

High Pressure Duct

Service manual



High Static Pressure Duct

1 Specifications	4
2 Dimensions	7
3 Unit Placement	10
4 Piping Diagrams	11
5 Wiring Diagrams.....	12
6 Fan Performance	16
7 Capacity Tables.....	19
8 Electrical Characteristics.....	27
9 Sound Levels	28
10 Error codes.....	29

The 2nd Generation DC Series VRF Indoor Units

1 Specifications

Model name			MVD-160T1DN1
Power supply			1-phase, 220-240V, 50Hz
Cooling ¹	Capacity	kW	16
		kBut/h	54.6
	Input	W	700
Heating ²	Capacity	kW	17
		kBut/h	58
	Input	W	700
Fan motor	Model		WZDK750-38GS-W
	Type		DC
	Brand		Panasonic/ Welling
	Speed (H/M/L)	r/min	1080/1046/996/954/ 910/869/825
Coil	Number of rows		4
	Tube pitch × row pitch	mm	25.4×22
	Fin spacing	mm	1.6
	Fin type		Hydrophilic aluminum
	Tube OD and type	mm	Φ9.53 Inner groove
	Dimensions (L×H ×W)	mm	996×356×88
	Number of circuits		7
Airflow rate ³		m ³ /h	2660/2530/2400/2270/ 2140/2010/1880
External static pressure ⁴		Pa	100 (30~ 200)
Sound pressure level ⁵		dB(A)	54/54/53/52/51/50/50
Sound power level		dB(A)	72/72/71/70/69/68/68
Unit	Net dimensions ⁶	mm	1322×423×691
	Packed dimensions (W×H×D)	mm	1436×450×768
	Net/Gross weight	kg	63/70
Refrigerant type			R410A
Throttle	Type	Electronic expansion valve	
	Model	BD20FKS(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:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
- 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.)
- 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.
- Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

The 2nd Generation DC Series VRF Indoor Units

Model name			MVD-200T1DN1	MVD-250T1DN1	MVD-280T1DN1
Power supply			1-phase, 220-240V, 50Hz		
Cooling ¹	Capacity	kW	20	25	28
		kBut/h	68.2	85.3	95.5
	Input	W	990	1200	1200
Heating ²	Capacity	kW	22.5	26	31.5
		kBut/h	76.8	88.7	107.5
	Input	W	990	1200	1200
Fan motor	Model		ZKSN-920-8-12	ZKSN-920-8-12	ZKSN-920-8-12
	Type		DC		
	Brand		Nidec/Yongan		
	Speed (H/M/L)	r/min	1208/1179/1149/1127/1101/1075/1053		
Coil	Number of rows		4	4	4
	Tube pitch × row pitch	mm	25.4×22	25.4×22	25.4×22
	Fin spacing	mm	1.8	1.8	1.8
	Fin type		Hydrophilic aluminum		
	Tube OD and type	mm	Φ9.53 Inner groove		
	Dimensions (L×H×W)	mm	1125×512×88	1125×512×88	1125×512×88
	Number of circuits		20	20	20
Airflow rate ³		m ³ /h	4330/4230/4130/4030/3930/3830/3730		
External static pressure ⁴		Pa	170 (20~250)		
Sound pressure level ⁵		dB(A)	57/56/55/54/53/52/50		
Sound power level		dB(A)	75/74/73/72/71/70/68		
Unit	Net dimensions ⁶ (W×H×D)	mm	1454×515×931		
	Packed dimensions (W×H×D)	mm	1509×550×990		
	Net/Gross weight	kg	130/142		
Refrigerant type			R410A		
Throttle	Type	Electronic expansion valve			
	Model	D20MISZ-1R(L)			
Design pressure (H/L)		MPa	4.4/2.6		
Pipe	Liquid/Gas pipe	mm	Φ12.7/Φ22.2		
connections	Drain pipe	mm	OD Φ32		

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.

The 2nd Generation DC Series VRF Indoor Units

Model name			MVD-400T1DN1	MVD-450T1DN1	MVD-560T1DN1
Power supply			1-phase, 220-240V, 50Hz		
Cooling ¹	Capacity	kW	40	45	56
		kBut/h	136.5	153.6	191.1
	Input	W	1800	1800	2272
Heating ²	Capacity	kW	45	56	63
		kBut/h	153.6	191.1	215.0
	Input	W	1800	1800	2272
Fan motor	Model		ZKSN-920-8-12-1		
	Type		DC		
	Brand		Nidec/Yongan		
	Speed (H/M/L)	r/min	1060/1015/960/900/840/785/735		1103/1043/978/927/869/ 820/755
Coil	Number of rows		4		5
	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	1602×588×47	1602×588×47	1602×588×53.84
	Number of circuits		28	28	28
Airflow rate ³		m ³ /h	6500/6150/5800/5450/5100/4750/4400		7400/7000/6600/6200 /5800/5400/5000
External static pressure ⁴		Pa	300 (100~400)		
Sound pressure level ⁵		dB(A)	60/59/58/57/55/54/52		59/58/57/56/55/53/51
Sound power level		dB(A)	78/77/76/75/73/72/70		77/76/75/74/73/71/69
Unit	Net dimensions ⁶ (W×H×D)	mm	2005×929×670		
	Packed dimensions (W×H×D)	mm	2095×964×800		
	Net/Gross weight	kg	210/235		218/248
Refrigerant type			R410A		
Throttle	Type	Electronic expansion valve			
	Model	DPF(TS2)4.5C-02			
Design pressure (H/L)		MPa	4.4/2.6		
Pipe connections	Liquid/Gas pipe	mm	Φ15.9/Φ28.6		
	Drain pipe	mm	OD Φ32		

Notes:

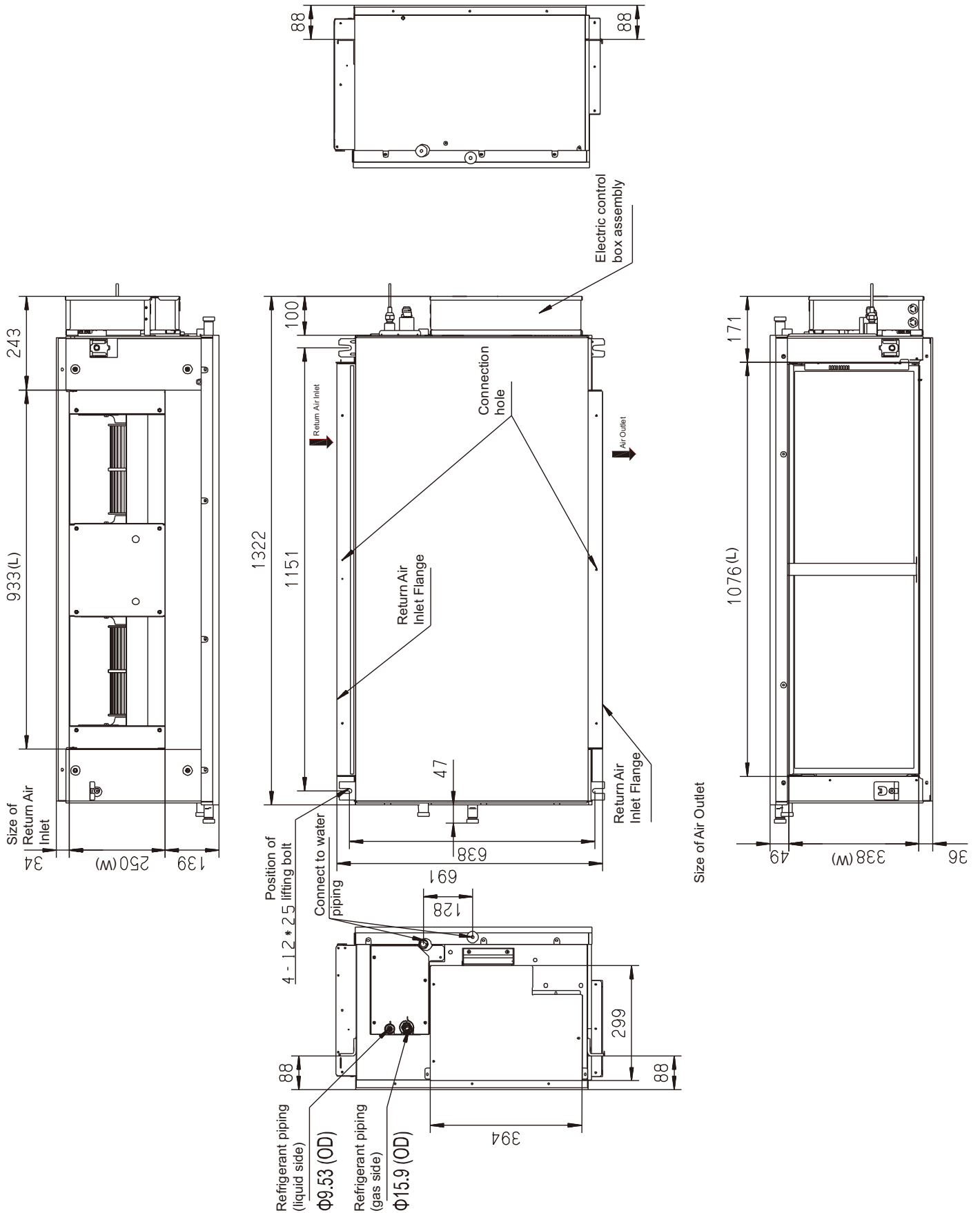
- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
- 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.)
- 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.
- Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

2 Dimensions

2.1 Unit Dimensions

MI2-140T1DN1 / MVD-160T1DN1

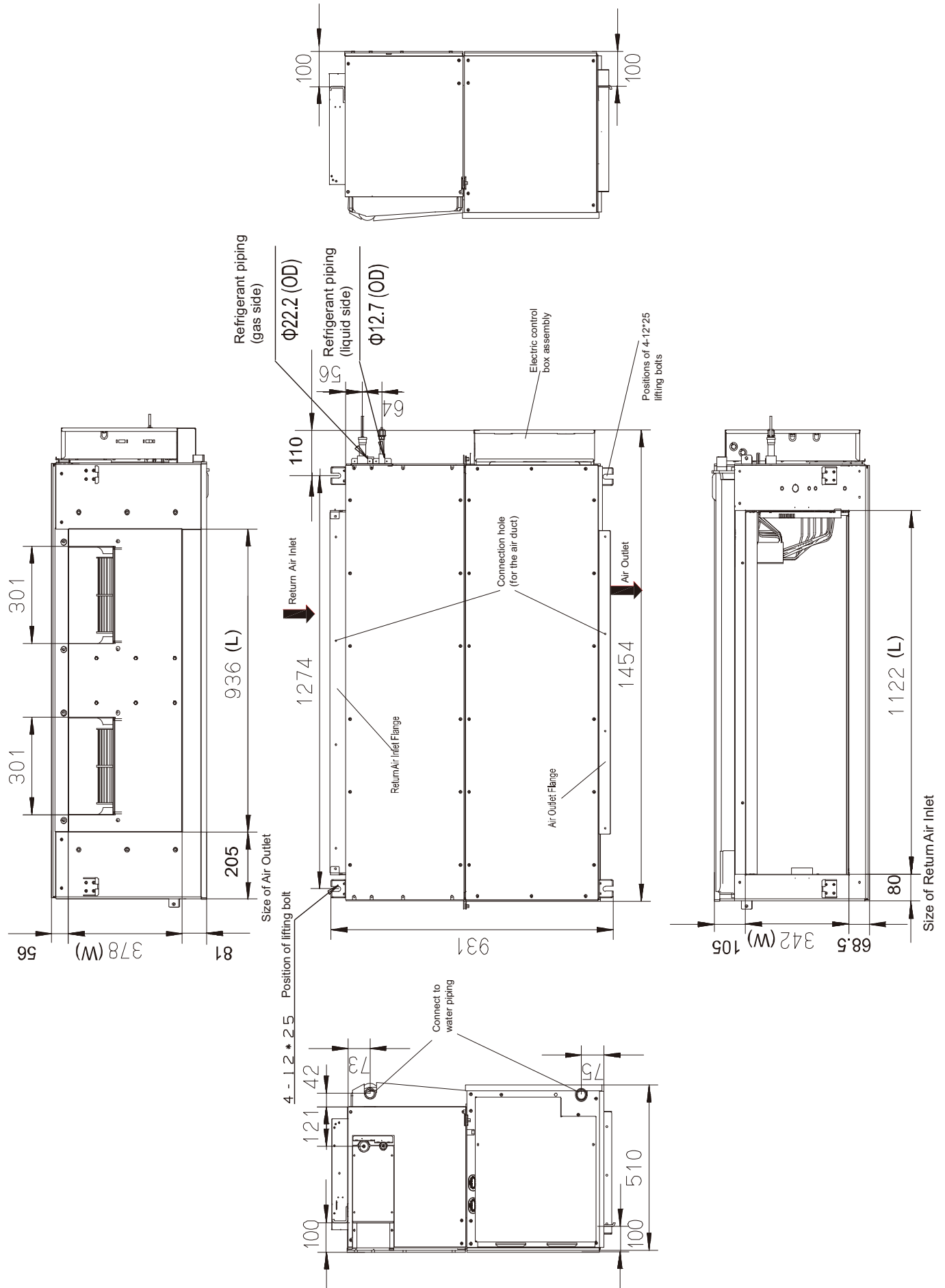
Figure 2.1: dimensions (unit: mm)



The 2nd Generation DC Series VRF Indoor Units

MVD-200T1DN1 / MVD-250T1DN1 / MVD-280T1DN1

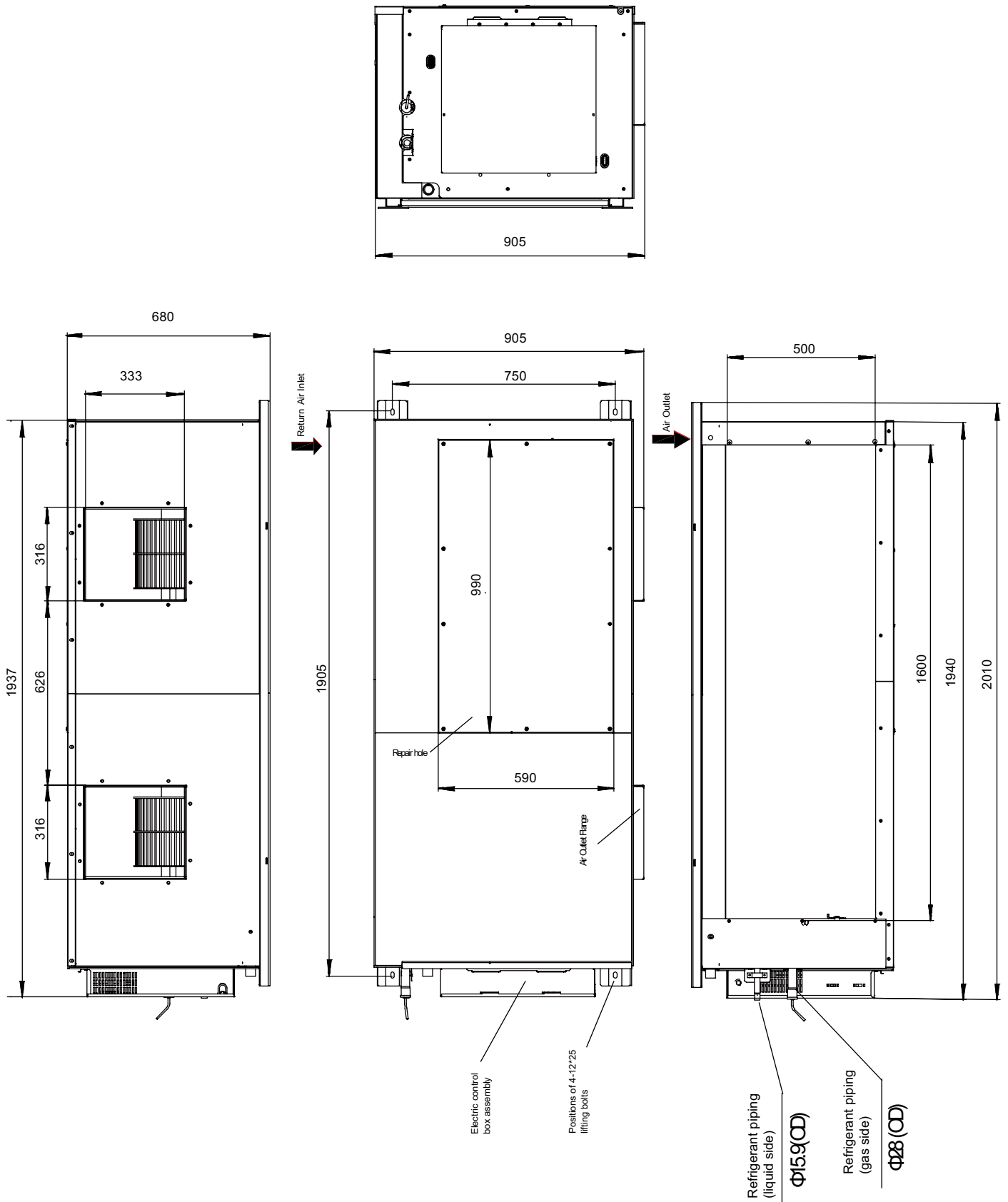
Figure 2.2: dimensions (unit: mm)



The 2nd Generation DC Series VRF Indoor Units

MVD-400T1DN1/ MVD-450T1DN1/MVD-560T1DN1

Figure 2.3: dimensions (unit: mm)



The 2nd Generation DC Series VRF Indoor Units

3 Unit Placement

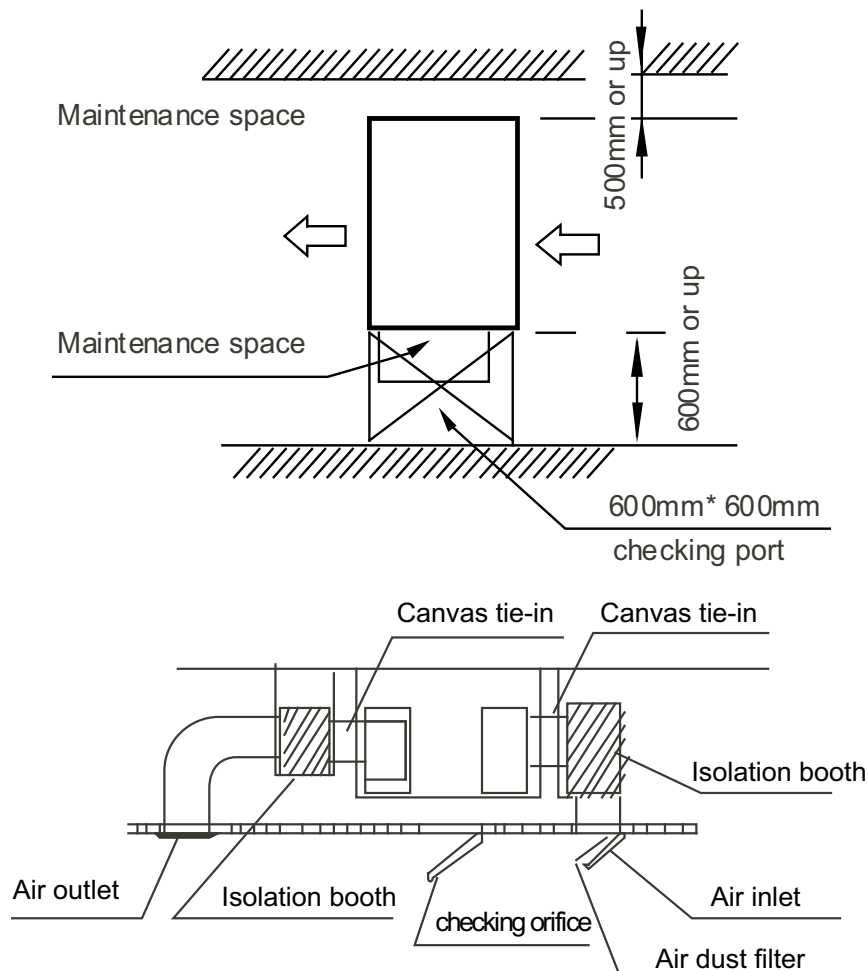
3.1 Placement Considerations

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

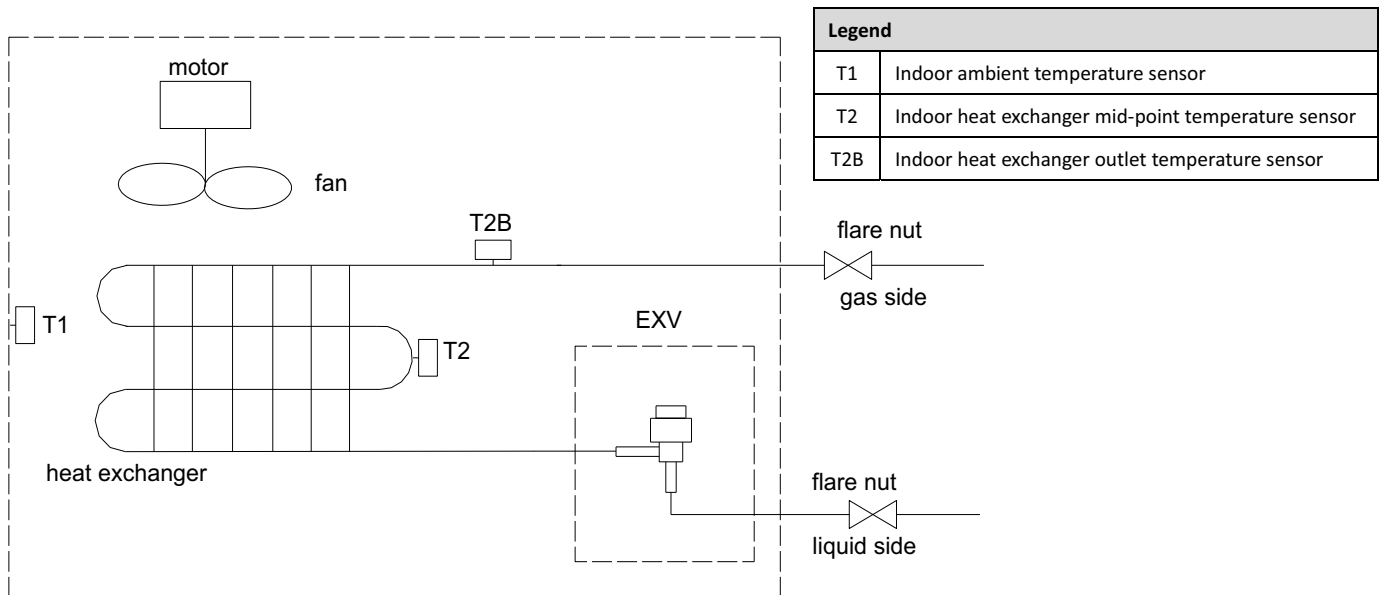
Figure 3.1: High Static Pressure Duct space requirements (unit: mm)



4 Piping Diagrams

MVD-160T1DN1 / MVD-200T1DN1 / MVD-250T1DN1 / MVD-280T1DN1/ MVD-400T1DN1/
MVD-450T1DN1/MVD-560T1DN1

Figure 4.1: piping diagram

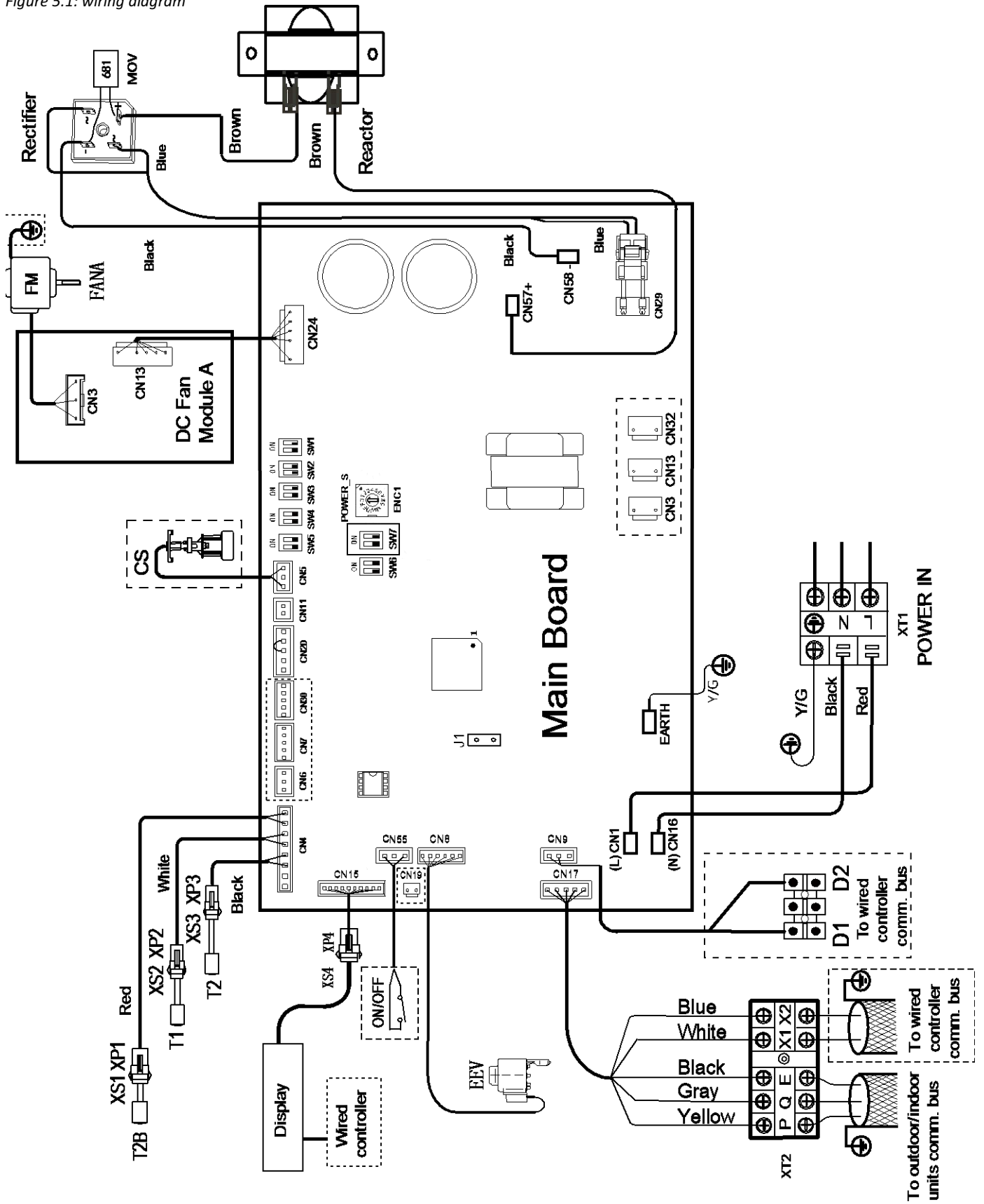


The 2nd Generation DC Series VRF Indoor Units

5 Wiring Diagrams

MVD-160T1DN1

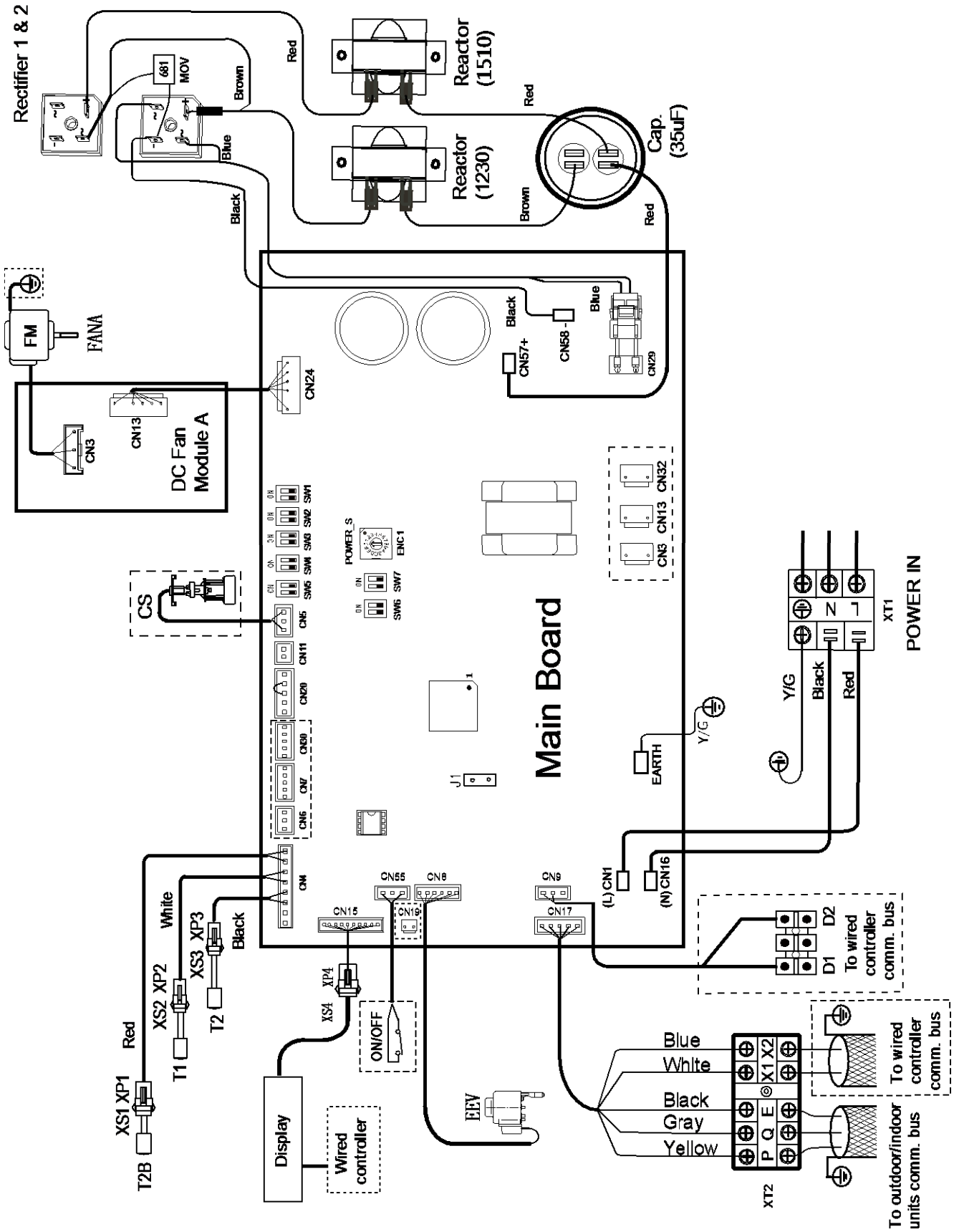
Figure 5.1: wiring diagram



The 2nd Generation DC Series VRF Indoor Units

MVD-200T1DN1 / MVD-250T1DN1 / MVD-280T1DN1

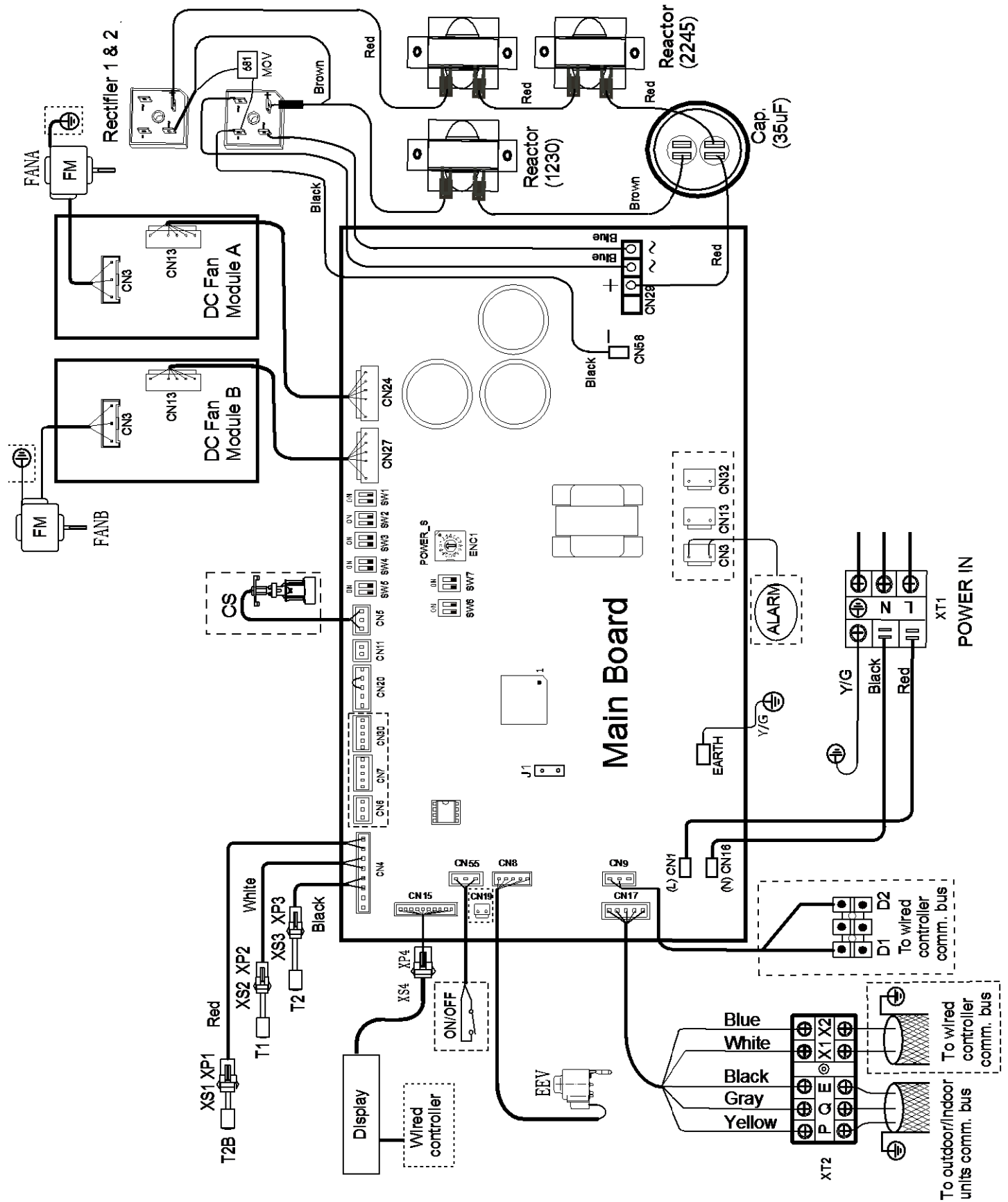
Figure 5.2: wiring diagram



The 2nd Generation DC Series VRF Indoor Units

MVD-400T1DN1/ MVD-450T1DN1/MVD-560T1DN1

Figure 5.3: wiring diagram



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.

The 2nd Generation DC Series VRF Indoor Units

6 Fan Performance

Figure 6.1: MVD-160T1DN1 fan performance

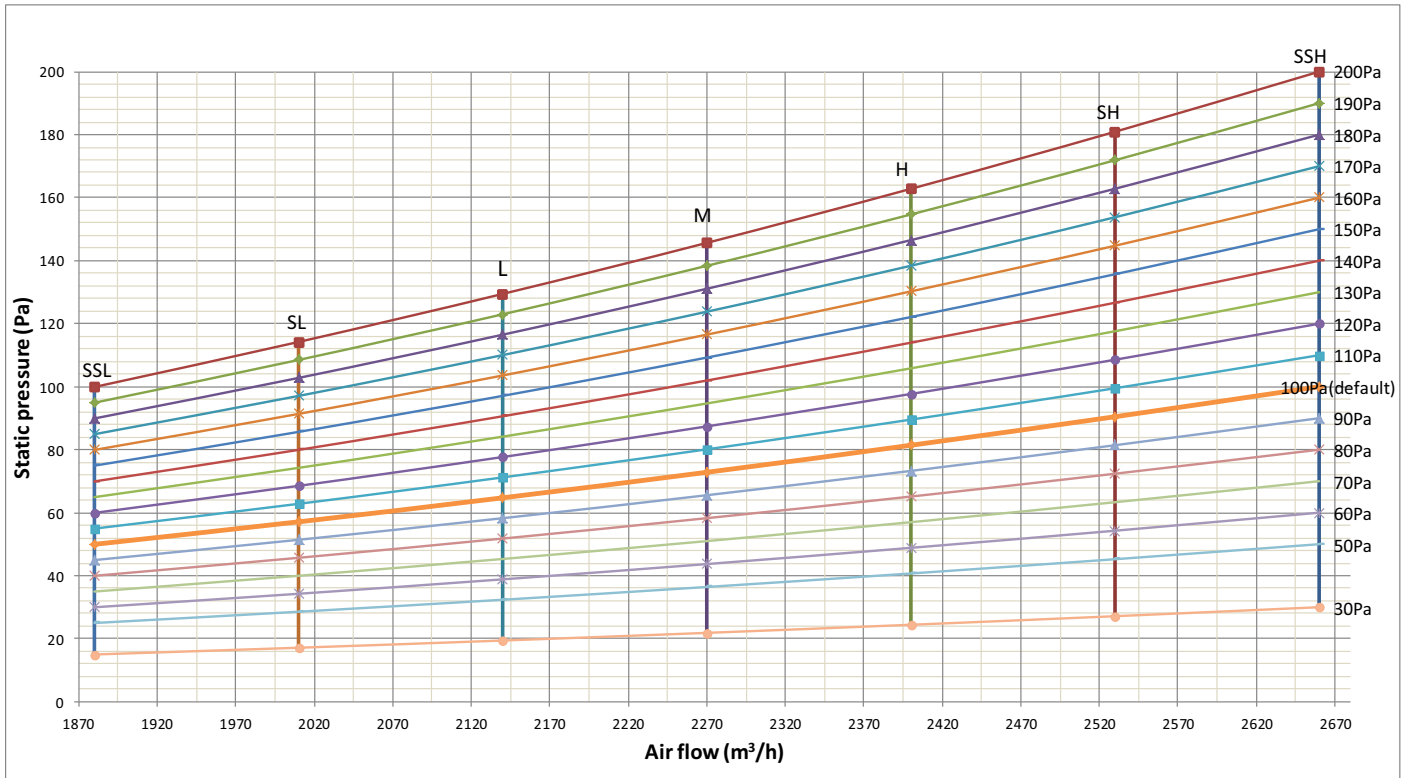
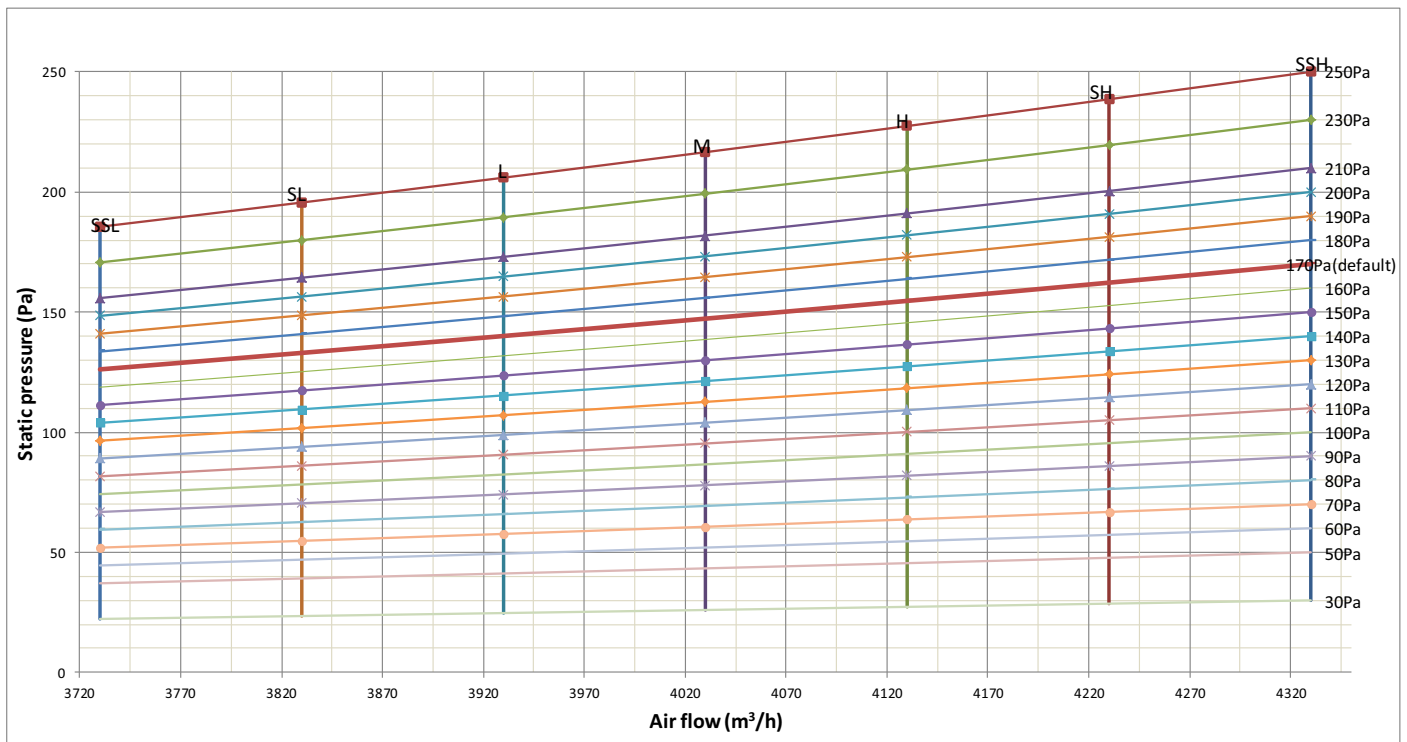


Figure 6.2: MVD-200(250,280)T1DN1 fan performance



The 2nd Generation DC Series VRF Indoor Units

Figure 6.3: MVD-400(450)T1DN1 fan performance

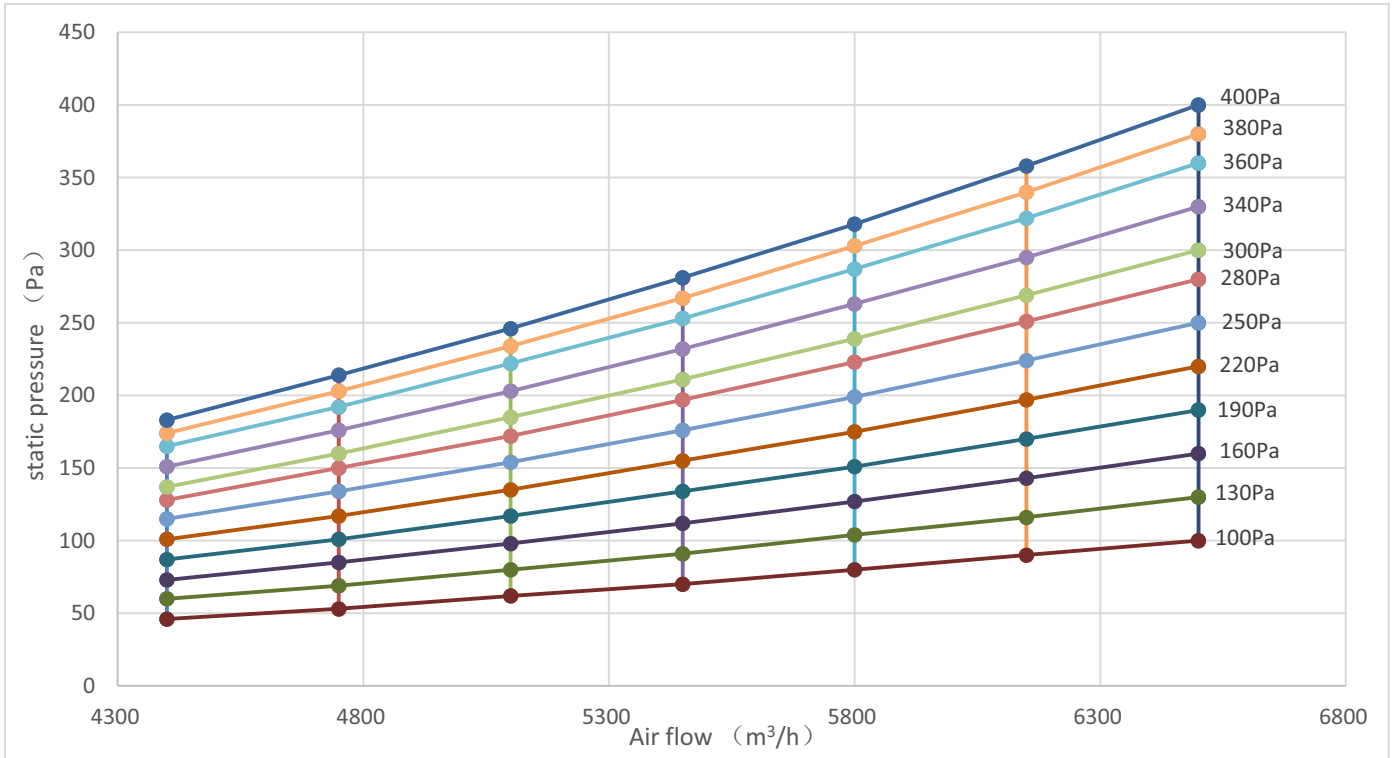
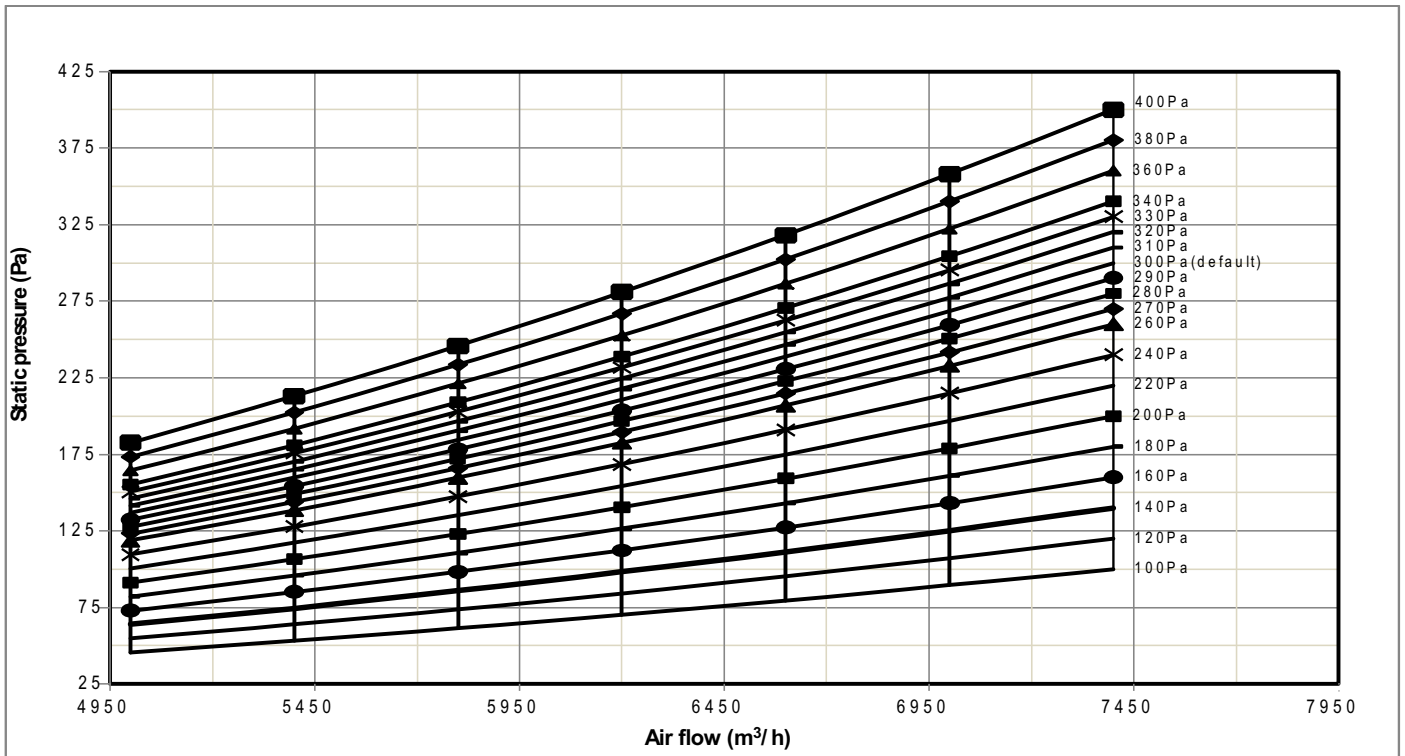


Figure 6.4: MVD-560T1DN1 fan performance



The 2nd Generation DC Series VRF Indoor Units

Table 6.1: ESP settings through DIP switch SW2

Capacity	ESP1	ESP2	ESP3	ESP4
16.0kW	100Pa	50Pa	170Pa	200Pa
20.0-28.0kW	170Pa	100Pa	200Pa	250Pa
40-56kW	300Pa	100Pa	200Pa	400Pa

Table 6.2: ESP settings through the new wired controller

Capacity	00	01	02	03	04	05	06	07	08	09
16.0kW	30Pa	50Pa	60Pa	70Pa	80Pa	90Pa	100Pa	110Pa	120Pa	130Pa
20.0-28.0kW	30Pa	50Pa	60Pa	70Pa	80Pa	90Pa	100Pa	110Pa	120Pa	130Pa
40-56kW	100Pa	120Pa	140Pa	160Pa	180Pa	200Pa	220Pa	240Pa	260Pa	270Pa
Capacity	10	11	12	13	14	15	16	17	18	19
16.0kW	140Pa	150Pa	160Pa	170Pa	180Pa	190Pa	200Pa	200Pa	200Pa	200Pa
20.0-28.0kW	140Pa	150Pa	160Pa	170Pa	180Pa	190Pa	200Pa	210Pa	230Pa	250Pa
40-56kW	280Pa	290Pa	300Pa	310Pa	320Pa	330Pa	340Pa	360Pa	380Pa	400Pa

7 Capacity Tables

7.1 Cooling Capacity Table

Table 7.1: High Static Pressure Duct cooling capacity

Capacity (kW)	Outdoor air temperature (°C DB)	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
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
16.0	10.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	20.8	12.6
	12.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	20.5	12.4
	14.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	20.3	12.3
	16.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	20.0	12.1
	18.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	19.5	11.8
	20.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	19.2	11.6
	21.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	19.0	12.5	18.9	11.4
	23.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	18.7	12.5	18.7	11.3
	25.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	18.6	12.4	18.6	11.2
	27.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	18.4	12.3	18.4	11.3
	29.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	18.2	12.2	18.2	11.2
	31.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	18.1	12.1	17.6	10.8
	33.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	17.0	12.1	17.9	12.0	17.6	10.8
	35.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.8	12.0	17.3	11.6	17.3	10.8
	37.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.6	11.9	17.3	11.6	17.1	10.7
	39.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.3	11.6	16.6	11.3	17.1	10.9
42.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.3	11.6	16.6	11.3	17.1	10.9	
44.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.3	11.6	16.6	11.3	17.1	10.9	
46.0	11.0	9.7	13.0	10.6	15.0	11.9	16.0	12.1	16.3	11.6	16.6	11.3	17.1	10.9	

Abbreviations:

TC: Total capacity

SC: Sensible capacity

Notes:

1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.1: High Static Pressure Duct cooling capacity (continued)

Capacity (kW)	Outdoor air temperature (°C DB)	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
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
20.0	10.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	26.0	15.7
	12.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	25.6	15.5
	14.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	25.4	15.4
	16.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	25.0	15.1
	18.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	24.4	14.8
	20.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	24.0	14.5
	21.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.8	15.7	23.6	14.3
	23.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.4	15.7	23.4	14.2
	25.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.2	15.5	23.2	14.0
	27.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	23.0	15.4	23.0	14.2
	29.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	22.8	15.3	22.8	14.0
	31.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	22.6	15.1	22.0	13.5
	33.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.2	15.1	22.4	15.0	22.0	13.5
	35.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	21.0	15.0	21.6	14.5	21.6	13.5
	37.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	20.8	14.8	21.6	14.5	21.4	13.4
	39.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	20.4	14.5	20.8	14.2	21.4	13.6
42.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	20.4	14.5	20.8	14.2	21.4	13.6	
44.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	20.4	14.5	20.8	14.2	21.4	13.6	
46.0	13.8	12.1	16.2	13.3	18.8	14.8	20.0	15.1	20.4	14.5	20.8	14.2	21.4	13.6	
25.0	10.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	32.5	19.7
	12.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	32.0	19.4
	14.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	31.8	19.2
	16.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	31.3	18.9
	18.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	30.5	18.4
	20.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	30.0	18.1
	21.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.8	19.6	29.5	17.8
	23.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.3	19.6	29.3	17.7
	25.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	29.0	19.4	29.0	17.5
	27.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	28.8	19.3	28.8	17.7
	29.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	28.5	19.1	28.5	17.5
	31.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	28.3	18.9	27.5	16.9
	33.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.5	18.9	28.0	18.7	27.5	16.9
	35.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.3	18.7	27.0	18.1	27.0	16.9
	37.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	26.0	18.5	27.0	18.1	26.8	16.8
	39.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	25.5	18.2	26.0	17.7	26.8	17.0
42.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	25.5	18.2	26.0	17.7	26.8	17.0	
44.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	25.5	18.2	26.0	17.7	26.8	17.0	
46.0	17.3	15.1	20.3	16.6	23.5	18.5	25.0	18.9	25.5	18.2	26.0	17.7	26.8	17.0	

Abbreviations:

TC: Total capacity

SC: Sensible capacity

Notes:

1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.1: High Static Pressure Duct cooling capacity (continued)

Capacity (kW)	Outdoor air temperature (°C DB)	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
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
28.0	10.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	36.4	22.0
	12.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	35.8	21.7
	14.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	35.6	21.5
	16.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	35.0	21.2
	18.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	34.2	20.7
	20.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	33.6	20.3
	21.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	33.3	22.0	33.0	20.0
	23.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	32.8	21.9	32.8	19.8
	25.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	32.5	21.7	32.5	19.6
	27.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	32.2	21.6	32.2	19.8
	29.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	31.9	21.4	31.9	19.6
	31.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	31.6	21.2	30.8	19.0
	33.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.7	21.2	31.4	21.0	30.8	19.0
	35.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.4	21.0	30.2	20.2	30.2	18.9
	37.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	29.1	20.8	30.2	20.2	30.0	18.8
	39.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	28.6	20.4	29.1	19.8	30.0	19.1
	42.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	28.6	20.4	29.1	19.8	30.0	19.1
44.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	28.6	20.4	29.1	19.8	30.0	19.1	
46.0	19.3	16.9	22.7	18.6	26.3	20.8	28.0	21.2	28.6	20.4	29.1	19.8	30.0	19.1	
40.0	10.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	52.0	31.4
	12.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	51.2	31.0
	14.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	50.8	30.7
	16.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	50.0	30.2
	18.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	48.8	29.5
	20.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	48.0	29.0
	21.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	47.2	28.5
	23.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	46.8	31.3	46.8	28.3
	25.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	46.4	31.1	46.4	28.1
	27.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	46.0	30.8	46.0	28.3
	29.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	45.6	30.5	45.6	28.1
	31.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	45.2	30.3	44.0	27.1
	33.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	44.8	30.0	44.0	27.1
	35.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.0	29.9	43.2	28.9	43.2	27.1
	37.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	41.6	29.7	43.2	28.9	42.8	26.8
	39.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	40.8	29.1	41.6	28.3	42.8	27.3
	42.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	40.8	29.1	41.6	28.3	42.8	27.3
44.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	52.0	31.4	
46.0	27.6	24.1	32.4	26.6	37.6	29.6	40.0	30.2	42.4	30.2	47.6	31.4	51.2	31.0	

Abbreviations:

TC: Total capacity
 SC: Sensible capacity

Notes:

1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.1: High Static Pressure Duct cooling capacity (continued)

Capacity (kW)	Outdoor air temperature (°C DB)	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
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
45.0	10.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	58.5	35.4
	12.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	57.6	34.8
	14.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	57.2	34.6
	16.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	56.3	34.0
	18.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	54.9	33.2
	20.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	54.0	32.7
	21.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	53.6	35.3	53.1	32.1
	23.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	52.7	35.3	52.7	31.8
	25.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	52.2	35.0	52.2	31.6
	27.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	51.8	34.7	51.8	31.9
	29.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	51.3	34.4	51.3	31.6
	31.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	50.9	34.0	49.5	30.5
	33.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.7	34.0	50.4	33.7	49.5	30.5
	35.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	47.3	33.7	48.6	32.5	48.6	30.4
	37.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	46.8	33.4	48.6	32.5	48.2	30.2
	39.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	45.9	32.7	46.8	31.8	48.2	30.7
	42.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	45.9	32.7	46.8	31.8	48.2	30.7
44.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	45.9	32.7	46.8	31.8	48.2	30.7	
46.0	31.1	27.2	36.5	29.9	42.3	33.3	45.0	34.0	45.9	32.7	46.8	31.8	48.2	30.7	
56.0	10.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	72.8	44.0
	12.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	71.7	43.4
	14.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	71.1	43.0
	16.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	70.0	42.3
	18.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	68.3	41.3
	20.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	67.2	40.6
	21.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	66.6	43.9	66.1	40.0
	23.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	65.5	43.9	65.5	39.6
	25.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	65.0	43.5	65.0	39.3
	27.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	64.4	43.1	64.4	39.6
	29.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	63.8	42.7	63.8	39.3
	31.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	63.3	42.4	61.6	37.9
	33.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	59.4	42.3	62.7	42.0	61.6	37.9
	35.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	58.8	41.9	60.5	40.5	60.5	37.9
	37.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	58.2	41.5	60.5	40.5	59.9	37.5
	39.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	57.1	40.7	58.2	39.6	59.9	38.2
	42.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	57.1	40.7	58.2	39.6	59.9	38.2
44.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	57.1	40.7	58.2	39.6	59.9	38.2	
46.0	38.6	33.8	45.4	37.2	52.6	41.5	56.0	42.3	57.1	40.7	58.2	39.6	59.9	38.2	

Abbreviations:
 TC: Total capacity
 SC: Sensible capacity

Notes:
 1. Shaded cells indicate rating condition.

Table continued on next page ...

7.2 Heating Capacity Table

Table 7.2: High Static Pressure Duct heating capacity

Capacity (kW)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
16.0	-20	-19.8	9.52	9.52	9.52	9.52	9.52	9.52
	-19	-18.8	10.20	10.20	10.20	10.20	10.20	10.20
	-17	-16.7	10.71	10.71	10.71	10.71	10.71	10.71
	-15	-14.7	11.05	11.05	11.05	11.05	11.05	11.05
	-13.00	-12.60	11.73	11.73	11.73	11.73	11.73	11.73
	-11.00	-10.50	11.90	12.07	12.07	12.07	12.07	12.07
	-10.00	-9.50	12.41	12.41	12.41	12.41	12.41	12.41
	-9.10	-8.50	12.75	12.75	12.75	12.75	12.75	12.75
	-7.60	-7.00	12.92	12.92	12.92	12.92	12.92	12.92
	-5.60	-5.00	13.43	13.43	13.43	13.43	13.43	13.43
	-3.70	-3.00	14.11	14.11	14.11	14.11	14.11	14.11
	-0.70	0.00	15.13	15.13	15.13	15.13	15.13	14.28
	2.20	3.00	15.98	15.98	15.98	15.98	15.64	14.28
	4.10	5.00	16.49	16.49	16.49	16.49	15.64	14.28
	6.00	7.00	17.00	17.00	17.00	16.49	15.64	14.28
	7.90	9.00	17.51	17.51	17.00	16.49	15.64	14.28
	9.80	11.00	18.02	18.02	17.00	16.49	15.64	14.28
11.80	13.00	18.70	18.36	17.00	16.49	15.64	14.28	
13.70	15.00	19.21	18.36	17.00	16.49	15.64	14.28	

Abbreviations:
TC: Total capacity

Notes:
1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.2: High Static Pressure Duct heating capacity (continued)

Capacity (kW)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
	WB	DB	TC	TC	TC	TC	TC	TC
20.0	-20	-19.8	12.60	12.60	12.60	12.60	12.60	12.60
	-19	-18.8	13.50	13.50	13.50	13.50	13.50	13.50
	-17	-16.7	14.18	14.18	14.18	14.18	14.18	14.18
	-15	-14.7	14.63	14.63	14.63	14.63	14.63	14.63
	-13.00	-12.60	15.53	15.53	15.53	15.53	15.53	15.53
	-11.00	-10.50	15.75	15.98	15.98	15.98	15.98	15.98
	-10.00	-9.50	16.43	16.43	16.43	16.43	16.43	16.43
	-9.10	-8.50	16.88	16.88	16.88	16.88	16.88	16.88
	-7.60	-7.00	17.10	17.10	17.10	17.10	17.10	17.10
	-5.60	-5.00	17.78	17.78	17.78	17.78	17.78	17.78
	-3.70	-3.00	18.68	18.68	18.68	18.68	18.68	18.68
	-0.70	0.00	20.03	20.03	20.03	20.03	20.03	18.90
	2.20	3.00	21.15	21.15	21.15	21.15	20.70	18.90
	4.10	5.00	21.83	21.83	21.83	21.83	20.70	18.90
	6.00	7.00	22.50	22.50	22.50	21.83	20.70	18.90
	7.90	9.00	23.18	23.18	22.50	21.83	20.70	18.90
	9.80	11.00	23.85	23.85	22.50	21.83	20.70	18.90
11.80	13.00	24.75	24.30	22.50	21.83	20.70	18.90	
13.70	15.00	25.43	24.30	22.50	21.83	20.70	18.90	
25.0	-20	-19.8	14.56	14.56	14.56	14.56	14.56	14.56
	-19	-18.8	15.60	15.60	15.60	15.60	15.60	15.60
	-17	-16.7	16.38	16.38	16.38	16.38	16.38	16.38
	-15	-14.7	16.90	16.90	16.90	16.90	16.90	16.90
	-13.00	-12.60	17.94	17.94	17.94	17.94	17.94	17.94
	-11.00	-10.50	18.20	18.46	18.46	18.46	18.46	18.46
	-10.00	-9.50	18.98	18.98	18.98	18.98	18.98	18.98
	-9.10	-8.50	19.50	19.50	19.50	19.50	19.50	19.50
	-7.60	-7.00	19.76	19.76	19.76	19.76	19.76	19.76
	-5.60	-5.00	20.54	20.54	20.54	20.54	20.54	20.54
	-3.70	-3.00	21.58	21.58	21.58	21.58	21.58	21.58
	-0.70	0.00	23.14	23.14	23.14	23.14	23.14	21.84
	2.20	3.00	24.44	24.44	24.44	24.44	23.92	21.84
	4.10	5.00	25.22	25.22	25.22	25.22	23.92	21.84
	6.00	7.00	26.00	26.00	26.00	25.22	23.92	21.84
	7.90	9.00	26.78	26.78	26.00	25.22	23.92	21.84
	9.80	11.00	27.56	27.56	26.00	25.22	23.92	21.84
11.80	13.00	28.60	28.08	26.00	25.22	23.92	21.84	
13.70	15.00	29.38	28.08	26.00	25.22	23.92	21.84	

Abbreviations:
TC: Total capacity

Notes:
1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.2: High Static Pressure Duct heating capacity (continued)

Capacity (kW)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
	WB	DB	TC	TC	TC	TC	TC	TC
28.0	-20	-19.8	17.64	17.64	17.64	17.64	17.64	17.64
	-19	-18.8	18.90	18.90	18.90	18.90	18.90	18.90
	-17	-16.7	19.85	19.85	19.85	19.85	19.85	19.85
	-15	-14.7	20.48	20.48	20.48	20.48	20.48	20.48
	-13.00	-12.60	21.74	21.74	21.74	21.74	21.74	21.74
	-11.00	-10.50	22.05	22.37	22.37	22.37	22.37	22.37
	-10.00	-9.50	23.00	23.00	23.00	23.00	23.00	23.00
	-9.10	-8.50	23.63	23.63	23.63	23.63	23.63	23.63
	-7.60	-7.00	23.94	23.94	23.94	23.94	23.94	23.94
	-5.60	-5.00	24.89	24.89	24.89	24.89	24.89	24.89
	-3.70	-3.00	26.15	26.15	26.15	26.15	26.15	26.15
	-0.70	0.00	28.04	28.04	28.04	28.04	28.04	26.46
	2.20	3.00	29.61	29.61	29.61	29.61	28.98	26.46
	4.10	5.00	30.56	30.56	30.56	30.56	28.98	26.46
	6.00	7.00	31.50	31.50	31.50	30.56	28.98	26.46
	7.90	9.00	32.45	32.45	31.50	30.56	28.98	26.46
	9.80	11.00	33.39	33.39	31.50	30.56	28.98	26.46
11.80	13.00	34.65	34.02	31.50	30.56	28.98	26.46	
13.70	15.00	35.60	34.02	31.50	30.56	28.98	26.46	
40.0	-20	-19.8	25.20	25.20	25.20	25.20	25.20	25.20
	-19	-18.8	27.00	27.00	27.00	27.00	27.00	27.00
	-17	-16.7	28.35	28.35	28.35	28.35	28.35	28.35
	-15	-14.7	29.25	29.25	29.25	29.25	29.25	29.25
	-13.00	-12.60	31.05	31.05	31.05	31.05	31.05	31.05
	-11.00	-10.50	31.50	31.95	31.95	31.95	31.95	31.95
	-10.00	-9.50	32.85	32.85	32.85	32.85	32.85	32.85
	-9.10	-8.50	33.75	33.75	33.75	33.75	33.75	33.75
	-7.60	-7.00	34.20	34.20	34.20	34.20	34.20	34.20
	-5.60	-5.00	35.55	35.55	35.55	35.55	35.55	35.55
	-3.70	-3.00	37.35	37.35	37.35	37.35	37.35	37.35
	-0.70	0.00	40.05	40.05	40.05	40.05	40.05	37.80
	2.20	3.00	42.30	42.30	42.30	42.30	41.40	37.80
	4.10	5.00	43.65	43.65	43.65	43.65	41.40	37.80
	6.00	7.00	45.00	45.00	45.00	43.65	41.40	37.80
	7.90	9.00	46.35	46.35	45.00	43.65	41.40	37.80
	9.80	11.00	47.70	47.70	45.00	43.65	41.40	37.80
11.80	13.00	49.50	48.60	45.00	43.65	41.40	37.80	
13.70	15.00	50.85	48.60	45.00	43.65	41.40	37.80	

Abbreviations:
TC: Total capacity

Notes:
1. Shaded cells indicate rating condition.

Table continued on next page ...

The 2nd Generation DC Series VRF Indoor Units

Table 7.2: High Static Pressure Duct heating capacity (continued)

Capacity (kW)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
	WB	DB	TC	TC	TC	TC	TC	TC
45.0	-20	-19.8	28.00	28.00	28.00	28.00	28.00	28.00
	-19	-18.8	30.00	30.00	30.00	30.00	30.00	30.00
	-17	-16.7	31.50	31.50	31.50	31.50	31.50	31.50
	-15	-14.7	32.50	32.50	32.50	32.50	32.50	32.50
	-13.00	-12.60	34.50	34.50	34.50	34.50	34.50	34.50
	-11.00	-10.50	35.00	35.50	35.50	35.50	35.50	35.50
	-10.00	-9.50	36.50	36.50	36.50	36.50	36.50	36.50
	-9.10	-8.50	37.50	37.50	37.50	37.50	37.50	37.50
	-7.60	-7.00	38.00	38.00	38.00	38.00	38.00	38.00
	-5.60	-5.00	39.50	39.50	39.50	39.50	39.50	39.50
	-3.70	-3.00	41.50	41.50	41.50	41.50	41.50	41.50
	-0.70	0.00	44.50	44.50	44.50	44.50	44.50	42.00
	2.20	3.00	47.00	47.00	47.00	47.00	46.00	42.00
	4.10	5.00	48.50	48.50	48.50	48.50	46.00	42.00
	6.00	7.00	50.00	50.00	50.00	48.50	46.00	42.00
	7.90	9.00	51.50	51.50	50.00	48.50	46.00	42.00
	9.80	11.00	53.00	53.00	50.00	48.50	46.00	42.00
11.80	13.00	55.00	54.00	50.00	48.50	46.00	42.00	
13.70	15.00	56.50	54.00	50.00	48.50	46.00	42.00	
56.0	-20	-19.8	35.28	35.28	35.28	35.28	35.28	35.28
	-19	-18.8	37.80	37.80	37.80	37.80	37.80	37.80
	-17	-16.7	39.69	39.69	39.69	39.69	39.69	39.69
	-15	-14.7	40.95	40.95	40.95	40.95	40.95	40.95
	-13.00	-12.60	43.47	43.47	43.47	43.47	43.47	43.47
	-11.00	-10.50	44.10	44.73	44.73	44.73	44.73	44.73
	-10.00	-9.50	45.99	45.99	45.99	45.99	45.99	45.99
	-9.10	-8.50	47.25	47.25	47.25	47.25	47.25	47.25
	-7.60	-7.00	47.88	47.88	47.88	47.88	47.88	47.88
	-5.60	-5.00	49.77	49.77	49.77	49.77	49.77	49.77
	-3.70	-3.00	52.29	52.29	52.29	52.29	52.29	52.29
	-0.70	0.00	56.07	56.07	56.07	56.07	56.07	52.92
	2.20	3.00	59.22	59.22	59.22	59.22	57.96	52.92
	4.10	5.00	61.11	61.11	61.11	61.11	57.96	52.92
	6.00	7.00	63.00	63.00	63.00	61.11	57.96	52.92
	7.90	9.00	64.89	64.89	63.00	61.11	57.96	52.92
	9.80	11.00	66.78	66.78	63.00	61.11	57.96	52.92
11.80	13.00	69.30	68.04	63.00	61.11	57.96	52.92	
13.70	15.00	71.19	68.04	63.00	61.11	57.96	52.92	

Abbreviations:
TC: Total capacity

Notes:
1. Shaded cells indicate rating condition.

8 Electrical Characteristics

Table 8.1: High 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
MVD-160T1DN1	50	220-240	198	264	4.7	15	0.56	3.8
MVD-200T1DN1	50	220-240	198	264	6.7	15	0.80	5.4
MVD-250T1DN1	50	220-240	198	264	6.7	15	0.96	5.4
MVD-280T1DN1	50	220-240	198	264	6.7	15	0.96	5.4
MVD-400T1DN1	50	220-240	198	264	12.5	30	1.84	12.4
MVD-450T1DN1	50	220-240	198	264	12.5	30	1.84	12.4
MVD-560T1DN1	50	220-240	198	264	15.4	30	1.84	12.4

Abbreviations:

MCA: Minimum Circuit Amps

MFA: Maximum Fuse Amps

FLA: Full Load Amps

The 2nd Generation DC Series VRF Indoor Units

9 Sound Levels

9.1 Overall

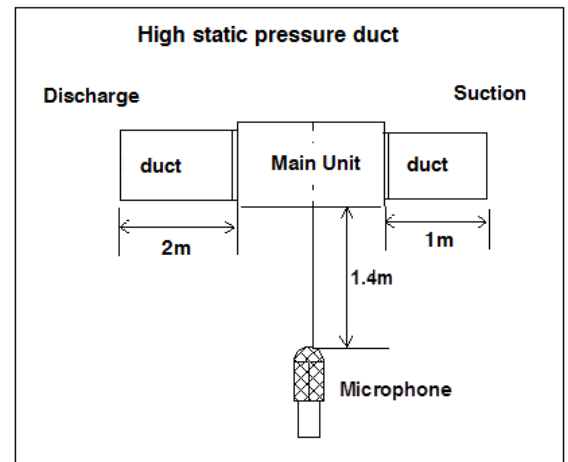
Table 9.1: High Static Pressure Duct sound pressure levels¹

Model name	Sound pressure levels dB(A)						
	SSH	SH	H	M	L	SL	SSL
MVD-160T1DN1	54	54	53	52	51	50	50
MVD-200T1DN1	57	56	55	54	53	52	50
MVD-250T1DN1	57	56	55	54	53	52	50
MVD-280T1DN1	57	56	55	54	53	52	50
MVD-400T1DN1	60	59	58	57	55	54	52
MVD-450T1DN1	60	59	58	57	55	54	52
MVD-560T1DN1	59	58	57	56	55	53	51

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: High Static Pressure Duct sound pressure level measurement



9.2 Octave Band Levels

Figure 9.1: MVD-160T1DN1 octave band levels

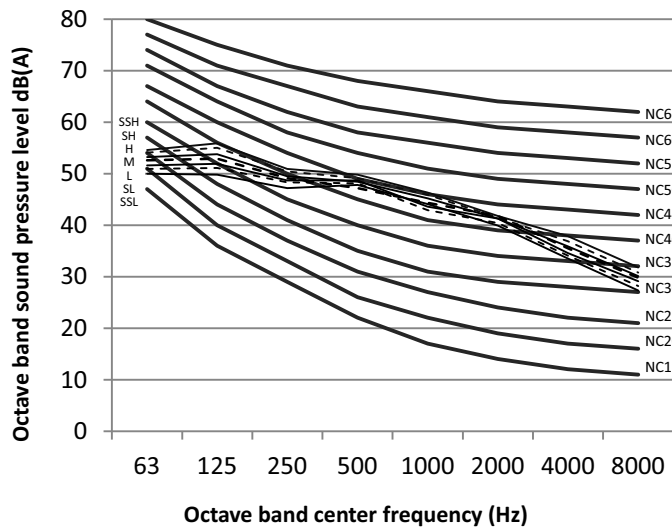


Figure 9.2: MVD-200(250,280)T1DN1 octave band levels

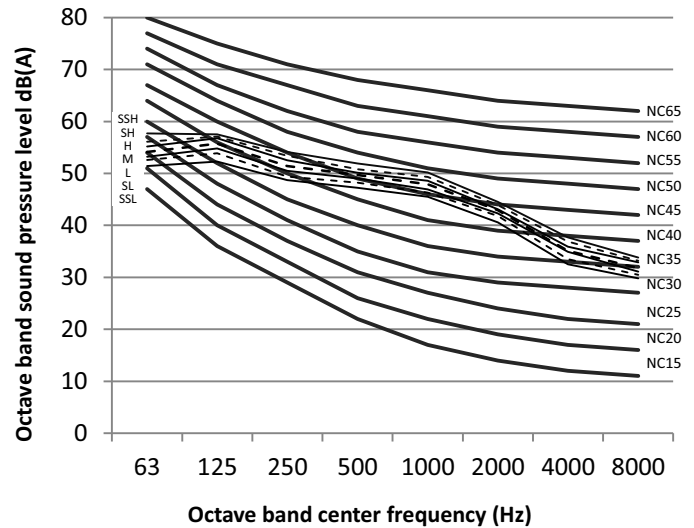


Figure 9.3: MVD-400(450)T1DN1 octave band levels

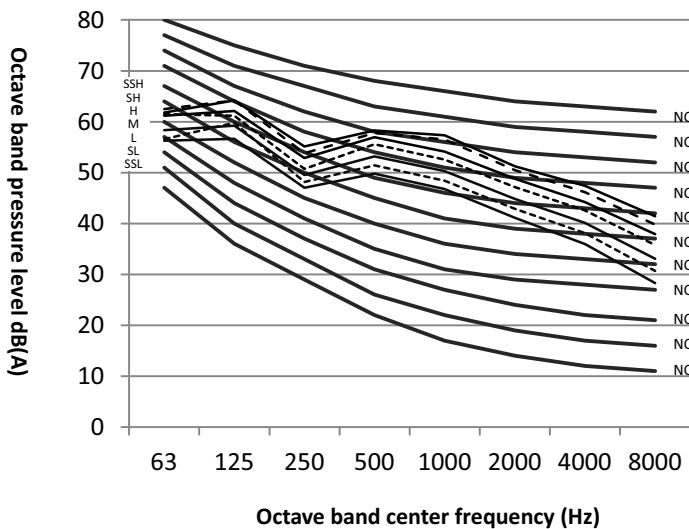
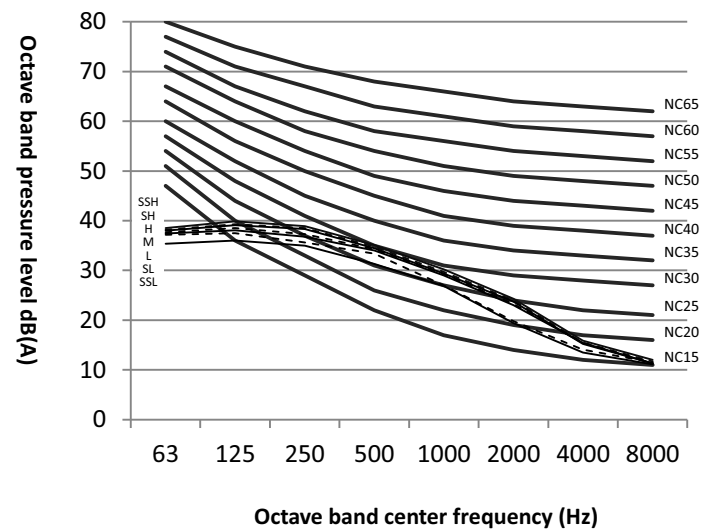


Figure 9.4: MVD-560T1DN1 octave band levels



10 Error codes

With the exception of a mode conflict error, contact your supplier or service engineer if any of the error codes listed in the following table are displayed on the unit's display panel. If the mode conflict error is displayed and persists, contact your supplier or service engineer. These errors should only be investigated by a professional technician. The descriptions are provided in this manual for reference only.

Content	Digital display output	Possible causes
Mode conflict	E0	<ul style="list-style-type: none"> ♦ The indoor unit's operating mode conflicts with that of the outdoor units.
Communication error between indoor and outdoor units	E1	<ul style="list-style-type: none"> ♦ Communication wires between indoor and outdoor units not connected properly. ♦ Interference from high voltage wires or other sources of electromagnetic radiation. ♦ Communication wire too long. ♦ Damaged main PCB.
Indoor ambient temperature sensor (T1) error	E2	<ul style="list-style-type: none"> ♦ Temperature sensor not connected properly or has malfunctioned. ♦ Damaged main PCB.
Indoor heat exchanger mid-point temperature sensor (T2) error	E3	
Indoor heat exchanger outlet temperature sensor (T2B) error	E4	
Fan error	E6	<ul style="list-style-type: none"> ♦ Fan stuck or blocked. ♦ Fan motor not connected properly or has malfunctioned. ♦ Power supply abnormal. ♦ Damaged main PCB.
EEPROM mismatch	E7	<ul style="list-style-type: none"> ♦ Damaged main PCB.
EEV error	Eb	<ul style="list-style-type: none"> ♦ Line loosened or broken. ♦ The electronic expansion valve is stuck. ♦ Damaged main PCB.
Outdoor unit error	Ed	<ul style="list-style-type: none"> ♦ Outdoor unit error.
Water level error	EE	<ul style="list-style-type: none"> ♦ Water level float stuck. ♦ Water level switch not connected properly. ♦ Damaged main PCB. ♦ Drain pump has malfunctioned.
The indoor unit has not been assigned an address	FE	<ul style="list-style-type: none"> ♦ Indoor unit has not been assigned an address.



MUNDO  CLIMA[®]



www.mundoclima.com

ASK FOR MORE INFORMATION

Phone: (+34) 93 446 27 80

eMail: info@mundoclima.com

TECHNICAL ASSISTANCE

Phone: (+34) 93 652 53 57