

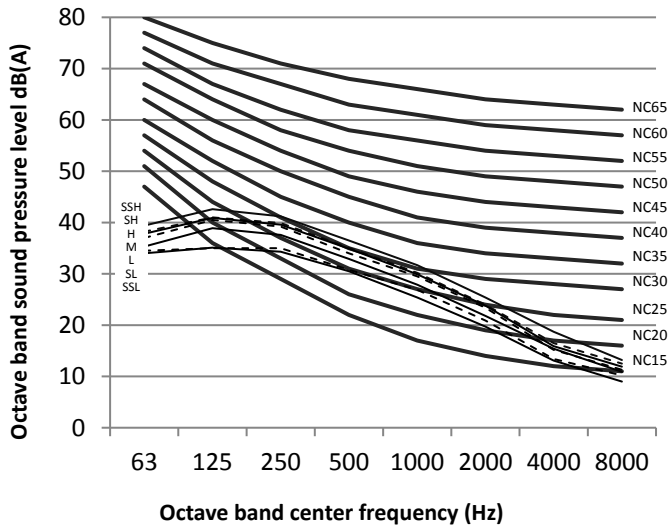



*Figure 9.9: MI2-140T2DHN1(A) octave band levels*

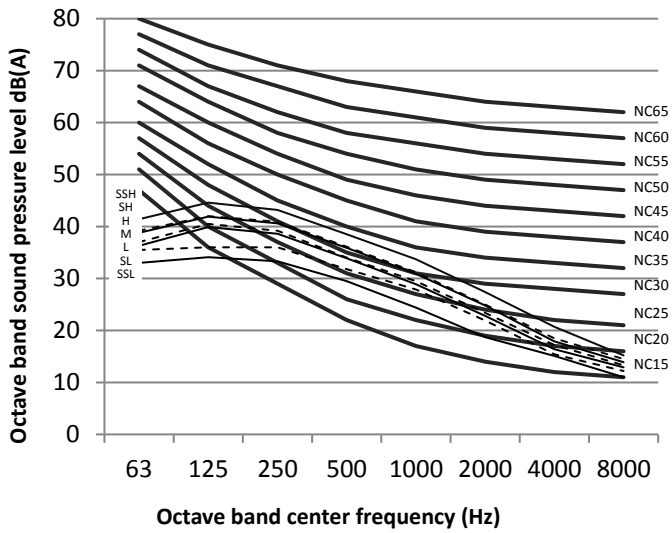
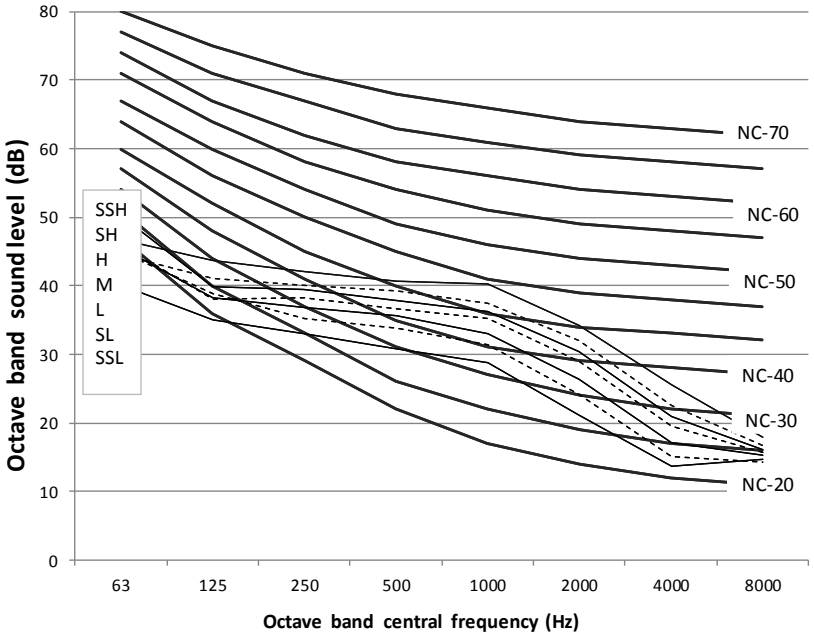


*Figure 9.10: MI2-160T2DHN1(A) octave band levels*



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