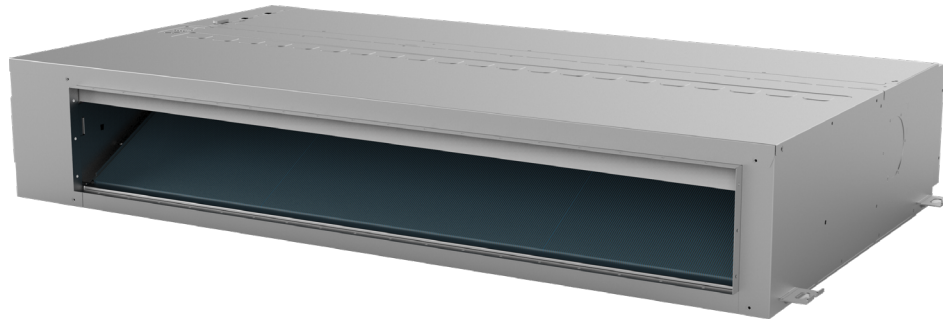


ECOFLEX MINI VRF SLIM DUCT INDOOR UNIT TECHNICAL SELECTION DATA



Model Numbers

| | |
|-----------|-----------|
| MSD-015CS | MSD-056CS |
| MSD-022CS | MSD-071CS |
| MSD-028CS | MSD-080CS |
| MSD-036CS | MSD-090CS |
| MSD-045CS | MSD-112CS |

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TECHNICAL SELECTION DATA

ECOFLEX - Mini VRF

01. Specification

| Model | | MSD-015CS | MSD-022CS | MSD-028CS | MSD-036CS | MSD-045CS | |
|--|-------------------------------------|-------------------------------------|----------------------|-----------|-----------|-------------|--------------|
| Power supply | | 1-phase, 230V, 50Hz | | | | | |
| Cooling ¹ | Capacity | kW | 1.5 | 2.2 | 2.8 | 3.6 | 4.5 |
| | | kBtu/h | 5.1 | 7.5 | 9.6 | 12.3 | 15.4 |
| | Power Input | W | 21 | 22 | 28 | 31 | 43 |
| Heating ² | Capacity | kW | 1.8 | 2.5 | 3.2 | 4 | 5 |
| | | kBtu/h | 6.1 | 8.5 | 10.9 | 13.7 | 17.1 |
| | Power Input | W | 21 | 22 | 28 | 31 | 43 |
| Fan motor type | | DC | | | | | |
| Indoor Coil | Number of rows | | 2&3 | 2&3 | 2&3 | 2&3 | 2&3 |
| | Tube pitch | mm | 14&18 | | | | |
| | Fin spacing | mm | 1.33 | | | | |
| | Fin Type | | Hydrophilic aluminum | | | | |
| | Tube OD and type | mm | Ø5 Inner-groove | | | | |
| | Dimensions (L×H×W) | mm | 380×170×95 | | | 530×170×95 | 730×170×95 |
| | Number of circuits | | 4 | | | | 6 |
| Air flow rate ³ (OPa) (Max / Min) ⁷ | | l/s | 94 / 81 | 103 / 82 | 128 / 83 | 168 / 89 | 222 / 121 |
| External static pressure ⁸ | | Pa | 10 (10-50) | | | | |
| Sound pressure level ⁴ (OPa) (Max / Min) ⁷ | | dB(A) | 27 / 22 | 28 / 22 | 30 / 22 | 30 / 22 | 33 / 26 |
| Sound power level | | dB(A) | 43.5 / 40 | 46 / 40 | 50.5 / 40 | 50.5 / 43 | 52 / 43 |
| Unit | Net dimensions ⁶ (W×H×D) | mm | 550×199×450 | | | 700×199×450 | 900×199×450 |
| | Packed dimensions (W×H×D) | mm | 715×255×525 | | | 865×255×525 | 1065×255×525 |
| | Net/Gross weight | kg | 11.5/13.5 | | | 13.0/15.5 | 16.5/19.5 |
| Refrigerant type | | R-32 | | | | | |
| Throttle | Type | Electronic expansion valve | | | | | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | | | | |
| Pipe connections | Liquid/Gas pipe | Ø 6.35 mm / Ø 12.7 mm (1/4" / 1/2") | | | | | |
| | Drain pipe | mm | OD Ø25 | | | | |

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Air flow rates are from the highest speed to the lowest speed, total 7 rates for each model.
- 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 Sem-anechoic chamber.
- Sound power level is from highest level to lowest level, total 7 levels for each model.
- Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.
- Refer to the section Sound Levels for more details.
- 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.)

TECHNICAL SELECTION DATA

ECOFLEX - Mini VRF

| Model | | MSD-056CS | MSD-071CS | MSD-080CS | MSD-090CS | MSD-112CS | |
|--|-------------------------------------|----------------------------|---|---------------------------------|--------------|-------------|-------------|
| Power supply | | 1-phase, 230V, 50Hz | | | | | |
| Cooling ¹ | Capacity | kW | 5.6 | 7.1 | 8 | 9 | 11.2 |
| | | kBtu/h | 19.1 | 24.2 | 27.3 | 30.7 | 38.2 |
| | Power Input | W | 58 | 65 | 108 | 108 | 128 |
| Heating ² | Capacity | kW | 6.3 | 8 | 9 | 10 | 12.5 |
| | | kBtu/h | 21.5 | 27.3 | 30.7 | 34.1 | 42.7 |
| | Power Input | W | 58 | 65 | 108 | 108 | 128 |
| Fan motor type | | DC | | | | | |
| Indoor Coil | Number of rows | | 2&3 | 2&3 | 2&3 | 2&3 | 2&3 |
| | Tube pitch | mm | 14&18 | | | | |
| | Fin spacing | mm | 1.33 | | | | |
| | Fin Type | | Hydrophilic aluminum | | | | |
| | Tube OD and type | mm | Ø5 Inner-groove | | | | |
| | Dimensions (L×H×W) | mm | 730×170×95 | 930×170×95 | 1405×170×95 | | |
| | Number of circuits | | 6 | 8 | 12 | | |
| Air flow rate ³ (OPa) (Max / Min) ⁷ | | l/s | 250 / 131 | 318 / 161 | 389 / 267 | 389 / 267 | 450 / 300 |
| External static pressure ⁸ | | Pa | 10 (10-50) | | 20(10-80) | | |
| Sound pressure level ⁴ (OPa) (Max / Min) ⁷ | | dB(A) | 36 / 27 | 37 / 29 | 36.5 / 30.5 | 36.5 / 30.5 | 39.5 / 31.5 |
| Sound power level | | dB(A) | 56 / 44 | 57 / 47 | 57 / 49.5 | 57 / 49.5 | 60.5 / 50.5 |
| Unit | Net dimensions ⁶ (W×H×D) | mm | 900×199×450 | 1100×199×450 | 1600×199×450 | | |
| | Packed dimensions (W×H×D) | mm | 1065×255×525 | 1300×255×525 | 1780×250×525 | | |
| | Net/Gross weight | kg | 16.5/19.5 | 20/23.5 | 28/32.5 | | |
| Refrigerant type | | R-32 | | | | | |
| Throttle | Type | Electronic expansion valve | | | | | |
| Design pressure (H/L) | | MPa | 4.4/2.6 | | | | |
| Pipe connections | Liquid/Gas pipe | | Ø 6.35 mm / Ø 12.7 mm (1/4" / 1/2") | Ø9.52mm / Ø15.9mm (3/8" / 5/8") | | | |
| | Drain pipe | mm | OD Ø25 | | | | |

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Air flow rates are from the highest speed to the lowest speed, total 7 rates for each model.
- 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 Sem-anechoic chamber.
- Sound power level is from highest level to lowest level, total 7 levels for each model.
- Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.
- Refer to the section Sound Levels for more details.
- 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.)

02. Dimensions

02.01. Unit Dimensions

Figure 2.1: Slim Duct dimensions (unit: mm)

Figure 2.1: External dimension, air outlet size, and size of fresh air outlet: (unit: mm)

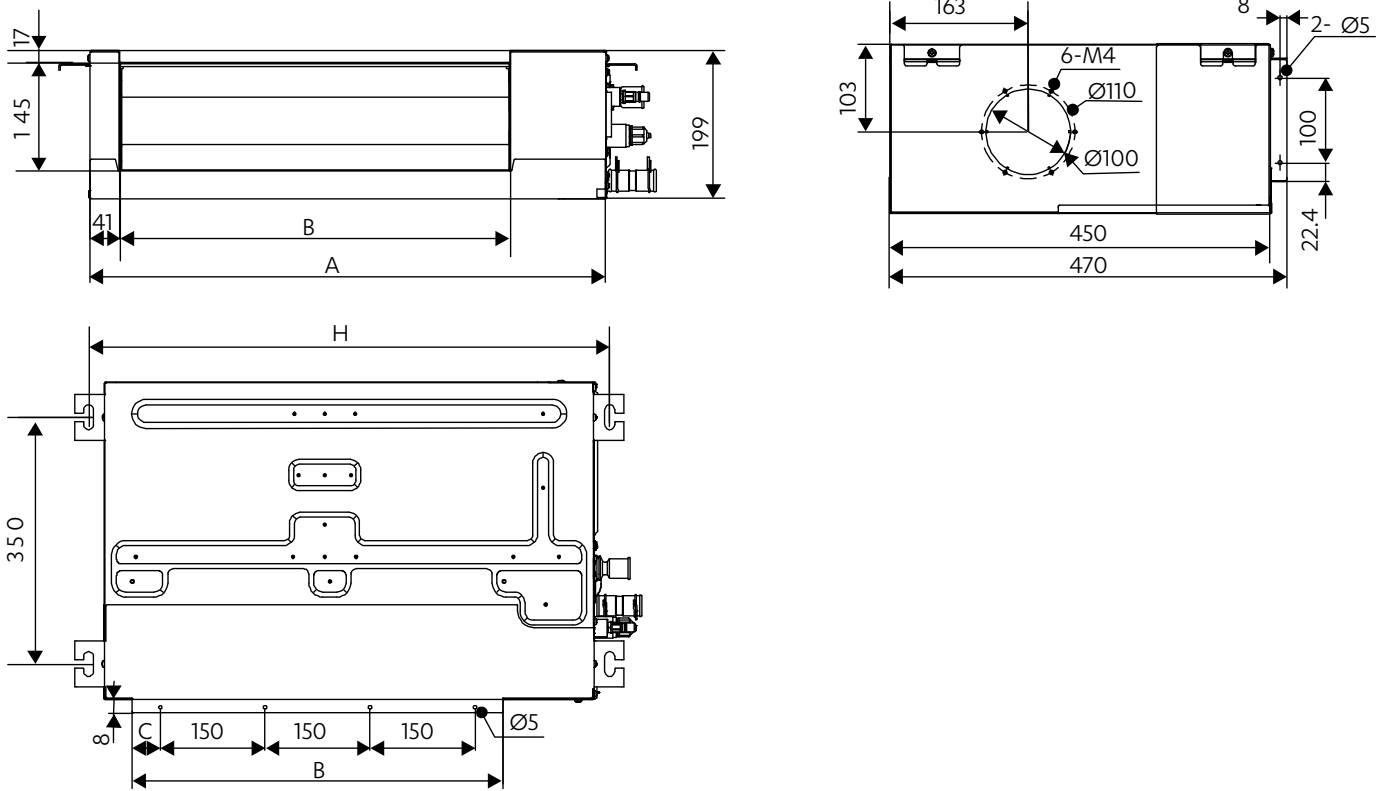


Figure 2.2: Size of return air inlet (rear return air mode): (unit: mm)

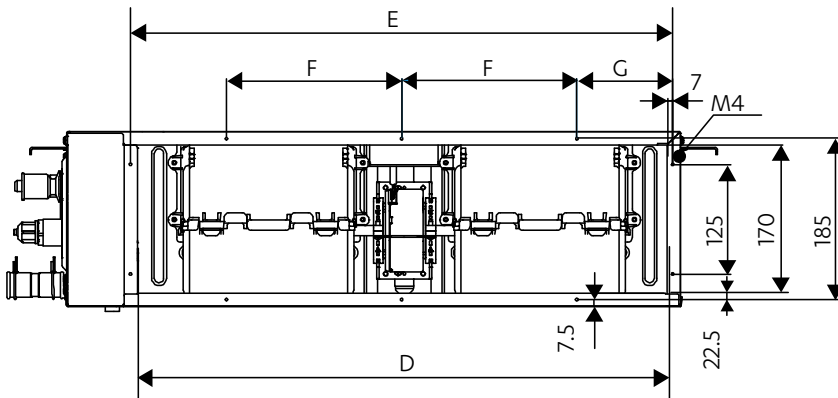
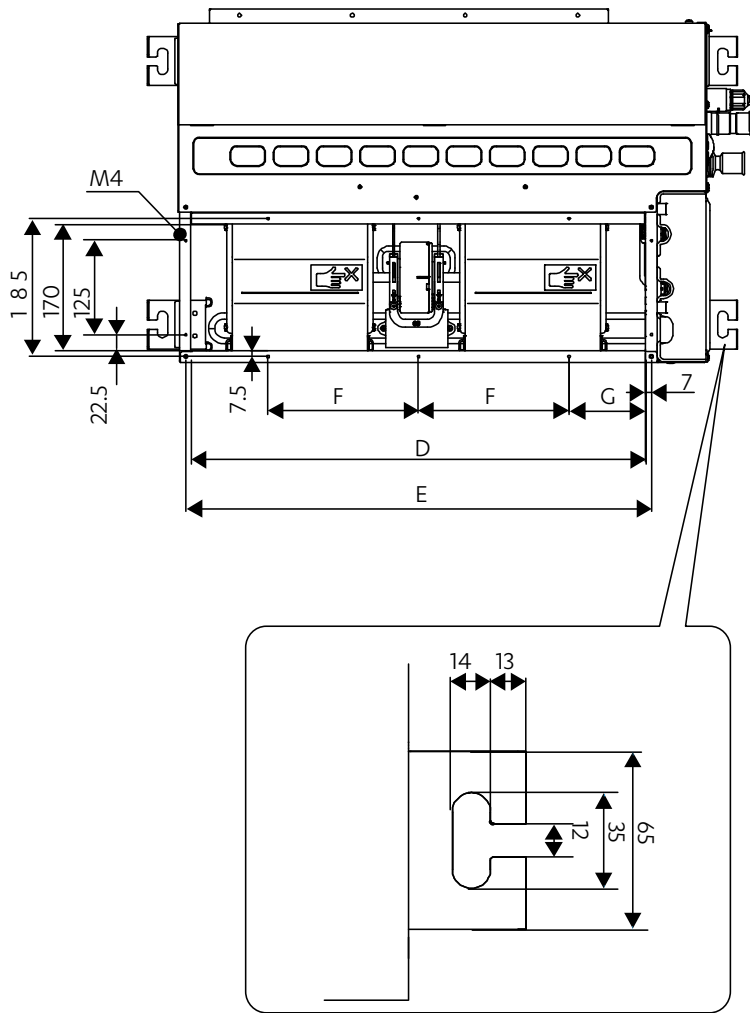


Table 2.1: Letter-Size Correspondence Table: (unit: mm)

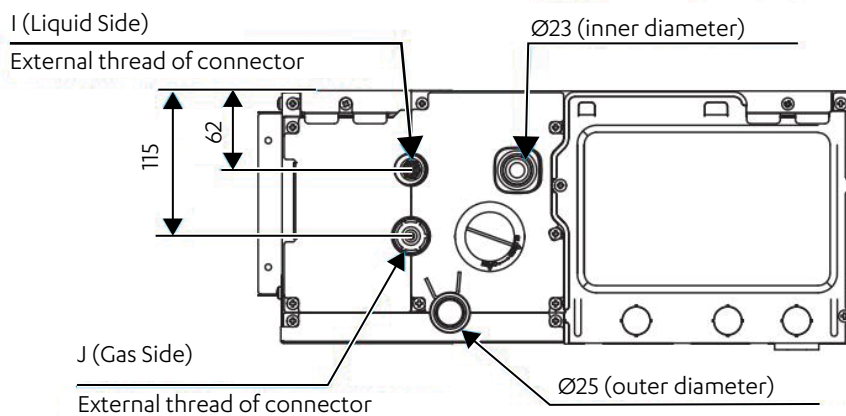
| Capacity (kW) | A | B | C | D | E | F | G | H | I | J |
|---------------|------|------|----|------|------|-----|-------|------|-------------|------------|
| kW≤2.8 | 550 | 380 | 40 | 455 | 469 | 250 | 109.5 | 595 | 7/16-20 UNF | 3/4-16 UNF |
| 2.8<kW≤3.6 | 700 | 530 | 40 | 605 | 619 | 200 | 109.5 | 745 | | |
| 3.6<kW≤5.6 | 900 | 730 | 65 | 805 | 819 | 200 | 109.5 | 945 | | |
| 5.6<kW≤7.1 | 1100 | 930 | 15 | 1005 | 1019 | 200 | 109.5 | 1145 | 5/8-18 UNF | 7/8-14 UNF |
| 7.1<kW≤11.2 | 1600 | 1400 | 25 | 1505 | 1519 | 200 | 159.5 | 1645 | | |

Figure 2.3: Size of return air inlet (bottom return air mode) and distance between lifting lugs: (unit: mm)



Notes:
1. meaning of letters refer to Table 2.1

Figure 2.4: Piping and water pipe size:(unit: mm)



Notes:
1. meaning of letters refer to Table 2.1

03. Unit Placement

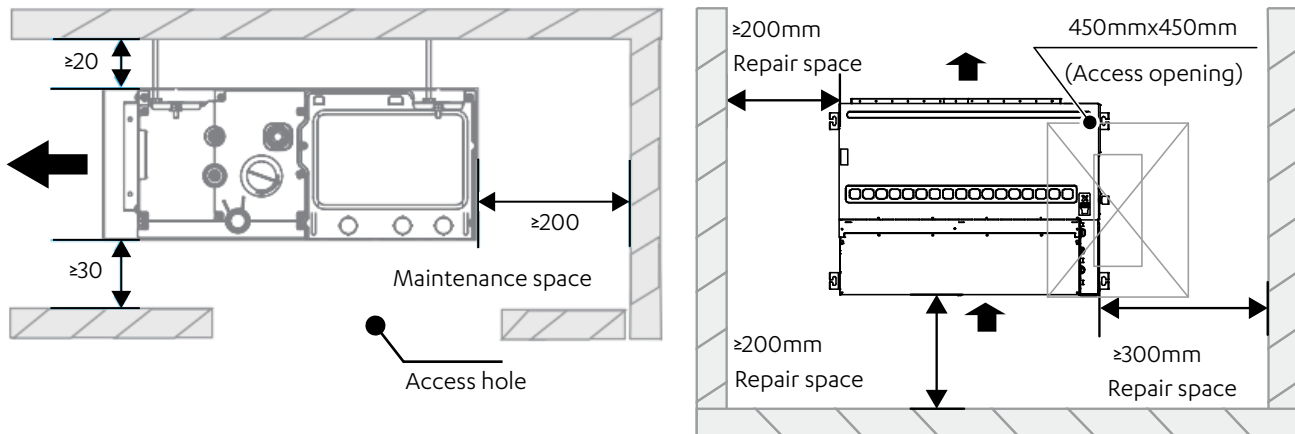
03.01. Placement Considerations

Unit placement should take account of the following considerations:

- Units should not be installed in the following locations:
 - A place filled with mineral oil, fumes or mist, like a kitchen.
 - A place where there are corrosive gases, such as acid or alkaline gases..
 - A place exposed to combustible gases and using volatile combustible gases such as diluent or gasoline.
 - A place where there is equipment emitting electromagnetic radiation.
 - A place where there is a high salt content in the air e.g. coastal environment.
 - Do not use the air conditioner in an environment where an explosion may occur.
 - Places like in vehicles or cabin rooms.
 - Factories with major voltage fluctuations in the power supplies.
 - Other special environmental conditions.
- Units should be installed in positions where:
 - Ensure that the airflow in and out of the IDU is reasonably organized to form an air circulation in the room.
 - Ensure IDU maintenance space.
 - The nearer the drainage pipe and copper pipe are to the ODU, the lower the pipe cost is.
 - Prevent the air conditioner from blowing directly to the human body.
 - The closer the wiring to the power cabinet, the lower the wiring cost is.
 - Keep the air-conditioning return air away from the setting sun of the room.
 - Be careful not to interfere with the light tank, fire pipe, gas pipe and other facilities.
 - The IDU should not be lifted in the places like load-bearing beam and columns that affect the structural safety of the house.
 - The wired controller and the IDU should be in the same installation space; otherwise, the sampling point setting of the wired controller need to be changed.

03.02. Space Requirements

Figure 3.1: Slim Duct space requirements (unit: mm)

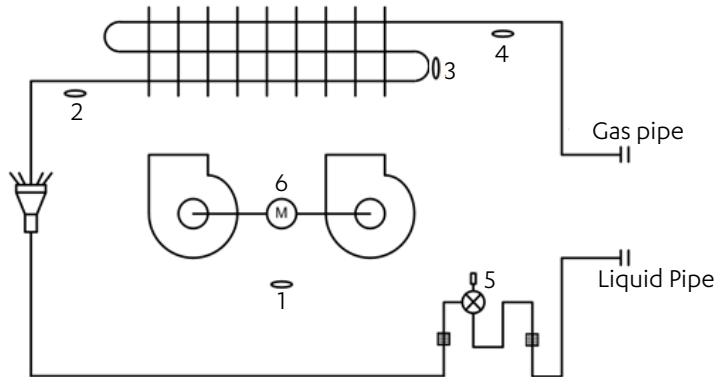


Notes:

The centerline of the maintenance hole should be in the same position as the centerline of the indoor unit.

04. Piping Diagram

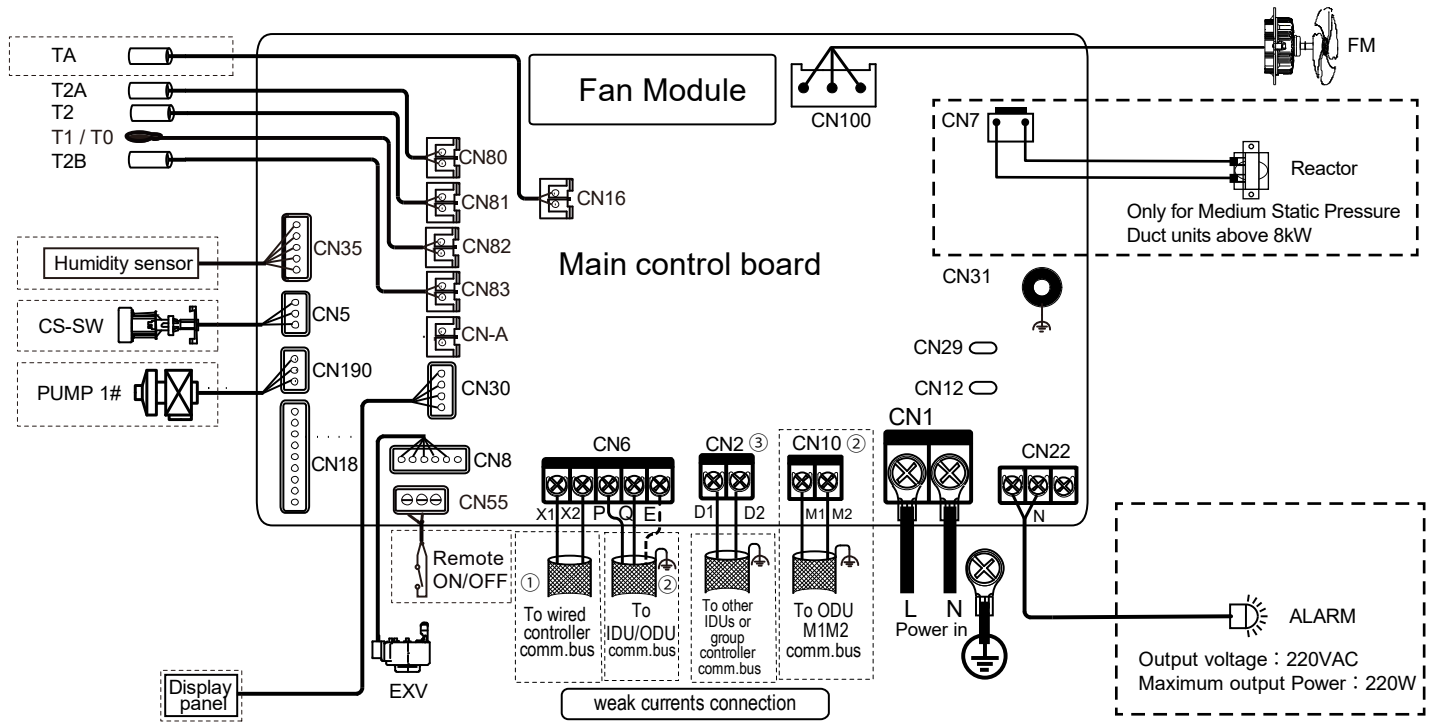
Figure 4.1: Slim Duct piping diagram



| Legend | Code | Description |
|--------|------|----------------------------|
| 1 | T1 | Inlet Air Temp. Sensor |
| 2 | T2A | Liquid Pipe Temp. Sensor |
| 3 | T2 | Middle Pipe Temp. Sensor |
| 4 | T2B | Gas Pipe Temp. Sensor |
| 5 | EEV | Electronic Expansion Valve |
| 6 | FAN | DC Fan motor |

05. Wiring Diagram

Figure 5.1: Slim Duct wiring diagram



Installation Notes

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.
- The dotted lines indicate the field wiring or optional function.
- PQ and M1M2 communication ports both are used for indoor and outdoor communication, and only one of them can be used at a time. Meanwhile, be sure to connect the same communication ports (PQ to PQ; M1M2 to M1M2) in case of damage of the main control board.
- D1D2 communication ports are used for group control communication. When connecting the group controller, the D1D2 port of the indoor units that are to be group controlled must be connected in a daisy chain, and the group controller must be connected to the X1X2 port of one of the indoor units in the group controller, and set to group control mode. In addition, D1D2 communication ports can also be connected to the central controller.

06. Capacity Tables

06.01. Cooling Capacity Table

Table 6.01: Slim 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 |
| MSD-015CS | 1.4 | 1.3 | 1.5 | 1.4 | 1.5 | 1.3 | 1.5 | 1.3 | 1.6 | 1.3 | 1.6 | 1.2 | 1.6 | 1.1 |
| MSD-022CS | 2.0 | 1.9 | 2.1 | 1.9 | 2.2 | 1.9 | 2.2 | 1.8 | 2.3 | 1.8 | 2.3 | 1.7 | 2.4 | 1.7 |
| MSD-028CS | 2.5 | 2.3 | 2.7 | 2.4 | 2.8 | 2.4 | 2.8 | 2.3 | 2.9 | 2.3 | 2.9 | 2.2 | 3.0 | 2.1 |
| MSD-036CS | 3.2 | 3.0 | 3.4 | 3.1 | 3.6 | 3.1 | 3.6 | 3.0 | 3.7 | 3.0 | 3.8 | 2.8 | 3.9 | 2.7 |
| MSD-045CS | 4.0 | 3.7 | 4.3 | 3.8 | 4.5 | 3.9 | 4.5 | 3.7 | 4.6 | 3.6 | 4.7 | 3.5 | 4.8 | 3.3 |
| MSD-056CS | 5.0 | 4.6 | 5.3 | 4.7 | 5.6 | 4.8 | 5.6 | 4.6 | 5.7 | 4.5 | 5.8 | 4.3 | 6.0 | 4.1 |
| MSD-071CS | 6.3 | 5.8 | 6.7 | 5.9 | 7.0 | 6.0 | 7.1 | 5.8 | 7.2 | 5.7 | 7.4 | 5.4 | 7.6 | 5.2 |
| MSD-080CS | 7.1 | 6.3 | 7.6 | 6.5 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.3 | 8.3 | 6.0 | 8.5 | 5.8 |
| MSD-090CS | 8.0 | 7.1 | 8.5 | 7.3 | 8.9 | 7.4 | 9.0 | 7.3 | 9.1 | 7.1 | 9.4 | 6.8 | 9.6 | 6.5 |
| MSD-112CS | 9.9 | 8.8 | 10.6 | 9.1 | 11.1 | 9.3 | 11.2 | 9.1 | 11.3 | 8.8 | 11.6 | 8.4 | 11.9 | 8.1 |

Abbreviations:

TC: Total capacity (kW)

SC: Sensible capacity(kW)

Notes:

Shaded cells indicate rated conditions.

06.02. Heating Capacity Table

Table 6.02: Slim Duct heating capacity

| Model | Indoor air temperature (°C DB) | | | | | |
|-----------|--------------------------------|------|------|------|------|------|
| | 16 | 18 | 20 | 21 | 22 | 24 |
| | TC | TC | TC | TC | TC | TC |
| MSD-015CS | 1.9 | 1.9 | 1.8 | 1.7 | 1.7 | 1.6 |
| MSD-022CS | 2.7 | 2.7 | 2.5 | 2.4 | 2.4 | 2.2 |
| MSD-028CS | 3.4 | 3.4 | 3.2 | 3.1 | 3.0 | 2.8 |
| MSD-036CS | 4.2 | 4.2 | 4.0 | 3.8 | 3.8 | 3.5 |
| MSD-045CS | 5.3 | 5.3 | 5.0 | 4.8 | 4.7 | 4.4 |
| MSD-056CS | 6.7 | 6.6 | 6.3 | 6.1 | 5.9 | 5.5 |
| MSD-071CS | 8.5 | 8.4 | 8.0 | 7.8 | 7.5 | 7.0 |
| MSD-080CS | 9.5 | 9.5 | 9.0 | 8.7 | 8.5 | 7.8 |
| MSD-090CS | 10.6 | 10.5 | 10.0 | 9.7 | 9.4 | 8.8 |
| MSD-112CS | 13.3 | 13.1 | 12.5 | 12.1 | 11.8 | 10.9 |

Abbreviations:

TC: Total capacity (kW)

Notes:

Shaded cells indicate rated conditions.

07. Electrical Characteristics

Table 7.1: Slim Duct electrical characteristics

| Model | Power Supply | | | | | | Indoor Fan Motors | |
|-----------|--------------|-------------|------------|------------|------|-----|-------------------------|------|
| | Hz | Rated Volts | Min. volts | Max. volts | MCA | MFA | Rated motor output (kW) | FLA |
| MSD-015CS | 50 | 230 | 217 | 243 | 0.88 | 15 | 20 | 0.70 |
| MSD-022CS | 50 | 230 | 217 | 243 | 0.88 | 15 | 20 | 0.70 |
| MSD-028CS | 50 | 230 | 217 | 243 | 0.88 | 15 | 20 | 0.70 |
| MSD-036CS | 50 | 230 | 217 | 243 | 0.94 | 15 | 20 | 0.75 |
| MSD-045CS | 50 | 230 | 217 | 243 | 1.10 | 15 | 30 | 0.85 |
| MSD-056CS | 50 | 230 | 217 | 243 | 1.10 | 15 | 30 | 0.85 |
| MSD-071CS | 50 | 230 | 217 | 243 | 1.20 | 15 | 50 | 0.94 |
| MSD-080CS | 50 | 230 | 217 | 243 | 1.70 | 15 | 60 | 1.35 |
| MSD-090CS | 50 | 230 | 217 | 243 | 1.70 | 15 | 60 | 1.35 |
| MSD-112CS | 50 | 230 | 217 | 243 | 1.70 | 15 | 60 | 1.35 |

Abbreviations:

MCA: Minimum Circuit Amps

MFA: Maximum Fuse Amps

FLA: Full Load Amps

08. Sound Levels

08.01. Overall

Table 8.1.1: Slim Duct sound pressure levels¹

| Model | Sound pressure levels dB | | | | | | |
|-----------|--------------------------|------|------|------|----|------|------|
| | SSH | SH | H | M | L | SL | SSL |
| MSD-015CS | 27 | 26 | 25 | 24 | 23 | 22.5 | 22 |
| MSD-022CS | 28 | 27 | 26 | 25 | 24 | 23.5 | 22 |
| MSD-028CS | 30 | 29 | 28 | 27 | 26 | 25 | 22 |
| MSD-036CS | 30 | 29 | 28 | 27 | 26 | 25.5 | 25 |
| MSD-045CS | 33 | 32.5 | 32 | 30 | 29 | 28 | 26 |
| MSD-056CS | 36 | 34 | 33 | 32 | 31 | 30 | 27 |
| MSD-071CS | 37 | 35 | 34 | 32.5 | 31 | 30 | 29 |
| MSD-080CS | 36.5 | 35 | 34 | 33 | 32 | 31 | 30.5 |
| MSD-090CS | 36.5 | 35 | 34 | 33 | 32 | 31 | 30.5 |
| MSD-112CS | 39.5 | 38 | 36.5 | 35 | 34 | 32.5 | 31.5 |

Notes:

- (1) Sound pressure levels are measured 1.5m below the unit in a semi-anechoic chamber at 0 Pa static pressure. During in-situ operation, sound pressure levels may be higher as a result of ambient noise.

Figure 8.1.1: Slim Duct sound pressure level measurement

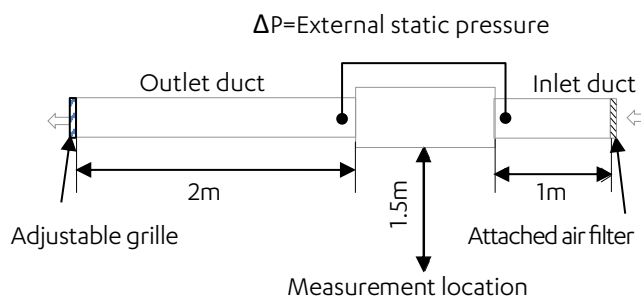


Table 8.1.2: Slim Duct Air flow rate (OPa).

Table 8.1.2: Slim Duct Sound Power Levels

| Model | Sound pressure levels dB | | | | | | |
|-----------|--------------------------|-----|-----|-----|-----|-----|-----|
| | SSH | SH | H | M | L | SL | SSL |
| MSD-015CS | 94 | 93 | 91 | 89 | 85 | 83 | 81 |
| MSD-022CS | 103 | 96 | 94 | 89 | 87 | 85 | 82 |
| MSD-028CS | 128 | 120 | 115 | 106 | 98 | 90 | 83 |
| MSD-036CS | 168 | 155 | 141 | 126 | 115 | 101 | 89 |
| MSD-045CS | 222 | 214 | 195 | 175 | 155 | 141 | 121 |
| MSD-056CS | 250 | 222 | 211 | 189 | 168 | 153 | 131 |
| MSD-071CS | 318 | 287 | 266 | 239 | 212 | 186 | 161 |
| MSD-080CS | 389 | 369 | 347 | 326 | 304 | 285 | 267 |
| MSD-090CS | 389 | 369 | 347 | 326 | 304 | 285 | 267 |
| MSD-112CS | 450 | 423 | 398 | 373 | 348 | 325 | 300 |

| Model | Sound pressure levels dB | | | | | | |
|-----------|--------------------------|------|------|------|------|------|------|
| | SSH | SH | H | M | L | SL | SSL |
| MSD-015CS | 43.5 | 43.0 | 42.5 | 42.0 | 41.5 | 41.0 | 40.0 |
| MSD-022CS | 46.0 | 45.0 | 44.0 | 43.0 | 42.0 | 41.0 | 40.0 |
| MSD-028CS | 50.5 | 49.0 | 47.0 | 45.5 | 43.5 | 42.0 | 40.0 |
| MSD-036CS | 50.5 | 49.5 | 48.0 | 47.0 | 45.5 | 44.5 | 43.0 |
| MSD-045CS | 52.0 | 50.5 | 49.0 | 47.5 | 46.0 | 44.5 | 43.0 |
| MSD-056CS | 56.0 | 54.0 | 52.0 | 50.0 | 48.0 | 46.0 | 44.0 |
| MSD-071CS | 57.0 | 55.5 | 54.0 | 52.0 | 50.5 | 49.0 | 47.0 |
| MSD-080CS | 57.0 | 56.0 | 54.5 | 53.5 | 52.0 | 51.0 | 49.5 |
| MSD-090CS | 57.0 | 56.0 | 54.5 | 53.5 | 52.0 | 51.0 | 49.5 |
| MSD-112CS | 60.5 | 59.0 | 57.5 | 55.5 | 54.0 | 52.5 | 50.5 |

08.02. Octave Band Levels

Figure 8.3: MSD-015CS octave band levels

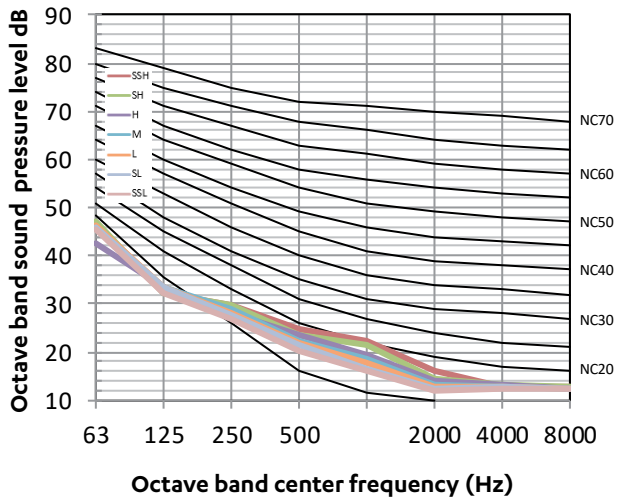


Figure 8.4: MSD-022CS octave band levels

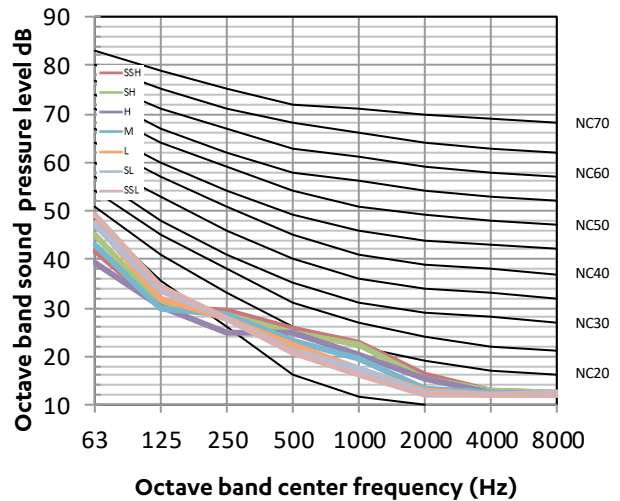


Figure 8.5: MSD-028CS octave band levels

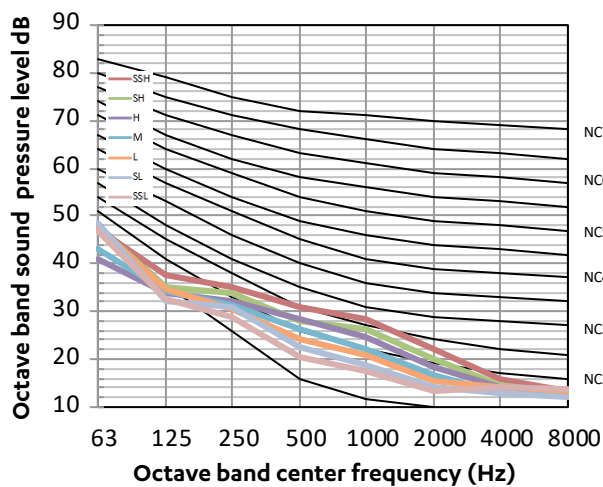
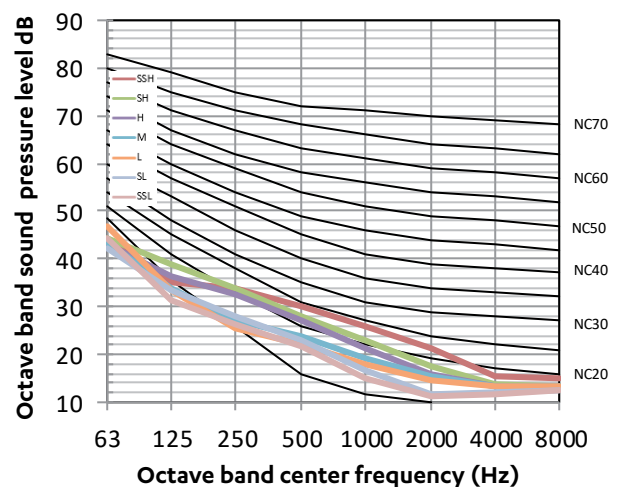


Figure 8.6: MSD-036CS octave band levels



TECHNICAL SELECTION DATA

ECOFLEX - Mini VRF

Figure 8.7: MSD-045CS octave band levels

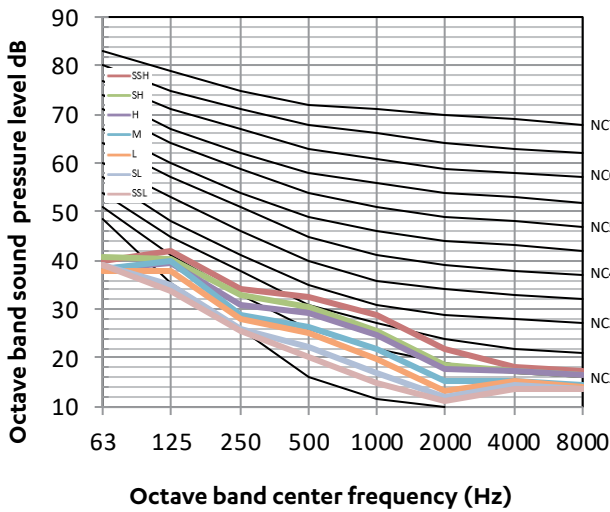


Figure 8.8: MSD-056CS octave band levels

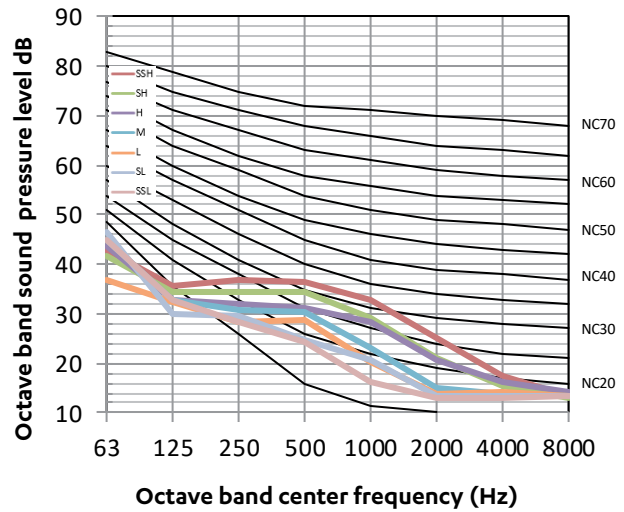


Figure 8.9: MSD-071CS octave band levels

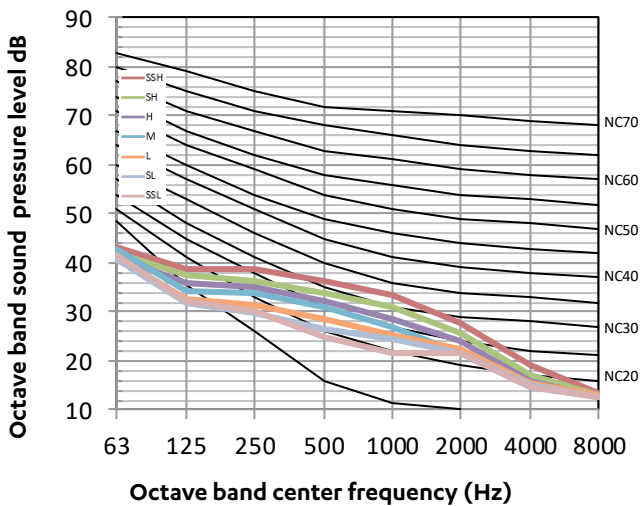


Figure 8.10: MSD-080CS octave band levels

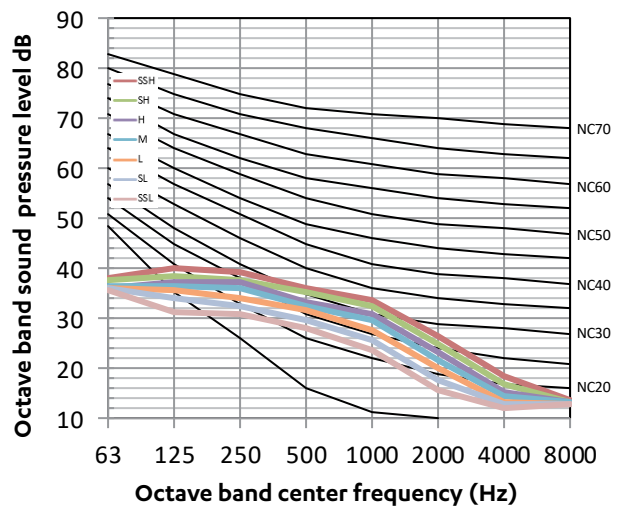


Figure 8.11: MSD-090CS octave band levels

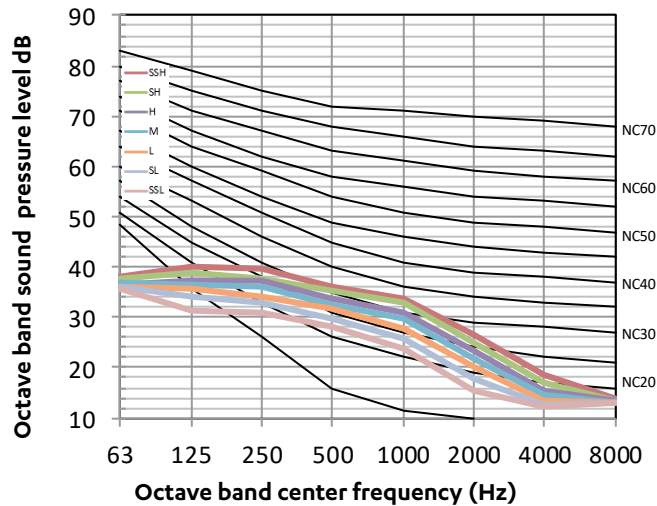
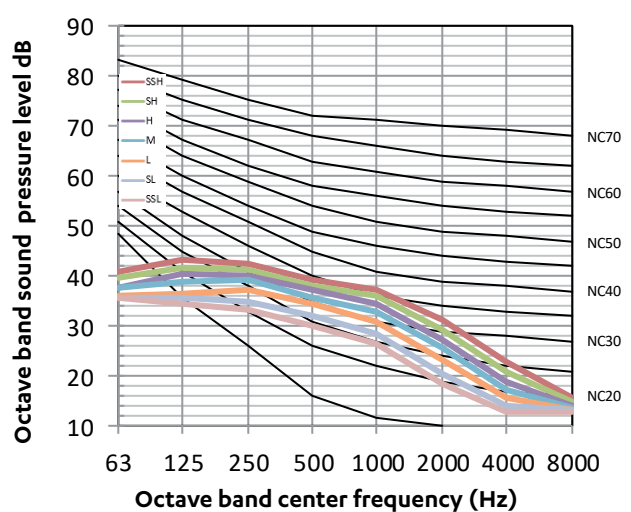


Figure 8.12: MSD-112CS octave band levels



09. Fan Performance

09.01. How to switch between Constant Airflow mode and Constant Speed mode

- ① In the main interface, press "≡"+"↵" for 3 seconds at the same time, and the main interface will display "CC". Press the "▲" and "▼" to select the indoor unit ("n00-n63" is displayed, and the last two digits are the indoor unit addresses). Press the "↵" to enter the parameter setting interface, and "n00" will be displayed.
- ② When "n00" is displayed, press the "↵" to enter the static pressure setting. Use the "▲" and "▼" keys to adjust to the demand parameter values, and press the "↵" to confirm.
- ③ Press the "⌚" button to return to the previous menu and exit the parameter setting. Parameter setting will also exit after 60 s of no operation.

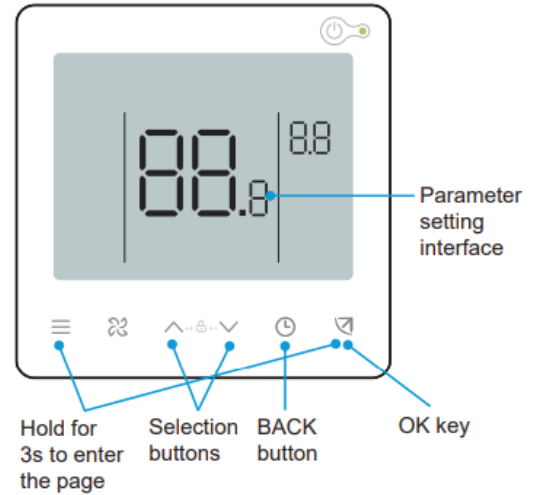


Table 9.1: Slim Duct mode setting

| First level menu | Second level menu | Description | Default |
|------------------|-------------------|------------------|---------|
| n30 | 00 | Constant Speed | - |
| | 01 | Constant Airflow | √ |

Notes:

The above is only an example. If you choose other controllers, please refer to their instructions for setting.

09.02. Constant Airflow mode

09.02.01. Fan performance diagram

Figure 9.1: MSD-015CS

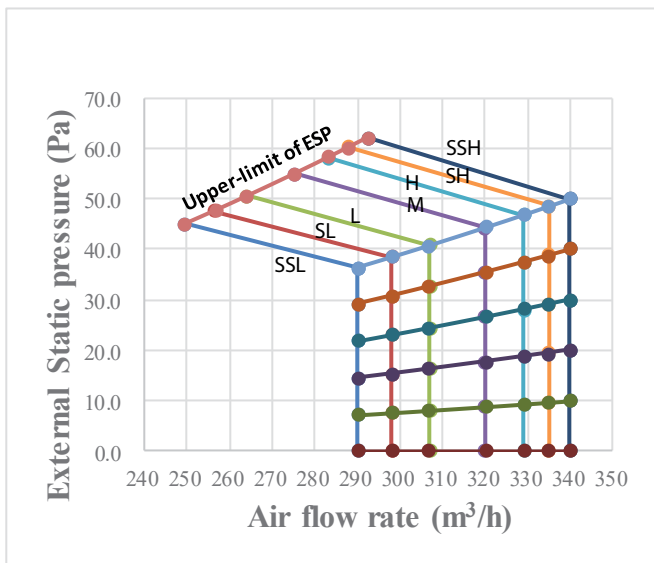


Figure 9.2: MSD-022CS

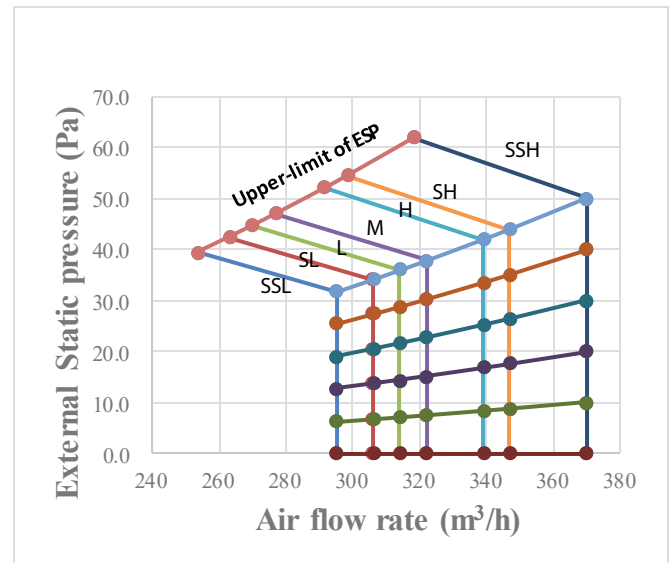


Figure 9.3: MSD-028CS

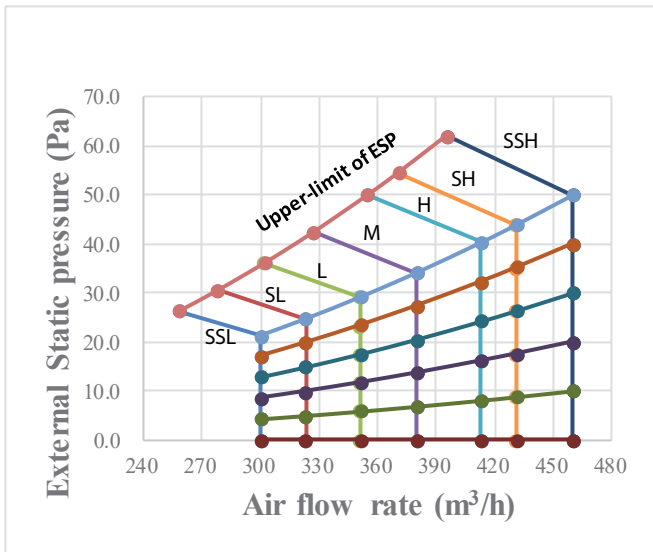


Figure 9.4: MSD-036CS

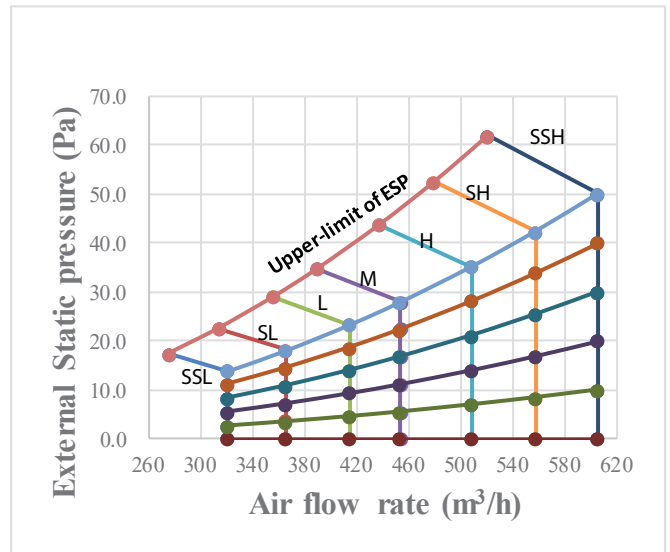


Figure 9.5: MSD-045CS

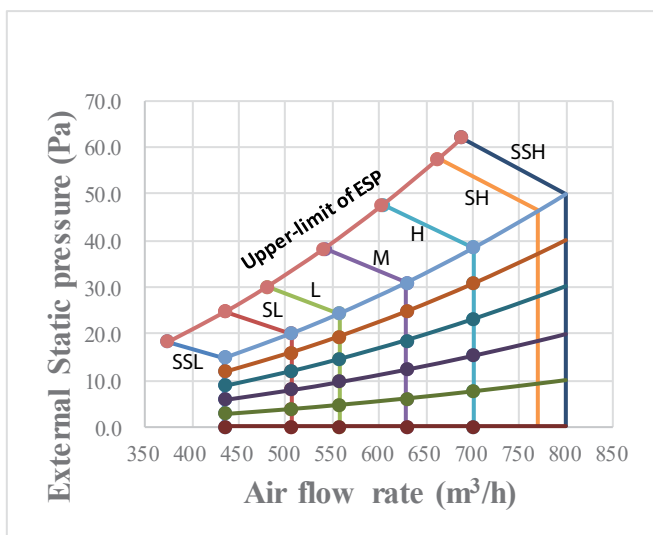


Figure 9.6: MSD-056CS

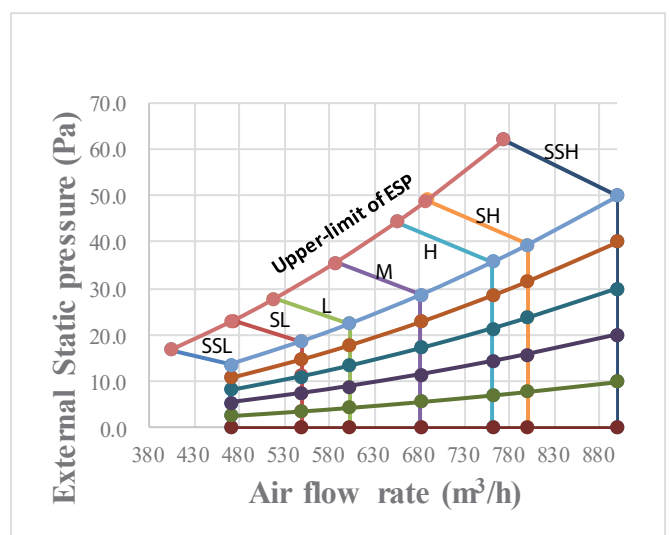


Figure 9.7: MSD-071CS

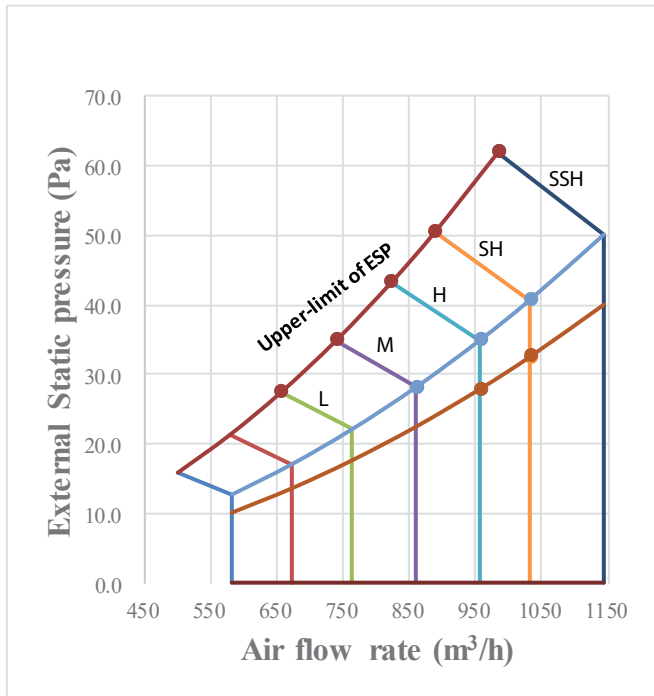


Figure 9.8: MSD-080CS

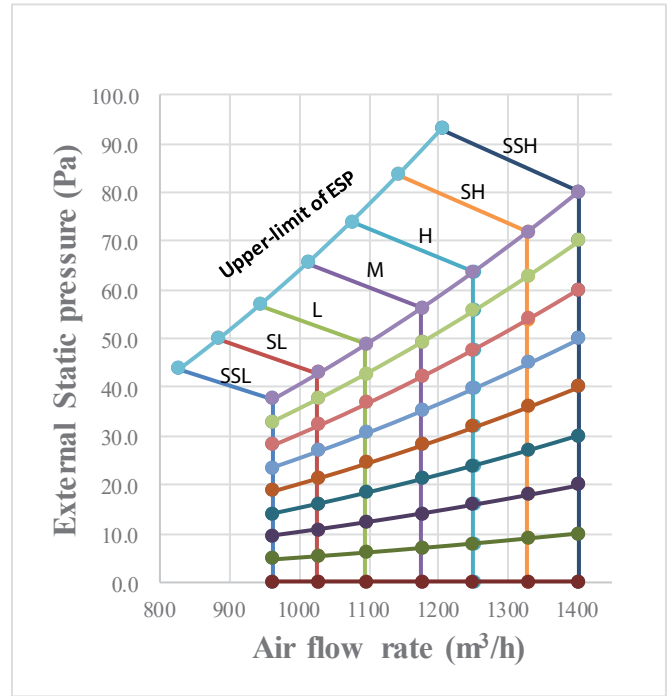


Figure 9.9: MSD-090CS

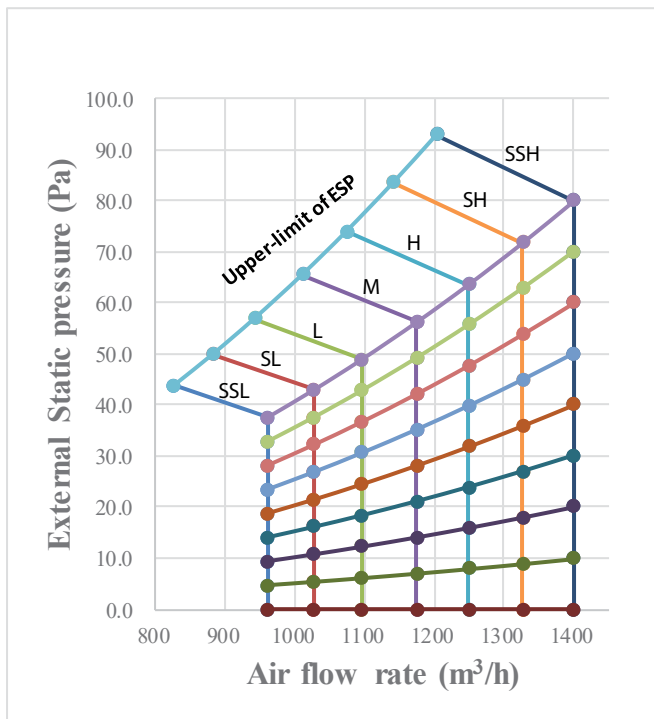
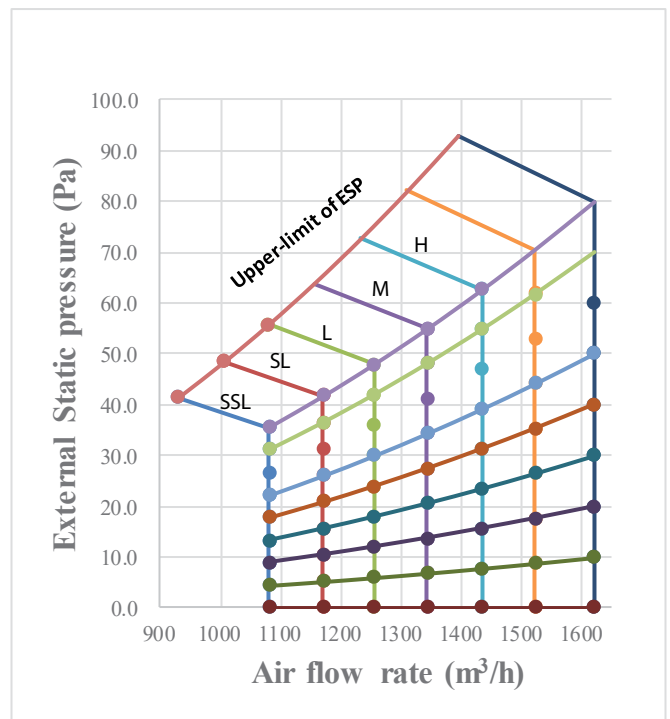


Figure 9.10: MSD-112CS



09.02.02. How to Read the Diagram (Constant Airflow mode)

The vertical axis is the External Static Pressure (Pa) while the horizontal axis represents the Air Flow (m³/h). The characteristic curve for the “SSH”, “SH”, “H”, “M”, “L”, “SL” and “SSL” fan speed control.

For MSD-080CS, in “H” windshield, when the external static pressure is less than 122 Pa, the air flow keeps 1837 m³/h, but when the external static pressure is greater than 122 Pa, the air flow begins to decline, and the allowable maximum external static pressure is 137 Pa.



09.03. Constant Speed mode

09.03.01. Set external static pressure parameters

- ① In the main interface, press "≡"+"↵" for 3 seconds at the same time, and the main interface will display "CC". Press the "▲" and "▼" to select the indoor unit ("n00-n63" is displayed, and the last two digits are the indoor unit addresses). Press the "↵" to enter the parameter setting interface, and "n00" will be displayed.
- ② When "n00" is displayed, press the "↵" to enter the static pressure setting. Use the "▲" and "▼" keys to adjust to the demand parameter values, and press the "↵" to confirm.
- ③ Press the "🕒" button to return to the previous menu and exit the parameter setting. Parameter setting will also exit after 60 s of no operation.

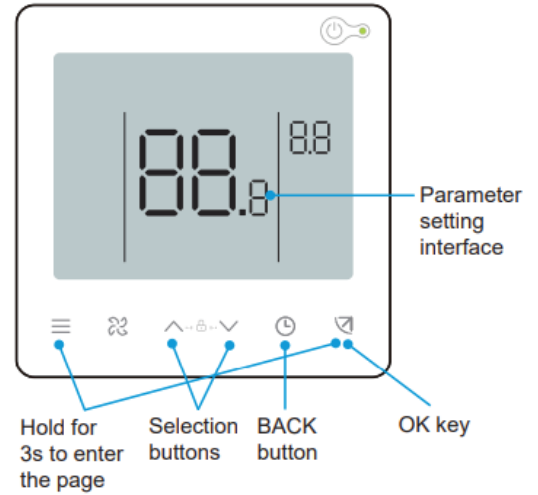


Table 9.1: External static pressure setting (1.5-7.1kW)

| First level menu | Second level menu | Description | Default |
|------------------|-------------------------|-----------------------|---------|
| n00 | 00/01/02/03/04/05/~ /19 | Static pressure level | 00 |

| Level | 00 | 01 | 02 | 03 | 04-19 |
|---------------------|----|----|----|----|-------|
| Static pressure(Pa) | 10 | 20 | 30 | 40 | 50 |

| First level menu | Second level menu | Description | Default |
|------------------|-------------------------|-----------------------|---------|
| N00 | 00/01/02/03/04/05/~ /19 | Static pressure level | 01 |

| Level | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07-19 |
|---------------------|----|----|----|----|----|----|----|-------|
| Static pressure(Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |

Notes:

The above is only an example of 865 wired controller. If you choose other controllers, please refer to their manuals for setting.

09.03.02. Fan performance diagram

Figure 9.11: MSD-015CS

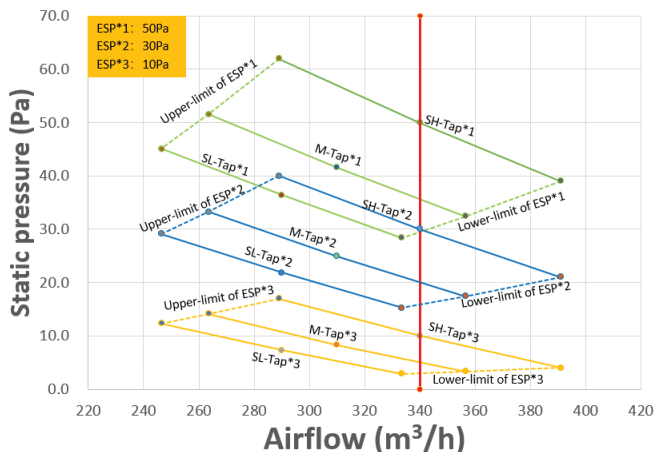
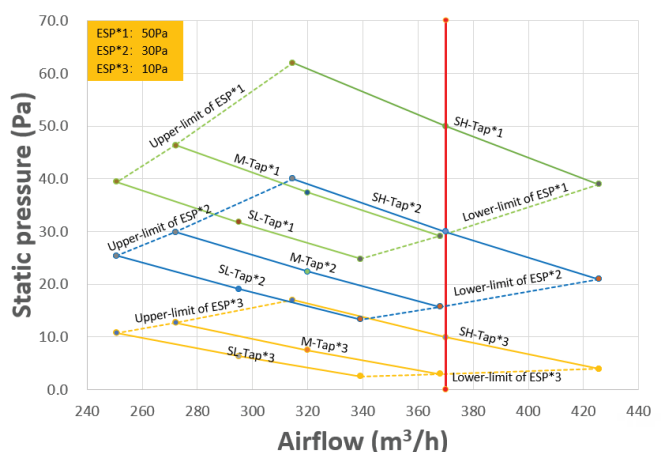


Figure 9.12: MSD-022CS



TECHNICAL SELECTION DATA

ECOFLEX - Mini VRF

Figure 9.13: MSD-028CS

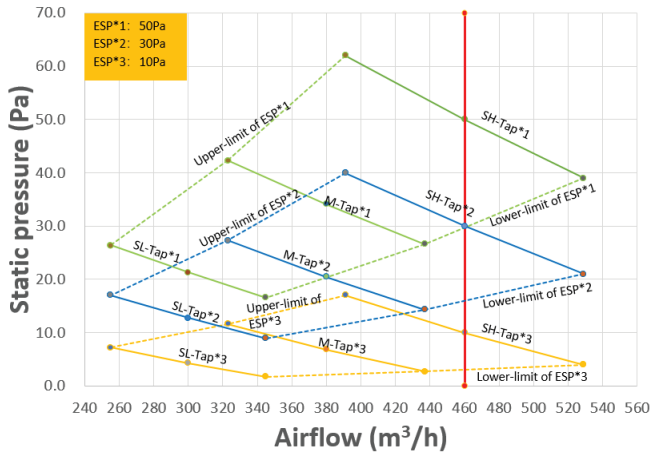


Figure 9.14: MSD-036CS

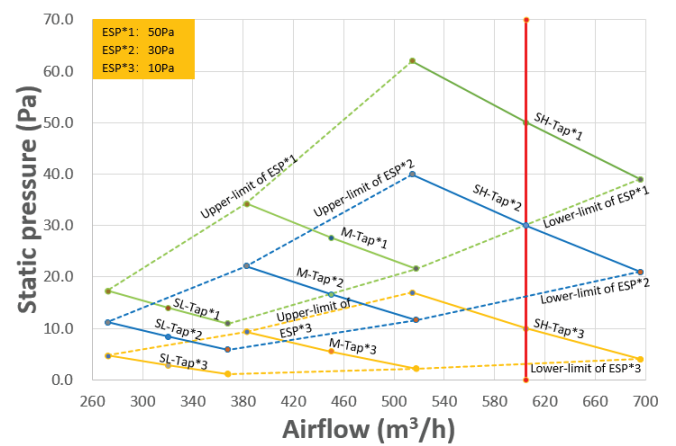


Figure 9.15: MSD-045CS

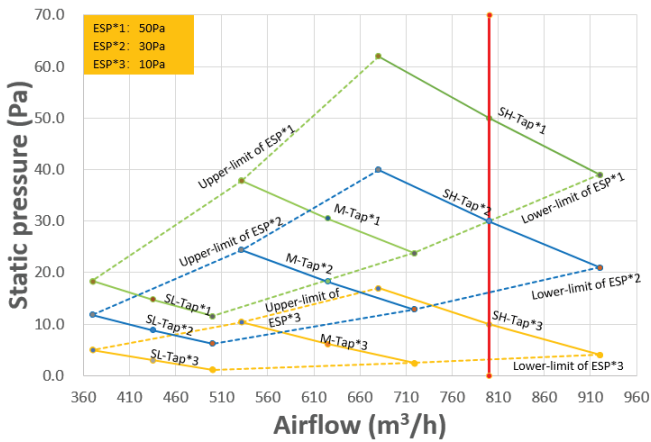


Figure 9.16: MSD-056CS

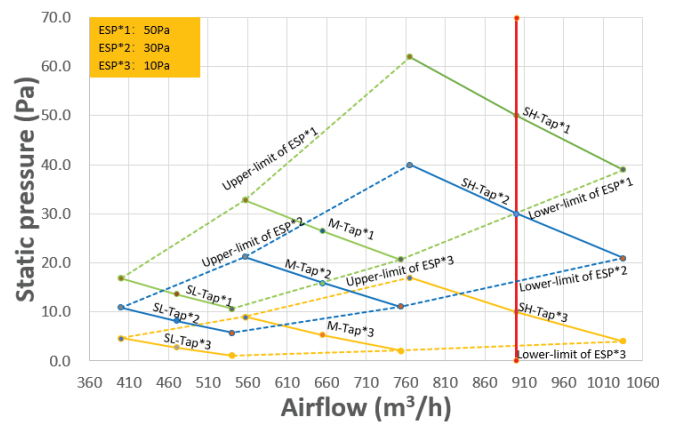


Figure 9.17: MSD-071CS

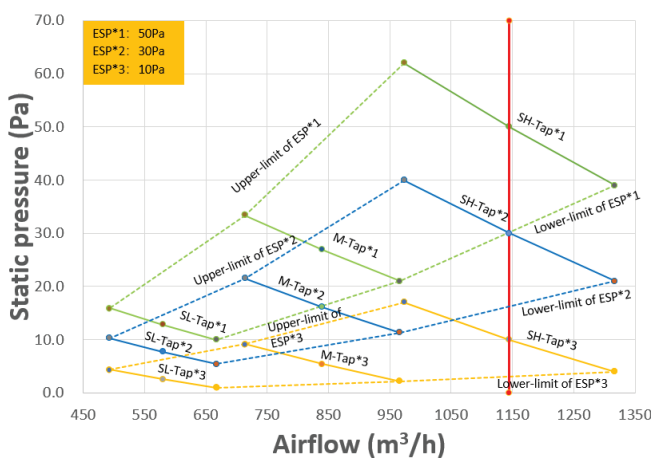


Figure 9.18: MSD-080CS

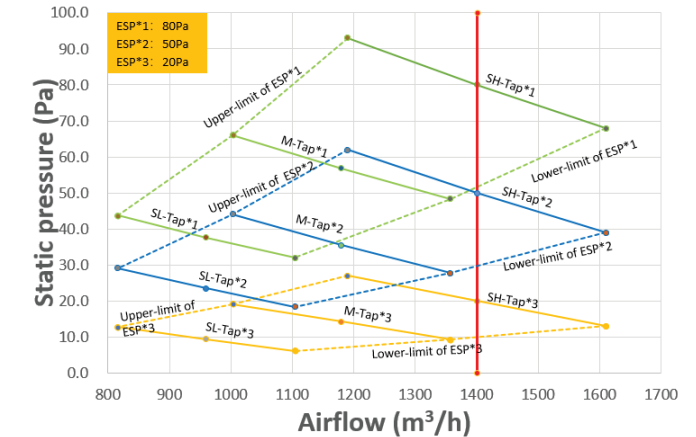


Figure 9.19: MSD-090CS

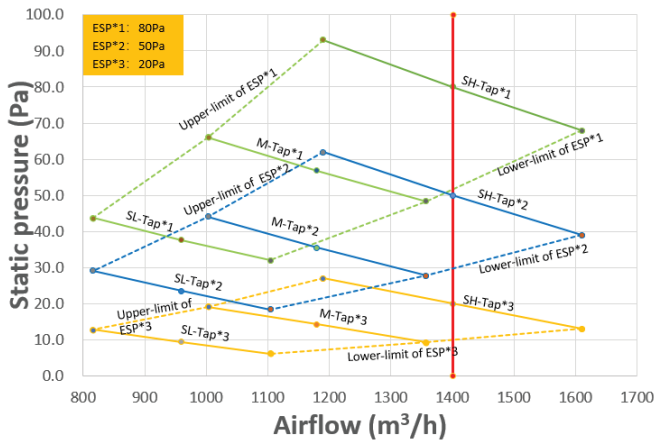
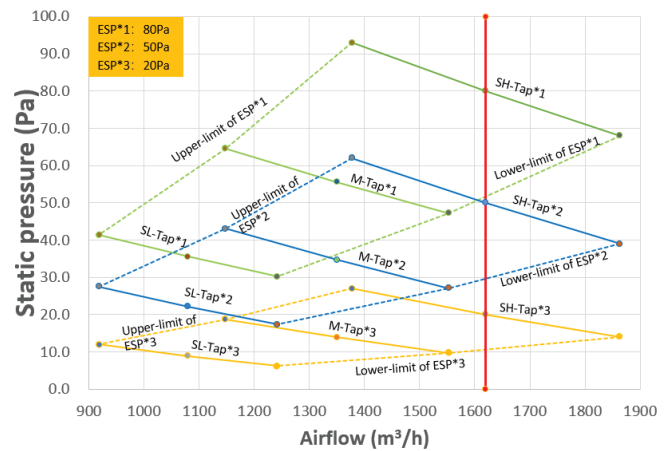


Figure 9.20: MSD-112CS



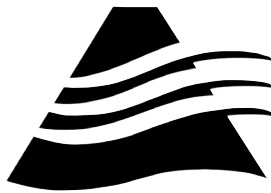
09.03.03. How to Read the Diagram (Constant Speed mode)

The vertical axis is the External Static Pressure (Pa) while the horizontal axis represents the Air Flow (m3/h). The characteristic curve for the “SH”, “M” and “SL” fan speed control.

The Air Flow decreases with the increase of the external static pressure. For MSD-080CS, in “SH” windshield and “50Pa” setting static pressure, when the externa static pressure is 50Pa, the air flow is 2105 m3/h, and the allowable externa static pressure range is 34 to 66.



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