



# Technical Service Manual

Mini VRF



**Model:**

3 phase, 380-415V, 50Hz

MDV-V120W/DRN1

MDV-V140W/DRN1

MDV-V160W/DRN1

MDV-V180W/DRN1

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# Part 1    General Information

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# 1. Product Lineup

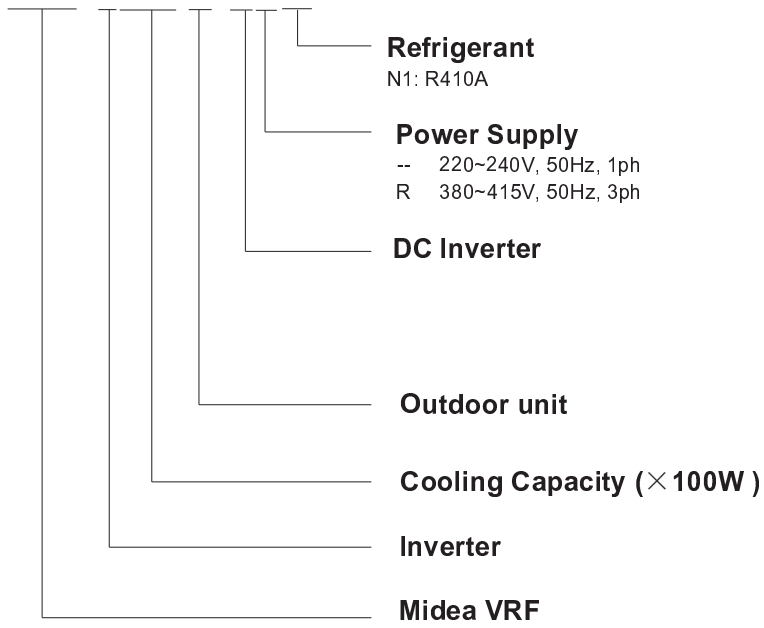
## Outdoor Units



Model name	Dimension body(mm)	Net/Gross weight (kg)	Power supply
MDV-V120W/DRN1	Width: 900 Height: 1327 Depth:400	95/106	380-415V-3ph~ 50Hz
MDV-V140W/DRN1	Width: 900 Height: 1327 Depth:400	95/106	380-415V-3ph~ 50Hz
MDV-V160W/DRN1	Width: 900 Height: 1327 Depth:400	102/113	380-415V-3ph~ 50Hz
MDV-V180W/DRN1	Width: 900 Height: 1327 Depth:400	107/118	380-415V-3ph~ 50Hz

## 2. Nomenclature

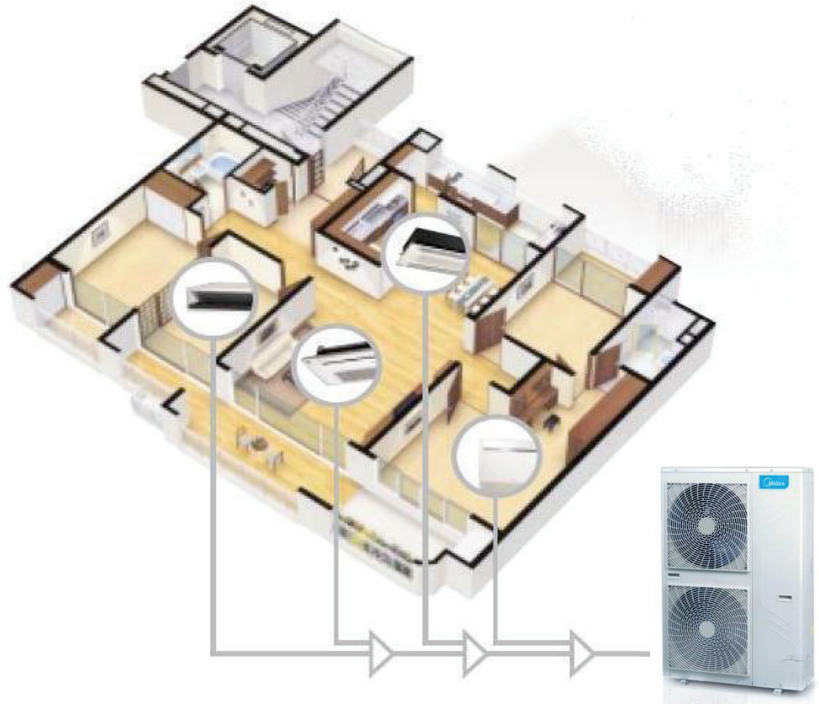
### MDV-V120W/DRN1



### 3. Features

#### 3.1 Wide application

The All DC Inverter Mini VRF system is a highly efficient solution for small commercial buildings requiring heating and cooling of up to 9 zones with one outdoor unit. Such as villa, restaurant, school etc.

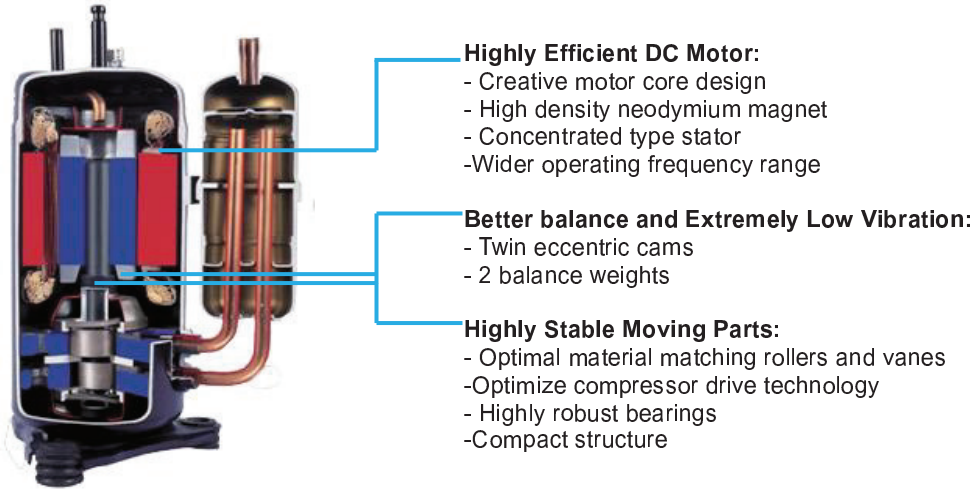


Midea offers various indoor units, more than 100 models of 15 types. Capacity ranges are from 1.5kW to 16 kW. It is all compliance with residential and light commercial place. Our systems can be operated up to 130% of capacity which allows any system to be designed to the customers' and applications' needs.



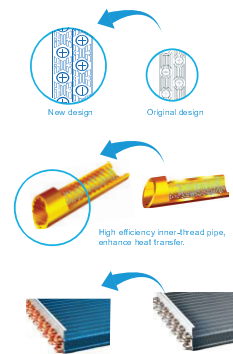
### 3.2 High efficient DC inverter compressor

All DC inverter Mini VRF adopts highly intelligent inverter-driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the real heat load demands.. This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the limiting the impact on the environment.



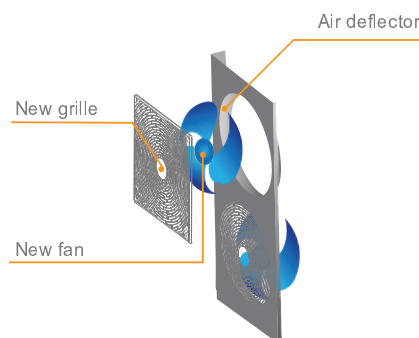
### 3.3 High performance heat exchanger

The new designed window fins enlarge the heat-exchanging area , which decrease the air resistance, save more power and enhance heat exchange performance. Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.



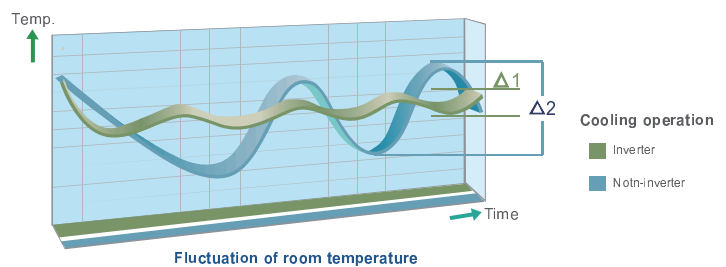
### 3.4 Low-operating sound design

Optimally design fan shape and new designed discharge air grille and air deflector, making higher air volume and lower operation sound.



### 3.5 Quick warm-up & cool-down design and less temperature fluctuation

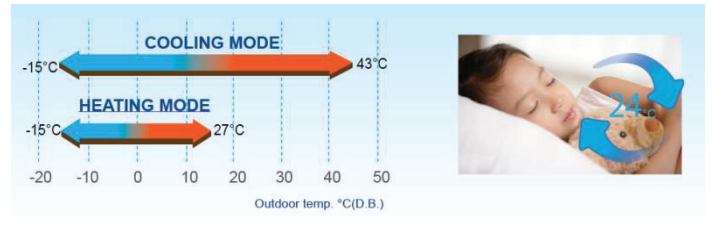
Utilizing the inverter compressor benefits, the system can reach All load quickly and shorten warm-up or cool-down time for an immediate comfortable air solution. Less temperature fluctuation will create a better living environment.



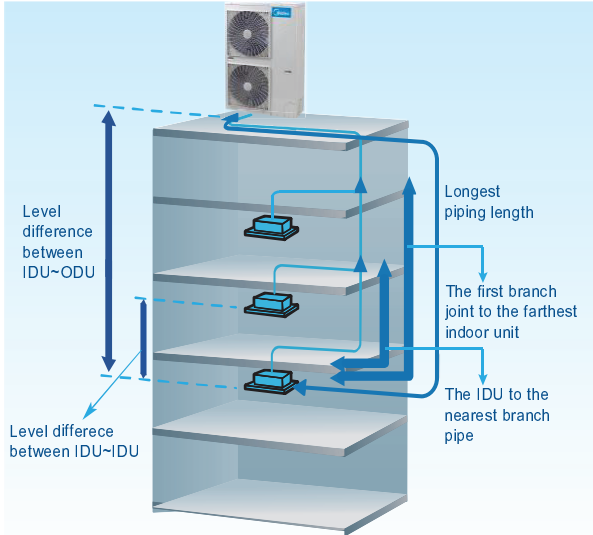


### 3.6 Wide operation temperature range

No matter in extremely cold winter when outdoor temperature gets as low as -15°C or in hot summer when temperature is up to 43°C, the Mini VRF system will keep stable performance.



### 3.7 Flexible piping design

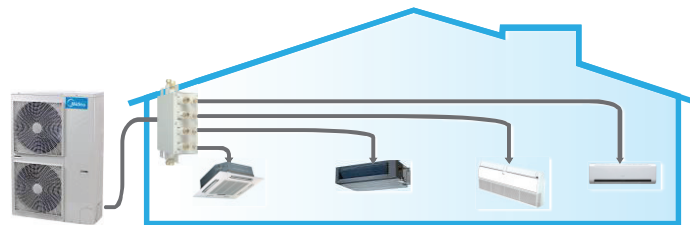


Piping Length		Permitted Value
Total piping length (Actual)		100m
Longest piping length	Actual	60m
	Equivalent	70m
The first branch joint to the farthest IDU		20m
The IDU to the nearest branch pipe		15m
Level difference between ODU~IDU	ODU up	30m
	ODU down	20m
Level difference between IDU~IDU		8m

### 3.8 Flexible indoor unit's connection

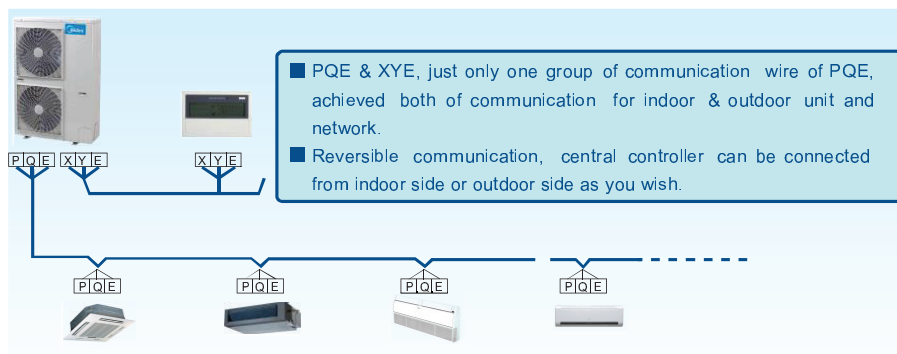
Mini VRF with intelligent control gives you independent zoning control with maximum flexibility. A single outdoor unit supports up to nine indoor units, freeing up considerable space outside. Use your backyard more wisely with much more space available created by less number of outdoor units.

- Max. 6 indoor units for a 12kW outdoor unit installation
- Max. 6 indoor units for a 14kW outdoor unit installation
- Max. 7 indoor units for a 16kW outdoor unit installation
- Max. 9 indoor units for a 18kW outdoor unit installation



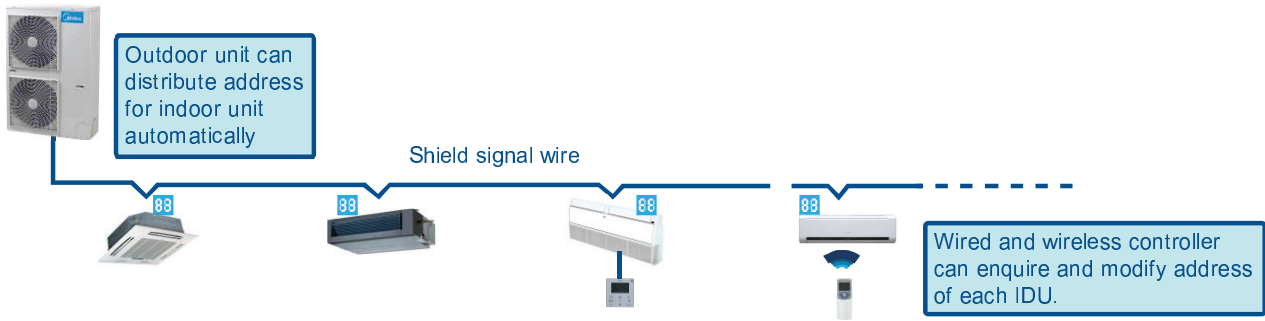
### 3.9 Simple signal line connection

Installation is much easier as the communication wiring between indoor & outdoor units can be shared. It's easy for the user to retrofit the existing system with a centralized control by simply connecting to outdoor units.



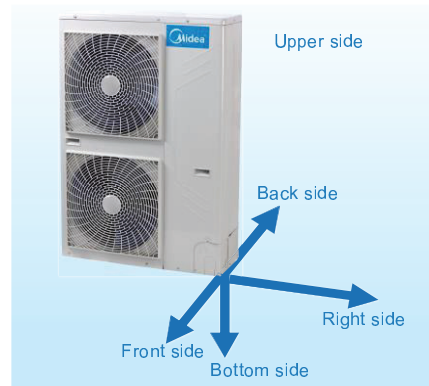
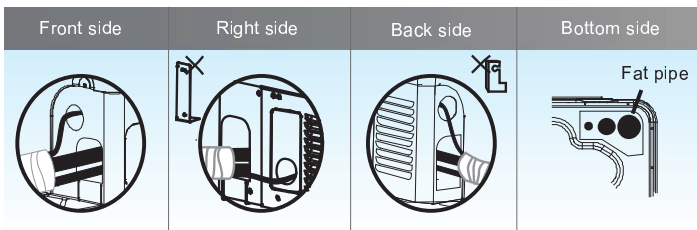
### 3.10 Auto address setting function

The addresses of indoor units can be set automatically by outdoor unit. Wired controller and wireless controller can enquire and modify the address of each indoor unit.



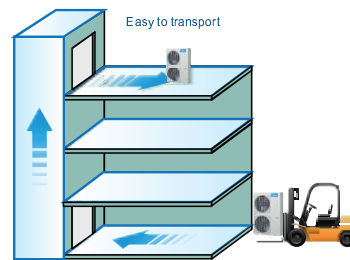
### 3.11 Easy piping connection

Offering four directions to connect pipes and wirings to meet various installation requests.



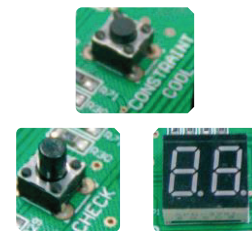
### 3.12 Easy installation

The Mini VRF can be transported by elevator which makes installation dramatically easy, and effectively reduces time and labor thanks to the small size.



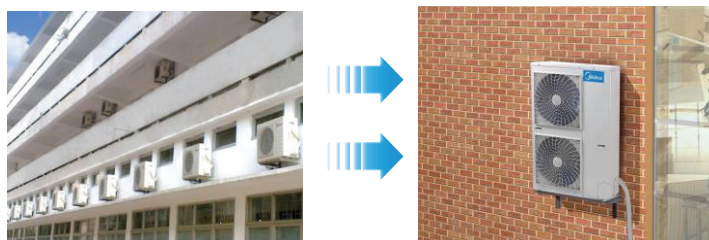
### 3.13 Easy maintenance

Forced cooling button makes outdoor unit run in cooling mode at any condition, so it is very easy for you to charge refrigerant to the system when it needs to be done. The self-diagnosis function detects malfunctions in major locations in the system and displays the type of malfunction and location. This allows service and maintenance to be performed more efficiently.











### 3.14 Space saving

The Mini VRF units are more compact, resulting in significant savings in installation space. It is particularly suitable for small offices, villas, shops, etc.










## 4. Indoor Units Lineup

Capacity (×100W)	Cassette unit			
	One-way cassette	Two-way cassette	Compact four-way cassette	Four-way cassette
				
15			•	
18	•			
22	•	•	•	
28	•	•	•	•
36	•	•	•	•
45	•	•	•	•
56	•	•		•
71	•	•		•
80				•
90				•
100				•
112				•
140				•

Capacity (×100W)	Duct unit			
	Low static pressure duct	Medium static pressure duct	High static pressure duct	
				
15		•		
18	•			
22	•	•		
28	•	•		
36	•	•		
45	•	•		
56	•	•		
71	•	•	•	
80		•	•	
90		•	•	
112		•	•	
140		•		•
160				•

**Indoor units lineup**

Capacity (×100W)	Floor-standing/Ceiling & Floor/Console			
	Floor standing (exposed)	Floor standing (concealed)	Ceiling & floor	console
				
22	•	•		•
28	•	•		•
36	•	•	•	•
45	•	•	•	•
56	•	•	•	
71	•	•	•	
80	•	•	•	
90			•	
112			•	
140			•	
160			•	

Capacity (×100W)	Wall mounted		
	Wall mounted (S panel)	Wall mounted (M panel)	Wall mounted (R panel)
			
15	•		
22	•	•	
28	•	•	
36	•	•	
45	•	•	
56	•	•	
71		•	•
80		•	•
90		•	•

**Note:** If ODU connect only one IDU, the capacity of IDU should be not more than ODU.  
 If ODU connect more than one IDU, the capacity of each IDU should be not more than 8kW for refrigerant uniform distribution.  
 Due to continuous improvement, specifications are subject to change without prior notice.

# Part 2 Outdoor Units

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## 1. Specifications

Sale Model			MDV-V120W/DRN1	MDV-V140W/DRN1
Power supply		V-Ph-Hz	380-415V-3N~50Hz	380-415V-3N~50Hz
Cooling	Capacity	kW	12.3	14.0
	Input	kW	3.25	3.95
	EER	kW/ kW	3.78	3.54
Heating	Capacity	kW	13.2	15.4
	Input	kW	3.47	4.16
	COP	kW/ kW	3.80	3.7
Compressor	Model		TNB306FPNMC	TNB306FPNMC
	Type		Rotary	Rotary
	Brand		MITSUBISHI	MITSUBISHI
	Capacity	Btu/h	33720	33720
	Input	W	3010	3010
	Rated current(RLA)	A	9.3	9.3
	Crankcase	W	27	27
	Refrigerant oil	ml	FV50S 870+630ml	FV50S 870+630ml
Outdoor fan motor	Model		WZDK100-38G	WZDK100-38G
	Type		DC motor	DC motor
	Brand		Panasonic	Panasonic
	Insulation class		E	E
	Safe class		IP23	IP23
	Input	W	2 x 100	2 x 100
	Output	W	2 x 85	2 x 85
	Rated current	A	2 x 0.9	2 x 0.9
	Capacitor	uF	/	/
	Speed	r/min	800	800
Outdoor fan	Material		ASG20	ASG20
	Type		Axial fan	Axial fan
	Diameter	mm	508	508
	Height	mm	170	170
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	22 x 19.05	22 x 19.05
	Fin spacing	mm	1.6	1.6
	Tube outside dia.and type	mm	Φ7.94	Φ7.94
			Inner groove tube	Inner groove tube
	Coil length x height	mm	1276 x 870	1276 x 870
Number of circuits		7	7	
Outdoor air flow		m <sup>3</sup> /h	6000	6000
Outdoor sound level(sound pressure level )		dB(A)	57	57
Outdoor Unit	Dimension(W x H x D)	mm	900 x 1327 x 400	900 x 1327 x 400
	Packing (W x H x D)	mm	1030 x 1456 x 435	1030 x 1456 x 435
	Net/Gross weight	kg	95/106	95/106
Refrigerant	Type		R410A	R410A
	Charged volume	g	3300	3900

Throttle type			Electronic expansion valve	
Design pressure		MPa	4.4/2.6	
Refrigerant piping	Liquid side/ Gas side	mm	φ9.53/φ15.9	φ9.53/φ15.9
	Max. refrigerant pipe length	m	100	100
	Max. difference in level	m	8	8
Connection wiring	Power wiring	mm <sup>2</sup>	5 core x2.5	5 core x2.5
	Signal wiring	mm <sup>2</sup>	3 core shielded wire x 0.75	3 core shielded wire x 0.75
Ambient temp		°C	(Cooling -15~43) (Heating -15~27)	(Cooling -15~43) (Heating -15~27)

Sale Model			MDV-V160W/DRN1	MDV-V180W/DRN1
Power supply		V-Ph-Hz	380-415V-3N~50Hz	380-415V-3N~50Hz
Cooling	Capacity	kW	15.5	17.5
	Input	kW	4.52	5.3
	EER	kW/ kW	3.43	3.3
Heating	Capacity	kW	17.0	19.0
	Input	kW	4.77	5.0
	COP	kW/ kW	3.56	3.8
Compressor	Model		LNB42FSAMC	LNB42FSAMC
	Type		Rotary	Rotary
	Brand		MITSUBISHI	MITSUBISHI
	Capacity	Btu/h	47700	47700
	Input	W	4240	4270
	Rated current(RLA)	A	12	12
	Crankcase	W	25	25
	Refrigerant oil	ml	FV50S 1400ml	FV50S 1400ml
Outdoor fan motor	Model		WZDK100-38G	WZDK100-38G
	Type		DC motor	DC motor
	Brand		Panasonic	Panasonic
	Insulation class		E	E
	Safe class		IP23	IP23
	Input	W	2 x 100	2 x 100
	Output	W	2 x 85	2 x 85
	Rated current	A	2 x 0.9	2 x 0.9
	Capacitor	uF	/	/
	Speed	r/min	800	800
Outdoor fan	Material		ASG20	ASG20
Outdoor fan	Type		Axial fan	Axial fan
	Diameter	mm	508	508
	Height	mm	170	170
Outdoor coil	Number of rows		2	2.5
	Tube pitch(a)x row pitch(b)	mm	22 x 19.05	22 x 19.05
	Fin spacing	mm	1.6	1.6
	Tube outside dia. and type	mm	φ7.94	φ7.94
			Inner groove tube	Inner groove tube

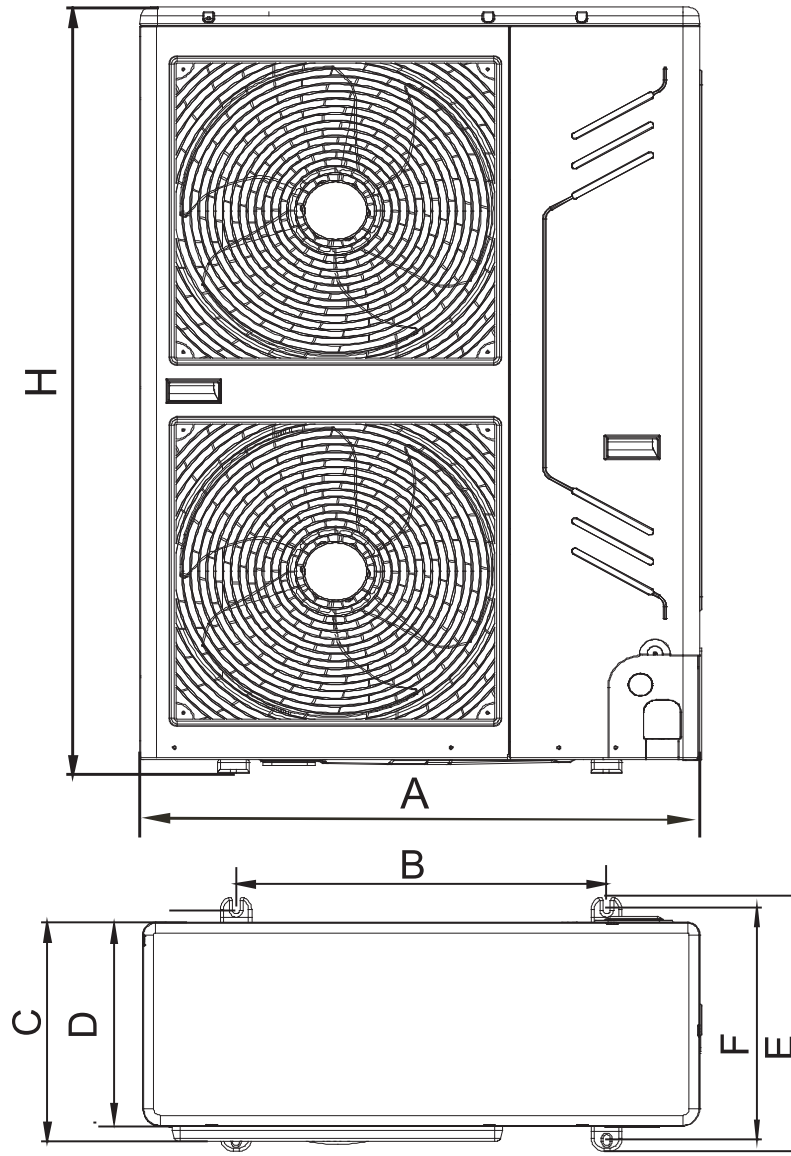
	Coil length x height	mm	1276 x 870	1276 x 870
	Number of circuits		7	12
Outdoor air flow		m <sup>3</sup> /h	6000	6800
Outdoor sound level(sound pressure level )		dB(A)	57	59
Outdoor unit	Dimension (W x H x D)	mm	900 x 1327 x 400	900 x 1327 x 400
	Packing (W x H x D)	mm	1030 x 1456 x 435	1030 x 1456 x 435
	Net/Gross weight	kg	102/113	107/118
Refrigerant	Type		R410A	R410A
	Charged volume	g	3900	4500
Throttle type			Electronic expansion valve	
Design pressure		MPa	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid side/ Gas side	mm	Φ9.53/Φ19.1	Φ9.53/Φ19.1
	Max. refrigerant pipe length	m	100	100
	Max. difference in level	m	8	8
Connection wiring	Power wiring	mm <sup>2</sup>	5 core x2.5	5 core x2.5
	Signal wiring	mm <sup>2</sup>	3 core shielded wire x 0.75	3 core shielded wire x 0.75
Ambient temp		°C	(Cooling -15~43) (Heating -15~27)	(Cooling -15~43) (Heating -15~27)

**Notes:**

1. The cooling conditions: indoor temp.: 27°CDB (80.6°F), 19°CWB (66.2°F) outdoor temp.: 35°CDB (95°F), 24°CWB (75.2°F) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp.: 20°CDB (68°F), 15°CWB (59°F) outdoor temp.: 7°CDB (44.6°F), 6°CWB (42.8°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of \*m(1.2m for 120~180 model). During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The aboved datas may be changed without notice for future improvement on quality and performance.



## 2. Dimensions

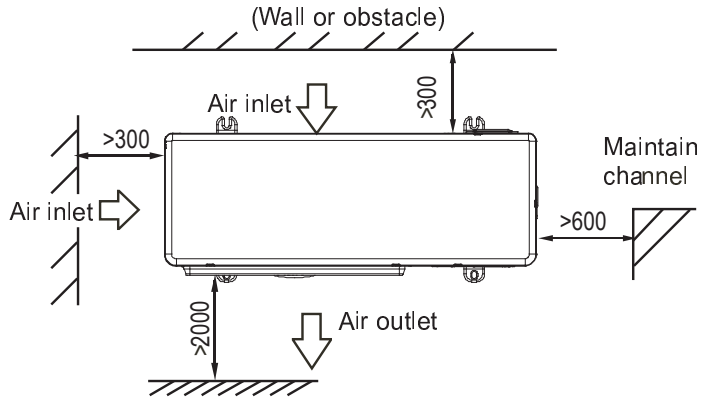


(unit: mm)

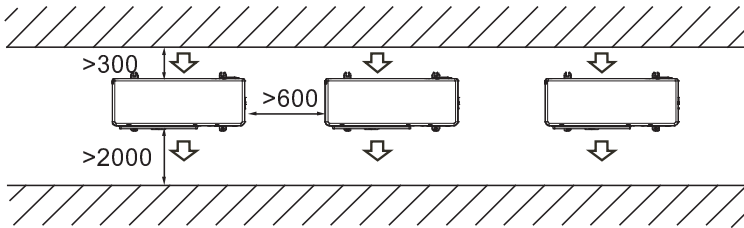
MODEL (kW)	A	B	C	D	E	F	G	H
12/14/ 16/18	900	600	348	320	400	360	—	1327

### 3. Service Space

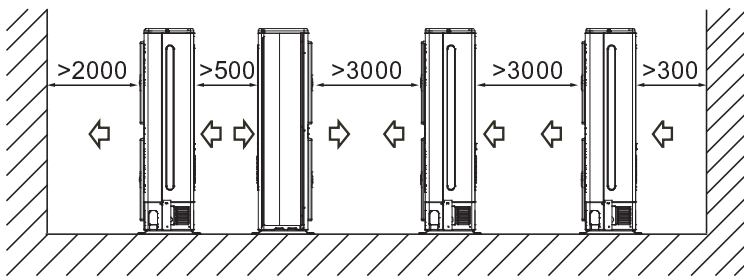
- Single unit installation



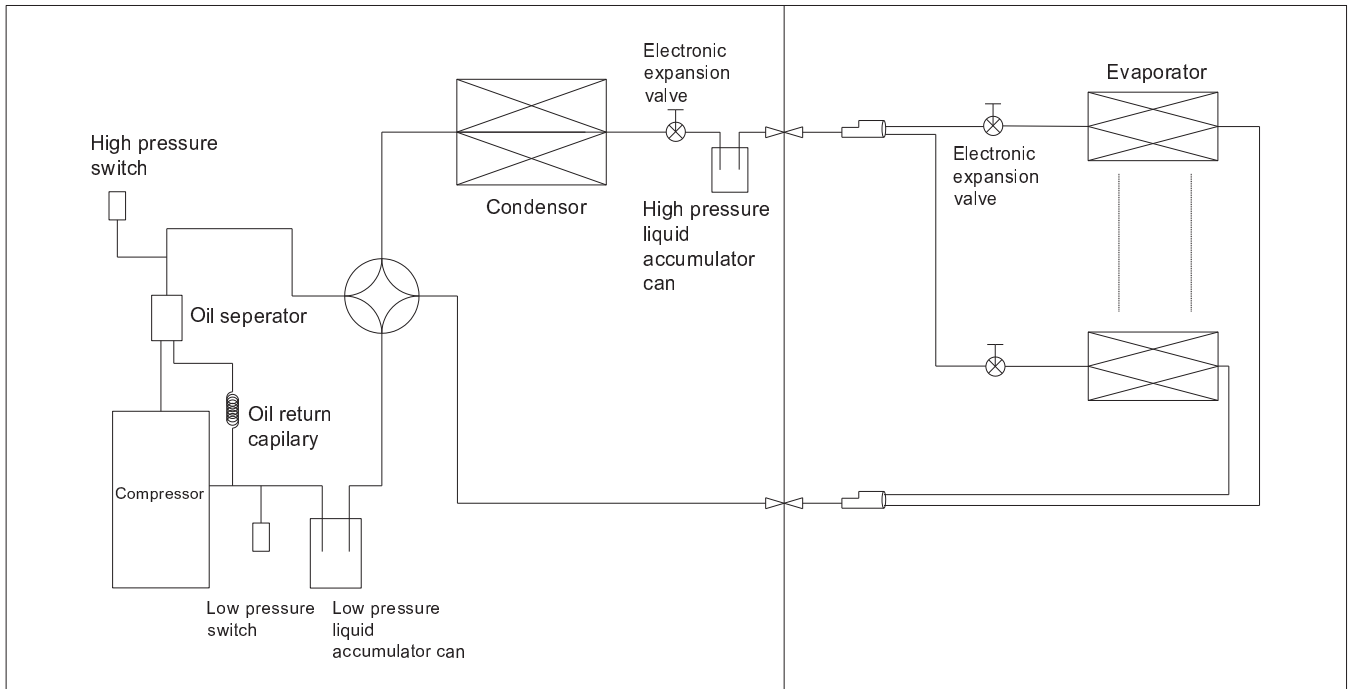
- Parallel connect the two units or above



- Parallel connect the front with rear sides



## 4. Piping Diagrams



**Oil separator:** used to separate oil from high pressure & temperature gas refrigerant, which is pumped out from compressor. It makes the oil return back to each compressor very soon.

**Low pressure liquid receiver & High pressure liquid receiver:** It is used to store the liquid refrigerant and oil; it can protect the compressor from liquid hammer.

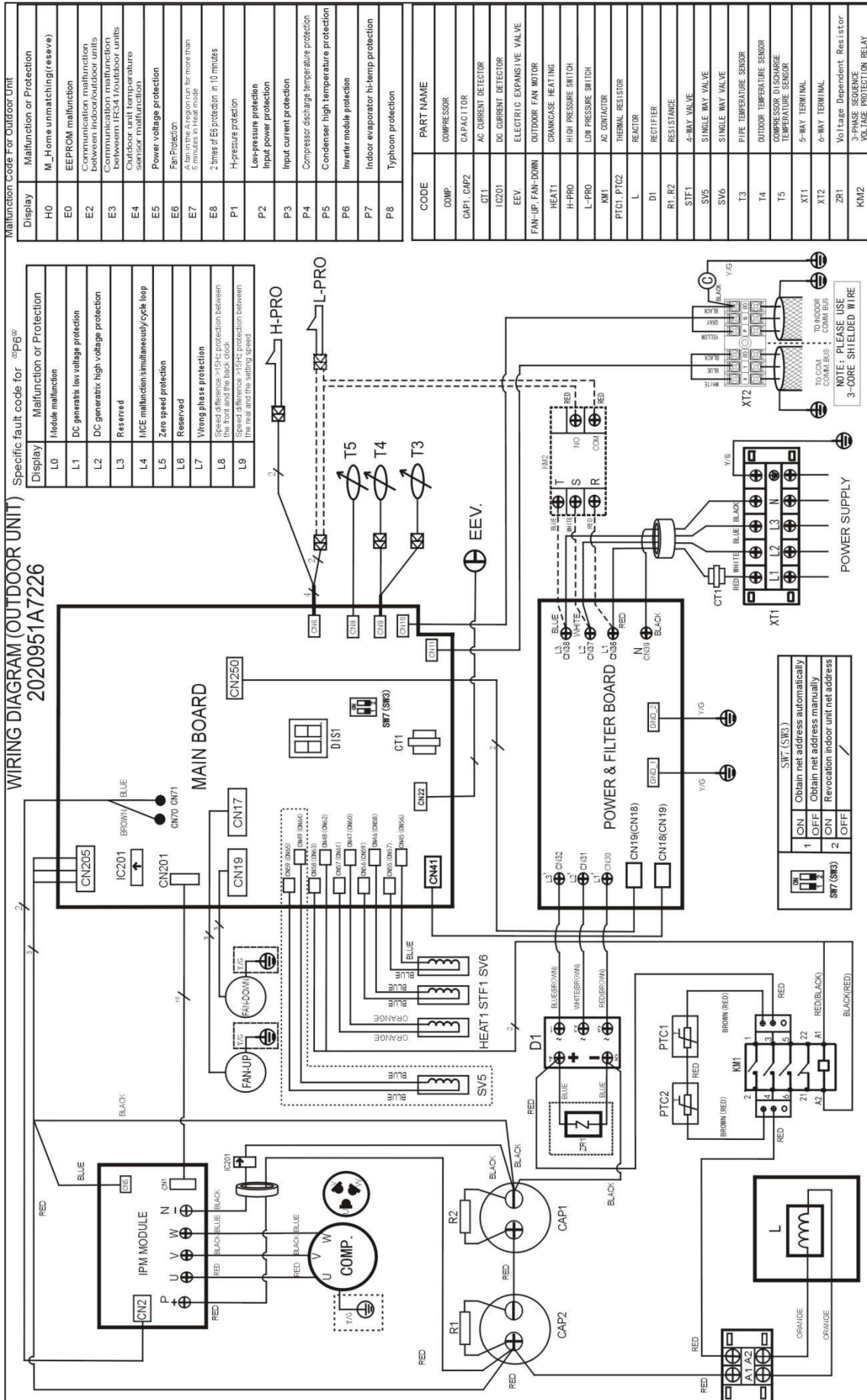
**4-way valve:** Closed in cooling mode and open in heating mode

**Electronic expansion valve:** The opening is of the valve is regulated according to the discharge air temperature of compressor, used to regulating refrigerant flow.

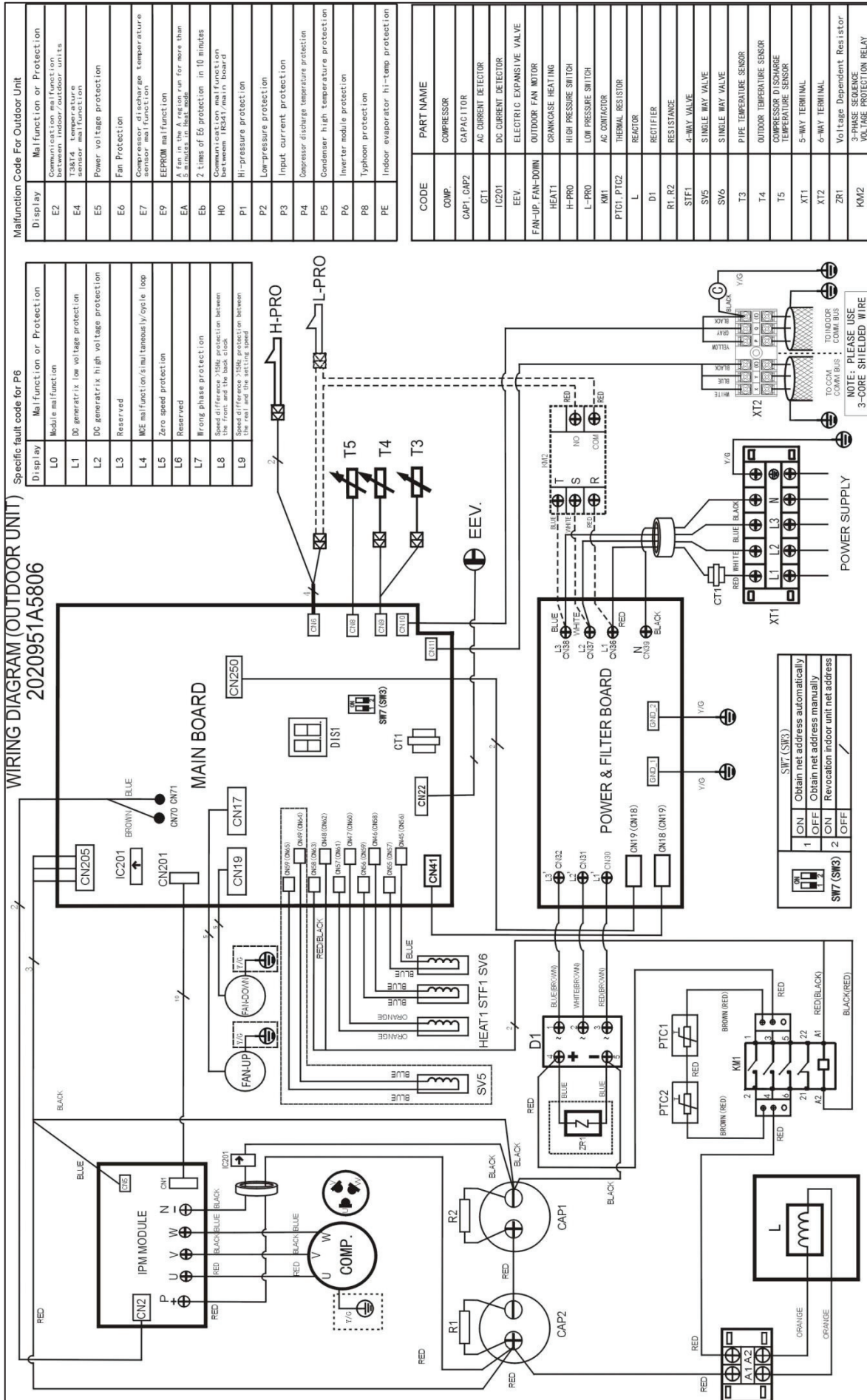
**High Pressure Switch:** When the discharge pressure of compressor is 4.2Mpa or higher, the protection switch will be triggered, and if the discharge pressure is down to 3.3MPa, the protection switch will be recovered.

**Low Pressure Switch:** When the gas pressure back to compressor is 0.14Mpa or lower, the protection switch will be triggered, and if the discharge pressure is down to 0.3MPa, the protection switch will be recovered.

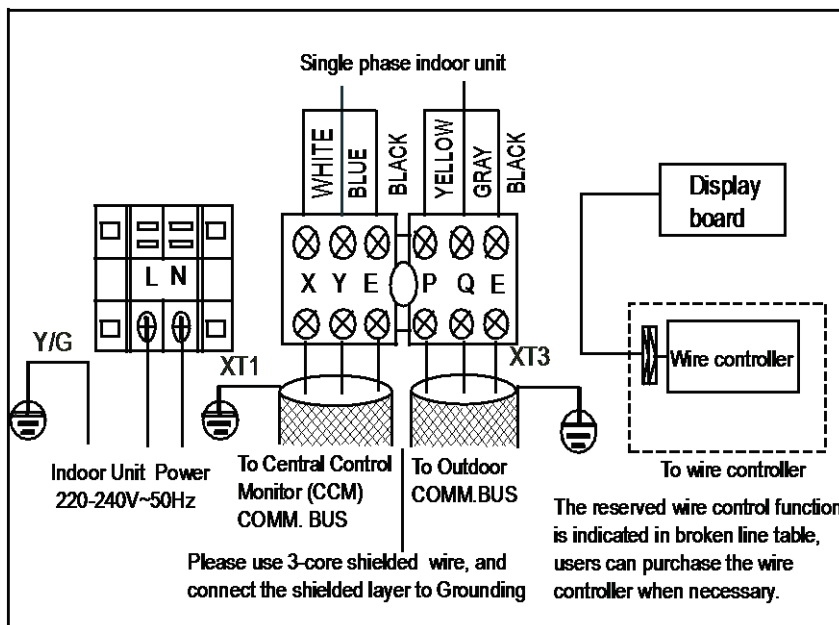
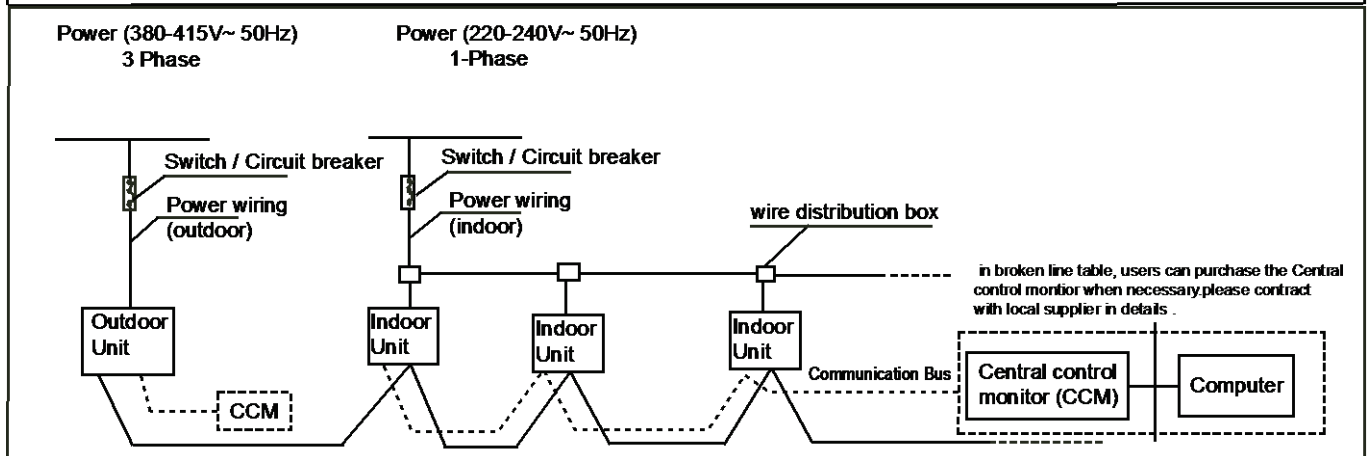
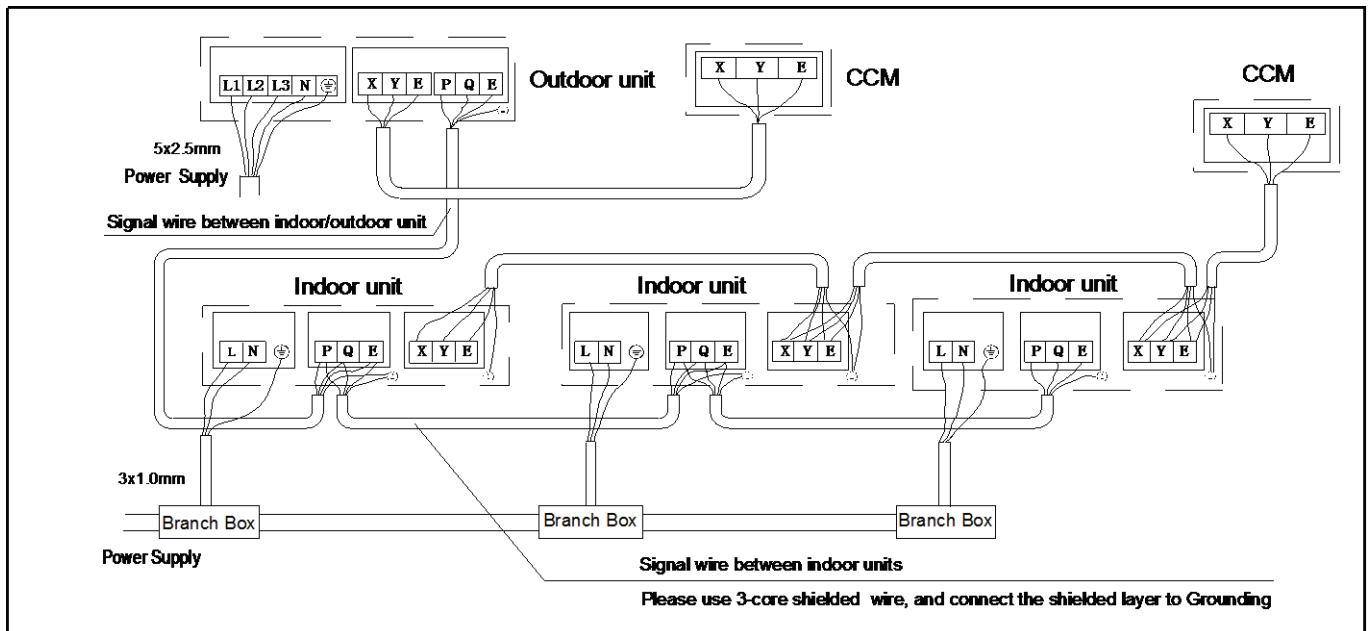
### 5. Wiring Diagrams (For 12-16kW)



For 18kW



## 6. Field Wiring



# 7. Capacity Tables

## MDV-V120W/DRN1

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-5	10.81	1.33	12.87	1.62	14.93	1.74	15.51	1.81	16.25	1.86	16.65	2.02	17.07	2.04
	-2	10.81	1.33	12.87	1.65	14.93	1.74	15.51	1.82	16.25	1.86	16.65	2.05	17.07	2.06
	0	10.81	1.35	12.87	1.68	14.93	1.8	15.51	1.92	16.25	1.97	16.65	2.07	17.07	2.08
	2	10.81	1.38	12.87	1.69	14.93	1.86	15.51	2.03	16.25	1.99	16.65	2.09	17.07	2.11
	4	10.81	1.41	12.87	1.72	14.93	1.93	15.51	2.04	16.25	2.02	16.65	2.09	17.07	2.15
	6	10.81	1.43	12.87	1.75	14.93	2	15.51	2.05	16.07	2.08	16.44	2.09	16.88	2.17
	8	10.81	1.47	12.87	1.79	14.93	2.1	15.51	2.15	15.87	2.15	16.27	3.9	16.66	2.19
	10	10.81	1.5	12.87	1.83	14.93	2.18	15.51	2.23	15.68	4.04	16.08	4.06	16.47	2.25
	12	10.81	1.52	12.87	1.87	14.93	2.22	15.29	4.03	15.51	4.06	15.86	4.07	16.25	2.27
	14	10.81	1.56	12.87	1.9	14.89	4.05	15.11	4.06	15.29	4.08	15.68	4.09	16.08	2.32
	16	10.81	1.58	12.87	1.94	14.72	4.06	14.89	4.08	15.07	4.1	15.46	4.12	15.86	2.36
	18	10.81	1.61	12.87	1.98	14.5	2.32	14.67	2.33	14.89	2.35	15.29	2.37	15.68	2.39
	20	10.81	1.65	12.87	2.11	14.28	2.44	14.5	2.45	14.67	2.46	15.07	2.48	15.46	2.51
	21	10.81	1.69	12.87	2.18	14.19	2.49	14.41	2.51	14.58	2.52	14.98	2.55	15.37	2.57
	23	10.81	1.81	12.87	2.34	14.01	2.61	14.19	2.62	14.36	2.63	14.76	2.66	15.15	2.69
	25	10.81	1.94	12.87	2.51	13.79	2.72	13.97	2.73	14.19	2.75	14.58	2.78	14.98	2.8
	27	10.81	2.07	12.87	2.68	13.62	2.83	13.79	2.85	13.97	2.86	14.36	2.9	14.76	2.93
	29	10.81	2.21	12.87	2.86	13.4	2.95	13.57	2.97	13.79	2.98	14.19	3.01	14.58	3.04
	31	10.81	2.36	12.83	3.03	13.18	3.07	13.4	3.08	13.57	3.1	13.97	3.13	14.36	3.17
	33	10.81	2.51	12.61	3.15	13	3.18	13.18	3.2	13.4	3.22	13.79	3.25	14.14	3.29
35	10.81	2.68	12.39	3.26	12.78	3.3	13	3.32	13.18	3.33	13.57	3.37	13.97	3.41	
37	10.81	2.85	12.21	3.38	12.61	3.42	12.78	3.43	13	3.46	13.35	3.5	13.75	3.54	
39	10.81	3.03	11.99	3.41	12.39	3.53	12.61	3.55	12.78	3.57	13.18	3.61	13.57	3.66	
41	10.81	3.19	11.87	3.45	12.26	3.56	12.48	3.59	12.65	3.61	13.05	3.62	13.05	3.69	
43	10.81	3.27	11.78	3.46	12.19	3.57	12.41	3.6	12.52	3.61	12.81	3.63	12.9	3.7	
120%	-5	9.97	1.28	11.86	1.55	13.79	1.84	14.76	2	15.46	2.09	15.81	2.16	16.17	2.21
	-2	9.97	1.3	11.86	1.57	13.79	1.86	14.76	2.02	15.46	2.11	15.81	2.17	16.17	2.22
	0	9.97	1.31	11.86	1.58	13.79	1.88	14.76	2.02	15.46	2.13	15.81	2.19	16.17	2.23
	2	9.97	1.31	11.86	1.6	13.79	1.89	14.76	2.04	15.46	2.14	15.81	2.2	16.17	2.23
	4	9.97	1.32	11.86	1.62	13.79	1.92	14.76	2.06	15.46	2.17	15.81	2.21	16.17	2.24
	6	9.97	1.34	11.86	1.63	13.79	1.94	14.76	2.08	15.46	2.19	15.81	2.23	16.17	2.24
	8	9.97	1.35	11.86	1.65	13.79	1.97	14.76	2.11	15.46	2.22	15.81	2.23	16.17	2.25
	10	9.97	1.37	11.86	1.67	13.79	1.98	14.76	2.15	15.46	2.22	15.81	2.24	16.17	2.26
	12	9.97	1.39	11.86	1.7	13.79	2.02	14.76	2.19	15.24	2.23	15.59	2.23	15.95	2.28
	14	9.97	1.42	11.86	1.73	13.79	2.06	14.76	2.23	15.02	2.24	15.42	2.26	15.77	2.31
	16	9.97	1.45	11.86	1.77	13.79	2.1	14.67	4.1	14.85	2.27	15.2	2.3	15.55	2.34
	18	9.97	1.47	11.86	1.8	13.79	2.17	14.45	2.32	14.63	2.33	14.98	2.35	15.37	2.37
	20	9.97	1.5	11.86	1.87	13.79	2.34	14.28	2.44	14.45	2.44	14.8	2.47	15.16	2.49
	21	9.97	1.52	11.86	1.94	13.79	2.42	14.14	2.49	14.32	2.5	14.72	2.52	15.07	2.55
	23	9.97	1.62	11.86	2.08	13.79	2.59	13.97	2.6	14.14	2.62	14.5	2.64	14.85	2.66
	25	9.97	1.73	11.86	2.23	13.57	2.71	13.75	2.72	13.93	2.73	14.32	2.75	14.67	2.78
	27	9.97	1.85	11.86	2.38	13.4	2.82	13.57	2.83	13.75	2.85	14.1	2.87	14.45	2.9
	29	9.97	1.97	11.86	2.54	13.18	2.93	13.35	2.95	13.53	2.96	13.88	2.99	14.28	3.02
	31	9.97	2.1	11.86	2.71	12.96	3.05	13.18	3.06	13.35	3.08	13.71	3.11	14.06	3.14
	33	9.97	2.24	11.86	2.89	12.78	3.16	12.96	3.18	13.13	3.19	13.49	3.23	13.84	3.26
35	9.97	2.38	11.86	3.08	12.56	3.28	12.74	3.29	12.96	3.31	13.31	3.35	13.66	3.38	
37	9.97	2.54	11.86	3.28	12.39	3.39	12.56	3.41	12.74	3.43	13.09	3.46	13.44	3.5	
39	9.97	2.7	11.82	3.47	12.17	3.51	12.34	3.53	12.52	3.55	12.91	3.59	13.27	3.62	
41	9.97	2.77	11.72	3.49	12.07	3.53	12.25	3.56	12.42	3.57	12.82	3.6	12.88	3.65	
43	9.97	2.81	11.66	3.52	11.98	3.55	12.15	3.57	12.33	3.59	12.6	3.61	12.68	3.72	

**MDV-V120W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
110%	-5	9.14	1.12	10.9	1.39	12.65	1.66	13.53	1.79	14.41	1.92	15.51	2	15.86	2.06
	-2	9.14	1.14	10.9	1.41	12.65	1.68	13.53	1.8	14.41	1.94	15.51	2.02	15.86	2.07
	0	9.14	1.15	10.9	1.42	12.65	1.69	13.53	1.82	14.41	1.96	15.51	2.04	15.86	2.09
	2	9.14	1.18	10.9	1.43	12.65	1.72	13.53	1.84	14.41	1.98	15.51	2.07	15.86	2.12
	4	9.14	1.2	10.9	1.45	12.65	1.73	13.53	1.86	14.41	2.01	15.51	2.09	15.86	2.14
	6	9.14	1.21	10.9	1.47	12.65	1.75	13.53	1.89	14.41	2.03	15.51	2.12	15.86	2.17
	8	9.14	1.23	10.9	1.49	12.65	1.77	13.53	1.91	14.41	2.06	15.51	2.13	15.86	2.2
	10	9.14	1.24	10.9	1.51	12.65	1.8	13.53	1.94	14.41	2.09	15.51	2.15	15.86	2.21
	12	9.14	1.27	10.9	1.54	12.65	1.83	13.53	1.98	14.41	2.13	15.33	2.18	15.64	2.24
	14	9.14	1.29	10.9	1.57	12.65	1.87	13.53	2.01	14.41	2.17	15.11	2.19	15.46	2.26
	16	9.14	1.31	10.9	1.6	12.65	1.9	13.53	2.05	14.41	2.21	14.94	2.22	15.24	2.28
	18	9.14	1.34	10.9	1.63	12.65	1.94	13.53	2.11	14.41	2.32	14.72	2.33	15.07	2.36
	20	9.14	1.36	10.9	1.66	12.65	2.05	13.53	2.27	14.19	2.43	14.54	2.45	14.85	2.47
	21	9.14	1.38	10.9	1.71	12.65	2.13	13.53	2.35	14.1	2.49	14.41	2.51	14.76	2.53
	23	9.14	1.44	10.9	1.84	12.65	2.28	13.53	2.52	13.88	2.6	14.23	2.62	14.54	2.65
	25	9.14	1.54	10.9	1.96	12.65	2.44	13.53	2.7	13.71	2.71	14.01	2.74	14.36	2.76
	27	9.14	1.64	10.9	2.1	12.65	2.61	13.31	2.82	13.49	2.83	13.84	2.85	14.15	2.88
	29	9.14	1.75	10.9	2.24	12.65	2.79	13.13	2.93	13.31	2.94	13.62	2.97	13.97	3
	31	9.14	1.86	10.9	2.39	12.65	2.98	12.92	3.04	13.09	3.06	13.44	3.08	13.75	3.11
	33	9.14	1.98	10.9	2.55	12.56	3.14	12.74	3.16	12.92	3.17	13.22	3.2	13.57	3.23
35	9.14	2.11	10.9	2.71	12.34	3.25	12.52	3.27	12.7	3.29	13	3.32	13.36	3.35	
37	9.14	2.24	10.9	2.89	12.17	3.37	12.34	3.39	12.48	3.4	12.83	3.44	13.13	3.47	
39	9.14	2.38	10.9	3.08	11.95	3.49	12.12	3.5	12.3	3.52	12.61	3.56	12.96	3.59	
41	9.14	2.41	10.9	3.1	11.86	3.51	12.03	3.53	12.21	3.55	12.45	3.58	12.57	3.62	
43	9.14	2.43	10.9	3.14	11.76	3.54	11.94	3.55	12.11	3.57	12.34	3.59	12.38	3.69	
100%	-5	8.3	1.02	9.88	1.23	11.51	1.46	12.3	1.57	13.09	1.7	14.72	1.94	15.55	2.02
	-2	8.3	1.03	9.88	1.24	11.51	1.48	12.3	1.6	13.09	1.72	14.72	1.96	15.55	2.03
	0	8.3	1.04	9.88	1.26	11.51	1.5	12.3	1.62	13.09	1.74	14.72	1.99	15.55	2.06
	2	8.3	1.06	9.88	1.27	11.51	1.51	12.3	1.64	13.09	1.76	14.72	2.02	15.55	2.09
	4	8.3	1.07	9.88	1.29	11.51	1.53	12.3	1.66	13.09	1.78	14.72	2.04	15.55	2.11
	6	8.3	1.09	9.88	1.31	11.51	1.55	12.3	1.69	13.09	1.81	14.72	2.07	15.55	2.15
	8	8.3	1.11	9.88	1.33	11.51	1.58	12.3	1.71	13.09	1.84	14.72	2.1	15.55	2.18
	10	8.3	1.12	9.88	1.36	11.51	1.61	12.3	1.74	13.09	1.87	14.72	2.14	15.55	2.21
	12	8.3	1.14	9.88	1.38	11.51	1.64	12.3	1.77	13.09	1.91	14.72	2.18	15.33	2.23
	14	8.3	1.16	9.88	1.41	11.51	1.67	12.3	1.8	13.09	1.94	14.72	2.22	15.15	2.26
	16	8.3	1.18	9.88	1.44	11.51	1.7	12.3	1.84	13.09	1.98	14.63	2.25	14.94	2.28
	18	8.3	1.2	9.88	1.46	11.51	1.73	12.3	1.87	13.09	2.02	14.45	2.32	14.76	2.34
	20	8.3	1.23	9.88	1.49	11.51	1.79	12.3	1.97	13.09	2.16	14.23	2.43	14.54	2.45
	21	8.3	1.24	9.88	1.51	11.51	1.85	12.3	2.04	13.09	2.24	14.15	2.49	14.45	2.51
	23	8.3	1.27	9.88	1.61	11.51	1.98	12.3	2.19	13.09	2.4	13.97	2.6	14.23	2.62
	25	8.3	1.35	9.88	1.72	11.51	2.12	12.3	2.34	13.09	2.57	13.75	2.72	14.06	2.74
	27	8.3	1.45	9.88	1.83	11.51	2.27	12.3	2.51	13.09	2.75	13.53	2.83	13.84	2.86
	29	8.3	1.54	9.88	1.95	11.51	2.42	12.3	2.68	13.05	2.92	13.35	2.95	13.66	2.97
	31	8.3	1.64	9.88	2.08	11.51	2.58	12.3	2.86	12.87	3.04	13.14	3.06	13.44	3.09
	33	8.3	1.74	9.88	2.22	11.51	2.76	12.3	3.05	12.65	3.15	12.96	3.18	13.27	3.21
35	8.3	1.85	9.88	2.36	11.51	2.94	12.3	3.25	12.43	3.26	12.74	3.29	13.05	3.32	
37	8.3	1.97	9.88	2.51	11.51	3.13	12.08	3.36	12.26	3.38	12.56	3.41	12.83	3.44	
39	8.3	2.09	9.88	2.67	11.51	3.33	11.9	3.48	12.04	3.5	12.34	3.53	12.65	3.56	
41	8.3	2.19	9.88	2.77	11.51	3.46	11.72	3.5	11.94	3.55	12.13	3.61	12.47	3.63	
43	8.3	2.28	9.88	2.87	11.51	3.52	11.53	3.54	11.86	3.58	12.2	3.63	12.25	3.67	



**MDV-V120W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
90%	-5	7.47	0.9	8.92	1.08	10.37	1.28	11.07	1.39	11.77	1.48	13.22	1.7	14.67	1.95
	-2	7.47	0.91	8.92	1.09	10.37	1.29	11.07	1.41	11.77	1.5	13.22	1.72	14.67	1.97
	0	7.47	0.92	8.92	1.11	10.37	1.31	11.07	1.43	11.77	1.52	13.22	1.74	14.67	1.99
	2	7.47	0.94	8.92	1.12	10.37	1.33	11.07	1.45	11.77	1.54	13.22	1.78	14.67	2.02
	4	7.47	0.95	8.92	1.14	10.37	1.35	11.07	1.47	11.77	1.56	13.22	1.8	14.67	2.05
	6	7.47	0.97	8.92	1.16	10.37	1.37	11.07	1.5	11.77	1.59	13.22	1.83	14.67	2.08
	8	7.47	0.98	8.92	1.18	10.37	1.4	11.07	1.52	11.77	1.62	13.22	1.87	14.67	2.1
	10	7.47	1	8.92	1.21	10.37	1.43	11.07	1.54	11.77	1.66	13.22	1.89	14.67	2.13
	12	7.47	1.02	8.92	1.23	10.37	1.45	11.07	1.57	11.77	1.69	13.22	1.93	14.67	2.17
	14	7.47	1.04	8.92	1.25	10.37	1.48	11.07	1.6	11.77	1.72	13.22	1.96	14.67	2.21
	16	7.47	1.06	8.92	1.27	10.37	1.51	11.07	1.63	11.77	1.75	13.22	2	14.63	2.25
	18	7.47	1.07	8.92	1.3	10.37	1.54	11.07	1.66	11.77	1.79	13.22	2.04	14.45	2.32
	20	7.47	1.09	8.92	1.33	10.37	1.57	11.07	1.69	11.77	1.85	13.22	2.19	14.23	2.43
	21	7.47	1.1	8.92	1.34	10.37	1.59	11.07	1.75	11.77	1.92	13.22	2.27	14.15	2.49
	23	7.47	1.13	8.92	1.39	10.37	1.71	11.07	1.88	11.77	2.06	13.22	2.44	13.92	2.6
	25	7.47	1.19	8.92	1.49	10.37	1.83	11.07	2.01	11.77	2.2	13.22	2.61	13.75	2.72
	27	7.47	1.26	8.92	1.59	10.37	1.95	11.07	2.15	11.77	2.35	13.22	2.79	13.53	2.83
	29	7.47	1.34	8.92	1.69	10.37	2.08	11.07	2.29	11.77	2.51	13.09	2.92	13.35	2.94
	31	7.47	1.43	8.92	1.8	10.37	2.22	11.07	2.44	11.77	2.68	12.87	3.04	13.13	3.06
	33	7.47	1.52	8.92	1.91	10.37	2.37	11.07	2.61	11.77	2.86	12.7	3.15	12.96	3.18
35	7.47	1.61	8.92	2.04	10.37	2.52	11.07	2.78	11.77	3.05	12.48	3.27	12.74	3.29	
37	7.47	1.71	8.92	2.16	10.37	2.68	11.07	2.96	11.77	3.25	12.26	3.38	12.56	3.41	
39	7.47	1.81	8.92	2.3	10.37	2.85	11.07	3.15	11.77	3.46	12.08	3.5	12.34	3.53	
41	7.47	1.88	8.92	2.41	10.37	2.96	11.07	3.23	11.77	3.48	12	3.59	12.26	3.61	
43	7.47	1.97	8.92	2.51	10.37	3.06	11.07	3.32	11.77	3.56	11.93	3.64	12.16	3.66	
80%	-5	6.63	0.8	7.91	0.94	9.18	1.11	9.84	1.18	10.5	1.27	11.77	1.47	13.05	1.68
	-2	6.63	0.81	7.91	0.95	9.18	1.12	9.84	1.2	10.5	1.29	11.77	1.49	13.05	1.7
	0	6.63	0.82	7.91	0.96	9.18	1.14	9.84	1.22	10.5	1.31	11.77	1.51	13.05	1.72
	2	6.63	0.84	7.91	0.98	9.18	1.15	9.84	1.24	10.5	1.33	11.77	1.54	13.05	1.75
	4	6.63	0.85	7.91	0.99	9.18	1.17	9.84	1.27	10.5	1.36	11.77	1.57	13.05	1.78
	6	6.63	0.87	7.91	1.02	9.18	1.19	9.84	1.3	10.5	1.38	11.77	1.59	13.05	1.81
	8	6.63	0.88	7.91	1.04	9.18	1.22	9.84	1.32	10.5	1.41	11.77	1.61	13.05	1.84
	10	6.63	0.89	7.91	1.06	9.18	1.25	9.84	1.35	10.5	1.45	11.77	1.65	13.05	1.86
	12	6.63	0.9	7.91	1.08	9.18	1.27	9.84	1.38	10.5	1.48	11.77	1.68	13.05	1.9
	14	6.63	0.92	7.91	1.1	9.18	1.3	9.84	1.4	10.5	1.5	11.77	1.71	13.05	1.93
	16	6.63	0.93	7.91	1.12	9.18	1.32	9.84	1.42	10.5	1.53	11.77	1.75	13.05	1.97
	18	6.63	0.95	7.91	1.14	9.18	1.35	9.84	1.45	10.5	1.56	11.77	1.78	13.05	2.01
	20	6.63	0.97	7.91	1.17	9.18	1.38	9.84	1.48	10.5	1.59	11.77	1.85	13.05	2.15
	21	6.63	0.98	7.91	1.17	9.18	1.39	9.84	1.5	10.5	1.63	11.77	1.91	13.05	2.23
	23	6.63	0.99	7.91	1.2	9.18	1.45	9.84	1.59	10.5	1.74	11.77	2.05	13.05	2.39
	25	6.63	1.02	7.91	1.27	9.18	1.55	9.84	1.7	10.5	1.86	11.77	2.19	13.05	2.55
	27	6.63	1.09	7.91	1.36	9.18	1.66	9.84	1.82	10.5	1.98	11.77	2.34	13.05	2.73
	29	6.63	1.16	7.91	1.45	9.18	1.77	9.84	1.94	10.5	2.12	11.77	2.5	13.05	2.92
	31	6.63	1.23	7.91	1.54	9.18	1.88	9.84	2.06	10.5	2.26	11.77	2.67	12.83	3.04
	33	6.63	1.31	7.91	1.63	9.18	2	9.84	2.2	10.5	2.4	11.77	2.85	12.65	3.15
35	6.63	1.39	7.91	1.74	9.18	2.13	9.84	2.34	10.5	2.56	11.77	3.04	12.43	3.26	
37	6.63	1.47	7.91	1.84	9.18	2.26	9.84	2.49	10.5	2.73	11.77	3.24	12.26	3.38	
39	6.63	1.56	7.91	1.97	9.18	2.41	9.84	2.65	10.5	2.9	11.77	3.45	12.04	3.5	
41	6.63	1.59	7.91	1.98	9.18	2.44	9.84	2.72	10.5	2.96	11.77	3.53	11.96	3.56	
43	6.63	1.64	7.91	2	9.18	2.48	9.84	2.77	10.5	3	11.77	3.58	11.89	3.59	

**MDV-V120W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-5	5.8	0.71	6.94	0.83	8.04	0.94	8.61	1.01	9.18	1.08	10.28	1.23	11.42	1.42
	-2	5.8	0.72	6.94	0.84	8.04	0.95	8.61	1.03	9.18	1.1	10.28	1.25	11.42	1.44
	0	5.8	0.72	6.94	0.85	8.04	0.97	8.61	1.05	9.18	1.12	10.28	1.28	11.42	1.46
	2	5.8	0.72	6.94	0.85	8.04	0.98	8.61	1.07	9.18	1.14	10.28	1.31	11.42	1.48
	4	5.8	0.73	6.94	0.87	8.04	1.01	8.61	1.09	9.18	1.16	10.28	1.33	11.42	1.52
	6	5.8	0.74	6.94	0.89	8.04	1.03	8.61	1.12	9.18	1.19	10.28	1.35	11.42	1.55
	8	5.8	0.76	6.94	0.91	8.04	1.05	8.61	1.14	9.18	1.22	10.28	1.39	11.42	1.58
	10	5.8	0.77	6.94	0.93	8.04	1.08	8.61	1.17	9.18	1.25	10.28	1.42	11.42	1.59
	12	5.8	0.79	6.94	0.94	8.04	1.1	8.61	1.19	9.18	1.27	10.28	1.45	11.42	1.63
	14	5.8	0.81	6.94	0.96	8.04	1.12	8.61	1.2	9.18	1.29	10.28	1.47	11.42	1.66
	16	5.8	0.82	6.94	0.98	8.04	1.14	8.61	1.23	9.18	1.32	10.28	1.5	11.42	1.69
	18	5.8	0.83	6.94	0.99	8.04	1.17	8.61	1.25	9.18	1.34	10.28	1.53	11.42	1.72
	20	5.8	0.85	6.94	1.01	8.04	1.19	8.61	1.27	9.18	1.37	10.28	1.56	11.42	1.77
	21	5.8	0.85	6.94	1.02	8.04	1.2	8.61	1.29	9.18	1.38	10.28	1.58	11.42	1.83
	23	5.8	0.87	6.94	1.04	8.04	1.22	8.61	1.33	9.18	1.45	10.28	1.7	11.42	1.96
	25	5.8	0.88	6.94	1.08	8.04	1.3	8.61	1.42	9.18	1.55	10.28	1.81	11.42	2.1
	27	5.8	0.94	6.94	1.15	8.04	1.39	8.61	1.52	9.18	1.65	10.28	1.94	11.42	2.24
	29	5.8	0.99	6.94	1.22	8.04	1.48	8.61	1.62	9.18	1.76	10.28	2.06	11.42	2.4
	31	5.8	1.05	6.94	1.3	8.04	1.57	8.61	1.72	9.18	1.87	10.28	2.2	11.42	2.55
	33	5.8	1.12	6.94	1.38	8.04	1.67	8.61	1.83	9.18	1.99	10.28	2.34	11.42	2.72
35	5.8	1.18	6.94	1.46	8.04	1.77	8.61	1.94	9.18	2.12	10.28	2.5	11.42	2.9	
37	5.8	1.25	6.94	1.55	8.04	1.89	8.61	2.06	9.18	2.26	10.28	2.66	11.42	3.09	
39	5.8	1.32	6.94	1.64	8.04	2	8.61	2.19	9.18	2.4	10.28	2.83	11.42	3.29	
41	5.8	1.38	6.94	1.7	8.04	2.06	8.61	2.27	9.18	2.47	10.28	2.94	11.42	3.44	
43	5.8	1.49	6.94	1.82	8.04	2.14	8.61	2.39	9.18	2.54	10.28	3.05	11.42	3.55	
60%	-5	4.96	0.61	5.93	0.7	6.9	0.82	7.38	0.87	7.86	0.94	8.83	1.06	9.8	1.21
	-2	4.96	0.61	5.93	0.71	6.9	0.83	7.38	0.88	7.86	0.95	8.83	1.07	9.8	1.22
	0	4.96	0.62	5.93	0.72	6.9	0.84	7.38	0.9	7.86	0.97	8.83	1.09	9.8	1.24
	2	4.96	0.63	5.93	0.74	6.9	0.86	7.38	0.91	7.86	0.98	8.83	1.11	9.8	1.25
	4	4.96	0.65	5.93	0.75	6.9	0.88	7.38	0.92	7.86	0.99	8.83	1.13	9.8	1.27
	6	4.96	0.65	5.93	0.77	6.9	0.89	7.38	0.94	7.86	1.01	8.83	1.15	9.8	1.3
	8	4.96	0.67	5.93	0.78	6.9	0.91	7.38	0.96	7.86	1.04	8.83	1.17	9.8	1.32
	10	4.96	0.68	5.93	0.8	6.9	0.92	7.38	0.99	7.86	1.06	8.83	1.2	9.8	1.34
	12	4.96	0.69	5.93	0.81	6.9	0.94	7.38	1.01	7.86	1.07	8.83	1.22	9.8	1.36
	14	4.96	0.7	5.93	0.82	6.9	0.95	7.38	1.02	7.86	1.09	8.83	1.24	9.8	1.39
	16	4.96	0.71	5.93	0.84	6.9	0.97	7.38	1.04	7.86	1.11	8.83	1.26	9.8	1.41
	18	4.96	0.72	5.93	0.85	6.9	0.99	7.38	1.06	7.86	1.13	8.83	1.28	9.8	1.44
	20	4.96	0.73	5.93	0.87	6.9	1.01	7.38	1.08	7.86	1.16	8.83	1.31	9.8	1.47
	21	4.96	0.74	5.93	0.87	6.9	1.02	7.38	1.09	7.86	1.16	8.83	1.32	9.8	1.48
	23	4.96	0.75	5.93	0.89	6.9	1.03	7.38	1.11	7.86	1.19	8.83	1.38	9.8	1.58
	25	4.96	0.76	5.93	0.9	6.9	1.07	7.38	1.16	7.86	1.26	8.83	1.47	9.8	1.69
	27	4.96	0.79	5.93	0.96	6.9	1.14	7.38	1.24	7.86	1.34	8.83	1.56	9.8	1.8
	29	4.96	0.84	5.93	1.02	6.9	1.22	7.38	1.32	7.86	1.43	8.83	1.67	9.8	1.92
	31	4.96	0.89	5.93	1.08	6.9	1.29	7.38	1.41	7.86	1.52	8.83	1.77	9.8	2.05
	33	4.96	0.94	5.93	1.14	6.9	1.37	7.38	1.49	7.86	1.62	8.83	1.89	9.8	2.18
35	4.96	0.99	5.93	1.21	6.9	1.45	7.38	1.59	7.86	1.72	8.83	2.01	9.8	2.32	
37	4.96	1.05	5.93	1.28	6.9	1.54	7.38	1.68	7.86	1.83	8.83	2.14	9.8	2.47	
39	4.96	1.11	5.93	1.36	6.9	1.63	7.38	1.78	7.86	1.94	8.83	2.27	9.8	2.63	
41	4.96	1.14	5.93	1.42	6.9	1.69	7.38	1.85	7.86	2.01	8.83	2.38	9.8	2.75	
43	4.96	1.18	5.93	1.48	6.9	1.75	7.38	1.91	7.86	2.08	8.83	2.48	9.8	2.87	

**MDV-V120W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:14		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-5	4.15	0.53	4.96	0.61	5.75	0.7	6.15	0.73	6.55	0.77	7.34	0.88	8.17	0.95
	-2	4.15	0.53	4.96	0.62	5.75	0.71	6.15	0.74	6.55	0.79	7.34	0.89	8.17	0.96
	0	4.15	0.54	4.96	0.63	5.75	0.72	6.15	0.75	6.55	0.79	7.34	0.9	8.17	0.98
	2	4.15	0.55	4.96	0.64	5.75	0.73	6.15	0.76	6.55	0.81	7.34	0.91	8.17	0.99
	4	4.15	0.55	4.96	0.65	5.75	0.74	6.15	0.77	6.55	0.82	7.34	0.93	8.17	1.02
	6	4.15	0.56	4.96	0.66	5.75	0.75	6.15	0.79	6.55	0.84	7.34	0.95	8.17	1.05
	8	4.15	0.58	4.96	0.67	5.75	0.76	6.15	0.81	6.55	0.85	7.34	0.96	8.17	1.08
	10	4.15	0.59	4.96	0.68	5.75	0.78	6.15	0.82	6.55	0.88	7.34	0.99	8.17	1.1
	12	4.15	0.59	4.96	0.69	5.75	0.79	6.15	0.84	6.55	0.89	7.34	1	8.17	1.12
	14	4.15	0.6	4.96	0.7	5.75	0.8	6.15	0.85	6.55	0.91	7.34	1.02	8.17	1.14
	16	4.15	0.61	4.96	0.71	5.75	0.81	6.15	0.87	6.55	0.92	7.34	1.04	8.17	1.16
	18	4.15	0.62	4.96	0.72	5.75	0.82	6.15	0.88	6.55	0.94	7.34	1.06	8.17	1.18
	20	4.15	0.63	4.96	0.73	5.75	0.84	6.15	0.89	6.55	0.95	7.34	1.07	8.17	1.2
	21	4.15	0.63	4.96	0.74	5.75	0.85	6.15	0.9	6.55	0.96	7.34	1.09	8.17	1.21
	23	4.15	0.64	4.96	0.74	5.75	0.86	6.15	0.92	6.55	0.98	7.34	1.1	8.17	1.24
	25	4.15	0.65	4.96	0.76	5.75	0.88	6.15	0.94	6.55	1.01	7.34	1.16	8.17	1.32
	27	4.15	0.66	4.96	0.79	5.75	0.92	6.15	1	6.55	1.07	7.34	1.24	8.17	1.41
	29	4.15	0.7	4.96	0.83	5.75	0.98	6.15	1.06	6.55	1.14	7.34	1.31	8.17	1.5
	31	4.15	0.74	4.96	0.88	5.75	1.04	6.15	1.13	6.55	1.21	7.34	1.4	8.17	1.6
	33	4.15	0.78	4.96	0.93	5.75	1.1	6.15	1.19	6.55	1.29	7.34	1.48	8.17	1.7
35	4.15	0.82	4.96	0.99	5.75	1.16	6.15	1.26	6.55	1.36	7.34	1.58	8.17	1.8	
37	4.15	0.87	4.96	1.04	5.75	1.24	6.15	1.34	6.55	1.45	7.34	1.67	8.17	1.92	
39	4.15	0.92	4.96	1.1	5.75	1.31	6.15	1.41	6.55	1.53	7.34	1.77	8.17	2.04	
41	4.15	0.95	4.96	1.15	5.75	1.35	6.15	1.48	6.55	1.6	7.34	1.87	8.17	2.13	
43	4.15	1.02	4.96	1.23	5.75	1.4	6.15	1.55	6.55	1.64	7.34	1.96	8.17	2.23	

**Note:**

1. [ ] is tested under our standard condition.
2. In cooling mode, avoid running the unit when outdoor air temperature is above 43 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V120W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature(°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-13.7	-15	9.39	2.74	9.35	2.9	9.3	3.06	9.3	3.14	9.26	3.22	9.26	3.38
	-11.8	-13	9.76	2.87	9.76	3.02	9.72	3.17	9.68	3.24	9.68	3.32	9.64	3.47
	-9.8	-11	10.23	2.99	10.18	3.14	10.14	3.28	10.14	3.35	10.14	3.42	10.1	3.57
	-9.5	-10	10.48	3.06	10.43	3.2	10.39	3.33	10.39	3.41	10.35	3.47	10.35	3.61
	-8.5	-9.1	10.68	3.11	10.64	3.24	10.64	3.38	10.6	3.45	10.6	3.52	10.56	3.66
	-7	-7.6	11.06	3.2	11.06	3.33	11.02	3.47	11.02	3.53	10.98	3.6	10.94	3.73
	-5	-5.6	11.65	3.32	11.61	3.45	11.56	3.57	11.56	3.64	11.52	3.7	11.52	3.82
	-3	-3.7	12.19	3.43	12.15	3.55	12.15	3.67	12.11	3.73	12.11	3.79	12.07	3.91
	0	-0.7	13.16	3.6	13.16	3.71	13.12	3.82	13.12	3.86	13.07	3.93	13.07	4.04
	3	2.2	14.2	3.74	14.16	3.85	14.12	3.95	14.12	4	14.12	4.06	14.08	4.16
	5	4.1	14.92	3.84	14.88	3.94	14.88	4.03	14.83	4.08	14.83	4.13	14.79	4.23
	7	6	15.67	3.93	15.63	4.02	15.63	4.11	15.59	4.16	15.59	4.2	14.96	4.04
	9	7.9	16.47	4.01	16.43	4.1	16.43	4.19	16.39	4.23	16.05	4.14	14.96	3.79
	11	9.8	17.31	4.09	17.27	4.17	17.18	4.23	16.59	4.06	16.05	3.89	14.96	3.57
	13	11.8	18.23	4.17	18.19	4.25	17.18	3.96	16.59	3.8	16.05	3.65	14.96	3.35
15	13.7	19.11	4.24	18.27	4.02	17.18	3.73	16.59	3.59	16.05	3.44	14.96	3.16	
120%	-13.7	-15	9.35	2.96	9.3	3.1	9.26	3.24	9.26	3.32	9.26	3.39	9.22	3.54
	-11.8	-13	9.72	3.07	9.72	3.21	9.68	3.35	9.68	3.42	9.64	3.49	9.64	3.63
	-9.8	-11	10.18	3.19	10.14	3.32	10.14	3.45	10.1	3.52	10.1	3.58	10.06	3.72
	-9.5	-10	10.44	3.24	10.39	3.38	10.35	3.5	10.35	3.57	10.35	3.63	10.31	3.76
	-8.5	-9.1	10.64	3.29	10.6	3.42	10.6	3.55	10.56	3.61	10.56	3.68	10.52	3.8
	-7	-7.6	11.02	3.38	11.02	3.5	10.98	3.62	10.98	3.69	10.94	3.75	10.94	3.87
	-5	-5.6	11.61	3.49	11.57	3.61	11.52	3.72	11.52	3.78	11.52	3.84	11.48	3.95
	-3	-3.7	12.15	3.59	12.15	3.7	12.11	3.81	12.11	3.87	12.07	3.93	12.07	4.03
	0	-0.7	13.12	3.75	13.12	3.85	13.07	3.95	13.07	4	13.03	4.05	13.03	4.16
	3	2.2	14.16	3.88	14.12	3.98	14.12	4.07	14.08	4.12	14.08	4.17	13.79	4.15
	5	4.1	14.88	3.97	14.83	4.06	14.83	4.15	14.79	4.2	14.79	4.24	13.79	3.89
	7	6	15.63	4.05	15.63	4.14	15.59	4.22	15.34	4.16	14.83	3.99	13.79	3.66
	9	7.9	16.43	4.13	16.39	4.21	15.84	4.07	15.34	3.91	14.83	3.75	13.79	3.45
	11	9.8	17.27	4.2	16.85	4.13	15.84	3.83	15.34	3.68	14.83	3.53	13.79	3.25
	13	11.8	17.89	4.16	16.85	3.88	15.84	3.59	15.34	3.46	14.83	3.32	13.79	3.06
15	13.7	17.89	3.92	16.85	3.65	15.84	3.39	15.34	3.26	14.83	3.13	13.79	2.88	
110%	-13.7	-15	9.3	3.17	9.26	3.3	9.22	3.43	9.22	3.5	9.22	3.57	9.18	3.7
	-11.8	-13	9.68	3.28	9.68	3.4	9.64	3.53	9.64	3.59	9.6	3.66	9.6	3.79
	-9.8	-11	10.14	3.38	10.1	3.5	10.1	3.62	10.06	3.69	10.06	3.74	10.06	3.87
	-9.5	-10	10.39	3.43	10.35	3.55	10.31	3.67	10.31	3.73	10.31	3.79	10.27	3.91
	-8.5	-9.1	10.6	3.48	10.56	3.6	10.56	3.71	10.52	3.77	10.52	3.83	10.52	3.49
	-7	-7.6	10.98	3.56	10.98	3.67	10.94	3.78	10.94	3.84	10.94	3.89	10.9	4.01
	-5	-5.6	11.57	3.66	11.52	3.77	11.48	3.87	11.48	3.93	11.48	3.98	11.44	4.09
	-3	-3.7	12.11	3.75	12.11	3.85	12.07	3.96	12.07	4.01	12.03	4.06	12.03	4.16
	0	-0.7	13.07	3.89	13.07	3.99	13.03	4.08	13.03	4.13	13.03	4.18	12.66	4.1
	3	2.2	14.12	4.02	14.08	4.11	14.08	4.2	14.04	4.24	13.58	4.07	12.66	3.73
	5	4.1	14.83	4.1	14.83	4.19	14.54	4.15	14.04	3.98	13.58	3.82	12.66	3.51
	7	6	15.59	4.18	15.46	4.2	14.54	3.89	14.04	3.74	13.58	3.59	12.66	3.3
	9	7.9	16.38	4.25	15.46	3.95	14.54	3.66	14.04	3.52	13.58	3.38	12.66	3.11
	11	9.8	16.38	3.99	15.46	3.72	14.54	3.45	14.04	3.32	13.58	3.19	12.66	2.93
	13	11.8	16.38	3.74	15.46	3.49	14.54	3.24	14.04	3.12	13.58	3	12.66	2.76
15	13.7	16.38	3.33	15.46	3.29	14.54	3.06	14.04	2.94	13.58	2.83	12.66	2.61	

**MDV-V120W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature(°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100%	-13.7	-15	9.26	3.38	9.22	3.5	9.18	3.62	9.18	3.69	9.18	3.74	9.14	3.87
	-11.8	-13	9.64	3.48	9.64	3.59	9.6	3.71	9.6	3.77	9.6	3.83	9.55	3.94
	-9.8	-11	10.1	3.57	10.06	3.69	10.06	3.79	10.06	3.85	10.01	3.91	10.01	4.02
	-9.5	-10	10.35	3.62	10.31	3.73	10.31	3.84	10.27	3.89	10.27	3.95	10.22	4.06
	-8.5	-9.1	10.56	3.66	10.52	3.77	10.52	3.88	10.52	3.93	10.48	3.98	10.48	4.09
	-7	-7.6	10.94	3.74	10.94	3.84	10.9	3.94	10.9	3.99	10.9	4.04	10.85	4.15
	-5	-5.6	11.52	3.83	11.48	3.93	11.48	4.02	11.44	4.07	11.44	4.12	11.4	4.22
	-3	-3.7	12.07	3.92	12.07	3.56	12.03	4.1	12.03	4.15	12.03	4.19	11.52	4.02
	0	-0.7	13.03	4.04	13.03	4.13	12.99	4.21	12.78	4.15	12.36	3.97	11.52	3.65
	3	2.2	14.08	4.16	14.04	4.24	13.2	3.92	12.78	3.77	12.36	3.62	11.52	3.32
	5	4.1	14.79	4.24	14.04	3.98	13.2	3.69	12.78	3.55	12.36	3.41	11.52	3.13
	7	6	14.88	4.02	14.04	3.74	13.2	3.47	12.78	3.34	12.36	3.21	11.52	2.95
	9	7.9	14.88	3.78	14.04	3.52	13.2	3.27	12.78	3.1	12.36	3.02	11.52	2.79
	11	9.8	14.88	3.56	14.04	3.32	13.2	3.08	12.78	2.97	12.36	2.85	11.52	2.63
	13	11.8	14.88	3.34	14.04	3.12	13.2	2.9	12.78	2.79	12.36	2.69	11.52	2.48
15	13.7	14.88	3.15	14.04	2.94	13.2	2.74	12.78	2.64	12.36	2.54	11.52	2.35	
90%	-13.7	-15	9.2	3.6	9.16	3.7	9.16	3.81	9.12	3.87	9.12	3.92	9.12	4.03
	-11.8	-13	9.58	3.68	9.58	3.79	9.54	3.89	9.54	3.94	9.54	3.99	9.5	4.1
	-9.8	-11	10.04	3.77	10.04	3.87	10	3.97	10	4.02	10	4.07	9.96	4.17
	-9.5	-10	10.29	3.81	10.25	3.91	10.25	4.01	10.21	4.06	10.21	4.11	10.21	4.2
	-8.5	-9.1	10.5	3.85	10.5	3.95	10.46	4.04	10.46	4.09	10.46	4.14	10.33	4.18
	-7	-7.6	10.88	3.92	10.88	4.01	10.83	4.1	10.83	4.15	10.83	4.19	10.33	3.99
	-5	-5.6	11.46	4	11.42	4.09	11.42	4.17	11.38	4.22	11.09	4.09	10.33	3.75
	-3	-3.7	12.01	4.08	12.01	4.16	11.88	4.18	11.46	4.01	11.09	3.85	10.33	3.53
	0	-0.7	13.01	4.2	12.63	4.09	11.88	3.79	11.46	3.64	11.09	3.5	10.33	3.21
	3	2.2	13.39	4	12.63	3.72	11.88	3.45	11.46	3.32	11.09	3.19	10.33	2.94
	5	4.1	13.39	3.76	12.63	3.5	11.88	3.25	11.46	3.13	11.09	3.01	10.33	2.77
	7	6	13.39	3.53	12.63	3.3	11.88	3.06	11.46	2.95	11.09	2.84	10.33	2.62
	9	7.9	13.39	3.33	12.63	3.1	11.88	2.89	11.46	2.78	11.09	2.68	10.33	2.47
	11	9.8	13.39	3.14	12.63	2.93	11.88	2.73	11.46	2.63	11.09	2.53	10.33	2.34
	13	11.8	13.39	2.95	12.63	2.76	11.88	2.57	11.46	2.48	11.09	2.39	10.33	2.21
15	13.7	13.39	2.79	12.63	2.61	11.88	2.44	11.46	2.35	11.09	2.27	10.33	2.1	
80%	-13.7	-15	9.18	3.81	9.14	3.9	9.14	4	9.14	4.05	9.09	4.1	9.09	4.2
	-11.8	-13	9.55	3.88	9.55	3.98	9.51	4.07	9.51	4.11	9.51	4.16	9.22	4.05
	-9.8	-11	10.02	3.96	10.02	4.05	9.97	4.14	9.97	4.18	9.89	4.17	9.22	3.83
	-9.5	-10	10.27	4	10.22	4.09	10.23	4.17	10.23	4.22	9.89	4.05	9.22	3.71
	-8.5	-9.1	10.48	4.04	9.74	4.12	10.43	4.2	10.23	4.11	9.89	3.94	9.22	3.61
	-7	-7.6	10.85	4.1	10.85	4.18	10.56	4.09	10.23	3.92	9.89	3.77	9.22	3.46
	-5	-5.6	11.44	4.17	11.23	4.15	10.56	3.84	10.23	3.69	9.89	3.54	9.22	3.25
	-3	-3.7	11.9	4.19	11.23	3.9	10.56	3.61	10.23	3.48	9.89	3.34	9.22	3.07
	0	-0.7	11.9	3.8	11.23	3.54	10.56	3.29	10.23	3.17	9.89	3.04	9.22	2.8
	3	2.2	11.9	3.47	11.23	3.23	10.56	3.01	10.23	2.89	9.89	2.78	9.22	2.57
	5	4.1	11.9	3.26	11.23	3.05	10.56	2.83	10.23	2.73	9.89	2.63	9.22	2.43
	7	6	11.9	3.07	11.23	2.88	10.56	2.68	10.23	2.58	9.89	2.49	9.22	2.3
	9	7.9	11.9	2.9	11.23	2.71	10.56	2.53	10.23	2.44	9.89	2.35	9.22	2.18
	11	9.8	11.9	2.74	11.23	2.56	10.56	2.39	10.23	2.31	9.89	2.23	9.22	2.06
	13	11.8	11.9	2.58	11.23	2.42	10.56	2.26	10.23	2.18	9.89	2.1	9.22	1.95
15	13.7	11.9	2.44	11.23	2.29	10.56	2.14	10.23	2.07	9.89	2	9.22	1.86	

**MDV-V120W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature(°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-13.7	-15	9.11	4.02	9.07	4.11	9.07	4.19	8.91	4.13	8.61	3.96	8.03	3.63
	-11.8	-13	9.49	4.09	9.49	4.17	9.24	4.07	8.91	3.91	8.61	3.75	8.03	3.44
	-9.8	-11	9.95	4.15	9.82	4.15	9.24	3.84	8.91	3.7	8.61	3.55	8.03	3.26
	-9.5	-10	10.2	4.19	9.82	4.03	9.24	3.73	8.91	3.59	8.61	3.45	8.03	3.17
	-8.5	-9.1	10.41	4.21	9.82	3.92	9.24	3.63	8.91	3.49	8.61	3.36	8.03	3.09
	-7	-7.6	10.41	4.02	9.82	3.74	9.24	3.47	8.91	3.34	8.61	3.21	8.03	2.96
	-5	-5.6	10.41	3.78	9.82	3.52	9.24	3.27	8.91	3.15	8.61	3.12	8.03	2.79
	-3	-3.7	10.41	3.56	9.82	3.32	9.24	3.09	8.91	2.97	8.61	2.86	8.03	2.64
	0	-0.7	10.41	3.24	9.82	3.03	9.24	2.82	8.91	2.71	8.61	2.61	8.03	2.42
	3	2.2	10.41	2.96	9.82	2.77	9.24	2.58	8.91	2.49	8.61	2.4	8.03	2.22
	5	4.1	10.41	2.79	9.82	2.61	9.24	2.44	8.91	2.35	8.61	2.27	8.03	2.1
	7	6	10.41	2.64	9.82	2.47	9.24	2.31	8.91	2.23	8.61	2.15	8.03	1.99
	9	7.9	10.41	2.5	9.82	2.34	9.24	2.19	8.91	2.11	8.61	2.04	8.03	1.89
	11	9.8	10.41	2.36	9.82	2.21	9.24	2.07	8.91	2	8.61	1.93	8.03	1.79
	13	11.8	10.41	2.23	9.82	2.1	9.24	1.96	8.91	1.9	8.61	1.83	8.03	1.7
15	13.7	10.41	2.11	9.82	1.99	9.24	1.86	8.91	1.8	8.61	1.74	8.03	1.62	
60%	-13.7	-15	8.93	4.13	8.42	3.84	7.92	3.56	7.67	3.42	7.42	3.29	6.91	3.02
	-11.8	-13	8.93	3.91	8.42	3.64	7.92	3.38	7.67	3.25	7.42	3.12	6.91	2.89
	-9.8	-11	8.93	3.69	8.42	3.44	7.92	3.19	7.67	3.07	7.42	2.96	6.91	2.73
	-9.5	-10	8.93	3.59	8.42	3.34	7.92	3.1	7.67	2.99	7.42	2.87	6.91	2.65
	-8.5	-9.1	8.93	3.49	8.42	3.26	7.92	3.03	7.67	2.92	7.42	2.8	6.91	2.59
	-7	-7.6	8.93	3.34	8.42	3.12	7.92	2.9	7.67	2.79	7.42	2.69	6.91	2.48
	-5	-5.6	8.93	3.15	8.42	2.94	7.92	2.74	7.67	2.64	7.42	2.54	6.91	2.35
	-3	-3.7	8.93	2.97	8.42	2.78	7.92	2.59	7.67	2.5	7.42	2.4	6.91	2.22
	0	-0.7	8.93	2.71	8.42	2.54	7.92	2.37	7.67	2.29	7.42	2.2	6.91	2.04
	3	2.2	8.93	2.49	8.42	2.33	7.92	2.18	7.67	2.1	7.42	2.03	6.91	1.88
	5	4.1	8.93	2.35	8.42	2.21	7.92	2.06	7.67	2	7.42	1.92	6.91	1.79
	7	6	8.93	2.23	8.42	2.09	7.92	1.96	7.67	1.89	7.42	1.83	6.91	1.7
	9	7.9	8.93	2.11	8.42	1.98	7.92	1.86	7.67	1.8	7.42	1.73	6.91	1.62
	11	9.8	8.93	2	8.42	1.88	7.92	1.77	7.67	1.71	7.42	1.65	6.91	1.54
	13	11.8	8.93	1.89	8.42	1.78	7.92	1.68	7.67	1.62	7.42	1.57	6.91	1.46
15	13.7	8.93	1.8	8.42	1.69	7.92	1.6	7.67	1.55	7.42	1.5	6.91	1.4	
50%	-13.7	-15	7.44	3.31	7.02	3.09	6.6	2.87	6.35	2.77	6.14	2.66	5.72	2.46
	-11.8	-13	7.44	3.14	7.02	2.93	6.6	2.73	6.35	2.63	6.14	2.53	5.72	2.34
	-9.8	-11	7.44	2.97	7.02	2.78	6.6	2.59	6.35	2.5	6.14	2.41	5.72	2.23
	-9.5	-10	7.44	2.89	7.02	2.7	6.6	2.52	6.35	2.43	6.14	2.34	5.72	2.17
	-8.5	-9.1	7.44	2.82	7.02	2.64	6.6	2.46	6.35	2.37	6.14	2.29	5.72	2.12
	-7	-7.6	7.44	2.7	7.02	2.53	6.6	2.36	6.35	2.28	6.14	2.2	5.72	2.04
	-5	-5.6	7.44	2.55	7.02	2.39	6.6	2.24	6.35	2.16	6.14	2.08	5.72	1.93
	-3	-3.7	7.44	2.42	7.02	2.27	6.6	2.12	6.35	2.05	6.14	1.97	5.72	1.83
	0	-0.7	7.44	2.22	7.02	2.08	6.6	1.95	6.35	1.88	6.14	1.82	5.72	1.69
	3	2.2	7.44	2.04	7.02	1.92	6.6	1.8	6.35	1.74	6.14	1.68	5.72	1.57
	5	4.1	7.44	1.94	7.02	1.82	6.6	1.71	6.35	1.65	6.14	1.6	5.72	1.49
	7	6	7.44	1.84	7.02	1.73	6.6	1.63	6.35	1.57	6.14	1.52	5.72	1.42
	9	7.9	7.44	1.74	7.02	1.64	6.6	1.55	6.35	1.5	6.14	1.45	5.72	1.36
	11	9.8	7.44	1.66	7.02	1.56	6.6	1.47	6.35	1.43	6.14	1.38	5.72	1.29
	13	11.8	7.44	1.58	7.02	1.49	6.6	1.4	6.35	1.36	6.14	1.32	5.72	1.23
15	13.7	7.44	1.5	7.02	1.42	6.6	1.34	6.35	1.3	6.14	1.26	5.72	1.18	

**Note:**

1. [ ] is tested under our standard condition.
2. In heating mode, avoid running the unit when the outdoor air temperature is below -15 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V140W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:14		DB:23.3,WB:16		DB:25.8,WB:18		DB:27,WB:19		DB:28.2,WB:20		DB:30.7,WB:22		DB:32,WB:24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-5	12.3	1.61	14.65	1.97	17	2.11	17.65	2.2	18.5	2.26	18.95	2.46	19.43	2.47
	-2	12.3	1.61	14.65	2.01	17	2.11	17.65	2.21	18.5	2.26	18.95	2.49	19.43	2.5
	0	12.3	1.64	14.65	2.04	17	2.19	17.65	2.33	18.5	2.39	18.95	2.52	19.43	2.53
	2	12.3	1.67	14.65	2.05	17	2.26	17.65	2.46	18.5	2.42	18.95	2.54	19.43	2.57
	4	12.3	1.71	14.65	2.09	17	2.34	17.65	2.47	18.5	2.45	18.95	2.54	19.43	2.62
	6	12.3	1.74	14.65	2.13	17	2.43	17.65	2.5	18.29	2.53	18.72	2.54	19.21	2.64
	8	12.3	1.78	14.65	2.18	17	2.55	17.65	2.62	18.07	2.61	18.51	3.9	18.97	2.66
	10	12.3	1.82	14.65	2.23	17	2.65	17.65	2.7	17.85	4.04	18.3	4.06	18.75	2.74
	12	12.3	1.85	14.65	2.27	17	2.7	17.4	4.03	17.65	4.06	18.05	4.07	18.5	2.76
	14	12.3	1.89	14.65	2.31	16.95	4.05	17.2	4.06	17.4	4.08	17.85	4.09	18.3	2.82
	16	12.3	1.92	14.65	2.36	16.75	4.06	16.95	4.08	17.15	4.1	17.6	4.12	18.05	2.86
	18	12.3	1.96	14.65	2.41	16.5	2.82	16.7	2.84	16.95	2.85	17.4	2.88	17.85	2.91
	20	12.3	2	14.65	2.56	16.25	2.96	16.5	2.98	16.7	2.99	17.15	3.02	17.6	3.05
	21	12.3	2.05	14.65	2.65	16.15	3.03	16.4	3.05	16.6	3.06	17.05	3.09	17.5	3.12
	23	12.3	2.2	14.65	2.84	15.95	3.17	16.15	3.18	16.35	3.2	16.8	3.23	17.25	3.26
	25	12.3	2.35	14.65	3.05	15.7	3.31	15.9	3.32	16.15	3.34	16.6	3.38	17.05	3.41
	27	12.3	2.51	14.65	3.26	15.5	3.44	15.7	3.47	15.9	3.48	16.35	3.52	16.8	3.56
	29	12.3	2.68	14.65	3.48	15.25	3.58	15.45	3.6	15.7	3.63	16.15	3.66	16.6	3.7
	31	12.3	2.86	14.6	3.68	15	3.73	15.25	3.75	15.45	3.76	15.9	3.81	16.35	3.85
	33	12.3	3.05	14.35	3.82	14.8	3.86	15	3.89	15.25	3.91	15.7	3.95	16.1	3.99
35	12.3	3.25	14.1	3.96	14.55	4.01	14.8	4.03	15	4.05	15.45	4.1	15.9	4.14	
37	12.3	3.46	13.9	4.1	14.35	4.15	14.55	4.17	14.8	4.2	15.2	4.25	15.65	4.3	
39	12.3	3.68	13.65	4.15	14.1	4.29	14.35	4.32	14.55	4.34	15	4.39	15.45	4.45	
41	12.3	3.88	13.51	4.19	13.95	4.33	14.2	4.36	14.4	4.38	14.85	4.4	14.86	4.49	
43	12.3	3.98	13.41	4.21	13.88	4.34	14.13	4.38	14.25	4.39	14.58	4.41	14.68	4.5	
120%	-5	11.35	1.56	13.5	1.89	15.7	2.23	16.8	2.44	17.6	2.54	18	2.62	18.4	2.69
	-2	11.35	1.57	13.5	1.91	15.7	2.26	16.8	2.45	17.6	2.57	18	2.64	18.4	2.7
	0	11.35	1.59	13.5	1.92	15.7	2.28	16.8	2.46	17.6	2.59	18	2.66	18.4	2.71
	2	11.35	1.59	13.5	1.94	15.7	2.3	16.8	2.48	17.6	2.6	18	2.68	18.4	2.71
	4	11.35	1.61	13.5	1.97	15.7	2.33	16.8	2.5	17.6	2.64	18	2.68	18.4	2.72
	6	11.35	1.63	13.5	1.98	15.7	2.36	16.8	2.53	17.6	2.67	18	2.71	18.4	2.73
	8	11.35	1.64	13.5	2	15.7	2.39	16.8	2.56	17.6	2.69	18	2.71	18.4	2.74
	10	11.35	1.66	13.5	2.03	15.7	2.41	16.8	2.61	17.6	2.69	18	2.72	18.4	2.75
	12	11.35	1.69	13.5	2.07	15.7	2.46	16.8	2.66	17.35	2.71	17.75	2.71	18.15	2.77
	14	11.35	1.73	13.5	2.11	15.7	2.51	16.8	2.71	17.1	2.72	17.55	2.75	17.95	2.8
	16	11.35	1.76	13.5	2.15	15.7	2.56	16.7	4.1	16.9	2.76	17.3	2.79	17.7	2.84
	18	11.35	1.79	13.5	2.19	15.7	2.64	16.45	2.82	16.65	2.83	17.05	2.86	17.5	2.89
	20	11.35	1.83	13.5	2.28	15.7	2.84	16.25	2.96	16.45	2.97	16.85	3	17.25	3.02
	21	11.35	1.84	13.5	2.36	15.7	2.94	16.1	3.03	16.3	3.04	16.75	3.07	17.15	3.1
	23	11.35	1.97	13.5	2.53	15.7	3.15	15.9	3.16	16.1	3.18	16.5	3.21	16.9	3.24
	25	11.35	2.1	13.5	2.7	15.45	3.29	15.65	3.3	15.85	3.32	16.3	3.35	16.7	3.38
	27	11.35	2.25	13.5	2.89	15.25	3.42	15.45	3.44	15.65	3.46	16.05	3.49	16.45	3.52
	29	11.35	2.4	13.5	3.09	15	3.56	15.2	3.58	15.4	3.6	15.8	3.64	16.25	3.67
	31	11.35	2.56	13.5	3.3	14.75	3.71	15	3.72	15.2	3.74	15.6	3.78	16	3.82
	33	11.35	2.72	13.5	3.51	14.55	3.84	14.75	3.86	14.95	3.88	15.35	3.92	15.75	3.96
35	11.35	2.9	13.5	3.75	14.3	3.98	14.5	4	14.75	4.02	15.15	4.07	15.55	4.11	
37	11.35	3.08	13.5	3.99	14.1	4.13	14.3	4.15	14.5	4.17	14.9	4.21	15.3	4.26	
39	11.35	3.28	13.45	4.22	13.85	4.26	14.05	4.29	14.25	4.31	14.7	4.36	15.1	4.4	
41	11.35	3.37	13.34	4.25	13.74	4.29	13.94	4.32	14.14	4.34	14.59	4.37	14.67	4.44	
43	11.35	3.42	13.27	4.28	13.63	4.32	13.83	4.34	14.03	4.36	14.34	4.38	14.44	4.52	

**MDV-V140W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:19		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
110%	-5	10.4	1.36	12.4	1.7	14.4	2.02	15.4	2.17	16.4	2.34	17.65	2.43	18.05	2.5
	-2	10.4	1.39	12.4	1.72	14.4	2.04	15.4	2.19	16.4	2.35	17.65	2.45	18.05	2.51
	0	10.4	1.4	12.4	1.73	14.4	2.06	15.4	2.21	16.4	2.38	17.65	2.47	18.05	2.55
	2	10.4	1.43	12.4	1.74	14.4	2.09	15.4	2.23	16.4	2.41	17.65	2.51	18.05	2.58
	4	10.4	1.46	12.4	1.76	14.4	2.11	15.4	2.26	16.4	2.44	17.65	2.55	18.05	2.6
	6	10.4	1.48	12.4	1.78	14.4	2.13	15.4	2.29	16.4	2.47	17.65	2.57	18.05	2.64
	8	10.4	1.49	12.4	1.81	14.4	2.15	15.4	2.32	16.4	2.5	17.65	2.59	18.05	2.67
	10	10.4	1.51	12.4	1.84	14.4	2.18	15.4	2.36	16.4	2.54	17.65	2.61	18.05	2.69
	12	10.4	1.54	12.4	1.87	14.4	2.23	15.4	2.41	16.4	2.59	17.45	2.65	17.8	2.73
	14	10.4	1.57	12.4	1.91	14.4	2.27	15.4	2.45	16.4	2.64	17.2	2.67	17.6	2.75
	16	10.4	1.59	12.4	1.94	14.4	2.31	15.4	2.5	16.4	2.69	17	2.7	17.35	2.78
	18	10.4	1.62	12.4	1.98	14.4	2.36	15.4	2.57	16.4	2.82	16.75	2.84	17.15	2.86
	20	10.4	1.66	12.4	2.02	14.4	2.5	15.4	2.76	16.15	2.95	16.55	2.98	16.9	3
	21	10.4	1.67	12.4	2.08	14.4	2.59	15.4	2.86	16.05	3.02	16.4	3.05	16.8	3.07
	23	10.4	1.75	12.4	2.23	14.4	2.77	15.4	3.07	15.8	3.16	16.2	3.19	16.55	3.22
	25	10.4	1.87	12.4	2.38	14.4	2.97	15.4	3.28	15.6	3.3	15.95	3.33	16.35	3.35
	27	10.4	1.99	12.4	2.55	14.4	3.17	15.15	3.42	15.35	3.43	15.75	3.47	16.1	3.5
	29	10.4	2.12	12.4	2.72	14.4	3.39	14.95	3.56	15.15	3.58	15.5	3.61	15.9	3.64
	31	10.4	2.26	12.4	2.9	14.4	3.62	14.7	3.7	14.9	3.72	15.3	3.75	15.65	3.79
	33	10.4	2.41	12.4	3.09	14.3	3.82	14.5	3.84	14.7	3.85	15.05	3.89	15.45	3.93
35	10.4	2.56	12.4	3.3	14.05	3.96	14.25	3.98	14.45	4	14.8	4.04	15.2	4.07	
37	10.4	2.73	12.4	3.51	13.85	4.1	14.05	4.12	14.2	4.14	14.6	4.18	14.95	4.22	
39	10.4	2.9	12.4	3.74	13.6	4.24	13.8	4.26	14	4.28	14.35	4.32	14.75	4.37	
41	10.4	2.93	12.4	3.77	13.49	4.27	13.69	4.29	13.89	4.31	14.17	4.35	14.31	4.4	
43	10.4	2.96	12.4	3.82	13.39	4.3	13.59	4.32	13.79	4.34	14.04	4.37	14.09	4.48	
100%	-5	9.45	1.24	11.25	1.49	13.1	1.78	14	1.9	14.9	2.07	16.75	2.35	17.7	2.46
	-2	9.45	1.26	11.25	1.51	13.1	1.8	14	1.94	14.9	2.09	16.75	2.38	17.7	2.47
	0	9.45	1.27	11.25	1.53	13.1	1.82	14	1.96	14.9	2.11	16.75	2.42	17.7	2.5
	2	9.45	1.29	11.25	1.55	13.1	1.84	14	1.99	14.9	2.14	16.75	2.46	17.7	2.54
	4	9.45	1.3	11.25	1.56	13.1	1.86	14	2.02	14.9	2.16	16.75	2.48	17.7	2.57
	6	9.45	1.32	11.25	1.6	13.1	1.89	14	2.05	14.9	2.2	16.75	2.52	17.7	2.61
	8	9.45	1.35	11.25	1.62	13.1	1.92	14	2.08	14.9	2.23	16.75	2.56	17.7	2.65
	10	9.45	1.36	11.25	1.65	13.1	1.95	14	2.11	14.9	2.27	16.75	2.6	17.7	2.69
	12	9.45	1.38	11.25	1.68	13.1	1.99	14	2.15	14.9	2.32	16.75	2.65	17.45	2.71
	14	9.45	1.41	11.25	1.71	13.1	2.03	14	2.19	14.9	2.36	16.75	2.7	17.25	2.74
	16	9.45	1.44	11.25	1.75	13.1	2.07	14	2.24	14.9	2.41	16.65	2.73	17	2.77
	18	9.45	1.46	11.25	1.78	13.1	2.11	14	2.28	14.9	2.45	16.45	2.82	16.8	2.84
	20	9.45	1.49	11.25	1.82	13.1	2.17	14	2.4	14.9	2.63	16.2	2.95	16.55	2.98
	21	9.45	1.51	11.25	1.83	13.1	2.25	14	2.48	14.9	2.72	16.1	3.02	16.45	3.05
	23	9.45	1.54	11.25	1.95	13.1	2.41	14	2.66	14.9	2.92	15.9	3.16	16.2	3.19
	25	9.45	1.64	11.25	2.09	13.1	2.58	14	2.85	14.9	3.12	15.65	3.3	16	3.33
	27	9.45	1.76	11.25	2.23	13.1	2.76	14	3.05	14.9	3.34	15.4	3.44	15.75	3.47
	29	9.45	1.87	11.25	2.37	13.1	2.94	14	3.25	14.85	3.55	15.2	3.58	15.55	3.61
	31	9.45	1.99	11.25	2.53	13.1	3.14	14	3.47	14.65	3.69	14.95	3.72	15.3	3.75
	33	9.45	2.11	11.25	2.7	13.1	3.35	14	3.71	14.4	3.83	14.75	3.86	15.1	3.9
35	9.45	2.25	11.25	2.87	13.1	3.57	14	3.95	14.15	3.97	14.5	4	14.85	4.04	
37	9.45	2.39	11.25	3.06	13.1	3.81	13.75	4.09	13.95	4.11	14.3	4.15	14.6	4.18	
39	9.45	2.54	11.25	3.25	13.1	4.05	13.55	4.23	13.7	4.25	14.05	4.29	14.4	4.33	
41	9.45	2.66	11.25	3.37	13.1	4.2	13.34	4.26	13.59	4.31	13.81	4.39	14.19	4.42	
43	9.45	2.78	11.25	3.48	13.1	4.28	13.13	4.31	13.5	4.36	13.89	4.41	13.94	4.47	



**MDV-V140W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
90%	-5	8.5	1.1	10.15	1.32	11.8	1.55	12.6	1.69	13.4	1.8	15.05	2.07	16.7	2.37
	-2	8.5	1.11	10.15	1.33	11.8	1.57	12.6	1.72	13.4	1.82	15.05	2.09	16.7	2.4
	0	8.5	1.12	10.15	1.35	11.8	1.6	12.6	1.74	13.4	1.85	15.05	2.12	16.7	2.41
	2	8.5	1.14	10.15	1.36	11.8	1.61	12.6	1.77	13.4	1.88	15.05	2.16	16.7	2.45
	4	8.5	1.16	10.15	1.38	11.8	1.64	12.6	1.79	13.4	1.9	15.05	2.19	16.7	2.49
	6	8.5	1.17	10.15	1.41	11.8	1.67	12.6	1.82	13.4	1.93	15.05	2.23	16.7	2.53
	8	8.5	1.2	10.15	1.44	11.8	1.7	12.6	1.85	13.4	1.97	15.05	2.27	16.7	2.55
	10	8.5	1.22	10.15	1.47	11.8	1.74	12.6	1.87	13.4	2.01	15.05	2.3	16.7	2.59
	12	8.5	1.24	10.15	1.5	11.8	1.77	12.6	1.91	13.4	2.05	15.05	2.34	16.7	2.64
	14	8.5	1.26	10.15	1.52	11.8	1.8	12.6	1.94	13.4	2.09	15.05	2.38	16.7	2.69
	16	8.5	1.28	10.15	1.55	11.8	1.84	12.6	1.98	13.4	2.13	15.05	2.43	16.65	2.74
	18	8.5	1.3	10.15	1.58	11.8	1.87	12.6	2.02	13.4	2.17	15.05	2.48	16.45	2.82
	20	8.5	1.33	10.15	1.62	11.8	1.91	12.6	2.06	13.4	2.25	15.05	2.67	16.2	2.95
	21	8.5	1.34	10.15	1.63	11.8	1.94	12.6	2.13	13.4	2.33	15.05	2.76	16.1	3.02
	23	8.5	1.37	10.15	1.69	11.8	2.08	12.6	2.28	13.4	2.5	15.05	2.96	15.85	3.16
	25	8.5	1.44	10.15	1.81	11.8	2.22	12.6	2.44	13.4	2.67	15.05	3.17	15.65	3.3
	27	8.5	1.53	10.15	1.93	11.8	2.37	12.6	2.61	13.4	2.86	15.05	3.4	15.4	3.44
	29	8.5	1.63	10.15	2.05	11.8	2.53	12.6	2.78	13.4	3.06	14.9	3.55	15.2	3.58
	31	8.5	1.74	10.15	2.19	11.8	2.69	12.6	2.97	13.4	3.26	14.65	3.69	14.95	3.72
	33	8.5	1.84	10.15	2.33	11.8	2.87	12.6	3.17	13.4	3.48	14.45	3.83	14.75	3.86
35	8.5	1.96	10.15	2.48	11.8	3.06	12.6	3.37	13.4	3.7	14.2	3.97	14.5	4	
37	8.5	2.08	10.15	2.63	11.8	3.26	12.6	3.59	13.4	3.95	13.95	4.11	14.3	4.14	
39	8.5	2.2	10.15	2.8	11.8	3.47	12.6	3.83	13.4	4.21	13.75	4.25	14.05	4.29	
41	8.5	2.28	10.15	2.93	11.8	3.59	12.6	3.93	13.4	4.23	13.65	4.36	13.96	4.39	
43	8.5	2.39	10.15	3.05	11.8	3.72	12.6	4.03	13.4	4.32	13.58	4.42	13.84	4.45	
80%	-5	7.55	0.97	9	1.14	10.45	1.35	11.2	1.44	11.95	1.55	13.4	1.79	14.85	2.04
	-2	7.55	0.98	9	1.16	10.45	1.36	11.2	1.46	11.95	1.56	13.4	1.81	14.85	2.06
	0	7.55	1	9	1.17	10.45	1.38	11.2	1.48	11.95	1.59	13.4	1.83	14.85	2.09
	2	7.55	1.02	9	1.19	10.45	1.4	11.2	1.51	11.95	1.62	13.4	1.87	14.85	2.13
	4	7.55	1.03	9	1.21	10.45	1.43	11.2	1.54	11.95	1.65	13.4	1.9	14.85	2.16
	6	7.55	1.05	9	1.24	10.45	1.45	11.2	1.57	11.95	1.68	13.4	1.93	14.85	2.2
	8	7.55	1.07	9	1.27	10.45	1.48	11.2	1.6	11.95	1.72	13.4	1.96	14.85	2.24
	10	7.55	1.08	9	1.29	10.45	1.52	11.2	1.64	11.95	1.76	13.4	2.01	14.85	2.26
	12	7.55	1.1	9	1.31	10.45	1.55	11.2	1.67	11.95	1.79	13.4	2.04	14.85	2.31
	14	7.55	1.12	9	1.34	10.45	1.58	11.2	1.7	11.95	1.83	13.4	2.08	14.85	2.35
	16	7.55	1.13	9	1.36	10.45	1.61	11.2	1.73	11.95	1.86	13.4	2.12	14.85	2.39
	18	7.55	1.16	9	1.39	10.45	1.64	11.2	1.77	11.95	1.9	13.4	2.17	14.85	2.44
	20	7.55	1.18	9	1.42	10.45	1.67	11.2	1.8	11.95	1.93	13.4	2.25	14.85	2.61
	21	7.55	1.19	9	1.43	10.45	1.69	11.2	1.82	11.95	1.98	13.4	2.33	14.85	2.7
	23	7.55	1.21	9	1.46	10.45	1.77	11.2	1.94	11.95	2.11	13.4	2.49	14.85	2.9
	25	7.55	1.25	9	1.55	10.45	1.89	11.2	2.07	11.95	2.26	13.4	2.67	14.85	3.1
	27	7.55	1.33	9	1.65	10.45	2.01	11.2	2.21	11.95	2.41	13.4	2.85	14.85	3.32
	29	7.55	1.41	9	1.76	10.45	2.15	11.2	2.35	11.95	2.58	13.4	3.04	14.85	3.55
	31	7.55	1.5	9	1.87	10.45	2.28	11.2	2.51	11.95	2.75	13.4	3.25	14.6	3.69
	33	7.55	1.59	9	1.99	10.45	2.43	11.2	2.67	11.95	2.92	13.4	3.46	14.4	3.83
35	7.55	1.69	9	2.11	10.45	2.59	11.2	2.84	11.95	3.11	13.4	3.69	14.15	3.97	
37	7.55	1.79	9	2.24	10.45	2.75	11.2	3.03	11.95	3.32	13.4	3.93	13.95	4.1	
39	7.55	1.9	9	2.39	10.45	2.93	11.2	3.22	11.95	3.53	13.4	4.19	13.7	4.25	
41	7.55	1.94	9	2.41	10.45	2.97	11.2	3.31	11.95	3.59	13.4	4.3	13.62	4.32	
43	7.55	1.99	9	2.43	10.45	3.01	11.2	3.36	11.95	3.64	13.4	4.35	13.53	4.37	

**MDV-V140W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-5	6.6	0.86	7.9	1.01	9.15	1.15	9.8	1.23	10.45	1.31	11.7	1.5	13	1.73
	-2	6.6	0.87	7.9	1.02	9.15	1.15	9.8	1.25	10.45	1.34	11.7	1.52	13	1.75
	0	6.6	0.87	7.9	1.03	9.15	1.18	9.8	1.28	10.45	1.36	11.7	1.56	13	1.77
	2	6.6	0.88	7.9	1.04	9.15	1.2	9.8	1.3	10.45	1.38	11.7	1.59	13	1.8
	4	6.6	0.89	7.9	1.06	9.15	1.22	9.8	1.32	10.45	1.41	11.7	1.61	13	1.84
	6	6.6	0.91	7.9	1.08	9.15	1.25	9.8	1.37	10.45	1.45	11.7	1.64	13	1.88
	8	6.6	0.92	7.9	1.11	9.15	1.28	9.8	1.39	10.45	1.48	11.7	1.69	13	1.91
	10	6.6	0.94	7.9	1.13	9.15	1.31	9.8	1.42	10.45	1.52	11.7	1.72	13	1.94
	12	6.6	0.96	7.9	1.14	9.15	1.34	9.8	1.44	10.45	1.54	11.7	1.76	13	1.98
	14	6.6	0.98	7.9	1.17	9.15	1.36	9.8	1.46	10.45	1.57	11.7	1.79	13	2.01
	16	6.6	1	7.9	1.19	9.15	1.39	9.8	1.5	10.45	1.6	11.7	1.82	13	2.05
	18	6.6	1.01	7.9	1.21	9.15	1.42	9.8	1.52	10.45	1.63	11.7	1.86	13	2.09
	20	6.6	1.03	7.9	1.23	9.15	1.44	9.8	1.55	10.45	1.66	11.7	1.9	13	2.15
	21	6.6	1.04	7.9	1.24	9.15	1.45	9.8	1.57	10.45	1.68	11.7	1.92	13	2.23
	23	6.6	1.05	7.9	1.26	9.15	1.49	9.8	1.62	10.45	1.76	11.7	2.06	13	2.38
	25	6.6	1.08	7.9	1.31	9.15	1.58	9.8	1.73	10.45	1.88	11.7	2.2	13	2.55
	27	6.6	1.14	7.9	1.4	9.15	1.69	9.8	1.84	10.45	2.01	11.7	2.35	13	2.73
	29	6.6	1.21	7.9	1.49	9.15	1.79	9.8	1.96	10.45	2.13	11.7	2.51	13	2.91
	31	6.6	1.28	7.9	1.58	9.15	1.91	9.8	2.09	10.45	2.27	11.7	2.67	13	3.1
	33	6.6	1.36	7.9	1.68	9.15	2.03	9.8	2.22	10.45	2.42	11.7	2.85	13	3.31
35	6.6	1.44	7.9	1.78	9.15	2.16	9.8	2.36	10.45	2.58	11.7	3.03	13	3.53	
37	6.6	1.52	7.9	1.88	9.15	2.29	9.8	2.51	10.45	2.74	11.7	3.23	13	3.76	
39	6.6	1.61	7.9	2	9.15	2.43	9.8	2.67	10.45	2.91	11.7	3.43	13	4	
41	6.6	1.68	7.9	2.07	9.15	2.5	9.8	2.76	10.45	3	11.7	3.58	13	4.18	
43	6.6	1.82	7.9	2.21	9.15	2.61	9.8	2.9	10.45	3.09	11.7	3.71	13	4.31	
60%	-5	5.65	0.74	6.75	0.85	7.85	0.99	8.4	1.06	8.95	1.14	10.05	1.29	11.15	1.47
	-2	5.65	0.74	6.75	0.87	7.85	1.01	8.4	1.08	8.95	1.16	10.05	1.3	11.15	1.48
	0	5.65	0.75	6.75	0.88	7.85	1.03	8.4	1.09	8.95	1.18	10.05	1.32	11.15	1.5
	2	5.65	0.76	6.75	0.9	7.85	1.05	8.4	1.11	8.95	1.19	10.05	1.35	11.15	1.52
	4	5.65	0.79	6.75	0.92	7.85	1.07	8.4	1.12	8.95	1.21	10.05	1.37	11.15	1.54
	6	5.65	0.79	6.75	0.93	7.85	1.09	8.4	1.15	8.95	1.23	10.05	1.4	11.15	1.58
	8	5.65	0.81	6.75	0.95	7.85	1.11	8.4	1.17	8.95	1.26	10.05	1.43	11.15	1.61
	10	5.65	0.83	6.75	0.97	7.85	1.12	8.4	1.2	8.95	1.28	10.05	1.45	11.15	1.63
	12	5.65	0.84	6.75	0.98	7.85	1.14	8.4	1.22	8.95	1.3	10.05	1.48	11.15	1.66
	14	5.65	0.85	6.75	1	7.85	1.16	8.4	1.25	8.95	1.33	10.05	1.51	11.15	1.69
	16	5.65	0.86	6.75	1.02	7.85	1.18	8.4	1.27	8.95	1.35	10.05	1.53	11.15	1.72
	18	5.65	0.88	6.75	1.03	7.85	1.2	8.4	1.29	8.95	1.38	10.05	1.56	11.15	1.75
	20	5.65	0.89	6.75	1.05	7.85	1.22	8.4	1.31	8.95	1.41	10.05	1.59	11.15	1.79
	21	5.65	0.9	6.75	1.06	7.85	1.23	8.4	1.33	8.95	1.42	10.05	1.61	11.15	1.8
	23	5.65	0.91	6.75	1.08	7.85	1.26	8.4	1.35	8.95	1.44	10.05	1.67	11.15	1.92
	25	5.65	0.93	6.75	1.1	7.85	1.3	8.4	1.42	8.95	1.53	10.05	1.78	11.15	2.05
	27	5.65	0.96	6.75	1.17	7.85	1.39	8.4	1.51	8.95	1.63	10.05	1.9	11.15	2.19
	29	5.65	1.02	6.75	1.23	7.85	1.48	8.4	1.61	8.95	1.74	10.05	2.03	11.15	2.34
	31	5.65	1.08	6.75	1.31	7.85	1.57	8.4	1.71	8.95	1.85	10.05	2.16	11.15	2.49
	33	5.65	1.14	6.75	1.39	7.85	1.67	8.4	1.82	8.95	1.97	10.05	2.29	11.15	2.65
35	5.65	1.21	6.75	1.47	7.85	1.77	8.4	1.93	8.95	2.09	10.05	2.44	11.15	2.82	
37	5.65	1.28	6.75	1.56	7.85	1.87	8.4	2.04	8.95	2.22	10.05	2.6	11.15	3	
39	5.65	1.35	6.75	1.65	7.85	1.99	8.4	2.17	8.95	2.36	10.05	2.76	11.15	3.19	
41	5.65	1.39	6.75	1.72	7.85	2.06	8.4	2.25	8.95	2.44	10.05	2.89	11.15	3.34	
43	5.65	1.43	6.75	1.79	7.85	2.13	8.4	2.32	8.95	2.53	10.05	3.01	11.15	3.48	

**MDV-V140W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-5	4.73	0.64	5.65	0.74	6.55	0.85	7	0.89	7.45	0.94	8.35	1.07	9.3	1.15
	-2	4.73	0.64	5.65	0.75	6.55	0.86	7	0.9	7.45	0.96	8.35	1.08	9.3	1.17
	0	4.73	0.65	5.65	0.77	6.55	0.87	7	0.91	7.45	0.97	8.35	1.1	9.3	1.19
	2	4.73	0.66	5.65	0.78	6.55	0.89	7	0.93	7.45	0.98	8.35	1.1	9.3	1.21
	4	4.73	0.67	5.65	0.79	6.55	0.9	7	0.94	7.45	1	8.35	1.13	9.3	1.24
	6	4.73	0.68	5.65	0.8	6.55	0.91	7	0.96	7.45	1.02	8.35	1.15	9.3	1.28
	8	4.73	0.7	5.65	0.82	6.55	0.93	7	0.98	7.45	1.03	8.35	1.17	9.3	1.32
	10	4.73	0.71	5.65	0.83	6.55	0.94	7	1	7.45	1.06	8.35	1.2	9.3	1.34
	12	4.73	0.72	5.65	0.84	6.55	0.96	7	1.02	7.45	1.09	8.35	1.22	9.3	1.36
	14	4.73	0.73	5.65	0.85	6.55	0.97	7	1.04	7.45	1.1	8.35	1.24	9.3	1.38
	16	4.73	0.74	5.65	0.86	6.55	0.98	7	1.05	7.45	1.12	8.35	1.26	9.3	1.41
	18	4.73	0.75	5.65	0.87	6.55	1	7	1.07	7.45	1.14	8.35	1.28	9.3	1.43
	20	4.73	0.76	5.65	0.88	6.55	1.02	7	1.09	7.45	1.16	8.35	1.3	9.3	1.46
	21	4.73	0.77	5.65	0.89	6.55	1.03	7	1.1	7.45	1.17	8.35	1.32	9.3	1.47
	23	4.73	0.78	5.65	0.9	6.55	1.04	7	1.12	7.45	1.19	8.35	1.34	9.3	1.51
	25	4.73	0.79	5.65	0.92	6.55	1.06	7	1.14	7.45	1.23	8.35	1.41	9.3	1.61
	27	4.73	0.8	5.65	0.96	6.55	1.12	7	1.21	7.45	1.3	8.35	1.5	9.3	1.71
	29	4.73	0.85	5.65	1.01	6.55	1.19	7	1.29	7.45	1.39	8.35	1.6	9.3	1.83
	31	4.73	0.89	5.65	1.07	6.55	1.26	7	1.37	7.45	1.47	8.35	1.7	9.3	1.94
	33	4.73	0.95	5.65	1.13	6.55	1.34	7	1.45	7.45	1.56	8.35	1.8	9.3	2.07
35	4.73	1	5.65	1.2	6.55	1.42	7	1.53	7.45	1.66	8.35	1.92	9.3	2.19	
37	4.73	1.05	5.65	1.27	6.55	1.5	7	1.62	7.45	1.76	8.35	2.03	9.3	2.33	
39	4.73	1.11	5.65	1.34	6.55	1.59	7	1.72	7.45	1.86	8.35	2.16	9.3	2.48	
41	4.73	1.16	5.65	1.39	6.55	1.64	7	1.8	7.45	1.94	8.35	2.27	9.3	2.59	
43	4.73	1.24	5.65	1.49	6.55	1.7	7	1.88	7.45	1.99	8.35	2.39	9.3	2.71	

**Note:**

1. [ ] is tested under our standard condition.
2. In cooling mode, avoid running the unit when outdoor air temperature is above 43 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V140W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-13.7	-15	10.95	3.29	10.9	3.48	10.85	3.67	10.85	3.76	10.8	3.86	10.8	4.05
	-11.8	-13	11.39	3.44	11.39	3.62	11.34	3.8	11.29	3.89	11.29	3.98	11.24	4.16
	-9.8	-11	11.93	3.59	11.88	3.76	11.83	3.93	11.83	4.02	11.83	4.11	11.78	4.28
	-9.5	-10	12.22	3.66	12.17	3.83	12.12	4	12.12	4.08	12.08	4.17	12.08	4.33
	-8.5	-9.1	12.47	3.73	12.42	3.89	12.42	4.06	12.37	4.14	12.37	4.22	12.32	4.39
	-7	-7.6	12.91	3.84	12.91	4	12.86	4.15	12.86	4.24	12.81	4.31	12.76	4.47
	-5	-5.6	13.59	3.98	13.54	4.13	13.49	4.28	13.49	4.36	13.44	4.43	13.44	4.58
	-3	-3.7	14.23	4.11	14.18	4.26	14.18	4.4	14.13	4.47	14.13	4.54	14.08	4.68
	0	-0.7	15.35	4.31	15.35	4.45	15.3	4.58	15.3	4.62	15.25	4.71	15.25	4.84
	3	2.2	16.57	4.49	16.52	4.61	16.48	4.74	16.48	4.8	16.48	4.86	16.43	4.98
	5	4.1	17.4	4.6	17.35	4.72	17.35	4.84	17.31	4.89	17.31	4.95	17.26	5.07
	7	6	18.28	4.71	18.24	4.82	18.24	4.93	18.19	4.99	18.19	5.04	17.45	4.84
	9	7.9	19.21	4.81	19.16	4.92	19.16	5.02	19.12	5.07	18.72	4.97	17.45	4.55
	11	9.8	20.19	4.91	20.14	5	20.04	5.07	19.36	4.87	18.72	4.67	17.45	4.28
	13	11.8	21.27	5	21.22	5.09	20.04	4.75	19.36	4.56	18.72	4.38	17.45	4.02
15	13.7	22.29	5.08	21.32	4.82	20.04	4.47	19.36	4.3	18.72	4.13	17.45	3.79	
120%	-13.7	-15	10.9	3.54	10.85	3.72	10.81	3.89	10.81	3.98	10.81	4.07	10.76	4.24
	-11.8	-13	11.34	3.68	11.34	3.85	11.29	4.01	11.29	4.1	11.25	4.18	11.25	4.35
	-9.8	-11	11.88	3.82	11.83	3.98	11.83	4.14	11.78	4.22	11.78	4.3	11.73	4.46
	-9.5	-10	12.17	3.89	12.13	4.05	12.08	4.2	12.08	4.28	12.08	4.35	12.03	4.51
	-8.5	-9.1	12.42	3.95	12.37	4.1	12.37	4.25	12.32	4.33	12.32	4.41	12.27	4.56
	-7	-7.6	12.86	4.05	12.86	4.2	12.81	4.34	12.81	4.42	12.76	4.49	12.76	4.64
	-5	-5.6	13.54	4.18	13.49	4.32	13.44	4.46	13.44	4.53	13.44	4.6	13.4	4.74
	-3	-3.7	14.18	4.31	14.18	4.44	14.13	4.57	14.13	4.64	14.08	4.71	14.08	4.84
	0	-0.7	15.3	4.49	15.3	4.61	15.25	4.73	15.25	4.8	15.2	4.86	15.2	4.98
	3	2.2	16.53	4.66	16.48	4.77	16.48	4.88	16.43	4.94	16.43	5	16.08	4.97
	5	4.1	17.36	4.76	17.31	4.87	17.31	4.98	17.26	5.03	17.26	5.08	16.08	4.67
	7	6	18.24	4.86	18.24	4.96	18.19	5.06	17.89	4.99	17.31	4.79	16.08	4.39
	9	7.9	19.17	4.95	19.12	5.05	18.48	4.88	17.89	4.69	17.31	4.5	16.08	4.13
	11	9.8	20.14	5.04	19.65	4.95	18.48	4.59	17.89	4.41	17.31	4.24	16.08	3.9
	13	11.8	20.88	4.99	19.65	4.65	18.48	4.31	17.89	4.14	17.31	3.98	16.08	3.66
15	13.7	20.88	4.7	19.65	4.38	18.48	4.06	17.89	3.91	17.31	3.75	16.08	3.46	
110%	-13.7	-15	10.85	3.8	10.81	3.96	10.76	4.12	10.76	4.2	10.76	4.28	10.71	4.44
	-11.8	-13	11.29	3.93	11.29	4.08	11.24	4.23	11.24	4.31	11.19	4.38	11.19	4.54
	-9.8	-11	11.83	4.05	11.78	4.2	11.78	4.34	11.73	4.42	11.73	4.49	11.73	4.64
	-9.5	-10	12.12	4.12	12.08	4.26	12.03	4.4	12.03	4.47	12.03	4.54	11.98	4.68
	-8.5	-9.1	12.37	4.17	12.32	4.31	12.32	4.45	12.27	4.52	12.27	4.59	12.27	4.19
	-7	-7.6	12.81	4.27	12.81	4.4	12.76	4.53	12.76	4.6	12.76	4.67	12.71	4.8
	-5	-5.6	13.49	4.39	13.44	4.52	13.4	4.64	13.4	4.71	13.4	4.77	13.35	4.9
	-3	-3.7	14.13	4.5	14.13	4.62	14.08	4.74	14.08	4.8	14.03	4.86	14.03	4.99
	0	-0.7	15.25	4.67	15.25	4.78	15.21	4.89	15.21	4.95	15.21	5.01	14.76	4.91
	3	2.2	16.48	4.82	16.43	4.93	16.43	5.03	16.38	5.08	15.84	4.87	14.76	4.47
	5	4.1	17.31	4.92	17.31	5.02	16.96	4.97	16.38	4.77	15.84	4.58	14.76	4.2
	7	6	18.19	5.01	18.04	5.04	16.96	4.67	16.38	4.48	15.84	4.31	14.76	3.95
	9	7.9	19.12	5.09	18.04	4.74	16.96	4.39	16.38	4.22	15.84	4.05	14.76	3.73
	11	9.8	19.12	4.79	18.04	4.46	16.96	4.13	16.38	3.98	15.84	3.82	14.76	3.52
	13	11.8	19.12	4.49	18.04	4.18	16.96	3.88	16.38	3.74	15.84	3.59	14.76	3.31
15	13.7	19.12	3.99	18.04	3.94	16.96	3.67	16.38	3.53	15.84	3.4	14.76	3.13	

**MDV-V140W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
100%	-13.7	-15	10.8	4.05	10.76	4.2	10.71	4.34	10.71	4.42	10.71	4.49	10.66	4.64
	-11.8	-13	11.25	4.17	11.25	4.31	11.2	4.45	11.2	4.52	11.2	4.59	11.15	4.73
	-9.8	-11	11.78	4.28	11.73	4.42	11.73	4.55	11.73	4.62	11.68	4.68	11.68	4.81
	-9.5	-10	12.08	4.34	12.03	4.47	12.03	4.6	11.98	4.67	11.98	4.73	11.93	4.86
	-8.5	-9.1	12.32	4.39	12.27	4.52	12.27	4.65	12.27	4.71	12.22	4.78	12.22	4.9
	-7	-7.6	12.76	4.48	12.76	4.6	12.71	4.72	12.71	4.79	12.71	4.85	12.66	4.97
	-5	-5.6	13.44	4.59	13.39	4.71	13.39	4.82	13.35	4.88	13.35	4.94	13.3	5.06
	-3	-3.7	14.08	4.69	14.08	4.26	14.03	4.92	14.03	4.97	14.03	5.02	13.44	4.81
	0	-0.7	15.2	4.85	15.2	4.95	15.16	5.05	14.91	4.97	14.42	4.77	13.44	4.37
	3	2.2	16.43	4.99	16.38	5.08	15.4	4.7	14.91	4.52	14.42	4.34	13.44	3.98
	5	4.1	17.26	5.08	16.38	4.77	15.4	4.42	14.91	4.25	14.42	4.08	13.44	3.75
	7	6	17.36	4.82	16.38	4.48	15.4	4.16	14.91	4	14.42	3.85	13.44	3.54
	9	7.9	17.36	4.53	16.38	4.22	15.4	3.92	14.91	3.72	14.42	3.63	13.44	3.34
	11	9.8	17.36	4.26	16.38	3.98	15.4	3.7	14.91	3.55	14.42	3.42	13.44	3.15
	13	11.8	17.36	4	16.38	3.74	15.4	3.48	14.91	3.35	14.42	3.23	13.44	2.98
15	13.7	17.36	3.78	16.38	3.53	15.4	3.28	14.91	3.17	14.42	3.05	13.44	2.82	
90%	-13.7	-15	10.74	4.31	10.69	4.44	10.69	4.57	10.64	4.64	10.64	4.7	10.64	4.83
	-11.8	-13	11.18	4.41	11.18	4.54	11.13	4.66	11.13	4.73	11.13	4.79	11.08	4.91
	-9.8	-11	11.71	4.52	11.71	4.64	11.66	4.75	11.66	4.81	11.66	4.88	11.61	5
	-9.5	-10	12.01	4.57	11.96	4.69	11.96	4.8	11.91	4.86	11.91	4.92	11.91	5.04
	-8.5	-9.1	12.25	4.62	12.25	4.73	12.2	4.85	12.2	4.9	12.2	4.96	12.05	5.01
	-7	-7.6	12.69	4.69	12.69	4.8	12.64	4.92	12.64	4.97	12.64	5.02	12.05	4.78
	-5	-5.6	13.37	4.8	13.32	4.9	13.32	5	13.27	5.06	12.93	4.9	12.05	4.49
	-3	-3.7	14.01	4.89	14.01	4.99	13.86	5.01	13.37	4.81	12.93	4.61	12.05	4.24
	0	-0.7	15.18	5.03	14.74	4.91	13.86	4.54	13.37	4.37	12.93	4.19	12.05	3.85
	3	2.2	15.62	4.79	14.74	4.46	13.86	4.14	13.37	3.98	12.93	3.83	12.05	3.52
	5	4.1	15.62	4.51	14.74	4.2	13.86	3.9	13.37	3.75	12.93	3.61	12.05	3.32
	7	6	15.62	4.24	14.74	3.95	13.86	3.67	13.37	3.54	12.93	3.4	12.05	3.14
	9	7.9	15.62	3.99	14.74	3.72	13.86	3.46	13.37	3.34	12.93	3.21	12.05	2.97
	11	9.8	15.62	3.76	14.74	3.51	13.86	3.27	13.37	3.15	12.93	3.04	12.05	2.81
	13	11.8	15.62	3.54	14.74	3.31	13.86	3.08	13.37	2.98	12.93	2.87	12.05	2.65
15	13.7	15.62	3.34	14.74	3.13	13.86	2.92	13.37	2.82	12.93	2.72	12.05	2.52	
80%	-13.7	-15	10.71	4.57	10.66	4.68	10.66	4.8	10.66	4.85	10.61	4.91	10.61	5.03
	-11.8	-13	11.15	4.66	11.15	4.77	11.1	4.88	11.1	4.93	11.1	4.99	10.76	4.86
	-9.8	-11	11.68	4.75	11.68	4.86	11.64	4.96	11.64	5.01	11.54	5	10.76	4.59
	-9.5	-10	11.98	4.8	11.93	4.9	11.93	5	11.93	5.06	11.54	4.86	10.76	4.45
	-8.5	-9.1	12.22	4.84	11.36	4.94	12.17	5.04	11.93	4.93	11.54	4.73	10.76	4.33
	-7	-7.6	12.66	4.91	12.66	5.01	12.32	4.9	11.93	4.71	11.54	4.52	10.76	4.14
	-5	-5.6	13.35	5	13.1	4.97	12.32	4.6	11.93	4.42	11.54	4.25	10.76	3.9
	-3	-3.7	13.88	5.02	13.1	4.68	12.32	4.33	11.93	4.17	11.54	4	10.76	3.68
	0	-0.7	13.88	4.56	13.1	4.25	12.32	3.94	11.93	3.8	11.54	3.65	10.76	3.36
	3	2.2	13.88	4.15	13.1	3.87	12.32	3.6	11.93	3.47	11.54	3.34	10.76	3.08
	5	4.1	13.88	3.91	13.1	3.65	12.32	3.4	11.93	3.27	11.54	3.16	10.76	2.91
	7	6	13.88	3.68	13.1	3.45	12.32	3.21	11.93	3.1	11.54	2.98	10.76	2.76
	9	7.9	13.88	3.48	13.1	3.25	12.32	3.03	11.93	2.92	11.54	2.82	10.76	2.61
	11	9.8	13.88	3.28	13.1	3.07	12.32	2.87	11.93	2.77	11.54	2.67	10.76	2.47
	13	11.8	13.88	3.1	13.1	2.9	12.32	2.71	11.93	2.61	11.54	2.52	10.76	2.34
15	13.7	13.88	2.93	13.1	2.75	12.32	2.57	11.93	2.48	11.54	2.39	10.76	2.23	

**MDV-V140W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-13.7	-15	10.63	4.82	10.58	4.92	10.58	5.02	10.39	4.95	10.05	4.75	9.37	4.35
	-11.8	-13	11.07	4.9	11.07	5	10.78	4.88	10.39	4.69	10.05	4.5	9.37	4.13
	-9.8	-11	11.61	4.98	11.46	4.98	10.78	4.61	10.39	4.43	10.05	4.25	9.37	3.91
	-9.5	-10	11.9	5.02	11.46	4.83	10.78	4.47	10.39	4.3	10.05	4.13	9.37	3.8
	-8.5	-9.1	12.15	5.05	11.46	4.7	10.78	4.35	10.39	4.19	10.05	4.02	9.37	3.7
	-7	-7.6	12.15	4.82	11.46	4.49	10.78	4.17	10.39	4.01	10.05	3.85	9.37	3.54
	-5	-5.6	12.15	4.53	11.46	4.22	10.78	3.92	10.39	3.77	10.05	4.45	9.37	3.34
	-3	-3.7	12.15	4.27	11.46	3.98	10.78	3.7	10.39	3.56	10.05	3.43	9.37	3.16
	0	-0.7	12.15	3.88	11.46	3.63	10.78	3.38	10.39	3.25	10.05	3.13	9.37	2.9
	3	2.2	12.15	3.55	11.46	3.32	10.78	3.1	10.39	2.98	10.05	2.87	9.37	2.66
	5	4.1	12.15	3.35	11.46	3.13	10.78	2.93	10.39	2.82	10.05	2.72	9.37	2.52
	7	6	12.15	3.17	11.46	2.97	10.78	2.77	10.39	2.67	10.05	2.58	9.37	2.39
	9	7.9	12.15	2.99	11.46	2.8	10.78	2.62	10.39	2.53	10.05	2.44	9.37	2.26
	11	9.8	12.15	2.83	11.46	2.65	10.78	2.48	10.39	2.4	10.05	2.32	9.37	2.15
	13	11.8	12.15	2.67	11.46	2.51	10.78	2.35	10.39	2.27	10.05	2.19	9.37	2.04
15	13.7	12.15	2.53	11.46	2.38	10.78	2.23	10.39	2.16	10.05	2.09	9.37	1.94	
60%	-13.7	-15	10.41	4.95	9.83	4.6	9.24	4.27	8.95	4.11	8.65	3.94	8.07	3.62
	-11.8	-13	10.41	4.68	9.83	4.36	9.24	4.05	8.95	3.9	8.65	3.74	8.07	3.46
	-9.8	-11	10.41	4.42	9.83	4.12	9.24	3.83	8.95	3.68	8.65	3.54	8.07	3.27
	-9.5	-10	10.41	4.3	9.83	4.01	9.24	3.72	8.95	3.59	8.65	3.45	8.07	3.18
	-8.5	-9.1	10.41	4.19	9.83	3.91	9.24	3.63	8.95	3.5	8.65	3.36	8.07	3.1
	-7	-7.6	10.41	4	9.83	3.74	9.24	3.47	8.95	3.35	8.65	3.22	8.07	2.98
	-5	-5.6	10.41	3.77	9.83	3.52	9.24	3.28	8.95	3.16	8.65	3.04	8.07	2.81
	-3	-3.7	10.41	3.56	9.83	3.33	9.24	3.1	8.95	2.99	8.65	2.88	8.07	2.66
	0	-0.7	10.41	3.25	9.83	3.05	9.24	2.84	8.95	2.74	8.65	2.64	8.07	2.45
	3	2.2	10.41	2.98	9.83	2.8	9.24	2.61	8.95	2.52	8.65	2.44	8.07	2.26
	5	4.1	10.41	2.82	9.83	2.65	9.24	2.47	8.95	2.39	8.65	2.31	8.07	2.14
	7	6	10.41	2.67	9.83	2.51	9.24	2.34	8.95	2.27	8.65	2.19	8.07	2.04
	9	7.9	10.41	2.53	9.83	2.38	9.24	2.23	8.95	2.16	8.65	2.08	8.07	1.94
	11	9.8	10.41	2.4	9.83	2.26	9.24	2.12	8.95	2.05	8.65	1.98	8.07	1.85
	13	11.8	10.41	2.27	9.83	2.14	9.24	2.01	8.95	1.95	8.65	1.88	8.07	1.76
15	13.7	10.41	2.16	9.83	2.03	9.24	1.91	8.95	1.85	8.65	1.79	8.07	1.67	
50%	-13.7	-15	8.67	3.97	8.19	3.7	7.7	3.44	7.41	3.32	7.16	3.19	6.68	2.95
	-11.8	-13	8.67	3.77	8.19	3.52	7.7	3.27	7.41	3.15	7.16	3.04	6.68	2.81
	-9.8	-11	8.67	3.57	8.19	3.33	7.7	3.11	7.41	2.99	7.16	2.88	6.68	2.67
	-9.5	-10	8.67	3.47	8.19	3.24	7.7	3.03	7.41	2.92	7.16	2.81	6.68	2.6
	-8.5	-9.1	8.67	3.38	8.19	3.17	7.7	2.95	7.41	2.85	7.16	2.74	6.68	2.54
	-7	-7.6	8.67	3.24	8.19	3.04	7.7	2.83	7.41	2.73	7.16	2.64	6.68	2.44
	-5	-5.6	8.67	3.06	8.19	2.87	7.7	2.68	7.41	2.59	7.16	2.5	6.68	2.31
	-3	-3.7	8.67	2.9	8.19	2.72	7.7	2.54	7.41	2.45	7.16	2.37	6.68	2.2
	0	-0.7	8.67	2.66	8.19	2.5	7.7	2.34	7.41	2.26	7.16	2.18	6.68	2.03
	3	2.2	8.67	2.45	8.19	2.3	7.7	2.16	7.41	2.09	7.16	2.01	6.68	1.88
	5	4.1	8.67	2.32	8.19	2.18	7.7	2.05	7.41	1.98	7.16	1.92	6.68	1.79
	7	6	8.67	2.2	8.19	2.07	7.7	1.95	7.41	1.89	7.16	1.83	6.68	1.71
	9	7.9	8.67	2.09	8.19	1.97	7.7	1.85	7.41	1.8	7.16	1.74	6.68	1.63
	11	9.8	8.67	1.99	8.19	1.87	7.7	1.77	7.41	1.71	7.16	1.66	6.68	1.55
	13	11.8	8.67	1.89	8.19	1.78	7.7	1.68	7.41	1.63	7.16	1.58	6.68	1.48
15	13.7	8.67	1.8	8.19	1.7	7.7	1.6	7.41	1.56	7.16	1.51	6.68	1.42	

**Note:**

1. [ ] is tested under our standard condition.
2. In heating mode, avoid running the unit when the outdoor air temperature is below -15 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V160W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-5	13.62	1.85	16.22	2.26	18.82	2.42	19.54	2.52	20.48	2.59	20.98	2.81	21.51	2.83
	-2	13.62	1.85	16.22	2.3	18.82	2.42	19.54	2.53	20.48	2.59	20.98	2.85	21.51	2.86
	0	13.62	1.88	16.22	2.34	18.82	2.51	19.54	2.67	20.48	2.74	20.98	2.88	21.51	2.9
	2	13.62	1.91	16.22	2.34	18.82	2.59	19.54	2.82	20.48	2.77	20.98	2.9	21.51	2.94
	4	13.62	1.96	16.22	2.39	18.82	2.68	19.54	2.83	20.48	2.8	20.98	2.9	21.51	3
	6	13.62	1.99	16.22	2.44	18.82	2.78	19.54	2.86	20.25	2.89	20.72	2.9	21.27	3.02
	8	13.62	2.04	16.22	2.49	18.82	2.92	19.54	2.99	20	2.99	20.5	3.9	21	3.05
	10	13.62	2.08	16.22	2.55	18.82	3.03	19.54	3.09	19.76	4.04	20.26	4.06	20.76	3.14
	12	13.62	2.12	16.22	2.6	18.82	3.09	19.26	4.03	19.54	4.06	19.98	4.07	20.48	3.16
	14	13.62	2.16	16.22	2.64	18.77	4.05	19.04	4.06	19.26	4.08	19.76	4.09	20.26	3.23
	16	13.62	2.2	16.22	2.7	18.54	4.06	18.77	4.08	18.99	4.1	19.49	4.12	19.98	3.28
	18	13.62	2.24	16.22	2.75	18.27	3.23	18.49	3.25	18.77	3.27	19.26	3.3	19.76	3.33
	20	13.62	2.29	16.22	2.93	17.99	3.39	18.27	3.41	18.49	3.42	18.99	3.45	19.49	3.49
	21	13.62	2.35	16.22	3.03	17.88	3.47	18.16	3.48	18.38	3.5	18.88	3.54	19.37	3.57
	23	13.62	2.52	16.22	3.25	17.66	3.62	17.88	3.64	18.1	3.66	18.6	3.7	19.1	3.73
	25	13.62	2.69	16.22	3.48	17.38	3.78	17.6	3.8	17.88	3.83	18.38	3.86	18.88	3.9
	27	13.62	2.88	16.22	3.73	17.16	3.94	17.38	3.97	17.6	3.98	18.1	4.03	18.6	4.07
	29	13.62	3.07	16.22	3.98	16.88	4.1	17.1	4.12	17.38	4.15	17.88	4.19	18.38	4.23
	31	13.62	3.28	16.16	4.22	16.61	4.26	16.88	4.29	17.1	4.31	17.6	4.36	18.1	4.4
	33	13.62	3.49	15.89	4.37	16.39	4.42	16.61	4.45	16.88	4.47	17.38	4.52	17.82	4.57
35	13.62	3.72	15.61	4.53	16.11	4.59	16.39	4.61	16.61	4.64	17.1	4.69	17.6	4.74	
37	13.62	3.96	15.39	4.7	15.89	4.75	16.11	4.78	16.39	4.81	16.83	4.86	17.33	4.92	
39	13.62	4.22	15.11	4.75	15.61	4.91	15.89	4.94	16.11	4.97	16.61	5.03	17.1	5.09	
41	13.62	4.44	14.96	4.79	15.45	4.96	15.72	4.99	15.94	5.02	16.44	5.04	16.45	5.13	
43	13.62	4.55	14.85	4.82	15.36	4.97	15.64	5.01	15.78	5.02	16.14	5.05	16.25	5.14	
120%	-5	12.57	1.78	14.95	2.16	17.38	2.56	18.6	2.79	19.49	2.91	19.93	3	20.37	3.08
	-2	12.57	1.8	14.95	2.18	17.38	2.58	18.6	2.8	19.49	2.94	19.93	3.02	20.37	3.09
	0	12.57	1.82	14.95	2.2	17.38	2.61	18.6	2.81	19.49	2.97	19.93	3.04	20.37	3.1
	2	12.57	1.82	14.95	2.22	17.38	2.63	18.6	2.84	19.49	2.98	19.93	3.06	20.37	3.1
	4	12.57	1.84	14.95	2.25	17.38	2.67	18.6	2.86	19.49	3.02	19.93	3.07	20.37	3.11
	6	12.57	1.86	14.95	2.27	17.38	2.7	18.6	2.9	19.49	3.05	19.93	3.1	20.37	3.12
	8	12.57	1.88	14.95	2.29	17.38	2.73	18.6	2.93	19.49	3.08	19.93	3.11	20.37	3.13
	10	12.57	1.9	14.95	2.32	17.38	2.76	18.6	2.98	19.49	3.08	19.93	3.12	20.37	3.15
	12	12.57	1.94	14.95	2.36	17.38	2.81	18.6	3.04	19.21	3.1	19.65	3.1	20.09	3.17
	14	12.57	1.97	14.95	2.41	17.38	2.87	18.6	3.1	18.93	3.12	19.43	3.14	19.87	3.21
	16	12.57	2.01	14.95	2.46	17.38	2.92	18.49	4.1	18.71	3.16	19.15	3.2	19.6	3.26
	18	12.57	2.05	14.95	2.51	17.38	3.02	18.21	3.23	18.43	3.24	18.88	3.27	19.37	3.3
	20	12.57	2.09	14.95	2.61	17.38	3.25	17.99	3.39	18.21	3.4	18.66	3.43	19.1	3.46
	21	12.57	2.11	14.95	2.7	17.38	3.37	17.82	3.47	18.05	3.48	18.54	3.51	18.99	3.55
	23	12.57	2.25	14.95	2.89	17.38	3.61	17.6	3.62	17.82	3.64	18.27	3.67	18.71	3.7
	25	12.57	2.41	14.95	3.09	17.1	3.76	17.33	3.78	17.55	3.8	18.05	3.83	18.49	3.87
	27	12.57	2.57	14.95	3.31	16.88	3.92	17.1	3.94	17.33	3.96	17.77	4	18.21	4.03
	29	12.57	2.74	14.95	3.53	16.61	4.08	16.83	4.1	17.05	4.12	17.49	4.16	17.99	4.2
	31	12.57	2.92	14.95	3.77	16.33	4.24	16.61	4.26	16.83	4.28	17.27	4.32	17.71	4.37
	33	12.57	3.11	14.95	4.02	16.11	4.4	16.33	4.42	16.55	4.44	16.99	4.49	17.44	4.53
35	12.57	3.31	14.95	4.29	15.83	4.56	16.05	4.58	16.33	4.61	16.77	4.65	17.22	4.7	
37	12.57	3.53	14.95	4.57	15.61	4.72	15.83	4.75	16.05	4.77	16.5	4.82	16.94	4.87	
39	12.57	3.75	14.89	4.82	15.33	4.88	15.56	4.91	15.78	4.93	16.27	4.99	16.72	5.04	
41	12.57	3.86	14.77	4.86	15.21	4.91	15.44	4.94	15.66	4.97	16.15	5	16.24	5.08	
43	12.57	3.91	14.69	4.89	15.09	4.94	15.31	4.96	15.54	4.99	15.87	5.02	15.98	5.18	

**MDV-V160W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
110%	-5	11.51	1.56	13.73	1.94	15.94	2.31	17.05	2.48	18.16	2.67	19.54	2.78	19.99	2.86
	-2	11.51	1.59	13.73	1.97	15.94	2.33	17.05	2.51	18.16	2.69	19.54	2.8	19.99	2.88
	0	11.51	1.6	13.73	1.98	15.94	2.35	17.05	2.53	18.16	2.72	19.54	2.83	19.99	2.91
	2	11.51	1.64	13.73	2	15.94	2.39	17.05	2.55	18.16	2.75	19.54	2.87	19.99	2.95
	4	11.51	1.67	13.73	2.02	15.94	2.41	17.05	2.58	18.16	2.8	19.54	2.91	19.99	2.98
	6	11.51	1.69	13.73	2.04	15.94	2.44	17.05	2.63	18.16	2.83	19.54	2.94	19.99	3.02
	8	11.51	1.7	13.73	2.07	15.94	2.46	17.05	2.65	18.16	2.86	19.54	2.96	19.99	3.05
	10	11.51	1.72	13.73	2.1	15.94	2.5	17.05	2.7	18.16	2.91	19.54	2.98	19.99	3.08
	12	11.51	1.76	13.73	2.14	15.94	2.55	17.05	2.75	18.16	2.96	19.32	3.03	19.71	3.12
	14	11.51	1.79	13.73	2.18	15.94	2.6	17.05	2.8	18.16	3.02	19.04	3.05	19.49	3.14
	16	11.51	1.82	13.73	2.22	15.94	2.64	17.05	2.86	18.16	3.08	18.82	3.09	19.21	3.18
	18	11.51	1.86	13.73	2.27	15.94	2.7	17.05	2.94	18.16	3.22	18.54	3.25	18.99	3.28
	20	11.51	1.89	13.73	2.31	15.94	2.86	17.05	3.16	17.88	3.38	18.32	3.41	18.71	3.44
	21	11.51	1.91	13.73	2.38	15.94	2.96	17.05	3.27	17.77	3.46	18.16	3.48	18.6	3.51
	23	11.51	2	13.73	2.55	15.94	3.17	17.05	3.51	17.49	3.61	17.94	3.65	18.32	3.68
	25	11.51	2.14	13.73	2.73	15.94	3.39	17.05	3.76	17.27	3.77	17.66	3.81	18.1	3.84
	27	11.51	2.28	13.73	2.92	15.94	3.63	16.77	3.92	17	3.93	17.44	3.97	17.83	4
	29	11.51	2.43	13.73	3.11	15.94	3.88	16.55	4.08	16.77	4.09	17.16	4.13	17.6	4.17
	31	11.51	2.59	13.73	3.32	15.94	4.14	16.28	4.23	16.5	4.25	16.94	4.29	17.33	4.33
	33	11.51	2.75	13.73	3.54	15.83	4.37	16.05	4.39	16.28	4.41	16.66	4.45	17.11	4.5
35	11.51	2.93	13.73	3.77	15.56	4.53	15.78	4.55	16	4.58	16.39	4.62	16.83	4.66	
37	11.51	3.12	13.73	4.01	15.33	4.69	15.56	4.71	15.72	4.73	16.17	4.78	16.55	4.82	
39	11.51	3.31	13.73	4.28	15.06	4.85	15.28	4.87	15.5	4.9	15.89	4.95	16.33	5	
41	11.51	3.35	13.73	4.31	14.94	4.88	15.16	4.91	15.38	4.93	15.69	4.98	15.84	5.03	
43	11.51	3.38	13.73	4.37	14.82	4.92	15.04	4.94	15.26	4.97	15.55	5	15.6	5.13	
100%	-5	10.46	1.42	12.46	1.71	14.5	2.03	15.5	2.18	16.5	2.36	18.54	2.69	19.6	2.81
	-2	10.46	1.44	12.46	1.73	14.5	2.06	15.5	2.22	16.5	2.4	18.54	2.73	19.6	2.83
	0	10.46	1.45	12.46	1.75	14.5	2.08	15.5	2.25	16.5	2.42	18.54	2.77	19.6	2.86
	2	10.46	1.48	12.46	1.77	14.5	2.1	15.5	2.28	16.5	2.45	18.54	2.81	19.6	2.91
	4	10.46	1.49	12.46	1.79	14.5	2.13	15.5	2.31	16.5	2.48	18.54	2.84	19.6	2.94
	6	10.46	1.51	12.46	1.83	14.5	2.16	15.5	2.35	16.5	2.51	18.54	2.88	19.6	2.98
	8	10.46	1.54	12.46	1.85	14.5	2.2	15.5	2.38	16.5	2.55	18.54	2.92	19.6	3.03
	10	10.46	1.56	12.46	1.89	14.5	2.24	15.5	2.42	16.5	2.6	18.54	2.97	19.6	3.08
	12	10.46	1.58	12.46	1.93	14.5	2.28	15.5	2.46	16.5	2.65	18.54	3.03	19.32	3.1
	14	10.46	1.61	12.46	1.96	14.5	2.32	15.5	2.51	16.5	2.7	18.54	3.09	19.1	3.14
	16	10.46	1.64	12.46	2	14.5	2.37	15.5	2.56	16.5	2.75	18.43	3.13	18.82	3.17
	18	10.46	1.68	12.46	2.03	14.5	2.41	15.5	2.61	16.5	2.81	18.21	3.23	18.6	3.25
	20	10.46	1.71	12.46	2.08	14.5	2.49	15.5	2.74	16.5	3.01	17.94	3.38	18.32	3.41
	21	10.46	1.72	12.46	2.1	14.5	2.58	15.5	2.84	16.5	3.11	17.83	3.46	18.21	3.49
	23	10.46	1.77	12.46	2.24	14.5	2.76	15.5	3.04	16.5	3.34	17.6	3.62	17.94	3.65
	25	10.46	1.88	12.46	2.39	14.5	2.95	15.5	3.26	16.5	3.58	17.33	3.78	17.71	3.81
	27	10.46	2.01	12.46	2.55	14.5	3.16	15.5	3.48	16.5	3.83	17.05	3.94	17.44	3.97
	29	10.46	2.14	12.46	2.72	14.5	3.37	15.5	3.72	16.44	4.06	16.83	4.1	17.22	4.13
	31	10.46	2.28	12.46	2.9	14.5	3.59	15.5	3.97	16.22	4.22	16.55	4.26	16.94	4.29
	33	10.46	2.42	12.46	3.09	14.5	3.83	15.5	4.24	15.94	4.38	16.33	4.42	16.72	4.46
35	10.46	2.57	12.46	3.28	14.5	4.09	15.5	4.52	15.67	4.54	16.05	4.58	16.44	4.62	
37	10.46	2.74	12.46	3.5	14.5	4.36	15.22	4.68	15.44	4.7	15.83	4.74	16.16	4.78	
39	10.46	2.91	12.46	3.72	14.5	4.64	15	4.84	15.17	4.86	15.56	4.9	15.94	4.95	
41	10.46	3.04	12.46	3.85	14.5	4.81	14.77	4.87	15.05	4.94	15.29	5.02	15.71	5.05	
43	10.46	3.18	12.46	3.99	14.5	4.89	14.54	4.93	14.94	4.98	15.38	5.05	15.43	5.11	



**MDV-V160W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:16		DB:23.3,WB:16		DB:25.8,WB:18		DB:27,WB:19		DB:28.2,WB:20		DB:30.7,WB:22		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
90%	-5	9.41	1.26	11.24	1.51	13.06	1.78	13.95	1.94	14.84	2.06	16.66	2.37	18.49	2.72
	-2	9.41	1.27	11.24	1.52	13.06	1.8	13.95	1.97	14.84	2.09	16.66	2.39	18.49	2.74
	0	9.41	1.29	11.24	1.54	13.06	1.83	13.95	1.99	14.84	2.11	16.66	2.42	18.49	2.76
	2	9.41	1.31	11.24	1.56	13.06	1.85	13.95	2.02	14.84	2.15	16.66	2.47	18.49	2.8
	4	9.41	1.33	11.24	1.58	13.06	1.88	13.95	2.05	14.84	2.17	16.66	2.51	18.49	2.84
	6	9.41	1.34	11.24	1.61	13.06	1.91	13.95	2.09	14.84	2.21	16.66	2.55	18.49	2.89
	8	9.41	1.37	11.24	1.65	13.06	1.95	13.95	2.11	14.84	2.25	16.66	2.6	18.49	2.92
	10	9.41	1.39	11.24	1.68	13.06	1.99	13.95	2.14	14.84	2.3	16.66	2.63	18.49	2.97
	12	9.41	1.42	11.24	1.71	13.06	2.02	13.95	2.18	14.84	2.35	16.66	2.68	18.49	3.02
	14	9.41	1.44	11.24	1.74	13.06	2.06	13.95	2.22	14.84	2.39	16.66	2.73	18.49	3.08
	16	9.41	1.47	11.24	1.77	13.06	2.1	13.95	2.27	14.84	2.44	16.66	2.78	18.43	3.13
	18	9.41	1.49	11.24	1.81	13.06	2.14	13.95	2.31	14.84	2.49	16.66	2.84	18.21	3.23
	20	9.41	1.52	11.24	1.85	13.06	2.18	13.95	2.36	14.84	2.58	16.66	3.05	17.94	3.38
	21	9.41	1.54	11.24	1.86	13.06	2.22	13.95	2.44	14.84	2.67	16.66	3.16	17.83	3.46
	23	9.41	1.57	11.24	1.94	13.06	2.38	13.95	2.61	14.84	2.86	16.66	3.39	17.55	3.62
	25	9.41	1.65	11.24	2.07	13.06	2.54	13.95	2.8	14.84	3.06	16.66	3.63	17.33	3.78
	27	9.41	1.75	11.24	2.21	13.06	2.71	13.95	2.98	14.84	3.27	16.66	3.89	17.05	3.93
	29	9.41	1.87	11.24	2.35	13.06	2.89	13.95	3.19	14.84	3.5	16.5	4.06	16.83	4.09
	31	9.41	1.99	11.24	2.5	13.06	3.08	13.95	3.4	14.84	3.73	16.22	4.22	16.55	4.26
	33	9.41	2.11	11.24	2.66	13.06	3.29	13.95	3.62	14.84	3.98	16	4.39	16.33	4.42
35	9.41	2.24	11.24	2.83	13.06	3.5	13.95	3.86	14.84	4.24	15.72	4.54	16.05	4.58	
37	9.41	2.38	11.24	3.01	13.06	3.73	13.95	4.11	14.84	4.52	15.44	4.7	15.83	4.74	
39	9.41	2.52	11.24	3.2	13.06	3.97	13.95	4.38	14.84	4.81	15.22	4.87	15.56	4.9	
41	9.41	2.61	11.24	3.35	13.06	4.11	13.95	4.5	14.84	4.84	15.12	4.99	15.45	5.02	
43	9.41	2.73	11.24	3.49	13.06	4.26	13.95	4.61	14.84	4.94	15.04	5.06	15.32	5.1	
80%	-5	8.36	1.11	9.96	1.31	11.57	1.55	12.4	1.65	13.23	1.77	14.84	2.05	16.44	2.34
	-2	8.36	1.12	9.96	1.32	11.57	1.56	12.4	1.67	13.23	1.79	14.84	2.07	16.44	2.36
	0	8.36	1.14	9.96	1.34	11.57	1.58	12.4	1.69	13.23	1.82	14.84	2.1	16.44	2.39
	2	8.36	1.16	9.96	1.36	11.57	1.6	12.4	1.72	13.23	1.85	14.84	2.14	16.44	2.44
	4	8.36	1.18	9.96	1.38	11.57	1.63	12.4	1.76	13.23	1.89	14.84	2.18	16.44	2.47
	6	8.36	1.2	9.96	1.42	11.57	1.66	12.4	1.8	13.23	1.92	14.84	2.21	16.44	2.51
	8	8.36	1.23	9.96	1.45	11.57	1.7	12.4	1.83	13.23	1.96	14.84	2.24	16.44	2.56
	10	8.36	1.24	9.96	1.48	11.57	1.74	12.4	1.88	13.23	2.01	14.84	2.3	16.44	2.59
	12	8.36	1.26	9.96	1.5	11.57	1.77	12.4	1.91	13.23	2.05	14.84	2.34	16.44	2.64
	14	8.36	1.28	9.96	1.54	11.57	1.8	12.4	1.94	13.23	2.09	14.84	2.38	16.44	2.69
	16	8.36	1.3	9.96	1.56	11.57	1.84	12.4	1.98	13.23	2.13	14.84	2.43	16.44	2.74
	18	8.36	1.32	9.96	1.59	11.57	1.88	12.4	2.02	13.23	2.17	14.84	2.48	16.44	2.79
	20	8.36	1.35	9.96	1.62	11.57	1.91	12.4	2.06	13.23	2.21	14.84	2.57	16.44	2.98
	21	8.36	1.36	9.96	1.63	11.57	1.93	12.4	2.08	13.23	2.26	14.84	2.66	16.44	3.09
	23	8.36	1.38	9.96	1.67	11.57	2.02	12.4	2.22	13.23	2.42	14.84	2.85	16.44	3.32
	25	8.36	1.43	9.96	1.77	11.57	2.16	12.4	2.37	13.23	2.58	14.84	3.05	16.44	3.55
	27	8.36	1.52	9.96	1.89	11.57	2.3	12.4	2.53	13.23	2.76	14.84	3.26	16.44	3.8
	29	8.36	1.61	9.96	2.01	11.57	2.46	12.4	2.69	13.23	2.95	14.84	3.48	16.44	4.06
	31	8.36	1.71	9.96	2.14	11.57	2.61	12.4	2.87	13.23	3.14	14.84	3.72	16.16	4.22
	33	8.36	1.82	9.96	2.27	11.57	2.78	12.4	3.06	13.23	3.34	14.84	3.96	15.94	4.38
35	8.36	1.93	9.96	2.42	11.57	2.96	12.4	3.25	13.23	3.56	14.84	4.22	15.67	4.54	
37	8.36	2.05	9.96	2.56	11.57	3.15	12.4	3.47	13.23	3.8	14.84	4.5	15.44	4.7	
39	8.36	2.17	9.96	2.74	11.57	3.35	12.4	3.69	13.23	4.04	14.84	4.79	15.17	4.86	
41	8.36	2.22	9.96	2.76	11.57	3.4	12.4	3.78	13.23	4.11	14.84	4.92	15.07	4.95	
43	8.36	2.28	9.96	2.78	11.57	3.45	12.4	3.85	13.23	4.17	14.84	4.97	14.98	5	

**MDV-V160W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB		DB:23.3,WB:16		DB:25.8,WB:18		DB:27,WB:19		DB:28.2,WB:20		DB:30.7,WB:22		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-5	7.31	0.99	8.75	1.16	10.13	1.31	10.85	1.41	11.57	1.5	12.95	1.72	14.39	1.97
	-2	7.31	1	8.75	1.16	10.13	1.32	10.85	1.43	11.57	1.53	12.95	1.74	14.39	2
	0	7.31	1	8.75	1.18	10.13	1.35	10.85	1.46	11.57	1.56	12.95	1.78	14.39	2.03
	2	7.31	1.01	8.75	1.18	10.13	1.37	10.85	1.49	11.57	1.58	12.95	1.82	14.39	2.06
	4	7.31	1.02	8.75	1.21	10.13	1.4	10.85	1.51	11.57	1.62	12.95	1.85	14.39	2.11
	6	7.31	1.04	8.75	1.24	10.13	1.43	10.85	1.56	11.57	1.66	12.95	1.88	14.39	2.15
	8	7.31	1.05	8.75	1.27	10.13	1.47	10.85	1.59	11.57	1.69	12.95	1.93	14.39	2.19
	10	7.31	1.08	8.75	1.29	10.13	1.5	10.85	1.62	11.57	1.74	12.95	1.97	14.39	2.22
	12	7.31	1.1	8.75	1.31	10.13	1.54	10.85	1.65	11.57	1.77	12.95	2.01	14.39	2.26
	14	7.31	1.12	8.75	1.33	10.13	1.56	10.85	1.68	11.57	1.8	12.95	2.05	14.39	2.3
	16	7.31	1.14	8.75	1.36	10.13	1.59	10.85	1.71	11.57	1.83	12.95	2.08	14.39	2.35
	18	7.31	1.16	8.75	1.38	10.13	1.62	10.85	1.74	11.57	1.86	12.95	2.13	14.39	2.39
	20	7.31	1.18	8.75	1.41	10.13	1.65	10.85	1.77	11.57	1.9	12.95	2.17	14.39	2.46
	21	7.31	1.19	8.75	1.42	10.13	1.66	10.85	1.79	11.57	1.92	12.95	2.2	14.39	2.55
	23	7.31	1.21	8.75	1.44	10.13	1.7	10.85	1.85	11.57	2.02	12.95	2.36	14.39	2.73
	25	7.31	1.23	8.75	1.5	10.13	1.81	10.85	1.98	11.57	2.15	12.95	2.52	14.39	2.92
	27	7.31	1.3	8.75	1.6	10.13	1.93	10.85	2.11	11.57	2.3	12.95	2.69	14.39	3.12
	29	7.31	1.38	8.75	1.7	10.13	2.05	10.85	2.25	11.57	2.44	12.95	2.87	14.39	3.33
	31	7.31	1.46	8.75	1.8	10.13	2.19	10.85	2.39	11.57	2.6	12.95	3.06	14.39	3.55
	33	7.31	1.55	8.75	1.92	10.13	2.33	10.85	2.54	11.57	2.77	12.95	3.26	14.39	3.79
35	7.31	1.64	8.75	2.03	10.13	2.47	10.85	2.7	11.57	2.95	12.95	3.47	14.39	4.04	
37	7.31	1.74	8.75	2.16	10.13	2.63	10.85	2.87	11.57	3.14	12.95	3.7	14.39	4.3	
39	7.31	1.84	8.75	2.28	10.13	2.78	10.85	3.05	11.57	3.33	12.95	3.93	14.39	4.58	
41	7.31	1.92	8.75	2.37	10.13	2.87	10.85	3.15	11.57	3.43	12.95	4.09	14.39	4.78	
43	7.31	2.08	8.75	2.53	10.13	2.98	10.85	3.32	11.57	3.54	12.95	4.24	14.39	4.93	
60%	-5	6.26	0.84	7.47	0.98	8.69	1.14	9.3	1.21	9.91	1.31	11.13	1.47	12.34	1.69
	-2	6.26	0.85	7.47	0.99	8.69	1.16	9.3	1.23	9.91	1.32	11.13	1.49	12.34	1.7
	0	6.26	0.86	7.47	1	8.69	1.17	9.3	1.25	9.91	1.34	11.13	1.51	12.34	1.72
	2	6.26	0.88	7.47	1.03	8.69	1.2	9.3	1.27	9.91	1.36	11.13	1.55	12.34	1.74
	4	6.26	0.9	7.47	1.05	8.69	1.22	9.3	1.29	9.91	1.38	11.13	1.57	12.34	1.77
	6	6.26	0.91	7.47	1.07	8.69	1.24	9.3	1.31	9.91	1.41	11.13	1.6	12.34	1.81
	8	6.26	0.93	7.47	1.08	8.69	1.27	9.3	1.34	9.91	1.44	11.13	1.63	12.34	1.84
	10	6.26	0.94	7.47	1.11	8.69	1.29	9.3	1.38	9.91	1.47	11.13	1.66	12.34	1.86
	12	6.26	0.96	7.47	1.13	8.69	1.31	9.3	1.4	9.91	1.49	11.13	1.69	12.34	1.89
	14	6.26	0.97	7.47	1.14	8.69	1.33	9.3	1.43	9.91	1.52	11.13	1.72	12.34	1.93
	16	6.26	0.99	7.47	1.16	8.69	1.35	9.3	1.45	9.91	1.55	11.13	1.75	12.34	1.97
	18	6.26	1	7.47	1.18	8.69	1.38	9.3	1.47	9.91	1.58	11.13	1.78	12.34	2
	20	6.26	1.02	7.47	1.21	8.69	1.4	9.3	1.5	9.91	1.61	11.13	1.82	12.34	2.05
	21	6.26	1.03	7.47	1.21	8.69	1.41	9.3	1.52	9.91	1.62	11.13	1.84	12.34	2.06
	23	6.26	1.04	7.47	1.24	8.69	1.44	9.3	1.55	9.91	1.65	11.13	1.91	12.34	2.2
	25	6.26	1.06	7.47	1.25	8.69	1.49	9.3	1.62	9.91	1.75	11.13	2.04	12.34	2.34
	27	6.26	1.1	7.47	1.33	8.69	1.59	9.3	1.73	9.91	1.87	11.13	2.17	12.34	2.5
	29	6.26	1.16	7.47	1.41	8.69	1.69	9.3	1.84	9.91	1.99	11.13	2.32	12.34	2.67
	31	6.26	1.24	7.47	1.5	8.69	1.8	9.3	1.96	9.91	2.12	11.13	2.47	12.34	2.84
	33	6.26	1.3	7.47	1.59	8.69	1.91	9.3	2.08	9.91	2.25	11.13	2.63	12.34	3.03
35	6.26	1.38	7.47	1.69	8.69	2.02	9.3	2.2	9.91	2.39	11.13	2.8	12.34	3.23	
37	6.26	1.46	7.47	1.78	8.69	2.14	9.3	2.34	9.91	2.54	11.13	2.97	12.34	3.44	
39	6.26	1.54	7.47	1.89	8.69	2.27	9.3	2.48	9.91	2.7	11.13	3.15	12.34	3.65	
41	6.26	1.59	7.47	1.97	8.69	2.35	9.3	2.58	9.91	2.8	11.13	3.3	12.34	3.82	
43	6.26	1.64	7.47	2.05	8.69	2.44	9.3	2.66	9.91	2.9	11.13	3.44	12.34	3.99	

**MDV-V160W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:14		DB:23.3,WB:16		DB:25.8,WB:18		DB:27,WB:19		DB:28.2,WB:20		DB:30.7,WB:22		DB:32,WB:24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-5	5.23	0.73	6.26	0.85	7.25	0.97	7.75	1.02	8.25	1.07	9.24	1.22	10.3	1.32
	-2	5.23	0.74	6.26	0.86	7.25	0.98	7.75	1.03	8.25	1.09	9.24	1.24	10.3	1.33
	0	5.23	0.75	6.26	0.88	7.25	1	7.75	1.05	8.25	1.11	9.24	1.26	10.3	1.36
	2	5.23	0.76	6.26	0.89	7.25	1.02	7.75	1.06	8.25	1.12	9.24	1.26	10.3	1.38
	4	5.23	0.77	6.26	0.9	7.25	1.03	7.75	1.07	8.25	1.15	9.24	1.29	10.3	1.42
	6	5.23	0.78	6.26	0.92	7.25	1.04	7.75	1.1	8.25	1.17	9.24	1.31	10.3	1.46
	8	5.23	0.8	6.26	0.93	7.25	1.06	7.75	1.12	8.25	1.18	9.24	1.34	10.3	1.51
	10	5.23	0.82	6.26	0.94	7.25	1.08	7.75	1.14	8.25	1.22	9.24	1.37	10.3	1.53
	12	5.23	0.82	6.26	0.96	7.25	1.1	7.75	1.16	8.25	1.24	9.24	1.39	10.3	1.55
	14	5.23	0.83	6.26	0.97	7.25	1.11	7.75	1.19	8.25	1.26	9.24	1.42	10.3	1.58
	16	5.23	0.85	6.26	0.98	7.25	1.13	7.75	1.21	8.25	1.28	9.24	1.44	10.3	1.61
	18	5.23	0.86	6.26	1	7.25	1.15	7.75	1.22	8.25	1.3	9.24	1.47	10.3	1.64
	20	5.23	0.87	6.26	1.01	7.25	1.16	7.75	1.24	8.25	1.33	9.24	1.49	10.3	1.67
	21	5.23	0.88	6.26	1.02	7.25	1.18	7.75	1.25	8.25	1.34	9.24	1.51	10.3	1.69
	23	5.23	0.89	6.26	1.04	7.25	1.19	7.75	1.28	8.25	1.36	9.24	1.53	10.3	1.72
	25	5.23	0.9	6.26	1.05	7.25	1.22	7.75	1.3	8.25	1.41	9.24	1.61	10.3	1.84
	27	5.23	0.92	6.26	1.1	7.25	1.29	7.75	1.39	8.25	1.49	9.24	1.72	10.3	1.96
	29	5.23	0.97	6.26	1.16	7.25	1.36	7.75	1.47	8.25	1.59	9.24	1.83	10.3	2.09
	31	5.23	1.02	6.26	1.22	7.25	1.44	7.75	1.57	8.25	1.69	9.24	1.94	10.3	2.22
	33	5.23	1.08	6.26	1.3	7.25	1.53	7.75	1.66	8.25	1.79	9.24	2.06	10.3	2.36
35	5.23	1.15	6.26	1.37	7.25	1.62	7.75	1.75	8.25	1.89	9.24	2.19	10.3	2.51	
37	5.23	1.21	6.26	1.45	7.25	1.72	7.75	1.86	8.25	2.01	9.24	2.33	10.3	2.67	
39	5.23	1.27	6.26	1.53	7.25	1.82	7.75	1.97	8.25	2.13	9.24	2.47	10.3	2.83	
41	5.23	1.33	6.26	1.59	7.25	1.88	7.75	2.06	8.25	2.22	9.24	2.6	10.3	2.96	
43	5.23	1.41	6.26	1.7	7.25	1.95	7.75	2.15	8.25	2.28	9.24	2.73	10.3	3.1	

**Note:**

1. [ ] is tested under our standard condition.
2. In cooling mode, avoid running the unit when outdoor air temperature is above 43 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V160W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
130%	-13.7	-15	12.09	3.77	12.04	3.99	11.98	4.21	11.98	4.31	11.93	4.42	11.93	4.64
	-11.8	-13	12.58	3.94	12.58	4.15	12.52	4.35	12.47	4.46	12.47	4.57	12.41	4.77
	-9.8	-11	13.17	4.11	13.11	4.31	13.06	4.51	13.06	4.61	13.06	4.71	13.01	4.91
	-9.5	-10	13.49	4.2	13.44	4.39	13.38	4.58	13.38	4.68	13.33	4.78	13.33	4.97
	-8.5	-9.1	13.76	4.27	13.71	4.46	13.71	4.65	13.65	4.75	13.65	4.84	13.6	5.03
	-7	-7.6	14.25	4.4	14.25	4.58	14.19	4.76	14.19	4.86	14.14	4.94	14.08	5.13
	-5	-5.6	15	4.57	14.95	4.74	14.89	4.91	14.89	5	14.84	5.08	14.84	5.25
	-3	-3.7	15.71	4.71	15.65	4.88	15.65	5.04	15.6	5.13	15.6	5.21	15.54	5.37
	0	-0.7	16.95	4.94	16.95	5.1	16.89	5.25	16.89	5.3	16.84	5.4	16.84	5.55
	3	2.2	18.29	5.15	18.24	5.29	18.19	5.43	18.19	5.5	18.19	5.58	18.13	5.71
	5	4.1	19.21	5.28	19.16	5.41	19.16	5.54	19.11	5.61	19.11	5.68	19.05	5.81
	7	6	20.18	5.4	20.13	5.53	20.13	5.66	20.08	5.72	20.08	5.78	19.27	5.55
	9	7.9	21.21	5.51	21.15	5.64	21.15	5.75	21.1	5.82	20.67	5.69	19.27	5.22
	11	9.8	22.29	5.62	22.24	5.74	22.13	5.81	21.37	5.58	20.67	5.35	19.27	4.91
	13	11.8	23.48	5.73	23.42	5.84	22.13	5.45	21.37	5.23	20.67	5.02	19.27	4.61
15	13.7	24.61	5.83	23.53	5.53	22.13	5.13	21.37	4.93	20.67	4.73	19.27	4.35	
120%	-13.7	-15	12.04	4.06	11.98	4.26	11.93	4.46	11.93	4.57	11.93	4.66	11.87	4.86
	-11.8	-13	12.52	4.22	12.52	4.41	12.47	4.6	12.47	4.7	12.41	4.79	12.41	4.99
	-9.8	-11	13.11	4.38	13.06	4.56	13.06	4.75	13.01	4.84	13.01	4.93	12.95	5.11
	-9.5	-10	13.44	4.46	13.39	4.64	13.33	4.81	13.33	4.91	13.33	4.99	13.28	5.17
	-8.5	-9.1	13.71	4.53	13.65	4.7	13.65	4.88	13.6	4.96	13.6	5.06	13.55	5.23
	-7	-7.6	14.19	4.65	14.19	4.81	14.14	4.98	14.14	5.07	14.09	5.15	14.09	5.32
	-5	-5.6	14.95	4.79	14.9	4.96	14.84	5.12	14.84	5.2	14.84	5.28	14.79	5.43
	-3	-3.7	15.65	4.94	15.65	5.09	15.6	5.24	15.6	5.32	15.54	5.4	15.54	5.54
	0	-0.7	16.89	5.15	16.89	5.29	16.84	5.43	16.84	5.5	16.78	5.57	16.78	5.71
	3	2.2	18.24	5.34	18.19	5.47	18.19	5.6	18.13	5.67	18.13	5.73	17.76	5.7
	5	4.1	19.16	5.46	19.11	5.58	19.11	5.71	19.05	5.77	19.05	5.83	17.76	5.35
	7	6	20.13	5.57	20.13	5.69	20.08	5.8	19.75	5.72	19.11	5.49	17.76	5.04
	9	7.9	21.16	5.68	21.1	5.79	20.4	5.6	19.75	5.38	19.11	5.16	17.76	4.74
	11	9.8	22.24	5.78	21.7	5.68	20.4	5.27	19.75	5.06	19.11	4.86	17.76	4.47
	13	11.8	23.04	5.72	21.7	5.33	20.4	4.94	19.75	4.75	19.11	4.57	17.76	4.2
15	13.7	23.04	5.39	21.7	5.02	20.4	4.66	19.75	4.48	19.11	4.31	17.76	3.96	
110%	-13.7	-15	11.98	4.36	11.93	4.54	11.87	4.72	11.87	4.81	11.87	4.91	11.82	5.09
	-11.8	-13	12.47	4.5	12.47	4.68	12.41	4.85	12.41	4.94	12.36	5.02	12.36	5.2
	-9.8	-11	13.06	4.65	13.01	4.81	13.01	4.98	12.95	5.07	12.95	5.15	12.95	5.32
	-9.5	-10	13.38	4.72	13.33	4.88	13.28	5.05	13.28	5.13	13.28	5.21	13.22	5.37
	-8.5	-9.1	13.65	4.78	13.6	4.94	13.6	5.1	13.55	5.19	13.55	5.27	13.55	4.8
	-7	-7.6	14.14	4.89	14.14	5.04	14.09	5.2	14.09	5.28	14.09	5.35	14.03	5.51
	-5	-5.6	14.9	5.03	14.84	5.18	14.79	5.32	14.79	5.4	14.79	5.47	14.73	5.62
	-3	-3.7	15.6	5.16	15.6	5.3	15.54	5.44	15.54	5.51	15.49	5.58	15.49	5.72
	0	-0.7	16.84	5.35	16.84	5.48	16.79	5.61	16.79	5.67	16.79	5.74	16.3	5.63
	3	2.2	18.19	5.53	18.13	5.65	18.13	5.77	18.08	5.82	17.49	5.59	16.3	5.12
	5	4.1	19.11	5.64	19.11	5.75	18.73	5.7	18.08	5.47	17.49	5.25	16.3	4.82
	7	6	20.08	5.74	19.91	5.78	18.73	5.35	18.08	5.14	17.49	4.94	16.3	4.53
	9	7.9	21.1	5.84	19.91	5.43	18.73	5.04	18.08	4.84	17.49	4.65	16.3	4.27
	11	9.8	21.1	5.49	19.91	5.11	18.73	4.74	18.08	4.56	17.49	4.38	16.3	4.03
	13	11.8	21.1	5.15	19.91	4.79	18.73	4.45	18.08	4.29	17.49	4.12	16.3	3.8
15	13.7	21.1	4.57	19.91	4.52	18.73	4.21	18.08	4.05	17.49	3.9	16.3	3.59	

**MDV-V160W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
100%	-13.7	-15	11.93	4.65	11.87	4.81	11.82	4.98	11.82	5.07	11.82	5.15	11.77	5.31
	-11.8	-13	12.41	4.78	12.41	4.94	12.36	5.1	12.36	5.18	12.36	5.26	12.3	5.42
	-9.8	-11	13.01	4.91	12.95	5.07	12.95	5.22	12.95	5.3	12.9	5.37	12.9	5.52
	-9.5	-10	13.33	4.98	13.28	5.13	13.28	5.28	13.22	5.35	13.22	5.43	13.17	5.58
	-8.5	-9.1	13.6	5.04	13.55	5.18	13.55	5.33	13.55	5.4	13.49	5.48	13.49	5.62
	-7	-7.6	14.09	5.14	14.09	5.28	14.03	5.41	14.03	5.49	14.03	5.56	13.98	5.7
	-5	-5.6	14.84	5.27	14.79	5.4	14.79	5.53	14.73	5.59	14.73	5.66	14.68	5.8
	-3	-3.7	15.54	5.38	15.54	4.89	15.49	5.64	15.49	5.7	15.49	5.76	14.84	5.52
	0	-0.7	16.78	5.56	16.78	5.67	16.73	5.79	16.46	5.7	15.92	5.46	14.84	5.01
	3	2.2	18.13	5.72	18.08	5.82	17	5.39	16.46	5.18	15.92	4.97	14.84	4.57
	5	4.1	19.05	5.82	18.08	5.47	17	5.07	16.46	4.87	15.92	4.68	14.84	4.31
	7	6	19.16	5.53	18.08	5.14	17	4.77	16.46	4.59	15.92	4.41	14.84	4.06
	9	7.9	19.16	5.19	18.08	4.84	17	4.49	16.46	4.27	15.92	4.16	14.84	3.83
	11	9.8	19.16	4.89	18.08	4.56	17	4.24	16.46	4.08	15.92	3.92	14.84	3.62
	13	11.8	19.16	4.59	18.08	4.29	17	3.99	16.46	3.84	15.92	3.7	14.84	3.41
15	13.7	19.16	4.33	18.08	4.05	17	3.77	16.46	3.63	15.92	3.49	14.84	3.23	
90%	-13.7	-15	11.85	4.94	11.8	5.09	11.8	5.24	11.74	5.31	11.74	5.39	11.74	5.54
	-11.8	-13	12.34	5.06	12.34	5.2	12.28	5.35	12.28	5.42	12.28	5.49	12.23	5.63
	-9.8	-11	12.93	5.18	12.93	5.32	12.87	5.45	12.87	5.52	12.87	5.59	12.82	5.73
	-9.5	-10	13.25	5.24	13.2	5.38	13.2	5.51	13.15	5.58	13.15	5.64	13.15	5.77
	-8.5	-9.1	13.52	5.3	13.52	5.43	13.47	5.56	13.47	5.62	13.47	5.69	13.31	5.74
	-7	-7.6	14.01	5.38	14.01	5.51	13.95	5.64	13.95	5.7	13.95	5.76	13.31	5.48
	-5	-5.6	14.76	5.5	14.71	5.62	14.71	5.74	14.65	5.8	14.28	5.62	13.31	5.15
	-3	-3.7	15.46	5.61	15.46	5.72	15.3	5.74	14.76	5.51	14.28	5.29	13.31	4.86
	0	-0.7	16.76	5.77	16.27	5.62	15.3	5.21	14.76	5.01	14.28	4.81	13.31	4.42
	3	2.2	17.24	5.49	16.27	5.12	15.3	4.75	14.76	4.57	14.28	4.39	13.31	4.04
	5	4.1	17.24	5.17	16.27	4.81	15.3	4.47	14.76	4.3	14.28	4.14	13.31	3.81
	7	6	17.24	4.86	16.27	4.53	15.3	4.21	14.76	4.06	14.28	3.9	13.31	3.6
	9	7.9	17.24	4.58	16.27	4.27	15.3	3.97	14.76	3.83	14.28	3.69	13.31	3.4
	11	9.8	17.24	4.31	16.27	4.03	15.3	3.75	14.76	3.62	14.28	3.48	13.31	3.22
	13	11.8	17.24	4.06	16.27	3.8	15.3	3.54	14.76	3.41	14.28	3.29	13.31	3.04
15	13.7	17.24	3.83	16.27	3.59	15.3	3.35	14.76	3.23	14.28	3.12	13.31	2.89	
80%	-13.7	-15	11.82	5.23	11.77	5.36	11.77	5.5	11.77	5.56	11.71	5.63	11.71	5.77
	-11.8	-13	12.31	5.34	12.31	5.47	12.25	5.59	12.25	5.66	12.25	5.72	11.87	5.57
	-9.8	-11	12.9	5.45	12.9	5.57	12.84	5.69	12.84	5.75	12.74	5.74	11.87	5.26
	-9.5	-10	13.22	5.5	13.17	5.62	13.17	5.74	13.17	5.8	12.74	5.57	11.87	5.1
	-8.5	-9.1	13.49	5.55	12.54	5.67	13.44	5.78	13.17	5.65	12.74	5.42	11.87	4.97
	-7	-7.6	13.98	5.63	13.98	5.74	13.6	5.62	13.17	5.4	12.74	5.18	11.87	4.75
	-5	-5.6	14.73	5.73	14.46	5.7	13.6	5.28	13.17	5.07	12.74	4.87	11.87	4.47
	-3	-3.7	15.33	5.76	14.46	5.36	13.6	4.97	13.17	4.78	12.74	4.59	11.87	4.22
	0	-0.7	15.33	5.23	14.46	4.87	13.6	4.52	13.17	4.35	12.74	4.18	11.87	3.85
	3	2.2	15.33	4.76	14.46	4.44	13.6	4.13	13.17	3.98	12.74	3.83	11.87	3.53
	5	4.1	15.33	4.49	14.46	4.19	13.6	3.9	13.17	3.75	12.74	3.62	11.87	3.34
	7	6	15.33	4.22	14.46	3.95	13.6	3.68	13.17	3.55	12.74	3.42	11.87	3.16
	9	7.9	15.33	3.99	14.46	3.73	13.6	3.47	13.17	3.35	12.74	3.23	11.87	2.99
	11	9.8	15.33	3.77	14.46	3.52	13.6	3.29	13.17	3.17	12.74	3.06	11.87	2.84
	13	11.8	15.33	3.55	14.46	3.33	13.6	3.11	13.17	3	12.74	2.89	11.87	2.68
15	13.7	15.33	3.36	14.46	3.15	13.6	2.95	13.17	2.84	12.74	2.74	11.87	2.55	

**MDV-V160W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-13.7	-15	11.74	5.53	11.68	5.64	11.68	5.76	11.47	5.67	11.09	5.44	10.34	4.99
	-11.8	-13	12.22	5.62	12.22	5.73	11.9	5.59	11.47	5.38	11.09	5.16	10.34	4.73
	-9.8	-11	12.82	5.71	12.65	5.71	11.9	5.28	11.47	5.08	11.09	4.88	10.34	4.48
	-9.5	-10	13.14	5.76	12.65	5.54	11.9	5.13	11.47	4.93	11.09	4.74	10.34	4.35
	-8.5	-9.1	13.41	5.79	12.65	5.39	11.9	4.99	11.47	4.8	11.09	4.61	10.34	4.24
	-7	-7.6	13.41	5.53	12.65	5.15	11.9	4.78	11.47	4.6	11.09	4.42	10.34	4.06
	-5	-5.6	13.41	5.2	12.65	4.84	11.9	4.5	11.47	4.32	11.09	5.11	10.34	3.83
	-3	-3.7	13.41	4.89	12.65	4.57	11.9	4.24	11.47	4.08	11.09	3.93	10.34	3.62
	0	-0.7	13.41	4.45	12.65	4.16	11.9	3.87	11.47	3.73	11.09	3.59	10.34	3.32
	3	2.2	13.41	4.07	12.65	3.81	11.9	3.55	11.47	3.42	11.09	3.3	10.34	3.05
	5	4.1	13.41	3.84	12.65	3.59	11.9	3.36	11.47	3.23	11.09	3.12	10.34	2.89
	7	6	13.41	3.63	12.65	3.4	11.9	3.17	11.47	3.06	11.09	2.95	10.34	2.74
	9	7.9	13.41	3.43	12.65	3.22	11.9	3	11.47	2.9	11.09	2.8	10.34	2.6
	11	9.8	13.41	3.25	12.65	3.04	11.9	2.85	11.47	2.75	11.09	2.66	10.34	2.47
	13	11.8	13.41	3.07	12.65	2.88	11.9	2.69	11.47	2.61	11.09	2.52	10.34	2.34
15	13.7	13.41	2.91	12.65	2.73	11.9	2.56	11.47	2.48	11.09	2.39	10.34	2.23	
60%	-13.7	-15	11.5	5.67	10.85	5.28	10.2	4.89	9.88	4.71	9.55	4.52	8.9	4.16
	-11.8	-13	11.5	5.37	10.85	5	10.2	4.64	9.88	4.47	9.55	4.29	8.9	3.97
	-9.8	-11	11.5	5.07	10.85	4.73	10.2	4.39	9.88	4.22	9.55	4.06	8.9	3.75
	-9.5	-10	11.5	4.93	10.85	4.6	10.2	4.27	9.88	4.11	9.55	3.95	8.9	3.64
	-8.5	-9.1	11.5	4.8	10.85	4.48	10.2	4.16	9.88	4.01	9.55	3.85	8.9	3.56
	-7	-7.6	11.5	4.59	10.85	4.29	10.2	3.98	9.88	3.84	9.55	3.69	8.9	3.41
	-5	-5.6	11.5	4.32	10.85	4.04	10.2	3.76	9.88	3.62	9.55	3.49	8.9	3.23
	-3	-3.7	11.5	4.08	10.85	3.82	10.2	3.56	9.88	3.43	9.55	3.3	8.9	3.05
	0	-0.7	11.5	3.73	10.85	3.49	10.2	3.26	9.88	3.15	9.55	3.03	8.9	2.81
	3	2.2	11.5	3.42	10.85	3.21	10.2	3	9.88	2.89	9.55	2.79	8.9	2.59
	5	4.1	11.5	3.23	10.85	3.04	10.2	2.84	9.88	2.74	9.55	2.65	8.9	2.46
	7	6	11.5	3.06	10.85	2.87	10.2	2.69	9.88	2.6	9.55	2.51	8.9	2.34
	9	7.9	11.5	2.9	10.85	2.73	10.2	2.55	9.88	2.47	9.55	2.38	8.9	2.22
	11	9.8	11.5	2.75	10.85	2.59	10.2	2.43	9.88	2.35	9.55	2.27	8.9	2.12
	13	11.8	11.5	2.6	10.85	2.45	10.2	2.3	9.88	2.23	9.55	2.16	8.9	2.01
15	13.7	11.5	2.48	10.85	2.33	10.2	2.19	9.88	2.12	9.55	2.06	8.9	1.92	
50%	-13.7	-15	9.58	4.55	9.04	4.24	8.5	3.95	8.18	3.8	7.91	3.66	7.37	3.38
	-11.8	-13	9.58	4.32	9.04	4.03	8.5	3.75	8.18	3.62	7.91	3.48	7.37	3.22
	-9.8	-11	9.58	4.09	9.04	3.82	8.5	3.56	8.18	3.43	7.91	3.31	7.37	3.06
	-9.5	-10	9.58	3.98	9.04	3.72	8.5	3.47	8.18	3.34	7.91	3.22	7.37	2.98
	-8.5	-9.1	9.58	3.88	9.04	3.63	8.5	3.38	8.18	3.26	7.91	3.15	7.37	2.91
	-7	-7.6	9.58	3.72	9.04	3.48	8.5	3.25	8.18	3.13	7.91	3.02	7.37	2.8
	-5	-5.6	9.58	3.51	9.04	3.29	8.5	3.07	8.18	2.97	7.91	2.86	7.37	2.65
	-3	-3.7	9.58	3.32	9.04	3.12	8.5	2.91	8.18	2.81	7.91	2.71	7.37	2.52
	0	-0.7	9.58	3.05	9.04	2.86	8.5	2.68	8.18	2.59	7.91	2.5	7.37	2.33
	3	2.2	9.58	2.81	9.04	2.64	8.5	2.47	8.18	2.39	7.91	2.31	7.37	2.16
	5	4.1	9.58	2.66	9.04	2.5	8.5	2.35	8.18	2.27	7.91	2.2	7.37	2.05
	7	6	9.58	2.53	9.04	2.38	8.5	2.24	8.18	2.16	7.91	2.09	7.37	1.96
	9	7.9	9.58	2.4	9.04	2.26	8.5	2.12	8.18	2.06	7.91	1.99	7.37	1.86
	11	9.8	9.58	2.28	9.04	2.15	8.5	2.03	8.18	1.96	7.91	1.9	7.37	1.78
	13	11.8	9.58	2.17	9.04	2.04	8.5	1.93	8.18	1.87	7.91	1.81	7.37	1.7
15	13.7	9.58	2.06	9.04	1.95	8.5	1.84	8.18	1.78	7.91	1.73	7.37	1.62	

**Note:**

1. [ ] is tested under our standard condition.
2. In heating mode, avoid running the unit when the outdoor air temperature is below -15 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V180W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-5	15.37	2.17	18.31	2.64	21.25	2.83	22.06	2.95	23.12	3.03	23.69	3.3	24.28	3.32
	-2	15.37	2.17	18.31	2.7	21.25	2.83	22.06	2.97	23.12	3.03	23.69	3.34	24.28	3.35
	0	15.37	2.2	18.31	2.74	21.25	2.94	22.06	3.13	23.12	3.21	23.69	3.38	24.28	3.4
	2	15.37	2.24	18.31	2.75	21.25	3.04	22.06	3.31	23.12	3.25	23.69	3.41	24.28	3.45
	4	15.37	2.29	18.31	2.8	21.25	3.14	22.06	3.32	23.12	3.29	23.69	3.4	24.28	3.51
	6	15.37	2.34	18.31	2.86	21.25	3.26	22.06	3.35	22.87	3.39	23.4	3.4	24.02	3.54
	8	15.37	2.39	18.31	2.92	21.25	3.42	22.06	3.51	22.58	3.5	23.14	3.9	23.71	3.57
	10	15.37	2.44	18.31	2.99	21.25	3.55	22.06	3.63	22.31	4.04	22.87	4.06	23.44	3.68
	12	15.37	2.49	18.31	3.04	21.25	3.62	21.75	4.03	22.06	4.06	22.56	4.07	23.12	3.7
	14	15.37	2.54	18.31	3.1	21.19	4.05	21.5	4.06	21.75	4.08	22.31	4.09	22.87	3.78
	16	15.37	2.58	18.31	3.16	20.94	4.06	21.19	4.08	21.44	4.1	22	4.12	22.56	3.84
	18	15.37	2.63	18.31	3.23	20.62	3.79	20.87	3.81	21.19	3.83	21.75	3.86	22.31	3.9
	20	15.37	2.69	18.31	3.44	20.31	3.97	20.62	3.99	20.87	4.01	21.44	4.05	22	4.09
	21	15.37	2.76	18.31	3.56	20.19	4.06	20.5	4.09	20.75	4.11	21.31	4.15	21.87	4.19
	23	15.37	2.96	18.31	3.81	19.94	4.25	20.19	4.27	20.44	4.29	21	4.34	21.56	4.38
	25	15.37	3.16	18.31	4.09	19.62	4.44	19.87	4.46	20.19	4.49	20.75	4.53	21.31	4.57
	27	15.37	3.37	18.31	4.37	19.37	4.62	19.62	4.65	19.87	4.67	20.44	4.72	21	4.77
	29	15.37	3.6	18.31	4.67	19.06	4.81	19.31	4.84	19.62	4.86	20.19	4.91	20.75	4.96
	31	15.37	3.84	18.25	4.94	18.75	5	19.06	5.03	19.31	5.05	19.87	5.11	20.44	5.16
	33	15.37	4.09	17.94	5.13	18.5	5.19	18.75	5.21	19.06	5.24	19.62	5.3	20.12	5.36
35	15.37	4.36	17.62	5.31	18.19	5.38	18.5	5.41	18.75	5.44	19.31	5.5	19.87	5.56	
37	15.37	4.64	17.37	5.51	17.94	5.57	18.19	5.6	18.5	5.64	19	5.7	19.56	5.77	
39	15.37	4.94	17.06	5.56	17.62	5.76	17.94	5.79	18.19	5.83	18.75	5.89	19.31	5.96	
41	15.37	5.2	16.89	5.62	17.44	5.81	17.75	5.85	18	5.88	18.56	5.91	18.57	6.02	
43	15.37	5.33	16.76	5.65	17.35	5.83	17.66	5.87	17.82	5.89	18.23	5.92	18.35	6.03	
120%	-5	14.19	2.09	16.87	2.53	19.63	3	21	3.27	22	3.41	22.5	3.52	23	3.61
	-2	14.19	2.11	16.87	2.56	19.63	3.03	21	3.29	22	3.45	22.5	3.55	23	3.62
	0	14.19	2.13	16.87	2.58	19.63	3.06	21	3.3	22	3.48	22.5	3.57	23	3.63
	2	14.19	2.14	16.87	2.61	19.63	3.08	21	3.33	22	3.49	22.5	3.59	23	3.64
	4	14.19	2.16	16.87	2.64	19.63	3.13	21	3.36	22	3.54	22.5	3.6	23	3.65
	6	14.19	2.18	16.87	2.66	19.63	3.16	21	3.39	22	3.58	22.5	3.63	23	3.66
	8	14.19	2.2	16.87	2.69	19.63	3.21	21	3.44	22	3.61	22.5	3.64	23	3.68
	10	14.19	2.23	16.87	2.72	19.63	3.24	21	3.5	22	3.62	22.5	3.65	23	3.69
	12	14.19	2.27	16.87	2.77	19.63	3.3	21	3.56	21.69	3.63	22.19	3.63	22.69	3.72
	14	14.19	2.31	16.87	2.83	19.63	3.36	21	3.64	21.37	3.65	21.94	3.69	22.44	3.76
	16	14.19	2.36	16.87	2.89	19.63	3.43	20.87	4.1	21.12	3.71	21.62	3.75	22.12	3.82
	18	14.19	2.4	16.87	2.94	19.63	3.54	20.56	3.79	20.81	3.8	21.31	3.84	21.87	3.87
	20	14.19	2.45	16.87	3.06	19.63	3.81	20.31	3.97	20.56	3.99	21.06	4.02	21.56	4.06
	21	14.19	2.47	16.87	3.16	19.63	3.95	20.12	4.06	20.37	4.08	20.94	4.11	21.44	4.16
	23	14.19	2.64	16.87	3.39	19.63	4.23	19.88	4.24	20.12	4.26	20.62	4.31	21.12	4.34
	25	14.19	2.82	16.87	3.63	19.31	4.41	19.56	4.43	19.81	4.45	20.37	4.49	20.87	4.54
	27	14.19	3.01	16.87	3.88	19.06	4.59	19.31	4.62	19.56	4.64	20.06	4.69	20.56	4.73
	29	14.19	3.21	16.87	4.14	18.75	4.78	19	4.81	19.25	4.83	19.75	4.88	20.31	4.92
	31	14.19	3.43	16.87	4.42	18.44	4.97	18.75	4.99	19	5.02	19.5	5.07	20	5.12
	33	14.19	3.65	16.87	4.71	18.19	5.16	18.44	5.19	18.69	5.21	19.19	5.26	19.69	5.31
35	14.19	3.89	16.87	5.03	17.87	5.34	18.12	5.37	18.44	5.4	18.94	5.46	19.44	5.51	
37	14.19	4.14	16.87	5.36	17.62	5.54	17.87	5.56	18.12	5.59	18.62	5.65	19.13	5.71	
39	14.19	4.4	16.81	5.66	17.31	5.72	17.56	5.76	17.81	5.79	18.37	5.85	18.88	5.91	
41	14.19	4.52	16.68	5.7	17.18	5.76	17.43	5.8	17.68	5.83	18.24	5.87	18.33	5.95	
43	14.19	4.59	16.59	5.74	17.04	5.8	17.29	5.82	17.54	5.85	17.92	5.88	18.05	6.07	

**MDV-V180W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
110%	-5	13	1.83	15.5	2.27	18	2.71	19.25	2.91	20.5	3.13	22.06	3.26	22.56	3.36
	-2	13	1.86	15.5	2.3	18	2.74	19.25	2.94	20.5	3.16	22.06	3.29	22.56	3.37
	0	13	1.88	15.5	2.32	18	2.76	19.25	2.96	20.5	3.19	22.06	3.32	22.56	3.42
	2	13	1.92	15.5	2.34	18	2.8	19.25	2.99	20.5	3.23	22.06	3.37	22.56	3.46
	4	13	1.96	15.5	2.37	18	2.83	19.25	3.03	20.5	3.28	22.06	3.42	22.56	3.49
	6	13	1.98	15.5	2.39	18	2.86	19.25	3.08	20.5	3.31	22.06	3.45	22.56	3.54
	8	13	2	15.5	2.43	18	2.89	19.25	3.11	20.5	3.35	22.06	3.47	22.56	3.58
	10	13	2.02	15.5	2.46	18	2.93	19.25	3.16	20.5	3.41	22.06	3.5	22.56	3.61
	12	13	2.06	15.5	2.51	18	2.99	19.25	3.23	20.5	3.47	21.81	3.55	22.25	3.66
	14	13	2.1	15.5	2.56	18	3.04	19.25	3.29	20.5	3.54	21.5	3.58	22	3.68
	16	13	2.14	15.5	2.61	18	3.1	19.25	3.35	20.5	3.61	21.25	3.62	21.69	3.72
	18	13	2.18	15.5	2.66	18	3.16	19.25	3.44	20.5	3.78	20.94	3.81	21.44	3.84
	20	13	2.22	15.5	2.71	18	3.35	19.25	3.7	20.19	3.96	20.69	3.99	21.13	4.03
	21	13	2.24	15.5	2.79	18	3.47	19.25	3.84	20.06	4.06	20.5	4.09	21	4.12
	23	13	2.35	15.5	2.99	18	3.72	19.25	4.11	19.75	4.24	20.25	4.28	20.69	4.31
	25	13	2.51	15.5	3.2	18	3.98	19.25	4.41	19.5	4.42	19.94	4.46	20.44	4.5
	27	13	2.67	15.5	3.42	18	4.26	18.94	4.59	19.19	4.61	19.69	4.65	20.13	4.69
	29	13	2.85	15.5	3.65	18	4.55	18.69	4.78	18.94	4.8	19.38	4.84	19.88	4.89
	31	13	3.04	15.5	3.89	18	4.86	18.38	4.96	18.63	4.99	19.13	5.03	19.56	5.08
	33	13	3.23	15.5	4.15	17.88	5.12	18.12	5.15	18.38	5.17	18.81	5.22	19.31	5.27
35	13	3.44	15.5	4.42	17.56	5.31	17.81	5.34	18.06	5.36	18.5	5.41	19	5.46	
37	13	3.66	15.5	4.71	17.31	5.5	17.56	5.52	17.75	5.55	18.25	5.61	18.69	5.66	
39	13	3.89	15.5	5.01	17	5.69	17.25	5.71	17.5	5.74	17.94	5.8	18.44	5.86	
41	13	3.93	15.5	5.05	16.87	5.73	17.12	5.75	17.37	5.78	17.71	5.84	17.88	5.9	
43	13	3.97	15.5	5.12	16.73	5.77	16.98	5.79	17.23	5.82	17.55	5.86	17.61	6.02	
100%	-5	11.81	1.66	14.06	2	16.37	2.39	17.5	2.55	18.63	2.77	20.94	3.16	22.13	3.3
	-2	11.81	1.68	14.06	2.03	16.37	2.41	17.5	2.6	18.63	2.81	20.94	3.2	22.13	3.32
	0	11.81	1.7	14.06	2.05	16.37	2.44	17.5	2.63	18.63	2.84	20.94	3.25	22.13	3.35
	2	11.81	1.74	14.06	2.08	16.37	2.46	17.5	2.67	18.63	2.87	20.94	3.3	22.13	3.41
	4	11.81	1.75	14.06	2.1	16.37	2.5	17.5	2.71	18.63	2.9	20.94	3.33	22.13	3.45
	6	11.81	1.77	14.06	2.14	16.37	2.53	17.5	2.76	18.63	2.95	20.94	3.38	22.13	3.5
	8	11.81	1.81	14.06	2.17	16.37	2.58	17.5	2.79	18.63	2.99	20.94	3.43	22.13	3.56
	10	11.81	1.83	14.06	2.21	16.37	2.62	17.5	2.84	18.63	3.05	20.94	3.49	22.13	3.61
	12	11.81	1.86	14.06	2.26	16.37	2.67	17.5	2.89	18.63	3.11	20.94	3.55	21.81	3.64
	14	11.81	1.89	14.06	2.3	16.37	2.72	17.5	2.94	18.63	3.16	20.94	3.62	21.56	3.68
	16	11.81	1.93	14.06	2.34	16.37	2.78	17.5	3	18.63	3.23	20.81	3.66	21.25	3.72
	18	11.81	1.96	14.06	2.39	16.37	2.83	17.5	3.06	18.63	3.29	20.56	3.79	21	3.81
	20	11.81	2	14.06	2.44	16.37	2.91	17.5	3.21	18.63	3.53	20.25	3.96	20.69	4
	21	11.81	2.02	14.06	2.46	16.37	3.02	17.5	3.33	18.63	3.65	20.13	4.06	20.56	4.09
	23	11.81	2.07	14.06	2.62	16.37	3.24	17.5	3.56	18.63	3.91	19.87	4.24	20.25	4.28
	25	11.81	2.21	14.06	2.8	16.37	3.46	17.5	3.82	18.63	4.19	19.56	4.43	20	4.46
	27	11.81	2.36	14.06	2.99	16.37	3.7	17.5	4.09	18.63	4.49	19.25	4.61	19.69	4.66
	29	11.81	2.51	14.06	3.19	16.37	3.95	17.5	4.36	18.56	4.76	19	4.81	19.44	4.84
	31	11.81	2.67	14.06	3.4	16.37	4.21	17.5	4.66	18.31	4.95	18.69	4.99	19.12	5.04
	33	11.81	2.84	14.06	3.62	16.37	4.49	17.5	4.97	18	5.14	18.44	5.18	18.88	5.23
35	11.81	3.01	14.06	3.85	16.37	4.79	17.5	5.3	17.69	5.32	18.12	5.37	18.56	5.41	
37	11.81	3.21	14.06	4.1	16.37	5.11	17.19	5.49	17.44	5.51	17.87	5.56	18.25	5.61	
39	11.81	3.41	14.06	4.36	16.37	5.44	16.94	5.67	17.12	5.7	17.56	5.75	18	5.81	
41	11.81	3.57	14.06	4.52	16.37	5.63	16.67	5.71	16.99	5.79	17.26	5.89	17.74	5.93	
43	11.81	3.72	14.06	4.68	16.37	5.74	16.41	5.78	16.87	5.84	17.36	5.92	17.43	5.99	



**MDV-V180W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
90%	-5	10.62	1.47	12.69	1.77	14.75	2.08	15.75	2.27	16.75	2.42	18.81	2.78	20.88	3.18
	-2	10.62	1.49	12.69	1.78	14.75	2.11	15.75	2.3	16.75	2.45	18.81	2.81	20.88	3.22
	0	10.62	1.51	12.69	1.81	14.75	2.14	15.75	2.33	16.75	2.48	18.81	2.84	20.88	3.24
	2	10.62	1.53	12.69	1.83	14.75	2.16	15.75	2.37	16.75	2.52	18.81	2.9	20.88	3.29
	4	10.62	1.55	12.69	1.86	14.75	2.2	15.75	2.4	16.75	2.55	18.81	2.94	20.88	3.34
	6	10.62	1.57	12.69	1.89	14.75	2.24	15.75	2.45	16.75	2.59	18.81	2.99	20.88	3.39
	8	10.62	1.61	12.69	1.93	14.75	2.29	15.75	2.48	16.75	2.64	18.81	3.04	20.88	3.42
	10	10.62	1.64	12.69	1.97	14.75	2.33	15.75	2.51	16.75	2.7	18.81	3.08	20.88	3.48
	12	10.62	1.66	12.69	2.01	14.75	2.37	15.75	2.56	16.75	2.75	18.81	3.14	20.88	3.54
	14	10.62	1.69	12.69	2.04	14.75	2.41	15.75	2.61	16.75	2.8	18.81	3.2	20.88	3.61
	16	10.62	1.72	12.69	2.08	14.75	2.46	15.75	2.66	16.75	2.86	18.81	3.26	20.81	3.67
	18	10.62	1.75	12.69	2.12	14.75	2.51	15.75	2.71	16.75	2.91	18.81	3.33	20.56	3.79
	20	10.62	1.79	12.69	2.17	14.75	2.56	15.75	2.76	16.75	3.02	18.81	3.58	20.25	3.96
	21	10.62	1.8	12.69	2.19	14.75	2.6	15.75	2.86	16.75	3.13	18.81	3.71	20.13	4.06
	23	10.62	1.84	12.69	2.27	14.75	2.79	15.75	3.06	16.75	3.36	18.81	3.98	19.81	4.24
	25	10.62	1.94	12.69	2.43	14.75	2.98	15.75	3.28	16.75	3.59	18.81	4.26	19.56	4.43
	27	10.62	2.06	12.69	2.59	14.75	3.18	15.75	3.5	16.75	3.84	18.81	4.56	19.25	4.61
	29	10.62	2.19	12.69	2.76	14.75	3.39	15.75	3.74	16.75	4.1	18.62	4.76	19	4.8
	31	10.62	2.33	12.69	2.94	14.75	3.61	15.75	3.99	16.75	4.37	18.31	4.95	18.69	4.99
	33	10.62	2.47	12.69	3.12	14.75	3.86	15.75	4.25	16.75	4.66	18.06	5.14	18.44	5.18
35	10.62	2.63	12.69	3.32	14.75	4.11	15.75	4.53	16.75	4.97	17.75	5.33	18.13	5.37	
37	10.62	2.79	12.69	3.53	14.75	4.37	15.75	4.82	16.75	5.3	17.44	5.51	17.87	5.56	
39	10.62	2.96	12.69	3.76	14.75	4.65	15.75	5.14	16.75	5.64	17.19	5.71	17.56	5.75	
41	10.62	3.06	12.69	3.93	14.75	4.82	15.75	5.27	16.75	5.68	17.07	5.85	17.44	5.89	
43	10.62	3.21	12.69	4.1	14.75	4.99	15.75	5.41	16.75	5.8	16.98	5.93	17.29	5.98	
80%	-5	9.44	1.3	11.25	1.53	13.06	1.82	14	1.93	14.94	2.08	16.75	2.4	18.56	2.74
	-2	9.44	1.32	11.25	1.55	13.06	1.83	14	1.96	14.94	2.1	16.75	2.43	18.56	2.77
	0	9.44	1.34	11.25	1.57	13.06	1.85	14	1.98	14.94	2.14	16.75	2.46	18.56	2.81
	2	9.44	1.37	11.25	1.59	13.06	1.88	14	2.02	14.94	2.17	16.75	2.51	18.56	2.86
	4	9.44	1.39	11.25	1.62	13.06	1.92	14	2.07	14.94	2.21	16.75	2.56	18.56	2.9
	6	9.44	1.41	11.25	1.66	13.06	1.95	14	2.11	14.94	2.25	16.75	2.59	18.56	2.95
	8	9.44	1.44	11.25	1.7	13.06	1.99	14	2.15	14.94	2.3	16.75	2.63	18.56	3.01
	10	9.44	1.45	11.25	1.74	13.06	2.04	14	2.2	14.94	2.36	16.75	2.69	18.56	3.04
	12	9.44	1.47	11.25	1.76	13.06	2.08	14	2.24	14.94	2.41	16.75	2.74	18.56	3.09
	14	9.44	1.5	11.25	1.8	13.06	2.11	14	2.28	14.94	2.45	16.75	2.79	18.56	3.15
	16	9.44	1.52	11.25	1.83	13.06	2.16	14	2.32	14.94	2.49	16.75	2.85	18.56	3.21
	18	9.44	1.55	11.25	1.86	13.06	2.2	14	2.37	14.94	2.54	16.75	2.91	18.56	3.27
	20	9.44	1.58	11.25	1.9	13.06	2.24	14	2.41	14.94	2.59	16.75	3.01	18.56	3.5
	21	9.44	1.59	11.25	1.91	13.06	2.26	14	2.44	14.94	2.65	16.75	3.12	18.56	3.63
	23	9.44	1.62	11.25	1.96	13.06	2.37	14	2.6	14.94	2.84	16.75	3.34	18.56	3.89
	25	9.44	1.67	11.25	2.08	13.06	2.54	14	2.78	14.94	3.03	16.75	3.58	18.56	4.16
	27	9.44	1.78	11.25	2.21	13.06	2.7	14	2.96	14.94	3.24	16.75	3.82	18.56	4.46
	29	9.44	1.89	11.25	2.36	13.06	2.88	14	3.16	14.94	3.46	16.75	4.08	18.56	4.76
	31	9.44	2.01	11.25	2.51	13.06	3.06	14	3.36	14.94	3.69	16.75	4.36	18.25	4.95
	33	9.44	2.14	11.25	2.66	13.06	3.26	14	3.59	14.94	3.92	16.75	4.64	18	5.14
35	9.44	2.26	11.25	2.84	13.06	3.47	14	3.81	14.94	4.18	16.75	4.95	17.69	5.32	
37	9.44	2.4	11.25	3.01	13.06	3.69	14	4.06	14.94	4.45	16.75	5.28	17.44	5.51	
39	9.44	2.54	11.25	3.21	13.06	3.93	14	4.32	14.94	4.74	16.75	5.62	17.12	5.7	
41	9.44	2.6	11.25	3.24	13.06	3.99	14	4.44	14.94	4.82	16.75	5.76	17.02	5.8	
43	9.44	2.68	11.25	3.26	13.06	4.04	14	4.51	14.94	4.89	16.75	5.83	16.91	5.86	

**MDV-V180W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:1		DB:23.3,WB:1		DB:25.8,WB:1		DB:27,WB:1		DB:28.2,WB:2		DB:30.7,WB:2		DB:32,WB:2	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
70%	-5	8.25	1.16	9.87	1.36	11.44	1.54	12.25	1.65	13.06	1.76	14.63	2.01	16.25	2.32
	-2	8.25	1.17	9.87	1.36	11.44	1.55	12.25	1.68	13.06	1.79	14.63	2.05	16.25	2.35
	0	8.25	1.17	9.87	1.38	11.44	1.58	12.25	1.71	13.06	1.82	14.63	2.09	16.25	2.38
	2	8.25	1.18	9.87	1.39	11.44	1.61	12.25	1.74	13.06	1.86	14.63	2.13	16.25	2.42
	4	8.25	1.2	9.87	1.42	11.44	1.64	12.25	1.78	13.06	1.9	14.63	2.17	16.25	2.47
	6	8.25	1.21	9.87	1.45	11.44	1.68	12.25	1.83	13.06	1.94	14.63	2.2	16.25	2.52
	8	8.25	1.24	9.87	1.49	11.44	1.72	12.25	1.86	13.06	1.98	14.63	2.27	16.25	2.57
	10	8.25	1.26	9.87	1.51	11.44	1.76	12.25	1.9	13.06	2.04	14.63	2.31	16.25	2.6
	12	8.25	1.29	9.87	1.54	11.44	1.8	12.25	1.94	13.06	2.07	14.63	2.36	16.25	2.65
	14	8.25	1.31	9.87	1.56	11.44	1.83	12.25	1.96	13.06	2.11	14.63	2.4	16.25	2.7
	16	8.25	1.34	9.87	1.59	11.44	1.86	12.25	2.01	13.06	2.15	14.63	2.44	16.25	2.75
	18	8.25	1.36	9.87	1.62	11.44	1.9	12.25	2.04	13.06	2.19	14.63	2.49	16.25	2.81
	20	8.25	1.38	9.87	1.65	11.44	1.94	12.25	2.08	13.06	2.23	14.63	2.54	16.25	2.89
	21	8.25	1.39	9.87	1.66	11.44	1.95	12.25	2.1	13.06	2.25	14.63	2.58	16.25	2.99
	23	8.25	1.41	9.87	1.69	11.44	1.99	12.25	2.17	13.06	2.36	14.63	2.76	16.25	3.2
	25	8.25	1.44	9.87	1.76	11.44	2.12	12.25	2.32	13.06	2.52	14.63	2.96	16.25	3.42
	27	8.25	1.53	9.87	1.88	11.44	2.26	12.25	2.47	13.06	2.69	14.63	3.16	16.25	3.66
	29	8.25	1.62	9.87	1.99	11.44	2.41	12.25	2.64	13.06	2.86	14.63	3.36	16.25	3.91
	31	8.25	1.71	9.87	2.11	11.44	2.56	12.25	2.8	13.06	3.05	14.63	3.59	16.25	4.16
	33	8.25	1.82	9.87	2.25	11.44	2.73	12.25	2.98	13.06	3.25	14.63	3.82	16.25	4.44
35	8.25	1.93	9.87	2.39	11.44	2.89	12.25	3.17	13.06	3.46	14.63	4.07	16.25	4.74	
37	8.25	2.04	9.87	2.53	11.44	3.08	12.25	3.36	13.06	3.68	14.63	4.34	16.25	5.04	
39	8.25	2.16	9.87	2.68	11.44	3.26	12.25	3.58	13.06	3.91	14.63	4.61	16.25	5.37	
41	8.25	2.25	9.87	2.77	11.44	3.36	12.25	3.7	13.06	4.03	14.63	4.8	16.25	5.61	
43	8.25	2.44	9.87	2.96	11.44	3.5	12.25	3.9	13.06	4.15	14.63	4.97	16.25	5.78	
60%	-5	7.06	0.99	8.44	1.15	9.81	1.33	10.5	1.42	11.19	1.54	12.56	1.72	13.94	1.98
	-2	7.06	0.99	8.44	1.16	9.81	1.36	10.5	1.44	11.19	1.55	12.56	1.75	13.94	1.99
	0	7.06	1.01	8.44	1.18	9.81	1.38	10.5	1.46	11.19	1.58	12.56	1.78	13.94	2.02
	2	7.06	1.03	8.44	1.2	9.81	1.4	10.5	1.49	11.19	1.6	12.56	1.81	13.94	2.04
	4	7.06	1.05	8.44	1.23	9.81	1.43	10.5	1.51	11.19	1.62	12.56	1.84	13.94	2.07
	6	7.06	1.07	8.44	1.25	9.81	1.46	10.5	1.54	11.19	1.65	12.56	1.88	13.94	2.12
	8	7.06	1.09	8.44	1.27	9.81	1.48	10.5	1.57	11.19	1.69	12.56	1.91	13.94	2.15
	10	7.06	1.11	8.44	1.3	9.81	1.51	10.5	1.61	11.19	1.72	12.56	1.95	13.94	2.19
	12	7.06	1.13	8.44	1.32	9.81	1.54	10.5	1.64	11.19	1.75	12.56	1.99	13.94	2.22
	14	7.06	1.14	8.44	1.34	9.81	1.56	10.5	1.67	11.19	1.79	12.56	2.02	13.94	2.26
	16	7.06	1.16	8.44	1.36	9.81	1.59	10.5	1.7	11.19	1.81	12.56	2.06	13.94	2.31
	18	7.06	1.18	8.44	1.39	9.81	1.61	10.5	1.73	11.19	1.85	12.56	2.09	13.94	2.35
	20	7.06	1.19	8.44	1.41	9.81	1.64	10.5	1.76	11.19	1.89	12.56	2.14	13.94	2.4
	21	7.06	1.21	8.44	1.42	9.81	1.66	10.5	1.78	11.19	1.9	12.56	2.16	13.94	2.42
	23	7.06	1.22	8.44	1.45	9.81	1.69	10.5	1.81	11.19	1.94	12.56	2.24	13.94	2.58
	25	7.06	1.24	8.44	1.47	9.81	1.75	10.5	1.9	11.19	2.06	12.56	2.39	13.94	2.75
	27	7.06	1.29	8.44	1.56	9.81	1.86	10.5	2.03	11.19	2.19	12.56	2.55	13.94	2.94
	29	7.06	1.36	8.44	1.66	9.81	1.99	10.5	2.16	11.19	2.34	12.56	2.72	13.94	3.14
	31	7.06	1.45	8.44	1.76	9.81	2.11	10.5	2.29	11.19	2.49	12.56	2.89	13.94	3.34
	33	7.06	1.53	8.44	1.86	9.81	2.24	10.5	2.44	11.19	2.64	12.56	3.08	13.94	3.56
35	7.06	1.62	8.44	1.98	9.81	2.37	10.5	2.59	11.19	2.81	12.56	3.28	13.94	3.79	
37	7.06	1.71	8.44	2.09	9.81	2.51	10.5	2.74	11.19	2.98	12.56	3.49	13.94	4.03	
39	7.06	1.81	8.44	2.21	9.81	2.66	10.5	2.91	11.19	3.16	12.56	3.7	13.94	4.29	
41	7.06	1.87	8.44	2.31	9.81	2.76	10.5	3.02	11.19	3.28	12.56	3.87	13.94	4.48	
43	7.06	1.92	8.44	2.41	9.81	2.86	10.5	3.11	11.19	3.39	12.56	4.04	13.94	4.67	

**MDV-V180W/DRN1**

**Cooling** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor temperature (°C DB)	Indoor temperature(°C DB/WB)													
		DB:20.8,WB:14		DB:23.3,WB:16		DB:25.8,WB:18		DB:27,WB:19		DB:28.2,WB:20		DB:30.7,WB:22		DB:32,WB:24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-5	5.91	0.86	7.06	0.99	8.19	1.14	8.75	1.19	9.31	1.26	10.44	1.43	11.63	1.54
	-2	5.91	0.86	7.06	1.01	8.19	1.15	8.75	1.21	9.31	1.28	10.44	1.45	11.63	1.56
	0	5.91	0.88	7.06	1.03	8.19	1.17	8.75	1.23	9.31	1.3	10.44	1.47	11.63	1.59
	2	5.91	0.89	7.06	1.04	8.19	1.19	8.75	1.24	9.31	1.32	10.44	1.48	11.63	1.62
	4	5.91	0.9	7.06	1.06	8.19	1.21	8.75	1.26	9.31	1.35	10.44	1.52	11.63	1.66
	6	5.91	0.92	7.06	1.08	8.19	1.22	8.75	1.29	9.31	1.37	10.44	1.54	11.63	1.71
	8	5.91	0.94	7.06	1.09	8.19	1.24	8.75	1.32	9.31	1.39	10.44	1.57	11.63	1.77
	10	5.91	0.96	7.06	1.11	8.19	1.26	8.75	1.34	9.31	1.43	10.44	1.61	11.63	1.79
	12	5.91	0.96	7.06	1.12	8.19	1.29	8.75	1.36	9.31	1.46	10.44	1.64	11.63	1.82
	14	5.91	0.98	7.06	1.14	8.19	1.3	8.75	1.39	9.31	1.48	10.44	1.66	11.63	1.86
	16	5.91	0.99	7.06	1.15	8.19	1.32	8.75	1.41	9.31	1.5	10.44	1.69	11.63	1.89
	18	5.91	1.01	7.06	1.17	8.19	1.34	8.75	1.44	9.31	1.53	10.44	1.72	11.63	1.92
	20	5.91	1.02	7.06	1.19	8.19	1.36	8.75	1.46	9.31	1.56	10.44	1.75	11.63	1.96
	21	5.91	1.03	7.06	1.2	8.19	1.38	8.75	1.47	9.31	1.57	10.44	1.77	11.63	1.98
	23	5.91	1.04	7.06	1.21	8.19	1.4	8.75	1.5	9.31	1.6	10.44	1.8	11.63	2.02
	25	5.91	1.06	7.06	1.24	8.19	1.43	8.75	1.53	9.31	1.65	10.44	1.89	11.63	2.16
	27	5.91	1.08	7.06	1.29	8.19	1.51	8.75	1.63	9.31	1.75	10.44	2.01	11.63	2.3
	29	5.91	1.14	7.06	1.36	8.19	1.6	8.75	1.73	9.31	1.86	10.44	2.14	11.63	2.45
	31	5.91	1.2	7.06	1.44	8.19	1.69	8.75	1.84	9.31	1.98	10.44	2.28	11.63	2.61
	33	5.91	1.27	7.06	1.52	8.19	1.8	8.75	1.94	9.31	2.1	10.44	2.42	11.63	2.77
35	5.91	1.34	7.06	1.61	8.19	1.9	8.75	2.06	9.31	2.22	10.44	2.57	11.63	2.94	
37	5.91	1.41	7.06	1.7	8.19	2.01	8.75	2.18	9.31	2.36	10.44	2.73	11.63	3.13	
39	5.91	1.49	7.06	1.79	8.19	2.13	8.75	2.31	9.31	2.5	10.44	2.89	11.63	3.32	
41	5.91	1.55	7.06	1.87	8.19	2.21	8.75	2.41	9.31	2.61	10.44	3.05	11.63	3.48	
43	5.91	1.66	7.06	2	8.19	2.28	8.75	2.52	9.31	2.67	10.44	3.2	11.63	3.63	

**Note:**

1. [ ] is tested under our standard condition.
2. In cooling mode, avoid running the unit when outdoor air temperature is above 43 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

**MDV-V180W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
130%	-13.7	-15	13.51	3.95	13.45	4.18	13.39	4.41	13.39	4.52	13.33	4.64	13.33	4.86
	-11.8	-13	14.05	4.13	14.05	4.35	13.99	4.56	13.93	4.68	13.93	4.79	13.87	5
	-9.8	-11	14.72	4.31	14.66	4.52	14.6	4.73	14.6	4.83	14.6	4.93	14.54	5.14
	-9.5	-10	15.08	4.4	15.02	4.6	14.96	4.81	14.96	4.91	14.9	5.01	14.9	5.21
	-8.5	-9.1	15.38	4.48	15.32	4.68	15.32	4.88	15.26	4.97	15.26	5.07	15.2	5.27
	-7	-7.6	15.92	4.61	15.92	4.81	15.86	4.99	15.86	5.09	15.8	5.18	15.74	5.38
	-5	-5.6	16.77	4.79	16.71	4.97	16.65	5.15	16.65	5.24	16.59	5.32	16.59	5.51
	-3	-3.7	17.55	4.94	17.49	5.12	17.49	5.29	17.43	5.38	17.43	5.46	17.37	5.63
	0	-0.7	18.94	5.18	18.94	5.34	18.88	5.5	18.88	5.56	18.82	5.66	18.82	5.82
	3	2.2	20.45	5.4	20.39	5.55	20.33	5.69	20.33	5.77	20.33	5.84	20.27	5.99
	5	4.1	21.47	5.53	21.41	5.68	21.41	5.81	21.35	5.88	21.35	5.95	21.29	6.09
	7	6	22.56	5.66	22.5	5.79	22.5	5.93	22.44	5.99	22.44	6.06	21.53	5.82
	9	7.9	23.7	5.78	23.64	5.91	23.64	6.03	23.58	6.1	23.1	5.97	21.53	5.47
	11	9.8	24.91	5.9	24.85	6.01	24.73	6.09	23.89	5.85	23.1	5.61	21.53	5.15
	13	11.8	26.24	6.01	26.18	6.12	24.73	5.71	23.89	5.48	23.1	5.27	21.53	4.83
15	13.7	27.5	6.11	26.3	5.8	24.73	5.38	23.89	5.17	23.1	4.96	21.53	4.56	
120%	-13.7	-15	13.45	4.26	13.39	4.47	13.33	4.68	13.33	4.79	13.33	4.89	13.27	5.1
	-11.8	-13	14	4.42	14	4.62	13.93	4.83	13.93	4.93	13.87	5.03	13.87	5.23
	-9.8	-11	14.66	4.59	14.6	4.78	14.6	4.97	14.54	5.07	14.54	5.16	14.48	5.36
	-9.5	-10	15.02	4.68	14.96	4.86	14.9	5.05	14.9	5.14	14.9	5.23	14.84	5.42
	-8.5	-9.1	15.32	4.75	15.26	4.93	15.26	5.11	15.2	5.2	15.2	5.3	15.14	5.48
	-7	-7.6	15.86	4.87	15.86	5.05	15.8	5.22	15.8	5.31	15.74	5.4	15.74	5.57
	-5	-5.6	16.71	5.03	16.65	5.19	16.59	5.36	16.59	5.45	16.59	5.53	16.53	5.7
	-3	-3.7	17.49	5.18	17.49	5.34	17.43	5.49	17.43	5.57	17.37	5.66	17.37	5.81
	0	-0.7	18.88	5.4	18.88	5.55	18.82	5.69	18.82	5.77	18.76	5.84	18.76	5.99
	3	2.2	20.39	5.6	20.33	5.73	20.33	5.87	20.27	5.94	20.27	6.01	19.85	5.97
	5	4.1	21.41	5.72	21.35	5.85	21.35	5.98	21.29	6.05	21.29	6.11	19.85	5.61
	7	6	22.5	5.84	22.5	5.96	22.44	6.08	22.08	6	21.35	5.75	19.85	5.28
	9	7.9	23.65	5.95	23.59	6.07	22.8	5.87	22.08	5.64	21.35	5.41	19.85	4.97
	11	9.8	24.85	6.06	24.25	5.95	22.8	5.52	22.08	5.31	21.35	5.09	19.85	4.68
	13	11.8	25.76	6	24.25	5.58	22.8	5.18	22.08	4.98	21.35	4.79	19.85	4.4
15	13.7	25.76	5.65	24.25	5.26	22.8	4.88	22.08	4.69	21.35	4.51	19.85	4.16	
110%	-13.7	-15	13.39	4.57	13.33	4.76	13.27	4.95	13.27	5.05	13.27	5.14	13.21	5.33
	-11.8	-13	13.93	4.72	13.93	4.9	13.87	5.08	13.87	5.18	13.81	5.27	13.81	5.45
	-9.8	-11	14.6	4.87	14.54	5.05	14.54	5.22	14.48	5.31	14.48	5.4	14.48	5.57
	-9.5	-10	14.96	4.95	14.9	5.12	14.84	5.29	14.84	5.38	14.84	5.46	14.78	5.63
	-8.5	-9.1	15.26	5.01	15.2	5.18	15.2	5.35	15.14	5.44	15.14	5.52	15.14	5.03
	-7	-7.6	15.8	5.13	15.8	5.29	15.74	5.45	15.74	5.53	15.74	5.61	15.68	5.77
	-5	-5.6	16.65	5.27	16.59	5.43	16.53	5.58	16.53	5.66	16.53	5.73	16.47	5.89
	-3	-3.7	17.43	5.41	17.43	5.55	17.37	5.7	17.37	5.77	17.31	5.84	17.31	5.99
	0	-0.7	18.82	5.61	18.82	5.75	18.76	5.88	18.76	5.95	18.76	6.02	18.22	5.9
	3	2.2	20.33	5.8	20.27	5.92	20.27	6.05	20.21	6.1	19.54	5.86	18.22	5.37
	5	4.1	21.35	5.91	21.35	6.03	20.93	5.97	20.21	5.73	19.54	5.51	18.22	5.05
	7	6	22.44	6.02	22.26	6.06	20.93	5.61	20.21	5.39	19.54	5.18	18.22	4.75
	9	7.9	23.58	6.12	22.26	5.69	20.93	5.28	20.21	5.07	19.54	4.87	18.22	4.48
	11	9.8	23.58	5.75	22.26	5.36	20.93	4.97	20.21	4.78	19.54	4.59	18.22	4.23
	13	11.8	23.58	5.4	22.26	5.03	20.93	4.67	20.21	4.49	19.54	4.32	18.22	3.98
15	13.7	23.58	4.79	22.26	4.74	20.93	4.41	20.21	4.24	19.54	4.08	18.22	3.77	

**MDV-V180W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
100%	-13.7	-15	13.33	4.87	13.27	5.05	13.21	5.22	13.21	5.31	13.21	5.4	13.15	5.57
	-11.8	-13	13.87	5.01	13.87	5.18	13.81	5.34	13.81	5.43	13.81	5.51	13.75	5.68
	-9.8	-11	14.54	5.15	14.48	5.31	14.48	5.47	14.48	5.55	14.42	5.63	14.42	5.79
	-9.5	-10	14.9	5.22	14.84	5.38	14.84	5.53	14.78	5.61	14.78	5.69	14.72	5.84
	-8.5	-9.1	15.2	5.28	15.14	5.44	15.14	5.58	15.14	5.66	15.08	5.74	15.08	5.89
	-7	-7.6	15.74	5.38	15.74	5.53	15.68	5.68	15.68	5.75	15.68	5.82	15.62	5.97
	-5	-5.6	16.59	5.52	16.53	5.66	16.53	5.8	16.47	5.86	16.47	5.94	16.41	6.08
	-3	-3.7	17.37	5.64	17.37	5.12	17.31	5.91	17.31	5.97	17.31	6.04	16.59	5.79
	0	-0.7	18.76	5.82	18.76	5.95	18.7	6.07	18.4	5.97	17.79	5.73	16.59	5.25
	3	2.2	20.27	5.99	20.21	6.1	19	5.65	18.4	5.43	17.79	5.21	16.59	4.79
	5	4.1	21.29	6.1	20.21	5.73	19	5.31	18.4	5.11	17.79	4.91	16.59	4.51
	7	6	21.41	5.79	20.21	5.39	19	5	18.4	4.81	17.79	4.62	16.59	4.25
	9	7.9	21.41	5.44	20.21	5.07	19	4.71	18.4	4.47	17.79	4.36	16.59	4.01
	11	9.8	21.41	5.12	20.21	4.78	19	4.44	18.4	4.27	17.79	4.11	16.59	3.79
	13	11.8	21.41	4.81	20.21	4.49	19	4.18	18.4	4.03	17.79	3.88	16.59	3.58
15	13.7	21.41	4.54	20.21	4.24	19	3.95	18.4	3.81	17.79	3.66	16.59	3.39	
90%	-13.7	-15	13.25	5.18	13.19	5.34	13.19	5.49	13.13	5.57	13.13	5.65	13.13	5.81
	-11.8	-13	13.79	5.31	13.79	5.45	13.73	5.6	13.73	5.68	13.73	5.75	13.67	5.9
	-9.8	-11	14.45	5.43	14.45	5.57	14.39	5.71	14.39	5.79	14.39	5.86	14.33	6.01
	-9.5	-10	14.81	5.49	14.75	5.64	14.75	5.77	14.69	5.84	14.69	5.92	14.69	6.05
	-8.5	-9.1	15.11	5.55	15.11	5.69	15.05	5.82	15.05	5.89	15.05	5.96	14.87	6.02
	-7	-7.6	15.66	5.64	15.66	5.77	15.6	5.91	15.6	5.97	15.6	6.04	14.87	5.75
	-5	-5.6	16.5	5.77	16.44	5.89	16.44	6.01	16.38	6.08	15.96	5.89	14.87	5.4
	-3	-3.7	17.28	5.88	17.28	5.99	17.1	6.02	16.5	5.78	15.96	5.55	14.87	5.09
	0	-0.7	18.73	6.05	18.18	5.9	17.1	5.46	16.5	5.25	15.96	5.04	14.87	4.63
	3	2.2	19.27	5.76	18.18	5.36	17.1	4.97	16.5	4.79	15.96	4.6	14.87	4.23
	5	4.1	19.27	5.42	18.18	5.05	17.1	4.69	16.5	4.51	15.96	4.34	14.87	3.99
	7	6	19.27	5.09	18.18	4.75	17.1	4.42	16.5	4.25	15.96	4.09	14.87	3.77
	9	7.9	19.27	4.8	18.18	4.47	17.1	4.16	16.5	4.01	15.96	3.86	14.87	3.57
	11	9.8	19.27	4.52	18.18	4.22	17.1	3.94	16.5	3.79	15.96	3.65	14.87	3.38
	13	11.8	19.27	4.25	18.18	3.98	17.1	3.71	16.5	3.58	15.96	3.45	14.87	3.19
15	13.7	19.27	4.02	18.18	3.76	17.1	3.51	16.5	3.39	15.96	3.27	14.87	3.03	
80%	-13.7	-15	13.21	5.49	13.15	5.62	13.15	5.77	13.15	5.83	13.09	5.9	13.09	6.05
	-11.8	-13	13.75	5.6	13.75	5.73	13.69	5.86	13.69	5.93	13.69	6	13.27	5.84
	-9.8	-11	14.42	5.71	14.42	5.84	14.35	5.97	14.35	6.03	14.23	6.01	13.27	5.51
	-9.5	-10	14.78	5.77	14.72	5.89	14.72	6.01	14.72	6.08	14.23	5.84	13.27	5.35
	-8.5	-9.1	15.08	5.82	14.02	5.94	15.02	6.06	14.72	5.92	14.23	5.68	13.27	5.21
	-7	-7.6	15.62	5.9	15.62	6.02	15.2	5.89	14.72	5.66	14.23	5.43	13.27	4.98
	-5	-5.6	16.47	6.01	16.17	5.97	15.2	5.53	14.72	5.32	14.23	5.1	13.27	4.69
	-3	-3.7	17.13	6.04	16.17	5.62	15.2	5.21	14.72	5.01	14.23	4.81	13.27	4.43
	0	-0.7	17.13	5.48	16.17	5.1	15.2	4.74	14.72	4.56	14.23	4.38	13.27	4.04
	3	2.2	17.13	4.99	16.17	4.66	15.2	4.33	14.72	4.17	14.23	4.01	13.27	3.7
	5	4.1	17.13	4.7	16.17	4.39	15.2	4.08	14.72	3.93	14.23	3.79	13.27	3.5
	7	6	17.13	4.43	16.17	4.14	15.2	3.86	14.72	3.72	14.23	3.58	13.27	3.31
	9	7.9	17.13	4.18	16.17	3.91	15.2	3.64	14.72	3.51	14.23	3.39	13.27	3.14
	11	9.8	17.13	3.95	16.17	3.69	15.2	3.45	14.72	3.32	14.23	3.21	13.27	2.97
	13	11.8	17.13	3.72	16.17	3.49	15.2	3.26	14.72	3.14	14.23	3.03	13.27	2.81
15	13.7	17.13	3.52	16.17	3.31	15.2	3.09	14.72	2.98	14.23	2.88	13.27	2.68	

**MDV-V180W/DRN1**

**Heating** TC: Total Capacity (kW); PI: Power Input (kW) (Compressor + Outdoor fan motor)

Combination (%) (Capacity index)	Outdoor Air temperature (°C DB)		Indoor temperature(°C WB)											
			16		18		20		21		22		24	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-13.7	-15	13.12	5.79	13.06	5.92	13.06	6.04	12.82	5.95	12.4	5.71	11.56	5.23
	-11.8	-13	13.66	5.89	13.66	6.01	13.3	5.86	12.82	5.64	12.4	5.41	11.56	4.96
	-9.8	-11	14.32	5.99	14.14	5.98	13.3	5.54	12.82	5.32	12.4	5.11	11.56	4.69
	-9.5	-10	14.68	6.04	14.14	5.8	13.3	5.38	12.82	5.17	12.4	4.97	11.56	4.56
	-8.5	-9.1	14.99	6.07	14.14	5.65	13.3	5.23	12.82	5.03	12.4	4.84	11.56	4.45
	-7	-7.6	14.99	5.8	14.14	5.4	13.3	5.01	12.82	4.82	12.4	4.63	11.56	4.26
	-5	-5.6	14.99	5.45	14.14	5.08	13.3	4.71	12.82	4.53	12.4	5.35	11.56	4.02
	-3	-3.7	14.99	5.13	14.14	4.79	13.3	4.45	12.82	4.28	12.4	4.12	11.56	3.8
	0	-0.7	14.99	4.67	14.14	4.36	13.3	4.06	12.82	3.91	12.4	3.77	11.56	3.48
	3	2.2	14.99	4.27	14.14	3.99	13.3	3.72	12.82	3.58	12.4	3.45	11.56	3.19
	5	4.1	14.99	4.03	14.14	3.77	13.3	3.52	12.82	3.39	12.4	3.27	11.56	3.03
	7	6	14.99	3.8	14.14	3.56	13.3	3.32	12.82	3.21	12.4	3.1	11.56	2.87
	9	7.9	14.99	3.6	14.14	3.37	13.3	3.15	12.82	3.04	12.4	2.93	11.56	2.72
	11	9.8	14.99	3.4	14.14	3.19	13.3	2.99	12.82	2.88	12.4	2.79	11.56	2.58
	13	11.8	14.99	3.21	14.14	3.02	13.3	2.82	12.82	2.73	12.4	2.64	11.56	2.45
15	13.7	14.99	3.05	14.14	2.86	13.3	2.68	12.82	2.6	12.4	2.51	11.56	2.34	
60%	-13.7	-15	12.85	5.95	12.12	5.53	11.4	5.13	11.04	4.93	10.68	4.74	9.95	4.36
	-11.8	-13	12.85	5.63	12.12	5.24	11.4	4.86	11.04	4.68	10.68	4.5	9.95	4.16
	-9.8	-11	12.85	5.32	12.12	4.95	11.4	4.6	11.04	4.43	10.68	4.26	9.95	3.93
	-9.5	-10	12.85	5.17	12.12	4.82	11.4	4.47	11.04	4.31	10.68	4.14	9.95	3.82
	-8.5	-9.1	12.85	5.03	12.12	4.69	11.4	4.36	11.04	4.2	10.68	4.04	9.95	3.73
	-7	-7.6	12.85	4.81	12.12	4.49	11.4	4.18	11.04	4.03	10.68	3.87	9.95	3.58
	-5	-5.6	12.85	4.53	12.12	4.23	11.4	3.94	11.04	3.8	10.68	3.66	9.95	3.38
	-3	-3.7	12.85	4.28	12.12	4	11.4	3.73	11.04	3.6	10.68	3.46	9.95	3.2
	0	-0.7	12.85	3.91	12.12	3.66	11.4	3.42	11.04	3.3	10.68	3.18	9.95	2.94
	3	2.2	12.85	3.58	12.12	3.36	11.4	3.14	11.04	3.03	10.68	2.93	9.95	2.71
	5	4.1	12.85	3.39	12.12	3.18	11.4	2.97	11.04	2.88	10.68	2.77	9.95	2.58
	7	6	12.85	3.21	12.12	3.01	11.4	2.82	11.04	2.73	10.68	2.64	9.95	2.45
	9	7.9	12.85	3.04	12.12	2.86	11.4	2.68	11.04	2.59	10.68	2.5	9.95	2.33
	11	9.8	12.85	2.88	12.12	2.71	11.4	2.55	11.04	2.46	10.68	2.38	9.95	2.22
	13	11.8	12.85	2.73	12.12	2.57	11.4	2.42	11.04	2.34	10.68	2.26	9.95	2.11
15	13.7	12.85	2.6	12.12	2.44	11.4	2.3	11.04	2.23	10.68	2.16	9.95	2.01	
50%	-13.7	-15	10.7	4.77	10.1	4.45	9.5	4.14	9.14	3.99	8.84	3.84	8.24	3.55
	-11.8	-13	10.7	4.53	10.1	4.23	9.5	3.93	9.14	3.79	8.84	3.65	8.24	3.38
	-9.8	-11	10.7	4.29	10.1	4.01	9.5	3.73	9.14	3.6	8.84	3.47	8.24	3.21
	-9.5	-10	10.7	4.17	10.1	3.9	9.5	3.64	9.14	3.51	8.84	3.38	8.24	3.12
	-8.5	-9.1	10.7	4.06	10.1	3.81	9.5	3.55	9.14	3.42	8.84	3.3	8.24	3.05
	-7	-7.6	10.7	3.9	10.1	3.65	9.5	3.4	9.14	3.29	8.84	3.17	8.24	2.93
	-5	-5.6	10.7	3.68	10.1	3.45	9.5	3.22	9.14	3.11	8.84	3	8.24	2.78
	-3	-3.7	10.7	3.48	10.1	3.27	9.5	3.05	9.14	2.95	8.84	2.84	8.24	2.64
	0	-0.7	10.7	3.19	10.1	3	9.5	2.81	9.14	2.71	8.84	2.62	8.24	2.44
	3	2.2	10.7	2.94	10.1	2.77	9.5	2.59	9.14	2.51	8.84	2.42	8.24	2.26
	5	4.1	10.7	2.79	10.1	2.62	9.5	2.46	9.14	2.38	8.84	2.31	8.24	2.15
	7	6	10.7	2.65	10.1	2.49	9.5	2.34	9.14	2.27	8.84	2.19	8.24	2.05
	9	7.9	10.7	2.51	10.1	2.37	9.5	2.23	9.14	2.16	8.84	2.09	8.24	1.95
	11	9.8	10.7	2.39	10.1	2.25	9.5	2.12	9.14	2.06	8.84	1.99	8.24	1.86
	13	11.8	10.7	2.27	10.1	2.14	9.5	2.02	9.14	1.96	8.84	1.9	8.24	1.78
15	13.7	10.7	2.16	10.1	2.05	9.5	1.93	9.14	1.87	8.84	1.81	8.24	1.7	

**Note:**

1. [ ] is tested under our standard condition.
2. In heating mode, avoid running the unit when the outdoor air temperature is below -15 degrees.
3. The above table shows the average value of conditions may operate.
4. It is recommended to connect less than 130%.

## 8. Electric Characteristics

Model	Outdoor Unit				Power Supply			Compressor		OFM	
	Hz	Voltage	Min. (V)	Max. (V)	MCA	TOCA	MFA	MSC	RLA	kW	FLA
<b>MDV-V120W/DRN1</b>	50	380-415	342	456	15	15	25	/	9.3	2×0.1	2×0.9
<b>MDV-V140W/DRN1</b>	50	380-415	342	456	16.25	15	25	/	9.3	2×0.1	2×0.9
<b>MDV-V160W/DRN1</b>	50	380-415	342	456	17.5	15	25	/	12	2×0.1	2×0.9
<b>MDV-V180W/DRN1</b>	50	380-415	342	456	18.75	16	25	/	12	2×0.1	2×0.9

**Remark:**

TOCA: Total Over-current Amps. (A)

MFA: Max. Fuse Amps. (A)

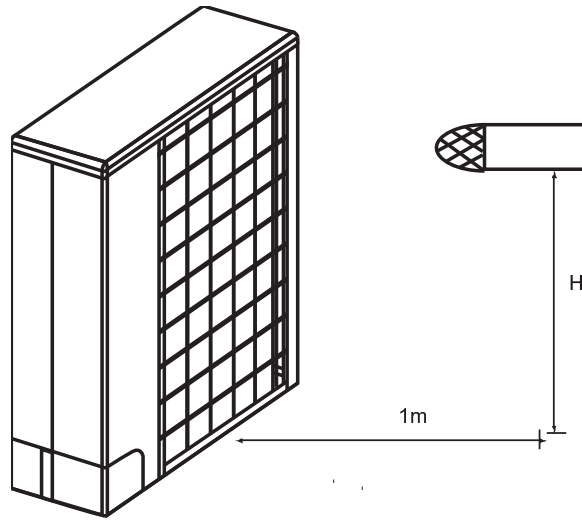
RLA: Rated Locked Amps. (A)

OFM: Outdoor Fan Motor.

FLA: Full Load Amps. (A)

KW: Rated Motor Output (KW)

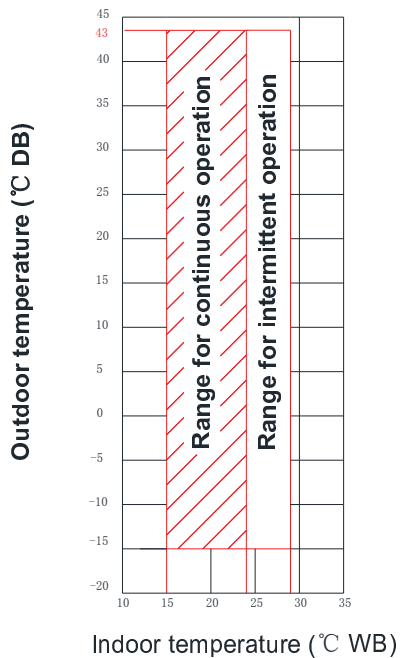
## 9. Sound Levels



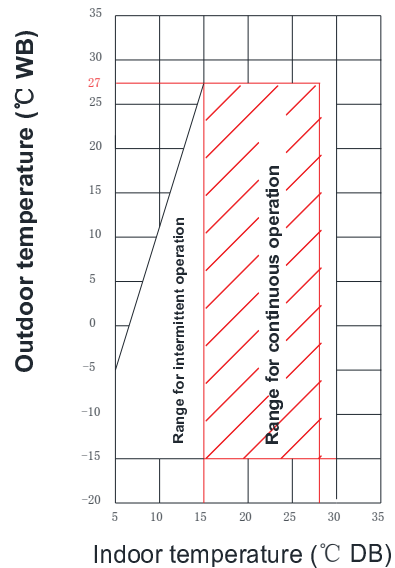
Model	Noise level dB(A)	Height (m)
MDV-V120W/DRN1	57	1.2
MDV-V140W/DRN1	57	1.2
MDV-V160W/DRN1	57	1.2
MDV-V180W/DRN1	59	1.2

## 10. Operation Limits

### Cooling



### Heating



**Note:**

- These figures assume the following operating conditions:  
 Equivalent piping length: 7.5m  
 Level difference: 0m
- If the system is running in cooling mode, when the ambient temperature is lower than -15°C or higher than 43°C, the unit will stop for protection control.



## **Part 3 Installation**

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# 1. Precautions

- Ensure that all Local, National and International regulations are satisfied.
- Read this "PRECAUTIONS" carefully before Installation.
- The precautions described below include the important Items regarding safety.
- Observe them without fail.
- After the installation work, perform a trial operation to check for any problem.
- Follow the Owner's Manual to explain how to use and maintain the unit to the customer.
- Turn off the main power supply switch (or breaker) before maintenance the unit.
- Ask the customer that the Installation Manual and the Owner's manual should be kept together.

## Caution 1:

The characteristics of R410A refrigerant are: Hydrophilic, oxidizing membrane or oil, and its pressure is approx. 1.6 times higher than that of refrigerant R22. Accompanied with the new refrigerant, refrigerating oil has also been changed, Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigerating oil does not enter the refrigerating cycle.

To prevent charging an incorrect refrigerant and refrigerating oil, the sizes of connecting sections of charging port of the main unit and installation tools are charged from those for the conventional refrigerant.

Accordingly the exclusive tools are required for the new refrigerant (R410A).

For connecting pipes, use new and clean pipes designed for R410A, and please care so that water or dust does not enter.

Moreover, do not use the existing piping because there are problems with pressure-resistance force and impurity in it.

## Caution 2:

This unit must be connected to the main power supply by means of a switch with a contact separation of at least 3 mm. The installation fuse must be used for the power supply line of this conditioner.

## Caution 3:

Ask an authorized dealer or qualified installation professional to install/maintain the air conditioner. Inappropriate installation may result in water leakage, electric shock or fire.

Turn off the main power supply switch or breaker before attempting any electrical work. Make sure all power switches are off.

Failure to do so may cause electric shock.

Connect the connecting cable correctly. If the connecting cable is connected in a wrong way, electric parts may be damaged.

When moving the air conditioner for the installation into another place, be very careful not to enter any gaseous matter other than the specified refrigerant into the refrigeration cycle. If air or any other has is mixed in refrigerant, the gas pressure in the refrigeration cycle becomes abnormally high and it may resultantly causes pipe burst and injuries on persons.

Do not modify this unit by removing any of the safety guards or by by-passing any of the safety interlock switches. Exposure of unit to water or other moisture before installation may cause a short circuit of electrical parts.

Do not store it in a wet basement or expose to rain or water. After unpacking the unit, examine it carefully if there are possible damage.

Do not install in a place that might increase the vibration of the unit. To avoid personal injury (with sharp edges) be careful when handling parts.

Perform installation work properly according to the Installation Manual. Inappropriate installation may result in water leakage, electric shock or fire. When the air conditioner is installed in a small room, provide appropriate measures to ensure that the concentration of refrigerant leakage occur in the room does not exceed the critical level. If refrigerant gas has leaked during the installation work, ventilate the room immediately. If the leaked refrigerant gas comes in contact with fire, noxious gas may generate. After the installation work, confirm that refrigerant gas doer not leak. If refrigerant gas leaks into the room and flows near a fire source, such as a cooking range, noxious gas might generate.





Install the air conditioner securely in a location where the base can sustain the weight adequately. Perform the specified installation work to guard against an earthquake. If the air conditioner is not installed appropriately, accidents may occur due to the falling unit.

Electrical work must be performed by a qualified electrician in accordance with the Installation Manual. Make sure the air conditioner uses an exclusive power supply. An insufficient power supply capacity or inappropriate installation may cause fire. Use the specified cables for wiring connect the terminals securely fix. To prevent external forces applied to the terminals from affecting the terminals. Be sure to provide grounding. Do not connect ground wires to gas pipes, water pipes, lightning rods or ground wires for telephone cables. Conform to the regulations of the local electric company when wiring the power supply.

Inappropriate grounding may cause electric shock Do not install the air conditioner in a location subject to a risk of exposure to a combustible gas. If a combustible gas leaks, and stays around the unit, a fire may occur.

## 2. Accessories

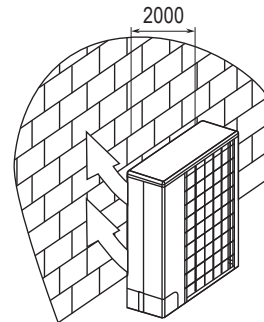
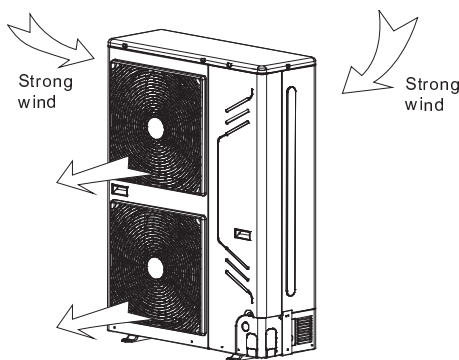
Please check whether the following fittings are of full scope. If there are some spare fittings, please keep them carefully.

INSTALLATION FITTINGS	NAME	SHAPE	QUANTITY
	1. Outdoor unit installation manual		1
	2. Outdoor unit owner's manual		1
	3. Indoor unit owner's manual		1
	4. Outflow connecting tube		1

## 3. Outdoor unit installation

### 3.1 Installation space selection

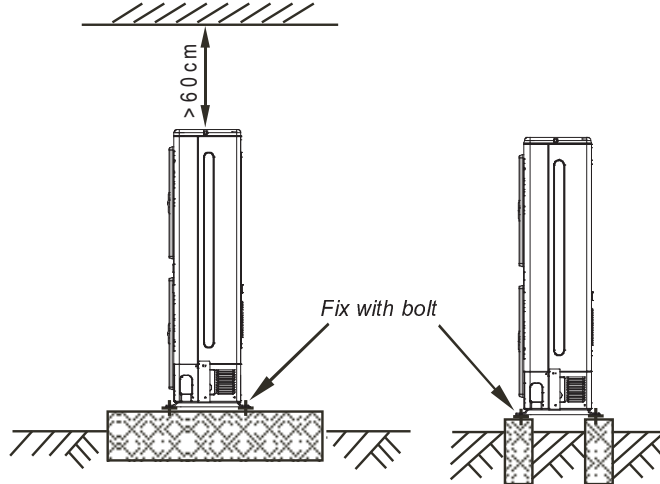
- Install the outdoor unit at a place where discharge air is not blocked. When an outdoor unit is installed in a place that is always exposed
- To a strong wind like a coast or on the high store of a building, secure a normal fan operation by using a duct or a wind shield.
- When installing the outdoor unit in a place that is constantly exposed to a strong wind such as the upper stairs or rooftop of a building, apply the windproof measures referring to the following examples.
- Install the unit so that its discharge port faces to the wall of the building. Keep a distance 2000mm or more between the unit and the wall surface.
- Supposing the wind direction during the operation season of the discharge port is set at right angle to the wind direction.



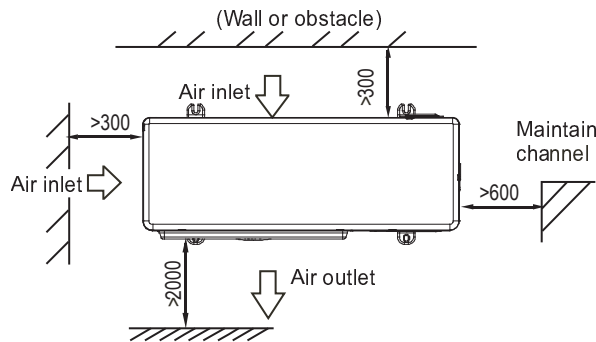
- Do not install the unit in a place full of machine oil.
- Do not install the unit in a place full of sulphuric gas.
- Do not install the unit in a place where high-frequency radio waves are likely to be.

**3.2 Installation space (units: mm)**

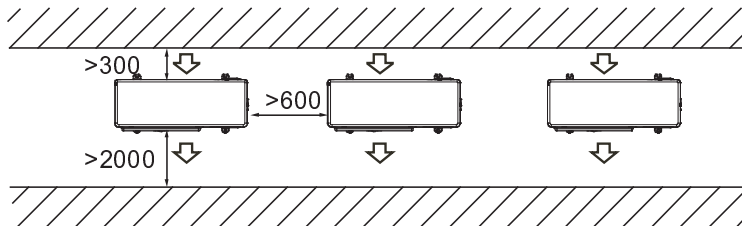
- Since the gravity center of the unit is not at its physical center, so please be careful when lifting it with a sling.
- Never hold the inlet of the outdoor unit to prevent it from deforming.
- Do not touch the fan with hands or other objects.
- Do not lean it more than 45°, and do not lay it sidelong.
- Make concrete foundation according to the specifications of the outdoor units.
- Fasten the feet of this unit with bolts firmly to prevent it from collapsing in case of earthquake or strong wind.



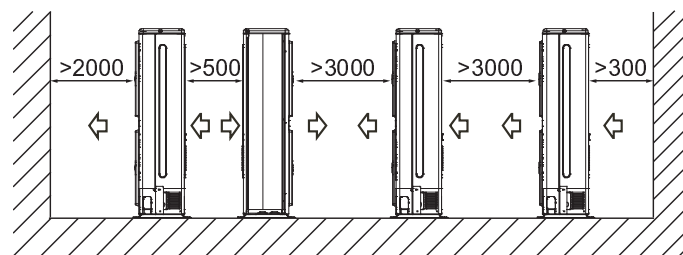
**Single unit installation**



**Parallel connect two units or above**



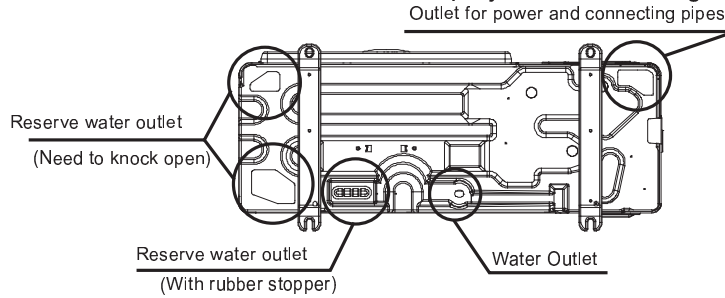
**Parallel connect the front with rear sides**



All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased (depend on model).The actual shape shall prevail.

### 3.3 Water Outlet

Four condensed water outlets on the chassis for selection display as the follow figure:

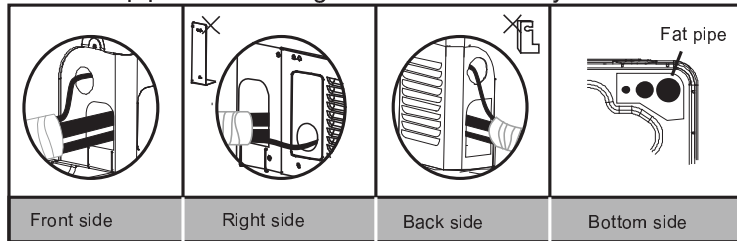


While installing the outdoor unit, pay attention to the installation place and the drainage pattern; if it's installed at the alpine zone, the frozen condensed water will block up the water outlet, please pull out the rubber stopper of the reserve water outlet. If that still fails to satisfy for the water draining, please knock open the other two water outlets, and keep the water can drain in time. Pay attention to the knock the reserve water outlet from outside to inside, and it will be beyond repair after knocking open, please pay attention to the installation place, lest cause the inconvenience. Please do the moth proofing for the knocked out hole, to avoid the pest processing into and destroy the components.

## 4. Piping installation

### 4.1 Piping connection

Offering four directions to connect pipes and wirings for meet a variety of installation request.



Right side pipe connection: please remove the L-shape metal plate, otherwise cannot wiring.

Back side pipe connection: Please wipe off the piping support rubber blanket beside the inner outlet pipe cover of the machine while back side getting out pipes.

Bottom side pipe connection: the knock out should from inside to outside, and then piping and wiring through this.

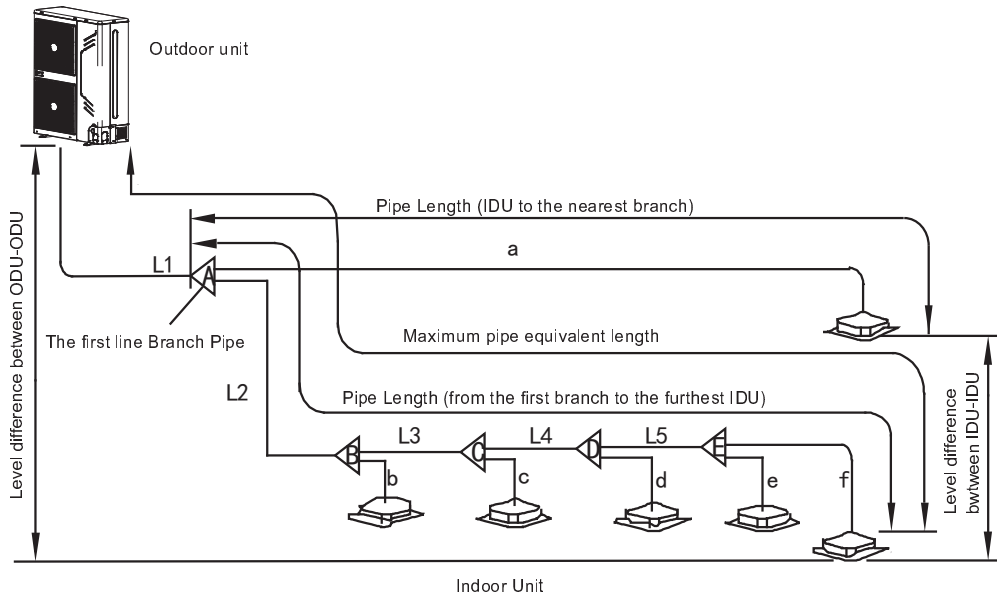
Pay attention to the piping the fat connecting pipe should out from the largest hole, otherwise the pipes will be rubbed. Please do the moth proofing for the knocked out hole, to avoid the pest processing into and destroy the components.

### 4.2 Allowable length and level difference of refrigerant pipe

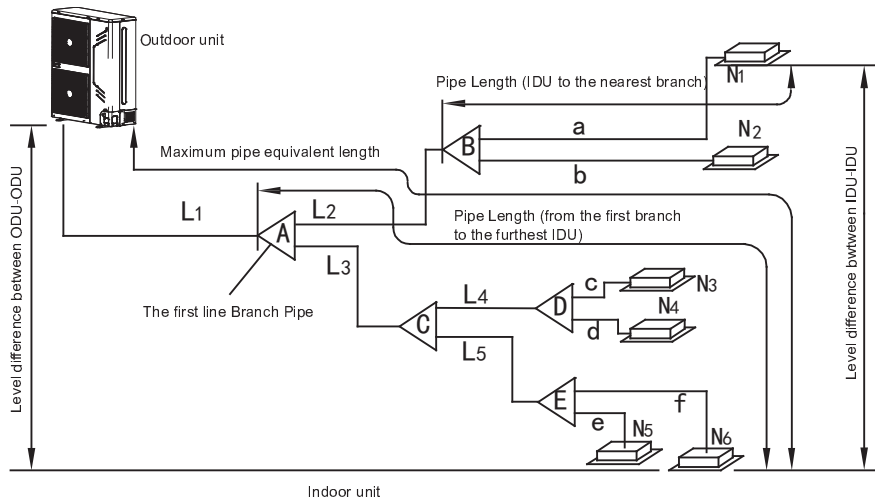
		Permitted value	Piping	
Pipe Length	Total Pipe Length(Actual)	≤100m	L1+L2+L3+L4+L5+a+b+c+d+e+f	
	Maximum Piping(L)	Actual Length	≤60	L1+L2+L3+L4+L5+f(The first connecting method) or L1+L3+L5+f(The second connecting method)
		Equivalent Length	≤70m	
	Pipe Length (from the first branch to the furthest IDU)	≤20m	L2+L3+L4+L5+f(The first connecting method) or L3+L5+f(The second connecting method)	
Pipe Length(IDU to the nearest branch)	≤15m	a,b,c,d,e		
Level difference	Level difference between IDU~ODU	Outdoor Unit up	≤30m	----
		Indoor Unit Down	≤20m	----
	Level difference between IDU~IDU	≤8m	----	

Note: When the total equivalent piping length of liquid + gas side is ≥90m, it must increase the size of air side main pipe. Besides, according to the distance of refrigerant pipe and the over matched state of indoor unit, when the capacity is decreasing it still can increase the gas side main pipe size.

**The first connecting method**

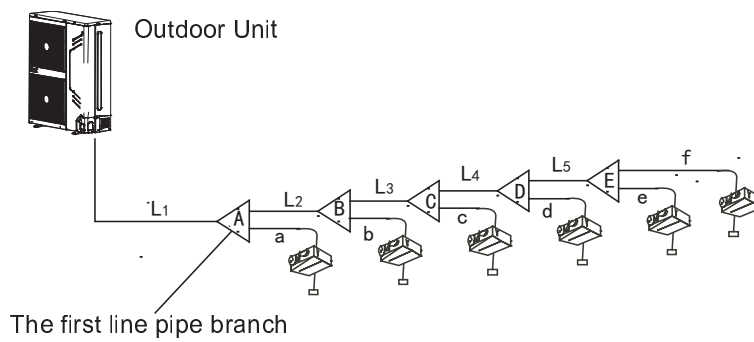


**The second connecting method**

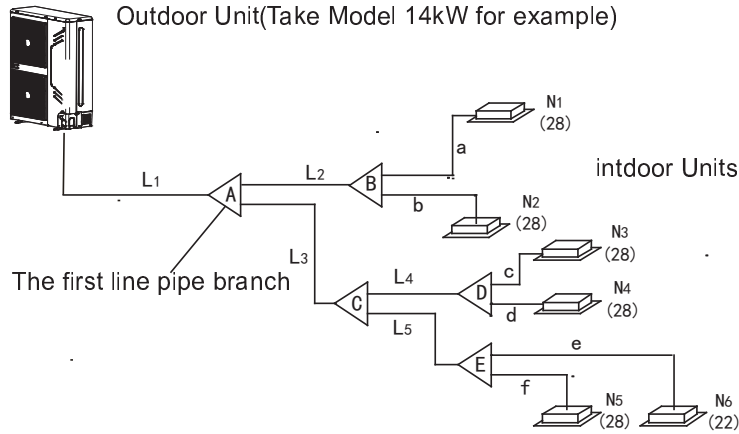


**4.3 Refrigerant pipe selection**

**The first connecting method**



The second connecting method



Pipe definition	Pipe connecting position	Code
Main pipe	The pipe between outdoor units to the first branch of indoor unit.	L1
The main pipes of indoor unit	The pipe after the first branch does not direct connect with the indoor unit.	L2~L5
The branch pipes of indoor unit	The pipe after the branch connects with the indoor unit.	a,b,c,d,e,f
Indoor unit branch pipes components	The pipes connect with the main pipe, the branch pipe and the main pipe of indoor unit.	A,B,C,D,E

Note: The distance between the first branch to the last indoor unit is more than 15m, choose the second connecting method. The pipe between the indoor units to the closest branch must be less than 15m.

Table 1: Indoor unit branch pipes selection (a~f)

A: Capacity of indoor units (kW)

A (kW)	Gas Side(Φ)	Liquid Side(Φ)
Wall mounted 2.2~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Wall mounted 5.6	15.9(Flaring nut)	9.5(Flaring nut)
Four way cassette type 1.5~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Four way cassette type 5.6~8.0	15.9(Flaring nut)	9.5(Flaring nut)
One way cassette type 1.8~4.5	12.7(Flaring nut)	6.4(Flaring nut)
One way cassette type 5.6	15.9(Flaring nut)	9.5(Flaring nut)
Low static pressure 1.8~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Low static pressure 5.6	15.9(Flaring nut)	9.5(Flaring nut)
Thin duct type 7.1	12.7(Flaring nut)	6.4(Flaring nut)
A5 duct type 2.2~4.5	12.7(Flaring nut)	6.4(Flaring nut)
A5 duct type 5.6~8.0	15.9(Flaring nut)	9.5(Flaring nut)
A5 duct type 9.0~14.0	15.9(Flaring nut)	9.5(Flaring nut)
Console Type 2.2~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Two-way Cassette Type 2.2~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Two-way Cassette Type 5.6~7.1	15.9(Flaring nut)	9.5(Flaring nut)
Ceiling And Floor Type 3.6~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Ceiling And Floor Type 5.6~16.0	15.9(Flaring nut)	9.5(Flaring nut)
Expose And Concealed Floor-standing type 2.2~4.5	12.7(Flaring nut)	6.4(Flaring nut)
Expose And Concealed Floor-standing type 5.6~8.0	15.9(Flaring nut)	9.5(Flaring nut)

Note: The maximum length of the branch pipe should not be longer than 15m.

**Table 2: Indoor unit main pipes selection (L1~L5)**

Total capacity of downstream indoor units (kW)	Main pipe size(mm)		Branch Pipe
	Air pipe	Liquid pipe	
A<16.6	Φ15.9	Φ9.5	FQZHN-01C
16.6≤A<23	Φ19.1	Φ9.5	FQZHN-01C

**Table 3: Main pipes selection (L1)**

Total capacity of outdoor units (kW)	When the equivalent length of all liquid and air pipes < 90m			When the equivalent length of all liquid and air pipes ≥ 90m		
	gas side (mm)	liquid side (mm)	The first line branch pipe	gas side (mm)	liquid side (mm)	The first line branch pipe
A<16	Φ15.9	Φ9.5	FQZHN-01C	Φ19.1	Φ9.5	FQZHN-01C
16≤A<23	Φ19.1	Φ9.5	FQZHN-01C	Φ22.2	Φ9.5	FQZHN-02C

Note: Main pipe L1 can be selected from table 2 and table 3, the larger size should be finally selected.

The straight distance between copper pipe turning and the contiguous branch pipe is at least 0.5m;

The straight distance between the contiguous branch pipes is at least 0.5m;

The straight distance which the branch pipes connected to the indoor unit is at least 0.5m;

**Table4: Outdoor unit pipe connection**

MODEL	Piping side	Outdoor unit pipe connection (mm)	
		Gas Side	Liquid Side
12kW		Φ15.9	Φ9.5
14kW		Φ15.9	Φ9.5
16kW		Φ19.1	Φ9.5
18kW		Φ19.1	Φ9.5

Outdoor Unit (kW)	Maximum Quantity of Indoor unit	Total Capacity of Indoor unit
12	6	45%~130%
14	6	45%~130%
16	7	45%~130%
18	9	45%~130%

If ODU connect only one IDU, the capacity of IDU should be not more than ODU.

If ODU connect more than one IDU, the capacity of each IDU should be not more than 8kW for refrigerant uniform distribution.

When capacity of indoor unit greater than the sum of 100%, capacity of indoor unit will be attenuated.

When capacity of indoor unit greater than or equal to the sum of 120%, in order to ensure the effectiveness of machine, and then try to open the indoor units at different time.

When the capacity of indoor unit is greater than or equal to 16.8kW, the caliber of primary gas pipe should be augmented from Φ16 to Φ19.

#### 4.4 Remove Dirt or Water in the Piping

Make sure there is no any dirt or water before connecting the piping to the outdoor units.

Wash the piping with high pressure nitrogen, never use refrigerant of outdoor unit.

#### 4.5 Airtight Test

Charge pressured nitrogen after connecting indoor/outdoor unit piping to do airtight test.

Cautions:

1. Pressured nitrogen [4.3MPa (44kg/cm) for R410A] should be used in the airtight test.
2. Tighten high pressure/low pressure valves before applying pressured nitrogen.
3. Apply pressure from air vent mouth on the high pressure/low pressure valves.
4. The high pressure/low pressure valves are closed when applying pressured nitrogen.
5. The airtight test should never be use any oxygen, flammable gas or poisonous gas.

#### 4.6 Vacuum

Using vacuum pump to do the vacuum and never using refrigerant to expel the air.

Vacuum should be done from both liquid side and gas side simultaneously.



### 4.7 Additional refrigerant charge

Calculate the added refrigerant according to the diameter and the length of the liquid side pipe of the outdoor unit/indoor unit connection.

When the outdoor unit connects one indoor unit:

Liquid Side Piping Diameter	Refrigerant to be Added Perimeter Piping
Φ6.4	0.023kg
Φ9.5	0.060kg
Φ12.7	0.120kg
Φ15.9	0.180kg
Φ19.1	0.270kg
Φ22.2	0.380kg

Note: Additional refrigerant volume of divergent pipe is 0.1kg per item (Consider the liquid side of divergent pipe only).

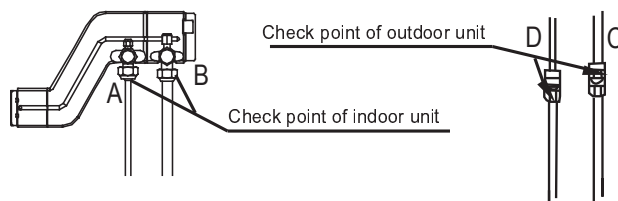
### 4.8 Leak detection

Use soap water or leak detector to check every joint whether leaks or not.

Note: A is low pressure side stop valve.

B is high pressure side stop valve.

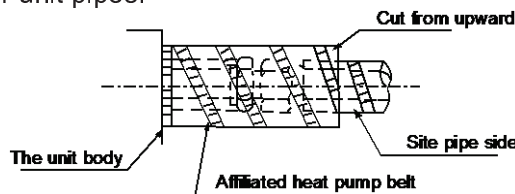
C and D are connecting pipes interface of indoor and outdoor units.



### 4.9 Heat Insulation

Do the heat insulation to the pipes of air side and liquid side separately. The temperature of the pipes of air side and liquid side when cooling, for avoiding condensation please do the heat insulation fully.

- The air side pipe should use closed cell foamed insulation material, which the fire-retardant is B1 grade and the heat resistance over 120°C.
- When the external diameter of copper pipe ≤ Φ12.7mm, the thickness of the insulating layer at least more than 15mm; When the external diameter of copper pipe ≥ Φ15.9mm, the thickness of the insulating layer at least more than 20mm.
- Please use attached heat-insulating materials to do the heat insulation without clearance for the connecting parts of the indoor unit pipes.



## 5. Electric Wiring Installations

### 5.1 Highlights of electrical installation

- 1) Please separately design the special power of indoor units and outdoor units.
- 2) The power adopts special circuit, and installs creepage protector and manual switch.
- 3) The indoor units' power, creepage protector and manual switch connecting to the same outdoor unit must be general. All indoor units must be the same circuit, and must simultaneously on or off; otherwise, system life will seriously effect, and appear the situation not to solve.
- 4) The communication line between indoor units and outdoor units please use 3 core shielded wiring, while don't use the multi core wiring without shielded affect, for the interference is reduced each other
- 5) Purchased wiring, parts and materials should be in compliance with the local and national regulations.
- 6) All field wiring construction should be finished by qualified electrician.
- 7) Air conditioning equipment should be grounded according to the relevant local and national electrical regulations.
- 8) Current leakage protection switch should be installed (select current leakage breaker in light of the 1.5-2 times of total loading rated current.)
- 9) When connecting wiring and wire holder, use cable clamp to fix and make sure no exposure.

- 10) Refrigerant piping system and wiring system of indoor and outdoor unit belongs to the different system.
- 11) Do not connect the power wire to the terminal of signal wire.
- 12) When power wire is parallel with signal wire, put wires to their own wire tube and remain proper gap (the current capacity of power wire is: 10A below 300mm, 50A below 500mm).
- 13) Voltage discrepancy of power wire terminal (side of power transformer) and end voltage (side of unit) should be less than 2%. If its length could not be shortened, thicken the power wire. Voltage discrepancy between phases shall not pass 2% rated value and Current discrepancy between highest and lowest phase should be less than 3% rated value.

**5.2 Selection of wiring**

- 1. The selection of wiring area shall in accordance with the requirements below:
    - 1) Voltage loss of wire shall meet the requirement of terminal voltage for normal operation and startup.
    - 2) The wiring current-carrying capacity determined by installed method and environment is not less than the largest current of unit.
    - 3) Conductor shall ensure the stability of movement and heating.
    - 4) The conductor's smallest sectional area should satisfy the requirement of mechanical strength.
- When earth protection line (shortly called PE line) is made of material the same as phase line, the smallest sectional area of PE line should be in accordance with the regulation below:

Sectional area of core to phase lines(mm <sup>2</sup> )	Smallest sectional area of PE line(mm <sup>2</sup> )
S ≤ 16	S
16 < S ≤ 35	16
S > 35	S/2

**5.3 Distribution highlights of distribution wiring**

- 1. When distributing wiring, select wirings with different colors for phase line, zero line and protection earth according to relevant regulations.
- 2. The power wire and control wire of concealed engineering is prohibited to bind together with refrigerant piping. It is necessary to pass through wire tube and be distributed separately, and the gap between control line and power wire should be 500mm at least.
- 3. When distributing wiring by passing through pipe, the following should be paid attention to:
  - 1) Metal wire tube could be used in indoor and outdoor, but it is not suitable to the place with acid – alkali corrosion.
  - 2) Plastic wire tube is generally used in indoor and place with corrosion, but it is not suitable to situation with mechanical damage
  - 3) The wiring through pipe shall not be in the form with ends jointing. If there must be joint, connection box should be installed at the corresponding place.
  - 4) The wiring with different voltage should not pass through the same wire tube.
  - 5) Total sectional area of wiring through wire tube shall not exceed 40% valid area of stuffing tube.
  - 6) Fixing point of wire tube support shall follow the standard below:

Normal diameter of wire tube Mm	Largest gap between fixed points of wire tube	
	Metal pipe	Plastic pipe
15~20	1.5m	1m
25~32	2m	1.5m
40~50	2.5m	2m

**5.4 Outdoor unit power wiring selection**

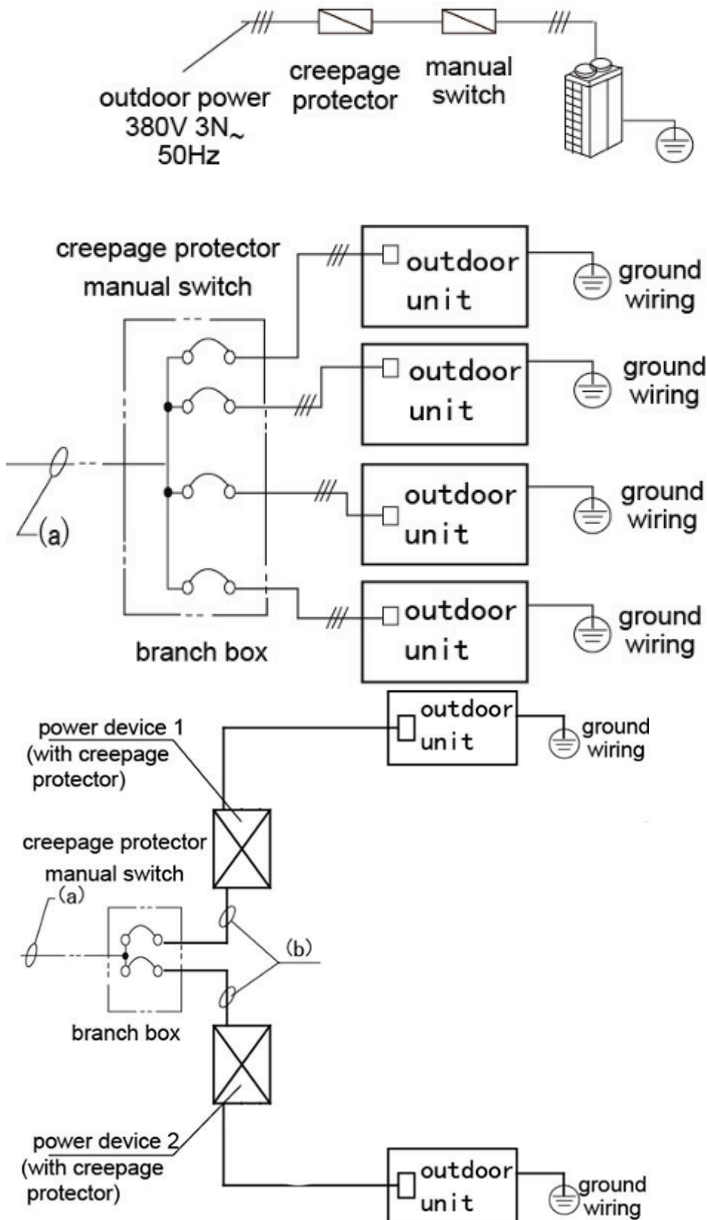
- 1) Separate Power Supply without power facility.

Model	Power	The shortest wiring diameter (mm)			Manual switch (A)		Creepage protector
		≤20m	≤50m	GND	Capacity	Fuse	
8KW	220V, 1N~50Hz/ 220V, 1N, 60Hz	2*2.5	2*3.0	4.0	30	25A	<100mA, 0.1sec
10.5KW		2*2.5	2*3.0	4.0	30	25A	<100mA, 0.1sec
12KW		2*3.3	2*4.0	4.0	50	40A	<100mA, 0.1sec
14KW		2*3.3	2*4.0	4.0	50	40A	<100mA, 0.1sec
16KW		2*3.3	2*4.0	4.0	50	40A	<100mA, 0.1sec

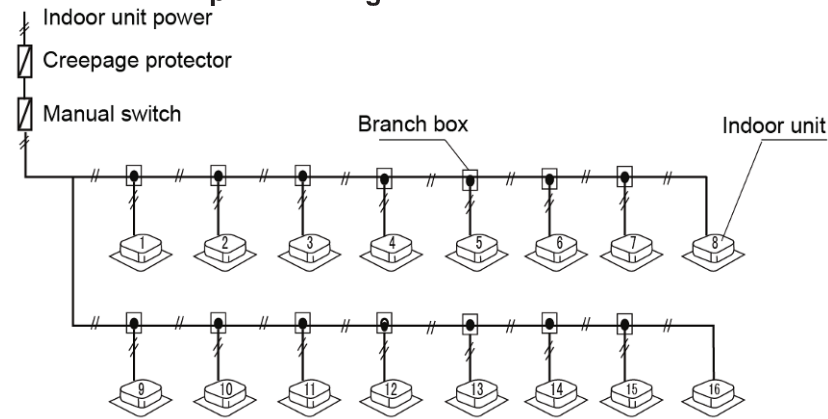
Model	Power	The shortest wiring diameter (mm)			Manual switch (A)		Creepage protector
		≤20m	≤50m	GND	Capacity	Fuse	
12KW	380~415V/3N/50Hz	4*3.3	4*4.0	4.0	30	25A	<100mA,0.1sec
14KW	380~415V/3N/50Hz	4*3.3	4*4.0	4.0	30	25A	<100mA,0.1sec
16KW	380~415V/3N/50Hz	4*3.3	4*4.0	4.0	30	25A	<100mA,0.1sec
18kW	380~415V/3N/50Hz	4*3.3	4*4.0	4.0	30	25A	<100mA,0.1sec

Note: The length in the table equals the value of power cord connecting outdoor units, indicating the condition that the voltage dropping range is within 2%. If the length exceeds the above figure, please select the wire diameter according to relevant standard.

2) With power facilities.



## 5.5 Indoor unit power wiring selection



### Note:

- 1) Set refrigerant piping system, signal wires between indoor unit, and that between outdoor units into one system.
- 2) Please do not put the signal wire and power wire in the same wire tube; keep distance between the two tubes. (Current capacity of power supply: less than 10A--300mm, less than 50A--500mm.)
- 3) Make sure to set address of outdoor unit in case of parallel multi-outdoor units.

### CAUTION

- Please select power source for indoor unit and outdoor unit respectively
- The power supply has specified branch circuit with leakage protector and manual switch.

Indoor unit connect with power supply which is 220-240V~50Hz. Outdoor unit connect with power supply which is 380-415V~50Hz (Please set all the indoor unit power supply of one system into the same circuit. It should turn on or shut down the unit at the same time, otherwise, the service life would affect seriously, even the unit may not turn on.)

- Please put the connective wire system between indoor unit and outdoor unit with the refrigerant system together.
- Use 3-core screened wire as indoor and outdoor control wire.
- The installation should comply with relevant national electric standard.
- Power wiring should be engaged by professional electrician.

## 6. Outdoor Unit Wiring

### 6.1 The Specification of Power

Table 6-1

Capacity		12kW-16kW	18kW
Outdoor Unit power	Phase	3 phase	3 phase
	Voltage and Frequency	380-415V~ 50Hz	380-415V~ 50Hz
	Power Wiring(mm <sup>2</sup> )	5-core X2.5	5-core X2.5
Circuit Breaker/Fuse (A)		25	32
Indoor unit/Outdoor unit Signal wire (Weak electric signal) (mm <sup>2</sup> )		3-core shielded wire 3X0.75	3-core shielded wire 3X0.75

**CAUTION**

A disconnection device having an air gap contact separation in all active conductors should be incorporated in the fixed wiring according to the National Wiring Regulation.

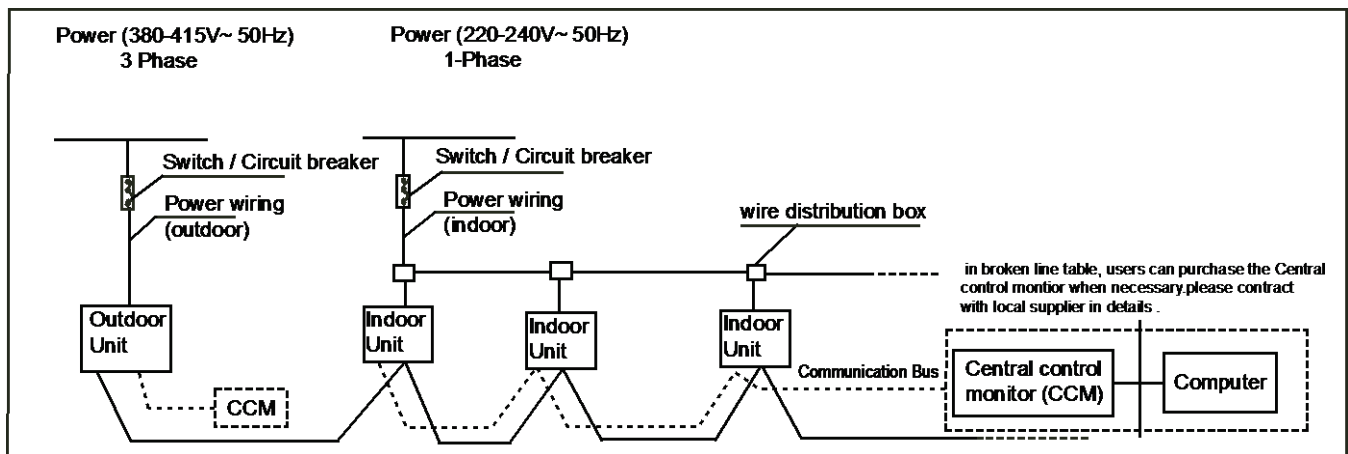


Fig.6-1

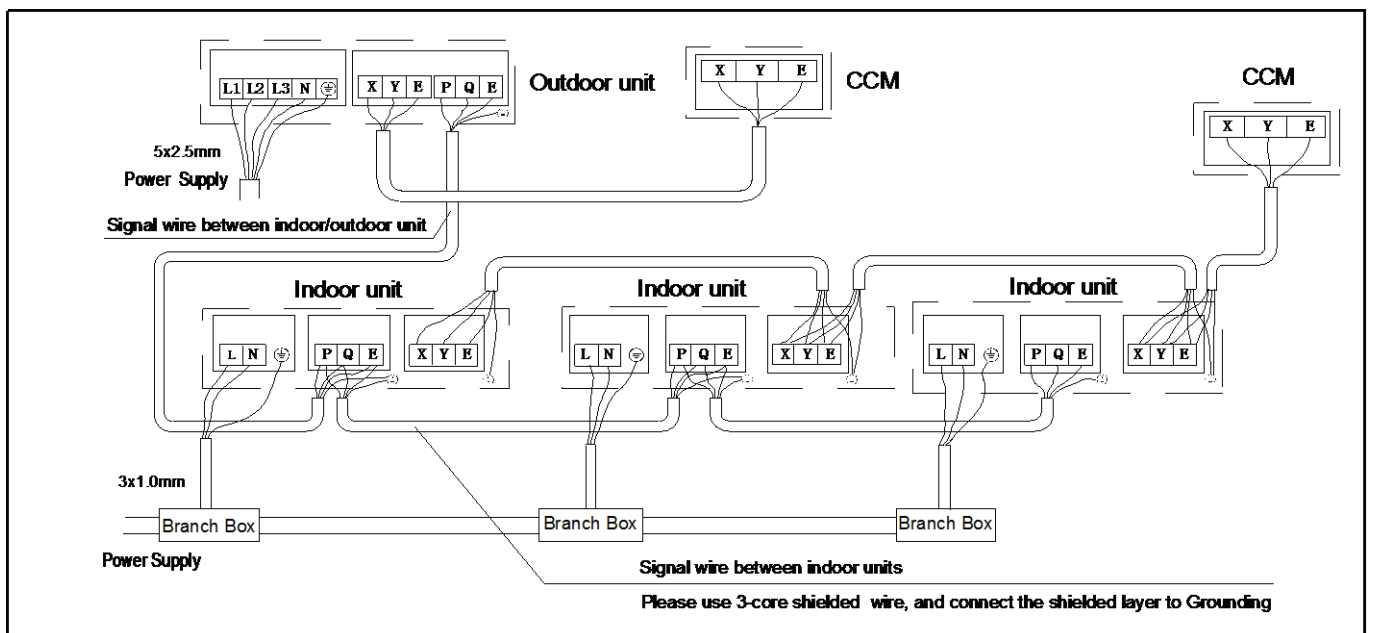


Fig.6-2

**CAUTION**

The reserved function is indicated in broken line table, users can select it when necessary.

**Indoor/Outdoor Unit Signal Wire**

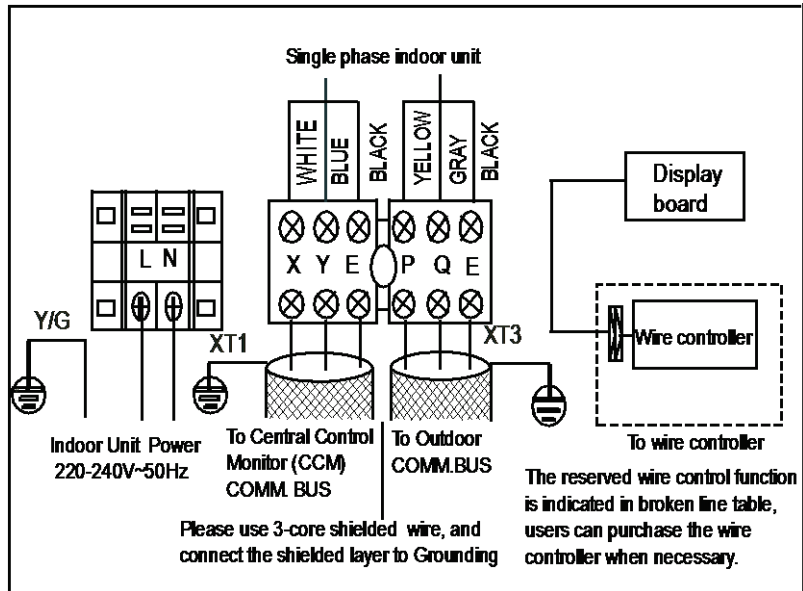
Connect the wire according to their numbers.  
Wrong connection may cause malfunction.

**Wiring Connection**

Seal the wiring connection with the insulation material, or the condensing dew will be caused.

**NOTE**

The air-conditioners can connect with Central Control Monitor (CCM). Before operation, please wiring correctly and set system  
the air-conditioners can connect with Central Control Monitor (CCM). Before operation, please wiring correctly and set system



**Fig.6-3**

**6.2 Indoor Unit Wiring**

Power Supply

**Table 6-2**

<b>Capacity (kW)</b>		1.5~16
<b>indoor Unit power</b>	<b>Phase</b>	1- phase
	<b>Frequency and Voltage</b>	220-240V~ 50Hz
	<b>Power Wiring(mm<sup>2</sup>)</b>	3-core×1.0
<b>Circuit Breaker (A)</b>		16
<b>Indoor unit/Outdoor unit Signal wire (Weak electric signal) (mm<sup>2</sup>)</b>		3-core shielded wire 3X0.75

1.Signal wire is 3-core, polarized wire. Use 3-core shield wire to prevent interference. The grounding method now is grounding the closed end of the shield wire and opening (insulating) at the end. Shield is to be grounded.

2.The control between outdoor unit and indoor unit is BUS type. An address is set on field during the installation.

**CAUTION**

The wire diameter and continuous length are under the condition that the voltage vibration is within 2%. If the continuous length is exceed showing value, choose the wire diameter follow relevant regulation.

### Indoor unit power supply wiring

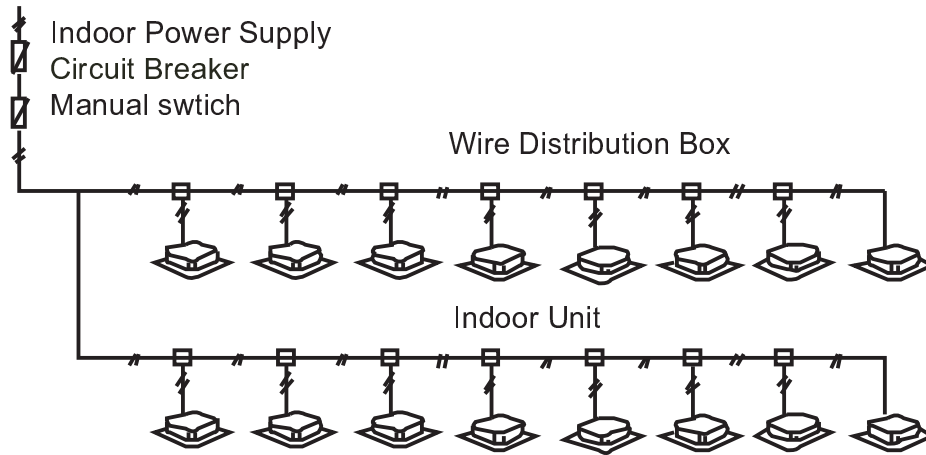


Fig.6-4

**CAUTION**

1. Refrigerant piping system, indoor unit-indoor unit connection signal wires and indoor unit-outdoor unit connection signal wire are in the same system.
2. When power cord is parallel with signal wire, please put them into separate wire distribution pipes, and leave a proper distance. (Reference distance: It is 300mm when current capacity of power cord is less than 10A, or 500mm when 50A).  
Please use shield wire as indoor unit/outdoor unit signal wire.

### Indoor/Outdoor unit signal wire wiring

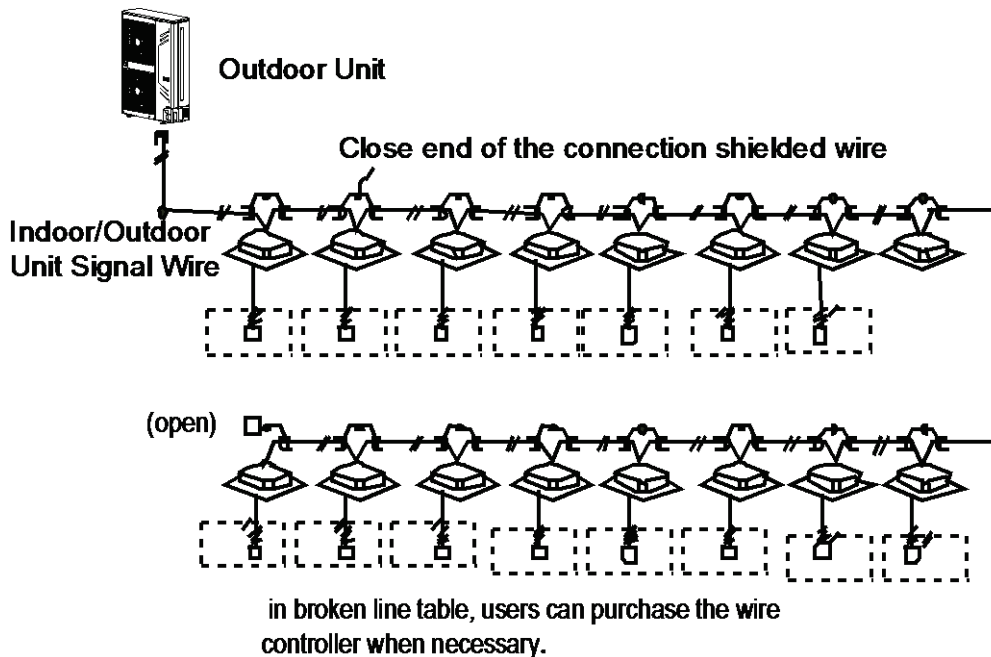


Fig.6-5

## 7. Test Running

Operate according to “key points for test running” on the electric control box cover.

**CAUTION**

- Test running cannot start until the outdoor unit has been connected to the power for 12hours.
- Test running cannot start until all the valves are affirmed open.
- Never make the test running if the machine has malfunction.
- Make sure the communication between the indoor unit and outdoor unit is normal before test running.

## 8. Precautions on Refrigerant Leakage

This air conditioner (A/C) adopts innocuous and nonflammable refrigerant. The locating room of the A/C should big enough that any refrigerant leakage is unable to reach critical thickness. So certain essential action can be taken on time.

### Refrigerant critical thickness: 0.44[kg/m<sup>3</sup>] for R410A.

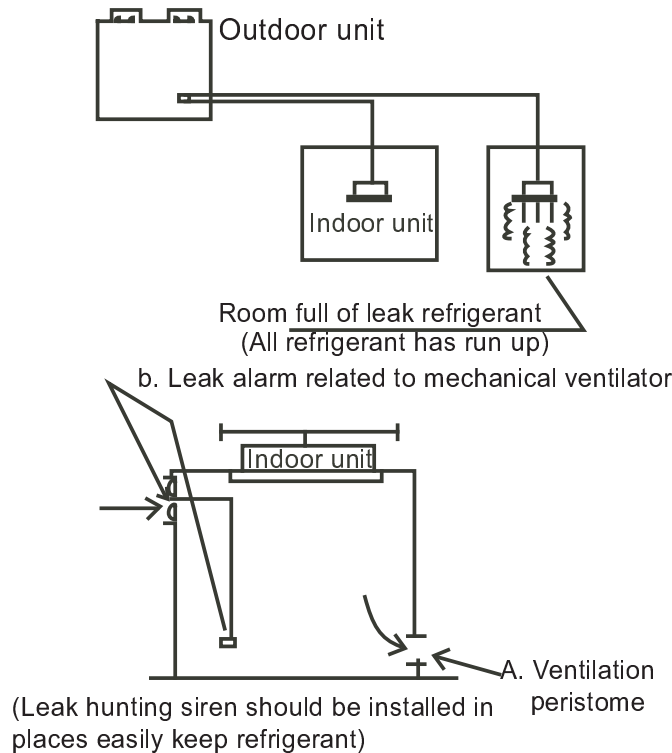
Confirm the critical thickness through follow steps, and take necessary actions.

1. Calculate the sum of the charge volume (A[kg]) Total Refrigerant volume of 10HP=factory refrigerant volume + super addition
2. Calculate the indoor cubage (B[m<sup>3</sup>]) (as the minimum cubage.
3. Calculate the refrigerant thickness

$$\frac{A[\text{kg}]}{B[\text{m}^3]} \leq \text{critical thickness}$$

Counter measure against over high thickness

1. Install mechanical ventilator to reduce the refrigerant thickness under critical level. (ventilate regularly)
2. Install leak alarm facility related to mechanical ventilator if you cannot regularly ventilate.



### NOTE

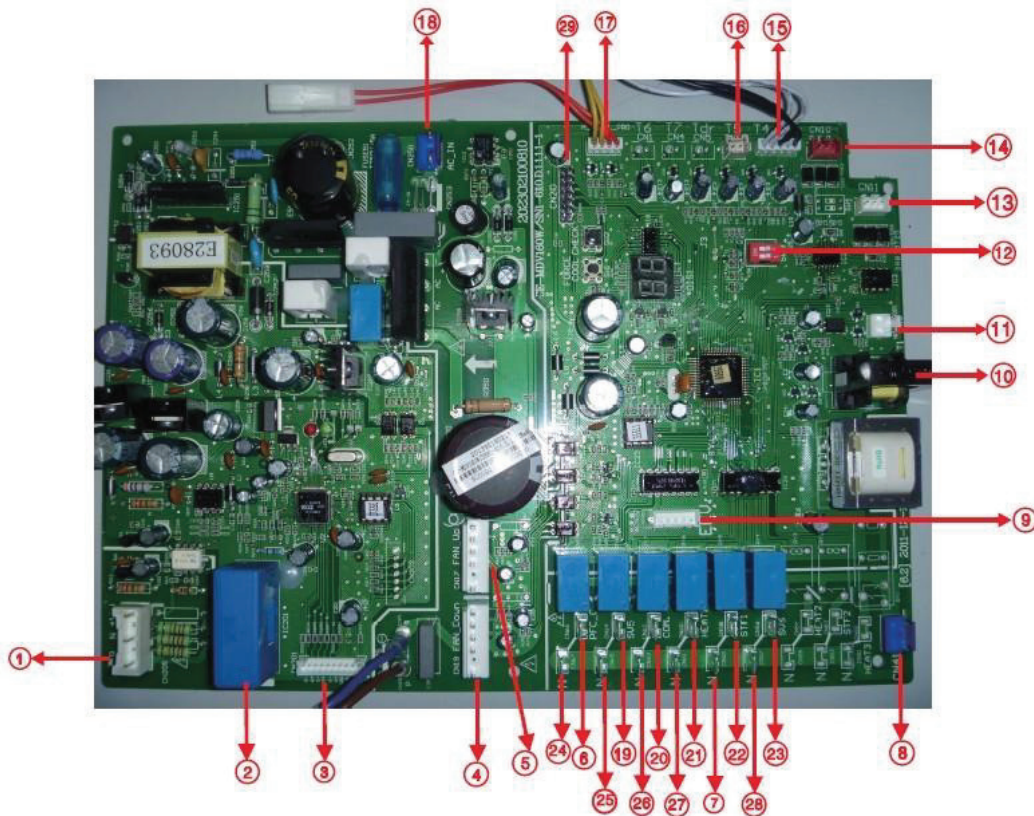
Please press “Force Cool” button to carry out refrigerant recycling process. Keep the low pressure above 0.2MPa; otherwise compressor may be burnt out.



# Part 4 Troubleshooting

<b>1. PCB ports instructions .....</b>	<b>71</b>
<b>2. PCB parts instructions .....</b>	<b>72</b>
<b>3. Error code table .....</b>	<b>75</b>
<b>4. Troubleshooting .....</b>	<b>76</b>

# 1 PCB ports instructions

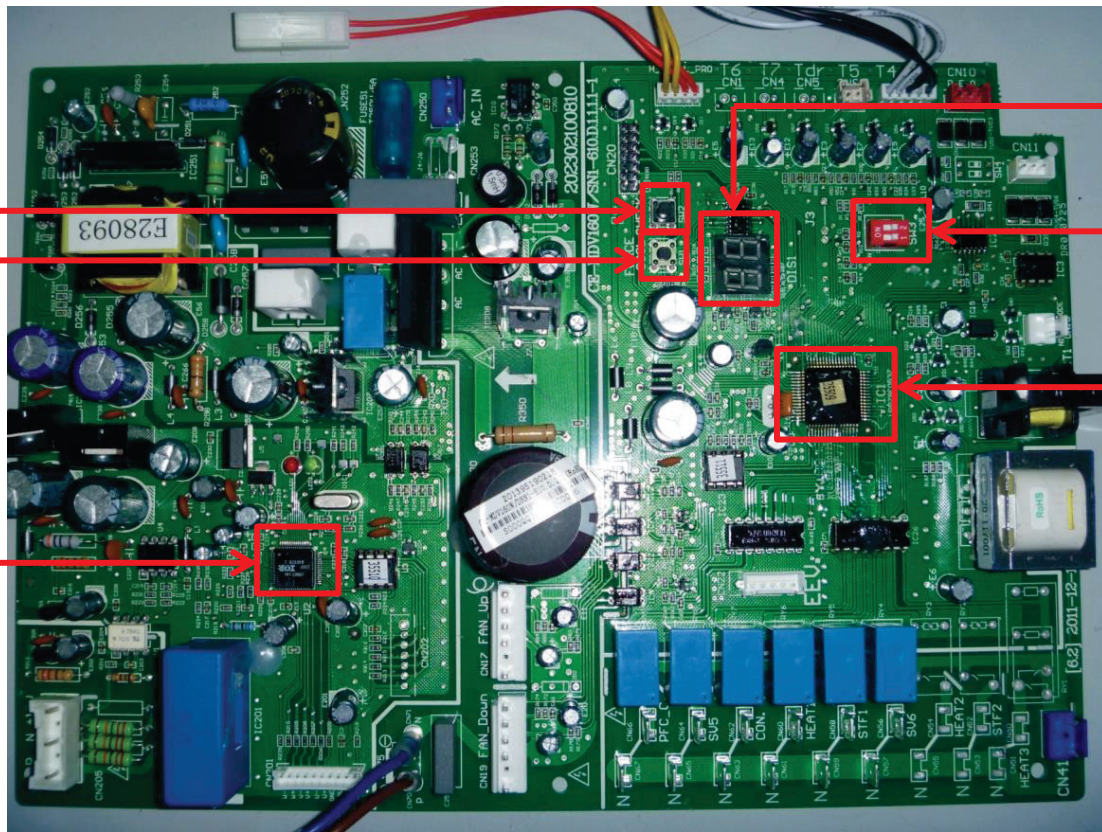


PCB ports instruction

No.	Content	Port voltage
1	Inspection port for inverter module voltage	DC 540V,DC 15V
2	Mutual inductor for compressor DC current	In dynamic change
3CN201	Activation port of inverter module	The left the first pin:DC
4CN19	Port of DC fan 1	The left the first pin:DC
5CN17	Port of DC fan 2	The left the first pin:DC
6CN66	Reserved	---
7CN59	Loading output terminal(4-way valve control)	AC 220V
8CN41	Power supply for relay	AC 220V
9CN22	EXV activation port	The left the first pin:DC
10	Input current of the mutual inductor at the inverter compressor	In dynamic change
11CN15	Reserve	---
12	SW7(SW3) net address code automatically	---
13CN11	Internet group control of indoor units	DC 2.5-2.7V
14CN10	Communication between indoor and outdoor units	DC 2.5-2.7V
15CN9	Inspection port for outdoor ambient temp. and condenser coil temp.	DC 0-5V
16CN8	Air discharge temp. sensed port at the compressor	DC 0-5V
17CN6	Input port for system pressure inspection	DC 0-5V
18CN250	Input port for power supply of the main control board	AC 220V
19CN64	Loading output terminal(16-18kw:solenoid valve SV5 control; Reserved for	AC 220V
20CN62	Loading output terminal (Delay control of DC power)	AC 220V
21CN60	Loading output terminal(crankcase heating control)	AC 220V
22CN58	Loading output terminal(4-way valve control)	AC 220V
23CN56	Loading output terminal(solenoid valve SV6 control)	AC 220V
24CN67	Reserved	---
25CN65	Loading output terminal(16-18kw:solenoid valve SV5 control; Reserved for 12-14kw)	AC 220V

26CN63	Loading output terminal (Delay control of DC power)	AC 220V
27CN61	Loading output terminal(crankcase heating control)	AC 220V
28CN57	Loading output terminal(solenoid valve SV6 control)	AC 220V
29CN20	Program terminal connected to the computer	---

## 2 PCB parts instructions



SW2: Query button

SW1: Forced cooling button

IRMCF341

LED digital tube display

Function setting dial switch

UPD78F0537A

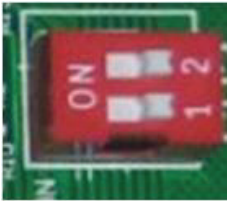
### 2.1 SW2 query instructions

No.	Content	Note
1	Normal display	----
2	Running mode	0-Standby;2-Cooling;3-Heating;4-Forced Cooling
3	Fan speed	0-OFF
4	Capacity requirement of indoor unit	----
5	Capacity requirement of revised outdoor unit	----
6	T3 pipe temperature	Actual value
7	T4 environment temperature	Actual value
8	T5 discharge temperature	If more than one hundred, only display hundred s' and tens digits.
9	Reserved	----
10	Opening degree of EXV	Actual value=Display value×8
11	Actual current value	Actual value
12	AD actual value of voltage	Actual value
13	T2 average temperature	Actual value
14	Quantity of indoor units	Actual value
15	Running quantity of indoor units	Actual value
16	<b>12~16kW</b> : the last fault or protection code (if there is no fault or protection code it will be display "nn") <b>18kW</b> : <b>18</b>	----
17	<b>12~16kW</b> : "--" displays <b>18kW</b> : Priority mode(Reserved)	Query for 12~16kW ends. "0" displays on 18kW..
18	<b>18kW</b> :Version of the program	Only for 18kW
19	<b>18kW</b> :The last fault or protection code (if there is no fault or protection code it will be display "nn")	Only for 18kW
20	<b>18kW</b> :Display "--"	Only for 18kW

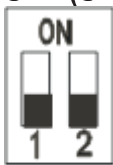
Remark:

- 1) Normal display: Display frequency of compressor when capacity needing.
- 2) Running mode: 0—Standby; 2—COOLING; 3—HEATING; 4—FORCED COOLING.
- 3) Fan speed: 0—OFF; 1~7—Speed increasing in turn.
- 4) SW1: Forced cooling button.  
SW2: Query button.

**2.3 Function setting dial switches instructions**



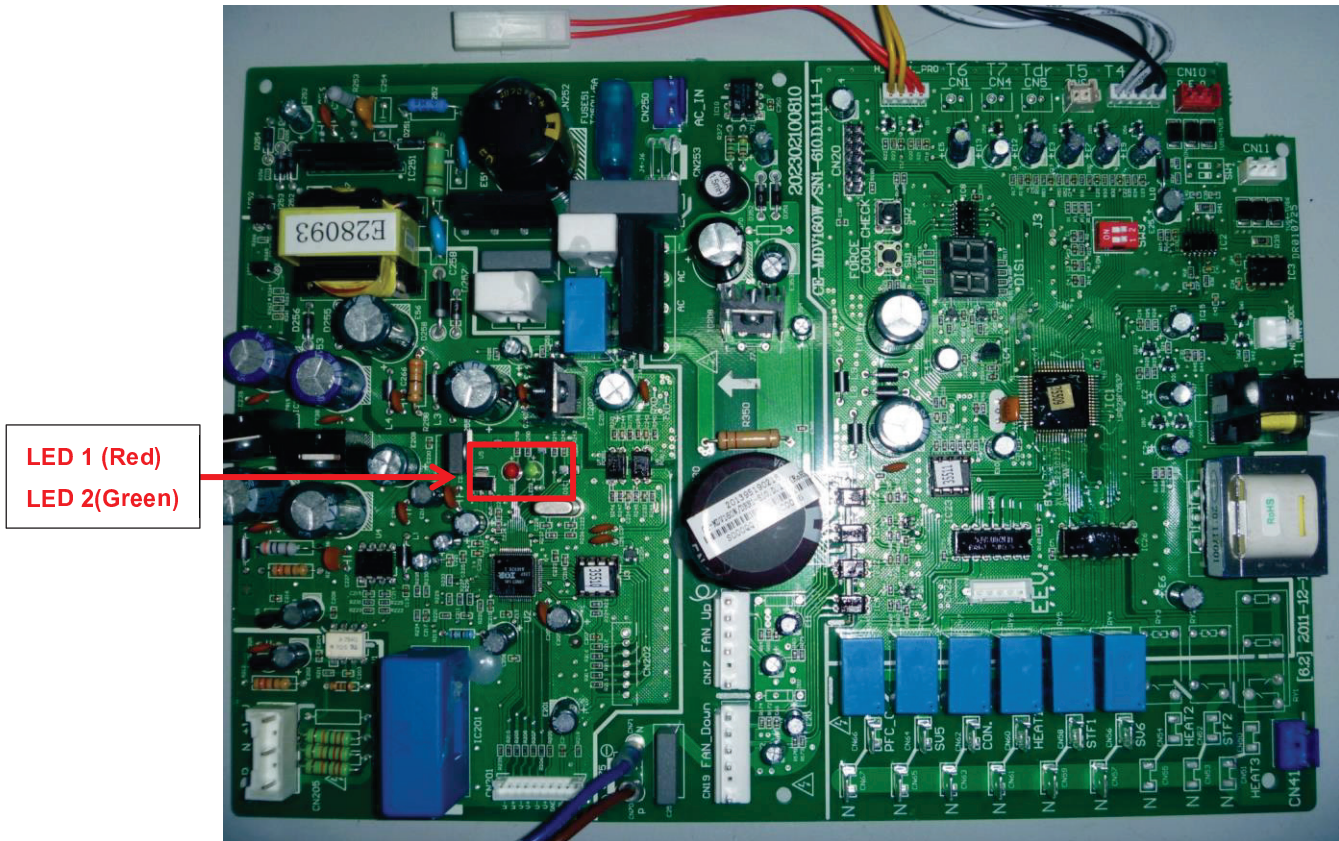
**SW7(SW3) definition: Auto Addressing Dial**



**SW7**

SW7(SW3)		
1	ON	Obtain network address automatically
	OFF	Obtain network address manually
2	ON	Revocation indoor unit network address
	OFF	/

### 1.4 LED on PCB instructions



LED 1 (Red)  
LED 2 (Green)

**LED1:** Malfunction indicator lamp of inverter module. The lamp will be off if the system running is normal. And it will be on if the inverter module is faulty and the error code will display on digital tube.

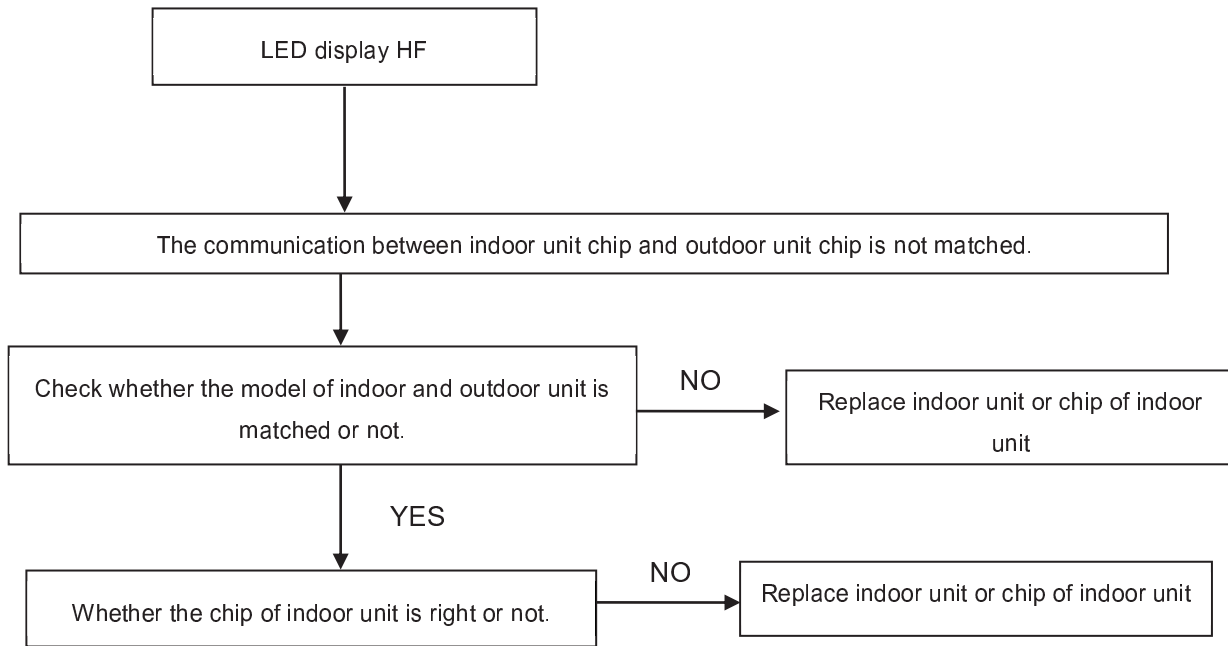
**LED2:** Running indicator lamp of inverter module. The lamp will be on if the system running is normal.

### 3 Error code table

Error code	Content	Note
HF	Not matched with M_HOME indoor unit	Only display on 18kW
E0	EEPROM malfunction	For 12~16kW model
E9		For 18kW model
E2	Communication malfunction between indoor/outdoor units	All the unit
E3	Communication malfunction in outdoor PCB	For 12~16kW model
H0		For 18kW model
E4	T3&T4 temperature sensor malfunction	All the unit
E5	Outdoor unit voltage protection	All the unit
E6	DC fan error	All the unit
E7	Discharge Sensor Malfunction	For 12~16kW model
EA		For 18kW model
E8	There are two times E6 fault in 10 minutes (recovery after power off)	For 12~16kW model
Eb		For 18kW model
P0	Reserved	-----
P1	High pressure protection	All the unit
P2	Low pressure protection	All the unit
P3	Compressor current protection	All the unit
P4	Compressor discharge temperature protection	All the unit
P5	Condenser high temperature protection	All the unit
P6	IPM modules protection	All the unit
P7	Evaporator high temperature protection	For 12~16kW model
PE		For 18kW model
P8	Typhoon protection	All the unit
L0	Module malfunction	For 18kW model
L1	DC generatrix low voltage protection	For 18kW model
L2	DC generatrix high voltage protection	For 18kW model
L3	Reserved	For 18kW model
L4	MCE malfunction/simultaneously/cycle loop	For 18kW model
L5	Zero speed protection	For 18kW model
L6	Reserved	----
L7	Wrong phase protection	For 18kW model
L8	Speed difference>15Hz protection between the front and the back clock	For 18kW model
L9	Speed difference>15Hz protection between the real and the setting speed	For 18kW model

## 4 Troubleshooting

### 4.1 HF: not matched with M\_Home indoor unit. (Only display on 18kW model)

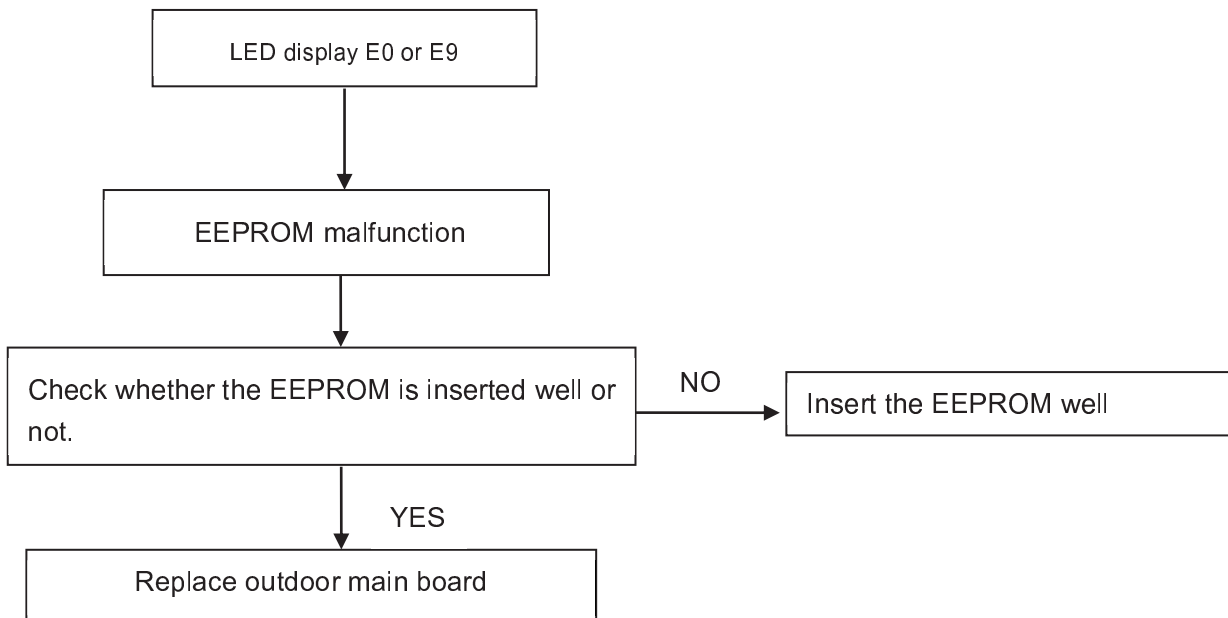


\*Outdoor unit chip refers to 0537 chip.

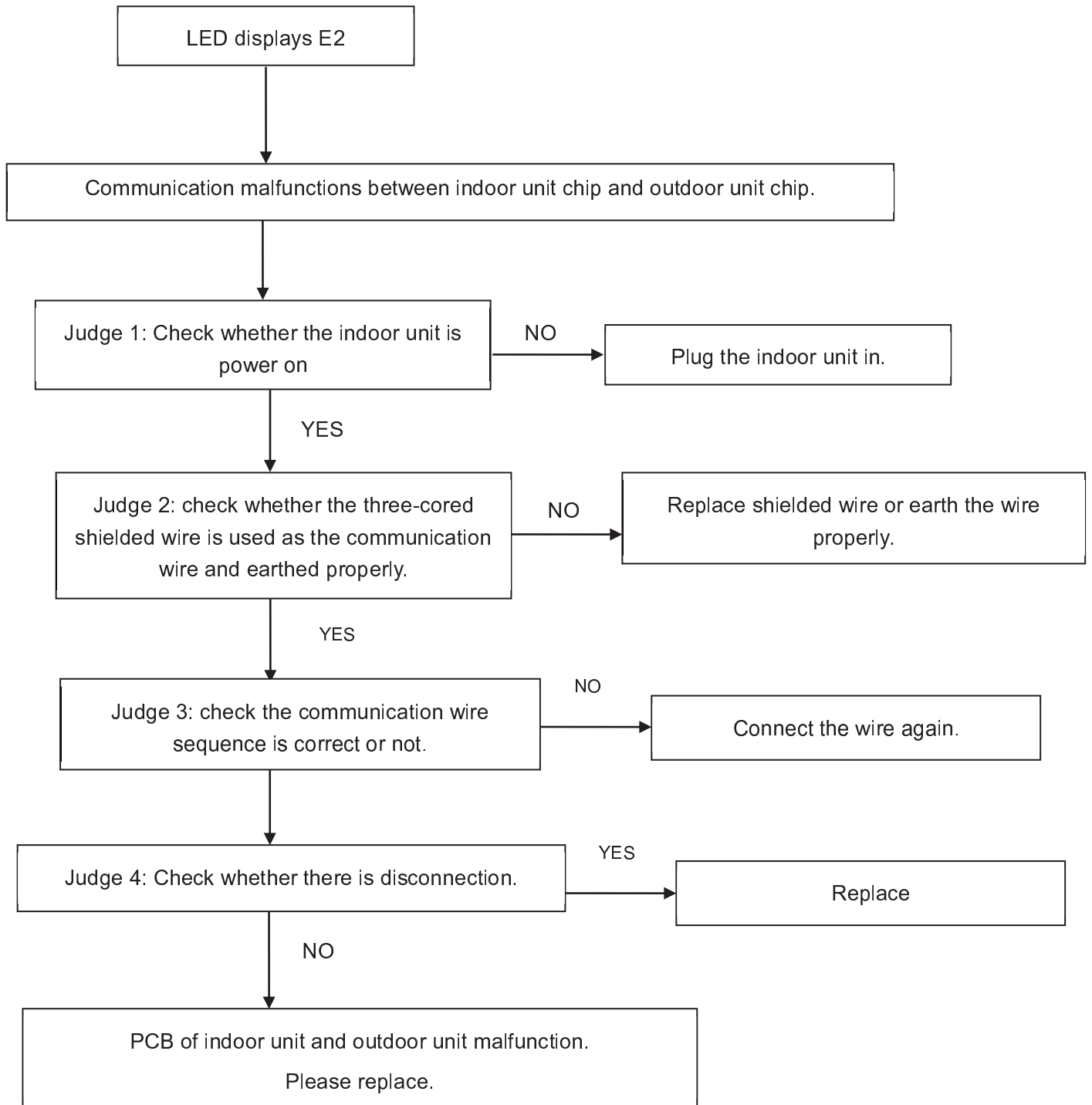
### 4.2 E0/E9: EEPROM malfunction (E0 display on 12~16kW model; E9 display on 18kW model)

The malfunction may be caused by two reasons:

1) The EEPROM is not inserted well; 2) Outdoor main board is broken.



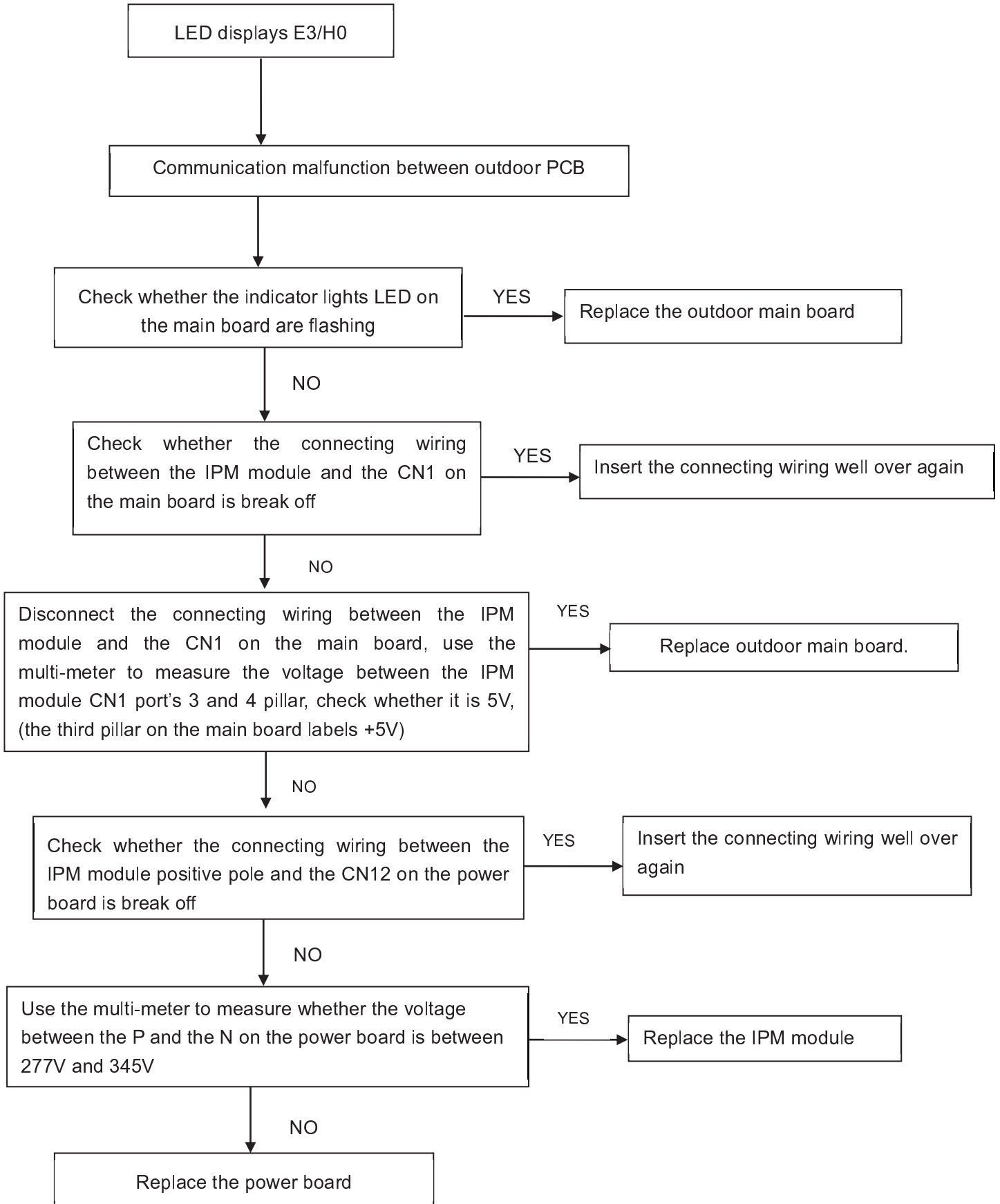
**4.3 E2: Communication malfunctions between indoor unit chip and outdoor unit chip.**



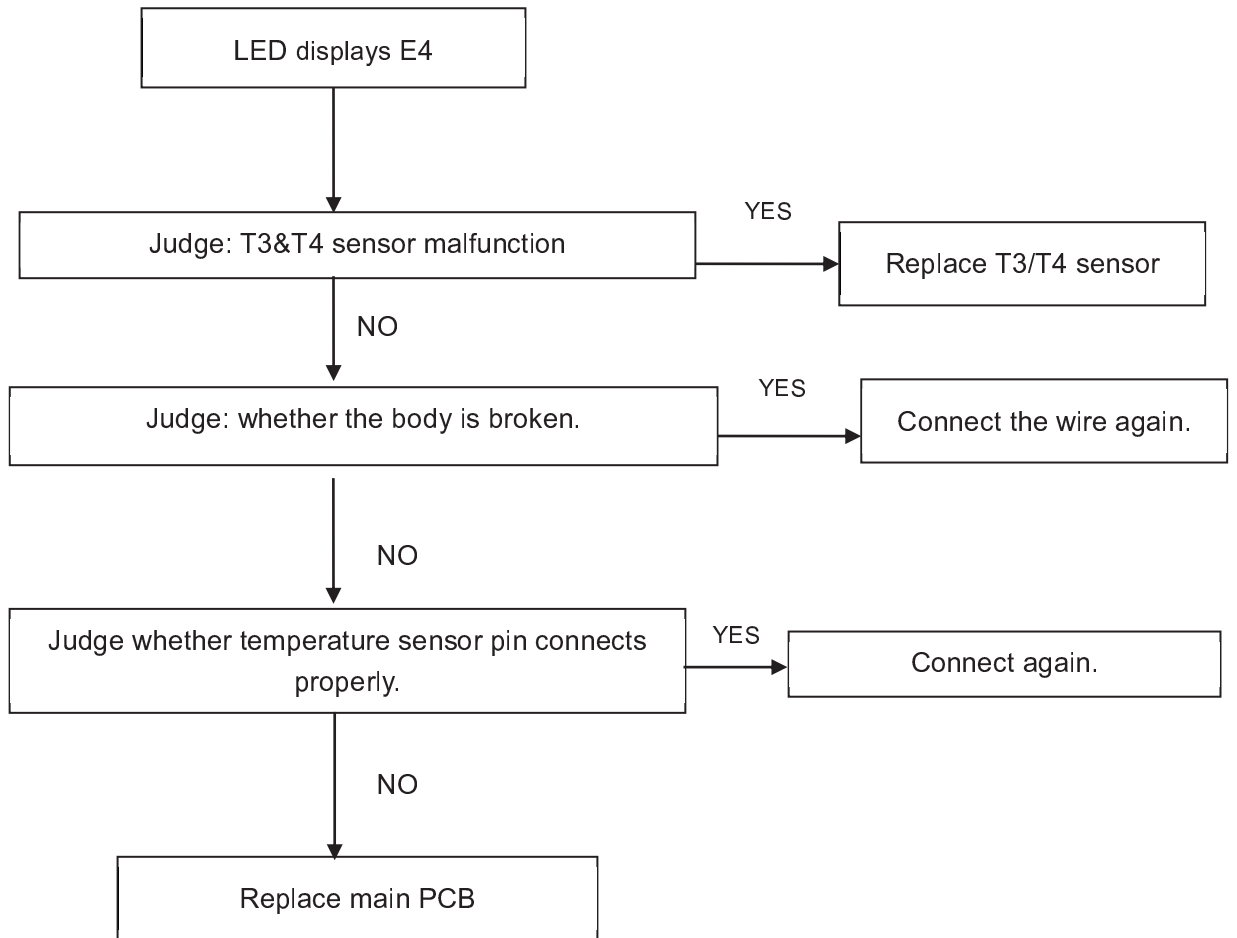
\*Outdoor unit chip refers to 0537 chip.



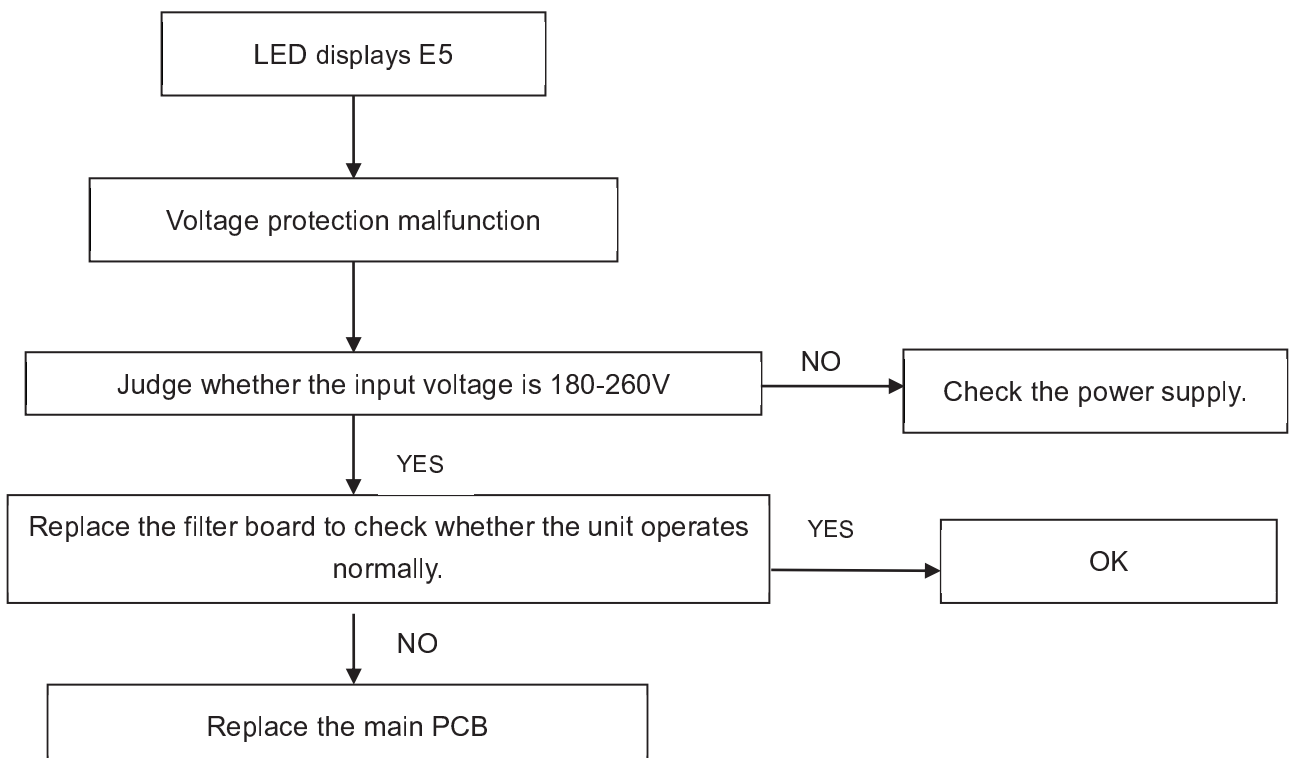
**4.4 E3/H0: Communication malfunction in outdoor PCB (E3 display on 12~16kW; H0 display on 18kW)**



**4.5 E4: T3&T4 sensor malfunction**



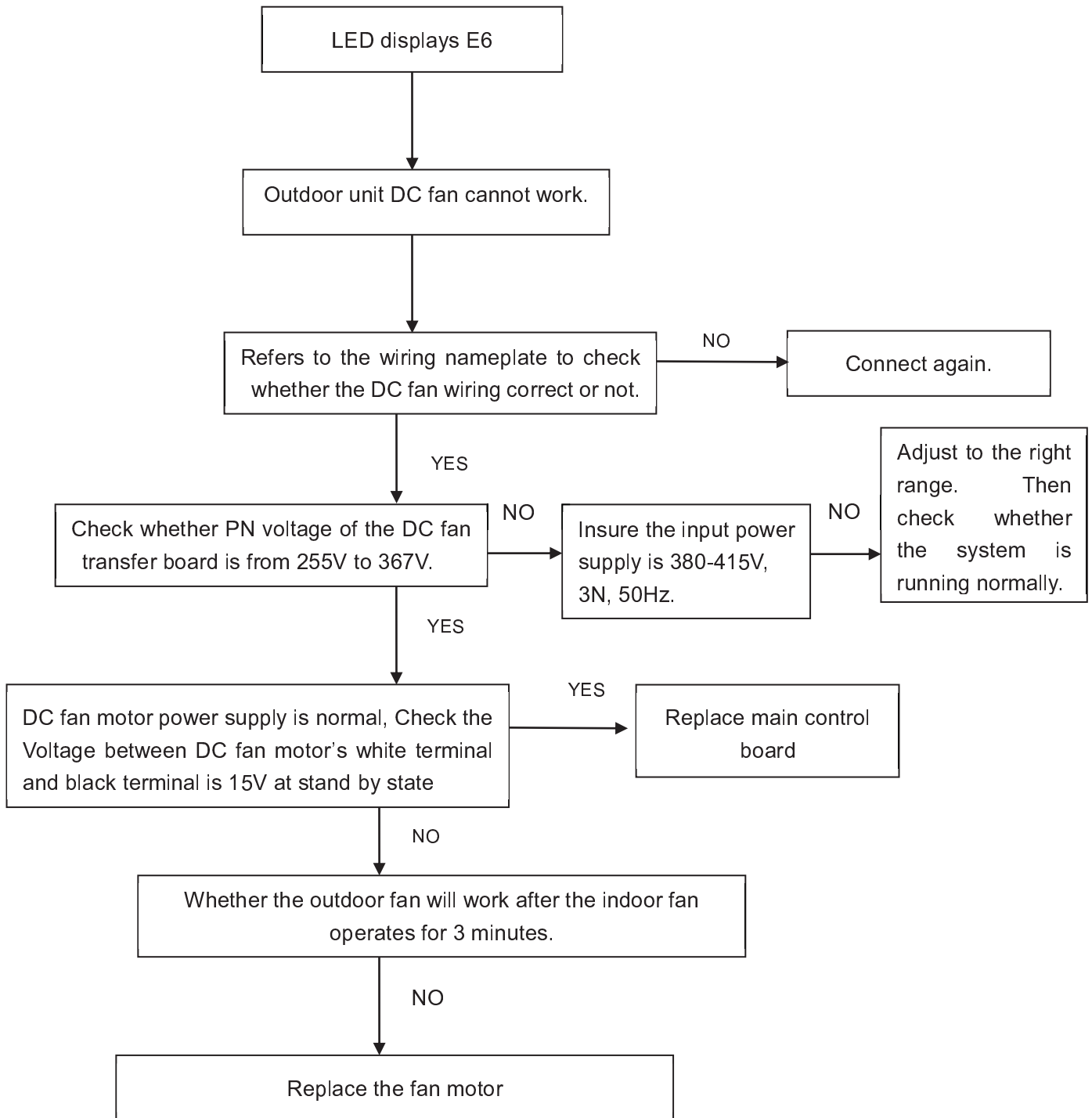
**4.6 E5: Voltage protection malfunction**



**4.7 E6:DC Fan Error**

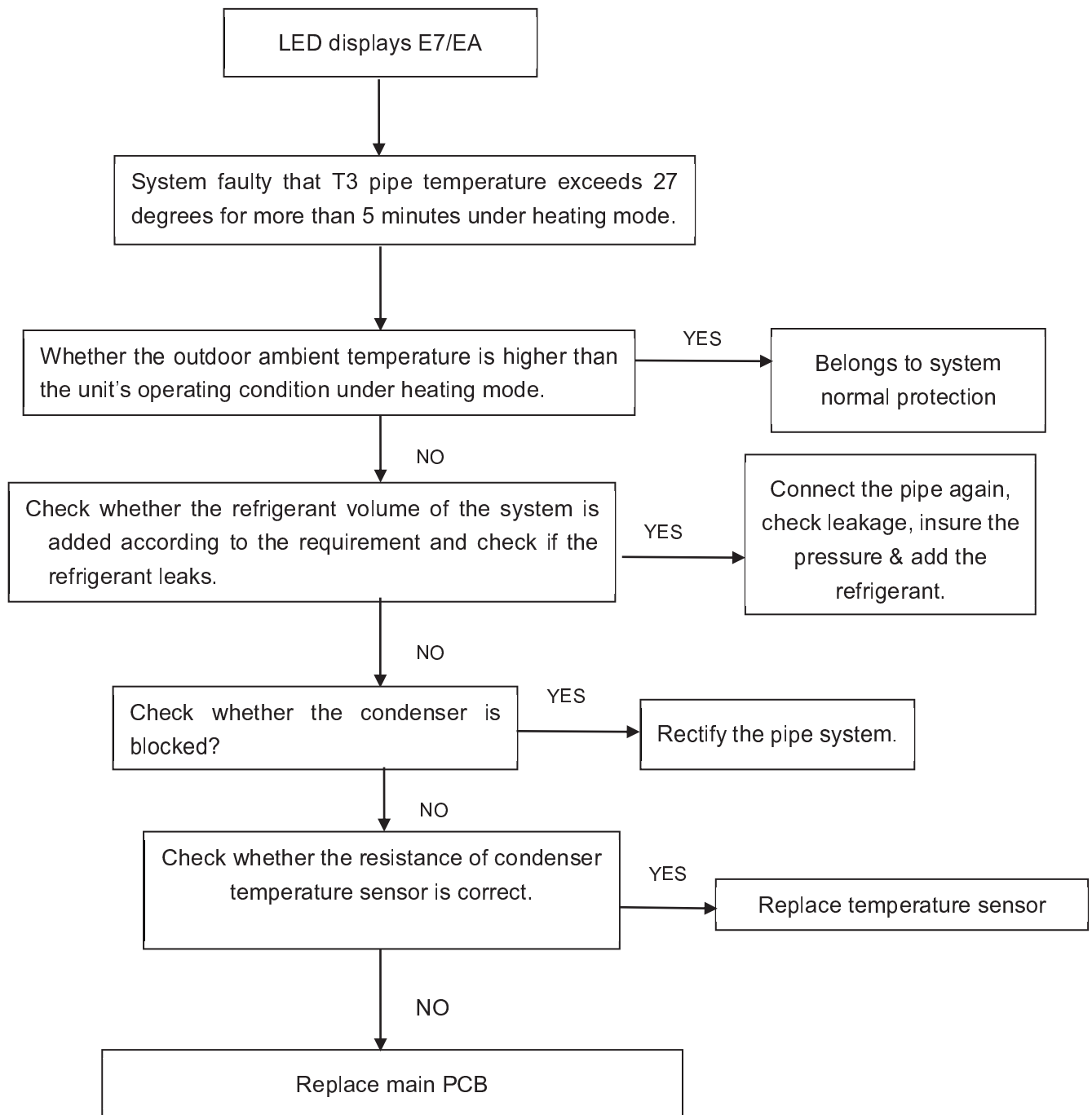
The error may be caused by two reasons:

- 1). The wiring connection is wrong; 2). Power supply voltage is not normal.



**4.8 E7/EA: Discharge Sensor Malfunction (E7 display on 12~16kW; EA display on 18kW)**

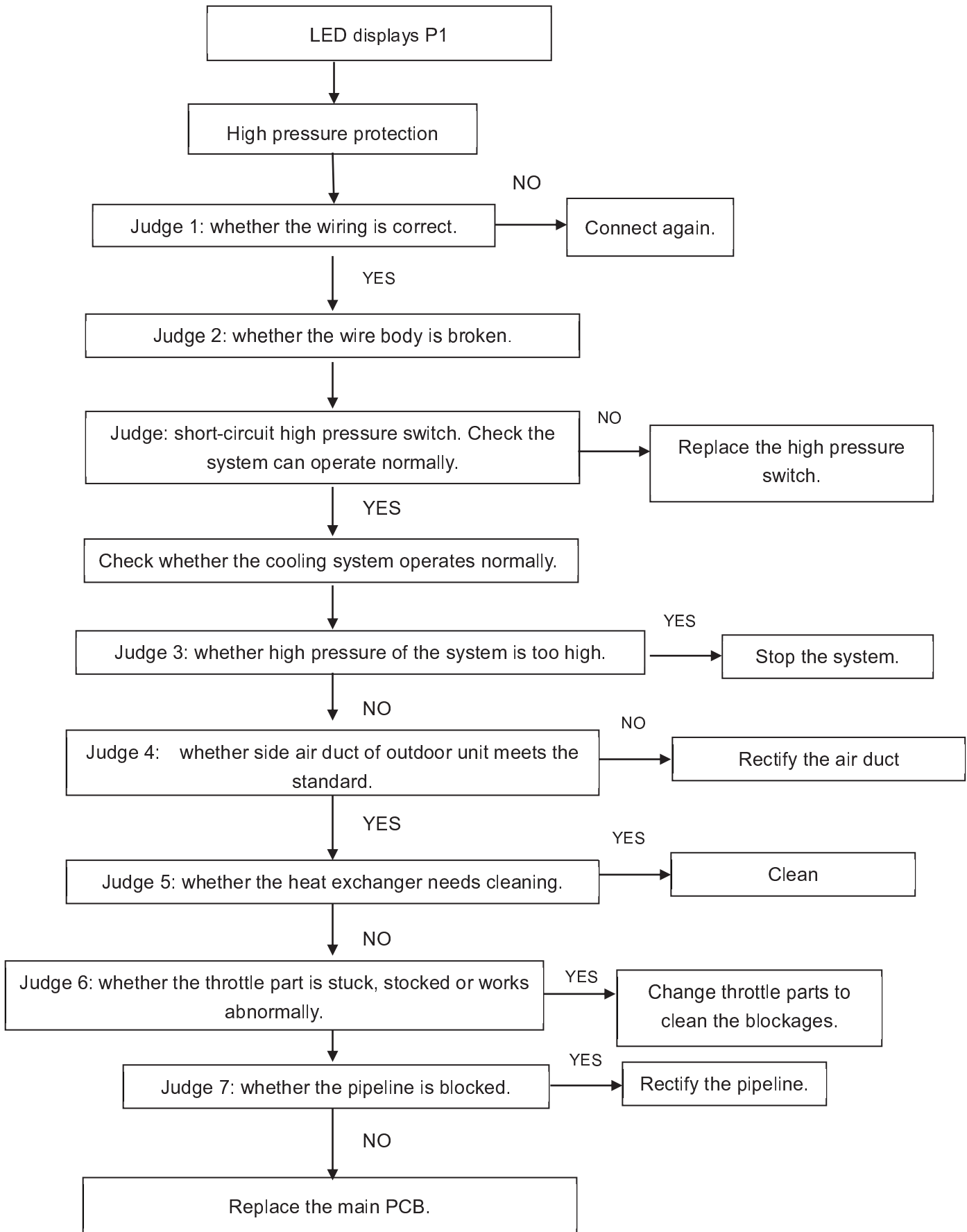
T3 pipe temperature exceeds 27 degrees for more than 5 minutes under heating mode.



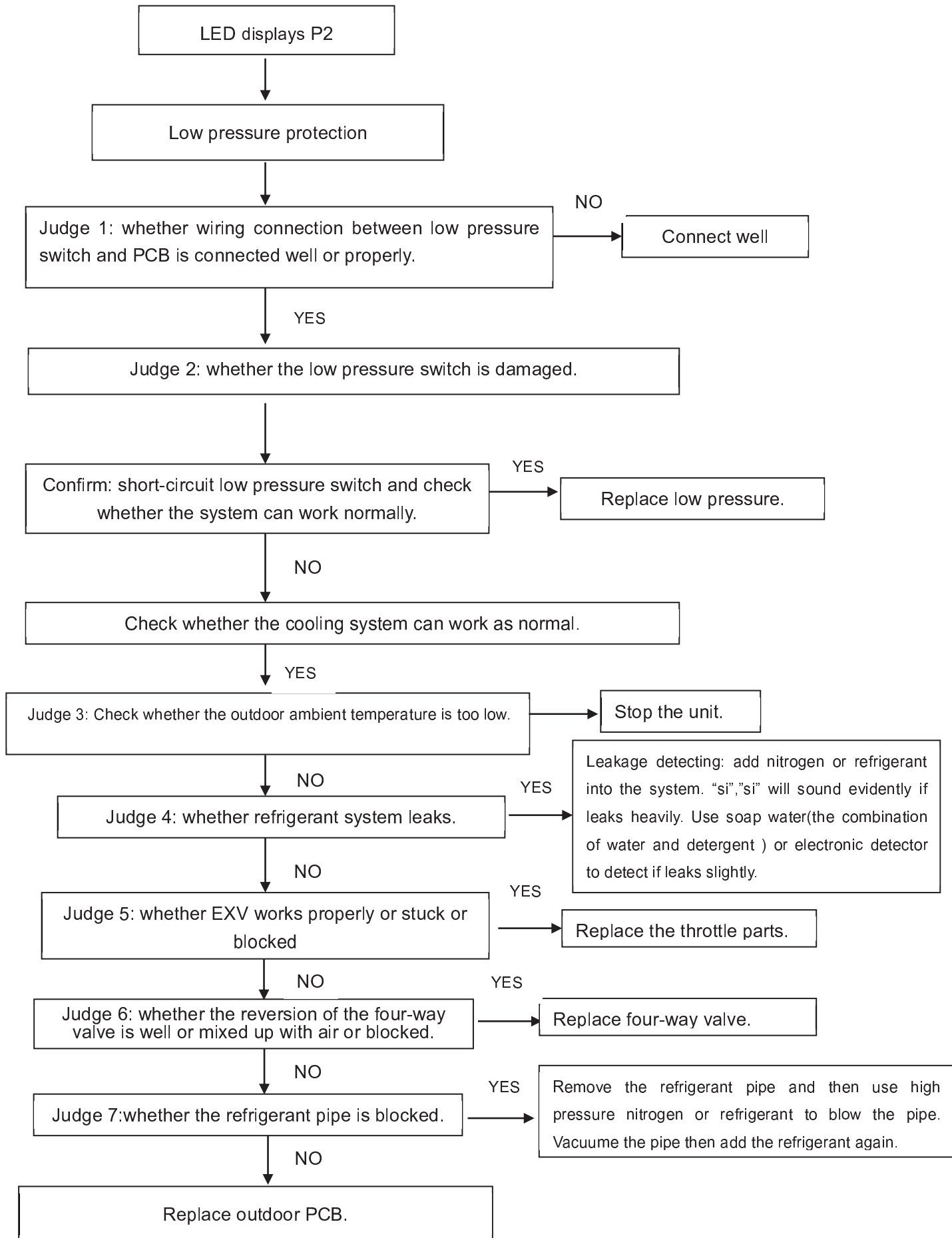
**4.9 E8/Eb malfunction (E8 display on 12~16kW; Eb display on 18kW)**

E8/Eb will display if E6 faulty happens twice in 10 minutes continuously. Malfunction checking method is the same as E7/EA (refers to the above).

**4.10P1 malfunction: High pressure protection**

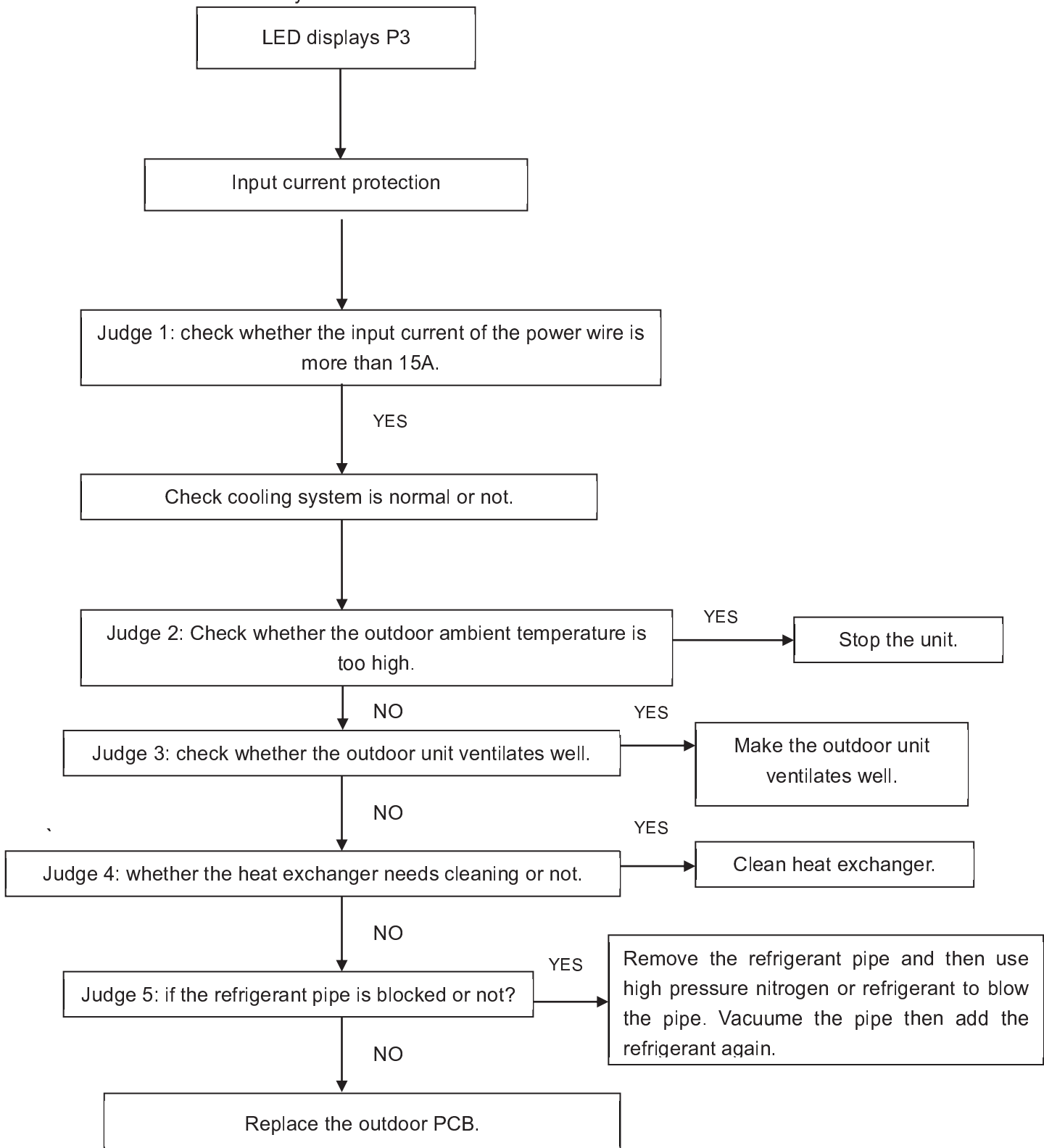


4.11P2: Low pressure protection



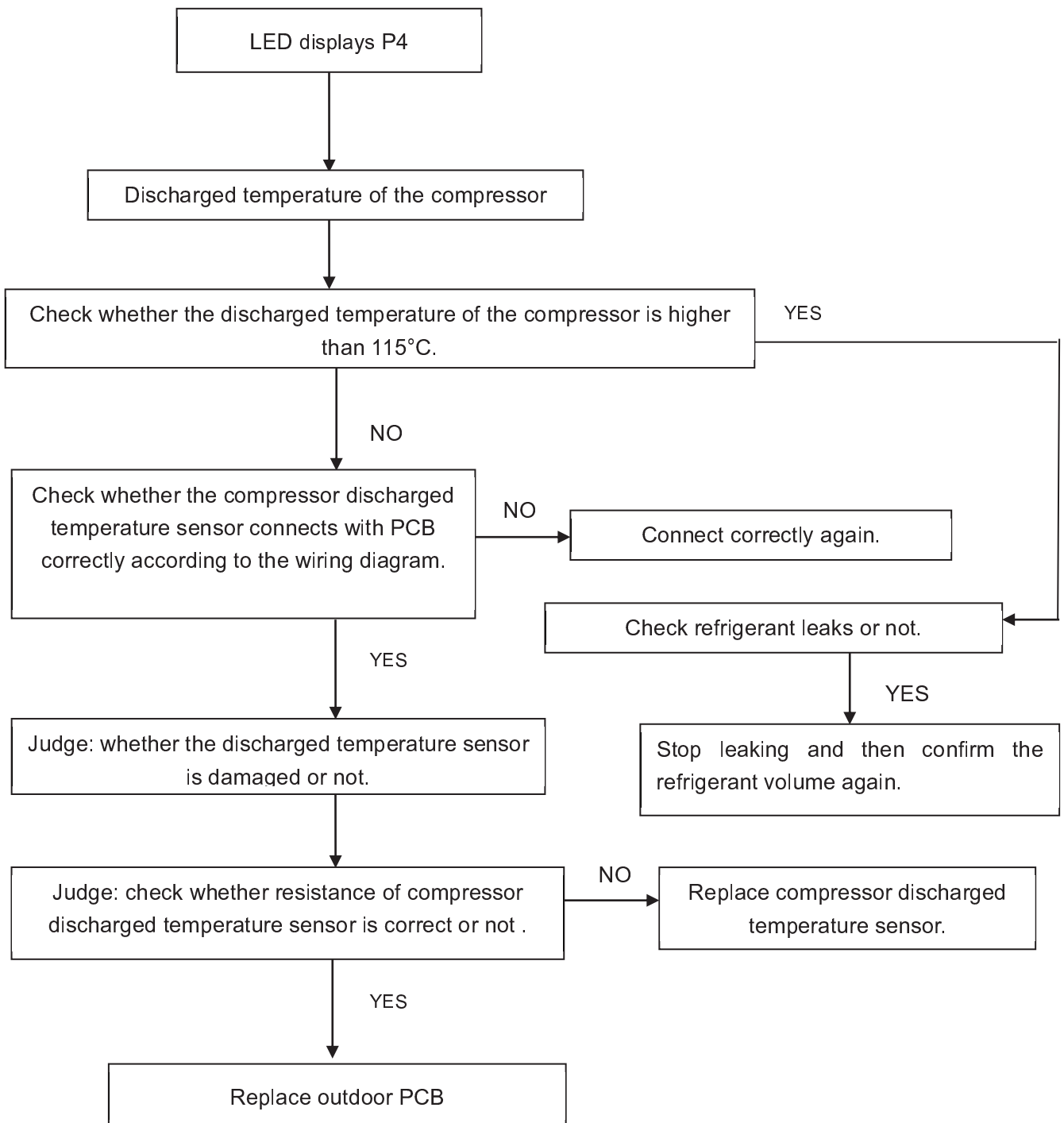
**4.12P3: Compressor current protection**

It will protect when input current is more than 15A. It will recover when input current is less than 15A.  
It will recover automatically.



**4.13P4:Compressor discharged temperature protection**

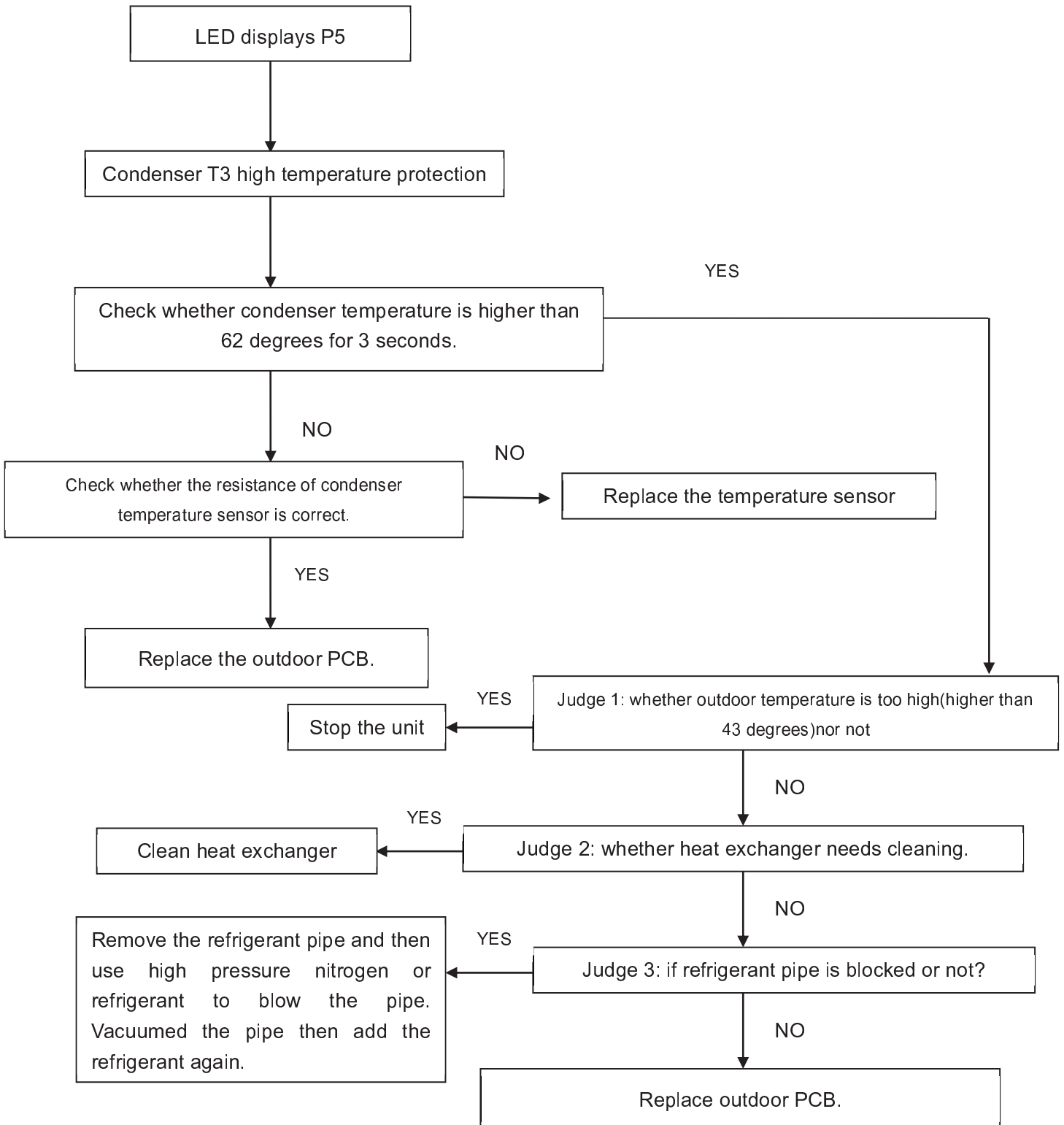
When the discharged temperature of the compressor is higher than 115°C, the unit will stop running. When the discharged temperature of the compressor is lower than 90°C , the unit resumes normal operation automatically.





**4.14P5: Condenser high temperature protection**

When condenser temperature is higher than 62 degrees for 3 seconds, the unit will stop operating. When pipe temperature outside is lower than 52 degrees, the unit will resume operate.

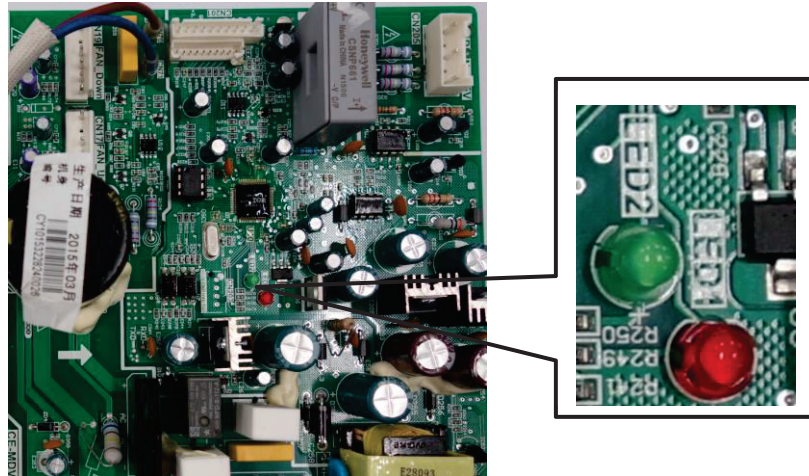


**4.15 P6 indicates inverter module protection; H4 indicates P6 protection has occurred 3 times in 60 minutes. When an H4 error occurs, a manual system restart is required before the system can resume operation. The cause of an xH4 error should be addressed promptly in order to avoid system damage.**

**4.15.1 Specific error codes for H4 inverter module protection**

The specific error codes L0, L1, L2, L4, L5, L7, L8 and L9 can be obtained from the inverter module LED indicators. If an inverter module error has occurred, one of inverter module LED indicators is continuously on and the other one of inverter module LED indicators flashes.

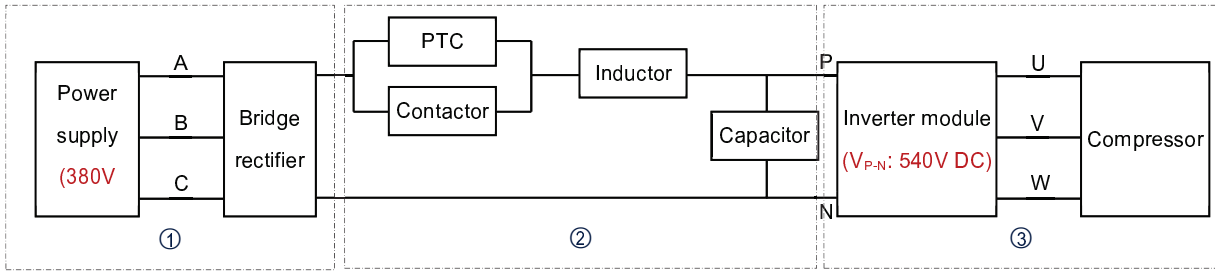
*Inverter module LED indicators*



*Errors indicated on LED*

LED flashing pattern	Corresponding error
Flashes 8 times and stops for 1 second, then repeats	L0 - Inverter module protection
Flashes 9 times and stops for 1 second, then repeats	L1 - DC bus low voltage protection
Flashes 10 times and stops for 1 second, then repeats	L2 - DC bus high voltage protection
Flashes 12 times and stops for 1 second, then repeats	L4 - MCE error
Flashes 13 times and stops for 1 second, then repeats	L5 - Zero speed protection
Flashes 15 times and stops for 1 second, then repeats	L7 - Phase sequence error
Flashes 16 times and stops for 1 second, then repeats	L8 - Compressor frequency variation greater than 15Hz within one second protection
Flashes 17 times and stops for 1 second, then repeats	L9 - Actual compressor frequency differs from target frequency by more than 15Hz protection

4.15.2 Principle of DC inverter



- ① 380-415V AC power supply change to DC power supply after bridge rectifier.
- ② Contactor is open the current across the PTC to charge capacitor, after 5 seconds the contactor closed.
- ③ The capacitor output steady 540V DC power supply for inverter module P N terminals.

4.15.3 L0 troubleshooting

Condition 1: L0 error appears immediately when the outdoor unit is power on.

```

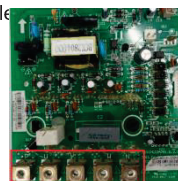
    graph TD
      L0[L0] --> Q1{Communication wires between main PCB and inverter module (10 pins) are not connected properly1}
      Q1 -- Yes --> A1[Ensure communication wires are connected properly]
      Q1 -- No --> Q2{Inverter module is failed2}
      Q2 -- Yes --> A2[Replace the inverter module]
      Q2 -- No --> Q3{Voltage between F0 and G on communication wire terminal (10 pins) on main PCB is too low2}
      Q3 -- Yes --> A2
  
```

Notes:

1. Communication wire between main PCB and inverter module:

Communication wire terminal on main PCB	Communication wire	Communication wire terminal on inverter module

2. Measure the resistance between PU/PW/PV/UN/VN/WN on inverter module. If the resistances are infinite, the U V W terminals are normal. If the resistances are zero, the U V W terminals have failed.

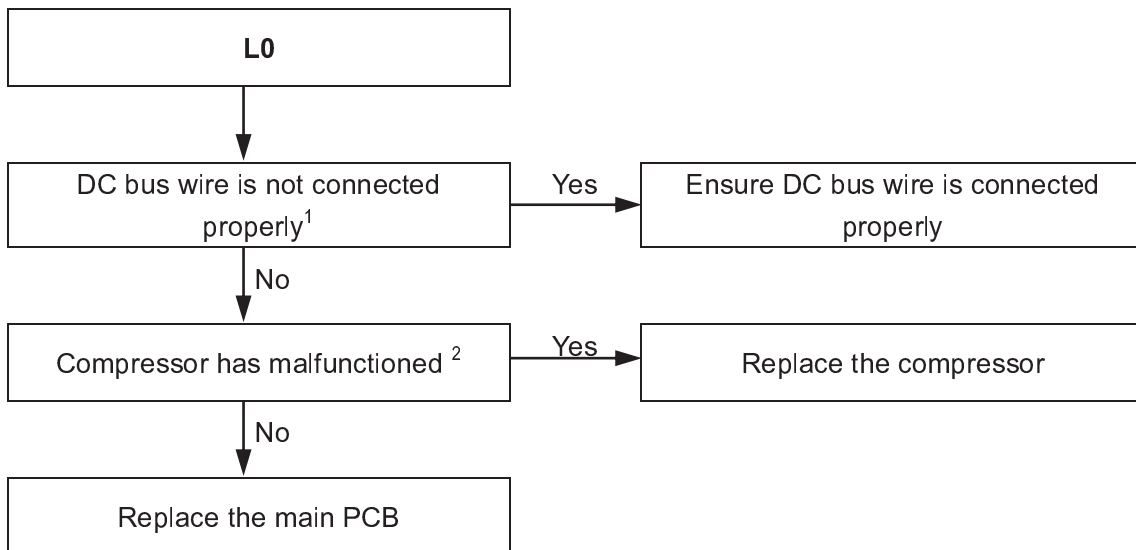


3. The normal voltage between F0 and GND is 3.1V.

$V_{normal} = 3.1V$

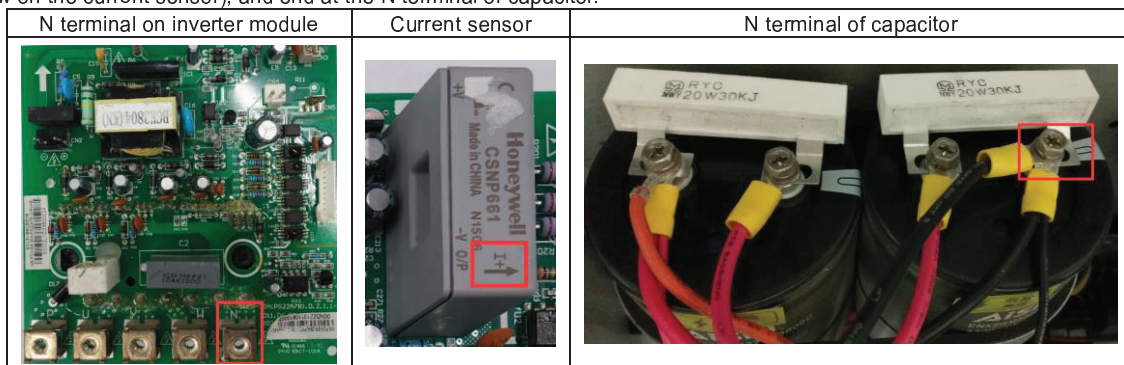


**Condition 2: L0 error appears immediately when the compressor starts up.**



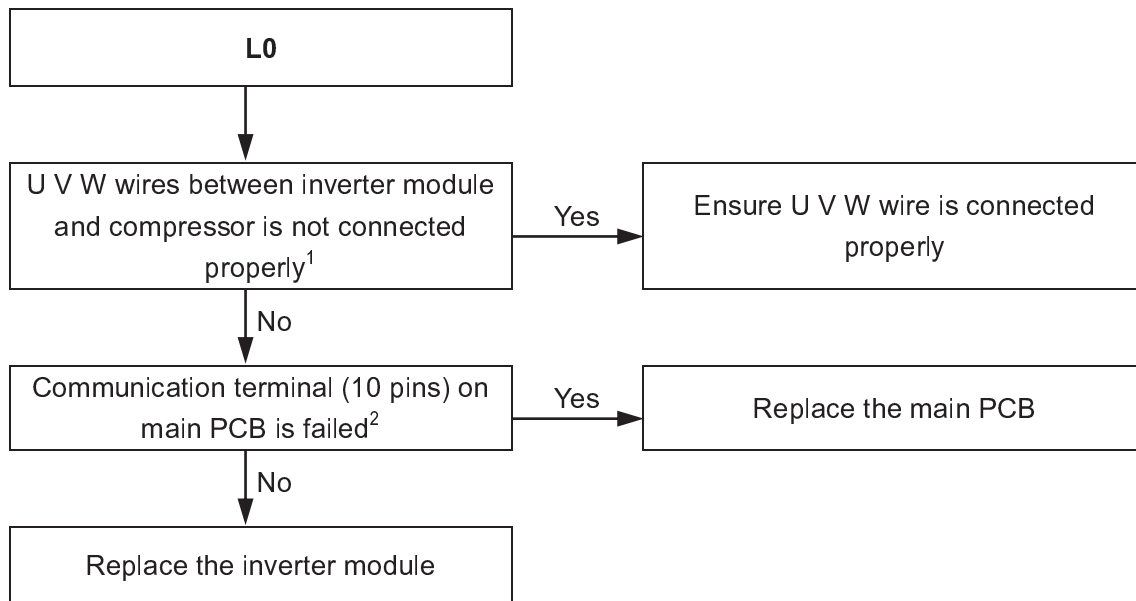
Notes:

1. The DC bus wire should run from the N terminal on the inverter module, through the current sensor (in the direction indicated by the arrow on the current sensor), and end at the N terminal of capacitor.

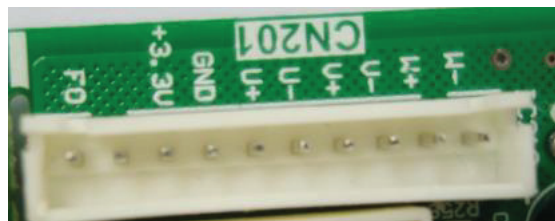


2. To check for compressor:

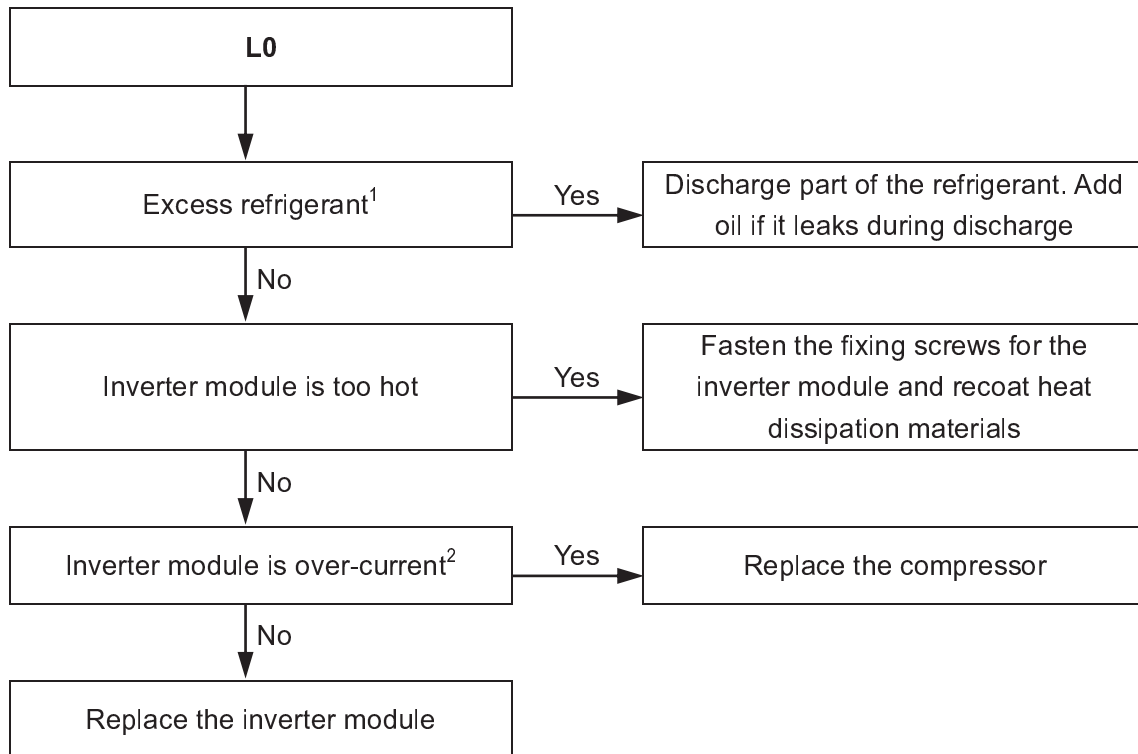
- The normal resistances of the inverter compressor are 0.7-1.5Ω among U V W and infinite between each of U V W and ground. If any of the resistances differ from these specifications, the compressor has malfunctioned.
- If there is another unit nearby that is operating normally, its electric control box can be used to check the compressor. Disconnect the power wires of the compressor referenced in the error unit and also disconnect the power wires that connect the compressor to the electric control box in the normal unit and use them to connect the compressor in error unit to the electric control box of the unit that is operating normally. Ensure that the U, V, W terminals are connected in the right order, and then start the system that is operating normally. If the compressor in error unit runs normally means the compressor is normal; if the compressor still does not run normally means the compressor has malfunctioned.

**Condition 3: L0 error appears when the compressor starts up within 2 seconds.****Notes:**

1. Connect the U V W wires between inverter module and compressor in the right order according to the arrow marked on compressor.
2. Measure the voltage between each of W-, W+, V-, V+, U-, U+ and GND when the unit is in standby. The normal voltage should be 2.5V-4V and these six voltages should be same, otherwise the communication terminal is failed.



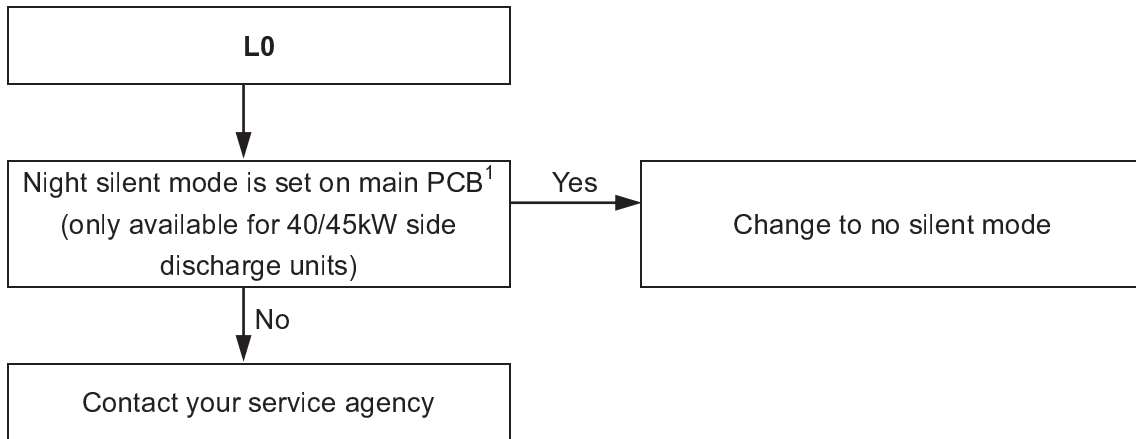
**Condition 4: L0 error appears after the compressor running a period time (running frequency is over 60Hz).**



Notes:






1. Excess refrigerant causes discharge temperature to be lower than normal, discharge pressure to be higher than normal and suction pressure to be higher than normal.
2. Use clip-on ammeter to measure the compressor current, if the current is normal indicates the inverter module is failed, if the current is abnormal indicates the compressor is failed.

**Condition 5: L0 error appears irregular.**



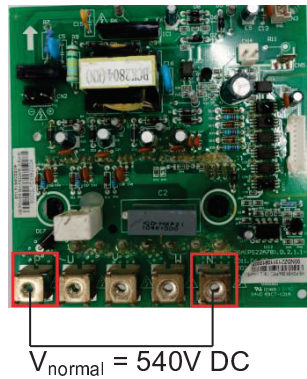
Notes:

1. Silent mode is set on SW3 switch on main PCB:

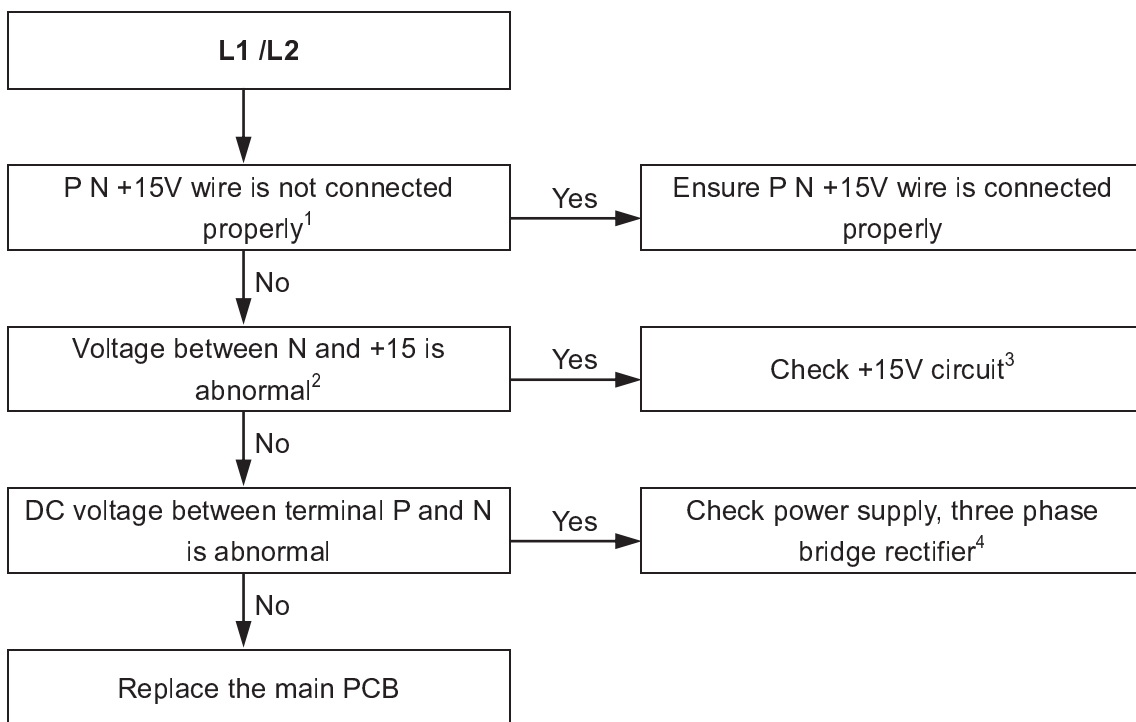
Switch	Setting	Switch positions	Description
 S3	Silent mode		Night silent mode (default)
			Silent mode
			Reserved
			No silent mode

### 4.15.4 L1 / L2 troubleshooting

The normal DC voltage between terminal P and N on inverter module is 540V. If the voltage is lower than 300V, the unit is in L1 error. If the voltage is higher than 800V, the unit is in L2 error.

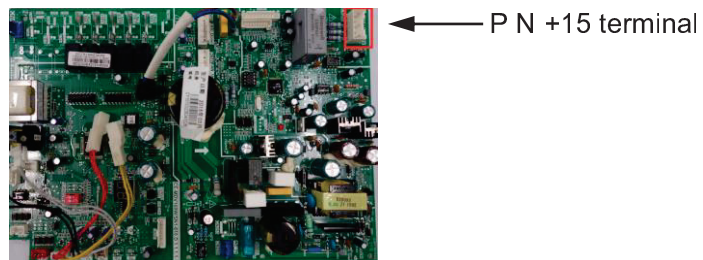


**Condition 1: L1 or L2 error appears immediately when the outdoor unit is power on.**

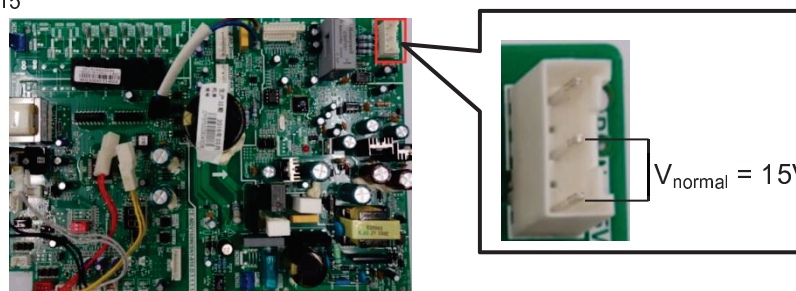


Notes:

1. P N +15V terminal on main PCB:

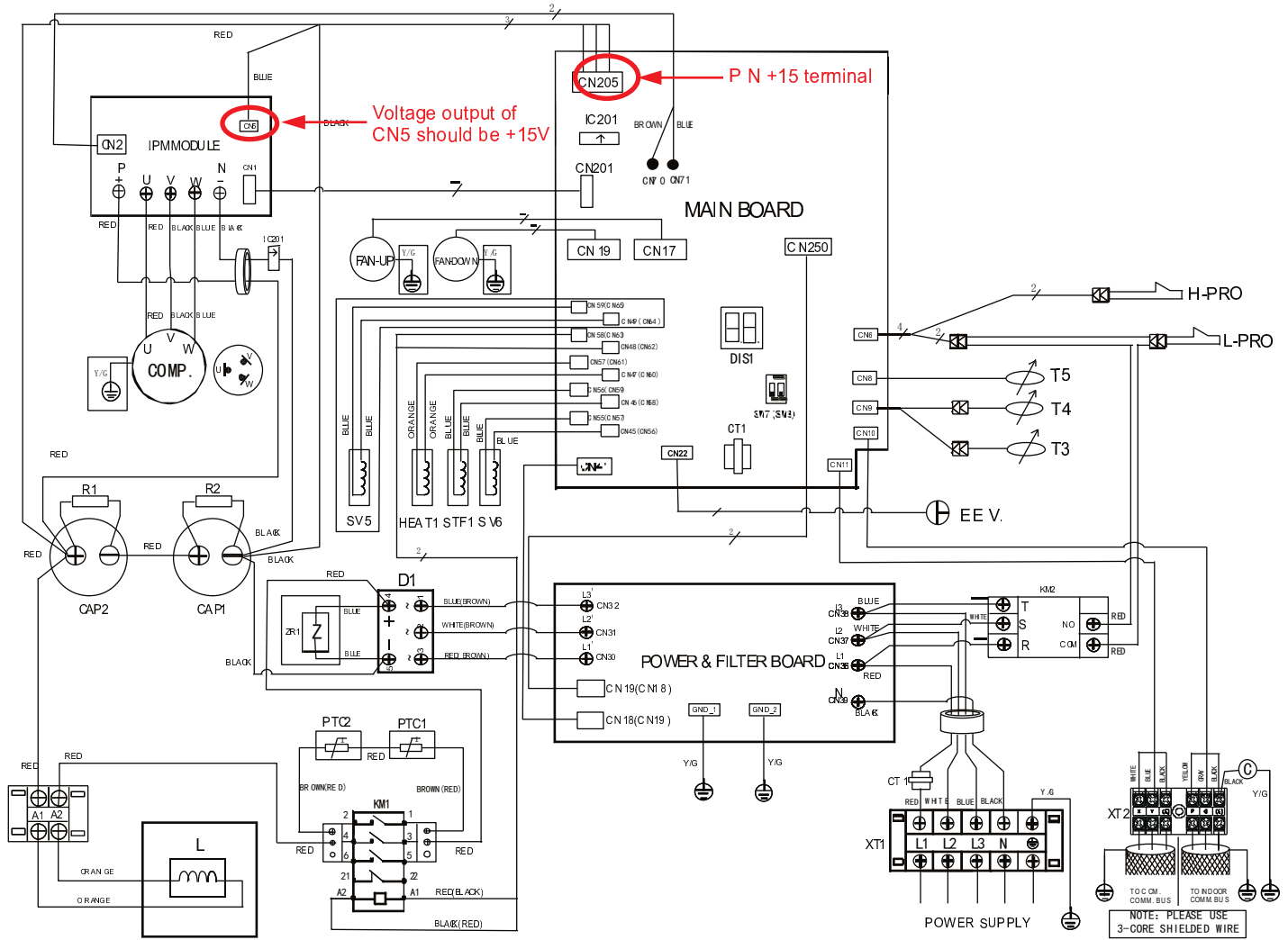


2. Voltage between N and +15

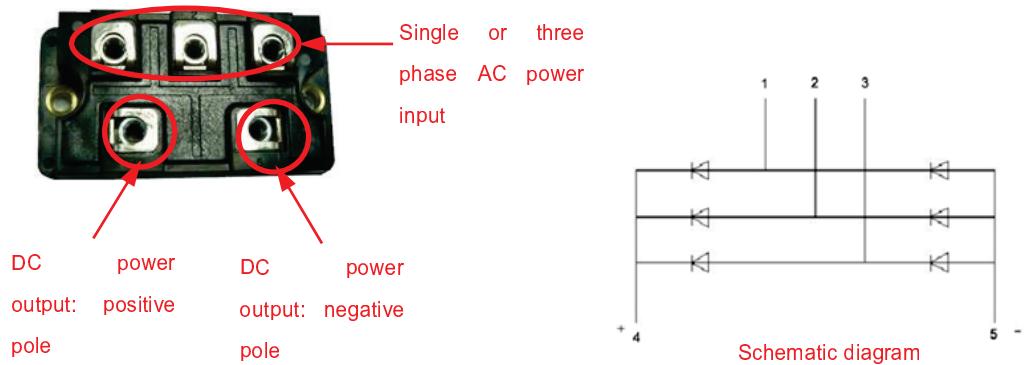




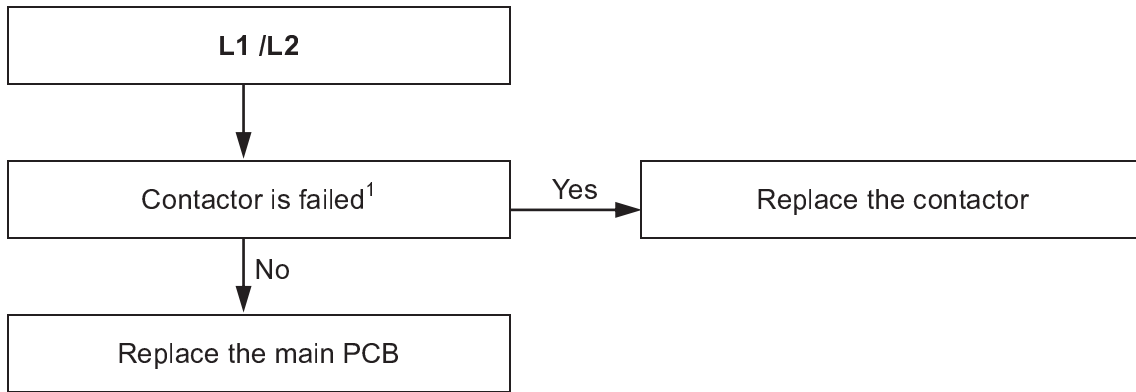
3. Check the +15V circuit according to corresponding wiring diagram. If CN5 on inverter module output voltage is not +15V means the inverter module is failed. If voltage output of inverter module is +15V means main PCB is failed.



4. To check for three phase bridge rectifier:
- Method 1: measure the resistance between any two terminals of the 5 terminals. if any of the resistance is nearly 0, the three phase bridge rectifier is failed.
- Method 2: dial the multimeter to diode gear:
- 1) Put the red pen in negative pole of DC power output terminal (terminal 5), then put black pen in terminal 1, 2 and 3 in turn. The voltage should be around 0.378V. If the voltage is 0, the three phase bridge rectifier is failed.
  - 2) Put the red pen in positive pole of DC power output terminal (terminal 4), then put black pen in terminal 1, 2 and 3 in turn. The voltage should be infinite. If the voltage is 0, the three phase bridge rectifier is failed.



**Condition 2: L1 or L2 error appears when the compressor operates at 20-30Hz.**

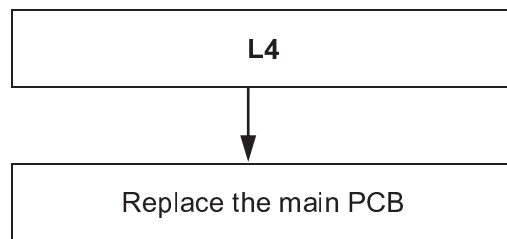


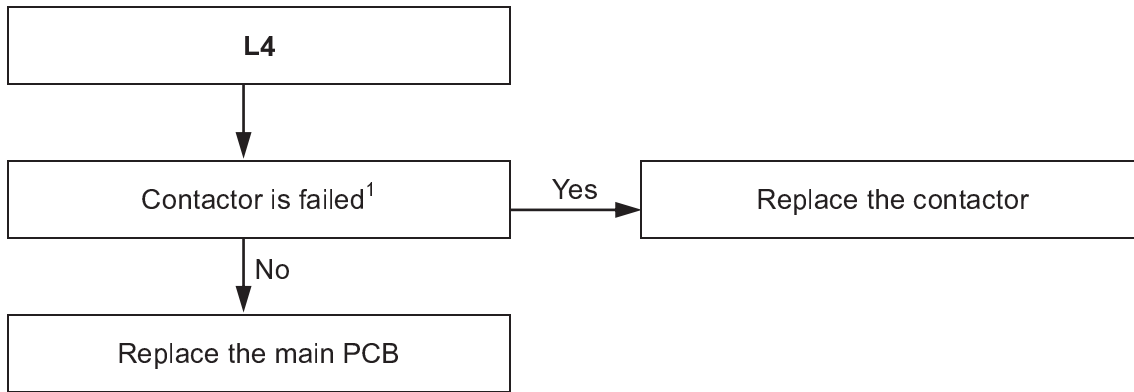
Notes:

- 1. Check the voltage between two wires which are connected between contactor and main PCB, if the voltage is 220V AC and the contactor is not contacted indicates the contactor is failed.

**4.15.5 L4 troubleshooting**

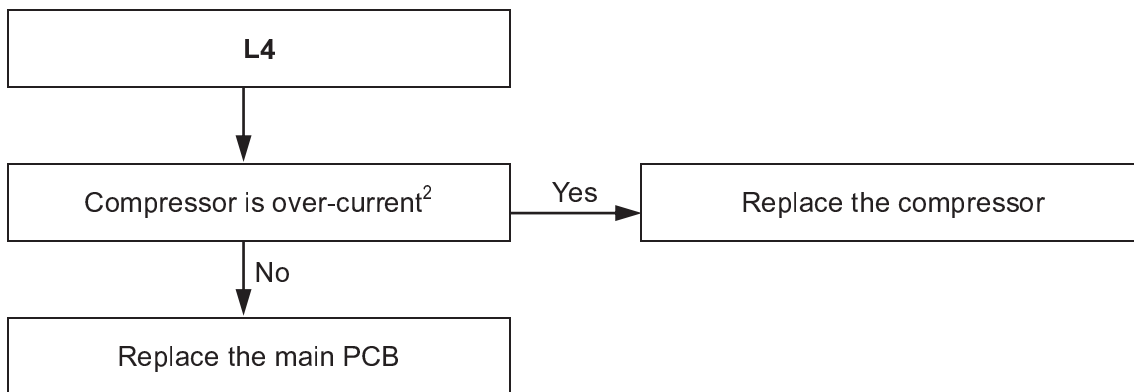
**Condition 1: L4 error appears immediately when the outdoor unit is power on.**



**Condition 2: L4 error appears when the compressor operates at 20-30Hz.**

## Notes:

1. Check the voltage between two wires which are connected between contactor and main PCB, if the voltage is 220V AC and the contactor is not contacted indicates the contactor is failed.

**Condition 3: L4 error appears after the compressor running a period time (running frequency is over 60Hz).**

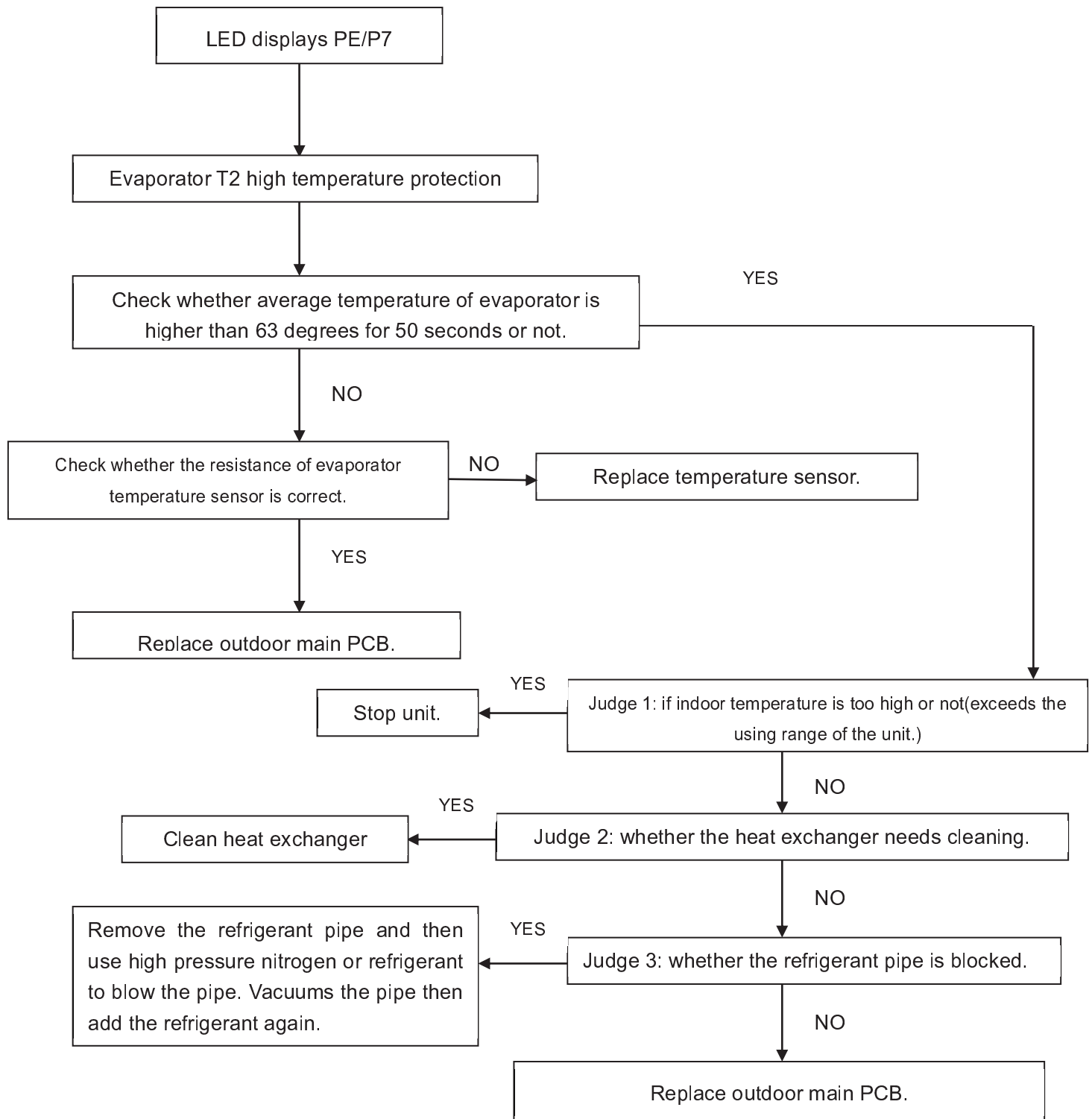
## Notes:

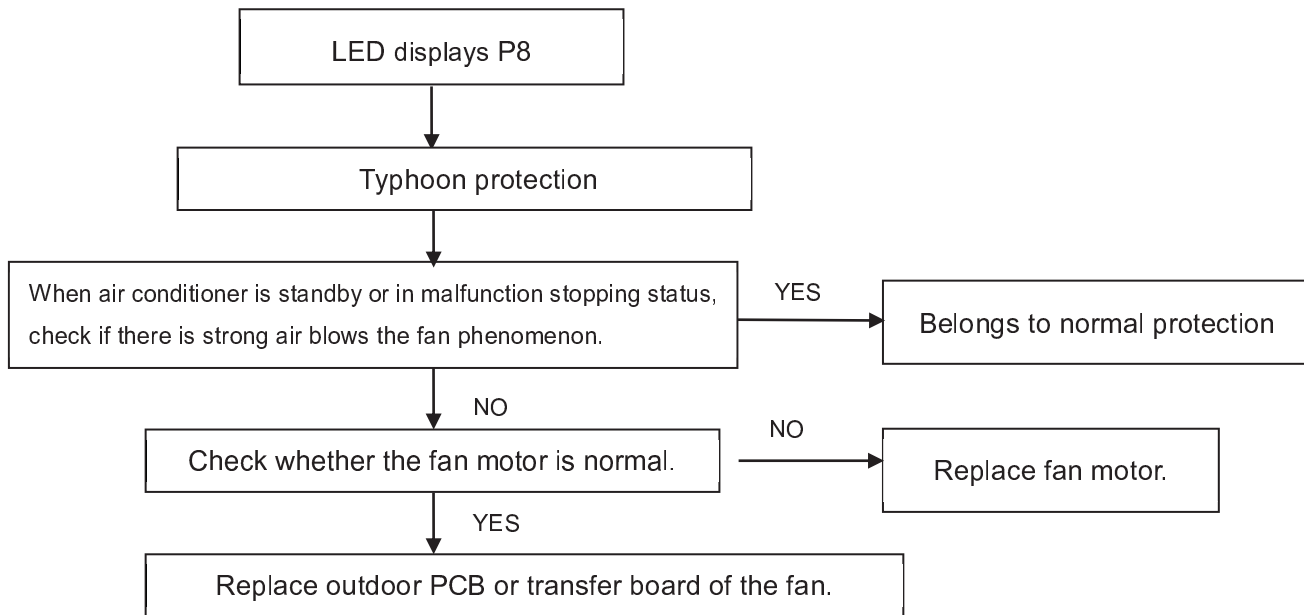
1. Use clip-on ammeter to measure the compressor current, if the current is normal indicates the compressor is failed, if the current is abnormal indicates the main PCB is failed.

**4.16 PE/P7 malfunction: Evaporator T2 high temperature protection**

**(PE display on 12~16kW, P7 display on 18kW)**

When the middle average temperature of the evaporator is higher than 63 degrees for 50 seconds, the unit will stop operating. When pipe temperature is lower than 50 degrees, the unit will resume running.



**4.17P8: Typhoon protection**



Midea CAC After-service Application



iOS Version



Android Version



Midea CAC News Application



iOS Version

## Commercial Air Conditioner Division Midea Group

Add.: Midea Headquarters Building, 6 Midea Avenue, Shunde, Foshan, Guangdong, China

Postal code: 528311

Tel: +86-757-26338346 Fax: +86-757-22390205

[cac.midea.com](http://cac.midea.com)    [global.midea.com](http://global.midea.com)

Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.