

VRF MW

MW-XMi SERIES 252T - 335T



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Part 1

General Information

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1 Indoor and Outdoor Unit Capacities

1.1 Indoor Units

1.1.1 Standard indoor units

Table 1-1.1: Standard indoor unit abbreviation codes

Abbreviation code	Type
Q1DN	One-way Cassette
Q2DN	Two-way Cassette
Q4AN	Compact Four-way Cassette
Q4DN	Four-way Cassette
CNT2	Medium Static Pressure Duct

Abbreviation code	Type
CN	High Static Pressure Duct
GWMN	Wall-mounted
DDLC	Ceiling & Floor
DZ	Floor Standing
DNB	Console

Table 1-1.2: Standard indoor unit capacity range

Capacity		Capacity index	Q1DN	Q2DN	Q4AN	Q4DN	CNT2	CN	GWMN	DDLC	DZ	DNB
kW	HP											
1.8	0.6	18	18	—	—	—	—	—	—	—	18	—
2.2	0.8	22	22	22	22	—	22	—	22	—	22	22
2.8	1	28	28	28	28	28	28	—	28	—	28	28
3.6	1.25	36	36	36	36	36	36	—	36	36	36	36
4.5	1.6	45	45	45	45	45	45	—	45	45	45	45
5.6	2	56	56	56	—	56	56	—	56	56	56	—
7.1	2.5	71	71	—	—	71	71	71	71	71	71	—
8.0	3	80	—	—	—	80	80	80	80	80	80	—
9.0	3.2	90	—	—	—	90	90	90	90	90	90	—
10.0	3.6	100	—	—	—	100	—	—	—	—	—	—
11.2	4	112	—	—	—	112	112	112	—	112	—	—
14.0	5	140	—	—	—	140	140	140	—	140	—	—
16.0	6	160	—	—	—	—	—	160	—	160	—	—
20.0	7	200	—	—	—	—	—	200	—	—	—	—
25.0	9	250	—	—	—	—	—	250	—	—	—	—
28.0	10	280	—	—	—	—	—	280	—	—	—	—

1.1.2 Fresh air processing unit

Table 1-1.3: Fresh air processing unit capacity range

Capacity	12.5kW	14kW	20kW	25kW	28kW
Capacity index	125	140	200	250	280

1.2 Heat recovery ventilator

Table 1-1.4: Heat recovery ventilator capacity range

Capacity	200m ³ /h	300m ³ /h	400m ³ /h	500m ³ /h	800m ³ /h	1000m ³ /h	1500m ³ /h	2000m ³ /h
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1.3 Outdoor Units

Table 1-1.5: Outdoor unit capacity range

Capacity	Model Name	Combination Type
8HP	MW-XMi 252T	/
10HP	MW-XMi 280T	/
12HP	MW-XMi 335T	/
16HP	MW-XMi 504T	8HP+8HP
18HP	MW-XMi 532T	8HP+10HP
20HP	MW-XMi 560T	10HP+10HP
22HP	MW-XMi 615T	10HP+12HP
24HP	MW-XMi 670T	12HP+12HP
26HP	MW-XMi 784T	8HP+8HP+10HP
28HP	MW-XMi 812T	8HP+10HP+10HP
30HP	MW-XMi 840T	10HP+10HP+10HP
32HP	MW-XMi 895T	10HP+10HP+12HP
34HP	MW-XMi 950T	10HP+12HP+12HP
36HP	MW-XMi 1005T	12HP+12HP+12HP

2 External Appearance

2.1 Indoor Units

2.1.1 Standard indoor units

Table 1-2.1: Standard indoor unit appearance

One-way Cassette Q1DN 	Two-way Cassette Q2DN 
Compact Four-way Cassette Q4AN 	Four-way Cassette Q4DN 
Medium Static Pressure Duct CNT2 	High Static Pressure Duct CN 
Wall-mounted GWMN 	Ceiling & Floor DDL C 
Floor Standing DZ 	Console DNB 

2.1.2 Fresh air processing unit

Table 1-2.2: Fresh air processing unit appearance

Fresh Air Processing Unit CNFA 

2.2 Heat Recovery Ventilator

Table 1-2.3: Heat recovery ventilator appearance

Heat Recovery Ventilator 
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2.3 Outdoor Units

2.3.1 Single units

Table 1-2.4: Single outdoor unit appearance

8/10/12HP


2.3.2 Combinations of units

Table 1-2.5: Combination outdoor unit appearance

16-24HP	26-36HP
	

3 Outdoor Unit Combinations

Table 1-3.1: Outdoor unit combinations

System capacity		Number of units	Modules ¹			Outdoor branch joint kit ²
kW	HP		8	10	12	
25.2	8	1	•			—
28.0	10	1		•		
33.5	12	1			•	
50.4	16	1	••			FQZHW-02N1D
53.2	18	1	•	•		
56.0	20	1		••		
61.5	22	1		•	•	
67.0	24	1			••	
78.4	26	1	••	•		FQZHW-02N1D
81.2	28	1	•	••		
84.0	30	1		•••		
89.5	32	1		••	•	
95.0	34	1		•	••	
100.5	36	2			•••	

Notes:

1. The combinations of units shown in the table are factory-recommended. Other combinations of units are also possible.
2. For systems with two or more outdoor units, outdoor branch joints (sold separately) are required.

4 Nomenclature

4.1 Indoor Units

4.1.1 Standard indoor units

Q1DN = X M i D 22
 ① ② ③ ④ ⑤ ⑥

Legend		
No.	Code	Remarks
1	Q1DN	Indoor unit type Q1DN: One-way Cassette Q2DN: Two-way Cassette Q4AN: Four-way Cassette Compact Q4DN: Four-way Cassette CNT2: Medium Static Pressure Duct CN: High Static Pressure Duct GWMN: Wall-mounted DDLC: Ceiling & Floor DZ: Floor Standing DNB: Console
2	X	R410A
3	M	Midea
4	i	Inverter
5	D	Series category (D: DC series)
6	22	Capacity index (the capacity in kW multiplied by 10)

4.1.2 Fresh air processing unit

CNFA = X M i D 280
 ① ② ③ ④ ⑤ ⑥

Legend		
No.	Code	Remarks
1	CNFA	Fresh Air Processing Unit
2	X	R410A
3	M	Midea
4	i	Inverter
5	D	Series category (D: DC series)
6	280	Capacity index (the capacity in kW multiplied by 10)

4.2 Heat recovery ventilator

HRV = M i D 200
 ① ② ③ ④ ⑤

Legend		
No.	Code	Remarks
1	HRV	Heat recovery ventilator
2	M	Midea
3	i	Inverter
4	D	Series category (D: DC series)
5	200	Airflow in m ³ /h

4.3 Outdoor Units

MW = X M i 252 T
 ① ② ③ ④ ⑤ ⑥

Legend		
No.	Code	Remarks
1	MW	Water-source heat pump VRF
2	X	R410A
3	M	Midea
4	i	Inverter
5	252	Capacity index (the capacity in kW multiplied by 10)
6	T	3 phase, 380-415V, 50 Hz

5 Combination Ratio

$$\text{Combination ratio} = \frac{\text{Sum of capacity indexes of the indoor units}}{\text{Capacity index of the outdoor units}}$$

Table 1-5.1: Indoor and outdoor unit combination ratio limitations

Type	Minimum combination ratio	Maximum combination ratio		
		Standard indoor units only	Fresh air processing units only	Fresh air processing units and standard indoor units together
MW Series outdoor units	50%	130%	100%	100% ¹

Notes:

- When fresh air processing units are installed together with standard indoor units, the total capacity of the fresh air processing units must not exceed 30% of the total capacity of the outdoor units and the combination ratio must not exceed 100%.

Table 1-5.2: Combinations of Indoor and outdoor units

Outdoor unit capacity			Sum of capacity indexes of connected indoor units (standard indoor units only)	Sum of capacity indexes of connected indoor units (fresh air processing units and standard indoor units together)	Maximum number of connected indoor units
kW	HP	Capacity index			
25.2	8	252	126 to 327.6	126 to 252	13
28.0	10	280	140 to 364	140 to 280	16
33.5	12	335	167.5 to 435.5	167.5 to 335	19
50.4	16	504	252 to 655.2	252 to 504	23
53.2	18	532	266 to 691.6	266 to 532	29
56.0	20	560	280 to 728	280 to 560	33
61.5	22	615	307.5 to 799.5	307.5 to 615	36
67.0	24	670	335 to 871	335 to 670	39
78.4	26	784	392 to 1019.2	392 to 784	43
81.2	28	812	406 to 1055.6	406 to 812	46
84.0	30	840	420 to 1092	420 to 840	50
89.5	32	895	447.5 to 1163.5	447.5 to 895	53
95.0	34	950	475 to 1235	475 to 950	56
100.5	36	1005	502.5 to 1306.5	502.5 to 1005	59

6 Selection Procedure

6.1 Procedure

Step 1: Establish design conditions

Design temperature and humidity (indoor and outdoor)
Required heat load of each room
System peak load
Piping length, level differences
Indoor unit specifications (type and quantity)

Step 2: Select indoor units

Decide indoor unit safety factor

Select indoor unit models ensuring that:
 $\text{Indoor unit capacity corrected for indoor air temperature WB}^1 \geq \text{Required heat load} \times \text{Indoor unit safety factor}$

Step 3: Select outdoor units

Determine required total heat load on outdoor units

Use the sum of the peak load of each room

Use the system peak load

Provisionally select outdoor unit capacity based on combination ratio

Confirm that the number of indoor units connected to the outdoor units is within limitation

Correct cooling and heating capacities of the outdoor units for the following items:
Water source temperature / Indoor air temperature WB / Combination ratio / Piping length, level difference / Piping heat loss

Is corrected outdoor unit capacity $\geq$ Required total heat load on outdoor units?

No

VRF system selection is complete

Notes:

1. If the indoor design temperature falls between two temperatures listed in the indoor unit's capacity table, calculate the corrected capacity by interpolation. If the indoor unit selection is to be based on total heat load and sensible heat load, select indoor units which satisfy not only the total head load requirements of each room but also the sensible heat load requirements of each room. As with total heat capacity, the sensible heat capacity of indoor units should be corrected for indoor temperature, interpolating where necessary. For the indoor unit capacity tables, refer to the indoor unit technical manuals.

6.2 Example

The following is a selection example based on total heat load for cooling.

Figure 1-6.1: Room plan

Room A	Room H	Room G	Room F
Room B			Room E
	Room C	Room D	

Step 1: Establish design conditions

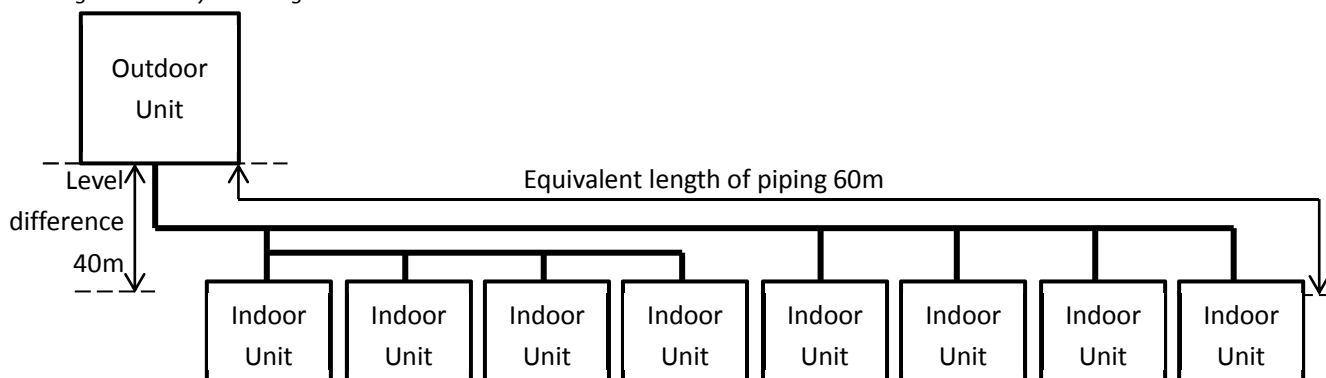
- Indoor air temperature 25°C DB, 18°C WB; water inlet temperature 30°C DB, water flow rate 100l/min.
- Determine peak load of each room and system peak load. As shown in Table 1-6.1, the system peak load is 50.7kW.

Table 1-6.1: Required heat load of each room (kW)

Time	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Total
9:00	4.8	4.8	3.0	3.0	9.1	9.0	2.9	2.9	39.5
12:00	6.6	7.1	5.1	5.1	7.4	6.8	4.0	4.0	46.1
14:00	9.0	9.4	4.9	4.9	7.3	6.8	4.2	4.2	50.7
16:00	10.6	10.7	3.9	3.9	6.3	6.2	3.8	3.8	49.2

- The maximum piping lengths and level differences in this example are as given in Figure 1-6.2.

Figure 1-6.2: System diagram



- Indoor unit type for all rooms: Medium Static Pressure Duct (CNT2).

Step 2: Select indoor units

- In this example, a safety factor is not used (i.e. the safety factor is 1).
- Select indoor unit models using the medium static pressure duct cooling capacity table. Each indoor unit's corrected capacity needs to be greater than or equal to the peak load of the relevant room. The selected indoor units are shown in Table 1-6.3.

Table 1-6.2: Extract from medium static pressure duct (CNT2) cooling capacity table

Model	Capacity index	Indoor air temperature													
		14°C WB		16°C WB		18°C WB		19°C WB		20°C WB		22°C WB		24°C WB	
		20°C DB		23°C DB		26°C DB		27°C DB		28°C DB		30°C DB		32°C DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
T2	22	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.4	1.5	2.4	1.5
	28	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.1	2.0	3.1	1.9
	36	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.2	2.8	3.9	2.3
	45	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	4.9	3.1	5.1	2.9
	56	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.2	3.7	6.2	3.4
	71	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	7.8	4.6	7.8	4.3
	80	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	8.8	5.2	8.8	4.8
	90	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	9.9	6.1	9.9	5.7
	112	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.5	7.8	12.5	7.4
	140	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	15.7	9.7	15.4	8.8

Abbreviations:

TC: Total capacity (kW); SHC: Sensible heat capacity (kW)

Table 1-6.3: Selected indoor units

	Room A	Room B	Room C	Room D
Peak heat load (kW)	10.6	10.7	5.1	5.1
Selected indoor unit	CNT2-XMi D140	CNT2-XMi D140	CNT2-XMi D56	CNT2-XMi D56
Corrected TC (kW)	13.2	13.2	5.3	5.3
	Room E	Room F	Room G	Room H
Peak heat load (kW)	9.1	9.0	4.2	4.2
Selected indoor unit	CNT2-XMi D112	CNT2-XMi D112	CNT2-XMi D45	CNT2-XMi D45
Corrected TC (kW)	10.5	10.5	4.2	4.2

Step 3: Select outdoor units

- Determine the required total heat load from the indoor units to the outdoor units based on either the sum of the peak loads of each room or the system peak load. In this example, it is determined based on the system peak load. Therefore, the required heat load is 50.7kW.
- Provisionally select outdoor units using the sum of the capacity indexes (CIs) of the selected indoor units (as shown in Table 1-6.4), ensuring that the combination ratio is between 50% and 130%. Refer to Table 1-6.5. As the sum of CIs of the indoor units is 706, outdoor units from 20HP to 36HP are potentially suitable. Start from the smallest, which is the 20HP unit.

Table 1-6.4: Sum of indoor unit capacity indexes

Model	Capacity Index	No. of units
CNT2-XMi D140	140	2
CNT2-XMi D112	112	2
CNT2-XMi D56	56	2
CNT2-XMi D45	45	2

Sum of CIs	706
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Table 1-6.5: Extract from Table 1-5.2 Combinations of Indoor and outdoor units

Outdoor unit capacity			Sum of capacity indexes of connected indoor units (standard indoor units only)	Maximum number of connected indoor units
kW	HP	Capacity index		
25.2	8	252	126 to 327.6	13
28.0	10	280	140 to 364	16
33.5	12	335	167.5 to 435.5	19
50.4	16	504	252 to 655.2	23
53.2	18	532	266 to 691.6	29
56.0	20	560	280 to 728	33
61.5	22	615	307.5 to 799.5	36
67.0	24	670	335 to 871	39
78.4	26	784	392 to 1019.2	43
81.2	28	812	406 to 1055.6	46
84.0	30	840	420 to 1092	50
89.5	32	895	447.5 to 1163.5	53
95.0	34	950	475 to 1235	56
100.5	36	1005	502.5 to 1306.5	59

- The number of connected indoor units is 8 and the maximum number of connected indoor units on the 20HP outdoor unit is 33, so the number of connected indoor units is within the limitation.
- Calculate the corrected capacity of the outdoor units:
 - a) The sum of the indoor unit CIs is 706 and the CI of the 20HP outdoor unit (MW-XMi 560T) is 560, so the combination ratio is $706 / 560 = 126\%$.
 - b) 20HP outdoor unit is combined by two 10HP outdoor units. Using the outdoor units' cooling capacity table, interpolate to obtain the capacity ("B"). Refer to Tables 1-6.6.

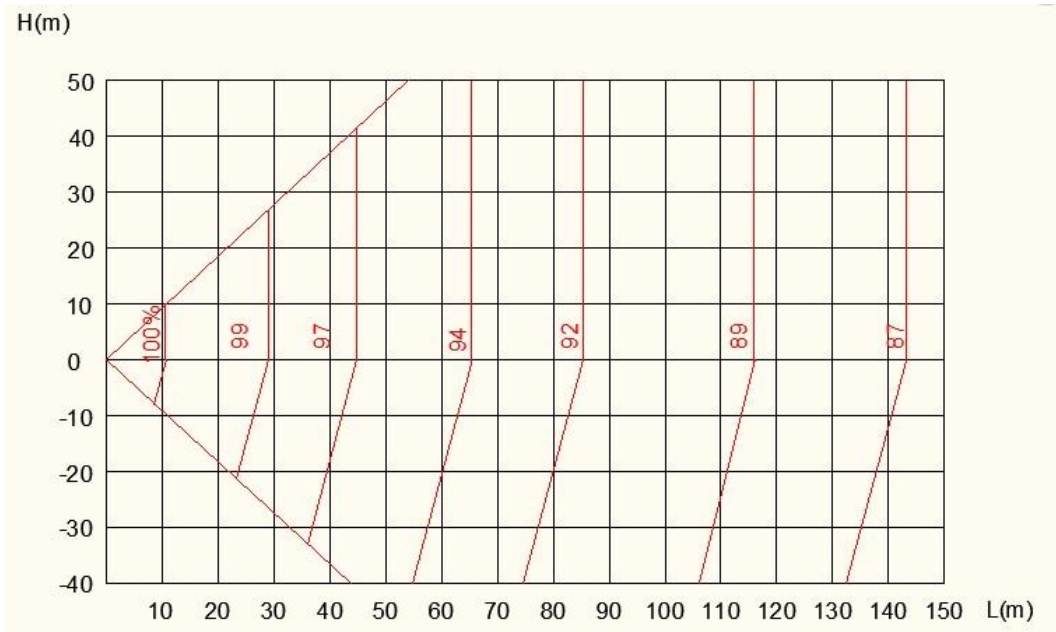
Table 1-6.6: Extract from Table 2-8.7 MW-XMi 560T cooling capacity

CR	Inlet water temp. (°C)	Water flow rate (l/min)	Indoor air temp. (°C DB / °C WB) 25.8 / 18.0		
			TC	PI	ΔT
			kW	kW	°C
130%	30	100	29.26	6.18	5.01
120%	30	100	28.73	6.15	4.93

Cooling capacity calculated by interpolation = $28.73 + (29.26 - 28.73) \times (126 - 120) / (130 - 120) = 29.01\text{kW}$, for 20HP unit is combined by two 10HP outdoor units, so the total outdoor unit capacity is $29.01 \times 2 = 58.02\text{kW}$

c) Find the correction factor for piping length and level difference ("K1") , K1=0.93

Figure 1-6.3: Rate of change in cooling capacity



- Notes:
1. The horizontal axis shows equivalent length of piping between farthest indoor unit and first outdoor branch joint; the vertical axis shows the largest level difference between indoor unit and outdoor unit. For level differences, positive values indicate that the outdoor unit is above the indoor unit, negative values indicate that the outdoor unit is below the indoor unit.

d) Calculate the corrected capacity of MW-XMi 560T ("C") by using K1:

$C = B \times K1 = 58.02 \times 0.93 = 53.96kW$

- The corrected capacity 53.96kW is larger than required total heat load 50.7kW, so selection is complete. (In the event that the corrected capacity is lower than the required total heat load, Step 3 should be repeated from the point where the outdoor unit capacity is provisionally selected.)

Part 2

Outdoor Unit

Engineering Data

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1 Specifications

8-12HP

Table 2-1.1: 8-12HP specifications

HP			8	10	12
Model			MW-XMi 252T	MW-XMi 280T	MW-XMi 335T
Power supply		V-Ph-Hz	380~415V 3Ph ~ 50Hz		
Cooling ¹	Capacity	kW	25.2	28.0	33.5
	Input	kW	4.80	6.10	8.00
	EER	kW/kW	5.25	4.59	4.19
Heating ²	Capacity	kW	27.0	31.5	37.5
	Input	kW	4.45	5.83	7.80
	COP	kW/kW	6.07	5.40	4.81
Compressor	Model		E655DHD-65D2YG		
	Quantities		1		
	Type		DC Inverter		
	Brand		Hitachi		
	Capacity	kW	31.59		
	Input	kW	10.34		
	Operating frequency	Hz	40 - 200		
	Crankcase	W	40 - 80		
	Refrigerant oil	ml	FV68H / 500		
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m ³ /h	5.4	6	7.2
	Pressure drop	kPa	35	40	48
	Max pressure of water pipe side	MPa	1.98		
Drainage pipe outside diameter		mm	Φ10		
Water side connecting pipe		mm	DN32 inner groove		
Sound pressure level ³		dB(A)	51	52	52
Sound power level		dB(A)	72	74	74
Dimension (W×H×D)		mm	780×1000×550		
Packing (W×H×D)		mm	845×1170×600		
Net weight		kg	146	146	147
Gross weight		kg	155	155	156
Refrigerant type			R410A		
Refrigerant factory charge		kg	2		
Throttle type			EXV		
Excessive operating pressure		MPa	4.4 / 2.6		
Liquid pipe / Gas pipe ⁴		mm	Φ12.7 / Φ25.4	Φ12.7 / Φ25.4	Φ15.9 / Φ31.8
Oil balance pipe		mm	Φ6.35		
Main unit water inlet temp.		°C	7—45		
Main unit ambient temp. range		°C	0—40		
Main unit ambient humidity			Below 80%		

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; water inlet temperature 30°C; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; water inlet temperature 20°C; equivalent refrigerant piping length 5m with zero level difference.
- Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.
- Diameters given are those of the unit's stop valve.

16-20HP

Table 2-1.2: 16-20HP specifications

HP			16	18	20
Model			MW-XMi 504T	MW-XMi 532T	MW-XMi 560T
Combined type			8HP×2	8HP+10HP	10HP×2
Power supply		V-Ph-Hz	380~415V 3Ph ~ 50Hz		
Cooling ¹	Capacity	kW	50.4	53.2	56.0
	Input	kW	9.60	10.90	12.20
	EER	kW/kW	5.25	4.88	4.59
Heating ²	Capacity	kW	54.0	58.5	63.0
	Input	kW	8.90	10.28	11.66
	COP	kW/kW	6.07	5.69	5.40
Compressor	Model		E655DHD-65D2YG		
	Quantities		2		
	Type		DC Inverter		
	Brand		Hitachi		
	Capacity	kW	31.59×2		
	Input	kW	10.34×2		
	Operating frequency	Hz	40 - 200		
	Crankcase	W	(40 - 80)×2		
	Refrigerant oil	ml	FV68H / 500×2		
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m ³ /h	5.4×2	5.4+6	6×2
	Pressure drop	kPa	35×2	35+40	40×2
	Max pressure of water pipe side	MPa	1.98		
Drainage pipe outside diameter		mm	Φ10		
Water side connecting pipe		mm	DN32 inner groove		
Sound pressure level ³		dB(A)	53		
Sound power level		dB(A)	75		
Dimension (W×H×D)		mm	(780×1000×550)×2		
Packing (W×H×D)		mm	(845×1170×600)×2		
Net weight		kg	146×2		
Gross weight		kg	155×2		
Refrigerant type			R410A		
Refrigerant factory charge		kg	2×2		
Throttle type			EXV		
Excessive operating pressure		MPa	4.4 / 2.6		
Liquid pipe / Gas pipe ⁴		mm	Φ12.7 / Φ28.6	Φ15.9 / Φ28.6	Φ15.9 / Φ28.6
Oil balance pipe		mm	Φ6.35		
Main unit water inlet temp.		°C	7—45		
Main unit ambient temp. range		°C	0—40		
Main unit ambient humidity			Below 80%		

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; water inlet temperature 30°C; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; water inlet temperature 20°C; equivalent refrigerant piping length 5m with zero level difference.
- Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.

22-24HP

Table 2-1.3: 22-24HP specifications

HP			22	24
Model			MW-XMi 615T	MW-XMi 670T
Combined type			10HP+12HP	12HP×2
Power supply		V-Ph-Hz	380~415V 3Ph ~ 50Hz	
Cooling ¹	Capacity	kW	61.5	67.0
	Input	kW	14.10	16.00
	EER	kW/kW	4.36	4.19
Heating ²	Capacity	kW	69.0	75.0
	Input	kW	13.63	15.60
	COP	kW/kW	5.06	4.81
Compressor	Model		E655DHD-65D2YG	
	Quantities		2	
	Type		DC Inverter	
	Brand		Hitachi	
	Capacity	kW	31.59×2	
	Input	kW	10.34×2	
	Operating frequency	Hz	40 – 200	
	Crankcase	W	(40 – 80)×2	
	Refrigerant oil	ml	FV68H / 500×2	
Heat exchanger	Type		Double-pipe heat exchanger	
	Rated water flow volume	m ³ /h	6+7.2	7.2×2
	Pressure drop	kPa	40+48	48×2
	Max pressure of water pipe side	Mpa	1.98	
Drainage pipe outside diameter		mm	Φ10	
Water side connecting pipe		mm	DN32 inner groove	
Sound pressure level ³		dB(A)	54	
Sound power level		dB(A)	76	
Dimension (W×H×D)		mm	(780×1000×550)×2	
Packing (W×H×D)		mm	(845×1170×600)×2	
Net weight		kg	146+147	147×2
Gross weight		kg	155+156	156×2
Refrigerant type			R410A	
Refrigerant factory charge		kg	2×2	
Throttle type			EXV	
Excessive operating pressure		MPa	4.4 / 2.6	
Liquid pipe / Gas pipe ⁴		mm	Φ15.9 / Φ28.6	
Oil balance pipe		mm	Φ6.35	
Main unit water inlet temp.		°C	7 - 45	
Main unit ambient temp. range		°C	0 - 40	
Main unit ambient humidity			Below 80%	

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; water inlet temperature 30°C; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; water inlet temperature 20°C; equivalent refrigerant piping length 5m with zero level difference.
- Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.

26-30HP

Table 2-1.4: 26-30HP specifications

HP			26	28	30
Model			MW-XMi 784T	MW-XMi 812T	MW-XMi 840T
Combined type			8HP×2+10HP	8HP+10HP×2	10HP×3
Power supply		V-Ph-Hz	380~415V 3Ph ~ 50Hz		
Cooling ¹	Capacity	kW	78.4	81.2	84.0
	Input	kW	15.70	17.00	18.30
	EER	kW/kW	4.99	4.78	4.59
Heating ²	Capacity	kW	85.5	90.0	94.5
	Input	kW	14.73	16.11	17.49
	COP	kW/kW	5.80	5.59	5.40
Compressor	Model		E655DHD-65D2YG		
	Quantities		3		
	Type		DC Inverter		
	Brand		Hitachi		
	Capacity	kW	31.59×3		
	Input	kW	10.34×3		
	Operating frequency	Hz	40 - 200		
	Crankcase	W	(40 - 80)×3		
	Refrigerant oil	ml	FV68H / 500×3		
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m ³ /h	5.4×2+6	5.4+6×2	6×3
	Pressure drop	kPa	35×2+40	35+40×2	40×3
	Max pressure of water pipe side	MPa	1.98		
Drainage pipe outside diameter		mm	Φ10		
Water side connecting pipe		mm	DN32 inner groove		
Sound pressure level ³		dB(A)	55	55	56
Sound power level		dB(A)	77	77	78
Dimension (W×H×D)		mm	(780×1000×550)×3		
Packing (W×H×D)		mm	(845×1170×600)×3		
Net weight		kg	146×3		
Gross weight		kg	155×3		
Refrigerant type			R410A		
Refrigerant factory charge		kg	2×3		
Throttle type			EXV		
Excessive operating pressure		MPa	4.4 / 2.6		
Liquid pipe / Gas pipe ⁴		mm	Φ19.1 / Φ31.8		
Oil balance pipe		mm	Φ6.35		
Main unit water inlet temp.		°C	7 — 45		
Main unit ambient temp. range		°C	0 — 40		
Main unit ambient humidity			Below 80%		

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; water inlet temperature 30°C; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; water inlet temperature 20°C; equivalent refrigerant piping length 5m with zero level difference.
- Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.

32-36HP

Table 2-1.5: 32-36HP specifications

HP			32	34	36
Model			MW-XMi 895T	MW-XMi 950T	MW-XMi 1005T
Combined type			10HP×2+12HP	10HP+12HP×2	12HP×3
Power supply		V-Ph-Hz	380~415V 3Ph ~ 50Hz		
Cooling ¹	Capacity	kW	89.5	95.0	100.5
	Input	kW	20.20	22.10	24.00
	EER	kW/kW	4.43	4.30	4.19
Heating ²	Capacity	kW	100.5	106.5	112.5
	Input	kW	19.46	21.43	23.40
	COP	kW/kW	5.16	4.97	4.81
Compressor	Model		E655DHD-65D2YG		
	Quantities		3		
	Type		DC Inverter		
	Brand		Hitachi		
	Capacity	kW	31.59×3		
	Input	kW	10.34×3		
	Operating frequency	Hz	40 - 200		
	Crankcase	W	(40 - 80)×3		
	Refrigerant oil	ml	FV68H / 500×3		
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m ³ /h	6×2+7.2	6+7.2×2	7.2×3
	Pressure drop	kPa	40×2+48	40+48×2	48×3
	Max pressure of water pipe side	MPa	1.98		
Drainage pipe outside diameter		mm	Φ10		
Water side connecting pipe		mm	DN32 inner groove		
Sound pressure level ³		dB(A)	57	57	58
Sound power level		dB(A)	79	79	80
Dimension (W×H×D)		mm	(780×1000×550)×3		
Packing (W×H×D)		mm	(845×1170×600)×3		
Net weight		kg	146×2+147	146+147×2	147×3
Gross weight		kg	155×2+156	155+156×2	156×3
Refrigerant type			R410A		
Refrigerant factory charge		kg	2×3		
Throttle type			EXV		
Excessive operating pressure		MPa	4.4 / 2.6		
Liquid pipe / Gas pipe ⁴		mm	Φ19.1 / Φ31.8	Φ19.1 / Φ38.1	Φ19.1 / Φ38.1
Oil balance pipe		mm	Φ6.35		
Main unit water inlet temp.		°C	7 — 45		
Main unit ambient temp. range		°C	0 — 40		
Main unit ambient humidity			Below 80%		

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; water inlet temperature 30°C; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; water inlet temperature 20°C; equivalent refrigerant piping length 5m with zero level difference.
- Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.

2 Dimensions

8/10/12HP

Figure 2-2.1: 8/10/12 external dimensions (unit: mm)

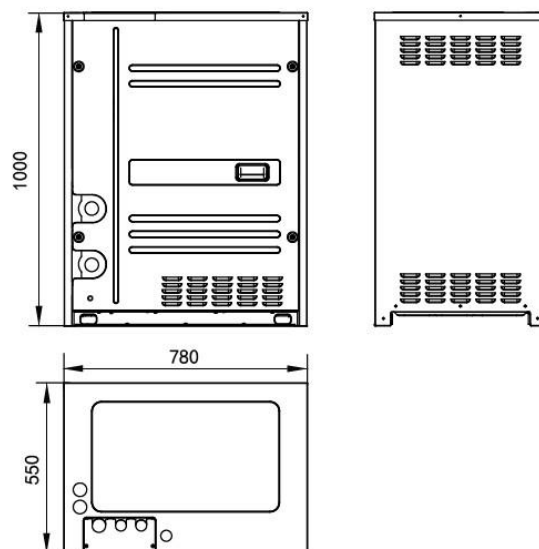
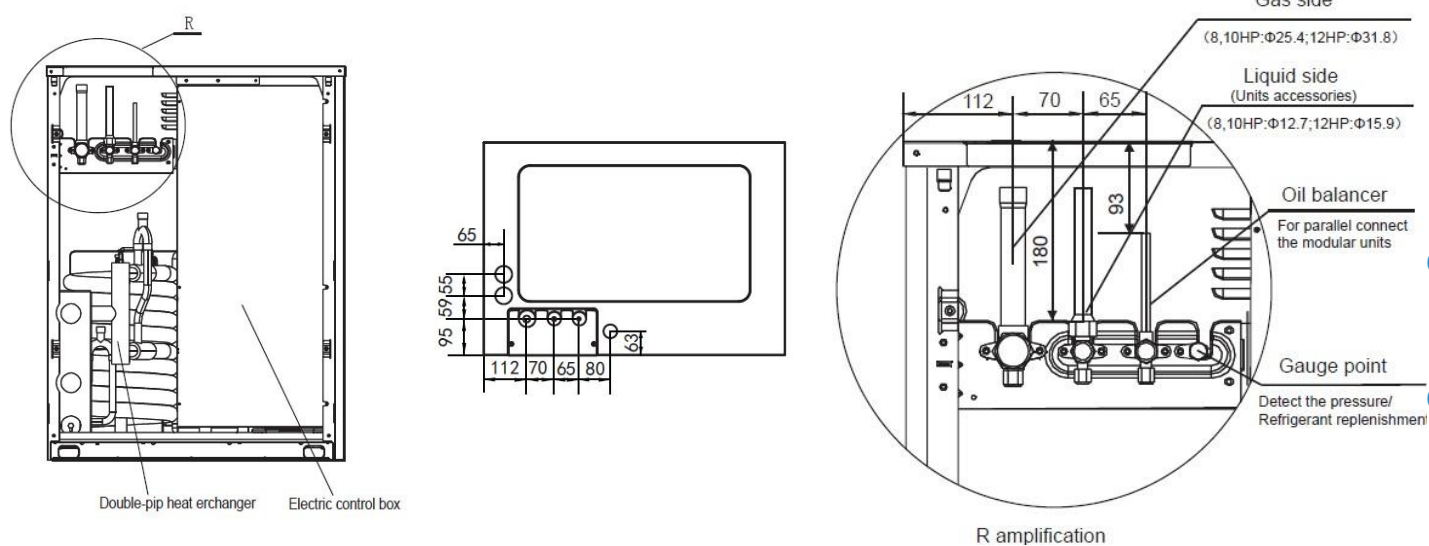


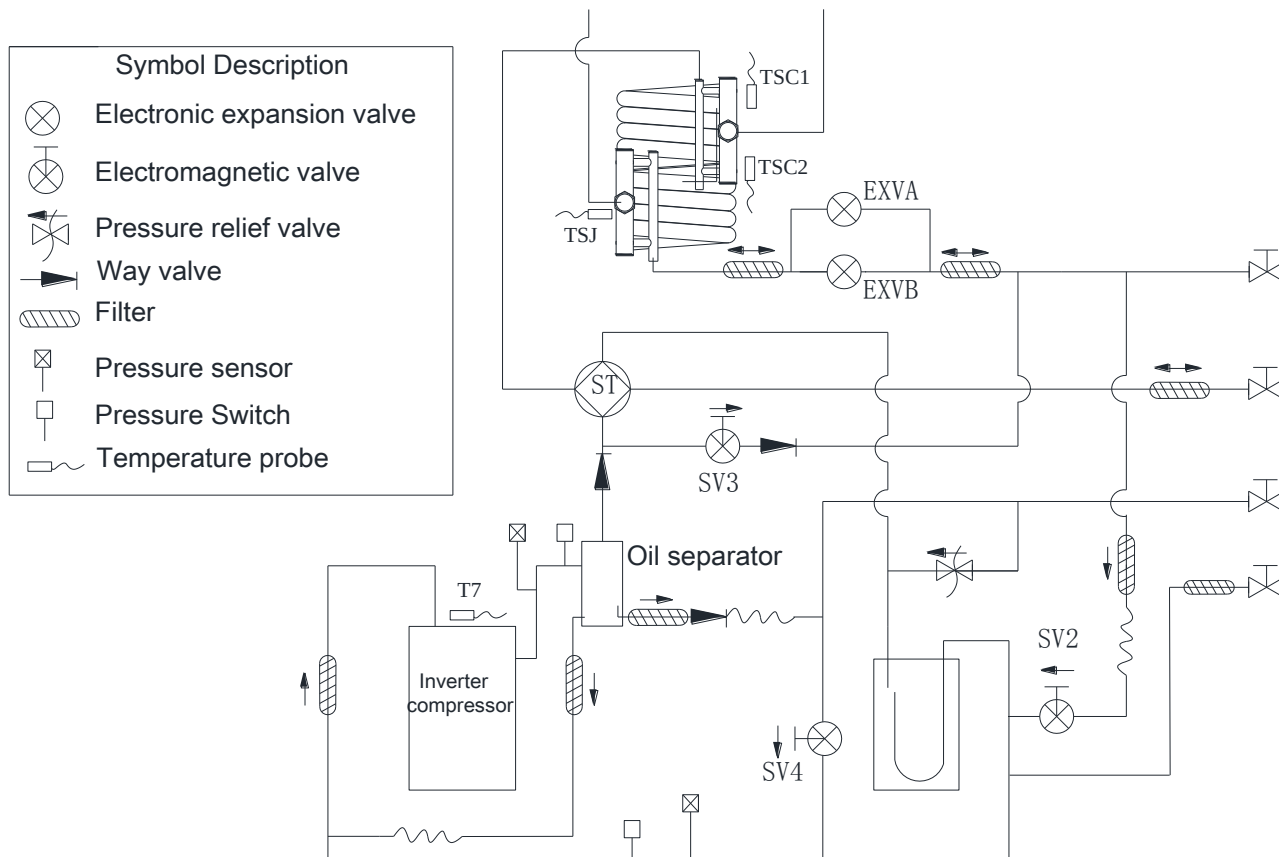
Figure 2-2.2: 8/10/12 internal dimensions (unit: mm)



3 Piping Diagrams

8/10/12HP

Figure 2-4.1: 8/10/12HP piping diagram



Remark:

TSC1: water outlet temp. of upper pipe

TSC2: water outlet temp. of lower pipe

TSJ: water inlet temp. of double-pipe heat exchanger

T5: inverter module temp.

Pc: discharge pressure

Ps: suction pressure

T7: discharge temp. of inverter compressor

Key components:

1. Oil separator:

Separates oil from gas refrigerant pumped out of the compressor and quickly returns it to the compressor. Separation efficiency is up to 99%.

2. Accumulator:

Stores liquid refrigerant and oil to protect compressor from liquid hammering.

3. Electronic expansion valve (EXV):

Controls refrigerant flow and reduces refrigerant pressure. Max. Open degree is 700 pulses; When system power on, the EXV closes 700pulse first, then opens to 350 pulse and stand by; When then the unit started, it opens to the right pulse; When the running main unit receives OFF signal, the EXV of slave unit will stop, while master unit is running and slave unit stopped at the same time. If all main units stopped, the EXV will close first, and then open to the pulse of stand-by.

4. Four-way valve:

Controls refrigerant flow direction. Closed in cooling mode and open in heating mode. When closed, the heat exchanger functions as a condenser; when open, the heat exchanger functions as an evaporator.

5. Solenoid valve SV2:

Spray a little liquid refrigerant to cooling compressor. Open when any compressor discharge temperature is higher than 100°C.

6. Solenoid valve SV3:

Open when power on, closed after 60 seconds; open when discharge pressure is less than 1.8MP in cooling mode, open when discharge pressure is greater than 4.0MPa in heating mode.

7. Solenoid valve SV4:

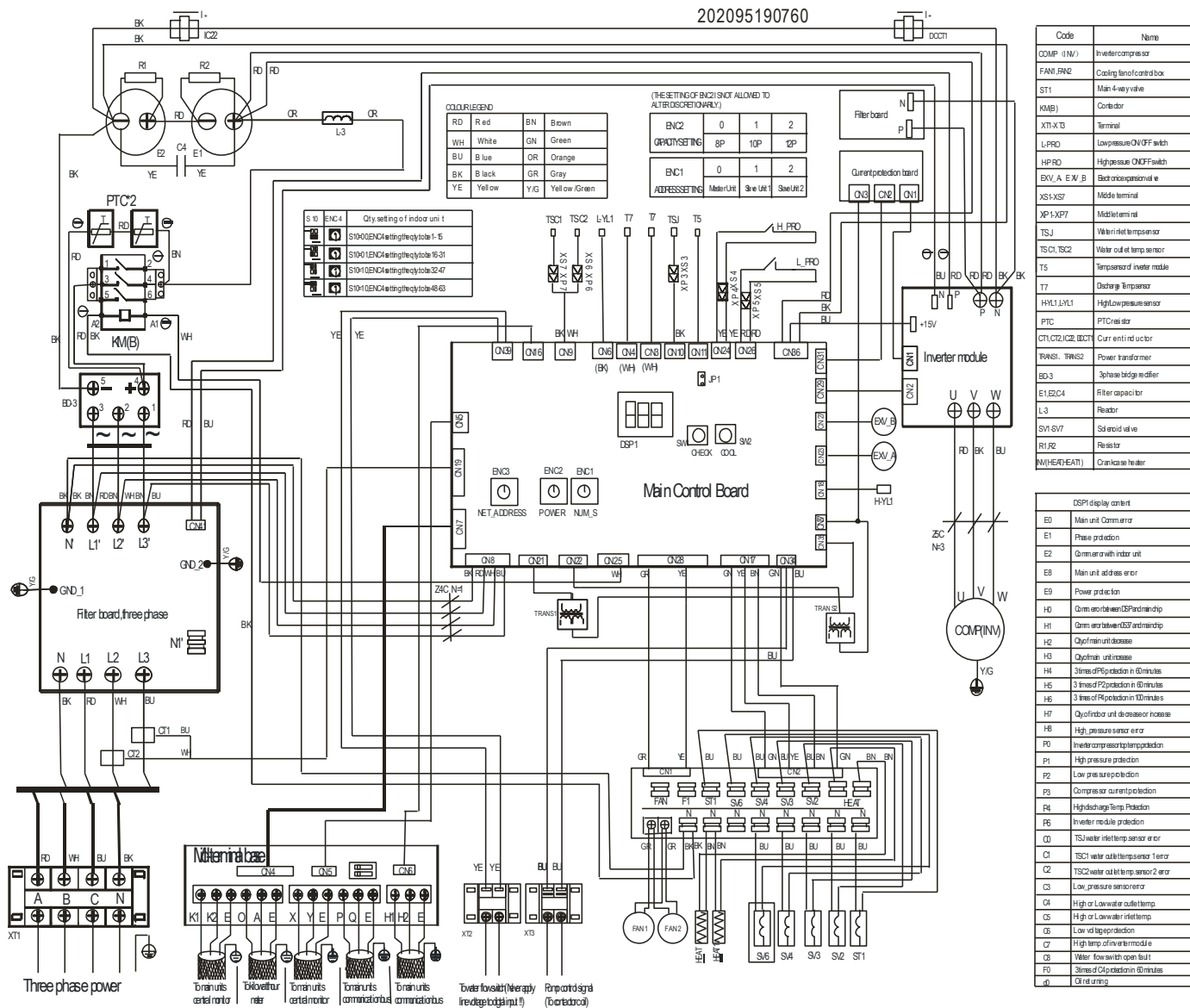
Oil returning valve. Opens after the DC inverter compressor has been run for 5 minutes and then closes 15 minutes later. (For the system has only one main unit). Every 20 minutes, SV4 of each main unit opens for 3 minutes. (For the system has more than one main unit)

4 Wiring Diagrams

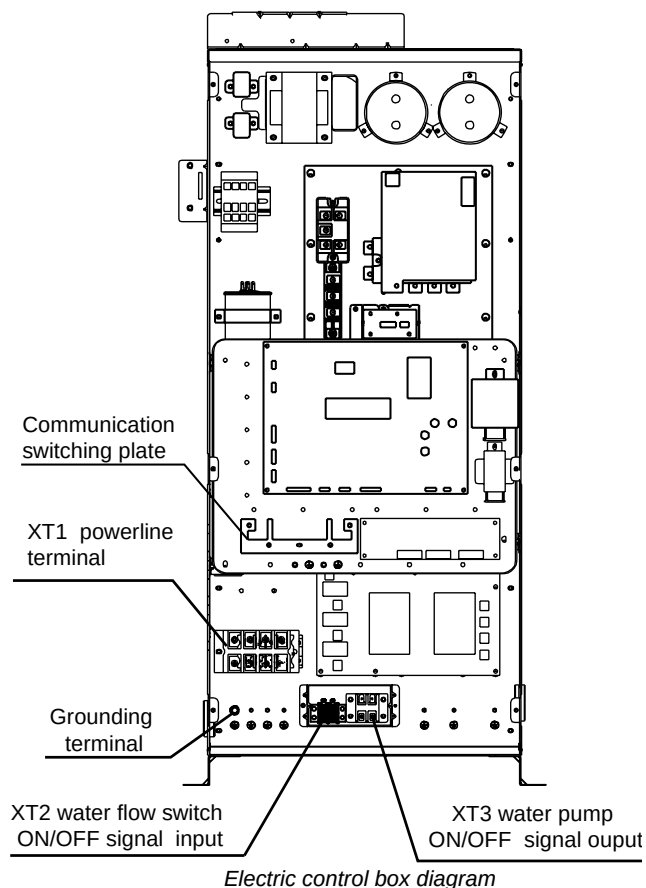
4.1 Wiring diagram

8/10/12HP

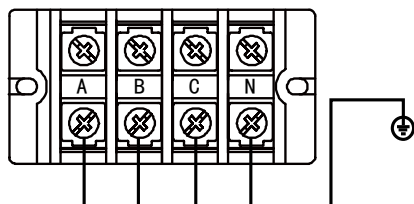
Figure 2-5.1: 8/10/12HP wiring diagram



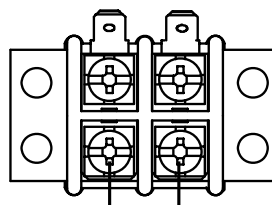
4.2 Terminal base function



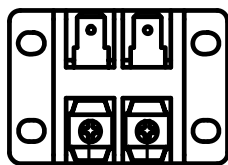
Note: Never apply line voltage to communication switching plate and XT2 water flow switch ON/OFF signal input terminal.



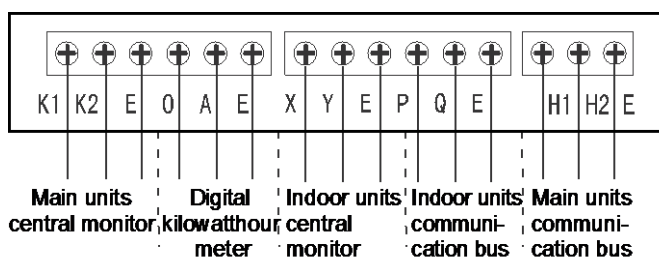
XT1 Powerline terminal
380-415V 3N- 50Hz/60Hz



XT2 water flow switch ON/OFF signal input terminal
(Must be connected to weak current control circuit !)

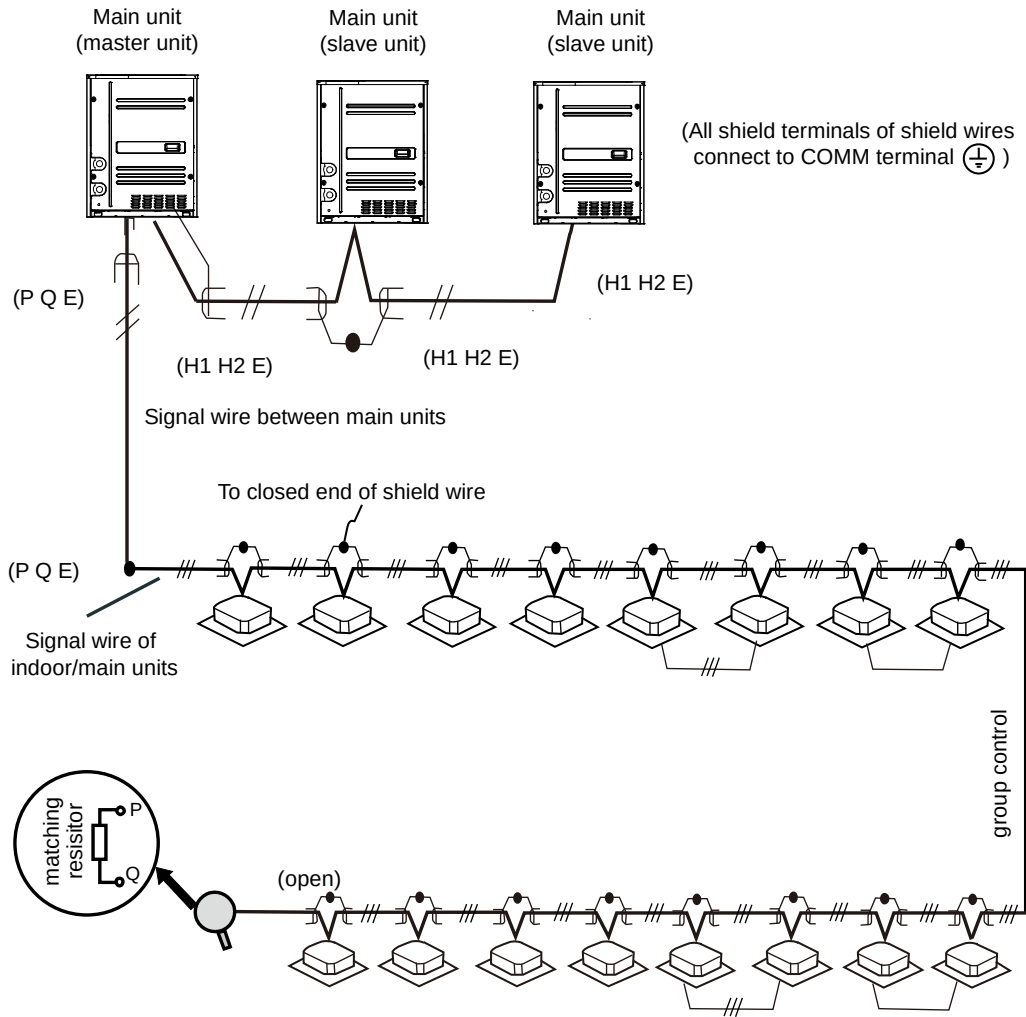


XT3 Water pump ON/OFF signal output terminals
(Dry contact)



4.3 Signal wire of indoor/main units

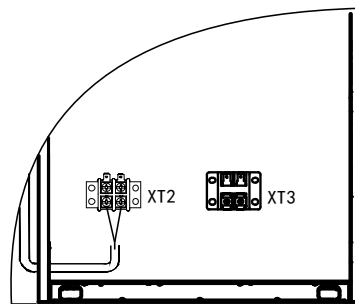
Signal wire of indoor/main unit adopts 3-core shielded wire ($\geq 0.75\text{mm}^2$) which has polarity, please connect it correctly.



4.4 Electric wiring of water pipelines

4.4.1 Water flow ON/OFF signal wiring

- 1) Water flow switch should be wired during the installation. Each unit must be configured a water flow switch, and it cannot operate without a water flow switch.
- 2) The signal wire should apply 0.75mm² shielding wire, and connected to the XT2 terminal in the electric control box



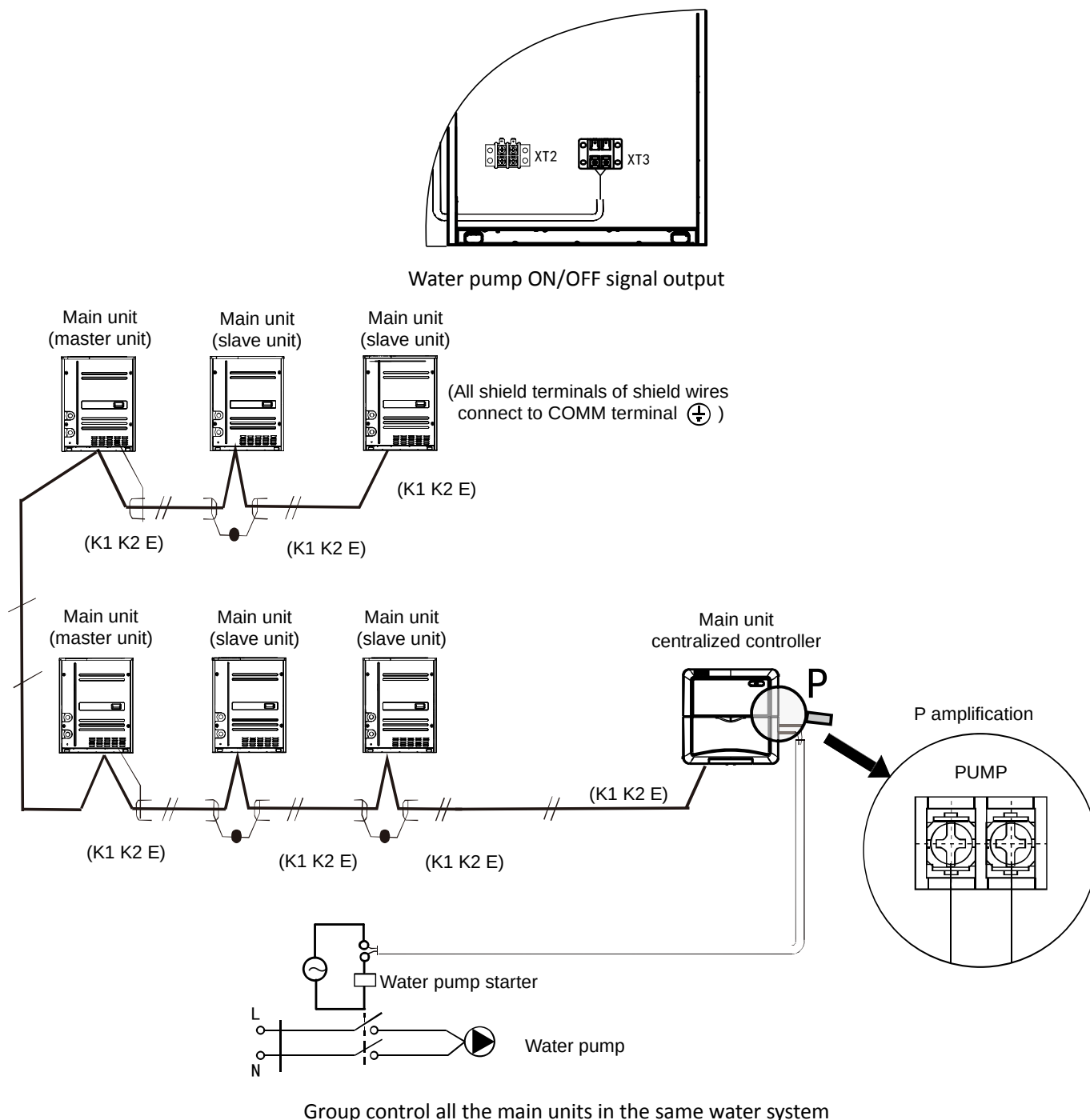
Water flow ON/OFF signal input

4.4.2 Water pump ON/OFF signal wiring

1) Each unit has configured a dry contact terminal for central control of the water pump (see Fig.3-3), this terminal cannot be connected to power terminal of the water pump directly, only should be connected to the control terminal of the water pump starter.

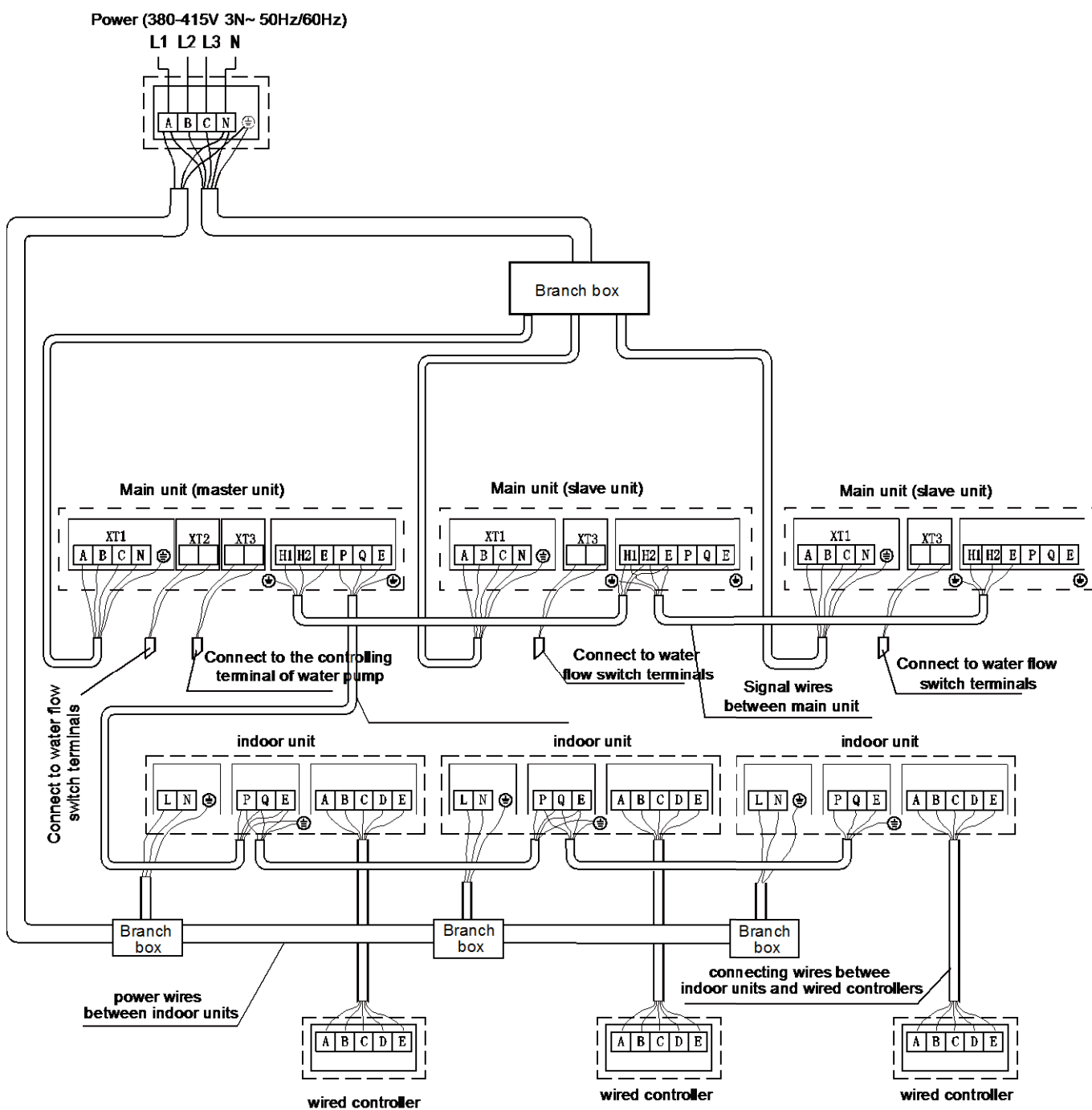
2) When the water pump ON/OFF signal wire has been connected to strong current, it should be wired the signal wires along with other strong current wires; when it has been connected to weak current, it should be wired the signal wires along with the weak current wires.

3) When the water pipeline has a single system, the water pump ON/OFF signal wire should be connected to the XT3 terminals in the main unit electric control box. When the water pipeline has several systems, the water pump ON/OFF signal should be controlled by the main unit centralized controller. The wiring of main unit centralized controller.

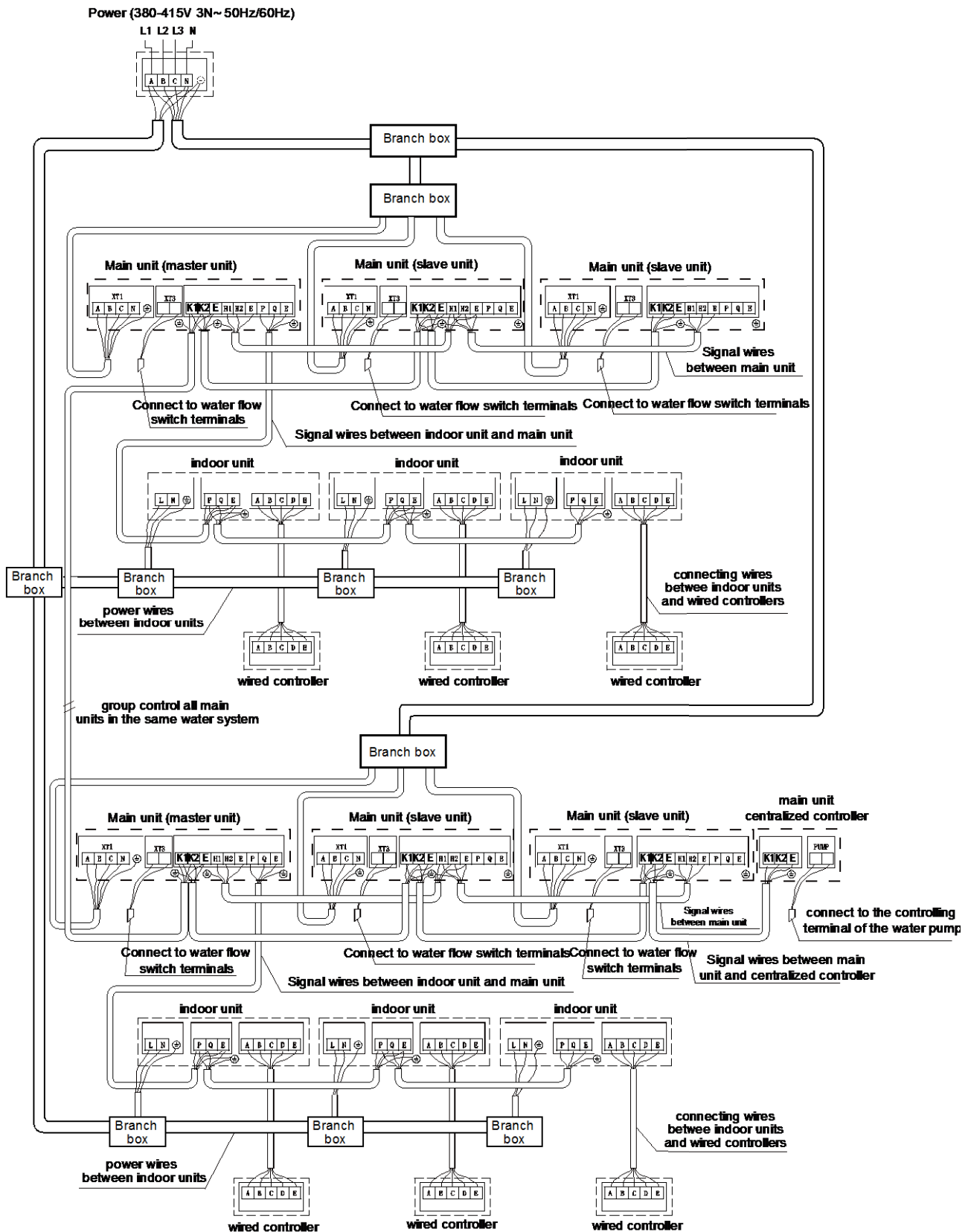


4.5 Example for power wire connection

4.5.1 A water circuit for single system wiring



4.5.2 A water circuit for several systems wiring



Note:

1. The signal connecting line between main units, indoor and main units and indoor units has polarity. When connecting, be careful to prevent error connection.
2. Signal line shall adopt three-core shielded wire with an area above 0.75 mm².
3. Do not bind signal line and copper pipe together with belting.
4. Make sure that the shield metal layer should be grounded well indoor control box in order to prevent interference.
5. It's forbidden to connect 200V or above high-volt power to the communication terminal.

5 Electrical Characteristics

Table 2-6.1: Outdoor unit electrical characteristics

Model	Main unit				Power Supply			Compressor	
	Hz	Voltage	Min.	Max.	MCA	TOCA	MFA	MSC	RLA
8HP	50	380-415	342	456	18.6	21	20	-	8.7
10HP					18.6	21	20		9.3
12HP					20.9	21	25		12.1
16HP					37.2	42	40		17.4
18HP					37.2	42	40		18
20HP					37.2	42	40		18.6
22HP					39.5	42	45		21.4
24HP					41.8	42	45		24.2
26HP					55.8	63	60		26.7
28HP					55.8	63	60		27.3
30HP					55.8	63	60		27.9
32HP					58.1	63	60		30.7
34HP					60.4	63	65		33.5
36HP					62.7	63	65		36.3

Abbreviations:

MCA: Minimum Circuit Amps; TOCA: Total Over-current Amps; MFA: Maximum Fuse Amps; MSC: Maximum Starting Current (A); RLA: Rated Load Amps; FLA: Full Load Amps

Notes:

1. Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits. Maximum allowable voltage variation between phases is 2%.
2. Select wire size based on the value of MCA.
3. TOCA indicates the total overcurrent amps value of each OC set.
4. MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
5. MSC indicates the maximum current on compressor start-up in amps.
6. RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB.

6 Capacity Tables

6.1 Capacity Tables

8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
130	10	45.00	22.74	1.89	7.74	28.92	3.30	10.13	29.07	2.68	9.98	29.38	2.69	10.08	29.75	2.69	10.20	30.39	2.71	10.40	30.86	2.69	10.54
		90.00	22.74	1.76	3.85	28.92	3.10	5.03	29.07	2.51	4.96	29.38	2.52	5.01	29.75	2.49	5.07	30.39	2.54	5.17	30.86	2.56	5.25
		112.50	22.74	1.70	3.07	28.92	3.04	4.02	29.07	2.45	3.96	29.38	2.45	4.00	29.75	2.47	4.05	30.39	2.48	4.13	30.86	2.48	4.19
		135.00	22.74	1.67	2.56	28.92	2.99	3.34	29.07	2.44	3.30	29.38	2.43	3.33	29.75	2.46	3.37	30.39	2.45	3.44	30.86	2.45	3.49
	15	45.00	22.41	2.49	7.83	28.53	4.34	10.33	28.60	3.51	10.09	28.94	3.52	10.20	29.21	3.53	10.29	29.97	3.56	10.54	30.43	3.55	10.68
		90.00	22.41	2.29	3.88	28.53	4.07	5.12	28.60	3.28	5.01	28.94	3.29	5.06	29.21	3.29	5.11	29.97	3.34	5.23	30.43	3.34	5.31
		112.50	22.41	2.23	3.10	28.53	3.96	4.08	28.60	3.21	4.00	28.94	3.23	4.04	29.21	3.23	4.08	29.97	3.26	4.18	30.43	3.27	4.24
		135.00	22.41	2.20	2.58	28.53	3.92	3.40	28.60	3.18	3.33	28.94	3.19	3.37	29.21	3.21	3.40	29.97	3.23	3.48	30.43	3.22	3.53
	20	45.00	22.09	3.03	7.89	28.14	5.27	10.50	28.13	4.26	10.18	28.50	4.28	10.30	28.88	4.27	10.42	29.54	4.31	10.64	30.01	4.30	10.78
		90.00	22.09	2.78	3.91	28.14	4.94	5.20	28.13	3.97	5.04	28.50	4.00	5.11	28.88	4.00	5.17	29.54	4.04	5.28	30.01	4.05	5.35
		112.50	22.09	2.70	3.12	28.14	4.81	4.14	28.13	3.90	4.03	28.50	3.92	4.08	28.88	3.92	4.12	29.54	3.96	4.21	30.01	3.96	4.27
		135.00	22.09	2.65	2.59	28.14	4.75	3.45	28.13	3.86	3.35	28.50	3.87	3.39	28.88	3.88	3.43	29.54	3.91	3.50	30.01	3.91	3.55
	25	45.00	22.09	3.56	8.06	26.33	4.66	9.74	27.28	4.73	10.06	27.65	4.74	10.18	28.03	4.77	10.31	28.60	4.78	10.49	28.98	4.78	10.61
		90.00	22.09	3.27	3.99	26.33	4.36	4.82	27.28	4.42	4.98	27.65	4.44	5.04	28.03	4.46	5.11	28.60	4.48	5.20	28.98	4.50	5.26
		112.50	22.09	3.18	3.18	26.33	4.27	3.85	27.28	4.34	3.98	27.65	4.35	4.02	28.03	4.38	4.07	28.60	4.39	4.15	28.98	4.40	4.20
		135.00	22.09	3.14	2.64	26.33	4.21	3.20	27.28	4.29	3.31	27.65	4.30	3.35	28.03	4.33	3.39	28.60	4.35	3.45	28.98	4.35	3.49
	30	45.00	22.09	4.22	8.27	25.48	5.14	9.62	26.33	5.21	9.91	26.62	5.23	10.01	26.99	5.23	10.13	27.47	5.26	10.29	27.84	5.24	10.40
		90.00	22.09	3.87	4.08	25.48	4.82	4.76	26.33	4.86	4.90	26.62	4.89	4.95	26.99	4.90	5.01	27.47	4.93	5.09	27.84	4.94	5.15
		112.50	22.09	3.78	3.25	25.48	4.71	3.80	26.33	4.77	3.91	26.62	4.79	3.95	26.99	4.82	4.00	27.47	4.83	4.06	27.84	4.83	4.11
		135.00	22.09	3.73	2.70	25.48	4.65	3.16	26.33	4.72	3.25	26.62	4.74	3.29	26.99	4.78	3.33	27.47	4.79	3.38	27.84	4.77	3.42
	35	45.00	22.09	5.02	8.52	24.35	5.64	9.43	25.11	5.68	9.68	25.48	5.72	9.81	25.77	5.71	9.89	26.14	5.73	10.02	26.43	5.73	10.11
		90.00	22.09	4.62	4.20	24.35	5.27	4.65	25.11	5.32	4.78	25.48	5.34	4.84	25.77	5.36	4.89	26.14	5.37	4.95	26.43	5.37	5.00
		112.50	22.09	4.49	3.34	24.35	5.15	3.71	25.11	5.20	3.81	25.48	5.23	3.86	25.77	5.26	3.90	26.14	5.27	3.95	26.43	5.26	3.98
		135.00	22.09	4.43	2.78	24.35	5.09	3.08	25.11	5.15	3.17	25.48	5.18	3.21	25.77	5.20	3.24	26.14	5.22	3.29	26.43	5.20	3.31
	40	45.00	19.54	5.30	7.81	21.63	5.95	8.67	22.29	5.99	8.89	22.64	6.03	9.01	22.87	6.03	9.08	23.31	6.05	9.23	23.54	6.04	9.30
		90.00	19.54	4.87	3.84	21.63	5.55	4.27	22.29	5.61	4.38	22.64	5.63	4.44	22.87	5.65	4.48	23.31	5.68	4.56	23.54	5.67	4.59
		112.50	19.54	4.73	3.05	21.63	5.43	3.40	22.29	5.48	3.49	22.64	5.52	3.54	22.87	5.54	3.57	23.31	5.56	3.63	23.54	5.54	3.66
		135.00	19.54	4.67	2.54	21.63	5.37	2.83	22.29	5.42	2.90	22.64	5.47	2.94	22.87	5.48	2.97	23.31	5.50	3.02	23.54	5.48	3.04
	45	45.00	17.11	5.58	7.13	18.91	6.24	7.90	19.47	6.30	8.10	19.80	6.35	8.22	19.97	6.35	8.27	20.37	6.36	8.40	20.54	6.35	8.45
		90.00	17.11	5.12	3.49	18.91	5.85	3.89	19.47	5.89	3.99	19.80	5.92	4.04	19.97	5.93	4.07	20.37	5.97	4.14	20.54	5.97	4.17
		112.50	17.11	4.98	2.78	18.91	5.71	3.10	19.47	5.76	3.17	19.80	5.81	3.22	19.97	5.83	3.24	20.37	5.85	3.30	20.54	5.82	3.31
		135.00	17.11	4.92	2.31	18.91	5.64	2.57	19.47	5.70	2.64	19.80	5.76	2.68	19.97	5.77	2.70	20.37	5.79	2.74	20.54	5.75	2.75
120	10	45.00	20.81	1.65	7.06	24.82	2.14	8.47	28.26	2.63	9.71	28.71	2.63	9.85	29.08	2.65	9.97	29.73	2.66	10.18	30.29	2.66	10.36
		90.00	20.81	1.51	3.51	24.82	1.99	4.21	28.26	2.44	4.82	28.71	2.47	4.90	29.08	2.46	4.96	29.73	2.49	5.06	30.29	2.47	5.15
		112.50	20.81	1.49	2.80	24.82	1.95	3.37	28.26	2.41	3.86	28.71	2.41	3.91	29.08	2.42	3.96	29.73	2.44	4.04	30.29	2.44	4.11
		135.00	20.81	1.48	2.34	24.82	1.94	2.80	28.26	2.40	3.21	28.71	2.39	3.26	29.08	2.40	3.30	29.73	2.42	3.37	30.29	2.41	3.43
	15	45.00	20.60	2.19	7.16	24.58	2.84	8.62	28.02	3.48	9.90	28.37	3.48	10.01	28.74	3.51	10.14	29.40	3.52	10.35	29.96	3.52	10.52
		90.00	20.60	2.00	3.55	24.58	2.66	4.28	28.02	3.24	4.91	28.37	3.26	4.97	28.74	3.28	5.03	29.40	3.29	5.14	29.96	3.30	5.23
		112.50	20.60	1.96	2.84	24.58	2.60	3.42	28.02	3.18	3.92	28.37	3.19	3.97	28.74	3.21	4.02	29.40	3.24	4.10	29.96	3.22	4.17
		135.00	20.60	1.94	2.36	24.58	2.57	2.84	28.02	3.15	3.27	28.37	3.17	3.30	28.74	3.19	3.35	29.40	3.21	3.42	29.96	3.20	3.47
	20	45.00	20.39	2.66	7.24	24.35	3.47	8.74	27.65	4.23	10.02	28.03	4.25	10.15	28.41	4.26	10.27	29.07	4.30	10.49	29.64	4.29	10.66
		90.00	20.39	2.44	3.59	24.35	3.24	4.34	27.65	3.95	4.97	28.03	3.97	5.03	28.41	3.99	5.09	29.07	4.02	5.20	29.64	4.04	5.29
		112.50	20.39	2.38	2.86	24.35	3.17	3.46	27.65	3.86	3.96	28.03	3.89	4.01	28.41	3.92	4.06	29.07	3.94	4.15	29.64	3.94	4.22
		135.00	20.39	2.34	2.38	24.35	3.14	2.88	27.65	3.82	3.30	28.03	3.85	3.34	28.41	3.88	3.38	29.07	3.91	3.46	29.64	3.89	3.51
	25	45.00	20.39	3.12	7.39	24.35	4.08	8.94	26.80	4.70	9.90	27.18	4.72	10.03	27.65	4.75	10.18	28.22	4.76	10.37	28.69	4.79	10.52
		90.00	20.39	2.88	3.66	24.35	3.82	4.43	26.80	4.39	4.90	27.18	4.42	4.97	27.65	4.43	5.04	28.22	4.47	5.14	28.69	4.48	5.21
		112.50	20.39	2.80	2.92	24.35	3.73	3.53	26.80	4.31	3.91	27.18	4.32	3.96	27.65	4.36	4.02	28.22	4.37	4.10	28.69	4.38	4.16
		135.00	20.39	2.76	2.43	24.35	3.69	2.94	26.80	4.26	3.25	27.18	4.27	3.29	27.65	4.32	3.35	28.22	4.33	3.41	28.69	4.32	3.46
	30	45.00	20.39	3.69	7.57	24.35	4.85	9.18	25.86	5.17	9.75	26.24	5.20	9.88	26.52	5.23	9.98	27.09	5.25	10.16	27.56	5.25	10.31
		90.00	20.39	3.41	3.74	24.35	4.53	4.54	25.86	4.84	4.82	26.24	4.86	4.89	26.52	4.88	4.93	27.09	4.91	5.03	27.56	4.93	5.11
		112.50	20.39	3.30	2.98	24.35	4.44	3.62	25.86	4.74													

8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
110	10	45.00	18.89	1.43	6.39	22.50	1.84	7.65	26.19	2.32	8.96	27.70	2.57	9.51	28.07	2.58	9.63	28.94	2.59	9.91	29.50	2.60	10.09			
		90.00	18.89	1.31	3.17	22.50	1.72	3.81	26.19	2.18	4.46	27.70	2.40	4.73	28.07	2.43	4.79	28.94	2.41	4.93	29.50	2.43	5.02			
		112.50	18.89	1.27	2.53	22.50	1.68	3.04	26.19	2.14	3.56	27.70	2.36	3.78	28.07	2.37	3.83	28.94	2.37	3.94	29.50	2.41	4.01			
		135.00	18.89	1.24	2.11	22.50	1.67	2.53	26.19	2.11	2.96	27.70	2.34	3.15	28.07	2.34	3.19	28.94	2.34	3.28	29.50	2.38	3.34			
	15	45.00	18.79	1.90	6.50	22.39	2.46	7.81	26.07	3.13	9.18	27.58	3.44	9.75	27.96	3.45	9.87	28.82	3.47	10.15	29.28	3.50	10.30			
		90.00	18.79	1.75	3.23	22.39	2.29	3.88	26.07	2.92	4.56	27.58	3.22	4.84	27.96	3.24	4.90	28.82	3.25	5.04	29.28	3.28	5.12			
		112.50	18.79	1.69	2.57	22.39	2.24	3.10	26.07	2.86	3.64	27.58	3.16	3.86	27.96	3.18	3.91	28.82	3.18	4.02	29.28	3.20	4.08			
		135.00	18.79	1.67	2.14	22.39	2.23	2.58	26.07	2.82	3.03	27.58	3.13	3.22	27.96	3.14	3.26	28.82	3.15	3.35	29.28	3.16	3.40			
	20	45.00	18.69	2.33	6.61	22.27	3.02	7.95	25.96	3.83	9.36	27.47	4.21	9.96	27.84	4.25	10.09	28.60	4.26	10.33	29.16	4.29	10.51			
		90.00	18.69	2.14	3.27	22.27	2.82	3.94	25.96	3.59	4.64	27.47	3.95	4.94	27.84	3.96	5.00	28.60	4.00	5.12	29.16	4.02	5.21			
		112.50	18.69	2.07	2.61	22.27	2.75	3.15	25.96	3.51	3.70	27.47	3.87	3.94	27.84	3.91	3.99	28.60	3.92	4.09	29.16	3.92	4.16			
		135.00	18.69	2.04	2.17	22.27	2.73	2.62	25.96	3.46	3.08	27.47	3.83	3.28	27.84	3.87	3.32	28.60	3.88	3.40	29.16	3.86	3.46			
	25	45.00	18.69	2.74	6.74	22.27	3.55	8.11	25.96	4.53	9.58	26.71	4.68	9.87	27.09	4.71	9.99	27.75	4.73	10.21	28.31	4.77	10.40			
		90.00	18.69	2.52	3.33	22.27	3.32	4.02	25.96	4.23	4.74	26.71	4.39	4.89	27.09	4.41	4.95	27.75	4.44	5.06	28.31	4.47	5.15			
		112.50	18.69	2.45	2.66	22.27	3.25	3.21	25.96	4.14	3.78	26.71	4.29	3.90	27.09	4.34	3.95	27.75	4.35	4.04	28.31	4.36	4.11			
		135.00	18.69	2.40	2.21	22.27	3.21	2.67	25.96	4.10	3.15	26.71	4.24	3.24	27.09	4.29	3.29	27.75	4.30	3.36	28.31	4.30	3.42			
	30	45.00	18.69	3.23	6.89	22.27	4.22	8.33	25.39	5.13	9.59	25.77	5.17	9.72	26.05	5.20	9.82	26.71	5.22	10.04	27.18	5.25	10.19			
		90.00	18.69	2.97	3.40	22.27	3.93	4.12	25.39	4.81	4.75	25.77	4.83	4.81	26.05	4.86	4.86	26.71	4.89	4.97	27.18	4.92	5.04			
		112.50	18.69	2.89	2.71	22.27	3.86	3.28	25.39	4.69	3.78	25.77	4.74	3.84	26.05	4.77	3.87	26.71	4.79	3.96	27.18	4.80	4.02			
		135.00	18.69	2.85	2.26	22.27	3.81	2.73	25.39	4.64	3.15	25.77	4.69	3.19	26.05	4.72	3.22	26.71	4.75	3.30	27.18	4.74	3.34			
	35	45.00	18.65	3.86	7.07	22.27	5.03	8.58	24.26	6.14	9.55	24.63	5.65	9.52	24.92	5.67	9.61	25.48	5.70	9.80	25.96	5.73	9.96			
		90.00	18.65	3.55	3.49	22.27	4.70	4.24	24.26	5.75	4.72	24.63	5.29	4.70	24.92	5.31	4.75	25.48	5.34	4.84	25.96	5.37	4.92			
		112.50	18.65	3.45	2.78	22.27	4.60	3.38	24.26	5.63	3.76	24.63	5.19	3.75	24.92	5.21	3.79	25.48	5.24	3.86	25.96	5.24	3.92			
		135.00	18.65	3.40	2.31	22.27	4.55	2.81	24.26	5.56	3.12	24.63	5.13	3.12	24.92	5.15	3.15	25.48	5.19	3.21	25.96	5.17	3.26			
	40	45.00	17.34	4.24	6.78	20.71	5.52	8.24	22.45	6.76	9.18	22.73	6.21	9.10	23.04	6.23	9.20	23.64	6.26	9.40	24.12	6.29	9.56			
		90.00	17.34	3.90	3.34	20.71	5.16	4.07	22.45	6.31	4.52	22.73	5.80	4.48	23.04	5.83	4.54	23.64	5.86	4.64	24.12	5.90	4.72			
		112.50	17.34	3.78	2.66	20.71	5.05	3.24	22.45	6.18	3.60	22.73	5.70	3.57	23.04	5.71	3.61	23.64	5.75	3.69	24.12	5.76	3.76			
		135.00	17.34	3.74	2.21	20.71	5.00	2.69	22.45	6.13	2.99	22.73	5.64	2.97	23.04	5.67	3.01	23.64	5.70	3.07	24.12	5.68	3.12			
	45	45.00	15.92	4.62	6.46	19.02	6.02	7.87	20.77	7.37	8.84	20.94	6.76	8.71	21.28	6.79	8.82	21.80	6.82	8.99	22.19	6.85	9.13			
		90.00	15.92	4.24	3.17	19.02	5.63	3.87	20.77	6.86	4.34	20.94	6.34	4.29	21.28	6.34	4.34	21.80	6.38	4.43	22.19	6.44	4.50			
		112.50	15.92	4.13	2.52	19.02	5.51	3.08	20.77	6.75	3.46	20.94	6.21	3.41	21.28	6.23	3.46	21.80	6.27	3.53	22.19	6.27	3.58			
		135.00	15.92	4.07	2.09	19.02	5.44	2.56	20.77	6.69	2.88	20.94	6.15	2.84	21.28	6.18	2.88	21.80	6.21	2.93	22.19	6.19	2.97			
100	10	45.00	16.99	1.20	5.72	20.29	1.55	6.86	23.60	1.97	8.04	25.20	2.19	8.61	26.80	2.43	9.19	29.82	2.54	10.17	28.60	2.57	9.80			
		90.00	16.99	1.10	2.84	20.29	1.43	3.41	23.60	1.84	4.00	25.20	2.06	4.28	26.80	2.30	4.57	29.82	2.38	5.06	28.60	2.38	4.87			
		112.50	16.99	1.08	2.27	20.29	1.40	2.73	23.60	1.81	3.19	25.20	2.00	3.42	26.80	2.23	3.65	29.82	2.33	4.04	28.60	2.34	3.89			
		135.00	16.99	1.08	1.89	20.29	1.39	2.27	23.60	1.79	2.66	25.20	1.98	2.85	26.80	2.21	3.04	29.82	2.31	3.37	28.60	2.32	3.24			
	15	45.00	16.99	1.64	5.86	20.29	2.10	7.04	23.60	2.67	8.26	25.20	2.98	8.86	26.80	3.29	9.46	29.82	3.44	10.45	28.60	3.47	10.08			
		90.00	16.99	1.50	2.91	20.29	1.96	3.50	23.60	2.50	4.10	25.20	2.78	4.40	26.80	3.09	4.70	29.82	3.22	5.19	28.60	3.24	5.00			
		112.50	16.99	1.47	2.32	20.29	1.92	2.79	23.60	2.45	3.27	25.20	2.73	3.51	26.80	3.03	3.75	29.82	3.15	4.14	28.60	3.16	3.99			
		135.00	16.99	1.45	1.93	20.29	1.89	2.32	23.60	2.42	2.73	25.20	2.70	2.92	26.80	3.00	3.12	29.82	3.13	3.45	28.60	3.12	3.32			
	20	45.00	16.99	2.01	5.97	20.29	2.58	7.19	23.60	3.30	8.45	25.20	3.68	9.08	26.80	4.07	9.70	29.82	4.23	10.70	28.60	4.27	10.33			
		90.00	16.99	1.85	2.96	20.29	2.42	3.57	23.60	3.07	4.19	25.20	3.43	4.50	26.80	3.80	4.81	29.82	3.97	5.31	28.60	4.00	5.12			
		112.50	16.99	1.80	2.36	20.29	2.37	2.85	23.60	3.02	3.35	25.20	3.38	3.59	26.80	3.74	3.84	29.82	3.89	4.24	28.60	3.89	4.08			
		135.00	16.99	1.77	1.97	20.29	2.34	2.37	23.60	2.98	2.78	25.20	3.34	2.99	26.80	3.71	3.20	29.82	3.85	3.53	28.60	3.82	3.40			
	25	45.00	16.99	2.36	6.08	20.29	3.05	7.34	23.60	3.88	8.64	25.20	4.32	9.28	26.52	4.70	9.81	27.18	4.70	10.02	27.75	4.76	10.22			
		90.00	16.99	2.17	3.01	20.29	2.85	3.64	23.60	3.62	4.28	25.20	4.04	4.59	26.52	4.38	4.86	27.18	4.42	4.97	27.75	4.44	5.06			
		112.50	16.99	2.11	2.40	20.29	2.79	2.90	23.60	3.54	3.41	25.20	3.96	3.67	26.52	4.30	3.87	27.18	4.33	3.96	27.75	4.33	4.03			
		135.00	16.99	2.08	2.00	20.29	2.76	2.41	23.60	3.50	2.84	25.20	3.92	3.05	26.52	4.25	3.22	27.18	4.29	3.30	27.75	4.27	3.35			
	30	45.00	16.99	2.79	6.22	20.29	3.62	7.51	23.60																	

8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
90	10	45.00	15.29	1.04	5.13	18.22	1.32	6.14	21.24	1.65	7.19	22.65	1.85	7.70	24.16	2.05	8.24	27.09	2.49	9.30	28.03	2.54	9.61			
		90.00	15.29	0.97	2.56	18.22	1.24	3.06	21.24	1.56	3.58	22.65	1.74	3.83	24.16	1.91	4.10	27.09	2.32	4.62	28.03	2.37	4.78			
		112.50	15.29	0.93	2.04	18.22	1.22	2.44	21.24	1.51	2.86	22.65	1.70	3.06	24.16	1.88	3.27	27.09	2.27	3.69	28.03	2.31	3.81			
		135.00	15.29	0.91	1.70	18.22	1.21	2.04	21.24	1.49	2.38	22.65	1.68	2.55	24.16	1.86	2.73	27.09	2.25	3.07	28.03	2.27	3.17			
	15	45.00	15.29	1.40	5.25	18.22	1.80	6.29	21.24	2.25	7.38	22.65	2.51	7.91	24.16	2.77	8.46	27.09	3.35	9.57	28.03	3.44	9.89			
		90.00	15.29	1.30	2.61	18.22	1.67	3.13	21.24	2.12	3.67	22.65	2.34	3.93	24.16	2.60	4.21	27.09	3.13	4.75	28.03	3.22	4.91			
		112.50	15.29	1.26	2.08	18.22	1.64	2.50	21.24	2.07	2.93	22.65	2.31	3.14	24.16	2.54	3.36	27.09	3.07	3.79	28.03	3.13	3.92			
		135.00	15.29	1.24	1.73	18.22	1.63	2.08	21.24	2.04	2.44	22.65	2.28	2.61	24.16	2.52	2.80	27.09	3.04	3.16	28.03	3.08	3.26			
	20	45.00	15.29	1.73	5.35	18.22	2.21	6.42	21.24	2.78	7.55	22.65	3.10	8.09	24.16	3.41	8.66	27.09	4.12	9.81	28.03	4.24	10.14			
		90.00	15.29	1.59	2.65	18.22	2.06	3.19	21.24	2.60	3.75	22.65	2.89	4.01	24.16	3.20	4.30	27.09	3.86	4.86	28.03	3.97	5.03			
		112.50	15.29	1.55	2.12	18.22	2.02	2.54	21.24	2.56	2.99	22.65	2.84	3.20	24.16	3.15	3.43	27.09	3.78	3.88	28.03	3.86	4.01			
		135.00	15.29	1.53	1.76	18.22	1.99	2.12	21.24	2.53	2.49	22.65	2.82	2.67	24.16	3.11	2.86	27.09	3.75	3.23	28.03	3.82	3.34			
	25	45.00	15.29	2.02	5.44	18.22	2.58	6.54	21.24	3.27	7.70	22.65	3.63	8.26	24.16	4.04	8.86	26.52	4.67	9.80	27.18	4.72	10.03			
		90.00	15.29	1.86	2.70	18.22	2.42	3.24	21.24	3.06	3.82	22.65	3.41	4.10	24.16	3.77	4.39	26.52	4.38	4.86	27.18	4.41	4.96			
		112.50	15.29	1.80	2.15	18.22	2.37	2.59	21.24	3.01	3.05	22.65	3.34	3.27	24.16	3.70	3.50	26.52	4.29	3.87	27.18	4.31	3.96			
		135.00	15.29	1.77	1.79	18.22	2.34	2.15	21.24	2.97	2.54	22.65	3.30	2.72	24.16	3.67	2.92	26.52	4.25	3.22	27.18	4.25	3.29			
	30	45.00	15.29	2.39	5.56	18.22	3.05	6.68	21.24	4.07	7.95	22.65	4.32	8.48	24.16	4.78	9.10	25.58	5.16	9.66	26.14	5.19	9.85			
		90.00	15.29	2.19	2.75	18.22	2.86	3.31	21.24	3.80	3.93	22.65	4.04	4.19	24.16	4.47	4.50	25.58	4.82	4.78	26.14	4.86	4.87			
		112.50	15.29	2.14	2.19	18.22	2.79	2.64	21.24	3.71	3.14	22.65	3.96	3.35	24.16	4.39	3.59	25.58	4.73	3.81	26.14	4.74	3.88			
		135.00	15.29	2.11	1.82	18.22	2.76	2.20	21.24	3.68	2.61	22.65	3.91	2.78	24.16	4.35	2.99	25.58	4.68	3.17	26.14	4.66	3.23			
	35	45.00	15.29	2.83	5.69	18.22	3.63	6.87	21.24	4.63	8.13	22.65	5.15	8.74	23.88	5.60	9.27	24.54	5.63	9.48	25.01	5.67	9.64			
		90.00	15.29	2.60	2.81	18.22	3.40	3.40	21.24	4.32	4.02	22.65	4.82	4.32	23.88	5.23	4.57	24.54	5.28	4.69	25.01	5.31	4.76			
		112.50	15.29	2.52	2.24	18.22	3.33	2.71	21.24	4.23	3.20	22.65	4.72	3.44	23.88	5.15	3.65	24.54	5.17	3.73	25.01	5.17	3.79			
		135.00	15.29	2.48	1.86	18.22	3.28	2.25	21.24	4.18	2.66	22.65	4.67	2.86	23.88	5.10	3.04	24.54	5.12	3.11	25.01	5.09	3.15			
	40	45.00	14.79	3.23	5.66	17.67	4.17	6.86	20.65	5.32	8.16	21.96	5.91	8.76	23.17	6.44	9.31	23.84	6.48	9.53	24.20	6.52	9.65			
		90.00	14.79	2.98	2.79	17.67	3.91	3.39	20.65	4.97	4.03	21.96	5.52	4.32	23.17	6.03	4.59	23.84	6.06	4.70	24.20	6.10	4.76			
		112.50	14.79	2.89	2.22	17.67	3.82	2.70	20.65	4.87	3.21	21.96	5.42	3.44	23.17	5.91	3.66	23.84	5.96	3.75	24.20	5.94	3.79			
		135.00	14.79	2.85	1.85	17.67	3.77	2.25	20.65	4.82	2.67	21.96	5.37	2.86	23.17	5.85	3.04	23.84	5.89	3.11	24.20	5.86	3.15			
	45	45.00	14.39	3.65	5.67	17.12	4.72	6.86	20.06	6.00	8.19	21.38	6.69	8.82	22.46	7.27	9.34	23.14	7.32	9.57	23.51	7.36	9.70			
		90.00	14.39	3.37	2.79	17.12	4.40	3.38	20.06	5.61	4.03	21.38	6.24	4.34	22.46	6.81	4.60	23.14	6.84	4.71	23.51	6.89	4.78			
		112.50	14.39	3.26	2.22	17.12	4.31	2.69	20.06	5.50	3.21	21.38	6.12	3.46	22.46	6.68	3.66	23.14	6.72	3.75	23.51	6.73	3.80			
		135.00	14.39	3.21	1.84	17.12	4.25	2.24	20.06	5.43	2.67	21.38	6.06	2.87	22.46	6.61	3.05	23.14	6.66	3.12	23.51	6.64	3.16			
80	10	45.00	13.59	0.87	4.54	16.23	1.10	5.45	18.88	1.38	6.37	20.20	1.55	6.84	21.42	1.69	7.26	24.07	2.06	8.21	26.71	2.41	9.15			
		90.00	13.59	0.80	2.26	16.23	1.05	2.72	18.88	1.28	3.17	20.20	1.44	3.40	21.42	1.58	3.61	24.07	1.90	4.08	26.71	2.25	4.55			
		112.50	13.59	0.78	1.81	16.23	1.01	2.17	18.88	1.26	2.53	20.20	1.39	2.71	21.42	1.54	2.89	24.07	1.87	3.26	26.71	2.21	3.64			
		135.00	13.59	0.78	1.51	16.23	0.99	1.80	18.88	1.26	2.11	20.20	1.37	2.26	21.42	1.51	2.40	24.07	1.87	2.72	26.71	2.21	3.03			
	15	45.00	13.59	1.19	4.65	16.23	1.50	5.57	18.88	1.88	6.52	20.20	2.09	7.01	21.42	2.29	7.45	24.07	2.77	8.44	26.71	3.28	9.43			
		90.00	13.59	1.09	2.31	16.23	1.41	2.77	18.88	1.75	3.24	20.20	1.95	3.48	21.42	2.15	3.70	24.07	2.59	4.19	26.71	3.06	4.68			
		112.50	13.59	1.06	1.84	16.23	1.38	2.21	18.88	1.72	2.59	20.20	1.90	2.78	21.42	2.09	2.96	24.07	2.54	3.35	26.71	2.99	3.73			
		135.00	13.59	1.05	1.53	16.23	1.35	1.84	18.88	1.70	2.16	20.20	1.89	2.31	21.42	2.07	2.46	24.07	2.53	2.79	26.71	2.96	3.11			
	20	45.00	13.59	1.47	4.73	16.23	1.85	5.68	18.88	2.32	6.66	20.20	2.56	7.15	21.42	2.83	7.62	24.07	3.41	8.64	26.71	4.04	9.66			
		90.00	13.59	1.35	2.35	16.23	1.73	2.82	18.88	2.17	3.31	20.20	2.40	3.55	21.42	2.65	3.78	24.07	3.18	4.28	26.71	3.77	4.79			
		112.50	13.59	1.31	1.87	16.23	1.69	2.25	18.88	2.13	2.64	20.20	2.36	2.84	21.42	2.60	3.02	24.07	3.14	3.42	26.71	3.68	3.82			
		135.00	13.59	1.29	1.56	16.23	1.68	1.88	18.88	2.10	2.20	20.20	2.33	2.36	21.42	2.57	2.51	24.07	3.11	2.85	26.71	3.63	3.18			
	25	45.00	13.59	1.71	4.81	16.23	2.16	5.78	18.88	2.72	6.79	20.20	3.02	7.30	21.42	3.35	7.78	24.07	4.02	8.83	26.52	4.68	9.81			
		90.00	13.59	1.58	2.38	16.23	2.03	2.87	18.88	2.55	3.37	20.20	2.83	3.62	21.42	3.12	3.86	24.07	3.76	4.37	26.52	4.38	4.86			
		112.50	13.59	1.53	1.90	16.23	1.99	2.29	18.88	2.50	2.69	20.20	2.78	2.89	21.42	3.06	3.08	24.07	3.68	3.49	26.52	4.28	3.87			
		135.00	13.59	1.51	1.58	16.23	1.96	1.91	18.88	2.48	2.24	20.20	2.74	2.40	21.42	3.03	2.56	24.07	3.65	2.90	26.52	4.21	3.22			
	30	45.00	13.59	2.01	4.90	16.23	2.56	5.91	18.88	3.22	6.9															

8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
70	10	45.00	11.89	0.74	3.97	14.16	0.92	4.74	16.52	1.15	5.55	17.65	1.26	5.94	18.78	1.37	6.33	21.05	1.65	7.13	23.41	1.94	7.97			
		90.00	11.89	0.68	1.98	14.16	0.86	2.36	16.52	1.07	2.76	17.65	1.18	2.96	18.78	1.29	3.15	21.05	1.54	3.55	23.41	1.83	3.97			
		112.50	11.89	0.65	1.58	14.16	0.83	1.88	16.52	1.04	2.21	17.65	1.14	2.36	18.78	1.26	2.52	21.05	1.52	2.84	23.41	1.78	3.17			
		135.00	11.89	0.63	1.31	14.16	0.82	1.57	16.52	1.03	1.84	17.65	1.13	1.97	18.78	1.23	2.10	21.05	1.51	2.36	23.41	1.76	2.64			
	15	45.00	11.89	0.99	4.05	14.16	1.24	4.84	16.52	1.55	5.68	17.65	1.70	6.08	18.78	1.87	6.49	21.05	2.23	7.32	23.41	2.64	8.19			
		90.00	11.89	0.92	2.01	14.16	1.17	2.41	16.52	1.45	2.82	17.65	1.59	3.02	18.78	1.75	3.23	21.05	2.08	3.63	23.41	2.47	4.07			
		112.50	11.89	0.89	1.61	14.16	1.14	1.92	16.52	1.41	2.25	17.65	1.56	2.41	18.78	1.71	2.58	21.05	2.05	2.90	23.41	2.42	3.25			
		135.00	11.89	0.88	1.34	14.16	1.13	1.60	16.52	1.40	1.88	17.65	1.55	2.01	18.78	1.69	2.14	21.05	2.02	2.42	23.41	2.38	2.70			
	20	45.00	11.89	1.23	4.12	14.16	1.54	4.93	16.52	1.91	5.79	17.65	2.09	6.20	18.78	2.31	6.63	21.05	2.75	7.48	23.41	3.26	8.38			
		90.00	11.89	1.13	2.05	14.16	1.43	2.45	16.52	1.78	2.88	17.65	1.96	3.08	18.78	2.16	3.29	21.05	2.57	3.71	23.41	3.03	4.15			
		112.50	11.89	1.10	1.63	14.16	1.41	1.96	16.52	1.74	2.30	17.65	1.92	2.46	18.78	2.12	2.63	21.05	2.53	2.96	23.41	2.96	3.32			
		135.00	11.89	1.08	1.36	14.16	1.39	1.63	16.52	1.73	1.91	17.65	1.91	2.05	18.78	2.11	2.19	21.05	2.50	2.47	23.41	2.91	2.76			
	25	45.00	11.89	1.42	4.18	14.16	1.78	5.01	16.52	2.22	5.89	17.65	2.46	6.32	18.78	2.70	6.75	21.05	3.25	7.64	23.41	3.82	8.56			
		90.00	11.89	1.31	2.07	14.16	1.67	2.49	16.52	2.08	2.92	17.65	2.30	3.14	18.78	2.53	3.35	21.05	3.03	3.78	23.41	3.57	4.24			
		112.50	11.89	1.27	1.65	14.16	1.63	1.99	16.52	2.03	2.33	17.65	2.24	2.50	18.78	2.48	2.67	21.05	2.98	3.02	23.41	3.47	3.38			
		135.00	11.89	1.26	1.38	14.16	1.61	1.65	16.52	2.01	1.94	17.65	2.22	2.08	18.78	2.46	2.23	21.05	2.96	2.52	23.41	3.44	2.81			
	30	45.00	11.89	1.67	4.26	14.16	2.10	5.11	16.52	2.63	6.02	17.65	2.90	6.46	18.78	3.20	6.91	21.05	3.84	7.82	23.41	4.53	8.78			
		90.00	11.89	1.54	2.11	14.16	1.97	2.53	16.52	2.45	2.98	17.65	2.71	3.20	18.78	2.99	3.42	21.05	3.59	3.87	23.41	4.24	4.35			
		112.50	11.89	1.50	1.68	14.16	1.92	2.02	16.52	2.41	2.38	17.65	2.66	2.55	18.78	2.93	2.73	21.05	3.54	3.09	23.41	4.13	3.46			
		135.00	11.89	1.47	1.40	14.16	1.90	1.68	16.52	2.39	1.98	17.65	2.64	2.13	18.78	2.91	2.27	21.05	3.49	2.57	23.41	4.08	2.88			
	35	45.00	11.89	1.96	4.35	14.16	2.48	5.23	16.52	3.10	6.17	17.65	3.46	6.63	18.78	4.16	7.21	21.05	4.56	8.05	23.41	5.41	9.06			
		90.00	11.89	1.81	2.15	14.16	2.32	2.59	16.52	2.89	3.05	17.65	3.22	3.28	18.78	3.89	3.56	21.05	4.28	3.98	23.41	5.07	4.48			
		112.50	11.89	1.76	1.72	14.16	2.28	2.07	16.52	2.84	2.43	17.65	3.18	2.62	18.78	3.82	2.84	21.05	4.19	3.17	23.41	4.93	3.56			
		135.00	11.89	1.73	1.43	14.16	2.25	1.72	16.52	2.81	2.03	17.65	3.14	2.18	18.78	3.79	2.36	21.05	4.15	2.64	23.41	4.85	2.96			
	40	45.00	11.89	2.32	4.47	14.16	2.94	5.37	16.52	3.67	6.35	17.65	4.09	6.83	18.78	4.92	7.45	21.05	5.42	8.32	23.41	6.41	9.37			
		90.00	11.89	2.13	2.20	14.16	2.75	2.66	16.52	3.43	3.14	17.65	3.82	3.37	18.78	4.62	3.68	21.05	5.06	4.10	23.41	6.00	4.62			
		112.50	11.89	2.08	1.76	14.16	2.69	2.12	16.52	3.36	2.50	17.65	3.76	2.69	18.78	4.52	2.93	21.05	4.97	3.27	23.41	5.84	3.68			
		135.00	11.89	2.05	1.46	14.16	2.65	1.76	16.52	3.33	2.08	17.65	3.73	2.24	18.78	4.48	2.44	21.05	4.92	2.72	23.41	5.77	3.06			
	45	45.00	11.89	2.69	4.58	14.16	3.39	5.52	16.52	4.23	6.52	17.65	4.72	7.03	18.78	5.69	7.69	21.05	6.25	8.58	23.41	7.42	9.69			
		90.00	11.89	2.46	2.26	14.16	3.18	2.72	16.52	3.96	3.22	17.65	4.42	3.47	18.78	5.35	3.79	21.05	5.86	4.23	23.41	6.92	4.77			
		112.50	11.89	2.41	1.80	14.16	3.11	2.17	16.52	3.88	2.56	17.65	4.35	2.77	18.78	5.22	3.02	21.05	5.74	3.37	23.41	6.77	3.79			
		135.00	11.89	2.38	1.49	14.16	3.07	1.81	16.52	3.84	2.13	17.65	4.30	2.30	18.78	5.17	2.51	21.05	5.70	2.80	23.41	6.70	3.15			
60	10	45.00	10.19	0.61	3.39	12.18	0.75	4.06	14.16	0.91	4.74	15.10	1.00	5.06	16.14	1.09	5.42	18.03	1.31	6.08	20.01	1.54	6.77			
		90.00	10.19	0.55	1.69	12.18	0.70	2.02	14.16	0.85	2.36	15.10	0.95	2.52	16.14	1.01	2.70	18.03	1.21	3.02	20.01	1.43	3.37			
		112.50	10.19	0.53	1.35	12.18	0.68	1.62	14.16	0.83	1.88	15.10	0.92	2.01	16.14	0.99	2.15	18.03	1.18	2.41	20.01	1.38	2.69			
		135.00	10.19	0.52	1.12	12.18	0.67	1.35	14.16	0.83	1.57	15.10	0.91	1.68	16.14	0.98	1.79	18.03	1.17	2.01	20.01	1.35	2.24			
	15	45.00	10.19	0.81	3.46	12.18	1.01	4.15	14.16	1.23	4.84	15.10	1.36	5.17	16.14	1.48	5.54	18.03	1.77	6.22	20.01	2.08	6.94			
		90.00	10.19	0.75	1.72	12.18	0.94	2.06	14.16	1.15	2.41	15.10	1.28	2.57	16.14	1.37	2.75	18.03	1.64	3.09	20.01	1.94	3.45			
		112.50	10.19	0.73	1.37	12.18	0.92	1.65	14.16	1.12	1.92	15.10	1.25	2.06	16.14	1.36	2.20	18.03	1.61	2.47	20.01	1.87	2.75			
		135.00	10.19	0.72	1.14	12.18	0.91	1.37	14.16	1.11	1.60	15.10	1.24	1.71	16.14	1.35	1.83	18.03	1.59	2.06	20.01	1.84	2.29			
	20	45.00	10.19	1.00	3.52	12.18	1.24	4.22	14.16	1.51	4.92	15.10	1.67	5.27	16.14	1.82	5.64	18.03	2.16	6.35	20.01	2.55	7.09			
		90.00	10.19	0.92	1.75	12.18	1.16	2.10	14.16	1.42	2.45	15.10	1.56	2.62	16.14	1.71	2.81	18.03	2.03	3.15	20.01	2.38	3.52			
		112.50	10.19	0.90	1.39	12.18	1.14	1.67	14.16	1.39	1.95	15.10	1.54	2.09	16.14	1.67	2.24	18.03	2.00	2.52	20.01	2.33	2.81			
		135.00	10.19	0.89	1.16	12.18	1.13	1.39	14.16	1.38	1.63	15.10	1.52	1.74	16.14	1.66	1.86	18.03	1.99	2.10	20.01	2.30	2.34			
	25	45.00	10.19	1.17	3.57	12.18	1.44	4.28	14.16	1.78	5.01	15.10	1.97	5.36	16.14	2.14	5.75	18.03	2.54	6.46	20.01	2.98	7.23			
		90.00	10.19	1.07	1.77	12.18	1.35	2.13	14.16	1.66	2.49	15.10	1.83	2.66	16.14	2.01	2.85	18.03	2.39	3.21	20.01	2.80	3.58			
		112.50	10.19	1.04	1.41	12.18	1.33	1.70	14.16	1.64	1.99	15.10	1.80	2.12	16.14	1.97	2.28	18.03	2.33	2.56	20.01	2.72	2.86			
		135.00	10.19	1.03	1.18	12.18	1.32	1.41	14.16	1.62	1.65	15.10	1.79	1.77	16.14	1.96	1.90	18.03	2.30	2.13	20.01	2.69	2.38			
	30	45.00	10.19	1.38	3.64	12.18	1.70	4.36	14.16	2.09	5.115															

8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	45.00	8.49	0.49	2.82	10.10	0.59	3.36	11.80	0.72	3.93	12.65	0.79	4.22	13.40	0.84	4.48	15.10	0.99	5.06	16.71	1.16	5.62			
		90.00	8.49	0.46	1.41	10.10	0.55	1.67	11.80	0.66	1.96	12.65	0.73	2.10	13.40	0.80	2.23	15.10	0.93	2.52	16.71	1.09	2.80			
		112.50	8.49	0.44	1.12	10.10	0.54	1.34	11.80	0.66	1.57	12.65	0.70	1.68	13.40	0.77	1.78	15.10	0.90	2.01	16.71	1.04	2.23			
		135.00	8.49	0.43	0.93	10.10	0.53	1.11	11.80	0.66	1.31	12.65	0.69	1.40	13.40	0.76	1.48	15.10	0.88	1.67	16.71	1.01	1.86			
	15	45.00	8.49	0.67	2.88	10.10	0.80	3.43	11.80	0.96	4.01	12.65	1.06	4.31	13.40	1.15	4.57	15.10	1.34	5.17	16.71	1.55	5.74			
		90.00	8.49	0.62	1.43	10.10	0.75	1.71	11.80	0.90	2.00	12.65	0.98	2.14	13.40	1.07	2.27	15.10	1.25	2.57	16.71	1.47	2.86			
		112.50	8.49	0.59	1.14	10.10	0.73	1.36	11.80	0.89	1.60	12.65	0.96	1.71	13.40	1.05	1.82	15.10	1.22	2.05	16.71	1.41	2.28			
		135.00	8.49	0.58	0.95	10.10	0.71	1.13	11.80	0.87	1.33	12.65	0.95	1.42	13.40	1.03	1.51	15.10	1.21	1.71	16.71	1.40	1.90			
	20	45.00	8.49	0.82	2.93	10.10	0.98	3.48	11.80	1.18	4.08	12.65	1.30	4.38	13.40	1.41	4.65	15.10	1.64	5.26	16.71	1.91	5.85			
		90.00	8.49	0.75	1.45	10.10	0.92	1.73	11.80	1.11	2.03	12.65	1.22	2.18	13.40	1.32	2.31	15.10	1.55	2.62	16.71	1.81	2.91			
		112.50	8.49	0.72	1.16	10.10	0.91	1.38	11.80	1.09	1.62	12.65	1.19	1.74	13.40	1.30	1.85	15.10	1.52	2.09	16.71	1.76	2.32			
		135.00	8.49	0.71	0.96	10.10	0.90	1.15	11.80	1.08	1.35	12.65	1.18	1.45	13.40	1.28	1.54	15.10	1.51	1.74	16.71	1.72	1.93			
	25	45.00	8.49	0.95	2.97	10.10	1.15	3.54	11.80	1.38	4.14	12.65	1.50	4.45	13.40	1.64	4.73	15.10	1.95	5.36	16.71	2.28	5.97			
		90.00	8.49	0.87	1.47	10.10	1.07	1.76	11.80	1.30	2.06	12.65	1.42	2.21	13.40	1.54	2.35	15.10	1.82	2.66	16.71	2.12	2.96			
		112.50	8.49	0.85	1.17	10.10	1.05	1.40	11.80	1.27	1.64	12.65	1.38	1.76	13.40	1.51	1.87	15.10	1.79	2.12	16.71	2.07	2.36			
		135.00	8.49	0.85	0.98	10.10	1.04	1.17	11.80	1.26	1.37	12.65	1.36	1.47	13.40	1.48	1.56	15.10	1.77	1.77	16.71	2.05	1.97			
	30	45.00	8.49	1.10	3.01	10.10	1.33	3.59	11.80	1.63	4.22	12.65	1.78	4.54	13.40	1.93	4.82	15.10	2.28	5.46	16.71	2.67	6.09			
		90.00	8.49	1.00	1.49	10.10	1.24	1.78	11.80	1.51	2.09	12.65	1.66	2.25	13.40	1.81	2.39	15.10	2.14	2.71	16.71	2.49	3.02			
		112.50	8.49	0.97	1.19	10.10	1.21	1.42	11.80	1.48	1.67	12.65	1.63	1.80	13.40	1.78	1.91	15.10	2.10	2.16	16.71	2.43	2.41			
		135.00	8.49	0.96	0.99	10.10	1.20	1.18	11.80	1.47	1.39	12.65	1.62	1.49	13.40	1.77	1.59	15.10	2.07	1.80	16.71	2.38	2.00			
	35	45.00	8.49	1.27	3.07	10.10	1.56	3.66	11.80	1.92	4.31	12.65	2.09	4.63	13.40	2.29	4.93	15.10	2.71	5.60	16.71	3.18	6.25			
		90.00	8.49	1.17	1.52	10.10	1.46	1.82	11.80	1.78	2.13	12.65	1.96	2.30	13.40	2.14	2.44	15.10	2.53	2.77	16.71	2.96	3.09			
		112.50	8.49	1.14	1.21	10.10	1.43	1.45	11.80	1.75	1.70	12.65	1.92	1.83	13.40	2.10	1.95	15.10	2.49	2.21	16.71	2.89	2.46			
		135.00	8.49	1.11	1.01	10.10	1.41	1.21	11.80	1.73	1.42	12.65	1.91	1.53	13.40	2.09	1.62	15.10	2.46	1.84	16.71	2.84	2.05			
	40	45.00	8.49	1.50	3.14	10.10	1.84	3.75	11.80	2.26	4.42	12.65	2.48	4.76	13.40	2.71	5.06	15.10	3.20	5.75	16.71	3.77	6.44			
		90.00	8.49	1.38	1.55	10.10	1.72	1.86	11.80	2.11	2.19	12.65	2.32	2.35	13.40	2.54	2.50	15.10	3.00	2.84	16.71	3.52	3.18			
		112.50	8.49	1.35	1.24	10.10	1.69	1.48	11.80	2.08	1.74	12.65	2.28	1.88	13.40	2.49	2.00	15.10	2.94	2.27	16.71	3.43	2.53			
		135.00	8.49	1.32	1.03	10.10	1.68	1.23	11.80	2.05	1.45	12.65	2.26	1.56	13.40	2.46	1.66	15.10	2.91	1.89	16.71	3.38	2.10			
	45	45.00	8.49	1.73	3.21	10.10	2.13	3.84	11.80	2.60	4.53	12.65	2.88	4.88	13.40	3.14	5.20	15.10	3.70	5.91	16.71	4.35	6.62			
		90.00	8.49	1.60	1.59	10.10	1.99	1.90	11.80	2.43	2.24	12.65	2.67	2.41	13.40	2.93	2.57	15.10	3.47	2.92	16.71	4.08	3.27			
		112.50	8.49	1.56	1.26	10.10	1.96	1.52	11.80	2.39	1.78	12.65	2.63	1.92	13.40	2.87	2.05	15.10	3.39	2.32	16.71	3.98	2.60			
		135.00	8.49	1.52	1.05	10.10	1.93	1.26	11.80	2.38	1.49	12.65	2.59	1.60	13.40	2.84	1.70	15.10	3.37	1.93	16.71	3.93	2.16			

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	45.00	26.51	4.52	6.88	26.40	4.56	6.83	26.35	4.72	6.76	26.23	4.71	6.73	26.10	4.66	6.70	25.85	4.87	6.56
		90.00	27.11	4.48	3.54	26.83	4.57	3.48	26.80	4.75	3.45	26.68	4.71	3.43	26.48	4.66	3.41	26.24	4.85	3.34
		112.50	27.28	4.55	2.84	27.01	4.64	2.80	26.98	4.77	2.78	26.77	4.72	2.76	26.66	4.72	2.74	26.43	5.09	2.67
		135.00	27.37	4.58	2.38	27.09	4.67	2.34	27.06	4.78	2.32	26.87	4.73	2.31	26.75	4.77	2.29	26.53	5.20	2.22
	15	45.00	26.59	4.04	7.05	26.49	4.05	7.02	26.35	4.23	6.92	26.23	4.24	6.88	26.10	4.16	6.86	25.85	4.37	6.72
		90.00	27.45	3.88	3.69	27.27	3.98	3.64	27.15	4.19	3.59	27.14	4.11	3.60	26.85	4.03	3.57	26.73	4.24	3.52
		112.50	27.62	3.98	2.96	27.53	4.07	2.93	27.51	4.19	2.92	27.41	4.11	2.91	27.22	4.14	2.89	27.02	4.66	2.80
		135.00	27.71	4.02	2.47	27.61	4.12	2.45	27.69	4.19	2.45	27.50	4.11	2.44	27.41	4.20	2.42	27.22	4.88	2.33
	20	45.00	27.62	3.72	7.47	27.44	3.71	7.42	27.42	3.82	7.38	27.23	3.81	7.32	27.03	3.83	7.25	26.73	4.24	7.03
		90.00	28.48	3.61	3.89	28.31	3.70	3.85	28.22	3.81	3.82	28.05	3.87	3.78	27.96	3.94	3.76	27.70	4.09	3.69
		112.50	28.57	3.61	3.12	28.48	3.70	3.10	28.58	3.84	3.09	28.41	3.87	3.07	28.15	3.94	3.03	27.90	4.35	2.95
		135.00	28.65	3.61	2.61	28.66	3.70	2.60	28.76	3.85	2.60	28.50	3.87	2.57	28.24	3.94	2.53	28.00	4.48	2.45
	25	45.00	31.34	3.85	8.60	31.17	3.93	8.52	30.91	4.10	8.38	30.82	4.17	8.33	30.65	4.24	8.26	30.39	4.41	8.12
		90.00	31.34	3.79	4.31	31.17	3.91	4.26	30.91	4.03	4.20	30.82	4.10	4.18	30.65	4.17	4.14	30.39	4.33	4.07
		112.50	31.34	3.74	3.45	31.17	3.81	3.42	30.91	3.97	3.37	30.82	4.04	3.35	30.65	4.11	3.32	30.39	4.26	3.27
		135.00	31.34	3.71	2.88	31.17	3.75	2.86	30.91	3.94	2.81	30.82	4.00	2.80	30.65	4.07	2.77	30.39	4.23	2.73
	30	45.00	33.77	4.13	9.27	33.94	4.15	9.32	33.59	4.36	9.14	32.51	4.40	8.79	33.16	4.52	8.96	30.91	4.07	8.39
		90.00	33.77	4.00	4.65	33.94	4.12	4.66	33.59	4.26	4.59	32.51	4.33	4.41	33.16	4.36	4.50	30.91	3.91	4.22
		112.50	33.77	3.94	3.73	33.94	4.01	3.74	33.59	4.19	3.68	32.51	4.25	3.53	33.16	4.36	3.60	30.91	3.91	3.38
		135.00	33.77	3.91	3.11	33.94	3.95	3.13	33.59	4.15	3.07	32.51	4.22	2.95	33.16	4.36	3.00	30.91	3.91	2.81
	35	45.00	36.97	4.36	10.20	36.71	4.45	10.09	35.49	4.31	9.75	33.26	4.09	9.12	33.16	4.02	9.11	30.91	3.57	8.55
		90.00	36.97	4.22	5.12	36.71	4.35	5.06	35.49	4.23	4.89	33.26	4.02	4.57	33.16	3.94	4.57	30.91	3.43	4.30
		112.50	36.97	4.22	4.10	36.71	4.30	4.05	35.49	4.16	3.92	33.26	3.95	3.67	33.16	3.87	3.66	30.91	3.43	3.44
		135.00	36.97	4.22	3.41	36.71	4.28	3.38	35.49	4.12	3.27	33.26	3.91	3.06	33.16	3.83	3.06	30.91	3.43	2.86
	40	45.00	36.97	4.22	10.24	36.71	4.30	10.13	35.49	4.16	9.80	33.26	3.95	9.17	33.16	3.87	9.16	30.91	3.36	8.61
		90.00	36.97	4.07	5.14	36.71	4.19	5.08	35.49	4.02	4.92	33.26	3.80	4.61	33.16	3.71	4.60	30.91	3.22	4.33
		112.50	36.97	4.00	4.12	36.71	4.13	4.08	35.49	4.02	3.94	33.26	3.80	3.68	33.16	3.71	3.68	30.91	3.22	3.46
		135.00	36.97	3.96	3.44	36.71	4.09	3.40	35.49	4.02	3.28	33.26	3.80	3.07	33.16	3.71	3.07	30.91	3.22	2.89
	45	45.00	36.97	4.07	10.29	36.71	4.16	10.18	35.49	4.02	9.84	33.26	3.80	9.21	33.16	3.71	9.21	30.91	3.14	8.68
		90.00	36.97	3.93	5.17	36.71	4.05	5.11	35.49	3.79	4.96	33.26	3.59	4.64	33.16	3.50	4.64	30.91	3.01	4.36
		112.50	36.97	3.78	4.15	36.71	3.94	4.10	35.49	3.86	3.96	33.26	3.65	3.70	33.16	3.57	3.70	30.91	3.01	3.49
		135.00	36.97	3.71	3.47	36.71	3.89	3.42	35.49	3.90	3.29	33.26	3.69	3.08	33.16	3.61	3.08	30.91	3.01	2.91
120	10	45.00	26.68	4.69	6.88	26.66	4.82	6.83	26.88	4.99	6.84	26.54	5.00	6.74	26.41	5.09	6.67	26.19	5.08	6.60
		90.00	27.22	4.76	3.51	27.03	4.90	3.46	27.17	5.06	3.46	26.82	5.03	3.41	26.71	5.07	3.38	26.50	5.10	3.35
		112.50	27.31	4.74	2.82	27.03	4.90	2.77	27.36	5.08	2.79	26.92	5.05	2.74	26.81	5.10	2.72	26.61	5.27	2.67
		135.00	27.40	4.73	2.36	26.94	4.90	2.30	27.36	5.09	2.32	26.92	5.06	2.28	26.81	5.11	2.26	26.71	5.36	2.23
	15	45.00	26.86	4.16	7.10	26.75	4.26	7.03	26.88	4.43	7.02	26.54	4.50	6.89	26.41	4.53	6.84	26.19	4.57	6.76
		90.00	27.40	4.19	3.63	27.40	4.29	3.61	27.55	4.46	3.61	27.11	4.43	3.55	26.91	4.39	3.52	26.82	4.49	3.49
		112.50	27.58	4.13	2.93	27.40	4.26	2.89	27.74	4.46	2.91	27.31	4.43	2.86	27.21	4.39	2.85	27.03	4.80	2.78
		135.00	27.67	4.10	2.46	27.31	4.25	2.40	27.84	4.46	2.44	27.40	4.43	2.39	27.31	4.39	2.39	27.13	4.94	2.31
	20	45.00	27.58	3.73	7.46	27.49	3.78	7.41	27.65	3.89	7.43	27.11	3.97	7.24	27.01	4.12	7.16	26.82	4.32	7.04
		90.00	28.31	3.73	3.84	28.14	3.84	3.80	28.22	3.96	3.79	27.79	4.04	3.71	27.70	4.11	3.69	27.44	4.26	3.62
		112.50	28.40	3.69	3.09	28.14	3.81	3.04	28.51	3.96	3.07	27.98	4.04	2.99	27.90	4.12	2.97	27.65	4.42	2.91
		135.00	28.49	3.68	2.59	28.14	3.79	2.54	28.60	3.96	2.57	28.08	4.04	2.51	27.90	4.13	2.48	27.76	4.49	2.43
	25	45.00	30.98	4.01	8.43	30.82	4.10	8.36	30.56	4.23	8.23	30.47	4.35	8.17	30.30	4.44	8.09	28.48	4.07	7.63
		90.00	31.08	3.95	4.24	30.82	4.07	4.18	30.56	4.20	4.12	30.47	4.27	4.10	30.30	4.36	4.06	28.48	3.99	3.83
		112.50	31.18	3.81	3.42	30.82	3.97	3.36	30.56	4.12	3.31	30.47	4.27	3.28	30.30	4.28	3.25	28.48	3.99	3.06
		135.00	31.18	3.74	2.86	30.82	3.91	2.80	30.56	4.09	2.76	30.47	4.27	2.73	30.30	4.24	2.72	28.48	3.99	2.55
	30	45.00	33.85	4.32	9.23	33.50	4.40	9.10	32.72	4.35	8.87	31.69	4.14	8.61	30.65	4.02	8.33	28.48	3.54	7.80
		90.00	33.85	4.17	4.64	33.50	4.30	4.57	32.72	4.27	4.45	31.69	4.07	4.32	30.65	3.86	4.19	28.48	3.47	3.91
		112.50	33.85	4.04	3.73	33.50	4.21	3.66	32.72	4.19	3.57	31.69	4.07	3.45	30.65	3.86	3.35	28.48	3.40	3.14
		135.00	33.85	3.97	3.11	33.50	4.15	3.06	32.72	4.14	2.98	31.69	4.07	2.88	30.65	3.86	2.79	28.48	3.37	2.62
	35	45.00	36.53	4.66	9.97	34.80	4.28	9.54	32.72	3.90	9.01	31.69	3.70	8.75	30.65	3.53	8.48	28.48	3.12	7.93
		90.00	36.53	4.40	5.02	34.80	4.12	4.80	32.72	3.74	4.53	31.69	3.56	4.40	30.65	3.39	4.26	28.48	3.05	3.98
		112.50	36.53	4.34	4.03	34.80	4.08	3.84	32.72	3.74	3.62	31.69	3.56	3.52	30.65	3.39	3.41	28.48	2.98	3.19
		135.00	36.53	4.32	3.36	34.80	4.07	3.20	32.72	3.74	3.02	31.69	3.56	2.93	30.65	3.39	2.84	28.48	2.94	2.66
	40	45.00	36.53	4.50	10.02	34.80	4.07	9.61	32.72	3.68	9.08	31.69	3.49	8.82	30.65	3.32	8.55	28.48	2.90	8.00
		90.00	36.53	4.15	5.06	34.80	3.88	4.83	32.72	3.52	4.57	31.69	3.35	4.43	30.65					

8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	45.00	26.90	5.07	6.83	26.99	5.21	6.81	26.91	5.41	6.72	26.81	5.40	6.69	26.61	5.59	6.57	25.50	5.05	6.39
		90.00	27.29	5.11	3.47	27.28	5.27	3.44	27.01	5.48	3.37	27.01	5.43	3.37	26.82	5.57	3.32	25.61	5.07	3.21
		112.50	27.38	5.11	2.79	27.38	5.27	2.77	27.11	5.47	2.71	27.12	5.42	2.71	26.82	5.60	2.65	25.72	5.12	2.58
		135.00	27.48	5.11	2.33	27.48	5.27	2.32	27.21	5.46	2.27	27.12	5.41	2.26	26.93	5.61	2.22	25.72	5.15	2.14
	15	45.00	26.90	4.47	7.01	27.09	4.63	7.02	26.91	4.83	6.90	26.81	4.86	6.86	26.61	4.97	6.77	25.50	4.54	6.55
		90.00	27.38	4.45	3.59	27.48	4.63	3.57	27.21	4.83	3.50	27.12	4.79	3.49	27.04	4.83	3.47	25.82	4.46	3.34
		112.50	27.57	4.42	2.90	27.58	4.59	2.88	27.31	4.77	2.82	27.22	4.72	2.81	27.04	4.83	2.78	25.93	4.54	2.68
		135.00	27.67	4.40	2.43	27.68	4.57	2.41	27.41	4.74	2.36	27.32	4.68	2.36	27.14	4.83	2.33	26.04	4.58	2.24
	20	45.00	27.48	3.87	7.38	27.58	4.02	7.37	27.31	4.15	7.24	27.12	4.22	7.16	27.04	4.38	7.09	25.82	4.12	6.79
		90.00	28.05	3.90	3.78	27.88	4.02	3.73	27.62	4.15	3.67	27.53	4.22	3.64	27.36	4.30	3.61	26.14	4.09	3.45
		112.50	28.24	3.90	3.04	28.17	4.02	3.02	27.72	4.15	2.95	27.63	4.16	2.94	27.46	4.30	2.90	26.25	4.09	2.77
		135.00	28.34	3.90	2.55	28.27	4.02	2.53	27.82	4.15	2.47	27.74	4.12	2.46	27.57	4.30	2.43	26.25	4.09	2.31
	25	45.00	30.53	4.16	8.25	30.47	4.34	8.17	30.04	4.40	8.02	29.00	4.19	7.76	28.05	3.99	7.52	26.14	3.50	7.08
		90.00	30.73	4.13	4.16	30.47	4.26	4.10	30.04	4.32	4.02	29.00	4.11	3.89	28.05	3.90	3.78	26.14	3.50	3.54
		112.50	30.94	4.13	3.35	30.47	4.28	3.28	30.04	4.23	3.23	29.00	4.11	3.11	28.05	3.83	3.03	26.14	3.43	2.84
		135.00	31.04	4.13	2.80	30.47	4.28	2.73	30.04	4.19	2.69	29.00	4.11	2.59	28.05	3.79	2.53	26.14	3.40	2.37
	30	45.00	33.42	4.45	9.06	31.94	4.21	8.67	30.04	3.75	8.22	29.00	3.63	7.93	28.05	3.47	7.69	26.14	3.21	7.17
		90.00	33.42	4.37	4.54	31.94	4.12	4.35	30.04	3.67	4.12	29.00	3.56	3.98	28.05	3.39	3.86	26.14	3.13	3.60
		112.50	33.42	4.33	3.64	31.94	4.05	3.49	30.04	3.59	3.31	29.00	3.49	3.19	28.05	3.39	3.08	26.14	3.13	2.88
		135.00	33.42	4.32	3.03	31.94	4.00	2.91	30.04	3.55	2.76	29.00	3.46	2.66	28.05	3.39	2.57	26.14	3.13	2.40
	35	45.00	33.85	4.09	9.31	31.94	3.68	8.84	30.04	3.37	8.34	29.00	3.27	8.05	28.05	3.04	7.82	26.14	2.76	7.31
		90.00	33.85	3.94	4.68	31.94	3.60	4.43	30.04	3.29	4.18	29.00	3.19	4.04	28.05	2.98	3.92	26.14	2.69	3.67
		112.50	33.85	3.83	3.75	31.94	3.53	3.55	30.04	3.21	3.36	29.00	3.19	3.23	28.05	2.98	3.14	26.14	2.69	2.93
		135.00	33.85	3.79	3.13	31.94	3.49	2.97	30.04	3.18	2.80	29.00	3.19	2.69	28.05	2.98	2.61	26.14	2.69	2.44
	40	45.00	33.85	3.86	9.38	31.94	3.53	8.88	30.04	3.14	8.41	29.00	3.05	8.11	28.05	2.82	7.89	26.14	2.54	7.38
		90.00	33.85	3.70	4.71	31.94	3.37	4.47	30.04	3.00	4.23	29.00	2.96	4.07	28.05	2.75	3.96	26.14	2.47	3.70
		112.50	33.85	3.64	3.78	31.94	3.29	3.58	30.04	3.00	3.38	29.00	2.89	3.27	28.05	2.67	3.17	26.14	2.40	2.97
		135.00	33.85	3.62	3.15	31.94	3.25	2.99	30.04	3.00	2.82	29.00	2.85	2.73	28.05	2.64	2.65	26.14	2.36	2.48
	45	45.00	33.85	3.61	9.46	31.94	3.37	8.93	30.04	2.91	8.48	29.00	2.82	8.19	28.05	2.60	7.96	26.14	2.32	7.45
		90.00	33.85	3.45	4.75	31.94	3.14	4.50	30.04	2.69	4.28	29.00	2.73	4.11	28.05	2.53	3.99	26.14	2.25	3.74
		112.50	33.85	3.45	3.80	31.94	3.05	3.61	30.04	2.77	3.41	29.00	2.58	3.30	28.05	2.37	3.21	26.14	2.11	3.01
		135.00	33.85	3.45	3.17	31.94	3.01	3.02	30.04	2.81	2.84	29.00	2.51	2.76	28.05	2.30	2.68	26.14	2.03	2.51
100	10	45.00	26.90	5.33	6.74	27.22	5.61	6.76	27.00	5.90	6.60	26.40	5.48	6.54	25.54	5.31	6.33	23.81	4.73	5.97
		90.00	27.20	5.44	3.40	27.32	5.69	3.38	27.00	5.97	3.29	26.40	5.51	3.27	25.54	5.33	3.16	23.81	4.75	2.98
		112.50	27.40	5.41	2.75	27.43	5.69	2.72	27.00	5.96	2.63	26.40	5.50	2.61	25.54	5.31	2.53	23.81	4.73	2.39
		135.00	27.50	5.40	2.30	27.53	5.69	2.28	27.00	5.95	2.19	26.40	5.49	2.18	25.54	5.31	2.11	23.81	4.72	1.99
	15	45.00	27.10	4.71	7.00	27.22	4.96	6.96	27.00	5.26	6.80	26.40	4.92	6.72	25.54	4.73	6.51	23.81	4.25	6.12
		90.00	27.20	4.80	3.50	27.32	4.98	3.49	27.00	5.26	3.40	26.40	4.86	3.37	25.54	4.66	3.26	23.81	4.18	3.07
		112.50	27.40	4.72	2.84	27.53	4.93	2.83	27.00	5.20	2.73	26.40	4.79	2.70	25.54	4.59	2.62	23.81	4.11	2.46
		135.00	27.50	4.67	2.38	27.53	4.91	2.36	27.00	5.16	2.28	26.40	4.75	2.26	25.54	4.55	2.19	23.81	4.07	2.06
	20	45.00	27.30	4.02	7.28	27.43	4.21	7.26	27.00	4.45	7.05	26.40	4.21	6.94	25.54	4.01	6.73	23.81	3.68	6.29
		90.00	27.70	4.09	3.69	27.53	4.22	3.64	27.00	4.45	3.53	26.40	4.14	3.48	25.54	3.94	3.38	23.81	3.53	3.17
		112.50	27.80	4.02	2.97	27.74	4.19	2.95	27.00	4.38	2.83	26.40	4.07	2.79	25.54	3.86	2.71	23.81	3.47	2.54
		135.00	27.90	3.99	2.49	27.84	4.17	2.47	27.00	4.34	2.36	26.40	4.04	2.33	25.54	3.81	2.26	23.81	3.43	2.12
	25	45.00	29.87	4.33	7.99	29.00	4.21	7.75	27.00	3.82	7.25	26.40	3.64	7.12	25.54	3.45	6.91	23.81	3.04	6.49
		90.00	30.30	4.34	4.06	29.00	4.11	3.89	27.00	3.73	3.64	26.40	3.55	3.57	25.54	3.37	3.47	23.81	3.04	3.25
		112.50	30.41	4.24	3.27	29.00	4.08	3.12	27.00	3.67	2.92	26.40	3.48	2.87	25.54	3.37	2.77	23.81	2.96	2.61
		135.00	30.52	4.20	2.74	29.00	4.07	2.60	27.00	3.63	2.44	26.40	3.44	2.39	25.54	3.37	2.31	23.81	2.93	2.18
	30	45.00	30.73	3.96	8.37	29.00	3.64	7.93	27.00	3.28	7.42	26.40	3.18	7.26	25.54	2.94	7.07	23.81	2.74	6.59
		90.00	30.73	3.89	4.20	29.00	3.56	3.98	27.00	3.24	3.71	26.40	3.09	3.64	25.54	2.94	3.53	23.81	2.66	3.31
		112.50	30.73	3.80	3.37	29.00	3.56	3.18	27.00	3.20	2.98	26.40	3.09	2.92	25.54	2.87	2.84	23.81	2.66	2.65
		135.00	30.73	3.76	2.81	29.00	3.56	2.65	27.00	3.18	2.48	26.40	3.09	2.43	25.54	2.83	2.37	23.81	2.66	2.20
	35	45.00	30.73	3.57	8.49	29.00	3.28	8.04	27.00	2.89	7.54	26.40	2.82	7.37	25.54	2.68	7.15	23.81	2.43	6.69
		90.00	30.73	3.41	4.27	29.00	3.13	4.04	27.00	2.86	3.77	26.40	2.73	3.70	25.54	2.60	3.59	23.81	2.36	3.35
		112.50	30.73	3.41	3.42	29.00	3.13	3.24	27.00	2.82	3.02	26.40	2.73	2.96	25.54	2.60	2.87	23.81	2.36	2.68
		135.00	30.73	3.41	2.85	29.00	3.13	2.70	27.00	2.80	2.52	26.40	2.73	2.47	25.54	2.60	2.39	23.81	2.36	2.24
	40	45.00	30.73																	

8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	45.00	27.24	5.92	6.67	26.14	5.55	6.44	24.59	4.97	6.14	23.72	4.72	5.94	22.94	4.57	5.74	21.38	3.98	5.44
		90.00	27.13	5.95	3.31	26.03	5.58	3.20	24.59	4.99	3.06	23.72	4.75	2.97	22.94	4.56	2.87	21.38	4.00	2.72
		112.50	27.36	5.92	2.68	26.14	5.56	2.57	24.59	4.97	2.45	23.72	4.73	2.38	22.94	4.57	2.30	21.38	4.01	2.17
		135.00	27.47	5.91	2.25	26.14	5.55	2.15	24.59	4.97	2.05	23.72	4.72	1.98	22.94	4.58	1.91	21.38	4.02	1.81
	15	45.00	27.36	5.11	6.96	26.26	4.85	6.69	24.59	4.43	6.30	23.72	4.25	6.09	22.94	4.08	5.90	21.38	3.58	5.57
		90.00	27.13	5.02	3.46	26.03	4.77	3.32	24.59	4.36	3.16	23.72	4.18	3.06	22.94	3.94	2.97	21.38	3.51	2.79
		112.50	27.36	4.96	2.80	26.14	4.69	2.68	24.59	4.29	2.54	23.72	4.10	2.45	22.94	3.94	2.38	21.38	3.51	2.24
		135.00	27.47	4.92	2.35	26.26	4.66	2.25	24.59	4.25	2.12	23.72	4.07	2.05	22.94	3.94	1.98	21.38	3.51	1.86
	20	45.00	27.47	4.32	7.24	26.37	4.13	6.95	24.59	3.78	6.51	23.72	3.59	6.29	22.94	3.49	6.08	21.38	3.17	5.69
		90.00	27.36	4.32	3.60	26.14	4.08	3.45	24.59	3.71	3.26	23.72	3.53	3.16	22.94	3.35	3.06	21.38	3.02	2.87
		112.50	27.47	4.26	2.90	26.26	4.05	2.78	24.59	3.71	2.61	23.72	3.53	2.53	22.94	3.35	2.45	21.38	3.02	2.30
		135.00	27.58	4.22	2.43	26.26	4.04	2.32	24.59	3.71	2.18	23.72	3.53	2.10	22.94	3.35	2.04	21.38	3.02	1.91
	25	45.00	27.37	3.85	7.35	26.14	3.53	7.07	24.59	3.26	6.67	23.72	3.04	6.47	22.94	2.97	6.24	21.38	2.70	5.84
		90.00	27.70	3.82	3.73	26.14	3.50	3.54	24.59	3.19	3.35	23.72	3.04	3.23	22.94	2.89	3.13	21.38	2.62	2.93
		112.50	27.81	3.72	3.01	26.14	3.42	2.84	24.59	3.19	2.68	23.72	2.96	2.60	22.94	2.89	2.51	21.38	2.62	2.35
		135.00	27.81	3.67	2.52	26.14	3.38	2.37	24.59	3.19	2.23	23.72	2.93	2.17	22.94	2.89	2.09	21.38	2.62	1.96
	30	45.00	27.70	3.39	7.60	26.14	3.10	7.20	24.59	2.86	6.79	23.72	2.74	6.56	22.94	2.61	6.36	21.38	2.30	5.97
		90.00	27.70	3.32	3.81	26.14	3.04	3.61	24.59	2.78	3.41	23.72	2.66	3.29	22.94	2.54	3.19	21.38	2.30	2.98
		112.50	27.70	3.24	3.06	26.14	2.96	2.90	24.59	2.78	2.73	23.72	2.66	2.63	22.94	2.54	2.55	21.38	2.23	2.40
		135.00	27.70	3.20	2.55	26.14	2.92	2.42	24.59	2.78	2.27	23.72	2.66	2.20	22.94	2.54	2.13	21.38	2.20	2.00
	35	45.00	27.70	3.01	7.72	26.14	2.77	7.31	24.59	2.54	6.90	23.72	2.44	6.65	22.94	2.32	6.45	21.38	2.12	6.02
		90.00	27.70	2.93	3.87	26.14	2.69	3.67	24.59	2.47	3.46	23.72	2.36	3.34	22.94	2.25	3.23	21.38	2.05	3.02
		112.50	27.70	2.85	3.11	26.14	2.62	2.94	24.59	2.38	2.78	23.72	2.29	2.68	22.94	2.25	2.59	21.38	2.05	2.42
		135.00	27.70	2.81	2.59	26.14	2.57	2.46	24.59	2.34	2.32	23.72	2.26	2.24	22.94	2.25	2.16	21.38	2.05	2.01
	40	45.00	27.70	2.78	7.79	26.14	2.54	7.38	24.59	2.24	6.99	23.72	2.14	6.75	22.94	2.10	6.52	21.38	1.90	6.09
		90.00	27.70	2.63	3.92	26.14	2.47	3.70	24.59	2.17	3.51	23.72	2.07	3.38	22.94	2.02	3.27	21.38	1.83	3.06
		112.50	27.70	2.63	3.14	26.14	2.47	2.96	24.59	2.17	2.80	23.72	2.07	2.71	22.94	2.02	2.62	21.38	1.83	2.45
		135.00	27.70	2.63	2.61	26.14	2.47	2.47	24.59	2.17	2.34	23.72	2.07	2.26	22.94	2.02	2.18	21.38	1.83	2.04
	45	45.00	27.70	2.55	7.86	26.14	2.32	7.45	24.59	1.94	7.08	23.72	1.85	6.84	22.94	1.88	6.59	21.38	1.67	6.16
		90.00	27.70	2.32	3.97	26.14	2.24	3.74	24.59	1.87	3.55	23.72	1.78	3.43	22.94	1.80	3.31	21.38	1.60	3.09
		112.50	27.70	2.40	3.16	26.14	2.32	2.98	24.59	1.94	2.83	23.72	1.85	2.74	22.94	1.80	2.64	21.38	1.60	2.47
		135.00	27.70	2.44	2.63	26.14	2.36	2.48	24.59	1.97	2.36	23.72	1.89	2.28	22.94	1.80	2.20	21.38	1.60	2.06
80	10	45.00	24.48	5.00	6.09	23.09	4.58	5.79	21.82	4.06	5.55	21.12	3.94	5.37	20.43	3.74	5.22	19.05	3.40	4.89
		90.00	24.59	4.97	3.07	23.20	4.55	2.92	21.82	4.06	2.78	21.12	3.95	2.68	20.43	3.75	2.61	19.05	3.40	2.45
		112.50	24.59	4.96	2.46	23.20	4.57	2.33	21.82	4.08	2.22	21.12	3.93	2.15	20.43	3.73	2.09	19.05	3.38	1.96
		135.00	24.59	4.95	2.05	23.09	4.58	1.93	21.82	4.09	1.85	21.12	3.92	1.79	20.43	3.72	1.74	19.05	3.37	1.63
	15	45.00	24.59	4.53	6.27	23.20	4.11	5.97	21.82	3.61	5.69	21.12	3.55	5.49	20.43	3.34	5.34	19.05	3.05	5.00
		90.00	24.59	4.38	3.16	23.20	3.96	3.01	21.82	3.55	2.86	21.12	3.47	2.76	20.43	3.27	2.68	19.05	2.98	2.51
		112.50	24.59	4.29	2.54	23.20	3.96	2.41	21.82	3.55	2.29	21.12	3.40	2.22	20.43	3.19	2.16	19.05	2.91	2.02
		135.00	24.59	4.24	2.12	23.20	3.96	2.01	21.82	3.55	1.90	21.12	3.36	1.85	20.43	3.15	1.80	19.05	2.88	1.69
	20	45.00	24.59	3.81	6.50	23.20	3.50	6.16	21.82	3.11	5.85	21.12	3.04	5.65	20.43	2.91	5.48	19.05	2.63	5.13
		90.00	24.59	3.73	3.26	23.20	3.41	3.09	21.82	3.11	2.93	21.12	2.96	2.84	20.43	2.83	2.75	19.05	2.55	2.58
		112.50	24.59	3.65	2.62	23.20	3.33	2.49	21.82	3.04	2.35	21.12	2.96	2.27	20.43	2.76	2.21	19.05	2.55	2.06
		135.00	24.59	3.60	2.19	23.20	3.30	2.07	21.82	3.00	1.96	21.12	2.96	1.89	20.43	2.72	1.85	19.05	2.55	1.72
	25	45.00	24.59	3.29	6.66	23.20	3.02	6.31	21.82	2.69	5.98	21.12	2.64	5.78	20.43	2.52	5.60	19.05	2.30	5.24
		90.00	24.59	3.20	3.34	23.20	2.94	3.17	21.82	2.69	2.99	21.12	2.57	2.90	20.43	2.45	2.81	19.05	2.23	2.63
		112.50	24.59	3.14	2.68	23.20	2.94	2.53	21.82	2.61	2.40	21.12	2.57	2.32	20.43	2.45	2.25	19.05	2.23	2.10
		135.00	24.59	3.09	2.24	23.20	2.94	2.11	21.82	2.58	2.01	21.12	2.57	1.93	20.43	2.45	1.87	19.05	2.23	1.75
	30	45.00	24.59	2.85	6.80	23.20	2.65	6.43	21.82	2.45	6.06	21.12	2.34	5.87	20.43	2.23	5.69	19.05	2.05	5.32
		90.00	24.59	2.76	3.41	23.20	2.57	3.23	21.82	2.36	3.04	21.12	2.27	2.95	20.43	2.16	2.86	19.05	1.97	2.67
		112.50	24.59	2.76	2.73	23.20	2.57	2.58	21.82	2.36	2.43	21.12	2.27	2.36	20.43	2.16	2.29	19.05	1.97	2.14
		135.00	24.59	2.76	2.28	23.20	2.57	2.15	21.82	2.36	2.03	21.12	2.27	1.96	20.43	2.16	1.90	19.05	1.97	1.78
	35	45.00	24.59	2.58	6.88	23.20	2.36	6.52	21.82	2.18	6.14	21.12	2.02	5.97	20.43	2.00	5.76	19.05	1.77	5.40
		90.00	24.59	2.51	3.45	23.20	2.29	3.27	21.82	2.10	3.08	21.12	2.02	2.99	20.43	1.93	2.89	19.05	1.77	2.70
		112.50	24.59	2.51	2.76	23.20	2.21	2.63	21.82	2.10	2.47	21.12	1.94	2.40	20.43	1.93	2.31	19.05	1.70	2.17
		135.00	24.59	2.51	2.30	23.20	2.17	2.19	21.82	2.10	2.06	21.12	1.91	2.00	20.43	1.93	1.93	19.05	1.66	1.81
	40	45.00	24.59	2.42	6.93	23.20	2.14	6.												

8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	45.00	21.45	4.15	5.41	20.34	3.79	5.18	19.13	3.44	4.91	18.44	3.21	4.76	17.83	3.11	4.60	16.62	2.75	4.34
		90.00	21.56	4.12	2.73	20.34	3.76	2.59	19.13	3.41	2.46	18.44	3.21	2.38	17.83	3.11	2.30	16.62	2.75	2.17
		112.50	21.56	4.14	2.18	20.34	3.78	2.07	19.13	3.42	1.96	18.44	3.22	1.90	17.83	3.08	1.84	16.62	2.75	1.73
		135.00	21.56	4.14	1.82	20.34	3.78	1.73	19.13	3.43	1.64	18.44	3.23	1.59	17.83	3.07	1.54	16.62	2.76	1.44
	15	45.00	21.56	3.76	5.57	20.34	3.41	5.29	19.13	3.07	5.02	18.44	2.88	4.87	17.83	2.76	4.71	16.62	2.47	4.42
		90.00	21.56	3.61	2.81	20.34	3.25	2.67	19.13	2.92	2.53	18.44	2.82	2.44	17.83	2.70	2.37	16.62	2.40	2.22
		112.50	21.56	3.61	2.25	20.34	3.25	2.14	19.13	2.92	2.03	18.44	2.82	1.95	17.83	2.63	1.90	16.62	2.40	1.78
		135.00	21.56	3.61	1.87	20.34	3.25	1.78	19.13	2.92	1.69	18.44	2.82	1.63	17.83	2.59	1.59	16.62	2.40	1.48
	20	45.00	21.56	3.14	5.76	20.34	2.88	5.46	19.13	2.65	5.15	18.44	2.53	4.98	17.83	2.41	4.82	16.62	2.19	4.51
		90.00	21.56	3.06	2.89	20.34	2.80	2.74	19.13	2.57	2.59	18.44	2.46	2.50	17.83	2.34	2.42	16.62	2.13	2.27
		112.50	21.56	3.06	2.31	20.34	2.80	2.19	19.13	2.57	2.07	18.44	2.39	2.01	17.83	2.34	1.94	16.62	2.06	1.82
		135.00	21.56	3.06	1.93	20.34	2.80	1.83	19.13	2.57	1.73	18.44	2.36	1.68	17.83	2.34	1.61	16.62	2.02	1.52
	25	45.00	21.56	2.71	5.89	20.34	2.51	5.58	19.13	2.30	5.26	18.44	2.21	5.08	17.83	2.05	4.93	16.62	1.87	4.61
		90.00	21.56	2.64	2.96	20.34	2.44	2.80	19.13	2.23	2.64	18.44	2.14	2.55	17.83	2.05	2.47	16.62	1.87	2.31
		112.50	21.56	2.57	2.38	20.34	2.35	2.25	19.13	2.23	2.11	18.44	2.14	2.04	17.83	1.98	1.98	16.62	1.87	1.84
		135.00	21.56	2.53	1.98	20.34	2.31	1.88	19.13	2.23	1.76	18.44	2.14	1.70	17.83	1.94	1.66	16.62	1.87	1.54
	30	45.00	21.56	2.39	5.99	20.34	2.22	5.67	19.13	2.06	5.34	18.44	1.90	5.17	17.83	1.89	4.98	16.62	1.67	4.67
		90.00	21.56	2.32	3.01	20.34	2.15	2.84	19.13	1.98	2.68	18.44	1.90	2.59	17.83	1.82	2.50	16.62	1.67	2.34
		112.50	21.56	2.32	2.41	20.34	2.15	2.28	19.13	1.98	2.15	18.44	1.83	2.08	17.83	1.82	2.00	16.62	1.67	1.87
		135.00	21.56	2.32	2.01	20.34	2.15	1.90	19.13	1.98	1.79	18.44	1.79	1.74	17.83	1.82	1.67	16.62	1.67	1.56
	35	45.00	21.56	2.14	6.07	20.34	1.99	5.74	19.13	1.77	5.43	18.44	1.76	5.22	17.83	1.64	5.06	16.62	1.58	4.70
		90.00	21.56	2.07	3.05	20.34	1.92	2.88	19.13	1.77	2.71	18.44	1.69	2.62	17.83	1.64	2.53	16.62	1.51	2.36
		112.50	21.56	2.07	2.44	20.34	1.92	2.30	19.13	1.70	2.18	18.44	1.69	2.10	17.83	1.64	2.03	16.62	1.51	1.89
		135.00	21.56	2.07	2.03	20.34	1.92	1.92	19.13	1.67	1.82	18.44	1.69	1.75	17.83	1.64	1.69	16.62	1.51	1.57
	40	45.00	21.56	1.99	6.12	20.34	1.85	5.78	19.13	1.63	5.47	18.44	1.55	5.28	17.83	1.50	5.11	16.62	1.43	4.75
		90.00	21.56	1.92	3.07	20.34	1.77	2.90	19.13	1.56	2.75	18.44	1.55	2.64	17.83	1.50	2.55	16.62	1.37	2.38
		112.50	21.56	1.92	2.46	20.34	1.77	2.32	19.13	1.56	2.20	18.44	1.48	2.12	17.83	1.42	2.05	16.62	1.37	1.91
		135.00	21.56	1.92	2.05	20.34	1.77	1.94	19.13	1.56	1.83	18.44	1.44	1.77	17.83	1.39	1.71	16.62	1.37	1.59
	45	45.00	21.56	1.84	6.17	20.34	1.69	5.83	19.13	1.49	5.52	18.44	1.34	5.35	17.83	1.36	5.15	16.62	1.29	4.79
		90.00	21.56	1.77	3.09	20.34	1.62	2.93	19.13	1.35	2.78	18.44	1.40	2.66	17.83	1.36	2.58	16.62	1.22	2.41
		112.50	21.56	1.77	2.48	20.34	1.62	2.34	19.13	1.41	2.22	18.44	1.27	2.15	17.83	1.21	2.08	16.62	1.22	1.93
		135.00	21.56	1.77	2.06	20.34	1.62	1.95	19.13	1.45	1.84	18.44	1.20	1.80	17.83	1.13	1.74	16.62	1.22	1.61
60	10	45.00	18.44	3.19	4.77	17.40	3.01	4.50	16.36	2.82	4.23	15.84	2.62	4.13	15.32	2.55	3.99	14.28	2.25	3.76
		90.00	18.44	3.19	2.38	17.40	3.01	2.25	16.36	2.82	2.12	15.84	2.65	2.06	15.32	2.54	2.00	14.28	2.27	1.88
		112.50	18.44	3.20	1.91	17.40	2.98	1.80	16.36	2.79	1.70	15.84	2.62	1.65	15.32	2.52	1.60	14.28	2.25	1.50
		135.00	18.44	3.20	1.59	17.40	2.96	1.51	16.36	2.77	1.42	15.84	2.60	1.38	15.32	2.51	1.34	14.28	2.24	1.25
	15	45.00	18.44	2.89	4.86	17.40	2.71	4.59	16.36	2.51	4.33	15.84	2.35	4.22	15.32	2.26	4.08	14.28	2.02	3.83
		90.00	18.44	2.82	2.44	17.40	2.63	2.31	16.36	2.44	2.18	15.84	2.35	2.11	15.32	2.19	2.05	14.28	2.02	1.92
		112.50	18.44	2.82	1.95	17.40	2.56	1.86	16.36	2.37	1.75	15.84	2.27	1.70	15.32	2.13	1.65	14.28	1.96	1.54
		135.00	18.44	2.82	1.63	17.40	2.52	1.55	16.36	2.33	1.46	15.84	2.23	1.42	15.32	2.09	1.38	14.28	1.92	1.29
	20	45.00	18.44	2.52	4.98	17.40	2.33	4.71	16.36	2.15	4.44	15.84	2.07	4.31	15.32	1.99	4.17	14.28	1.81	3.90
		90.00	18.44	2.45	2.50	17.40	2.26	2.37	16.36	2.08	2.23	15.84	2.00	2.16	15.32	1.91	2.10	14.28	1.74	1.96
		112.50	18.44	2.45	2.00	17.40	2.26	1.89	16.36	2.08	1.79	15.84	2.00	1.73	15.32	1.91	1.68	14.28	1.74	1.57
		135.00	18.44	2.45	1.67	17.40	2.26	1.58	16.36	2.08	1.49	15.84	2.00	1.44	15.32	1.91	1.40	14.28	1.74	1.31
	25	45.00	18.44	2.21	5.08	17.40	2.06	4.80	16.36	1.83	4.54	15.84	1.83	4.38	15.32	1.69	4.26	14.28	1.62	3.96
		90.00	18.44	2.14	2.55	17.40	1.98	2.41	16.36	1.83	2.27	15.84	1.76	2.20	15.32	1.69	2.13	14.28	1.55	1.99
		112.50	18.44	2.14	2.04	17.40	1.98	1.93	16.36	1.76	1.83	15.84	1.76	1.76	15.32	1.69	1.70	14.28	1.55	1.59
		135.00	18.44	2.14	1.70	17.40	1.98	1.61	16.36	1.73	1.52	15.84	1.76	1.47	15.32	1.69	1.42	14.28	1.55	1.33
	30	45.00	18.44	1.97	5.15	17.40	1.83	4.87	16.36	1.72	4.58	15.84	1.64	4.44	15.32	1.58	4.30	14.28	1.47	4.01
		90.00	18.44	1.90	2.59	17.40	1.76	2.45	16.36	1.64	2.30	15.84	1.57	2.23	15.32	1.51	2.16	14.28	1.39	2.02
		112.50	18.44	1.90	2.07	17.40	1.76	1.96	16.36	1.64	1.84	15.84	1.57	1.78	15.32	1.51	1.73	14.28	1.39	1.61
		135.00	18.44	1.90	1.72	17.40	1.76	1.63	16.36	1.64	1.53	15.84	1.57	1.49	15.32	1.51	1.44	14.28	1.39	1.34
	35	45.00	18.44	1.70	5.23	17.40	1.66	4.92	16.36	1.48	4.65	15.84	1.50	4.48	15.32	1.43	4.34	14.28	1.35	4.04
		90.00	18.44	1.70	2.62	17.40	1.59	2.47	16.36	1.48	2.33	15.84	1.42	2.25	15.32	1.37	2.18	14.28	1.27	2.03
		112.50	18.44	1.70	2.09	17.40	1.59	1.98	16.36	1.40	1.87	15.84	1.42	1.80	15.32	1.37	1.74	14.28	1.27	1.63
		135.00	18.44	1.70	1.74	17.40	1.59	1.65	16.36	1.37	1.56	15.84	1.42	1.50	15.32	1.37	1.45	14.28	1.27	1.36
	40	45.00	18.44	1.55	5.28	17.40														

8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	45.00	15.30	2.54	3.99	14.43	2.39	3.76	14.54	2.18	3.86	13.16	2.10	3.46	12.73	1.96	3.37	11.86	1.81	3.14
		90.00	15.41	2.52	2.02	14.54	2.39	1.90	14.54	2.17	1.93	13.16	2.08	1.73	12.73	1.98	1.68	11.86	1.79	1.57
		112.50	15.41	2.54	1.61	14.54	2.39	1.52	14.54	2.17	1.55	13.16	2.09	1.38	12.73	1.95	1.35	11.86	1.80	1.26
		135.00	15.41	2.54	1.34	14.54	2.40	1.27	14.54	2.18	1.29	13.16	2.09	1.15	12.73	1.93	1.13	11.86	1.80	1.05
	15	45.00	15.41	2.29	4.10	14.54	2.16	3.87	14.54	1.94	3.94	13.16	1.88	3.53	12.73	1.75	3.43	11.86	1.62	3.20
		90.00	15.41	2.22	2.06	14.54	2.09	1.95	14.54	1.87	1.98	13.16	1.81	1.77	12.73	1.75	1.72	11.86	1.55	1.61
		112.50	15.41	2.22	1.65	14.54	2.09	1.56	14.54	1.87	1.58	13.16	1.81	1.42	12.73	1.67	1.38	11.86	1.55	1.29
		135.00	15.41	2.22	1.37	14.54	2.09	1.30	14.54	1.87	1.32	13.16	1.81	1.18	12.73	1.63	1.16	11.86	1.55	1.07
	20	45.00	15.41	2.00	4.19	14.54	1.86	3.97	14.54	1.73	4.01	13.16	1.66	3.60	12.73	1.60	3.48	11.86	1.41	3.27
		90.00	15.41	1.92	2.11	14.54	1.79	1.99	14.54	1.65	2.02	13.16	1.59	1.81	12.73	1.53	1.75	11.86	1.41	1.63
		112.50	15.41	1.92	1.69	14.54	1.79	1.59	14.54	1.65	1.61	13.16	1.59	1.45	12.73	1.53	1.40	11.86	1.41	1.31
		135.00	15.41	1.92	1.41	14.54	1.79	1.33	14.54	1.65	1.34	13.16	1.59	1.21	12.73	1.53	1.17	11.86	1.41	1.09
	25	45.00	15.41	1.78	4.26	14.54	1.58	4.05	14.54	1.55	4.06	13.16	1.41	3.67	12.73	1.36	3.56	11.86	1.26	3.31
		90.00	15.41	1.69	2.15	14.54	1.58	2.03	14.54	1.47	2.04	13.16	1.41	1.84	12.73	1.36	1.78	11.86	1.26	1.66
		112.50	15.41	1.69	1.72	14.54	1.58	1.62	14.54	1.47	1.63	13.16	1.41	1.47	12.73	1.36	1.42	11.86	1.26	1.33
		135.00	15.41	1.69	1.43	14.54	1.58	1.35	14.54	1.47	1.36	13.16	1.41	1.22	12.73	1.36	1.19	11.86	1.26	1.10
	30	45.00	15.41	1.59	4.32	14.54	1.48	4.08	14.54	1.41	4.11	13.16	1.28	3.71	12.73	1.30	3.57	11.86	1.22	3.33
		90.00	15.41	1.52	2.17	14.54	1.42	2.05	14.54	1.33	2.07	13.16	1.28	1.86	12.73	1.23	1.80	11.86	1.15	1.67
		112.50	15.41	1.52	1.74	14.54	1.42	1.64	14.54	1.33	1.65	13.16	1.28	1.49	12.73	1.23	1.44	11.86	1.15	1.34
		135.00	15.41	1.52	1.45	14.54	1.42	1.37	14.54	1.33	1.38	13.16	1.28	1.24	12.73	1.23	1.20	11.86	1.15	1.12
	35	45.00	15.41	1.44	4.37	14.54	1.29	4.14	14.54	1.21	4.17	13.16	1.24	3.73	12.73	1.13	3.63	11.86	1.05	3.38
		90.00	15.41	1.38	2.19	14.54	1.29	2.07	14.54	1.21	2.08	13.16	1.17	1.87	12.73	1.13	1.81	11.86	1.05	1.69
		112.50	15.41	1.38	1.75	14.54	1.29	1.66	14.54	1.21	1.67	13.16	1.17	1.50	12.73	1.13	1.45	11.86	1.05	1.35
		135.00	15.41	1.38	1.46	14.54	1.29	1.38	14.54	1.21	1.39	13.16	1.17	1.25	12.73	1.13	1.21	11.86	1.05	1.13
	40	45.00	15.41	1.30	4.41	14.54	1.22	4.17	14.54	1.14	4.19	13.16	1.10	3.77	12.73	1.06	3.65	11.86	0.98	3.40
		90.00	15.41	1.23	2.22	14.54	1.15	2.09	14.54	1.07	2.11	13.16	1.10	1.89	12.73	0.99	1.84	11.86	0.98	1.70
		112.50	15.41	1.23	1.77	14.54	1.15	1.67	14.54	1.07	1.68	13.16	1.10	1.51	12.73	0.99	1.47	11.86	0.98	1.36
		135.00	15.41	1.23	1.48	14.54	1.15	1.40	14.54	1.07	1.40	13.16	1.10	1.26	12.73	0.99	1.22	11.86	0.98	1.13
	45	45.00	15.41	1.16	4.46	14.54	1.15	4.19	14.54	1.07	4.21	13.16	0.95	3.82	12.73	0.99	3.67	11.86	0.91	3.42
		90.00	15.41	1.09	2.24	14.54	1.00	2.12	14.54	0.93	2.13	13.16	1.02	1.90	12.73	0.85	1.86	11.86	0.91	1.71
		112.50	15.41	1.09	1.79	14.54	1.00	1.69	14.54	0.93	1.70	13.16	1.02	1.52	12.73	0.85	1.49	11.86	0.91	1.37
		135.00	15.41	1.09	1.49	14.54	1.00	1.41	14.54	0.93	1.42	13.16	1.02	1.27	12.73	0.85	1.24	11.86	0.91	1.14

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP cooling mode

CR (%)	Inlet water Temp. (°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	50.00	25.27	2.41	7.83	32.13	4.20	10.28	32.30	3.41	10.10	32.65	3.42	10.20	33.05	3.42	10.32	33.77	3.45	10.53	34.28	3.42	10.66
		100.00	25.27	2.23	3.89	32.13	3.94	5.10	32.30	3.19	5.02	32.65	3.20	5.07	33.05	3.17	5.12	33.77	3.23	5.23	34.28	3.25	5.31
		125.00	25.27	2.16	3.10	32.13	3.86	4.07	32.30	3.12	4.01	32.65	3.12	4.05	33.05	3.14	4.09	33.77	3.15	4.18	34.28	3.16	4.24
		150.00	25.27	2.13	2.58	32.13	3.80	3.39	32.30	3.10	3.34	32.65	3.08	3.37	33.05	3.12	3.41	33.77	3.12	3.48	34.28	3.11	3.53
	15	50.00	24.90	3.16	7.94	31.70	5.51	10.53	31.78	4.46	10.25	32.16	4.48	10.36	32.45	4.49	10.45	33.30	4.52	10.70	33.82	4.51	10.84
		100.00	24.90	2.92	3.93	31.70	5.17	5.21	31.78	4.17	5.08	32.16	4.19	5.14	32.45	4.18	5.18	33.30	4.24	5.31	33.82	4.24	5.38
		125.00	24.90	2.83	3.14	31.70	5.04	4.16	31.78	4.08	4.06	32.16	4.10	4.10	32.45	4.11	4.14	33.30	4.15	4.24	33.82	4.15	4.30
		150.00	24.90	2.79	2.61	31.70	4.99	3.46	31.78	4.05	3.38	32.16	4.06	3.42	32.45	4.07	3.44	33.30	4.10	3.53	33.82	4.09	3.57
	20	50.00	24.54	3.85	8.03	31.27	6.69	10.74	31.25	5.41	10.37	31.67	5.44	10.50	32.09	5.42	10.61	32.82	5.47	10.83	33.35	5.47	10.98
		100.00	24.54	3.53	3.97	31.27	6.27	5.31	31.25	5.05	5.13	31.67	5.08	5.20	32.09	5.09	5.26	32.82	5.13	5.37	33.35	5.15	5.45
		125.00	24.54	3.43	3.16	31.27	6.11	4.23	31.25	4.96	4.10	31.67	4.98	4.15	32.09	4.98	4.19	32.82	5.04	4.28	33.35	5.03	4.34
		150.00	24.54	3.37	2.63	31.27	6.04	3.52	31.25	4.90	3.41	31.67	4.92	3.45	32.09	4.93	3.49	32.82	4.97	3.56	33.35	4.97	3.61
	25	50.00	24.54	4.53	8.22	29.26	5.92	9.95	30.31	6.01	10.27	30.73	6.02	10.40	31.15	6.07	10.53	31.78	6.07	10.71	32.19	6.07	10.82
		100.00	24.54	4.16	4.06	29.26	5.54	4.92	30.31	5.61	5.08	30.73	5.64	5.14	31.15	5.67	5.21	31.78	5.70	5.30	32.19	5.72	5.36
		125.00	24.54	4.04	3.23	29.26	5.43	3.92	30.31	5.52	4.05	30.73	5.53	4.10	31.15	5.56	4.15	31.78	5.58	4.23	32.19	5.59	4.27
		150.00	24.54	3.99	2.69	29.26	5.36	3.26	30.31	5.45	3.37	30.73	5.47	3.41	31.15	5.51	3.46	31.78	5.53	3.52	32.19	5.52	3.56
	30	50.00	24.54	5.36	8.46	28.31	6.54	9.86	29.26	6.62	10.15	29.57	6.64	10.24	29.99	6.65	10.36	30.52	6.69	10.53	30.94	6.66	10.64
		100.00	24.54	4.92	4.17	28.31	6.12	4.87	29.26	6.18	5.01	29.57	6.21	5.06	29.99	6.23	5.12	30.52	6.26	5.20	30.94	6.27	5.26
		125.00	24.54	4.80	3.32	28.31	5.98	3.88	29.26	6.06	4.00	29.57	6.09	4.03	29.99	6.13	4.09	30.52	6.13	4.15	30.94	6.13	4.19
		150.00	24.54	4.73	2.76	28.31	5.91	3.23	29.26	6.00	3.32	29.57	6.02	3.36	29.99	6.07	3.40	30.52	6.08	3.45	30.94	6.06	3.49
	35	50.00	24.54	6.39	8.75	27.06	7.17	9.68	27.90	7.21	9.93	28.31	7.27	10.06	28.63	7.26	10.15	29.05	7.29	10.28	29.36	7.28	10.36
		100.00	24.54	5.88	4.30	27.06	6.70	4.77	27.90	6.76	4.90	28.31	6.79	4.96	28.63	6.81	5.01	29.05	6.83	5.07	29.36	6.83	5.12
		125.00	24.54	5.70	3.42	27.06	6.55	3.80	27.90	6.61	3.90	28.31	6.64	3.95	28.63	6.68	4.00	29.05	6.70	4.04	29.36	6.68	4.08
		150.00	24.54	5.62	2.84	27.06	6.47	3.16	27.90	6.55	3.25	28.31	6.58	3.29	28.63	6.61	3.32	29.05	6.63	3.36	29.36	6.61	3.39
	40	50.00	21.71	6.74	8.05	24.03	7.56	8.94	24.77	7.62	9.16	25.16	7.66	9.28	25.41	7.66	9.35	25.90	7.69	9.50	26.15	7.67	9.57
		100.00	21.71	6.19	3.95	24.03	7.05	4.40	24.77	7.13	4.51	25.16	7.15	4.57	25.41	7.18	4.61	25.90	7.22	4.68	26.15	7.21	4.72
		125.00	21.71	6.01	3.14	24.03	6.90	3.50	24.77	6.97	3.59	25.16	7.02	3.64	25.41	7.04	3.67	25.90	7.06	3.73	26.15	7.05	3.76
		150.00	21.71	5.94	2.61	24.03	6.83	2.91	24.77	6.89	2.99	25.16	6.95	3.03	25.41	6.96	3.05	25.90	6.99	3.10	26.15	6.96	3.12
	45	50.00	19.01	7.09	7.38	21.01	7.93	8.19	21.64	8.01	8.39	22.00	8.06	8.50	22.19	8.07	8.56	22.63	8.08	8.69	22.83	8.07	8.74
		100.00	19.01	6.50	3.61	21.01	7.43	4.02	21.64	7.49	4.12	22.00	7.53	4.18	22.19	7.53	4.20	22.63	7.59	4.27	22.83	7.59	4.30
		125.00	19.01	6.33	2.87	21.01	7.26	3.20	21.64	7.33	3.28	22.00	7.38	3.32	22.19	7.40	3.35	22.63	7.44	3.40	22.83	7.40	3.42
		150.00	19.01	6.25	2.38	21.01	7.17	2.66	21.64	7.24	2.72	22.00	7.32	2.76	22.19	7.33	2.78	22.63	7.36	2.83	22.83	7.30	2.84
120	10	50.00	23.12	2.09	7.13	27.57	2.71	8.56	31.40	3.35	9.83	31.90	3.34	9.97	32.31	3.37	10.09	33.03	3.38	10.30	33.66	3.38	10.48
		100.00	23.12	1.91	3.54	27.57	2.54	4.26	31.40	3.10	4.88	31.90	3.14	4.96	32.31	3.13	5.01	33.03	3.17	5.12	33.66	3.14	5.20
		125.00	23.12	1.90	2.83	27.57	2.48	3.40	31.40	3.06	3.90	31.90	3.07	3.96	32.31	3.08	4.00	33.03	3.10	4.09	33.66	3.10	4.16
		150.00	23.12	1.88	2.36	27.57	2.46	2.83	31.40	3.04	3.25	31.90	3.04	3.29	32.31	3.04	3.33	33.03	3.07	3.40	33.66	3.06	3.46
	15	50.00	22.89	2.78	7.26	27.32	3.61	8.75	31.13	4.42	10.06	31.52	4.43	10.17	31.94	4.46	10.30	32.67	4.48	10.51	33.29	4.48	10.68
		100.00	22.89	2.54	3.60	27.32	3.38	4.34	31.13	4.12	4.99	31.52	4.14	5.04	31.94	4.16	5.11	32.67	4.19	5.21	33.29	4.19	5.30
		125.00	22.89	2.49	2.87	27.32	3.31	3.47	31.13	4.04	3.98	31.52	4.06	4.03	31.94	4.08	4.08	32.67	4.12	4.16	33.29	4.10	4.23
		150.00	22.89	2.46	2.39	27.32	3.27	2.88	31.13	4.00	3.31	31.52	4.02	3.35	31.94	4.05	3.39	32.67	4.07	3.46	33.29	4.06	3.52
	20	50.00	22.65	3.38	7.36	27.06	4.40	8.90	30.73	5.37	10.21	31.15	5.40	10.34	31.57	5.41	10.46	32.30	5.46	10.68	32.93	5.45	10.86
		100.00	22.65	3.11	3.64	27.06	4.12	4.41	30.73	5.02	5.06	31.15	5.05	5.12	31.57	5.07	5.18	32.30	5.11	5.29	32.93	5.13	5.38
		125.00	22.65	3.03	2.91	27.06	4.03	3.52	30.73	4.90	4.03	31.15	4.95	4.08	31.57	4.99	4.14	32.30	5.01	4.22	32.93	5.00	4.29
		150.00	22.65	2.98	2.42	27.06	3.99	2.93	30.73	4.85	3.35	31.15	4.90	3.40	31.57	4.94	3.44	32.30	4.96	3.51	32.93	4.94	3.57
	25	50.00	22.65	3.97	7.53	27.06	5.18	9.12	29.78	5.98	10.11	30.20	5.99	10.24	30.73	6.04	10.40	31.36	6.05	10.58	31.88	6.08	10.74
		100.00	22.65	3.66	3.72	27.06	4.86	4.51	29.78	5.58	5.00	30.20	5.61	5.06	30.73	5.63	5.14	31.36	5.68	5.24	31.88	5.70	5.31
		125.00	22.65	3.55	2.96	27.06	4.74	3.60	29.78	5.48	3.99	30.20	5.49	4.04	30.73	5.55	4.10	31.36	5.56	4.18	31.88	5.57	4.24
		150.00	22.65	3.51	2.47	27.06	4.68	2.99	29.78	5.41	3.32	30.20	5.43	3.36	30.73	5.49	3.42	31.36	5.50	3.48	31.88	5.49	3.52
	30	50.00	22.65	4.69	7.73	27.06	6.16	9.40	28.73	6.57	9.98	29.15	6.61	10.11	29.47	6.65	10.22	30.10	6.67	10.40	30.62	6.67	10.55
		100.00	22.65	4.33	3.82	27.06	5.76	4.64	28.73														

VRF MW



10HP cooling mode

CR (%)	Inlet water Temp. (°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
110	10	50.00	20.99	1.81	6.45	25.00	2.34	7.73	29.10	2.95	9.07	30.78	3.26	9.63	31.19	3.28	9.75	32.15	3.29	10.02	32.78	3.31	10.21			
		100.00	20.99	1.67	3.20	25.00	2.18	3.84	29.10	2.77	4.51	30.78	3.06	4.79	31.19	3.09	4.85	32.15	3.06	4.98	32.78	3.09	5.07			
		125.00	20.99	1.61	2.56	25.00	2.13	3.07	29.10	2.72	3.60	30.78	3.00	3.82	31.19	3.01	3.87	32.15	3.01	3.98	32.78	3.06	4.06			
		150.00	20.99	1.58	2.13	25.00	2.12	2.56	29.10	2.68	3.00	30.78	2.97	3.18	31.19	2.97	3.22	32.15	2.97	3.31	32.78	3.03	3.38			
	15	50.00	20.88	2.41	6.59	24.87	3.13	7.92	28.97	3.98	9.32	30.65	4.38	9.91	31.06	4.39	10.03	32.03	4.41	10.31	32.53	4.45	10.46			
		100.00	20.88	2.22	3.27	24.87	2.91	3.93	28.97	3.71	4.62	30.65	4.10	4.91	31.06	4.12	4.98	32.03	4.13	5.11	32.53	4.17	5.19			
		125.00	20.88	2.15	2.61	24.87	2.85	3.14	28.97	3.64	3.69	30.65	4.01	3.92	31.06	4.05	3.97	32.03	4.04	4.08	32.53	4.07	4.14			
		150.00	20.88	2.12	2.17	24.87	2.83	2.61	28.97	3.59	3.07	30.65	3.98	3.27	31.06	4.00	3.31	32.03	4.01	3.40	32.53	4.02	3.45			
	20	50.00	20.76	2.96	6.71	24.75	3.84	8.09	28.84	4.86	9.53	30.52	5.35	10.15	30.94	5.40	10.28	31.78	5.41	10.52	32.40	5.46	10.71			
		100.00	20.76	2.72	3.32	24.75	3.58	4.01	28.84	4.56	4.72	30.52	5.02	5.03	30.94	5.04	5.09	31.78	5.08	5.21	32.40	5.11	5.30			
		125.00	20.76	2.63	2.65	24.75	3.50	3.20	28.84	4.46	3.77	30.52	4.91	4.01	30.94	4.97	4.06	31.78	4.98	4.16	32.40	4.98	4.23			
		150.00	20.76	2.59	2.20	24.75	3.47	2.66	28.84	4.40	3.13	30.52	4.86	3.34	30.94	4.92	3.38	31.78	4.93	3.46	32.40	4.91	3.52			
	25	50.00	20.76	3.48	6.86	24.75	4.52	8.28	28.84	5.76	9.79	29.68	5.95	10.08	30.10	5.99	10.21	30.83	6.01	10.42	31.46	6.07	10.62			
		100.00	20.76	3.20	3.39	24.75	4.22	4.10	28.84	5.38	4.84	29.68	5.57	4.99	30.10	5.60	5.05	30.83	5.64	5.16	31.46	5.68	5.25			
		125.00	20.76	3.11	2.70	24.75	4.12	3.27	28.84	5.26	3.86	29.68	5.45	3.97	30.10	5.51	4.03	30.83	5.52	4.11	31.46	5.54	4.19			
		150.00	20.76	3.06	2.25	24.75	4.08	2.72	28.84	5.21	3.21	29.68	5.39	3.31	30.10	5.45	3.35	30.83	5.46	3.42	31.46	5.46	3.48			
	30	50.00	20.76	4.10	7.03	24.75	5.36	8.52	28.21	6.52	9.82	28.63	6.57	9.96	28.94	6.60	10.05	29.68	6.64	10.27	30.20	6.67	10.43			
		100.00	20.76	3.77	3.47	24.75	5.00	4.21	28.21	6.11	4.85	28.63	6.14	4.92	28.94	6.17	4.97	29.68	6.21	5.08	30.20	6.25	5.16			
		125.00	20.76	3.68	2.77	24.75	4.91	3.36	28.21	5.97	3.87	28.63	6.03	3.92	28.94	6.06	3.96	29.68	6.09	4.05	30.20	6.10	4.11			
		150.00	20.76	3.62	2.30	24.75	4.84	2.79	28.21	5.90	3.22	28.63	5.96	3.26	28.94	6.00	3.29	29.68	6.03	3.37	30.20	6.02	3.42			
	35	50.00	20.72	4.90	7.25	24.75	6.39	8.81	26.95	7.80	9.83	27.37	7.18	9.77	27.69	7.20	9.87	28.31	7.25	10.06	28.84	7.29	10.22			
		100.00	20.72	4.51	3.57	24.75	5.97	4.34	26.95	7.31	4.85	27.37	6.72	4.82	27.69	6.75	4.87	28.31	6.79	4.96	28.84	6.82	5.04			
		125.00	20.72	4.39	2.84	24.75	5.85	3.46	26.95	7.16	3.86	27.37	6.60	3.84	27.69	6.62	3.88	28.31	6.66	3.96	28.84	6.66	4.02			
		150.00	20.72	4.32	2.36	24.75	5.78	2.88	26.95	7.07	3.21	27.37	6.52	3.20	27.69	6.54	3.23	28.31	6.60	3.29	28.84	6.58	3.34			
	40	50.00	19.26	5.39	6.97	23.01	7.02	8.49	24.95	8.59	9.49	25.26	7.89	9.38	25.60	7.92	9.48	26.27	7.96	9.68	26.80	8.00	9.84			
		100.00	19.26	4.95	3.42	23.01	6.56	4.18	24.95	8.02	4.66	25.26	7.38	4.62	25.60	7.41	4.67	26.27	7.45	4.77	26.80	7.50	4.85			
		125.00	19.26	4.81	2.72	23.01	6.42	3.33	24.95	7.86	3.71	25.26	7.24	3.68	25.60	7.26	3.72	26.27	7.31	3.80	26.80	7.32	3.86			
		150.00	19.26	4.75	2.26	23.01	6.35	2.77	24.95	7.79	3.09	25.26	7.17	3.06	25.60	7.20	3.09	26.27	7.25	3.16	26.80	7.22	3.21			
	45	50.00	17.69	5.87	6.66	21.14	7.65	8.14	23.08	9.36	9.18	23.27	8.59	9.01	23.64	8.63	9.13	24.22	8.66	9.30	24.65	8.71	9.44			
		100.00	17.69	5.39	3.26	21.14	7.16	4.00	23.08	8.72	4.50	23.27	8.05	4.43	23.64	8.06	4.48	24.22	8.11	4.57	24.65	8.18	4.64			
		125.00	17.69	5.25	2.60	21.14	7.00	3.18	23.08	8.57	3.58	23.27	7.89	3.53	23.64	7.92	3.57	24.22	7.97	3.64	24.65	7.97	3.69			
		150.00	17.69	5.17	2.16	21.14	6.91	2.64	23.08	8.50	2.98	23.27	7.81	2.93	23.64	7.85	2.97	24.22	7.90	3.03	24.65	7.87	3.07			
100	10	50.00	18.88	1.52	5.77	22.55	1.97	6.94	26.22	2.50	8.12	28.00	2.78	8.71	29.78	3.09	9.30	33.13	3.23	10.28	31.78	3.26	9.91			
		100.00	18.88	1.40	2.87	22.55	1.82	3.45	26.22	2.34	4.04	28.00	2.62	4.33	29.78	2.92	4.62	33.13	3.02	5.11	31.78	3.02	4.92			
		125.00	18.88	1.38	2.29	22.55	1.78	2.75	26.22	2.30	3.23	28.00	2.54	3.46	29.78	2.84	3.69	33.13	2.97	4.08	31.78	2.97	3.93			
		150.00	18.88	1.38	1.91	22.55	1.76	2.29	26.22	2.28	2.69	28.00	2.51	2.88	29.78	2.80	3.07	33.13	2.93	3.40	31.78	2.95	3.27			
	15	50.00	18.88	2.08	5.93	22.55	2.67	7.13	26.22	3.39	8.38	28.00	3.79	8.99	29.78	4.19	9.61	33.13	4.37	10.61	31.78	4.41	10.24			
		100.00	18.88	1.91	2.94	22.55	2.49	3.54	26.22	3.17	4.16	28.00	3.54	4.46	29.78	3.93	4.77	33.13	4.09	5.26	31.78	4.12	5.08			
		125.00	18.88	1.87	2.35	22.55	2.43	2.83	26.22	3.11	3.32	28.00	3.48	3.56	29.78	3.84	3.80	33.13	4.01	4.20	31.78	4.01	4.05			
		150.00	18.88	1.84	1.95	22.55	2.40	2.35	26.22	3.08	2.76	28.00	3.43	2.96	29.78	3.81	3.17	33.13	3.97	3.50	31.78	3.96	3.37			
	20	50.00	18.88	2.56	6.06	22.55	3.28	7.31	26.22	4.19	8.60	28.00	4.68	9.24	29.78	5.18	9.89	33.13	5.38	10.89	31.78	5.42	10.52			
		100.00	18.88	2.36	3.00	22.55	3.08	3.62	26.22	3.90	4.26	28.00	4.36	4.58	29.78	4.84	4.90	33.13	5.05	5.40	31.78	5.08	5.21			
		125.00	18.88	2.29	2.40	22.55	3.02	2.89	26.22	3.84	3.40	28.00	4.30	3.65	29.78	4.75	3.91	33.13	4.94	4.31	31.78	4.94	4.15			
		150.00	18.88	2.25	1.99	22.55	2.97	2.41	26.22	3.79	2.83	28.00	4.25	3.04	29.78	4.72	3.25	33.13	4.89	3.58	31.78	4.86	3.45			
	25	50.00	18.88	3.00	6.19	22.55	3.88	7.48	26.22	4.93	8.81	28.00	5.49	9.47	29.47	5.97	10.02	30.20	5.98	10.23	30.83	6.05	10.43			
		100.00	18.88	2.76	3.06	22.55	3.62	3.70	26.22	4.60	4.36	28.00	5.14	4.69	29.47	5.56	4.95	30.20	5.61	5.06	30.83	5.64	5.16			
		125.00	18.88	2.69	2.44	22.55	3.55	2.95	26.22	4.50	3.48	28.00	5.03	3.74	29.47	5.47	3.95	30.20	5.50	4.04	30.83	5.50	4.11			
		150.00	18.88	2.65	2.03	22.55	3.51	2.46	26.22	4.45	2.89	28.00	4.99	3.11	29.47	5.40	3.29	30.20	5.46	3.36	30.83	5.43	3.42			
	30	50.00	18.88	3.55	6.34	22.55	4.60	7.68	26.22	5.83	9.07	28.00	6.53	9.77	28.42	6.58	9.90	29.15	6.61	10.11	29.68	6.66	10.28			
		100.00	18.88	3.26	3.13	22.55	4.29	3.80	26.22	5.46																

10HP cooling mode

CR (%)	Inlet water Temp. (°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	50.00	16.99	1.32	5.18	20.24	1.68	6.20	23.60	2.09	7.27	25.17	2.35	7.78	26.85	2.60	8.33	30.10	3.16	9.41	31.15	3.23	9.72
		100.00	16.99	1.23	2.58	20.24	1.58	3.09	23.60	1.98	3.62	25.17	2.21	3.87	26.85	2.43	4.14	30.10	2.94	4.67	31.15	3.01	4.83
		125.00	16.99	1.18	2.06	20.24	1.55	2.47	23.60	1.92	2.89	25.17	2.16	3.09	26.85	2.38	3.31	30.10	2.88	3.73	31.15	2.93	3.86
		150.00	16.99	1.15	1.71	20.24	1.53	2.05	23.60	1.89	2.40	25.17	2.13	2.57	26.85	2.37	2.76	30.10	2.87	3.11	31.15	2.89	3.21
	15	50.00	16.99	1.79	5.31	20.24	2.29	6.37	23.60	2.86	7.48	25.17	3.19	8.02	26.85	3.52	8.59	30.10	4.26	9.72	31.15	4.37	10.05
		100.00	16.99	1.65	2.64	20.24	2.13	3.16	23.60	2.69	3.72	25.17	2.98	3.98	26.85	3.30	4.26	30.10	3.98	4.82	31.15	4.10	4.99
		125.00	16.99	1.60	2.10	20.24	2.08	2.53	23.60	2.63	2.97	25.17	2.93	3.18	26.85	3.23	3.40	30.10	3.91	3.85	31.15	3.98	3.97
		150.00	16.99	1.57	1.75	20.24	2.07	2.10	23.60	2.59	2.47	25.17	2.90	2.65	26.85	3.20	2.83	30.10	3.87	3.20	31.15	3.92	3.31
	20	50.00	16.99	2.20	5.43	20.24	2.81	6.52	23.60	3.53	7.67	25.17	3.93	8.23	26.85	4.33	8.82	30.10	5.24	10.00	31.15	5.38	10.33
		100.00	16.99	2.02	2.69	20.24	2.62	3.23	23.60	3.30	3.80	25.17	3.67	4.08	26.85	4.07	4.37	30.10	4.91	4.95	31.15	5.05	5.12
		125.00	16.99	1.97	2.15	20.24	2.56	2.58	23.60	3.25	3.04	25.17	3.61	3.26	26.85	4.00	3.49	30.10	4.81	3.95	31.15	4.91	4.08
		150.00	16.99	1.94	1.78	20.24	2.53	2.15	23.60	3.22	2.53	25.17	3.58	2.71	26.85	3.95	2.90	30.10	4.77	3.29	31.15	4.85	3.39
	25	50.00	16.99	2.57	5.53	20.24	3.28	6.65	23.60	4.16	7.85	25.17	4.61	8.42	26.85	5.13	9.05	29.47	5.93	10.01	30.20	6.00	10.24
		100.00	16.99	2.37	2.74	20.24	3.08	3.30	23.60	3.88	3.89	25.17	4.33	4.17	26.85	4.80	4.48	29.47	5.56	4.95	30.20	5.60	5.06
		125.00	16.99	2.29	2.18	20.24	3.01	2.63	23.60	3.82	3.10	25.17	4.24	3.33	26.85	4.70	3.57	29.47	5.45	3.95	30.20	5.48	4.04
		150.00	16.99	2.25	1.81	20.24	2.98	2.19	23.60	3.78	2.58	25.17	4.20	2.77	26.85	4.67	2.97	29.47	5.40	3.29	30.20	5.41	3.36
	30	50.00	16.99	3.04	5.67	20.24	3.87	6.82	23.60	5.18	8.14	25.17	5.49	8.67	26.85	6.07	9.31	28.42	6.56	9.89	29.05	6.60	10.08
		100.00	16.99	2.78	2.80	20.24	3.63	3.38	23.60	4.83	4.02	25.17	5.13	4.29	26.85	5.69	4.60	28.42	6.13	4.89	29.05	6.18	4.98
		125.00	16.99	2.72	2.23	20.24	3.55	2.69	23.60	4.72	3.20	25.17	5.03	3.42	26.85	5.58	3.67	28.42	6.02	3.90	29.05	6.02	3.97
		150.00	16.99	2.68	1.85	20.24	3.51	2.24	23.60	4.67	2.67	25.17	4.97	2.84	26.85	5.53	3.05	28.42	5.95	3.24	29.05	5.92	3.30
	35	50.00	16.99	3.59	5.82	20.24	4.61	7.03	23.60	5.88	8.34	25.17	6.54	8.97	26.85	7.12	9.52	27.27	7.15	9.74	27.79	7.21	9.90
		100.00	16.99	3.30	2.87	20.24	4.32	3.47	23.60	5.49	4.11	25.17	6.13	4.43	26.85	6.65	4.69	27.27	6.71	4.81	27.79	6.75	4.88
		125.00	16.99	3.20	2.28	20.24	4.23	2.77	23.60	5.38	3.28	25.17	6.00	3.53	26.85	6.55	3.74	27.27	6.57	3.83	27.79	6.57	3.89
		150.00	16.99	3.15	1.90	20.24	4.17	2.30	23.60	5.32	2.73	25.17	5.94	2.93	26.85	6.48	3.11	27.27	6.51	3.18	27.79	6.47	3.23
	40	50.00	16.43	4.11	5.81	19.63	5.30	7.05	22.94	6.76	8.40	24.40	7.51	9.03	25.74	8.18	9.59	26.49	8.23	9.82	26.89	8.29	9.95
		100.00	16.43	3.79	2.86	19.63	4.97	3.48	22.94	6.31	4.14	24.40	7.02	4.44	25.74	7.66	4.72	26.49	7.70	4.84	26.89	7.75	4.90
		125.00	16.43	3.67	2.27	19.63	4.85	2.77	22.94	6.18	3.29	24.40	6.89	3.54	25.74	7.51	3.76	26.49	7.57	3.85	26.89	7.55	3.90
		150.00	16.43	3.62	1.89	19.63	4.79	2.30	22.94	6.12	2.74	24.40	6.83	2.94	25.74	7.44	3.13	26.49	7.49	3.20	26.89	7.45	3.24
	45	50.00	15.99	4.64	5.84	19.02	5.99	7.07	22.28	7.63	8.46	23.76	8.50	9.12	24.96	9.24	9.67	25.71	9.31	9.91	26.12	9.35	10.03
		100.00	15.99	4.28	2.87	19.02	5.60	3.48	22.28	7.13	4.16	23.76	7.92	4.48	24.96	8.65	4.75	25.71	8.69	4.87	26.12	8.76	4.93
		125.00	15.99	4.15	2.28	19.02	5.48	2.77	22.28	6.99	3.31	23.76	7.78	3.57	24.96	8.48	3.78	25.71	8.55	3.88	26.12	8.55	3.92
		150.00	15.99	4.08	1.89	19.02	5.41	2.30	22.28	6.91	2.75	23.76	7.70	2.97	24.96	8.40	3.15	25.71	8.46	3.22	26.12	8.43	3.26
80	10	50.00	15.10	1.11	4.59	18.04	1.40	5.50	20.97	1.76	6.43	22.44	1.97	6.90	23.81	2.15	7.34	26.74	2.61	8.30	29.68	3.06	9.26
		100.00	15.10	1.02	2.28	18.04	1.33	2.74	20.97	1.63	3.20	22.44	1.83	3.43	23.81	2.00	3.65	26.74	2.42	4.12	29.68	2.86	4.60
		125.00	15.10	0.99	1.82	18.04	1.29	2.19	20.97	1.60	2.55	22.44	1.77	2.74	23.81	1.96	2.92	26.74	2.38	3.29	29.68	2.81	3.68
		150.00	15.10	0.99	1.52	18.04	1.26	1.82	20.97	1.60	2.13	22.44	1.74	2.28	23.81	1.92	2.43	26.74	2.38	2.75	29.68	2.81	3.06
	15	50.00	15.10	1.51	4.70	18.04	1.91	5.64	20.97	2.39	6.61	22.44	2.66	7.10	23.81	2.91	7.56	26.74	3.52	8.56	29.68	4.16	9.57
		100.00	15.10	1.39	2.33	18.04	1.79	2.80	20.97	2.22	3.28	22.44	2.47	3.52	23.81	2.73	3.75	26.74	3.29	4.25	29.68	3.89	4.75
		125.00	15.10	1.35	1.86	18.04	1.75	2.24	20.97	2.19	2.62	22.44	2.41	2.81	23.81	2.66	2.99	26.74	3.23	3.39	29.68	3.80	3.79
		150.00	15.10	1.34	1.55	18.04	1.72	1.86	20.97	2.16	2.18	22.44	2.40	2.34	23.81	2.63	2.49	26.74	3.21	2.82	29.68	3.76	3.15
	20	50.00	15.10	1.87	4.80	18.04	2.35	5.77	20.97	2.95	6.77	22.44	3.25	7.27	23.81	3.60	7.75	26.74	4.34	8.79	29.68	5.13	9.85
		100.00	15.10	1.71	2.38	18.04	2.20	2.86	20.97	2.75	3.35	22.44	3.06	3.61	23.81	3.37	3.84	26.74	4.05	4.35	29.68	4.80	4.88
		125.00	15.10	1.67	1.90	18.04	2.15	2.28	20.97	2.70	2.68	22.44	2.99	2.88	23.81	3.30	3.07	26.74	3.99	3.48	29.68	4.68	3.89
		150.00	15.10	1.64	1.58	18.04	2.14	1.90	20.97	2.67	2.23	22.44	2.96	2.39	23.81	3.27	2.55	26.74	3.95	2.89	29.68	4.61	3.23
	25	50.00	15.10	2.17	4.88	18.04	2.75	5.88	20.97	3.46	6.91	22.44	3.84	7.43	23.81	4.25	7.94	26.74	5.11	9.01	29.47	5.95	10.02
		100.00	15.10	2.00	2.42	18.04	2.58	2.92	20.97	3.24	3.42	22.44	3.59	3.68	23.81	3.97	3.93	26.74	4.77	4.46	29.47	5.56	4.95
		125.00	15.10	1.94	1.93	18.04	2.52	2.33	20.97	3.18	2.73	22.44	3.53	2.94	23.81	3.89	3.13	26.74	4.68	3.55	29.47	5.44	3.95
		150.00	15.10	1.91	1.60	18.04	2.50	1.94	20.97	3.15	2.27	22.44	3.49	2.44	23.81	3.85	2.61	26.74	4.64	2.96	29.47	5.35	3.28
	30	50.00	15.10	2.55	4.99	18.04	3.25	6.02	20.97	4.09	7.09	22.44	4.56	7.64	23.81	5.01	8.15	26.74	6.06	9.28	28.42	6.55	9.89
		100.00	15.10	2.35	2.47	18.04	3.03	2.98	20.97	3.81	3.50	22.44	4.25	3.77	2								

VRF MW



10HP cooling mode

CR (%)	Inlet water Temp. (°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
70	10	50.00	13.21	0.94	4.00	15.73	1.17	4.78	18.35	1.46	5.60	19.61	1.60	6.00	20.87	1.74	6.40	23.39	2.10	7.21	26.01	2.46	8.05			
		100.00	13.21	0.86	1.99	15.73	1.10	2.38	18.35	1.37	2.79	19.61	1.50	2.99	20.87	1.64	3.18	23.39	1.95	3.58	26.01	2.33	4.01			
		125.00	13.21	0.83	1.59	15.73	1.05	1.90	18.35	1.32	2.23	19.61	1.45	2.38	20.87	1.60	2.54	23.39	1.93	2.86	26.01	2.26	3.20			
		150.00	13.21	0.81	1.32	15.73	1.04	1.58	18.35	1.30	1.85	19.61	1.44	1.98	20.87	1.56	2.11	23.39	1.92	2.39	26.01	2.24	2.66			
	15	50.00	13.21	1.26	4.09	15.73	1.58	4.90	18.35	1.96	5.74	19.61	2.16	6.16	20.87	2.37	6.57	23.39	2.84	7.42	26.01	3.35	8.30			
		100.00	13.21	1.17	2.03	15.73	1.49	2.44	18.35	1.84	2.86	19.61	2.02	3.06	20.87	2.23	3.27	23.39	2.65	3.68	26.01	3.14	4.12			
		125.00	13.21	1.13	1.62	15.73	1.45	1.94	18.35	1.80	2.28	19.61	1.98	2.44	20.87	2.18	2.61	23.39	2.61	2.94	26.01	3.07	3.29			
		150.00	13.21	1.11	1.35	15.73	1.43	1.62	18.35	1.78	1.90	19.61	1.96	2.03	20.87	2.14	2.17	23.39	2.57	2.45	26.01	3.03	2.74			
	20	50.00	13.21	1.56	4.18	15.73	1.95	5.00	18.35	2.42	5.87	19.61	2.65	6.30	20.87	2.93	6.73	23.39	3.49	7.60	26.01	4.14	8.53			
		100.00	13.21	1.44	2.07	15.73	1.82	2.48	18.35	2.26	2.91	19.61	2.49	3.13	20.87	2.74	3.34	23.39	3.27	3.77	26.01	3.85	4.22			
		125.00	13.21	1.40	1.65	15.73	1.79	1.98	18.35	2.21	2.33	19.61	2.44	2.49	20.87	2.69	2.67	23.39	3.21	3.01	26.01	3.77	3.37			
		150.00	13.21	1.37	1.37	15.73	1.76	1.65	18.35	2.19	1.94	19.61	2.43	2.08	20.87	2.68	2.22	23.39	3.17	2.50	26.01	3.70	2.80			
	25	50.00	13.21	1.81	4.25	15.73	2.26	5.09	18.35	2.82	5.99	19.61	3.13	6.43	20.87	3.43	6.87	23.39	4.13	7.78	26.01	4.86	8.73			
		100.00	13.21	1.67	2.10	15.73	2.12	2.52	18.35	2.64	2.97	19.61	2.92	3.19	20.87	3.22	3.41	23.39	3.85	3.85	26.01	4.54	4.32			
		125.00	13.21	1.62	1.68	15.73	2.07	2.01	18.35	2.58	2.37	19.61	2.85	2.54	20.87	3.16	2.72	23.39	3.78	3.07	26.01	4.42	3.44			
		150.00	13.21	1.60	1.40	15.73	2.04	1.68	18.35	2.55	1.97	19.61	2.82	2.11	20.87	3.12	2.26	23.39	3.76	2.56	26.01	4.37	2.86			
	30	50.00	13.21	2.12	4.34	15.73	2.67	5.20	18.35	3.34	6.14	19.61	3.69	6.59	20.87	4.07	7.05	23.39	4.88	8.00	26.01	5.76	8.99			
		100.00	13.21	1.95	2.14	15.73	2.50	2.58	18.35	3.12	3.04	19.61	3.45	3.26	20.87	3.80	3.49	23.39	4.56	3.95	26.01	5.39	4.44			
		125.00	13.21	1.90	1.71	15.73	2.45	2.06	18.35	3.06	2.42	19.61	3.38	2.60	20.87	3.73	2.78	23.39	4.49	3.15	26.01	5.25	3.54			
		150.00	13.21	1.87	1.42	15.73	2.42	1.71	18.35	3.03	2.02	19.61	3.35	2.16	20.87	3.70	2.32	23.39	4.44	2.62	26.01	5.19	2.94			
	35	50.00	13.21	2.49	4.44	15.73	3.15	5.34	18.35	3.94	6.30	19.61	4.39	6.79	20.87	5.29	7.40	23.39	5.80	8.26	26.01	6.88	9.30			
		100.00	13.21	2.30	2.19	15.73	2.95	2.64	18.35	3.67	3.11	19.61	4.10	3.35	20.87	4.94	3.65	23.39	5.44	4.08	26.01	6.44	4.59			
		125.00	13.21	2.23	1.75	15.73	2.90	2.11	18.35	3.61	2.48	19.61	4.04	2.68	20.87	4.85	2.91	23.39	5.33	3.25	26.01	6.27	3.65			
		150.00	13.21	2.19	1.45	15.73	2.86	1.75	18.35	3.57	2.07	19.61	3.99	2.23	20.87	4.82	2.42	23.39	5.27	2.70	26.01	6.16	3.03			
	40	50.00	13.21	2.95	4.57	15.73	3.74	5.51	18.35	4.66	6.51	19.61	5.20	7.02	20.87	6.25	7.67	23.39	6.88	8.56	26.01	8.14	9.66			
		100.00	13.21	2.71	2.25	15.73	3.50	2.72	18.35	4.36	3.21	19.61	4.85	3.46	20.87	5.87	3.78	23.39	6.43	4.22	26.01	7.62	4.76			
		125.00	13.21	2.64	1.79	15.73	3.42	2.17	18.35	4.27	2.56	19.61	4.78	2.76	20.87	5.75	3.01	23.39	6.32	3.36	26.01	7.42	3.78			
		150.00	13.21	2.61	1.49	15.73	3.37	1.80	18.35	4.23	2.13	19.61	4.74	2.30	20.87	5.69	2.50	23.39	6.25	2.79	26.01	7.34	3.14			
	45	50.00	13.21	3.42	4.70	15.73	4.31	5.67	18.35	5.38	6.71	19.61	6.00	7.24	20.87	7.23	7.95	23.39	7.95	8.86	26.01	9.43	10.02			
		100.00	13.21	3.12	2.31	15.73	4.05	2.80	18.35	5.04	3.31	19.61	5.61	3.57	20.87	6.79	3.91	23.39	7.44	4.36	26.01	8.80	4.92			
		125.00	13.21	3.06	1.84	15.73	3.95	2.23	18.35	4.93	2.63	19.61	5.52	2.84	20.87	6.64	3.11	23.39	7.29	3.47	26.01	8.60	3.92			
		150.00	13.21	3.02	1.53	15.73	3.91	1.85	18.35	4.89	2.19	19.61	5.46	2.36	20.87	6.57	2.59	23.39	7.24	2.89	26.01	8.51	3.25			
60	10	50.00	11.33	0.77	3.42	13.53	0.95	4.10	15.73	1.15	4.77	16.78	1.28	5.11	17.93	1.39	5.46	20.03	1.67	6.14	22.23	1.95	6.84			
		100.00	11.33	0.70	1.70	13.53	0.89	2.04	15.73	1.07	2.38	16.78	1.20	2.54	17.93	1.28	2.72	20.03	1.54	3.05	22.23	1.82	3.40			
		125.00	11.33	0.68	1.36	13.53	0.86	1.63	15.73	1.06	1.90	16.78	1.17	2.03	17.93	1.26	2.17	20.03	1.50	2.44	22.23	1.76	2.71			
		150.00	11.33	0.66	1.13	13.53	0.85	1.36	15.73	1.06	1.58	16.78	1.16	1.69	17.93	1.25	1.81	20.03	1.48	2.03	22.23	1.72	2.26			
	15	50.00	11.33	1.04	3.50	13.53	1.29	4.19	15.73	1.57	4.89	16.78	1.73	5.24	17.93	1.89	5.61	20.03	2.25	6.30	22.23	2.64	7.03			
		100.00	11.33	0.95	1.74	13.53	1.20	2.08	15.73	1.46	2.43	16.78	1.62	2.60	17.93	1.74	2.78	20.03	2.08	3.13	22.23	2.47	3.49			
		125.00	11.33	0.92	1.39	13.53	1.17	1.66	15.73	1.43	1.94	16.78	1.59	2.08	17.93	1.73	2.22	20.03	2.04	2.50	22.23	2.38	2.78			
		150.00	11.33	0.91	1.15	13.53	1.16	1.39	15.73	1.41	1.62	16.78	1.58	1.73	17.93	1.71	1.85	20.03	2.02	2.08	22.23	2.34	2.32			
	20	50.00	11.33	1.27	3.56	13.53	1.58	4.27	15.73	1.92	4.99	16.78	2.12	5.35	17.93	2.32	5.73	20.03	2.75	6.44	22.23	3.24	7.20			
		100.00	11.33	1.17	1.77	13.53	1.48	2.12	15.73	1.81	2.48	16.78	1.98	2.65	17.93	2.17	2.84	20.03	2.58	3.20	22.23	3.02	3.57			
		125.00	11.33	1.15	1.41	13.53	1.45	1.69	15.73	1.76	1.98	16.78	1.95	2.12	17.93	2.13	2.27	20.03	2.54	2.55	22.23	2.96	2.85			
		150.00	11.33	1.13	1.17	13.53	1.43	1.41	15.73	1.75	1.65	16.78	1.94	1.77	17.93	2.11	1.89	20.03	2.52	2.13	22.23	2.92	2.37			
	25	50.00	11.33	1.48	3.62	13.53	1.83	4.34	15.73	2.26	5.09	16.78	2.50	5.45	17.93	2.72	5.84	20.03	3.23	6.58	22.23	3.79	7.36			
		100.00	11.33	1.37	1.80	13.53	1.72	2.16	15.73	2.11	2.52	16.78	2.33	2.70	17.93	2.55	2.90	20.03	3.03	3.26	22.23	3.56	3.65			
		125.00	11.33	1.33	1.43	13.53	1.69	1.72	15.73	2.08	2.02	16.78	2.28	2.16	17.93	2.50	2.31	20.03	2.96	2.60	22.23	3.46	2.91			
		150.00	11.33	1.31	1.19	13.53	1.68	1.43	15.73	2.06	1.68	16.78	2.27	1.80	17.93	2.49	1.93	20.03	2.93	2.16	22.23	3.42	2.42			
	30	50.00	11.33	1.75	3.70	13.53	2.16	4.44	15.73	2.66	5.20	16.78	2.92	5.57	17.93	3.21	5.98	20.03	3.84	6.75	22.23	4.48	7.56			
		100.00	11.33	1.60	1.83	13.53	2.01	2.20	15.73	2.48	2.58	16.78	2.73	2.76	17.93	3.00	2.96	20.03	3.58							

10HP cooling mode

CR (%)	Inlet water Temp. (°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	50.00	9.44	0.62	2.85	11.22	0.75	3.39	13.11	0.92	3.97	14.05	1.00	4.26	14.89	1.06	4.51	16.78	1.25	5.10	18.56	1.47	5.67
		100.00	9.44	0.59	1.42	11.22	0.70	1.69	13.11	0.84	1.97	14.05	0.92	2.12	14.89	1.01	2.25	16.78	1.18	2.54	18.56	1.39	2.82
		125.00	9.44	0.56	1.13	11.22	0.69	1.35	13.11	0.84	1.58	14.05	0.89	1.69	14.89	0.98	1.80	16.78	1.14	2.03	18.56	1.32	2.25
		150.00	9.44	0.54	0.94	11.22	0.67	1.12	13.11	0.84	1.32	14.05	0.88	1.41	14.89	0.96	1.49	16.78	1.12	1.69	18.56	1.28	1.87
	15	50.00	9.44	0.85	2.91	11.22	1.02	3.46	13.11	1.22	4.05	14.05	1.34	4.35	14.89	1.46	4.62	16.78	1.71	5.23	18.56	1.97	5.81
		100.00	9.44	0.78	1.45	11.22	0.95	1.72	13.11	1.14	2.02	14.05	1.25	2.16	14.89	1.36	2.30	16.78	1.59	2.60	18.56	1.86	2.89
		125.00	9.44	0.75	1.15	11.22	0.92	1.37	13.11	1.13	1.61	14.05	1.22	1.73	14.89	1.33	1.84	16.78	1.56	2.08	18.56	1.80	2.30
		150.00	9.44	0.74	0.96	11.22	0.91	1.14	13.11	1.11	1.34	14.05	1.20	1.44	14.89	1.31	1.53	16.78	1.54	1.73	18.56	1.78	1.92
	20	50.00	9.44	1.04	2.96	11.22	1.25	3.53	13.11	1.50	4.13	14.05	1.66	4.44	14.89	1.80	4.72	16.78	2.09	5.34	18.56	2.43	5.94
		100.00	9.44	0.95	1.47	11.22	1.17	1.75	13.11	1.42	2.05	14.05	1.55	2.21	14.89	1.68	2.34	16.78	1.97	2.65	18.56	2.30	2.95
		125.00	9.44	0.92	1.17	11.22	1.16	1.40	13.11	1.38	1.64	14.05	1.52	1.76	14.89	1.65	1.87	16.78	1.93	2.12	18.56	2.23	2.35
		150.00	9.44	0.91	0.98	11.22	1.14	1.17	13.11	1.37	1.37	14.05	1.50	1.47	14.89	1.63	1.56	16.78	1.92	1.76	18.56	2.19	1.96
	25	50.00	9.44	1.20	3.01	11.22	1.46	3.59	13.11	1.76	4.21	14.05	1.90	4.51	14.89	2.09	4.80	16.78	2.48	5.45	18.56	2.90	6.07
		100.00	9.44	1.10	1.49	11.22	1.36	1.78	13.11	1.65	2.09	14.05	1.80	2.24	14.89	1.96	2.38	16.78	2.32	2.70	18.56	2.69	3.01
		125.00	9.44	1.07	1.19	11.22	1.34	1.42	13.11	1.62	1.67	14.05	1.76	1.79	14.89	1.92	1.90	16.78	2.28	2.16	18.56	2.63	2.40
		150.00	9.44	1.07	0.99	11.22	1.33	1.18	13.11	1.60	1.39	14.05	1.73	1.49	14.89	1.88	1.58	16.78	2.24	1.79	18.56	2.61	2.00
	30	50.00	9.44	1.40	3.07	11.22	1.69	3.65	13.11	2.07	4.29	14.05	2.26	4.61	14.89	2.46	4.91	16.78	2.90	5.57	18.56	3.39	6.21
		100.00	9.44	1.27	1.51	11.22	1.58	1.81	13.11	1.92	2.13	14.05	2.11	2.29	14.89	2.31	2.43	16.78	2.72	2.76	18.56	3.17	3.07
		125.00	9.44	1.23	1.21	11.22	1.54	1.44	13.11	1.88	1.70	14.05	2.07	1.82	14.89	2.26	1.94	16.78	2.67	2.20	18.56	3.09	2.45
		150.00	9.44	1.22	1.01	11.22	1.52	1.20	13.11	1.86	1.41	14.05	2.06	1.52	14.89	2.25	1.62	16.78	2.63	1.83	18.56	3.03	2.04
	35	50.00	9.44	1.43	3.07	11.22	1.73	3.66	13.11	2.12	4.31	14.05	2.31	4.63	14.89	2.52	4.92	16.78	2.97	5.59	18.56	3.47	6.23
		100.00	9.44	1.49	1.55	11.22	1.85	1.85	13.11	2.27	2.18	14.05	2.49	2.34	14.89	2.72	2.49	16.78	3.22	2.83	18.56	3.76	3.16
		125.00	9.44	1.44	1.23	11.22	1.82	1.48	13.11	2.22	1.73	14.05	2.44	1.87	14.89	2.67	1.99	16.78	3.16	2.26	18.56	3.68	2.52
		150.00	9.44	1.42	1.02	11.22	1.79	1.23	13.11	2.20	1.44	14.05	2.43	1.55	14.89	2.66	1.65	16.78	3.12	1.88	18.56	3.61	2.09
	40	50.00	9.44	1.91	3.21	11.22	2.34	3.84	13.11	2.87	4.52	14.05	3.16	4.87	14.89	3.45	5.19	16.78	4.07	5.90	18.56	4.80	6.61
		100.00	9.44	1.75	1.58	11.22	2.19	1.90	13.11	2.69	2.23	14.05	2.94	2.40	14.89	3.22	2.56	16.78	3.81	2.91	18.56	4.47	3.26
		125.00	9.44	1.71	1.26	11.22	2.15	1.51	13.11	2.64	1.78	14.05	2.90	1.92	14.89	3.16	2.04	16.78	3.74	2.32	18.56	4.37	2.59
		150.00	9.44	1.68	1.05	11.22	2.13	1.26	13.11	2.61	1.48	14.05	2.87	1.60	14.89	3.13	1.70	16.78	3.70	1.93	18.56	4.30	2.16
	45	50.00	9.44	2.20	3.29	11.22	2.71	3.94	13.11	3.31	4.64	14.05	3.66	5.01	14.89	3.98	5.34	16.78	4.70	6.08	18.56	5.53	6.81
		100.00	9.44	2.03	1.62	11.22	2.53	1.94	13.11	3.09	2.29	14.05	3.40	2.47	14.89	3.73	2.63	16.78	4.41	3.00	18.56	5.18	3.36
		125.00	9.44	1.98	1.29	11.22	2.49	1.55	13.11	3.04	1.83	14.05	3.34	1.97	14.89	3.64	2.10	16.78	4.31	2.39	18.56	5.05	2.67
		150.00	9.44	1.94	1.07	11.22	2.46	1.29	13.11	3.03	1.52	14.05	3.29	1.63	14.89	3.61	1.74	16.78	4.28	1.99	18.56	4.99	2.22

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																		
			16.00			18.00			20.00			21.00			22.00			24.00			
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	
			50.00	30.93	5.92	7.04	30.80	5.97	6.99	30.74	6.18	6.91	30.60	6.17	6.88	30.46	6.11	6.85	30.16	6.38	6.69
130	10		100.00	31.63	5.87	3.62	31.30	5.99	3.56	31.26	6.23	3.52	31.13	6.17	3.51	30.89	6.10	3.49	30.61	6.36	3.41
			125.00	31.83	5.96	2.91	31.51	6.08	2.86	31.47	6.25	2.84	31.24	6.19	2.82	31.11	6.19	2.81	30.84	6.67	2.72
			150.00	31.93	6.00	2.43	31.61	6.12	2.39	31.58	6.27	2.37	31.34	6.20	2.36	31.21	6.25	2.34	30.95	6.81	2.26
		15		50.00	31.03	5.30	7.24	30.90	5.30	7.20	30.74	5.54	7.09	30.60	5.55	7.05	30.46	5.45	7.04	30.16	5.73
			100.00	32.03	5.08	3.79	31.81	5.21	3.74	31.68	5.49	3.69	31.66	5.39	3.70	31.32	5.28	3.66	31.18	5.55	3.61
			125.00	32.23	5.21	3.04	32.12	5.33	3.02	32.10	5.49	3.00	31.98	5.39	2.99	31.76	5.43	2.96	31.52	6.11	2.86
			150.00	32.33	5.27	2.54	32.22	5.39	2.52	32.30	5.49	2.52	32.09	5.39	2.50	31.97	5.50	2.48	31.75	6.39	2.38
	20		50.00	32.23	4.87	7.70	32.01	4.86	7.64	31.99	5.01	7.59	31.77	4.99	7.54	31.54	5.02	7.46	31.18	5.55	7.21
			100.00	33.23	4.73	4.01	33.03	4.84	3.97	32.93	5.00	3.93	32.72	5.07	3.89	32.62	5.16	3.86	32.32	5.35	3.80
			125.00	33.33	4.73	3.22	33.23	4.84	3.20	33.34	5.03	3.19	33.15	5.07	3.16	32.84	5.16	3.12	32.55	5.69	3.02
			150.00	33.43	4.73	2.69	33.43	4.84	2.68	33.55	5.04	2.67	33.26	5.07	2.64	32.95	5.16	2.61	32.66	5.87	2.51
	25		50.00	36.56	5.04	8.87	36.36	5.15	8.78	36.06	5.37	8.64	35.96	5.46	8.58	35.75	5.56	8.50	35.45	5.77	8.35
			100.00	36.56	4.97	4.45	36.36	5.12	4.40	36.06	5.28	4.33	35.96	5.37	4.30	35.75	5.47	4.26	35.45	5.68	4.19
			125.00	36.56	4.89	3.57	36.36	4.99	3.53	36.06	5.20	3.47	35.96	5.29	3.45	35.75	5.38	3.42	35.45	5.58	3.36
			150.00	36.56	4.86	2.97	36.36	4.92	2.95	36.06	5.16	2.90	35.96	5.24	2.88	35.75	5.33	2.85	35.45	5.54	2.81
	30		50.00	39.40	5.42	9.56	39.59	5.44	9.61	39.19	5.71	9.42	37.93	5.77	9.05	38.68	5.93	9.22	36.06	5.33	8.65
			100.00	39.40	5.24	4.81	39.59	5.40	4.81	39.19	5.58	4.73	37.93	5.68	4.54	38.68	5.71	4.64	36.06	5.13	4.35
			125.00	39.40	5.16	3.85	39.59	5.25	3.87	39.19	5.49	3.79	37.93	5.57	3.64	38.68	5.71	3.71	36.06	5.13	3.48
			150.00	39.40	5.12	3.22	39.59	5.18	3.23	39.19	5.44	3.17	37.93	5.53	3.04	38.68	5.71	3.09	36.06	5.13	2.90
	35		50.00	43.13	5.71	10.53	42.82	5.83	10.41	41.41	5.65	10.06	38.81	5.36	9.41	38.68	5.27	9.40	36.06	4.68	8.83
			100.00	43.13	5.52	5.29	42.82	5.69	5.22	41.41	5.54	5.05	38.81	5.27	4.72	38.68	5.16	4.72	36.06	4.50	4.44
			125.00	43.13	5.52	4.23	42.82	5.64	4.19	41.41	5.45	4.05	38.81	5.18	3.79	38.68	5.06	3.78	36.06	4.50	3.55
			150.00	43.13	5.52	3.53	42.82	5.61	3.49	41.41	5.40	3.38	38.81	5.12	3.16	38.68	5.02	3.16	36.06	4.50	2.96
	40		50.00	43.13	5.52	10.58	42.82	5.64	10.46	41.41	5.45	10.12	38.81	5.18	9.46	38.68	5.06	9.46	36.06	4.40	8.91
			100.00	43.13	5.33	5.32	42.82	5.49	5.25	41.41	5.26	5.09	38.81	4.98	4.76	38.68	4.86	4.76	36.06	4.22	4.48
			125.00	43.13	5.24	4.27	42.82	5.41	4.21	41.41	5.26	4.07	38.81	4.98	3.81	38.68	4.86	3.81	36.06	4.22	3.58
			150.00	43.13	5.19	3.56	42.82	5.35	3.52	41.41	5.26	3.39	38.81	4.98	3.17	38.68	4.86	3.17	36.06	4.22	2.99
	45		50.00	43.13	5.33	10.64	42.82	5.45	10.52	41.41	5.26	10.17	38.81	4.98	9.52	38.68	4.86	9.52	36.06	4.12	8.99
			100.00	43.13	5.15	5.34	42.82	5.30	5.28	41.41	4.96	5.13	38.81	4.70	4.80	38.68	4.58	4.80	36.06	3.94	4.52
			125.00	43.13	4.96	4.30	42.82	5.16	4.24	41.41	5.06	4.09	38.81	4.78	3.83	38.68	4.67	3.83	36.06	3.94	3.62
			150.00	43.13	4.86	3.59	42.82	5.10	3.54	41.41	5.11	3.41	38.81	4.83	3.19	38.68	4.73	3.18	36.06	3.94	3.01
	120	10		50.00	31.12	6.15	7.03	31.10	6.32	6.97	31.36	6.54	6.99	30.96	6.55	6.87	30.81	6.66	6.80	30.56	6.66
			100.00	31.76	6.24	3.59	31.53	6.41	3.53	31.70	6.63	3.53	31.30	6.59	3.48	31.16	6.64	3.45	30.92	6.68	3.41
			125.00	31.86	6.21	2.89	31.53	6.41	2.83	31.92	6.65	2.84	31.41	6.61	2.79	31.28	6.68	2.77	31.04	6.90	2.72
			150.00	31.97	6.20	2.42	31.43	6.41	2.35	31.92	6.67	2.37	31.41	6.63	2.32	31.28	6.69	2.31	31.16	7.03	2.26
15			50.00	31.33	5.45	7.28	31.21	5.58	7.21	31.36	5.81	7.19	30.96	5.89	7.06	30.81	5.93	7.00	30.56	5.98	6.92
			100.00	31.97	5.49	3.73	31.96	5.63	3.71	32.14	5.84	3.70	31.63	5.81	3.63	31.39	5.76	3.61	31.29	5.88	3.58
			125.00	32.18	5.41	3.01	31.96	5.58	2.97	32.37	5.84	2.99	31.86	5.81	2.93	31.74	5.76	2.92	31.53	6.28	2.84
			150.00	32.29	5.37	2.53	31.86	5.56	2.47	32.48	5.84	2.50	31.97	5.81	2.45	31.86	5.76	2.45	31.65	6.48	2.36
20			50.00	32.18	4.89	7.68	32.07	4.96	7.63	32.26	5.10	7.64	31.63	5.21	7.44	31.51	5.40	7.35	31.29	5.66	7.21
			100.00	33.03	4.89	3.96	32.83	5.03	3.91	32.93	5.19	3.90	32.42	5.29	3.82	32.32	5.38	3.79	32.02	5.58	3.72
			125.00	33.13	4.84	3.18	32.83	4.99	3.13	33.26	5.19	3.16	32.65	5.29	3.08	32.55	5.40	3.06	32.26	5.79	2.98
			150.00	33.24	4.82	2.67	32.83	4.97	2.61	33.37	5.19	2.64	32.76	5.29	2.58	32.55	5.41	2.55	32.38	5.88	2.49
25			50.00	36.14	5.26	8.69	35.96	5.37	8.61	35.65	5.54	8.47	35.55	5.70	8.40	35.35	5.81	8.31	33.23	5.33	7.85
			100.00	36.26	5.18	4.37	35.96	5.34	4.31	35.65	5.51	4.24	35.55	5.60	4.21	35.35	5.71	4.17	33.23	5.23	3.94
			125.00	36.37	4.99	3.53	35.96	5.20	3.46	35.65	5.40	3.41	35.55	5.60	3.37	35.35	5.61	3.35	33.23	5.23	3.15
			150.00	36.37	4.90	2.95	35.96	5.12	2.89	35.65	5.36	2.84	35.55	5.60	2.81	35.35	5.56	2.79	33.23	5.23	2.63
30			50.00	39.49	5.67	9.52	39.09	5.76	9.38	38.18	5.70	9.14	36.97	5.43	8.88	35.75	5.27	8.58	33.23	4.64	8.05
			100.00	39.49	5.47	4.79	39.09	5.64	4.71	38.18	5.60	4.58	36.97	5.33	4.45	35.75	5.06	4.32	33.23	4.54	4.04
			125.00	39.49	5.30	3.85	39.09	5.51	3.78	38.18	5.49	3.68	36.97	5.33	3.56	35.75	5.06	3.45	33.23	4.45	3.24
			150.00	39.49	5.20	3.22	39.09	5.44	3.16	38.18	5.43	3.07	36.97	5.33	2.97	35.75	5.06	2.88	33.23	4.41	2.70
35			50.00	42.62	6.10	10.28	40.60	5.61	9.85	38.18	5.10	9.31	36.97	4.85	9.04	35.75	4.63	8.76	33.23	4.08	8.20
			100.00	42.62	5.76	5.19	40.60	5.39	4.95	38.18	4.90	4.68	36.97	4.67	4.55	35.75	4.44	4.41	33.23	3.99	4.11
			125.00	42.62	5.69	4.16	40.60	5.35	3.97	38.18	4.90	3.75	36.97	4.67	3.64	35.75	4.44	3.52	33.23	3.90	3.30
			150.00	42.62	5.66	3.47	40.60	5.33	3.31	38.18	4.90	3.12	36.97	4.67	3.03	35.75	4.44	2.94	33.23	3.85	2.76
40			50.00	42.62	5.90	10.33	40.60	5.33	9.93	38.18	4.82	9.39	36.97	4.57	9.12	35.75	4.35	8.84	33.23	3.80	8.28
			100.00	42.62	5.43	5															

10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	50.00	31.39	6.64	6.97	31.49	6.83	6.94	31.40	7.09	6.84	31.28	7.08	6.81	31.05	7.32	6.68	29.75	6.61	6.51
		100.00	31.83	6.69	3.54	31.83	6.91	3.51	31.51	7.18	3.42	31.52	7.12	3.43	31.30	7.30	3.38	29.88	6.64	3.27
		125.00	31.94	6.69	2.84	31.95	6.91	2.82	31.63	7.17	2.75	31.64	7.10	2.76	31.30	7.34	2.70	30.00	6.71	2.62
		150.00	32.06	6.69	2.38	32.06	6.91	2.36	31.75	7.15	2.31	31.64	7.09	2.30	31.42	7.35	2.26	30.00	6.75	2.18
	15	50.00	31.39	5.86	7.18	31.60	6.06	7.19	31.40	6.33	7.06	31.28	6.36	7.01	31.05	6.52	6.90	29.75	5.94	6.70
		100.00	31.94	5.83	3.67	32.06	6.06	3.66	31.75	6.33	3.58	31.64	6.27	3.57	31.54	6.33	3.55	30.13	5.85	3.42
		125.00	32.17	5.79	2.97	32.18	6.01	2.95	31.87	6.25	2.88	31.76	6.18	2.88	31.54	6.33	2.84	30.25	5.94	2.74
		150.00	32.28	5.76	2.49	32.29	5.99	2.47	31.98	6.20	2.42	31.88	6.13	2.42	31.67	6.33	2.38	30.38	6.00	2.29
	20	50.00	32.06	5.08	7.59	32.18	5.26	7.58	31.87	5.44	7.44	31.64	5.53	7.35	31.54	5.74	7.26	30.13	5.40	6.96
		100.00	32.72	5.11	3.89	32.52	5.26	3.84	32.22	5.44	3.77	32.12	5.53	3.74	31.92	5.63	3.70	30.50	5.35	3.54
		125.00	32.95	5.11	3.13	32.87	5.26	3.11	32.34	5.44	3.03	32.24	5.44	3.02	32.04	5.63	2.97	30.63	5.35	2.85
		150.00	33.06	5.11	2.62	32.98	5.26	2.60	32.45	5.44	2.53	32.36	5.39	2.53	32.16	5.63	2.49	30.63	5.35	2.37
	25	50.00	35.61	5.45	8.49	35.55	5.68	8.41	35.05	5.76	8.24	33.84	5.48	7.98	32.72	5.22	7.74	30.50	4.59	7.29
		100.00	35.86	5.41	4.28	35.55	5.58	4.22	35.05	5.66	4.14	33.84	5.38	4.00	32.72	5.11	3.89	30.50	4.59	3.65
		125.00	36.10	5.41	3.45	35.55	5.61	3.37	35.05	5.54	3.32	33.84	5.38	3.20	32.72	5.02	3.12	30.50	4.50	2.93
		150.00	36.22	5.41	2.89	35.55	5.61	2.81	35.05	5.48	2.77	33.84	5.38	2.67	32.72	4.97	2.60	30.50	4.45	2.44
	30	50.00	38.99	5.83	9.33	37.27	5.51	8.94	35.05	4.92	8.48	33.84	4.76	8.18	32.72	4.55	7.93	30.50	4.21	7.40
		100.00	38.99	5.72	4.68	37.27	5.39	4.49	35.05	4.81	4.26	33.84	4.67	4.10	32.72	4.44	3.98	30.50	4.10	3.71
		125.00	38.99	5.68	3.75	37.27	5.30	3.60	35.05	4.71	3.42	33.84	4.57	3.29	32.72	4.44	3.18	30.50	4.10	2.97
		150.00	38.99	5.66	3.13	37.27	5.24	3.00	35.05	4.65	2.85	33.84	4.53	2.75	32.72	4.44	2.65	30.50	4.10	2.48
	35	50.00	39.49	5.36	9.61	37.27	4.82	9.13	35.05	4.41	8.62	33.84	4.28	8.32	32.72	3.98	8.09	30.50	3.61	7.57
		100.00	39.49	5.16	4.83	37.27	4.72	4.58	35.05	4.31	4.33	33.84	4.18	4.17	32.72	3.90	4.06	30.50	3.52	3.80
		125.00	39.49	5.02	3.88	37.27	4.62	3.68	35.05	4.21	3.47	33.84	4.18	3.34	32.72	3.90	3.24	30.50	3.52	3.04
		150.00	39.49	4.96	3.24	37.27	4.57	3.07	35.05	4.17	2.90	33.84	4.18	2.78	32.72	3.90	2.70	30.50	3.52	2.53
	40	50.00	39.49	5.05	9.69	37.27	4.62	9.19	35.05	4.12	8.70	33.84	3.99	8.40	32.72	3.70	8.17	30.50	3.33	7.65
		100.00	39.49	4.84	4.88	37.27	4.41	4.62	35.05	3.93	4.38	33.84	3.88	4.22	32.72	3.60	4.10	30.50	3.23	3.84
		125.00	39.49	4.77	3.91	37.27	4.31	3.71	35.05	3.93	3.50	33.84	3.78	3.38	32.72	3.50	3.29	30.50	3.14	3.08
		150.00	39.49	4.74	3.26	37.27	4.25	3.10	35.05	3.93	2.92	33.84	3.73	2.82	32.72	3.46	2.74	30.50	3.09	2.57
	45	50.00	39.49	4.73	9.78	37.27	4.41	9.25	35.05	3.82	8.79	33.84	3.69	8.49	32.72	3.40	8.25	30.50	3.04	7.73
		100.00	39.49	4.52	4.92	37.27	4.11	4.67	35.05	3.52	4.44	33.84	3.58	4.26	32.72	3.31	4.14	30.50	2.94	3.88
		125.00	39.49	4.52	3.94	37.27	4.00	3.75	35.05	3.63	3.54	33.84	3.39	3.43	32.72	3.11	3.33	30.50	2.76	3.12
		150.00	39.49	4.52	3.28	37.27	3.94	3.13	35.05	3.68	2.94	33.84	3.29	2.87	32.72	3.01	2.79	30.50	2.66	2.61
100	10	50.00	31.39	6.98	6.87	31.75	7.35	6.87	31.50	7.72	6.69	30.81	7.18	6.65	29.80	6.96	6.43	27.78	6.19	6.08
		100.00	31.74	7.12	3.46	31.87	7.45	3.44	31.50	7.82	3.33	30.81	7.21	3.32	29.80	6.99	3.21	27.78	6.22	3.03
		125.00	31.97	7.09	2.80	32.00	7.45	2.76	31.50	7.80	2.67	30.81	7.20	2.66	29.80	6.96	2.57	27.78	6.19	2.43
		150.00	32.09	7.08	2.35	32.12	7.45	2.31	31.50	7.79	2.22	30.81	7.19	2.22	29.80	6.96	2.14	27.78	6.18	2.03
	15	50.00	31.62	6.17	7.16	31.75	6.50	7.11	31.50	6.89	6.93	30.81	6.45	6.86	29.80	6.20	6.64	27.78	5.56	6.25
		100.00	31.74	6.28	3.58	31.87	6.52	3.57	31.50	6.89	3.46	30.81	6.36	3.44	29.80	6.11	3.33	27.78	5.47	3.14
		125.00	31.97	6.18	2.90	32.12	6.46	2.89	31.50	6.81	2.78	30.81	6.27	2.76	29.80	6.01	2.68	27.78	5.38	2.52
		150.00	32.09	6.12	2.44	32.12	6.44	2.41	31.50	6.76	2.32	30.81	6.22	2.31	29.80	5.96	2.24	27.78	5.33	2.11
	20	50.00	31.85	5.27	7.48	32.00	5.51	7.46	31.50	5.83	7.22	30.81	5.52	7.12	29.80	5.25	6.91	27.78	4.82	6.46
		100.00	32.32	5.36	3.79	32.12	5.53	3.74	31.50	5.83	3.61	30.81	5.43	3.57	29.80	5.16	3.47	27.78	4.63	3.26
		125.00	32.44	5.27	3.06	32.36	5.48	3.03	31.50	5.74	2.90	30.81	5.33	2.87	29.80	5.05	2.79	27.78	4.55	2.62
		150.00	32.55	5.23	2.56	32.48	5.46	2.53	31.50	5.68	2.42	30.81	5.29	2.39	29.80	5.00	2.33	27.78	4.50	2.18
	25	50.00	34.85	5.67	8.21	33.84	5.51	7.97	31.50	5.00	7.46	30.81	4.76	7.33	29.80	4.51	7.12	27.78	3.99	6.70
		100.00	35.35	5.69	4.17	33.84	5.38	4.00	31.50	4.89	3.74	30.81	4.66	3.68	29.80	4.42	3.57	27.78	3.99	3.35
		125.00	35.48	5.56	3.37	33.84	5.34	3.21	31.50	4.81	3.00	30.81	4.56	2.96	29.80	4.42	2.86	27.78	3.88	2.69
		150.00	35.60	5.50	2.82	33.84	5.33	2.67	31.50	4.76	2.51	30.81	4.51	2.47	29.80	4.42	2.38	27.78	3.84	2.25
	30	50.00	35.86	5.19	8.63	33.84	4.77	8.18	31.50	4.29	7.66	30.81	4.16	7.50	29.80	3.85	7.30	27.78	3.59	6.81
		100.00	35.86	5.10	4.33	33.84	4.67	4.10	31.50	4.25	3.83	30.81	4.05	3.77	29.80	3.85	3.65	27.78	3.48	3.42
		125.00	35.86	4.98	3.48	33.84	4.67	3.28	31.50	4.19	3.07	30.81	4.05	3.01	29.80	3.76	2.93	27.78	3.48	2.74
		150.00	35.86	4.93	2.90	33.84	4.67	2.74	31.50	4.17	2.56	30.81	4.05	2.51	29.80	3.70	2.45	27.78	3.48	2.28
	35	50.00	35.86	4.68	8.77	33.84	4.30	8.31	31.50	3.79	7.80	30.81	3.69	7.63	29.80	3.51	7.40	27.78	3.18	6.92
		100.00	35.86	4.47	4.42	33.84	4.10	4.18	31.50	3.75	3.90	30.81	3.58	3.83	29.80	3.41	3.71	27.78	3.09	3.47
		125.00	35.86	4.47	3.53	33.84	4.10	3.35	31.50	3.69	3.13	30.81	3.58	3.07	29.80	3.41	2.97	27.78	3.09	2.78
		150.00	35.86	4.47	2.94	33.84	4.10	2.79	31.50	3.67	2.61	30.81	3.58	2.55	29.80	3.41	2.48	27.78	3.09	2.32
	40	50.00	35.86	4.37	8.86	33.84	3.99	8.40	31.50	3.39	7.91	30.81	3.29	7.74	29.80	3.10	7.51	27.78	2.90	7.00
		100.00	35.86	4.16	4.46	33.84	3.79	4.23	31.50	3.35	3.96	30.81	3.18	3.89	29.					

VRF MW



10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	50.00	31.79	7.76	6.76	30.50	7.27	6.54	28.68	6.51	6.24	27.67	6.18	6.05	26.77	5.99	5.85	24.95	5.22	5.55
		100.00	31.65	7.79	3.36	30.37	7.31	3.24	28.68	6.54	3.12	27.67	6.22	3.02	26.77	5.97	2.93	24.95	5.24	2.77
		125.00	31.92	7.76	2.72	30.50	7.28	2.61	28.68	6.51	2.50	27.67	6.19	2.42	26.77	5.99	2.34	24.95	5.25	2.22
		150.00	32.05	7.75	2.28	30.50	7.27	2.18	28.68	6.51	2.08	27.67	6.18	2.02	26.77	6.00	1.95	24.95	5.27	1.85
	15	50.00	31.92	6.69	7.10	30.63	6.36	6.83	28.68	5.80	6.44	27.67	5.57	6.22	26.77	5.34	6.03	24.95	4.69	5.70
		100.00	31.65	6.58	3.53	30.37	6.25	3.39	28.68	5.71	3.23	27.67	5.47	3.12	26.77	5.16	3.04	24.95	4.59	2.86
		125.00	31.92	6.50	2.86	30.50	6.15	2.74	28.68	5.62	2.60	27.67	5.37	2.51	26.77	5.16	2.43	24.95	4.59	2.29
		150.00	32.05	6.44	2.40	30.63	6.11	2.30	28.68	5.56	2.17	27.67	5.33	2.10	26.77	5.16	2.03	24.95	4.59	1.91
	20	50.00	32.05	5.67	7.42	30.76	5.41	7.13	28.68	4.95	6.68	27.67	4.71	6.46	26.77	4.58	6.24	24.95	4.15	5.85
		100.00	31.92	5.67	3.69	30.50	5.35	3.54	28.68	4.85	3.35	27.67	4.63	3.24	26.77	4.39	3.15	24.95	3.96	2.95
		125.00	32.05	5.58	2.98	30.63	5.30	2.85	28.68	4.85	2.68	27.67	4.63	2.59	26.77	4.39	2.52	24.95	3.96	2.36
		150.00	32.18	5.53	2.50	30.63	5.29	2.38	28.68	4.85	2.24	27.67	4.63	2.16	26.77	4.39	2.10	24.95	3.96	1.97
	25	50.00	31.94	5.05	7.57	30.50	4.62	7.28	28.68	4.27	6.87	27.67	3.99	6.66	26.77	3.89	6.44	24.95	3.53	6.03
		100.00	32.32	5.01	3.84	30.50	4.58	3.65	28.68	4.17	3.45	27.67	3.99	3.33	26.77	3.79	3.23	24.95	3.43	3.03
		125.00	32.45	4.88	3.10	30.50	4.48	2.93	28.68	4.17	2.76	27.67	3.88	2.68	26.77	3.79	2.59	24.95	3.43	2.42
		150.00	32.45	4.80	2.59	30.50	4.43	2.45	28.68	4.17	2.30	27.67	3.84	2.24	26.77	3.79	2.16	24.95	3.43	2.02
	30	50.00	32.32	4.44	7.85	30.50	4.07	7.44	28.68	3.74	7.02	27.67	3.59	6.78	26.77	3.42	6.57	24.95	3.01	6.17
		100.00	32.32	4.34	3.94	30.50	3.99	3.73	28.68	3.65	3.52	27.67	3.48	3.40	26.77	3.32	3.30	24.95	3.01	3.09
		125.00	32.32	4.25	3.16	30.50	3.88	3.00	28.68	3.65	2.82	27.67	3.48	2.72	26.77	3.32	2.64	24.95	2.92	2.48
		150.00	32.32	4.19	2.64	30.50	3.82	2.50	28.68	3.65	2.35	27.67	3.48	2.27	26.77	3.32	2.20	24.95	2.88	2.07
	35	50.00	32.32	3.94	7.99	30.50	3.63	7.56	28.68	3.32	7.14	27.67	3.20	6.89	26.77	3.04	6.68	24.95	2.77	6.24
		100.00	32.32	3.83	4.01	30.50	3.52	3.80	28.68	3.23	3.58	27.67	3.09	3.46	26.77	2.95	3.35	24.95	2.68	3.13
		125.00	32.32	3.74	3.22	30.50	3.43	3.05	28.68	3.12	2.88	27.67	2.99	2.78	26.77	2.95	2.68	24.95	2.68	2.51
		150.00	32.32	3.68	2.69	30.50	3.37	2.55	28.68	3.07	2.40	27.67	2.95	2.32	26.77	2.95	2.23	24.95	2.68	2.09
	40	50.00	32.32	3.64	8.07	30.50	3.33	7.65	28.68	2.93	7.25	27.67	2.81	7.00	26.77	2.76	6.76	24.95	2.48	6.32
		100.00	32.32	3.44	4.06	30.50	3.24	3.84	28.68	2.84	3.64	27.67	2.71	3.51	26.77	2.65	3.39	24.95	2.39	3.17
		125.00	32.32	3.44	3.25	30.50	3.24	3.07	28.68	2.84	2.91	27.67	2.71	2.81	26.77	2.65	2.72	24.95	2.39	2.54
		150.00	32.32	3.44	2.71	30.50	3.24	2.56	28.68	2.84	2.42	27.67	2.71	2.34	26.77	2.65	2.26	24.95	2.39	2.12
	45	50.00	32.32	3.34	8.16	30.50	3.03	7.73	28.68	2.54	7.36	27.67	2.42	7.11	26.77	2.46	6.84	24.95	2.19	6.41
		100.00	32.32	3.05	4.12	30.50	2.94	3.88	28.68	2.45	3.69	27.67	2.33	3.57	26.77	2.36	3.43	24.95	2.10	3.22
		125.00	32.32	3.14	3.28	30.50	3.03	3.09	28.68	2.54	2.94	27.67	2.42	2.84	26.77	2.36	2.75	24.95	2.10	2.57
		150.00	32.32	3.20	2.73	30.50	3.09	2.57	28.68	2.58	2.45	27.67	2.47	2.36	26.77	2.36	2.29	24.95	2.10	2.14
80	10	50.00	28.56	6.55	6.19	26.94	6.00	5.89	25.45	5.31	5.67	24.64	5.17	5.48	23.84	4.90	5.33	22.22	4.45	5.00
		100.00	28.68	6.51	3.12	27.07	5.96	2.97	25.45	5.31	2.83	24.64	5.18	2.74	23.84	4.91	2.66	22.22	4.45	2.50
		125.00	28.68	6.50	2.50	27.07	5.98	2.37	25.45	5.34	2.26	24.64	5.15	2.19	23.84	4.88	2.13	22.22	4.42	2.00
		150.00	28.68	6.48	2.08	26.94	6.00	1.96	25.45	5.35	1.89	24.64	5.14	1.83	23.84	4.87	1.78	22.22	4.41	1.67
	15	50.00	28.68	5.94	6.40	27.07	5.38	6.10	25.45	4.72	5.83	24.64	4.65	5.63	23.84	4.37	5.48	22.22	4.00	5.13
		100.00	28.68	5.73	3.23	27.07	5.18	3.08	25.45	4.65	2.93	24.64	4.55	2.83	23.84	4.28	2.75	22.22	3.91	2.58
		125.00	28.68	5.62	2.60	27.07	5.18	2.46	25.45	4.65	2.34	24.64	4.46	2.27	23.84	4.17	2.21	22.22	3.81	2.07
		150.00	28.68	5.56	2.17	27.07	5.18	2.05	25.45	4.65	1.95	24.64	4.41	1.90	23.84	4.12	1.85	22.22	3.77	1.73
	20	50.00	28.68	4.98	6.67	27.07	4.58	6.33	25.45	4.07	6.02	24.64	3.99	5.81	23.84	3.81	5.64	22.22	3.45	5.28
		100.00	28.68	4.88	3.35	27.07	4.47	3.18	25.45	4.07	3.01	24.64	3.88	2.92	23.84	3.70	2.83	22.22	3.34	2.66
		125.00	28.68	4.78	2.69	27.07	4.37	2.56	25.45	3.98	2.42	24.64	3.88	2.34	23.84	3.61	2.28	22.22	3.34	2.13
		150.00	28.68	4.72	2.25	27.07	4.33	2.13	25.45	3.93	2.02	24.64	3.88	1.95	23.84	3.56	1.90	22.22	3.34	1.77
	25	50.00	28.68	4.31	6.86	27.07	3.95	6.51	25.45	3.52	6.17	24.64	3.45	5.96	23.84	3.30	5.78	22.22	3.01	5.41
		100.00	28.68	4.19	3.45	27.07	3.85	3.27	25.45	3.52	3.09	24.64	3.36	2.99	23.84	3.21	2.90	22.22	2.92	2.72
		125.00	28.68	4.11	2.77	27.07	3.85	2.61	25.45	3.42	2.48	24.64	3.36	2.40	23.84	3.21	2.32	22.22	2.92	2.17
		150.00	28.68	4.05	2.31	27.07	3.85	2.18	25.45	3.38	2.07	24.64	3.36	2.00	23.84	3.21	1.94	22.22	2.92	1.81
	30	50.00	28.68	3.73	7.02	27.07	3.47	6.64	25.45	3.20	6.26	24.64	3.07	6.07	23.84	2.93	5.88	22.22	2.68	5.50
		100.00	28.68	3.62	3.53	27.07	3.37	3.33	25.45	3.10	3.14	24.64	2.98	3.05	23.84	2.83	2.96	22.22	2.58	2.76
		125.00	28.68	3.62	2.82	27.07	3.37	2.67	25.45	3.10	2.52	24.64	2.98	2.44	23.84	2.83	2.37	22.22	2.58	2.21
		150.00	28.68	3.62	2.35	27.07	3.37	2.22	25.45	3.10	2.10	24.64	2.98	2.03	23.84	2.83	1.97	22.22	2.58	1.84
	35	50.00	28.68	3.38	7.12	27.07	3.09	6.75	25.45	2.85	6.36	24.64	2.64	6.19	23.84	2.63	5.97	22.22	2.31	5.60
		100.00	28.68	3.29	3.57	27.07	2.99	3.39	25.45	2.76	3.19	24.64	2.64	3.10	23.84	2.53	3.00	22.22	2.31	2.80
		125.00	28.68	3.29	2.86	27.07	2.90	2.72	25.45	2.76	2.55	24.64	2.54	2.49	23.84	2.53	2.40	22.22	2.22	2.25
		150.00	28.68	3.29	2.38	27.07	2.85	2.27	25.45	2.76	2.13	24.64	2.50	2.08	23.84	2.53	2.00	22.22	2.17	1.88
	40	50.00	28.68	3.18	7.18	27.07	2.81	6.83	25.45	2.55	6.44	24.64	2.45	6.24	23.84	2.34	6.05	22.22	2.12	5.66
		100.00	28.68	2.98	3.62	27.07	2.71	3.43	25.45	2.55	3.22	24.64	2.36	3.14	23.84	2.34	3.03	22.22	2.03	2.84
		125.00	28.68	2.98	2.89	<														

10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																		
			16.00			18.00			20.00			21.00			22.00			24.00			
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	
			50.00	25.02	5.44	5.51	23.74	4.96	5.29	22.32	4.51	5.01	21.51	4.20	4.87	20.81	4.07	4.71	19.39	3.61	4.44
70	10		100.00	25.15	5.40	2.78	23.74	4.92	2.65	22.32	4.47	2.51	21.51	4.20	2.44	20.81	4.07	2.36	19.39	3.61	2.22
			125.00	25.15	5.42	2.22	23.74	4.95	2.12	22.32	4.49	2.01	21.51	4.21	1.95	20.81	4.03	1.89	19.39	3.61	1.78
			150.00	25.15	5.42	1.85	23.74	4.95	1.76	22.32	4.50	1.67	21.51	4.23	1.62	20.81	4.02	1.58	19.39	3.62	1.48
		15		50.00	25.15	4.93	5.69	23.74	4.47	5.42	22.32	4.02	5.15	21.51	3.77	4.99	20.81	3.62	4.84	19.39	3.23
			100.00	25.15	4.73	2.87	23.74	4.26	2.74	22.32	3.83	2.60	21.51	3.69	2.51	20.81	3.53	2.43	19.39	3.15	2.29
			125.00	25.15	4.73	2.30	23.74	4.26	2.19	22.32	3.83	2.08	21.51	3.69	2.01	20.81	3.44	1.96	19.39	3.15	1.83
			150.00	25.15	4.73	1.92	23.74	4.26	1.83	22.32	3.83	1.73	21.51	3.69	1.67	20.81	3.39	1.63	19.39	3.15	1.52
	20		50.00	25.15	4.12	5.92	23.74	3.77	5.62	22.32	3.47	5.30	21.51	3.31	5.12	20.81	3.16	4.97	19.39	2.87	4.65
			100.00	25.15	4.00	2.98	23.74	3.67	2.82	22.32	3.36	2.67	21.51	3.22	2.57	20.81	3.07	2.50	19.39	2.79	2.34
			125.00	25.15	4.00	2.38	23.74	3.67	2.26	22.32	3.36	2.13	21.51	3.13	2.07	20.81	3.07	2.00	19.39	2.70	1.88
			150.00	25.15	4.00	1.98	23.74	3.67	1.88	22.32	3.36	1.78	21.51	3.09	1.73	20.81	3.07	1.66	19.39	2.65	1.57
	25		50.00	25.15	3.55	6.08	23.74	3.29	5.76	22.32	3.02	5.43	21.51	2.90	5.24	20.81	2.68	5.10	19.39	2.45	4.77
			100.00	25.15	3.46	3.05	23.74	3.19	2.89	22.32	2.93	2.73	21.51	2.80	2.63	20.81	2.68	2.55	19.39	2.45	2.38
			125.00	25.15	3.36	2.45	23.74	3.09	2.32	22.32	2.93	2.18	21.51	2.80	2.11	20.81	2.59	2.05	19.39	2.45	1.91
			150.00	25.15	3.32	2.05	23.74	3.03	1.94	22.32	2.93	1.82	21.51	2.80	1.76	20.81	2.54	1.71	19.39	2.45	1.59
	30		50.00	25.15	3.14	6.19	23.74	2.91	5.86	22.32	2.69	5.52	21.51	2.48	5.36	20.81	2.47	5.16	19.39	2.18	4.84
			100.00	25.15	3.04	3.11	23.74	2.81	2.95	22.32	2.59	2.78	21.51	2.48	2.68	20.81	2.38	2.59	19.39	2.18	2.42
			125.00	25.15	3.04	2.49	23.74	2.81	2.36	22.32	2.59	2.22	21.51	2.39	2.15	20.81	2.38	2.07	19.39	2.18	1.94
			150.00	25.15	3.04	2.07	23.74	2.81	1.96	22.32	2.59	1.85	21.51	2.34	1.80	20.81	2.38	1.73	19.39	2.18	1.61
	35		50.00	25.15	2.80	6.29	23.74	2.61	5.95	22.32	2.32	5.63	21.51	2.31	5.40	20.81	2.14	5.25	19.39	2.06	4.88
			100.00	25.15	2.71	3.16	23.74	2.51	2.99	22.32	2.32	2.81	21.51	2.22	2.71	20.81	2.14	2.63	19.39	1.97	2.45
			125.00	25.15	2.71	2.53	23.74	2.51	2.39	22.32	2.23	2.26	21.51	2.22	2.17	20.81	2.14	2.10	19.39	1.97	1.96
			150.00	25.15	2.71	2.11	23.74	2.51	1.99	22.32	2.18	1.89	21.51	2.22	1.81	20.81	2.14	1.75	19.39	1.97	1.63
	40		50.00	25.15	2.60	6.35	23.74	2.42	6.00	22.32	2.13	5.68	21.51	2.03	5.48	20.81	1.96	5.30	19.39	1.87	4.93
			100.00	25.15	2.51	3.19	23.74	2.32	3.01	22.32	2.04	2.85	21.51	2.03	2.74	20.81	1.96	2.65	19.39	1.79	2.48
			125.00	25.15	2.51	2.55	23.74	2.32	2.41	22.32	2.04	2.28	21.51	1.94	2.20	20.81	1.86	2.13	19.39	1.79	1.98
			150.00	25.15	2.51	2.12	23.74	2.32	2.01	22.32	2.04	1.90	21.51	1.89	1.84	20.81	1.82	1.78	19.39	1.79	1.65
	45		50.00	25.15	2.42	6.40	23.74	2.22	6.06	22.32	1.95	5.73	21.51	1.76	5.56	20.81	1.78	5.36	19.39	1.69	4.98
			100.00	25.15	2.32	3.21	23.74	2.12	3.04	22.32	1.77	2.89	21.51	1.84	2.77	20.81	1.78	2.68	19.39	1.60	2.50
			125.00	25.15	2.32	2.57	23.74	2.12	2.43	22.32	1.85	2.30	21.51	1.66	2.23	20.81	1.59	2.16	19.39	1.60	2.00
			150.00	25.15	2.32	2.14	23.74	2.12	2.03	22.32	1.90	1.92	21.51	1.57	1.87	20.81	1.49	1.81	19.39	1.60	1.67
	60	10		50.00	21.51	4.18	4.88	20.30	3.94	4.60	19.09	3.69	4.33	18.48	3.43	4.24	17.88	3.34	4.09	16.67	2.94
			100.00	21.51	4.18	2.44	20.30	3.94	2.30	19.09	3.69	2.17	18.48	3.47	2.11	17.88	3.32	2.05	16.67	2.98	1.93
			125.00	21.51	4.19	1.95	20.30	3.91	1.85	19.09	3.65	1.74	18.48	3.43	1.69	17.88	3.30	1.64	16.67	2.94	1.55
			150.00	21.51	4.19	1.62	20.30	3.88	1.54	19.09	3.63	1.45	18.48	3.40	1.41	17.88	3.29	1.37	16.67	2.93	1.29
15			50.00	21.51	3.79	4.99	20.30	3.55	4.71	19.09	3.29	4.45	18.48	3.08	4.33	17.88	2.96	4.20	16.67	2.65	3.95
			100.00	21.51	3.69	2.51	20.30	3.44	2.37	19.09	3.20	2.24	18.48	3.08	2.17	17.88	2.87	2.11	16.67	2.65	1.97
			125.00	21.51	3.69	2.01	20.30	3.35	1.91	19.09	3.11	1.80	18.48	2.98	1.74	17.88	2.78	1.70	16.67	2.56	1.59
			150.00	21.51	3.69	1.67	20.30	3.30	1.59	19.09	3.05	1.50	18.48	2.93	1.46	17.88	2.73	1.42	16.67	2.51	1.33
20			50.00	21.51	3.30	5.12	20.30	3.06	4.85	19.09	2.82	4.58	18.48	2.71	4.44	17.88	2.61	4.30	16.67	2.37	4.02
			100.00	21.51	3.21	2.58	20.30	2.97	2.44	19.09	2.73	2.30	18.48	2.62	2.23	17.88	2.50	2.16	16.67	2.29	2.02
			125.00	21.51	3.21	2.06	20.30	2.97	1.95	19.09	2.73	1.84	18.48	2.62	1.79	17.88	2.50	1.73	16.67	2.29	1.62
			150.00	21.51	3.21	1.72	20.30	2.97	1.63	19.09	2.73	1.53	18.48	2.62	1.49	17.88	2.50	1.44	16.67	2.29	1.35
25			50.00	21.51	2.90	5.24	20.30	2.70	4.95	19.09	2.40	4.70	18.48	2.39	4.53	17.88	2.21	4.41	16.67	2.12	4.09
			100.00	21.51	2.80	2.63	20.30	2.60	2.49	19.09	2.40	2.35	18.48	2.30	2.28	17.88	2.21	2.20	16.67	2.03	2.06
			125.00	21.51	2.80	2.11	20.30	2.60	1.99	19.09	2.31	1.89	18.48	2.30	1.82	17.88	2.21	1.76	16.67	2.03	1.65
			150.00	21.51	2.80	1.76	20.30	2.60	1.66	19.09	2.27	1.58	18.48	2.30	1.52	17.88	2.21	1.47	16.67	2.03	1.37
30			50.00	21.51	2.58	5.33	20.30	2.40	5.04	19.09	2.25	4.74	18.48	2.15	4.60	17.88	2.06	4.45	16.67	1.92	4.15
			100.00	21.51	2.48	2.68	20.30	2.30	2.53	19.09	2.14	2.39	18.48	2.06	2.31	17.88	1.97	2.24	16.67	1.82	2.09
			125.00	21.51	2.48	2.14	20.30	2.30	2.03	19.09	2.14	1.91	18.48	2.06	1.85	17.88	1.97	1.79	16.67	1.82	1.67
			150.00	21.51	2.48	1.79	20.30	2.30	1.69	19.09	2.14	1.59	18.48	2.06	1.54	17.88	1.97	1.49	16.67	1.82	1.39
35			50.00	21.51	2.23	5.43	20.30	2.17	5.10	19.09	1.94	4.83	18.48	1.96	4.65	17.88	1.87	4.51	16.67	1.76	4.20
			100.00	21.51	2.23	2.71	20.30	2.08	2.56	19.09	1.94	2.41	18.48	1.86	2.34	17.88	1.79	2.26	16.67	1.66	2.11
			125.00	21.51	2.23	2.17	20.30	2.08	2.05	19.09	1.83	1.94	18.48	1.86	1.87	17.88	1.79	1.81	16.67	1.66	1.69
			150.00	21.51	2.23	1.81	20.30	2.08	1.71	19.09	1.80	1.62	18.48	1.86	1.56	17.88	1.79	1.51	16.67	1.66	1.41
40			50.00	21.51	2.04	5.48	20.30	1.99	5.15	19.09	1.76	4.88	18.48	1.78	4.70	17.88	1.69	4.56	16.67	1.57	4.25
			100.00	21.51																	

10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	50.00	17.85	3.33	4.09	16.84	3.14	3.86	16.97	2.85	3.97	15.35	2.76	3.54	14.85	2.57	3.46	13.84	2.37	3.23
		100.00	17.98	3.30	2.07	16.97	3.14	1.95	16.97	2.84	1.99	15.35	2.73	1.78	14.85	2.59	1.73	13.84	2.34	1.62
		125.00	17.98	3.33	1.65	16.97	3.14	1.56	16.97	2.84	1.59	15.35	2.74	1.42	14.85	2.56	1.38	13.84	2.35	1.29
		150.00	17.98	3.33	1.37	16.97	3.15	1.30	16.97	2.85	1.32	15.35	2.74	1.18	14.85	2.53	1.16	13.84	2.35	1.08
	15	50.00	17.98	3.00	4.22	16.97	2.83	3.98	16.97	2.54	4.06	15.35	2.47	3.62	14.85	2.29	3.53	13.84	2.12	3.30
		100.00	17.98	2.91	2.12	16.97	2.73	2.00	16.97	2.45	2.04	15.35	2.38	1.83	14.85	2.29	1.77	13.84	2.03	1.66
		125.00	17.98	2.91	1.70	16.97	2.73	1.60	16.97	2.45	1.63	15.35	2.38	1.46	14.85	2.19	1.43	13.84	2.03	1.33
		150.00	17.98	2.91	1.41	16.97	2.73	1.34	16.97	2.45	1.36	15.35	2.38	1.22	14.85	2.13	1.19	13.84	2.03	1.11
	20	50.00	17.98	2.62	4.32	16.97	2.44	4.09	16.97	2.27	4.14	15.35	2.18	3.71	14.85	2.09	3.59	13.84	1.84	3.38
		100.00	17.98	2.52	2.18	16.97	2.34	2.06	16.97	2.16	2.08	15.35	2.09	1.87	14.85	2.00	1.81	13.84	1.84	1.69
		125.00	17.98	2.52	1.74	16.97	2.34	1.65	16.97	2.16	1.67	15.35	2.09	1.49	14.85	2.00	1.45	13.84	1.84	1.35
		150.00	17.98	2.52	1.45	16.97	2.34	1.37	16.97	2.16	1.39	15.35	2.09	1.24	14.85	2.00	1.21	13.84	1.84	1.13
	25	50.00	17.98	2.33	4.40	16.97	2.07	4.19	16.97	2.03	4.20	15.35	1.85	3.80	14.85	1.78	3.68	13.84	1.65	3.43
		100.00	17.98	2.22	2.22	16.97	2.07	2.10	16.97	1.93	2.12	15.35	1.85	1.90	14.85	1.78	1.84	13.84	1.65	1.72
		125.00	17.98	2.22	1.77	16.97	2.07	1.68	16.97	1.93	1.69	15.35	1.85	1.52	14.85	1.78	1.47	13.84	1.65	1.37
		150.00	17.98	2.22	1.48	16.97	2.07	1.40	16.97	1.93	1.41	15.35	1.85	1.27	14.85	1.78	1.23	13.84	1.65	1.14
	30	50.00	17.98	2.08	4.47	16.97	1.94	4.23	16.97	1.84	4.26	15.35	1.67	3.85	14.85	1.71	3.70	13.84	1.59	3.45
		100.00	17.98	1.99	2.25	16.97	1.86	2.13	16.97	1.74	2.14	15.35	1.67	1.92	14.85	1.61	1.86	13.84	1.50	1.74
		125.00	17.98	1.99	1.80	16.97	1.86	1.70	16.97	1.74	1.71	15.35	1.67	1.54	14.85	1.61	1.49	13.84	1.50	1.39
		150.00	17.98	1.99	1.50	16.97	1.86	1.42	16.97	1.74	1.43	15.35	1.67	1.28	14.85	1.61	1.24	13.84	1.50	1.16
	35	50.00	17.98	1.88	4.53	16.97	1.69	4.30	16.97	1.59	4.33	15.35	1.62	3.86	14.85	1.48	3.76	13.84	1.38	3.51
		100.00	17.98	1.80	2.28	16.97	1.69	2.15	16.97	1.59	2.16	15.35	1.53	1.94	14.85	1.48	1.88	13.84	1.38	1.75
		125.00	17.98	1.80	1.82	16.97	1.69	1.72	16.97	1.59	1.73	15.35	1.53	1.56	14.85	1.48	1.51	13.84	1.38	1.40
		150.00	17.98	1.80	1.52	16.97	1.69	1.43	16.97	1.59	1.44	15.35	1.53	1.30	14.85	1.48	1.25	13.84	1.38	1.17
	40	50.00	17.98	1.70	4.58	16.97	1.60	4.33	16.97	1.50	4.35	15.35	1.44	3.91	14.85	1.39	3.79	13.84	1.28	3.53
		100.00	17.98	1.61	2.30	16.97	1.51	2.18	16.97	1.41	2.19	15.35	1.44	1.96	14.85	1.29	1.91	13.84	1.28	1.77
		125.00	17.98	1.61	1.84	16.97	1.51	1.74	16.97	1.41	1.75	15.35	1.44	1.57	14.85	1.29	1.53	13.84	1.28	1.41
		150.00	17.98	1.61	1.54	16.97	1.51	1.45	16.97	1.41	1.46	15.35	1.44	1.30	14.85	1.29	1.27	13.84	1.28	1.18
	45	50.00	17.98	1.52	4.63	16.97	1.51	4.35	16.97	1.41	4.38	15.35	1.24	3.97	14.85	1.29	3.82	13.84	1.19	3.56
		100.00	17.98	1.42	2.33	16.97	1.31	2.20	16.97	1.21	2.22	15.35	1.33	1.97	14.85	1.11	1.93	13.84	1.19	1.78
		125.00	17.98	1.42	1.86	16.97	1.31	1.76	16.97	1.21	1.77	15.35	1.33	1.58	14.85	1.11	1.55	13.84	1.19	1.42
		150.00	17.98	1.42	1.55	16.97	1.31	1.47	16.97	1.21	1.48	15.35	1.33	1.32	14.85	1.11	1.29	13.84	1.19	1.19

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

12HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
130	10	60.00	30.23	3.16	7.87	38.44	5.51	10.36	38.65	4.47	10.16	39.06	4.49	10.27	39.54	4.49	10.38	40.41	4.52	10.59	41.02	4.48	10.73			
		120.00	30.23	2.93	3.91	38.44	5.16	5.14	38.65	4.18	5.05	39.06	4.19	5.10	39.54	4.16	5.15	40.41	4.23	5.26	41.02	4.26	5.34			
		150.00	30.23	2.83	3.12	38.44	5.06	4.10	38.65	4.09	4.03	39.06	4.09	4.07	39.54	4.12	4.12	40.41	4.13	4.20	41.02	4.14	4.26			
		180.00	30.23	2.79	2.59	38.44	4.99	3.41	38.65	4.06	3.36	39.06	4.04	3.39	39.54	4.10	3.43	40.41	4.09	3.50	41.02	4.08	3.54			
	15	60.00	29.80	4.15	8.00	37.93	7.23	10.64	38.02	5.86	10.34	38.48	5.87	10.45	38.82	5.88	10.54	39.84	5.93	10.79	40.46	5.91	10.93			
		120.00	29.80	3.82	3.96	37.93	6.78	5.27	38.02	5.47	5.13	38.48	5.49	5.18	38.82	5.49	5.22	39.84	5.56	5.35	40.46	5.57	5.42			
		150.00	29.80	3.71	3.16	37.93	6.61	4.20	38.02	5.35	4.09	38.48	5.38	4.14	38.82	5.38	4.17	39.84	5.44	4.27	40.46	5.45	4.33			
		180.00	29.80	3.66	2.63	37.93	6.54	3.49	38.02	5.31	3.40	38.48	5.32	3.44	38.82	5.34	3.47	39.84	5.38	3.55	40.46	5.37	3.60			
	20	60.00	29.36	5.04	8.11	37.41	8.78	10.89	37.39	7.10	10.49	37.89	7.13	10.61	38.39	7.11	10.73	39.27	7.18	10.95	39.90	7.17	11.10			
		120.00	29.36	4.63	4.01	37.41	8.23	5.38	37.39	6.62	5.19	37.89	6.66	5.25	38.39	6.67	5.31	39.27	6.73	5.42	39.90	6.75	5.50			
		150.00	29.36	4.49	3.19	37.41	8.02	4.28	37.39	6.50	4.14	37.89	6.53	4.19	38.39	6.53	4.24	39.27	6.60	4.32	39.90	6.59	4.38			
		180.00	29.36	4.42	2.65	37.41	7.92	3.56	37.39	6.43	3.44	37.89	6.45	3.48	38.39	6.47	3.52	39.27	6.52	3.60	39.90	6.51	3.65			
	25	60.00	29.36	5.94	8.32	35.01	7.76	10.08	36.26	7.88	10.40	36.76	7.90	10.53	37.26	7.96	10.66	38.02	7.97	10.84	38.52	7.97	10.96			
		120.00	29.36	5.45	4.10	35.01	7.27	4.98	36.26	7.36	5.14	36.76	7.40	5.20	37.26	7.43	5.27	38.02	7.47	5.36	38.52	7.50	5.42			
		150.00	29.36	5.30	3.27	35.01	7.12	3.97	36.26	7.23	4.10	36.76	7.25	4.15	37.26	7.30	4.20	38.02	7.32	4.27	38.52	7.33	4.32			
		180.00	29.36	5.23	2.72	35.01	7.02	3.30	36.26	7.15	3.41	36.76	7.17	3.45	37.26	7.22	3.49	38.02	7.25	3.56	38.52	7.24	3.60			
	30	60.00	29.36	7.03	8.58	33.88	8.57	10.01	35.01	8.68	10.30	35.38	8.71	10.39	35.88	8.72	10.51	36.51	8.77	10.67	37.01	8.74	10.78			
		120.00	29.36	6.45	4.22	33.88	8.03	4.94	35.01	8.11	5.08	35.38	8.15	5.13	35.88	8.17	5.19	36.51	8.21	5.27	37.01	8.23	5.33			
		150.00	29.36	6.30	3.36	33.88	7.84	3.93	35.01	7.95	4.05	35.38	7.99	4.09	35.88	8.03	4.14	36.51	8.04	4.20	37.01	8.04	4.25			
		180.00	29.36	6.21	2.79	33.88	7.75	3.27	35.01	7.87	3.37	35.38	7.90	3.40	35.88	7.97	3.45	36.51	7.98	3.50	37.01	7.94	3.53			
	35	60.00	29.36	8.37	8.89	32.37	9.40	9.85	33.37	9.46	10.10	33.88	9.53	10.23	34.25	9.52	10.32	34.75	9.56	10.44	35.13	9.54	10.53			
		120.00	29.36	7.71	4.37	32.37	8.78	4.85	33.37	8.86	4.98	33.88	8.90	5.04	34.25	8.93	5.09	34.75	8.96	5.15	35.13	8.96	5.20			
		150.00	29.36	7.48	3.47	32.37	8.59	3.86	33.37	8.67	3.96	33.88	8.71	4.02	34.25	8.76	4.06	34.75	8.79	4.11	35.13	8.76	4.14			
		180.00	29.36	7.38	2.89	32.37	8.49	3.21	33.37	8.59	3.30	33.88	8.64	3.34	34.25	8.67	3.37	34.75	8.70	3.41	35.13	8.67	3.44			
	40	60.00	25.97	8.83	8.20	28.76	9.91	9.12	29.63	9.99	9.34	30.10	10.04	9.46	30.40	10.04	9.53	30.99	10.08	9.68	31.29	10.06	9.75			
		120.00	25.97	8.12	4.02	28.76	9.25	4.48	29.63	9.35	4.59	30.10	9.38	4.65	30.40	9.41	4.69	30.99	9.46	4.77	31.29	9.45	4.80			
		150.00	25.97	7.89	3.19	28.76	9.05	3.56	29.63	9.14	3.66	30.10	9.21	3.71	30.40	9.23	3.74	30.99	9.26	3.80	31.29	9.24	3.82			
		180.00	25.97	7.78	2.65	28.76	8.95	2.96	29.63	9.03	3.04	30.10	9.11	3.08	30.40	9.13	3.11	30.99	9.17	3.16	31.29	9.13	3.18			
	45	60.00	22.75	9.30	7.55	25.14	10.41	8.38	25.89	10.50	8.58	26.32	10.58	8.70	26.55	10.58	8.75	27.08	10.59	8.88	27.31	10.58	8.93			
		120.00	22.75	8.53	3.69	25.14	9.74	4.11	25.89	9.82	4.21	26.32	9.87	4.27	26.55	9.88	4.29	27.08	9.96	4.37	27.31	9.95	4.39			
		150.00	22.75	8.30	2.93	25.14	9.52	3.27	25.89	9.61	3.35	26.32	9.68	3.39	26.55	9.71	3.42	27.08	9.76	3.47	27.31	9.70	3.49			
		180.00	22.75	8.19	2.43	25.14	9.40	2.71	25.89	9.50	2.78	26.32	9.61	2.82	26.55	9.62	2.84	27.08	9.65	2.89	27.31	9.58	2.90			
120	10	60.00	27.66	2.74	7.17	32.99	3.56	8.62	37.57	4.39	9.89	38.17	4.38	10.03	38.66	4.42	10.15	39.52	4.43	10.36	40.27	4.44	10.54			
		120.00	27.66	2.51	3.56	32.99	3.32	4.28	37.57	4.07	4.91	38.17	4.11	4.98	38.66	4.10	5.04	39.52	4.16	5.15	40.27	4.12	5.23			
		150.00	27.66	2.49	2.84	32.99	3.25	3.42	37.57	4.02	3.92	38.17	4.02	3.98	38.66	4.04	4.03	39.52	4.07	4.11	40.27	4.06	4.18			
		180.00	27.66	2.47	2.37	32.99	3.23	2.85	37.57	3.99	3.27	38.17	3.98	3.31	38.66	3.99	3.35	39.52	4.03	3.42	40.27	4.02	3.48			
	15	60.00	27.38	3.65	7.31	32.68	4.74	8.82	37.25	5.79	10.15	37.72	5.81	10.26	38.21	5.85	10.39	39.08	5.87	10.60	39.83	5.87	10.77			
		120.00	27.38	3.33	3.62	32.68	4.43	4.37	37.25	5.40	5.03	37.72	5.43	5.09	38.21	5.46	5.15	39.08	5.49	5.25	39.83	5.50	5.34			
		150.00	27.38	3.27	2.89	32.68	4.34	3.49	37.25	5.30	4.01	37.72	5.32	4.06	38.21	5.35	4.11	39.08	5.41	4.19	39.83	5.37	4.26			
		180.00	27.38	3.23	2.41	32.68	4.29	2.90	37.25	5.25	3.34	37.72	5.28	3.38	38.21	5.31	3.42	39.08	5.34	3.49	39.83	5.33	3.55			
	20	60.00	27.10	4.43	7.43	32.37	5.78	8.99	36.76	7.05	10.33	37.26	7.08	10.45	37.77	7.10	10.58	38.64	7.17	10.80	39.40	7.14	10.97			
		120.00	27.10	4.07	3.67	32.37	5.40	4.45	36.76	6.58	5.11	37.26	6.62	5.17	37.77	6.65	5.24	38.64	6.70	5.34	39.40	6.73	5.44			
		150.00	27.10	3.97	2.93	32.37	5.28	3.55	36.76	6.43	4.07	37.26	6.49	4.13	37.77	6.54	4.18	38.64	6.57	4.26	39.40	6.56	4.33			
		180.00	27.10	3.90	2.44	32.37	5.23	2.95	36.76	6.36	3.39	37.26	6.42	3.43	37.77	6.47	3.48	38.64	6.51	3.55	39.40	6.48	3.60			
	25	60.00	27.10	5.21	7.62	32.37	6.80	9.23	35.63	7.84	10.25	36.13	7.86	10.37	36.76	7.92	10.53	37.51	7.94	10.71	38.14	7.98	10.87			
		120.00	27.10	4.80	3.76	32.37	6.37	4.57	35.63	7.32	5.06	36.13	7.36	5.13	36.76	7.39	5.20	37.51	7.44	5.30	38.14	7.47	5.38			
		150.00	27.10	4.66	2.99	32.37	6.21	3.64	35.63	7.19	4.04	36.13	7.20	4.09	36.76	7.27	4.15	37.51	7.29	4.22	38.14	7.30	4.28			
		180.00	27.10	4.60	2.49	32.37	6.14	3.03	35.63	7.10	3.36	36.13	7.12	3.40	36.76	7.19	3.45	37.51	7.21	3.51	38.14	7.21	3.56			
	30	60.00	27.10	6.15	7.84	32.37	8.08	9.53	34.38	8.61	10.13	34.88	8.67	10.27	35.26	8.72	10.37	36.01	8.74	10.55	36.64	8.74	10.70			
		120.00	27.10	5.68	3.86	32.37	7.55	4.70</																		

VRF MW



12HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	60.00	25.11	2.38	6.48	29.91	3.07	7.77	34.82	3.86	9.12	36.82	4.28	9.69	37.32	4.30	9.81	38.47	4.32	10.09	39.22	4.34	10.27
		120.00	25.11	2.19	3.22	29.91	2.86	3.86	34.82	3.63	4.53	36.82	4.01	4.81	37.32	4.05	4.88	38.47	4.01	5.01	39.22	4.05	5.10
		150.00	25.11	2.11	2.57	29.91	2.80	3.08	34.82	3.56	3.62	36.82	3.94	3.84	37.32	3.94	3.89	38.47	3.94	4.00	39.22	4.01	4.08
		180.00	25.11	2.07	2.14	29.91	2.78	2.57	34.82	3.52	3.01	36.82	3.89	3.20	37.32	3.90	3.24	38.47	3.90	3.33	39.22	3.97	3.39
	15	60.00	24.98	3.17	6.64	29.76	4.10	7.98	34.66	5.22	9.40	36.67	5.74	10.00	37.17	5.76	10.12	38.32	5.78	10.40	38.92	5.83	10.55
		120.00	24.98	2.92	3.29	29.76	3.82	3.96	34.66	4.87	4.66	36.67	5.37	4.95	37.17	5.40	5.02	38.32	5.41	5.15	38.92	5.46	5.23
		150.00	24.98	2.82	2.62	29.76	3.74	3.16	34.66	4.77	3.72	36.67	5.26	3.95	37.17	5.31	4.01	38.32	5.30	4.11	38.92	5.33	4.17
		180.00	24.98	2.78	2.18	29.76	3.71	2.63	34.66	4.70	3.09	36.67	5.21	3.29	37.17	5.24	3.33	38.32	5.26	3.42	38.92	5.27	3.47
	20	60.00	24.84	3.88	6.77	29.61	5.04	8.17	34.50	6.38	9.64	36.51	7.01	10.26	37.01	7.08	10.39	38.02	7.10	10.64	38.77	7.16	10.83
		120.00	24.84	3.57	3.35	29.61	4.70	4.04	34.50	5.98	4.77	36.51	6.58	5.08	37.01	6.61	5.14	38.02	6.66	5.27	38.77	6.70	5.36
		150.00	24.84	3.45	2.67	29.61	4.59	3.22	34.50	5.84	3.80	36.51	6.44	4.05	37.01	6.52	4.10	38.02	6.53	4.20	38.77	6.53	4.27
		180.00	24.84	3.40	2.22	29.61	4.55	2.68	34.50	5.77	3.16	36.51	6.38	3.37	37.01	6.45	3.41	38.02	6.46	3.49	38.77	6.44	3.55
	25	60.00	24.84	4.56	6.93	29.61	5.92	8.37	34.50	7.55	9.91	35.51	7.81	10.21	36.01	7.86	10.34	36.89	7.88	10.55	37.64	7.95	10.75
		120.00	24.84	4.19	3.42	29.61	5.53	4.14	34.50	7.06	4.90	35.51	7.31	5.05	36.01	7.35	5.11	36.89	7.40	5.22	37.64	7.44	5.31
		150.00	24.84	4.08	2.73	29.61	5.41	3.30	34.50	6.90	3.90	35.51	7.14	4.02	36.01	7.23	4.08	36.89	7.24	4.16	37.64	7.27	4.23
		180.00	24.84	4.01	2.27	29.61	5.35	2.75	34.50	6.83	3.25	35.51	7.06	3.34	36.01	7.15	3.39	36.89	7.16	3.46	37.64	7.17	3.52
	30	60.00	24.84	5.38	7.12	29.61	7.03	8.64	33.75	8.56	9.97	34.25	8.61	10.10	34.63	8.66	10.20	35.51	8.70	10.42	36.13	8.75	10.58
		120.00	24.84	4.95	3.51	29.61	6.55	4.26	33.75	8.01	4.92	34.25	8.05	4.99	34.63	8.09	5.03	35.51	8.15	5.15	36.13	8.20	5.22
		150.00	24.84	4.82	2.80	29.61	6.43	3.40	33.75	7.82	3.92	34.25	7.90	3.97	34.63	7.95	4.01	35.51	7.98	4.10	36.13	8.00	4.16
		180.00	24.84	4.75	2.32	29.61	6.35	2.83	33.75	7.74	3.26	34.25	7.81	3.30	34.63	7.87	3.34	35.51	7.91	3.41	36.13	7.90	3.46
	35	60.00	24.79	6.43	7.36	29.61	8.38	8.95	32.25	10.23	10.01	32.75	9.42	9.94	33.12	9.45	10.03	33.88	9.51	10.23	34.50	9.56	10.39
		120.00	24.79	5.92	3.62	29.61	7.83	4.41	32.25	9.58	4.93	32.75	8.81	4.90	33.12	8.85	4.95	33.88	8.90	5.04	34.50	8.94	5.12
		150.00	24.79	5.75	2.88	29.61	7.67	3.51	32.25	9.39	3.93	32.75	8.65	3.90	33.12	8.68	3.94	33.88	8.73	4.02	34.50	8.74	4.08
		180.00	24.79	5.67	2.39	29.61	7.58	2.92	32.25	9.27	3.26	32.75	8.55	3.25	33.12	8.58	3.28	33.88	8.66	3.34	34.50	8.62	3.39
	40	60.00	23.05	7.07	7.10	27.53	9.20	8.66	29.85	11.27	9.69	30.22	10.34	9.56	30.63	10.39	9.67	31.43	10.43	9.87	32.07	10.49	10.03
		120.00	23.05	6.49	3.48	27.53	8.61	4.26	29.85	10.52	4.76	30.22	9.67	4.70	30.63	9.72	4.76	31.43	9.77	4.86	32.07	9.84	4.94
		150.00	23.05	6.31	2.77	27.53	8.42	3.39	29.85	10.31	3.79	30.22	9.50	3.75	30.63	9.52	3.79	31.43	9.58	3.87	32.07	9.60	3.93
		180.00	23.05	6.23	2.30	27.53	8.33	2.82	29.85	10.21	3.15	30.22	9.40	3.11	30.63	9.45	3.15	31.43	9.51	3.22	32.07	9.46	3.26
	45	60.00	21.16	7.70	6.80	25.29	10.03	8.33	27.62	12.28	9.41	27.84	11.27	9.22	28.29	11.32	9.34	28.98	11.36	9.51	29.49	11.42	9.64
		120.00	21.16	7.07	3.33	25.29	9.39	4.09	27.62	11.44	4.60	27.84	10.56	4.53	28.29	10.56	4.58	28.98	10.64	4.67	29.49	10.73	4.74
		150.00	21.16	6.88	2.64	25.29	9.18	3.25	27.62	11.25	3.66	27.84	10.34	3.60	28.29	10.39	3.65	28.98	10.45	3.72	29.49	10.45	3.77
		180.00	21.16	6.78	2.20	25.29	9.07	2.70	27.62	11.15	3.05	27.84	10.24	2.99	28.29	10.30	3.03	28.98	10.36	3.09	29.49	10.32	3.13
100	10	60.00	22.58	2.00	5.79	26.98	2.58	6.97	31.37	3.28	8.17	33.50	3.65	8.76	35.63	4.06	9.36	39.64	4.23	10.34	38.02	4.28	9.97
		120.00	22.58	1.84	2.88	26.98	2.39	3.46	31.37	3.07	4.06	33.50	3.44	4.35	35.63	3.83	4.65	39.64	3.96	5.14	38.02	3.96	4.95
		150.00	22.58	1.81	2.30	26.98	2.33	2.76	31.37	3.01	3.24	33.50	3.34	3.47	35.63	3.72	3.71	39.64	3.89	4.10	38.02	3.89	3.95
		180.00	22.58	1.81	1.92	26.98	2.31	2.30	31.37	2.99	2.70	33.50	3.29	2.89	35.63	3.68	3.09	39.64	3.84	3.42	38.02	3.87	3.29
	15	60.00	22.58	2.73	5.97	26.98	3.50	7.18	31.37	4.45	8.44	33.50	4.97	9.07	35.63	5.49	9.69	39.64	5.73	10.69	38.02	5.78	10.32
		120.00	22.58	2.50	2.96	26.98	3.27	3.57	31.37	4.16	4.19	33.50	4.64	4.50	35.63	5.15	4.81	39.64	5.37	5.30	38.02	5.40	5.12
		150.00	22.58	2.45	2.36	26.98	3.19	2.84	31.37	4.08	3.34	33.50	4.56	3.59	35.63	5.04	3.83	39.64	5.26	4.23	38.02	5.27	4.08
		180.00	22.58	2.41	1.96	26.98	3.15	2.37	31.37	4.03	2.78	33.50	4.50	2.99	35.63	5.00	3.19	39.64	5.21	3.52	38.02	5.20	3.40
	20	60.00	22.58	3.35	6.11	26.98	4.30	7.37	31.37	5.50	8.69	33.50	6.13	9.34	35.63	6.79	10.00	39.64	7.05	11.01	38.02	7.11	10.64
		120.00	22.58	3.09	3.03	26.98	4.03	3.65	31.37	5.12	4.30	33.50	5.72	4.62	35.63	6.34	4.95	39.64	6.62	5.45	38.02	6.66	5.27
		150.00	22.58	3.00	2.41	26.98	3.96	2.92	31.37	5.04	3.43	33.50	5.64	3.69	35.63	6.23	3.95	39.64	6.48	4.35	38.02	6.48	4.20
		180.00	22.58	2.95	2.01	26.98	3.90	2.43	31.37	4.97	2.86	33.50	5.57	3.07	35.63	6.18	3.29	39.64	6.42	3.62	38.02	6.37	3.49
	25	60.00	22.58	3.94	6.25	26.98	5.08	7.56	31.37	6.46	8.92	33.50	7.20	9.59	35.26	7.83	10.16	36.13	7.84	10.36	36.89	7.94	10.57
		120.00	22.58	3.62	3.09	26.98	4.75	3.74	31.37	6.04	4.41	33.50	6.74	4.74	35.26	7.30	5.02	36.13	7.36	5.13	36.89	7.40	5.22
		150.00	22.58	3.52	2.46	26.98	4.66	2.98	31.37	5.90	3.51	33.50	6.60	3.78	35.26	7.17	4.00	36.13	7.22	4.09	36.89	7.22	4.16
		180.00	22.58	3.47	2.05	26.98	4.60	2.48	31.37	5.84	2.92	33.50	6.54	3.15	35.26	7.09	3.33	36.13	7.16	3.40	36.89	7.12	3.46
	30	60.00	22.58	4.66	6.42	26.98	6.03	7.78	31.37	7.65	9.20	33.50	8.56	9.91	34.00	8.63	10.05	34.88	8.66	10.26	35.51	8.73	10.43
		120.00	22.58	4.27																			

12HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
90	10	60.00	20.33	1.73	5.20	24.22	2.20	6.23	28.23	2.75	7.30	30.11	3.08	7.82	32.12	3.41	8.37	36.01	4.14	9.46	37.26	4.23	9.78
		120.00	20.33	1.61	2.59	24.22	2.07	3.10	28.23	2.60	3.63	30.11	2.89	3.89	32.12	3.19	4.16	36.01	3.86	4.70	37.26	3.95	4.86
		150.00	20.33	1.54	2.06	24.22	2.03	2.48	28.23	2.52	2.90	30.11	2.83	3.11	32.12	3.13	3.32	36.01	3.78	3.75	37.26	3.84	3.88
		180.00	20.33	1.51	1.72	24.22	2.01	2.06	28.23	2.48	2.41	30.11	2.79	2.59	32.12	3.10	2.77	36.01	3.76	3.12	37.26	3.79	3.23
	15	60.00	20.33	2.34	5.34	24.22	3.00	6.42	28.23	3.75	7.54	30.11	4.19	8.09	32.12	4.61	8.66	36.01	5.59	9.81	37.26	5.74	10.14
		120.00	20.33	2.17	2.65	24.22	2.79	3.18	28.23	3.53	3.74	30.11	3.91	4.01	32.12	4.33	4.30	36.01	5.22	4.86	37.26	5.37	5.02
		150.00	20.33	2.10	2.11	24.22	2.73	2.54	28.23	3.44	2.99	30.11	3.84	3.20	32.12	4.24	3.43	36.01	5.12	3.88	37.26	5.22	4.01
		180.00	20.33	2.06	1.76	24.22	2.71	2.12	28.23	3.40	2.49	30.11	3.80	2.66	32.12	4.20	2.85	36.01	5.07	3.23	37.26	5.14	3.33
	20	60.00	20.33	2.88	5.47	24.22	3.68	6.58	28.23	4.63	7.75	30.11	5.16	8.31	32.12	5.68	8.91	36.01	6.87	10.11	37.26	7.06	10.45
		120.00	20.33	2.65	2.71	24.22	3.44	3.26	28.23	4.33	3.84	30.11	4.82	4.12	32.12	5.33	4.41	36.01	6.43	5.00	37.26	6.62	5.17
		150.00	20.33	2.58	2.16	24.22	3.36	2.60	28.23	4.26	3.06	30.11	4.73	3.28	32.12	5.25	3.52	36.01	6.31	3.99	37.26	6.44	4.12
		180.00	20.33	2.55	1.80	24.22	3.32	2.16	28.23	4.22	2.55	30.11	4.69	2.73	32.12	5.18	2.93	36.01	6.25	3.32	37.26	6.36	3.43
	25	60.00	20.33	3.37	5.59	24.22	4.31	6.72	28.23	5.45	7.94	30.11	6.05	8.52	32.12	6.73	9.16	35.26	7.78	10.15	36.13	7.87	10.37
		120.00	20.33	3.10	2.76	24.22	4.03	3.33	28.23	5.09	3.93	30.11	5.68	4.22	32.12	6.29	4.53	35.26	7.30	5.02	36.13	7.35	5.12
		150.00	20.33	3.00	2.20	24.22	3.94	2.66	28.23	5.02	3.14	30.11	5.56	3.36	32.12	6.16	3.61	35.26	7.15	4.00	36.13	7.18	4.08
		180.00	20.33	2.96	1.83	24.22	3.91	2.21	28.23	4.96	2.61	30.11	5.50	2.80	32.12	6.12	3.00	35.26	7.08	3.33	36.13	7.09	3.40
	30	60.00	20.33	3.98	5.73	24.22	5.08	6.91	28.23	6.79	8.25	30.11	7.20	8.79	32.12	7.97	9.45	34.00	8.60	10.04	34.75	8.66	10.23
		120.00	20.33	3.65	2.83	24.22	4.76	3.42	28.23	6.33	4.07	30.11	6.73	4.34	32.12	7.46	4.66	34.00	8.04	4.95	34.75	8.11	5.05
		150.00	20.33	3.57	2.25	24.22	4.66	2.72	28.23	6.19	3.25	30.11	6.59	3.46	32.12	7.31	3.72	34.00	7.89	3.95	34.75	7.89	4.02
		180.00	20.33	3.52	1.87	24.22	4.61	2.27	28.23	6.13	2.70	30.11	6.52	2.88	32.12	7.25	3.09	34.00	7.80	3.28	34.75	7.77	3.34
	35	60.00	20.33	4.71	5.90	24.22	6.05	7.14	28.23	7.71	8.47	30.11	8.58	9.12	31.74	9.34	9.68	32.62	9.38	9.90	33.25	9.45	10.07
		120.00	20.33	4.33	2.91	24.22	5.67	3.52	28.23	7.20	4.18	30.11	8.04	4.50	31.74	8.72	4.77	32.62	8.80	4.88	33.25	8.85	4.96
		150.00	20.33	4.20	2.31	24.22	5.55	2.81	28.23	7.06	3.33	30.11	7.87	3.58	31.74	8.58	3.80	32.62	8.62	3.89	33.25	8.61	3.95
		180.00	20.33	4.13	1.92	24.22	5.47	2.33	28.23	6.97	2.77	30.11	7.79	2.98	31.74	8.50	3.16	32.62	8.54	3.23	33.25	8.48	3.28
	40	60.00	19.66	5.39	5.90	23.49	6.96	7.18	27.45	8.87	8.56	29.19	9.85	9.20	30.80	10.73	9.79	31.69	10.79	10.01	32.17	10.87	10.15
		120.00	19.66	4.97	2.90	23.49	6.51	3.54	27.45	8.28	4.21	29.19	9.21	4.53	30.80	10.04	4.81	31.69	10.10	4.93	32.17	10.16	4.99
		150.00	19.66	4.81	2.31	23.49	6.36	2.81	27.45	8.11	3.35	29.19	9.04	3.60	30.80	9.84	3.83	31.69	9.93	3.92	32.17	9.90	3.97
		180.00	19.66	4.74	1.92	23.49	6.28	2.34	27.45	8.03	2.79	29.19	8.96	3.00	30.80	9.76	3.19	31.69	9.82	3.26	32.17	9.77	3.30
	45	60.00	19.13	6.09	5.94	22.76	7.86	7.22	26.66	10.01	8.64	28.42	11.14	9.32	29.86	12.12	9.90	30.76	12.21	10.13	31.25	12.26	10.26
		120.00	19.13	5.62	2.92	22.76	7.34	3.55	26.66	9.35	4.24	28.42	10.39	4.57	29.86	11.35	4.86	30.76	11.40	4.97	31.25	11.49	5.04
		150.00	19.13	5.44	2.32	22.76	7.19	2.82	26.66	9.16	3.38	28.42	10.21	3.64	29.86	11.13	3.86	30.76	11.21	3.96	31.25	11.21	4.00
		180.00	19.13	5.35	1.92	22.76	7.09	2.35	26.66	9.06	2.81	28.42	10.10	3.03	29.86	11.02	3.21	30.76	11.10	3.29	31.25	11.06	3.32
80	10	60.00	18.07	1.45	4.60	21.58	1.84	5.52	25.09	2.30	6.46	26.85	2.58	6.94	28.48	2.82	7.38	31.99	3.43	8.35	35.51	4.02	9.32
		120.00	18.07	1.33	2.29	21.58	1.74	2.75	25.09	2.14	3.21	26.85	2.40	3.45	28.48	2.63	3.67	31.99	3.17	4.14	35.51	3.75	4.63
		150.00	18.07	1.30	1.83	21.58	1.69	2.19	25.09	2.10	2.56	26.85	2.32	2.75	28.48	2.56	2.93	31.99	3.12	3.31	35.51	3.69	3.70
		180.00	18.07	1.30	1.52	21.58	1.65	1.83	25.09	2.10	2.14	26.85	2.28	2.29	28.48	2.52	2.44	31.99	3.12	2.76	35.51	3.69	3.08
	15	60.00	18.07	1.98	4.73	21.58	2.50	5.68	25.09	3.14	6.65	26.85	3.49	7.15	28.48	3.81	7.61	31.99	4.62	8.63	35.51	5.46	9.66
		120.00	18.07	1.82	2.34	21.58	2.35	2.82	25.09	2.92	3.30	26.85	3.25	3.55	28.48	3.58	3.78	31.99	4.32	4.28	35.51	5.11	4.79
		150.00	18.07	1.77	1.87	21.58	2.29	2.25	25.09	2.87	2.64	26.85	3.17	2.83	28.48	3.49	3.01	31.99	4.24	3.42	35.51	4.99	3.82
		180.00	18.07	1.75	1.56	21.58	2.25	1.87	25.09	2.83	2.19	26.85	3.15	2.36	28.48	3.45	2.51	31.99	4.21	2.84	35.51	4.93	3.18
	20	60.00	18.07	2.45	4.84	21.58	3.09	5.82	25.09	3.87	6.83	26.85	4.27	7.34	28.48	4.72	7.83	31.99	5.69	8.88	35.51	6.73	9.96
		120.00	18.07	2.24	2.39	21.58	2.88	2.88	25.09	3.61	3.38	26.85	4.01	3.64	28.48	4.42	3.88	31.99	5.31	4.40	35.51	6.29	4.93
		150.00	18.07	2.19	1.91	21.58	2.82	2.30	25.09	3.55	2.70	26.85	3.93	2.90	28.48	4.33	3.09	31.99	5.23	3.51	35.51	6.14	3.93
		180.00	18.07	2.15	1.59	21.58	2.80	1.92	25.09	3.51	2.25	26.85	3.89	2.42	28.48	4.29	2.57	31.99	5.18	2.92	35.51	6.05	3.27
	25	60.00	18.07	2.84	4.93	21.58	3.60	5.94	25.09	4.54	6.98	26.85	5.04	7.52	28.48	5.58	8.03	31.99	6.70	9.12	35.26	7.80	10.15
		120.00	18.07	2.63	2.44	21.58	3.38	2.94	25.09	4.25	3.46	26.85	4.71	3.72	28.48	5.20	3.97	31.99	6.26	4.51	35.26	7.30	5.02
		150.00	18.07	2.54	1.94	21.58	3.31	2.35	25.09	4.17	2.76	26.85	4.63	2.97	28.48	5.10	3.17	31.99	6.14	3.60	35.26	7.13	4.00
		180.00	18.07	2.51	1.62	21.58	3.27	1.95	25.09	4.13	2.30	26.85	4.57	2.47	28.48	5.05	2.63	31.99	6.09	2.99	35.26	7.02	3.32
	30	60.00	18.07	3.35	5.05	21.58	4.26	6.09	25.09	5.36	7.18	26.85	5.98	7.74	28.48	6.58	8.26	31.99	7.95	9.41	34.00	8.59	10.04
		120.00	18.07	3.08	2.49	21.58	3.98	3.01	25.09	5.00	3.55	26.85	5.57	3.82	28.48	6.16	4.08	31.99	7.43	4.65	34.00	8.04	4.95
		150.00																					

VRF MW



12HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
		kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C				
70	10	60.00	15.81	1.23	4.02	18.82	1.54	4.80	21.96	1.91	5.63	23.46	2.10	6.02	24.97	2.28	6.42	27.98	2.76	7.25	31.12	3.23	8.10			
		120.00	15.81	1.13	2.00	18.82	1.44	2.39	21.96	1.79	2.80	23.46	1.97	3.00	24.97	2.16	3.20	27.98	2.56	3.60	31.12	3.06	4.03			
		150.00	15.81	1.09	1.59	18.82	1.38	1.90	21.96	1.73	2.23	23.46	1.91	2.39	24.97	2.09	2.55	27.98	2.54	2.88	31.12	2.97	3.21			
		180.00	15.81	1.06	1.33	18.82	1.36	1.59	21.96	1.71	1.86	23.46	1.89	1.99	24.97	2.05	2.12	27.98	2.51	2.40	31.12	2.94	2.68			
	15	60.00	15.81	1.66	4.12	18.82	2.07	4.92	21.96	2.58	5.78	23.46	2.83	6.20	24.97	3.11	6.62	27.98	3.72	7.47	31.12	4.40	8.37			
		120.00	15.81	1.53	2.04	18.82	1.95	2.45	21.96	2.42	2.87	23.46	2.65	3.08	24.97	2.92	3.29	27.98	3.47	3.71	31.12	4.11	4.15			
		150.00	15.81	1.48	1.63	18.82	1.90	1.95	21.96	2.35	2.29	23.46	2.60	2.46	24.97	2.86	2.62	27.98	3.42	2.96	31.12	4.03	3.31			
		180.00	15.81	1.46	1.36	18.82	1.88	1.63	21.96	2.33	1.91	23.46	2.58	2.05	24.97	2.81	2.18	27.98	3.37	2.46	31.12	3.97	2.76			
	20	60.00	15.81	2.04	4.21	18.82	2.56	5.04	21.96	3.18	5.93	23.46	3.48	6.35	24.97	3.85	6.79	27.98	4.58	7.67	31.12	5.43	8.62			
		120.00	15.81	1.88	2.08	18.82	2.39	2.50	21.96	2.96	2.94	23.46	3.26	3.15	24.97	3.60	3.37	27.98	4.29	3.80	31.12	5.05	4.26			
		150.00	15.81	1.83	1.66	18.82	2.35	2.00	21.96	2.90	2.34	23.46	3.20	2.51	24.97	3.53	2.69	27.98	4.21	3.04	31.12	4.94	3.40			
		180.00	15.81	1.80	1.38	18.82	2.31	1.66	21.96	2.88	1.95	23.46	3.19	2.09	24.97	3.51	2.24	27.98	4.16	2.53	31.12	4.85	2.83			
	25	60.00	15.81	2.37	4.29	18.82	2.97	5.14	21.96	3.69	6.05	23.46	4.10	6.50	24.97	4.50	6.95	27.98	5.41	7.87	31.12	6.37	8.84			
		120.00	15.81	2.19	2.12	18.82	2.79	2.55	21.96	3.46	3.00	23.46	3.83	3.22	24.97	4.22	3.44	27.98	5.05	3.89	31.12	5.96	4.37			
		150.00	15.81	2.12	1.69	18.82	2.71	2.03	21.96	3.39	2.39	23.46	3.74	2.56	24.97	4.14	2.74	27.98	4.96	3.11	31.12	5.79	3.48			
		180.00	15.81	2.10	1.41	18.82	2.68	1.69	21.96	3.35	1.99	23.46	3.70	2.13	24.97	4.10	2.28	27.98	4.94	2.59	31.12	5.74	2.90			
	30	60.00	15.81	2.78	4.38	18.82	3.50	5.26	21.96	4.38	6.21	23.46	4.83	6.67	24.97	5.34	7.14	27.98	6.40	8.10	31.12	7.55	9.12			
		120.00	15.81	2.56	2.17	18.82	3.28	2.60	21.96	4.09	3.07	23.46	4.52	3.30	24.97	4.99	3.53	27.98	5.98	4.00	31.12	7.07	4.50			
		150.00	15.81	2.50	1.73	18.82	3.21	2.08	21.96	4.01	2.45	23.46	4.43	2.63	24.97	4.89	2.82	27.98	5.89	3.19	31.12	6.89	3.58			
		180.00	15.81	2.45	1.43	18.82	3.17	1.73	21.96	3.98	2.04	23.46	4.40	2.19	24.97	4.85	2.34	27.98	5.82	2.66	31.12	6.81	2.98			
	35	60.00	15.81	3.27	4.50	18.82	4.13	5.41	21.96	5.17	6.39	23.46	5.76	6.89	24.97	6.94	7.52	27.98	7.60	8.39	31.12	9.02	9.46			
		120.00	15.81	3.01	2.22	18.82	3.87	2.67	21.96	4.82	3.16	23.46	5.37	3.40	24.97	6.48	3.71	27.98	7.14	4.14	31.12	8.45	4.66			
		150.00	15.81	2.93	1.77	18.82	3.80	2.13	21.96	4.74	2.52	23.46	5.30	2.71	24.97	6.37	2.95	27.98	6.99	3.30	31.12	8.22	3.71			
		180.00	15.81	2.88	1.47	18.82	3.75	1.77	21.96	4.68	2.09	23.46	5.24	2.26	24.97	6.32	2.46	27.98	6.92	2.74	31.12	8.08	3.08			
	40	60.00	15.81	3.87	4.64	18.82	4.90	5.59	21.96	6.11	6.62	23.46	6.81	7.14	24.97	8.20	7.82	27.98	9.03	8.72	31.12	10.68	9.85			
		120.00	15.81	3.55	2.28	18.82	4.59	2.76	21.96	5.72	3.26	23.46	6.37	3.52	24.97	7.69	3.85	27.98	8.44	4.29	31.12	9.99	4.85			
		150.00	15.81	3.47	1.82	18.82	4.48	2.20	21.96	5.60	2.60	23.46	6.27	2.80	24.97	7.53	3.06	27.98	8.29	3.42	31.12	9.74	3.85			
		180.00	15.81	3.42	1.51	18.82	4.42	1.83	21.96	5.54	2.16	23.46	6.21	2.33	24.97	7.47	2.55	27.98	8.19	2.84	31.12	9.62	3.20			
	45	60.00	15.81	4.48	4.78	18.82	5.65	5.77	21.96	7.06	6.84	23.46	7.87	7.38	24.97	9.48	8.12	27.98	10.42	9.05	31.12	12.36	10.25			
		120.00	15.81	4.09	2.35	18.82	5.31	2.84	21.96	6.60	3.37	23.46	7.36	3.63	24.97	8.91	3.99	27.98	9.76	4.45	31.12	11.53	5.03			
		150.00	15.81	4.01	1.87	18.82	5.18	2.26	21.96	6.47	2.68	23.46	7.24	2.89	24.97	8.70	3.17	27.98	9.57	3.54	31.12	11.28	4.00			
		180.00	15.81	3.96	1.55	18.82	5.12	1.88	21.96	6.41	2.23	23.46	7.16	2.41	24.97	8.61	2.64	27.98	9.49	2.94	31.12	11.16	3.32			
60	10	60.00	13.55	1.01	3.43	16.19	1.25	4.11	18.82	1.51	4.79	20.07	1.67	5.12	21.46	1.82	5.49	23.96	2.19	6.16	26.60	2.56	6.87			
		120.00	13.55	0.92	1.71	16.19	1.17	2.05	18.82	1.41	2.38	20.07	1.58	2.55	21.46	1.68	2.73	23.96	2.02	3.06	26.60	2.39	3.42			
		150.00	13.55	0.89	1.36	16.19	1.13	1.63	18.82	1.39	1.91	20.07	1.54	2.04	21.46	1.66	2.18	23.96	1.97	2.44	26.60	2.31	2.73			
		180.00	13.55	0.87	1.13	16.19	1.11	1.36	18.82	1.39	1.59	20.07	1.52	1.70	21.46	1.64	1.82	23.96	1.95	2.04	26.60	2.25	2.27			
	15	60.00	13.55	1.36	3.51	16.19	1.69	4.21	18.82	2.05	4.92	20.07	2.27	5.27	21.46	2.47	5.64	23.96	2.94	6.34	26.60	3.46	7.09			
		120.00	13.55	1.25	1.74	16.19	1.57	2.09	18.82	1.91	2.44	20.07	2.13	2.62	21.46	2.29	2.80	23.96	2.73	3.15	26.60	3.24	3.52			
		150.00	13.55	1.21	1.39	16.19	1.53	1.67	18.82	1.87	1.95	20.07	2.09	2.09	21.46	2.27	2.24	23.96	2.68	2.51	26.60	3.12	2.80			
		180.00	13.55	1.19	1.16	16.19	1.52	1.39	18.82	1.85	1.62	20.07	2.07	1.74	21.46	2.24	1.86	23.96	2.65	2.09	26.60	3.07	2.33			
	20	60.00	13.55	1.67	3.59	16.19	2.07	4.30	18.82	2.52	5.03	20.07	2.78	5.39	21.46	3.04	5.78	23.96	3.60	6.50	26.60	4.25	7.27			
		120.00	13.55	1.54	1.78	16.19	1.94	2.14	18.82	2.37	2.50	20.07	2.60	2.67	21.46	2.85	2.87	23.96	3.38	3.22	26.60	3.97	3.60			
		150.00	13.55	1.50	1.42	16.19	1.90	1.71	18.82	2.31	1.99	20.07	2.56	2.13	21.46	2.79	2.29	23.96	3.33	2.57	26.60	3.88	2.87			
		180.00	13.55	1.48	1.18	16.19	1.88	1.42	18.82	2.29	1.66	20.07	2.54	1.78	21.46	2.77	1.90	23.96	3.31	2.14	26.60	3.83	2.39			
	25	60.00	13.55	1.95	3.65	16.19	2.40	4.38	18.82	2.97	5.14	20.07	3.28	5.50	21.46	3.57	5.90	23.96	4.24	6.65	26.60	4.97	7.44			
		120.00	13.55	1.79	1.81	16.19	2.26	2.17	18.82	2.77	2.54	20.07	3.05	2.72	21.46	3.34	2.92	23.96	3.98	3.29	26.60	4.67	3.69			
		150.00	13.55	1.74	1.44	16.19	2.22	1.74	18.82	2.73	2.03	20.07	2.99	2.17	21.46	3.28	2.33	23.96	3.89	2.63	26.60	4.54	2.94			
		180.00	13.55	1.72	1.20	16.19	2.20	1.44	18.82	2.70	1.69	20.07	2.98	1.81	21.46	3.26	1.94	23.96	3.84	2.18	26.60	4.48	2.44			
	30	60.00	13.55	2.29	3.73	16.19	2.83	4.48	18.82	3.49	5.26	20.07	3.84	5.64	21.46	4.21	6.05	23.96	5.04	6.84	26.60	5.87	7.65			
		120.00	13.55	2.10	1.84	16.19	2.64	2.22	18.82	3.25	2.60	20.07	3.58	2.79	21.46	3.94	2.99	23.96	4.70	3.38	26.60	5.51	3.78			
		150.00	13.55	2.06	1.47	16.19	2.59	1.77	18.82	3.20	2.08	20.07	3.51	2.22	21.46	3.86	2.39	23.96	4.63	2.70	26.60	5.38	3.02			
		180.00	13.55	2.																						

12HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
50	10	60.00	11.29	0.81	2.85	13.43	0.98	3.40	15.68	1.20	3.98	16.81	1.31	4.27	17.82	1.40	4.53	20.07	1.64	5.12	22.21	1.93	5.69
		120.00	11.29	0.77	1.42	13.43	0.92	1.69	15.68	1.10	1.98	16.81	1.21	2.12	17.82	1.33	2.26	20.07	1.54	2.55	22.21	1.82	2.83
		150.00	11.29	0.73	1.13	13.43	0.90	1.35	15.68	1.10	1.58	16.81	1.17	1.70	17.82	1.29	1.80	20.07	1.49	2.03	22.21	1.73	2.26
		180.00	11.29	0.71	0.94	13.43	0.88	1.12	15.68	1.10	1.32	16.81	1.15	1.41	17.82	1.26	1.50	20.07	1.47	1.69	22.21	1.68	1.88
	15	60.00	11.29	1.11	2.92	13.43	1.33	3.48	15.68	1.60	4.07	16.81	1.76	4.38	17.82	1.92	4.65	20.07	2.24	5.26	22.21	2.59	5.85
		120.00	11.29	1.03	1.45	13.43	1.25	1.73	15.68	1.50	2.02	16.81	1.64	2.17	17.82	1.79	2.31	20.07	2.09	2.61	22.21	2.44	2.91
		150.00	11.29	0.99	1.16	13.43	1.21	1.38	15.68	1.48	1.62	16.81	1.60	1.74	17.82	1.74	1.84	20.07	2.04	2.08	22.21	2.36	2.32
		180.00	11.29	0.97	0.96	13.43	1.19	1.15	15.68	1.46	1.35	16.81	1.58	1.44	17.82	1.72	1.54	20.07	2.01	1.73	22.21	2.33	1.93
	20	60.00	11.29	1.37	2.98	13.43	1.64	3.55	15.68	1.96	4.16	16.81	2.17	4.47	17.82	2.35	4.75	20.07	2.74	5.38	22.21	3.18	5.98
		120.00	11.29	1.25	1.48	13.43	1.54	1.76	15.68	1.86	2.07	16.81	2.03	2.22	17.82	2.20	2.36	20.07	2.59	2.67	22.21	3.01	2.97
		150.00	11.29	1.21	1.18	13.43	1.52	1.41	15.68	1.82	1.65	16.81	1.99	1.77	17.82	2.16	1.88	20.07	2.54	2.13	22.21	2.93	2.37
		180.00	11.29	1.19	0.98	13.43	1.50	1.17	15.68	1.79	1.37	16.81	1.97	1.48	17.82	2.14	1.57	20.07	2.51	1.77	22.21	2.87	1.97
	25	60.00	11.29	1.58	3.03	13.43	1.91	3.62	15.68	2.30	4.24	16.81	2.50	4.55	17.82	2.74	4.85	20.07	3.26	5.50	22.21	3.80	6.13
		120.00	11.29	1.45	1.50	13.43	1.78	1.79	15.68	2.16	2.10	16.81	2.36	2.26	17.82	2.57	2.40	20.07	3.04	2.72	22.21	3.53	3.03
		150.00	11.29	1.41	1.20	13.43	1.76	1.43	15.68	2.12	1.68	16.81	2.30	1.80	17.82	2.51	1.92	20.07	2.99	2.17	22.21	3.45	2.42
		180.00	11.29	1.41	1.00	13.43	1.74	1.19	15.68	2.10	1.40	16.81	2.26	1.50	17.82	2.47	1.59	20.07	2.94	1.81	22.21	3.42	2.01
	30	60.00	11.29	1.83	3.09	13.43	2.22	3.69	15.68	2.71	4.33	16.81	2.96	4.66	17.82	3.22	4.96	20.07	3.80	5.63	22.21	4.44	6.28
		120.00	11.29	1.67	1.53	13.43	2.07	1.83	15.68	2.52	2.15	16.81	2.77	2.31	17.82	3.02	2.46	20.07	3.57	2.79	22.21	4.15	3.11
		150.00	11.29	1.62	1.22	13.43	2.01	1.46	15.68	2.46	1.71	16.81	2.72	1.84	17.82	2.97	1.96	20.07	3.50	2.22	22.21	4.05	2.48
		180.00	11.29	1.60	1.01	13.43	2.00	1.21	15.68	2.44	1.42	16.81	2.70	1.53	17.82	2.95	1.63	20.07	3.45	1.85	22.21	3.97	2.06
	35	60.00	11.29	2.12	3.16	13.43	2.60	3.78	15.68	3.20	4.45	16.81	3.48	4.78	17.82	3.82	5.10	20.07	4.51	5.79	22.21	5.30	6.48
		120.00	11.29	1.95	1.56	13.43	2.43	1.87	15.68	2.97	2.20	16.81	3.26	2.37	17.82	3.57	2.52	20.07	4.22	2.86	22.21	4.94	3.20
		150.00	11.29	1.90	1.24	13.43	2.39	1.49	15.68	2.91	1.75	16.81	3.20	1.89	17.82	3.51	2.01	20.07	4.15	2.28	22.21	4.82	2.55
		180.00	11.29	1.86	1.03	13.43	2.35	1.24	15.68	2.89	1.46	16.81	3.18	1.57	17.82	3.48	1.67	20.07	4.10	1.90	22.21	4.74	2.12
	40	60.00	11.29	2.50	3.25	13.43	3.07	3.89	15.68	3.77	4.58	16.81	4.14	4.94	17.82	4.52	5.27	20.07	5.34	5.99	22.21	6.29	6.72
		120.00	11.29	2.30	1.60	13.43	2.87	1.92	15.68	3.52	2.26	16.81	3.86	2.44	17.82	4.23	2.60	20.07	5.00	2.95	22.21	5.87	3.31
		150.00	11.29	2.24	1.28	13.43	2.82	1.53	15.68	3.46	1.80	16.81	3.80	1.94	17.82	4.14	2.07	20.07	4.90	2.35	22.21	5.72	2.63
		180.00	11.29	2.21	1.06	13.43	2.80	1.28	15.68	3.42	1.50	16.81	3.76	1.62	17.82	4.10	1.72	20.07	4.85	1.96	22.21	5.64	2.19
	45	60.00	11.29	2.89	3.34	13.43	3.55	4.00	15.68	4.34	4.72	16.81	4.80	5.09	17.82	5.23	5.43	20.07	6.17	6.19	22.21	7.25	6.94
		120.00	11.29	2.67	1.65	13.43	3.32	1.97	15.68	4.05	2.33	16.81	4.46	2.51	17.82	4.89	2.68	20.07	5.78	3.05	22.21	6.80	3.42
		150.00	11.29	2.59	1.31	13.43	3.26	1.57	15.68	3.99	1.85	16.81	4.38	2.00	17.82	4.78	2.13	20.07	5.66	2.43	22.21	6.63	2.72
		180.00	11.29	2.54	1.09	13.43	3.22	1.31	15.68	3.97	1.54	16.81	4.32	1.66	17.82	4.74	1.77	20.07	5.61	2.02	22.21	6.54	2.26

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
130	10	60.00	36.82	7.92	6.78	36.66	7.99	6.72	36.60	8.27	6.64	36.43	8.25	6.61	36.26	8.18	6.59	35.90	8.54	6.42
		120.00	37.65	7.86	3.49	37.27	8.02	3.43	37.22	8.33	3.39	37.06	8.25	3.38	36.77	8.16	3.35	36.44	8.50	3.28
		150.00	37.89	7.97	2.81	37.51	8.14	2.76	37.47	8.36	2.73	37.19	8.28	2.71	37.03	8.28	2.70	36.71	8.92	2.61
		180.00	38.01	8.03	2.34	37.63	8.19	2.30	37.59	8.39	2.28	37.31	8.29	2.27	37.16	8.36	2.25	36.85	9.11	2.17
	15	60.00	36.94	7.09	7.00	36.79	7.09	6.97	36.60	7.41	6.85	36.43	7.43	6.80	36.26	7.29	6.79	35.90	7.67	6.62
		120.00	38.13	6.80	3.67	37.87	6.97	3.62	37.71	7.34	3.56	37.69	7.21	3.57	37.29	7.06	3.54	37.12	7.42	3.48
		150.00	38.37	6.97	2.95	38.23	7.13	2.92	38.21	7.34	2.90	38.07	7.21	2.89	37.80	7.26	2.86	37.53	8.17	2.75
		180.00	38.49	7.05	2.46	38.35	7.22	2.43	38.46	7.34	2.43	38.20	7.21	2.42	38.06	7.36	2.40	37.80	8.55	2.29
	20	60.00	38.37	6.51	7.47	38.11	6.51	7.41	38.08	6.70	7.36	37.82	6.68	7.30	37.55	6.72	7.23	37.12	7.42	6.97
		120.00	39.56	6.33	3.90	39.32	6.48	3.85	39.20	6.68	3.81	38.96	6.78	3.77	38.84	6.90	3.75	38.48	7.16	3.67
		150.00	39.68	6.33	3.13	39.56	6.48	3.10	39.69	6.73	3.09	39.46	6.78	3.07	39.09	6.90	3.02	38.75	7.62	2.92
		180.00	39.80	6.33	2.62	39.80	6.48	2.60	39.94	6.74	2.60	39.59	6.78	2.56	39.22	6.90	2.53	38.88	7.86	2.42
	25	60.00	43.53	6.74	8.63	43.29	6.89	8.54	42.93	7.19	8.38	42.80	7.30	8.33	42.56	7.43	8.24	42.20	7.72	8.09
		120.00	43.53	6.65	4.32	43.29	6.85	4.27	42.93	7.06	4.21	42.80	7.19	4.18	42.56	7.32	4.13	42.20	7.59	4.06
		150.00	43.53	6.55	3.47	43.29	6.67	3.44	42.93	6.95	3.38	42.80	7.08	3.35	42.56	7.20	3.32	42.20	7.46	3.26
		180.00	43.53	6.50	2.89	43.29	6.58	2.87	42.93	6.91	2.82	42.80	7.01	2.80	42.56	7.13	2.77	42.20	7.41	2.72
	30	60.00	46.90	7.25	9.30	47.13	7.28	9.35	46.65	7.64	9.15	45.15	7.72	8.78	46.05	7.93	8.94	42.93	7.13	8.40
		120.00	46.90	7.01	4.68	47.13	7.23	4.68	46.65	7.47	4.59	45.15	7.59	4.40	46.05	7.64	4.50	42.93	6.86	4.23
		150.00	46.90	6.90	3.75	47.13	7.03	3.76	46.65	7.34	3.69	45.15	7.45	3.54	46.05	7.64	3.60	42.93	6.86	3.38
		180.00	46.90	6.86	3.13	47.13	6.93	3.14	46.65	7.27	3.08	45.15	7.39	2.95	46.05	7.64	3.00	42.93	6.86	2.82
	35	60.00	51.34	7.63	10.25	50.98	7.80	10.13	49.30	7.56	9.79	46.20	7.17	9.15	46.05	7.05	9.15	42.93	6.26	8.60
		120.00	51.34	7.39	5.15	50.98	7.62	5.08	49.30	7.42	4.91	46.20	7.05	4.59	46.05	6.90	4.59	42.93	6.01	4.33
		150.00	51.34	7.39	4.12	50.98	7.55	4.07	49.30	7.29	3.94	46.20	6.93	3.68	46.05	6.78	3.68	42.93	6.01	3.46
		180.00	51.34	7.39	3.44	50.98	7.51	3.40	49.30	7.22	3.29	46.20	6.86	3.08	46.05	6.72	3.07	42.93	6.01	2.89
	40	60.00	51.34	7.39	10.31	50.98	7.55	10.19	49.30	7.29	9.85	46.20	6.93	9.21	46.05	6.78	9.21	42.93	5.89	8.69
		120.00	51.34	7.13	5.18	50.98	7.35	5.12	49.30	7.04	4.96	46.20	6.66	4.64	46.05	6.50	4.64	42.93	5.65	4.37
		150.00	51.34	7.01	4.16	50.98	7.24	4.10	49.30	7.04	3.96	46.20	6.66	3.71	46.05	6.50	3.71	42.93	5.65	3.50
		180.00	51.34	6.94	3.47	50.98	7.16	3.43	49.30	7.04	3.30	46.20	6.66	3.09	46.05	6.50	3.09	42.93	5.65	2.91
	45	60.00	51.34	7.13	10.37	50.98	7.29	10.25	49.30	7.04	9.91	46.20	6.66	9.27	46.05	6.50	9.28	42.93	5.51	8.78
		120.00	51.34	6.89	5.21	50.98	7.09	5.15	49.30	6.64	5.00	46.20	6.29	4.68	46.05	6.13	4.68	42.93	5.27	4.42
		150.00	51.34	6.63	4.19	50.98	6.91	4.13	49.30	6.77	3.99	46.20	6.39	3.73	46.05	6.25	3.73	42.93	5.27	3.53
		180.00	51.34	6.51	3.50	50.98	6.82	3.45	49.30	6.84	3.32	46.20	6.47	3.11	46.05	6.32	3.11	42.93	5.27	2.94
120	10	60.00	37.05	8.23	6.76	37.03	8.45	6.70	37.34	8.75	6.71	36.85	8.77	6.59	36.68	8.91	6.51	36.38	8.91	6.44
		120.00	37.81	8.35	3.45	37.54	8.58	3.40	37.74	8.87	3.39	37.26	8.81	3.34	37.10	8.88	3.31	36.81	8.94	3.27
		150.00	37.93	8.31	2.78	37.54	8.58	2.72	38.00	8.90	2.73	37.39	8.84	2.68	37.24	8.93	2.66	36.96	9.24	2.60
		180.00	38.06	8.29	2.33	37.41	8.58	2.25	38.00	8.93	2.27	37.39	8.88	2.23	37.24	8.95	2.21	37.10	9.40	2.17
	15	60.00	37.30	7.30	7.04	37.16	7.47	6.96	37.34	7.77	6.93	36.85	7.88	6.79	36.68	7.93	6.74	36.38	8.00	6.66
		120.00	38.06	7.35	3.60	38.05	7.53	3.58	38.27	7.82	3.57	37.66	7.77	3.50	37.37	7.70	3.48	37.25	7.87	3.45
		150.00	38.31	7.24	2.91	38.05	7.47	2.87	38.53	7.82	2.88	37.93	7.77	2.83	37.79	7.70	2.82	37.54	8.41	2.73
		180.00	38.44	7.19	2.44	37.92	7.44	2.38	38.67	7.82	2.41	38.06	7.77	2.37	37.92	7.70	2.36	37.68	8.67	2.27
	20	60.00	38.31	6.54	7.45	38.18	6.63	7.40	38.40	6.83	7.40	37.66	6.96	7.20	37.51	7.22	7.10	37.25	7.58	6.96
		120.00	39.32	6.54	3.84	39.08	6.73	3.79	39.20	6.95	3.78	38.60	7.08	3.70	38.48	7.20	3.67	38.12	7.47	3.59
		150.00	39.44	6.48	3.09	39.08	6.68	3.04	39.60	6.95	3.06	38.86	7.08	2.98	38.75	7.22	2.96	38.41	7.74	2.88
		180.00	39.57	6.45	2.59	39.08	6.65	2.54	39.73	6.95	2.56	39.00	7.08	2.50	38.75	7.24	2.46	38.55	7.87	2.40
	25	60.00	43.03	7.03	8.44	42.80	7.19	8.35	42.44	7.42	8.21	42.32	7.62	8.14	42.08	7.78	8.04	39.56	7.13	7.61
		120.00	43.17	6.92	4.25	42.80	7.14	4.18	42.44	7.37	4.11	42.32	7.49	4.08	42.08	7.64	4.04	39.56	7.00	3.82
		150.00	43.30	6.67	3.44	42.80	6.96	3.36	42.44	7.23	3.30	42.32	7.49	3.27	42.08	7.51	3.24	39.56	7.00	3.05
		180.00	43.30	6.55	2.87	42.80	6.86	2.81	42.44	7.17	2.76	42.32	7.49	2.72	42.08	7.43	2.71	39.56	7.00	2.55
	30	60.00	47.01	7.58	9.25	46.53	7.71	9.10	45.45	7.63	8.87	44.01	7.26	8.62	42.56	7.05	8.33	39.56	6.20	7.82
		120.00	47.01	7.32	4.65	46.53	7.54	4.57	45.45	7.49	4.45	44.01	7.13	4.32	42.56	6.77	4.20	39.56	6.08	3.93
		150.00	47.01	7.09	3.74	46.53	7.37	3.67	45.45	7.34	3.58	44.01	7.13	3.46	42.56	6.77	3.36	39.56	5.95	3.15
		180.00	47.01	6.96	3.13	46.53	7.28	3.07	45.45	7.26	2.99	44.01	7.13	2.88	42.56	6.77	2.80	39.56	5.90	2.63
	35	60.00	50.74	8.17	9.98	48.34	7.50	9.58	45.45	6.83	9.06	44.01	6.49	8.80	42.56	6.19	8.53	39.56	5.46	8.00
		120.00	50.74	7.71	5.05	48.34	7.21	4.82	45.45	6.56	4.56	44.01	6.24	4.43	42.56	5.94	4.29	39.56	5.34	4.01
		150.00	50.74	7.61	4.05	48.34	7.16	3.86	45.45	6.56	3.65	44.01	6.24	3.54	42.56	5.94	3.44	39.56	5.22	3.22
		180.00	50.74	7.57	3.37	48.34	7.14	3.22	45.45	6.56	3.04	44.01	6.24	2.95	42.56	5.94	2.86	39.56	5.16	2.69
40	60.00	50.74	7.89	10.05	48.34	7.14	9.66	45.45	6.45	9.15	44.01	6.12	8.89	42.56	5.81	8.62	39.56	5.09	8.08	
	120.00	50.74	7.27	5.10	48.34	6.81	4.87	45.45	6.18	4.60	44.01	5.86	4.47	42.56	5.55	4.34	39.56	4.98	4.05	
	150.00	50.74	7.17	4.09	48.34	6.71	3.91	45.45	6.18	3.68	44.01	5.86	3.58	42.56	5.55	3.47	39.56	4.85	3.26	
	180.00	50.74	7.13	3.41	48.34	6.67	3.26	45.45	6.18	3.07	44.01	5.86	2.98	42.56	5.55	2.89	39.56	4.78	2.72	
45	60.00	50.74	7.59	10.12	48.34	6.77	9.75	45.45	6.05	9.24	44.4									

12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
110	10	60.00	37.37	8.88	6.68	37.49	9.13	6.65	37.38	9.49	6.54	37.23	9.47	6.51	36.96	9.80	6.37	35.42	8.85	6.23
		120.00	37.90	8.95	3.39	37.90	9.24	3.36	37.52	9.60	3.27	37.52	9.52	3.28	37.26	9.76	3.22	35.57	8.89	3.13
		150.00	38.03	8.95	2.73	38.03	9.24	2.70	37.66	9.59	2.63	37.66	9.50	2.64	37.26	9.81	2.58	35.72	8.98	2.51
		180.00	38.16	8.95	2.28	38.17	9.24	2.26	37.80	9.57	2.21	37.66	9.49	2.20	37.40	9.83	2.16	35.72	9.03	2.09
	15	60.00	37.37	7.84	6.93	37.62	8.11	6.92	37.38	8.47	6.78	37.23	8.51	6.74	36.96	8.72	6.62	35.42	7.95	6.44
		120.00	38.03	7.80	3.54	38.17	8.11	3.52	37.80	8.47	3.44	37.66	8.39	3.43	37.55	8.46	3.41	35.87	7.82	3.29
		150.00	38.29	7.74	2.87	38.31	8.05	2.84	37.94	8.37	2.77	37.81	8.27	2.77	37.55	8.46	2.73	36.01	7.95	2.63
		180.00	38.43	7.71	2.40	38.44	8.02	2.38	38.08	8.30	2.33	37.95	8.21	2.32	37.70	8.46	2.29	36.16	8.03	2.20
	20	60.00	38.16	6.79	7.36	38.31	7.04	7.33	37.94	7.28	7.19	37.66	7.40	7.10	37.55	7.68	7.01	35.87	7.22	6.72
		120.00	38.96	6.84	3.77	38.72	7.04	3.71	38.36	7.28	3.64	38.24	7.40	3.62	38.00	7.53	3.57	36.31	7.16	3.42
		150.00	39.22	6.84	3.04	39.13	7.04	3.01	38.50	7.28	2.93	38.38	7.28	2.92	38.14	7.53	2.87	36.46	7.16	2.75
		180.00	39.35	6.84	2.54	39.26	7.04	2.52	38.64	7.28	2.45	38.52	7.22	2.45	38.29	7.53	2.40	36.46	7.16	2.29
	25	60.00	42.40	7.29	8.23	42.32	7.60	8.14	41.72	7.70	7.98	40.28	7.34	7.73	38.96	6.99	7.50	36.31	6.14	7.08
		120.00	42.68	7.24	4.16	42.32	7.47	4.09	41.72	7.57	4.00	40.28	7.20	3.88	38.96	6.84	3.77	36.31	6.14	3.54
		150.00	42.97	7.24	3.35	42.32	7.50	3.27	41.72	7.41	3.22	40.28	7.20	3.10	38.96	6.72	3.02	36.31	6.01	2.84
		180.00	43.11	7.24	2.80	42.32	7.50	2.72	41.72	7.34	2.69	40.28	7.20	2.59	38.96	6.65	2.53	36.31	5.96	2.37
	30	60.00	46.41	7.80	9.05	44.37	7.37	8.68	41.72	6.58	8.24	40.28	6.37	7.95	38.96	6.09	7.71	36.31	5.63	7.20
		120.00	46.41	7.66	4.54	44.37	7.21	4.36	41.72	6.43	4.14	40.28	6.24	3.99	38.96	5.94	3.87	36.31	5.48	3.62
		150.00	46.41	7.60	3.64	44.37	7.09	3.50	41.72	6.30	3.32	40.28	6.11	3.21	38.96	5.94	3.10	36.31	5.48	2.89
		180.00	46.41	7.58	3.04	44.37	7.01	2.92	41.72	6.23	2.77	40.28	6.06	2.68	38.96	5.94	2.58	36.31	5.48	2.41
	35	60.00	47.01	7.18	9.34	44.37	6.45	8.89	41.72	5.91	8.40	40.28	5.73	8.10	38.96	5.33	7.89	36.31	4.84	7.38
		120.00	47.01	6.90	4.70	44.37	6.32	4.46	41.72	5.76	4.22	40.28	5.60	4.07	38.96	5.22	3.96	36.31	4.71	3.71
		150.00	47.01	6.72	3.78	44.37	6.18	3.58	41.72	5.63	3.39	40.28	5.60	3.25	38.96	5.22	3.17	36.31	4.71	2.96
		180.00	47.01	6.64	3.16	44.37	6.11	2.99	41.72	5.58	2.83	40.28	5.60	2.71	38.96	5.22	2.64	36.31	4.71	2.47
	40	60.00	47.01	6.76	9.44	44.37	6.18	8.96	41.72	5.51	8.49	40.28	5.34	8.19	38.96	4.95	7.98	36.31	4.45	7.47
		120.00	47.01	6.48	4.75	44.37	5.90	4.51	41.72	5.25	4.28	40.28	5.19	4.11	38.96	4.82	4.00	36.31	4.33	3.75
		150.00	47.01	6.38	3.81	44.37	5.77	3.62	41.72	5.25	3.42	40.28	5.06	3.30	38.96	4.68	3.22	36.31	4.20	3.01
		180.00	47.01	6.34	3.18	44.37	5.69	3.02	41.72	5.25	2.85	40.28	4.99	2.76	38.96	4.62	2.68	36.31	4.13	2.52
	45	60.00	47.01	6.32	9.54	44.37	5.90	9.02	41.72	5.11	8.59	40.28	4.93	8.29	38.96	4.55	8.07	36.31	4.06	7.56
		120.00	47.01	6.04	4.80	44.37	5.50	4.56	41.72	4.71	4.34	40.28	4.79	4.16	38.96	4.43	4.05	36.31	3.94	3.80
		150.00	47.01	6.04	3.84	44.37	5.35	3.66	41.72	4.86	3.46	40.28	4.53	3.35	38.96	4.16	3.26	36.31	3.69	3.06
		180.00	47.01	6.04	3.20	44.37	5.27	3.06	41.72	4.93	2.88	40.28	4.40	2.80	38.96	4.03	2.73	36.31	3.55	2.56
100	10	60.00	37.36	9.34	6.57	37.80	9.84	6.56	37.50	10.33	6.37	36.67	9.60	6.35	35.47	9.32	6.13	33.07	8.28	5.81
		120.00	37.78	9.53	3.31	37.94	9.97	3.28	37.50	10.46	3.17	36.67	9.65	3.17	35.47	9.35	3.06	33.07	8.32	2.90
		150.00	38.06	9.48	2.68	38.09	9.97	2.64	37.50	10.44	2.54	36.67	9.63	2.54	35.47	9.32	2.45	33.07	8.28	2.33
		180.00	38.20	9.47	2.25	38.24	9.97	2.21	37.50	10.42	2.12	36.67	9.62	2.11	35.47	9.32	2.04	33.07	8.27	1.94
	15	60.00	37.64	8.25	6.89	37.80	8.70	6.82	37.50	9.22	6.63	36.67	8.63	6.58	35.47	8.29	6.37	33.07	7.44	6.01
		120.00	37.78	8.41	3.44	37.94	8.73	3.43	37.50	9.22	3.32	36.67	8.51	3.30	35.47	8.17	3.20	33.07	7.32	3.02
		150.00	38.06	8.27	2.79	38.24	8.65	2.78	37.50	9.11	2.66	36.67	8.39	2.65	35.47	8.05	2.57	33.07	7.20	2.43
		180.00	38.20	8.19	2.35	38.24	8.61	2.32	37.50	9.04	2.22	36.67	8.32	2.22	35.47	7.97	2.15	33.07	7.13	2.03
	20	60.00	37.92	7.05	7.24	38.09	7.37	7.20	37.50	7.80	6.97	36.67	7.39	6.87	35.47	7.02	6.67	33.07	6.45	6.24
		120.00	38.48	7.18	3.67	38.24	7.40	3.62	37.50	7.80	3.48	36.67	7.26	3.45	35.47	6.90	3.35	33.07	6.19	3.15
		150.00	38.62	7.05	2.96	38.53	7.34	2.93	37.50	7.67	2.80	36.67	7.13	2.77	35.47	6.76	2.69	33.07	6.09	2.53
		180.00	38.75	6.99	2.48	38.67	7.30	2.45	37.50	7.60	2.34	36.67	7.07	2.31	35.47	6.69	2.25	33.07	6.02	2.11
	25	60.00	41.48	7.59	7.95	40.28	7.37	7.72	37.50	6.69	7.23	36.67	6.37	7.11	35.47	6.04	6.90	33.07	5.33	6.51
		120.00	42.08	7.61	4.04	40.28	7.20	3.88	37.50	6.54	3.63	36.67	6.23	3.57	35.47	5.91	3.47	33.07	5.33	3.25
		150.00	42.23	7.44	3.26	40.28	7.14	3.11	37.50	6.44	2.91	36.67	6.10	2.87	35.47	5.91	2.77	33.07	5.19	2.62
		180.00	42.38	7.36	2.74	40.28	7.13	2.59	37.50	6.36	2.43	36.67	6.03	2.40	35.47	5.91	2.31	33.07	5.14	2.18
	30	60.00	42.68	6.94	8.38	40.28	6.38	7.95	37.50	5.74	7.45	36.67	5.57	7.29	35.47	5.15	7.11	33.07	4.81	6.63
		120.00	42.68	6.82	4.21	40.28	6.24	3.99	37.50	5.69	3.73	36.67	5.42	3.66	35.47	5.15	3.56	33.07	4.66	3.33
		150.00	42.68	6.67	3.38	40.28	6.24	3.19	37.50	5.61	2.99	36.67	5.42	2.93	35.47	5.03	2.86	33.07	4.66	2.67
		180.00	42.68	6.59	2.82	40.28	6.24	2.66	37.50	5.57	2.50	36.67	5.42	2.44	35.47	4.95	2.39	33.07	4.66	2.22
	35	60.00	42.68	6.26	8.54	40.28	5.75	8.10	37.50	5.07	7.61	36.67	4.94	7.44	35.47	4.69	7.22	33.07	4.26	6.76
		120.00	42.68	5.98	4.30	40.28	5.48	4.08	37.50	5.02	3.81	36.67	4.79	3.74	35.47	4.56	3.62	33.07	4.13	3.39
		150.00	42.68	5.98	3.44	40.28	5.48	3.26	37.50	4.94	3.05	36.67	4.79	2.99	35.47	4.56	2.90	33.07	4.13	2.71
		180.00	42.68	5.98	2.87	40.28	5.48	2.72	37.50	4.91	2.55	36.67	4.79	2.49	35.47	4.56	2.42	33.07	4.13	2.26
40	60.00	42.68	5.84	8.64	40.28	5.33	8.20	37.50	4.54	7.73	36.67	4.40	7.57	35.47	4.15	7.35	33.07	3.87	6.85	
	120.00	42.68	5.56	4.35	40.28	5.07	4.13	37.50	4.48	3.87	36.67	4.25	3.80	35.47	4.02	3.69	33.07	3.74	3.44	
	150.00	42.68	5.45	3.49	40.28	5.07	3.30	37.50	4.41	3.10	36.67	4.25	3.04	35.47	4.02	2.95	33.07	3.74	2.75	
	180.00	42.68	5.37	2.92	40.28	5.07	2.75	37.50	4.35	2.59	36.67	4.25	2.53	35.47	4.02	2.46	33.07	3.74	2.29	
45	60.00	42.68	5.45	8.73	40.28	4.92	8.29													

VRF MW



12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
90	10	60.00	37.84	10.38	6.44	36.31	9.73	6.23	34.15	8.71	5.97	32.95	8.27	5.79	31.86	8.01	5.59	29.70	6.98	5.33
		120.00	37.68	10.42	3.20	36.16	9.78	3.09	34.15	8.75	2.98	32.95	8.32	2.89	31.86	7.99	2.80	29.70	7.01	2.66
		150.00	38.00	10.38	2.59	36.31	9.74	2.49	34.15	8.71	2.39	32.95	8.28	2.31	31.86	8.01	2.24	29.70	7.03	2.13
		180.00	38.15	10.36	2.17	36.31	9.73	2.08	34.15	8.71	1.99	32.95	8.27	1.93	31.86	8.03	1.86	29.70	7.05	1.77
	15	60.00	38.00	8.95	6.81	36.47	8.50	6.56	34.15	7.76	6.19	32.95	7.45	5.98	31.86	7.15	5.80	29.70	6.28	5.49
		120.00	37.68	8.80	3.39	36.16	8.36	3.26	34.15	7.64	3.11	32.95	7.32	3.01	31.86	6.90	2.93	29.70	6.15	2.76
		150.00	38.00	8.69	2.75	36.31	8.23	2.63	34.15	7.52	2.50	32.95	7.19	2.42	31.86	6.90	2.34	29.70	6.15	2.21
		180.00	38.15	8.62	2.31	36.47	8.17	2.21	34.15	7.44	2.09	32.95	7.13	2.02	31.86	6.90	1.95	29.70	6.15	1.84
	20	60.00	38.15	7.58	7.17	36.62	7.24	6.89	34.15	6.62	6.46	32.95	6.30	6.25	31.86	6.12	6.04	29.70	5.55	5.66
		120.00	38.00	7.58	3.57	36.31	7.15	3.42	34.15	6.49	3.24	32.95	6.19	3.14	31.86	5.88	3.05	29.70	5.29	2.86
		150.00	38.15	7.47	2.88	36.47	7.10	2.76	34.15	6.49	2.59	32.95	6.19	2.51	31.86	5.88	2.44	29.70	5.29	2.29
		180.00	38.31	7.39	2.42	36.47	7.08	2.30	34.15	6.49	2.16	32.95	6.19	2.09	31.86	5.88	2.03	29.70	5.29	1.91
	25	60.00	38.02	6.75	7.33	36.31	6.18	7.07	34.15	5.71	6.67	32.95	5.33	6.48	31.86	5.21	6.25	29.70	4.73	5.86
		120.00	38.48	6.70	3.73	36.31	6.13	3.54	34.15	5.58	3.35	32.95	5.33	3.24	31.86	5.07	3.14	29.70	4.59	2.94
		150.00	38.63	6.52	3.01	36.31	6.00	2.84	34.15	5.58	2.68	32.95	5.19	2.60	31.86	5.07	2.51	29.70	4.59	2.36
		180.00	38.63	6.43	2.52	36.31	5.92	2.38	34.15	5.58	2.23	32.95	5.14	2.17	31.86	5.07	2.09	29.70	4.59	1.96
	30	60.00	38.48	5.94	7.63	36.31	5.44	7.24	34.15	5.00	6.84	32.95	4.81	6.60	31.86	4.57	6.40	29.70	4.03	6.02
		120.00	38.48	5.81	3.83	36.31	5.33	3.63	34.15	4.88	3.43	32.95	4.66	3.32	31.86	4.45	3.21	29.70	4.03	3.01
		150.00	38.48	5.68	3.08	36.31	5.18	2.92	34.15	4.88	2.75	32.95	4.66	2.65	31.86	4.45	2.57	29.70	3.91	2.42
		180.00	38.48	5.61	2.57	36.31	5.11	2.44	34.15	4.88	2.29	32.95	4.66	2.21	31.86	4.45	2.14	29.70	3.86	2.02
	35	60.00	38.48	5.28	7.79	36.31	4.86	7.38	34.15	4.45	6.97	32.95	4.27	6.73	31.86	4.07	6.52	29.70	3.71	6.10
		120.00	38.48	5.13	3.91	36.31	4.71	3.71	34.15	4.32	3.50	32.95	4.13	3.38	31.86	3.94	3.27	29.70	3.59	3.06
		150.00	38.48	5.00	3.14	36.31	4.59	2.98	34.15	4.18	2.81	32.95	4.01	2.71	31.86	3.94	2.62	29.70	3.59	2.45
		180.00	38.48	4.93	2.62	36.31	4.51	2.49	34.15	4.10	2.35	32.95	3.95	2.27	31.86	3.94	2.18	29.70	3.59	2.04
	40	60.00	38.48	4.88	7.88	36.31	4.46	7.47	34.15	3.92	7.09	32.95	3.76	6.85	31.86	3.69	6.61	29.70	3.32	6.19
		120.00	38.48	4.60	3.97	36.31	4.33	3.75	34.15	3.80	3.56	32.95	3.63	3.44	31.86	3.54	3.32	29.70	3.20	3.11
		150.00	38.48	4.60	3.18	36.31	4.33	3.00	34.15	3.80	2.85	32.95	3.63	2.75	31.86	3.54	2.66	29.70	3.20	2.49
		180.00	38.48	4.60	2.65	36.31	4.33	2.50	34.15	3.80	2.37	32.95	3.63	2.29	31.86	3.54	2.21	29.70	3.20	2.07
	45	60.00	38.48	4.47	7.98	36.31	4.06	7.56	34.15	3.40	7.21	32.95	3.24	6.97	31.86	3.29	6.70	29.70	2.93	6.28
		120.00	38.48	4.40	4.03	36.31	3.93	3.80	34.15	3.27	3.62	32.95	3.11	3.50	31.86	3.16	3.37	29.70	2.81	3.15
		150.00	38.48	4.20	3.22	36.31	4.06	3.03	34.15	3.40	2.88	32.95	3.24	2.79	31.86	3.16	2.69	29.70	2.81	2.52
		180.00	38.48	4.27	2.67	36.31	4.13	2.52	34.15	3.45	2.40	32.95	3.31	2.32	31.86	3.16	2.24	29.70	2.81	2.10
80	10	60.00	34.00	8.77	5.92	32.07	8.02	5.64	30.30	7.11	5.44	29.34	6.91	5.26	28.38	6.55	5.12	26.45	5.95	4.81
		120.00	34.15	8.71	2.98	32.22	7.97	2.84	30.30	7.11	2.72	29.34	6.93	2.63	28.38	6.57	2.56	26.45	5.95	2.40
		150.00	34.15	8.69	2.39	32.22	8.01	2.27	30.30	7.14	2.17	29.34	6.89	2.11	28.38	6.53	2.05	26.45	5.92	1.93
		180.00	34.15	8.67	1.99	32.07	8.02	1.88	30.30	7.16	1.81	29.34	6.88	1.76	28.38	6.52	1.71	26.45	5.90	1.61
	15	60.00	34.15	7.94	6.15	32.22	7.20	5.87	30.30	6.32	5.62	29.34	6.23	5.42	28.38	5.85	5.28	26.45	5.35	4.95
		120.00	34.15	7.67	3.11	32.22	6.93	2.97	30.30	6.22	2.82	29.34	6.09	2.73	28.38	5.73	2.66	26.45	5.23	2.49
		150.00	34.15	7.51	2.50	32.22	6.93	2.37	30.30	6.22	2.26	29.34	5.96	2.19	28.38	5.59	2.14	26.45	5.09	2.00
		180.00	34.15	7.43	2.09	32.22	6.93	1.98	30.30	6.22	1.88	29.34	5.89	1.83	28.38	5.51	1.79	26.45	5.04	1.67
	20	60.00	34.15	6.67	6.44	32.22	6.13	6.12	30.30	5.45	5.83	29.34	5.33	5.63	28.38	5.09	5.46	26.45	4.61	5.12
		120.00	34.15	6.53	3.24	32.22	5.98	3.08	30.30	5.45	2.91	29.34	5.19	2.83	28.38	4.95	2.75	26.45	4.47	2.58
		150.00	34.15	6.39	2.60	32.22	5.84	2.47	30.30	5.32	2.34	29.34	5.19	2.27	28.38	4.83	2.21	26.45	4.47	2.06
		180.00	34.15	6.32	2.18	32.22	5.79	2.07	30.30	5.25	1.96	29.34	5.19	1.89	28.38	4.76	1.85	26.45	4.47	1.72
	25	60.00	34.15	5.76	6.66	32.22	5.29	6.32	30.30	4.71	6.00	29.34	4.62	5.80	28.38	4.42	5.62	26.45	4.03	5.26
		120.00	34.15	5.61	3.35	32.22	5.15	3.17	30.30	4.71	3.00	29.34	4.50	2.91	28.38	4.30	2.82	26.45	3.90	2.64
		150.00	34.15	5.50	2.69	32.22	5.15	2.54	30.30	4.57	2.41	29.34	4.50	2.33	28.38	4.30	2.26	26.45	3.90	2.12
		180.00	34.15	5.42	2.25	32.22	5.15	2.12	30.30	4.52	2.02	29.34	4.50	1.94	28.38	4.30	1.88	26.45	3.90	1.76
	30	60.00	34.15	4.99	6.84	32.22	4.64	6.47	30.30	4.29	6.10	29.34	4.10	5.92	28.38	3.92	5.74	26.45	3.59	5.36
		120.00	34.15	4.84	3.44	32.22	4.51	3.25	30.30	4.14	3.07	29.34	3.98	2.97	28.38	3.79	2.88	26.45	3.45	2.70
		150.00	34.15	4.84	2.75	32.22	4.51	2.60	30.30	4.14	2.45	29.34	3.98	2.38	28.38	3.79	2.31	26.45	3.45	2.16
		180.00	34.15	4.84	2.29	32.22	4.51	2.17	30.30	4.14	2.05	29.34	3.98	1.98	28.38	3.79	1.92	26.45	3.45	1.80
	35	60.00	34.15	4.53	6.95	32.22	4.13	6.59	30.30	3.82	6.21	29.34	3.54	6.05	28.38	3.51	5.83	26.45	3.10	5.48
		120.00	34.15	4.40	3.49	32.22	4.01	3.31	30.30	3.69	3.12	29.34	3.54	3.03	28.38	3.39	2.93	26.45	3.10	2.74
		150.00	34.15	4.40	2.79	32.22	3.88	2.66	30.30	3.69	2.50	29.34	3.40	2.43	28.38	3.39	2.34	26.45	2.98	2.20
		180.00	34.15	4.40	2.33	32.22	3.81	2.22	30.30	3.69	2.08	29.34	3.35	2.03	28.38	3.39	1.95	26.45	2.91	1.84
	40	60.00	34.15	4.25	7.01	32.22	3.75	6.68	30.30	3.42	6.30	29.34	3.28	6.11	28.38	3.13	5.92	26.45	2.84	5.54
		120.00	34.15	3.99	3.54	32.22	3.63	3.35	30.30	3.42	3.15	29.34	3.15	3.07	28.38	3.13	2.96	26.45	2.72	2.78
		150.00	34.15	3.99	2.83	32.22	3.63	2.68	30.30	3.29	2.5									

12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
70	10	60.00	29.79	7.28	5.28	28.26	6.64	5.07	26.57	6.04	4.81	25.61	5.62	4.69	24.77	5.45	4.53	23.09	4.83	4.28
		120.00	29.94	7.22	2.66	28.26	6.58	2.54	26.57	5.99	2.41	25.61	5.62	2.34	24.77	5.45	2.27	23.09	4.83	2.14
		150.00	29.94	7.26	2.13	28.26	6.62	2.03	26.57	6.00	1.93	25.61	5.64	1.87	24.77	5.39	1.82	23.09	4.83	1.71
		180.00	29.94	7.26	1.77	28.26	6.62	1.69	26.57	6.02	1.61	25.61	5.65	1.56	24.77	5.38	1.52	23.09	4.84	1.43
	15	60.00	29.94	6.59	5.48	28.26	5.98	5.23	26.57	5.38	4.97	25.61	5.04	4.82	24.77	4.85	4.67	23.09	4.33	4.40
		120.00	29.94	6.33	2.77	28.26	5.70	2.65	26.57	5.12	2.52	25.61	4.94	2.42	24.77	4.72	2.35	23.09	4.21	2.21
		150.00	29.94	6.33	2.21	28.26	5.70	2.12	26.57	5.12	2.01	25.61	4.94	1.94	24.77	4.60	1.89	23.09	4.21	1.77
		180.00	29.94	6.33	1.85	28.26	5.70	1.76	26.57	5.12	1.68	25.61	4.94	1.62	24.77	4.54	1.58	23.09	4.21	1.48
	20	60.00	29.94	5.51	5.73	28.26	5.04	5.45	26.57	4.64	5.14	25.61	4.43	4.97	24.77	4.23	4.82	23.09	3.84	4.51
		120.00	29.94	5.36	2.88	28.26	4.91	2.74	26.57	4.50	2.59	25.61	4.31	2.50	24.77	4.11	2.42	23.09	3.73	2.27
		150.00	29.94	5.36	2.31	28.26	4.91	2.19	26.57	4.50	2.07	25.61	4.19	2.01	24.77	4.11	1.94	23.09	3.61	1.83
		180.00	29.94	5.36	1.92	28.26	4.91	1.83	26.57	4.50	1.73	25.61	4.14	1.68	24.77	4.11	1.62	23.09	3.54	1.53
	25	60.00	29.94	4.75	5.91	28.26	4.40	5.60	26.57	4.04	5.28	25.61	3.87	5.10	24.77	3.59	4.97	23.09	3.27	4.65
		120.00	29.94	4.62	2.97	28.26	4.27	2.81	26.57	3.92	2.66	25.61	3.75	2.56	24.77	3.59	2.48	23.09	3.27	2.32
		150.00	29.94	4.50	2.39	28.26	4.13	2.26	26.57	3.92	2.12	25.61	3.75	2.05	24.77	3.47	2.00	23.09	3.27	1.86
		180.00	29.94	4.44	1.99	28.26	4.06	1.89	26.57	3.92	1.77	25.61	3.75	1.71	24.77	3.40	1.67	23.09	3.27	1.55
	30	60.00	29.94	4.20	6.04	28.26	3.89	5.72	26.57	3.60	5.39	25.61	3.32	5.23	24.77	3.31	5.03	23.09	2.92	4.73
		120.00	29.94	4.07	3.03	28.26	3.77	2.87	26.57	3.46	2.71	25.61	3.32	2.61	24.77	3.18	2.53	23.09	2.92	2.37
		150.00	29.94	4.07	2.43	28.26	3.77	2.30	26.57	3.46	2.17	25.61	3.20	2.10	24.77	3.18	2.03	23.09	2.92	1.89
		180.00	29.94	4.07	2.02	28.26	3.77	1.91	26.57	3.46	1.81	25.61	3.14	1.76	24.77	3.18	1.69	23.09	2.92	1.58
	35	60.00	29.94	3.75	6.14	28.26	3.49	5.81	26.57	3.11	5.50	25.61	3.09	5.28	24.77	2.87	5.14	23.09	2.76	4.77
		120.00	29.94	3.63	3.09	28.26	3.36	2.92	26.57	3.11	2.75	25.61	2.97	2.65	24.77	2.87	2.57	23.09	2.64	2.40
		150.00	29.94	3.63	2.47	28.26	3.36	2.34	26.57	2.99	2.21	25.61	2.97	2.12	24.77	2.87	2.05	23.09	2.64	1.92
		180.00	29.94	3.63	2.06	28.26	3.36	1.95	26.57	2.92	1.85	25.61	2.97	1.77	24.77	2.87	1.71	23.09	2.64	1.60
	40	60.00	29.94	3.48	6.21	28.26	3.24	5.87	26.57	2.85	5.56	25.61	2.71	5.37	24.77	2.63	5.19	23.09	2.50	4.83
		120.00	29.94	3.36	3.12	28.26	3.11	2.95	26.57	2.73	2.80	25.61	2.71	2.69	24.77	2.63	2.60	23.09	2.40	2.43
		150.00	29.94	3.36	2.49	28.26	3.11	2.36	26.57	2.73	2.24	25.61	2.59	2.16	24.77	2.49	2.09	23.09	2.40	1.94
		180.00	29.94	3.36	2.08	28.26	3.11	1.97	26.57	2.73	1.86	25.61	2.53	1.80	24.77	2.44	1.75	23.09	2.40	1.62
	45	60.00	29.94	3.23	6.26	28.26	2.97	5.93	26.57	2.61	5.62	25.61	2.35	5.46	24.77	2.38	5.25	23.09	2.26	4.89
		120.00	29.94	3.11	3.15	28.26	2.84	2.98	26.57	2.37	2.84	25.61	2.46	2.71	24.77	2.38	2.63	23.09	2.14	2.46
		150.00	29.94	3.11	2.52	28.26	2.84	2.38	26.57	2.47	2.26	25.61	2.22	2.19	24.77	2.13	2.12	23.09	2.14	1.97
		180.00	29.94	3.11	2.10	28.26	2.84	1.99	26.57	2.54	1.88	25.61	2.10	1.84	24.77	1.99	1.78	23.09	2.14	1.64
60	10	60.00	25.61	5.59	4.70	24.17	5.28	4.43	22.73	4.94	4.17	22.00	4.59	4.08	21.28	4.46	3.94	19.84	3.94	3.73
		120.00	25.61	5.59	2.35	24.17	5.28	2.22	22.73	4.94	2.09	22.00	4.64	2.04	21.28	4.45	1.97	19.84	3.99	1.86
		150.00	25.61	5.61	1.88	24.17	5.22	1.78	22.73	4.89	1.67	22.00	4.59	1.63	21.28	4.41	1.58	19.84	3.94	1.49
		180.00	25.61	5.61	1.56	24.17	5.19	1.48	22.73	4.85	1.40	22.00	4.55	1.36	21.28	4.40	1.32	19.84	3.92	1.24
	15	60.00	25.61	5.07	4.82	24.17	4.75	4.55	22.73	4.40	4.30	22.00	4.12	4.19	21.28	3.97	4.06	19.84	3.55	3.82
		120.00	25.61	4.94	2.42	24.17	4.60	2.29	22.73	4.28	2.16	22.00	4.12	2.10	21.28	3.85	2.04	19.84	3.55	1.91
		150.00	25.61	4.94	1.94	24.17	4.48	1.85	22.73	4.16	1.74	22.00	3.98	1.69	21.28	3.73	1.65	19.84	3.43	1.54
		180.00	25.61	4.94	1.62	24.17	4.41	1.54	22.73	4.09	1.46	22.00	3.91	1.41	21.28	3.66	1.38	19.84	3.36	1.29
	20	60.00	25.61	4.42	4.97	24.17	4.09	4.71	22.73	3.77	4.45	22.00	3.62	4.31	21.28	3.49	4.17	19.84	3.18	3.91
		120.00	25.61	4.30	2.50	24.17	3.97	2.37	22.73	3.65	2.24	22.00	3.50	2.17	21.28	3.35	2.10	19.84	3.06	1.97
		150.00	25.61	4.30	2.00	24.17	3.97	1.89	22.73	3.65	1.79	22.00	3.50	1.74	21.28	3.35	1.68	19.84	3.06	1.57
		180.00	25.61	4.30	1.67	24.17	3.97	1.58	22.73	3.65	1.49	22.00	3.50	1.45	21.28	3.35	1.40	19.84	3.06	1.31
	25	60.00	25.61	3.88	5.10	24.17	3.62	4.82	22.73	3.21	4.58	22.00	3.20	4.41	21.28	2.96	4.30	19.84	2.84	3.99
		120.00	25.61	3.75	2.56	24.17	3.47	2.43	22.73	3.21	2.29	22.00	3.08	2.22	21.28	2.96	2.15	19.84	2.72	2.01
		150.00	25.61	3.75	2.05	24.17	3.47	1.94	22.73	3.09	1.84	22.00	3.08	1.77	21.28	2.96	1.72	19.84	2.72	1.61
		180.00	25.61	3.75	1.71	24.17	3.47	1.62	22.73	3.04	1.54	22.00	3.08	1.48	21.28	2.96	1.43	19.84	2.72	1.34
	30	60.00	25.61	3.45	5.20	24.17	3.21	4.92	22.73	3.01	4.62	22.00	2.88	4.48	21.28	2.76	4.34	19.84	2.57	4.05
		120.00	25.61	3.32	2.61	24.17	3.08	2.47	22.73	2.87	2.33	22.00	2.75	2.26	21.28	2.64	2.19	19.84	2.44	2.04
		150.00	25.61	3.32	2.09	24.17	3.08	1.98	22.73	2.87	1.86	22.00	2.75	1.81	21.28	2.64	1.75	19.84	2.44	1.63
		180.00	25.61	3.32	1.74	24.17	3.08	1.65	22.73	2.87	1.55	22.00	2.75	1.50	21.28	2.64	1.46	19.84	2.44	1.36
	35	60.00	25.61	2.98	5.31	24.17	2.90	4.99	22.73	2.59	4.72	22.00	2.63	4.54	21.28	2.50	4.40	19.84	2.36	4.10
		120.00	25.61	2.98	2.65	24.17	2.78	2.51	22.73	2.59	2.36	22.00	2.49	2.29	21.28	2.40	2.21	19.84	2.22	2.07
		150.00	25.61	2.98	2.12	24.17	2.78	2.01	22.73	2.45	1.90	22.00	2.49	1.83	21.28	2.40	1.77	19.84	2.22	1.65
		180.00	25.61	2.98	1.77	24.17	2.78	1.67	22.73	2.40	1.59	22.00	2.49	1.53	21.28	2.40	1.48	19.84	2.22	1.38
	40	60.00	25.61	2.72	5.37	24.17	2.66	5.04	22.73	2.35	4.78	22.00	2.39	4.60	21.28	2.26	4.46	19.84	2.10	4.16
		120.00	25.61	2.72	2.68	24.17	2.52	2.54	22.73	2.35	2.39	22.00	2.25	2.32	21.28	2.14	2.24	19.84	2.10	2.08
150.00		25.61	2.72	2.15	24.17	2.52	2.03													

VRF MW



12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
50	10	60.00	21.25	4.45	3.94	20.05	4.20	3.72	20.20	3.82	3.84	18.28	3.69	3.42	17.68	3.44	3.34	16.47	3.17	3.12
		120.00	21.40	4.41	1.99	20.20	4.20	1.88	20.20	3.80	1.92	18.28	3.65	1.72	17.68	3.47	1.67	16.47	3.13	1.56
		150.00	21.40	4.45	1.59	20.20	4.20	1.50	20.20	3.80	1.54	18.28	3.67	1.37	17.68	3.42	1.34	16.47	3.15	1.25
		180.00	21.40	4.45	1.33	20.20	4.21	1.25	20.20	3.82	1.28	18.28	3.67	1.14	17.68	3.38	1.12	16.47	3.15	1.04
	15	60.00	21.40	4.02	4.08	20.20	3.78	3.85	20.20	3.40	3.94	18.28	3.30	3.51	17.68	3.07	3.43	16.47	2.84	3.20
		120.00	21.40	3.89	2.05	20.20	3.66	1.94	20.20	3.28	1.98	18.28	3.18	1.77	17.68	3.07	1.71	16.47	2.72	1.61
		150.00	21.40	3.89	1.64	20.20	3.66	1.55	20.20	3.28	1.59	18.28	3.18	1.42	17.68	2.93	1.38	16.47	2.72	1.29
		180.00	21.40	3.89	1.37	20.20	3.66	1.29	20.20	3.28	1.32	18.28	3.18	1.18	17.68	2.85	1.16	16.47	2.72	1.07
	20	60.00	21.40	3.50	4.20	20.20	3.26	3.97	20.20	3.03	4.03	18.28	2.92	3.60	17.68	2.80	3.49	16.47	2.46	3.29
		120.00	21.40	3.37	2.11	20.20	3.13	2.00	20.20	2.89	2.03	18.28	2.79	1.82	17.68	2.68	1.76	16.47	2.46	1.64
		150.00	21.40	3.37	1.69	20.20	3.13	1.60	20.20	2.89	1.62	18.28	2.79	1.45	17.68	2.68	1.41	16.47	2.46	1.31
		180.00	21.40	3.37	1.41	20.20	3.13	1.33	20.20	2.89	1.35	18.28	2.79	1.21	17.68	2.68	1.17	16.47	2.46	1.10
	25	60.00	21.40	3.11	4.29	20.20	2.77	4.09	20.20	2.72	4.10	18.28	2.48	3.71	17.68	2.39	3.59	16.47	2.21	3.34
		120.00	21.40	2.97	2.16	20.20	2.77	2.04	20.20	2.58	2.07	18.28	2.48	1.85	17.68	2.39	1.79	16.47	2.21	1.67
		150.00	21.40	2.97	1.73	20.20	2.77	1.64	20.20	2.58	1.65	18.28	2.48	1.48	17.68	2.39	1.43	16.47	2.21	1.34
		180.00	21.40	2.97	1.44	20.20	2.77	1.36	20.20	2.58	1.38	18.28	2.48	1.24	17.68	2.39	1.20	16.47	2.21	1.11
	30	60.00	21.40	2.79	4.36	20.20	2.60	4.13	20.20	2.47	4.16	18.28	2.24	3.76	17.68	2.28	3.61	16.47	2.13	3.36
		120.00	21.40	2.67	2.20	20.20	2.49	2.08	20.20	2.32	2.10	18.28	2.24	1.88	17.68	2.16	1.82	16.47	2.01	1.70
		150.00	21.40	2.67	1.76	20.20	2.49	1.66	20.20	2.32	1.68	18.28	2.24	1.50	17.68	2.16	1.46	16.47	2.01	1.36
		180.00	21.40	2.67	1.46	20.20	2.49	1.38	20.20	2.32	1.40	18.28	2.24	1.25	17.68	2.16	1.21	16.47	2.01	1.13
	35	60.00	21.40	2.52	4.43	20.20	2.26	4.21	20.20	2.12	4.24	18.28	2.17	3.78	17.68	1.98	3.68	16.47	1.84	3.43
		120.00	21.40	2.41	2.23	20.20	2.26	2.10	20.20	2.12	2.12	18.28	2.05	1.90	17.68	1.98	1.84	16.47	1.84	1.72
		150.00	21.40	2.41	1.78	20.20	2.26	1.68	20.20	2.12	1.70	18.28	2.05	1.52	17.68	1.98	1.47	16.47	1.84	1.37
		180.00	21.40	2.41	1.48	20.20	2.26	1.40	20.20	2.12	1.41	18.28	2.05	1.27	17.68	1.98	1.23	16.47	1.84	1.14
	40	60.00	21.40	2.27	4.49	20.20	2.14	4.24	20.20	2.00	4.27	18.28	1.92	3.84	17.68	1.86	3.71	16.47	1.71	3.46
		120.00	21.40	2.15	2.26	20.20	2.02	2.13	20.20	1.88	2.15	18.28	1.92	1.92	17.68	1.73	1.87	16.47	1.71	1.73
		150.00	21.40	2.15	1.81	20.20	2.02	1.71	20.20	1.88	1.72	18.28	1.92	1.53	17.68	1.73	1.50	16.47	1.71	1.38
		180.00	21.40	2.15	1.50	20.20	2.02	1.42	20.20	1.88	1.43	18.28	1.92	1.28	17.68	1.73	1.25	16.47	1.71	1.15
	45	60.00	21.40	2.03	4.54	20.20	2.02	4.26	20.20	1.88	4.30	18.28	1.66	3.90	17.68	1.73	3.74	16.47	1.59	3.49
		120.00	21.40	1.91	2.29	20.20	1.76	2.16	20.20	1.62	2.18	18.28	1.78	1.93	17.68	1.49	1.90	16.47	1.59	1.74
		150.00	21.40	1.91	1.83	20.20	1.76	1.73	20.20	1.62	1.74	18.28	1.78	1.55	17.68	1.49	1.52	16.47	1.59	1.40
		180.00	21.40	1.91	1.52	20.20	1.76	1.44	20.20	1.62	1.45	18.28	1.78	1.29	17.68	1.49	1.27	16.47	1.59	1.16

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

8HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	90.00	45.48	3.79	7.74	57.83	6.61	10.13	58.14	5.36	9.98	58.77	5.39	10.08	59.49	5.39	10.20	60.79	5.42	10.40	61.71	5.38	10.54
		180.00	45.48	3.51	3.85	57.83	6.19	5.03	58.14	5.02	4.96	58.77	5.03	5.01	59.49	4.99	5.07	60.79	5.08	5.18	61.71	5.11	5.25
		225.00	45.48	3.40	3.07	57.83	6.07	4.02	58.14	4.90	3.96	58.77	4.90	4.00	59.49	4.94	4.05	60.79	4.96	4.13	61.71	4.97	4.19
		270.00	45.48	3.34	2.56	57.83	5.99	3.34	58.14	4.88	3.30	58.77	4.85	3.33	59.49	4.91	3.37	60.79	4.91	3.44	61.71	4.90	3.49
	15	90.00	44.83	4.98	7.83	57.06	8.67	10.33	57.20	7.03	10.09	57.89	7.05	10.20	58.41	7.06	10.29	59.94	7.11	10.54	60.87	7.09	10.68
		180.00	44.83	4.59	3.88	57.06	8.14	5.12	57.20	6.57	5.01	57.89	6.59	5.07	58.41	6.59	5.11	59.94	6.67	5.23	60.87	6.68	5.31
		225.00	44.83	4.45	3.10	57.06	7.93	4.09	57.20	6.42	4.00	57.89	6.46	4.04	58.41	6.46	4.08	59.94	6.53	4.18	60.87	6.54	4.24
		270.00	44.83	4.40	2.58	57.06	7.85	3.40	57.20	6.37	3.33	57.89	6.38	3.37	58.41	6.41	3.40	59.94	6.45	3.48	60.87	6.44	3.53
	20	90.00	44.17	6.05	7.89	56.29	10.53	10.50	56.25	8.52	10.18	57.01	8.55	10.30	57.76	8.53	10.42	59.08	8.61	10.64	60.03	8.61	10.79
		180.00	44.17	5.56	3.91	56.29	9.87	5.20	56.25	7.94	5.04	57.01	7.99	5.11	57.76	8.01	5.17	59.08	8.07	5.28	60.03	8.10	5.35
		225.00	44.17	5.39	3.12	56.29	9.62	4.14	56.25	7.80	4.03	57.01	7.84	4.08	57.76	7.83	4.12	59.08	7.92	4.21	60.03	7.91	4.27
		270.00	44.17	5.31	2.59	56.29	9.50	3.45	56.25	7.71	3.35	57.01	7.74	3.39	57.76	7.76	3.43	59.08	7.83	3.50	60.03	7.81	3.55
	25	90.00	44.17	7.12	8.06	52.67	9.32	9.74	54.55	9.46	10.06	55.31	9.48	10.18	56.06	9.55	10.31	57.20	9.56	10.49	57.95	9.56	10.61
		180.00	44.17	6.54	3.98	52.67	8.72	4.82	54.55	8.84	4.98	55.31	8.88	5.04	56.06	8.92	5.11	57.20	8.96	5.20	57.95	9.00	5.26
		225.00	44.17	6.36	3.18	52.67	8.55	3.85	54.55	8.68	3.97	55.31	8.70	4.02	56.06	8.76	4.07	57.20	8.79	4.15	57.95	8.80	4.20
		270.00	44.17	6.28	2.64	52.67	8.43	3.20	54.55	8.58	3.31	55.31	8.61	3.35	56.06	8.67	3.39	57.20	8.70	3.45	57.95	8.69	3.49
	30	90.00	44.17	8.44	8.27	50.97	10.29	9.63	52.67	10.41	9.91	53.23	10.45	10.01	53.99	10.47	10.13	54.93	10.52	10.29	55.69	10.49	10.40
		180.00	44.17	7.74	4.08	50.97	9.63	4.76	52.67	9.73	4.90	53.23	9.78	4.95	53.99	9.81	5.01	54.93	9.85	5.09	55.69	9.87	5.15
		225.00	44.17	7.55	3.25	50.97	9.41	3.80	52.67	9.54	3.91	53.23	9.59	3.95	53.99	9.64	4.00	54.93	9.65	4.06	55.69	9.65	4.11
		270.00	44.17	7.45	2.70	50.97	9.30	3.16	52.67	9.44	3.25	53.23	9.48	3.28	53.99	9.56	3.33	54.93	9.57	3.38	55.69	9.53	3.42
	35	90.00	44.17	10.05	8.52	48.70	11.28	9.43	50.21	11.35	9.67	50.97	11.44	9.81	51.53	11.43	9.89	52.29	11.47	10.02	52.85	11.45	10.11
		180.00	44.17	9.25	4.20	48.70	10.54	4.65	50.21	10.63	4.78	50.97	10.68	4.84	51.53	10.71	4.89	52.29	10.75	4.95	52.85	10.75	5.00
		225.00	44.17	8.97	3.34	48.70	10.30	3.71	50.21	10.40	3.81	50.97	10.45	3.86	51.53	10.51	3.90	52.29	10.55	3.95	52.85	10.51	3.98
		270.00	44.17	8.85	2.78	48.70	10.19	3.08	50.21	10.30	3.17	50.97	10.36	3.21	51.53	10.40	3.24	52.29	10.44	3.29	52.85	10.40	3.31
	40	90.00	39.07	10.60	7.81	43.26	11.90	8.67	44.58	11.99	8.89	45.28	12.05	9.01	45.74	12.05	9.08	46.62	12.10	9.23	47.07	12.07	9.29
		180.00	39.07	9.74	3.84	43.26	11.10	4.27	44.58	11.22	4.38	45.28	11.25	4.44	45.74	11.29	4.48	46.62	11.36	4.56	47.07	11.35	4.59
		225.00	39.07	9.46	3.05	43.26	10.86	3.40	44.58	10.97	3.49	45.28	11.05	3.54	45.74	11.07	3.57	46.62	11.12	3.63	47.07	11.09	3.66
		270.00	39.07	9.34	2.54	43.26	10.75	2.83	44.58	10.84	2.90	45.28	10.93	2.94	45.74	10.96	2.97	46.62	11.01	3.02	47.07	10.96	3.04
	45	90.00	34.22	11.16	7.13	37.82	12.49	7.91	38.95	12.60	8.10	39.59	12.69	8.22	39.94	12.70	8.27	40.74	12.71	8.40	41.09	12.69	8.45
		180.00	34.22	10.23	3.49	37.82	11.69	3.89	38.95	11.79	3.99	39.59	11.85	4.04	39.94	11.85	4.07	40.74	11.95	4.14	41.09	11.95	4.17
		225.00	34.22	9.96	2.78	37.82	11.42	3.10	38.95	11.53	3.17	39.59	11.62	3.22	39.94	11.65	3.24	40.74	11.71	3.30	41.09	11.65	3.31
		270.00	34.22	9.83	2.31	37.82	11.28	2.57	38.95	11.40	2.64	39.59	11.53	2.68	39.94	11.54	2.70	40.74	11.58	2.74	41.09	11.50	2.75
120	10	90.00	41.62	3.29	7.06	49.63	4.27	8.47	56.53	5.26	9.71	57.42	5.25	9.85	58.16	5.31	9.97	59.46	5.32	10.18	60.58	5.32	10.36
		180.00	41.62	3.01	3.51	49.63	3.99	4.21	56.53	4.88	4.82	57.42	4.94	4.90	58.16	4.92	4.96	59.46	4.99	5.06	60.58	4.95	5.15
		225.00	41.62	2.99	2.80	49.63	3.90	3.37	56.53	4.82	3.86	57.42	4.83	3.91	58.16	4.84	3.96	59.46	4.88	4.04	60.58	4.87	4.11
		270.00	41.62	2.96	2.34	49.63	3.88	2.80	56.53	4.79	3.21	57.42	4.78	3.26	58.16	4.79	3.30	59.46	4.83	3.37	60.58	4.82	3.43
	15	90.00	41.20	4.38	7.16	49.17	5.69	8.62	56.04	6.95	9.90	56.74	6.97	10.01	57.49	7.02	10.14	58.80	7.05	10.35	59.93	7.05	10.52
		180.00	41.20	4.00	3.55	49.17	5.32	4.28	56.04	6.48	4.91	56.74	6.52	4.97	57.49	6.55	5.03	58.80	6.59	5.14	59.93	6.60	5.23
		225.00	41.20	3.93	2.84	49.17	5.21	3.42	56.04	6.36	3.92	56.74	6.39	3.97	57.49	6.42	4.02	58.80	6.49	4.10	59.93	6.45	4.17
		270.00	41.20	3.87	2.36	49.17	5.15	2.85	56.04	6.30	3.27	56.74	6.33	3.30	57.49	6.37	3.35	58.80	6.41	3.42	59.93	6.40	3.47
	20	90.00	40.77	5.32	7.24	48.70	6.93	8.74	55.31	8.46	10.02	56.06	8.50	10.15	56.82	8.52	10.27	58.14	8.60	10.49	59.27	8.57	10.66
		180.00	40.77	4.89	3.59	48.70	6.48	4.34	55.31	7.90	4.97	56.06	7.94	5.03	56.82	7.98	5.09	58.14	8.04	5.20	59.27	8.07	5.29
		225.00	40.77	4.76	2.86	48.70	6.34	3.46	55.31	7.72	3.96	56.06	7.79	4.01	56.82	7.85	4.06	58.14	7.89	4.15	59.27	7.87	4.22
		270.00	40.77	4.68	2.38	48.70	6.28	2.88	55.31	7.63	3.30	56.06	7.71	3.34	56.82	7.77	3.38	58.14	7.81	3.45	59.27	7.77	3.51
	25	90.00	40.77	6.25	7.39	48.70	8.16	8.93	53.61	9.40	9.90	54.36	9.43	10.03	55.31	9.50	10.18	56.44	9.53	10.37	57.38	9.57	10.52
		180.00	40.77	5.76	3.66	48.70	7.64	4.43	53.61	8.79	4.90	54.36	8.84	4.97	55.31	8.87	5.04	56.44	8.93	5.14	57.38	8.96	5.21
		225.00	40.77	5.59	2.91	48.70	7.45	3.53	53.61	8.63	3.91	54.36	8.64	3.96	55.31	8.73	4.03	56.44	8.75	4.10	57.38	8.76	4.16
		270.00	40.77	5.52	2.42	48.70	7.37	2.94	53.61	8.52	3.25	54.36	8.55	3.30	55.31	8.63	3.35	56.44	8.66	3.41	57.38	8.65	3.46
	30	90.00	40.77	7.38	7.57	48.70	9.70	9.18	51.72	10.34	9.75	52.48	10.40	9.88	53.04	10.46	9.98	54.18	10.49	10.16	5		

VRF MW



8HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	90.00	37.78	2.86	6.39	45.00	3.69	7.65	52.39	4.64	8.96	55.40	5.14	9.51	56.14	5.16	9.63	57.88	5.18	9.91	59.00	5.20	10.09
		180.00	37.78	2.62	3.17	45.00	3.43	3.81	52.39	4.36	4.46	55.40	4.81	4.73	56.14	4.86	4.79	57.88	4.81	4.93	59.00	4.87	5.02
		225.00	37.78	2.53	2.53	45.00	3.36	3.04	52.39	4.27	3.56	55.40	4.73	3.78	56.14	4.73	3.83	57.88	4.73	3.94	59.00	4.81	4.01
		270.00	37.78	2.49	2.11	45.00	3.33	2.53	52.39	4.22	2.97	55.40	4.67	3.15	56.14	4.68	3.19	57.88	4.68	3.28	59.00	4.76	3.34
	15	90.00	37.58	3.80	6.50	44.77	4.92	7.81	52.15	6.26	9.18	55.16	6.89	9.75	55.91	6.91	9.87	57.65	6.94	10.15	58.55	7.00	10.30
		180.00	37.58	3.50	3.23	44.77	4.59	3.88	52.15	5.84	4.56	55.16	6.45	4.84	55.91	6.48	4.90	57.65	6.49	5.04	58.55	6.56	5.12
		225.00	37.58	3.38	2.57	44.77	4.48	3.10	52.15	5.73	3.64	55.16	6.31	3.86	55.91	6.37	3.92	57.65	6.36	4.02	58.55	6.40	4.08
		270.00	37.58	3.34	2.14	44.77	4.46	2.58	52.15	5.64	3.03	55.16	6.26	3.22	55.91	6.29	3.26	57.65	6.31	3.35	58.55	6.32	3.40
	20	90.00	37.38	4.65	6.60	44.55	6.05	7.95	51.91	7.66	9.36	54.93	8.42	9.95	55.69	8.49	10.09	57.20	8.52	10.33	58.33	8.59	10.52
		180.00	37.38	4.28	3.27	44.55	5.64	3.94	51.91	7.18	4.64	54.93	7.90	4.94	55.69	7.93	5.00	57.20	7.99	5.12	58.33	8.04	5.21
		225.00	37.38	4.14	2.61	44.55	5.51	3.15	51.91	7.01	3.70	54.93	7.73	3.94	55.69	7.82	3.99	57.20	7.83	4.09	58.33	7.83	4.16
		270.00	37.38	4.08	2.17	44.55	5.46	2.62	51.91	6.93	3.08	54.93	7.65	3.28	55.69	7.74	3.32	57.20	7.76	3.40	58.33	7.73	3.46
	25	90.00	37.38	5.47	6.73	44.55	7.11	8.12	51.91	9.06	9.58	53.42	9.37	9.87	54.18	9.43	9.99	55.50	9.46	10.21	56.63	9.55	10.40
		180.00	37.38	5.03	3.33	44.55	6.64	4.02	51.91	8.47	4.74	53.42	8.77	4.89	54.18	8.82	4.95	55.50	8.88	5.06	56.63	8.93	5.15
		225.00	37.38	4.90	2.66	44.55	6.49	3.21	51.91	8.28	3.78	53.42	8.57	3.90	54.18	8.67	3.95	55.50	8.69	4.03	56.63	8.72	4.11
		270.00	37.38	4.81	2.21	44.55	6.42	2.67	51.91	8.20	3.15	53.42	8.47	3.24	54.18	8.58	3.29	55.50	8.60	3.36	56.63	8.60	3.42
	30	90.00	37.38	6.45	6.89	44.55	8.44	8.33	50.78	10.27	9.59	51.53	10.34	9.72	52.10	10.39	9.82	53.42	10.44	10.04	54.36	10.50	10.19
		180.00	37.38	5.94	3.40	44.55	7.86	4.12	50.78	9.62	4.75	51.53	9.66	4.81	52.10	9.71	4.86	53.42	9.78	4.97	54.36	9.84	5.04
		225.00	37.38	5.79	2.71	44.55	7.72	3.29	50.78	9.39	3.78	51.53	9.48	3.84	52.10	9.54	3.87	53.42	9.58	3.96	54.36	9.60	4.02
		270.00	37.38	5.70	2.26	44.55	7.62	2.73	50.78	9.29	3.15	51.53	9.37	3.19	52.10	9.45	3.22	53.42	9.49	3.30	54.36	9.48	3.34
	35	90.00	37.29	7.72	7.07	44.55	10.05	8.58	48.51	12.28	9.55	49.27	11.30	9.52	49.83	11.34	9.61	50.97	11.41	9.80	51.91	11.47	9.96
		180.00	37.29	7.10	3.49	44.55	9.39	4.24	48.51	11.50	4.72	49.27	10.57	4.70	49.83	10.62	4.75	50.97	10.68	4.84	51.91	10.73	4.92
		225.00	37.29	6.90	2.78	44.55	9.20	3.38	48.51	11.27	3.76	49.27	10.38	3.75	49.83	10.41	3.79	50.97	10.48	3.86	51.91	10.48	3.92
		270.00	37.29	6.80	2.31	44.55	9.09	2.81	48.51	11.13	3.12	49.27	10.26	3.12	49.83	10.30	3.15	50.97	10.39	3.21	51.91	10.35	3.26
	40	90.00	34.67	8.48	6.78	41.42	11.05	8.24	44.91	13.52	9.18	45.46	12.41	9.09	46.09	12.47	9.20	47.28	12.52	9.40	48.25	12.59	9.56
		180.00	34.67	7.79	3.34	41.42	10.33	4.07	44.91	12.63	4.52	45.46	11.61	4.48	46.09	11.66	4.54	47.28	11.73	4.64	48.25	11.81	4.72
		225.00	34.67	7.57	2.66	41.42	10.11	3.24	44.91	12.37	3.60	45.46	11.40	3.57	46.09	11.43	3.62	47.28	11.50	3.69	48.25	11.51	3.76
		270.00	34.67	7.47	2.21	41.42	10.00	2.69	44.91	12.25	2.99	45.46	11.28	2.97	46.09	11.34	3.01	47.28	11.41	3.07	48.25	11.36	3.12
	45	90.00	31.84	9.25	6.46	38.05	12.04	7.87	41.55	14.74	8.84	41.88	13.52	8.71	42.56	13.58	8.82	43.59	13.63	8.99	44.37	13.71	9.13
		180.00	31.84	8.48	3.17	38.05	11.27	3.87	41.55	13.73	4.34	41.88	12.67	4.29	42.56	12.68	4.34	43.59	12.77	4.43	44.37	12.88	4.50
		225.00	31.84	8.26	2.52	38.05	11.02	3.08	41.55	13.49	3.46	41.88	12.41	3.41	42.56	12.47	3.46	43.59	12.54	3.53	44.37	12.54	3.58
		270.00	31.84	8.14	2.09	38.05	10.88	2.56	41.55	13.38	2.88	41.88	12.29	2.84	42.56	12.35	2.88	43.59	12.43	2.93	44.37	12.39	2.97
100	10	90.00	33.98	2.40	5.72	40.58	3.10	6.86	47.19	3.94	8.03	50.40	4.38	8.61	53.61	4.87	9.19	59.63	5.08	10.17	57.20	5.13	9.79
		180.00	33.98	2.21	2.84	40.58	2.87	3.41	47.19	3.69	4.00	50.40	4.13	4.28	53.61	4.60	4.57	59.63	4.75	5.06	57.20	4.75	4.87
		225.00	33.98	2.17	2.27	40.58	2.80	2.73	47.19	3.61	3.19	50.40	4.00	3.42	53.61	4.46	3.65	59.63	4.67	4.04	57.20	4.67	3.89
		270.00	33.98	2.17	1.89	40.58	2.78	2.27	47.19	3.59	2.66	50.40	3.95	2.85	53.61	4.41	3.04	59.63	4.61	3.37	57.20	4.64	3.24
	15	90.00	33.98	3.27	5.85	40.58	4.20	7.04	47.19	5.34	8.26	50.40	5.97	8.86	53.61	6.59	9.46	59.63	6.88	10.45	57.20	6.94	10.08
		180.00	33.98	3.00	2.91	40.58	3.92	3.50	47.19	4.99	4.10	50.40	5.57	4.40	53.61	6.18	4.70	59.63	6.44	5.19	57.20	6.48	5.00
		225.00	33.98	2.94	2.32	40.58	3.83	2.79	47.19	4.89	3.27	50.40	5.47	3.51	53.61	6.05	3.75	59.63	6.31	4.14	57.20	6.32	3.99
		270.00	33.98	2.90	1.93	40.58	3.78	2.32	47.19	4.84	2.73	50.40	5.39	2.92	53.61	6.00	3.12	59.63	6.25	3.45	57.20	6.24	3.32
	20	90.00	33.98	4.02	5.97	40.58	5.16	7.19	47.19	6.60	8.45	50.40	7.36	9.08	53.61	8.15	9.70	59.63	8.46	10.70	57.20	8.53	10.33
		180.00	33.98	3.71	2.96	40.58	4.84	3.57	47.19	6.15	4.19	50.40	6.86	4.50	53.61	7.61	4.81	59.63	7.94	5.31	57.20	7.99	5.12
		225.00	33.98	3.61	2.36	40.58	4.75	2.85	47.19	6.04	3.35	50.40	6.76	3.59	53.61	7.48	3.84	59.63	7.78	4.24	57.20	7.78	4.08
		270.00	33.98	3.54	1.97	40.58	4.68	2.37	47.19	5.97	2.78	50.40	6.69	2.99	53.61	7.42	3.20	59.63	7.70	3.53	57.20	7.64	3.40
	25	90.00	33.98	4.73	6.08	40.58	6.10	7.34	47.19	7.75	8.63	50.40	8.64	9.28	53.04	9.39	9.81	54.36	9.41	10.02	55.50	9.53	10.22
		180.00	33.98	4.35	3.01	40.58	5.70	3.64	47.19	7.24	4.28	50.40	8.09	4.60	53.04	8.76	4.86	54.36	8.84	4.97	55.50	8.88	5.06
		225.00	33.98	4.23	2.40	40.58	5.59	2.90	47.19	7.07	3.41	50.40	7.92	3.67	53.04	8.60	3.87	54.36	8.66	3.96	55.50	8.66	4.03
		270.00	33.98	4.17	2.00	40.58	5.52	2.42	47.19	7.00	2.84	50.40	7.85	3.05	53.04	8.50	3.22	54.36	8.59	3.30	55.50	8.54	3.35
	30	90.00	33.98	5.59	6.22	40.58	7.24	7.52	47.19	9.18	8.86	50.40	10.27	9.53	51.16	10.35	9.67	52.48	10.40	9.88	53.42	10.48	10.04
		180.00	33.98																				

8HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	90.00	30.58	2.08	5.13	36.43	2.64	6.14	42.47	3.30	7.19	45.30	3.69	7.70	48.32	4.09	8.24	54.18	4.97	9.29	56.06	5.08	9.61
		180.00	30.58	1.94	2.55	36.43	2.48	3.06	42.47	3.12	3.58	45.30	3.47	3.83	48.32	3.83	4.10	54.18	4.63	4.62	56.06	4.74	4.78
		225.00	30.58	1.85	2.04	36.43	2.44	2.44	42.47	3.03	2.86	45.30	3.40	3.06	48.32	3.75	3.27	54.18	4.54	3.69	56.06	4.61	3.81
		270.00	30.58	1.81	1.70	36.43	2.41	2.03	42.47	2.98	2.38	45.30	3.35	2.55	48.32	3.72	2.73	54.18	4.51	3.07	56.06	4.55	3.17
	15	90.00	30.58	2.81	5.25	36.43	3.60	6.29	42.47	4.50	7.38	45.30	5.03	7.91	48.32	5.53	8.46	54.18	6.70	9.57	56.06	6.89	9.89
		180.00	30.58	2.60	2.61	36.43	3.35	3.13	42.47	4.23	3.67	45.30	4.69	3.93	48.32	5.19	4.20	54.18	6.27	4.75	56.06	6.45	4.91
		225.00	30.58	2.52	2.08	36.43	3.28	2.50	42.47	4.13	2.93	45.30	4.61	3.14	48.32	5.09	3.36	54.18	6.15	3.79	56.06	6.26	3.92
		270.00	30.58	2.48	1.73	36.43	3.26	2.08	42.47	4.08	2.44	45.30	4.57	2.61	48.32	5.04	2.80	54.18	6.08	3.16	56.06	6.17	3.26
	20	90.00	30.58	3.45	5.35	36.43	4.42	6.42	42.47	5.56	7.55	45.30	6.19	8.09	48.32	6.82	8.67	54.18	8.25	9.81	56.06	8.47	10.14
		180.00	30.58	3.18	2.65	36.43	4.12	3.19	42.47	5.19	3.74	45.30	5.78	4.01	48.32	6.40	4.30	54.18	7.72	4.86	56.06	7.94	5.03
		225.00	30.58	3.10	2.12	36.43	4.03	2.54	42.47	5.12	2.99	45.30	5.68	3.20	48.32	6.30	3.43	54.18	7.57	3.88	56.06	7.73	4.01
		270.00	30.58	3.06	1.76	36.43	3.99	2.12	42.47	5.07	2.49	45.30	5.63	2.67	48.32	6.22	2.86	54.18	7.51	3.23	56.06	7.63	3.34
	25	90.00	30.58	4.04	5.44	36.43	5.17	6.54	42.47	6.54	7.70	45.30	7.26	8.26	48.32	8.08	8.86	53.04	9.33	9.80	54.36	9.45	10.03
		180.00	30.58	3.73	2.70	36.43	4.84	3.24	42.47	6.11	3.82	45.30	6.81	4.09	48.32	7.55	4.39	53.04	8.76	4.86	54.36	8.82	4.96
		225.00	30.58	3.61	2.15	36.43	4.73	2.59	42.47	6.02	3.05	45.30	6.67	3.27	48.32	7.39	3.50	53.04	8.58	3.87	54.36	8.62	3.96
		270.00	30.58	3.55	1.79	36.43	4.69	2.15	42.47	5.95	2.54	45.30	6.60	2.72	48.32	7.34	2.92	53.04	8.50	3.22	54.36	8.51	3.29
	30	90.00	30.58	4.78	5.56	36.43	6.09	6.68	42.47	8.15	7.95	45.30	8.64	8.48	48.32	9.56	9.10	51.16	10.32	9.66	52.29	10.39	9.85
		180.00	30.58	4.38	2.75	36.43	5.72	3.31	42.47	7.59	3.93	45.30	8.07	4.19	48.32	8.95	4.50	51.16	9.65	4.78	52.29	9.73	4.87
		225.00	30.58	4.28	2.19	36.43	5.59	2.64	42.47	7.43	3.14	45.30	7.91	3.35	48.32	8.78	3.59	51.16	9.47	3.81	52.29	9.47	3.88
		270.00	30.58	4.23	1.82	36.43	5.53	2.20	42.47	7.35	2.61	45.30	7.82	2.78	48.32	8.70	2.99	51.16	9.36	3.17	52.29	9.32	3.23
	35	90.00	30.58	5.65	5.69	36.43	7.26	6.87	42.47	9.25	8.13	45.30	10.30	8.74	47.76	11.20	9.27	49.08	11.26	9.48	50.02	11.34	9.64
		180.00	30.58	5.19	2.81	36.43	6.80	3.40	42.47	8.64	4.02	45.30	9.65	4.32	47.76	10.46	4.57	49.08	10.56	4.69	50.02	10.62	4.76
		225.00	30.58	5.04	2.24	36.43	6.66	2.71	42.47	8.47	3.20	45.30	9.45	3.44	47.76	10.30	3.65	49.08	10.35	3.74	50.02	10.34	3.79
		270.00	30.58	4.96	1.86	36.43	6.57	2.25	42.47	8.37	2.66	45.30	9.35	2.86	47.76	10.19	3.04	49.08	10.24	3.11	50.02	10.18	3.15
	40	90.00	29.58	6.47	5.66	35.33	8.35	6.86	41.29	10.64	8.16	43.92	11.82	8.76	46.34	12.88	9.31	47.68	12.95	9.53	48.40	13.04	9.66
		180.00	29.58	5.96	2.79	35.33	7.82	3.39	41.29	9.93	4.02	43.92	11.05	4.32	46.34	12.05	4.59	47.68	12.12	4.70	48.40	12.19	4.76
		225.00	29.58	5.78	2.22	35.33	7.63	2.70	41.29	9.73	3.21	43.92	10.85	3.44	46.34	11.81	3.66	47.68	11.91	3.75	48.40	11.88	3.79
		270.00	29.58	5.69	1.85	35.33	7.54	2.25	41.29	9.63	2.67	43.92	10.75	2.86	46.34	11.71	3.04	47.68	11.78	3.11	48.40	11.73	3.15
	45	90.00	28.78	7.30	5.67	34.24	9.43	6.86	40.11	12.01	8.19	42.76	13.37	8.82	44.92	14.55	9.35	46.27	14.65	9.57	47.01	14.72	9.70
		180.00	28.78	6.74	2.79	34.24	8.81	3.38	40.11	11.22	4.03	42.76	12.47	4.34	44.92	13.62	4.60	46.27	13.68	4.71	47.01	13.79	4.78
		225.00	28.78	6.53	2.22	34.24	8.62	2.69	40.11	11.00	3.21	42.76	12.25	3.46	44.92	13.35	3.66	46.27	13.45	3.75	47.01	13.45	3.80
		270.00	28.78	6.42	1.84	34.24	8.51	2.24	40.11	10.87	2.67	42.76	12.12	2.87	44.92	13.22	3.05	46.27	13.32	3.12	47.01	13.27	3.16
80	10	90.00	27.18	1.74	4.55	32.47	2.20	5.45	37.75	2.76	6.37	40.40	3.10	6.84	42.85	3.39	7.27	48.13	4.11	8.21	53.42	4.82	9.15
		180.00	27.18	1.60	2.26	32.47	2.09	2.72	37.75	2.57	3.17	40.40	2.88	3.40	42.85	3.16	3.61	48.13	3.81	4.08	53.42	4.50	4.55
		225.00	27.18	1.56	1.81	32.47	2.02	2.17	37.75	2.52	2.53	40.40	2.79	2.71	42.85	3.08	2.89	48.13	3.75	3.26	53.42	4.43	3.64
		270.00	27.18	1.56	1.51	32.47	1.98	1.80	37.75	2.52	2.11	40.40	2.74	2.26	42.85	3.03	2.40	48.13	3.75	2.72	53.42	4.43	3.03
	15	90.00	27.18	2.38	4.64	32.47	3.00	5.57	37.75	3.77	6.52	40.40	4.18	7.01	42.85	4.58	7.45	48.13	5.55	8.44	53.42	6.55	9.42
		180.00	27.18	2.19	2.31	32.47	2.82	2.77	37.75	3.50	3.24	40.40	3.89	3.48	42.85	4.29	3.70	48.13	5.18	4.19	53.42	6.13	4.68
		225.00	27.18	2.12	1.84	32.47	2.75	2.21	37.75	3.45	2.59	40.40	3.80	2.78	42.85	4.19	2.96	48.13	5.09	3.35	53.42	5.99	3.73
		270.00	27.18	2.10	1.53	32.47	2.70	1.84	37.75	3.40	2.16	40.40	3.77	2.31	42.85	4.14	2.46	48.13	5.06	2.79	53.42	5.92	3.11
	20	90.00	27.18	2.94	4.73	32.47	3.70	5.68	37.75	4.65	6.66	40.40	5.12	7.15	42.85	5.66	7.62	48.13	6.83	8.64	53.42	8.08	9.66
		180.00	27.18	2.69	2.35	32.47	3.45	2.82	37.75	4.33	3.31	40.40	4.81	3.55	42.85	5.30	3.78	48.13	6.37	4.28	53.42	7.55	4.79
		225.00	27.18	2.63	1.87	32.47	3.39	2.25	37.75	4.26	2.64	40.40	4.71	2.84	42.85	5.20	3.02	48.13	6.28	3.42	53.42	7.37	3.82
		270.00	27.18	2.59	1.56	32.47	3.36	1.88	37.75	4.21	2.20	40.40	4.66	2.36	42.85	5.15	2.51	48.13	6.22	2.85	53.42	7.26	3.18
	25	90.00	27.18	3.41	4.81	32.47	4.32	5.78	37.75	5.45	6.79	40.40	6.05	7.30	42.85	6.69	7.79	48.13	8.04	8.83	53.04	9.36	9.81
		180.00	27.18	3.15	2.38	32.47	4.06	2.87	37.75	5.09	3.37	40.40	5.65	3.62	42.85	6.24	3.86	48.13	7.51	4.37	53.04	8.76	4.86
		225.00	27.18	3.05	1.90	32.47	3.97	2.29	37.75	5.00	2.69	40.40	5.56	2.89	42.85	6.12	3.08	48.13	7.37	3.49	53.04	8.55	3.87
		270.00	27.18	3.01	1.58	32.47	3.93	1.91	37.75	4.95	2.24	40.40	5.49	2.40	42.85	6.07	2.56	48.13	7.31	2.90	53.04	8.42	3.22
	30	90.00	27.18	4.02	4.90	32.47	5.11	5.91	37.75	6.43	6.94	40.40	7.18	7.48	42.85	7.89	7.97	48.13	9.54	9.06	51.16	10.31	9.66
		180.00	27.18	3.69	2.43	32.47	4.78	2.93															

VRF MW



8HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
70	10	90.00	23.78	1.48	3.97	28.31	1.84	4.74	33.03	2.29	5.55	35.30	2.52	5.94	37.56	2.74	6.33	42.09	3.31	7.13	46.81	3.87	7.96			
		180.00	23.78	1.35	1.98	28.31	1.73	2.36	33.03	2.15	2.76	35.30	2.36	2.96	37.56	2.59	3.15	42.09	3.07	3.55	46.81	3.67	3.97			
		225.00	23.78	1.31	1.58	28.31	1.66	1.88	33.03	2.08	2.21	35.30	2.29	2.36	37.56	2.51	2.52	42.09	3.04	2.84	46.81	3.56	3.17			
		270.00	23.78	1.27	1.31	28.31	1.64	1.57	33.03	2.05	1.84	35.30	2.26	1.97	37.56	2.46	2.10	42.09	3.01	2.36	46.81	3.53	2.64			
	15	90.00	23.78	1.99	4.05	28.31	2.48	4.84	33.03	3.09	5.68	35.30	3.40	6.08	37.56	3.73	6.49	42.09	4.46	7.32	46.81	5.28	8.19			
		180.00	23.78	1.84	2.01	28.31	2.34	2.41	33.03	2.90	2.82	35.30	3.19	3.02	37.56	3.50	3.23	42.09	4.17	3.63	46.81	4.93	4.07			
		225.00	23.78	1.77	1.61	28.31	2.27	1.92	33.03	2.83	2.25	35.30	3.11	2.41	37.56	3.43	2.58	42.09	4.11	2.90	46.81	4.83	3.25			
		270.00	23.78	1.75	1.34	28.31	2.25	1.60	33.03	2.80	1.88	35.30	3.09	2.01	37.56	3.38	2.14	42.09	4.05	2.42	46.81	4.76	2.70			
	20	90.00	23.78	2.45	4.12	28.31	3.07	4.93	33.03	3.82	5.79	35.30	4.18	6.20	37.56	4.62	6.63	42.09	5.50	7.48	46.81	6.51	8.38			
		180.00	23.78	2.26	2.05	28.31	2.87	2.45	33.03	3.55	2.87	35.30	3.92	3.08	37.56	4.31	3.29	42.09	5.14	3.71	46.81	6.07	4.15			
		225.00	23.78	2.20	1.63	28.31	2.82	1.96	33.03	3.48	2.30	35.30	3.85	2.46	37.56	4.24	2.63	42.09	5.05	2.96	46.81	5.93	3.32			
		270.00	23.78	2.16	1.36	28.31	2.77	1.63	33.03	3.45	1.91	35.30	3.82	2.05	37.56	4.21	2.19	42.09	4.99	2.47	46.81	5.83	2.76			
	25	90.00	23.78	2.85	4.19	28.31	3.56	5.01	33.03	4.43	5.89	35.30	4.92	6.32	37.56	5.40	6.75	42.09	6.49	7.64	46.81	7.64	8.56			
		180.00	23.78	2.63	2.08	28.31	3.34	2.49	33.03	4.16	2.92	35.30	4.60	3.13	37.56	5.06	3.35	42.09	6.07	3.78	46.81	7.15	4.24			
		225.00	23.78	2.55	1.66	28.31	3.26	1.98	33.03	4.06	2.33	35.30	4.49	2.50	37.56	4.97	2.67	42.09	5.95	3.02	46.81	6.95	3.38			
		270.00	23.78	2.53	1.38	28.31	3.21	1.65	33.03	4.02	1.94	35.30	4.44	2.08	37.56	4.92	2.23	42.09	5.92	2.52	46.81	6.88	2.81			
	30	90.00	23.78	3.34	4.26	28.31	4.20	5.11	33.03	5.26	6.02	35.30	5.80	6.46	37.56	6.41	6.91	42.09	7.68	7.82	46.81	9.06	8.78			
		180.00	23.78	3.07	2.11	28.31	3.93	2.53	33.03	4.90	2.98	35.30	5.43	3.20	37.56	5.99	3.42	42.09	7.18	3.87	46.81	8.49	4.34			
		225.00	23.78	3.00	1.68	28.31	3.85	2.02	33.03	4.81	2.38	35.30	5.32	2.55	37.56	5.87	2.73	42.09	7.07	3.09	46.81	8.26	3.46			
		270.00	23.78	2.94	1.40	28.31	3.81	1.68	33.03	4.77	1.98	35.30	5.28	2.13	37.56	5.82	2.27	42.09	6.99	2.57	46.81	8.17	2.88			
	35	90.00	23.78	3.92	4.35	28.31	4.96	5.23	33.03	6.20	6.17	35.30	6.91	6.63	37.56	8.33	7.21	42.09	9.12	8.05	46.81	10.83	9.06			
		180.00	23.78	3.61	2.15	28.31	4.65	2.59	33.03	5.78	3.05	35.30	6.45	3.28	37.56	7.78	3.56	42.09	8.57	3.98	46.81	10.14	4.48			
		225.00	23.78	3.51	1.72	28.31	4.56	2.07	33.03	5.68	2.43	35.30	6.35	2.62	37.56	7.64	2.84	42.09	8.39	3.17	46.81	9.87	3.56			
		270.00	23.78	3.45	1.43	28.31	4.49	1.72	33.03	5.61	2.02	35.30	6.28	2.18	37.56	7.58	2.36	42.09	8.30	2.64	46.81	9.70	2.96			
	40	90.00	23.78	4.65	4.47	28.31	5.88	5.37	33.03	7.34	6.34	35.30	8.18	6.83	37.56	9.84	7.45	42.09	10.83	8.32	46.81	12.81	9.37			
		180.00	23.78	4.26	2.20	28.31	5.51	2.66	33.03	6.86	3.13	35.30	7.64	3.37	37.56	9.23	3.68	42.09	10.13	4.10	46.81	11.99	4.62			
		225.00	23.78	4.16	1.76	28.31	5.38	2.12	33.03	6.72	2.50	35.30	7.52	2.69	37.56	9.04	2.93	42.09	9.95	3.27	46.81	11.68	3.68			
		270.00	23.78	4.10	1.46	28.31	5.31	1.76	33.03	6.65	2.08	35.30	7.45	2.24	37.56	8.96	2.44	42.09	9.83	2.72	46.81	11.55	3.06			
	45	90.00	23.78	5.38	4.58	28.31	6.79	5.52	33.03	8.47	6.52	35.30	9.44	7.03	37.56	11.38	7.69	42.09	12.51	8.58	46.81	14.84	9.69			
		180.00	23.78	4.91	2.25	28.31	6.37	2.73	33.03	7.93	3.22	35.30	8.83	3.47	37.56	10.69	3.79	42.09	11.71	4.23	46.81	13.84	4.77			
		225.00	23.78	4.81	1.80	28.31	6.21	2.17	33.03	7.76	2.56	35.30	8.69	2.77	37.56	10.44	3.02	42.09	11.48	3.37	46.81	13.53	3.79			
		270.00	23.78	4.75	1.49	28.31	6.15	1.81	33.03	7.69	2.13	35.30	8.60	2.30	37.56	10.33	2.51	42.09	11.39	2.80	46.81	13.40	3.15			
60	10	90.00	20.39	1.22	3.39	24.35	1.50	4.06	28.31	1.81	4.73	30.20	2.01	5.06	32.28	2.19	5.42	36.05	2.63	6.08	40.02	3.07	6.77			
		180.00	20.39	1.11	1.69	24.35	1.40	2.02	28.31	1.69	2.36	30.20	1.89	2.52	32.28	2.01	2.69	36.05	2.42	3.02	40.02	2.87	3.37			
		225.00	20.39	1.06	1.35	24.35	1.36	1.62	28.31	1.67	1.88	30.20	1.84	2.01	32.28	1.99	2.15	36.05	2.37	2.41	40.02	2.77	2.69			
		270.00	20.39	1.04	1.12	24.35	1.33	1.35	28.31	1.67	1.57	30.20	1.82	1.68	32.28	1.96	1.79	36.05	2.34	2.01	40.02	2.70	2.24			
	15	90.00	20.39	1.63	3.46	24.35	2.03	4.14	28.31	2.46	4.84	30.20	2.72	5.17	32.28	2.97	5.54	36.05	3.53	6.22	40.02	4.15	6.94			
		180.00	20.39	1.50	1.72	24.35	1.89	2.06	28.31	2.29	2.40	30.20	2.55	2.57	32.28	2.74	2.75	36.05	3.27	3.09	40.02	3.88	3.45			
		225.00	20.39	1.46	1.37	24.35	1.84	1.65	28.31	2.25	1.92	30.20	2.51	2.06	32.28	2.72	2.20	36.05	3.21	2.47	40.02	3.75	2.75			
		270.00	20.39	1.43	1.14	24.35	1.82	1.37	28.31	2.22	1.60	30.20	2.48	1.71	32.28	2.69	1.83	36.05	3.18	2.06	40.02	3.68	2.29			
	20	90.00	20.39	2.00	3.52	24.35	2.49	4.22	28.31	3.02	4.92	30.20	3.33	5.27	32.28	3.65	5.65	36.05	4.32	6.34	40.02	5.10	7.09			
		180.00	20.39	1.85	1.75	24.35	2.32	2.10	28.31	2.85	2.45	30.20	3.12	2.62	32.28	3.42	2.81	36.05	4.06	3.15	40.02	4.76	3.52			
		225.00	20.39	1.80	1.39	24.35	2.28	1.67	28.31	2.78	1.95	30.20	3.07	2.09	32.28	3.35	2.24	36.05	4.00	2.52	40.02	4.66	2.81			
		270.00	20.39	1.78	1.16	24.35	2.26	1.39	28.31	2.75	1.63	30.20	3.05	1.74	32.28	3.32	1.86	36.05	3.97	2.10	40.02	4.59	2.34			
	25	90.00	20.39	2.34	3.57	24.35	2.88	4.28	28.31	3.56	5.01	30.20	3.93	5.36	32.28	4.28	5.74	36.05	5.09	6.46	40.02	5.96	7.23			
		180.00	20.39	2.15	1.77	24.35	2.71	2.13	28.31	3.33	2.49	30.20	3.66	2.66	32.28	4.01	2.85	36.05	4.78	3.21	40.02	5.60	3.58			
		225.00	20.39	2.09	1.41	24.35	2.66	1.70	28.31	3.28	1.99	30.20	3.59	2.12	32.28	3.94	2.28	36.05	4.66	2.56	40.02	5.44	2.86			
		270.00	20.39	2.07	1.18	24.35	2.64	1.41	28.31	3.23	1.65	30.20	3.57	1.77	32.28	3.91	1.90	36.05	4.61	2.13	40.02	5.38	2.38			
	30	90.00	20.39	2.75	3.64	24.35	3.40	4.36	28.31	4.19	5.11	30.20	4.60	5.47	32.28	5.05	5.87	36.05	6.04	6.62	40.02	7.04	7.40			
		180.00	20.39	2.52	1.80	24.35	3.17	2.16	28.31	3.90	2.53	30.20	4.30	2.71	32.28	4.73	2.91	36.05	5.64	3.2						

8HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	90.00	16.99	0.97	2.82	20.20	1.18	3.36	23.60	1.44	3.93	25.29	1.57	4.22	26.80	1.67	4.48	30.20	1.97	5.06	33.41	2.32	5.61
		180.00	16.99	0.93	1.41	20.20	1.11	1.67	23.60	1.32	1.96	25.29	1.45	2.10	26.80	1.60	2.23	30.20	1.85	2.52	33.41	2.18	2.80
		225.00	16.99	0.88	1.12	20.20	1.08	1.34	23.60	1.32	1.57	25.29	1.40	1.68	26.80	1.54	1.78	30.20	1.79	2.01	33.41	2.08	2.23
		270.00	16.99	0.86	0.93	20.20	1.06	1.11	23.60	1.32	1.30	25.29	1.38	1.40	26.80	1.52	1.48	30.20	1.76	1.67	33.41	2.01	1.86
	15	90.00	16.99	1.33	2.88	20.20	1.60	3.43	23.60	1.92	4.01	25.29	2.12	4.31	26.80	2.30	4.57	30.20	2.69	5.17	33.41	3.10	5.74
		180.00	16.99	1.24	1.43	20.20	1.50	1.70	23.60	1.80	2.00	25.29	1.97	2.14	26.80	2.15	2.27	30.20	2.51	2.57	33.41	2.93	2.86
		225.00	16.99	1.19	1.14	20.20	1.45	1.36	23.60	1.77	1.59	25.29	1.92	1.71	26.80	2.09	1.82	30.20	2.45	2.05	33.41	2.83	2.28
		270.00	16.99	1.16	0.95	20.20	1.43	1.13	23.60	1.75	1.33	25.29	1.89	1.42	26.80	2.07	1.51	30.20	2.42	1.71	33.41	2.80	1.90
	20	90.00	16.99	1.64	2.93	20.20	1.97	3.48	23.60	2.36	4.08	25.29	2.61	4.38	26.80	2.83	4.66	30.20	3.28	5.26	33.41	3.82	5.85
		180.00	16.99	1.50	1.45	20.20	1.85	1.73	23.60	2.23	2.03	25.29	2.44	2.18	26.80	2.64	2.31	30.20	3.10	2.62	33.41	3.61	2.91
		225.00	16.99	1.45	1.16	20.20	1.82	1.38	23.60	2.18	1.62	25.29	2.39	1.74	26.80	2.59	1.85	30.20	3.04	2.09	33.41	3.51	2.32
		270.00	16.99	1.43	0.96	20.20	1.80	1.15	23.60	2.15	1.35	25.29	2.36	1.45	26.80	2.56	1.54	30.20	3.01	1.74	33.41	3.44	1.93
	25	90.00	16.99	1.89	2.97	20.20	2.30	3.53	23.60	2.76	4.14	25.29	3.00	4.45	26.80	3.29	4.73	30.20	3.91	5.36	33.41	4.57	5.97
		180.00	16.99	1.74	1.47	20.20	2.13	1.75	23.60	2.60	2.06	25.29	2.83	2.21	26.80	3.09	2.35	30.20	3.65	2.66	33.41	4.23	2.96
		225.00	16.99	1.69	1.17	20.20	2.11	1.40	23.60	2.55	1.64	25.29	2.76	1.76	26.80	3.01	1.87	30.20	3.59	2.12	33.41	4.14	2.36
		270.00	16.99	1.69	0.98	20.20	2.09	1.17	23.60	2.52	1.37	25.29	2.72	1.47	26.80	2.96	1.56	30.20	3.53	1.77	33.41	4.10	1.97
	30	90.00	16.99	2.20	3.01	20.20	2.66	3.59	23.60	3.26	4.22	25.29	3.55	4.53	26.80	3.87	4.82	30.20	4.56	5.46	33.41	5.33	6.09
		180.00	16.99	2.01	1.49	20.20	2.48	1.78	23.60	3.02	2.09	25.29	3.33	2.25	26.80	3.63	2.39	30.20	4.28	2.71	33.41	4.98	3.02
		225.00	16.99	1.94	1.19	20.20	2.42	1.42	23.60	2.96	1.67	25.29	3.26	1.79	26.80	3.56	1.91	30.20	4.20	2.16	33.41	4.86	2.41
		270.00	16.99	1.92	0.99	20.20	2.40	1.18	23.60	2.93	1.39	25.29	3.24	1.49	26.80	3.53	1.59	30.20	4.15	1.80	33.41	4.76	2.00
	35	90.00	16.99	2.54	3.07	20.20	3.12	3.66	23.60	3.83	4.31	25.29	4.18	4.63	26.80	4.59	4.93	30.20	5.41	5.60	33.41	6.36	6.25
		180.00	16.99	2.34	1.52	20.20	2.91	1.82	23.60	3.57	2.13	25.29	3.92	2.30	26.80	4.28	2.44	30.20	5.06	2.77	33.41	5.92	3.09
		225.00	16.99	2.27	1.21	20.20	2.87	1.45	23.60	3.49	1.70	25.29	3.84	1.83	26.80	4.21	1.95	30.20	4.97	2.21	33.41	5.79	2.46
		270.00	16.99	2.23	1.01	20.20	2.82	1.21	23.60	3.47	1.42	25.29	3.82	1.53	26.80	4.18	1.62	30.20	4.92	1.84	33.41	5.69	2.05
	40	90.00	16.99	3.00	3.14	20.20	3.68	3.75	23.60	4.52	4.42	25.29	4.97	4.76	26.80	5.43	5.07	30.20	6.41	5.75	33.41	7.55	6.44
		180.00	16.99	2.76	1.55	20.20	3.45	1.86	23.60	4.23	2.19	25.29	4.63	2.35	26.80	5.07	2.50	30.20	6.00	2.84	33.41	7.04	3.18
		225.00	16.99	2.69	1.24	20.20	3.38	1.48	23.60	4.15	1.74	25.29	4.56	1.88	26.80	4.97	2.00	30.20	5.88	2.27	33.41	6.87	2.53
		270.00	16.99	2.65	1.03	20.20	3.36	1.23	23.60	4.10	1.45	25.29	4.51	1.56	26.80	4.92	1.66	30.20	5.82	1.89	33.41	6.77	2.10
	45	90.00	16.99	3.47	3.21	20.20	4.27	3.84	23.60	5.20	4.53	25.29	5.76	4.88	26.80	6.27	5.20	30.20	7.40	5.91	33.41	8.70	6.62
		180.00	16.99	3.20	1.59	20.20	3.99	1.90	23.60	4.86	2.24	25.29	5.35	2.41	26.80	5.86	2.57	30.20	6.94	2.92	33.41	8.16	3.27
		225.00	16.99	3.11	1.26	20.20	3.92	1.52	23.60	4.79	1.78	25.29	5.25	1.92	26.80	5.74	2.05	30.20	6.79	2.33	33.41	7.95	2.60
		270.00	16.99	3.05	1.05	20.20	3.87	1.26	23.60	4.76	1.49	25.29	5.18	1.60	26.80	5.68	1.70	30.20	6.73	1.93	33.41	7.85	2.16

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



8HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	90.00	53.02	9.04	6.88	52.80	9.12	6.83	52.71	9.44	6.76	52.46	9.41	6.73	52.21	9.33	6.70	51.70	9.74	6.56
		180.00	54.22	8.97	3.54	53.67	9.15	3.48	53.60	9.50	3.45	53.37	9.41	3.44	52.95	9.31	3.41	52.48	9.70	3.34
		225.00	54.56	9.10	2.84	54.01	9.29	2.80	53.95	9.54	2.78	53.55	9.45	2.76	53.32	9.45	2.74	52.87	10.18	2.67
		270.00	54.73	9.16	2.38	54.19	9.35	2.34	54.13	9.57	2.32	53.73	9.46	2.31	53.51	9.53	2.29	53.06	10.40	2.22
	15	90.00	53.19	8.09	7.05	52.97	8.09	7.02	52.71	8.46	6.92	52.46	8.48	6.88	52.21	8.32	6.86	51.70	8.75	6.72
		180.00	54.91	7.76	3.69	54.53	7.95	3.64	54.31	8.38	3.59	54.28	8.23	3.60	53.70	8.06	3.57	53.45	8.47	3.52
		225.00	55.25	7.95	2.96	55.05	8.14	2.93	55.02	8.38	2.92	54.82	8.23	2.91	54.44	8.28	2.89	54.04	9.32	2.80
		270.00	55.42	8.04	2.47	55.23	8.23	2.45	55.38	8.38	2.45	55.01	8.23	2.44	54.81	8.40	2.42	54.43	9.76	2.33
	20	90.00	55.25	7.43	7.48	54.88	7.43	7.42	54.84	7.64	7.38	54.46	7.62	7.32	54.07	7.67	7.25	53.45	8.47	7.03
		180.00	56.96	7.22	3.89	56.62	7.40	3.85	56.44	7.63	3.82	56.10	7.74	3.78	55.93	7.87	3.76	55.41	8.17	3.69
		225.00	57.14	7.22	3.12	56.97	7.40	3.10	57.16	7.68	3.09	56.83	7.74	3.07	56.30	7.87	3.03	55.80	8.69	2.95
		270.00	57.31	7.22	2.61	57.31	7.40	2.60	57.51	7.69	2.60	57.01	7.74	2.57	56.48	7.87	2.53	55.99	8.97	2.45
	25	90.00	62.68	7.70	8.60	62.33	7.86	8.52	61.81	8.20	8.38	61.64	8.33	8.33	61.29	8.48	8.26	60.77	8.81	8.12
		180.00	62.68	7.58	4.31	62.33	7.81	4.26	61.81	8.06	4.20	61.64	8.20	4.18	61.29	8.35	4.14	60.77	8.66	4.07
		225.00	62.68	7.47	3.45	62.33	7.61	3.42	61.81	7.93	3.37	61.64	8.07	3.35	61.29	8.21	3.32	60.77	8.51	3.27
		270.00	62.68	7.42	2.88	62.33	7.51	2.86	61.81	7.88	2.81	61.64	8.00	2.80	61.29	8.14	2.77	60.77	8.45	2.73
	30	90.00	67.54	8.27	9.27	67.87	8.30	9.31	67.18	8.72	9.14	65.02	8.81	8.79	66.31	9.05	8.95	61.81	8.14	8.39
		180.00	67.54	8.00	4.65	67.87	8.25	4.66	67.18	8.52	4.59	65.02	8.66	4.41	66.31	8.72	4.50	61.81	7.83	4.22
		225.00	67.54	7.88	3.73	67.87	8.02	3.74	67.18	8.38	3.68	65.02	8.50	3.53	66.31	8.72	3.60	61.81	7.83	3.38
		270.00	67.54	7.82	3.11	67.87	7.91	3.13	67.18	8.30	3.07	65.02	8.44	2.95	66.31	8.72	3.00	61.81	7.83	2.81
	35	90.00	73.93	8.71	10.20	73.41	8.90	10.09	70.99	8.63	9.75	66.53	8.19	9.12	66.31	8.04	9.11	61.81	7.14	8.55
		180.00	73.93	8.43	5.12	73.41	8.69	5.06	70.99	8.46	4.89	66.53	8.04	4.57	66.31	7.87	4.57	61.81	6.86	4.30
		225.00	73.93	8.43	4.10	73.41	8.61	4.05	70.99	8.32	3.92	66.53	7.90	3.67	66.31	7.73	3.66	61.81	6.86	3.44
		270.00	73.93	8.43	3.41	73.41	8.57	3.38	70.99	8.24	3.27	66.53	7.82	3.06	66.31	7.67	3.06	61.81	6.86	2.86
	40	90.00	73.93	8.43	10.24	73.41	8.61	10.13	70.99	8.32	9.80	66.53	7.90	9.17	66.31	7.73	9.16	61.81	6.72	8.61
		180.00	73.93	8.14	5.14	73.41	8.38	5.08	70.99	8.03	4.92	66.53	7.60	4.61	66.31	7.42	4.60	61.81	6.45	4.33
		225.00	73.93	8.00	4.12	73.41	8.26	4.07	70.99	8.03	3.94	66.53	7.60	3.69	66.31	7.42	3.68	61.81	6.45	3.46
		270.00	73.93	7.92	3.44	73.41	8.17	3.40	70.99	8.03	3.28	66.53	7.60	3.07	66.31	7.42	3.07	61.81	6.45	2.89
	45	90.00	73.93	8.14	10.29	73.41	8.32	10.18	70.99	8.03	9.84	66.53	7.60	9.21	66.31	7.42	9.21	61.81	6.29	8.68
		180.00	73.93	7.86	5.17	73.41	8.09	5.11	70.99	7.58	4.96	66.53	7.18	4.64	66.31	6.99	4.64	61.81	6.01	4.36
		225.00	73.93	7.56	4.15	73.41	7.88	4.10	70.99	7.72	3.96	66.53	7.30	3.70	66.31	7.13	3.70	61.81	6.01	3.49
		270.00	73.93	7.43	3.47	73.41	7.78	3.42	70.99	7.81	3.29	66.53	7.38	3.08	66.31	7.22	3.08	61.81	6.01	2.91
120	10	90.00	53.35	9.39	6.87	53.32	9.64	6.83	53.77	9.98	6.85	53.07	10.00	6.73	52.82	10.17	6.67	52.38	10.16	6.60
		180.00	54.44	9.53	3.51	54.06	9.79	3.46	54.34	10.12	3.46	53.65	10.06	3.41	53.42	10.13	3.38	53.01	10.20	3.35
		225.00	54.62	9.48	2.82	54.06	9.79	2.77	54.72	10.15	2.79	53.84	10.09	2.74	53.62	10.19	2.72	53.22	10.54	2.67
		270.00	54.80	9.46	2.36	53.87	9.79	2.30	54.72	10.19	2.32	53.84	10.13	2.28	53.62	10.21	2.26	53.43	10.73	2.23
	15	90.00	53.71	8.33	7.10	53.50	8.52	7.03	53.77	8.87	7.02	53.07	8.99	6.89	52.82	9.05	6.84	52.38	9.13	6.76
		180.00	54.80	8.39	3.63	54.80	8.59	3.61	55.11	8.92	3.61	54.23	8.87	3.55	53.82	8.79	3.52	53.63	8.98	3.49
		225.00	55.17	8.26	2.93	54.80	8.52	2.89	55.49	8.92	2.91	54.61	8.87	2.86	54.41	8.79	2.85	54.05	9.59	2.78
		270.00	55.35	8.20	2.46	54.61	8.49	2.40	55.68	8.92	2.44	54.81	8.87	2.39	54.61	8.79	2.39	54.26	9.89	2.31
	20	90.00	55.17	7.47	7.46	54.98	7.57	7.41	55.30	7.79	7.43	54.23	7.95	7.24	54.02	8.24	7.16	53.63	8.65	7.03
		180.00	56.62	7.47	3.84	56.27	7.68	3.80	56.44	7.93	3.79	55.58	8.07	3.71	55.41	8.22	3.69	54.89	8.52	3.62
		225.00	56.80	7.39	3.09	56.27	7.62	3.04	57.02	7.93	3.07	55.96	8.07	3.00	55.80	8.24	2.97	55.30	8.84	2.91
		270.00	56.98	7.36	2.59	56.27	7.59	2.54	57.21	7.93	2.57	56.16	8.07	2.51	55.80	8.26	2.48	55.51	8.98	2.42
	25	90.00	61.96	8.02	8.43	61.64	8.20	8.35	61.12	8.46	8.23	60.95	8.70	8.17	60.60	8.88	8.09	56.96	8.14	7.63
		180.00	62.16	7.90	4.24	61.64	8.15	4.18	61.12	8.40	4.12	60.95	8.55	4.10	60.60	8.72	4.06	56.96	7.99	3.83
		225.00	62.35	7.62	3.42	61.64	7.94	3.36	61.12	8.24	3.31	60.95	8.55	3.28	60.60	8.57	3.25	56.96	7.99	3.06
		270.00	62.35	7.47	2.86	61.64	7.82	2.80	61.12	8.18	2.76	60.95	8.55	2.73	60.60	8.48	2.72	56.96	7.99	2.55
	30	90.00	67.70	8.65	9.23	67.01	8.80	9.10	65.45	8.70	8.87	63.37	8.28	8.61	61.29	8.05	8.32	56.96	7.08	7.80
		180.00	67.70	8.35	4.64	67.01	8.61	4.57	65.45	8.55	4.45	63.37	8.13	4.32	61.29	7.73	4.19	56.96	6.93	3.91
		225.00	67.70	8.09	3.73	67.01	8.41	3.66	65.45	8.37	3.57	63.37	8.13	3.45	61.29	7.73	3.35	56.96	6.79	3.14
		270.00	67.70	7.94	3.11	67.01	8.31	3.06	65.45	8.29	2.98	63.37	8.13	2.88	61.29	7.73	2.79	56.96	6.73	2.62
	35	90.00	73.07	9.32	9.97	69.60	8.56	9.54	65.45	7.79	9.01	63.37	7.41	8.75	61.29	7.06	8.48	56.96	6.24	7.93
		180.00	73.07	8.79	5.02	69.60	8.23	4.80	65.45	7.48	4.53	63.37	7.12	4.40	61.29	6.78	4.26	56.96	6.10	3.98
		225.00	73.07	8.68	4.03	69.60	8.17	3.84	65.45	7.48	3.63	63.37	7.12	3.52	61.29	6.78	3.41	56.96	5.96	3.19
		270.00	73.07	8.63	3.36	69.60	8.14	3.20	65.45	7.48	3.02	63.37	7.12	2.93	61.29	6.78	2.84	56.96	5.88	2.66
	40	90.00	73.07	9.00	10.02	69.60	8.14	9.61	65.45	7.36	9.08	63.37	6.98	8.82	61.29	6.63	8.55	56.96	5.80	8.00
		180.00	73.07	8.29	5.06	69.60	7.77	4.83	65.45	7.05	4.57	63.37	6.69	4.43	61.29	6.33	4.30	56.96	5.69	4

8HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	90.00	53.81	10.13	6.83	53.98	10.42	6.81	53.82	10.83	6.72	53.62	10.80	6.69	53.22	11.18	6.57	51.00	10.10	6.40
		180.00	54.57	10.22	3.47	54.57	10.55	3.44	54.02	10.96	3.37	54.03	10.86	3.37	53.65	11.14	3.32	51.22	10.14	3.21
		225.00	54.76	10.22	2.79	54.77	10.55	2.77	54.22	10.94	2.71	54.23	10.84	2.71	53.65	11.20	2.65	51.43	10.24	2.58
		270.00	54.95	10.22	2.33	54.96	10.55	2.31	54.43	10.92	2.27	54.23	10.82	2.26	53.86	11.22	2.22	51.43	10.31	2.14
	15	90.00	53.81	8.95	7.01	54.18	9.25	7.02	53.82	9.66	6.90	53.62	9.71	6.86	53.22	9.95	6.77	51.00	9.07	6.56
		180.00	54.76	8.90	3.59	54.96	9.25	3.57	54.43	9.66	3.50	54.23	9.58	3.49	54.07	9.66	3.47	51.65	8.93	3.34
		225.00	55.14	8.83	2.90	55.16	9.18	2.88	54.63	9.55	2.82	54.44	9.44	2.81	54.07	9.66	2.78	51.86	9.07	2.68
		270.00	55.34	8.80	2.43	55.36	9.15	2.41	54.83	9.47	2.36	54.65	9.36	2.36	54.29	9.66	2.33	52.07	9.16	2.24
	20	90.00	54.95	7.75	7.38	55.16	8.03	7.37	54.63	8.30	7.24	54.23	8.45	7.16	54.07	8.76	7.09	51.65	8.24	6.79
		180.00	56.10	7.80	3.78	55.75	8.03	3.73	55.23	8.30	3.67	55.06	8.45	3.64	54.71	8.59	3.61	52.29	8.17	3.45
		225.00	56.48	7.80	3.04	56.34	8.03	3.02	55.43	8.30	2.95	55.27	8.31	2.94	54.93	8.59	2.90	52.50	8.17	2.77
		270.00	56.67	7.80	2.55	56.54	8.03	2.53	55.64	8.30	2.47	55.47	8.23	2.46	55.14	8.59	2.43	52.50	8.17	2.31
	25	90.00	61.05	8.32	8.24	60.95	8.67	8.17	60.08	8.79	8.02	58.00	8.37	7.76	56.10	7.97	7.52	52.29	7.01	7.08
		180.00	61.47	8.26	4.16	60.95	8.52	4.10	60.08	8.64	4.02	58.00	8.22	3.89	56.10	7.80	3.78	52.29	7.01	3.54
		225.00	61.88	8.26	3.35	60.95	8.56	3.28	60.08	8.46	3.23	58.00	8.22	3.11	56.10	7.67	3.03	52.29	6.86	2.84
		270.00	62.08	8.26	2.81	60.95	8.56	2.73	60.08	8.37	2.69	58.00	8.22	2.59	56.10	7.58	2.53	52.29	6.80	2.37
	30	90.00	66.83	8.90	9.06	63.89	8.41	8.67	60.08	7.51	8.22	58.00	7.27	7.93	56.10	6.95	7.68	52.29	6.43	7.17
		180.00	66.83	8.74	4.54	63.89	8.23	4.35	60.08	7.34	4.12	58.00	7.12	3.98	56.10	6.78	3.86	52.29	6.26	3.60
		225.00	66.83	8.67	3.64	63.89	8.10	3.49	60.08	7.19	3.31	58.00	6.98	3.19	56.10	6.78	3.08	52.29	6.26	2.88
		270.00	66.83	8.64	3.03	63.89	8.00	2.91	60.08	7.11	2.76	58.00	6.91	2.66	56.10	6.78	2.57	52.29	6.26	2.40
	35	90.00	67.70	8.19	9.30	63.89	7.36	8.84	60.08	6.74	8.34	58.00	6.53	8.05	56.10	6.08	7.82	52.29	5.52	7.31
		180.00	67.70	7.87	4.68	63.89	7.21	4.43	60.08	6.57	4.18	58.00	6.39	4.04	56.10	5.95	3.92	52.29	5.38	3.67
		225.00	67.70	7.67	3.75	63.89	7.06	3.55	60.08	6.43	3.36	58.00	6.39	3.23	56.10	5.95	3.14	52.29	5.38	2.93
		270.00	67.70	7.58	3.13	63.89	6.97	2.97	60.08	6.37	2.80	58.00	6.39	2.69	56.10	5.95	2.61	52.29	5.38	2.44
	40	90.00	67.70	7.71	9.38	63.89	7.06	8.89	60.08	6.28	8.41	58.00	6.09	8.12	56.10	5.65	7.89	52.29	5.08	7.38
		180.00	67.70	7.40	4.71	63.89	6.73	4.47	60.08	6.00	4.23	58.00	5.92	4.07	56.10	5.50	3.96	52.29	4.94	3.70
		225.00	67.70	7.28	3.78	63.89	6.58	3.58	60.08	6.00	3.38	58.00	5.78	3.27	56.10	5.34	3.17	52.29	4.80	2.97
		270.00	67.70	7.24	3.15	63.89	6.49	2.99	60.08	6.00	2.82	58.00	5.69	2.73	56.10	5.28	2.65	52.29	4.72	2.48
	45	90.00	67.70	7.21	9.46	63.89	6.73	8.94	60.08	5.83	8.48	58.00	5.63	8.19	56.10	5.19	7.96	52.29	4.63	7.45
		180.00	67.70	6.90	4.75	63.89	6.28	4.50	60.08	5.37	4.28	58.00	5.46	4.11	56.10	5.05	3.99	52.29	4.49	3.74
		225.00	67.70	6.90	3.80	63.89	6.10	3.61	60.08	5.54	3.41	58.00	5.17	3.30	56.10	4.74	3.21	52.29	4.21	3.01
		270.00	67.70	6.90	3.17	63.89	6.02	3.02	60.08	5.62	2.84	58.00	5.02	2.76	56.10	4.60	2.68	52.29	4.05	2.51
100	10	90.00	53.81	10.66	6.75	54.43	11.23	6.76	54.00	11.79	6.60	52.81	10.95	6.54	51.08	10.63	6.32	47.61	9.45	5.97
		180.00	54.41	10.87	3.40	54.64	11.38	3.38	54.00	11.94	3.29	52.81	11.01	3.27	51.08	10.67	3.16	47.61	9.49	2.98
		225.00	54.81	10.82	2.75	54.85	11.38	2.72	54.00	11.91	2.63	52.81	10.99	2.62	51.08	10.63	2.53	47.61	9.45	2.39
		270.00	55.01	10.80	2.30	55.06	11.38	2.28	54.00	11.89	2.19	52.81	10.97	2.18	51.08	10.63	2.11	47.61	9.43	1.99
	15	90.00	54.21	9.42	7.00	54.43	9.92	6.96	54.00	10.52	6.80	52.81	9.85	6.72	51.08	9.46	6.51	47.61	8.49	6.12
		180.00	54.41	9.59	3.50	54.64	9.96	3.49	54.00	10.52	3.40	52.81	9.71	3.37	51.08	9.32	3.26	47.61	8.36	3.07
		225.00	54.81	9.43	2.84	55.06	9.87	2.83	54.00	10.40	2.73	52.81	9.57	2.70	51.08	9.18	2.62	47.61	8.22	2.46
		270.00	55.01	9.35	2.38	55.06	9.83	2.36	54.00	10.31	2.28	52.81	9.49	2.26	51.08	9.10	2.19	47.61	8.14	2.06
	20	90.00	54.61	8.05	7.28	54.85	8.41	7.26	54.00	8.90	7.05	52.81	8.43	6.94	51.08	8.01	6.73	47.61	7.36	6.29
		180.00	55.41	8.19	3.69	55.06	8.45	3.64	54.00	8.90	3.53	52.81	8.29	3.48	51.08	7.87	3.38	47.61	7.06	3.17
		225.00	55.61	8.05	2.97	55.48	8.37	2.95	54.00	8.76	2.83	52.81	8.13	2.79	51.08	7.71	2.71	47.61	6.95	2.54
		270.00	55.81	7.98	2.49	55.69	8.33	2.47	54.00	8.67	2.36	52.81	8.07	2.33	51.08	7.63	2.26	47.61	6.87	2.12
	25	90.00	59.73	8.66	7.99	58.00	8.41	7.75	54.00	7.63	7.25	52.81	7.27	7.12	51.08	6.89	6.91	47.61	6.08	6.49
		180.00	60.60	8.68	4.06	58.00	8.22	3.89	54.00	7.47	3.64	52.81	7.11	3.57	51.08	6.75	3.47	47.61	6.08	3.25
		225.00	60.82	8.48	3.27	58.00	8.15	3.12	54.00	7.34	2.92	52.81	6.96	2.87	51.08	6.75	2.77	47.61	5.92	2.61
		270.00	61.03	8.40	2.74	58.00	8.13	2.60	54.00	7.26	2.44	52.81	6.88	2.39	51.08	6.75	2.31	47.61	5.86	2.18
	30	90.00	61.47	7.92	8.37	58.00	7.27	7.93	54.00	6.55	7.42	52.81	6.35	7.26	51.08	5.88	7.07	47.61	5.48	6.59
		180.00	61.47	7.78	4.20	58.00	7.12	3.98	54.00	6.49	3.71	52.81	6.18	3.64	51.08	5.88	3.53	47.61	5.32	3.31
		225.00	61.47	7.61	3.37	58.00	7.12	3.18	54.00	6.40	2.98	52.81	6.18	2.92	51.08	5.74	2.84	47.61	5.32	2.65
		270.00	61.47	7.52	2.81	58.00	7.12	2.65	54.00	6.36	2.48	52.81	6.18	2.43	51.08	5.65	2.37	47.61	5.32	2.20
	35	90.00	61.47	7.14	8.49	58.00	6.56	8.04	54.00	5.79	7.54	52.81	5.63	7.38	51.08	5.35	7.15	47.61	4.86	6.68
		180.00	61.47	6.82	4.27	58.00	6.26	4.05	54.00	5.72	3.77	52.81	5.46	3.70	51.08	5.20	3.59	47.61	4.71	3.35
		225.00	61.47	6.82	3.42	58.00	6.26	3.24	54.00	5.64	3.02	52.81	5.46	2.96	51.08	5.20	2.87	47.61	4.71	2.68
		270.00	61.47	6.82	2.85	58.00	6.26	2.70	54.00	5.60	2.52	52.81	5.46	2.47	51.08	5.20	2.39	47.61	4.71	2.24
	40	90.00	61.47	6.67	8.57	58.00	6.08	8.12	54.00	5.18	7.63	52.81	5.02	7.47	51.08	4.74	7.24	47.61	4.42	6.75
		180.00	61.47	6.35	4.31	58.00	5.78	4.08	54.00	5.11	3.82									

VRF MW



8HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	90.00	54.49	11.85	6.67	52.29	11.10	6.44	49.17	9.94	6.13	47.44	9.43	5.94	45.88	9.14	5.74	42.77	7.96	5.44
		180.00	54.26	11.89	3.31	52.07	11.16	3.20	49.17	9.98	3.06	47.44	9.49	2.97	45.88	9.12	2.87	42.77	8.00	2.72
		225.00	54.71	11.85	2.68	52.29	11.12	2.57	49.17	9.94	2.45	47.44	9.45	2.38	45.88	9.14	2.30	42.77	8.02	2.17
		270.00	54.94	11.83	2.25	52.29	11.10	2.15	49.17	9.94	2.04	47.44	9.43	1.98	45.88	9.16	1.91	42.77	8.04	1.81
	15	90.00	54.71	10.22	6.96	52.51	9.70	6.69	49.17	8.86	6.30	47.44	8.50	6.09	45.88	8.15	5.90	42.77	7.17	5.57
		180.00	54.26	10.05	3.46	52.07	9.53	3.32	49.17	8.72	3.16	47.44	8.36	3.06	45.88	7.87	2.97	42.77	7.01	2.80
		225.00	54.71	9.92	2.80	52.29	9.39	2.68	49.17	8.57	2.54	47.44	8.20	2.45	45.88	7.87	2.38	42.77	7.01	2.24
		270.00	54.94	9.83	2.35	52.51	9.32	2.25	49.17	8.49	2.12	47.44	8.14	2.05	45.88	7.87	1.98	42.77	7.01	1.86
	20	90.00	54.94	8.65	7.24	52.74	8.27	6.95	49.17	7.55	6.51	47.44	7.18	6.29	45.88	6.99	6.08	42.77	6.33	5.70
		180.00	54.71	8.65	3.60	52.29	8.16	3.45	49.17	7.41	3.26	47.44	7.06	3.16	45.88	6.70	3.06	42.77	6.04	2.87
		225.00	54.94	8.52	2.90	52.51	8.10	2.78	49.17	7.41	2.61	47.44	7.06	2.53	45.88	6.70	2.45	42.77	6.04	2.30
		270.00	55.16	8.44	2.44	52.51	8.08	2.32	49.17	7.41	2.18	47.44	7.06	2.10	45.88	6.70	2.04	42.77	6.04	1.91
	25	90.00	54.75	7.71	7.36	52.29	7.06	7.07	49.17	6.52	6.67	47.44	6.08	6.47	45.88	5.95	6.24	42.77	5.39	5.84
		180.00	55.41	7.64	3.73	52.29	6.99	3.54	49.17	6.37	3.35	47.44	6.08	3.23	45.88	5.78	3.13	42.77	5.23	2.93
		225.00	55.62	7.44	3.01	52.29	6.84	2.84	49.17	6.37	2.68	47.44	5.92	2.60	45.88	5.78	2.51	42.77	5.23	2.35
		270.00	55.62	7.33	2.52	52.29	6.76	2.37	49.17	6.37	2.23	47.44	5.86	2.17	45.88	5.78	2.09	42.77	5.23	1.96
	30	90.00	55.41	6.78	7.60	52.29	6.21	7.20	49.17	5.71	6.80	47.44	5.48	6.56	45.88	5.22	6.36	42.77	4.60	5.97
		180.00	55.41	6.63	3.81	52.29	6.08	3.61	49.17	5.56	3.41	47.44	5.32	3.29	45.88	5.07	3.19	42.77	4.60	2.98
		225.00	55.41	6.48	3.06	52.29	5.92	2.90	49.17	5.56	2.73	47.44	5.32	2.63	45.88	5.07	2.55	42.77	4.46	2.40
		270.00	55.41	6.40	2.55	52.29	5.83	2.42	49.17	5.56	2.27	47.44	5.32	2.20	45.88	5.07	2.13	42.77	4.40	2.00
	35	90.00	55.41	6.02	7.72	52.29	5.54	7.31	49.17	5.07	6.89	47.44	4.88	6.65	45.88	4.64	6.45	42.77	4.24	6.02
		180.00	55.41	5.85	3.87	52.29	5.38	3.67	49.17	4.93	3.46	47.44	4.71	3.34	45.88	4.50	3.24	42.77	4.09	3.02
		225.00	55.41	5.71	3.11	52.29	5.23	2.94	49.17	4.77	2.78	47.44	4.57	2.68	45.88	4.50	2.59	42.77	4.09	2.42
		270.00	55.41	5.62	2.59	52.29	5.15	2.46	49.17	4.68	2.32	47.44	4.51	2.24	45.88	4.50	2.16	42.77	4.09	2.02
	40	90.00	55.41	5.56	7.79	52.29	5.09	7.38	49.17	4.48	6.99	47.44	4.29	6.75	45.88	4.21	6.52	42.77	3.79	6.09
		180.00	55.41	5.25	3.92	52.29	4.94	3.70	49.17	4.33	3.51	47.44	4.14	3.38	45.88	4.04	3.27	42.77	3.65	3.06
		225.00	55.41	5.25	3.14	52.29	4.94	2.96	49.17	4.33	2.80	47.44	4.14	2.71	45.88	4.04	2.62	42.77	3.65	2.45
		270.00	55.41	5.25	2.61	52.29	4.94	2.47	49.17	4.33	2.34	47.44	4.14	2.26	45.88	4.04	2.18	42.77	3.65	2.04
	45	90.00	55.41	5.11	7.86	52.29	4.63	7.45	49.17	3.88	7.08	47.44	3.69	6.84	45.88	3.75	6.59	42.77	3.35	6.16
		180.00	55.41	4.65	3.97	52.29	4.49	3.74	49.17	3.73	3.55	47.44	3.55	3.43	45.88	3.61	3.30	42.77	3.21	3.09
		225.00	55.41	4.79	3.17	52.29	4.63	2.98	49.17	3.88	2.83	47.44	3.69	2.74	45.88	3.61	2.64	42.77	3.21	2.47
		270.00	55.41	4.88	2.63	52.29	4.72	2.48	49.17	3.94	2.36	47.44	3.78	2.28	45.88	3.61	2.20	42.77	3.21	2.06
80	10	90.00	48.95	10.00	6.09	46.18	9.16	5.79	43.63	8.11	5.55	42.25	7.89	5.37	40.86	7.47	5.22	38.09	6.79	4.89
		180.00	49.17	9.94	3.07	46.40	9.09	2.92	43.63	8.11	2.78	42.25	7.91	2.68	40.86	7.49	2.61	38.09	6.79	2.45
		225.00	49.17	9.92	2.46	46.40	9.13	2.33	43.63	8.15	2.22	42.25	7.87	2.15	40.86	7.45	2.09	38.09	6.75	1.96
		270.00	49.17	9.89	2.05	46.18	9.16	1.93	43.63	8.17	1.85	42.25	7.85	1.79	40.86	7.43	1.74	38.09	6.73	1.63
	15	90.00	49.17	9.06	6.27	46.40	8.21	5.97	43.63	7.21	5.69	42.25	7.11	5.49	40.86	6.67	5.35	38.09	6.10	5.00
		180.00	49.17	8.75	3.16	46.40	7.91	3.01	43.63	7.09	2.86	42.25	6.95	2.76	40.86	6.53	2.68	38.09	5.97	2.51
		225.00	49.17	8.57	2.54	46.40	7.91	2.41	43.63	7.09	2.29	42.25	6.81	2.22	40.86	6.37	2.16	38.09	5.81	2.02
		270.00	49.17	8.48	2.12	46.40	7.91	2.01	43.63	7.09	1.90	42.25	6.73	1.85	40.86	6.29	1.80	38.09	5.75	1.69
	20	90.00	49.17	7.61	6.50	46.40	6.99	6.16	43.63	6.21	5.85	42.25	6.09	5.65	40.86	5.81	5.48	38.09	5.26	5.13
		180.00	49.17	7.45	3.26	46.40	6.82	3.09	43.63	6.21	2.93	42.25	5.93	2.84	40.86	5.65	2.75	38.09	5.10	2.58
		225.00	49.17	7.30	2.62	46.40	6.67	2.48	43.63	6.07	2.35	42.25	5.93	2.27	40.86	5.51	2.21	38.09	5.10	2.06
		270.00	49.17	7.21	2.19	46.40	6.60	2.07	43.63	5.99	1.96	42.25	5.93	1.89	40.86	5.43	1.85	38.09	5.10	1.72
	25	90.00	49.17	6.57	6.66	46.40	6.03	6.31	43.63	5.38	5.98	42.25	5.27	5.78	40.86	5.05	5.60	38.09	4.59	5.24
		180.00	49.17	6.40	3.34	46.40	5.88	3.17	43.63	5.38	2.99	42.25	5.13	2.90	40.86	4.90	2.81	38.09	4.45	2.63
		225.00	49.17	6.27	2.68	46.40	5.88	2.53	43.63	5.22	2.40	42.25	5.13	2.32	40.86	4.90	2.25	38.09	4.45	2.10
		270.00	49.17	6.18	2.24	46.40	5.88	2.11	43.63	5.16	2.01	42.25	5.13	1.93	40.86	4.90	1.87	38.09	4.45	1.75
	30	90.00	49.17	5.69	6.80	46.40	5.29	6.43	43.63	4.89	6.06	42.25	4.68	5.87	40.86	4.47	5.69	38.09	4.10	5.31
		180.00	49.17	5.52	3.41	46.40	5.15	3.23	43.63	4.73	3.04	42.25	4.54	2.95	40.86	4.32	2.86	38.09	3.94	2.67
		225.00	49.17	5.52	2.73	46.40	5.15	2.58	43.63	4.73	2.43	42.25	4.54	2.36	40.86	4.32	2.28	38.09	3.94	2.14
		270.00	49.17	5.52	2.27	46.40	5.15	2.15	43.63	4.73	2.03	42.25	4.54	1.97	40.86	4.32	1.90	38.09	3.94	1.78
	35	90.00	49.17	5.16	6.88	46.40	4.71	6.52	43.63	4.35	6.14	42.25	4.04	5.97	40.86	4.01	5.76	38.09	3.53	5.40
		180.00	49.17	5.02	3.45	46.40	4.57	3.27	43.63	4.21	3.08	42.25	4.04	2.99	40.86	3.86	2.89	38.09	3.53	2.70
		225.00	49.17	5.02	2.76	46.40	4.43	2.63	43.63	4.21	2.47	42.25	3.88	2.40	40.86	3.86	2.31	38.09	3.40	2.17
		270.00	49.17	5.02	2.30	46.40	4.35	2.19	43.63	4.21	2.05	42.25	3.82	2.00	40.86	3.86	1.93	38.09	3.32	1.81
	40	90.00	49.17	4.85	6.93	46.40	4.28	6.59	43.63	3.90	6.21	42.25	3.74	6.02	40.86	3.58	5.83	38.09	3.24	5.45
		180.00	49.17	4.56	3.49	46.40	4.14	3.30	43.63	3.90	3.11	42.25	3.60	3.0						

8HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	90.00	42.89	8.30	5.41	40.69	7.58	5.18	38.26	6.89	4.91	36.88	6.41	4.76	35.67	6.21	4.60	33.24	5.51	4.34
		180.00	43.11	8.24	2.73	40.69	7.51	2.59	38.26	6.83	2.46	36.88	6.41	2.38	35.67	6.21	2.30	33.24	5.51	2.17
		225.00	43.11	8.28	2.18	40.69	7.55	2.07	38.26	6.85	1.96	36.88	6.43	1.90	35.67	6.16	1.85	33.24	5.51	1.73
		270.00	43.11	8.28	1.82	40.69	7.55	1.73	38.26	6.87	1.64	36.88	6.45	1.59	35.67	6.14	1.54	33.24	5.52	1.44
	15	90.00	43.11	7.52	5.56	40.69	6.82	5.30	38.26	6.14	5.02	36.88	5.75	4.87	35.67	5.53	4.71	33.24	4.94	4.43
		180.00	43.11	7.22	2.81	40.69	6.51	2.67	38.26	5.84	2.53	36.88	5.63	2.44	35.67	5.39	2.37	33.24	4.80	2.22
		225.00	43.11	7.22	2.24	40.69	6.51	2.14	38.26	5.84	2.03	36.88	5.63	1.95	35.67	5.25	1.90	33.24	4.80	1.78
		270.00	43.11	7.22	1.87	40.69	6.51	1.78	38.26	5.84	1.69	36.88	5.63	1.63	35.67	5.18	1.59	33.24	4.80	1.48
	20	90.00	43.11	6.29	5.76	40.69	5.75	5.46	38.26	5.29	5.16	36.88	5.05	4.98	35.67	4.82	4.82	33.24	4.39	4.51
		180.00	43.11	6.11	2.89	40.69	5.61	2.74	38.26	5.13	2.59	36.88	4.92	2.50	35.67	4.69	2.42	33.24	4.25	2.27
		225.00	43.11	6.11	2.31	40.69	5.61	2.19	38.26	5.13	2.07	36.88	4.78	2.01	35.67	4.69	1.94	33.24	4.12	1.82
		270.00	43.11	6.11	1.93	40.69	5.61	1.83	38.26	5.13	1.73	36.88	4.72	1.68	35.67	4.69	1.61	33.24	4.04	1.52
	25	90.00	43.11	5.42	5.89	40.69	5.02	5.58	38.26	4.61	5.26	36.88	4.42	5.08	35.67	4.09	4.94	33.24	3.73	4.61
		180.00	43.11	5.28	2.96	40.69	4.87	2.80	38.26	4.47	2.64	36.88	4.28	2.55	35.67	4.09	2.47	33.24	3.73	2.31
		225.00	43.11	5.13	2.38	40.69	4.71	2.25	38.26	4.47	2.11	36.88	4.28	2.04	35.67	3.96	1.98	33.24	3.73	1.85
		270.00	43.11	5.07	1.98	40.69	4.63	1.88	38.26	4.47	1.76	36.88	4.28	1.70	35.67	3.88	1.66	33.24	3.73	1.54
	30	90.00	43.11	4.79	5.99	40.69	4.44	5.67	38.26	4.11	5.34	36.88	3.79	5.17	35.67	3.77	4.99	33.24	3.33	4.68
		180.00	43.11	4.64	3.01	40.69	4.30	2.84	38.26	3.95	2.68	36.88	3.79	2.59	35.67	3.63	2.50	33.24	3.33	2.34
		225.00	43.11	4.64	2.41	40.69	4.30	2.28	38.26	3.95	2.15	36.88	3.66	2.08	35.67	3.63	2.00	33.24	3.33	1.87
		270.00	43.11	4.64	2.00	40.69	4.30	1.90	38.26	3.95	1.79	36.88	3.58	1.74	35.67	3.63	1.67	33.24	3.33	1.56
	35	90.00	43.11	4.28	6.07	40.69	3.98	5.74	38.26	3.55	5.43	36.88	3.52	5.22	35.67	3.27	5.06	33.24	3.15	4.70
		180.00	43.11	4.14	3.05	40.69	3.83	2.88	38.26	3.55	2.71	36.88	3.39	2.62	35.67	3.27	2.53	33.24	3.01	2.36
		225.00	43.11	4.14	2.44	40.69	3.83	2.30	38.26	3.41	2.18	36.88	3.39	2.09	35.67	3.27	2.03	33.24	3.01	1.89
		270.00	43.11	4.14	2.03	40.69	3.83	1.92	38.26	3.33	1.82	36.88	3.39	1.75	35.67	3.27	1.69	33.24	3.01	1.58
	40	90.00	43.11	3.97	6.12	40.69	3.69	5.78	38.26	3.25	5.47	36.88	3.10	5.28	35.67	3.00	5.11	33.24	2.85	4.75
		180.00	43.11	3.83	3.07	40.69	3.55	2.90	38.26	3.12	2.75	36.88	3.10	2.64	35.67	3.00	2.55	33.24	2.74	2.38
		225.00	43.11	3.83	2.46	40.69	3.55	2.32	38.26	3.12	2.20	36.88	2.96	2.12	35.67	2.84	2.05	33.24	2.74	1.91
		270.00	43.11	3.83	2.05	40.69	3.55	1.94	38.26	3.12	1.83	36.88	2.88	1.77	35.67	2.78	1.71	33.24	2.74	1.59
	45	90.00	43.11	3.69	6.16	40.69	3.39	5.83	38.26	2.98	5.52	36.88	2.69	5.35	35.67	2.72	5.15	33.24	2.58	4.79
		180.00	43.11	3.55	3.09	40.69	3.24	2.93	38.26	2.70	2.78	36.88	2.80	2.66	35.67	2.72	2.58	33.24	2.44	2.41
		225.00	43.11	3.55	2.47	40.69	3.24	2.34	38.26	2.82	2.22	36.88	2.53	2.15	35.67	2.42	2.08	33.24	2.44	1.93
		270.00	43.11	3.55	2.06	40.69	3.24	1.95	38.26	2.90	1.84	36.88	2.39	1.80	35.67	2.27	1.74	33.24	2.44	1.61
60	10	90.00	36.88	6.38	4.77	34.80	6.02	4.50	32.72	5.63	4.24	31.69	5.23	4.14	30.65	5.09	4.00	28.57	4.49	3.76
		180.00	36.88	6.38	2.38	34.80	6.02	2.25	32.72	5.63	2.12	31.69	5.29	2.06	30.65	5.07	2.00	28.57	4.55	1.88
		225.00	36.88	6.40	1.91	34.80	5.96	1.80	32.72	5.58	1.70	31.69	5.23	1.65	30.65	5.04	1.60	28.57	4.49	1.51
		270.00	36.88	6.40	1.59	34.80	5.92	1.51	32.72	5.54	1.42	31.69	5.19	1.38	30.65	5.02	1.34	28.57	4.47	1.26
	15	90.00	36.88	5.78	4.86	34.80	5.42	4.59	32.72	5.02	4.33	31.69	4.70	4.22	30.65	4.53	4.08	28.57	4.05	3.83
		180.00	36.88	5.64	2.44	34.80	5.25	2.31	32.72	4.88	2.18	31.69	4.70	2.11	30.65	4.39	2.05	28.57	4.05	1.92
		225.00	36.88	5.64	1.95	34.80	5.11	1.86	32.72	4.74	1.75	31.69	4.54	1.70	30.65	4.25	1.65	28.57	3.91	1.54
		270.00	36.88	5.64	1.63	34.80	5.03	1.55	32.72	4.66	1.46	31.69	4.47	1.42	30.65	4.17	1.38	28.57	3.84	1.29
	20	90.00	36.88	5.05	4.98	34.80	4.67	4.71	32.72	4.31	4.44	31.69	4.13	4.31	30.65	3.98	4.17	28.57	3.62	3.90
		180.00	36.88	4.90	2.50	34.80	4.53	2.37	32.72	4.17	2.23	31.69	3.99	2.16	30.65	3.82	2.10	28.57	3.49	1.96
		225.00	36.88	4.90	2.00	34.80	4.53	1.89	32.72	4.17	1.79	31.69	3.99	1.73	30.65	3.82	1.68	28.57	3.49	1.57
		270.00	36.88	4.90	1.67	34.80	4.53	1.58	32.72	4.17	1.49	31.69	3.99	1.44	30.65	3.82	1.40	28.57	3.49	1.31
	25	90.00	36.88	4.42	5.07	34.80	4.13	4.80	32.72	3.66	4.54	31.69	3.65	4.38	30.65	3.37	4.26	28.57	3.24	3.96
		180.00	36.88	4.28	2.55	34.80	3.96	2.41	32.72	3.66	2.27	31.69	3.52	2.20	30.65	3.37	2.13	28.57	3.10	1.99
		225.00	36.88	4.28	2.04	34.80	3.96	1.93	32.72	3.53	1.83	31.69	3.52	1.76	30.65	3.37	1.71	28.57	3.10	1.59
		270.00	36.88	4.28	1.70	34.80	3.96	1.61	32.72	3.47	1.52	31.69	3.52	1.47	30.65	3.37	1.42	28.57	3.10	1.33
	30	90.00	36.88	3.93	5.15	34.80	3.66	4.87	32.72	3.43	4.58	31.69	3.28	4.44	30.65	3.15	4.30	28.57	2.94	4.01
		180.00	36.88	3.79	2.59	34.80	3.52	2.45	32.72	3.27	2.30	31.69	3.14	2.23	30.65	3.01	2.16	28.57	2.78	2.02
		225.00	36.88	3.79	2.07	34.80	3.52	1.96	32.72	3.27	1.84	31.69	3.14	1.79	30.65	3.01	1.73	28.57	2.78	1.61
		270.00	36.88	3.79	1.72	34.80	3.52	1.63	32.72	3.27	1.53	31.69	3.14	1.49	30.65	3.01	1.44	28.57	2.78	1.34
	35	90.00	36.88	3.40	5.23	34.80	3.31	4.92	32.72	2.96	4.65	31.69	3.00	4.49	30.65	2.86	4.34	28.57	2.69	4.05
		180.00	36.88	3.40	2.62	34.80	3.17	2.47	32.72	2.96	2.33	31.69	2.84	2.25	30.65	2.74	2.18	28.57	2.54	2.03
		225.00	36.88	3.40	2.09	34.80	3.17	1.98	32.72	2.80	1.87	31.69	2.84	1.80	30.65	2.74	1.75	28.57	2.54	1.63
		270.00	36.88	3.40	1.74	34.80	3.17	1.65	32.72	2.74	1.56	31.69	2.84	1.50	30.65	2.74	1.45	28.57	2.54	1.36
	40	90.00	36.88	3.11	5.28	34.80	3.03	4.97	32.72	2.68	4.70	31.69	2.72	4.53	30.65	2.58	4.39	28.57	2.40	4.09
180.00		36.88	3.11	2.64	34.80	2.87	2.50	32.72	2.68	2.35	31.69	2.56	2.28	30.65	2.44	2.20				

VRF MW



8HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	90.00	30.60	5.08	3.99	28.87	4.79	3.77	29.09	4.36	3.87	26.32	4.21	3.46	25.45	3.92	3.37	23.72	3.61	3.14
		180.00	30.82	5.04	2.02	29.09	4.79	1.90	29.09	4.34	1.94	26.32	4.17	1.73	25.45	3.96	1.68	23.72	3.57	1.58
		225.00	30.82	5.08	1.61	29.09	4.79	1.52	29.09	4.34	1.55	26.32	4.19	1.38	25.45	3.90	1.35	23.72	3.59	1.26
		270.00	30.82	5.08	1.34	29.09	4.81	1.27	29.09	4.36	1.29	26.32	4.19	1.15	25.45	3.86	1.13	23.72	3.59	1.05
	15	90.00	30.82	4.59	4.10	29.09	4.32	3.87	29.09	3.88	3.94	26.32	3.77	3.53	25.45	3.50	3.43	23.72	3.24	3.20
		180.00	30.82	4.44	2.06	29.09	4.17	1.95	29.09	3.74	1.98	26.32	3.63	1.77	25.45	3.50	1.72	23.72	3.10	1.61
		225.00	30.82	4.44	1.65	29.09	4.17	1.56	29.09	3.74	1.59	26.32	3.63	1.42	25.45	3.34	1.38	23.72	3.10	1.29
		270.00	30.82	4.44	1.37	29.09	4.17	1.30	29.09	3.74	1.32	26.32	3.63	1.18	25.45	3.26	1.16	23.72	3.10	1.07
	20	90.00	30.82	3.99	4.19	29.09	3.72	3.97	29.09	3.46	4.01	26.32	3.33	3.59	25.45	3.20	3.48	23.72	2.81	3.27
		180.00	30.82	3.85	2.11	29.09	3.58	1.99	29.09	3.30	2.02	26.32	3.19	1.81	25.45	3.06	1.75	23.72	2.81	1.63
		225.00	30.82	3.85	1.69	29.09	3.58	1.60	29.09	3.30	1.61	26.32	3.19	1.45	25.45	3.06	1.40	23.72	2.81	1.31
		270.00	30.82	3.85	1.41	29.09	3.58	1.33	29.09	3.30	1.34	26.32	3.19	1.21	25.45	3.06	1.17	23.72	2.81	1.09
	25	90.00	30.82	3.55	4.26	29.09	3.16	4.05	29.09	3.10	4.06	26.32	2.83	3.67	25.45	2.72	3.55	23.72	2.52	3.31
		180.00	30.82	3.39	2.14	29.09	3.16	2.03	29.09	2.94	2.04	26.32	2.83	1.84	25.45	2.72	1.78	23.72	2.52	1.66
		225.00	30.82	3.39	1.72	29.09	3.16	1.62	29.09	2.94	1.64	26.32	2.83	1.47	25.45	2.72	1.42	23.72	2.52	1.33
		270.00	30.82	3.39	1.43	29.09	3.16	1.35	29.09	2.94	1.36	26.32	2.83	1.22	25.45	2.72	1.18	23.72	2.52	1.10
	30	90.00	30.82	3.18	4.32	29.09	2.96	4.08	29.09	2.82	4.11	26.32	2.55	3.72	25.45	2.61	3.57	23.72	2.43	3.33
		180.00	30.82	3.04	2.17	29.09	2.84	2.05	29.09	2.65	2.07	26.32	2.55	1.86	25.45	2.47	1.80	23.72	2.29	1.68
		225.00	30.82	3.04	1.74	29.09	2.84	1.64	29.09	2.65	1.65	26.32	2.55	1.49	25.45	2.47	1.44	23.72	2.29	1.34
		270.00	30.82	3.04	1.45	29.09	2.84	1.37	29.09	2.65	1.38	26.32	2.55	1.24	25.45	2.47	1.20	23.72	2.29	1.12
	35	90.00	30.82	2.87	4.37	29.09	2.58	4.14	29.09	2.42	4.17	26.32	2.48	3.73	25.45	2.26	3.63	23.72	2.10	3.38
		180.00	30.82	2.75	2.19	29.09	2.58	2.07	29.09	2.42	2.08	26.32	2.34	1.87	25.45	2.26	1.81	23.72	2.10	1.69
		225.00	30.82	2.75	1.76	29.09	2.58	1.66	29.09	2.42	1.67	26.32	2.34	1.50	25.45	2.26	1.45	23.72	2.10	1.35
		270.00	30.82	2.75	1.46	29.09	2.58	1.38	29.09	2.42	1.39	26.32	2.34	1.25	25.45	2.26	1.21	23.72	2.10	1.13
	40	90.00	30.82	2.59	4.41	29.09	2.44	4.17	29.09	2.28	4.19	26.32	2.19	3.77	25.45	2.13	3.65	23.72	1.95	3.40
		180.00	30.82	2.45	2.22	29.09	2.30	2.09	29.09	2.15	2.11	26.32	2.19	1.89	25.45	1.97	1.84	23.72	1.95	1.70
		225.00	30.82	2.45	1.77	29.09	2.30	1.68	29.09	2.15	1.68	26.32	2.19	1.51	25.45	1.97	1.47	23.72	1.95	1.36
		270.00	30.82	2.45	1.48	29.09	2.30	1.40	29.09	2.15	1.40	26.32	2.19	1.26	25.45	1.97	1.22	23.72	1.95	1.13
	45	90.00	30.82	2.31	4.46	29.09	2.30	4.19	29.09	2.15	4.21	26.32	1.89	3.82	25.45	1.97	3.67	23.72	1.82	3.42
		180.00	30.82	2.17	2.24	29.09	2.00	2.12	29.09	1.85	2.13	26.32	2.03	1.90	25.45	1.70	1.86	23.72	1.82	1.71
		225.00	30.82	2.17	1.79	29.09	2.00	1.69	29.09	1.85	1.70	26.32	2.03	1.52	25.45	1.70	1.49	23.72	1.82	1.37
		270.00	30.82	2.17	1.49	29.09	2.00	1.41	29.09	1.85	1.42	26.32	2.03	1.27	25.45	1.70	1.24	23.72	1.82	1.14

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
130	10	95.00	48.01	4.30	7.79	61.04	7.50	10.20	61.37	6.09	10.04	62.03	6.12	10.15	62.80	6.12	10.26	64.17	6.16	10.47	65.14	6.11	10.61			
		190.00	48.01	3.99	3.87	61.04	7.03	5.07	61.37	5.70	4.99	62.03	5.71	5.04	62.80	5.67	5.10	64.17	5.77	5.21	65.14	5.81	5.28			
		237.50	48.01	3.86	3.09	61.04	6.89	4.05	61.37	5.57	3.99	62.03	5.57	4.03	62.80	5.61	4.07	64.17	5.63	4.16	65.14	5.64	4.21			
		285.00	48.01	3.80	2.57	61.04	6.80	3.37	61.37	5.54	3.32	62.03	5.51	3.35	62.80	5.58	3.39	64.17	5.57	3.46	65.14	5.56	3.51			
	15	95.00	47.32	5.65	7.89	60.23	9.85	10.43	60.37	7.98	10.18	61.10	8.00	10.29	61.66	8.02	10.37	63.27	8.08	10.62	64.25	8.05	10.76			
		190.00	47.32	5.21	3.91	60.23	9.24	5.17	60.37	7.46	5.05	61.10	7.48	5.11	61.66	7.48	5.15	63.27	7.58	5.27	64.25	7.59	5.35			
		237.50	47.32	5.05	3.12	60.23	9.00	4.12	60.37	7.29	4.03	61.10	7.33	4.08	61.66	7.34	4.11	63.27	7.41	4.21	64.25	7.42	4.27			
		285.00	47.32	4.99	2.60	60.23	8.91	3.43	60.37	7.23	3.35	61.10	7.25	3.39	61.66	7.28	3.42	63.27	7.33	3.50	64.25	7.31	3.55			
	20	95.00	46.62	6.87	7.96	59.42	11.96	10.63	59.38	9.67	10.28	60.17	9.71	10.40	60.97	9.69	10.52	62.37	9.78	10.74	63.36	9.78	10.89			
		190.00	46.62	6.31	3.94	59.42	11.21	5.26	59.38	9.02	5.09	60.17	9.07	5.15	60.97	9.09	5.22	62.37	9.16	5.32	63.36	9.20	5.40			
		237.50	46.62	6.12	3.14	59.42	10.93	4.19	59.38	8.86	4.06	60.17	8.90	4.11	60.97	8.89	4.16	62.37	9.00	4.25	63.36	8.98	4.31			
		285.00	46.62	6.03	2.61	59.42	10.78	3.48	59.38	8.76	3.38	60.17	8.78	3.42	60.97	8.81	3.46	62.37	8.89	3.54	63.36	8.87	3.58			
	25	95.00	46.62	8.09	8.15	55.59	10.58	9.85	57.58	10.74	10.17	58.38	10.77	10.29	59.18	10.84	10.42	60.37	10.85	10.60	61.17	10.85	10.72			
		190.00	46.62	7.43	4.02	55.59	9.91	4.88	57.58	10.03	5.03	58.38	10.09	5.10	59.18	10.12	5.16	60.37	10.18	5.25	61.17	10.21	5.31			
		237.50	46.62	7.22	3.21	55.59	9.70	3.89	57.58	9.86	4.02	58.38	9.88	4.06	59.18	9.94	4.12	60.37	9.98	4.19	61.17	9.99	4.24			
		285.00	46.62	7.13	2.67	55.59	9.57	3.23	57.58	9.74	3.34	58.38	9.77	3.38	59.18	9.84	3.42	60.37	9.88	3.49	61.17	9.87	3.53			
	30	95.00	46.62	9.58	8.37	53.80	11.68	9.75	55.59	11.82	10.04	56.19	11.87	10.13	56.99	11.89	10.25	57.98	11.95	10.41	58.78	11.91	10.52			
		190.00	46.62	8.79	4.12	53.80	10.94	4.82	55.59	11.04	4.96	56.19	11.10	5.01	56.99	11.13	5.07	57.98	11.19	5.15	58.78	11.21	5.21			
		237.50	46.62	8.58	3.29	53.80	10.69	3.84	55.59	10.83	3.96	56.19	10.88	3.99	56.99	10.95	4.05	57.98	10.96	4.11	58.78	10.96	4.15			
		285.00	46.62	8.46	2.73	53.80	10.56	3.19	55.59	10.72	3.29	56.19	10.76	3.32	56.99	10.85	3.37	57.98	10.87	3.42	58.78	10.82	3.45			
	35	95.00	46.62	11.41	8.64	51.41	12.80	9.56	53.00	12.89	9.81	53.80	12.98	9.94	54.40	12.98	10.03	55.19	13.02	10.15	55.79	13.00	10.24			
		190.00	46.62	10.50	4.25	51.41	11.97	4.72	53.00	12.07	4.84	53.80	12.13	4.91	54.40	12.17	4.95	55.19	12.20	5.02	55.79	12.20	5.06			
		237.50	46.62	10.19	3.38	51.41	11.70	3.76	53.00	11.81	3.86	53.80	11.87	3.91	54.40	11.94	3.95	55.19	11.98	4.00	55.79	11.93	4.03			
		285.00	46.62	10.05	2.81	51.41	11.56	3.12	53.00	11.70	3.21	53.80	11.77	3.25	54.40	11.81	3.29	55.19	11.85	3.33	55.79	11.81	3.35			
	40	95.00	41.24	12.04	7.93	45.67	13.51	8.81	47.06	13.61	9.03	47.79	13.68	9.15	48.28	13.69	9.22	49.21	13.74	9.37	49.69	13.71	9.44			
		190.00	41.24	11.06	3.89	45.67	12.60	4.34	47.06	12.74	4.45	47.79	12.78	4.51	48.28	12.82	4.55	49.21	12.90	4.62	49.69	12.88	4.66			
		237.50	41.24	10.75	3.10	45.67	12.34	3.45	47.06	12.45	3.54	47.79	12.54	3.59	48.28	12.57	3.62	49.21	12.62	3.68	49.69	12.59	3.71			
		285.00	41.24	10.61	2.57	45.67	12.20	2.87	47.06	12.31	2.95	47.79	12.41	2.99	48.28	12.44	3.01	49.21	12.50	3.06	49.69	12.44	3.08			
	45	95.00	36.12	12.67	7.26	39.93	14.18	8.05	41.11	14.31	8.25	41.79	14.41	8.37	42.16	14.42	8.42	43.00	14.43	8.55	43.37	14.41	8.60			
		190.00	36.12	11.62	3.55	39.93	13.27	3.96	41.11	13.38	4.06	41.79	13.45	4.11	42.16	13.46	4.14	43.00	13.57	4.21	43.37	13.56	4.24			
		237.50	36.12	11.30	2.82	39.93	12.97	3.15	41.11	13.09	3.23	41.79	13.19	3.27	42.16	13.23	3.30	43.00	13.29	3.35	43.37	13.22	3.37			
		285.00	36.12	11.17	2.35	39.93	12.80	2.62	41.11	12.95	2.68	41.79	13.09	2.72	42.16	13.10	2.74	43.00	13.14	2.79	43.37	13.05	2.80			
10	95.00	43.93	3.74	7.10	52.39	4.85	8.52	59.67	5.98	9.77	60.62	5.96	9.91	61.39	6.03	10.04	62.76	6.04	10.24	63.94	6.04	10.42				
	190.00	43.93	3.42	3.52	52.39	4.53	4.24	59.67	5.54	4.85	60.62	5.60	4.93	61.39	5.59	4.99	62.76	5.66	5.09	63.94	5.62	5.18				
	237.50	43.93	3.39	2.82	52.39	4.43	3.38	59.67	5.47	3.88	60.62	5.48	3.94	61.39	5.50	3.98	62.76	5.55	4.07	63.94	5.53	4.14				
	285.00	43.93	3.36	2.35	52.39	4.40	2.82	59.67	5.44	3.23	60.62	5.42	3.28	61.39	5.44	3.32	62.76	5.49	3.39	63.94	5.48	3.44				
15	95.00	43.48	4.97	7.21	51.90	6.46	8.69	59.15	7.89	9.98	59.90	7.91	10.09	60.68	7.97	10.22	62.07	8.00	10.43	63.25	8.00	10.61				
	190.00	43.48	4.54	3.57	51.90	6.04	4.31	59.15	7.35	4.95	59.90	7.40	5.01	60.68	7.44	5.07	62.07	7.48	5.18	63.25	7.49	5.27				
	237.50	43.48	4.46	2.85	51.90	5.91	3.44	59.15	7.22	3.95	59.90	7.25	4.00	60.68	7.29	4.05	62.07	7.37	4.13	63.25	7.32	4.20				
	285.00	43.48	4.40	2.38	51.90	5.85	2.87	59.15	7.15	3.29	59.90	7.19	3.33	60.68	7.23	3.37	62.07	7.28	3.44	63.25	7.26	3.50				
20	95.00	43.04	6.04	7.31	51.41	7.87	8.82	58.38	9.60	10.12	59.18	9.65	10.25	59.97	9.67	10.37	61.37	9.76	10.59	62.56	9.73	10.76				
	190.00	43.04	5.55	3.62	51.41	7.36	4.37	58.38	8.97	5.01	59.18	9.02	5.08	59.97	9.06	5.14	61.37	9.13	5.25	62.56	9.16	5.34				
	237.50	43.04	5.41	2.88	51.41	7.20	3.49	58.38	8.76	4.00	59.18	8.84	4.05	59.97	8.91	4.10	61.37	8.96	4.19	62.56	8.94	4.26				
	285.00	43.04	5.32	2.40	51.41	7.13	2.90	58.38	8.66	3.33	59.18	8.75	3.37	59.97	8.82	3.41	61.37	8.87	3.49	62.56	8.82	3.54				
25	95.00	43.04	7.09	7.46	51.41	9.26	9.03	56.59	10.68	10.01	57.38	10.71	10.14	58.38	10.79	10.30	59.58	10.82	10.48	60.57	10.87	10.64				
	190.00	43.04	6.54	3.69	51.41	8.68	4.47	56.59	9.98	4.95	57.38	10.03	5.02	58.38	10.07	5.10	59.58	10.14	5.19	60.57	10.18	5.27				
	237.50	43.04	6.35	2.94	51.41	8.46	3.57	56.59	9.80	3.95	57.38	9.82	4.00	58.38	9.91	4.07	59.58	9.93	4.14	60.57	9.95	4.20				
	285.00	43.04	6.27	2.45	51.41	8.37	2.97	56.59	9.67	3.29	57.38	9.71	3.33	58.38	9.80	3.38	59.58	9.83	3.44	60.57	9.82	3.49				
30	95.00	43.04	8.38	7.65	51.41	11.01	9.29	54.59	11.74	9.88	55.39	11.81	10.00	55.99	11.88	10.1.0										

VRF MW



10HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	95.00	39.88	3.24	6.42	47.50	4.19	7.69	55.30	5.27	9.02	58.47	5.83	9.57	59.26	5.86	9.69	61.09	5.88	9.97	62.28	5.91	10.15
		190.00	39.88	2.98	3.19	47.50	3.90	3.83	55.30	4.95	4.48	58.47	5.46	4.76	59.26	5.52	4.82	61.09	5.46	4.95	62.28	5.52	5.05
		237.50	39.88	2.88	2.55	47.50	3.81	3.06	55.30	4.85	3.58	58.47	5.37	3.80	59.26	5.37	3.85	61.09	5.37	3.96	62.28	5.47	4.03
		285.00	39.88	2.82	2.12	47.50	3.78	2.54	55.30	4.79	2.98	58.47	5.31	3.16	59.26	5.31	3.20	61.09	5.31	3.30	62.28	5.41	3.36
	15	95.00	39.67	4.31	6.55	47.26	5.58	7.87	55.05	7.11	9.25	58.23	7.82	9.83	59.02	7.84	9.95	60.85	7.88	10.23	61.81	7.95	10.38
		190.00	39.67	3.97	3.25	47.26	5.21	3.91	55.05	6.63	4.59	58.23	7.32	4.88	59.02	7.35	4.94	60.85	7.37	5.08	61.81	7.44	5.15
		237.50	39.67	3.84	2.59	47.26	5.09	3.12	55.05	6.50	3.67	58.23	7.17	3.89	59.02	7.23	3.95	60.85	7.22	4.05	61.81	7.27	4.11
		285.00	39.67	3.79	2.16	47.26	5.06	2.60	55.05	6.41	3.05	58.23	7.10	3.24	59.02	7.14	3.28	60.85	7.16	3.38	61.81	7.18	3.42
	20	95.00	39.45	5.28	6.66	47.02	6.86	8.02	54.79	8.69	9.45	57.98	9.56	10.05	58.78	9.64	10.19	60.37	9.67	10.43	61.57	9.75	10.62
		190.00	39.45	4.86	3.30	47.02	6.40	3.98	54.79	8.15	4.69	57.98	8.97	4.98	58.78	9.00	5.05	60.37	9.07	5.17	61.57	9.13	5.26
		237.50	39.45	4.71	2.63	47.02	6.25	3.17	54.79	7.96	3.74	57.98	8.78	3.98	58.78	8.88	4.03	60.37	8.90	4.12	61.57	8.89	4.20
		285.00	39.45	4.63	2.19	47.02	6.20	2.64	54.79	7.87	3.11	57.98	8.69	3.31	58.78	8.79	3.35	60.37	8.81	3.43	61.57	8.77	3.49
	25	95.00	39.45	6.22	6.80	47.02	8.07	8.20	54.79	10.29	9.69	56.39	10.64	9.98	57.19	10.71	10.11	58.58	10.74	10.32	59.78	10.84	10.51
		190.00	39.45	5.71	3.36	47.02	7.54	4.06	54.79	9.62	4.79	56.39	9.96	4.94	57.19	10.01	5.00	58.58	10.09	5.11	59.78	10.14	5.20
		237.50	39.45	5.56	2.68	47.02	7.37	3.24	54.79	9.40	3.82	56.39	9.73	3.94	57.19	9.85	3.99	58.58	9.87	4.08	59.78	9.90	4.15
		285.00	39.45	5.46	2.23	47.02	7.29	2.70	54.79	9.31	3.18	56.39	9.62	3.28	57.19	9.74	3.32	58.58	9.76	3.39	59.78	9.77	3.45
	30	95.00	39.45	7.33	6.96	47.02	9.58	8.43	53.60	11.66	9.72	54.40	11.74	9.85	54.99	11.80	9.94	56.39	11.86	10.16	57.38	11.92	10.32
		190.00	39.45	6.74	3.44	47.02	8.93	4.16	53.60	10.92	4.80	54.40	10.97	4.87	54.99	11.03	4.91	56.39	11.10	5.02	57.38	11.17	5.10
		237.50	39.45	6.57	2.74	47.02	8.77	3.32	53.60	10.66	3.83	54.40	10.77	3.88	54.99	10.83	3.92	56.39	10.88	4.01	57.38	10.90	4.07
		285.00	39.45	6.47	2.28	47.02	8.66	2.76	53.60	10.55	3.18	54.40	10.64	3.23	54.99	10.73	3.26	56.39	10.78	3.33	57.38	10.76	3.38
	35	95.00	39.36	8.76	7.16	47.02	11.42	8.70	51.21	13.94	9.70	52.00	12.83	9.65	52.60	12.87	9.75	53.80	12.95	9.94	54.79	13.02	10.10
		190.00	39.36	8.06	3.53	47.02	10.67	4.29	51.21	13.06	4.78	52.00	12.00	4.76	52.60	12.06	4.81	53.80	12.13	4.91	54.79	12.18	4.99
		237.50	39.36	7.84	2.81	47.02	10.45	3.42	51.21	12.80	3.81	52.00	11.79	3.80	52.60	11.82	3.84	53.80	11.90	3.91	54.79	11.90	3.97
		285.00	39.36	7.73	2.34	47.02	10.32	2.85	51.21	12.63	3.17	52.00	11.65	3.16	52.60	11.69	3.19	53.80	11.79	3.25	54.79	11.75	3.30
	40	95.00	36.60	9.63	6.88	43.72	12.54	8.38	47.40	15.35	9.34	47.99	14.09	9.24	48.65	14.16	9.35	49.91	14.22	9.55	50.93	14.29	9.71
		190.00	36.60	8.85	3.38	43.72	11.73	4.13	47.40	14.34	4.60	47.99	13.18	4.55	48.65	13.24	4.61	49.91	13.31	4.71	50.93	13.40	4.79
		237.50	36.60	8.59	2.69	43.72	11.48	3.29	47.40	14.04	3.66	47.99	12.94	3.63	48.65	12.98	3.67	49.91	13.06	3.75	50.93	13.07	3.81
		285.00	36.60	8.48	2.24	43.72	11.35	2.73	47.40	13.91	3.04	47.99	12.81	3.02	48.65	12.87	3.05	49.91	12.95	3.12	50.93	12.90	3.17
	45	95.00	33.61	10.50	6.57	40.16	13.67	8.01	43.86	16.73	9.02	44.20	15.35	8.87	44.92	15.42	8.98	46.01	15.48	9.15	46.84	15.57	9.29
		190.00	33.61	9.63	3.22	40.16	12.79	3.94	43.86	15.58	4.42	44.20	14.39	4.36	44.92	14.39	4.42	46.01	14.50	4.50	46.84	14.63	4.57
		237.50	33.61	9.38	2.56	40.16	12.51	3.14	43.86	15.32	3.52	44.20	14.09	3.47	44.92	14.16	3.52	46.01	14.24	3.59	46.84	14.24	3.64
		285.00	33.61	9.24	2.13	40.16	12.35	2.61	43.86	15.19	2.93	44.20	13.96	2.89	44.92	14.03	2.93	46.01	14.11	2.98	46.84	14.07	3.02
100	10	95.00	35.87	2.72	5.74	42.84	3.52	6.90	49.81	4.47	8.08	53.20	4.97	8.66	56.59	5.53	9.25	62.95	5.77	10.23	60.37	5.82	9.86
		190.00	35.87	2.51	2.86	42.84	3.26	3.43	49.81	4.19	4.02	53.20	4.69	4.31	56.59	5.22	4.60	62.95	5.39	5.09	60.37	5.40	4.90
		237.50	35.87	2.46	2.28	42.84	3.18	2.74	49.81	4.10	3.21	53.20	4.54	3.44	56.59	5.07	3.67	62.95	5.30	4.06	60.37	5.30	3.91
		285.00	35.87	2.46	1.90	42.84	3.15	2.28	49.81	4.07	2.67	53.20	4.49	2.86	56.59	5.01	3.06	62.95	5.24	3.38	60.37	5.27	3.26
	15	95.00	35.87	3.71	5.89	42.84	4.77	7.09	49.81	6.07	8.32	53.20	6.77	8.93	56.59	7.48	9.54	62.95	7.81	10.53	60.37	7.88	10.16
		190.00	35.87	3.41	2.92	42.84	4.45	3.52	49.81	5.67	4.13	53.20	6.32	4.43	56.59	7.02	4.73	62.95	7.32	5.23	60.37	7.36	5.04
		237.50	35.87	3.34	2.33	42.84	4.35	2.81	49.81	5.55	3.30	53.20	6.21	3.54	56.59	6.87	3.78	62.95	7.16	4.17	60.37	7.17	4.02
		285.00	35.87	3.29	1.94	42.84	4.30	2.34	49.81	5.50	2.74	53.20	6.13	2.94	56.59	6.81	3.15	62.95	7.10	3.48	60.37	7.08	3.35
	20	95.00	35.87	4.57	6.02	42.84	5.86	7.25	49.81	7.49	8.53	53.20	8.36	9.16	56.59	9.25	9.80	62.95	9.61	10.80	60.37	9.69	10.43
		190.00	35.87	4.21	2.98	42.84	5.50	3.60	49.81	6.98	4.23	53.20	7.79	4.54	56.59	8.64	4.86	62.95	9.02	5.36	60.37	9.07	5.17
		237.50	35.87	4.09	2.38	42.84	5.39	2.87	49.81	6.86	3.38	53.20	7.68	3.63	56.59	8.49	3.88	62.95	8.83	4.27	60.37	8.83	4.12
		285.00	35.87	4.02	1.98	42.84	5.31	2.39	49.81	6.78	2.81	53.20	7.59	3.02	56.59	8.43	3.23	62.95	8.74	3.56	60.37	8.68	3.43
	25	95.00	35.87	5.37	6.14	42.84	6.92	7.41	49.81	8.80	8.73	53.20	9.81	9.38	55.99	10.66	9.92	57.38	10.68	10.13	58.58	10.82	10.33
		190.00	35.87	4.93	3.04	42.84	6.47	3.67	49.81	8.22	4.32	53.20	9.18	4.64	55.99	9.94	4.91	57.38	10.03	5.02	58.58	10.09	5.11
		237.50	35.87	4.80	2.42	42.84	6.35	2.93	49.81	8.03	3.44	53.20	8.99	3.70	55.99	9.77	3.92	57.38	9.83	4.00	58.58	9.83	4.07
		285.00	35.87	4.73	2.01	42.84	6.27	2.44	49.81	7.95	2.87	53.20	8.91	3.08	55.99	9.65	3.26	57.38	9.75	3.33	58.58	9.69	3.39
	30	95.00	35.87	6.34	6.28	42.84	8.22	7.60	49.81	10.42	8.97	53.20	11.66	9.66	54.00	11.76	9.79	55.39	11.80	10.00			

10HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
90	10	95.00	32.28	2.36	5.16	38.46	3.00	6.17	44.83	3.74	7.23	47.82	4.19	7.74	51.01	4.65	8.29	57.19	5.65	9.35	59.18	5.77	9.67
		190.00	32.28	2.20	2.57	38.46	2.82	3.07	44.83	3.55	3.60	47.82	3.94	3.85	51.01	4.35	4.12	57.19	5.26	4.65	59.18	5.38	4.81
		237.50	32.28	2.10	2.05	38.46	2.77	2.45	44.83	3.44	2.87	47.82	3.86	3.08	51.01	4.26	3.29	57.19	5.15	3.71	59.18	5.24	3.84
		285.00	32.28	2.06	1.70	38.46	2.74	2.04	44.83	3.38	2.39	47.82	3.80	2.56	51.01	4.23	2.74	57.19	5.12	3.09	59.18	5.16	3.19
	15	95.00	32.28	3.19	5.28	38.46	4.09	6.33	44.83	5.11	7.44	47.82	5.71	7.97	51.01	6.28	8.53	57.19	7.61	9.65	59.18	7.82	9.97
		190.00	32.28	2.95	2.62	38.46	3.80	3.15	44.83	4.80	3.69	47.82	5.32	3.96	51.01	5.90	4.24	57.19	7.12	4.79	59.18	7.32	4.95
		237.50	32.28	2.86	2.09	38.46	3.72	2.51	44.83	4.69	2.95	47.82	5.24	3.16	51.01	5.78	3.38	57.19	6.98	3.82	59.18	7.11	3.95
		285.00	32.28	2.81	1.74	38.46	3.70	2.09	44.83	4.64	2.45	47.82	5.18	2.63	51.01	5.72	2.81	57.19	6.91	3.18	59.18	7.00	3.28
	20	95.00	32.28	3.92	5.39	38.46	5.02	6.47	44.83	6.31	7.61	47.82	7.03	8.17	51.01	7.74	8.75	57.19	9.36	9.91	59.18	9.62	10.24
		190.00	32.28	3.62	2.67	38.46	4.68	3.21	44.83	5.89	3.78	47.82	6.56	4.05	51.01	7.27	4.34	57.19	8.77	4.91	59.18	9.02	5.08
		237.50	32.28	3.52	2.13	38.46	4.58	2.56	44.83	5.81	3.02	47.82	6.45	3.23	51.01	7.15	3.46	57.19	8.59	3.92	59.18	8.77	4.05
		285.00	32.28	3.47	1.77	38.46	4.53	2.13	44.83	5.75	2.51	47.82	6.40	2.69	51.01	7.06	2.88	57.19	8.52	3.26	59.18	8.67	3.37
	25	95.00	32.28	4.59	5.49	38.46	5.87	6.60	44.83	7.43	7.78	47.82	8.24	8.35	51.01	9.17	8.96	55.99	10.59	9.91	57.38	10.72	10.14
		190.00	32.28	4.23	2.72	38.46	5.50	3.27	44.83	6.94	3.85	47.82	7.74	4.14	51.01	8.57	4.43	55.99	9.94	4.91	57.38	10.01	5.02
		237.50	32.28	4.09	2.17	38.46	5.37	2.61	44.83	6.83	3.08	47.82	7.58	3.30	51.01	8.40	3.54	55.99	9.75	3.91	57.38	9.79	4.00
		285.00	32.28	4.03	1.80	38.46	5.32	2.17	44.83	6.75	2.56	47.82	7.50	2.75	51.01	8.34	2.94	55.99	9.65	3.26	57.38	9.66	3.33
	30	95.00	32.28	5.43	5.61	38.46	6.92	6.75	44.83	9.25	8.05	47.82	9.81	8.58	51.01	10.85	9.21	54.00	11.71	9.78	55.19	11.80	9.97
		190.00	32.28	4.97	2.77	38.46	6.49	3.35	44.83	8.62	3.98	47.82	9.16	4.24	51.01	10.16	4.55	54.00	10.95	4.83	55.19	11.04	4.93
		237.50	32.28	4.86	2.21	38.46	6.35	2.67	44.83	8.43	3.17	47.82	8.98	3.38	51.01	9.96	3.63	54.00	10.75	3.86	55.19	10.76	3.93
		285.00	32.28	4.80	1.84	38.46	6.28	2.22	44.83	8.35	2.64	47.82	8.88	2.81	51.01	9.88	3.02	54.00	10.63	3.21	55.19	10.58	3.26
		95.00	32.28	6.42	5.76	38.46	8.24	6.95	44.83	10.50	8.24	47.82	11.69	8.86	50.41	12.72	9.40	51.81	12.78	9.62	52.80	12.88	9.78
		190.00	32.28	5.89	2.84	38.46	7.72	3.44	44.83	9.82	4.07	47.82	10.95	4.37	50.41	11.88	4.64	51.81	11.98	4.75	52.80	12.06	4.83
		237.50	32.28	5.73	2.26	38.46	7.56	2.74	44.83	9.61	3.24	47.82	10.73	3.49	50.41	11.70	3.70	51.81	11.75	3.78	52.80	11.73	3.84
		285.00	32.28	5.63	1.88	38.46	7.46	2.28	44.83	9.50	2.70	47.82	10.61	2.90	50.41	11.57	3.08	51.81	11.63	3.15	52.80	11.56	3.19
		95.00	31.22	7.34	5.74	37.30	9.48	6.96	43.59	12.08	8.29	46.36	13.42	8.90	48.91	14.62	9.46	50.33	14.71	9.68	51.09	14.81	9.81
		190.00	31.22	6.77	2.83	37.30	8.87	3.44	43.59	11.28	4.08	46.36	12.54	4.38	48.91	13.68	4.66	50.33	13.76	4.77	51.09	13.84	4.83
		237.50	31.22	6.56	2.25	37.30	8.66	2.74	43.59	11.05	3.25	46.36	12.32	3.49	48.91	13.41	3.71	50.33	13.52	3.80	51.09	13.49	3.85
		285.00	31.22	6.46	1.87	37.30	8.56	2.28	43.59	10.93	2.71	46.36	12.20	2.91	48.91	13.29	3.09	50.33	13.38	3.16	51.09	13.32	3.20
	45	95.00	30.38	8.29	5.76	36.14	10.71	6.97	42.34	13.63	8.33	45.14	15.18	8.98	47.42	16.52	9.52	48.84	16.63	9.75	49.62	16.71	9.88
		190.00	30.38	7.65	2.83	36.14	10.00	3.43	42.34	12.74	4.10	45.14	14.16	4.41	47.42	15.46	4.68	48.84	15.54	4.79	49.62	15.66	4.86
		237.50	30.38	7.41	2.25	36.14	9.79	2.74	42.34	12.48	3.26	45.14	13.91	3.52	47.42	15.16	3.73	48.84	15.27	3.82	49.62	15.28	3.86
		285.00	30.38	7.29	1.87	36.14	9.66	2.27	42.34	12.34	2.71	45.14	13.76	2.92	47.42	15.01	3.10	48.84	15.12	3.17	49.62	15.07	3.21
80	10	95.00	28.69	1.98	4.57	34.27	2.50	5.47	39.85	3.14	6.40	42.64	3.52	6.87	45.23	3.85	7.31	50.81	4.67	8.26	56.39	5.47	9.21
		190.00	28.69	1.81	2.27	34.27	2.37	2.73	39.85	2.92	3.18	42.64	3.28	3.42	45.23	3.58	3.63	50.81	4.32	4.10	56.39	5.11	4.58
		237.50	28.69	1.77	1.81	34.27	2.30	2.18	39.85	2.86	2.54	42.64	3.17	2.73	45.23	3.49	2.90	50.81	4.26	3.28	56.39	5.03	3.66
		285.00	28.69	1.77	1.51	34.27	2.25	1.81	39.85	2.86	2.12	42.64	3.11	2.27	45.23	3.44	2.41	50.81	4.26	2.73	56.39	5.03	3.05
	15	95.00	28.69	2.70	4.67	34.27	3.41	5.61	39.85	4.28	6.57	42.64	4.75	7.05	45.23	5.20	7.51	50.81	6.30	8.50	56.39	7.44	9.50
		190.00	28.69	2.48	2.32	34.27	3.20	2.79	39.85	3.97	3.26	42.64	4.42	3.50	45.23	4.87	3.73	50.81	5.88	4.22	56.39	6.96	4.72
		237.50	28.69	2.41	1.85	34.27	3.12	2.23	39.85	3.92	2.61	42.64	4.31	2.80	45.23	4.76	2.98	50.81	5.78	3.37	56.39	6.80	3.76
		285.00	28.69	2.39	1.54	34.27	3.07	1.85	39.85	3.86	2.17	42.64	4.29	2.33	45.23	4.70	2.48	50.81	5.74	2.81	56.39	6.72	3.13
	20	95.00	28.69	3.34	4.77	34.27	4.21	5.73	39.85	5.28	6.72	42.64	5.81	7.21	45.23	6.43	7.69	50.81	7.75	8.72	56.39	9.17	9.76
		190.00	28.69	3.05	2.36	34.27	3.92	2.84	39.85	4.92	3.33	42.64	5.46	3.58	45.23	6.02	3.81	50.81	7.23	4.32	56.39	8.57	4.84
		237.50	28.69	2.98	1.89	34.27	3.85	2.27	39.85	4.83	2.66	42.64	5.35	2.86	45.23	5.90	3.04	50.81	7.13	3.45	56.39	8.37	3.86
		285.00	28.69	2.94	1.57	34.27	3.82	1.89	39.85	4.78	2.21	42.64	5.30	2.38	45.23	5.84	2.53	50.81	7.06	2.87	56.39	8.25	3.21
	25	95.00	28.69	3.88	4.85	34.27	4.91	5.83	39.85	6.19	6.85	42.64	6.87	7.37	45.23	7.60	7.86	50.81	9.13	8.92	55.99	10.63	9.92
		190.00	28.69	3.58	2.40	34.27	4.61	2.89	39.85	5.78	3.40	42.64	6.42	3.65	45.23	7.09	3.89	50.81	8.53	4.42	55.99	9.94	4.91
		237.50	28.69	3.47	1.91	34.27	4.51	2.31	39.85	5.68	2.71	42.64	6.31	2.91	45.23	6.94	3.11	50.81	8.37	3.52	55.99	9.71	3.91
		285.00	28.69	3.42	1.59	34.27	4.46	1.92	39.85	5.62	2.26	42.64	6.23	2.43	45.23	6.89	2.59	50.81	8.30	2.93	55.99	9.56	3.25
	30	95.00	28.69	4.57	4.95	34.27	5.80	5.97	39.85	7.30	7.02	42.64	8.15	7.56	45.23	8.96	8.07	50.81	10.83	9.18	54.00	11.71	9.78
		190.00	28.69	4.19	2.45	34.27	5.42	2.95	39.85	6.81	3.47	42.64	7.59	3.74	45.23	8.39	3.99	50.81	10.12	4.54	54.00	10	

VRF MW



10HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
70	10	95.00	25.11	1.68	3.99	29.89	2.09	4.76	34.87	2.61	5.58	37.26	2.87	5.97	39.65	3.11	6.37	44.43	3.76	7.17	49.41	4.40	8.01
		190.00	25.11	1.54	1.98	29.89	1.96	2.37	34.87	2.44	2.78	37.26	2.68	2.97	39.65	2.94	3.17	44.43	3.49	3.57	49.41	4.16	3.99
		237.50	25.11	1.49	1.58	29.89	1.89	1.89	34.87	2.36	2.22	37.26	2.60	2.37	39.65	2.85	2.53	44.43	3.46	2.85	49.41	4.05	3.18
		285.00	25.11	1.44	1.32	29.89	1.86	1.58	34.87	2.33	1.85	37.26	2.57	1.98	39.65	2.80	2.11	44.43	3.42	2.37	49.41	4.01	2.65
	15	95.00	25.11	2.25	4.07	29.89	2.81	4.87	34.87	3.51	5.71	37.26	3.86	6.12	39.65	4.24	6.53	44.43	5.07	7.37	49.41	5.99	8.25
		190.00	25.11	2.09	2.02	29.89	2.66	2.42	34.87	3.29	2.84	37.26	3.62	3.04	39.65	3.98	3.25	44.43	4.73	3.66	49.41	5.60	4.10
		237.50	25.11	2.02	1.62	29.89	2.58	1.93	34.87	3.21	2.27	37.26	3.54	2.43	39.65	3.89	2.59	44.43	4.66	2.92	49.41	5.49	3.27
		285.00	25.11	1.99	1.34	29.89	2.56	1.61	34.87	3.18	1.89	37.26	3.51	2.02	39.65	3.83	2.16	44.43	4.60	2.43	49.41	5.41	2.77
	20	95.00	25.11	2.78	4.15	29.89	3.49	4.97	34.87	4.33	5.84	37.26	4.74	6.25	39.65	5.24	6.68	44.43	6.24	7.54	49.41	7.39	8.46
		190.00	25.11	2.57	2.06	29.89	3.25	2.47	34.87	4.03	2.90	37.26	4.45	3.10	39.65	4.90	3.32	44.43	5.84	3.74	49.41	6.89	4.19
		237.50	25.11	2.49	1.64	29.89	3.20	1.97	34.87	3.95	2.31	37.26	4.37	2.48	39.65	4.81	2.65	44.43	5.74	2.99	49.41	6.73	3.34
		285.00	25.11	2.45	1.37	29.89	3.15	1.64	34.87	3.92	1.92	37.26	4.34	2.06	39.65	4.78	2.21	44.43	5.67	2.49	49.41	6.61	2.78
	25	95.00	25.11	3.23	4.22	29.89	4.04	5.05	34.87	5.03	5.94	37.26	5.58	6.38	39.65	6.14	6.82	44.43	7.37	7.71	49.41	8.68	8.65
		190.00	25.11	2.98	2.09	29.89	3.80	2.51	34.87	4.72	2.95	37.26	5.22	3.16	39.65	5.75	3.38	44.43	6.89	3.82	49.41	8.12	4.28
		237.50	25.11	2.89	1.67	29.89	3.70	2.00	34.87	4.61	2.35	37.26	5.10	2.52	39.65	5.64	2.70	44.43	6.76	3.05	49.41	7.89	3.41
		285.00	25.11	2.87	1.39	29.89	3.65	1.66	34.87	4.56	1.96	37.26	5.04	2.10	39.65	5.58	2.24	44.43	6.72	2.54	49.41	7.82	2.84
	30	95.00	25.11	3.79	4.30	29.89	4.77	5.16	34.87	5.97	6.08	37.26	6.58	6.53	39.65	7.28	6.99	44.43	8.71	7.91	49.41	10.29	8.89
		190.00	25.11	3.49	2.13	29.89	4.46	2.56	34.87	5.57	3.01	37.26	6.16	3.23	39.65	6.80	3.46	44.43	8.15	3.91	49.41	9.63	4.40
		237.50	25.11	3.40	1.70	29.89	4.37	2.04	34.87	5.47	2.40	37.26	6.04	2.58	39.65	6.66	2.76	44.43	8.03	3.12	49.41	9.38	3.50
		285.00	25.11	3.34	1.41	29.89	4.32	1.70	34.87	5.42	2.00	37.26	5.99	2.15	39.65	6.61	2.30	44.43	7.93	2.60	49.41	9.27	2.91
	35	95.00	25.11	4.45	4.40	29.89	5.63	5.29	34.87	7.04	6.24	37.26	7.85	6.72	39.65	9.45	7.31	44.43	10.36	8.16	49.41	12.29	9.19
		190.00	25.11	4.10	2.17	29.89	5.28	2.62	34.87	6.56	3.08	37.26	7.32	3.32	39.65	8.83	3.61	44.43	9.73	4.03	49.41	11.51	4.54
		237.50	25.11	3.99	1.73	29.89	5.18	2.09	34.87	6.45	2.46	37.26	7.21	2.65	39.65	8.67	2.88	44.43	9.52	3.21	49.41	11.20	3.61
		285.00	25.11	3.92	1.44	29.89	5.10	1.74	34.87	6.37	2.05	37.26	7.14	2.20	39.65	8.61	2.40	44.43	9.42	2.67	49.41	11.01	3.00
	40	95.00	25.11	5.28	4.52	29.89	6.68	5.44	34.87	8.33	6.43	37.26	9.28	6.93	39.65	11.17	7.57	44.43	12.30	8.45	49.41	14.55	9.52
		190.00	25.11	4.84	2.23	29.89	6.25	2.69	34.87	7.79	3.18	37.26	8.67	3.42	39.65	10.48	3.73	44.43	11.50	4.16	49.41	13.62	4.69
		237.50	25.11	4.73	1.78	29.89	6.10	2.14	34.87	7.63	2.53	37.26	8.54	2.73	39.65	10.27	2.97	44.43	11.30	3.32	49.41	13.27	3.73
		285.00	25.11	4.66	1.48	29.89	6.03	1.78	34.87	7.55	2.11	37.26	8.46	2.27	39.65	10.17	2.47	44.43	11.16	2.76	49.41	13.11	3.10
	45	95.00	25.11	6.11	4.65	29.89	7.70	5.60	34.87	9.61	6.62	37.26	10.72	7.14	39.65	12.92	7.83	44.43	14.20	8.73	49.41	16.84	9.86
		190.00	25.11	5.58	2.28	29.89	7.23	2.76	34.87	9.00	3.27	37.26	10.03	3.52	39.65	12.14	3.85	44.43	13.30	4.30	49.41	15.72	4.85
		237.50	25.11	5.46	1.82	29.89	7.05	2.20	34.87	8.81	2.60	37.26	9.87	2.81	39.65	11.86	3.07	44.43	13.03	3.42	49.41	15.37	3.86
		285.00	25.11	5.39	1.51	29.89	6.98	1.83	34.87	8.73	2.16	37.26	9.76	2.33	39.65	11.73	2.55	44.43	12.93	2.85	49.41	15.21	3.21
60	10	95.00	21.52	1.38	3.41	25.70	1.70	4.08	29.89	2.06	4.76	31.88	2.28	5.09	34.07	2.49	5.44	38.06	2.98	6.11	42.24	3.49	6.81
		190.00	21.52	1.26	1.70	25.70	1.59	2.03	29.89	1.92	2.37	31.88	2.15	2.53	34.07	2.29	2.71	38.06	2.75	3.04	42.24	3.26	3.39
		237.50	21.52	1.21	1.35	25.70	1.54	1.62	29.89	1.89	1.89	31.88	2.09	2.02	34.07	2.26	2.16	38.06	2.69	2.43	42.24	3.14	2.70
		285.00	21.52	1.18	1.13	25.70	1.52	1.35	29.89	1.89	1.58	31.88	2.07	1.68	34.07	2.23	1.80	38.06	2.65	2.02	42.24	3.07	2.25
	15	95.00	21.52	1.85	3.48	25.70	2.30	4.17	29.89	2.80	4.87	31.88	3.09	5.21	34.07	3.37	5.57	38.06	4.01	6.26	42.24	4.71	6.99
		190.00	21.52	1.70	1.73	25.70	2.14	2.07	29.89	2.60	2.42	31.88	2.90	2.59	34.07	3.11	2.77	38.06	3.71	3.11	42.24	4.41	3.47
		237.50	21.52	1.65	1.38	25.70	2.09	1.66	29.89	2.55	1.93	31.88	2.85	2.07	34.07	3.09	2.21	38.06	3.65	2.48	42.24	4.25	2.77
		285.00	21.52	1.63	1.15	25.70	2.06	1.38	29.89	2.52	1.61	31.88	2.82	1.72	34.07	3.06	1.84	38.06	3.61	2.07	42.24	4.18	2.30
	20	95.00	21.52	2.27	3.54	25.70	2.82	4.25	29.89	3.43	4.96	31.88	3.78	5.31	34.07	4.14	5.69	38.06	4.91	6.40	42.24	5.79	7.15
		190.00	21.52	2.10	1.76	25.70	2.64	2.11	29.89	3.24	2.47	31.88	3.54	2.64	34.07	3.89	2.83	38.06	4.61	3.18	42.24	5.40	3.55
		237.50	21.52	2.05	1.40	25.70	2.59	1.68	29.89	3.15	1.97	31.88	3.49	2.11	34.07	3.80	2.26	38.06	4.54	2.54	42.24	5.29	2.83
		285.00	21.52	2.02	1.17	25.70	2.56	1.40	29.89	3.13	1.64	31.88	3.46	1.75	34.07	3.77	1.88	38.06	4.51	2.11	42.24	5.21	2.35
	25	95.00	21.52	2.65	3.60	25.70	3.27	4.31	29.89	4.04	5.05	31.88	4.47	5.41	34.07	4.86	5.80	38.06	5.77	6.53	42.24	6.77	7.30
		190.00	21.52	2.44	1.78	25.70	3.07	2.14	29.89	3.78	2.51	31.88	4.16	2.68	34.07	4.56	2.88	38.06	5.42	3.24	42.24	6.36	3.62
		237.50	21.52	2.37	1.42	25.70	3.02	1.71	29.89	3.73	2.00	31.88	4.08	2.14	34.07	4.47	2.30	38.06	5.30	2.58	42.24	6.18	2.88
		285.00	21.52	2.35	1.18	25.70	3.00	1.42	29.89	3.67	1.67	31.88	4.05	1.78	34.07	4.44	1.91	38.06	5.23	2.15	42.24	6.11	2.40
	30	95.00	21.52	3.13	3.67	25.70	3.86	4.40	29.89	4.76	5.16	31.88	5.23	5.52	34.07	5.74	5.93	38.06	6.86	6.69	42.24	8.00	7.48
		190.00	21.52	2.86	1.81	25.70	3.60	2.18	29.89	4.43	2.55	31.88	4.88	2.74	34.07	5.37	2.94	38.06	6.40	3.31	42.24	7.50	3.70
		237.50	21.52	2.81	1.45	25.70	3.53																

10HP+8HP cooling mode

CR(%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	95.00	17.93	1.11	2.83	21.32	1.34	3.37	24.91	1.64	3.95	26.70	1.79	4.24	28.29	1.90	4.50	31.88	2.24	5.08	35.27	2.63	5.64
		190.00	17.93	1.05	1.41	21.32	1.26	1.68	24.91	1.50	1.97	26.70	1.65	2.11	28.29	1.81	2.24	31.88	2.10	2.53	35.27	2.48	2.81
		237.50	17.93	1.00	1.13	21.32	1.23	1.34	24.91	1.50	1.57	26.70	1.59	1.68	28.29	1.75	1.79	31.88	2.03	2.02	35.27	2.36	2.24
		285.00	17.93	0.97	0.94	21.32	1.20	1.12	24.91	1.50	1.31	26.70	1.56	1.40	28.29	1.72	1.49	31.88	2.00	1.68	35.27	2.28	1.86
	15	95.00	17.93	1.51	2.89	21.32	1.82	3.44	24.91	2.19	4.03	26.70	2.40	4.33	28.29	2.61	4.60	31.88	3.05	5.20	35.27	3.52	5.77
		190.00	17.93	1.40	1.44	21.32	1.71	1.71	24.91	2.04	2.01	26.70	2.23	2.15	28.29	2.44	2.29	31.88	2.85	2.58	35.27	3.33	2.87
		237.50	17.93	1.35	1.15	21.32	1.65	1.37	24.91	2.01	1.60	26.70	2.18	1.72	28.29	2.38	1.83	31.88	2.78	2.06	35.27	3.21	2.29
		285.00	17.93	1.32	0.96	21.32	1.62	1.14	24.91	1.98	1.33	26.70	2.15	1.43	28.29	2.35	1.52	31.88	2.75	1.72	35.27	3.17	1.91
	20	95.00	17.93	1.86	2.95	21.32	2.24	3.51	24.91	2.67	4.11	26.70	2.96	4.42	28.29	3.21	4.69	31.88	3.73	5.30	35.27	4.34	5.90
		190.00	17.93	1.70	1.46	21.32	2.10	1.74	24.91	2.53	2.04	26.70	2.77	2.19	28.29	3.00	2.33	31.88	3.52	2.64	35.27	4.10	2.93
		237.50	17.93	1.65	1.17	21.32	2.07	1.39	24.91	2.47	1.63	26.70	2.71	1.75	28.29	2.94	1.86	31.88	3.46	2.10	35.27	3.99	2.34
		285.00	17.93	1.62	0.97	21.32	2.04	1.16	24.91	2.44	1.36	26.70	2.68	1.46	28.29	2.91	1.55	31.88	3.42	1.75	35.27	3.91	1.94
	25	95.00	17.93	2.15	2.99	21.32	2.61	3.56	24.91	3.14	4.18	26.70	3.40	4.48	28.29	3.73	4.77	31.88	4.44	5.41	35.27	5.18	6.02
		190.00	17.93	1.97	1.48	21.32	2.42	1.77	24.91	2.95	2.07	26.70	3.22	2.23	28.29	3.51	2.37	31.88	4.14	2.68	35.27	4.81	2.98
		237.50	17.93	1.92	1.18	21.32	2.40	1.41	24.91	2.89	1.66	26.70	3.14	1.78	28.29	3.42	1.89	31.88	4.07	2.14	35.27	4.70	2.38
		285.00	17.93	1.92	0.99	21.32	2.37	1.18	24.91	2.86	1.38	26.70	3.08	1.48	28.29	3.37	1.57	31.88	4.01	1.78	35.27	4.66	1.98
	30	95.00	17.93	2.49	3.04	21.32	3.02	3.62	24.91	3.70	4.26	26.70	4.03	4.58	28.29	4.39	4.87	31.88	5.17	5.52	35.27	6.05	6.15
		190.00	17.93	2.28	1.50	21.32	2.82	1.80	24.91	3.43	2.11	26.70	3.78	2.27	28.29	4.12	2.41	31.88	4.86	2.73	35.27	5.66	3.05
		237.50	17.93	2.21	1.20	21.32	2.75	1.43	24.91	3.36	1.68	26.70	3.70	1.81	28.29	4.04	1.93	31.88	4.77	2.18	35.27	5.51	2.43
		285.00	17.93	2.18	1.00	21.32	2.72	1.19	24.91	3.33	1.40	26.70	3.68	1.51	28.29	4.01	1.60	31.88	4.71	1.82	35.27	5.41	2.02
	35	95.00	17.93	2.88	3.10	21.32	3.55	3.70	24.91	4.35	4.36	26.70	4.75	4.68	28.29	5.21	4.99	31.88	6.15	5.66	35.27	7.22	6.33
		190.00	17.93	2.66	1.53	21.32	3.31	1.83	24.91	4.05	2.16	26.70	4.45	2.32	28.29	4.86	2.47	31.88	5.75	2.80	35.27	6.72	3.13
		237.50	17.93	2.58	1.22	21.32	3.26	1.46	24.91	3.97	1.72	26.70	4.37	1.85	28.29	4.78	1.97	31.88	5.65	2.23	35.27	6.57	2.49
		285.00	17.93	2.53	1.02	21.32	3.20	1.22	24.91	3.94	1.43	26.70	4.34	1.54	28.29	4.75	1.64	31.88	5.58	1.86	35.27	6.46	2.07
	40	95.00	17.93	3.41	3.18	21.32	4.18	3.80	24.91	5.13	4.47	26.70	5.64	4.81	28.29	6.16	5.13	31.88	7.28	5.83	35.27	8.57	6.53
		190.00	17.93	3.13	1.57	21.32	3.92	1.88	24.91	4.80	2.21	26.70	5.26	2.38	28.29	5.76	2.53	31.88	6.81	2.88	35.27	7.99	3.22
		237.50	17.93	3.06	1.25	21.32	3.84	1.50	24.91	4.71	1.76	26.70	5.18	1.90	28.29	5.64	2.02	31.88	6.68	2.30	35.27	7.80	2.56
		285.00	17.93	3.01	1.04	21.32	3.81	1.25	24.91	4.66	1.47	26.70	5.12	1.58	28.29	5.59	1.68	31.88	6.61	1.91	35.27	7.69	2.13
	45	95.00	17.93	3.94	3.26	21.32	4.84	3.89	24.91	5.91	4.59	26.70	6.53	4.95	28.29	7.12	5.27	31.88	8.41	6.00	35.27	9.88	6.72
		190.00	17.93	3.63	1.61	21.32	4.53	1.92	24.91	5.52	2.26	26.70	6.07	2.44	28.29	6.66	2.60	31.88	7.87	2.96	35.27	9.26	3.31
		237.50	17.93	3.53	1.28	21.32	4.45	1.53	24.91	5.44	1.81	26.70	5.97	1.95	28.29	6.51	2.07	31.88	7.71	2.36	35.27	9.03	2.64
		285.00	17.93	3.46	1.06	21.32	4.39	1.28	24.91	5.41	1.50	26.70	5.88	1.62	28.29	6.45	1.72	31.88	7.64	1.96	35.27	8.91	2.19

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	95.00	57.44	10.44	6.96	57.20	10.53	6.91	57.10	10.90	6.84	56.83	10.87	6.81	56.56	10.78	6.78	56.01	11.25	6.63
		190.00	58.74	10.36	3.58	58.14	10.57	3.52	58.06	10.98	3.49	57.81	10.87	3.48	57.37	10.76	3.45	56.85	11.21	3.38
		237.50	59.11	10.51	2.88	58.51	10.73	2.83	58.45	11.02	2.81	58.01	10.91	2.79	57.77	10.91	2.78	57.28	11.76	2.70
		285.00	59.29	10.58	2.41	58.70	10.80	2.37	58.64	11.05	2.35	58.21	10.93	2.33	57.97	11.01	2.32	57.49	12.01	2.25
	15	95.00	57.62	9.34	7.15	57.38	9.35	7.12	57.10	9.77	7.01	56.83	9.79	6.97	56.56	9.61	6.95	56.01	10.11	6.80
		190.00	59.48	8.96	3.74	59.08	9.19	3.69	58.83	9.68	3.64	58.80	9.50	3.65	58.17	9.31	3.62	57.91	9.79	3.56
		237.50	59.85	9.19	3.00	59.64	9.40	2.98	59.61	9.68	2.96	59.39	9.50	2.96	58.98	9.57	2.93	58.54	10.77	2.83
		285.00	60.04	9.29	2.51	59.83	9.51	2.48	59.99	9.68	2.48	59.59	9.50	2.47	59.38	9.71	2.45	58.97	11.27	2.35
	20	95.00	59.85	8.58	7.59	59.45	8.58	7.54	59.41	8.83	7.49	59.00	8.81	7.43	58.57	8.85	7.36	57.91	9.79	7.13
		190.00	61.71	8.34	3.95	61.34	8.54	3.91	61.15	8.81	3.88	60.77	8.94	3.84	60.59	9.09	3.81	60.02	9.44	3.75
		237.50	61.90	8.34	3.17	61.71	8.54	3.15	61.92	8.87	3.14	61.56	8.94	3.12	60.99	9.09	3.07	60.45	10.04	2.99
		285.00	62.08	8.34	2.65	62.09	8.54	2.64	62.31	8.88	2.64	61.76	8.94	2.61	61.19	9.09	2.57	60.66	10.36	2.48
	25	95.00	67.90	8.89	8.74	67.53	9.08	8.66	66.96	9.47	8.52	66.78	9.63	8.47	66.40	9.80	8.38	65.84	10.18	8.24
		190.00	67.90	8.76	4.38	67.53	9.03	4.33	66.96	9.31	4.27	66.78	9.47	4.24	66.40	9.64	4.20	65.84	10.01	4.13
		237.50	67.90	8.63	3.51	67.53	8.79	3.48	66.96	9.16	3.42	66.78	9.32	3.40	66.40	9.49	3.37	65.84	9.83	3.32
		285.00	67.90	8.57	2.93	67.53	8.67	2.91	66.96	9.10	2.86	66.78	9.24	2.84	66.40	9.40	2.81	65.84	9.76	2.77
	30	95.00	73.17	9.55	9.42	73.53	9.59	9.47	72.78	10.07	9.29	70.43	10.17	8.93	71.84	10.45	9.09	66.96	9.40	8.53
		190.00	73.17	9.24	4.73	73.53	9.52	4.74	72.78	9.84	4.66	70.43	10.01	4.48	71.84	10.07	4.57	66.96	9.04	4.29
		237.50	73.17	9.10	3.80	73.53	9.27	3.81	72.78	9.68	3.74	70.43	9.82	3.59	71.84	10.07	3.66	66.96	9.04	3.43
		285.00	73.17	9.04	3.17	73.53	9.14	3.18	72.78	9.59	3.12	70.43	9.75	3.00	71.84	10.07	3.05	66.96	9.04	2.86
	35	95.00	80.09	10.06	10.37	79.53	10.28	10.26	76.90	9.96	9.92	72.07	9.46	9.27	71.84	9.29	9.27	66.96	8.25	8.70
		190.00	80.09	9.74	5.21	79.53	10.04	5.15	76.90	9.77	4.97	72.07	9.29	4.65	71.84	9.10	4.65	66.96	7.93	4.37
		237.50	80.09	9.74	4.17	79.53	9.95	4.12	76.90	9.61	3.99	72.07	9.13	3.73	71.84	8.93	3.73	66.96	7.93	3.50
		285.00	80.09	9.74	3.47	79.53	9.90	3.44	76.90	9.51	3.33	72.07	9.03	3.11	71.84	8.86	3.11	66.96	7.93	2.91
	40	95.00	80.09	9.74	10.42	79.53	9.95	10.31	76.90	9.61	9.97	72.07	9.13	9.32	71.84	8.93	9.32	66.96	7.77	8.77
		190.00	80.09	9.40	5.24	79.53	9.68	5.17	76.90	9.28	5.01	72.07	8.78	4.69	71.84	8.57	4.69	66.96	7.45	4.41
		237.50	80.09	9.24	4.20	79.53	9.54	4.15	76.90	9.28	4.01	72.07	8.78	3.75	71.84	8.57	3.75	66.96	7.45	3.53
		285.00	80.09	9.15	3.50	79.53	9.44	3.46	76.90	9.28	3.34	72.07	8.78	3.13	71.84	8.57	3.12	66.96	7.45	2.94
	45	95.00	80.09	9.40	10.47	79.53	9.61	10.36	76.90	9.28	10.02	72.07	8.78	9.38	71.84	8.57	9.37	66.96	7.26	8.84
		190.00	80.09	9.08	5.26	79.53	9.34	5.20	76.90	8.75	5.05	72.07	8.29	4.72	71.84	8.07	4.72	66.96	6.94	4.45
		237.50	80.09	8.74	4.23	79.53	9.10	4.17	76.90	8.92	4.03	72.07	8.43	3.77	71.84	8.24	3.77	66.96	6.94	3.56
		285.00	80.09	8.58	3.53	79.53	8.98	3.48	76.90	9.02	3.35	72.07	8.52	3.14	71.84	8.34	3.14	66.96	6.94	2.96
120	10	95.00	57.80	10.84	6.96	57.76	11.14	6.91	58.25	11.53	6.92	57.49	11.55	6.80	57.23	11.75	6.74	56.75	11.74	6.67
		190.00	58.98	11.00	3.55	58.56	11.31	3.50	58.87	11.69	3.49	58.12	11.61	3.44	57.87	11.71	3.42	57.43	11.79	3.38
		237.50	59.17	10.95	2.86	58.56	11.31	2.80	59.28	11.73	2.82	58.33	11.66	2.77	58.09	11.77	2.74	57.65	12.17	2.69
		285.00	59.37	10.93	2.39	58.36	11.31	2.32	59.28	11.77	2.35	58.33	11.70	2.30	58.09	11.79	2.29	57.88	12.39	2.25
	15	95.00	58.19	9.62	7.19	57.96	9.84	7.13	58.25	10.24	7.11	57.49	10.39	6.98	57.23	10.46	6.93	56.75	10.55	6.84
		190.00	59.37	9.69	3.68	59.36	9.92	3.66	59.70	10.30	3.66	58.75	10.24	3.59	58.30	10.15	3.57	58.10	10.38	3.53
		237.50	59.76	9.54	2.98	59.36	9.84	2.93	60.11	10.30	2.95	59.17	10.24	2.90	58.95	10.15	2.89	58.56	11.08	2.81
		285.00	59.96	9.47	2.49	59.16	9.81	2.44	60.32	10.30	2.47	59.37	10.24	2.43	59.16	10.15	2.42	58.78	11.42	2.34
	20	95.00	59.76	8.63	7.57	59.56	8.74	7.53	59.90	9.00	7.54	58.75	9.18	7.34	58.52	9.51	7.26	58.10	9.99	7.13
		190.00	61.34	8.63	3.90	60.96	8.88	3.86	61.15	9.16	3.85	60.21	9.33	3.77	60.02	9.49	3.74	59.46	9.84	3.67
		237.50	61.53	8.54	3.14	60.96	8.80	3.09	61.77	9.16	3.12	60.63	9.33	3.04	60.45	9.51	3.02	59.91	10.21	2.95
		285.00	61.73	8.50	2.63	60.96	8.76	2.58	61.98	9.16	2.61	60.84	9.33	2.54	60.45	9.54	2.51	60.14	10.38	2.46
	25	95.00	67.13	9.27	8.57	66.78	9.47	8.49	66.21	9.78	8.36	66.03	10.05	8.29	65.65	10.25	8.21	61.71	9.40	7.75
		190.00	67.34	9.13	4.31	66.78	9.41	4.25	66.21	9.71	4.18	66.03	9.87	4.16	65.65	10.07	4.12	61.71	9.23	3.89
		237.50	67.55	8.80	3.48	66.78	9.17	3.41	66.21	9.52	3.36	66.03	9.87	3.33	65.65	9.90	3.30	61.71	9.23	3.11
		285.00	67.55	8.63	2.91	66.78	9.03	2.85	66.21	9.45	2.80	66.03	9.87	2.77	65.65	9.80	2.76	61.71	9.23	2.59
	30	95.00	73.34	9.99	9.38	72.59	10.16	9.25	70.90	10.05	9.01	68.65	9.57	8.75	66.40	9.30	8.46	61.71	8.17	7.93
		190.00	73.34	9.64	4.72	72.59	9.94	4.64	70.90	9.87	4.52	68.65	9.39	4.39	66.40	8.93	4.26	61.71	8.01	3.98
		237.50	73.34	9.34	3.79	72.59	9.72	3.73	70.90	9.67	3.63	68.65	9.39	3.51	66.40	8.93	3.41	61.71	7.84	3.19
		285.00	73.34	9.18	3.17	72.59	9.59	3.11	70.90	9.57	3.03	68.65	9.39	2.93	66.40	8.93	2.84	61.71	7.77	2.66
	35	95.00	79.16	10.76	10.13	75.40	9.89	9.70	70.90	9.00	9.17	68.65	8.56	8.90	66.40	8.16	8.63	61.71	7.20	8.07
		190.00	79.16	10.16	5.11	75.40	9.51	4.88	70.90	8.64	4.61	68.65	8.23	4.48	66.40	7.83	4.34	61.71	7.04	4.05
		237.50	79.16	10.03	4.10	75.40	9.43	3.91	70.90	8.64	3.69	68.65	8.23	3.58	66.40	7.83	3.47	61.71	6.89	3.25
		285.00	79.16	9.97	3.42	75.40	9.41	3.26	70.90	8.64	3.07	68.65	8.23	2.98	66.40	7.83	2.89	61.71	6.79	2.71
	40	95.00	79.16	10.40	10.18	75.40	9.41	9.78	70.90	8.50	9.24	68.65	8.06	8.97	66.40	7.66	8.70	61.71	6.70	8.15
		190.00	79.16	9.58																

10HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	95.00	58.29	11.70	6.90	58.48	12.04	6.88	58.31	12.51	6.78	58.08	12.48	6.76	57.66	12.91	6.63	55.25	11.66	6.46
		190.00	59.12	11.80	3.50	59.12	12.18	3.48	58.53	12.66	3.40	58.53	12.55	3.41	58.12	12.86	3.35	55.49	11.71	3.24
		237.50	59.33	11.80	2.82	59.33	12.18	2.79	58.74	12.64	2.73	58.75	12.52	2.74	58.12	12.94	2.68	55.72	11.83	2.60
		285.00	59.53	11.80	2.36	59.54	12.18	2.34	58.96	12.61	2.29	58.75	12.50	2.28	58.35	12.96	2.24	55.72	11.90	2.16
	15	95.00	58.29	10.34	7.10	58.69	10.69	7.11	58.31	11.16	6.98	58.08	11.22	6.94	57.66	11.49	6.84	55.25	10.48	6.63
		190.00	59.33	10.28	3.63	59.54	10.69	3.62	58.96	11.16	3.54	58.75	11.06	3.53	58.58	11.15	3.51	55.95	10.31	3.38
		237.50	59.74	10.20	2.94	59.76	10.61	2.91	59.18	11.03	2.85	58.98	10.90	2.85	58.58	11.15	2.81	56.18	10.48	2.71
		285.00	59.95	10.16	2.46	59.97	10.57	2.44	59.40	10.94	2.39	59.20	10.81	2.39	58.81	11.15	2.35	56.41	10.58	2.26
	20	95.00	59.53	8.95	7.49	59.76	9.28	7.48	59.18	9.59	7.35	58.75	9.76	7.26	58.58	10.12	7.18	55.95	9.51	6.88
		190.00	60.77	9.01	3.83	60.40	9.28	3.79	59.84	9.59	3.72	59.65	9.76	3.69	59.27	9.92	3.65	56.65	9.44	3.50
		237.50	61.19	9.01	3.09	61.04	9.28	3.07	60.05	9.59	2.99	59.87	9.60	2.98	59.50	9.92	2.94	56.88	9.44	2.81
		285.00	61.39	9.01	2.59	61.25	9.28	2.57	60.27	9.59	2.50	60.09	9.51	2.50	59.73	9.92	2.46	56.88	9.44	2.34
	25	95.00	66.14	9.61	8.37	66.03	10.01	8.30	65.09	10.15	8.14	62.84	9.67	7.88	60.77	9.21	7.64	56.65	8.09	7.19
		190.00	66.59	9.54	4.22	66.03	9.84	4.16	65.09	9.97	4.08	62.84	9.49	3.95	60.77	9.01	3.83	56.65	8.09	3.60
		237.50	67.03	9.54	3.41	66.03	9.89	3.33	65.09	9.77	3.28	62.84	9.49	3.16	60.77	8.86	3.08	56.65	7.93	2.89
		285.00	67.26	9.54	2.85	66.03	9.89	2.77	65.09	9.67	2.74	62.84	9.49	2.63	60.77	8.76	2.57	56.65	7.85	2.41
	30	95.00	72.40	10.28	9.20	69.21	9.72	8.81	65.09	8.67	8.36	62.84	8.40	8.06	60.77	8.02	7.81	56.65	7.42	7.29
		190.00	72.40	10.09	4.61	69.21	9.51	4.42	65.09	8.48	4.19	62.84	8.23	4.04	60.77	7.83	3.92	56.65	7.23	3.66
		237.50	72.40	10.01	3.70	69.21	9.35	3.55	65.09	8.30	3.36	62.84	8.06	3.25	60.77	7.83	3.14	56.65	7.23	2.93
		285.00	72.40	9.98	3.08	69.21	9.24	2.96	65.09	8.21	2.81	62.84	7.98	2.71	60.77	7.83	2.61	56.65	7.23	2.44
	35	95.00	73.34	9.46	9.46	69.21	8.50	8.99	65.09	7.78	8.49	62.84	7.55	8.19	60.77	7.02	7.96	56.65	6.37	7.45
		190.00	73.34	9.09	4.76	69.21	8.33	4.51	65.09	7.59	4.26	62.84	7.38	4.11	60.77	6.88	3.99	56.65	6.21	3.74
		237.50	73.34	8.86	3.82	69.21	8.15	3.62	65.09	7.43	3.42	62.84	7.38	3.29	60.77	6.88	3.19	56.65	6.21	2.99
		285.00	73.34	8.75	3.19	69.21	8.05	3.02	65.09	7.35	2.85	62.84	7.38	2.74	60.77	6.88	2.66	56.65	6.21	2.49
	40	95.00	73.34	8.91	9.54	69.21	8.15	9.04	65.09	7.26	8.57	62.84	7.04	8.27	60.77	6.52	8.04	56.65	5.86	7.52
		190.00	73.34	8.54	4.80	69.21	7.78	4.55	65.09	6.92	4.31	62.84	6.84	4.15	60.77	6.36	4.03	56.65	5.70	3.77
		237.50	73.34	8.41	3.85	69.21	7.60	3.65	65.09	6.92	3.45	62.84	6.67	3.33	60.77	6.17	3.24	56.65	5.54	3.03
		285.00	73.34	8.36	3.21	69.21	7.50	3.05	65.09	6.92	2.87	62.84	6.58	2.78	60.77	6.09	2.70	56.65	5.45	2.53
	45	95.00	73.34	8.33	9.63	69.21	7.78	9.10	65.09	6.73	8.64	62.84	6.50	8.34	60.77	6.00	8.11	56.65	5.35	7.60
		190.00	73.34	7.97	4.84	69.21	7.25	4.59	65.09	6.21	4.36	62.84	6.31	4.19	60.77	5.83	4.07	56.65	5.19	3.81
		237.50	73.34	7.97	3.87	69.21	7.05	3.68	65.09	6.40	3.48	62.84	5.97	3.37	60.77	5.48	3.28	56.65	4.87	3.07
		285.00	73.34	7.97	3.23	69.21	6.95	3.07	65.09	6.49	2.89	62.84	5.80	2.82	60.77	5.31	2.74	56.65	4.68	2.57
100	10	95.00	58.29	12.31	6.81	58.97	12.97	6.81	58.50	13.62	6.65	57.21	12.65	6.60	55.33	12.28	6.38	51.58	10.92	6.02
		190.00	58.94	12.56	3.44	59.19	13.14	3.41	58.50	13.79	3.31	57.21	12.72	3.29	55.33	12.32	3.19	51.58	10.96	3.01
		237.50	59.37	12.50	2.78	59.42	13.14	2.74	58.50	13.76	2.65	57.21	12.70	2.64	55.33	12.28	2.55	51.58	10.92	2.41
		285.00	59.59	12.48	2.33	59.65	13.14	2.30	58.50	13.74	2.21	57.21	12.68	2.20	55.33	12.28	2.13	51.58	10.89	2.01
	15	95.00	58.72	10.88	7.09	58.97	11.46	7.04	58.50	12.15	6.87	57.21	11.38	6.79	55.33	10.93	6.58	51.58	9.81	6.19
		190.00	58.94	11.08	3.54	59.19	11.50	3.53	58.50	12.15	3.43	57.21	11.22	3.41	55.33	10.77	3.30	51.58	9.65	3.11
		237.50	59.37	10.90	2.87	59.65	11.40	2.86	58.50	12.01	2.75	57.21	11.06	2.73	55.33	10.60	2.65	51.58	9.49	2.49
		285.00	59.59	10.79	2.41	59.65	11.35	2.38	58.50	11.91	2.30	57.21	10.97	2.28	55.33	10.51	2.21	51.58	9.40	2.08
	20	95.00	59.16	9.30	7.39	59.42	9.71	7.36	58.50	10.28	7.14	57.21	9.73	7.03	55.33	9.25	6.83	51.58	8.50	6.38
		190.00	60.02	9.46	3.74	59.65	9.76	3.69	58.50	10.28	3.57	57.21	9.57	3.53	55.33	9.09	3.42	51.58	8.16	3.22
		237.50	60.24	9.30	3.02	60.10	9.67	2.99	58.50	10.11	2.87	57.21	9.39	2.83	55.33	8.91	2.75	51.58	8.02	2.58
		285.00	60.46	9.22	2.53	60.33	9.63	2.50	58.50	10.02	2.39	57.21	9.32	2.36	55.33	8.81	2.30	51.58	7.93	2.16
	25	95.00	64.71	10.00	8.10	62.84	9.72	7.87	58.50	8.82	7.36	57.21	8.40	7.23	55.33	7.96	7.02	51.58	7.03	6.60
		190.00	65.65	10.02	4.12	62.84	9.49	3.95	58.50	8.63	3.69	57.21	8.21	3.63	55.33	7.79	3.52	51.58	7.03	3.30
		237.50	65.88	9.80	3.32	62.84	9.42	3.17	58.50	8.48	2.96	57.21	8.04	2.91	55.33	7.79	2.82	51.58	6.84	2.65
		285.00	66.12	9.70	2.79	62.84	9.39	2.64	58.50	8.39	2.47	57.21	7.95	2.43	55.33	7.79	2.35	51.58	6.77	2.21
	30	95.00	66.59	9.14	8.51	62.84	8.40	8.06	58.50	7.57	7.54	57.21	7.34	7.39	55.33	6.79	7.19	51.58	6.33	6.70
		190.00	66.59	8.99	4.27	62.84	8.23	4.04	58.50	7.49	3.78	57.21	7.14	3.71	55.33	6.79	3.59	51.58	6.14	3.37
		237.50	66.59	8.79	3.42	62.84	8.23	3.24	58.50	7.40	3.03	57.21	7.14	2.97	55.33	6.63	2.89	51.58	6.14	2.69
		285.00	66.59	8.69	2.86	62.84	8.23	2.70	58.50	7.35	2.53	57.21	7.14	2.47	55.33	6.53	2.41	51.58	6.14	2.24
	35	95.00	66.59	8.25	8.64	62.84	7.58	8.19	58.50	6.68	7.68	57.21	6.51	7.51	55.33	6.18	7.28	51.58	5.62	6.81
		190.00	66.59	7.88	4.35	62.84	7.23	4.12	58.50	6.61	3.84	57.21	6.31	3.77	55.33	6.01	3.65	51.58	5.45	3.42
		237.50	66.59	7.88	3.48	62.84	7.23	3.29	58.50	6.51	3.08	57.21	6.31	3.02	55.33	6.01	2.92	51.58	5.45	2.73
		285.00	66.59	7.88	2.90	62.84	7.23	2.75	58.50	6.46	2.57	57.21	6.31	2.51	55.33	6.01	2.44	51.58	5.45	2.28

VRF MW



10HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	95.00	59.03	13.69	6.72	56.65	12.82	6.49	53.27	11.48	6.19	51.39	10.89	6.00	49.71	10.56	5.80	46.33	9.20	5.50
		190.00	58.79	13.73	3.34	56.40	12.89	3.22	53.27	11.53	3.09	51.39	10.96	2.99	49.71	10.53	2.90	46.33	9.24	2.75
		237.50	59.27	13.69	2.70	56.65	12.84	2.60	53.27	11.48	2.48	51.39	10.92	2.40	49.71	10.56	2.32	46.33	9.27	2.20
		285.00	59.52	13.66	2.26	56.65	12.82	2.16	53.27	11.48	2.06	51.39	10.89	2.00	49.71	10.58	1.93	46.33	9.29	1.83
	15	95.00	59.27	11.80	7.03	56.89	11.21	6.77	53.27	10.23	6.38	51.39	9.81	6.16	49.71	9.42	5.97	46.33	8.28	5.64
		190.00	58.79	11.60	3.49	56.40	11.01	3.36	53.27	10.07	3.20	51.39	9.65	3.09	49.71	9.09	3.01	46.33	8.10	2.83
		237.50	59.27	11.45	2.83	56.65	10.84	2.71	53.27	9.90	2.57	51.39	9.47	2.48	49.71	9.09	2.41	46.33	8.10	2.27
		285.00	59.52	11.35	2.38	56.89	10.77	2.28	53.27	9.81	2.15	51.39	9.40	2.07	49.71	9.09	2.01	46.33	8.10	1.89
	20	95.00	59.52	9.99	7.34	57.13	9.55	7.05	53.27	8.72	6.60	51.39	8.30	6.38	49.71	8.07	6.17	46.33	7.31	5.78
		190.00	59.27	9.99	3.65	56.65	9.42	3.50	53.27	8.56	3.31	51.39	8.16	3.20	49.71	7.74	3.11	46.33	6.98	2.91
		237.50	59.52	9.84	2.94	56.89	9.35	2.82	53.27	8.56	2.65	51.39	8.16	2.56	49.71	7.74	2.49	46.33	6.98	2.33
		285.00	59.76	9.74	2.47	56.89	9.33	2.35	53.27	8.56	2.21	51.39	8.16	2.13	49.71	7.74	2.07	46.33	6.98	1.94
	25	95.00	59.31	8.90	7.47	56.65	8.15	7.18	53.27	7.53	6.78	51.39	7.03	6.57	49.71	6.87	6.35	46.33	6.23	5.94
		190.00	60.02	8.83	3.79	56.65	8.08	3.60	53.27	7.36	3.40	51.39	7.03	3.29	49.71	6.68	3.19	46.33	6.04	2.98
		237.50	60.26	8.60	3.06	56.65	7.90	2.89	53.27	7.36	2.72	51.39	6.84	2.64	49.71	6.68	2.55	46.33	6.04	2.39
		285.00	60.26	8.47	2.56	56.65	7.81	2.41	53.27	7.36	2.27	51.39	6.77	2.20	49.71	6.68	2.12	46.33	6.04	1.99
	30	95.00	60.02	7.83	7.73	56.65	7.17	7.33	53.27	6.60	6.91	51.39	6.33	6.67	49.71	6.03	6.47	46.33	5.31	6.08
		190.00	60.02	7.66	3.88	56.65	7.03	3.67	53.27	6.43	3.47	51.39	6.14	3.35	49.71	5.86	3.25	46.33	5.31	3.04
		237.50	60.02	7.49	3.11	56.65	6.83	2.95	53.27	6.43	2.78	51.39	6.14	2.68	49.71	5.86	2.60	46.33	5.15	2.44
		285.00	60.02	7.39	2.60	56.65	6.74	2.46	53.27	6.43	2.31	51.39	6.14	2.23	49.71	5.86	2.16	46.33	5.08	2.04
	35	95.00	60.02	6.95	7.86	56.65	6.40	7.44	53.27	5.86	7.02	51.39	5.63	6.78	49.71	5.36	6.57	46.33	4.89	6.14
		190.00	60.02	6.76	3.94	56.65	6.21	3.74	53.27	5.69	3.52	51.39	5.45	3.40	49.71	5.20	3.30	46.33	4.73	3.08
		237.50	60.02	6.59	3.17	56.65	6.04	3.00	53.27	5.50	2.83	51.39	5.28	2.73	49.71	5.20	2.64	46.33	4.73	2.46
		285.00	60.02	6.50	2.64	56.65	5.95	2.50	53.27	5.41	2.36	51.39	5.21	2.28	49.71	5.20	2.20	46.33	4.73	2.05
	40	95.00	60.02	6.43	7.94	56.65	5.88	7.52	53.27	5.17	7.12	51.39	4.95	6.88	49.71	4.86	6.64	46.33	4.38	6.21
		190.00	60.02	6.07	4.00	56.65	5.71	3.77	53.27	5.00	3.57	51.39	4.79	3.45	49.71	4.67	3.34	46.33	4.22	3.12
		237.50	60.02	6.07	3.20	56.65	5.71	3.02	53.27	5.00	2.86	51.39	4.79	2.76	49.71	4.67	2.67	46.33	4.22	2.50
		285.00	60.02	6.07	2.66	56.65	5.71	2.51	53.27	5.00	2.38	51.39	4.79	2.30	49.71	4.67	2.22	46.33	4.22	2.08
	45	95.00	60.02	5.90	8.02	56.65	5.35	7.60	53.27	4.48	7.23	51.39	4.27	6.98	49.71	4.33	6.72	46.33	3.87	6.29
		190.00	60.02	5.37	4.05	56.65	5.18	3.81	53.27	4.31	3.63	51.39	4.10	3.50	49.71	4.17	3.37	46.33	3.70	3.16
		237.50	60.02	5.54	3.23	56.65	5.35	3.04	53.27	4.48	2.89	51.39	4.27	2.79	49.71	4.17	2.70	46.33	3.70	2.53
		285.00	60.02	5.63	2.69	56.65	5.45	2.53	53.27	4.55	2.41	51.39	4.36	2.32	49.71	4.17	2.25	46.33	3.70	2.10
80	10	95.00	53.03	11.56	6.14	50.03	10.58	5.84	47.27	9.37	5.61	45.77	9.11	5.43	44.27	8.63	5.28	41.27	7.84	4.95
		190.00	53.27	11.48	3.10	50.27	10.50	2.95	47.27	9.37	2.81	45.77	9.13	2.71	44.27	8.66	2.64	41.27	7.84	2.48
		237.50	53.27	11.45	2.48	50.27	10.55	2.35	47.27	9.42	2.24	45.77	9.09	2.17	44.27	8.61	2.11	41.27	7.80	1.98
		285.00	53.27	11.43	2.07	50.03	10.58	1.95	47.27	9.44	1.87	45.77	9.06	1.81	44.27	8.59	1.76	41.27	7.78	1.65
	15	95.00	53.27	10.47	6.34	50.27	9.49	6.04	47.27	8.33	5.77	45.77	8.21	5.56	44.27	7.71	5.42	41.27	7.05	5.07
		190.00	53.27	10.11	3.20	50.27	9.14	3.05	47.27	8.19	2.89	45.77	8.02	2.80	44.27	7.55	2.72	41.27	6.89	2.55
		237.50	53.27	9.90	2.57	50.27	9.14	2.44	47.27	8.19	2.32	45.77	7.86	2.25	44.27	7.36	2.19	41.27	6.71	2.05
		285.00	53.27	9.80	2.15	50.27	9.14	2.03	47.27	8.19	1.93	45.77	7.77	1.88	44.27	7.27	1.83	41.27	6.64	1.71
	20	95.00	53.27	8.79	6.59	50.27	8.07	6.25	47.27	7.18	5.94	45.77	7.03	5.74	44.27	6.71	5.56	41.27	6.08	5.21
		190.00	53.27	8.61	3.31	50.27	7.88	3.14	47.27	7.18	2.97	45.77	6.84	2.88	44.27	6.53	2.79	41.27	5.89	2.62
		237.50	53.27	8.43	2.66	50.27	7.70	2.52	47.27	7.02	2.38	45.77	6.84	2.31	44.27	6.37	2.25	41.27	5.89	2.10
		285.00	53.27	8.32	2.22	50.27	7.63	2.11	47.27	6.92	1.99	45.77	6.84	1.92	44.27	6.27	1.88	41.27	5.89	1.75
	25	95.00	53.27	7.59	6.77	50.27	6.97	6.41	47.27	6.21	6.08	45.77	6.09	5.88	44.27	5.83	5.69	41.27	5.31	5.33
		190.00	53.27	7.39	3.40	50.27	6.79	3.22	47.27	6.21	3.04	45.77	5.93	2.95	44.27	5.66	2.86	41.27	5.15	2.68
		237.50	53.27	7.24	2.73	50.27	6.79	2.58	47.27	6.03	2.44	45.77	5.93	2.36	44.27	5.66	2.29	41.27	5.15	2.14
		285.00	53.27	7.14	2.28	50.27	6.79	2.15	47.27	5.96	2.04	45.77	5.93	1.97	44.27	5.66	1.91	41.27	5.15	1.78
	30	95.00	53.27	6.57	6.92	50.27	6.11	6.54	47.27	5.65	6.16	45.77	5.41	5.98	44.27	5.16	5.79	41.27	4.73	5.41
		190.00	53.27	6.38	3.47	50.27	5.94	3.28	47.27	5.46	3.10	45.77	5.25	3.00	44.27	5.00	2.91	41.27	4.55	2.72
		237.50	53.27	6.38	2.78	50.27	5.94	2.63	47.27	5.46	2.48	45.77	5.25	2.40	44.27	5.00	2.33	41.27	4.55	2.18
		285.00	53.27	6.38	2.32	50.27	5.94	2.19	47.27	5.46	2.06	45.77	5.25	2.00	44.27	5.00	1.94	41.27	4.55	1.81
	35	95.00	53.27	5.96	7.01	50.27	5.44	6.64	47.27	5.03	6.26	45.77	4.66	6.09	44.27	4.63	5.87	41.27	4.08	5.51
		190.00	53.27	5.79	3.52	50.27	5.28	3.33	47.27	4.86	3.14	45.77	4.66	3.04	44.27	4.46	2.95	41.27	4.08	2.75
		237.50	53.27	5.79	2.81	50.27	5.11	2.68	47.27	4.86	2.51	45.77	4.48	2.45	44.27	4.46	2.36	41.27	3.92	2.21
		285.00	53.27	5.79	2.34	50.27	5.02	2.23	47.27	4.86	2.09	45.77	4.41	2.04	44.27	4.46	1.97	41.27	3.83	1.85
	40	95.00	53.27	5.60	7.06	50.27	4.95	6.71	47.27	4.50	6.33	45.77	4.32	6.14	44.27	4.13	5.95	41.27	3.74	5.56
		190.00	53.27	5.26	3.56	50.27	4.78	3.37	47.27	4.50	3.17	45.77	4.16	3.08	44.27					

10HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	95.00	46.47	9.59	5.46	44.08	8.75	5.23	41.45	7.96	4.96	39.95	7.41	4.82	38.64	7.18	4.66	36.01	6.36	4.39
		190.00	46.71	9.51	2.75	44.08	8.68	2.62	41.45	7.89	2.49	39.95	7.41	2.41	38.64	7.18	2.33	36.01	6.36	2.20
		237.50	46.71	9.56	2.20	44.08	8.73	2.09	41.45	7.91	1.99	39.95	7.43	1.93	38.64	7.11	1.87	36.01	6.36	1.76
		285.00	46.71	9.56	1.83	44.08	8.73	1.75	41.45	7.93	1.65	39.95	7.45	1.60	38.64	7.09	1.56	36.01	6.38	1.46
	15	95.00	46.71	8.69	5.63	44.08	7.88	5.36	41.45	7.09	5.09	39.95	6.64	4.93	38.64	6.39	4.78	36.01	5.70	4.49
		190.00	46.71	8.34	2.84	44.08	7.52	2.71	41.45	6.75	2.57	39.95	6.51	2.48	38.64	6.23	2.40	36.01	5.55	2.26
		237.50	46.71	8.34	2.27	44.08	7.52	2.17	41.45	6.75	2.06	39.95	6.51	1.98	38.64	6.07	1.93	36.01	5.55	1.81
		285.00	46.71	8.34	1.89	44.08	7.52	1.81	41.45	6.75	1.71	39.95	6.51	1.65	38.64	5.98	1.61	36.01	5.55	1.50
	20	95.00	46.71	7.26	5.84	44.08	6.65	5.54	41.45	6.11	5.23	39.95	5.84	5.05	38.64	5.57	4.90	36.01	5.07	4.58
		190.00	46.71	7.06	2.94	44.08	6.48	2.78	41.45	5.93	2.63	39.95	5.68	2.54	38.64	5.41	2.46	36.01	4.91	2.30
		237.50	46.71	7.06	2.35	44.08	6.48	2.23	41.45	5.93	2.10	39.95	5.52	2.04	38.64	5.41	1.97	36.01	4.76	1.85
		285.00	46.71	7.06	1.96	44.08	6.48	1.86	41.45	5.93	1.75	39.95	5.45	1.70	38.64	5.41	1.64	36.01	4.67	1.55
	25	95.00	46.71	6.26	5.99	44.08	5.79	5.67	41.45	5.32	5.35	39.95	5.11	5.16	38.64	4.73	5.02	36.01	4.31	4.70
		190.00	46.71	6.09	3.01	44.08	5.63	2.85	41.45	5.16	2.69	39.95	4.95	2.59	38.64	4.73	2.51	36.01	4.31	2.35
		237.50	46.71	5.93	2.42	44.08	5.44	2.29	41.45	5.16	2.15	39.95	4.95	2.07	38.64	4.57	2.02	36.01	4.31	1.88
		285.00	46.71	5.85	2.02	44.08	5.35	1.91	41.45	5.16	1.79	39.95	4.95	1.73	38.64	4.48	1.69	36.01	4.31	1.57
	30	95.00	46.71	5.53	6.10	44.08	5.13	5.77	41.45	4.75	5.44	39.95	4.38	5.27	38.64	4.36	5.08	36.01	3.85	4.76
		190.00	46.71	5.36	3.06	44.08	4.96	2.90	41.45	4.56	2.73	39.95	4.38	2.63	38.64	4.20	2.55	36.01	3.85	2.38
		237.50	46.71	5.36	2.45	44.08	4.96	2.32	41.45	4.56	2.19	39.95	4.22	2.12	38.64	4.20	2.04	36.01	3.85	1.91
		285.00	46.71	5.36	2.04	44.08	4.96	1.93	41.45	4.56	1.82	39.95	4.13	1.77	38.64	4.20	1.70	36.01	3.85	1.59
	35	95.00	46.71	4.94	6.19	44.08	4.59	5.85	41.45	4.10	5.53	39.95	4.07	5.31	38.64	3.78	5.16	36.01	3.64	4.80
		190.00	46.71	4.78	3.11	44.08	4.43	2.94	41.45	4.10	2.77	39.95	3.91	2.67	38.64	3.78	2.58	36.01	3.48	2.41
		237.50	46.71	4.78	2.48	44.08	4.43	2.35	41.45	3.94	2.22	39.95	3.91	2.14	38.64	3.78	2.07	36.01	3.48	1.93
		285.00	46.71	4.78	2.07	44.08	4.43	1.96	41.45	3.85	1.86	39.95	3.91	1.78	38.64	3.78	1.72	36.01	3.48	1.61
	40	95.00	46.71	4.59	6.24	44.08	4.26	5.90	41.45	3.76	5.58	39.95	3.58	5.39	38.64	3.46	5.21	36.01	3.30	4.85
		190.00	46.71	4.43	3.13	44.08	4.10	2.96	41.45	3.60	2.80	39.95	3.58	2.69	38.64	3.46	2.61	36.01	3.16	2.43
		237.50	46.71	4.43	2.50	44.08	4.10	2.37	41.45	3.60	2.24	39.95	3.42	2.16	38.64	3.28	2.10	36.01	3.16	1.95
		285.00	46.71	4.43	2.09	44.08	4.10	1.97	41.45	3.60	1.87	39.95	3.33	1.81	38.64	3.21	1.75	36.01	3.16	1.62
	45	95.00	46.71	4.26	6.29	44.08	3.91	5.95	41.45	3.44	5.63	39.95	3.10	5.46	38.64	3.14	5.26	36.01	2.98	4.89
		190.00	46.71	4.10	3.16	44.08	3.75	2.99	41.45	3.12	2.84	39.95	3.24	2.72	38.64	3.14	2.63	36.01	2.82	2.46
		237.50	46.71	4.10	2.52	44.08	3.75	2.39	41.45	3.26	2.26	39.95	2.92	2.19	38.64	2.80	2.12	36.01	2.82	1.97
		285.00	46.71	4.10	2.10	44.08	3.75	1.99	41.45	3.35	1.88	39.95	2.77	1.84	38.64	2.62	1.78	36.01	2.82	1.64
60	10	95.00	39.95	7.37	4.83	37.70	6.96	4.55	35.45	6.51	4.29	34.33	6.04	4.19	33.20	5.88	4.05	30.95	5.19	3.82
		190.00	39.95	7.37	2.41	37.70	6.96	2.28	35.45	6.51	2.14	34.33	6.11	2.09	33.20	5.86	2.02	30.95	5.25	1.90
		237.50	39.95	7.39	1.93	37.70	6.89	1.83	35.45	6.44	1.72	34.33	6.04	1.68	33.20	5.82	1.62	30.95	5.19	1.53
		285.00	39.95	7.39	1.61	37.70	6.84	1.52	35.45	6.39	1.43	34.33	6.00	1.40	33.20	5.79	1.35	30.95	5.17	1.27
	15	95.00	39.95	6.68	4.93	37.70	6.26	4.66	35.45	5.80	4.39	34.33	5.43	4.28	33.20	5.23	4.14	30.95	4.68	3.89
		190.00	39.95	6.51	2.48	37.70	6.07	2.34	35.45	5.64	2.21	34.33	5.43	2.14	33.20	5.07	2.08	30.95	4.68	1.95
		237.50	39.95	6.51	1.98	37.70	5.91	1.88	35.45	5.48	1.78	34.33	5.25	1.72	33.20	4.91	1.68	30.95	4.52	1.57
		285.00	39.95	6.51	1.65	37.70	5.81	1.57	35.45	5.39	1.48	34.33	5.16	1.44	33.20	4.82	1.40	30.95	4.43	1.31
	20	95.00	39.95	5.83	5.05	37.70	5.39	4.79	35.45	4.97	4.51	34.33	4.77	4.38	33.20	4.59	4.24	30.95	4.19	3.96
		190.00	39.95	5.66	2.54	37.70	5.23	2.40	35.45	4.81	2.27	34.33	4.61	2.20	33.20	4.41	2.13	30.95	4.03	1.99
		237.50	39.95	5.66	2.03	37.70	5.23	1.92	35.45	4.81	1.82	34.33	4.61	1.76	33.20	4.41	1.71	30.95	4.03	1.59
		285.00	39.95	5.66	1.69	37.70	5.23	1.60	35.45	4.81	1.51	34.33	4.61	1.47	33.20	4.41	1.42	30.95	4.03	1.33
	25	95.00	39.95	5.11	5.16	37.70	4.77	4.88	35.45	4.23	4.62	34.33	4.22	4.46	33.20	3.90	4.34	30.95	3.74	4.03
		190.00	39.95	4.95	2.59	37.70	4.58	2.45	35.45	4.23	2.31	34.33	4.06	2.24	33.20	3.90	2.17	30.95	3.58	2.03
		237.50	39.95	4.95	2.07	37.70	4.58	1.96	35.45	4.07	1.86	34.33	4.06	1.79	33.20	3.90	1.74	30.95	3.58	1.62
		285.00	39.95	4.95	1.73	37.70	4.58	1.64	35.45	4.00	1.55	34.33	4.06	1.49	33.20	3.90	1.45	30.95	3.58	1.35
	30	95.00	39.95	4.54	5.24	37.70	4.23	4.96	35.45	3.96	4.66	34.33	3.79	4.52	33.20	3.64	4.38	30.95	3.39	4.08
		190.00	39.95	4.38	2.63	37.70	4.06	2.49	35.45	3.78	2.35	34.33	3.63	2.27	33.20	3.48	2.20	30.95	3.21	2.05
		237.50	39.95	4.38	2.11	37.70	4.06	1.99	35.45	3.78	1.88	34.33	3.63	1.82	33.20	3.48	1.76	30.95	3.21	1.64
		285.00	39.95	4.38	1.76	37.70	4.06	1.66	35.45	3.78	1.56	34.33	3.63	1.52	33.20	3.48	1.47	30.95	3.21	1.37
	35	95.00	39.95	3.93	5.34	37.70	3.82	5.02	35.45	3.41	4.75	34.33	3.46	4.57	33.20	3.30	4.43	30.95	3.11	4.12
		190.00	39.95	3.93	2.67	37.70	3.66	2.52	35.45	3.41	2.37	34.33	3.28	2.30	33.20	3.16	2.22	30.95	2.93	2.08
		237.50	39.95	3.93	2.13	37.70	3.66	2.02	35.45	3.23	1.91	34.33	3.28	1.84	33.20	3.16	1.78	30.95	2.93	1.66
		285.00	39.95	3.93	1.78	37.70	3.66	1.68	35.45	3.17	1.59	34.33	3.28	1.53	33.20	3.16	1.48	30.95	2.93	1.38
	40	95.00	39.95	3.59	5.39	37.70	3.50	5.07	35.45	3.10	4.79	34.33	3.14	4.62	33.20	2.98	4.48	30.95	2.77	4.17
		190.00	39.95	3.59	2.69	37.70	3.32	2.55	35.45	3.10	2.40	34.33	2.96	2.32	33.20	2.82	2.			

VRF MW



10HP+8HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	95.00	33.15	5.87	4.04	31.28	5.53	3.81	31.51	5.03	3.92	28.51	4.86	3.50	27.57	4.53	3.41	25.70	4.17	3.19
		190.00	33.39	5.82	2.04	31.51	5.53	1.92	31.51	5.01	1.96	28.51	4.81	1.75	27.57	4.58	1.70	25.70	4.13	1.60
		237.50	33.39	5.87	1.63	31.51	5.53	1.54	31.51	5.01	1.57	28.51	4.84	1.40	27.57	4.51	1.37	25.70	4.15	1.28
		285.00	33.39	5.87	1.36	31.51	5.55	1.28	31.51	5.03	1.31	28.51	4.84	1.17	27.57	4.46	1.14	25.70	4.15	1.06
	15	95.00	33.39	5.30	4.16	31.51	4.98	3.93	31.51	4.48	4.00	28.51	4.35	3.58	27.57	4.04	3.49	25.70	3.74	3.25
		190.00	33.39	5.13	2.09	31.51	4.82	1.98	31.51	4.32	2.01	28.51	4.19	1.80	27.57	4.04	1.74	25.70	3.59	1.64
		237.50	33.39	5.13	1.67	31.51	4.82	1.58	31.51	4.32	1.61	28.51	4.19	1.44	27.57	3.86	1.41	25.70	3.59	1.31
		285.00	33.39	5.13	1.40	31.51	4.82	1.32	31.51	4.32	1.34	28.51	4.19	1.20	27.57	3.76	1.18	25.70	3.59	1.09
	20	95.00	33.39	4.61	4.26	31.51	4.30	4.03	31.51	4.00	4.08	28.51	3.84	3.65	27.57	3.69	3.54	25.70	3.25	3.33
		190.00	33.39	4.45	2.14	31.51	4.13	2.03	31.51	3.81	2.05	28.51	3.68	1.84	27.57	3.53	1.78	25.70	3.25	1.66
		237.50	33.39	4.45	1.71	31.51	4.13	1.62	31.51	3.81	1.64	28.51	3.68	1.47	27.57	3.53	1.42	25.70	3.25	1.33
		285.00	33.39	4.45	1.43	31.51	4.13	1.35	31.51	3.81	1.37	28.51	3.68	1.23	27.57	3.53	1.19	25.70	3.25	1.11
	25	95.00	33.39	4.10	4.34	31.51	3.65	4.13	31.51	3.59	4.14	28.51	3.26	3.74	27.57	3.15	3.62	25.70	2.91	3.37
		190.00	33.39	3.91	2.18	31.51	3.65	2.06	31.51	3.40	2.08	28.51	3.26	1.87	27.57	3.15	1.81	25.70	2.91	1.69
		237.50	33.39	3.91	1.75	31.51	3.65	1.65	31.51	3.40	1.67	28.51	3.26	1.50	27.57	3.15	1.45	25.70	2.91	1.35
		285.00	33.39	3.91	1.46	31.51	3.65	1.38	31.51	3.40	1.39	28.51	3.26	1.25	27.57	3.15	1.21	25.70	2.91	1.12
	30	95.00	33.39	3.68	4.40	31.51	3.42	4.16	31.51	3.25	4.19	28.51	2.95	3.79	27.57	3.01	3.64	25.70	2.81	3.39
		190.00	33.39	3.51	2.21	31.51	3.28	2.09	31.51	3.06	2.11	28.51	2.95	1.89	27.57	2.85	1.83	25.70	2.65	1.71
		237.50	33.39	3.51	1.77	31.51	3.28	1.67	31.51	3.06	1.69	28.51	2.95	1.51	27.57	2.85	1.46	25.70	2.65	1.37
		285.00	33.39	3.51	1.47	31.51	3.28	1.39	31.51	3.06	1.40	28.51	2.95	1.26	27.57	2.85	1.22	25.70	2.65	1.14
	35	95.00	33.39	3.32	4.45	31.51	2.98	4.23	31.51	2.80	4.25	28.51	2.86	3.80	27.57	2.61	3.70	25.70	2.43	3.45
		190.00	33.39	3.18	2.24	31.51	2.98	2.11	31.51	2.80	2.13	28.51	2.70	1.91	27.57	2.61	1.85	25.70	2.43	1.72
		237.50	33.39	3.18	1.79	31.51	2.98	1.69	31.51	2.80	1.70	28.51	2.70	1.53	27.57	2.61	1.48	25.70	2.43	1.38
		285.00	33.39	3.18	1.49	31.51	2.98	1.41	31.51	2.80	1.42	28.51	2.70	1.27	27.57	2.61	1.23	25.70	2.43	1.15
	40	95.00	33.39	3.00	4.50	31.51	2.82	4.25	31.51	2.64	4.28	28.51	2.53	3.85	27.57	2.46	3.72	25.70	2.25	3.47
		190.00	33.39	2.83	2.26	31.51	2.66	2.14	31.51	2.48	2.15	28.51	2.53	1.92	27.57	2.28	1.87	25.70	2.25	1.74
		237.50	33.39	2.83	1.81	31.51	2.66	1.71	31.51	2.48	1.72	28.51	2.53	1.54	27.57	2.28	1.50	25.70	2.25	1.39
		285.00	33.39	2.83	1.51	31.51	2.66	1.42	31.51	2.48	1.43	28.51	2.53	1.28	27.57	2.28	1.25	25.70	2.25	1.16
	45	95.00	33.39	2.67	4.55	31.51	2.66	4.27	31.51	2.48	4.30	28.51	2.19	3.90	27.57	2.28	3.75	25.70	2.10	3.50
		190.00	33.39	2.51	2.29	31.51	2.32	2.16	31.51	2.14	2.18	28.51	2.35	1.94	27.57	1.96	1.90	25.70	2.10	1.75
		237.50	33.39	2.51	1.83	31.51	2.32	1.73	31.51	2.14	1.74	28.51	2.35	1.55	27.57	1.96	1.52	25.70	2.10	1.40
		285.00	33.39	2.51	1.52	31.51	2.32	1.44	31.51	2.14	1.45	28.51	2.35	1.29	27.57	1.96	1.26	25.70	2.10	1.17

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	100.00	50.54	4.81	7.83	64.26	8.40	10.28	64.60	6.82	10.10	65.30	6.85	10.20	66.10	6.85	10.32	67.54	6.89	10.53	68.57	6.83	10.66
		200.00	50.54	4.46	3.89	64.26	7.87	5.10	64.60	6.38	5.02	65.30	6.39	5.07	66.10	6.34	5.12	67.54	6.45	5.23	68.57	6.50	5.31
		250.00	50.54	4.32	3.10	64.26	7.71	4.07	64.60	6.23	4.01	65.30	6.23	4.05	66.10	6.28	4.09	67.54	6.30	4.18	68.57	6.31	4.24
		300.00	50.54	4.25	2.58	64.26	7.61	3.39	64.60	6.20	3.34	65.30	6.17	3.37	66.10	6.25	3.41	67.54	6.24	3.48	68.57	6.22	3.53
	15	100.00	49.81	6.32	7.94	63.40	11.02	10.53	63.55	8.93	10.25	64.32	8.96	10.36	64.90	8.97	10.45	66.60	9.04	10.70	67.63	9.01	10.84
		200.00	49.81	5.83	3.93	63.40	10.34	5.21	63.55	8.35	5.08	64.32	8.37	5.14	64.90	8.37	5.18	66.60	8.48	5.31	67.63	8.49	5.38
		250.00	49.81	5.66	3.14	63.40	10.08	4.16	63.55	8.16	4.06	64.32	8.21	4.10	64.90	8.21	4.14	66.60	8.29	4.24	67.63	8.31	4.30
		300.00	49.81	5.59	2.61	63.40	9.97	3.46	63.55	8.09	3.38	64.32	8.11	3.41	64.90	8.15	3.44	66.60	8.20	3.53	67.63	8.18	3.57
	20	100.00	49.08	7.69	8.03	62.54	13.38	10.74	62.50	10.82	10.37	63.34	10.87	10.50	64.18	10.84	10.61	65.65	10.94	10.83	66.70	10.94	10.98
		200.00	49.08	7.06	3.97	62.54	12.54	5.31	62.50	10.10	5.13	63.34	10.16	5.20	64.18	10.18	5.26	65.65	10.26	5.37	66.70	10.30	5.44
		250.00	49.08	6.85	3.16	62.54	12.23	4.23	62.50	9.91	4.10	63.34	9.96	4.15	64.18	9.95	4.19	65.65	10.07	4.28	66.70	10.05	4.34
		300.00	49.08	6.74	2.63	62.54	12.07	3.52	62.50	9.80	3.41	63.34	9.83	3.45	64.18	9.86	3.49	65.65	9.95	3.56	66.70	9.93	3.61
	25	100.00	49.08	9.05	8.22	58.52	11.84	9.95	60.61	12.02	10.27	61.45	12.05	10.40	62.29	12.13	10.53	63.55	12.15	10.71	64.39	12.15	10.82
		200.00	49.08	8.32	4.06	58.52	11.09	4.92	60.61	11.23	5.08	61.45	11.29	5.14	62.29	11.33	5.21	63.55	11.39	5.30	64.39	11.43	5.36
		250.00	49.08	8.08	3.23	58.52	10.86	3.92	60.61	11.03	4.05	61.45	11.06	4.10	62.29	11.13	4.15	63.55	11.17	4.23	64.39	11.18	4.28
		300.00	49.08	7.98	2.69	58.52	10.71	3.26	60.61	10.90	3.37	61.45	10.94	3.41	62.29	11.01	3.46	63.55	11.05	3.52	64.39	11.04	3.56
	30	100.00	49.08	10.73	8.46	56.63	13.07	9.86	58.52	13.23	10.15	59.15	13.28	10.24	59.99	13.30	10.37	61.03	13.37	10.52	61.87	13.33	10.64
		200.00	49.08	9.83	4.17	56.63	12.24	4.87	58.52	12.36	5.01	59.15	12.42	5.06	59.99	12.46	5.12	61.03	12.52	5.20	61.87	12.54	5.26
		250.00	49.08	9.60	3.32	56.63	11.96	3.88	58.52	12.12	4.00	59.15	12.18	4.04	59.99	12.25	4.09	61.03	12.27	4.15	61.87	12.27	4.19
		300.00	49.08	9.47	2.76	56.63	11.82	3.23	58.52	12.00	3.32	59.15	12.05	3.36	59.99	12.15	3.40	61.03	12.16	3.45	61.87	12.11	3.49
	35	100.00	49.08	12.77	8.75	54.11	14.33	9.68	55.79	14.42	9.93	56.63	14.53	10.06	57.26	14.52	10.15	58.10	14.57	10.28	58.73	14.55	10.36
		200.00	49.08	11.75	4.30	54.11	13.39	4.77	55.79	13.52	4.90	56.63	13.58	4.96	57.26	13.62	5.01	58.10	13.66	5.07	58.73	13.66	5.12
		250.00	49.08	11.40	3.42	54.11	13.09	3.80	55.79	13.22	3.90	56.63	13.29	3.96	57.26	13.36	4.00	58.10	13.41	4.05	58.73	13.36	4.08
		300.00	49.08	11.25	2.84	54.11	12.94	3.16	55.79	13.09	3.25	56.63	13.17	3.29	57.26	13.22	3.32	58.10	13.27	3.36	58.73	13.22	3.39
	40	100.00	43.42	13.47	8.05	48.07	15.12	8.94	49.53	15.24	9.16	50.31	15.32	9.28	50.82	15.32	9.35	51.80	15.38	9.50	52.30	15.34	9.57
		200.00	43.42	12.38	3.95	48.07	14.11	4.40	49.53	14.26	4.51	50.31	14.30	4.57	50.82	14.35	4.61	51.80	14.43	4.68	52.30	14.42	4.72
		250.00	43.42	12.03	3.14	48.07	13.81	3.50	49.53	13.94	3.59	50.31	14.04	3.64	50.82	14.07	3.67	51.80	14.13	3.73	52.30	14.09	3.76
		300.00	43.42	11.87	2.61	48.07	13.66	2.91	49.53	13.77	2.98	50.31	13.89	3.03	50.82	13.93	3.05	51.80	13.99	3.10	52.30	13.93	3.12
	45	100.00	38.02	14.18	7.38	42.03	15.87	8.19	43.28	16.02	8.39	43.99	16.13	8.50	44.38	16.14	8.56	45.26	16.15	8.69	45.65	16.13	8.74
		200.00	38.02	13.00	3.61	42.03	14.86	4.02	43.28	14.98	4.12	43.99	15.06	4.18	44.38	15.06	4.20	45.26	15.18	4.27	45.65	15.18	4.30
		250.00	38.02	12.65	2.87	42.03	14.52	3.20	43.28	14.65	3.28	43.99	14.77	3.32	44.38	14.81	3.35	45.26	14.88	3.40	45.65	14.80	3.42
		300.00	38.02	12.50	2.38	42.03	14.33	2.66	43.28	14.49	2.72	43.99	14.65	2.76	44.38	14.67	2.78	45.26	14.71	2.83	45.65	14.61	2.84
120	10	100.00	46.24	4.18	7.13	55.15	5.43	8.57	62.81	6.69	9.83	63.81	6.67	9.97	64.62	6.75	10.09	66.07	6.76	10.30	67.31	6.76	10.48
		200.00	46.24	3.83	3.54	55.15	5.07	4.26	62.81	6.20	4.88	63.81	6.27	4.96	64.62	6.25	5.01	66.07	6.34	5.12	67.31	6.29	5.20
		250.00	46.24	3.80	2.83	55.15	4.96	3.40	62.81	6.13	3.90	63.81	6.14	3.96	64.62	6.15	4.00	66.07	6.21	4.09	67.31	6.19	4.16
		300.00	46.24	3.77	2.36	55.15	4.93	2.83	62.81	6.09	3.25	63.81	6.07	3.29	64.62	6.09	3.33	66.07	6.14	3.40	67.31	6.13	3.46
	15	100.00	45.77	5.57	7.26	54.63	7.23	8.75	62.27	8.83	10.06	63.05	8.85	10.17	63.88	8.92	10.30	65.33	8.96	10.51	66.58	8.96	10.68
		200.00	45.77	5.08	3.60	54.63	6.76	4.34	62.27	8.23	4.99	63.05	8.28	5.04	63.88	8.33	5.11	65.33	8.37	5.21	66.58	8.38	5.30
		250.00	45.77	4.99	2.87	54.63	6.62	3.46	62.27	8.08	3.98	63.05	8.12	4.03	63.88	8.16	4.08	65.33	8.24	4.16	66.58	8.19	4.23
		300.00	45.77	4.92	2.39	54.63	6.54	2.88	62.27	8.01	3.31	63.05	8.05	3.35	63.88	8.10	3.39	65.33	8.15	3.46	66.58	8.13	3.52
	20	100.00	45.30	6.76	7.36	54.11	8.81	8.90	61.45	10.75	10.21	62.29	10.80	10.34	63.13	10.83	10.46	64.60	10.93	10.68	65.86	10.89	10.85
		200.00	45.30	6.21	3.64	54.11	8.23	4.41	61.45	10.04	5.06	62.29	10.10	5.12	63.13	10.14	5.18	64.60	10.22	5.29	65.86	10.26	5.38
		250.00	45.30	6.05	2.91	54.11	8.05	3.52	61.45	9.81	4.03	62.29	9.89	4.08	63.13	9.97	4.14	64.60	10.02	4.22	65.86	10.00	4.29
		300.00	45.30	5.95	2.42	54.11	7.98	2.93	61.45	9.70	3.35	62.29	9.79	3.40	63.13	9.87	3.44	64.60	9.93	3.51	65.86	9.88	3.57
	25	100.00	45.30	7.94	7.53	54.11	10.37	9.12	59.57	11.95	10.11	60.40	11.99	10.24	61.45	12.07	10.40	62.71	12.11	10.58	63.76	12.17	10.74
		200.00	45.30	7.32	3.72	54.11	9.71	4.51	59.57	11.17	5.00	60.40	11.23	5.07	61.45	11.27	5.14	62.71	11.35	5.24	63.76	11.39	5.31
		250.00	45.30	7.11	2.97	54.11	9.47	3.60	59.57	10.96	3.99	60.40	10.99	4.04	61.45	11.09	4.10	62.71	11.12	4.18	63.76	11.13	4.24
		300.00	45.30	7.02	2.47	54.11	9.37	2.99	59.57	10.83	3.32	60.40	10.86	3.36	61.45	10.97	3.41	62.71	11.00	3.47	63.76	10.99	3.52
	30	100.00	45.30	9.38	7.73	54.11	12.32	9.40	57.47	13.14													

VRF MW



10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	100.00	41.98	3.63	6.45	50.00	4.69	7.73	58.21	5.89	9.07	61.55	6.53	9.63	62.38	6.56	9.75	64.31	6.58	10.03	65.56	6.61	10.21
		200.00	41.98	3.34	3.20	50.00	4.36	3.84	58.21	5.54	4.51	61.55	6.11	4.78	62.38	6.18	4.85	64.31	6.11	4.98	65.56	6.18	5.07
		250.00	41.98	3.22	2.56	50.00	4.26	3.07	58.21	5.43	3.60	61.55	6.01	3.82	62.38	6.01	3.87	64.31	6.01	3.98	65.56	6.12	4.05
		300.00	41.98	3.16	2.13	50.00	4.23	2.56	58.21	5.36	3.00	61.55	5.94	3.18	62.38	5.94	3.22	64.31	5.95	3.31	65.56	6.05	3.38
	15	100.00	41.75	4.83	6.59	49.75	6.25	7.92	57.94	7.95	9.32	61.29	8.75	9.91	62.13	8.78	10.03	64.05	8.82	10.31	65.06	8.89	10.46
		200.00	41.75	4.45	3.27	49.75	5.83	3.93	57.94	7.42	4.62	61.29	8.19	4.91	62.13	8.23	4.98	64.05	8.25	5.11	65.06	8.33	5.19
		250.00	41.75	4.30	2.61	49.75	5.70	3.14	57.94	7.28	3.69	61.29	8.02	3.92	62.13	8.09	3.97	64.05	8.09	4.08	65.06	8.13	4.14
		300.00	41.75	4.24	2.17	49.75	5.66	2.61	57.94	7.17	3.07	61.29	7.95	3.26	62.13	7.99	3.31	64.05	8.02	3.40	65.06	8.03	3.45
	20	100.00	41.53	5.91	6.71	49.50	7.68	8.09	57.68	9.73	9.53	61.03	10.69	10.14	61.87	10.79	10.28	63.55	10.82	10.52	64.81	10.91	10.71
		200.00	41.53	5.44	3.32	49.50	7.16	4.01	57.68	9.12	4.72	61.03	10.04	5.03	61.87	10.08	5.09	63.55	10.16	5.21	64.81	10.22	5.31
		250.00	41.53	5.27	2.65	49.50	7.00	3.20	57.68	8.91	3.77	61.03	9.83	4.01	61.87	9.94	4.06	63.55	9.96	4.16	64.81	9.95	4.23
		300.00	41.53	5.18	2.20	49.50	6.93	2.66	57.68	8.81	3.13	61.03	9.72	3.34	61.87	9.84	3.38	63.55	9.86	3.46	64.81	9.82	3.52
	25	100.00	41.53	6.96	6.86	49.50	9.03	8.28	57.68	11.52	9.79	59.36	11.90	10.08	60.19	11.98	10.21	61.66	12.02	10.42	62.92	12.13	10.61
		200.00	41.53	6.39	3.39	49.50	8.44	4.10	57.68	10.76	4.84	59.36	11.15	4.99	60.19	11.21	5.05	61.66	11.29	5.16	62.92	11.35	5.25
		250.00	41.53	6.22	2.70	49.50	8.25	3.27	57.68	10.52	3.86	59.36	10.90	3.97	60.19	11.02	4.03	61.66	11.05	4.11	62.92	11.08	4.19
		300.00	41.53	6.11	2.25	49.50	8.16	2.72	57.68	10.42	3.21	59.36	10.77	3.31	60.19	10.90	3.35	61.66	10.93	3.42	62.92	10.93	3.48
	30	100.00	41.53	8.20	7.03	49.50	10.73	8.52	56.42	13.05	9.82	57.26	13.14	9.96	57.89	13.21	10.06	59.36	13.27	10.27	60.40	13.34	10.43
		200.00	41.53	7.55	3.47	49.50	9.99	4.21	56.42	12.22	4.85	57.26	12.28	4.92	57.89	12.34	4.97	59.36	12.42	5.08	60.40	12.50	5.16
		250.00	41.53	7.36	2.77	49.50	9.81	3.36	56.42	11.93	3.87	57.26	12.05	3.92	57.89	12.12	3.96	59.36	12.18	4.05	60.40	12.21	4.11
		300.00	41.53	7.25	2.30	49.50	9.69	2.79	56.42	11.81	3.22	57.26	11.91	3.26	57.89	12.01	3.29	59.36	12.07	3.37	60.40	12.10	3.42
	35	100.00	41.43	9.81	7.25	49.50	12.78	8.81	53.90	15.61	9.83	54.74	14.36	9.77	55.37	14.41	9.87	56.63	14.50	10.06	57.68	14.58	10.22
		200.00	41.43	9.02	3.57	49.50	11.94	4.34	53.90	14.62	4.85	54.74	13.43	4.82	55.37	13.49	4.87	56.63	13.58	4.96	57.68	13.64	5.04
		250.00	41.43	8.77	2.84	49.50	11.69	3.46	53.90	14.32	3.86	54.74	13.19	3.84	55.37	13.23	3.88	56.63	13.32	3.96	57.68	13.32	4.02
		300.00	41.43	8.65	2.36	49.50	11.55	2.88	53.90	14.14	3.21	54.74	13.04	3.20	55.37	13.08	3.23	56.63	13.20	3.29	57.68	13.15	3.34
	40	100.00	38.53	10.78	6.97	46.02	14.04	8.49	49.90	17.19	9.49	50.51	15.77	9.37	51.21	15.85	9.48	52.53	15.91	9.68	53.61	16.00	9.84
		200.00	38.53	9.90	3.42	46.02	13.13	4.18	49.90	16.05	4.66	50.51	14.75	4.62	51.21	14.82	4.67	52.53	14.90	4.77	53.61	15.00	4.85
		250.00	38.53	9.62	2.72	46.02	12.85	3.33	49.90	15.72	3.71	50.51	14.48	3.68	51.21	14.52	3.72	52.53	14.61	3.80	53.61	14.63	3.86
		300.00	38.53	9.49	2.26	46.02	12.71	2.77	49.90	15.57	3.09	50.51	14.33	3.06	51.21	14.41	3.09	52.53	14.50	3.16	53.61	14.43	3.21
	45	100.00	35.38	11.75	6.67	42.27	15.30	8.14	46.16	18.73	9.18	46.53	17.18	9.01	47.29	17.26	9.13	48.44	17.32	9.30	49.30	17.42	9.44
		200.00	35.38	10.78	3.26	42.27	14.32	4.00	46.16	17.44	4.50	46.53	16.10	4.43	47.29	16.11	4.48	48.44	16.23	4.57	49.30	16.37	4.64
		250.00	35.38	10.50	2.60	42.27	14.00	3.18	46.16	17.15	3.58	46.53	15.77	3.52	47.29	15.85	3.57	48.44	15.94	3.64	49.30	15.94	3.69
		300.00	35.38	10.34	2.16	42.27	13.83	2.64	46.16	17.00	2.98	46.53	15.62	2.93	47.29	15.70	2.97	48.44	15.80	3.03	49.30	15.74	3.07
100	10	100.00	37.75	3.05	5.77	45.09	3.94	6.93	52.43	5.00	8.12	56.00	5.56	8.71	59.57	6.19	9.30	66.26	6.45	10.28	63.55	6.52	9.91
		200.00	37.75	2.81	2.87	45.09	3.64	3.45	52.43	4.69	4.04	56.00	5.24	4.33	59.57	5.84	4.63	66.26	6.04	5.11	63.55	6.04	4.92
		250.00	37.75	2.75	2.29	45.09	3.56	2.75	52.43	4.59	3.23	56.00	5.09	3.46	59.57	5.67	3.69	66.26	5.93	4.08	63.55	5.94	3.93
		300.00	37.75	2.75	1.91	45.09	3.53	2.29	52.43	4.56	2.69	56.00	5.02	2.88	59.57	5.60	3.07	66.26	5.86	3.40	63.55	5.90	3.27
	15	100.00	37.75	4.16	5.93	45.09	5.33	7.13	52.43	6.79	8.38	56.00	7.58	8.99	59.57	8.37	9.61	66.26	8.74	10.61	63.55	8.82	10.24
		200.00	37.75	3.81	2.94	45.09	4.98	3.54	52.43	6.34	4.16	56.00	7.08	4.46	59.57	7.86	4.77	66.26	8.19	5.26	63.55	8.24	5.08
		250.00	37.75	3.73	2.35	45.09	4.87	2.83	52.43	6.22	3.32	56.00	6.95	3.56	59.57	7.69	3.80	66.26	8.01	4.20	63.55	8.03	4.05
		300.00	37.75	3.68	1.95	45.09	4.81	2.35	52.43	6.15	2.76	56.00	6.86	2.96	59.57	7.62	3.17	66.26	7.94	3.50	63.55	7.93	3.37
	20	100.00	37.75	5.11	6.06	45.09	6.56	7.31	52.43	8.38	8.60	56.00	9.35	9.24	59.57	10.35	9.89	66.26	10.76	10.89	63.55	10.84	10.52
		200.00	37.75	4.71	3.00	45.09	6.15	3.62	52.43	7.81	4.26	56.00	8.72	4.58	59.57	9.67	4.90	66.26	10.10	5.40	63.55	10.16	5.21
		250.00	37.75	4.58	2.39	45.09	6.03	2.89	52.43	7.68	3.40	56.00	8.59	3.65	59.57	9.50	3.91	66.26	9.89	4.31	63.55	9.88	4.15
		300.00	37.75	4.50	1.99	45.09	5.95	2.41	52.43	7.59	2.83	56.00	8.50	3.04	59.57	9.43	3.25	66.26	9.78	3.58	63.55	9.71	3.45
	25	100.00	37.75	6.01	6.19	45.09	7.75	7.47	52.43	9.85	8.81	56.00	10.98	9.47	58.94	11.93	10.02	60.40	11.96	10.23	61.66	12.10	10.43
		200.00	37.75	5.52	3.06	45.09	7.24	3.70	52.43	9.21	4.36	56.00	10.28	4.69	58.94	11.13	4.95	60.40	11.23	5.07	61.66	11.29	5.16
		250.00	37.75	5.37	2.44	45.09	7.10	2.95	52.43	8.99	3.47	56.00	10.07	3.74	58.94	10.93	3.95	60.40	11.01	4.04	61.66	11.01	4.11
		300.00	37.75	5.29	2.03	45.09	7.02	2.46	52.43	8.90	2.89	56.00	9.97	3.11	58.94	10.81	3.29	60.40	10.91	3.36	61.66	10.85	3.42
	30	100.00	37.75	7.10	6.34	45.09	9.20	7.68	52.43	11.67	9.07	56.00	13.05	9.77	56.84								

10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
90	10	100.00	33.98	2.64	5.18	40.48	3.36	6.20	47.19	4.19	7.27	50.34	4.69	7.78	53.69	5.20	8.33	60.19	6.32	9.41	62.29	6.45	9.72
		200.00	33.98	2.46	2.58	40.48	3.16	3.09	47.19	3.97	3.62	50.34	4.41	3.87	53.69	4.87	4.14	60.19	5.89	4.67	62.29	6.02	4.83
		250.00	33.98	2.35	2.06	40.48	3.10	2.47	47.19	3.84	2.89	50.34	4.32	3.09	53.69	4.77	3.31	60.19	5.77	3.73	62.29	5.86	3.86
		300.00	33.98	2.30	1.71	40.48	3.07	2.05	47.19	3.78	2.40	50.34	4.26	2.57	53.69	4.73	2.75	60.19	5.73	3.11	62.29	5.78	3.21
	15	100.00	33.98	3.57	5.31	40.48	4.57	6.37	47.19	5.72	7.48	50.34	6.39	8.02	53.69	7.03	8.59	60.19	8.52	9.72	62.29	8.75	10.05
		200.00	33.98	3.31	2.64	40.48	4.26	3.16	47.19	5.38	3.72	50.34	5.96	3.98	53.69	6.60	4.26	60.19	7.97	4.82	62.29	8.20	4.98
		250.00	33.98	3.20	2.10	40.48	4.17	2.53	47.19	5.25	2.97	50.34	5.86	3.18	53.69	6.47	3.40	60.19	7.81	3.85	62.29	7.96	3.97
		300.00	33.98	3.15	1.75	40.48	4.14	2.10	47.19	5.19	2.47	50.34	5.80	2.65	53.69	6.40	2.83	60.19	7.73	3.20	62.29	7.84	3.31
	20	100.00	33.98	4.39	5.43	40.48	5.62	6.52	47.19	7.06	7.67	50.34	7.87	8.23	53.69	8.67	8.82	60.19	10.48	10.00	62.29	10.77	10.33
		200.00	33.98	4.05	2.69	40.48	5.24	3.23	47.19	6.60	3.80	50.34	7.34	4.08	53.69	8.13	4.37	60.19	9.81	4.95	62.29	10.10	5.12
		250.00	33.98	3.94	2.15	40.48	5.12	2.58	47.19	6.50	3.04	50.34	7.22	3.26	53.69	8.00	3.49	60.19	9.62	3.95	62.29	9.82	4.08
		300.00	33.98	3.89	1.79	40.48	5.07	2.15	47.19	6.44	2.53	50.34	7.16	2.71	53.69	7.90	2.90	60.19	9.54	3.29	62.29	9.70	3.39
	25	100.00	33.98	5.14	5.53	40.48	6.57	6.65	47.19	8.31	7.85	50.34	9.22	8.42	53.69	10.27	9.05	58.94	11.86	10.01	60.40	12.00	10.24
		200.00	33.98	4.73	2.74	40.48	6.15	3.30	47.19	7.77	3.89	50.34	8.66	4.17	53.69	9.59	4.48	58.94	11.13	4.95	60.40	11.21	5.06
		250.00	33.98	4.58	2.18	40.48	6.01	2.63	47.19	7.65	3.10	50.34	8.48	3.33	53.69	9.40	3.57	58.94	10.91	3.95	60.40	10.96	4.04
		300.00	33.98	4.51	1.81	40.48	5.96	2.19	47.19	7.56	2.58	50.34	8.39	2.77	53.69	9.33	2.97	58.94	10.80	3.29	60.40	10.81	3.36
	30	100.00	33.98	6.07	5.66	40.48	7.74	6.82	47.19	10.35	8.14	50.34	10.98	8.67	53.69	12.15	9.31	56.84	13.11	9.89	58.10	13.20	10.08
		200.00	33.98	5.56	2.80	40.48	7.26	3.38	47.19	9.65	4.02	50.34	10.26	4.28	53.69	11.37	4.60	56.84	12.26	4.89	58.10	12.36	4.98
		250.00	33.98	5.44	2.23	40.48	7.10	2.69	47.19	9.44	3.20	50.34	10.06	3.42	53.69	11.15	3.67	56.84	12.03	3.90	58.10	12.04	3.97
		300.00	33.98	5.37	1.85	40.48	7.02	2.24	47.19	9.35	2.67	50.34	9.94	2.84	53.69	11.06	3.05	56.84	11.90	3.24	58.10	11.84	3.30
	35	100.00	33.98	7.18	5.82	40.48	9.23	7.03	47.19	11.76	8.34	50.34	13.09	8.97	53.06	14.24	9.52	54.53	14.31	9.74	55.58	14.41	9.90
		200.00	33.98	6.60	2.87	40.48	8.64	3.47	47.19	10.99	4.11	50.34	12.26	4.43	53.06	13.29	4.69	54.53	13.41	4.80	55.58	13.49	4.88
		250.00	33.98	6.41	2.28	40.48	8.46	2.77	47.19	10.76	3.28	50.34	12.01	3.53	53.06	13.09	3.74	54.53	13.15	3.83	55.58	13.13	3.89
		300.00	33.98	6.30	1.90	40.48	8.35	2.30	47.19	10.63	2.73	50.34	11.88	2.93	53.06	12.96	3.11	54.53	13.02	3.18	55.58	12.94	3.23
	40	100.00	32.87	8.22	5.81	39.26	10.61	7.05	45.88	13.52	8.40	48.80	15.02	9.03	51.49	16.36	9.60	52.97	16.46	9.82	53.78	16.57	9.95
		200.00	32.87	7.58	2.86	39.26	9.93	3.48	45.88	12.62	4.14	48.80	14.04	4.44	51.49	15.32	4.72	52.97	15.40	4.84	53.78	15.49	4.90
		250.00	32.87	7.34	2.27	39.26	9.70	2.77	45.88	12.37	3.30	48.80	13.79	3.54	51.49	15.01	3.76	52.97	15.14	3.85	53.78	15.10	3.90
		300.00	32.87	7.23	1.89	39.26	9.58	2.30	45.88	12.24	2.74	48.80	13.66	2.94	51.49	14.88	3.13	52.97	14.97	3.20	53.78	14.90	3.24
	45	100.00	31.98	9.28	5.84	38.04	11.99	7.08	44.57	15.26	8.46	47.51	16.99	9.12	49.91	18.49	9.67	51.42	18.61	9.90	52.24	18.70	10.03
		200.00	31.98	8.56	2.87	38.04	11.20	3.48	44.57	14.26	4.16	47.51	15.85	4.48	49.91	17.31	4.75	51.42	17.39	4.87	52.24	17.52	4.93
		250.00	31.98	8.30	2.28	38.04	10.96	2.77	44.57	13.97	3.31	47.51	15.56	3.57	49.91	16.97	3.78	51.42	17.09	3.88	52.24	17.10	3.92
		300.00	31.98	8.16	1.89	38.04	10.81	2.30	44.57	13.81	2.75	47.51	15.41	2.97	49.91	16.80	3.15	51.42	16.92	3.22	52.24	16.87	3.26
80	10	100.00	30.20	2.22	4.59	36.07	2.80	5.50	41.95	3.51	6.43	44.88	3.94	6.91	47.61	4.31	7.34	53.48	5.23	8.30	59.36	6.12	9.26
		200.00	30.20	2.03	2.28	36.07	2.66	2.74	41.95	3.26	3.20	44.88	3.67	3.43	47.61	4.01	3.65	53.48	4.84	4.12	59.36	5.72	4.60
		250.00	30.20	1.98	1.82	36.07	2.57	2.19	41.95	3.20	2.55	44.88	3.54	2.74	47.61	3.91	2.91	53.48	4.76	3.30	59.36	5.63	3.68
		300.00	30.20	1.98	1.52	36.07	2.51	1.82	41.95	3.20	2.13	44.88	3.48	2.28	47.61	3.85	2.43	53.48	4.76	2.75	59.36	5.63	3.06
	15	100.00	30.20	3.02	4.70	36.07	3.81	5.64	41.95	4.79	6.61	44.88	5.32	7.10	47.61	5.82	7.56	53.48	7.05	8.56	59.36	8.33	9.57
		200.00	30.20	2.78	2.33	36.07	3.58	2.80	41.95	4.45	3.28	44.88	4.95	3.52	47.61	5.46	3.75	53.48	6.58	4.25	59.36	7.79	4.75
		250.00	30.20	2.70	1.86	36.07	3.49	2.24	41.95	4.38	2.62	44.88	4.83	2.81	47.61	5.32	2.99	53.48	6.47	3.39	59.36	7.61	3.79
		300.00	30.20	2.67	1.55	36.07	3.44	1.86	41.95	4.32	2.18	44.88	4.80	2.34	47.61	5.26	2.49	53.48	6.43	2.82	59.36	7.52	3.15
	20	100.00	30.20	3.74	4.80	36.07	4.71	5.77	41.95	5.91	6.77	44.88	6.51	7.27	47.61	7.20	7.75	53.48	8.67	8.79	59.36	10.27	9.85
		200.00	30.20	3.42	2.38	36.07	4.39	2.86	41.95	5.50	3.36	44.88	6.11	3.61	47.61	6.74	3.84	53.48	8.09	4.35	59.36	9.59	4.88
		250.00	30.20	3.34	1.90	36.07	4.30	2.28	41.95	5.41	2.68	44.88	5.99	2.88	47.61	6.61	3.07	53.48	7.98	3.48	59.36	9.36	3.89
		300.00	30.20	3.29	1.58	36.07	4.27	1.90	41.95	5.35	2.23	44.88	5.93	2.40	47.61	6.54	2.55	53.48	7.90	2.89	59.36	9.23	3.23
	25	100.00	30.20	4.34	4.88	36.07	5.49	5.88	41.95	6.92	6.91	44.88	7.68	7.43	47.61	8.50	7.94	53.48	10.22	9.01	58.94	11.90	10.02
		200.00	30.20	4.01	2.42	36.07	5.16	2.92	41.95	6.47	3.42	44.88	7.18	3.68	47.61	7.93	3.93	53.48	9.55	4.46	58.94	11.13	4.95
		250.00	30.20	3.88	1.93	36.07	5.05	2.33	41.95	6.35	2.73	44.88	7.06	2.94	47.61	7.77	3.13	53.48	9.36	3.56	58.94	10.87	3.95
		300.00	30.20	3.83	1.60	36.07	4.99	1.94	41.95	6.29	2.27	44.88	6.98	2.44	47.61	7.71	2.61	53.48	9.29	2.96	58.94	10.70	3.28
	30	100.00	30.20	5.11	4.99	36.07	6.50	6.02	41.95	8.17	7.09	44.88	9.12	7.64	47.61	10.03	8.15	53.48	12.12	9.28	56.84	13.10	9.89
		200.00	30.20	4.69	2.47	36.07	6.07	2.98	41.95	7.63	3.51	44.88	8.50	3.77	47.61</								

VRF MW



10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	100.00	26.43	1.88	4.00	31.46	2.34	4.78	36.70	2.92	5.60	39.22	3.21	6.00	41.74	3.48	6.40	46.77	4.21	7.21	52.01	4.92	8.05
		200.00	26.43	1.72	1.99	31.46	2.20	2.38	36.70	2.73	2.79	39.22	3.00	2.99	41.74	3.29	3.18	46.77	3.91	3.58	52.01	4.66	4.01
		250.00	26.43	1.66	1.59	31.46	2.11	1.90	36.70	2.64	2.23	39.22	2.91	2.38	41.74	3.19	2.54	46.77	3.87	2.86	52.01	4.53	3.20
		300.00	26.43	1.61	1.32	31.46	2.08	1.58	36.70	2.61	1.85	39.22	2.88	1.98	41.74	3.13	2.12	46.77	3.83	2.39	52.01	4.49	2.66
	15	100.00	26.43	2.52	4.09	31.46	3.15	4.90	36.70	3.93	5.75	39.22	4.32	6.16	41.74	4.74	6.57	46.77	5.67	7.42	52.01	6.71	8.30
		200.00	26.43	2.34	2.03	31.46	2.98	2.44	36.70	3.68	2.86	39.22	4.05	3.06	41.74	4.45	3.27	46.77	5.30	3.68	52.01	6.27	4.12
		250.00	26.43	2.26	1.62	31.46	2.89	1.94	36.70	3.59	2.28	39.22	3.96	2.44	41.74	4.35	2.61	46.77	5.22	2.94	52.01	6.14	3.29
		300.00	26.43	2.23	1.35	31.46	2.86	1.62	36.70	3.56	1.90	39.22	3.93	2.03	41.74	4.29	2.17	46.77	5.15	2.45	52.01	6.05	2.74
	20	100.00	26.43	3.11	4.18	31.46	3.90	5.00	36.70	4.85	5.88	39.22	5.31	6.30	41.74	5.87	6.73	46.77	6.99	7.60	52.01	8.27	8.53
		200.00	26.43	2.87	2.07	31.46	3.64	2.48	36.70	4.51	2.91	39.22	4.98	3.13	41.74	5.48	3.34	46.77	6.53	3.77	52.01	7.71	4.22
		250.00	26.43	2.79	1.65	31.46	3.58	1.98	36.70	4.42	2.33	39.22	4.89	2.50	41.74	5.39	2.67	46.77	6.42	3.01	52.01	7.53	3.37
		300.00	26.43	2.74	1.37	31.46	3.53	1.65	36.70	4.39	1.94	39.22	4.86	2.08	41.74	5.35	2.22	46.77	6.35	2.50	52.01	7.40	2.80
	25	100.00	26.43	3.62	4.25	31.46	4.52	5.09	36.70	5.63	5.99	39.22	6.25	6.43	41.74	6.87	6.87	46.77	8.25	7.78	52.01	9.72	8.73
		200.00	26.43	3.34	2.10	31.46	4.25	2.53	36.70	5.28	2.97	39.22	5.85	3.19	41.74	6.43	3.41	46.77	7.71	3.85	52.01	9.08	4.32
		250.00	26.43	3.24	1.68	31.46	4.14	2.01	36.70	5.16	2.37	39.22	5.70	2.54	41.74	6.31	2.72	46.77	7.56	3.07	52.01	8.83	3.44
		300.00	26.43	3.21	1.40	31.46	4.08	1.68	36.70	5.10	1.97	39.22	5.65	2.12	41.74	6.25	2.26	46.77	7.53	2.56	52.01	8.75	2.86
	30	100.00	26.43	4.25	4.34	31.46	5.34	5.20	36.70	6.68	6.14	39.22	7.37	6.59	41.74	8.14	7.05	46.77	9.75	7.99	52.01	11.51	8.98
		200.00	26.43	3.90	2.14	31.46	5.00	2.58	36.70	6.23	3.04	39.22	6.90	3.26	41.74	7.61	3.49	46.77	9.12	3.95	52.01	10.78	4.44
		250.00	26.43	3.81	1.71	31.46	4.89	2.06	36.70	6.12	2.42	39.22	6.76	2.60	41.74	7.46	2.78	46.77	8.98	3.15	52.01	10.50	3.54
		300.00	26.43	3.73	1.42	31.46	4.84	1.71	36.70	6.06	2.02	39.22	6.71	2.17	41.74	7.40	2.32	46.77	8.88	2.62	52.01	10.38	2.94
	35	100.00	26.43	4.98	4.44	31.46	6.30	5.34	36.70	7.88	6.31	39.22	8.79	6.79	41.74	10.58	7.40	46.77	11.60	8.25	52.01	13.76	9.30
		200.00	26.43	4.59	2.19	31.46	5.91	2.64	36.70	7.34	3.11	39.22	8.19	3.35	41.74	9.88	3.65	46.77	10.88	4.08	52.01	12.89	4.59
		250.00	26.43	4.46	1.75	31.46	5.80	2.11	36.70	7.22	2.49	39.22	8.08	2.68	41.74	9.71	2.91	46.77	10.66	3.25	52.01	12.54	3.65
		300.00	26.43	4.39	1.45	31.46	5.71	1.75	36.70	7.13	2.07	39.22	7.99	2.23	41.74	9.64	2.42	46.77	10.55	2.70	52.01	12.32	3.03
	40	100.00	26.43	5.91	4.57	31.46	7.48	5.51	36.70	9.32	6.51	39.22	10.39	7.02	41.74	12.50	7.67	46.77	13.77	8.56	52.01	16.28	9.66
		200.00	26.43	5.42	2.25	31.46	7.00	2.72	36.70	8.72	3.21	39.22	9.71	3.46	41.74	11.73	3.78	46.77	12.87	4.22	52.01	15.24	4.76
		250.00	26.43	5.29	1.79	31.46	6.83	2.17	36.70	8.54	2.56	39.22	9.56	2.76	41.74	11.49	3.01	46.77	12.64	3.36	52.01	14.85	3.78
		300.00	26.43	5.21	1.49	31.46	6.75	1.80	36.70	8.45	2.13	39.22	9.47	2.30	41.74	11.39	2.50	46.77	12.49	2.79	52.01	14.67	3.14
	45	100.00	26.43	6.84	4.70	31.46	8.62	5.67	36.70	10.76	6.71	39.22	11.99	7.24	41.74	14.46	7.95	46.77	15.90	8.86	52.01	18.85	10.02
		200.00	26.43	6.24	2.31	31.46	8.09	2.80	36.70	10.07	3.31	39.22	11.22	3.57	41.74	13.59	3.91	46.77	14.89	4.36	52.01	17.59	4.92
		250.00	26.43	6.12	1.84	31.46	7.90	2.23	36.70	9.86	2.63	39.22	11.04	2.84	41.74	13.27	3.11	46.77	14.59	3.47	52.01	17.20	3.92
		300.00	26.43	6.04	1.53	31.46	7.81	1.85	36.70	9.77	2.19	39.22	10.93	2.36	41.74	13.13	2.59	46.77	14.48	2.89	52.01	17.02	3.25
60	10	100.00	22.65	1.55	3.42	27.06	1.90	4.10	31.46	2.30	4.77	33.56	2.55	5.11	35.87	2.78	5.47	40.06	3.34	6.14	44.46	3.90	6.84
		200.00	22.65	1.41	1.70	27.06	1.78	2.04	31.46	2.15	2.38	33.56	2.40	2.54	35.87	2.56	2.72	40.06	3.08	3.05	44.46	3.65	3.40
		250.00	22.65	1.35	1.36	27.06	1.73	1.63	31.46	2.12	1.90	33.56	2.34	2.03	35.87	2.53	2.17	40.06	3.01	2.44	44.46	3.52	2.71
		300.00	22.65	1.33	1.13	27.06	1.70	1.36	31.46	2.12	1.58	33.56	2.31	1.69	35.87	2.49	1.81	40.06	2.97	2.03	44.46	3.43	2.26
	15	100.00	22.65	2.07	3.50	27.06	2.57	4.19	31.46	3.13	4.89	33.56	3.45	5.23	35.87	3.77	5.61	40.06	4.49	6.30	44.46	5.28	7.03
		200.00	22.65	1.91	1.74	27.06	2.40	2.08	31.46	2.92	2.43	33.56	3.24	2.60	35.87	3.49	2.78	40.06	4.16	3.13	44.46	4.93	3.49
		250.00	22.65	1.85	1.39	27.06	2.34	1.66	31.46	2.85	1.94	33.56	3.18	2.08	35.87	3.45	2.22	40.06	4.08	2.50	44.46	4.76	2.78
		300.00	22.65	1.82	1.15	27.06	2.31	1.38	31.46	2.82	1.62	33.56	3.15	1.73	35.87	3.42	1.85	40.06	4.05	2.08	44.46	4.68	2.32
	20	100.00	22.65	2.54	3.56	27.06	3.16	4.27	31.46	3.84	4.99	33.56	4.24	5.35	35.87	4.64	5.73	40.06	5.49	6.44	44.46	6.48	7.20
		200.00	22.65	2.35	1.77	27.06	2.95	2.12	31.46	3.62	2.48	33.56	3.97	2.65	35.87	4.35	2.84	40.06	5.16	3.20	44.46	6.05	3.57
		250.00	22.65	2.29	1.41	27.06	2.90	1.69	31.46	3.53	1.98	33.56	3.91	2.12	35.87	4.25	2.27	40.06	5.08	2.55	44.46	5.92	2.85
		300.00	22.65	2.26	1.17	27.06	2.87	1.41	31.46	3.50	1.65	33.56	3.88	1.76	35.87	4.22	1.89	40.06	5.05	2.13	44.46	5.83	2.37
	25	100.00	22.65	2.97	3.62	27.06	3.66	4.34	31.46	4.52	5.09	33.56	5.00	5.45	35.87	5.44	5.84	40.06	6.46	6.58	44.46	7.57	7.36
		200.00	22.65	2.73	1.79	27.06	3.44	2.16	31.46	4.23	2.52	33.56	4.65	2.70	35.87	5.10	2.90	40.06	6.07	3.26	44.46	7.12	3.65
		250.00	22.65	2.65	1.43	27.06	3.38	1.72	31.46	4.17	2.02	33.56	4.57	2.16	35.87	5.01	2.31	40.06	5.93	2.60	44.46	6.92	2.91
		300.00	22.65	2.63	1.19	27.06	3.36	1.43	31.46	4.11	1.68	33.56	4.54	1.80	35.87	4.97	1.93	40.06	5.86	2.16	44.46	6.83	2.42
	30	100.00	22.65	3.50	3.70	27.06	4.32	4.44	31.46	5.32	5.20	33.56	5.85	5.57	35.87	6.42	5.98	40.06	7.68	6.75	44.46	8.95	7.55
		200.00	22.65	3.20	1.83	27.06	4.03</																

10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	100.00	18.88	1.24	2.84	22.44	1.50	3.39	26.22	1.83	3.97	28.10	2.00	4.26	29.78	2.13	4.51	33.56	2.50	5.10	37.12	2.95	5.67
		200.00	18.88	1.18	1.42	22.44	1.41	1.69	26.22	1.67	1.97	28.10	1.84	2.12	29.78	2.03	2.25	33.56	2.35	2.54	37.12	2.77	2.82
		250.00	18.88	1.12	1.13	22.44	1.38	1.35	26.22	1.67	1.58	28.10	1.78	1.69	29.78	1.96	1.80	33.56	2.28	2.03	37.12	2.64	2.25
		300.00	18.88	1.09	0.94	22.44	1.35	1.12	26.22	1.67	1.31	28.10	1.75	1.41	29.78	1.93	1.49	33.56	2.24	1.69	37.12	2.56	1.87
	15	100.00	18.88	1.69	2.91	22.44	2.03	3.46	26.22	2.45	4.05	28.10	2.69	4.36	29.78	2.93	4.63	33.56	3.41	5.23	37.12	3.94	5.81
		200.00	18.88	1.57	1.45	22.44	1.91	1.72	26.22	2.29	2.02	28.10	2.50	2.16	29.78	2.73	2.30	33.56	3.19	2.60	37.12	3.73	2.89
		250.00	18.88	1.51	1.15	22.44	1.85	1.37	26.22	2.25	1.61	28.10	2.44	1.73	29.78	2.66	1.84	33.56	3.11	2.07	37.12	3.60	2.30
		300.00	18.88	1.48	0.96	22.44	1.81	1.14	26.22	2.22	1.34	28.10	2.41	1.44	29.78	2.63	1.53	33.56	3.07	1.73	37.12	3.55	1.92
	20	100.00	18.88	2.08	2.96	22.44	2.50	3.53	26.22	2.99	4.13	28.10	3.31	4.44	29.78	3.59	4.72	33.56	4.17	5.34	37.12	4.85	5.94
		200.00	18.88	1.90	1.47	22.44	2.35	1.75	26.22	2.83	2.05	28.10	3.10	2.21	29.78	3.36	2.34	33.56	3.95	2.65	37.12	4.59	2.95
		250.00	18.88	1.84	1.17	22.44	2.32	1.40	26.22	2.77	1.64	28.10	3.03	1.76	29.78	3.29	1.87	33.56	3.87	2.12	37.12	4.46	2.35
		300.00	18.88	1.81	0.98	22.44	2.28	1.17	26.22	2.74	1.36	28.10	3.00	1.47	29.78	3.26	1.56	33.56	3.83	1.76	37.12	4.38	1.96
	25	100.00	18.88	2.41	3.01	22.44	2.92	3.59	26.22	3.51	4.20	28.10	3.81	4.51	29.78	4.18	4.80	33.56	4.96	5.45	37.12	5.80	6.07
		200.00	18.88	2.21	1.49	22.44	2.71	1.78	26.22	3.30	2.09	28.10	3.60	2.24	29.78	3.93	2.38	33.56	4.63	2.70	37.12	5.38	3.01
		250.00	18.88	2.15	1.19	22.44	2.68	1.42	26.22	3.24	1.67	28.10	3.51	1.79	29.78	3.83	1.90	33.56	4.56	2.16	37.12	5.26	2.40
		300.00	18.88	2.15	0.99	22.44	2.65	1.18	26.22	3.21	1.39	28.10	3.45	1.49	29.78	3.77	1.58	33.56	4.49	1.79	37.12	5.21	2.00
	30	100.00	18.88	2.79	3.06	22.44	3.38	3.65	26.22	4.14	4.29	28.10	4.51	4.61	29.78	4.92	4.91	33.56	5.79	5.57	37.12	6.77	6.21
		200.00	18.88	2.55	1.52	22.44	3.16	1.81	26.22	3.84	2.13	28.10	4.23	2.29	29.78	4.61	2.43	33.56	5.44	2.76	37.12	6.33	3.07
		250.00	18.88	2.47	1.21	22.44	3.07	1.44	26.22	3.76	1.70	28.10	4.14	1.82	29.78	4.52	1.94	33.56	5.34	2.20	37.12	6.17	2.45
		300.00	18.88	2.44	1.01	22.44	3.04	1.20	26.22	3.73	1.41	28.10	4.11	1.52	29.78	4.49	1.62	33.56	5.27	1.83	37.12	6.05	2.04
	35	100.00	18.88	3.23	3.13	22.44	3.97	3.74	26.22	4.87	4.40	28.10	5.31	4.73	29.78	5.83	5.04	33.56	6.88	5.72	37.12	8.09	6.39
		200.00	18.88	2.97	1.55	22.44	3.70	1.85	26.22	4.53	2.17	28.10	4.98	2.34	29.78	5.44	2.49	33.56	6.43	2.83	37.12	7.53	3.16
		250.00	18.88	2.89	1.23	22.44	3.64	1.48	26.22	4.44	1.73	28.10	4.89	1.87	29.78	5.35	1.99	33.56	6.32	2.26	37.12	7.35	2.52
		300.00	18.88	2.83	1.02	22.44	3.58	1.23	26.22	4.41	1.44	28.10	4.86	1.55	29.78	5.31	1.65	33.56	6.25	1.88	37.12	7.23	2.09
	40	100.00	18.88	3.82	3.21	22.44	4.68	3.84	26.22	5.74	4.52	28.10	6.31	4.87	29.78	6.90	5.19	33.56	8.14	5.90	37.12	9.59	6.61
		200.00	18.88	3.51	1.58	22.44	4.38	1.90	26.22	5.37	2.23	28.10	5.89	2.40	29.78	6.45	2.56	33.56	7.62	2.91	37.12	8.95	3.26
		250.00	18.88	3.42	1.26	22.44	4.29	1.51	26.22	5.28	1.78	28.10	5.80	1.92	29.78	6.32	2.04	33.56	7.48	2.32	37.12	8.73	2.59
		300.00	18.88	3.37	1.05	22.44	4.27	1.26	26.22	5.21	1.48	28.10	5.74	1.60	29.78	6.25	1.70	33.56	7.40	1.93	37.12	8.60	2.16
	45	100.00	18.88	4.41	3.29	22.44	5.42	3.94	26.22	6.61	4.64	28.10	7.31	5.01	29.78	7.97	5.34	33.56	9.41	6.08	37.12	11.05	6.81
		200.00	18.88	4.07	1.62	22.44	5.07	1.95	26.22	6.18	2.29	28.10	6.80	2.47	29.78	7.45	2.63	33.56	8.81	3.00	37.12	10.36	3.36
		250.00	18.88	3.96	1.29	22.44	4.98	1.55	26.22	6.08	1.83	28.10	6.68	1.97	29.78	7.29	2.10	33.56	8.63	2.39	37.12	10.11	2.67
		300.00	18.88	3.87	1.07	22.44	4.92	1.29	26.22	6.05	1.52	28.10	6.59	1.64	29.78	7.22	1.74	33.56	8.55	1.99	37.12	9.98	2.22

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	100.00	61.85	11.84	7.04	61.60	11.94	6.99	61.49	12.37	6.91	61.20	12.33	6.88	60.91	12.22	6.85	60.32	12.76	6.69
		200.00	63.26	11.75	3.62	62.61	11.98	3.56	62.53	12.45	3.52	62.26	12.33	3.51	61.78	12.20	3.49	61.23	12.71	3.41
		250.00	63.66	11.92	2.91	63.01	12.17	2.86	62.94	12.49	2.84	62.47	12.38	2.82	62.21	12.38	2.80	61.68	13.33	2.72
		300.00	63.86	12.00	2.43	63.22	12.25	2.39	63.15	12.54	2.37	62.69	12.40	2.36	62.43	12.49	2.34	61.91	13.62	2.26
	15	100.00	62.05	10.59	7.24	61.80	10.60	7.20	61.49	11.08	7.09	61.20	11.11	7.05	60.91	10.90	7.04	60.32	11.46	6.87
		200.00	64.06	10.16	3.79	63.62	10.42	3.74	63.36	10.98	3.69	63.32	10.78	3.70	62.64	10.56	3.66	62.36	11.10	3.61
		250.00	64.46	10.42	3.04	64.23	10.66	3.02	64.19	10.98	3.00	63.96	10.78	2.99	63.51	10.85	2.96	63.05	12.22	2.86
		300.00	64.66	10.54	2.54	64.43	10.79	2.52	64.61	10.98	2.52	64.17	10.78	2.50	63.95	11.01	2.48	63.50	12.79	2.38
	20	100.00	64.46	9.74	7.70	64.03	9.73	7.64	63.98	10.01	7.59	63.54	9.99	7.53	63.08	10.04	7.46	62.36	11.10	7.21
		200.00	66.46	9.46	4.01	66.05	9.69	3.97	65.85	9.99	3.93	65.45	10.14	3.89	65.25	10.31	3.86	64.64	10.71	3.79
		250.00	66.66	9.46	3.22	66.46	9.69	3.20	66.68	10.06	3.19	66.30	10.14	3.16	65.68	10.31	3.12	65.10	11.38	3.02
		300.00	66.86	9.46	2.69	66.86	9.69	2.68	67.10	10.08	2.67	66.51	10.14	2.64	65.90	10.31	2.61	65.32	11.75	2.51
	25	100.00	73.12	10.08	8.87	72.72	10.30	8.78	72.11	10.75	8.64	71.91	10.92	8.58	71.51	11.11	8.50	70.90	11.55	8.35
		200.00	73.12	9.93	4.45	72.72	10.24	4.40	72.11	10.56	4.33	71.91	10.75	4.30	71.51	10.94	4.26	70.90	11.35	4.19
		250.00	73.12	9.79	3.56	72.72	9.97	3.53	72.11	10.39	3.47	71.91	10.58	3.45	71.51	10.76	3.42	70.90	11.16	3.36
		300.00	73.12	9.72	2.97	72.72	9.84	2.95	72.11	10.32	2.90	71.91	10.48	2.88	71.51	10.66	2.85	70.90	11.07	2.81
	30	100.00	78.80	10.83	9.56	79.18	10.88	9.61	78.38	11.42	9.42	75.85	11.54	9.05	77.37	11.85	9.22	72.11	10.66	8.65
		200.00	78.80	10.48	4.81	79.18	10.80	4.81	78.38	11.16	4.73	75.85	11.35	4.54	77.37	11.43	4.64	72.11	10.26	4.35
		250.00	78.80	10.32	3.85	79.18	10.51	3.87	78.38	10.98	3.79	75.85	11.14	3.64	77.37	11.43	3.71	72.11	10.26	3.48
		300.00	78.80	10.25	3.22	79.18	10.36	3.23	78.38	10.87	3.17	75.85	11.05	3.04	77.37	11.43	3.09	72.11	10.26	2.90
	35	100.00	86.25	11.41	10.53	85.65	11.66	10.41	82.82	11.30	10.06	77.62	10.72	9.41	77.37	10.53	9.40	72.11	9.35	8.83
		200.00	86.25	11.05	5.29	85.65	11.39	5.22	82.82	11.09	5.05	77.62	10.54	4.72	77.37	10.32	4.72	72.11	8.99	4.44
		250.00	86.25	11.05	4.23	85.65	11.28	4.19	82.82	10.90	4.05	77.62	10.35	3.79	77.37	10.13	3.78	72.11	8.99	3.55
		300.00	86.25	11.05	3.53	85.65	11.23	3.49	82.82	10.79	3.38	77.62	10.25	3.16	77.37	10.05	3.16	72.11	8.99	2.96
	40	100.00	86.25	11.05	10.58	85.65	11.28	10.46	82.82	10.90	10.12	77.62	10.35	9.46	77.37	10.13	9.46	72.11	8.81	8.91
		200.00	86.25	10.66	5.32	85.65	10.98	5.25	82.82	10.52	5.09	77.62	9.96	4.76	77.37	9.72	4.76	72.11	8.45	4.48
		250.00	86.25	10.48	4.27	85.65	10.82	4.21	82.82	10.52	4.07	77.62	9.96	3.81	77.37	9.72	3.81	72.11	8.45	3.58
		300.00	86.25	10.38	3.56	85.65	10.71	3.52	82.82	10.52	3.39	77.62	9.96	3.17	77.37	9.72	3.17	72.11	8.45	2.99
	45	100.00	86.25	10.66	10.64	85.65	10.90	10.52	82.82	10.52	10.17	77.62	9.96	9.52	77.37	9.72	9.52	72.11	8.24	8.99
		200.00	86.25	10.30	5.34	85.65	10.60	5.28	82.82	9.93	5.13	77.62	9.40	4.80	77.37	9.16	4.80	72.11	7.88	4.52
		250.00	86.25	9.91	4.30	85.65	10.33	4.24	82.82	10.12	4.09	77.62	9.56	3.83	77.37	9.35	3.83	72.11	7.88	3.62
		300.00	86.25	9.73	3.59	85.65	10.19	3.54	82.82	10.23	3.41	77.62	9.67	3.19	77.37	9.45	3.19	72.11	7.88	3.01
120	10	100.00	62.24	12.30	7.03	62.21	12.63	6.98	62.73	13.08	6.99	61.92	13.10	6.87	61.63	13.33	6.80	61.11	13.31	6.73
		200.00	63.51	12.48	3.59	63.07	12.83	3.53	63.40	13.26	3.53	62.59	13.17	3.48	62.32	13.28	3.45	61.84	13.37	3.41
		250.00	63.73	12.42	2.89	63.07	12.83	2.83	63.84	13.30	2.84	62.82	13.22	2.79	62.55	13.35	2.77	62.09	13.81	2.72
		300.00	63.94	12.40	2.42	62.85	12.83	2.35	63.84	13.35	2.37	62.82	13.27	2.32	62.55	13.38	2.31	62.33	14.06	2.26
	15	100.00	62.67	10.91	7.28	62.42	11.17	7.21	62.73	11.62	7.19	61.92	11.78	7.05	61.63	11.86	7.00	61.11	11.96	6.92
		200.00	63.94	10.99	3.73	63.93	11.25	3.71	64.29	11.69	3.70	63.27	11.62	3.63	62.79	11.51	3.61	62.57	11.77	3.57
		250.00	64.36	10.83	3.01	63.93	11.17	2.97	64.74	11.69	2.99	63.72	11.62	2.93	63.48	11.51	2.93	63.06	12.57	2.84
		300.00	64.57	10.74	2.52	63.71	11.12	2.47	64.96	11.69	2.50	63.94	11.62	2.45	63.71	11.51	2.45	63.30	12.95	2.36
	20	100.00	64.36	9.78	7.68	64.14	9.92	7.63	64.51	10.21	7.64	63.27	10.41	7.44	63.02	10.79	7.35	62.57	11.33	7.21
		200.00	66.05	9.78	3.96	65.65	10.07	3.91	65.85	10.39	3.90	64.84	10.58	3.82	64.64	10.77	3.79	64.03	11.16	3.72
		250.00	66.27	9.68	3.18	65.65	9.98	3.13	66.52	10.39	3.16	65.29	10.58	3.08	65.10	10.79	3.06	64.52	11.58	2.98
		300.00	66.48	9.64	2.67	65.65	9.94	2.61	66.74	10.39	2.64	65.52	10.58	2.58	65.10	10.82	2.55	64.76	11.77	2.49
	25	100.00	72.29	10.51	8.69	71.91	10.75	8.61	71.31	11.09	8.47	71.10	11.39	8.40	70.70	11.63	8.31	66.46	10.66	7.85
		200.00	72.52	10.35	4.37	71.91	10.67	4.31	71.31	11.01	4.24	71.10	11.20	4.21	70.70	11.43	4.17	66.46	10.46	3.94
		250.00	72.75	9.98	3.53	71.91	10.40	3.46	71.31	10.80	3.41	71.10	11.20	3.37	70.70	11.23	3.35	66.46	10.46	3.15
		300.00	72.75	9.79	2.95	71.91	10.25	2.89	71.31	10.72	2.84	71.10	11.20	2.81	70.70	11.11	2.80	66.46	10.46	2.63
	30	100.00	78.98	11.33	9.52	78.17	11.53	9.38	76.36	11.40	9.14	73.93	10.85	8.88	71.51	10.54	8.58	66.46	9.27	8.05
		200.00	78.98	10.94	4.79	78.17	11.28	4.71	76.36	11.20	4.58	73.93	10.65	4.45	71.51	10.12	4.32	66.46	9.08	4.04
		250.00	78.98	10.59	3.85	78.17	11.02	3.78	76.36	10.97	3.68	73.93	10.65	3.56	71.51	10.12	3.46	66.46	8.90	3.24
		300.00	78.98	10.41	3.22	78.17	10.88	3.16	76.36	10.86	3.07	73.93	10.65	2.97	71.51	10.12	2.88	66.46	8.82	2.70
	35	100.00	85.24	12.21	10.28	81.20	11.22	9.85	76.36	10.21	9.31	73.93	9.71	9.04	71.51	9.25	8.76	66.46	8.17	8.20
		200.00	85.24	11.52	5.19	81.20	10.78	4.95	76.36	9.80	4.68	73.93	9.33	4.55	71.51	8.88	4.41	66.46	7.99	4.11
		250.00	85.24	11.37	4.16	81.20	10.70	3.97	76.36	9.80	3.75	73.93	9.33	3.64	71.51	8.88	3.53	66.46	7.81	3.30
		300.00	85.24	11.31	3.47	81.20	10.67	3.31	76.36	9.80	3.12	73.93	9.33	3.03	71.51	8.88	2.94	66.46	7.71	2.76
	40	100.00	85.24	11.79	10.34	81.20	10.67	9.93	76.36	9.										

10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	100.00	62.78	13.27	6.97	62.98	13.66	6.94	62.79	14.18	6.84	62.55	14.15	6.81	62.09	14.64	6.68	59.50	13.23	6.51
		200.00	63.67	13.38	3.54	63.66	13.82	3.51	63.03	14.36	3.42	63.03	14.23	3.43	62.59	14.59	3.38	59.75	13.28	3.27
		250.00	63.89	13.38	2.84	63.89	13.82	2.82	63.26	14.33	2.75	63.27	14.20	2.76	62.59	14.67	2.70	60.00	13.42	2.62
		300.00	64.11	13.38	2.38	64.12	13.82	2.36	63.50	14.31	2.31	63.27	14.18	2.30	62.84	14.70	2.26	60.00	13.50	2.18
	15	100.00	62.78	11.72	7.18	63.21	12.12	7.19	62.79	12.66	7.05	62.55	12.73	7.01	62.09	13.03	6.90	59.50	11.89	6.70
		200.00	63.89	11.66	3.67	64.12	12.12	3.66	63.50	12.66	3.58	63.27	12.55	3.57	63.09	12.65	3.55	60.25	11.70	3.42
		250.00	64.33	11.57	2.97	64.35	12.03	2.95	63.73	12.51	2.88	63.51	12.37	2.88	63.09	12.65	2.84	60.50	11.89	2.74
		300.00	64.56	11.53	2.49	64.58	11.98	2.47	63.97	12.41	2.42	63.75	12.27	2.42	63.34	12.65	2.38	60.75	12.00	2.29
	20	100.00	64.11	10.15	7.59	64.35	10.52	7.58	63.73	10.88	7.44	63.27	11.07	7.35	63.09	11.48	7.26	60.25	10.79	6.96
		200.00	65.45	10.22	3.89	65.04	10.52	3.84	64.44	10.88	3.77	64.24	11.07	3.74	63.83	11.26	3.70	61.00	10.71	3.54
		250.00	65.89	10.22	3.13	65.73	10.52	3.11	64.67	10.88	3.03	64.48	10.89	3.02	64.08	11.26	2.97	61.25	10.71	2.84
		300.00	66.12	10.22	2.62	65.96	10.52	2.60	64.91	10.88	2.53	64.72	10.79	2.53	64.33	11.26	2.49	61.25	10.71	2.37
	25	100.00	71.23	10.90	8.49	71.10	11.36	8.41	70.09	11.52	8.24	67.67	10.97	7.98	65.45	10.44	7.74	61.00	9.18	7.29
		200.00	71.71	10.82	4.28	71.10	11.16	4.22	70.09	11.31	4.14	67.67	10.77	4.00	65.45	10.22	3.89	61.00	9.18	3.65
		250.00	72.19	10.82	3.45	71.10	11.22	3.37	70.09	11.08	3.32	67.67	10.77	3.20	65.45	10.05	3.12	61.00	8.99	2.93
		300.00	72.43	10.82	2.89	71.10	11.22	2.81	70.09	10.97	2.77	67.67	10.77	2.67	65.45	9.93	2.60	61.00	8.91	2.44
	30	100.00	77.97	11.66	9.33	74.54	11.02	8.94	70.09	9.84	8.48	67.67	9.52	8.18	65.45	9.10	7.93	61.00	8.42	7.40
		200.00	77.97	11.45	4.68	74.54	10.78	4.49	70.09	9.61	4.26	67.67	9.33	4.10	65.45	8.88	3.98	61.00	8.20	3.72
		250.00	77.97	11.35	3.75	74.54	10.61	3.60	70.09	9.42	3.42	67.67	9.14	3.29	65.45	8.88	3.18	61.00	8.20	2.97
		300.00	77.97	11.32	3.13	74.54	10.49	3.00	70.09	9.31	2.85	67.67	9.06	2.75	65.45	8.88	2.65	61.00	8.20	2.48
	35	100.00	78.98	10.73	9.60	74.54	9.64	9.13	70.09	8.83	8.62	67.67	8.56	8.32	65.45	7.96	8.09	61.00	7.23	7.57
		200.00	78.98	10.31	4.83	74.54	9.44	4.58	70.09	8.61	4.33	67.67	8.37	4.17	65.45	7.80	4.06	61.00	7.04	3.80
		250.00	78.98	10.04	3.88	74.54	9.25	3.68	70.09	8.42	3.47	67.67	8.37	3.34	65.45	7.80	3.24	61.00	7.04	3.04
		300.00	78.98	9.93	3.24	74.54	9.13	3.07	70.09	8.34	2.90	67.67	8.37	2.78	65.45	7.80	2.70	61.00	7.04	2.53
	40	100.00	78.98	10.10	9.69	74.54	9.25	9.19	70.09	8.23	8.70	67.67	7.98	8.40	65.45	7.40	8.17	61.00	6.65	7.65
		200.00	78.98	9.69	4.88	74.54	8.82	4.62	70.09	7.85	4.38	67.67	7.76	4.21	65.45	7.21	4.10	61.00	6.47	3.84
		250.00	78.98	9.54	3.91	74.54	8.62	3.71	70.09	7.85	3.50	67.67	7.57	3.38	65.45	6.99	3.29	61.00	6.28	3.08
		300.00	78.98	9.48	3.26	74.54	8.51	3.10	70.09	7.85	2.92	67.67	7.46	2.82	65.45	6.91	2.75	61.00	6.18	2.57
	45	100.00	78.98	9.45	9.78	74.54	8.82	9.25	70.09	7.64	8.79	67.67	7.38	8.48	65.45	6.81	8.25	61.00	6.07	7.73
		200.00	78.98	9.03	4.92	74.54	8.22	4.67	70.09	7.04	4.44	67.67	7.16	4.26	65.45	6.62	4.14	61.00	5.89	3.88
		250.00	78.98	9.03	3.94	74.54	8.00	3.75	70.09	7.26	3.54	67.67	6.77	3.43	65.45	6.21	3.33	61.00	5.52	3.12
		300.00	78.98	9.03	3.28	74.54	7.88	3.13	70.09	7.37	2.94	67.67	6.58	2.87	65.45	6.03	2.79	61.00	5.31	2.61
100	10	100.00	62.77	13.97	6.87	63.50	14.71	6.87	63.00	15.45	6.69	61.61	14.35	6.65	59.59	13.93	6.43	55.55	12.38	6.07
		200.00	63.47	14.24	3.46	63.75	14.91	3.44	63.00	15.64	3.33	61.61	14.43	3.32	59.59	13.98	3.21	55.55	12.43	3.03
		250.00	63.94	14.17	2.80	63.99	14.91	2.76	63.00	15.61	2.67	61.61	14.40	2.66	59.59	13.93	2.57	55.55	12.38	2.43
		300.00	64.17	14.15	2.35	64.24	14.91	2.31	63.00	15.58	2.22	61.61	14.38	2.22	59.59	13.93	2.14	55.55	12.36	2.03
	15	100.00	63.24	12.34	7.16	63.50	13.00	7.11	63.00	13.78	6.93	61.61	12.90	6.85	59.59	12.40	6.64	55.55	11.13	6.25
		200.00	63.47	12.57	3.58	63.75	13.05	3.57	63.00	13.78	3.46	61.61	12.72	3.44	59.59	12.21	3.33	55.55	10.95	3.14
		250.00	63.94	12.36	2.90	64.24	12.92	2.89	63.00	13.62	2.78	61.61	12.54	2.76	59.59	12.03	2.68	55.55	10.77	2.52
		300.00	64.17	12.24	2.44	64.24	12.88	2.41	63.00	13.51	2.32	61.61	12.44	2.31	59.59	11.92	2.24	55.55	10.66	2.11
	20	100.00	63.71	10.54	7.48	63.99	11.02	7.45	63.00	11.66	7.22	61.61	11.04	7.12	59.59	10.50	6.91	55.55	9.64	6.46
		200.00	64.64	10.73	3.79	64.24	11.07	3.74	63.00	11.66	3.61	61.61	10.86	3.57	59.59	10.31	3.47	55.55	9.25	3.26
		250.00	64.87	10.54	3.06	64.72	10.97	3.03	63.00	11.47	2.90	61.61	10.65	2.87	59.59	10.10	2.79	55.55	9.10	2.61
		300.00	65.11	10.45	2.56	64.97	10.92	2.54	63.00	11.36	2.42	61.61	10.58	2.39	59.59	10.00	2.33	55.55	9.00	2.18
	25	100.00	69.69	11.34	8.21	67.67	11.02	7.97	63.00	10.00	7.46	61.61	9.53	7.33	59.59	9.03	7.11	55.55	7.97	6.70
		200.00	70.70	11.37	4.17	67.67	10.77	4.00	63.00	9.78	3.74	61.61	9.31	3.68	59.59	8.84	3.57	55.55	7.97	3.35
		250.00	70.95	11.11	3.37	67.67	10.68	3.21	63.00	9.62	3.00	61.61	9.12	2.95	59.59	8.84	2.86	55.55	7.76	2.69
		300.00	71.21	11.00	2.82	67.67	10.65	2.67	63.00	9.51	2.51	61.61	9.02	2.47	59.59	8.84	2.38	55.55	7.68	2.25
	30	100.00	71.71	10.37	8.63	67.67	9.53	8.18	63.00	8.58	7.66	61.61	8.32	7.50	59.59	7.71	7.30	55.55	7.18	6.81
		200.00	71.71	10.20	4.33	67.67	9.33	4.10	63.00	8.50	3.83	61.61	8.10	3.76	59.59	7.71	3.65	55.55	6.97	3.42
		250.00	71.71	9.97	3.48	67.67	9.33	3.28	63.00	8.39	3.07	61.61	8.10	3.01	59.59	7.51	2.93	55.55	6.97	2.73
		300.00	71.71	9.85	2.90	67.67	9.33	2.74	63.00	8.33	2.56	61.61	8.10	2.51	59.59	7.41	2.45	55.55	6.97	2.28
	35	100.00	71.71	9.36	8.77	67.67	8.59	8.31	63.00	7.58	7.80	61.61	7.38	7.63	59.59	7.01	7.40	55.55	6.37	6.92
		200.00	71.71	8.93	4.42	67.67	8.20	4.18	63.00	7.50	3.90	61.61	7.16	3.83	59.59	6.82	3.71	55.55	6.18	3.47
		250.00	71.71	8.93	3.53	67.67	8.20	3.35	63.00	7.39	3.13	61.61	7.16	3.06	59.59	6.82	2.97	55.55	6.18	2.78
		300.00	71.71	8.93	2.94	67.67	8.20	2.79	63.00	7.33	2.61	61.61	7.16	2.55	59.59	6.82	2.48	55.55	6.18	2.32
	40	100.00	71.71	8.74	8.86	67.67	7.97	8.40	63.00	6.78	7.91	61.61	6.58</							

VRF MW



10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	100.00	63.57	15.52	6.76	61.00	14.54	6.54	57.37	13.02	6.24	55.35	12.36	6.05	53.53	11.97	5.85	49.89	10.43	5.55
		200.00	63.31	15.58	3.36	60.74	14.62	3.24	57.37	13.08	3.12	55.35	12.44	3.02	53.53	11.95	2.93	49.89	10.48	2.77
		250.00	63.83	15.52	2.72	61.00	14.57	2.61	57.37	13.02	2.50	55.35	12.38	2.42	53.53	11.97	2.34	49.89	10.51	2.22
		300.00	64.09	15.49	2.28	61.00	14.54	2.18	57.37	13.02	2.08	55.35	12.36	2.02	53.53	12.00	1.95	49.89	10.53	1.85
	15	100.00	63.83	13.39	7.10	61.26	12.71	6.83	57.37	11.60	6.44	55.35	11.13	6.22	53.53	10.68	6.03	49.89	9.39	5.70
		200.00	63.31	13.16	3.53	60.74	12.49	3.39	57.37	11.42	3.23	55.35	10.95	3.12	53.53	10.31	3.04	49.89	9.19	2.86
		250.00	63.83	12.99	2.86	61.00	12.30	2.74	57.37	11.23	2.60	55.35	10.74	2.51	53.53	10.31	2.43	49.89	9.19	2.29
		300.00	64.09	12.88	2.40	61.26	12.21	2.30	57.37	11.13	2.17	55.35	10.66	2.10	53.53	10.31	2.03	49.89	9.19	1.91
	20	100.00	64.09	11.33	7.42	61.53	10.83	7.13	57.37	9.89	6.68	55.35	9.41	6.46	53.53	9.15	6.24	49.89	8.30	5.85
		200.00	63.83	11.33	3.69	61.00	10.69	3.54	57.37	9.71	3.35	55.35	9.25	3.24	53.53	8.78	3.15	49.89	7.91	2.95
		250.00	64.09	11.16	2.98	61.26	10.61	2.85	57.37	9.71	2.68	55.35	9.25	2.59	53.53	8.78	2.52	49.89	7.91	2.36
		300.00	64.36	11.05	2.50	61.26	10.58	2.38	57.37	9.71	2.24	55.35	9.25	2.16	53.53	8.78	2.10	49.89	7.91	1.97
	25	100.00	63.87	10.10	7.57	61.00	9.24	7.28	57.37	8.54	6.87	55.35	7.97	6.67	53.53	7.79	6.44	49.89	7.07	6.03
		200.00	64.64	10.01	3.84	61.00	9.16	3.65	57.37	8.35	3.45	55.35	7.97	3.33	53.53	7.57	3.23	49.89	6.86	3.03
		250.00	64.90	9.75	3.10	61.00	8.97	2.93	57.37	8.35	2.76	55.35	7.76	2.68	53.53	7.57	2.59	49.89	6.86	2.42
		300.00	64.90	9.61	2.59	61.00	8.85	2.45	57.37	8.35	2.30	55.35	7.68	2.24	53.53	7.57	2.16	49.89	6.86	2.02
	30	100.00	64.64	8.88	7.85	61.00	8.14	7.44	57.37	7.48	7.02	55.35	7.18	6.78	53.53	6.84	6.57	49.89	6.03	6.17
		200.00	64.64	8.69	3.94	61.00	7.97	3.73	57.37	7.29	3.52	55.35	6.97	3.40	53.53	6.65	3.30	49.89	6.03	3.09
		250.00	64.64	8.49	3.16	61.00	7.75	3.00	57.37	7.29	2.82	55.35	6.97	2.72	53.53	6.65	2.64	49.89	5.84	2.48
		300.00	64.64	8.38	2.64	61.00	7.64	2.50	57.37	7.29	2.35	55.35	6.97	2.27	53.53	6.65	2.20	49.89	5.76	2.07
	35	100.00	64.64	7.89	7.99	61.00	7.26	7.56	57.37	6.65	7.14	55.35	6.39	6.89	53.53	6.08	6.68	49.89	5.55	6.24
		200.00	64.64	7.67	4.01	61.00	7.04	3.80	57.37	6.46	3.58	55.35	6.18	3.46	53.53	5.89	3.35	49.89	5.36	3.13
		250.00	64.64	7.48	3.22	61.00	6.86	3.05	57.37	6.24	2.88	55.35	5.99	2.78	53.53	5.89	2.68	49.89	5.36	2.51
		300.00	64.64	7.37	2.69	61.00	6.75	2.54	57.37	6.14	2.40	55.35	5.91	2.32	53.53	5.89	2.23	49.89	5.36	2.09
	40	100.00	64.64	7.29	8.07	61.00	6.67	7.65	57.37	5.86	7.25	55.35	5.61	7.00	53.53	5.51	6.76	49.89	4.97	6.32
		200.00	64.64	6.88	4.06	61.00	6.48	3.84	57.37	5.68	3.64	55.35	5.43	3.51	53.53	5.30	3.39	49.89	4.78	3.17
		250.00	64.64	6.88	3.25	61.00	6.48	3.07	57.37	5.68	2.91	55.35	5.43	2.81	53.53	5.30	2.71	49.89	4.78	2.54
		300.00	64.64	6.88	2.71	61.00	6.48	2.56	57.37	5.68	2.42	55.35	5.43	2.34	53.53	5.30	2.26	49.89	4.78	2.12
	45	100.00	64.64	6.69	8.15	61.00	6.07	7.73	57.37	5.08	7.36	55.35	4.84	7.11	53.53	4.92	6.84	49.89	4.39	6.40
		200.00	64.64	6.09	4.12	61.00	5.88	3.88	57.37	4.89	3.69	55.35	4.65	3.57	53.53	4.73	3.43	49.89	4.20	3.21
		250.00	64.64	6.28	3.28	61.00	6.07	3.09	57.37	5.08	2.94	55.35	4.84	2.84	53.53	4.73	2.75	49.89	4.20	2.57
		300.00	64.64	6.39	2.73	61.00	6.18	2.57	57.37	5.16	2.45	55.35	4.95	2.36	53.53	4.73	2.29	49.89	4.20	2.14
80	10	100.00	57.11	13.11	6.19	53.88	12.00	5.89	50.90	10.63	5.67	49.29	10.33	5.48	47.67	9.79	5.33	44.44	8.90	5.00
		200.00	57.37	13.02	3.12	54.14	11.91	2.97	50.90	10.63	2.83	49.29	10.36	2.74	47.67	9.82	2.66	44.44	8.90	2.50
		250.00	57.37	12.99	2.50	54.14	11.97	2.37	50.90	10.68	2.26	49.29	10.31	2.19	47.67	9.77	2.13	44.44	8.85	2.00
		300.00	57.37	12.96	2.08	53.88	12.00	1.96	50.90	10.71	1.89	49.29	10.28	1.83	47.67	9.74	1.78	44.44	8.82	1.67
	15	100.00	57.37	11.88	6.40	54.14	10.76	6.10	50.90	9.45	5.83	49.29	9.31	5.63	47.67	8.74	5.48	44.44	8.00	5.13
		200.00	57.37	11.47	3.23	54.14	10.37	3.08	50.90	9.29	2.93	49.29	9.10	2.83	47.67	8.56	2.75	44.44	7.82	2.58
		250.00	57.37	11.23	2.60	54.14	10.37	2.46	50.90	9.29	2.34	49.29	8.92	2.27	47.67	8.35	2.21	44.44	7.61	2.07
		300.00	57.37	11.11	2.17	54.14	10.37	2.05	50.90	9.29	1.95	49.29	8.81	1.90	47.67	8.24	1.85	44.44	7.53	1.73
	20	100.00	57.37	9.97	6.67	54.14	9.16	6.33	50.90	8.14	6.02	49.29	7.97	5.81	47.67	7.61	5.64	44.44	6.89	5.28
		200.00	57.37	9.76	3.35	54.14	8.93	3.18	50.90	8.14	3.01	49.29	7.76	2.92	47.67	7.40	2.83	44.44	6.69	2.66
		250.00	57.37	9.56	2.69	54.14	8.74	2.56	50.90	7.96	2.42	49.29	7.76	2.34	47.67	7.22	2.28	44.44	6.69	2.13
		300.00	57.37	9.44	2.25	54.14	8.65	2.13	50.90	7.85	2.02	49.29	7.76	1.95	47.67	7.12	1.90	44.44	6.69	1.77
	25	100.00	57.37	8.61	6.86	54.14	7.90	6.51	50.90	7.04	6.17	49.29	6.91	5.96	47.67	6.61	5.78	44.44	6.02	5.41
		200.00	57.37	8.39	3.45	54.14	7.71	3.27	50.90	7.04	3.09	49.29	6.72	2.99	47.67	6.42	2.90	44.44	5.84	2.72
		250.00	57.37	8.22	2.77	54.14	7.71	2.61	50.90	6.83	2.48	49.29	6.72	2.40	47.67	6.42	2.32	44.44	5.84	2.17
		300.00	57.37	8.10	2.31	54.14	7.71	2.18	50.90	6.76	2.07	49.29	6.72	2.00	47.67	6.42	1.93	44.44	5.84	1.81
	30	100.00	57.37	7.46	7.02	54.14	6.93	6.64	50.90	6.41	6.26	49.29	6.14	6.07	47.67	5.86	5.88	44.44	5.37	5.50
		200.00	57.37	7.23	3.53	54.14	6.74	3.33	50.90	6.20	3.15	49.29	5.95	3.05	47.67	5.67	2.96	44.44	5.16	2.76
		250.00	57.37	7.23	2.82	54.14	6.74	2.67	50.90	6.20	2.52	49.29	5.95	2.44	47.67	5.67	2.36	44.44	5.16	2.21
		300.00	57.37	7.23	2.35	54.14	6.74	2.22	50.90	6.20	2.10	49.29	5.95	2.03	47.67	5.67	1.97	44.44	5.16	1.84
	35	100.00	57.37	6.77	7.12	54.14	6.17	6.75	50.90	5.71	6.36	49.29	5.29	6.19	47.67	5.25	5.97	44.44	4.63	5.60
		200.00	57.37	6.57	3.57	54.14	5.99	3.39	50.90	5.52	3.19	49.29	5.29	3.10	47.67	5.06	3.00	44.44	4.63	2.80
		250.00	57.37	6.57	2.86	54.14	5.80	2.72	50.90	5.52	2.55	49.29	5.08	2.49	47.67	5.06	2.40	44.44	4.45	2.25
		300.00	57.37	6.57	2.38	54.14	5.69	2.27	50.90	5.52	2.13	49.29	5.00	2.08	47.67	5.06	2.00	44.44	4.35	1.88
	40	100.00	57.37	6.35	7.18	54.14	5.61	6.83	50.90	5.11	6.44	49.29	4.90	6.25	47.67	4.68	6.05	44.44	4.24	5.66
		200.00	57.37	5.97	3.62	54.14	5.43	3.43	50.90	5										

10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
70	10	100.00	50.04	10.88	5.51	47.47	9.92	5.28	44.64	9.03	5.01	43.03	8.40	4.87	41.61	8.14	4.71	38.78	7.21	4.44
		200.00	50.30	10.79	2.78	47.47	9.84	2.65	44.64	8.95	2.51	43.03	8.40	2.44	41.61	8.14	2.35	38.78	7.21	2.22
		250.00	50.30	10.85	2.22	47.47	9.90	2.11	44.64	8.97	2.01	43.03	8.43	1.95	41.61	8.06	1.89	38.78	7.21	1.78
		300.00	50.30	10.85	1.85	47.47	9.90	1.76	44.64	9.00	1.67	43.03	8.45	1.62	41.61	8.04	1.57	38.78	7.24	1.48
	15	100.00	50.30	9.85	5.69	47.47	8.94	5.42	44.64	8.04	5.15	43.03	7.54	4.99	41.61	7.24	4.84	38.78	6.47	4.55
		200.00	50.30	9.46	2.87	47.47	8.53	2.74	44.64	7.65	2.60	43.03	7.38	2.51	41.61	7.06	2.43	38.78	6.29	2.29
		250.00	50.30	9.46	2.30	47.47	8.53	2.19	44.64	7.65	2.08	43.03	7.38	2.01	41.61	6.88	1.95	38.78	6.29	1.83
		300.00	50.30	9.46	1.92	47.47	8.53	1.83	44.64	7.65	1.73	43.03	7.38	1.67	41.61	6.78	1.63	38.78	6.29	1.52
	20	100.00	50.30	8.24	5.92	47.47	7.54	5.62	44.64	6.93	5.31	43.03	6.62	5.12	41.61	6.32	4.97	38.78	5.75	4.65
		200.00	50.30	8.01	2.98	47.47	7.35	2.82	44.64	6.72	2.67	43.03	6.44	2.57	41.61	6.14	2.50	38.78	5.57	2.34
		250.00	50.30	8.01	2.38	47.47	7.35	2.26	44.64	6.72	2.13	43.03	6.26	2.07	41.61	6.14	2.00	38.78	5.40	1.88
		300.00	50.30	8.01	1.98	47.47	7.35	1.88	44.64	6.72	1.78	43.03	6.19	1.73	41.61	6.14	1.66	38.78	5.30	1.57
	25	100.00	50.30	7.10	6.08	47.47	6.57	5.76	44.64	6.04	5.43	43.03	5.79	5.24	41.61	5.36	5.10	38.78	4.89	4.77
		200.00	50.30	6.91	3.05	47.47	6.38	2.89	44.64	5.86	2.73	43.03	5.61	2.63	41.61	5.36	2.55	38.78	4.89	2.38
		250.00	50.30	6.72	2.45	47.47	6.17	2.32	44.64	5.86	2.18	43.03	5.61	2.11	41.61	5.19	2.05	38.78	4.89	1.91
		300.00	50.30	6.64	2.05	47.47	6.06	1.94	44.64	5.86	1.82	43.03	5.61	1.76	41.61	5.08	1.71	38.78	4.89	1.59
	30	100.00	50.30	6.27	6.20	47.47	5.82	5.86	44.64	5.39	5.52	43.03	4.97	5.36	41.61	4.94	5.16	38.78	4.36	4.84
		200.00	50.30	6.08	3.11	47.47	5.63	2.94	44.64	5.18	2.78	43.03	4.97	2.68	41.61	4.76	2.59	38.78	4.36	2.42
		250.00	50.30	6.08	2.49	47.47	5.63	2.36	44.64	5.18	2.22	43.03	4.79	2.15	41.61	4.76	2.07	38.78	4.36	1.94
		300.00	50.30	6.08	2.07	47.47	5.63	1.96	44.64	5.18	1.85	43.03	4.69	1.80	41.61	4.76	1.73	38.78	4.36	1.61
	35	100.00	50.30	5.61	6.29	47.47	5.21	5.95	44.64	4.65	5.63	43.03	4.62	5.40	41.61	4.29	5.25	38.78	4.13	4.88
		200.00	50.30	5.42	3.16	47.47	5.02	2.99	44.64	4.65	2.81	43.03	4.44	2.71	41.61	4.29	2.63	38.78	3.95	2.45
		250.00	50.30	5.42	2.53	47.47	5.02	2.39	44.64	4.47	2.26	43.03	4.44	2.17	41.61	4.29	2.10	38.78	3.95	1.96
		300.00	50.30	5.42	2.10	47.47	5.02	1.99	44.64	4.36	1.89	43.03	4.44	1.81	41.61	4.29	1.75	38.78	3.95	1.63
	40	100.00	50.30	5.21	6.34	47.47	4.84	6.00	44.64	4.26	5.68	43.03	4.06	5.48	41.61	3.93	5.30	38.78	3.74	4.93
		200.00	50.30	5.02	3.19	47.47	4.65	3.01	44.64	4.08	2.85	43.03	4.06	2.74	41.61	3.93	2.65	38.78	3.58	2.48
		250.00	50.30	5.02	2.55	47.47	4.65	2.41	44.64	4.08	2.28	43.03	3.88	2.20	41.61	3.72	2.13	38.78	3.58	1.98
		300.00	50.30	5.02	2.12	47.47	4.65	2.01	44.64	4.08	1.90	43.03	3.78	1.84	41.61	3.64	1.78	38.78	3.58	1.65
	45	100.00	50.30	4.83	6.40	47.47	4.44	6.06	44.64	3.90	5.73	43.03	3.52	5.56	41.61	3.56	5.35	38.78	3.38	4.98
		200.00	50.30	4.65	3.21	47.47	4.25	3.04	44.64	3.54	2.89	43.03	3.67	2.77	41.61	3.56	2.68	38.78	3.19	2.50
		250.00	50.30	4.65	2.57	47.47	4.25	2.43	44.64	3.70	2.30	43.03	3.32	2.24	41.61	3.18	2.16	38.78	3.19	2.00
		300.00	50.30	4.65	2.14	47.47	4.25	2.03	44.64	3.80	1.92	43.03	3.14	1.87	41.61	2.97	1.81	38.78	3.19	1.67
60	10	100.00	43.03	8.36	4.88	40.60	7.89	4.60	38.18	7.38	4.33	36.97	6.86	4.24	35.75	6.67	4.09	33.33	5.88	3.86
		200.00	43.03	8.36	2.44	40.60	7.89	2.30	38.18	7.38	2.17	36.97	6.93	2.11	35.75	6.65	2.05	33.33	5.96	1.93
		250.00	43.03	8.38	1.95	40.60	7.81	1.85	38.18	7.30	1.74	36.97	6.86	1.69	35.75	6.60	1.64	33.33	5.88	1.54
		300.00	43.03	8.38	1.62	40.60	7.76	1.54	38.18	7.25	1.45	36.97	6.80	1.41	35.75	6.57	1.37	33.33	5.86	1.29
	15	100.00	43.03	7.58	4.99	40.60	7.10	4.71	38.18	6.58	4.45	36.97	6.16	4.33	35.75	5.93	4.20	33.33	5.30	3.94
		200.00	43.03	7.39	2.51	40.60	6.88	2.37	38.18	6.39	2.24	36.97	6.16	2.17	35.75	5.75	2.11	33.33	5.30	1.97
		250.00	43.03	7.39	2.01	40.60	6.70	1.91	38.18	6.21	1.80	36.97	5.95	1.75	35.75	5.57	1.70	33.33	5.13	1.59
		300.00	43.03	7.39	1.67	40.60	6.59	1.60	38.18	6.11	1.50	36.97	5.85	1.46	35.75	5.47	1.42	33.33	5.03	1.33
	20	100.00	43.03	6.61	5.12	40.60	6.12	4.85	38.18	5.64	4.58	36.97	5.41	4.44	35.75	5.21	4.30	33.33	4.75	4.02
		200.00	43.03	6.42	2.58	40.60	5.93	2.44	38.18	5.46	2.30	36.97	5.23	2.23	35.75	5.01	2.16	33.33	4.57	2.02
		250.00	43.03	6.42	2.06	40.60	5.93	1.95	38.18	5.46	1.84	36.97	5.23	1.79	35.75	5.01	1.73	33.33	4.57	1.62
		300.00	43.03	6.42	1.72	40.60	5.93	1.63	38.18	5.46	1.53	36.97	5.23	1.49	35.75	5.01	1.44	33.33	4.57	1.35
	25	100.00	43.03	5.80	5.24	40.60	5.41	4.95	38.18	4.80	4.70	36.97	4.79	4.53	35.75	4.42	4.41	33.33	4.24	4.09
		200.00	43.03	5.61	2.63	40.60	5.19	2.49	38.18	4.80	2.35	36.97	4.61	2.28	35.75	4.42	2.20	33.33	4.06	2.06
		250.00	43.03	5.61	2.11	40.60	5.19	1.99	38.18	4.62	1.89	36.97	4.61	1.82	35.75	4.42	1.76	33.33	4.06	1.65
		300.00	43.03	5.61	1.76	40.60	5.19	1.66	38.18	4.54	1.58	36.97	4.61	1.52	35.75	4.42	1.47	33.33	4.06	1.37
	30	100.00	43.03	5.15	5.33	40.60	4.79	5.04	38.18	4.49	4.74	36.97	4.30	4.60	35.75	4.13	4.45	33.33	3.85	4.15
		200.00	43.03	4.97	2.68	40.60	4.61	2.53	38.18	4.29	2.38	36.97	4.12	2.31	35.75	3.95	2.24	33.33	3.65	2.09
		250.00	43.03	4.97	2.14	40.60	4.61	2.03	38.18	4.29	1.91	36.97	4.12	1.85	35.75	3.95	1.79	33.33	3.65	1.67
		300.00	43.03	4.97	1.79	40.60	4.61	1.69	38.18	4.29	1.59	36.97	4.12	1.54	35.75	3.95	1.49	33.33	3.65	1.39
	35	100.00	43.03	4.46	5.43	40.60	4.34	5.10	38.18	3.87	4.83	36.97	3.93	4.65	35.75	3.74	4.50	33.33	3.53	4.19
		200.00	43.03	4.46	2.71	40.60	4.16	2.56	38.18	3.87	2.41	36.97	3.72	2.34	35.75	3.59	2.26	33.33	3.32	2.11
		250.00	43.03	4.46	2.17	40.60	4.16	2.05	38.18	3.67	1.94	36.97	3.72	1.87	35.75	3.59	1.81	33.33	3.32	1.69
		300.00	43.03	4.46	1.81	40.60	4.16	1.71	38.18	3.59	1.62	36.97	3.72	1.56	35.75	3.59	1.51	33.33	3.32	1.41
	40	100.00	43.03	4.07	5.48	40.60	3.97	5.15	38.18	3.52	4.88	36.97	3.57	4.70	35.75	3.38	4.56	33.33	3.15	4.25
		200.00	43.03	4.07	2.74	40.60	3.76	2.59	38.18	3.52	2.44	36.97	3.36	2.36	35.75	3.20	2.29	33.33	3.15	2.12
		250.00	43.03	4.07	2.19	40.60	3.76	2.07												

VRF MW



10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	100.00	35.70	6.65	4.09	33.68	6.27	3.86	33.94	5.71	3.97	30.70	5.51	3.54	29.69	5.14	3.46	27.67	4.73	3.23
		200.00	35.96	6.60	2.07	33.94	6.27	1.95	33.94	5.68	1.99	30.70	5.46	1.78	29.69	5.19	1.72	27.67	4.68	1.62
		250.00	35.96	6.65	1.65	33.94	6.27	1.56	33.94	5.68	1.59	30.70	5.49	1.42	29.69	5.11	1.38	27.67	4.71	1.29
		300.00	35.96	6.65	1.37	33.94	6.30	1.30	33.94	5.71	1.32	30.70	5.49	1.18	29.69	5.06	1.16	27.67	4.71	1.08
	15	100.00	35.96	6.01	4.21	33.94	5.65	3.98	33.94	5.08	4.06	30.70	4.94	3.63	29.69	4.58	3.53	27.67	4.25	3.30
		200.00	35.96	5.82	2.12	33.94	5.46	2.00	33.94	4.90	2.04	30.70	4.75	1.83	29.69	4.58	1.77	27.67	4.07	1.66
		250.00	35.96	5.82	1.70	33.94	5.46	1.60	33.94	4.90	1.63	30.70	4.75	1.46	29.69	4.37	1.43	27.67	4.07	1.33
		300.00	35.96	5.82	1.41	33.94	5.46	1.34	33.94	4.90	1.36	30.70	4.75	1.22	29.69	4.27	1.19	27.67	4.07	1.11
	20	100.00	35.96	5.23	4.32	33.94	4.87	4.09	33.94	4.53	4.14	30.70	4.36	3.71	29.69	4.19	3.59	27.67	3.68	3.38
		200.00	35.96	5.04	2.17	33.94	4.68	2.06	33.94	4.33	2.08	30.70	4.17	1.87	29.69	4.00	1.81	27.67	3.68	1.69
		250.00	35.96	5.04	1.74	33.94	4.68	1.65	33.94	4.33	1.67	30.70	4.17	1.49	29.69	4.00	1.45	27.67	3.68	1.35
		300.00	35.96	5.04	1.45	33.94	4.68	1.37	33.94	4.33	1.39	30.70	4.17	1.24	29.69	4.00	1.20	27.67	3.68	1.13
	25	100.00	35.96	4.65	4.40	33.94	4.14	4.19	33.94	4.07	4.20	30.70	3.70	3.80	29.69	3.57	3.68	27.67	3.31	3.43
		200.00	35.96	4.44	2.22	33.94	4.14	2.10	33.94	3.85	2.12	30.70	3.70	1.90	29.69	3.57	1.84	27.67	3.31	1.71
		250.00	35.96	4.44	1.77	33.94	4.14	1.68	33.94	3.85	1.69	30.70	3.70	1.52	29.69	3.57	1.47	27.67	3.31	1.37
		300.00	35.96	4.44	1.48	33.94	4.14	1.40	33.94	3.85	1.41	30.70	3.70	1.27	29.69	3.57	1.23	27.67	3.31	1.14
	30	100.00	35.96	4.17	4.47	33.94	3.88	4.23	33.94	3.69	4.26	30.70	3.34	3.85	29.69	3.41	3.70	27.67	3.18	3.45
		200.00	35.96	3.99	2.25	33.94	3.72	2.13	33.94	3.48	2.14	30.70	3.34	1.93	29.69	3.23	1.86	27.67	3.00	1.74
		250.00	35.96	3.99	1.80	33.94	3.72	1.70	33.94	3.48	1.71	30.70	3.34	1.54	29.69	3.23	1.49	27.67	3.00	1.39
		300.00	35.96	3.99	1.50	33.94	3.72	1.42	33.94	3.48	1.43	30.70	3.34	1.28	29.69	3.23	1.24	27.67	3.00	1.16
	35	100.00	35.96	3.76	4.53	33.94	3.38	4.30	33.94	3.17	4.33	30.70	3.24	3.86	29.69	2.97	3.76	27.67	2.76	3.51
		200.00	35.96	3.61	2.28	33.94	3.38	2.15	33.94	3.17	2.16	30.70	3.06	1.94	29.69	2.97	1.88	27.67	2.76	1.75
		250.00	35.96	3.61	1.82	33.94	3.38	1.72	33.94	3.17	1.73	30.70	3.06	1.56	29.69	2.97	1.50	27.67	2.76	1.40
		300.00	35.96	3.61	1.52	33.94	3.38	1.43	33.94	3.17	1.44	30.70	3.06	1.30	29.69	2.97	1.25	27.67	2.76	1.17
	40	100.00	35.96	3.40	4.58	33.94	3.20	4.33	33.94	2.99	4.35	30.70	2.88	3.92	29.69	2.79	3.79	27.67	2.56	3.53
		200.00	35.96	3.22	2.30	33.94	3.02	2.18	33.94	2.81	2.19	30.70	2.88	1.96	29.69	2.58	1.91	27.67	2.56	1.77
		250.00	35.96	3.22	1.84	33.94	3.02	1.74	33.94	2.81	1.75	30.70	2.88	1.57	29.69	2.58	1.53	27.67	2.56	1.41
		300.00	35.96	3.22	1.54	33.94	3.02	1.45	33.94	2.81	1.46	30.70	2.88	1.31	29.69	2.58	1.27	27.67	2.56	1.18
	45	100.00	35.96	3.03	4.63	33.94	3.02	4.35	33.94	2.81	4.38	30.70	2.48	3.97	29.69	2.58	3.82	27.67	2.38	3.56
		200.00	35.96	2.85	2.33	33.94	2.63	2.20	33.94	2.42	2.22	30.70	2.66	1.97	29.69	2.22	1.93	27.67	2.38	1.78
		250.00	35.96	2.85	1.86	33.94	2.63	1.76	33.94	2.42	1.77	30.70	2.66	1.58	29.69	2.22	1.55	27.67	2.38	1.42
		300.00	35.96	2.85	1.55	33.94	2.63	1.47	33.94	2.42	1.48	30.70	2.66	1.32	29.69	2.22	1.29	27.67	2.38	1.19

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

12HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
130	10	110.00	55.50	5.56	7.85	70.57	9.70	10.32	70.95	7.88	10.13	71.71	7.91	10.24	72.60	7.91	10.35	74.18	7.96	10.56	75.30	7.90	10.70			
		220.00	55.50	5.16	3.90	70.57	9.10	5.12	70.95	7.37	5.03	71.71	7.39	5.08	72.60	7.33	5.14	74.18	7.46	5.25	75.30	7.51	5.32			
		275.00	55.50	4.99	3.11	70.57	8.92	4.09	70.95	7.20	4.02	71.71	7.20	4.06	72.60	7.25	4.11	74.18	7.28	4.19	75.30	7.30	4.25			
		330.00	55.50	4.91	2.59	70.57	8.80	3.40	70.95	7.16	3.35	71.71	7.13	3.38	72.60	7.22	3.42	74.18	7.21	3.49	75.30	7.19	3.54			
	15	110.00	54.70	7.31	7.97	69.63	12.74	10.59	69.79	10.32	10.30	70.64	10.35	10.41	71.28	10.37	10.50	73.14	10.45	10.75	74.28	10.41	10.89			
		220.00	54.70	6.74	3.95	69.63	11.95	5.24	69.79	9.65	5.11	70.64	9.68	5.16	71.28	9.67	5.20	73.14	9.80	5.33	74.28	9.81	5.41			
		275.00	54.70	6.54	3.15	69.63	11.65	4.18	69.79	9.44	4.07	70.64	9.49	4.12	71.28	9.49	4.15	73.14	9.59	4.25	74.28	9.60	4.31			
		330.00	54.70	6.46	2.62	69.63	11.52	3.48	69.79	9.35	3.39	70.64	9.38	3.43	71.28	9.42	3.46	73.14	9.48	3.54	74.28	9.46	3.59			
	20	110.00	53.90	8.89	8.07	68.69	15.47	10.82	68.64	12.51	10.43	69.56	12.56	10.56	70.48	12.53	10.67	72.10	12.65	10.90	73.25	12.65	11.04			
		220.00	53.90	8.16	3.99	68.69	14.50	5.35	68.64	11.67	5.16	69.56	11.74	5.23	70.48	11.76	5.29	72.10	11.86	5.40	73.25	11.90	5.47			
		275.00	53.90	7.92	3.18	68.69	14.13	4.26	68.64	11.46	4.12	69.56	11.51	4.17	70.48	11.51	4.22	72.10	11.64	4.31	73.25	11.62	4.36			
		330.00	53.90	7.80	2.64	68.69	13.95	3.54	68.64	11.33	3.43	69.56	11.36	3.47	70.48	11.40	3.51	72.10	11.49	3.58	73.25	11.48	3.63			
	25	110.00	53.90	10.46	8.28	64.26	13.69	10.02	66.57	13.89	10.34	67.49	13.93	10.47	68.41	14.02	10.60	69.79	14.04	10.78	70.71	14.04	10.90			
		220.00	53.90	9.61	4.08	64.26	12.81	4.96	66.57	12.98	5.11	67.49	13.05	5.18	68.41	13.09	5.24	69.79	13.16	5.33	70.71	13.21	5.40			
		275.00	53.90	9.34	3.25	64.26	12.55	3.95	66.57	12.75	4.08	67.49	12.78	4.13	68.41	12.86	4.18	69.79	12.91	4.25	70.71	12.92	4.30			
		330.00	53.90	9.22	2.71	64.26	12.38	3.28	66.57	12.60	3.39	67.49	12.64	3.43	68.41	12.73	3.48	69.79	12.78	3.54	70.71	12.76	3.58			
	30	110.00	53.90	12.40	8.52	62.19	15.11	9.94	64.26	15.30	10.23	64.96	15.35	10.32	65.88	15.38	10.45	67.03	15.45	10.60	67.95	15.40	10.72			
		220.00	53.90	11.36	4.20	62.19	14.15	4.91	64.26	14.29	5.05	64.96	14.36	5.10	65.88	14.40	5.16	67.03	14.47	5.24	67.95	14.50	5.30			
		275.00	53.90	11.10	3.34	62.19	13.83	3.91	64.26	14.01	4.03	64.96	14.08	4.06	65.88	14.16	4.12	67.03	14.18	4.18	67.95	14.18	4.22			
		330.00	53.90	10.94	2.78	62.19	13.67	3.25	64.26	13.87	3.35	64.96	13.92	3.38	65.88	14.04	3.42	67.03	14.06	3.48	67.95	14.00	3.51			
	35	110.00	53.90	14.76	8.83	59.43	16.56	9.77	61.27	16.67	10.02	62.19	16.80	10.16	62.88	16.79	10.24	63.80	16.84	10.37	64.49	16.82	10.45			
		220.00	53.90	13.59	4.34	59.43	15.48	4.82	61.27	15.62	4.94	62.19	15.69	5.01	62.88	15.74	5.05	63.80	15.78	5.12	64.49	15.78	5.16			
		275.00	53.90	13.18	3.45	59.43	15.13	3.83	61.27	15.28	3.94	62.19	15.35	3.99	62.88	15.44	4.03	63.80	15.49	4.08	64.49	15.44	4.11			
		330.00	53.90	13.00	2.87	59.43	14.96	3.19	61.27	15.13	3.27	62.19	15.22	3.32	62.88	15.28	3.35	63.80	15.33	3.39	64.49	15.28	3.42			
	40	110.00	47.68	15.57	8.13	52.79	17.47	9.03	54.40	17.61	9.26	55.25	17.70	9.38	55.81	17.70	9.45	56.88	17.77	9.60	57.44	17.73	9.67			
		220.00	47.68	14.31	3.98	52.79	16.30	4.44	54.40	16.48	4.56	55.25	16.53	4.61	55.81	16.59	4.65	56.88	16.68	4.73	57.44	16.66	4.76			
		275.00	47.68	13.90	3.17	52.79	15.96	3.54	54.40	16.11	3.63	55.25	16.23	3.68	55.81	16.26	3.71	56.88	16.33	3.77	57.44	16.29	3.79			
		330.00	47.68	13.72	2.63	52.79	15.78	2.94	54.40	15.92	3.01	55.25	16.06	3.06	55.81	16.10	3.08	56.88	16.17	3.13	57.44	16.10	3.15			
	45	110.00	41.76	16.38	7.48	46.15	18.34	8.29	47.53	18.51	8.49	48.31	18.64	8.61	48.73	18.65	8.66	49.71	18.67	8.79	50.13	18.64	8.84			
		220.00	41.76	15.03	3.65	46.15	17.17	4.07	47.53	17.31	4.17	48.31	17.40	4.22	48.73	17.41	4.25	49.71	17.55	4.32	50.13	17.54	4.35			
		275.00	41.76	14.62	2.90	46.15	16.78	3.24	47.53	16.93	3.32	48.31	17.06	3.36	48.73	17.11	3.39	49.71	17.20	3.44	50.13	17.10	3.46			
		330.00	41.76	14.44	2.41	46.15	16.56	2.69	47.53	16.75	2.75	48.31	16.93	2.80	48.73	16.95	2.82	49.71	17.00	2.86	50.13	16.88	2.87			
120	10	110.00	50.78	4.84	7.15	60.56	6.28	8.59	68.98	7.73	9.86	70.07	7.71	10.00	70.97	7.80	10.13	72.56	7.81	10.33	73.92	7.82	10.51			
		220.00	50.78	4.43	3.55	60.56	5.86	4.27	68.98	7.17	4.89	70.07	7.25	4.97	70.97	7.23	5.03	72.56	7.32	5.14	73.92	7.27	5.22			
		275.00	50.78	4.39	2.84	60.56	5.74	3.41	68.98	7.08	3.91	70.07	7.09	3.97	70.97	7.11	4.02	72.56	7.17	4.10	73.92	7.16	4.17			
		330.00	50.78	4.35	2.36	60.56	5.69	2.84	68.98	7.04	3.26	70.07	7.02	3.30	70.97	7.04	3.34	72.56	7.10	3.41	73.92	7.08	3.47			
	15	110.00	50.27	6.43	7.29	60.00	8.35	8.79	68.38	10.21	10.10	69.24	10.23	10.22	70.15	10.31	10.34	71.75	10.35	10.56	73.12	10.35	10.73			
		220.00	50.27	5.88	3.61	60.00	7.81	4.36	68.38	9.51	5.01	69.24	9.57	5.07	70.15	9.62	5.13	71.75	9.68	5.23	73.12	9.69	5.32			
		275.00	50.27	5.77	2.88	60.00	7.65	3.48	68.38	9.34	4.00	69.24	9.38	4.04	70.15	9.43	4.09	71.75	9.53	4.18	73.12	9.47	4.25			
		330.00	50.27	5.69	2.40	60.00	7.56	2.90	68.38	9.25	3.33	69.24	9.30	3.37	70.15	9.36	3.41	71.75	9.42	3.48	73.12	9.40	3.54			
	20	110.00	49.75	7.81	7.40	59.43	10.18	8.95	67.49	12.42	10.27	68.41	12.48	10.40	69.33	12.51	10.52	70.94	12.63	10.75	72.33	12.59	10.92			
		220.00	49.75	7.18	3.66	59.43	9.52	4.43	67.49	11.60	5.08	68.41	11.67	5.15	69.33	11.71	5.21	70.94	11.81	5.32	72.33	11.86	5.41			
		275.00	49.75	6.99	2.92	59.43	9.31	3.53	67.49	11.34	4.05	68.41	11.44	4.11	69.33	11.52	4.16	70.94	11.58	4.24	72.33	11.56	4.31			
		330.00	49.75	6.88	2.43	59.43	9.23	2.94	67.49	11.21	3.37	68.41	11.32	3.42	69.33	11.41	3.46	70.94	11.47	3.53	72.33	11.41	3.59			
	25	110.00	49.75	9.18	7.58	59.43	11.98	9.18	65.42	13.81	10.19	66.34	13.85	10.31	67.49	13.95	10.47	68.87	13.99	10.65	70.02	14.06	10.81			
		220.00	49.75	8.46	3.74	59.43	11.22	4.54	65.42	12.91	5.04	66.34	12.98	5.10	67.49	13.02	5.18	68.87	13.12	5.27	70.02	13.16	5.35			
		275.00	49.75	8.22	2.98	59.43	10.95	3.62	65.42	12.67	4.02	66.34	12.70	4.06	67.49	12.82	4.13	68.87	12.85	4.20	70.02	12.87	4.26			
		330.00	49.75	8.11	2.48	59.43	10.83	3.01	65.42	12.51	3.34	66.34	12.56	3.38	67.49	12.68	3.44	68.87	12.71	3.50	70.02	12.70	3.55			
	30	110.00	49.75	10.84	7.79	59.43	14.24	9.47	63.11	15.18	10.07															

VRF MW



12HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
110	10	110.00	46.10	4.19	6.47	54.91	5.42	7.76	63.93	6.81	9.09	67.60	7.54	9.66	68.51	7.58	9.78	70.62	7.61	10.06	72.00	7.64	10.24			
		220.00	46.10	3.86	3.21	54.91	5.04	3.85	63.93	6.40	4.52	67.60	7.06	4.80	68.51	7.14	4.86	70.62	7.07	4.99	72.00	7.15	5.09			
		275.00	46.10	3.72	2.56	54.91	4.93	3.08	63.93	6.28	3.61	67.60	6.94	3.83	68.51	6.95	3.88	70.62	6.95	3.99	72.00	7.07	4.07			
		330.00	46.10	3.65	2.13	54.91	4.89	2.56	63.93	6.20	3.01	67.60	6.86	3.19	68.51	6.87	3.23	70.62	6.87	3.32	72.00	6.99	3.39			
	15	110.00	45.85	5.58	6.61	54.63	7.22	7.95	63.63	9.19	9.36	67.31	10.11	9.95	68.23	10.14	10.08	70.35	10.19	10.36	71.45	10.28	10.51			
		220.00	45.85	5.14	3.28	54.63	6.73	3.95	63.63	8.58	4.64	67.31	9.47	4.94	68.23	9.51	5.00	70.35	9.54	5.14	71.45	9.63	5.21			
		275.00	45.85	4.97	2.61	54.63	6.58	3.15	63.63	8.41	3.71	67.31	9.27	3.94	68.23	9.36	3.99	70.35	9.34	4.10	71.45	9.40	4.16			
		330.00	45.85	4.90	2.18	54.63	6.55	2.62	63.63	8.29	3.08	67.31	9.19	3.28	68.23	9.24	3.32	70.35	9.27	3.41	71.45	9.29	3.46			
	20	110.00	45.61	6.83	6.74	54.36	8.88	8.13	63.34	11.24	9.59	67.03	12.36	10.21	67.95	12.47	10.34	69.79	12.51	10.58	71.17	12.61	10.77			
		220.00	45.61	6.29	3.34	54.36	8.28	4.03	63.34	10.55	4.75	67.03	11.60	5.05	67.95	11.64	5.12	69.79	11.74	5.24	71.17	11.81	5.33			
		275.00	45.61	6.09	2.66	54.36	8.09	3.21	63.34	10.30	3.79	67.03	11.36	4.03	67.95	11.49	4.09	69.79	11.51	4.18	71.17	11.50	4.25			
		330.00	45.61	5.99	2.21	54.36	8.01	2.67	63.34	10.18	3.15	67.03	11.24	3.35	67.95	11.37	3.40	69.79	11.39	3.48	71.17	11.35	3.54			
	25	110.00	45.61	8.04	6.90	54.36	10.44	8.33	63.34	13.31	9.86	65.19	13.76	10.15	66.11	13.85	10.28	67.72	13.89	10.49	69.10	14.02	10.69			
		220.00	45.61	7.39	3.41	54.36	9.75	4.12	63.34	12.44	4.87	65.19	12.88	5.02	66.11	12.95	5.08	67.72	13.05	5.19	69.10	13.12	5.29			
		275.00	45.61	7.19	2.72	54.36	9.53	3.29	63.34	12.16	3.88	65.19	12.59	4.00	66.11	12.74	4.05	67.72	12.77	4.14	69.10	12.81	4.21			
		330.00	45.61	7.06	2.26	54.36	9.43	2.73	63.34	12.04	3.23	65.19	12.45	3.33	66.11	12.60	3.37	67.72	12.63	3.44	69.10	12.63	3.50			
	30	110.00	45.61	9.48	7.08	54.36	12.40	8.58	61.96	15.08	9.91	62.88	15.18	10.04	63.57	15.27	10.14	65.19	15.34	10.35	66.34	15.42	10.51			
		220.00	45.61	8.72	3.49	54.36	11.55	4.24	61.96	14.12	4.89	62.88	14.19	4.95	63.57	14.26	5.00	65.19	14.36	5.11	66.34	14.45	5.19			
		275.00	45.61	8.50	2.78	54.36	11.34	3.38	61.96	13.79	3.90	62.88	13.93	3.95	63.57	14.00	3.99	65.19	14.07	4.08	66.34	14.11	4.14			
		330.00	45.61	8.38	2.31	54.36	11.20	2.81	61.96	13.64	3.24	62.88	13.77	3.28	63.57	13.88	3.32	65.19	13.95	3.39	66.34	13.92	3.44			
	35	110.00	45.50	11.33	7.31	54.36	14.77	8.89	59.20	18.04	9.93	60.12	16.60	9.86	60.81	16.65	9.96	62.19	16.76	10.15	63.34	16.85	10.31			
		220.00	45.50	10.43	3.60	54.36	13.80	4.38	59.20	16.89	4.89	60.12	15.53	4.86	60.81	15.60	4.91	62.19	15.69	5.01	63.34	15.76	5.09			
		275.00	45.50	10.14	2.86	54.36	13.51	3.49	59.20	16.55	3.90	60.12	15.25	3.88	60.81	15.29	3.91	62.19	15.39	3.99	63.34	15.40	4.05			
		330.00	45.50	9.99	2.38	54.36	13.35	2.90	59.20	16.34	3.24	60.12	15.08	3.22	60.81	15.12	3.25	62.19	15.26	3.32	63.34	15.20	3.37			
	40	110.00	42.31	12.46	7.04	50.54	16.22	8.58	54.80	19.86	9.60	55.47	18.23	9.48	56.23	18.31	9.58	57.69	18.39	9.78	58.87	18.49	9.95			
		220.00	42.31	11.44	3.46	50.54	15.17	4.22	54.80	18.55	4.72	55.47	17.05	4.66	56.23	17.13	4.72	57.69	17.22	4.82	58.87	17.34	4.90			
		275.00	42.31	11.12	2.75	50.54	14.85	3.36	54.80	18.16	3.75	55.47	16.74	3.71	56.23	16.79	3.76	57.69	16.89	3.84	58.87	16.91	3.90			
		330.00	42.31	10.97	2.28	50.54	14.69	2.80	54.80	18.00	3.12	55.47	16.57	3.09	56.23	16.65	3.12	57.69	16.76	3.19	58.87	16.68	3.24			
	45	110.00	38.85	13.58	6.74	46.43	17.68	8.24	50.70	21.65	9.30	51.10	19.86	9.12	51.93	19.95	9.24	53.19	20.02	9.41	54.14	20.14	9.55			
		220.00	38.85	12.46	3.30	46.43	16.55	4.05	50.70	20.16	4.56	51.10	18.61	4.48	51.93	18.62	4.54	53.19	18.75	4.63	54.14	18.92	4.70			
		275.00	38.85	12.13	2.62	46.43	16.18	3.22	50.70	19.82	3.63	51.10	18.23	3.57	51.93	18.31	3.61	53.19	18.42	3.68	54.14	18.43	3.73			
		330.00	38.85	11.95	2.18	46.43	15.98	2.67	50.70	19.65	3.01	51.10	18.06	2.96	51.93	18.14	3.00	53.19	18.26	3.06	54.14	18.19	3.10			
100	10	110.00	41.46	3.52	5.78	49.52	4.55	6.95	57.58	5.78	8.15	61.50	6.43	8.73	65.42	7.15	9.33	72.77	7.46	10.31	69.79	7.53	9.94			
		220.00	41.46	3.24	2.87	49.52	4.21	3.45	57.58	5.42	4.05	61.50	6.06	4.34	65.42	6.75	4.64	72.77	6.98	5.13	69.79	6.98	4.94			
		275.00	41.46	3.18	2.30	49.52	4.11	2.76	57.58	5.31	3.23	61.50	5.88	3.47	65.42	6.56	3.70	72.77	6.86	4.09	69.79	6.86	3.94			
		330.00	41.46	3.18	1.91	49.52	4.08	2.30	57.58	5.27	2.69	61.50	5.81	2.88	65.42	6.48	3.08	72.77	6.78	3.41	69.79	6.82	3.28			
	15	110.00	41.46	4.81	5.95	49.52	6.17	7.16	57.58	7.85	8.41	61.50	8.76	9.03	65.42	9.68	9.65	72.77	10.10	10.65	69.79	10.19	10.28			
		220.00	41.46	4.41	2.95	49.52	5.76	3.55	57.58	7.33	4.17	61.50	8.18	4.48	65.42	9.08	4.79	72.77	9.46	5.29	69.79	9.52	5.10			
		275.00	41.46	4.32	2.35	49.52	5.63	2.84	57.58	7.18	3.33	61.50	8.03	3.58	65.42	8.89	3.82	72.77	9.26	4.22	69.79	9.28	4.07			
		330.00	41.46	4.25	1.96	49.52	5.56	2.36	57.58	7.11	2.77	61.50	7.92	2.98	65.42	8.81	3.18	72.77	9.18	3.51	69.79	9.16	3.38			
	20	110.00	41.46	5.91	6.09	49.52	7.58	7.34	57.58	9.69	8.65	61.50	10.81	9.30	65.42	11.97	9.95	72.77	12.43	10.95	69.79	12.53	10.58			
		220.00	41.46	5.45	3.02	49.52	7.11	3.64	57.58	9.03	4.28	61.50	10.08	4.60	65.42	11.18	4.92	72.77	11.67	5.43	69.79	11.74	5.24			
		275.00	41.46	5.30	2.40	49.52	6.97	2.91	57.58	8.88	3.42	61.50	9.93	3.67	65.42	10.98	3.93	72.77	11.43	4.33	69.79	11.42	4.18			
		330.00	41.46	5.20	2.00	49.52	6.87	2.42	57.58	8.77	2.84	61.50	9.82	3.06	65.42	10.90	3.27	72.77	11.31	3.60	69.79	11.22	3.47			
	25	110.00	41.46	6.94	6.22	49.52	8.96	7.52	57.58	11.38	8.87	61.50	12.69	9.54	64.72	13.79	10.10	66.34	13.82	10.31	67.72	13.99	10.51			
		220.00	41.46	6.38	3.08	49.52	8.37	3.72	57.58	10.64	4.39	61.50	11.88	4.72	64.72	12.86	4.99	66.34	12.98	5.10	67.72	13.05	5.19			
		275.00	41.46	6.21	2.45	49.52	8.21	2.97	57.58	10.39	3.50	61.50	11.63	3.76	64.72	12.64	3.98	66.34	12.72	4.07	67.72	12.72	4.14			
		330.00	41.46	6.12	2.04	49.52	8.11	2.47	57.58	10.28	2.91	61.50	11.53	3.13	64.72	12.49	3.31	66.34	12.61	3.38	67.72	12.54	3.44			
	30	110.00	41.46	8.21	6.39	49.52	10.64	7.73	57.58	13.48	9.14	61.50	15.09	9.85	62.42	15.21	9.98	64.03	15.27	10.20	65.19	15.39	10.36			
		220.00	41.46	7.53	3.15	49.52	9.91	3.82	57.58	12.63	4.51	61.50	14.10	4.86	62.42	14.17	4.92	64.03	14.29	5.03	65.19	14.38	5.11			
		275.00	41.46	7.30	2.51	49.52	9.69	3.05	57.58	12.35	3.60	61.50	13.83	3.87	62.42	13.94	3.93	64.03	13.99	4.01	65.19	14.02	4.07			
		330.00	41.46	7.22	2.09	49.52	9.60	2.53	57.58	12.22	2.99	61.50	13.66	3.22	62.42	13.80	3.27	64.03	13.86	3.34	65.19	13.83	3.39			
	35	110.00	41.46	9.75	6.58	49.52	12.62	7.99	57.58	16.13	9.48	58.74	16.50	9.67	59.66	16.55	9.80	61.04	16.65	9.99	62.42	16.76	10.18			
		220.00	41.46	8.96	3.24	49.52</																				

12HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																					
			14.00			16.00			18.00			19.00			20.00			22.00			24.00			
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC	
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	
90	10	110.00	37.31	3.06	5.19	44.46	3.88	6.21	51.83	4.84	7.29	55.28	5.42	7.80	58.97	6.01	8.35	66.11	7.30	9.44	68.41	7.46	9.75	
		220.00	37.31	2.84	2.58	44.46	3.65	3.09	51.83	4.59	3.63	55.28	5.10	3.88	58.97	5.62	4.15	66.11	6.80	4.69	68.41	6.96	4.84	
		275.00	37.31	2.72	2.06	44.46	3.58	2.47	51.83	4.44	2.89	55.28	4.99	3.10	58.97	5.51	3.32	66.11	6.67	3.74	68.41	6.77	3.87	
		330.00	37.31	2.66	1.71	44.46	3.55	2.06	51.83	4.37	2.41	55.28	4.92	2.58	58.97	5.47	2.76	66.11	6.62	3.12	68.41	6.68	3.22	
	15	110.00	37.31	4.13	5.33	44.46	5.29	6.40	51.83	6.61	7.51	55.28	7.38	8.06	58.97	8.13	8.63	66.11	9.84	9.77	68.41	10.11	10.10	
		220.00	37.31	3.82	2.64	44.46	4.92	3.17	51.83	6.21	3.73	55.28	6.88	4.00	58.97	7.63	4.28	66.11	9.21	4.84	68.41	9.47	5.01	
		275.00	37.31	3.70	2.11	44.46	4.82	2.53	51.83	6.07	2.98	55.28	6.78	3.19	58.97	7.47	3.42	66.11	9.03	3.86	68.41	9.20	3.99	
		330.00	37.31	3.64	1.76	44.46	4.78	2.11	51.83	6.00	2.48	55.28	6.70	2.66	58.97	7.40	2.84	66.11	8.94	3.22	68.41	9.06	3.32	
	20	110.00	37.31	5.07	5.45	44.46	6.49	6.55	51.83	8.16	7.71	55.28	9.09	8.28	58.97	10.02	8.87	66.11	12.11	10.06	68.41	12.45	10.40	
		220.00	37.31	4.68	2.70	44.46	6.06	3.25	51.83	7.62	3.82	55.28	8.49	4.10	58.97	9.40	4.39	66.11	11.34	4.98	68.41	11.67	5.15	
		275.00	37.31	4.55	2.15	44.46	5.92	2.59	51.83	7.51	3.05	55.28	8.35	3.27	58.97	9.25	3.51	66.11	11.11	3.97	68.41	11.35	4.10	
		330.00	37.31	4.49	1.79	44.46	5.86	2.16	51.83	7.44	2.54	55.28	8.27	2.72	58.97	9.13	2.92	66.11	11.02	3.31	68.41	11.21	3.41	
	25	110.00	37.31	5.94	5.56	44.46	7.59	6.69	51.83	9.61	7.90	55.28	10.66	8.48	58.97	11.87	9.11	64.72	13.70	10.08	66.34	13.87	10.31	
		220.00	37.31	5.47	2.75	44.46	7.11	3.31	51.83	8.98	3.91	55.28	10.01	4.20	58.97	11.08	4.50	64.72	12.86	4.99	66.34	12.95	5.10	
		275.00	37.31	5.30	2.19	44.46	6.95	2.64	51.83	8.84	3.12	55.28	9.80	3.35	58.97	10.86	3.59	64.72	12.61	3.98	66.34	12.66	4.06	
		330.00	37.31	5.21	1.82	44.46	6.88	2.20	51.83	8.73	2.60	55.28	9.70	2.78	58.97	10.79	2.99	64.72	12.48	3.31	66.34	12.49	3.38	
	30	110.00	37.31	7.02	5.70	44.46	8.95	6.87	51.83	11.96	8.20	55.28	12.69	8.74	58.97	14.04	9.39	62.42	15.15	9.97	63.80	15.26	10.17	
		220.00	37.31	6.43	2.81	44.46	8.39	3.40	51.83	11.15	4.05	55.28	11.86	4.32	58.97	13.14	4.64	62.42	14.17	4.92	63.80	14.29	5.02	
		275.00	37.31	6.29	2.24	44.46	8.21	2.71	51.83	10.91	3.23	55.28	11.62	3.44	58.97	12.89	3.70	62.42	13.91	3.93	63.80	13.91	4.00	
		330.00	37.31	6.21	1.87	44.46	8.12	2.25	51.83	10.80	2.68	55.28	11.49	2.86	58.97	12.78	3.07	62.42	13.75	3.26	63.80	13.69	3.32	
	35	110.00	37.31	8.30	5.86	44.46	10.66	7.09	51.83	13.59	8.41	55.28	15.12	9.05	58.28	16.45	9.61	59.89	16.54	9.83	61.04	16.66	9.99	
		220.00	37.31	7.62	2.89	44.46	9.98	3.50	51.83	12.70	4.15	55.28	14.17	4.46	58.28	15.36	4.73	59.89	15.50	4.85	61.04	15.60	4.93	
		275.00	37.31	7.41	2.30	44.46	9.78	2.79	51.83	12.44	3.30	55.28	13.88	3.56	58.28	15.13	3.78	59.89	15.20	3.86	61.04	15.18	3.92	
		330.00	37.31	7.28	1.91	44.46	9.64	2.32	51.83	12.29	2.75	55.28	13.73	2.96	58.28	14.97	3.14	59.89	15.04	3.21	61.04	14.95	3.26	
	40	110.00	36.10	9.50	5.86	43.12	12.26	7.12	50.39	15.63	8.49	53.59	17.36	9.12	56.54	18.91	9.70	58.18	19.02	9.93	59.06	19.15	10.06	
		220.00	36.10	8.76	2.88	43.12	11.48	3.51	50.39	14.59	4.18	53.59	16.23	4.49	56.54	17.70	4.77	58.18	17.80	4.88	59.06	17.91	4.95	
		275.00	36.10	8.48	2.29	43.12	11.21	2.79	50.39	14.29	3.33	53.59	15.93	3.58	56.54	17.35	3.80	58.18	17.49	3.89	59.06	17.45	3.93	
		330.00	36.10	8.36	1.91	43.12	11.07	2.32	50.39	14.14	2.77	53.59	15.79	2.97	56.54	17.20	3.16	58.18	17.30	3.23	59.06	17.22	3.27	
	45	110.00	35.12	10.73	5.89	41.78	13.86	7.15	48.95	17.63	8.56	52.18	19.64	9.23	54.81	21.37	9.79	56.47	21.51	10.03	57.37	21.62	10.15	
		220.00	35.12	9.90	2.89	41.78	12.94	3.52	48.95	16.48	4.21	52.18	18.32	4.53	54.81	20.00	4.81	56.47	20.10	4.92	57.37	20.25	4.99	
		275.00	35.12	9.59	2.30	41.78	12.67	2.80	48.95	16.15	3.35	52.18	17.99	3.61	54.81	19.61	3.83	56.47	19.75	3.92	57.37	19.76	3.97	
		330.00	35.12	9.44	1.91	41.78	12.50	2.33	48.95	15.96	2.78	52.18	17.80	3.00	54.81	19.42	3.18	56.47	19.56	3.26	57.37	19.50	3.29	
80	10	110.00	33.17	2.56	4.59	39.62	3.24	5.51	46.07	4.06	6.45	49.29	4.55	6.92	52.29	4.98	7.36	58.74	6.04	8.33	65.19	7.08	9.29	
		220.00	33.17	2.35	2.28	39.62	3.07	2.74	46.07	3.77	3.20	49.29	4.24	3.44	52.29	4.63	3.66	58.74	5.59	4.14	65.19	6.61	4.62	
		275.00	33.17	2.28	1.82	39.62	2.97	2.19	46.07	3.70	2.56	49.29	4.10	2.75	52.29	4.52	2.92	58.74	5.50	3.30	65.19	6.50	3.69	
		330.00	33.17	2.28	1.52	39.62	2.90	1.82	46.07	3.70	2.13	49.29	4.03	2.29	52.29	4.44	2.43	58.74	5.50	2.75	65.19	6.50	3.07	
	15	110.00	33.17	3.49	4.71	39.62	4.41	5.66	46.07	5.53	6.63	49.29	6.14	7.13	52.29	6.72	7.59	58.74	8.14	8.60	65.19	9.63	9.62	
		220.00	33.17	3.21	2.34	39.62	4.14	2.81	46.07	5.14	3.29	49.29	5.72	3.54	52.29	6.31	3.77	58.74	7.61	4.26	65.19	9.00	4.77	
		275.00	33.17	3.12	1.87	39.62	4.04	2.25	46.07	5.07	2.63	49.29	5.58	2.82	52.29	6.15	3.01	58.74	7.47	3.41	65.19	8.79	3.80	
		330.00	33.17	3.09	1.55	39.62	3.97	1.87	46.07	4.99	2.19	49.29	5.54	2.35	52.29	6.08	2.50	58.74	7.43	2.84	65.19	8.69	3.17	
	20	110.00	33.17	4.32	4.82	39.62	5.44	5.79	46.07	6.83	6.80	49.29	7.52	7.30	52.29	8.32	7.79	58.74	10.02	8.84	65.19	11.86	9.91	
		220.00	33.17	3.95	2.39	39.62	5.07	2.87	46.07	6.36	3.37	49.29	7.06	3.62	52.29	7.79	3.86	58.74	9.35	4.38	65.19	11.08	4.90	
		275.00	33.17	3.86	1.90	39.62	4.97	2.29	46.07	6.25	2.69	49.29	6.92	2.89	52.29	7.63	3.08	58.74	9.22	3.49	65.19	10.82	3.91	
		330.00	33.17	3.80	1.58	39.62	4.94	1.91	46.07	6.18	2.24	49.29	6.85	2.41	52.29	7.56	2.56	58.74	9.13	2.91	65.19	10.67	3.25	
	25	110.00	33.17	5.01	4.91	39.62	6.35	5.91	46.07	8.00	6.95	49.29	8.88	7.48	52.29	9.83	7.99	58.74	11.81	9.07	64.72	13.75	10.09	
		220.00	33.17	4.63	2.43	39.62	5.96	2.93	46.07	7.48	3.44	49.29	8.30	3.70	52.29	9.17	3.95	58.74	11.04	4.49	64.72	12.86	4.99	
		275.00	33.17	4.48	1.94	39.62	5.83	2.34	46.07	7.34	2.75	49.29	8.16	2.95	52.29	8.98	3.15	58.74	10.82	3.58	64.72	12.56	3.97	
		330.00	33.17	4.42	1.61	39.62	5.77	1.95	46.07	7.27	2.29	49.29	8.06	2.46	52.29	8.91	2.62	58.74	10.74	2.98	64.72	12.37	3.30	
	30	110.00	33.17	5.91	5.02	39.62	7.51	6.06	46.07	9.45	7.14	49.29	10.54	7.69	52.29	11.59	8.21	58.74	14.01	9.35				

VRF MW



12HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	110.00	29.02	2.17	4.01	34.55	2.71	4.79	40.31	3.37	5.62	43.07	3.71	6.01	45.84	4.03	6.41	51.37	4.86	7.23	57.12	5.69	8.08
		220.00	29.02	1.99	1.99	34.55	2.54	2.38	40.31	3.16	2.79	43.07	3.47	2.99	45.84	3.80	3.19	51.37	4.51	3.59	57.12	5.39	4.02
		275.00	29.02	1.92	1.59	34.55	2.44	1.90	40.31	3.05	2.23	43.07	3.36	2.39	45.84	3.69	2.55	51.37	4.47	2.87	57.12	5.23	3.21
		330.00	29.02	1.86	1.32	34.55	2.41	1.58	40.31	3.02	1.86	43.07	3.33	1.99	45.84	3.62	2.12	51.37	4.43	2.39	57.12	5.18	2.67
	15	110.00	29.02	2.92	4.11	34.55	3.64	4.91	40.31	4.54	5.77	43.07	4.99	6.18	45.84	5.48	6.60	51.37	6.55	7.45	57.12	7.75	8.34
		220.00	29.02	2.70	2.04	34.55	3.44	2.44	40.31	4.26	2.86	43.07	4.68	3.07	45.84	5.14	3.28	51.37	6.12	3.70	57.12	7.25	4.14
		275.00	29.02	2.61	1.63	34.55	3.34	1.95	40.31	4.15	2.29	43.07	4.57	2.45	45.84	5.03	2.62	51.37	6.03	2.95	57.12	7.10	3.30
		330.00	29.02	2.58	1.35	34.55	3.31	1.62	40.31	4.11	1.90	43.07	4.54	2.04	45.84	4.96	2.18	51.37	5.95	2.46	57.12	7.00	2.75
	20	110.00	29.02	3.60	4.19	34.55	4.51	5.02	40.31	5.60	5.90	43.07	6.13	6.33	45.84	6.78	6.77	51.37	8.07	7.64	57.12	9.56	8.57
		220.00	29.02	3.32	2.08	34.55	4.21	2.49	40.31	5.21	2.93	43.07	5.75	3.14	45.84	6.34	3.35	51.37	7.55	3.79	57.12	8.91	4.24
		275.00	29.02	3.23	1.66	34.55	4.14	1.99	40.31	5.11	2.34	43.07	5.65	2.51	45.84	6.22	2.68	51.37	7.42	3.02	57.12	8.71	3.39
		330.00	29.02	3.17	1.38	34.55	4.08	1.66	40.31	5.07	1.94	43.07	5.61	2.09	45.84	6.19	2.23	51.37	7.34	2.52	57.12	8.56	2.81
	25	110.00	29.02	4.18	4.27	34.55	5.23	5.11	40.31	6.51	6.02	43.07	7.22	6.47	45.84	7.94	6.91	51.37	9.54	7.83	57.12	11.23	8.79
		220.00	29.02	3.86	2.11	34.55	4.91	2.54	40.31	6.10	2.98	43.07	6.76	3.20	45.84	7.44	3.42	51.37	8.91	3.87	57.12	10.50	4.35
		275.00	29.02	3.74	1.68	34.55	4.78	2.02	40.31	5.97	2.38	43.07	6.59	2.55	45.84	7.29	2.73	51.37	8.74	3.09	57.12	10.21	3.46
		330.00	29.02	3.71	1.40	34.55	4.72	1.68	40.31	5.90	1.98	43.07	6.52	2.13	45.84	7.22	2.27	51.37	8.70	2.57	57.12	10.11	2.88
	30	110.00	29.02	4.91	4.36	34.55	6.17	5.24	40.31	7.72	6.18	43.07	8.52	6.63	45.84	9.41	7.10	51.37	11.27	8.05	57.12	13.31	9.06
		220.00	29.02	4.51	2.16	34.55	5.78	2.59	40.31	7.20	3.05	43.07	7.97	3.28	45.84	8.79	3.51	51.37	10.55	3.98	57.12	12.46	4.47
		275.00	29.02	4.40	1.72	34.55	5.65	2.07	40.31	7.07	2.44	43.07	7.81	2.62	45.84	8.62	2.80	51.37	10.38	3.18	57.12	12.14	3.56
		330.00	29.02	4.32	1.43	34.55	5.59	1.72	40.31	7.01	2.03	43.07	7.75	2.18	45.84	8.55	2.33	51.37	10.26	2.64	57.12	11.99	2.96
	35	110.00	29.02	5.76	4.47	34.55	7.28	5.38	40.31	9.11	6.35	43.07	10.16	6.84	45.84	12.23	7.47	51.37	13.40	8.33	57.12	15.90	9.39
		220.00	29.02	5.31	2.21	34.55	6.83	2.66	40.31	8.49	3.14	43.07	9.47	3.38	45.84	11.42	3.68	51.37	12.58	4.11	57.12	14.90	4.63
		275.00	29.02	5.16	1.76	34.55	6.70	2.12	40.31	8.35	2.50	43.07	9.33	2.70	45.84	11.22	2.93	51.37	12.32	3.28	57.12	14.49	3.68
		330.00	29.02	5.07	1.46	34.55	6.60	1.76	40.31	8.25	2.08	43.07	9.23	2.24	45.84	11.14	2.44	51.37	12.19	2.72	57.12	14.24	3.06
	40	110.00	29.02	6.83	4.61	34.55	8.64	5.55	40.31	10.77	6.57	43.07	12.01	7.08	45.84	14.45	7.75	51.37	15.91	8.65	57.12	18.82	9.76
		220.00	29.02	6.26	2.27	34.55	8.09	2.74	40.31	10.08	3.24	43.07	11.22	3.49	45.84	13.56	3.82	51.37	14.87	4.26	57.12	17.61	4.80
		275.00	29.02	6.11	1.81	34.55	7.90	2.18	40.31	9.87	2.58	43.07	11.05	2.78	45.84	13.28	3.04	51.37	14.61	3.39	57.12	17.16	3.82
		330.00	29.02	6.02	1.50	34.55	7.80	1.81	40.31	9.77	2.15	43.07	10.95	2.32	45.84	13.16	2.53	51.37	14.44	2.82	57.12	16.96	3.17
	45	110.00	29.02	7.90	4.75	34.55	9.97	5.72	40.31	12.44	6.78	43.07	13.86	7.32	45.84	16.71	8.04	51.37	18.37	8.97	57.12	21.79	10.15
		220.00	29.02	7.22	2.33	34.55	9.35	2.82	40.31	11.64	3.34	43.07	12.97	3.60	45.84	15.70	3.96	51.37	17.21	4.41	57.12	20.33	4.98
		275.00	29.02	7.07	1.86	34.55	9.13	2.25	40.31	11.40	2.66	43.07	12.76	2.87	45.84	15.34	3.15	51.37	16.86	3.51	57.12	19.88	3.96
		330.00	29.02	6.98	1.54	34.55	9.03	1.87	40.31	11.29	2.21	43.07	12.63	2.39	45.84	15.18	2.61	51.37	16.73	2.92	57.12	19.68	3.29
60	10	110.00	24.88	1.79	3.43	29.71	2.20	4.10	34.55	2.66	4.78	36.85	2.95	5.12	39.39	3.22	5.48	43.99	3.86	6.15	48.83	4.51	6.86
		220.00	24.88	1.63	1.70	29.71	2.06	2.04	34.55	2.48	2.38	36.85	2.78	2.55	39.39	2.96	2.72	43.99	3.56	3.06	48.83	4.21	3.41
		275.00	24.88	1.56	1.36	29.71	1.99	1.63	34.55	2.45	1.90	36.85	2.71	2.03	39.39	2.92	2.18	43.99	3.47	2.44	48.83	4.07	2.72
		330.00	24.88	1.53	1.13	29.71	1.96	1.36	34.55	2.45	1.59	36.85	2.67	1.69	39.39	2.88	1.81	43.99	3.43	2.03	48.83	3.97	2.26
	15	110.00	24.88	2.39	3.51	29.71	2.97	4.20	34.55	3.62	4.91	36.85	3.99	5.25	39.39	4.36	5.62	43.99	5.19	6.32	48.83	6.10	7.06
		220.00	24.88	2.20	1.74	29.71	2.77	2.09	34.55	3.37	2.44	36.85	3.75	2.61	39.39	4.03	2.79	43.99	4.80	3.14	48.83	5.70	3.51
		275.00	24.88	2.14	1.39	29.71	2.70	1.67	34.55	3.30	1.95	36.85	3.68	2.08	39.39	3.99	2.23	43.99	4.72	2.51	48.83	5.50	2.79
		330.00	24.88	2.11	1.16	29.71	2.67	1.39	34.55	3.26	1.62	36.85	3.65	1.74	39.39	3.96	1.86	43.99	4.68	2.09	48.83	5.40	2.32
	20	110.00	24.88	2.94	3.58	29.71	3.65	4.29	34.55	4.43	5.01	36.85	4.90	5.37	39.39	5.36	5.75	43.99	6.35	6.47	48.83	7.49	7.24
		220.00	24.88	2.71	1.77	29.71	3.41	2.13	34.55	4.19	2.49	36.85	4.58	2.66	39.39	5.03	2.86	43.99	5.96	3.21	48.83	6.99	3.59
		275.00	24.88	2.65	1.42	29.71	3.35	1.70	34.55	4.08	1.99	36.85	4.51	2.13	39.39	4.92	2.28	43.99	5.88	2.56	48.83	6.84	2.86
		330.00	24.88	2.62	1.18	29.71	3.31	1.42	34.55	4.04	1.65	36.85	4.48	1.77	39.39	4.88	1.90	43.99	5.83	2.14	48.83	6.74	2.38
	25	110.00	24.88	3.43	3.64	29.71	4.23	4.36	34.55	5.23	5.11	36.85	5.78	5.48	39.39	6.29	5.87	43.99	7.47	6.62	48.83	8.75	7.40
		220.00	24.88	3.16	1.80	29.71	3.98	2.17	34.55	4.89	2.54	36.85	5.38	2.71	39.39	5.89	2.91	43.99	7.01	3.28	48.83	8.23	3.67
		275.00	24.88	3.07	1.44	29.71	3.91	1.73	34.55	4.82	2.02	36.85	5.28	2.17	39.39	5.79	2.32	43.99	6.85	2.61	48.83	7.99	2.92
		330.00	24.88	3.04	1.20	29.71	3.88	1.44	34.55	4.75	1.68	36.85	5.24	1.80	39.39	5.75	1.93	43.99	6.77	2.18	48.83	7.90	2.43
	30	110.00	24.88	4.04	3.72	29.71	4.99	4.46	34.55	6.15	5.23	36.85	6.76	5.61	39.39	7.42	6.02	43.99	8.87	6.80	48.83	10.34	7.61
		220.00	24.88	3.69	1.84	29.7																	

12HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	110.00	20.73	1.43	2.85	24.65	1.74	3.39	28.79	2.12	3.97	30.87	2.31	4.27	32.71	2.46	4.52	36.85	2.89	5.11	40.77	3.41	5.68
		220.00	20.73	1.36	1.42	24.65	1.63	1.69	28.79	1.93	1.98	30.87	2.13	2.12	32.71	2.34	2.25	36.85	2.72	2.54	40.77	3.20	2.83
		275.00	20.73	1.29	1.13	24.65	1.59	1.35	28.79	1.93	1.58	30.87	2.06	1.69	32.71	2.27	1.80	36.85	2.63	2.03	40.77	3.05	2.25
		330.00	20.73	1.26	0.94	24.65	1.56	1.12	28.79	1.93	1.32	30.87	2.02	1.41	32.71	2.23	1.50	36.85	2.59	1.69	40.77	2.95	1.87
	15	110.00	20.73	1.95	2.92	24.65	2.35	3.47	28.79	2.83	4.07	30.87	3.11	4.37	32.71	3.38	4.64	36.85	3.95	5.25	40.77	4.56	5.83
		220.00	20.73	1.81	1.45	24.65	2.21	1.73	28.79	2.64	2.02	30.87	2.89	2.17	32.71	3.15	2.31	36.85	3.68	2.61	40.77	4.31	2.90
		275.00	20.73	1.74	1.16	24.65	2.13	1.38	28.79	2.60	1.61	30.87	2.82	1.73	32.71	3.07	1.84	36.85	3.60	2.08	40.77	4.16	2.31
		330.00	20.73	1.71	0.96	24.65	2.10	1.15	28.79	2.57	1.34	30.87	2.78	1.44	32.71	3.04	1.53	36.85	3.55	1.73	40.77	4.11	1.92
	20	110.00	20.73	2.41	2.97	24.65	2.89	3.54	28.79	3.46	4.15	30.87	3.83	4.46	32.71	4.15	4.74	36.85	4.82	5.36	40.77	5.61	5.96
		220.00	20.73	2.20	1.47	24.65	2.71	1.76	28.79	3.27	2.06	30.87	3.58	2.21	32.71	3.88	2.35	36.85	4.56	2.66	40.77	5.31	2.96
		275.00	20.73	2.13	1.18	24.65	2.68	1.41	28.79	3.20	1.65	30.87	3.51	1.77	32.71	3.80	1.88	36.85	4.47	2.13	40.77	5.16	2.36
		330.00	20.73	2.09	0.98	24.65	2.64	1.17	28.79	3.16	1.37	30.87	3.47	1.47	32.71	3.77	1.56	36.85	4.43	1.77	40.77	5.06	1.96
	25	110.00	20.73	2.78	3.02	24.65	3.37	3.60	28.79	4.06	4.22	30.87	4.40	4.53	32.71	4.83	4.83	36.85	5.74	5.48	40.77	6.71	6.10
		220.00	20.73	2.55	1.50	24.65	3.13	1.79	28.79	3.81	2.10	30.87	4.16	2.25	32.71	4.54	2.39	36.85	5.35	2.71	40.77	6.22	3.02
		275.00	20.73	2.48	1.19	24.65	3.10	1.43	28.79	3.74	1.67	30.87	4.06	1.80	32.71	4.43	1.91	36.85	5.27	2.17	40.77	6.07	2.41
		330.00	20.73	2.48	0.99	24.65	3.06	1.19	28.79	3.70	1.39	30.87	3.99	1.49	32.71	4.35	1.59	36.85	5.18	1.80	40.77	6.03	2.01
	30	110.00	20.73	3.23	3.08	24.65	3.91	3.67	28.79	4.78	4.32	30.87	5.22	4.64	32.71	5.68	4.94	36.85	6.69	5.60	40.77	7.83	6.25
		220.00	20.73	2.95	1.52	24.65	3.65	1.82	28.79	4.44	2.14	30.87	4.89	2.30	32.71	5.33	2.45	36.85	6.29	2.77	40.77	7.32	3.09
		275.00	20.73	2.85	1.21	24.65	3.55	1.45	28.79	4.34	1.70	30.87	4.79	1.83	32.71	5.23	1.95	36.85	6.17	2.21	40.77	7.13	2.46
		330.00	20.73	2.82	1.01	24.65	3.52	1.21	28.79	4.31	1.42	30.87	4.75	1.53	32.71	5.19	1.62	36.85	6.09	1.84	40.77	6.99	2.05
	35	110.00	20.73	3.73	3.14	24.65	4.59	3.76	28.79	5.63	4.43	30.87	6.14	4.76	32.71	6.74	5.07	36.85	7.95	5.76	40.77	9.34	6.44
		220.00	20.73	3.44	1.55	24.65	4.28	1.86	28.79	5.24	2.19	30.87	5.75	2.35	32.71	6.29	2.51	36.85	7.44	2.85	40.77	8.70	3.18
		275.00	20.73	3.34	1.24	24.65	4.21	1.48	28.79	5.13	1.74	30.87	5.65	1.88	32.71	6.18	2.00	36.85	7.31	2.27	40.77	8.50	2.53
		330.00	20.73	3.28	1.03	24.65	4.14	1.23	28.79	5.09	1.45	30.87	5.61	1.56	32.71	6.14	1.66	36.85	7.22	1.89	40.77	8.35	2.11
	40	110.00	20.73	4.41	3.23	24.65	5.41	3.86	28.79	6.64	4.56	30.87	7.30	4.91	32.71	7.97	5.23	36.85	9.41	5.95	40.77	11.08	6.67
		220.00	20.73	4.05	1.59	24.65	5.07	1.91	28.79	6.21	2.25	30.87	6.80	2.42	32.71	7.45	2.58	36.85	8.81	2.94	40.77	10.34	3.29
		275.00	20.73	3.96	1.27	24.65	4.96	1.52	28.79	6.10	1.79	30.87	6.70	1.93	32.71	7.30	2.06	36.85	8.64	2.34	40.77	10.09	2.62
		330.00	20.73	3.89	1.06	24.65	4.93	1.27	28.79	6.03	1.49	30.87	6.63	1.61	32.71	7.23	1.71	36.85	8.55	1.95	40.77	9.94	2.17
	45	110.00	20.73	5.09	3.32	24.65	6.26	3.97	28.79	7.64	4.68	30.87	8.45	5.06	32.71	9.21	5.39	36.85	10.87	6.14	40.77	12.77	6.88
		220.00	20.73	4.70	1.63	24.65	5.85	1.96	28.79	7.14	2.31	30.87	7.86	2.49	32.71	8.61	2.66	36.85	10.19	3.02	40.77	11.98	3.39
		275.00	20.73	4.57	1.30	24.65	5.75	1.56	28.79	7.03	1.84	30.87	7.72	1.98	32.71	8.42	2.12	36.85	9.97	2.41	40.77	11.68	2.70
		330.00	20.73	4.47	1.08	24.65	5.68	1.30	28.79	7.00	1.53	30.87	7.61	1.65	32.71	8.35	1.76	36.85	9.89	2.00	40.77	11.53	2.24

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



12HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	110.00	67.74	13.84	6.90	67.46	13.96	6.84	67.35	14.46	6.77	67.03	14.42	6.73	66.71	14.29	6.71	66.06	14.92	6.54
		220.00	69.28	13.73	3.55	68.57	14.01	3.49	68.48	14.56	3.45	68.19	14.42	3.44	67.66	14.26	3.42	67.06	14.86	3.34
		275.00	69.72	13.93	2.85	69.02	14.22	2.80	68.94	14.61	2.78	68.42	14.47	2.76	68.14	14.47	2.75	67.56	15.59	2.66
		330.00	69.94	14.03	2.38	69.24	14.32	2.34	69.17	14.66	2.32	68.66	14.49	2.31	68.37	14.60	2.29	67.80	15.92	2.21
	15	110.00	67.96	12.38	7.11	67.68	12.39	7.07	67.35	12.95	6.96	67.03	12.98	6.91	66.71	12.74	6.90	66.06	13.40	6.74
		220.00	70.16	11.88	3.73	69.68	12.18	3.68	69.39	12.83	3.62	69.35	12.60	3.63	68.61	12.34	3.60	68.30	12.97	3.54
		275.00	70.59	12.18	2.99	70.35	12.47	2.96	70.30	12.83	2.94	70.05	12.60	2.94	69.56	12.69	2.91	69.05	14.28	2.80
		330.00	70.81	12.32	2.49	70.57	12.61	2.47	70.76	12.83	2.47	70.28	12.60	2.46	70.04	12.87	2.44	69.55	14.95	2.33
	20	110.00	70.59	11.38	7.57	70.13	11.37	7.52	70.08	11.70	7.47	69.59	11.68	7.41	69.09	11.74	7.34	68.30	12.97	7.08
		220.00	72.79	11.06	3.95	72.34	11.33	3.90	72.12	11.68	3.87	71.68	11.86	3.83	71.46	12.05	3.80	70.80	12.52	3.73
		275.00	73.01	11.06	3.17	72.79	11.33	3.14	73.03	11.75	3.14	72.61	11.86	3.11	71.93	12.05	3.06	71.29	13.31	2.97
		330.00	73.23	11.06	2.65	73.23	11.33	2.64	73.49	11.78	2.63	72.84	11.86	2.60	72.17	12.05	2.56	71.54	13.73	2.47
	25	110.00	80.09	11.79	8.74	79.65	12.04	8.65	78.98	12.56	8.50	78.76	12.76	8.44	78.32	12.99	8.36	77.65	13.50	8.21
		220.00	80.09	11.61	4.38	79.65	11.97	4.33	78.98	12.34	4.26	78.76	12.56	4.23	78.32	12.78	4.19	77.65	13.27	4.12
		275.00	80.09	11.44	3.51	79.65	11.66	3.48	78.98	12.15	3.42	78.76	12.36	3.40	78.32	12.58	3.36	77.65	13.04	3.31
		330.00	80.09	11.37	2.93	79.65	11.50	2.91	78.98	12.07	2.85	78.76	12.25	2.84	78.32	12.46	2.81	77.65	12.94	2.76
	30	110.00	86.30	12.66	9.42	86.73	12.71	9.47	85.84	13.35	9.27	83.08	13.49	8.90	84.73	13.85	9.07	78.98	12.47	8.51
		220.00	86.30	12.25	4.74	86.73	12.63	4.74	85.84	13.05	4.66	83.08	13.27	4.46	84.73	13.36	4.57	78.98	11.99	4.28
		275.00	86.30	12.06	3.80	86.73	12.28	3.81	85.84	12.83	3.74	83.08	13.02	3.58	84.73	13.36	3.65	78.98	11.99	3.43
		330.00	86.30	11.98	3.17	86.73	12.11	3.18	85.84	12.71	3.12	83.08	12.92	2.99	84.73	13.36	3.04	78.98	11.99	2.86
	35	110.00	94.47	13.34	10.38	93.80	13.63	10.26	90.71	13.21	9.91	85.01	12.54	9.27	84.73	12.31	9.26	78.98	10.93	8.70
		220.00	94.47	12.92	5.22	93.80	13.31	5.15	90.71	12.96	4.97	85.01	12.32	4.65	84.73	12.06	4.65	78.98	10.51	4.38
		275.00	94.47	12.92	4.17	93.80	13.19	4.13	90.71	12.74	3.99	85.01	12.10	3.73	84.73	11.84	3.73	78.98	10.51	3.50
		330.00	94.47	12.92	3.48	93.80	13.12	3.44	90.71	12.61	3.33	85.01	11.98	3.11	84.73	11.74	3.11	78.98	10.51	2.92
	40	110.00	94.47	12.92	10.43	93.80	13.19	10.31	90.71	12.74	9.97	85.01	12.10	9.33	84.73	11.84	9.32	78.98	10.30	8.79
		220.00	94.47	12.46	5.25	93.80	12.84	5.18	90.71	12.30	5.02	85.01	11.64	4.69	84.73	11.37	4.69	78.98	9.87	4.42
		275.00	94.47	12.25	4.21	93.80	12.64	4.15	90.71	12.30	4.01	85.01	11.64	3.75	84.73	11.37	3.75	78.98	9.87	3.54
		330.00	94.47	12.13	3.51	93.80	12.52	3.47	90.71	12.30	3.34	85.01	11.64	3.13	84.73	11.37	3.13	78.98	9.87	2.95
	45	110.00	94.47	12.46	10.49	93.80	12.74	10.37	90.71	12.30	10.03	85.01	11.64	9.39	84.73	11.37	9.39	78.98	9.63	8.87
		220.00	94.47	12.04	5.27	93.80	12.39	5.21	90.71	11.61	5.06	85.01	10.99	4.73	84.73	10.71	4.73	78.98	9.21	4.46
		275.00	94.47	11.58	4.24	93.80	12.07	4.18	90.71	11.83	4.04	85.01	11.17	3.78	84.73	10.93	3.78	78.98	9.21	3.57
		330.00	94.47	11.37	3.54	93.80	11.91	3.49	90.71	11.95	3.36	85.01	11.30	3.14	84.73	11.05	3.14	78.98	9.21	2.98
120	10	110.00	68.17	14.37	6.88	68.13	14.77	6.83	68.70	15.29	6.83	67.81	15.32	6.72	67.50	15.58	6.64	66.93	15.56	6.57
		220.00	69.56	14.59	3.52	69.07	14.99	3.46	69.43	15.50	3.45	68.55	15.40	3.40	68.26	15.52	3.37	67.73	15.63	3.33
		275.00	69.79	14.52	2.83	69.07	14.99	2.77	69.92	15.55	2.78	68.80	15.45	2.73	68.51	15.61	2.71	68.00	16.14	2.65
		330.00	70.03	14.49	2.37	68.84	14.99	2.30	69.92	15.60	2.32	68.80	15.51	2.27	68.51	15.64	2.25	68.27	16.43	2.21
	15	110.00	68.63	12.75	7.15	68.37	13.05	7.08	68.70	13.58	7.05	67.81	13.77	6.91	67.50	13.86	6.86	66.93	13.98	6.77
		220.00	70.03	12.85	3.66	70.02	13.15	3.64	70.41	13.66	3.63	69.29	13.58	3.56	68.77	13.46	3.54	68.53	13.76	3.50
		275.00	70.49	12.65	2.96	70.02	13.05	2.91	70.90	13.66	2.93	69.78	13.58	2.88	69.53	13.46	2.87	69.07	14.69	2.78
		330.00	70.72	12.56	2.48	69.78	13.00	2.42	71.15	13.66	2.45	70.03	13.58	2.41	69.78	13.46	2.40	69.33	15.14	2.31
	20	110.00	70.49	11.44	7.55	70.25	11.59	7.50	70.66	11.93	7.51	69.29	12.17	7.31	69.02	12.61	7.22	68.53	13.24	7.07
		220.00	72.34	11.44	3.90	71.90	11.77	3.85	72.12	12.14	3.84	71.02	12.36	3.75	70.80	12.58	3.72	70.13	13.05	3.65
		275.00	72.58	11.32	3.13	71.90	11.67	3.08	72.86	12.14	3.11	71.51	12.36	3.03	71.30	12.61	3.00	70.67	13.53	2.92
		330.00	72.81	11.27	2.62	71.90	11.62	2.57	73.10	12.14	2.60	71.76	12.36	2.53	71.30	12.64	2.50	70.93	13.76	2.44
	25	110.00	79.17	12.29	8.56	78.76	12.56	8.47	78.10	12.96	8.33	77.88	13.32	8.26	77.43	13.59	8.17	72.79	12.46	7.72
		220.00	79.42	12.10	4.31	78.76	12.47	4.24	78.10	12.87	4.17	77.88	13.09	4.14	77.43	13.36	4.10	72.79	12.23	3.87
		275.00	79.67	11.66	3.48	78.76	12.15	3.41	78.10	12.63	3.35	77.88	13.09	3.31	77.43	13.12	3.29	72.79	12.23	3.10
		330.00	79.67	11.44	2.91	78.76	11.98	2.85	78.10	12.53	2.80	77.88	13.09	2.76	77.43	12.99	2.75	72.79	12.23	2.58
	30	110.00	86.50	13.25	9.37	85.62	13.48	9.23	83.63	13.33	8.99	80.97	12.68	8.74	78.32	12.33	8.44	72.79	10.84	7.92
		220.00	86.50	12.78	4.72	85.62	13.18	4.63	83.63	13.09	4.51	80.97	12.45	4.38	78.32	11.83	4.25	72.79	10.62	3.98
		275.00	86.50	12.38	3.79	85.62	12.88	3.72	83.63	12.82	3.62	80.97	12.45	3.51	78.32	11.83	3.40	72.79	10.40	3.19
		330.00	86.50	12.17	3.17	85.62	12.72	3.11	83.63	12.69	3.02	80.97	12.45	2.92	78.32	11.83	2.83	72.79	10.31	2.66
	35	110.00	93.36	14.27	10.12	88.94	13.11	9.70	83.63	11.93	9.17	80.97	11.35	8.91	78.32	10.81	8.64	72.79	9.55	8.09
		220.00	93.36	13.47	5.11	88.94	12.61	4.88	83.63	11.46	4.62	80.97	10.91	4.48	78.32	10.38	4.35	72.79	9.34	4.06
		275.00	93.36	13.29	4.10	88.94	12.51	3.91	83.63	11.46	3.69	80.97	10.91	3.59	78.32	10.38	3.48	72.79	9.13	3.26
		330.00	93.36	13.22	3.42	88.94	12.47	3.26	83.63	11.46	3.08	80.97	10.91	2.99	78.32	10.38	2.90	72.79	9.01	2.72

12HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	110.00	68.76	15.52	6.81	68.97	15.96	6.78	68.77	16.58	6.68	68.51	16.55	6.65	68.01	17.12	6.51	65.17	15.46	6.36
		220.00	69.73	15.65	3.46	69.73	16.15	3.43	69.03	16.78	3.34	69.04	16.63	3.35	68.55	17.06	3.29	65.44	15.53	3.19
		275.00	69.97	15.65	2.78	69.98	16.15	2.75	69.29	16.75	2.69	69.30	16.60	2.70	68.55	17.15	2.63	65.72	15.69	2.56
		330.00	70.22	15.65	2.33	70.23	16.15	2.31	69.54	16.73	2.25	69.30	16.57	2.25	68.82	17.18	2.20	65.72	15.78	2.13
	15	110.00	68.76	13.71	7.04	69.22	14.17	7.04	68.77	14.79	6.91	68.51	14.88	6.86	68.01	15.23	6.75	65.17	13.90	6.56
		220.00	69.97	13.63	3.60	70.23	14.17	3.59	69.54	14.79	3.50	69.30	14.67	3.49	69.10	14.79	3.47	65.99	13.67	3.35
		275.00	70.46	13.53	2.91	70.48	14.06	2.89	69.80	14.62	2.82	69.56	14.46	2.82	69.10	14.79	2.78	66.27	13.90	2.68
		330.00	70.71	13.48	2.44	70.74	14.01	2.42	70.06	14.51	2.37	69.83	14.34	2.37	69.37	14.79	2.33	66.54	14.02	2.24
	20	110.00	70.22	11.87	7.46	70.48	12.30	7.44	69.80	12.72	7.30	69.30	12.94	7.21	69.10	13.41	7.12	65.99	12.61	6.83
		220.00	71.68	11.94	3.82	71.24	12.30	3.77	70.57	12.72	3.70	70.35	12.94	3.67	69.91	13.16	3.63	66.81	12.52	3.47
		275.00	72.17	11.94	3.08	71.99	12.30	3.05	70.83	12.72	2.97	70.62	12.73	2.96	70.18	13.16	2.92	67.09	12.52	2.79
		330.00	72.41	11.94	2.58	72.25	12.30	2.56	71.09	12.72	2.49	70.88	12.61	2.48	70.46	13.16	2.44	67.09	12.52	2.33
	25	110.00	78.01	12.74	8.35	77.88	13.28	8.26	76.77	13.46	8.10	74.11	12.82	7.84	71.68	12.21	7.61	66.81	10.73	7.17
		220.00	78.54	12.65	4.21	77.88	13.05	4.15	76.77	13.22	4.06	74.11	12.58	3.94	71.68	11.94	3.82	66.81	10.73	3.59
		275.00	79.07	12.65	3.40	77.88	13.11	3.31	76.77	12.95	3.27	74.11	12.58	3.15	71.68	11.75	3.07	66.81	10.51	2.88
		330.00	79.33	12.65	2.84	77.88	13.11	2.76	76.77	12.82	2.73	74.11	12.58	2.62	71.68	11.61	2.56	66.81	10.41	2.40
	30	110.00	85.40	13.63	9.18	81.64	12.89	8.79	76.77	11.50	8.35	74.11	11.13	8.06	71.68	10.64	7.81	66.81	9.84	7.29
		220.00	85.40	13.38	4.61	81.64	12.61	4.42	76.77	11.24	4.19	74.11	10.91	4.04	71.68	10.38	3.92	66.81	9.58	3.66
		275.00	85.40	13.27	3.69	81.64	12.40	3.54	76.77	11.01	3.36	74.11	10.68	3.25	71.68	10.38	3.14	66.81	9.58	2.93
		330.00	85.40	13.24	3.08	81.64	12.26	2.96	76.77	10.88	2.81	74.11	10.59	2.71	71.68	10.38	2.61	66.81	9.58	2.44
	35	110.00	86.50	12.54	9.46	81.64	11.27	9.00	76.77	10.32	8.50	74.11	10.01	8.20	71.68	9.31	7.98	66.81	8.45	7.47
		220.00	86.50	12.05	4.76	81.64	11.04	4.52	76.77	10.07	4.27	74.11	9.78	4.11	71.68	9.12	4.00	66.81	8.24	3.75
		275.00	86.50	11.74	3.83	81.64	10.81	3.62	76.77	9.85	3.42	74.11	9.78	3.29	71.68	9.12	3.20	66.81	8.24	3.00
		330.00	86.50	11.60	3.19	81.64	10.67	3.03	76.77	9.75	2.86	74.11	9.78	2.74	71.68	9.12	2.67	66.81	8.24	2.50
	40	110.00	86.50	11.81	9.55	81.64	10.81	9.06	76.77	9.62	8.59	74.11	9.33	8.29	71.68	8.65	8.06	66.81	7.77	7.55
		220.00	86.50	11.33	4.81	81.64	10.31	4.56	76.77	9.18	4.32	74.11	9.07	4.16	71.68	8.43	4.05	66.81	7.56	3.79
		275.00	86.50	11.15	3.86	81.64	10.08	3.66	76.77	9.18	3.46	74.11	8.85	3.34	71.68	8.18	3.25	66.81	7.34	3.04
		330.00	86.50	11.08	3.22	81.64	9.95	3.06	76.77	9.18	2.88	74.11	8.72	2.79	71.68	8.08	2.71	66.81	7.22	2.54
	45	110.00	86.50	11.05	9.65	81.64	10.31	9.12	76.77	8.93	8.68	74.11	8.62	8.38	71.68	7.95	8.15	66.81	7.10	7.64
		220.00	86.50	10.56	4.86	81.64	9.61	4.61	76.77	8.23	4.38	74.11	8.37	4.21	71.68	7.73	4.09	66.81	6.88	3.83
		275.00	86.50	10.56	3.89	81.64	9.35	3.70	76.77	8.48	3.49	74.11	7.91	3.39	71.68	7.26	3.30	66.81	6.45	3.09
		330.00	86.50	10.56	3.24	81.64	9.22	3.09	76.77	8.61	2.91	74.11	7.69	2.83	71.68	7.04	2.76	66.81	6.21	2.58
100	10	110.00	68.75	16.33	6.71	69.55	17.19	6.70	69.00	18.06	6.52	67.48	16.78	6.49	65.27	16.28	6.27	60.84	14.47	5.93
		220.00	69.52	16.65	3.38	69.82	17.42	3.35	69.00	18.28	3.24	67.48	16.87	3.24	65.27	16.34	3.13	60.84	14.53	2.96
		275.00	70.03	16.57	2.74	70.09	17.42	2.69	69.00	18.25	2.60	67.48	16.84	2.59	65.27	16.28	2.51	60.84	14.47	2.37
		330.00	70.29	16.54	2.29	70.35	17.42	2.26	69.00	18.22	2.17	67.48	16.81	2.16	65.27	16.28	2.09	60.84	14.44	1.98
	15	110.00	69.26	14.42	7.02	69.55	15.20	6.95	69.00	16.11	6.77	67.48	15.08	6.70	65.27	14.49	6.50	60.84	13.01	6.12
		220.00	69.52	14.69	3.51	69.82	15.25	3.49	69.00	16.11	3.38	67.48	14.87	3.36	65.27	14.27	3.26	60.84	12.80	3.07
		275.00	70.03	14.45	2.84	70.35	15.11	2.83	69.00	15.92	2.72	67.48	14.66	2.70	65.27	14.06	2.62	60.84	12.59	2.47
		330.00	70.29	14.31	2.39	70.35	15.05	2.36	69.00	15.80	2.27	67.48	14.54	2.26	65.27	13.94	2.19	60.84	12.47	2.06
	20	110.00	69.77	12.33	7.35	70.09	12.88	7.32	69.00	13.63	7.08	67.48	12.91	6.98	65.27	12.27	6.78	60.84	11.27	6.34
		220.00	70.80	12.54	3.73	70.35	12.94	3.67	69.00	13.63	3.54	67.48	12.70	3.50	65.27	12.05	3.40	60.84	10.82	3.20
		275.00	71.05	12.33	3.00	70.89	12.82	2.97	69.00	13.41	2.84	67.48	12.45	2.82	65.27	11.81	2.74	60.84	10.64	2.57
		330.00	71.31	12.22	2.52	71.16	12.76	2.49	69.00	13.28	2.38	67.48	12.36	2.35	65.27	11.68	2.28	60.84	10.52	2.15
	25	110.00	76.33	13.26	8.07	74.11	12.89	7.83	69.00	11.69	7.33	67.48	11.14	7.21	65.27	10.55	7.00	60.84	9.32	6.59
		220.00	77.43	13.29	4.10	74.11	12.58	3.94	69.00	11.44	3.68	67.48	10.88	3.62	65.27	10.33	3.51	60.84	9.32	3.30
		275.00	77.71	12.99	3.31	74.11	12.48	3.15	69.00	11.25	2.96	67.48	10.67	2.91	65.27	10.33	2.81	60.84	9.07	2.65
		330.00	77.99	12.86	2.78	74.11	12.45	2.63	69.00	11.12	2.47	67.48	10.54	2.43	65.27	10.33	2.34	60.84	8.98	2.21
	30	110.00	78.54	12.12	8.50	74.11	11.14	8.06	69.00	10.03	7.54	67.48	9.73	7.39	65.27	9.01	7.20	60.84	8.40	6.71
		220.00	78.54	11.92	4.26	74.11	10.91	4.04	69.00	9.94	3.78	67.48	9.47	3.71	65.27	9.01	3.60	60.84	8.15	3.37
		275.00	78.54	11.65	3.42	74.11	10.91	3.23	69.00	9.81	3.03	67.48	9.47	2.97	65.27	8.78	2.89	60.84	8.15	2.70
		330.00	78.54	11.52	2.86	74.11	10.91	2.70	69.00	9.74	2.53	67.48	9.47	2.47	65.27	8.66	2.41	60.84	8.15	2.25
	35	110.00	78.54	10.94	8.65	74.11	10.04	8.20	69.00	8.86	7.69	67.48	8.63	7.53	65.27	8.20	7.30	60.84	7.45	6.83
		220.00	78.54	10.44	4.36	74.11	9.58	4.13	69.00	8.77	3.85	67.48	8.37	3.78	65.27	7.97	3.66	60.84	7.22	3.43
		275.00	78.54	10.44	3.48	74.11	9.58	3.30	69.00	8.64	3.09	67.48	8.37	3.02	65.27	7.97	2.93	60.84	7.22	2.74
		330.00	78.54	10.44	2.90	74.11	9.58	2.75	69.00	8.57	2.58	67.48	8.37	2.52	65.27	7.97	2.44	60.84	7.22	2.29
	40	110.00	78.54	10.21	8.74	74.11														

VRF MW



12HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	110.00	69.62	18.14	6.59	66.81	17.00	6.37	62.83	15.22	6.09	60.62	14.44	5.91	58.63	14.00	5.71	54.65	12.20	5.43
		220.00	69.34	18.21	3.27	66.53	17.09	3.16	62.83	15.28	3.04	60.62	14.54	2.95	58.63	13.97	2.86	54.65	12.26	2.71
		275.00	69.91	18.14	2.65	66.81	17.03	2.55	62.83	15.22	2.44	60.62	14.48	2.36	58.63	14.00	2.28	54.65	12.28	2.17
		330.00	70.20	18.11	2.22	66.81	17.00	2.12	62.83	15.22	2.03	60.62	14.44	1.97	58.63	14.03	1.90	54.65	12.31	1.81
	15	110.00	69.91	15.65	6.94	67.10	14.86	6.68	62.83	13.56	6.30	60.62	13.01	6.09	58.63	12.49	5.90	54.65	10.98	5.59
		220.00	69.34	15.38	3.45	66.53	14.60	3.32	62.83	13.35	3.17	60.62	12.80	3.06	58.63	12.05	2.98	54.65	10.74	2.81
		275.00	69.91	15.19	2.80	66.81	14.37	2.68	62.83	13.13	2.54	60.62	12.56	2.46	58.63	12.05	2.38	54.65	10.74	2.25
		330.00	70.20	15.05	2.35	67.10	14.28	2.25	62.83	13.01	2.12	60.62	12.46	2.05	58.63	12.05	1.99	54.65	10.74	1.87
	20	110.00	70.20	13.25	7.29	67.38	12.66	7.00	62.83	11.56	6.56	60.62	11.00	6.35	58.63	10.70	6.13	54.65	9.70	5.75
		220.00	69.91	13.25	3.62	66.81	12.50	3.47	62.83	11.35	3.29	60.62	10.82	3.19	58.63	10.27	3.09	54.65	9.25	2.90
		275.00	70.20	13.05	2.92	67.10	12.40	2.80	62.83	11.35	2.63	60.62	10.82	2.55	58.63	10.27	2.47	54.65	9.25	2.32
		330.00	70.48	12.92	2.45	67.10	12.37	2.33	62.83	11.35	2.20	60.62	10.82	2.12	58.63	10.27	2.06	54.65	9.25	1.94
	25	110.00	69.96	11.80	7.44	66.81	10.81	7.16	62.83	9.98	6.76	60.62	9.32	6.56	58.63	9.10	6.34	54.65	8.26	5.93
		220.00	70.80	11.70	3.78	66.81	10.71	3.59	62.83	9.76	3.39	60.62	9.32	3.28	58.63	8.85	3.18	54.65	8.01	2.98
		275.00	71.08	11.40	3.05	66.81	10.48	2.88	62.83	9.76	2.72	60.62	9.07	2.64	58.63	8.85	2.55	54.65	8.01	2.39
		330.00	71.08	11.23	2.55	66.81	10.35	2.41	62.83	9.76	2.26	60.62	8.98	2.20	58.63	8.85	2.12	54.65	8.01	1.99
	30	110.00	70.80	10.38	7.73	66.81	9.51	7.33	62.83	8.74	6.92	60.62	8.40	6.68	58.63	7.99	6.48	54.65	7.04	6.09
		220.00	70.80	10.16	3.88	66.81	9.32	3.68	62.83	8.52	3.47	60.62	8.15	3.36	58.63	7.77	3.25	54.65	7.04	3.04
		275.00	70.80	9.93	3.11	66.81	9.06	2.96	62.83	8.52	2.78	60.62	8.15	2.68	58.63	7.77	2.60	54.65	6.83	2.45
		330.00	70.80	9.80	2.60	66.81	8.93	2.47	62.83	8.52	2.32	60.62	8.15	2.24	58.63	7.77	2.17	54.65	6.74	2.04
	35	110.00	70.80	9.22	7.88	66.81	8.49	7.46	62.83	7.77	7.04	60.62	7.47	6.80	58.63	7.11	6.59	54.65	6.49	6.16
		220.00	70.80	8.96	3.95	66.81	8.24	3.75	62.83	7.55	3.54	60.62	7.22	3.42	58.63	6.89	3.31	54.65	6.27	3.09
		275.00	70.80	8.74	3.18	66.81	8.01	3.01	62.83	7.30	2.84	60.62	7.00	2.74	58.63	6.89	2.65	54.65	6.27	2.48
		330.00	70.80	8.61	2.65	66.81	7.89	2.51	62.83	7.17	2.37	60.62	6.91	2.29	58.63	6.89	2.21	54.65	6.27	2.06
	40	110.00	70.80	8.52	7.97	66.81	7.79	7.55	62.83	6.86	7.16	60.62	6.56	6.91	58.63	6.44	6.68	54.65	5.81	6.25
		220.00	70.80	8.04	4.01	66.81	7.57	3.79	62.83	6.63	3.59	60.62	6.34	3.47	58.63	6.19	3.35	54.65	5.59	3.14
		275.00	70.80	8.04	3.21	66.81	7.57	3.03	62.83	6.63	2.88	60.62	6.34	2.78	58.63	6.19	2.68	54.65	5.59	2.51
		330.00	70.80	8.04	2.68	66.81	7.57	2.53	62.83	6.63	2.40	60.62	6.34	2.31	58.63	6.19	2.24	54.65	5.59	2.09
	45	110.00	70.80	7.82	8.06	66.81	7.09	7.64	62.83	5.94	7.28	60.62	5.66	7.03	58.63	5.75	6.76	54.65	5.13	6.33
		220.00	70.80	7.12	4.07	66.81	6.87	3.83	62.83	5.72	3.65	60.62	5.44	3.53	58.63	5.52	3.40	54.65	4.91	3.18
		275.00	70.80	7.34	3.25	66.81	7.09	3.06	62.83	5.94	2.91	60.62	5.66	2.81	58.63	5.52	2.72	54.65	4.91	2.54
		330.00	70.80	7.47	2.70	66.81	7.22	2.54	62.83	6.03	2.42	60.62	5.78	2.34	58.63	5.52	2.26	54.65	4.91	2.12
80	10	110.00	62.55	15.32	6.04	59.01	14.02	5.76	55.75	12.42	5.54	53.98	12.08	5.36	52.21	11.45	5.21	48.67	10.40	4.90
		220.00	62.83	15.22	3.05	59.29	13.92	2.90	55.75	12.42	2.77	53.98	12.11	2.68	52.21	11.48	2.61	48.67	10.40	2.45
		275.00	62.83	15.19	2.44	59.29	13.99	2.32	55.75	12.48	2.21	53.98	12.05	2.15	52.21	11.42	2.09	48.67	10.34	1.96
		330.00	62.83	15.15	2.03	59.01	14.02	1.92	55.75	12.51	1.84	53.98	12.02	1.79	52.21	11.39	1.74	48.67	10.31	1.64
	15	110.00	62.83	13.88	6.26	59.29	12.58	5.98	55.75	11.05	5.72	53.98	10.88	5.51	52.21	10.22	5.37	48.67	9.35	5.03
		220.00	62.83	13.40	3.16	59.29	12.12	3.02	55.75	10.86	2.87	53.98	10.64	2.77	52.21	10.01	2.70	48.67	9.14	2.53
		275.00	62.83	13.13	2.54	59.29	12.12	2.41	55.75	10.86	2.30	53.98	10.42	2.23	52.21	9.76	2.17	48.67	8.90	2.04
		330.00	62.83	12.99	2.13	59.29	12.12	2.01	55.75	10.86	1.91	53.98	10.30	1.86	52.21	9.64	1.82	48.67	8.81	1.70
	20	110.00	62.83	11.65	6.55	59.29	10.71	6.22	55.75	9.52	5.91	53.98	9.32	5.71	52.21	8.90	5.54	48.67	8.06	5.20
		220.00	62.83	11.41	3.29	59.29	10.44	3.12	55.75	9.52	2.96	53.98	9.07	2.87	52.21	8.65	2.79	48.67	7.82	2.61
		275.00	62.83	11.17	2.64	59.29	10.21	2.51	55.75	9.30	2.38	53.98	9.07	2.30	52.21	8.44	2.24	48.67	7.82	2.09
		330.00	62.83	11.04	2.21	59.29	10.11	2.10	55.75	9.18	1.99	53.98	9.07	1.91	52.21	8.32	1.87	48.67	7.82	1.74
	25	110.00	62.83	10.07	6.75	59.29	9.24	6.40	55.75	8.24	6.08	53.98	8.08	5.87	52.21	7.73	5.69	48.67	7.04	5.33
		220.00	62.83	9.80	3.39	59.29	9.01	3.22	55.75	8.24	3.04	53.98	7.86	2.95	52.21	7.51	2.86	48.67	6.82	2.68
		275.00	62.83	9.60	2.72	59.29	9.01	2.57	55.75	7.99	2.44	53.98	7.86	2.36	52.21	7.51	2.29	48.67	6.82	2.14
		330.00	62.83	9.47	2.28	59.29	9.01	2.14	55.75	7.90	2.04	53.98	7.86	1.97	52.21	7.51	1.91	48.67	6.82	1.78
	30	110.00	62.83	8.72	6.92	59.29	8.11	6.55	55.75	7.49	6.17	53.98	7.17	5.99	52.21	6.84	5.80	48.67	6.27	5.42
		220.00	62.83	8.46	3.48	59.29	7.88	3.29	55.75	7.24	3.10	53.98	6.96	3.01	52.21	6.62	2.92	48.67	6.03	2.73
		275.00	62.83	8.46	2.78	59.29	7.88	2.63	55.75	7.24	2.48	53.98	6.96	2.41	52.21	6.62	2.33	48.67	6.03	2.18
		330.00	62.83	8.46	2.32	59.29	7.88	2.19	55.75	7.24	2.07	53.98	6.96	2.01	52.21	6.62	1.94	48.67	6.03	1.82
	35	110.00	62.83	7.91	7.03	59.29	7.22	6.66	55.75	6.67	6.28	53.98	6.18	6.11	52.21	6.14	5.89	48.67	5.41	5.53
		220.00	62.83	7.68	3.53	59.29	7.00	3.34	55.75	6.45	3.15	53.98	6.18	3.06	52.21	5.92	2.96	48.67	5.41	2.77
		275.00	62.83	7.68	2.82	59.29	6.78	2.69	55.75	6.45	2.52	53.98	5.94	2.46	52.21	5.92	2.37	48.67	5.20	2.22
		330.00	62.83	7.68	2.35	59.29	6.66	2.24	55.75	6.45	2.10	53.98	5.85	2.05	52.21	5.92	1.97	48.67	5.08	1.86
	40	110.00	62.83	7.43	7.09	59.29	6.56	6.75	55.75	5.97	6.37	53.98	5.73	6.17	52.21	5.48	5.98	48.67	4.96	5.59
		220.00	62.83																	

12HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	110.00	54.81	12.71	5.38	51.99	11.60	5.17	48.89	10.55	4.90	47.12	9.82	4.77	45.58	9.52	4.61	42.48	8.43	4.36
		220.00	55.09	12.61	2.72	51.99	11.50	2.59	48.89	10.46	2.46	47.12	9.82	2.39	45.58	9.52	2.31	42.48	8.43	2.18
		275.00	55.09	12.68	2.17	51.99	11.57	2.07	48.89	10.49	1.97	47.12	9.85	1.91	45.58	9.43	1.85	42.48	8.43	1.74
		330.00	55.09	12.68	1.81	51.99	11.57	1.72	48.89	10.52	1.64	47.12	9.88	1.59	45.58	9.40	1.54	42.48	8.46	1.45
	15	110.00	55.09	11.52	5.57	51.99	10.45	5.31	48.89	9.40	5.05	47.12	8.81	4.90	45.58	8.47	4.75	42.48	7.56	4.47
		220.00	55.09	11.05	2.82	51.99	9.97	2.69	48.89	8.95	2.55	47.12	8.63	2.46	45.58	8.26	2.39	42.48	7.36	2.25
		275.00	55.09	11.05	2.25	51.99	9.97	2.15	48.89	8.95	2.04	47.12	8.63	1.97	45.58	8.05	1.92	42.48	7.36	1.80
		330.00	55.09	11.05	1.88	51.99	9.97	1.79	48.89	8.95	1.70	47.12	8.63	1.64	45.58	7.93	1.61	42.48	7.36	1.50
	20	110.00	55.09	9.63	5.82	51.99	8.81	5.52	48.89	8.10	5.22	47.12	7.74	5.04	45.58	7.39	4.89	42.48	6.72	4.57
		220.00	55.09	9.36	2.92	51.99	8.59	2.78	48.89	7.86	2.62	47.12	7.53	2.53	45.58	7.18	2.46	42.48	6.51	2.30
		275.00	55.09	9.36	2.34	51.99	8.59	2.22	48.89	7.86	2.10	47.12	7.32	2.04	45.58	7.18	1.96	42.48	6.31	1.85
		330.00	55.09	9.36	1.95	51.99	8.59	1.85	48.89	7.86	1.75	47.12	7.23	1.70	45.58	7.18	1.64	42.48	6.19	1.55
	25	110.00	55.09	8.30	5.98	51.99	7.68	5.67	48.89	7.06	5.35	47.12	6.77	5.16	45.58	6.27	5.03	42.48	5.72	4.70
		220.00	55.09	8.08	3.01	51.99	7.46	2.85	48.89	6.84	2.69	47.12	6.56	2.59	45.58	6.27	2.51	42.48	5.72	2.35
		275.00	55.09	7.86	2.42	51.99	7.21	2.29	48.89	6.84	2.15	47.12	6.56	2.08	45.58	6.06	2.02	42.48	5.72	1.88
		330.00	55.09	7.76	2.02	51.99	7.09	1.91	48.89	6.84	1.79	47.12	6.56	1.73	45.58	5.94	1.69	42.48	5.72	1.57
	30	110.00	55.09	7.33	6.11	51.99	6.80	5.78	48.89	6.30	5.45	47.12	5.81	5.29	45.58	5.78	5.09	42.48	5.10	4.78
		220.00	55.09	7.11	3.07	51.99	6.58	2.90	48.89	6.05	2.74	47.12	5.81	2.64	45.58	5.56	2.56	42.48	5.10	2.39
		275.00	55.09	7.11	2.46	51.99	6.58	2.32	48.89	6.05	2.19	47.12	5.60	2.12	45.58	5.56	2.05	42.48	5.10	1.91
		330.00	55.09	7.11	2.05	51.99	6.58	1.94	48.89	6.05	1.83	47.12	5.48	1.78	45.58	5.56	1.71	42.48	5.10	1.59
	35	110.00	55.09	6.55	6.21	51.99	6.09	5.87	48.89	5.43	5.56	47.12	5.40	5.34	45.58	5.01	5.19	42.48	4.83	4.82
		220.00	55.09	6.34	3.12	51.99	5.87	2.95	48.89	5.43	2.78	47.12	5.19	2.68	45.58	5.01	2.59	42.48	4.61	2.42
		275.00	55.09	6.34	2.49	51.99	5.87	2.36	48.89	5.22	2.23	47.12	5.19	2.15	45.58	5.01	2.08	42.48	4.61	1.94
		330.00	55.09	6.34	2.08	51.99	5.87	1.97	48.89	5.10	1.87	47.12	5.19	1.79	45.58	5.01	1.73	42.48	4.61	1.61
	40	110.00	55.09	6.09	6.27	51.99	5.65	5.93	48.89	4.98	5.62	47.12	4.74	5.42	45.58	4.59	5.24	42.48	4.37	4.87
		220.00	55.09	5.87	3.15	51.99	5.44	2.98	48.89	4.77	2.82	47.12	4.74	2.71	45.58	4.59	2.62	42.48	4.19	2.45
		275.00	55.09	5.87	2.52	51.99	5.44	2.38	48.89	4.77	2.26	47.12	4.53	2.18	45.58	4.35	2.11	42.48	4.19	1.96
		330.00	55.09	5.87	2.10	51.99	5.44	1.99	48.89	4.77	1.88	47.12	4.41	1.82	45.58	4.26	1.76	42.48	4.19	1.63
	45	110.00	55.09	5.65	6.32	51.99	5.19	5.99	48.89	4.56	5.67	47.12	4.11	5.50	45.58	4.17	5.30	42.48	3.95	4.93
		220.00	55.09	5.43	3.18	51.99	4.97	3.01	48.89	4.14	2.86	47.12	4.29	2.74	45.58	4.17	2.65	42.48	3.73	2.48
		275.00	55.09	5.43	2.54	51.99	4.97	2.41	48.89	4.32	2.28	47.12	3.88	2.21	45.58	3.71	2.14	42.48	3.73	1.98
		330.00	55.09	5.43	2.12	51.99	4.97	2.01	48.89	4.44	1.90	47.12	3.67	1.85	45.58	3.47	1.80	42.48	3.73	1.65
60	10	110.00	47.12	9.77	4.78	44.47	9.22	4.51	41.81	8.63	4.25	40.49	8.01	4.15	39.16	7.80	4.01	36.50	6.88	3.79
		220.00	47.12	9.77	2.39	44.47	9.22	2.25	41.81	8.63	2.12	40.49	8.10	2.07	39.16	7.77	2.01	36.50	6.97	1.89
		275.00	47.12	9.80	1.91	44.47	9.13	1.81	41.81	8.54	1.70	40.49	8.01	1.66	39.16	7.71	1.61	36.50	6.88	1.52
		330.00	47.12	9.80	1.59	44.47	9.07	1.51	41.81	8.48	1.42	40.49	7.95	1.39	39.16	7.68	1.34	36.50	6.85	1.26
	15	110.00	47.12	8.86	4.90	44.47	8.29	4.63	41.81	7.69	4.37	40.49	7.20	4.26	39.16	6.93	4.12	36.50	6.20	3.88
		220.00	47.12	8.64	2.46	44.47	8.05	2.33	41.81	7.47	2.20	40.49	7.20	2.13	39.16	6.72	2.07	36.50	6.20	1.94
		275.00	47.12	8.64	1.97	44.47	7.83	1.87	41.81	7.26	1.77	40.49	6.96	1.72	39.16	6.51	1.67	36.50	5.99	1.56
		330.00	47.12	8.64	1.64	44.47	7.71	1.57	41.81	7.14	1.48	40.49	6.84	1.43	39.16	6.39	1.40	36.50	5.87	1.31
	20	110.00	47.12	7.73	5.04	44.47	7.15	4.77	41.81	6.59	4.51	40.49	6.33	4.37	39.16	6.09	4.23	36.50	5.55	3.96
		220.00	47.12	7.51	2.53	44.47	6.93	2.40	41.81	6.38	2.27	40.49	6.12	2.20	39.16	5.85	2.13	36.50	5.34	1.99
		275.00	47.12	7.51	2.03	44.47	6.93	1.92	41.81	6.38	1.81	40.49	6.12	1.76	39.16	5.85	1.70	36.50	5.34	1.59
		330.00	47.12	7.51	1.69	44.47	6.93	1.60	41.81	6.38	1.51	40.49	6.12	1.47	39.16	5.85	1.42	36.50	5.34	1.33
	25	110.00	47.12	6.78	5.16	44.47	6.32	4.88	41.81	5.61	4.63	40.49	5.60	4.46	39.16	5.17	4.35	36.50	4.96	4.04
		220.00	47.12	6.56	2.59	44.47	6.07	2.46	41.81	5.61	2.32	40.49	5.39	2.24	39.16	5.17	2.17	36.50	4.75	2.03
		275.00	47.12	6.56	2.08	44.47	6.07	1.96	41.81	5.40	1.86	40.49	5.39	1.80	39.16	5.17	1.74	36.50	4.75	1.62
		330.00	47.12	6.56	1.73	44.47	6.07	1.64	41.81	5.31	1.56	40.49	5.39	1.50	39.16	5.17	1.45	36.50	4.75	1.35
	30	110.00	47.12	6.02	5.26	44.47	5.60	4.97	41.81	5.25	4.68	40.49	5.02	4.54	39.16	4.83	4.39	36.50	4.50	4.09
		220.00	47.12	5.81	2.64	44.47	5.39	2.50	41.81	5.01	2.35	40.49	4.81	2.28	39.16	4.61	2.21	36.50	4.26	2.06
		275.00	47.12	5.81	2.11	44.47	5.39	2.00	41.81	5.01	1.88	40.49	4.81	1.83	39.16	4.61	1.77	36.50	4.26	1.65
		330.00	47.12	5.81	1.76	44.47	5.39	1.67	41.81	5.01	1.57	40.49	4.81	1.52	39.16	4.61	1.47	36.50	4.26	1.37
	35	110.00	47.12	5.21	5.36	44.47	5.07	5.04	41.81	4.53	4.77	40.49	4.59	4.59	39.16	4.38	4.45	36.50	4.12	4.14
		220.00	47.12	5.21	2.68	44.47	4.86	2.53	41.81	4.53	2.38	40.49	4.35	2.31	39.16	4.19	2.24	36.50	3.89	2.09
		275.00	47.12	5.21	2.14	44.47	4.86	2.03	41.81	4.29	1.92	40.49	4.35	1.85	39.16	4.19	1.79	36.50	3.89	1.67
		330.00	47.12	5.21	1.79	44.47	4.86	1.69	41.81	4.20	1.60	40.49	4.35	1.54	39.16	4.19	1.49	36.50	3.89	1.39
	40	110.00	47.12	4.76	5.42	44.47	4.64	5.09	41.81	4.11	4.82	40.49	4.17	4.65	39.16	3.95	4.50	36.50	3.68	4.20
		220.00	47.12	4.76	2.71	44.47	4.40	2.56	41.81	4.11	2.41	40.49	3.93							

VRF MW



12HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	110.00	39.10	7.78	4.01	36.89	7.33	3.78	37.17	6.67	3.90	33.63	6.44	3.48	32.52	6.00	3.39	30.31	5.53	3.17
		220.00	39.38	7.71	2.03	37.17	7.33	1.91	37.17	6.64	1.95	33.63	6.38	1.74	32.52	6.07	1.69	30.31	5.47	1.59
		275.00	39.38	7.78	1.62	37.17	7.33	1.53	37.17	6.64	1.56	33.63	6.41	1.39	32.52	5.97	1.36	30.31	5.50	1.27
		330.00	39.38	7.78	1.35	37.17	7.36	1.27	37.17	6.67	1.30	33.63	6.41	1.16	32.52	5.91	1.13	30.31	5.50	1.06
	15	110.00	39.38	7.02	4.14	37.17	6.61	3.91	37.17	5.94	3.99	33.63	5.77	3.56	32.52	5.36	3.47	30.31	4.96	3.24
		220.00	39.38	6.80	2.08	37.17	6.39	1.97	37.17	5.73	2.01	33.63	5.55	1.80	32.52	5.36	1.74	30.31	4.75	1.63
		275.00	39.38	6.80	1.67	37.17	6.39	1.57	37.17	5.73	1.61	33.63	5.55	1.44	32.52	5.11	1.40	30.31	4.75	1.31
		330.00	39.38	6.80	1.39	37.17	6.39	1.31	37.17	5.73	1.34	33.63	5.55	1.20	32.52	4.99	1.17	30.31	4.75	1.09
	20	110.00	39.38	6.11	4.26	37.17	5.70	4.03	37.17	5.30	4.08	33.63	5.09	3.65	32.52	4.90	3.53	30.31	4.31	3.33
		220.00	39.38	5.89	2.14	37.17	5.48	2.03	37.17	5.06	2.05	33.63	4.88	1.84	32.52	4.68	1.78	30.31	4.31	1.66
		275.00	39.38	5.89	1.71	37.17	5.48	1.62	37.17	5.06	1.64	33.63	4.88	1.47	32.52	4.68	1.42	30.31	4.31	1.33
		330.00	39.38	5.89	1.43	37.17	5.48	1.35	37.17	5.06	1.37	33.63	4.88	1.23	32.52	4.68	1.19	30.31	4.31	1.11
	25	110.00	39.38	5.44	4.34	37.17	4.84	4.14	37.17	4.75	4.15	33.63	4.33	3.75	32.52	4.17	3.63	30.31	3.86	3.38
		220.00	39.38	5.19	2.19	37.17	4.84	2.07	37.17	4.50	2.09	33.63	4.33	1.87	32.52	4.17	1.81	30.31	3.86	1.69
		275.00	39.38	5.19	1.75	37.17	4.84	1.65	37.17	4.50	1.67	33.63	4.33	1.50	32.52	4.17	1.45	30.31	3.86	1.35
		330.00	39.38	5.19	1.46	37.17	4.84	1.38	37.17	4.50	1.39	33.63	4.33	1.25	32.52	4.17	1.21	30.31	3.86	1.13
	30	110.00	39.38	4.87	4.41	37.17	4.54	4.17	37.17	4.31	4.20	33.63	3.91	3.80	32.52	3.99	3.65	30.31	3.72	3.40
		220.00	39.38	4.66	2.22	37.17	4.35	2.10	37.17	4.06	2.12	33.63	3.91	1.90	32.52	3.78	1.84	30.31	3.51	1.71
		275.00	39.38	4.66	1.78	37.17	4.35	1.68	37.17	4.06	1.69	33.63	3.91	1.52	32.52	3.78	1.47	30.31	3.51	1.37
		330.00	39.38	4.66	1.48	37.17	4.35	1.40	37.17	4.06	1.41	33.63	3.91	1.27	32.52	3.78	1.23	30.31	3.51	1.14
	35	110.00	39.38	4.40	4.47	37.17	3.95	4.25	37.17	3.71	4.28	33.63	3.79	3.82	32.52	3.47	3.72	30.31	3.22	3.46
		220.00	39.38	4.22	2.25	37.17	3.95	2.12	37.17	3.71	2.14	33.63	3.58	1.92	32.52	3.47	1.86	30.31	3.22	1.73
		275.00	39.38	4.22	1.80	37.17	3.95	1.70	37.17	3.71	1.71	33.63	3.58	1.54	32.52	3.47	1.49	30.31	3.22	1.39
		330.00	39.38	4.22	1.50	37.17	3.95	1.42	37.17	3.71	1.43	33.63	3.58	1.28	32.52	3.47	1.24	30.31	3.22	1.15
	40	110.00	39.38	3.97	4.53	37.17	3.74	4.28	37.17	3.50	4.31	33.63	3.36	3.87	32.52	3.26	3.74	30.31	2.99	3.50
		220.00	39.38	3.76	2.28	37.17	3.53	2.15	37.17	3.29	2.17	33.63	3.36	1.94	32.52	3.02	1.89	30.31	2.99	1.75
		275.00	39.38	3.76	1.82	37.17	3.53	1.72	37.17	3.29	1.73	33.63	3.36	1.55	32.52	3.02	1.51	30.31	2.99	1.40
		330.00	39.38	3.76	1.52	37.17	3.53	1.43	37.17	3.29	1.44	33.63	3.36	1.29	32.52	3.02	1.26	30.31	2.99	1.17
	45	110.00	39.38	3.54	4.58	37.17	3.53	4.30	37.17	3.29	4.33	33.63	2.90	3.93	32.52	3.02	3.77	30.31	2.78	3.52
		220.00	39.38	3.33	2.31	37.17	3.07	2.18	37.17	2.83	2.20	33.63	3.11	1.95	32.52	2.60	1.91	30.31	2.78	1.76
		275.00	39.38	3.33	1.84	37.17	3.07	1.74	37.17	2.83	1.76	33.63	3.11	1.56	32.52	2.60	1.53	30.31	2.78	1.41
		330.00	39.38	3.33	1.54	37.17	3.07	1.45	37.17	2.83	1.46	33.63	3.11	1.30	32.52	2.60	1.28	30.31	2.78	1.17

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	120.00	60.46	6.31	7.87	76.88	11.01	10.36	77.29	8.94	10.16	78.12	8.98	10.27	79.09	8.98	10.38	80.81	9.04	10.59	82.04	8.96	10.73
		240.00	60.46	5.85	3.91	76.88	10.32	5.14	77.29	8.36	5.05	78.12	8.38	5.10	79.09	8.32	5.15	80.81	8.46	5.26	82.04	8.52	5.34
		300.00	60.46	5.67	3.12	76.88	10.12	4.10	77.29	8.17	4.03	78.12	8.17	4.07	79.09	8.23	4.12	80.81	8.26	4.20	82.04	8.28	4.26
		360.00	60.46	5.57	2.59	76.88	9.98	3.41	77.29	8.13	3.36	78.12	8.09	3.39	79.09	8.19	3.43	80.81	8.18	3.50	82.04	8.16	3.54
	15	120.00	59.59	8.29	8.00	75.85	14.45	10.64	76.04	11.71	10.34	76.95	11.75	10.45	77.65	11.77	10.54	79.68	11.86	10.79	80.92	11.82	10.93
		240.00	59.59	7.65	3.96	75.85	13.56	5.27	76.04	10.95	5.13	76.95	10.98	5.18	77.65	10.98	5.22	79.68	11.12	5.35	80.92	11.13	5.42
		300.00	59.59	7.42	3.16	75.85	13.22	4.20	76.04	10.71	4.09	76.95	10.77	4.14	77.65	10.77	4.17	79.68	10.88	4.27	80.92	10.89	4.33
		360.00	59.59	7.33	2.63	75.85	13.08	3.49	76.04	10.61	3.40	76.95	10.64	3.44	77.65	10.69	3.47	79.68	10.75	3.55	80.92	10.73	3.60
	20	120.00	58.72	10.09	8.11	74.83	17.55	10.89	74.78	14.20	10.49	75.78	14.26	10.61	76.79	14.22	10.73	78.54	14.35	10.95	79.80	14.35	11.10
		240.00	58.72	9.26	4.01	74.83	16.45	5.38	74.78	13.24	5.19	75.78	13.32	5.25	76.79	13.35	5.31	78.54	13.45	5.42	79.80	13.51	5.50
		300.00	58.72	8.98	3.19	74.83	16.04	4.28	74.78	13.00	4.14	75.78	13.06	4.19	76.79	13.06	4.24	78.54	13.21	4.33	79.80	13.18	4.38
		360.00	58.72	8.85	2.65	74.83	15.83	3.56	74.78	12.86	3.44	75.78	12.89	3.48	76.79	12.93	3.52	78.54	13.04	3.60	79.80	13.02	3.65
	25	120.00	58.72	11.87	8.32	70.01	15.53	10.08	72.52	15.76	10.40	73.52	15.80	10.53	74.53	15.91	10.66	76.03	15.93	10.84	77.04	15.93	10.96
		240.00	58.72	10.91	4.10	70.01	14.54	4.98	72.52	14.73	5.14	73.52	14.81	5.21	74.53	14.86	5.27	76.03	14.94	5.36	77.04	14.99	5.42
		300.00	58.72	10.60	3.27	70.01	14.24	3.97	72.52	14.47	4.10	73.52	14.50	4.15	74.53	14.60	4.20	76.03	14.64	4.27	77.04	14.67	4.32
		360.00	58.72	10.47	2.72	70.01	14.05	3.30	72.52	14.30	3.41	73.52	14.35	3.45	74.53	14.45	3.50	76.03	14.50	3.56	77.04	14.48	3.60
	30	120.00	58.72	14.07	8.58	67.75	17.14	10.01	70.01	17.36	10.30	70.76	17.42	10.39	71.77	17.45	10.51	73.02	17.54	10.67	74.03	17.48	10.78
		240.00	58.72	12.90	4.22	67.75	16.05	4.94	70.01	16.21	5.08	70.76	16.29	5.13	71.77	16.34	5.19	73.02	16.42	5.27	74.03	16.45	5.33
		300.00	58.72	12.59	3.36	67.75	15.69	3.93	70.01	15.90	4.05	70.76	15.98	4.09	71.77	16.07	4.14	73.02	16.09	4.20	74.03	16.09	4.25
		360.00	58.72	12.42	2.79	67.75	15.51	3.27	70.01	15.74	3.37	70.76	15.80	3.40	71.77	15.93	3.45	73.02	15.95	3.50	74.03	15.89	3.53
	35	120.00	58.72	16.75	8.89	64.74	18.80	9.85	66.75	18.92	10.10	67.75	19.06	10.23	68.51	19.05	10.32	69.51	19.11	10.44	70.26	19.09	10.53
		240.00	58.72	15.42	4.37	64.74	17.57	4.85	66.75	17.72	4.98	67.75	17.80	5.04	68.51	17.86	5.09	69.51	17.91	5.15	70.26	17.91	5.20
		300.00	58.72	14.96	3.47	64.74	17.17	3.86	66.75	17.34	3.96	67.75	17.42	4.02	68.51	17.52	4.06	69.51	17.58	4.11	70.26	17.52	4.14
		360.00	58.72	14.75	2.89	64.74	16.98	3.21	66.75	17.17	3.30	67.75	17.27	3.34	68.51	17.34	3.37	69.51	17.40	3.41	70.26	17.34	3.44
	40	120.00	51.94	17.67	8.20	57.51	19.83	9.12	59.26	19.98	9.34	60.19	20.09	9.46	60.80	20.09	9.53	61.97	20.17	9.68	62.58	20.12	9.75
		240.00	51.94	16.24	4.02	57.51	18.50	4.48	59.26	18.70	4.59	60.19	18.76	4.65	60.80	18.82	4.69	61.97	18.93	4.77	62.58	18.91	4.80
		300.00	51.94	15.77	3.19	57.51	18.11	3.56	59.26	18.28	3.66	60.19	18.41	3.71	60.80	18.45	3.74	61.97	18.53	3.80	62.58	18.48	3.82
		360.00	51.94	15.57	2.65	57.51	17.91	2.96	59.26	18.07	3.04	60.19	18.22	3.08	60.80	18.27	3.11	61.97	18.35	3.16	62.58	18.27	3.18
	45	120.00	45.49	18.59	7.55	50.28	20.81	8.38	51.78	21.01	8.58	52.63	21.15	8.70	53.09	21.17	8.75	54.16	21.19	8.88	54.62	21.16	8.93
		240.00	45.49	17.06	3.69	50.28	19.48	4.11	51.78	19.64	4.21	52.63	19.74	4.27	53.09	19.75	4.29	54.16	19.91	4.36	54.62	19.91	4.39
		300.00	45.49	16.59	2.93	50.28	19.04	3.27	51.78	19.22	3.35	52.63	19.36	3.39	53.09	19.42	3.42	54.16	19.51	3.47	54.62	19.41	3.49
		360.00	45.49	16.39	2.43	50.28	18.80	2.71	51.78	19.00	2.78	52.63	19.21	2.82	53.09	19.23	2.84	54.16	19.29	2.89	54.62	19.16	2.90
120	10	120.00	55.33	5.49	7.17	65.98	7.12	8.62	75.14	8.77	9.89	76.34	8.75	10.03	77.32	8.85	10.16	79.04	8.86	10.36	80.53	8.87	10.54
		240.00	55.33	5.02	3.56	65.98	6.65	4.28	75.14	8.13	4.91	76.34	8.23	4.98	77.32	8.20	5.04	79.04	8.31	5.15	80.53	8.25	5.23
		300.00	55.33	4.98	2.84	65.98	6.51	3.42	75.14	8.03	3.92	76.34	8.05	3.98	77.32	8.07	4.03	79.04	8.14	4.11	80.53	8.12	4.18
		360.00	55.33	4.94	2.37	65.98	6.46	2.85	75.14	7.99	3.27	76.34	7.96	3.31	77.32	7.98	3.35	79.04	8.06	3.42	80.53	8.04	3.48
	15	120.00	54.76	7.30	7.31	65.36	9.48	8.82	74.50	11.58	10.15	75.43	11.61	10.26	76.42	11.70	10.39	78.17	11.75	10.60	79.66	11.75	10.77
		240.00	54.76	6.67	3.62	65.36	8.87	4.37	74.50	10.79	5.03	75.43	10.87	5.09	76.42	10.92	5.15	78.17	10.98	5.25	79.66	11.00	5.34
		300.00	54.76	6.54	2.89	65.36	8.68	3.49	74.50	10.60	4.01	75.43	10.65	4.06	76.42	10.70	4.11	78.17	10.81	4.19	79.66	10.75	4.26
		360.00	54.76	6.46	2.41	65.36	8.58	2.90	74.50	10.50	3.34	75.43	10.56	3.38	76.42	10.62	3.42	78.17	10.69	3.49	79.66	10.66	3.55
	20	120.00	54.20	8.86	7.43	64.74	11.55	8.99	73.52	14.10	10.33	74.53	14.16	10.45	75.53	14.20	10.58	77.29	14.33	10.80	78.79	14.29	10.97
		240.00	54.20	8.15	3.67	64.74	10.80	4.45	73.52	13.16	5.11	74.53	13.24	5.17	75.53	13.29	5.23	77.29	13.40	5.34	78.79	13.45	5.44
		300.00	54.20	7.93	2.93	64.74	10.56	3.55	73.52	12.87	4.07	74.53	12.98	4.13	75.53	13.08	4.18	77.29	13.15	4.26	78.79	13.12	4.33
		360.00	54.20	7.81	2.44	64.74	10.47	2.95	73.52	12.72	3.39	74.53	12.84	3.43	75.53	12.95	3.48	77.29	13.02	3.55	78.79	12.95	3.60
	25	120.00	54.20	10.41	7.62	64.74	13.59	9.23	71.27	15.67	10.25	72.27	15.72	10.37	73.52	15.84	10.53	75.03	15.88	10.71	76.28	15.96	10.87
		240.00	54.20	9.61	3.76	64.74	12.74	4.57	71.27	14.65	5.06	72.27	14.73	5.13	73.52	14.78	5.20	75.03	14.89	5.30	76.28	14.94	5.38
		300.00	54.20	9.32	2.99	64.74	12.42	3.64	71.27	14.38	4.04	72.27	14.41	4.09	73.52	14.54	4.15	75.03	14.58	4.22	76.28	14.60	4.28
		360.00	54.20	9.20	2.49	64.74	12.28	3.03	71.27	14.20	3.36	72.27	14.25	3.40	73.52	14.39	3.45	75.03	14.43	3.51	76.28	14.41	3.56

VRF MW



12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	120.00	50.23	4.76	6.48	59.82	6.15	7.77	69.64	7.73	9.12	73.64	8.56	9.69	74.64	8.60	9.81	76.94	8.63	10.09	78.44	8.67	10.27
		240.00	50.23	4.37	3.22	59.82	5.72	3.86	69.64	7.26	4.53	73.64	8.01	4.81	74.64	8.11	4.88	76.94	8.02	5.01	78.44	8.11	5.10
		300.00	50.23	4.22	2.57	59.82	5.59	3.08	69.64	7.12	3.62	73.64	7.88	3.84	74.64	7.88	3.89	76.94	7.89	4.00	78.44	8.02	4.08
		360.00	50.23	4.14	2.14	59.82	5.55	2.57	69.64	7.03	3.01	73.64	7.79	3.20	74.64	7.79	3.24	76.94	7.80	3.33	78.44	7.94	3.39
	15	120.00	49.96	6.33	6.63	59.52	8.20	7.98	69.33	10.43	9.40	73.33	11.48	10.00	74.33	11.51	10.12	76.64	11.57	10.40	77.84	11.67	10.55
		240.00	49.96	5.83	3.29	59.52	7.64	3.96	69.33	9.73	4.66	73.33	10.75	4.95	74.33	10.80	5.02	76.64	10.82	5.15	77.84	10.93	5.23
		300.00	49.96	5.64	2.62	59.52	7.47	3.16	69.33	9.55	3.72	73.33	10.52	3.95	74.33	10.62	4.00	76.64	10.60	4.11	77.84	10.67	4.17
		360.00	49.96	5.56	2.18	59.52	7.43	2.63	69.33	9.41	3.09	73.33	10.43	3.29	74.33	10.48	3.33	76.64	10.52	3.42	77.84	10.54	3.47
	20	120.00	49.69	7.75	6.77	59.22	10.08	8.17	69.01	12.76	9.64	73.02	14.03	10.26	74.03	14.15	10.39	76.03	14.20	10.63	77.54	14.31	10.83
		240.00	49.69	7.14	3.35	59.22	9.39	4.04	69.01	11.97	4.77	73.02	13.16	5.08	74.03	13.21	5.14	76.03	13.32	5.27	77.54	13.40	5.36
		300.00	49.69	6.91	2.67	59.22	9.18	3.22	69.01	11.69	3.80	73.02	12.89	4.05	74.03	13.03	4.10	76.03	13.06	4.20	77.54	13.05	4.27
		360.00	49.69	6.79	2.22	59.22	9.09	2.68	69.01	11.55	3.16	73.02	12.75	3.37	74.03	12.90	3.41	76.03	12.93	3.49	77.54	12.88	3.55
	25	120.00	49.69	9.12	6.93	59.22	11.84	8.38	69.01	15.11	9.91	71.01	15.61	10.21	72.02	15.72	10.34	73.78	15.76	10.55	75.28	15.91	10.75
		240.00	49.69	8.38	3.42	59.22	11.06	4.14	69.01	14.12	4.90	71.01	14.62	5.05	72.02	14.70	5.11	73.78	14.81	5.22	75.28	14.89	5.31
		300.00	49.69	8.16	2.73	59.22	10.82	3.30	69.01	13.80	3.90	71.01	14.29	4.02	72.02	14.46	4.08	73.78	14.49	4.16	75.28	14.53	4.23
		360.00	49.69	8.02	2.27	59.22	10.70	2.75	69.01	13.67	3.25	71.01	14.12	3.34	72.02	14.29	3.39	73.78	14.33	3.46	75.28	14.33	3.52
	30	120.00	49.69	10.75	7.12	59.22	14.07	8.64	67.50	17.11	9.97	68.51	17.23	10.10	69.26	17.32	10.20	71.01	17.41	10.42	72.27	17.50	10.58
		240.00	49.69	9.90	3.51	59.22	13.11	4.26	67.50	16.03	4.92	68.51	16.11	4.99	69.26	16.19	5.04	71.01	16.29	5.14	72.27	16.40	5.23
		300.00	49.69	9.65	2.80	59.22	12.87	3.40	67.50	15.65	3.92	68.51	15.81	3.97	69.26	15.89	4.01	71.01	15.97	4.10	72.27	16.01	4.16
		360.00	49.69	9.50	2.33	59.22	12.71	2.83	67.50	15.48	3.26	68.51	15.62	3.30	69.26	15.75	3.34	71.01	15.82	3.41	72.27	15.79	3.46
	35	120.00	49.57	12.86	7.36	59.22	16.76	8.95	64.49	20.47	10.01	65.49	18.84	9.94	66.25	18.89	10.03	67.75	19.01	10.23	69.01	19.12	10.39
		240.00	49.57	11.83	3.62	59.22	15.66	4.41	64.49	19.17	4.93	65.49	17.62	4.90	66.25	17.70	4.95	67.75	17.80	5.04	69.01	17.88	5.12
		300.00	49.57	11.51	2.88	59.22	15.33	3.51	64.49	18.78	3.93	65.49	17.30	3.90	66.25	17.35	3.94	67.75	17.46	4.02	69.01	17.47	4.08
		360.00	49.57	11.34	2.39	59.22	15.15	2.92	64.49	18.54	3.26	65.49	17.11	3.25	66.25	17.16	3.28	67.75	17.31	3.34	69.01	17.25	3.39
	40	120.00	46.10	14.14	7.10	55.06	18.41	8.66	59.70	22.54	9.69	60.43	20.69	9.56	61.26	20.78	9.67	62.85	20.87	9.87	64.14	20.98	10.03
		240.00	46.10	12.98	3.48	55.06	17.22	4.26	59.70	21.05	4.76	60.43	19.35	4.70	61.26	19.43	4.76	62.85	19.54	4.86	64.14	19.68	4.94
		300.00	46.10	12.61	2.77	55.06	16.85	3.39	59.70	20.61	3.79	60.43	19.00	3.74	61.26	19.05	3.79	62.85	19.17	3.87	64.14	19.19	3.93
		360.00	46.10	12.45	2.30	55.06	16.67	2.82	59.70	20.42	3.15	60.43	18.80	3.11	61.26	18.89	3.15	62.85	19.01	3.22	64.14	18.93	3.26
	45	120.00	42.33	15.41	6.80	50.58	20.06	8.33	55.23	24.56	9.40	55.67	22.53	9.22	56.57	22.63	9.34	57.95	22.72	9.51	58.99	22.85	9.64
		240.00	42.33	14.14	3.33	50.58	18.78	4.09	55.23	22.88	4.60	55.67	21.12	4.53	56.57	21.13	4.58	57.95	21.28	4.67	58.99	21.47	4.74
		300.00	42.33	13.77	2.64	50.58	18.36	3.25	55.23	22.49	3.66	55.67	20.69	3.60	56.57	20.78	3.65	57.95	20.90	3.72	58.99	20.91	3.77
		360.00	42.33	13.56	2.20	50.58	18.13	2.70	55.23	22.30	3.05	55.67	20.49	2.99	56.57	20.59	3.03	57.95	20.71	3.09	58.99	20.65	3.13
100	10	120.00	45.17	3.99	5.79	53.95	5.16	6.97	62.73	6.56	8.17	67.00	7.29	8.76	71.27	8.11	9.36	79.27	8.46	10.34	76.03	8.55	9.97
		240.00	45.17	3.68	2.88	53.95	4.78	3.46	62.73	6.15	4.06	67.00	6.88	4.35	71.27	7.66	4.65	79.27	7.92	5.14	76.03	7.92	4.95
		300.00	45.17	3.61	2.30	53.95	4.66	2.76	62.73	6.02	3.24	67.00	6.67	3.47	71.27	7.44	3.71	79.27	7.78	4.10	76.03	7.79	3.95
		360.00	45.17	3.61	1.92	53.95	4.63	2.30	62.73	5.98	2.70	67.00	6.59	2.89	71.27	7.35	3.09	79.27	7.69	3.42	76.03	7.74	3.29
	15	120.00	45.17	5.45	5.97	53.95	7.00	7.18	62.73	8.90	8.44	67.00	9.94	9.07	71.27	10.98	9.69	79.27	11.47	10.69	76.03	11.57	10.32
		240.00	45.17	5.00	2.96	53.95	6.54	3.56	62.73	8.32	4.19	67.00	9.28	4.50	71.27	10.31	4.81	79.27	10.74	5.30	76.03	10.80	5.12
		300.00	45.17	4.90	2.36	53.95	6.38	2.84	62.73	8.15	3.34	67.00	9.12	3.59	71.27	10.08	3.84	79.27	10.51	4.23	76.03	10.53	4.08
		360.00	45.17	4.83	1.96	53.95	6.31	2.37	62.73	8.07	2.78	67.00	8.99	2.99	71.27	9.99	3.19	79.27	10.42	3.52	76.03	10.40	3.40
	20	120.00	45.17	6.70	6.11	53.95	8.60	7.37	62.73	10.99	8.69	67.00	12.26	9.34	71.27	13.58	10.00	79.27	14.10	11.01	76.03	14.22	10.64
		240.00	45.17	6.18	3.03	53.95	8.07	3.65	62.73	10.24	4.30	67.00	11.44	4.62	71.27	12.68	4.95	79.27	13.24	5.45	76.03	13.32	5.27
		300.00	45.17	6.01	2.41	53.95	7.91	2.92	62.73	10.07	3.43	67.00	11.27	3.69	71.27	12.46	3.95	79.27	12.97	4.35	76.03	12.96	4.20
		360.00	45.17	5.90	2.01	53.95	7.80	2.43	62.73	9.95	2.86	67.00	11.15	3.07	71.27	12.37	3.29	79.27	12.83	3.62	76.03	12.74	3.49
	25	120.00	45.17	7.88	6.25	53.95	10.16	7.56	62.73	12.92	8.92	67.00	14.40	9.59	70.51	15.65	10.16	72.27	15.68	10.37	73.78	15.88	10.57
		240.00	45.17	7.24	3.09	53.95	9.50	3.74	62.73	12.07	4.41	67.00	13.48	4.74	70.51	14.59	5.02	72.27	14.73	5.13	73.78	14.81	5.22
		300.00	45.17	7.04	2.46	53.95	9.31	2.98	62.73	11.79	3.51	67.00	13.20	3.78	70.51	14.34	4.00	72.27	14.44	4.09	73.78	14.44	4.16
		360.00	45.17	6.94	2.05	53.95	9.20	2.48	62.73	11.67	2.92	67.00	13.08	3.15	70.51	14.17	3.33	72.27	14.31	3.40	73.78	14.23	3.46
	30	120.00	45.17	9.31	6.42	53.95	12.07	7															

12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	120.00	40.65	3.47	5.20	48.43	4.40	6.23	56.46	5.49	7.30	60.22	6.15	7.82	64.24	6.82	8.37	72.02	8.29	9.46	74.53	8.46	9.78
		240.00	40.65	3.23	2.59	48.43	4.14	3.10	56.46	5.21	3.63	60.22	5.79	3.89	64.24	6.38	4.16	72.02	7.72	4.70	74.53	7.89	4.86
		300.00	40.65	3.09	2.06	48.43	4.06	2.47	56.46	5.04	2.90	60.22	5.67	3.11	64.24	6.25	3.32	72.02	7.57	3.75	74.53	7.68	3.88
		360.00	40.65	3.02	1.72	48.43	4.02	2.06	56.46	4.96	2.41	60.22	5.58	2.59	64.24	6.21	2.77	72.02	7.52	3.12	74.53	7.58	3.23
	15	120.00	40.65	4.68	5.34	48.43	6.00	6.41	56.46	7.50	7.54	60.22	8.38	8.09	64.24	9.22	8.66	72.02	11.17	9.80	74.53	11.48	10.14
		240.00	40.65	4.34	2.65	48.43	5.58	3.18	56.46	7.05	3.74	60.22	7.81	4.01	64.24	8.66	4.30	72.02	10.45	4.86	74.53	10.75	5.03
		300.00	40.65	4.20	2.11	48.43	5.47	2.54	56.46	6.89	2.99	60.22	7.69	3.20	64.24	8.48	3.43	72.02	10.24	3.88	74.53	10.44	4.01
		360.00	40.65	4.13	1.76	48.43	5.43	2.12	56.46	6.81	2.49	60.22	7.61	2.66	64.24	8.39	2.85	72.02	10.14	3.23	74.53	10.28	3.33
	20	120.00	40.65	5.76	5.47	48.43	7.37	6.58	56.46	9.27	7.75	60.22	10.32	8.31	64.24	11.37	8.91	72.02	13.74	10.11	74.53	14.12	10.45
		240.00	40.65	5.31	2.71	48.43	6.87	3.26	56.46	8.65	3.84	60.22	9.63	4.12	64.24	10.67	4.41	72.02	12.87	5.00	74.53	13.24	5.17
		300.00	40.65	5.17	2.16	48.43	6.72	2.60	56.46	8.53	3.06	60.22	9.47	3.29	64.24	10.49	3.52	72.02	12.61	3.99	74.53	12.88	4.12
		360.00	40.65	5.10	1.80	48.43	6.64	2.16	56.46	8.45	2.55	60.22	9.39	2.73	64.24	10.36	2.93	72.02	12.51	3.32	74.53	12.72	3.43
	25	120.00	40.65	6.74	5.59	48.43	8.61	6.72	56.46	10.90	7.94	60.22	12.10	8.52	64.24	13.47	9.16	70.51	15.55	10.14	72.27	15.74	10.37
		240.00	40.65	6.21	2.76	48.43	8.07	3.33	56.46	10.19	3.93	60.22	11.36	4.22	64.24	12.58	4.53	70.51	14.59	5.02	72.27	14.70	5.12
		300.00	40.65	6.01	2.20	48.43	7.88	2.65	56.46	10.03	3.13	60.22	11.12	3.36	64.24	12.32	3.61	70.51	14.31	4.00	72.27	14.37	4.08
		360.00	40.65	5.91	1.83	48.43	7.81	2.21	56.46	9.91	2.61	60.22	11.01	2.80	64.24	12.24	3.00	70.51	14.16	3.33	72.27	14.18	3.40
	30	120.00	40.65	7.97	5.73	48.43	10.15	6.90	56.46	13.58	8.25	60.22	14.39	8.79	64.24	15.93	9.45	68.00	17.19	10.04	69.51	17.32	10.23
		240.00	40.65	7.30	2.83	48.43	9.53	3.42	56.46	12.66	4.07	60.22	13.45	4.34	64.24	14.91	4.66	68.00	16.08	4.95	69.51	16.21	5.05
		300.00	40.65	7.14	2.25	48.43	9.32	2.72	56.46	12.38	3.25	60.22	13.19	3.46	64.24	14.63	3.72	68.00	15.78	3.95	69.51	15.79	4.02
		360.00	40.65	7.04	1.87	48.43	9.21	2.26	56.46	12.26	2.70	60.22	13.04	2.88	64.24	14.50	3.09	68.00	15.61	3.28	69.51	15.53	3.34
	35	120.00	40.65	9.42	5.90	48.43	12.10	7.13	56.46	15.42	8.47	60.22	17.16	9.12	63.49	18.67	9.68	65.24	18.76	9.90	66.50	18.90	10.06
		240.00	40.65	8.65	2.91	48.43	11.33	3.52	56.46	14.41	4.18	60.22	16.08	4.50	63.49	17.43	4.77	65.24	17.59	4.88	66.50	17.70	4.96
		300.00	40.65	8.41	2.31	48.43	11.10	2.81	56.46	14.11	3.33	60.22	15.75	3.58	63.49	17.17	3.80	65.24	17.24	3.89	66.50	17.23	3.95
		360.00	40.65	8.27	1.92	48.43	10.94	2.33	56.46	13.94	2.77	60.22	15.58	2.98	63.49	16.99	3.16	65.24	17.07	3.23	66.50	16.97	3.28
	40	120.00	39.32	10.78	5.90	46.97	13.91	7.18	54.89	17.74	8.56	58.38	19.70	9.20	61.60	21.46	9.79	63.38	21.59	10.01	64.34	21.74	10.15
		240.00	39.32	9.94	2.90	46.97	13.03	3.54	54.89	16.56	4.21	58.38	18.41	4.53	61.60	20.09	4.81	63.38	20.20	4.93	64.34	20.32	4.99
		300.00	39.32	9.63	2.31	46.97	12.72	2.81	54.89	16.22	3.35	58.38	18.08	3.60	61.60	19.69	3.83	63.38	19.85	3.92	64.34	19.80	3.97
		360.00	39.32	9.49	1.92	46.97	12.56	2.34	54.89	16.05	2.79	58.38	17.91	3.00	61.60	19.51	3.19	63.38	19.63	3.26	64.34	19.55	3.30
	45	120.00	38.26	12.17	5.94	45.51	15.72	7.22	53.32	20.01	8.64	56.84	22.29	9.33	59.72	24.25	9.90	61.52	24.41	10.13	62.50	24.53	10.26
		240.00	38.26	11.23	2.92	45.51	14.68	3.55	53.32	18.71	4.24	56.84	20.79	4.57	59.72	22.70	4.86	61.52	22.80	4.97	62.50	22.98	5.04
		300.00	38.26	10.88	2.32	45.51	14.37	2.82	53.32	18.33	3.38	56.84	20.41	3.64	59.72	22.26	3.86	61.52	22.41	3.96	62.50	22.42	4.00
		360.00	38.26	10.71	1.92	45.51	14.18	2.35	53.32	18.12	2.81	56.84	20.20	3.03	59.72	22.03	3.21	61.52	22.20	3.29	62.50	22.12	3.32
80	10	120.00	36.13	2.91	4.60	43.16	3.67	5.52	50.19	4.61	6.46	53.70	5.17	6.94	56.96	5.65	7.38	63.99	6.86	8.35	71.01	8.03	9.32
		240.00	36.13	2.66	2.29	43.16	3.49	2.75	50.19	4.28	3.21	53.70	4.81	3.45	56.96	5.26	3.67	63.99	6.35	4.14	71.01	7.50	4.63
		300.00	36.13	2.59	1.83	43.16	3.37	2.19	50.19	4.20	2.56	53.70	4.65	2.75	56.96	5.13	2.93	63.99	6.25	3.31	71.01	7.38	3.70
		360.00	36.13	2.59	1.52	43.16	3.30	1.83	50.19	4.20	2.14	53.70	4.57	2.29	56.96	5.04	2.44	63.99	6.25	2.76	71.01	7.38	3.08
	15	120.00	36.13	3.96	4.73	43.16	5.00	5.68	50.19	6.28	6.66	53.70	6.97	7.15	56.96	7.63	7.61	63.99	9.24	8.63	71.01	10.92	9.66
		240.00	36.13	3.64	2.34	43.16	4.70	2.82	50.19	5.83	3.30	53.70	6.49	3.55	56.96	7.15	3.78	63.99	8.63	4.28	71.01	10.22	4.79
		300.00	36.13	3.54	1.87	43.16	4.58	2.25	50.19	5.75	2.64	53.70	6.33	2.83	56.96	6.98	3.01	63.99	8.48	3.42	71.01	9.98	3.82
		360.00	36.13	3.50	1.56	43.16	4.51	1.87	50.19	5.67	2.19	53.70	6.29	2.36	56.96	6.90	2.51	63.99	8.43	2.85	71.01	9.86	3.18
	20	120.00	36.13	4.90	4.84	43.16	6.17	5.81	50.19	7.75	6.83	53.70	8.53	7.33	56.96	9.44	7.83	63.99	11.38	8.88	71.01	13.46	9.96
		240.00	36.13	4.48	2.39	43.16	5.76	2.88	50.19	7.22	3.38	53.70	8.01	3.64	56.96	8.84	3.88	63.99	10.61	4.40	71.01	12.58	4.93
		300.00	36.13	4.38	1.91	43.16	5.64	2.30	50.19	7.09	2.70	53.70	7.85	2.90	56.96	8.66	3.09	63.99	10.46	3.51	71.01	12.28	3.93
		360.00	36.13	4.31	1.59	43.16	5.61	1.92	50.19	7.01	2.25	53.70	7.77	2.42	56.96	8.58	2.57	63.99	10.36	2.92	71.01	12.10	3.27
	25	120.00	36.13	5.69	4.93	43.16	7.20	5.94	50.19	9.08	6.99	53.70	10.08	7.52	56.96	11.15	8.03	63.99	13.40	9.12	70.51	15.60	10.15
		240.00	36.13	5.25	2.44	43.16	6.77	2.94	50.19	8.49	3.46	53.70	9.42	3.72	56.96	10.40	3.97	63.99	12.52	4.51	70.51	14.59	5.02
		300.00	36.13	5.09	1.94	43.16	6.62	2.35	50.19	8.33	2.76	53.70	9.26	2.97	56.96	10.19	3.17	63.99	12.28	3.60	70.51	14.26	4.00
		360.00	36.13	5.02	1.62	43.16	6.55	1.95	50.19	8.26	2.30	53.70	9.15	2.47	56.96	10.11	2.63	63.99	12.18	2.99	70.51	14.03	3.32
	30	120.00	36.13	6.70	5.05	43.16	8.52	6.09	50.19	10.72	7.18	53.70	11.96	7.74	56.96	13.15	8.2.						

VRF MW



12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	TC °C
70	10	120.00	31.62	2.46	4.02	37.64	3.07	4.80	43.91	3.82	5.63	46.93	4.21	6.03	49.94	4.57	6.42	55.96	5.52	7.25	62.23	6.45	8.10
		240.00	31.62	2.25	2.00	37.64	2.88	2.39	43.91	3.58	2.80	46.93	3.93	3.00	49.94	4.31	3.20	55.96	5.12	3.60	62.23	6.11	4.03
		300.00	31.62	2.18	1.59	37.64	2.77	1.90	43.91	3.46	2.23	46.93	3.81	2.39	49.94	4.19	2.55	55.96	5.07	2.88	62.23	5.94	3.21
		360.00	31.62	2.11	1.33	37.64	2.73	1.59	43.91	3.42	1.86	46.93	3.77	1.99	49.94	4.10	2.12	55.96	5.02	2.40	62.23	5.88	2.68
	15	120.00	31.62	3.31	4.12	37.64	4.13	4.92	43.91	5.15	5.78	46.93	5.66	6.20	49.94	6.22	6.62	55.96	7.44	7.47	62.23	8.80	8.37
		240.00	31.62	3.06	2.04	37.64	3.90	2.45	43.91	4.83	2.87	46.93	5.31	3.08	49.94	5.84	3.29	55.96	6.95	3.71	62.23	8.22	4.15
		300.00	31.62	2.96	1.63	37.64	3.79	1.95	43.91	4.71	2.29	46.93	5.19	2.46	49.94	5.71	2.62	55.96	6.85	2.96	62.23	8.05	3.31
		360.00	31.62	2.92	1.36	37.64	3.75	1.63	43.91	4.67	1.91	46.93	5.15	2.05	49.94	5.63	2.18	55.96	6.75	2.46	62.23	7.94	2.76
	20	120.00	31.62	4.08	4.21	37.64	5.12	5.04	43.91	6.36	5.93	46.93	6.96	6.35	49.94	7.70	6.79	55.96	9.16	7.67	62.23	10.85	8.61
		240.00	31.62	3.77	2.09	37.64	4.78	2.50	43.91	5.92	2.94	46.93	6.53	3.15	49.94	7.19	3.37	55.96	8.57	3.80	62.23	10.11	4.26
		300.00	31.62	3.66	1.66	37.64	4.70	2.00	43.91	5.80	2.34	46.93	6.41	2.51	49.94	7.06	2.69	55.96	8.42	3.04	62.23	9.88	3.40
		360.00	31.62	3.59	1.38	37.64	4.62	1.66	43.91	5.76	1.95	46.93	6.37	2.09	49.94	7.02	2.24	55.96	8.32	2.53	62.23	9.71	2.83
	25	120.00	31.62	4.75	4.29	37.64	5.93	5.14	43.91	7.39	6.05	46.93	8.20	6.50	49.94	9.01	6.95	55.96	10.82	7.87	62.23	12.74	8.84
		240.00	31.62	4.38	2.12	37.64	5.57	2.55	43.91	6.93	3.00	46.93	7.67	3.22	49.94	8.44	3.44	55.96	10.11	3.89	62.23	11.91	4.37
		300.00	31.62	4.24	1.69	37.64	5.43	2.03	43.91	6.77	2.39	46.93	7.48	2.56	49.94	8.28	2.74	55.96	9.92	3.11	62.23	11.58	3.48
		360.00	31.62	4.21	1.41	37.64	5.36	1.69	43.91	6.69	1.99	46.93	7.40	2.13	49.94	8.19	2.28	55.96	9.87	2.59	62.23	11.47	2.90
	30	120.00	31.62	5.57	4.38	37.64	7.00	5.26	43.91	8.76	6.21	46.93	9.67	6.67	49.94	10.68	7.14	55.96	12.79	8.10	62.23	15.10	9.11
		240.00	31.62	5.12	2.16	37.64	6.55	2.60	43.91	8.17	3.07	46.93	9.05	3.30	49.94	9.98	3.53	55.96	11.97	4.00	62.23	14.14	4.50
		300.00	31.62	4.99	1.73	37.64	6.42	2.08	43.91	8.02	2.45	46.93	8.87	2.63	49.94	9.78	2.82	55.96	11.78	3.19	62.23	13.77	3.58
		360.00	31.62	4.90	1.43	37.64	6.35	1.73	43.91	7.95	2.04	46.93	8.79	2.19	49.94	9.70	2.34	55.96	11.65	2.66	62.23	13.61	2.98
	35	120.00	31.62	6.53	4.50	37.64	8.26	5.41	43.91	10.34	6.39	46.93	11.52	6.89	49.94	13.88	7.52	55.96	15.21	8.39	62.23	18.04	9.46
		240.00	31.62	6.02	2.22	37.64	7.75	2.67	43.91	9.63	3.16	46.93	10.75	3.40	49.94	12.96	3.71	55.96	14.28	4.14	62.23	16.90	4.66
		300.00	31.62	5.85	1.77	37.64	7.60	2.13	43.91	9.47	2.52	46.93	10.59	2.71	49.94	12.73	2.95	55.96	13.98	3.30	62.23	16.45	3.71
		360.00	31.62	5.75	1.47	37.64	7.49	1.77	43.91	9.36	2.09	46.93	10.47	2.25	49.94	12.64	2.46	55.96	13.83	2.74	62.23	16.16	3.08
	40	120.00	31.62	7.75	4.64	37.64	9.80	5.59	43.91	12.23	6.62	46.93	13.63	7.14	49.94	16.40	7.82	55.96	18.05	8.72	62.23	21.36	9.85
		240.00	31.62	7.11	2.28	37.64	9.18	2.76	43.91	11.44	3.26	46.93	12.73	3.52	49.94	15.39	3.85	55.96	16.88	4.29	62.23	19.99	4.84
		300.00	31.62	6.94	1.82	37.64	8.96	2.20	43.91	11.20	2.60	46.93	12.54	2.80	49.94	15.07	3.06	55.96	16.58	3.42	62.23	19.47	3.85
		360.00	31.62	6.84	1.51	37.64	8.85	1.83	43.91	11.09	2.16	46.93	12.42	2.33	49.94	14.93	2.55	55.96	16.38	2.84	62.23	19.24	3.20
	45	120.00	31.62	8.97	4.78	37.64	11.31	5.77	43.91	14.11	6.84	46.93	15.73	7.38	49.94	18.96	8.12	55.96	20.85	9.05	62.23	24.73	10.25
		240.00	31.62	8.19	2.35	37.64	10.61	2.84	43.91	13.21	3.37	46.93	14.72	3.63	49.94	17.82	3.99	55.96	19.52	4.45	62.23	23.07	5.03
		300.00	31.62	8.02	1.87	37.64	10.36	2.26	43.91	12.93	2.68	46.93	14.48	2.90	49.94	17.41	3.17	55.96	19.13	3.54	62.23	22.56	4.00
		360.00	31.62	7.92	1.55	37.64	10.24	1.88	43.91	12.82	2.23	46.93	14.33	2.41	49.94	17.22	2.64	55.96	18.98	2.94	62.23	22.33	3.32
60	10	120.00	27.10	2.03	3.43	32.37	2.49	4.11	37.64	3.02	4.79	40.15	3.35	5.13	42.91	3.65	5.49	47.93	4.38	6.17	53.20	5.12	6.87
		240.00	27.10	1.85	1.71	32.37	2.34	2.05	37.64	2.82	2.38	40.15	3.15	2.55	42.91	3.36	2.73	47.93	4.04	3.06	53.20	4.78	3.42
		300.00	27.10	1.77	1.36	32.37	2.26	1.63	37.64	2.78	1.91	40.15	3.07	2.04	42.91	3.31	2.18	47.93	3.94	2.45	53.20	4.61	2.73
		360.00	27.10	1.74	1.13	32.37	2.22	1.36	37.64	2.78	1.59	40.15	3.03	1.70	42.91	3.27	1.81	47.93	3.89	2.04	53.20	4.50	2.27
	15	120.00	27.10	2.72	3.51	32.37	3.38	4.21	37.64	4.11	4.92	40.15	4.53	5.27	42.91	4.95	5.64	47.93	5.89	6.34	53.20	6.92	7.09
		240.00	27.10	2.50	1.74	32.37	3.15	2.09	37.64	3.82	2.44	40.15	4.26	2.62	42.91	4.57	2.80	47.93	5.45	3.15	53.20	6.47	3.52
		300.00	27.10	2.43	1.39	32.37	3.07	1.67	37.64	3.74	1.95	40.15	4.18	2.09	42.91	4.53	2.24	47.93	5.35	2.51	53.20	6.25	2.80
		360.00	27.10	2.39	1.16	32.37	3.03	1.39	37.64	3.70	1.62	40.15	4.14	1.74	42.91	4.49	1.86	47.93	5.31	2.09	53.20	6.13	2.33
	20	120.00	27.10	3.33	3.59	32.37	4.14	4.30	37.64	5.03	5.03	40.15	5.56	5.39	42.91	6.08	5.77	47.93	7.20	6.50	53.20	8.50	7.27
		240.00	27.10	3.08	1.78	32.37	3.87	2.14	37.64	4.75	2.50	40.15	5.20	2.67	42.91	5.70	2.86	47.93	6.77	3.22	53.20	7.93	3.60
		300.00	27.10	3.01	1.42	32.37	3.80	1.71	37.64	4.63	1.99	40.15	5.12	2.13	42.91	5.58	2.29	47.93	6.67	2.57	53.20	7.76	2.87
		360.00	27.10	2.97	1.18	32.37	3.76	1.42	37.64	4.59	1.66	40.15	5.08	1.78	42.91	5.54	1.90	47.93	6.62	2.14	53.20	7.65	2.39
	25	120.00	27.10	3.89	3.65	32.37	4.80	4.38	37.64	5.93	5.14	40.15	6.56	5.50	42.91	7.13	5.90	47.93	8.48	6.65	53.20	9.93	7.44
		240.00	27.10	3.58	1.81	32.37	4.51	2.17	37.64	5.55	2.54	40.15	6.10	2.73	42.91	6.69	2.92	47.93	7.96	3.29	53.20	9.34	3.69
		300.00	27.10	3.48	1.44	32.37	4.44	1.74	37.64	5.47	2.03	40.15	5.99	2.18	42.91	6.56	2.33	47.93	7.77	2.63	53.20	9.07	2.94
		360.00	27.10	3.44	1.20	32.37	4.40	1.44	37.64	5.39	1.69	40.15	5.95	1.81	42.91	6.52	1.94	47.93	7.68	2.18	53.20	8.96	2.44
	30	120.00	27.10	4.59	3.73	32.37	5.66	4.48	37.64	6.98	5.26	40.15	7.67	5.64	42.91	8.42	6.05	47.93	10.07	6.84	53.20	11.74	7.65
		240.00	27.10	4.19	1.84	32.37	5.28	2.22	37.64	6.50	2.60	40.											

12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	120.00	22.58	1.62	2.85	26.85	1.97	3.40	31.37	2.41	3.98	33.63	2.62	4.27	35.63	2.79	4.53	40.15	3.28	5.12	44.42	3.86	5.69
		240.00	22.58	1.54	1.42	26.85	1.85	1.69	31.37	2.20	1.98	33.63	2.42	2.12	35.63	2.66	2.26	40.15	3.08	2.55	44.42	3.64	2.83
		300.00	22.58	1.46	1.13	26.85	1.81	1.35	31.37	2.20	1.58	33.63	2.34	1.70	35.63	2.57	1.80	40.15	2.99	2.03	44.42	3.47	2.26
		360.00	22.58	1.43	0.94	26.85	1.76	1.12	31.37	2.20	1.32	33.63	2.30	1.41	35.63	2.53	1.50	40.15	2.94	1.69	44.42	3.35	1.88
	15	120.00	22.58	2.22	2.92	26.85	2.67	3.48	31.37	3.21	4.07	33.63	3.53	4.38	35.63	3.84	4.65	40.15	4.48	5.26	44.42	5.17	5.84
		240.00	22.58	2.06	1.45	26.85	2.50	1.73	31.37	3.00	2.03	33.63	3.28	2.17	35.63	3.58	2.31	40.15	4.18	2.61	44.42	4.89	2.91
		300.00	22.58	1.98	1.16	26.85	2.42	1.38	31.37	2.95	1.62	33.63	3.20	1.74	35.63	3.49	1.84	40.15	4.08	2.09	44.42	4.72	2.32
		360.00	22.58	1.94	0.96	26.85	2.38	1.15	31.37	2.91	1.35	33.63	3.16	1.45	35.63	3.45	1.54	40.15	4.03	1.74	44.42	4.66	1.93
	20	120.00	22.58	2.73	2.98	26.85	3.28	3.55	31.37	3.93	4.16	33.63	4.35	4.48	35.63	4.71	4.75	40.15	5.47	5.38	44.42	6.36	5.98
		240.00	22.58	2.49	1.48	26.85	3.08	1.76	31.37	3.71	2.07	33.63	4.06	2.22	35.63	4.40	2.36	40.15	5.17	2.67	44.42	6.02	2.97
		300.00	22.58	2.42	1.18	26.85	3.04	1.41	31.37	3.63	1.65	33.63	3.98	1.77	35.63	4.32	1.88	40.15	5.07	2.13	44.42	5.85	2.37
		360.00	22.58	2.38	0.98	26.85	3.00	1.17	31.37	3.59	1.37	33.63	3.94	1.48	35.63	4.27	1.57	40.15	5.02	1.77	44.42	5.74	1.97
	25	120.00	22.58	3.16	3.03	26.85	3.83	3.62	31.37	4.61	4.24	33.63	5.00	4.55	35.63	5.48	4.85	40.15	6.51	5.50	44.42	7.61	6.13
		240.00	22.58	2.89	1.50	26.85	3.56	1.79	31.37	4.33	2.10	33.63	4.72	2.26	35.63	5.15	2.40	40.15	6.08	2.72	44.42	7.06	3.03
		300.00	22.58	2.82	1.20	26.85	3.52	1.43	31.37	4.24	1.68	33.63	4.61	1.80	35.63	5.02	1.92	40.15	5.98	2.17	44.42	6.89	2.42
		360.00	22.58	2.82	1.00	26.85	3.48	1.19	31.37	4.20	1.40	33.63	4.53	1.50	35.63	4.94	1.59	40.15	5.88	1.81	44.42	6.84	2.01
	30	120.00	22.58	3.66	3.09	26.85	4.43	3.69	31.37	5.43	4.34	33.63	5.92	4.66	35.63	6.45	4.96	40.15	7.60	5.63	44.42	8.88	6.28
		240.00	22.58	3.34	1.53	26.85	4.14	1.83	31.37	5.04	2.15	33.63	5.55	2.31	35.63	6.05	2.46	40.15	7.14	2.79	44.42	8.31	3.11
		300.00	22.58	3.24	1.22	26.85	4.03	1.46	31.37	4.93	1.71	33.63	5.43	1.84	35.63	5.93	1.96	40.15	7.00	2.22	44.42	8.09	2.48
		360.00	22.58	3.20	1.01	26.85	3.99	1.21	31.37	4.89	1.42	33.63	5.40	1.53	35.63	5.89	1.63	40.15	6.91	1.85	44.42	7.94	2.06
	35	120.00	22.58	4.23	3.16	26.85	5.21	3.78	31.37	6.39	4.45	33.63	6.97	4.78	35.63	7.65	5.10	40.15	9.02	5.80	44.42	10.60	6.48
		240.00	22.58	3.90	1.56	26.85	4.86	1.87	31.37	5.94	2.20	33.63	6.53	2.37	35.63	7.14	2.52	40.15	8.44	2.86	44.42	9.87	3.20
		300.00	22.58	3.79	1.24	26.85	4.78	1.49	31.37	5.82	1.75	33.63	6.41	1.89	35.63	7.01	2.01	40.15	8.29	2.28	44.42	9.65	2.55
		360.00	22.58	3.72	1.03	26.85	4.70	1.24	31.37	5.78	1.46	33.63	6.37	1.57	35.63	6.97	1.67	40.15	8.19	1.90	44.42	9.48	2.12
	40	120.00	22.58	5.00	3.25	26.85	6.14	3.89	31.37	7.53	4.58	33.63	8.28	4.94	35.63	9.05	5.27	40.15	10.68	5.99	44.42	12.58	6.72
		240.00	22.58	4.60	1.60	26.85	5.75	1.92	31.37	7.04	2.26	33.63	7.72	2.44	35.63	8.45	2.60	40.15	10.00	2.96	44.42	11.73	3.31
		300.00	22.58	4.49	1.28	26.85	5.63	1.53	31.37	6.92	1.80	33.63	7.60	1.94	35.63	8.28	2.07	40.15	9.80	2.35	44.42	11.45	2.63
		360.00	22.58	4.42	1.06	26.85	5.59	1.27	31.37	6.84	1.50	33.63	7.52	1.62	35.63	8.20	1.72	40.15	9.71	1.96	44.42	11.28	2.19
	45	120.00	22.58	5.78	3.34	26.85	7.11	4.00	31.37	8.67	4.72	33.63	9.59	5.09	35.63	10.45	5.43	40.15	12.34	6.19	44.42	14.50	6.94
		240.00	22.58	5.34	1.65	26.85	6.64	1.97	31.37	8.10	2.33	33.63	8.92	2.51	35.63	9.77	2.68	40.15	11.56	3.05	44.42	13.59	3.42
		300.00	22.58	5.19	1.31	26.85	6.53	1.57	31.37	7.98	1.85	33.63	8.76	2.00	35.63	9.56	2.13	40.15	11.32	2.43	44.42	13.25	2.72
		360.00	22.58	5.08	1.09	26.85	6.45	1.31	31.37	7.94	1.54	33.63	8.64	1.66	35.63	9.47	1.77	40.15	11.22	2.02	44.42	13.09	2.26

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	120.00	73.64	15.84	6.78	73.33	15.98	6.72	73.20	16.54	6.64	72.85	16.50	6.61	72.51	16.35	6.59	71.80	17.08	6.42
		240.00	75.30	15.71	3.49	74.54	16.03	3.43	74.44	16.66	3.39	74.12	16.50	3.38	73.54	16.32	3.36	72.89	17.01	3.28
		300.00	75.78	15.95	2.81	75.02	16.28	2.76	74.93	16.72	2.73	74.37	16.56	2.71	74.06	16.56	2.70	73.43	17.84	2.61
		360.00	76.02	16.05	2.34	75.26	16.39	2.30	75.18	16.77	2.28	74.63	16.59	2.27	74.32	16.71	2.25	73.70	18.22	2.17
	15	120.00	73.87	14.17	7.00	73.57	14.19	6.96	73.20	14.83	6.85	72.85	14.86	6.80	72.51	14.58	6.79	71.80	15.34	6.62
		240.00	76.26	13.60	3.67	75.74	13.94	3.62	75.43	14.68	3.56	75.38	14.42	3.57	74.58	14.13	3.54	74.24	14.85	3.48
		300.00	76.73	13.94	2.95	76.46	14.27	2.92	76.42	14.68	2.90	76.14	14.42	2.90	75.61	14.52	2.87	75.06	16.34	2.75
		360.00	76.97	14.10	2.46	76.71	14.43	2.43	76.91	14.68	2.43	76.40	14.42	2.42	76.13	14.73	2.40	75.60	17.11	2.29
	20	120.00	76.73	13.03	7.47	76.22	13.02	7.41	76.17	13.40	7.36	75.64	13.36	7.30	75.09	13.44	7.23	74.24	14.85	6.96
		240.00	79.12	12.66	3.90	78.64	12.96	3.85	78.40	13.37	3.81	77.91	13.57	3.77	77.67	13.80	3.75	76.95	14.33	3.67
		300.00	79.35	12.66	3.13	79.12	12.96	3.10	79.38	13.45	3.09	78.93	13.57	3.07	78.19	13.80	3.02	77.49	15.23	2.92
		360.00	79.59	12.66	2.62	79.60	12.96	2.60	79.88	13.48	2.60	79.18	13.57	2.56	78.45	13.80	2.53	77.77	15.72	2.43
	25	120.00	87.05	13.49	8.63	86.57	13.78	8.54	85.85	14.38	8.38	85.61	14.61	8.33	85.13	14.87	8.24	84.41	15.45	8.09
		240.00	87.05	13.29	4.32	86.57	13.70	4.27	85.85	14.13	4.21	85.61	14.38	4.18	85.13	14.63	4.13	84.41	15.19	4.06
		300.00	87.05	13.09	3.47	86.57	13.34	3.43	85.85	13.90	3.37	85.61	14.15	3.35	85.13	14.40	3.32	84.41	14.92	3.26
		360.00	87.05	13.01	2.89	86.57	13.16	2.87	85.85	13.81	2.82	85.61	14.02	2.80	85.13	14.26	2.77	84.41	14.81	2.72
	30	120.00	93.81	14.49	9.30	94.27	14.55	9.35	93.30	15.28	9.15	90.30	15.44	8.78	92.10	15.85	8.94	85.85	14.27	8.39
		240.00	93.81	14.02	4.68	94.27	14.45	4.68	93.30	14.93	4.59	90.30	15.19	4.40	92.10	15.29	4.50	85.85	13.72	4.23
		300.00	93.81	13.81	3.75	94.27	14.06	3.76	93.30	14.69	3.69	90.30	14.90	3.54	92.10	15.29	3.60	85.85	13.72	3.38
		360.00	93.81	13.71	3.13	94.27	13.86	3.14	93.30	14.55	3.08	90.30	14.79	2.95	92.10	15.29	3.00	85.85	13.72	2.82
	35	120.00	102.68	15.27	10.25	101.96	15.60	10.13	98.60	15.12	9.79	92.40	14.35	9.15	92.10	14.09	9.15	85.85	12.51	8.60
		240.00	102.68	14.78	5.15	101.96	15.24	5.08	98.60	14.83	4.91	92.40	14.10	4.59	92.10	13.80	4.59	85.85	12.03	4.33
		300.00	102.68	14.78	4.12	101.96	15.09	4.07	98.60	14.58	3.94	92.40	13.85	3.68	92.10	13.55	3.68	85.85	12.03	3.46
		360.00	102.68	14.78	3.44	101.96	15.02	3.40	98.60	14.44	3.29	92.40	13.71	3.08	92.10	13.44	3.07	85.85	12.03	2.89
	40	120.00	102.68	14.78	10.31	101.96	15.09	10.19	98.60	14.58	9.85	92.40	13.85	9.21	92.10	13.55	9.21	85.85	11.79	8.68
		240.00	102.68	14.26	5.18	101.96	14.69	5.12	98.60	14.08	4.96	92.40	13.32	4.64	92.10	13.01	4.64	85.85	11.30	4.37
		300.00	102.68	14.02	4.16	101.96	14.47	4.10	98.60	14.08	3.96	92.40	13.32	3.71	92.10	13.01	3.71	85.85	11.30	3.50
		360.00	102.68	13.88	3.47	101.96	14.33	3.43	98.60	14.08	3.30	92.40	13.32	3.09	92.10	13.01	3.09	85.85	11.30	2.91
	45	120.00	102.68	14.26	10.37	101.96	14.58	10.25	98.60	14.08	9.91	92.40	13.32	9.27	92.10	13.01	9.27	85.85	11.02	8.77
		240.00	102.68	13.78	5.21	101.96	14.18	5.15	98.60	13.29	5.00	92.40	12.58	4.68	92.10	12.25	4.68	85.85	10.54	4.42
		300.00	102.68	13.26	4.19	101.96	13.82	4.13	98.60	13.54	3.99	92.40	12.79	3.73	92.10	12.51	3.73	85.85	10.54	3.53
		360.00	102.68	13.02	3.50	101.96	13.63	3.45	98.60	13.68	3.32	92.40	12.93	3.11	92.10	12.65	3.11	85.85	10.54	2.94
120	10	120.00	74.10	16.45	6.76	74.05	16.90	6.70	74.67	17.49	6.71	73.71	17.53	6.59	73.37	17.83	6.51	72.75	17.81	6.44
		240.00	75.61	16.70	3.45	75.08	17.16	3.40	75.47	17.74	3.38	74.51	17.63	3.34	74.19	17.76	3.31	73.62	17.88	3.27
		300.00	75.86	16.61	2.78	75.08	17.16	2.72	76.00	17.80	2.73	74.78	17.69	2.68	74.47	17.86	2.66	73.91	18.47	2.60
		360.00	76.12	16.59	2.33	74.82	17.16	2.25	76.00	17.86	2.27	74.78	17.75	2.23	74.47	17.90	2.21	74.20	18.81	2.17
	15	120.00	74.60	14.59	7.04	74.31	14.94	6.96	74.67	15.54	6.93	73.71	15.76	6.79	73.37	15.87	6.74	72.75	16.00	6.65
		240.00	76.12	14.70	3.60	76.10	15.05	3.58	76.54	15.64	3.57	75.32	15.54	3.50	74.75	15.40	3.48	74.49	15.75	3.44
		300.00	76.62	14.48	2.91	76.10	14.94	2.87	77.07	15.64	2.88	75.85	15.54	2.83	75.57	15.40	2.82	75.07	16.81	2.73
		360.00	76.87	14.37	2.44	75.85	14.88	2.38	77.33	15.64	2.41	76.12	15.54	2.37	75.85	15.40	2.36	75.36	17.33	2.27
	20	120.00	76.62	13.09	7.45	76.36	13.27	7.40	76.80	13.65	7.40	75.32	13.93	7.20	75.02	14.44	7.10	74.49	15.16	6.96
		240.00	78.64	13.09	3.84	78.15	13.47	3.79	78.40	13.90	3.78	77.19	14.15	3.70	76.95	14.40	3.67	76.23	14.93	3.59
		300.00	78.89	12.95	3.09	78.15	13.35	3.04	79.19	13.90	3.06	77.73	14.15	2.98	77.50	14.44	2.96	76.81	15.49	2.88
		360.00	79.14	12.90	2.59	78.15	13.30	2.54	79.46	13.90	2.56	78.00	14.15	2.50	77.50	14.47	2.46	77.10	15.75	2.40
	25	120.00	86.06	14.07	8.44	85.61	14.38	8.35	84.89	14.84	8.21	84.65	15.24	8.14	84.17	15.56	8.05	79.12	14.26	7.60
		240.00	86.33	13.85	4.25	85.61	14.28	4.18	84.89	14.73	4.11	84.65	14.98	4.08	84.17	15.29	4.04	79.12	14.00	3.82
		300.00	86.60	13.35	3.44	85.61	13.91	3.36	84.89	14.45	3.30	84.65	14.98	3.27	84.17	15.02	3.24	79.12	14.00	3.05
		360.00	86.60	13.10	2.87	85.61	13.71	2.81	84.89	14.35	2.76	84.65	14.98	2.72	84.17	14.87	2.71	79.12	14.00	2.55
	30	120.00	94.03	15.16	9.25	93.06	15.43	9.10	90.90	15.25	8.87	88.01	14.52	8.62	85.13	14.11	8.33	79.12	12.40	7.82
		240.00	94.03	14.63	4.66	93.06	15.09	4.57	90.90	14.98	4.45	88.01	14.25	4.32	85.13	13.54	4.20	79.12	12.15	3.93
		300.00	94.03	14.17	3.75	93.06	14.75	3.67	90.90	14.68	3.58	88.01	14.25	3.46	85.13	13.54	3.36	79.12	11.90	3.15
		360.00	94.03	13.93	3.13	93.06	14.56	3.07	90.90	14.52	2.99	88.01	14.25	2.88	85.13	13.54	2.80	79.12	11.80	2.63
	35	120.00	101.48	16.34	9.98	96.67	15.01	9.58	90.90	13.66	9.06	88.01	12.99	8.80	85.13	12.38	8.53	79.12	10.93	8.00
		240.00	101.48	15.41	5.05	96.67	14.43	4.82	90.90	13.11	4.56	88.01	12.48	4.43	85.13	11.88	4.29	79.12	10.69	4.01
		300.00	101.48	15.21	4.05	96.67	14.31	3.86	90.90	13.11	3.65	88.01	12.48	3.54	85.13					

12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
110	10	120.00	74.73	17.76	6.68	74.97	18.27	6.65	74.75	18.98	6.54	74.47	18.94	6.51	73.92	19.59	6.37	70.84	17.70	6.23
		240.00	75.79	17.91	3.39	75.79	18.49	3.36	75.03	19.21	3.27	75.04	19.04	3.28	74.51	19.52	3.22	71.14	17.77	3.13
		300.00	76.06	17.91	2.73	76.07	18.49	2.70	75.31	19.18	2.63	75.33	19.00	2.64	74.51	19.63	2.57	71.43	17.96	2.51
		360.00	76.32	17.91	2.28	76.34	18.49	2.26	75.59	19.14	2.21	75.33	18.97	2.20	74.81	19.67	2.16	71.43	18.07	2.09
	15	120.00	74.73	15.69	6.92	75.24	16.22	6.92	74.75	16.93	6.78	74.47	17.03	6.74	73.92	17.44	6.62	70.84	15.90	6.44
		240.00	76.06	15.60	3.54	76.34	16.22	3.52	75.59	16.93	3.44	75.33	16.79	3.43	75.10	16.92	3.41	71.73	15.65	3.29
		300.00	76.59	15.48	2.87	76.61	16.09	2.84	75.87	16.73	2.77	75.61	16.55	2.77	75.10	16.92	2.73	72.03	15.90	2.63
		360.00	76.85	15.42	2.40	76.89	16.03	2.38	76.15	16.60	2.33	75.90	16.41	2.33	75.40	16.92	2.29	72.33	16.05	2.20
	20	120.00	76.32	13.58	7.36	76.61	14.08	7.33	75.87	14.56	7.19	75.33	14.81	7.10	75.10	15.35	7.01	71.73	14.44	6.72
		240.00	77.91	13.67	3.77	77.43	14.08	3.71	76.71	14.56	3.64	76.47	14.81	3.62	75.99	15.06	3.57	72.62	14.33	3.42
		300.00	78.44	13.67	3.04	78.25	14.08	3.01	76.99	14.56	2.93	76.76	14.57	2.92	76.29	15.06	2.87	72.92	14.33	2.75
		360.00	78.71	13.67	2.54	78.53	14.08	2.52	77.27	14.56	2.45	77.04	14.43	2.45	76.58	15.06	2.40	72.92	14.33	2.29
	25	120.00	84.80	14.58	8.23	84.65	15.20	8.14	83.45	15.41	7.98	80.56	14.67	7.73	77.91	13.97	7.50	72.62	12.28	7.08
		240.00	85.37	14.48	4.16	84.65	14.93	4.09	83.45	15.14	4.01	80.56	14.40	3.88	77.91	13.67	3.77	72.62	12.28	3.54
		300.00	85.94	14.48	3.35	84.65	15.01	3.27	83.45	14.83	3.22	80.56	14.40	3.10	77.91	13.44	3.02	72.62	12.03	2.84
		360.00	86.23	14.48	2.80	84.65	15.01	2.72	83.45	14.67	2.69	80.56	14.40	2.59	77.91	13.29	2.53	72.62	11.92	2.37
	30	120.00	92.82	15.60	9.06	88.74	14.75	8.68	83.45	13.16	8.24	80.56	12.74	7.95	77.91	12.18	7.71	72.62	11.26	7.20
		240.00	92.82	15.31	4.54	88.74	14.43	4.36	83.45	12.86	4.14	80.56	12.48	3.99	77.91	11.88	3.87	72.62	10.97	3.62
		300.00	92.82	15.19	3.64	88.74	14.19	3.50	83.45	12.60	3.32	80.56	12.23	3.21	77.91	11.88	3.10	72.62	10.97	2.89
		360.00	92.82	15.15	3.04	88.74	14.03	2.92	83.45	12.45	2.77	80.56	12.12	2.68	77.91	11.88	2.58	72.62	10.97	2.41
	35	120.00	94.03	14.35	9.34	88.74	12.90	8.89	83.45	11.81	8.40	80.56	11.45	8.10	77.91	10.65	7.89	72.62	9.67	7.38
		240.00	94.03	13.80	4.70	88.74	12.63	4.46	83.45	11.52	4.22	80.56	11.19	4.07	77.91	10.44	3.96	72.62	9.43	3.71
		300.00	94.03	13.44	3.78	88.74	12.37	3.58	83.45	11.27	3.39	80.56	11.19	3.25	77.91	10.44	3.17	72.62	9.43	2.96
		360.00	94.03	13.28	3.16	88.74	12.22	2.99	83.45	11.16	2.83	80.56	11.19	2.71	77.91	10.44	2.64	72.62	9.43	2.47
	40	120.00	94.03	13.52	9.44	88.74	12.37	8.95	83.45	11.02	8.49	80.56	10.68	8.19	77.91	9.90	7.98	72.62	8.90	7.47
		240.00	94.03	12.96	4.75	88.74	11.80	4.51	83.45	10.51	4.28	80.56	10.38	4.11	77.91	9.64	4.00	72.62	8.65	3.75
		300.00	94.03	12.76	3.81	88.74	11.53	3.62	83.45	10.51	3.42	80.56	10.13	3.30	77.91	9.36	3.22	72.62	8.41	3.01
		360.00	94.03	12.68	3.18	88.74	11.38	3.02	83.45	10.51	2.85	80.56	9.98	2.76	77.91	9.25	2.68	72.62	8.26	2.52
	45	120.00	94.03	12.64	9.54	88.74	11.80	9.02	83.45	10.22	8.59	80.56	9.87	8.29	77.91	9.10	8.07	72.62	8.12	7.56
		240.00	94.03	12.09	4.80	88.74	11.00	4.56	83.45	9.42	4.34	80.56	9.57	4.16	77.91	8.85	4.05	72.62	7.88	3.80
		300.00	94.03	12.09	3.84	88.74	10.70	3.66	83.45	9.71	3.46	80.56	9.06	3.35	77.91	8.31	3.26	72.62	7.39	3.06
		360.00	94.03	12.09	3.20	88.74	10.55	3.06	83.45	9.86	2.88	80.56	8.80	2.80	77.91	8.06	2.73	72.62	7.10	2.56
100	10	120.00	74.73	18.69	6.57	75.60	19.68	6.56	75.00	20.67	6.37	73.35	19.20	6.35	70.94	18.63	6.13	66.13	16.57	5.81
		240.00	75.56	19.06	3.31	75.89	19.94	3.28	75.00	20.92	3.17	73.35	19.30	3.17	70.94	18.70	3.06	66.13	16.64	2.90
		300.00	76.12	18.96	2.68	76.18	19.94	2.64	75.00	20.88	2.54	73.35	19.27	2.54	70.94	18.63	2.45	66.13	16.57	2.32
		360.00	76.40	18.93	2.25	76.47	19.94	2.21	75.00	20.85	2.12	73.35	19.23	2.12	70.94	18.63	2.04	66.13	16.53	1.94
	15	120.00	75.29	16.50	6.89	75.60	17.39	6.83	75.00	18.44	6.63	73.35	17.26	6.58	70.94	16.58	6.37	66.13	14.89	6.01
		240.00	75.56	16.81	3.44	75.89	17.46	3.43	75.00	18.44	3.32	73.35	17.02	3.30	70.94	16.34	3.20	66.13	14.65	3.02
		300.00	76.12	16.54	2.79	76.47	17.29	2.78	75.00	18.22	2.66	73.35	16.78	2.65	70.94	16.09	2.57	66.13	14.41	2.43
		360.00	76.40	16.38	2.35	76.47	17.23	2.32	75.00	18.08	2.22	73.35	16.64	2.22	70.94	15.95	2.15	66.13	14.27	2.03
	20	120.00	75.84	14.11	7.24	76.18	14.74	7.20	75.00	15.60	6.97	73.35	14.77	6.87	70.94	14.04	6.67	66.13	12.90	6.24
		240.00	76.95	14.35	3.67	76.47	14.81	3.62	75.00	15.60	3.48	73.35	14.53	3.45	70.94	13.80	3.35	66.13	12.38	3.15
		300.00	77.23	14.11	2.96	77.05	14.68	2.93	75.00	15.35	2.80	73.35	14.25	2.77	70.94	13.51	2.69	66.13	12.18	2.53
		360.00	77.51	13.98	2.48	77.34	14.61	2.45	75.00	15.20	2.34	73.35	14.15	2.31	70.94	13.37	2.25	66.13	12.04	2.11
	25	120.00	82.96	15.17	7.95	80.56	14.75	7.72	75.00	13.38	7.23	73.35	12.75	7.11	70.94	12.08	6.90	66.13	10.66	6.50
		240.00	84.17	15.21	4.04	80.56	14.40	3.88	75.00	13.09	3.63	73.35	12.46	3.57	70.94	11.83	3.47	66.13	10.66	3.25
		300.00	84.47	14.87	3.26	80.56	14.29	3.11	75.00	12.87	2.91	73.35	12.21	2.87	70.94	11.83	2.77	66.13	10.38	2.61
		360.00	84.77	14.72	2.74	80.56	14.25	2.59	75.00	12.73	2.43	73.35	12.06	2.40	70.94	11.83	2.31	66.13	10.28	2.18
	30	120.00	85.37	13.88	8.38	80.56	12.75	7.95	75.00	11.48	7.45	73.35	11.13	7.30	70.94	10.31	7.11	66.13	9.61	6.63
		240.00	85.37	13.65	4.21	80.56	12.48	3.99	75.00	11.37	3.73	73.35	10.84	3.66	70.94	10.31	3.55	66.13	9.32	3.33
		300.00	85.37	13.34	3.38	80.56	12.48	3.19	75.00	11.22	2.99	73.35	10.84	2.93	70.94	10.05	2.86	66.13	9.32	2.66
		360.00	85.37	13.18	2.82	80.56	12.48	2.66	75.00	11.15	2.50	73.35	10.84	2.44	70.94	9.91	2.39	66.13	9.32	2.22
	35	120.00	85.37	12.52	8.54	80.56	11.50	8.10	75.00	10.14	7.61	73.35	9.87	7.44	70.94	9.38	7.22	66.13	8.52	6.76
		240.00	85.37	11.95	4.30	80.56	10.97	4.08	75.00	10.03	3.81	73.35	9.58	3.74	70.94	9.12	3.62	66.13	8.26	3.39
		300.00	85.37	11.95	3.44	80.56	10.97	3.26	75.00	9.88	3.05	73.35	9.58	2.99	70.94	9.12	2.90	66.13	8.26	2.71
		360.00	85.37	11.95	2.87	80.56	10.97	2.72	75.00	9.81	2.55	73.35	9.58							

VRF MW



12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	120.00	75.68	20.77	6.44	72.62	19.45	6.23	68.30	17.42	5.97	65.89	16.53	5.79	63.73	16.02	5.59	59.40	13.96	5.33
		240.00	75.37	20.84	3.20	72.31	19.56	3.09	68.30	17.49	2.98	65.89	16.64	2.89	63.73	15.98	2.80	59.40	14.03	2.66
		300.00	75.99	20.77	2.59	72.62	19.49	2.49	68.30	17.42	2.39	65.89	16.57	2.31	63.73	16.02	2.24	59.40	14.06	2.13
		360.00	76.30	20.73	2.17	72.62	19.45	2.08	68.30	17.42	1.99	65.89	16.53	1.93	63.73	16.06	1.86	59.40	14.09	1.77
	15	120.00	75.99	17.91	6.81	72.93	17.01	6.56	68.30	15.52	6.19	65.89	14.89	5.98	63.73	14.29	5.80	59.40	12.56	5.49
		240.00	75.37	17.61	3.39	72.31	16.71	3.26	68.30	15.28	3.11	65.89	14.65	3.00	63.73	13.80	2.93	59.40	12.29	2.76
		300.00	75.99	17.38	2.75	72.62	16.45	2.63	68.30	15.03	2.50	65.89	14.37	2.42	63.73	13.80	2.34	59.40	12.29	2.21
		360.00	76.30	17.23	2.31	72.93	16.34	2.21	68.30	14.89	2.09	65.89	14.27	2.02	63.73	13.80	1.95	59.40	12.29	1.84
	20	120.00	76.30	15.16	7.17	73.24	14.49	6.89	68.30	13.23	6.46	65.89	12.59	6.25	63.73	12.24	6.04	59.40	11.10	5.66
		240.00	75.99	15.16	3.57	72.62	14.30	3.42	68.30	12.99	3.24	65.89	12.38	3.14	63.73	11.75	3.05	59.40	10.59	2.86
		300.00	76.30	14.94	2.88	72.93	14.19	2.76	68.30	12.99	2.59	65.89	12.38	2.51	63.73	11.75	2.44	59.40	10.59	2.29
		360.00	76.61	14.79	2.42	72.93	14.15	2.30	68.30	12.99	2.16	65.89	12.38	2.09	63.73	11.75	2.03	59.40	10.59	1.91
	25	120.00	76.04	13.51	7.33	72.62	12.37	7.07	68.30	11.42	6.67	65.89	10.66	6.48	63.73	10.42	6.25	59.40	9.46	5.86
		240.00	76.95	13.39	3.73	72.62	12.26	3.54	68.30	11.17	3.35	65.89	10.66	3.24	63.73	10.13	3.14	59.40	9.17	2.94
		300.00	77.26	13.05	3.01	72.62	12.00	2.84	68.30	11.17	2.68	65.89	10.38	2.60	63.73	10.13	2.51	59.40	9.17	2.36
		360.00	77.26	12.86	2.52	72.62	11.85	2.38	68.30	11.17	2.23	65.89	10.28	2.17	63.73	10.13	2.09	59.40	9.17	1.96
	30	120.00	76.95	11.89	7.63	72.62	10.88	7.24	68.30	10.01	6.83	65.89	9.61	6.60	63.73	9.15	6.40	59.40	8.06	6.02
		240.00	76.95	11.62	3.83	72.62	10.66	3.63	68.30	9.75	3.43	65.89	9.32	3.32	63.73	8.89	3.21	59.40	8.06	3.01
		300.00	76.95	11.36	3.08	72.62	10.37	2.92	68.30	9.75	2.75	65.89	9.32	2.65	63.73	8.89	2.57	59.40	7.82	2.42
		360.00	76.95	11.21	2.57	72.62	10.22	2.44	68.30	9.75	2.29	65.89	9.32	2.21	63.73	8.89	2.14	59.40	7.71	2.02
	35	120.00	76.95	10.55	7.79	72.62	9.72	7.38	68.30	8.90	6.97	65.89	8.55	6.72	63.73	8.14	6.52	59.40	7.42	6.09
		240.00	76.95	10.26	3.91	72.62	9.43	3.71	68.30	8.64	3.50	65.89	8.26	3.38	63.73	7.88	3.27	59.40	7.18	3.06
		300.00	76.95	10.00	3.14	72.62	9.17	2.98	68.30	8.35	2.81	65.89	8.01	2.71	63.73	7.88	2.62	59.40	7.18	2.45
		360.00	76.95	9.86	2.62	72.62	9.03	2.49	68.30	8.21	2.35	65.89	7.91	2.27	63.73	7.88	2.18	59.40	7.18	2.04
	40	120.00	76.95	9.75	7.88	72.62	8.92	7.47	68.30	7.85	7.09	65.89	7.51	6.85	63.73	7.38	6.61	59.40	6.65	6.19
		240.00	76.95	9.20	3.97	72.62	8.66	3.75	68.30	7.59	3.56	65.89	7.26	3.44	63.73	7.08	3.32	59.40	6.40	3.11
		300.00	76.95	9.20	3.18	72.62	8.66	3.00	68.30	7.59	2.85	65.89	7.26	2.75	63.73	7.08	2.66	59.40	6.40	2.49
		360.00	76.95	9.20	2.65	72.62	8.66	2.50	68.30	7.59	2.37	65.89	7.26	2.29	63.73	7.08	2.21	59.40	6.40	2.07
	45	120.00	76.95	8.95	7.97	72.62	8.12	7.56	68.30	6.80	7.21	65.89	6.47	6.97	63.73	6.58	6.70	59.40	5.87	6.28
		240.00	76.95	8.15	4.03	72.62	7.87	3.80	68.30	6.54	3.62	65.89	6.22	3.50	63.73	6.32	3.37	59.40	5.62	3.15
		300.00	76.95	8.40	3.22	72.62	8.12	3.03	68.30	6.80	2.88	65.89	6.47	2.79	63.73	6.32	2.69	59.40	5.62	2.52
		360.00	76.95	8.55	2.67	72.62	8.27	2.52	68.30	6.91	2.40	65.89	6.62	2.32	63.73	6.32	2.24	59.40	5.62	2.10
80	10	120.00	67.99	17.54	5.92	64.15	16.05	5.64	60.60	14.22	5.44	58.68	13.82	5.26	56.75	13.10	5.12	52.90	11.90	4.81
		240.00	68.30	17.42	2.98	64.45	15.94	2.84	60.60	14.22	2.72	58.68	13.86	2.63	56.75	13.14	2.56	52.90	11.90	2.40
		300.00	68.30	17.38	2.39	64.45	16.01	2.27	60.60	14.29	2.17	58.68	13.79	2.11	56.75	13.07	2.05	52.90	11.84	1.93
		360.00	68.30	17.34	1.99	64.15	16.05	1.88	60.60	14.32	1.81	58.68	13.75	1.76	56.75	13.03	1.71	52.90	11.80	1.61
	15	120.00	68.30	15.89	6.15	64.45	14.40	5.87	60.60	12.64	5.62	58.68	12.46	5.42	56.75	11.70	5.28	52.90	10.70	4.95
		240.00	68.30	15.34	3.10	64.45	13.87	2.97	60.60	12.43	2.82	58.68	12.18	2.73	56.75	11.45	2.66	52.90	10.46	2.49
		300.00	68.30	15.03	2.50	64.45	13.87	2.37	60.60	12.43	2.26	58.68	11.93	2.19	56.75	11.17	2.14	52.90	10.18	2.00
		360.00	68.30	14.87	2.09	64.45	13.87	1.98	60.60	12.43	1.88	58.68	11.79	1.83	56.75	11.03	1.79	52.90	10.08	1.67
	20	120.00	68.30	13.34	6.44	64.45	12.25	6.12	60.60	10.89	5.83	58.68	10.67	5.63	56.75	10.19	5.46	52.90	9.22	5.12
		240.00	68.30	13.06	3.24	64.45	11.95	3.08	60.60	10.89	2.91	58.68	10.39	2.83	56.75	9.91	2.75	52.90	8.95	2.58
		300.00	68.30	12.79	2.60	64.45	11.69	2.47	60.60	10.65	2.34	58.68	10.39	2.27	56.75	9.66	2.21	52.90	8.95	2.06
		360.00	68.30	12.63	2.18	64.45	11.58	2.07	60.60	10.51	1.96	58.68	10.39	1.89	56.75	9.52	1.85	52.90	8.95	1.72
	25	120.00	68.30	11.52	6.66	64.45	10.57	6.32	60.60	9.43	6.00	58.68	9.24	5.80	56.75	8.84	5.62	52.90	8.05	5.26
		240.00	68.30	11.22	3.35	64.45	10.31	3.17	60.60	9.43	3.00	58.68	9.00	2.91	56.75	8.59	2.82	52.90	7.81	2.64
		300.00	68.30	10.99	2.69	64.45	10.31	2.54	60.60	9.14	2.41	58.68	9.00	2.33	56.75	8.59	2.26	52.90	7.81	2.12
		360.00	68.30	10.84	2.25	64.45	10.31	2.12	60.60	9.04	2.02	58.68	9.00	1.94	56.75	8.59	1.88	52.90	7.81	1.76
	30	120.00	68.30	9.98	6.84	64.45	9.28	6.47	60.60	8.58	6.10	58.68	8.21	5.92	56.75	7.83	5.74	52.90	7.18	5.36
		240.00	68.30	9.68	3.44	64.45	9.02	3.25	60.60	8.29	3.07	58.68	7.96	2.97	56.75	7.58	2.88	52.90	6.90	2.70
		300.00	68.30	9.68	2.75	64.45	9.02	2.60	60.60	8.29	2.45	58.68	7.96	2.38	56.75	7.58	2.31	52.90	6.90	2.16
		360.00	68.30	9.68	2.29	64.45	9.02	2.17	60.60	8.29	2.04	58.68	7.96	1.98	56.75	7.58	1.92	52.90	6.90	1.80
	35	120.00	68.30	9.05	6.95	64.45	8.26	6.59	60.60	7.63	6.21	58.68	7.08	6.05	56.75	7.02	5.83	52.90	6.19	5.48
		240.00	68.30	8.79	3.49	64.45	8.01	3.31	60.60	7.38	3.12	58.68	7.08	3.03	56.75	6.77	2.93	52.90	6.19	2.74
		300.00	68.30	8.79	2.79	64.45	7.76	2.66	60.60	7.38	2.50	58.68	6.80	2.43	56.75	6.77	2.34	52.90	5.95	2.20
		360.00	68.30	8.79	2.33	64.45	7.62	2.22	60.60	7.38	2.08	58.68	6.69	2.03	56.75	6.77	1.95	52.90	5.81	1.84
40	120.00	68.30	8.50	7.01	64.45	7.51	6.68	60.60	6.83											

12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	120.00	59.57	14.55	5.28	56.51	13.28	5.07	53.15	12.08	4.82	51.22	11.24	4.69	49.54	10.89	4.53	46.17	9.65	4.28
		240.00	59.88	14.44	2.66	56.51	13.17	2.54	53.15	11.97	2.41	51.22	11.24	2.34	49.54	10.89	2.27	46.17	9.65	2.14
		300.00	59.88	14.51	2.13	56.51	13.24	2.03	53.15	12.01	1.93	51.22	11.27	1.87	49.54	10.79	1.82	46.17	9.65	1.71
		360.00	59.88	14.51	1.77	56.51	13.24	1.69	53.15	12.04	1.61	51.22	11.31	1.56	49.54	10.76	1.52	46.17	9.68	1.43
	15	120.00	59.88	13.18	5.48	56.51	11.96	5.22	53.15	10.76	4.97	51.22	10.08	4.82	49.54	9.69	4.67	46.17	8.65	4.40
		240.00	59.88	12.65	2.77	56.51	11.41	2.64	53.15	10.24	2.52	51.22	9.88	2.42	49.54	9.45	2.35	46.17	8.42	2.21
		300.00	59.88	12.65	2.22	56.51	11.41	2.12	53.15	10.24	2.01	51.22	9.88	1.94	49.54	9.21	1.89	46.17	8.42	1.77
		360.00	59.88	12.65	1.85	56.51	11.41	1.76	53.15	10.24	1.68	51.22	9.88	1.62	49.54	9.07	1.58	46.17	8.42	1.48
	20	120.00	59.88	11.02	5.73	56.51	10.09	5.44	53.15	9.27	5.14	51.22	8.86	4.97	49.54	8.45	4.82	46.17	7.69	4.51
		240.00	59.88	10.71	2.88	56.51	9.83	2.74	53.15	9.00	2.59	51.22	8.62	2.50	49.54	8.21	2.42	46.17	7.45	2.27
		300.00	59.88	10.71	2.31	56.51	9.83	2.19	53.15	9.00	2.07	51.22	8.38	2.01	49.54	8.21	1.94	46.17	7.22	1.83
		360.00	59.88	10.71	1.92	56.51	9.83	1.82	53.15	9.00	1.73	51.22	8.28	1.68	49.54	8.21	1.62	46.17	7.09	1.53
	25	120.00	59.88	9.50	5.91	56.51	8.79	5.60	53.15	8.08	5.28	51.22	7.75	5.10	49.54	7.18	4.97	46.17	6.54	4.65
		240.00	59.88	9.25	2.97	56.51	8.54	2.81	53.15	7.83	2.66	51.22	7.51	2.56	49.54	7.18	2.48	46.17	6.54	2.32
		300.00	59.88	8.99	2.39	56.51	8.26	2.26	53.15	7.83	2.13	51.22	7.51	2.05	49.54	6.94	2.00	46.17	6.54	1.86
		360.00	59.88	8.88	1.99	56.51	8.11	1.89	53.15	7.83	1.77	51.22	7.51	1.71	49.54	6.80	1.67	46.17	6.54	1.55
	30	120.00	59.88	8.39	6.04	56.51	7.78	5.71	53.15	7.21	5.39	51.22	6.65	5.23	49.54	6.61	5.03	46.17	5.84	4.73
		240.00	59.88	8.14	3.03	56.51	7.53	2.87	53.15	6.92	2.71	51.22	6.65	2.61	49.54	6.37	2.53	46.17	5.84	2.36
		300.00	59.88	8.14	2.43	56.51	7.53	2.30	53.15	6.92	2.17	51.22	6.41	2.10	49.54	6.37	2.02	46.17	5.84	1.89
		360.00	59.88	8.14	2.02	56.51	7.53	1.91	53.15	6.92	1.81	51.22	6.27	1.76	49.54	6.37	1.69	46.17	5.84	1.58
	35	120.00	59.88	7.50	6.14	56.51	6.97	5.81	53.15	6.22	5.50	51.22	6.18	5.28	49.54	5.74	5.14	46.17	5.52	4.77
		240.00	59.88	7.25	3.09	56.51	6.72	2.92	53.15	6.22	2.75	51.22	5.94	2.65	49.54	5.74	2.57	46.17	5.28	2.40
		300.00	59.88	7.25	2.47	56.51	6.72	2.34	53.15	5.98	2.21	51.22	5.94	2.12	49.54	5.74	2.05	46.17	5.28	1.92
		360.00	59.88	7.25	2.06	56.51	6.72	1.95	53.15	5.84	1.85	51.22	5.94	1.77	49.54	5.74	1.71	46.17	5.28	1.60
	40	120.00	59.88	6.97	6.20	56.51	6.47	5.87	53.15	5.70	5.56	51.22	5.43	5.37	49.54	5.25	5.19	46.17	5.00	4.83
		240.00	59.88	6.72	3.12	56.51	6.22	2.95	53.15	5.46	2.80	51.22	5.43	2.69	49.54	5.25	2.60	46.17	4.79	2.43
		300.00	59.88	6.72	2.49	56.51	6.22	2.36	53.15	5.46	2.24	51.22	5.19	2.16	49.54	4.98	2.09	46.17	4.79	1.94
		360.00	59.88	6.72	2.08	56.51	6.22	1.97	53.15	5.46	1.86	51.22	5.05	1.80	49.54	4.87	1.75	46.17	4.79	1.62
	45	120.00	59.88	6.47	6.26	56.51	5.94	5.93	53.15	5.22	5.62	51.22	4.71	5.45	49.54	4.77	5.25	46.17	4.52	4.88
		240.00	59.88	6.22	3.15	56.51	5.68	2.98	53.15	4.74	2.84	51.22	4.91	2.72	49.54	4.77	2.62	46.17	4.27	2.46
		300.00	59.88	6.22	2.52	56.51	5.68	2.38	53.15	4.95	2.26	51.22	4.44	2.19	49.54	4.25	2.12	46.17	4.27	1.97
		360.00	59.88	6.22	2.10	56.51	5.68	1.99	53.15	5.08	1.88	51.22	4.20	1.84	49.54	3.97	1.78	46.17	4.27	1.64
60	10	120.00	51.22	11.18	4.70	48.34	10.56	4.43	45.45	9.88	4.17	44.01	9.17	4.08	42.56	8.93	3.94	39.68	7.87	3.73
		240.00	51.22	11.18	2.35	48.34	10.56	2.22	45.45	9.88	2.09	44.01	9.28	2.04	42.56	8.89	1.97	39.68	7.97	1.86
		300.00	51.22	11.22	1.88	48.34	10.45	1.78	45.45	9.77	1.67	44.01	9.17	1.63	42.56	8.83	1.58	39.68	7.87	1.49
		360.00	51.22	11.22	1.56	48.34	10.38	1.48	45.45	9.70	1.40	44.01	9.10	1.36	42.56	8.79	1.32	39.68	7.84	1.24
	15	120.00	51.22	10.14	4.82	48.34	9.49	4.55	45.45	8.80	4.30	44.01	8.24	4.19	42.56	7.93	4.06	39.68	7.09	3.82
		240.00	51.22	9.89	2.42	48.34	9.21	2.29	45.45	8.55	2.16	44.01	8.24	2.10	42.56	7.69	2.04	39.68	7.09	1.91
		300.00	51.22	9.89	1.94	48.34	8.96	1.85	45.45	8.31	1.74	44.01	7.97	1.69	42.56	7.45	1.65	39.68	6.86	1.54
		360.00	51.22	9.89	1.62	48.34	8.82	1.54	45.45	8.17	1.46	44.01	7.83	1.41	42.56	7.31	1.38	39.68	6.72	1.29
	20	120.00	51.22	8.84	4.97	48.34	8.18	4.71	45.45	7.55	4.44	44.01	7.24	4.31	42.56	6.97	4.17	39.68	6.35	3.91
		240.00	51.22	8.59	2.50	48.34	7.93	2.37	45.45	7.30	2.24	44.01	7.00	2.17	42.56	6.70	2.10	39.68	6.12	1.97
		300.00	51.22	8.59	2.00	48.34	7.93	1.90	45.45	7.30	1.79	44.01	7.00	1.74	42.56	6.70	1.68	39.68	6.12	1.57
		360.00	51.22	8.59	1.67	48.34	7.93	1.58	45.45	7.30	1.49	44.01	7.00	1.45	42.56	6.70	1.40	39.68	6.12	1.31
	25	120.00	51.22	7.76	5.10	48.34	7.23	4.82	45.45	6.42	4.58	44.01	6.40	4.41	42.56	5.91	4.30	39.68	5.67	3.99
		240.00	51.22	7.51	2.56	48.34	6.95	2.43	45.45	6.42	2.29	44.01	6.17	2.22	42.56	5.91	2.15	39.68	5.43	2.01
		300.00	51.22	7.51	2.05	48.34	6.95	1.94	45.45	6.18	1.84	44.01	6.17	1.77	42.56	5.91	1.72	39.68	5.43	1.61
		360.00	51.22	7.51	1.71	48.34	6.95	1.62	45.45	6.08	1.54	44.01	6.17	1.48	42.56	5.91	1.43	39.68	5.43	1.34
	30	120.00	51.22	6.89	5.20	48.34	6.41	4.92	45.45	6.01	4.62	44.01	5.75	4.49	42.56	5.52	4.34	39.68	5.15	4.05
		240.00	51.22	6.65	2.61	48.34	6.17	2.47	45.45	5.74	2.33	44.01	5.51	2.26	42.56	5.28	2.19	39.68	4.88	2.04
		300.00	51.22	6.65	2.09	48.34	6.17	1.98	45.45	5.74	1.86	44.01	5.51	1.81	42.56	5.28	1.75	39.68	4.88	1.63
		360.00	51.22	6.65	1.74	48.34	6.17	1.65	45.45	5.74	1.55	44.01	5.51	1.50	42.56	5.28	1.46	39.68	4.88	1.36
	35	120.00	51.22	5.96	5.31	48.34	5.80	4.99	45.45	5.18	4.72	44.01	5.25	4.54	42.56	5.01	4.40	39.68	4.72	4.10
		240.00	51.22	5.96	2.65	48.34	5.56	2.51	45.45	5.18	2.36	44.01	4.98	2.29	42.56	4.80	2.21	39.68	4.45	2.07
		300.00	51.22	5.96	2.12	48.34	5.56	2.01	45.45	4.91	1.90	44.01	4.98	1.83	42.56	4.80	1.77	39.68	4.45	1.65
		360.00	51.22	5.96	1.77	48.34	5.56	1.67	45.45	4.81	1.59	44.01	4.98	1.53	42.56	4.80	1.48	39.68	4.45	1.38
	40	120.00	51.22	5.45	5.37	48.34	5.31	5.04	45.45	4.70	4.78	44.01	4.77	4.60	42.56	4				

VRF MW



12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	120.00	42.50	8.90	3.94	40.10	8.39	3.72	40.40	7.63	3.84	36.55	7.38	3.42	35.35	6.87	3.34	32.95	6.33	3.12
		240.00	42.80	8.83	1.99	40.40	8.39	1.88	40.40	7.60	1.92	36.55	7.31	1.71	35.35	6.94	1.67	32.95	6.26	1.56
		300.00	42.80	8.90	1.59	40.40	8.39	1.50	40.40	7.60	1.54	36.55	7.34	1.37	35.35	6.84	1.34	32.95	6.30	1.25
		360.00	42.80	8.90	1.33	40.40	8.43	1.25	40.40	7.63	1.28	36.55	7.34	1.14	35.35	6.77	1.12	32.95	6.30	1.04
	15	120.00	42.80	8.04	4.08	40.40	7.56	3.85	40.40	6.80	3.94	36.55	6.60	3.51	35.35	6.13	3.43	32.95	5.68	3.20
		240.00	42.80	7.79	2.05	40.40	7.31	1.94	40.40	6.55	1.98	36.55	6.36	1.77	35.35	6.13	1.71	32.95	5.44	1.61
		300.00	42.80	7.79	1.64	40.40	7.31	1.55	40.40	6.55	1.59	36.55	6.36	1.42	35.35	5.85	1.38	32.95	5.44	1.29
		360.00	42.80	7.79	1.37	40.40	7.31	1.29	40.40	6.55	1.32	36.55	6.36	1.18	35.35	5.71	1.16	32.95	5.44	1.08
	20	120.00	42.80	7.00	4.20	40.40	6.52	3.97	40.40	6.07	4.03	36.55	5.83	3.60	35.35	5.60	3.49	32.95	4.93	3.29
		240.00	42.80	6.75	2.11	40.40	6.27	2.00	40.40	5.79	2.03	36.55	5.58	1.82	35.35	5.36	1.76	32.95	4.93	1.64
		300.00	42.80	6.75	1.69	40.40	6.27	1.60	40.40	5.79	1.62	36.55	5.58	1.45	35.35	5.36	1.41	32.95	4.93	1.31
		360.00	42.80	6.75	1.41	40.40	6.27	1.33	40.40	5.79	1.35	36.55	5.58	1.21	35.35	5.36	1.17	32.95	4.93	1.10
	25	120.00	42.80	6.22	4.29	40.40	5.53	4.09	40.40	5.44	4.10	36.55	4.95	3.71	35.35	4.78	3.59	32.95	4.42	3.34
		240.00	42.80	5.94	2.16	40.40	5.53	2.04	40.40	5.15	2.07	36.55	4.95	1.85	35.35	4.78	1.79	32.95	4.42	1.67
		300.00	42.80	5.94	1.73	40.40	5.53	1.64	40.40	5.15	1.65	36.55	4.95	1.48	35.35	4.78	1.43	32.95	4.42	1.34
		360.00	42.80	5.94	1.44	40.40	5.53	1.36	40.40	5.15	1.38	36.55	4.95	1.24	35.35	4.78	1.20	32.95	4.42	1.11
	30	120.00	42.80	5.58	4.37	40.40	5.19	4.13	40.40	4.94	4.16	36.55	4.47	3.76	35.35	4.57	3.61	32.95	4.26	3.36
		240.00	42.80	5.33	2.20	40.40	4.98	2.08	40.40	4.65	2.10	36.55	4.47	1.88	35.35	4.32	1.82	32.95	4.02	1.70
		300.00	42.80	5.33	1.76	40.40	4.98	1.66	40.40	4.65	1.68	36.55	4.47	1.50	35.35	4.32	1.46	32.95	4.02	1.36
		360.00	42.80	5.33	1.46	40.40	4.98	1.38	40.40	4.65	1.40	36.55	4.47	1.25	35.35	4.32	1.21	32.95	4.02	1.13
	35	120.00	42.80	5.04	4.43	40.40	4.52	4.21	40.40	4.25	4.24	36.55	4.34	3.78	35.35	3.97	3.68	32.95	3.69	3.43
		240.00	42.80	4.83	2.23	40.40	4.52	2.10	40.40	4.25	2.12	36.55	4.09	1.90	35.35	3.97	1.84	32.95	3.69	1.72
		300.00	42.80	4.83	1.78	40.40	4.52	1.68	40.40	4.25	1.70	36.55	4.09	1.52	35.35	3.97	1.47	32.95	3.69	1.37
		360.00	42.80	4.83	1.48	40.40	4.52	1.40	40.40	4.25	1.41	36.55	4.09	1.27	35.35	3.97	1.23	32.95	3.69	1.14
	40	120.00	42.80	4.55	4.49	40.40	4.28	4.24	40.40	4.00	4.27	36.55	3.85	3.84	35.35	3.73	3.71	32.95	3.42	3.46
		240.00	42.80	4.30	2.26	40.40	4.04	2.13	40.40	3.76	2.15	36.55	3.85	1.92	35.35	3.45	1.87	32.95	3.42	1.73
		300.00	42.80	4.30	1.81	40.40	4.04	1.71	40.40	3.76	1.72	36.55	3.85	1.53	35.35	3.45	1.50	32.95	3.42	1.38
		360.00	42.80	4.30	1.50	40.40	4.04	1.42	40.40	3.76	1.43	36.55	3.85	1.28	35.35	3.45	1.25	32.95	3.42	1.15
	45	120.00	42.80	4.06	4.54	40.40	4.04	4.26	40.40	3.76	4.30	36.55	3.32	3.90	35.35	3.45	3.74	32.95	3.18	3.49
		240.00	42.80	3.81	2.29	40.40	3.51	2.16	40.40	3.24	2.18	36.55	3.56	1.93	35.35	2.98	1.90	32.95	3.18	1.75
		300.00	42.80	3.81	1.83	40.40	3.51	1.73	40.40	3.24	1.74	36.55	3.56	1.55	35.35	2.98	1.52	32.95	3.18	1.40
		360.00	42.80	3.81	1.52	40.40	3.51	1.44	40.40	3.24	1.45	36.55	3.56	1.29	35.35	2.98	1.27	32.95	3.18	1.16

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

8HP+8HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																					
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000			
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC	
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	
130	10	140.00	70.75	6.19	7.77	89.96	10.81	10.18	90.44	8.77	10.02	91.42	8.81	10.12	92.54	8.81	10.24	94.56	8.87	10.45	96.00	8.80	10.59	
		280.00	70.75	5.74	3.86	89.96	10.13	5.06	90.44	8.21	4.98	91.42	8.23	5.03	92.54	8.16	5.09	94.56	8.31	5.20	96.00	8.36	5.27	
		350.00	70.75	5.56	3.08	89.96	9.93	4.04	90.44	8.02	3.98	91.42	8.02	4.02	92.54	8.08	4.07	94.56	8.10	4.15	96.00	8.13	4.21	
		420.00	70.75	5.47	2.57	89.96	9.79	3.36	90.44	7.97	3.31	91.42	7.93	3.35	92.54	8.04	3.39	94.56	8.02	3.45	96.00	8.01	3.50	
	15	140.00	69.73	8.14	7.87	88.76	14.18	10.40	88.97	11.49	10.15	90.05	11.53	10.26	90.86	11.55	10.35	93.23	11.64	10.59	94.69	11.60	10.74	
		280.00	69.73	7.50	3.90	88.76	13.31	5.16	88.97	10.74	5.04	90.05	10.77	5.09	90.86	10.77	5.13	93.23	10.91	5.26	94.69	10.93	5.33	
		350.00	69.73	7.28	3.11	88.76	12.97	4.11	88.97	10.51	4.02	90.05	10.56	4.07	90.86	10.57	4.10	93.23	10.67	4.20	94.69	10.69	4.26	
		420.00	69.73	7.19	2.59	88.76	12.83	3.42	88.97	10.41	3.35	90.05	10.44	3.38	90.86	10.49	3.41	93.23	10.55	3.49	94.69	10.53	3.54	
	20	140.00	68.71	9.90	7.94	87.56	17.22	10.59	87.50	13.93	10.25	88.68	13.99	10.37	89.85	13.95	10.49	91.91	14.08	10.71	93.38	14.08	10.86	
		280.00	68.71	9.09	3.93	87.56	16.14	5.24	87.50	12.99	5.08	88.68	13.07	5.14	89.85	13.10	5.20	91.91	13.20	5.31	93.38	13.25	5.39	
		350.00	68.71	8.82	3.13	87.56	15.74	4.17	87.50	12.76	4.05	88.68	12.82	4.10	89.85	12.81	4.15	91.91	12.96	4.24	93.38	12.94	4.30	
		420.00	68.71	8.68	2.61	87.56	15.53	3.47	87.50	12.62	3.37	88.68	12.65	3.41	89.85	12.69	3.45	91.91	12.80	3.53	93.38	12.78	3.57	
	25	140.00	68.71	11.65	8.12	81.92	15.24	9.82	84.86	15.46	10.13	86.03	15.51	10.26	87.21	15.61	10.39	88.97	15.63	10.57	90.15	15.63	10.69	
		280.00	68.71	10.70	4.01	81.92	14.27	4.86	84.86	14.45	5.02	86.03	14.53	5.08	87.21	14.58	5.14	88.97	14.66	5.23	90.15	14.71	5.30	
		350.00	68.71	10.40	3.20	81.92	13.98	3.88	84.86	14.20	4.00	86.03	14.23	4.05	87.21	14.32	4.10	88.97	14.37	4.18	90.15	14.39	4.22	
		420.00	68.71	10.27	2.66	81.92	13.78	3.22	84.86	14.03	3.33	86.03	14.08	3.37	87.21	14.17	3.41	88.97	14.23	3.47	90.15	14.21	3.51	
	30	140.00	68.71	13.80	8.34	79.28	16.82	9.71	81.92	17.03	10.00	82.80	17.09	10.09	83.98	17.12	10.21	85.45	17.21	10.37	86.62	17.15	10.48	
		280.00	68.71	12.65	4.11	79.28	15.75	4.80	81.92	15.91	4.94	82.80	15.99	4.99	83.98	16.04	5.05	85.45	16.12	5.13	86.62	16.14	5.19	
		350.00	68.71	12.36	3.28	79.28	15.40	3.83	81.92	15.60	3.94	82.80	15.68	3.98	83.98	15.77	4.03	85.45	15.79	4.09	86.62	15.79	4.14	
		420.00	68.71	12.19	2.72	79.28	15.22	3.18	81.92	15.44	3.28	82.80	15.50	3.31	83.98	15.63	3.35	85.45	15.65	3.40	86.62	15.59	3.44	
	35	140.00	68.71	16.43	8.60	75.76	18.44	9.52	78.11	18.56	9.77	79.28	18.70	9.90	80.16	18.69	9.99	81.34	18.75	10.11	82.22	18.73	10.20	
		280.00	68.71	15.13	4.23	75.76	17.24	4.70	78.11	17.39	4.82	79.28	17.47	4.89	80.16	17.52	4.93	81.34	17.57	5.00	82.22	17.57	5.04	
		350.00	68.71	14.67	3.37	75.76	16.85	3.74	78.11	17.02	3.84	79.28	17.10	3.89	80.16	17.19	3.93	81.34	17.25	3.98	82.22	17.19	4.02	
		420.00	68.71	14.47	2.80	75.76	16.66	3.11	78.11	16.85	3.20	79.28	16.95	3.24	80.16	17.01	3.27	81.34	17.07	3.31	82.22	17.01	3.34	
	40	140.00	60.78	17.34	7.89	67.30	19.46	8.76	69.35	19.61	8.99	70.43	19.71	9.11	71.14	19.71	9.18	72.52	19.79	9.32	73.22	19.75	9.39	
		280.00	60.78	15.93	3.87	67.30	18.15	4.32	69.35	18.35	4.43	70.43	18.40	4.49	71.14	18.47	4.53	72.52	18.57	4.60	73.22	18.55	4.64	
		350.00	60.78	15.48	3.08	67.30	17.77	3.44	69.35	17.94	3.53	70.43	18.07	3.58	71.14	18.11	3.61	72.52	18.18	3.66	73.22	18.13	3.69	
		420.00	60.78	15.28	2.56	67.30	17.57	2.86	69.35	17.73	2.93	70.43	17.88	2.97	71.14	17.92	3.00	72.52	18.00	3.05	73.22	17.92	3.07	
	45	140.00	53.23	18.24	7.22	58.84	20.42	8.01	60.59	20.61	8.20	61.59	20.76	8.32	62.13	20.77	8.37	63.37	20.79	8.50	63.91	20.76	8.55	
		280.00	53.23	16.74	3.53	58.84	19.12	3.94	60.59	19.27	4.03	61.59	19.37	4.09	62.13	19.38	4.12	63.37	19.54	4.19	63.91	19.54	4.21	
		350.00	53.23	16.28	2.81	58.84	18.68	3.13	60.59	18.86	3.21	61.59	19.00	3.26	62.13	19.06	3.28	63.37	19.15	3.33	63.91	19.05	3.35	
		420.00	53.23	16.08	2.33	58.84	18.44	2.60	60.59	18.65	2.67	61.59	18.85	2.71	62.13	18.87	2.73	63.37	18.93	2.77	63.91	18.80	2.79	
	120	10	140.00	64.74	5.38	7.08	77.21	6.99	8.51	87.93	8.61	9.75	89.33	8.59	9.89	90.47	8.68	10.02	92.49	8.70	10.22	94.23	8.70	10.40
			280.00	64.74	4.93	3.52	77.21	6.52	4.23	87.93	7.98	4.84	89.33	8.07	4.92	90.47	8.05	4.98	92.49	8.16	5.08	94.23	8.09	5.17
			350.00	64.74	4.89	2.81	77.21	6.39	3.38	87.93	7.88	3.87	89.33	7.90	3.93	90.47	7.92	3.98	92.49	7.99	4.06	94.23	7.97	4.13
			420.00	64.74	4.85	2.34	77.21	6.34	2.81	87.93	7.84	3.22	89.33	7.81	3.27	90.47	7.84	3.31	92.49	7.91	3.38	94.23	7.89	3.44
		15	140.00	64.08	7.16	7.20	76.48	9.30	8.67	87.17	11.37	9.95	88.27	11.40	10.07	89.43	11.48	10.19	91.47	11.53	10.40	93.22	11.52	10.58
			280.00	64.08	6.54	3.57	76.48	8.70	4.30	87.17	10.59	4.94	88.27	10.66	5.00	89.43	10.71	5.06	91.47	10.78	5.16	93.22	10.79	5.25
			350.00	64.08	6.42	2.85	76.48	8.51	3.43	87.17	10.40	3.94	88.27	10.45	3.99	89.43	10.50	4.04	91.47	10.61	4.12	93.22	10.54	4.19
			420.00	64.08	6.34	2.37	76.48	8.42	2.86	87.17	10.30	3.28	88.27	10.36	3.32	89.43	10.42	3.36	91.47	10.49	3.43	93.22	10.46	3.49
		20	140.00	63.42	8.70	7.29	75.76	11.34	8.80	86.03	13.83	10.09	87.21	13.90	10.21	88.38	13.93	10.34	90.44	14.06	10.56	92.20	14.02	10.73
			280.00	63.42	7.99	3.61	75.76	10.60	4.36	86.03	12.91	5.00	87.21	12.99	5.06	88.38	13.04	5.12	90.44	13.15	5.23	92.20	13.20	5.32
			350.00	63.42	7.79	2.88	75.76	10.37	3.48	86.03	12.62	3.99	87.21	12.73	4.04	88.38	12.83	4.09	90.44	12.90	4.18	92.20	12.87	4.25
			420.00	63.42	7.66	2.39	75.76	10.27	2.90	86.03	12.48	3.32	87.21	12.60	3.36	88.38	12.71	3.40	90.44	12.77	3.48	92.20	12.71	3.53
		25	140.00	63.42	10.22	7.44	75.76	13.34	9.00	83.39	15.38	9.98	84.57	15.43	10.10	86.03	15.54	10.26	87.80	15.58	10.44	89.26	15.66	10.60
			280.00	63.42	9.43	3.68	75.76	12.50	4.46	83.39	14.37	4.94	84.57	14.45	5.00	86.03	14.50	5.08	87.80	14.61	5.17	89.26	14.66	5.25
			350.00	63.42	9.15	2.93	75.76	12.19	3.55	83.39	14.11	3.94	84.57	14.14	3.99	86.03	14.27	4.05	87.80	14.31	4.13	89.26	14.33	4.19
			420.00	63.42	9.03	2.44	75.76	12.05	2.96	83.39	13.93	3.28	84.57	13.98	3.32	86.03	14.12	3.37	87.80	14.16	3.43	89.26	14.14	3.

VRF MW



8HP+8HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	140.00	58.77	4.67	6.41	69.99	6.03	7.68	81.49	7.58	9.00	86.17	8.40	9.55	87.33	8.44	9.68	90.03	8.47	9.95	91.78	8.51	10.13
		280.00	58.77	4.29	3.19	69.99	5.61	3.82	81.49	7.13	4.48	86.17	7.86	4.75	87.33	7.96	4.81	90.03	7.87	4.94	91.78	7.96	5.04
		350.00	58.77	4.14	2.54	69.99	5.49	3.05	81.49	6.99	3.58	86.17	7.73	3.79	87.33	7.74	3.84	90.03	7.74	3.95	91.78	7.87	4.03
		420.00	58.77	4.07	2.12	69.99	5.45	2.54	81.49	6.90	2.98	86.17	7.64	3.16	87.33	7.65	3.20	90.03	7.65	3.29	91.78	7.79	3.35
	15	140.00	58.46	6.21	6.53	69.65	8.04	7.85	81.12	10.23	9.23	85.81	11.26	9.81	86.98	11.30	9.93	89.68	11.35	10.21	91.08	11.45	10.36
		280.00	58.46	5.72	3.24	69.65	7.50	3.90	81.12	9.55	4.58	85.81	10.55	4.87	86.98	10.59	4.93	89.68	10.62	5.07	91.08	10.72	5.14
		350.00	58.46	5.54	2.59	69.65	7.33	3.11	81.12	9.37	3.66	85.81	10.32	3.88	86.98	10.42	3.94	89.68	10.40	4.04	91.08	10.47	4.10
		420.00	58.46	5.46	2.15	69.65	7.29	2.59	81.12	9.23	3.04	85.81	10.23	3.23	86.98	10.29	3.28	89.68	10.32	3.37	91.08	10.34	3.42
	20	140.00	58.14	7.61	6.64	69.30	9.89	8.00	80.75	12.52	9.42	85.45	13.76	10.02	86.62	13.89	10.15	88.97	13.93	10.40	90.73	14.04	10.58
		280.00	58.14	7.00	3.29	69.30	9.22	3.97	80.75	11.74	4.67	85.45	12.91	4.97	86.62	12.97	5.03	88.97	13.07	5.15	90.73	13.15	5.25
		350.00	58.14	6.78	2.62	69.30	9.01	3.16	80.75	11.47	3.73	85.45	12.65	3.96	86.62	12.79	4.02	88.97	12.81	4.11	90.73	12.81	4.18
		420.00	58.14	6.66	2.18	69.30	8.92	2.63	80.75	11.33	3.10	85.45	12.51	3.30	86.62	12.66	3.34	88.97	12.68	3.42	90.73	12.64	3.48
	25	140.00	58.14	8.95	6.78	69.30	11.62	8.17	80.75	14.82	9.65	83.10	15.32	9.94	84.27	15.42	10.07	86.33	15.47	10.28	88.09	15.61	10.48
		280.00	58.14	8.23	3.35	69.30	10.86	4.05	80.75	13.85	4.78	83.10	14.35	4.92	84.27	14.42	4.99	86.33	14.53	5.09	88.09	14.61	5.19
		350.00	58.14	8.01	2.67	69.30	10.62	3.23	80.75	13.54	3.81	83.10	14.02	3.92	84.27	14.19	3.98	86.33	14.22	4.06	88.09	14.26	4.14
		420.00	58.14	7.87	2.22	69.30	10.50	2.69	80.75	13.41	3.17	83.10	13.86	3.26	84.27	14.03	3.31	86.33	14.06	3.38	88.09	14.07	3.44
	30	140.00	58.14	10.55	6.94	69.30	13.80	8.39	78.99	16.79	9.68	80.16	16.90	9.81	81.04	17.00	9.90	83.10	17.08	10.12	84.57	17.17	10.28
		280.00	58.14	9.71	3.43	69.30	12.86	4.15	78.99	15.73	4.78	80.16	15.80	4.85	81.04	15.88	4.90	83.10	15.99	5.00	84.57	16.09	5.08
		350.00	58.14	9.47	2.73	69.30	12.63	3.31	78.99	15.36	3.81	80.16	15.51	3.87	81.04	15.59	3.90	83.10	15.67	3.99	84.57	15.71	4.05
		420.00	58.14	9.33	2.27	69.30	12.47	2.75	78.99	15.19	3.17	80.16	15.33	3.22	81.04	15.45	3.25	83.10	15.53	3.32	84.57	15.50	3.37
	35	140.00	58.01	12.62	7.13	69.30	16.44	8.66	75.46	20.08	9.65	76.64	18.48	9.61	77.52	18.54	9.70	79.28	18.66	9.89	80.75	18.76	10.05
		280.00	58.01	11.61	3.52	69.30	15.36	4.28	75.46	18.81	4.76	76.64	17.29	4.74	77.52	17.37	4.79	79.28	17.47	4.89	80.75	17.55	4.97
		350.00	58.01	11.29	2.80	69.30	15.05	3.41	75.46	18.43	3.79	76.64	16.98	3.78	77.52	17.03	3.82	79.28	17.14	3.90	80.75	17.15	3.96
		420.00	58.01	11.13	2.33	69.30	14.87	2.83	75.46	18.19	3.15	76.64	16.79	3.15	77.52	16.84	3.18	79.28	16.99	3.24	80.75	16.93	3.29
	40	140.00	53.94	13.87	6.85	64.43	18.06	8.33	69.86	22.12	9.29	70.72	20.30	9.19	71.69	20.39	9.30	73.55	20.47	9.50	75.05	20.59	9.66
		280.00	53.94	12.74	3.37	64.43	16.89	4.11	69.86	20.65	4.57	70.72	18.99	4.53	71.69	19.07	4.58	73.55	19.18	4.68	75.05	19.31	4.77
		350.00	53.94	12.38	2.68	64.43	16.53	3.27	69.86	20.23	3.64	70.72	18.64	3.61	71.69	18.69	3.65	73.55	18.81	3.73	75.05	18.83	3.79
		420.00	53.94	12.22	2.23	64.43	16.35	2.72	69.86	20.04	3.03	70.72	18.45	3.00	71.69	18.54	3.04	73.55	18.66	3.10	75.05	18.57	3.15
	45	140.00	49.53	15.12	6.53	59.18	19.69	7.97	64.63	24.10	8.96	65.14	22.11	8.81	66.20	22.21	8.93	67.81	22.29	9.10	69.02	22.42	9.24
		280.00	49.53	13.87	3.20	59.18	18.42	3.92	64.63	22.45	4.40	65.14	20.72	4.34	66.20	20.73	4.39	67.81	20.88	4.48	69.02	21.07	4.55
		350.00	49.53	13.51	2.55	59.18	18.02	3.12	64.63	22.07	3.50	65.14	20.30	3.45	66.20	20.39	3.50	67.81	20.51	3.57	69.02	20.52	3.62
		420.00	49.53	13.31	2.12	59.18	17.79	2.59	64.63	21.88	2.91	65.14	20.11	2.87	66.20	20.20	2.91	67.81	20.33	2.97	69.02	20.26	3.01
100	10	140.00	52.85	3.92	5.74	63.13	5.06	6.89	73.41	6.44	8.07	78.40	7.16	8.64	83.39	7.96	9.23	92.76	8.30	10.21	88.97	8.39	9.84
		280.00	52.85	3.61	2.85	63.13	4.69	3.43	73.41	6.03	4.01	78.40	6.75	4.30	83.39	7.52	4.59	92.76	7.77	5.08	88.97	7.77	4.89
		350.00	52.85	3.54	2.28	63.13	4.58	2.74	73.41	5.91	3.20	78.40	6.55	3.43	83.39	7.30	3.66	92.76	7.63	4.06	88.97	7.64	3.90
		420.00	52.85	3.54	1.90	63.13	4.54	2.28	73.41	5.87	2.67	78.40	6.46	2.86	83.39	7.21	3.05	92.76	7.55	3.38	88.97	7.59	3.25
	15	140.00	52.85	5.35	5.88	63.13	6.86	7.07	73.41	8.74	8.30	78.40	9.76	8.91	83.39	10.77	9.51	92.76	11.25	10.51	88.97	11.35	10.13
		280.00	52.85	4.91	2.92	63.13	6.41	3.51	73.41	8.16	4.12	78.40	9.11	4.42	83.39	10.11	4.72	92.76	10.54	5.22	88.97	10.60	5.03
		350.00	52.85	4.81	2.33	63.13	6.26	2.80	73.41	8.00	3.29	78.40	8.94	3.53	83.39	9.89	3.77	92.76	10.31	4.17	88.97	10.33	4.01
		420.00	52.85	4.74	1.94	63.13	6.19	2.33	73.41	7.92	2.74	78.40	8.82	2.94	83.39	9.81	3.14	92.76	10.22	3.47	88.97	10.20	3.34
	20	140.00	52.85	6.58	6.00	63.13	8.44	7.23	73.41	10.79	8.51	78.40	12.03	9.14	83.39	13.32	9.77	92.76	13.84	10.77	88.97	13.95	10.40
		280.00	52.85	6.07	2.98	63.13	7.92	3.59	73.41	10.05	4.22	78.40	11.22	4.53	83.39	12.45	4.84	92.76	12.99	5.34	88.97	13.07	5.15
		350.00	52.85	5.90	2.37	63.13	7.77	2.86	73.41	9.89	3.37	78.40	11.06	3.61	83.39	12.23	3.86	92.76	12.72	4.26	88.97	12.72	4.11
		420.00	52.85	5.79	1.97	63.13	7.65	2.38	73.41	9.76	2.80	78.40	10.94	3.01	83.39	12.14	3.22	92.76	12.59	3.55	88.97	12.50	3.42
	25	140.00	52.85	7.73	6.12	63.13	9.97	7.39	73.41	12.68	8.70	78.40	14.13	9.35	82.51	15.36	9.89	84.57	15.39	10.10	86.33	15.58	10.29
		280.00	52.85	7.11	3.03	63.13	9.32	3.66	73.41	11.85	4.31	78.40	13.23	4.63	82.51	14.32	4.89	84.57	14.45	5.00	86.33	14.53	5.09
		350.00	52.85	6.91	2.42	63.13	9.14	2.92	73.41	11.57	3.43	78.40	12.95	3.69	82.51	14.07	3.90	84.57	14.17	3.99	86.33	14.17	4.06
		420.00	52.85	6.81	2.01	63.13	9.03	2.43	73.41	11.45	2.86	78.40	12.84	3.07	82.51	13.90	3.25	84.57	14.04	3.32	86.33	13.96	3.38
	30	140.00	52.85</																				

8HP+8HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
90	10	140.00	47.57	3.40	5.15	56.67	4.32	6.16	66.07	5.39	7.22	70.47	6.04	7.73	75.17	6.69	8.27	84.27	8.13	9.33	87.21	8.30	9.65			
		280.00	47.57	3.17	2.56	56.67	4.06	3.07	66.07	5.11	3.60	70.47	5.68	3.85	75.17	6.26	4.11	84.27	7.58	4.64	87.21	7.74	4.80			
		350.00	47.57	3.03	2.04	56.67	3.99	2.45	66.07	4.95	2.87	70.47	5.56	3.07	75.17	6.13	3.29	84.27	7.43	3.71	87.21	7.54	3.83			
		420.00	47.57	2.96	1.70	56.67	3.95	2.04	66.07	4.87	2.39	70.47	5.48	2.56	75.17	6.09	2.74	84.27	7.37	3.09	87.21	7.44	3.19			
	15	140.00	47.57	4.59	5.27	56.67	5.89	6.32	66.07	7.36	7.42	70.47	8.22	7.95	75.17	9.05	8.51	84.27	10.96	9.62	87.21	11.26	9.95			
		280.00	47.57	4.25	2.62	56.67	5.48	3.14	66.07	6.92	3.69	70.47	7.66	3.95	75.17	8.49	4.23	84.27	10.25	4.77	87.21	10.55	4.94			
		350.00	47.57	4.12	2.09	56.67	5.36	2.51	66.07	6.76	2.94	70.47	7.55	3.15	75.17	8.32	3.37	84.27	10.05	3.81	87.21	10.24	3.94			
		420.00	47.57	4.05	1.74	56.67	5.33	2.09	66.07	6.68	2.45	70.47	7.47	2.62	75.17	8.24	2.81	84.27	9.95	3.17	87.21	10.09	3.28			
	20	140.00	47.57	5.65	5.38	56.67	7.23	6.46	66.07	9.09	7.59	70.47	10.13	8.14	75.17	11.15	8.72	84.27	13.49	9.88	87.21	13.86	10.21			
		280.00	47.57	5.21	2.67	56.67	6.74	3.20	66.07	8.49	3.77	70.47	9.45	4.04	75.17	10.47	4.33	84.27	12.63	4.89	87.21	12.99	5.06			
		350.00	47.57	5.07	2.13	56.67	6.59	2.56	66.07	8.37	3.01	70.47	9.29	3.22	75.17	10.30	3.45	84.27	12.38	3.91	87.21	12.64	4.03			
		420.00	47.57	5.00	1.77	56.67	6.52	2.13	66.07	8.29	2.50	70.47	9.21	2.68	75.17	10.17	2.87	84.27	12.27	3.25	87.21	12.48	3.36			
	25	140.00	47.57	6.61	5.47	56.67	8.45	6.58	66.07	10.70	7.75	70.47	11.87	8.32	75.17	13.21	8.93	82.51	15.26	9.88	84.57	15.45	10.10			
		280.00	47.57	6.09	2.71	56.67	7.92	3.26	66.07	10.00	3.84	70.47	11.14	4.12	75.17	12.34	4.42	82.51	14.32	4.89	84.57	14.42	5.00			
		350.00	47.57	5.90	2.16	56.67	7.74	2.60	66.07	9.84	3.07	70.47	10.91	3.29	75.17	12.09	3.53	82.51	14.04	3.90	84.57	14.10	3.99			
		420.00	47.57	5.80	1.80	56.67	7.67	2.17	66.07	9.73	2.55	70.47	10.80	2.74	75.17	12.01	2.94	82.51	13.90	3.25	84.57	13.91	3.32			
	30	140.00	47.57	7.82	5.60	56.67	9.96	6.73	66.07	13.32	8.02	70.47	14.12	8.55	75.17	15.63	9.17	79.57	16.87	9.74	81.34	16.99	9.93			
		280.00	47.57	7.16	2.76	56.67	9.35	3.33	66.07	12.42	3.96	70.47	13.20	4.23	75.17	14.63	4.54	79.57	15.78	4.82	81.34	15.91	4.91			
		350.00	47.57	7.00	2.21	56.67	9.14	2.66	66.07	12.15	3.16	70.47	12.94	3.37	75.17	14.35	3.62	79.57	15.48	3.84	81.34	15.49	3.91			
		420.00	47.57	6.91	1.83	56.67	9.04	2.21	66.07	12.03	2.63	70.47	12.79	2.80	75.17	14.23	3.01	79.57	15.32	3.20	81.34	15.24	3.25			
		140.00	47.57	9.24	5.74	56.67	11.87	6.92	66.07	15.13	8.20	70.47	16.84	8.82	74.29	18.32	9.36	76.34	18.41	9.57	77.81	18.55	9.73			
		280.00	47.57	8.49	2.83	56.67	11.12	3.42	66.07	14.14	4.05	70.47	15.78	4.36	74.29	17.11	4.62	76.34	17.26	4.73	77.81	17.37	4.81			
		350.00	47.57	8.25	2.26	56.67	10.89	2.73	66.07	13.85	3.23	70.47	15.45	3.47	74.29	16.85	3.68	76.34	16.92	3.77	77.81	16.90	3.83			
		420.00	47.57	8.11	1.87	56.67	10.74	2.27	66.07	13.68	2.69	70.47	15.29	2.89	74.29	16.67	3.06	76.34	16.75	3.13	77.81	16.65	3.18			
		140.00	46.01	10.58	5.72	54.96	13.65	6.93	64.23	17.40	8.25	68.31	19.33	8.85	72.08	21.06	9.41	74.16	21.18	9.63	75.29	21.33	9.76			
		280.00	46.01	9.75	2.82	54.96	12.78	3.42	64.23	16.25	4.06	68.31	18.07	4.36	72.08	19.71	4.64	74.16	19.82	4.75	75.29	19.94	4.81			
		350.00	46.01	9.45	2.24	54.96	12.48	2.73	64.23	15.92	3.24	68.31	17.74	3.48	72.08	19.32	3.69	74.16	19.48	3.78	75.29	19.43	3.83			
		420.00	46.01	9.31	1.86	54.96	12.33	2.27	64.23	15.75	2.69	68.31	17.58	2.89	72.08	19.15	3.07	74.16	19.27	3.15	75.29	19.18	3.18			
	45	140.00	44.77	11.94	5.73	53.26	15.43	6.94	62.40	19.64	8.29	66.52	21.87	8.93	69.88	23.79	9.46	71.98	23.95	9.69	73.13	24.07	9.82			
		280.00	44.77	11.02	2.82	53.26	14.41	3.42	62.40	18.35	4.08	66.52	20.40	4.39	69.88	22.27	4.65	71.98	22.38	4.77	73.13	22.55	4.83			
		350.00	44.77	10.68	2.24	53.26	14.10	2.72	62.40	17.98	3.25	66.52	20.03	3.50	69.88	21.84	3.71	71.98	21.99	3.80	73.13	22.00	3.84			
		420.00	44.77	10.51	1.86	53.26	13.92	2.26	62.40	17.78	2.70	66.52	19.82	2.91	69.88	21.62	3.08	71.98	21.78	3.16	73.13	21.71	3.19			
80	10	140.00	42.28	2.85	4.56	50.50	3.61	5.47	58.73	4.52	6.39	62.84	5.07	6.86	66.65	5.54	7.29	74.88	6.73	8.24	83.10	7.88	9.19			
		280.00	42.28	2.61	2.27	50.50	3.42	2.72	58.73	4.20	3.18	62.84	4.72	3.41	66.65	5.16	3.63	74.88	6.23	4.10	83.10	7.36	4.57			
		350.00	42.28	2.54	1.81	50.50	3.31	2.17	58.73	4.12	2.54	62.84	4.56	2.72	66.65	5.03	2.90	74.88	6.13	3.27	83.10	7.24	3.65			
		420.00	42.28	2.54	1.51	50.50	3.23	1.81	58.73	4.12	2.12	62.84	4.48	2.27	66.65	4.95	2.41	74.88	6.13	2.73	83.10	7.24	3.04			
	15	140.00	42.28	3.88	4.66	50.50	4.91	5.60	58.73	6.16	6.56	62.84	6.84	7.04	66.65	7.49	7.49	74.88	9.07	8.48	83.10	10.72	9.48			
		280.00	42.28	3.58	2.32	50.50	4.61	2.78	58.73	5.72	3.26	62.84	6.37	3.50	66.65	7.02	3.72	74.88	8.47	4.21	83.10	10.02	4.70			
		350.00	42.28	3.47	1.85	50.50	4.50	2.22	58.73	5.64	2.60	62.84	6.21	2.79	66.65	6.85	2.97	74.88	8.32	3.36	83.10	9.79	3.75			
		420.00	42.28	3.44	1.54	50.50	4.42	1.85	58.73	5.56	2.16	62.84	6.17	2.32	66.65	6.77	2.47	74.88	8.27	2.80	83.10	9.68	3.12			
	20	140.00	42.28	4.81	4.76	50.50	6.06	5.71	58.73	7.60	6.70	62.84	8.37	7.19	66.65	9.26	7.67	74.88	11.16	8.69	83.10	13.21	9.73			
		280.00	42.28	4.40	2.36	50.50	5.65	2.84	58.73	7.08	3.32	62.84	7.86	3.57	66.65	8.67	3.80	74.88	10.41	4.31	83.10	12.34	4.82			
		350.00	42.28	4.30	1.88	50.50	5.54	2.26	58.73	6.96	2.65	62.84	7.71	2.85	66.65	8.50	3.04	74.88	10.27	3.44	83.10	12.05	3.84			
		420.00	42.28	4.23	1.57	50.50	5.50	1.89	58.73	6.88	2.21	62.84	7.63	2.37	66.65	8.42	2.53	74.88	10.17	2.86	83.10	11.88	3.20			
	25	140.00	42.28	5.58	4.84	50.50	7.07	5.82	58.73	8.91	6.83	62.84	9.89	7.35	66.65	10.94	7.84	74.88	13.15	8.89	82.51	15.31	9.88			
		280.00	42.28	5.16	2.40	50.50	6.64	2.89	58.73	8.33	3.39	62.84	9.24	3.64	66.65	10.21	3.88	74.88	12.29	4.40	82.51	14.32	4.89			
		350.00	42.28	4.99	1.91	50.50	6.50	2.30	58.73	8.18	2.70	62.84	9.09	2.91	66.65	10.00	3.10	74.88	12.05	3.51	82.51	13.99	3.90			
		420.00	42.28	4.93	1.59	50.50	6.43	1.92	58.73	8.10	2.25	62.84	8.98	2.42	66.65	9.92	2.58	74.88	11.95	2.92	82.51	13.77	3.24			
	30	140.00	42.28	6.58	4.94	50.50	8.36	5.95	58.73	10.52	7.00	62.84	11.74	7.53	66.65	12.91										

VRF MW



8HP+8HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	140.00	37.00	2.42	3.98	44.04	3.01	4.75	51.39	3.75	5.57	54.91	4.13	5.96	58.43	4.48	6.36	65.48	5.41	7.16	72.82	6.33	8.00
		280.00	37.00	2.21	1.98	44.04	2.83	2.37	51.39	3.52	2.77	54.91	3.86	2.97	58.43	4.23	3.17	65.48	5.03	3.56	72.82	6.00	3.98
		350.00	37.00	2.14	1.58	44.04	2.72	1.89	51.39	3.40	2.21	54.91	3.74	2.37	58.43	4.11	2.53	65.48	4.98	2.85	72.82	5.83	3.18
		420.00	37.00	2.07	1.32	44.04	2.68	1.57	51.39	3.36	1.84	54.91	3.70	1.97	58.43	4.03	2.10	65.48	4.93	2.37	72.82	5.77	2.65
	15	140.00	37.00	3.25	4.07	44.04	4.05	4.86	51.39	5.06	5.70	54.91	5.56	6.11	58.43	6.10	6.52	65.48	7.30	7.35	72.82	8.63	8.23
		280.00	37.00	3.01	2.02	44.04	3.83	2.42	51.39	4.74	2.83	54.91	5.21	3.04	58.43	5.73	3.24	65.48	6.81	3.65	72.82	8.07	4.09
		350.00	37.00	2.90	1.61	44.04	3.72	1.93	51.39	4.62	2.26	54.91	5.09	2.42	58.43	5.60	2.59	65.48	6.72	2.92	72.82	7.90	3.26
		420.00	37.00	2.87	1.34	44.04	3.68	1.61	51.39	4.58	1.88	54.91	5.05	2.02	58.43	5.52	2.15	65.48	6.62	2.43	72.82	7.79	2.71
	20	140.00	37.00	4.01	4.14	44.04	5.02	4.96	51.39	6.24	5.82	54.91	6.83	6.24	58.43	7.55	6.67	65.48	8.99	7.52	72.82	10.65	8.43
		280.00	37.00	3.70	2.06	44.04	4.69	2.46	51.39	5.81	2.89	54.91	6.40	3.10	58.43	7.06	3.31	65.48	8.41	3.73	72.82	9.92	4.18
		350.00	37.00	3.59	1.64	44.04	4.61	1.97	51.39	5.69	2.31	54.91	6.29	2.47	58.43	6.93	2.64	65.48	8.26	2.98	72.82	9.70	3.33
		420.00	37.00	3.52	1.36	44.04	4.54	1.64	51.39	5.65	1.92	54.91	6.25	2.06	58.43	6.89	2.20	65.48	8.17	2.48	72.82	9.53	2.77
	25	140.00	37.00	4.66	4.21	44.04	5.82	5.04	51.39	7.25	5.92	54.91	8.04	6.36	58.43	8.84	6.80	65.48	10.62	7.69	72.82	12.50	8.62
		280.00	37.00	4.30	2.09	44.04	5.47	2.50	51.39	6.80	2.94	54.91	7.52	3.15	58.43	8.28	3.37	65.48	9.92	3.81	72.82	11.69	4.27
		350.00	37.00	4.16	1.66	44.04	5.33	2.00	51.39	6.64	2.34	54.91	7.34	2.52	58.43	8.12	2.69	65.48	9.73	3.04	72.82	11.37	3.40
		420.00	37.00	4.13	1.38	44.04	5.26	1.66	51.39	6.57	1.95	54.91	7.27	2.09	58.43	8.04	2.24	65.48	9.69	2.53	72.82	11.26	2.83
	30	140.00	37.00	5.46	4.29	44.04	6.87	5.14	51.39	8.60	6.06	54.91	9.48	6.51	58.43	10.48	6.96	65.48	12.55	7.88	72.82	14.82	8.85
		280.00	37.00	5.03	2.12	44.04	6.43	2.55	51.39	8.02	3.00	54.91	8.88	3.22	58.43	9.79	3.45	65.48	11.74	3.90	72.82	13.88	4.38
		350.00	37.00	4.90	1.69	44.04	6.30	2.03	51.39	7.87	2.39	54.91	8.70	2.57	58.43	9.60	2.75	65.48	11.56	3.11	72.82	13.51	3.49
		420.00	37.00	4.81	1.41	44.04	6.23	1.69	51.39	7.80	1.99	54.91	8.63	2.14	58.43	9.52	2.29	65.48	11.43	2.59	72.82	13.36	2.90
	35	140.00	37.00	6.41	4.38	44.04	8.11	5.27	51.39	10.15	6.22	54.91	11.31	6.69	58.43	13.62	7.28	65.48	14.92	8.12	72.82	17.71	9.15
		280.00	37.00	5.91	2.17	44.04	7.60	2.61	51.39	9.45	3.07	54.91	10.54	3.31	58.43	12.72	3.59	65.48	14.01	4.01	72.82	16.59	4.52
		350.00	37.00	5.74	1.73	44.04	7.46	2.08	51.39	9.30	2.45	54.91	10.39	2.64	58.43	12.49	2.87	65.48	13.72	3.20	72.82	16.14	3.59
		420.00	37.00	5.64	1.44	44.04	7.35	1.73	51.39	9.18	2.04	54.91	10.28	2.20	58.43	12.40	2.39	65.48	13.57	2.66	72.82	15.86	2.99
	40	140.00	37.00	7.60	4.51	44.04	9.62	5.42	51.39	12.00	6.40	54.91	13.37	6.90	58.43	16.09	7.53	65.48	17.71	8.40	72.82	20.96	9.47
		280.00	37.00	6.97	2.22	44.04	9.01	2.68	51.39	11.23	3.16	54.91	12.49	3.40	58.43	15.10	3.71	65.48	16.56	4.14	72.82	19.61	4.67
		350.00	37.00	6.81	1.77	44.04	8.79	2.14	51.39	10.99	2.52	54.91	12.30	2.72	58.43	14.79	2.96	65.48	16.27	3.30	72.82	19.11	3.71
		420.00	37.00	6.71	1.47	44.04	8.68	1.78	51.39	10.88	2.10	54.91	12.19	2.26	58.43	14.65	2.46	65.48	16.08	2.75	72.82	18.88	3.09
	45	140.00	37.00	8.80	4.63	44.04	11.10	5.57	51.39	13.85	6.59	54.91	15.44	7.11	58.43	18.61	7.78	65.48	20.46	8.68	72.82	24.26	9.81
		280.00	37.00	8.04	2.27	44.04	10.41	2.75	51.39	12.96	3.25	54.91	14.44	3.50	58.43	17.48	3.83	65.48	19.16	4.28	72.82	22.64	4.82
		350.00	37.00	7.87	1.81	44.04	10.16	2.19	51.39	12.69	2.59	54.91	14.21	2.79	58.43	17.08	3.05	65.48	18.77	3.40	72.82	22.13	3.84
		420.00	37.00	7.77	1.51	44.04	10.05	1.82	51.39	12.58	2.15	54.91	14.06	2.32	58.43	16.90	2.54	65.48	18.63	2.83	72.82	21.91	3.19
60	10	140.00	31.71	1.99	3.40	37.88	2.45	4.07	44.04	2.96	4.75	46.98	3.29	5.08	50.21	3.58	5.43	56.08	4.30	6.10	62.25	5.02	6.80
		280.00	31.71	1.81	1.69	37.88	2.30	2.03	44.04	2.76	2.36	46.98	3.09	2.53	50.21	3.29	2.70	56.08	3.96	3.03	62.25	4.69	3.38
		350.00	31.71	1.74	1.35	37.88	2.22	1.62	44.04	2.73	1.89	46.98	3.02	2.02	50.21	3.25	2.16	56.08	3.87	2.42	62.25	4.53	2.70
		420.00	31.71	1.71	1.13	37.88	2.18	1.35	44.04	2.73	1.57	46.98	2.98	1.68	50.21	3.21	1.80	56.08	3.82	2.02	62.25	4.42	2.24
	15	140.00	31.71	2.66	3.47	37.88	3.31	4.16	44.04	4.03	4.86	46.98	4.45	5.20	50.21	4.86	5.56	56.08	5.78	6.25	62.25	6.79	6.97
		280.00	31.71	2.45	1.73	37.88	3.09	2.07	44.04	3.75	2.41	46.98	4.18	2.58	50.21	4.49	2.76	56.08	5.35	3.10	62.25	6.35	3.46
		350.00	31.71	2.38	1.38	37.88	3.01	1.65	44.04	3.67	1.93	46.98	4.10	2.06	50.21	4.45	2.21	56.08	5.25	2.48	62.25	6.13	2.76
		420.00	31.71	2.35	1.15	37.88	2.97	1.38	44.04	3.63	1.61	46.98	4.06	1.72	50.21	4.40	1.84	56.08	5.21	2.06	62.25	6.02	2.30
	20	140.00	31.71	3.27	3.53	37.88	4.06	4.24	44.04	4.94	4.95	46.98	5.45	5.30	50.21	5.97	5.68	56.08	7.07	6.38	62.25	8.34	7.13
		280.00	31.71	3.02	1.75	37.88	3.80	2.11	44.04	4.66	2.46	46.98	5.10	2.63	50.21	5.60	2.82	56.08	6.64	3.17	62.25	7.78	3.54
		350.00	31.71	2.95	1.40	37.88	3.73	1.68	44.04	4.54	1.96	46.98	5.03	2.10	50.21	5.47	2.25	56.08	6.54	2.53	62.25	7.62	2.82
		420.00	31.71	2.91	1.17	37.88	3.69	1.40	44.04	4.50	1.63	46.98	4.99	1.75	50.21	5.43	1.87	56.08	6.50	2.11	62.25	7.51	2.35
	25	140.00	31.71	3.82	3.59	37.88	4.71	4.30	44.04	5.82	5.04	46.98	6.43	5.40	50.21	7.00	5.78	56.08	8.32	6.51	62.25	9.75	7.27
		280.00	31.71	3.51	1.78	37.88	4.43	2.14	44.04	5.44	2.50	46.98	5.99	2.68	50.21	6.56	2.87	56.08	7.81	3.23	62.25	9.16	3.61
		350.00	31.71	3.41	1.42	37.88	4.35	1.71	44.04	5.37	2.00	46.98	5.88	2.14	50.21	6.44	2.29	56.08	7.63	2.57	62.25	8.90	2.88
		420.00	31.71	3.38	1.18	37.88	4.32	1.42	44.04	5.29	1.66	46.98	5.84	1.78	50.21	6.40	1.91	56.08	7.54	2.14	62.25	8.79	2.39
	30	140.00	31.71	4.50	3.66	37.88	5.56	4.39	44.04	6.85	5.14	46.98	7.53	5.51	50.21	8.27	5.91	56.08	9.88	6.66	62.25	11.52	7.45

8HP+8HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	140.00	26.43	1.59	2.83	31.42	1.93	3.37	36.70	2.36	3.95	39.35	2.58	4.23	41.70	2.74	4.49	46.98	3.22	5.07	51.97	3.79	5.63
		280.00	26.43	1.52	1.41	31.42	1.81	1.68	36.70	2.15	1.96	39.35	2.37	2.11	41.70	2.61	2.24	46.98	3.03	2.53	51.97	3.57	2.81
		350.00	26.43	1.44	1.13	31.42	1.77	1.34	36.70	2.15	1.57	39.35	2.29	1.68	41.70	2.52	1.79	46.98	2.93	2.02	51.97	3.40	2.24
		420.00	26.43	1.40	0.94	31.42	1.73	1.12	36.70	2.15	1.31	39.35	2.25	1.40	41.70	2.48	1.49	46.98	2.88	1.68	51.97	3.29	1.86
	15	140.00	26.43	2.18	2.89	31.42	2.62	3.44	36.70	3.15	4.03	39.35	3.46	4.32	41.70	3.77	4.59	46.98	4.39	5.19	51.97	5.07	5.76
		280.00	26.43	2.02	1.44	31.42	2.46	1.71	36.70	2.94	2.00	39.35	3.22	2.15	41.70	3.51	2.28	46.98	4.10	2.58	51.97	4.80	2.87
		350.00	26.43	1.94	1.15	31.42	2.38	1.37	36.70	2.90	1.60	39.35	3.14	1.72	41.70	3.42	1.82	46.98	4.00	2.06	51.97	4.63	2.29
		420.00	26.43	1.90	0.95	31.42	2.34	1.14	36.70	2.86	1.33	39.35	3.10	1.43	41.70	3.38	1.52	46.98	3.95	1.72	51.97	4.57	1.90
	20	140.00	26.43	2.68	2.94	31.42	3.22	3.50	36.70	3.85	4.10	39.35	4.27	4.41	41.70	4.62	4.68	46.98	5.37	5.29	51.97	6.24	5.88
		280.00	26.43	2.45	1.46	31.42	3.02	1.74	36.70	3.65	2.04	39.35	3.98	2.19	41.70	4.32	2.32	46.98	5.08	2.63	51.97	5.91	2.92
		350.00	26.43	2.37	1.16	31.42	2.98	1.39	36.70	3.56	1.63	39.35	3.90	1.75	41.70	4.24	1.86	46.98	4.98	2.10	51.97	5.74	2.33
		420.00	26.43	2.33	0.97	31.42	2.94	1.16	36.70	3.52	1.35	39.35	3.86	1.46	41.70	4.19	1.55	46.98	4.93	1.75	51.97	5.63	1.94
	25	140.00	26.43	3.10	2.98	31.42	3.76	3.55	36.70	4.52	4.16	39.35	4.90	4.47	41.70	5.38	4.76	46.98	6.39	5.39	51.97	7.47	6.00
		280.00	26.43	2.84	1.48	31.42	3.49	1.76	36.70	4.24	2.07	39.35	4.63	2.22	41.70	5.05	2.36	46.98	5.96	2.67	51.97	6.93	2.97
		350.00	26.43	2.76	1.18	31.42	3.45	1.41	36.70	4.16	1.65	39.35	4.52	1.77	41.70	4.93	1.88	46.98	5.87	2.14	51.97	6.76	2.37
		420.00	26.43	2.76	0.98	31.42	3.41	1.17	36.70	4.12	1.37	39.35	4.44	1.47	41.70	4.85	1.57	46.98	5.77	1.78	51.97	6.71	1.98
	30	140.00	26.43	3.59	3.03	31.42	4.35	3.61	36.70	5.32	4.25	39.35	5.81	4.56	41.70	6.33	4.85	46.98	7.45	5.50	51.97	8.72	6.13
		280.00	26.43	3.28	1.50	31.42	4.06	1.79	36.70	4.95	2.10	39.35	5.44	2.26	41.70	5.94	2.41	46.98	7.00	2.73	51.97	8.15	3.04
		350.00	26.43	3.18	1.20	31.42	3.95	1.43	36.70	4.83	1.68	39.35	5.33	1.81	41.70	5.82	1.92	46.98	6.87	2.18	51.97	7.94	2.42
		420.00	26.43	3.14	1.00	31.42	3.92	1.19	36.70	4.80	1.40	39.35	5.29	1.50	41.70	5.78	1.60	46.98	6.78	1.81	51.97	7.79	2.01
	35	140.00	26.43	4.15	3.09	31.42	5.11	3.69	36.70	6.27	4.34	39.35	6.83	4.67	41.70	7.50	4.97	46.98	8.85	5.64	51.97	10.41	6.30
		280.00	26.43	3.83	1.53	31.42	4.76	1.83	36.70	5.83	2.15	39.35	6.40	2.31	41.70	7.00	2.46	46.98	8.28	2.79	51.97	9.69	3.11
		350.00	26.43	3.72	1.22	31.42	4.69	1.46	36.70	5.71	1.71	39.35	6.29	1.84	41.70	6.88	1.96	46.98	8.14	2.23	51.97	9.46	2.48
		420.00	26.43	3.65	1.01	31.42	4.61	1.21	36.70	5.67	1.43	39.35	6.25	1.54	41.70	6.84	1.63	46.98	8.04	1.85	51.97	9.30	2.06
	40	140.00	26.43	4.91	3.17	31.42	6.02	3.78	36.70	7.39	4.45	39.35	8.12	4.80	41.70	8.88	5.11	46.98	10.48	5.80	51.97	12.34	6.50
		280.00	26.43	4.51	1.56	31.42	5.64	1.87	36.70	6.91	2.20	39.35	7.58	2.37	41.70	8.30	2.53	46.98	9.81	2.87	51.97	11.51	3.21
		350.00	26.43	4.41	1.25	31.42	5.53	1.49	36.70	6.79	1.76	39.35	7.46	1.89	41.70	8.13	2.01	46.98	9.62	2.29	51.97	11.24	2.55
		420.00	26.43	4.33	1.04	31.42	5.49	1.24	36.70	6.71	1.46	39.35	7.38	1.57	41.70	8.05	1.67	46.98	9.52	1.90	51.97	11.07	2.12
	45	140.00	26.43	5.67	3.24	31.42	6.98	3.88	36.70	8.51	4.57	39.35	9.41	4.93	41.70	10.26	5.25	46.98	12.11	5.97	51.97	14.22	6.69
		280.00	26.43	5.24	1.60	31.42	6.52	1.92	36.70	7.95	2.26	39.35	8.75	2.43	41.70	9.59	2.59	46.98	11.34	2.95	51.97	13.34	3.30
		350.00	26.43	5.09	1.27	31.42	6.40	1.53	36.70	7.83	1.80	39.35	8.59	1.94	41.70	9.38	2.06	46.98	11.10	2.35	51.97	13.01	2.63
		420.00	26.43	4.98	1.06	31.42	6.33	1.27	36.70	7.79	1.50	39.35	8.47	1.61	41.70	9.30	1.72	46.98	11.01	1.95	51.97	12.84	2.18

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



8HP+8HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	140.00	83.94	14.96	6.93	83.60	15.09	6.89	83.45	15.62	6.82	83.05	15.58	6.78	82.66	15.44	6.76	81.86	16.12	6.61
		280.00	85.85	14.84	3.57	84.97	15.14	3.51	84.86	15.73	3.47	84.50	15.58	3.46	83.84	15.41	3.44	83.09	16.06	3.37
		350.00	86.39	15.06	2.87	85.52	15.37	2.82	85.42	15.78	2.80	84.78	15.64	2.78	84.43	15.64	2.77	83.71	16.85	2.69
		420.00	86.66	15.16	2.40	85.79	15.47	2.36	85.71	15.84	2.34	85.07	15.66	2.33	84.72	15.78	2.31	84.02	17.21	2.24
	15	140.00	84.22	13.38	7.12	83.87	13.40	7.08	83.45	14.00	6.98	83.05	14.03	6.94	82.66	13.77	6.93	81.86	14.48	6.77
		280.00	86.93	12.84	3.72	86.34	13.16	3.68	85.99	13.87	3.62	85.94	13.62	3.63	85.02	13.34	3.60	84.64	14.02	3.55
		350.00	87.48	13.16	2.99	87.17	13.47	2.96	87.12	13.87	2.94	86.80	13.62	2.94	86.19	13.71	2.91	85.56	15.43	2.82
		420.00	87.75	13.31	2.49	87.44	13.63	2.47	87.68	13.87	2.47	87.09	13.62	2.46	86.78	13.91	2.44	86.18	16.16	2.35
	20	140.00	87.48	12.30	7.56	86.89	12.29	7.50	86.83	12.65	7.46	86.23	12.62	7.40	85.61	12.69	7.33	84.64	14.02	7.10
		280.00	90.19	11.95	3.93	89.64	12.24	3.89	89.37	12.62	3.86	88.82	12.81	3.82	88.55	13.03	3.80	87.73	13.53	3.73
		350.00	90.46	11.95	3.16	90.19	12.24	3.13	90.50	12.70	3.13	89.98	12.81	3.10	89.14	13.03	3.06	88.34	14.38	2.97
		420.00	90.74	11.95	2.64	90.74	12.24	2.63	91.06	12.73	2.62	90.26	12.81	2.59	89.43	13.03	2.56	88.65	14.84	2.47
	25	140.00	99.24	12.74	8.69	98.69	13.02	8.61	97.87	13.58	8.47	97.59	13.79	8.42	97.05	14.04	8.34	96.22	14.59	8.21
		280.00	99.24	12.55	4.36	98.69	12.93	4.31	97.87	13.34	4.25	97.59	13.58	4.22	97.05	13.82	4.18	96.22	14.34	4.12
		350.00	99.24	12.36	3.49	98.69	12.60	3.46	97.87	13.13	3.41	97.59	13.36	3.39	97.05	13.59	3.36	96.22	14.09	3.30
		420.00	99.24	12.28	2.91	98.69	12.43	2.89	97.87	13.04	2.84	97.59	13.24	2.83	97.05	13.46	2.80	96.22	13.99	2.76
	30	140.00	106.94	13.69	9.37	107.46	13.74	9.42	106.37	14.43	9.24	102.94	14.58	8.88	105.00	14.97	9.05	97.87	13.47	8.48
		280.00	106.94	13.24	4.71	107.46	13.65	4.71	106.37	14.10	4.64	102.94	14.34	4.45	105.00	14.44	4.55	97.87	12.96	4.27
		350.00	106.94	13.04	3.78	107.46	13.28	3.79	106.37	13.87	3.72	102.94	14.07	3.57	105.00	14.44	3.64	97.87	12.96	3.41
		420.00	106.94	12.95	3.15	107.46	13.09	3.16	106.37	13.74	3.10	102.94	13.96	2.98	105.00	14.44	3.03	97.87	12.96	2.84
	35	140.00	117.06	14.42	10.32	116.24	14.73	10.20	112.40	14.28	9.86	105.34	13.55	9.23	105.00	13.31	9.22	97.87	11.82	8.65
		280.00	117.06	13.96	5.18	116.24	14.39	5.12	112.40	14.01	4.94	105.34	13.31	4.62	105.00	13.03	4.62	97.87	11.36	4.35
		350.00	117.06	13.96	4.15	116.24	14.25	4.10	112.40	13.77	3.97	105.34	13.08	3.71	105.00	12.79	3.71	97.87	11.36	3.48
		420.00	117.06	13.96	3.45	116.24	14.18	3.42	112.40	13.63	3.31	105.34	12.95	3.10	105.00	12.69	3.09	97.87	11.36	2.90
	40	140.00	117.06	13.96	10.36	116.24	14.25	10.25	112.40	13.77	9.91	105.34	13.08	9.27	105.00	12.79	9.27	97.87	11.13	8.72
		280.00	117.06	13.47	5.21	116.24	13.87	5.14	112.40	13.29	4.98	105.34	12.58	4.66	105.00	12.28	4.66	97.87	10.67	4.38
		350.00	117.06	13.24	4.17	116.24	13.66	4.12	112.40	13.29	3.98	105.34	12.58	3.73	105.00	12.28	3.73	97.87	10.67	3.51
		420.00	117.06	13.11	3.48	116.24	13.53	3.44	112.40	13.29	3.32	105.34	12.58	3.11	105.00	12.28	3.11	97.87	10.67	2.92
	45	140.00	117.06	13.47	10.41	116.24	13.77	10.30	112.40	13.29	9.96	105.34	12.58	9.32	105.00	12.28	9.32	97.87	10.41	8.79
		280.00	117.06	13.01	5.23	116.24	13.39	5.17	112.40	12.54	5.02	105.34	11.88	4.70	105.00	11.57	4.70	97.87	9.95	4.42
		350.00	117.06	12.52	4.20	116.24	13.05	4.15	112.40	12.78	4.00	105.34	12.08	3.75	105.00	11.81	3.75	97.87	9.95	3.53
		420.00	117.06	12.29	3.51	116.24	12.87	3.46	112.40	12.92	3.33	105.34	12.21	3.12	105.00	11.94	3.12	97.87	9.95	2.95
120	10	140.00	84.47	15.53	6.93	84.42	15.96	6.88	85.13	16.52	6.90	84.03	16.55	6.78	83.64	16.84	6.71	82.94	16.82	6.65
		280.00	86.20	15.77	3.54	85.59	16.20	3.49	86.04	16.75	3.48	84.94	16.64	3.43	84.58	16.77	3.41	83.93	16.89	3.37
		350.00	86.48	15.69	2.85	85.59	16.20	2.79	86.64	16.81	2.81	85.25	16.70	2.76	84.90	16.87	2.74	84.26	17.44	2.69
		420.00	86.77	15.66	2.38	85.30	16.20	2.31	86.64	16.86	2.34	85.25	16.76	2.29	84.90	16.90	2.28	84.59	17.76	2.24
	15	140.00	85.05	13.78	7.16	84.71	14.11	7.10	85.13	14.68	7.08	84.03	14.88	6.95	83.64	14.98	6.90	82.94	15.11	6.82
		280.00	86.77	13.88	3.66	86.76	14.22	3.65	87.25	14.76	3.64	85.86	14.67	3.58	85.21	14.54	3.55	84.92	14.87	3.52
		350.00	87.35	13.68	2.96	86.76	14.11	2.92	87.86	14.76	2.94	86.47	14.67	2.89	86.15	14.54	2.88	85.58	15.88	2.80
		420.00	87.63	13.57	2.48	86.47	14.05	2.43	88.16	14.76	2.46	86.78	14.67	2.42	86.47	14.54	2.41	85.91	16.36	2.33
	20	140.00	87.35	12.36	7.54	87.05	12.53	7.49	87.55	12.89	7.50	85.86	13.15	7.31	85.52	13.63	7.23	84.92	14.31	7.10
		280.00	89.64	12.36	3.88	89.10	12.72	3.84	89.37	13.12	3.83	88.00	13.36	3.75	87.73	13.60	3.73	86.90	14.10	3.66
		350.00	89.93	12.23	3.12	89.10	12.61	3.08	90.28	13.12	3.10	88.61	13.36	3.03	88.35	13.63	3.00	87.56	14.62	2.93
		420.00	90.22	12.18	2.61	89.10	12.55	2.56	90.58	13.12	2.60	88.92	13.36	2.53	88.35	13.66	2.50	87.89	14.87	2.45
	25	140.00	98.11	13.28	8.53	97.59	13.58	8.44	96.77	14.01	8.32	96.50	14.39	8.25	95.95	14.69	8.17	90.19	13.47	7.71
		280.00	98.42	13.08	4.29	97.59	13.48	4.23	96.77	13.91	4.16	96.50	14.15	4.14	95.95	14.44	4.10	90.19	13.22	3.87
		350.00	98.73	12.60	3.46	97.59	13.13	3.40	96.77	13.65	3.34	96.50	14.15	3.31	95.95	14.18	3.29	90.19	13.22	3.09
		420.00	98.73	12.37	2.89	97.59	12.95	2.84	96.77	13.55	2.79	96.50	14.15	2.76	95.95	14.04	2.74	90.19	13.22	2.58
	30	140.00	107.19	14.31	9.33	106.09	14.57	9.20	103.63	14.40	8.97	100.34	13.71	8.71	97.05	13.32	8.42	90.19	11.71	7.89
		280.00	107.19	13.82	4.69	106.09	14.24	4.62	103.63	14.15	4.50	100.34	13.46	4.37	97.05	12.79	4.23	90.19	11.48	3.96
		350.00	107.19	13.38	3.77	106.09	13.92	3.71	103.63	13.86	3.61	100.34	13.46	3.49	97.05	12.79	3.39	90.19	11.24	3.17
		420.00	107.19	13.15	3.15	106.09	13.75	3.09	103.63	13.71	3.01	100.34	13.46	2.91	97.05	12.79	2.82	90.19	11.14	2.65
	35	140.00	115.69	15.42	10.08	110.21	14.17	9.65	103.63	12.90	9.12	100.34	12.26	8.85	97.05	11.69	8.58	90.19	10.32	8.03
		280.00	115.69	14.55	5.08	110.21	13.62	4.85	103.63	12.38	4.59	100.34	11.79	4.45	97.05	11.21	4.31	90.19	10.09	4.03
		350.00	115.69	14.37	4.07	110.21	13.51													

8HP+8HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	140.00	85.20	16.77	6.88	85.47	17.25	6.86	85.22	17.92	6.76	84.89	17.88	6.74	84.27	18.50	6.61	80.76	16.71	6.44
		280.00	86.41	16.91	3.49	86.40	17.46	3.46	85.54	18.14	3.39	85.54	17.98	3.40	84.94	18.43	3.34	81.09	16.78	3.23
		350.00	86.71	16.91	2.81	86.71	17.46	2.78	85.86	18.11	2.72	85.87	17.94	2.73	84.94	18.54	2.67	81.43	16.95	2.59
		420.00	87.01	16.91	2.35	87.03	17.46	2.33	86.17	18.08	2.28	85.87	17.91	2.28	85.28	18.57	2.24	81.43	17.06	2.16
	15	140.00	85.20	14.81	7.07	85.78	15.31	7.08	85.22	15.99	6.96	84.89	16.08	6.92	84.27	16.46	6.82	80.76	15.02	6.61
		280.00	86.71	14.73	3.62	87.03	15.31	3.60	86.17	15.99	3.53	85.87	15.85	3.52	85.62	15.98	3.50	81.77	14.77	3.37
		350.00	87.31	14.62	2.92	87.34	15.20	2.90	86.49	15.80	2.84	86.20	15.63	2.84	85.62	15.98	2.80	82.11	15.02	2.70
		420.00	87.61	14.56	2.45	87.65	15.14	2.43	86.81	15.68	2.38	86.52	15.50	2.38	85.95	15.98	2.34	82.45	15.15	2.25
	20	140.00	87.01	12.83	7.46	87.34	13.29	7.44	86.49	13.74	7.31	85.87	13.98	7.23	85.62	14.50	7.15	81.77	13.63	6.85
		280.00	88.82	12.91	3.82	88.27	13.29	3.77	87.45	13.74	3.70	87.18	13.98	3.68	86.63	14.22	3.64	82.79	13.53	3.48
		350.00	89.43	12.91	3.08	89.21	13.29	3.05	87.77	13.74	2.98	87.50	13.76	2.96	86.97	14.22	2.92	83.13	13.53	2.80
		420.00	89.73	12.91	2.57	89.52	13.29	2.55	88.09	13.74	2.49	87.83	13.63	2.49	87.30	14.22	2.45	83.13	13.53	2.33
	25	140.00	96.67	13.77	8.33	96.50	14.35	8.26	95.13	14.55	8.10	91.84	13.85	7.84	88.82	13.19	7.60	82.79	11.60	7.16
		280.00	97.32	13.67	4.20	96.50	14.10	4.14	95.13	14.29	4.06	91.84	13.60	3.93	88.82	12.91	3.82	82.79	11.60	3.58
		350.00	97.97	13.67	3.39	96.50	14.17	3.31	95.13	14.00	3.26	91.84	13.60	3.15	88.82	12.69	3.06	82.79	11.36	2.87
		420.00	98.30	13.67	2.84	96.50	14.17	2.76	95.13	13.85	2.72	91.84	13.60	2.62	88.82	12.55	2.56	82.79	11.25	2.40
	30	140.00	105.82	14.73	9.16	101.16	13.93	8.77	95.13	12.42	8.31	91.84	12.03	8.02	88.82	11.50	7.77	82.79	10.64	7.25
		280.00	105.82	14.46	4.59	101.16	13.62	4.40	95.13	12.14	4.17	91.84	11.79	4.02	88.82	11.21	3.90	82.79	10.36	3.64
		350.00	105.82	14.34	3.68	101.16	13.40	3.53	95.13	11.90	3.35	91.84	11.54	3.23	88.82	11.21	3.12	82.79	10.36	2.91
		420.00	105.82	14.31	3.07	101.16	13.25	2.95	95.13	11.76	2.79	91.84	11.44	2.69	88.82	11.21	2.60	82.79	10.36	2.43
	35	140.00	107.19	13.55	9.41	101.16	12.18	8.94	95.13	11.15	8.44	91.84	10.81	8.14	88.82	10.06	7.92	82.79	9.13	7.40
		280.00	107.19	13.03	4.73	101.16	11.93	4.48	95.13	10.88	4.23	91.84	10.57	4.08	88.82	9.85	3.97	82.79	8.90	3.71
		350.00	107.19	12.69	3.80	101.16	11.68	3.60	95.13	10.64	3.40	91.84	10.57	3.27	88.82	9.85	3.17	82.79	8.90	2.97
		420.00	107.19	12.54	3.17	101.16	11.54	3.00	95.13	10.54	2.83	91.84	10.57	2.72	88.82	9.85	2.65	82.79	8.90	2.48
	40	140.00	107.19	12.76	9.49	101.16	11.68	8.99	95.13	10.40	8.52	91.84	10.08	8.22	88.82	9.34	7.99	82.79	8.40	7.48
		280.00	107.19	12.24	4.77	101.16	11.14	4.52	95.13	9.92	4.28	91.84	9.81	4.12	88.82	9.11	4.01	82.79	8.17	3.75
		350.00	107.19	12.05	3.82	101.16	10.89	3.63	95.13	9.92	3.43	91.84	9.56	3.31	88.82	8.83	3.22	82.79	7.94	3.01
		420.00	107.19	11.98	3.19	101.16	10.75	3.03	95.13	9.92	2.85	91.84	9.42	2.76	88.82	8.73	2.68	82.79	7.80	2.51
	45	140.00	107.19	11.94	9.57	101.16	11.14	9.05	95.13	9.65	8.59	91.84	9.32	8.29	88.82	8.60	8.06	82.79	7.67	7.55
		280.00	107.19	11.41	4.81	101.16	10.39	4.56	95.13	8.90	4.33	91.84	9.04	4.16	88.82	8.36	4.04	82.79	7.44	3.79
		350.00	107.19	11.41	3.85	101.16	10.10	3.66	95.13	9.17	3.46	91.84	8.55	3.35	88.82	7.85	3.26	82.79	6.97	3.05
		420.00	107.19	11.41	3.21	101.16	9.96	3.06	95.13	9.31	2.88	91.84	8.31	2.80	88.82	7.61	2.72	82.79	6.71	2.55
100	10	140.00	85.19	17.64	6.79	86.18	18.58	6.79	85.50	19.52	6.63	83.61	18.13	6.58	80.87	17.59	6.36	75.39	15.64	6.01
		280.00	86.14	17.99	3.42	86.51	18.83	3.40	85.50	19.75	3.30	83.61	18.23	3.29	80.87	17.66	3.18	75.39	15.71	3.00
		350.00	86.78	17.91	2.77	86.85	18.83	2.73	85.50	19.72	2.64	83.61	18.19	2.63	80.87	17.59	2.54	75.39	15.64	2.40
		420.00	87.09	17.88	2.32	87.18	18.83	2.29	85.50	19.69	2.21	83.61	18.16	2.19	80.87	17.59	2.12	75.39	15.61	2.00
	15	140.00	85.83	15.58	7.06	86.18	16.42	7.01	85.50	17.41	6.84	83.61	16.30	6.77	80.87	15.66	6.55	75.39	14.06	6.16
		280.00	86.14	15.87	3.53	86.51	16.48	3.52	85.50	17.41	3.42	83.61	16.07	3.39	80.87	15.43	3.29	75.39	13.83	3.09
		350.00	86.78	15.61	2.86	87.18	16.33	2.85	85.50	17.21	2.75	83.61	15.84	2.72	80.87	15.19	2.64	75.39	13.60	2.48
		420.00	87.09	15.47	2.40	87.18	16.27	2.38	85.50	17.07	2.29	83.61	15.71	2.27	80.87	15.06	2.20	75.39	13.47	2.07
	20	140.00	86.46	13.32	7.35	86.85	13.92	7.33	85.50	14.73	7.11	83.61	13.95	7.00	80.87	13.26	6.80	75.39	12.18	6.35
		280.00	87.73	13.55	3.73	87.18	13.98	3.68	85.50	14.73	3.56	83.61	13.72	3.51	80.87	13.03	3.41	75.39	11.69	3.20
		350.00	88.04	13.32	3.00	87.84	13.86	2.97	85.50	14.49	2.85	83.61	13.46	2.82	80.87	12.76	2.74	75.39	11.50	2.57
		420.00	88.36	13.20	2.52	88.17	13.79	2.49	85.50	14.36	2.38	83.61	13.36	2.35	80.87	12.63	2.29	75.39	11.37	2.14
	25	140.00	94.58	14.33	8.07	91.84	13.93	7.83	85.50	12.63	7.32	83.61	12.03	7.19	80.87	11.41	6.98	75.39	10.07	6.57
		280.00	95.95	14.36	4.10	91.84	13.60	3.93	85.50	12.36	3.68	83.61	11.76	3.61	80.87	11.17	3.50	75.39	10.07	3.28
		350.00	96.29	14.04	3.31	91.84	13.49	3.15	85.50	12.15	2.95	83.61	11.53	2.90	80.87	11.17	2.80	75.39	9.80	2.64
		420.00	96.64	13.90	2.77	91.84	13.46	2.63	85.50	12.02	2.46	83.61	11.39	2.42	80.87	11.17	2.34	75.39	9.70	2.20
	30	140.00	97.32	13.10	8.46	91.84	12.04	8.02	85.50	10.84	7.50	83.61	10.51	7.35	80.87	9.73	7.15	75.39	9.08	6.67
		280.00	97.32	12.88	4.24	91.84	11.79	4.02	85.50	10.74	3.76	83.61	10.24	3.69	80.87	9.73	3.58	75.39	8.80	3.35
		350.00	97.32	12.59	3.41	91.84	11.79	3.22	85.50	10.60	3.01	83.61	10.24	2.95	80.87	9.49	2.87	75.39	8.80	2.68
		420.00	97.32	12.45	2.84	91.84	11.79	2.68	85.50	10.53	2.51	83.61	10.24	2.46	80.87	9.36	2.40	75.39	8.80	2.23
	35	140.00	97.32	12.88	8.49	91.84	11.81	8.04	85.50	10.57	7.53	83.61	10.24	7.37	80.87	9.51	7.17	75.39	8.80	6.69
		280.00	97.32	12.59	4.26	91.84	11.50	4.04	85.50	10.46	3.77	83.61	9.96	3.70	80.87	9.46	3.59	75.39	8.54	3.36
		350.00	97.32	12.36	3.42	91.84	11.50	3.23	85.50	10.32	3.02	83.61	9.96	2.96	80.87	9.27	2.88	75.39	8.54	2.69
		420.00	97.32	12.25	2.															

VRF MW



8HP+8HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	140.00	97.32	11.82	8.59	91.84	10.86	8.14	85.50	9.58	7.63	83.61	9.32	7.47	80.87	8.86	7.24	75.39	8.05	6.77
		280.00	97.32	11.29	4.32	91.84	10.36	4.09	85.50	9.47	3.82	83.61	9.04	3.75	80.87	8.61	3.63	75.39	7.80	3.40
		350.00	97.32	11.29	3.46	91.84	10.36	3.28	85.50	9.33	3.06	83.61	9.04	3.00	80.87	8.61	2.91	75.39	7.80	2.72
		420.00	97.32	11.29	2.88	91.84	10.36	2.73	85.50	9.26	2.55	83.61	9.04	2.50	80.87	8.61	2.42	75.39	7.80	2.26
	15	140.00	97.32	11.04	8.67	91.84	10.07	8.22	85.50	8.57	7.73	83.61	8.31	7.57	80.87	7.84	7.34	75.39	7.31	6.84
		280.00	97.32	10.51	4.36	91.84	9.57	4.13	85.50	8.46	3.87	83.61	8.03	3.80	80.87	7.60	3.68	75.39	7.07	3.43
		350.00	97.32	10.29	3.50	91.84	9.57	3.31	85.50	8.32	3.10	83.61	8.03	3.04	80.87	7.60	2.95	75.39	7.07	2.75
		420.00	97.32	10.15	2.92	91.84	9.57	2.76	85.50	8.22	2.59	83.61	8.03	2.53	80.87	7.60	2.45	75.39	7.07	2.29
	20	140.00	97.32	10.29	8.75	91.84	9.28	8.30	85.50	7.56	7.83	83.61	7.30	7.67	80.87	6.83	7.44	75.39	6.55	6.92
		280.00	97.32	9.76	4.40	91.84	8.78	4.17	85.50	7.45	3.92	83.61	7.06	3.85	80.87	6.58	3.73	75.39	6.30	3.47
		350.00	97.32	9.23	3.54	91.84	8.78	3.34	85.50	7.31	3.14	83.61	7.06	3.08	80.87	6.58	2.99	75.39	6.30	2.78
		420.00	97.32	8.98	2.96	91.84	8.78	2.78	85.50	7.21	2.62	83.61	7.06	2.56	80.87	6.58	2.49	75.39	6.30	2.31
	25	140.00	86.27	19.61	6.70	82.79	18.37	6.48	77.86	16.45	6.17	75.12	15.61	5.98	72.65	15.13	5.78	67.71	13.18	5.48
		280.00	85.92	19.68	3.33	82.44	18.47	3.21	77.86	16.52	3.08	75.12	15.71	2.99	72.65	15.09	2.89	67.71	13.24	2.74
		350.00	86.63	19.61	2.69	82.79	18.40	2.59	77.86	16.45	2.47	75.12	15.64	2.39	72.65	15.13	2.31	67.71	13.28	2.19
		420.00	86.98	19.57	2.26	82.79	18.37	2.16	77.86	16.45	2.06	75.12	15.61	1.99	72.65	15.16	1.93	67.71	13.31	1.82
	30	140.00	86.63	16.91	7.01	83.14	16.06	6.74	77.86	14.66	6.35	75.12	14.06	6.14	72.65	13.49	5.95	67.71	11.86	5.61
		280.00	85.92	16.63	3.48	82.44	15.78	3.35	77.86	14.42	3.19	75.12	13.83	3.08	72.65	13.03	3.00	67.71	11.60	2.82
		350.00	86.63	16.41	2.82	82.79	15.53	2.70	77.86	14.19	2.56	75.12	13.57	2.47	72.65	13.03	2.40	67.71	11.60	2.26
		420.00	86.98	16.27	2.37	83.14	15.43	2.27	77.86	14.06	2.14	75.12	13.47	2.07	72.65	13.03	2.00	67.71	11.60	1.88
	35	140.00	86.98	14.32	7.30	83.50	13.68	7.02	77.86	12.50	6.57	75.12	11.89	6.35	72.65	11.56	6.14	67.71	10.48	5.75
		280.00	86.63	14.32	3.63	82.79	13.50	3.48	77.86	12.26	3.30	75.12	11.69	3.19	72.65	11.09	3.09	67.71	10.00	2.90
		350.00	86.98	14.10	2.93	83.14	13.40	2.80	77.86	12.26	2.64	75.12	11.69	2.55	72.65	11.09	2.47	67.71	10.00	2.32
		420.00	87.34	13.96	2.46	83.14	13.36	2.34	77.86	12.26	2.20	75.12	11.69	2.12	72.65	11.09	2.06	67.71	10.00	1.93
	40	140.00	86.69	12.75	7.43	82.79	11.68	7.15	77.86	10.78	6.74	75.12	10.07	6.54	72.65	9.84	6.31	67.71	8.93	5.91
		280.00	87.73	12.65	3.77	82.79	11.57	3.58	77.86	10.55	3.38	75.12	10.07	3.27	72.65	9.57	3.17	67.71	8.66	2.97
		350.00	88.07	12.32	3.05	82.79	11.33	2.87	77.86	10.55	2.71	75.12	9.80	2.63	72.65	9.57	2.54	67.71	8.66	2.37
		420.00	88.07	12.14	2.54	82.79	11.19	2.40	77.86	10.55	2.26	75.12	9.70	2.19	72.65	9.57	2.11	67.71	8.66	1.98
	45	140.00	87.73	11.22	7.69	82.79	10.28	7.29	77.86	9.45	6.88	75.12	9.08	6.64	72.65	8.64	6.43	67.71	7.61	6.04
		280.00	87.73	10.98	3.86	82.79	10.07	3.65	77.86	9.21	3.45	75.12	8.80	3.33	72.65	8.40	3.23	67.71	7.61	3.02
		350.00	87.73	10.73	3.10	82.79	9.79	2.93	77.86	9.21	2.76	75.12	8.80	2.67	72.65	8.40	2.58	67.71	7.38	2.43
		420.00	87.73	10.59	2.58	82.79	9.65	2.45	77.86	9.21	2.30	75.12	8.80	2.22	72.65	8.40	2.15	67.71	7.28	2.02
80	10	140.00	87.73	9.96	7.82	82.79	9.17	7.40	77.86	8.40	6.98	75.12	8.07	6.74	72.65	7.68	6.53	67.71	7.01	6.10
		280.00	87.73	9.69	3.92	82.79	8.90	3.71	77.86	8.16	3.50	75.12	7.80	3.38	72.65	7.44	3.28	67.71	6.78	3.06
		350.00	87.73	9.45	3.15	82.79	8.66	2.98	77.86	7.89	2.81	75.12	7.57	2.72	72.65	7.44	2.62	67.71	6.78	2.45
		420.00	87.73	9.31	2.63	82.79	8.52	2.49	77.86	7.75	2.35	75.12	7.46	2.27	72.65	7.44	2.18	67.71	6.78	2.04
	15	140.00	87.73	9.21	7.89	82.79	8.42	7.47	77.86	7.41	7.08	75.12	7.09	6.84	72.65	6.96	6.60	67.71	6.28	6.18
		280.00	87.73	8.69	3.97	82.79	8.18	3.75	77.86	7.17	3.55	75.12	6.86	3.43	72.65	6.69	3.31	67.71	6.04	3.10
		350.00	87.73	8.69	3.18	82.79	8.18	3.00	77.86	7.17	2.84	75.12	6.86	2.74	72.65	6.69	2.65	67.71	6.04	2.48
		420.00	87.73	8.69	2.65	82.79	8.18	2.50	77.86	7.17	2.37	75.12	6.86	2.29	72.65	6.69	2.21	67.71	6.04	2.07
	20	140.00	87.73	8.45	7.97	82.79	7.67	7.55	77.86	6.42	7.18	75.12	6.11	6.94	72.65	6.21	6.68	67.71	5.54	6.25
		280.00	87.73	7.69	4.02	82.79	7.43	3.79	77.86	6.18	3.60	75.12	5.88	3.48	72.65	5.97	3.35	67.71	5.31	3.14
		350.00	87.73	7.94	3.21	82.79	7.67	3.02	77.86	6.42	2.87	75.12	6.11	2.77	72.65	5.97	2.68	67.71	5.31	2.51
		420.00	87.73	8.07	2.67	82.79	7.80	2.51	77.86	6.52	2.39	75.12	6.25	2.31	72.65	5.97	2.23	67.71	5.31	2.09
	25	140.00	77.51	16.56	6.13	73.13	15.15	5.83	69.08	13.43	5.59	66.89	13.05	5.41	64.70	12.37	5.26	60.31	11.24	4.93
		280.00	77.86	16.45	3.09	73.47	15.05	2.94	69.08	13.43	2.80	66.89	13.09	2.70	64.70	12.40	2.63	60.31	11.24	2.47
		350.00	77.86	16.41	2.47	73.47	15.12	2.35	69.08	13.49	2.24	66.89	13.02	2.17	64.70	12.34	2.11	60.31	11.18	1.98
		420.00	77.86	16.37	2.06	73.13	15.15	1.94	69.08	13.52	1.86	66.89	12.99	1.81	64.70	12.31	1.76	60.31	11.14	1.65
	30	140.00	77.86	15.00	6.32	73.47	13.59	6.02	69.08	11.94	5.74	66.89	11.76	5.54	64.70	11.04	5.39	60.31	10.10	5.05
		280.00	77.86	14.48	3.18	73.47	13.10	3.03	69.08	11.74	2.88	66.89	11.50	2.78	64.70	10.81	2.71	60.31	9.88	2.53
		350.00	77.86	14.19	2.56	73.47	13.10	2.43	69.08	11.74	2.31	66.89	11.26	2.24	64.70	10.55	2.18	60.31	9.62	2.04
		420.00	77.86	14.04	2.14	73.47	13.10	2.02	69.08	11.74	1.92	66.89	11.13	1.87	64.70	10.41	1.82	60.31	9.52	1.70
	35	140.00	77.86	12.60	6.56	73.47	11.57	6.22	69.08	10.28	5.91	66.89	10.07	5.71	64.70	9.62	5.54	60.31	8.71	5.19
		280.00	77.86	12.34	3.29	73.47	11.29	3.13	69.08	10.28	2.96	66.89	9.81	2.87	64.70	9.35	2.78	60.31	8.45	2.61
		350.00	77.86	12.08	2.64	73.47	11.04	2.51	69.08	10.05	2.37	66.89	9.81	2.30	64.70	9.12	2.23	60.31	8.45	2.09
		420.00	77.86	11.93	2.21	73.47	10.93	2.10	69.08	9.92	1.98	66.89	9.81	1.91	64.70	8.99	1.87	60.31	8.45	

8HP+8HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
70	10	140.00	77.86	8.55	6.97	73.47	7.80	6.60	69.08	7.21	6.22	66.89	6.68	6.05	64.70	6.63	5.84	60.31	5.85	5.47
		280.00	77.86	8.30	3.50	73.47	7.56	3.31	69.08	6.97	3.12	66.89	6.68	3.03	64.70	6.39	2.93	60.31	5.85	2.74
		350.00	77.86	8.30	2.80	73.47	7.33	2.66	69.08	6.97	2.50	66.89	6.42	2.43	64.70	6.39	2.34	60.31	5.62	2.20
		420.00	77.86	8.30	2.33	73.47	7.19	2.22	69.08	6.97	2.08	66.89	6.32	2.03	64.70	6.39	1.95	60.31	5.49	1.84
	15	140.00	77.86	8.03	7.02	73.47	7.09	6.67	69.08	6.45	6.30	66.89	6.19	6.10	64.70	5.92	5.91	60.31	5.36	5.52
		280.00	77.86	7.54	3.53	73.47	6.85	3.35	69.08	6.45	3.15	66.89	5.96	3.06	64.70	5.92	2.95	60.31	5.14	2.77
		350.00	77.86	7.54	2.83	73.47	6.85	2.68	69.08	6.21	2.53	66.89	5.96	2.45	64.70	5.92	2.36	60.31	5.14	2.22
		420.00	77.86	7.54	2.36	73.47	6.85	2.23	69.08	6.11	2.11	66.89	5.96	2.04	64.70	5.92	1.97	60.31	5.14	1.85
	20	140.00	77.86	7.54	7.07	73.47	6.35	6.75	69.08	5.70	6.37	66.89	5.73	6.15	64.70	5.17	5.98	60.31	4.91	5.57
		280.00	77.86	6.77	3.57	73.47	6.11	3.39	69.08	5.97	3.17	66.89	5.23	3.10	64.70	5.41	2.98	60.31	4.46	2.81
		350.00	77.86	6.77	2.86	73.47	6.35	2.70	69.08	5.46	2.56	66.89	5.46	2.47	64.70	5.41	2.38	60.31	4.65	2.24
		420.00	77.86	6.77	2.38	73.47	6.45	2.25	69.08	5.22	2.14	66.89	5.59	2.05	64.70	5.41	1.99	60.31	4.78	1.86
	25	140.00	67.92	13.74	5.45	64.42	12.54	5.22	60.59	11.40	4.94	58.39	10.61	4.80	56.47	10.29	4.64	52.64	9.11	4.37
		280.00	68.26	13.63	2.75	64.42	12.43	2.61	60.59	11.30	2.48	58.39	10.61	2.40	56.47	10.29	2.32	52.64	9.11	2.19
		350.00	68.26	13.70	2.19	64.42	12.50	2.09	60.59	11.34	1.98	58.39	10.64	1.92	56.47	10.19	1.86	52.64	9.11	1.75
		420.00	68.26	13.70	1.83	64.42	12.50	1.74	60.59	11.37	1.65	58.39	10.68	1.60	56.47	10.16	1.55	52.64	9.14	1.46
	30	140.00	68.26	12.45	5.61	64.42	11.29	5.34	60.59	10.16	5.07	58.39	9.52	4.91	56.47	9.15	4.76	52.64	8.17	4.47
		280.00	68.26	11.95	2.83	64.42	10.77	2.70	60.59	9.67	2.56	58.39	9.33	2.47	56.47	8.92	2.39	52.64	7.95	2.25
		350.00	68.26	11.95	2.26	64.42	10.77	2.16	60.59	9.67	2.05	58.39	9.33	1.97	56.47	8.70	1.92	52.64	7.95	1.80
		420.00	68.26	11.95	1.89	64.42	10.77	1.80	60.59	9.67	1.71	58.39	9.33	1.64	56.47	8.57	1.61	52.64	7.95	1.50
	35	140.00	68.26	10.40	5.82	64.42	9.52	5.52	60.59	8.76	5.21	58.39	8.36	5.03	56.47	7.98	4.87	52.64	7.26	4.56
		280.00	68.26	10.12	2.92	64.42	9.28	2.77	60.59	8.49	2.62	58.39	8.14	2.53	56.47	7.75	2.45	52.64	7.04	2.29
		350.00	68.26	10.12	2.34	64.42	9.28	2.22	60.59	8.49	2.09	58.39	7.91	2.03	56.47	7.75	1.96	52.64	6.82	1.84
		420.00	68.26	10.12	1.95	64.42	9.28	1.85	60.59	8.49	1.75	58.39	7.81	1.69	56.47	7.75	1.63	52.64	6.69	1.54
	40	140.00	68.26	8.97	5.96	64.42	8.30	5.64	60.59	7.63	5.32	58.39	7.32	5.13	56.47	6.78	5.00	52.64	6.18	4.67
		280.00	68.26	8.73	2.99	64.42	8.06	2.83	60.59	7.40	2.67	58.39	7.09	2.58	56.47	6.78	2.50	52.64	6.18	2.33
		350.00	68.26	8.49	2.40	64.42	7.79	2.28	60.59	7.40	2.14	58.39	7.09	2.06	56.47	6.55	2.01	52.64	6.18	1.87
		420.00	68.26	8.39	2.01	64.42	7.66	1.90	60.59	7.40	1.78	58.39	7.09	1.72	56.47	6.42	1.68	52.64	6.18	1.56
	45	140.00	68.26	7.92	6.06	64.42	7.35	5.74	60.59	6.81	5.41	58.39	6.28	5.24	56.47	6.25	5.05	52.64	5.51	4.74
		280.00	68.26	7.68	3.04	64.42	7.11	2.88	60.59	6.54	2.72	58.39	6.28	2.62	56.47	6.01	2.54	52.64	5.51	2.37
		350.00	68.26	7.68	2.44	64.42	7.11	2.30	60.59	6.54	2.17	58.39	6.05	2.10	56.47	6.01	2.03	52.64	5.51	1.89
		420.00	68.26	7.68	2.03	64.42	7.11	1.92	60.59	6.54	1.81	58.39	5.92	1.76	56.47	6.01	1.69	52.64	5.51	1.58
60	10	140.00	68.26	7.08	6.15	64.42	6.58	5.81	60.59	5.87	5.50	58.39	5.83	5.28	56.47	5.42	5.13	52.64	5.22	4.77
		280.00	68.26	6.85	3.09	64.42	6.35	2.92	60.59	5.87	2.75	58.39	5.61	2.65	56.47	5.42	2.57	52.64	4.99	2.39
		350.00	68.26	6.85	2.47	64.42	6.35	2.33	60.59	5.64	2.21	58.39	5.61	2.12	56.47	5.42	2.05	52.64	4.99	1.92
		420.00	68.26	6.85	2.06	64.42	6.35	1.95	60.59	5.51	1.85	58.39	5.61	1.77	56.47	5.42	1.71	52.64	4.99	1.60
	15	140.00	68.26	6.58	6.20	64.42	6.11	5.86	60.59	5.38	5.55	58.39	5.12	5.35	56.47	4.96	5.18	52.64	4.72	4.82
		280.00	68.26	6.34	3.11	64.42	5.87	2.94	60.59	5.16	2.79	58.39	5.12	2.68	56.47	4.96	2.59	52.64	4.53	2.42
		350.00	68.26	6.34	2.49	64.42	5.87	2.35	60.59	5.16	2.23	58.39	4.90	2.15	56.47	4.70	2.08	52.64	4.53	1.93
		420.00	68.26	6.34	2.07	64.42	5.87	1.96	60.59	5.16	1.86	58.39	4.77	1.80	56.47	4.60	1.74	52.64	4.53	1.61
	20	140.00	68.26	6.11	6.25	64.42	5.60	5.91	60.59	4.93	5.59	58.39	4.45	5.42	56.47	4.50	5.22	52.64	4.27	4.86
		280.00	68.26	5.87	3.14	64.42	5.37	2.97	60.59	4.48	2.82	58.39	4.64	2.70	56.47	4.50	2.61	52.64	4.04	2.44
		350.00	68.26	5.87	2.51	64.42	5.37	2.37	60.59	4.67	2.25	58.39	4.19	2.18	56.47	4.01	2.11	52.64	4.04	1.95
		420.00	68.26	5.87	2.09	64.42	5.37	1.98	60.59	4.80	1.87	58.39	3.96	1.82	56.47	3.75	1.77	52.64	4.04	1.63
	25	140.00	58.39	10.56	4.81	55.10	9.97	4.54	51.81	9.33	4.27	50.17	8.66	4.17	48.52	8.43	4.03	45.23	7.43	3.80
		280.00	58.39	10.56	2.40	55.10	9.97	2.27	51.81	9.33	2.14	50.17	8.76	2.08	48.52	8.40	2.02	45.23	7.53	1.89
		350.00	58.39	10.59	1.92	55.10	9.87	1.82	51.81	9.23	1.71	50.17	8.66	1.67	48.52	8.33	1.62	45.23	7.43	1.52
		420.00	58.39	10.59	1.60	55.10	9.80	1.52	51.81	9.16	1.43	50.17	8.60	1.39	48.52	8.30	1.35	45.23	7.40	1.27
	30	140.00	58.39	9.57	4.91	55.10	8.96	4.64	51.81	8.31	4.37	50.17	7.78	4.26	48.52	7.49	4.12	45.23	6.70	3.87
		280.00	58.39	9.33	2.47	55.10	8.70	2.33	51.81	8.08	2.20	50.17	7.78	2.13	48.52	7.26	2.07	45.23	6.70	1.94
		350.00	58.39	9.33	1.97	55.10	8.46	1.88	51.81	7.85	1.77	50.17	7.52	1.71	48.52	7.04	1.67	45.23	6.48	1.56
		420.00	58.39	9.33	1.64	55.10	8.33	1.57	51.81	7.72	1.48	50.17	7.39	1.43	48.52	6.91	1.39	45.23	6.35	1.30
	35	140.00	58.39	8.35	5.03	55.10	7.73	4.76	51.81	7.13	4.49	50.17	6.84	4.36	48.52	6.58	4.22	45.23	6.00	3.94
		280.00	58.39	8.11	2.53	55.10	7.49	2.39	51.81	6.90	2.26	50.17	6.61	2.19	48.52	6.32	2.12	45.23	5.77	1.98
		350.00	58.39	8.11	2.02	55.10	7.49	1.91	51.81	6.90	1.81	50.17	6.61	1.75	48.52	6.32	1.70	45.23	5.77	1.59
		420.00	58.39	8.11	1.68	55.10	7.49	1.60	51.81	6.90	1.50	50.17	6.61	1.46	48.52	6.32	1.41	45.23	5.77	1.32
40	140.00	58.39	7.32	5.13	55.10	6.83	4.85	51.81	6.06	4.60	50.17	6.05	4.43	48.52	5.58	4.32	45.23	5.36	4.01	
	280.00	58.39																		

VRF MW



8HP+8HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	140.00	58.39	5.63	5.30	55.10	5.48	4.99	51.81	4.89	4.72	50.17	4.96	4.54	48.52	4.73	4.40	45.23	4.46	4.10
		280.00	58.39	5.63	2.65	55.10	5.25	2.51	51.81	4.89	2.36	50.17	4.70	2.28	48.52	4.53	2.21	45.23	4.20	2.06
		350.00	58.39	5.63	2.12	55.10	5.25	2.00	51.81	4.63	1.90	50.17	4.70	1.83	48.52	4.53	1.77	45.23	4.20	1.65
	15	420.00	58.39	5.63	1.77	55.10	5.25	1.67	51.81	4.54	1.58	50.17	4.70	1.52	48.52	4.53	1.47	45.23	4.20	1.37
		140.00	58.39	5.15	5.35	55.10	5.02	5.03	51.81	4.44	4.76	50.17	4.50	4.59	48.52	4.27	4.45	45.23	3.97	4.15
		280.00	58.39	5.15	2.68	55.10	4.75	2.53	51.81	4.44	2.38	50.17	4.24	2.31	48.52	4.04	2.24	45.23	3.97	2.07
		350.00	58.39	5.15	2.14	55.10	4.75	2.02	51.81	4.44	1.90	50.17	4.24	1.85	48.52	4.04	1.79	45.23	3.97	1.66
	20	420.00	58.39	5.15	1.78	55.10	4.75	1.69	51.81	4.44	1.59	50.17	4.24	1.54	48.52	4.04	1.49	45.23	3.97	1.38
		140.00	58.39	4.66	5.40	55.10	4.56	5.08	51.81	3.96	4.81	50.17	4.01	4.64	48.52	3.81	4.49	45.23	3.52	4.19
		280.00	58.39	4.66	2.70	55.10	4.29	2.55	51.81	3.96	2.40	50.17	3.79	2.33	48.52	3.58	2.26	45.23	3.75	2.08
	25	350.00	58.39	4.66	2.16	55.10	4.29	2.04	51.81	4.18	1.91	50.17	3.79	1.86	48.52	3.58	1.81	45.23	3.75	1.67
		420.00	58.39	4.66	1.80	55.10	4.29	1.70	51.81	4.31	1.59	50.17	3.79	1.55	48.52	3.58	1.51	45.23	3.75	1.39
		140.00	48.45	8.40	4.03	45.71	7.92	3.80	46.06	7.21	3.90	41.67	6.96	3.49	40.30	6.49	3.40	37.56	5.98	3.17
	30	280.00	48.80	8.34	2.03	46.06	7.92	1.92	46.06	7.18	1.95	41.67	6.90	1.75	40.30	6.56	1.70	37.56	5.91	1.59
		350.00	48.80	8.40	1.62	46.06	7.92	1.53	46.06	7.18	1.56	41.67	6.93	1.40	40.30	6.46	1.36	37.56	5.95	1.27
		420.00	48.80	8.40	1.35	46.06	7.96	1.28	46.06	7.21	1.30	41.67	6.93	1.16	40.30	6.39	1.14	37.56	5.95	1.06
	35	140.00	48.80	7.59	4.14	46.06	7.14	3.91	46.06	6.42	3.98	41.67	6.23	3.56	40.30	5.79	3.47	37.56	5.36	3.24
		280.00	48.80	7.35	2.08	46.06	6.90	1.97	46.06	6.19	2.00	41.67	6.00	1.79	40.30	5.79	1.73	37.56	5.14	1.63
		350.00	48.80	7.35	1.67	46.06	6.90	1.57	46.06	6.19	1.60	41.67	6.00	1.43	40.30	5.52	1.40	37.56	5.14	1.30
	40	420.00	48.80	7.35	1.39	46.06	6.90	1.31	46.06	6.19	1.34	41.67	6.00	1.19	40.30	5.39	1.17	37.56	5.14	1.09
		140.00	48.80	6.61	4.24	46.06	6.16	4.01	46.06	5.73	4.05	41.67	5.51	3.63	40.30	5.29	3.52	37.56	4.65	3.31
		280.00	48.80	6.37	2.13	46.06	5.92	2.02	46.06	5.46	2.04	41.67	5.27	1.83	40.30	5.06	1.77	37.56	4.65	1.65
	45	350.00	48.80	6.37	1.71	46.06	5.92	1.61	46.06	5.46	1.63	41.67	5.27	1.46	40.30	5.06	1.42	37.56	4.65	1.32
		420.00	48.80	6.37	1.42	46.06	5.92	1.34	46.06	5.46	1.36	41.67	5.27	1.22	40.30	5.06	1.18	37.56	4.65	1.10
		140.00	48.80	5.88	4.31	46.06	5.23	4.10	46.06	5.14	4.11	41.67	4.68	3.72	40.30	4.51	3.60	37.56	4.18	3.36
	50	280.00	48.80	5.61	2.17	46.06	5.23	2.05	46.06	4.87	2.07	41.67	4.68	1.86	40.30	4.51	1.80	37.56	4.18	1.68
		350.00	48.80	5.61	1.74	46.06	5.23	1.64	46.06	4.87	1.66	41.67	4.68	1.49	40.30	4.51	1.44	37.56	4.18	1.34
		420.00	48.80	5.61	1.45	46.06	5.23	1.37	46.06	4.87	1.38	41.67	4.68	1.24	40.30	4.51	1.20	37.56	4.18	1.12
	55	140.00	48.80	5.27	4.38	46.06	4.90	4.14	46.06	4.66	4.16	41.67	4.22	3.76	40.30	4.31	3.62	37.56	4.02	3.37
		280.00	48.80	5.03	2.20	46.06	4.70	2.08	46.06	4.39	2.09	41.67	4.22	1.88	40.30	4.08	1.82	37.56	3.79	1.70
		350.00	48.80	5.03	1.76	46.06	4.70	1.66	46.06	4.39	1.68	41.67	4.22	1.51	40.30	4.08	1.46	37.56	3.79	1.36
		420.00	48.80	5.03	1.47	46.06	4.70	1.39	46.06	4.39	1.40	41.67	4.22	1.25	40.30	4.08	1.21	37.56	3.79	1.13

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

8HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	145.00	73.28	6.71	7.80	93.17	11.70	10.23	93.67	9.50	10.06	94.68	9.54	10.17	95.85	9.54	10.28	97.94	9.60	10.49	99.42	9.52	10.63
		290.00	73.28	6.22	3.88	93.17	10.97	5.08	93.67	8.89	5.00	94.68	8.91	5.05	95.85	8.84	5.11	97.94	8.99	5.21	99.42	9.05	5.29
		362.50	73.28	6.02	3.09	93.17	10.75	4.05	93.67	8.68	3.99	94.68	8.68	4.03	95.85	8.75	4.08	97.94	8.78	4.16	99.42	8.80	4.22
		435.00	73.28	5.92	2.58	93.17	10.60	3.37	93.67	8.63	3.33	94.68	8.59	3.36	95.85	8.70	3.40	97.94	8.69	3.47	99.42	8.67	3.51
	15	145.00	72.22	8.81	7.90	91.93	15.36	10.46	92.15	12.44	10.20	93.26	12.48	10.31	94.11	12.50	10.40	96.56	12.60	10.65	98.07	12.56	10.79
		290.00	72.22	8.13	3.92	91.93	14.41	5.19	92.15	11.63	5.06	93.26	11.67	5.12	94.11	11.66	5.16	96.56	11.82	5.29	98.07	11.83	5.36
		362.50	72.22	7.88	3.13	91.93	14.04	4.13	92.15	11.38	4.04	93.26	11.44	4.08	94.11	11.44	4.12	96.56	11.56	4.22	98.07	11.57	4.28
		435.00	72.22	7.78	2.60	91.93	13.89	3.44	92.15	11.27	3.36	93.26	11.30	3.40	94.11	11.35	3.43	96.56	11.43	3.51	98.07	11.40	3.56
	20	145.00	71.16	10.72	7.99	90.69	18.65	10.66	90.63	15.08	10.31	91.84	15.15	10.44	93.06	15.11	10.55	95.19	15.25	10.77	96.71	15.25	10.92
		290.00	71.16	9.84	3.95	90.69	17.48	5.28	90.63	14.07	5.11	91.84	14.15	5.17	93.06	14.18	5.23	95.19	14.29	5.34	96.71	14.35	5.42
		362.50	71.16	9.55	3.15	90.69	17.04	4.20	90.63	13.81	4.07	91.84	13.88	4.12	93.06	13.87	4.17	95.19	14.03	4.26	96.71	14.01	4.32
		435.00	71.16	9.40	2.62	90.69	16.82	3.50	90.63	13.66	3.39	91.84	13.70	3.43	93.06	13.74	3.47	95.19	13.86	3.55	96.71	13.84	3.59
	25	145.00	71.16	12.61	8.17	84.85	16.50	9.89	87.89	16.74	10.21	89.11	16.79	10.33	90.32	16.91	10.46	92.15	16.93	10.64	93.36	16.93	10.76
		290.00	71.16	11.59	4.04	84.85	15.45	4.89	87.89	15.65	5.05	89.11	15.73	5.11	90.32	15.79	5.17	92.15	15.87	5.27	93.36	15.93	5.33
		362.50	71.16	11.26	3.22	84.85	15.13	3.90	87.89	15.37	4.03	89.11	15.41	4.08	90.32	15.51	4.13	92.15	15.56	4.20	93.36	15.58	4.25
		435.00	71.16	11.12	2.68	84.85	14.92	3.24	87.89	15.19	3.35	89.11	15.24	3.39	90.32	15.35	3.44	92.15	15.40	3.50	93.36	15.39	3.54
	30	145.00	71.16	14.95	8.40	82.11	18.22	9.79	84.85	18.44	10.07	85.76	18.51	10.17	86.98	18.54	10.29	88.50	18.63	10.45	89.72	18.57	10.56
		290.00	71.16	13.70	4.14	82.11	17.06	4.84	84.85	17.23	4.98	85.76	17.31	5.03	86.98	17.37	5.09	88.50	17.45	5.17	89.72	17.48	5.23
		362.50	71.16	13.38	3.30	82.11	16.67	3.85	84.85	16.89	3.97	85.76	16.97	4.01	86.98	17.07	4.06	88.50	17.09	4.12	89.72	17.09	4.17
		435.00	71.16	13.19	2.74	82.11	16.48	3.21	84.85	16.72	3.30	85.76	16.79	3.33	86.98	16.93	3.38	88.50	16.95	3.43	89.72	16.88	3.47
	35	145.00	71.16	17.79	8.68	78.46	19.97	9.60	80.90	20.10	9.85	82.11	20.25	9.98	83.02	20.24	10.07	84.24	20.31	10.20	85.15	20.28	10.28
		290.00	71.16	16.38	4.27	78.46	18.66	4.74	80.90	18.83	4.86	82.11	18.92	4.93	83.02	18.97	4.97	84.24	19.03	5.04	85.15	19.03	5.08
		362.50	71.16	15.89	3.40	78.46	18.25	3.77	80.90	18.43	3.87	82.11	18.51	3.93	83.02	18.62	3.97	84.24	18.68	4.02	85.15	18.61	4.05
		435.00	71.16	15.67	2.82	78.46	18.04	3.14	80.90	18.24	3.22	82.11	18.35	3.27	83.02	18.42	3.30	84.24	18.49	3.34	85.15	18.42	3.37
	40	145.00	62.95	18.77	7.97	69.70	21.07	8.85	71.82	21.23	9.08	72.95	21.34	9.20	73.68	21.35	9.27	75.11	21.43	9.42	75.84	21.38	9.48
		290.00	62.95	17.25	3.91	69.70	19.66	4.36	71.82	19.87	4.47	72.95	19.93	4.53	73.68	20.00	4.57	75.11	20.11	4.64	75.84	20.09	4.68
		362.50	62.95	16.76	3.11	69.70	19.24	3.47	71.82	19.42	3.56	72.95	19.56	3.61	73.68	19.61	3.64	75.11	19.69	3.70	75.84	19.64	3.72
		435.00	62.95	16.54	2.58	69.70	19.03	2.88	71.82	19.19	2.96	72.95	19.36	3.00	73.68	19.41	3.03	75.11	19.49	3.08	75.84	19.41	3.10
	45	145.00	55.13	19.75	7.30	60.94	22.11	8.10	62.75	22.32	8.30	63.79	22.47	8.41	64.34	22.49	8.47	65.63	22.51	8.60	66.19	22.48	8.65
		290.00	55.13	18.12	3.57	60.94	20.70	3.98	62.75	20.87	4.08	63.79	20.98	4.13	64.34	20.99	4.16	65.63	21.16	4.23	66.19	21.15	4.26
		362.50	55.13	17.63	2.84	60.94	20.23	3.17	62.75	20.42	3.24	63.79	20.57	3.29	64.34	20.63	3.32	65.63	20.73	3.37	66.19	20.62	3.39
		435.00	55.13	17.41	2.36	60.94	19.97	2.63	62.75	20.19	2.70	63.79	20.41	2.74	64.34	20.44	2.76	65.63	20.50	2.80	66.19	20.36	2.81
120	10	145.00	67.05	5.83	7.11	79.96	7.57	8.54	91.07	9.32	9.79	92.52	9.30	9.93	93.70	9.40	10.06	95.80	9.42	10.26	97.60	9.43	10.44
		290.00	67.05	5.34	3.53	79.96	7.06	4.24	91.07	8.64	4.86	92.52	8.74	4.94	93.70	8.71	4.99	95.80	8.83	5.10	97.60	8.76	5.19
		362.50	67.05	5.29	2.82	79.96	6.91	3.39	91.07	8.54	3.89	92.52	8.55	3.94	93.70	8.58	3.99	95.80	8.65	4.08	97.60	8.63	4.14
		435.00	67.05	5.25	2.35	79.96	6.86	2.82	91.07	8.48	3.24	92.52	8.46	3.28	93.70	8.48	3.32	95.80	8.56	3.39	97.60	8.54	3.45
	15	145.00	66.37	7.76	7.23	79.21	10.07	8.71	90.28	12.31	10.01	91.42	12.34	10.12	92.62	12.43	10.25	94.73	12.48	10.46	96.55	12.48	10.63
		290.00	66.37	7.09	3.58	79.21	9.42	4.32	90.28	11.47	4.96	91.42	11.54	5.02	92.62	11.60	5.08	94.73	11.67	5.19	96.55	11.68	5.28
		362.50	66.37	6.95	2.86	79.21	9.22	3.45	90.28	11.26	3.96	91.42	11.31	4.01	92.62	11.37	4.06	94.73	11.49	4.14	96.55	11.42	4.21
		435.00	66.37	6.86	2.38	79.21	9.12	2.87	90.28	11.16	3.30	91.42	11.22	3.34	92.62	11.28	3.38	94.73	11.35	3.45	96.55	11.33	3.51
	20	145.00	65.69	9.42	7.33	78.46	12.28	8.85	89.11	14.98	10.15	90.32	15.05	10.28	91.54	15.09	10.40	93.67	15.23	10.62	95.49	15.18	10.79
		290.00	65.69	8.66	3.63	78.46	11.47	4.39	89.11	13.98	5.03	90.32	14.07	5.09	91.54	14.12	5.15	93.67	14.24	5.26	95.49	14.29	5.35
		362.50	65.69	8.43	2.89	78.46	11.22	3.50	89.11	13.67	4.01	90.32	13.79	4.06	91.54	13.90	4.11	93.67	13.97	4.20	95.49	13.94	4.27
		435.00	65.69	8.30	2.41	78.46	11.12	2.91	89.11	13.51	3.34	90.32	13.65	3.38	91.54	13.76	3.42	93.67	13.83	3.50	95.49	13.76	3.55
	25	145.00	65.69	11.06	7.49	78.46	14.44	9.06	86.37	16.65	10.05	87.59	16.70	10.17	89.11	16.82	10.33	90.93	16.87	10.51	92.45	16.95	10.67
		290.00	65.69	10.21	3.70	78.46	13.53	4.49	86.37	15.56	4.97	87.59	15.65	5.03	89.11	15.70	5.11	90.93	15.82	5.21	92.45	15.87	5.28
		362.50	65.69	9.91	2.95	78.46	13.20	3.58	86.37	15.28	3.97	87.59	15.31	4.01	89.11	15.45	4.08	90.93	15.49	4.15	92.45	15.51	4.21
		435.00	65.69	9.78	2.45	78.46	13.05	2.98	86.37	15.09	3.30	87.59	15.										

VRF MW



8HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	145.00	60.87	5.06	6.43	72.49	6.53	7.71	84.40	8.21	9.03	89.25	9.10	9.59	90.45	9.14	9.71	93.25	9.17	9.99	95.06	9.21	10.17
		290.00	60.87	4.65	3.20	72.49	6.08	3.83	84.40	7.72	4.49	89.25	8.52	4.77	90.45	8.61	4.83	93.25	8.52	4.96	95.06	8.62	5.06
		362.50	60.87	4.49	2.55	72.49	5.94	3.06	84.40	7.57	3.59	89.25	8.37	3.81	90.45	8.38	3.86	93.25	8.38	3.96	95.06	8.52	4.04
		435.00	60.87	4.40	2.12	72.49	5.90	2.55	84.40	7.47	2.99	89.25	8.27	3.17	90.45	8.28	3.21	93.25	8.29	3.30	95.06	8.43	3.36
	15	145.00	60.54	6.73	6.56	72.13	8.71	7.89	84.02	11.08	9.28	88.87	12.19	9.86	90.08	12.23	9.98	92.88	12.29	10.26	94.34	12.39	10.41
		290.00	60.54	6.20	3.25	72.13	8.12	3.91	84.02	10.34	4.60	88.87	11.42	4.89	90.08	11.47	4.95	92.88	11.50	5.09	94.34	11.61	5.17
		362.50	60.54	5.99	2.60	72.13	7.94	3.12	84.02	10.14	3.67	88.87	11.18	3.90	90.08	11.28	3.95	92.88	11.27	4.06	94.34	11.33	4.12
		435.00	60.54	5.91	2.16	72.13	7.89	2.60	84.02	9.99	3.06	88.87	11.08	3.25	90.08	11.14	3.29	92.88	11.17	3.38	94.34	11.20	3.43
	20	145.00	60.22	8.24	6.68	71.77	10.71	8.04	83.63	13.56	9.48	88.50	14.90	10.09	89.72	15.04	10.22	92.15	15.08	10.46	93.97	15.20	10.65
		290.00	60.22	7.58	3.31	71.77	9.98	3.99	83.63	12.71	4.70	88.50	13.98	5.00	89.72	14.04	5.06	92.15	14.15	5.18	93.97	14.24	5.28
		362.50	60.22	7.34	2.64	71.77	9.75	3.18	83.63	12.42	3.75	88.50	13.69	3.99	89.72	13.85	4.04	92.15	13.87	4.14	93.97	13.87	4.21
		435.00	60.22	7.22	2.19	71.77	9.66	2.65	83.63	12.27	3.12	88.50	13.55	3.32	89.72	13.71	3.36	92.15	13.73	3.44	93.97	13.68	3.50
	25	145.00	60.22	9.69	6.82	71.77	12.58	8.23	83.63	16.05	9.72	86.07	16.59	10.01	87.28	16.70	10.14	89.41	16.75	10.35	91.24	16.90	10.55
		290.00	60.22	8.91	3.37	71.77	11.76	4.07	83.63	15.00	4.81	86.07	15.53	4.95	87.28	15.62	5.02	89.41	15.73	5.13	91.24	15.82	5.22
		362.50	60.22	8.67	2.69	71.77	11.49	3.25	83.63	14.66	3.84	86.07	15.18	3.95	87.28	15.36	4.00	89.41	15.39	4.09	91.24	15.44	4.16
		435.00	60.22	8.52	2.23	71.77	11.36	2.70	83.63	14.52	3.19	86.07	15.01	3.29	87.28	15.19	3.33	89.41	15.22	3.40	91.24	15.23	3.46
	30	145.00	60.22	11.43	6.99	71.77	14.95	8.46	81.81	18.18	9.75	83.02	18.30	9.88	83.94	18.41	9.98	86.07	18.49	10.20	87.59	18.59	10.36
		290.00	60.22	10.52	3.45	71.77	13.93	4.18	81.81	17.03	4.82	83.02	17.11	4.88	83.94	17.20	4.93	86.07	17.31	5.04	87.59	17.42	5.12
		362.50	60.22	10.25	2.75	71.77	13.67	3.33	81.81	16.63	3.84	83.02	16.80	3.89	83.94	16.89	3.93	86.07	16.97	4.02	87.59	17.01	4.08
		435.00	60.22	10.10	2.29	71.77	13.50	2.77	81.81	16.45	3.19	83.02	16.60	3.24	83.94	16.73	3.27	86.07	16.81	3.34	87.59	16.78	3.39
	35	145.00	60.08	13.67	7.19	71.77	17.80	8.74	78.16	21.75	9.74	79.38	20.02	9.69	80.29	20.07	9.79	82.11	20.20	9.98	83.63	20.31	10.14
		290.00	60.08	12.57	3.54	71.77	16.63	4.31	78.16	20.37	4.80	79.38	18.72	4.78	80.29	18.80	4.83	82.11	18.92	4.93	83.63	19.00	5.01
		362.50	60.08	12.22	2.82	71.77	16.29	3.44	78.16	19.96	3.83	79.38	18.39	3.81	80.29	18.44	3.85	82.11	18.56	3.93	83.63	18.57	3.99
		435.00	60.08	12.05	2.35	71.77	16.10	2.86	78.16	19.70	3.18	79.38	18.18	3.17	80.29	18.23	3.20	82.11	18.39	3.27	83.63	18.33	3.31
	40	145.00	55.86	15.02	6.91	66.73	19.56	8.42	72.35	23.95	9.39	73.24	21.98	9.29	74.25	22.08	9.40	76.17	22.17	9.59	77.73	22.29	9.76
		290.00	55.86	13.80	3.40	66.73	18.29	4.15	72.35	22.36	4.62	73.24	20.56	4.57	74.25	20.65	4.63	76.17	20.76	4.73	77.73	20.91	4.81
		362.50	55.86	13.40	2.70	66.73	17.90	3.30	72.35	21.90	3.68	73.24	20.18	3.64	74.25	20.24	3.69	76.17	20.36	3.77	77.73	20.39	3.83
		435.00	55.86	13.23	2.25	66.73	17.71	2.75	72.35	21.70	3.06	73.24	19.97	3.03	74.25	20.07	3.07	76.17	20.20	3.13	77.73	20.11	3.18
	45	145.00	51.30	16.37	6.60	61.30	21.32	8.06	66.94	26.10	9.07	67.47	23.94	8.92	68.56	24.05	9.03	70.23	24.14	9.20	71.49	24.28	9.34
		290.00	51.30	15.02	3.23	61.30	19.95	3.96	66.94	24.31	4.45	67.47	22.44	4.38	68.56	22.45	4.44	70.23	22.61	4.53	71.49	22.81	4.60
		362.50	51.30	14.63	2.57	61.30	19.51	3.15	66.94	23.90	3.54	67.47	21.98	3.49	68.56	22.08	3.54	70.23	22.21	3.61	71.49	22.21	3.66
		435.00	51.30	14.41	2.14	61.30	19.27	2.62	66.94	23.69	2.95	67.47	21.77	2.90	68.56	21.88	2.94	70.23	22.01	3.00	71.49	21.94	3.04
100	10	145.00	54.74	4.24	5.75	65.39	5.48	6.91	76.03	6.97	8.10	81.20	7.75	8.68	86.37	8.62	9.26	96.07	8.99	10.25	92.15	9.08	9.87
		290.00	54.74	3.91	2.86	65.39	5.08	3.44	76.03	6.53	4.03	81.20	7.31	4.32	86.37	8.14	4.61	96.07	8.41	5.10	92.15	8.42	4.90
		362.50	54.74	3.84	2.29	65.39	4.96	2.74	76.03	6.40	3.22	81.20	7.09	3.44	86.37	7.90	3.68	96.07	8.27	4.07	92.15	8.27	3.92
		435.00	54.74	3.84	1.90	65.39	4.91	2.29	76.03	6.35	2.68	81.20	7.00	2.87	86.37	7.81	3.06	96.07	8.17	3.39	92.15	8.22	3.26
	15	145.00	54.74	5.79	5.90	65.39	7.43	7.10	76.03	9.46	8.34	81.20	10.57	8.95	86.37	11.67	9.56	96.07	12.18	10.56	92.15	12.29	10.19
		290.00	54.74	5.31	2.93	65.39	6.95	3.53	76.03	8.84	4.14	81.20	9.86	4.44	86.37	10.95	4.75	96.07	11.41	5.24	92.15	11.48	5.05
		362.50	54.74	5.20	2.34	65.39	6.78	2.82	76.03	8.66	3.30	81.20	9.69	3.55	86.37	10.71	3.79	96.07	11.17	4.18	92.15	11.19	4.03
		435.00	54.74	5.13	1.95	65.39	6.70	2.34	76.03	8.57	2.75	81.20	9.55	2.95	86.37	10.62	3.15	96.07	11.07	3.48	92.15	11.04	3.36
	20	145.00	54.74	7.12	6.03	65.39	9.14	7.27	76.03	11.68	8.56	81.20	13.03	9.19	86.37	14.43	9.83	96.07	14.99	10.83	92.15	15.11	10.46
		290.00	54.74	6.57	2.99	65.39	8.57	3.61	76.03	10.88	4.24	81.20	12.15	4.55	86.37	13.48	4.87	96.07	14.07	5.37	92.15	14.15	5.18
		362.50	54.74	6.38	2.38	65.39	8.41	2.88	76.03	10.70	3.38	81.20	11.97	3.64	86.37	13.24	3.89	96.07	13.78	4.29	92.15	13.77	4.13
		435.00	54.74	6.27	1.98	65.39	8.29	2.40	76.03	10.57	2.82	81.20	11.84	3.03	86.37	13.14	3.24	96.07	13.63	3.57	92.15	13.53	3.44
	25	145.00	54.74	8.37	6.16	65.39	10.80	7.43	76.03	13.73	8.75	81.20	15.30	9.41	85.46	16.63	9.96	87.59	16.66	10.17	89.41	16.87	10.37
		290.00	54.74	7.70	3.05	65.39	10.09	3.68	76.03	12.83	4.33	81.20	14.32	4.66	85.46	15.51	4.92	87.59	15.65	5.03	89.41	15.73	5.13
		362.50	54.74	7.48	2.43	65.39	9.90	2.94	76.03	12.53	3.46	81.20	14.03	3.72	85.46	15.24	3.93	87.59	15.34	4.02	89.41	15.34	4.09
		435.00	54.74	7.38	2.02	65.39	9.78	2.44	76.03	12.40	2.88	81.20	13.90	3.09	85.46	15.06	3.27	87.59	15.21	3.34	89.41	15.12	3.40
	30	145.00																					

8HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																					
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000			
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC	
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	
90	10	145.00	49.27	3.69	5.16	58.70	4.68	6.18	68.43	5.84	7.24	72.99	6.54	7.76	77.85	7.25	8.30	87.28	8.81	9.37	90.32	8.99	9.69	
		290.00	49.27	3.43	2.57	58.70	4.40	3.08	68.43	5.53	3.61	72.99	6.15	3.86	77.85	6.78	4.13	87.28	8.20	4.66	90.32	8.39	4.81	
		362.50	49.27	3.28	2.05	58.70	4.32	2.46	68.43	5.36	2.88	72.99	6.02	3.08	77.85	6.64	3.30	87.28	8.04	3.72	90.32	8.16	3.84	
		435.00	49.27	3.21	1.71	58.70	4.28	2.05	68.43	5.27	2.40	72.99	5.93	2.57	77.85	6.60	2.75	87.28	7.99	3.10	90.32	8.05	3.20	
	15	145.00	49.27	4.98	5.29	58.70	6.37	6.35	68.43	7.97	7.45	72.99	8.90	7.99	77.85	9.80	8.55	87.28	11.87	9.67	90.32	12.19	10.00	
		290.00	49.27	4.61	2.63	58.70	5.93	3.15	68.43	7.49	3.70	72.99	8.30	3.96	77.85	9.20	4.25	87.28	11.10	4.80	90.32	11.42	4.96	
		362.50	49.27	4.46	2.10	58.70	5.81	2.52	68.43	7.32	2.96	72.99	8.17	3.17	77.85	9.01	3.39	87.28	10.88	3.83	90.32	11.09	3.96	
		435.00	49.27	4.39	1.74	58.70	5.77	2.10	68.43	7.23	2.46	72.99	8.08	2.64	77.85	8.92	2.82	87.28	10.77	3.19	90.32	10.92	3.29	
	20	145.00	49.27	6.12	5.40	58.70	7.83	6.49	68.43	9.84	7.63	72.99	10.96	8.19	77.85	12.08	8.77	87.28	14.60	9.94	90.32	15.01	10.27	
		290.00	49.27	5.64	2.68	58.70	7.30	3.22	68.43	9.19	3.79	72.99	10.23	4.06	77.85	11.33	4.35	87.28	13.67	4.92	90.32	14.07	5.09	
		362.50	49.27	5.49	2.14	58.70	7.14	2.57	68.43	9.06	3.02	72.99	10.06	3.24	77.85	11.15	3.47	87.28	13.40	3.93	90.32	13.68	4.06	
		435.00	49.27	5.42	1.78	58.70	7.06	2.14	68.43	8.97	2.52	72.99	9.98	2.70	77.85	11.01	2.89	87.28	13.29	3.27	90.32	13.52	3.38	
	25	145.00	49.27	7.16	5.50	58.70	9.15	6.62	68.43	11.58	7.80	72.99	12.85	8.37	77.85	14.31	8.99	85.46	16.52	9.95	87.59	16.73	10.17	
		290.00	49.27	6.60	2.72	58.70	8.57	3.28	68.43	10.83	3.87	72.99	12.07	4.15	77.85	13.36	4.45	85.46	15.51	4.92	87.59	15.62	5.03	
		362.50	49.27	6.39	2.17	58.70	8.38	2.62	68.43	10.66	3.09	72.99	11.82	3.31	77.85	13.09	3.55	85.46	15.20	3.93	87.59	15.27	4.01	
		435.00	49.27	6.28	1.81	58.70	8.30	2.18	68.43	10.53	2.57	72.99	11.69	2.75	77.85	13.00	2.95	85.46	15.05	3.27	87.59	15.06	3.34	
	30	145.00	49.27	8.46	5.63	58.70	10.79	6.78	68.43	14.42	8.08	72.99	15.29	8.61	77.85	16.93	9.24	82.42	18.27	9.82	84.24	18.40	10.01	
		290.00	49.27	7.75	2.78	58.70	10.12	3.36	68.43	13.45	3.99	72.99	14.29	4.26	77.85	15.84	4.57	82.42	17.08	4.85	84.24	17.23	4.95	
		362.50	49.27	7.58	2.22	58.70	9.90	2.68	68.43	13.15	3.18	72.99	14.01	3.39	77.85	15.54	3.64	82.42	16.77	3.87	84.24	16.77	3.94	
		435.00	49.27	7.48	1.85	58.70	9.79	2.23	68.43	13.02	2.65	72.99	13.85	2.82	77.85	15.41	3.03	82.42	16.58	3.22	84.24	16.50	3.28	
	35	145.00	49.27	10.01	5.78	58.70	12.86	6.98	68.43	16.38	8.27	72.99	18.24	8.90	76.94	19.84	9.44	79.07	19.94	9.66	80.59	20.08	9.82	
		290.00	49.27	9.19	2.85	58.70	12.04	3.45	68.43	15.31	4.08	72.99	17.08	4.39	76.94	18.52	4.66	79.07	18.69	4.77	80.59	18.80	4.85	
		362.50	49.27	8.93	2.27	58.70	11.79	2.75	68.43	15.00	3.25	72.99	16.73	3.50	76.94	18.24	3.71	79.07	18.32	3.80	80.59	18.30	3.86	
		435.00	49.27	8.78	1.89	58.70	11.63	2.29	68.43	14.82	2.71	72.99	16.55	2.91	76.94	18.05	3.09	79.07	18.14	3.16	80.59	18.03	3.21	
	40	145.00	47.66	11.45	5.77	56.93	14.78	6.99	66.53	18.84	8.33	70.75	20.94	8.94	74.66	22.80	9.51	76.81	22.94	9.73	77.98	23.09	9.86	
		290.00	47.66	10.56	2.84	56.93	13.84	3.45	66.53	17.59	4.10	70.75	19.56	4.40	74.66	21.34	4.68	76.81	21.46	4.79	77.98	21.59	4.86	
		362.50	47.66	10.23	2.26	56.93	13.51	2.75	66.53	17.23	3.27	70.75	19.21	3.51	74.66	20.92	3.73	76.81	21.09	3.82	77.98	21.04	3.86	
		435.00	47.66	10.08	1.88	56.93	13.35	2.28	66.53	17.05	2.72	70.75	19.03	2.92	74.66	20.73	3.10	76.81	20.86	3.18	77.98	20.77	3.21	
	45	145.00	46.37	12.93	5.78	55.16	16.71	7.01	64.63	21.26	8.38	68.89	23.68	9.03	72.37	25.76	9.57	74.55	25.94	9.80	75.74	26.06	9.93	
		290.00	46.37	11.93	2.84	55.16	15.60	3.45	64.63	19.87	4.12	68.89	22.09	4.44	72.37	24.12	4.71	74.55	24.23	4.82	75.74	24.42	4.88	
		362.50	46.37	11.56	2.26	55.16	15.27	2.75	64.63	19.47	3.28	68.89	21.69	3.53	72.37	23.65	3.75	74.55	23.81	3.84	75.74	23.82	3.88	
		435.00	46.37	11.38	1.88	55.16	15.07	2.28	64.63	19.25	2.73	68.89	21.47	2.94	72.37	23.41	3.11	74.55	23.58	3.19	75.74	23.51	3.23	
	80	10	145.00	43.79	3.09	4.57	52.31	3.90	5.48	60.82	4.90	6.41	65.08	5.49	6.88	69.04	6.00	7.32	77.55	7.28	8.27	86.07	8.53	9.23
			290.00	43.79	2.83	2.27	52.31	3.70	2.73	60.82	4.55	3.19	65.08	5.11	3.42	69.04	5.59	3.64	77.55	6.74	4.11	86.07	7.97	4.59
			362.50	43.79	2.75	1.82	52.31	3.58	2.18	60.82	4.46	2.55	65.08	4.94	2.73	69.04	5.45	2.91	77.55	6.64	3.28	86.07	7.84	3.66
			435.00	43.79	2.75	1.51	52.31	3.50	1.81	60.82	4.46	2.12	65.08	4.85	2.27	69.04	5.36	2.42	77.55	6.64	2.74	86.07	7.84	3.05
		15	145.00	43.79	4.21	4.68	52.31	5.31	5.62	60.82	6.67	6.58	65.08	7.41	7.07	69.04	8.11	7.52	77.55	9.82	8.52	86.07	11.61	9.53
			290.00	43.79	3.87	2.32	52.31	4.99	2.79	60.82	6.20	3.27	65.08	6.90	3.51	69.04	7.60	3.74	77.55	9.17	4.23	86.07	10.85	4.73
			362.50	43.79	3.76	1.86	52.31	4.87	2.23	60.82	6.11	2.61	65.08	6.73	2.80	69.04	7.42	2.98	77.55	9.01	3.38	86.07	10.60	3.77
			435.00	43.79	3.72	1.54	52.31	4.79	1.86	60.82	6.02	2.17	65.08	6.68	2.33	69.04	7.33	2.48	77.55	8.96	2.81	86.07	10.48	3.14
		20	145.00	43.79	5.21	4.78	52.31	6.56	5.74	60.82	8.23	6.74	65.08	9.07	7.23	69.04	10.03	7.71	77.55	12.09	8.74	86.07	14.30	9.79
			290.00	43.79	4.76	2.37	52.31	6.12	2.85	60.82	7.67	3.34	65.08	8.51	3.59	69.04	9.39	3.82	77.55	11.28	4.33	86.07	13.36	4.85
			362.50	43.79	4.65	1.89	52.31	6.00	2.27	60.82	7.54	2.67	65.08	8.34	2.86	69.04	9.20	3.05	77.55	11.12	3.46	86.07	13.05	3.87
			435.00	43.79	4.58	1.57	52.31	5.96	1.89	60.82	7.45	2.22	65.08	8.26	2.38	69.04	9.11	2.54	77.55	11.01	2.88	86.07	12.86	3.22
		25	145.00	43.79	6.04	4.86	52.31	7.65	5.85	60.82	9.65	6.87	65.08	10.71	7.39	69.04	11.85	7.89	77.55	14.24	8.95	85.46	16.58	9.95
			290.00	43.79	5.58	2.41	52.31	7.19	2.90	60.82	9.02	3.41	65.08	10.01	3.66	69.04	11.05	3.91	77.55	13.31	4.43	85.46	15.51	4.92
			362.50	43.79	5.40	1.92	52.31	7.03	2.32	60.82	8.85	2.72	65.08	9.84	2.92	69.04	10.83	3.12	77.55	13.05	3.53	85.46	15.15	3.93
			435.00	43.79	5.33	1.60	52.31	6.96	1.93	60.82	8.77	2.26	65.08	9.72	2.43	69.04	10.74	2.59	77.55	12.94	2.94	85.46	14.91	3.26
30		145.00	43.79	7.12	4.97	52.31	9.05	5.98	60.82	11.39														

VRF MW



8HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	145.00	38.32	2.62	3.99	45.62	3.26	4.77	53.22	4.06	5.59	56.87	4.47	5.98	60.52	4.85	6.38	67.82	5.86	7.19	75.42	6.86	8.03
		290.00	38.32	2.39	1.99	45.62	3.06	2.37	53.22	3.81	2.78	56.87	4.18	2.98	60.52	4.58	3.18	67.82	5.44	3.57	75.42	6.49	3.99
		362.50	38.32	2.32	1.59	45.62	2.94	1.89	53.22	3.68	2.22	56.87	4.05	2.38	60.52	4.45	2.53	67.82	5.39	2.86	75.42	6.31	3.19
		435.00	38.32	2.24	1.32	45.62	2.90	1.58	53.22	3.64	1.85	56.87	4.01	1.98	60.52	4.36	2.11	67.82	5.34	2.38	75.42	6.25	2.66
	15	145.00	38.32	3.52	4.08	45.62	4.39	4.88	53.22	5.47	5.72	56.87	6.02	6.13	60.52	6.61	6.55	67.82	7.90	7.39	75.42	9.35	8.27
		290.00	38.32	3.26	2.03	45.62	4.15	2.43	53.22	5.13	2.85	56.87	5.64	3.05	60.52	6.20	3.25	67.82	7.38	3.67	75.42	8.74	4.10
		362.50	38.32	3.14	1.62	45.62	4.03	1.94	53.22	5.00	2.27	56.87	5.51	2.43	60.52	6.07	2.60	67.82	7.27	2.93	75.42	8.56	3.28
		435.00	38.32	3.11	1.35	45.62	3.99	1.61	53.22	4.96	1.89	56.87	5.47	2.03	60.52	5.98	2.16	67.82	7.17	2.44	75.42	8.44	2.73
	20	145.00	38.32	4.34	4.16	45.62	5.44	4.98	53.22	6.76	5.85	56.87	7.39	6.27	60.52	8.18	6.70	67.82	9.73	7.56	75.42	11.53	8.48
		290.00	38.32	4.00	2.06	45.62	5.07	2.47	53.22	6.29	2.90	56.87	6.94	3.11	60.52	7.64	3.32	67.82	9.11	3.75	75.42	10.74	4.20
		362.50	38.32	3.89	1.65	45.62	4.99	1.97	53.22	6.16	2.32	56.87	6.81	2.48	60.52	7.51	2.65	67.82	8.95	3.00	75.42	10.50	3.35
		435.00	38.32	3.82	1.37	45.62	4.91	1.64	53.22	6.12	1.93	56.87	6.77	2.07	60.52	7.46	2.21	67.82	8.84	2.49	75.42	10.32	2.79
	25	145.00	38.32	5.05	4.23	45.62	6.30	5.06	53.22	7.85	5.96	56.87	8.71	6.40	60.52	9.57	6.84	67.82	11.50	7.74	75.42	13.54	8.68
		290.00	38.32	4.65	2.10	45.62	5.92	2.51	53.22	7.36	2.95	56.87	8.15	3.17	60.52	8.97	3.39	67.82	10.74	3.83	75.42	12.66	4.30
		362.50	38.32	4.51	1.67	45.62	5.77	2.00	53.22	7.19	2.36	56.87	7.95	2.53	60.52	8.79	2.70	67.82	10.54	3.06	75.42	12.31	3.42
		435.00	38.32	4.47	1.39	45.62	5.69	1.67	53.22	7.11	1.96	56.87	7.87	2.10	60.52	8.71	2.25	67.82	10.49	2.55	75.42	12.19	2.85
	30	145.00	38.32	5.92	4.31	45.62	7.44	5.18	53.22	9.31	6.10	56.87	10.27	6.55	60.52	11.35	7.01	67.82	13.59	7.94	75.42	16.04	8.92
		290.00	38.32	5.44	2.13	45.62	6.96	2.56	53.22	8.68	3.02	56.87	9.61	3.24	60.52	10.60	3.47	67.82	12.71	3.93	75.42	15.03	4.41
		362.50	38.32	5.31	1.70	45.62	6.82	2.05	53.22	8.53	2.41	56.87	9.42	2.59	60.52	10.39	2.77	67.82	12.52	3.13	75.42	14.63	3.51
		435.00	38.32	5.20	1.42	45.62	6.74	1.70	53.22	8.45	2.00	56.87	9.34	2.15	60.52	10.31	2.30	67.82	12.37	2.61	75.42	14.46	2.92
	35	145.00	38.32	6.94	4.41	45.62	8.78	5.31	53.22	10.99	6.26	56.87	12.25	6.74	60.52	14.75	7.34	67.82	16.16	8.19	75.42	19.17	9.23
		290.00	38.32	6.40	2.18	45.62	8.23	2.63	53.22	10.23	3.09	56.87	11.42	3.33	60.52	13.77	3.62	67.82	15.17	4.05	75.42	17.96	4.55
		362.50	38.32	6.22	1.74	45.62	8.08	2.09	53.22	10.07	2.47	56.87	11.25	2.66	60.52	13.53	2.89	67.82	14.85	3.23	75.42	17.47	3.62
		435.00	38.32	6.11	1.44	45.62	7.96	1.74	53.22	9.94	2.05	56.87	11.13	2.21	60.52	13.43	2.40	67.82	14.70	2.68	75.42	17.17	3.01
	40	145.00	38.32	8.23	4.54	45.62	10.42	5.47	53.22	12.99	6.46	56.87	14.48	6.96	60.52	17.42	7.60	67.82	19.18	8.49	75.42	22.69	9.57
		290.00	38.32	7.55	2.24	45.62	9.75	2.70	53.22	12.16	3.19	56.87	13.53	3.43	60.52	16.35	3.75	67.82	17.93	4.18	75.42	21.23	4.71
		362.50	38.32	7.37	1.78	45.62	9.52	2.15	53.22	11.90	2.54	56.87	13.32	2.74	60.52	16.01	2.99	67.82	17.62	3.33	75.42	20.69	3.75
		435.00	38.32	7.26	1.48	45.62	9.40	1.79	53.22	11.78	2.11	56.87	13.20	2.28	60.52	15.86	2.48	67.82	17.41	2.77	75.42	20.45	3.12
	45	145.00	38.32	9.53	4.67	45.62	12.02	5.62	53.22	15.00	6.65	56.87	16.71	7.18	60.52	20.15	7.87	67.82	22.15	8.78	75.42	26.27	9.92
		290.00	38.32	8.70	2.29	45.62	11.28	2.77	53.22	14.03	3.28	56.87	15.64	3.54	60.52	18.93	3.87	67.82	20.74	4.32	75.42	24.51	4.87
		362.50	38.32	8.52	1.83	45.62	11.00	2.21	53.22	13.74	2.61	56.87	15.39	2.82	60.52	18.49	3.08	67.82	20.33	3.44	75.42	23.96	3.88
		435.00	38.32	8.41	1.52	45.62	10.89	1.84	53.22	13.62	2.17	56.87	15.22	2.34	60.52	18.30	2.56	67.82	20.17	2.86	75.42	23.72	3.22
60	10	145.00	32.84	2.15	3.41	39.23	2.65	4.08	45.62	3.21	4.76	48.66	3.56	5.09	52.00	3.88	5.45	58.09	4.65	6.12	64.47	5.44	6.82
		290.00	32.84	1.96	1.70	39.23	2.49	2.03	45.62	2.99	2.37	48.66	3.35	2.54	52.00	3.57	2.71	58.09	4.29	3.04	64.47	5.08	3.39
		362.50	32.84	1.89	1.35	39.23	2.40	1.62	45.62	2.95	1.89	48.66	3.27	2.03	52.00	3.52	2.17	58.09	4.19	2.43	64.47	4.90	2.71
		435.00	32.84	1.85	1.13	39.23	2.36	1.35	45.62	2.95	1.58	48.66	3.22	1.69	52.00	3.48	1.80	58.09	4.14	2.02	64.47	4.78	2.25
	15	145.00	32.84	2.89	3.49	39.23	3.59	4.18	45.62	4.36	4.87	48.66	4.81	5.22	52.00	5.26	5.59	58.09	6.26	6.28	64.47	7.35	7.01
		290.00	32.84	2.65	1.73	39.23	3.34	2.08	45.62	4.06	2.42	48.66	4.52	2.59	52.00	4.86	2.77	58.09	5.79	3.12	64.47	6.88	3.48
		362.50	32.84	2.58	1.38	39.23	3.26	1.66	45.62	3.98	1.93	48.66	4.44	2.07	52.00	4.81	2.22	58.09	5.69	2.49	64.47	6.64	2.77
		435.00	32.84	2.54	1.15	39.23	3.22	1.38	45.62	3.93	1.61	48.66	4.40	1.72	52.00	4.77	1.85	58.09	5.64	2.07	64.47	6.52	2.31
	20	145.00	32.84	3.54	3.55	39.23	4.40	4.26	45.62	5.35	4.97	48.66	5.90	5.32	52.00	6.46	5.70	58.09	7.65	6.41	64.47	9.03	7.17
		290.00	32.84	3.27	1.76	39.23	4.12	2.11	45.62	5.05	2.47	48.66	5.53	2.64	52.00	6.06	2.83	58.09	7.19	3.18	64.47	8.43	3.56
		362.50	32.84	3.19	1.41	39.23	4.03	1.69	45.62	4.92	1.97	48.66	5.44	2.11	52.00	5.93	2.26	58.09	7.09	2.54	64.47	8.25	2.84
		435.00	32.84	3.15	1.17	39.23	3.99	1.41	45.62	4.88	1.64	48.66	5.40	1.76	52.00	5.88	1.88	58.09	7.03	2.12	64.47	8.13	2.36
	25	145.00	32.84	4.14	3.61	39.23	5.10	4.32	45.62	6.30	5.06	48.66	6.97	5.43	52.00	7.58	5.81	58.09	9.00	6.54	64.47	10.55	7.32
		290.00	32.84	3.81	1.79	39.23	4.79	2.15	45.62	5.89	2.51	48.66	6.48	2.69	52.00	7.10	2.88	58.09	8.46	3.25	64.47	9.92	3.63
		362.50	32.84	3.70	1.43	39.23	4.71	1.71	45.62	5.81	2.01	48.66	6.36	2.15	52.00	6.98	2.30	58.09	8.26	2.59	64.47	9.64	2.89
		435.00	32.84	3.66	1.19	39.23	4.68	1.43	45.62	5.73	1.67	48.66	6.32	1.79	52.00	6.93	1.92	58.09	8.16	2.15	64.47	9.52	2.41
	30	145.00	32.84	4.88	3.68	39.23	6.02	4.41	45.62	7.42	5.17	48.66	8.15	5.54	52.00	8.95	5.95	58.09	10.70	6.71	64.47	12.47	7.51
		2																					

8HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00000			16.00000			18.00000			19.00000			20.00000			22.00000			24.00000		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	145.00	27.37	1.72	2.84	32.54	2.09	3.38	38.01	2.56	3.96	40.75	2.79	4.25	43.19	2.97	4.50	48.66	3.49	5.09	53.83	4.11	5.65
		290.00	27.37	1.64	1.41	32.54	1.96	1.68	38.01	2.33	1.97	40.75	2.57	2.11	43.19	2.83	2.24	48.66	3.28	2.53	53.83	3.86	2.81
		362.50	27.37	1.56	1.13	32.54	1.92	1.34	38.01	2.33	1.57	40.75	2.48	1.69	43.19	2.73	1.79	48.66	3.17	2.02	53.83	3.68	2.24
		435.00	27.37	1.51	0.94	32.54	1.87	1.12	38.01	2.33	1.31	40.75	2.44	1.40	43.19	2.69	1.49	48.66	3.12	1.68	53.83	3.56	1.87
	15	145.00	27.37	2.36	2.90	32.54	2.83	3.45	38.01	3.41	4.04	40.75	3.75	4.34	43.19	4.08	4.61	48.66	4.76	5.21	53.83	5.49	5.79
		290.00	27.37	2.19	1.44	32.54	2.66	1.72	38.01	3.18	2.01	40.75	3.49	2.16	43.19	3.80	2.29	48.66	4.44	2.59	53.83	5.19	2.88
		362.50	27.37	2.10	1.15	32.54	2.57	1.37	38.01	3.14	1.61	40.75	3.40	1.72	43.19	3.71	1.83	48.66	4.33	2.07	53.83	5.01	2.30
		435.00	27.37	2.06	0.96	32.54	2.53	1.14	38.01	3.09	1.34	40.75	3.35	1.43	43.19	3.66	1.52	48.66	4.28	1.72	53.83	4.95	1.91
	20	145.00	27.37	2.90	2.95	32.54	3.49	3.51	38.01	4.17	4.11	40.75	4.62	4.43	43.19	5.00	4.70	48.66	5.81	5.31	53.83	6.76	5.91
		290.00	27.37	2.65	1.46	32.54	3.27	1.75	38.01	3.95	2.05	40.75	4.31	2.20	43.19	4.68	2.33	48.66	5.50	2.64	53.83	6.40	2.94
		362.50	27.37	2.57	1.17	32.54	3.23	1.40	38.01	3.86	1.63	40.75	4.23	1.75	43.19	4.59	1.86	48.66	5.39	2.11	53.83	6.22	2.34
		435.00	27.37	2.52	0.97	32.54	3.18	1.16	38.01	3.81	1.36	40.75	4.18	1.46	43.19	4.54	1.55	48.66	5.34	1.76	53.83	6.10	1.95
	25	145.00	27.37	3.35	3.00	32.54	4.07	3.57	38.01	4.90	4.19	40.75	5.31	4.49	43.19	5.82	4.78	48.66	6.92	5.42	53.83	8.09	6.04
		290.00	27.37	3.07	1.48	32.54	3.78	1.77	38.01	4.60	2.08	40.75	5.02	2.23	43.19	5.47	2.37	48.66	6.46	2.69	53.83	7.50	2.99
		362.50	27.37	2.99	1.18	32.54	3.74	1.42	38.01	4.51	1.66	40.75	4.89	1.78	43.19	5.34	1.89	48.66	6.35	2.15	53.83	7.32	2.39
		435.00	27.37	2.99	0.99	32.54	3.69	1.18	38.01	4.47	1.38	40.75	4.81	1.48	43.19	5.25	1.57	48.66	6.25	1.79	53.83	7.26	1.99
	30	145.00	27.37	3.89	3.05	32.54	4.71	3.63	38.01	5.77	4.27	40.75	6.29	4.59	43.19	6.85	4.88	48.66	8.07	5.53	53.83	9.44	6.17
		290.00	27.37	3.55	1.51	32.54	4.40	1.80	38.01	5.36	2.12	40.75	5.89	2.27	43.19	6.43	2.42	48.66	7.58	2.74	53.83	8.82	3.06
		362.50	27.37	3.44	1.20	32.54	4.28	1.44	38.01	5.23	1.69	40.75	5.77	1.82	43.19	6.30	1.93	48.66	7.44	2.19	53.83	8.60	2.44
		435.00	27.37	3.40	1.00	32.54	4.24	1.20	38.01	5.19	1.40	40.75	5.73	1.51	43.19	6.26	1.61	48.66	7.34	1.82	53.83	8.43	2.02
	35	145.00	27.37	4.50	3.11	32.54	5.53	3.71	38.01	6.79	4.37	40.75	7.40	4.70	43.19	8.13	5.00	48.66	9.59	5.68	53.83	11.27	6.35
		290.00	27.37	4.14	1.54	32.54	5.16	1.84	38.01	6.32	2.16	40.75	6.94	2.33	43.19	7.58	2.48	48.66	8.97	2.81	53.83	10.49	3.14
		362.50	27.37	4.03	1.22	32.54	5.08	1.47	38.01	6.19	1.72	40.75	6.81	1.86	43.19	7.45	1.98	48.66	8.81	2.24	53.83	10.25	2.50
		435.00	27.37	3.95	1.02	32.54	4.99	1.22	38.01	6.14	1.44	40.75	6.77	1.54	43.19	7.40	1.64	48.66	8.71	1.87	53.83	10.07	2.08
	40	145.00	27.37	5.32	3.19	32.54	6.52	3.81	38.01	8.00	4.49	40.75	8.80	4.83	43.19	9.62	5.15	48.66	11.35	5.85	53.83	13.36	6.55
		290.00	27.37	4.89	1.57	32.54	6.11	1.88	38.01	7.48	2.22	40.75	8.20	2.39	43.19	8.98	2.54	48.66	10.62	2.89	53.83	12.47	3.23
		362.50	27.37	4.77	1.25	32.54	5.98	1.50	38.01	7.35	1.77	40.75	8.08	1.91	43.19	8.80	2.03	48.66	10.42	2.30	53.83	12.17	2.57
		435.00	27.37	4.69	1.04	32.54	5.94	1.25	38.01	7.27	1.47	40.75	7.99	1.58	43.19	8.71	1.69	48.66	10.31	1.92	53.83	11.99	2.14
	45	145.00	27.37	6.14	3.27	32.54	7.55	3.91	38.01	9.21	4.61	40.75	10.19	4.97	43.19	11.10	5.30	48.66	13.11	6.02	53.83	15.40	6.75
		290.00	27.37	5.67	1.61	32.54	7.06	1.93	38.01	8.61	2.27	40.75	9.47	2.45	43.19	10.38	2.61	48.66	12.28	2.97	53.83	14.44	3.33
		362.50	27.37	5.51	1.28	32.54	6.93	1.54	38.01	8.48	1.81	40.75	9.30	1.95	43.19	10.16	2.08	48.66	12.02	2.37	53.83	14.08	2.65
		435.00	27.37	5.40	1.07	32.54	6.85	1.28	38.01	8.43	1.51	40.75	9.18	1.62	43.19	10.07	1.73	48.66	11.92	1.97	53.83	13.90	2.20

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



8HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	145.00	88.36	16.36	6.99	87.99	16.50	6.94	87.84	17.09	6.87	87.43	17.04	6.83	87.02	16.89	6.81	86.16	17.63	6.65
		290.00	90.36	16.23	3.60	89.44	16.56	3.54	89.33	17.20	3.50	88.94	17.04	3.49	88.25	16.86	3.46	87.47	17.56	3.39
		362.50	90.94	16.47	2.89	90.02	16.81	2.84	89.92	17.26	2.82	89.25	17.10	2.80	88.87	17.10	2.79	88.12	18.42	2.71
		435.00	91.22	16.58	2.41	90.31	16.92	2.37	90.22	17.32	2.36	89.55	17.13	2.34	89.18	17.26	2.33	88.44	18.82	2.25
	15	145.00	88.65	14.64	7.18	88.28	14.65	7.15	87.84	15.31	7.04	87.43	15.35	7.00	87.02	15.06	6.98	86.16	15.84	6.82
		290.00	91.51	14.04	3.76	90.89	14.40	3.71	90.51	15.16	3.66	90.46	14.89	3.67	89.49	14.59	3.63	89.09	15.33	3.58
		362.50	92.08	14.39	3.02	91.76	14.73	2.99	91.70	15.16	2.97	91.37	14.89	2.97	90.73	14.99	2.94	90.07	16.88	2.84
		435.00	92.37	14.56	2.52	92.05	14.90	2.50	92.29	15.16	2.49	91.68	14.89	2.48	91.35	15.21	2.46	90.72	17.67	2.36
	20	145.00	92.08	13.45	7.63	91.47	13.44	7.57	91.40	13.83	7.53	90.77	13.80	7.47	90.11	13.88	7.40	89.09	15.33	7.16
		290.00	94.94	13.07	3.97	94.36	13.39	3.93	94.07	13.80	3.89	93.50	14.01	3.86	93.21	14.25	3.83	92.34	14.80	3.76
		362.50	95.23	13.07	3.19	94.94	13.39	3.17	95.26	13.89	3.16	94.71	14.01	3.13	93.83	14.25	3.09	92.99	15.73	3.00
		435.00	95.51	13.07	2.67	95.52	13.39	2.66	95.85	13.92	2.65	95.01	14.01	2.62	94.14	14.25	2.58	93.32	16.23	2.49
	25	145.00	104.46	13.93	8.79	103.89	14.24	8.70	103.02	14.85	8.56	102.73	15.08	8.51	102.15	15.35	8.42	101.29	15.95	8.28
		290.00	104.46	13.73	4.40	103.89	14.14	4.35	103.02	14.59	4.29	102.73	14.85	4.26	102.15	15.11	4.22	101.29	15.68	4.15
		362.50	104.46	13.52	3.53	103.89	13.78	3.50	103.02	14.36	3.44	102.73	14.61	3.42	102.15	14.87	3.39	101.29	15.41	3.33
		435.00	104.46	13.43	2.94	103.89	13.59	2.92	103.02	14.26	2.87	102.73	14.48	2.85	102.15	14.73	2.83	101.29	15.30	2.78
	30	145.00	112.57	14.97	9.47	113.12	15.03	9.52	111.97	15.78	9.33	108.36	15.94	8.97	110.52	16.37	9.14	103.02	14.74	8.57
		290.00	112.57	14.48	4.76	113.12	14.93	4.76	111.97	15.42	4.68	108.36	15.68	4.50	110.52	15.79	4.60	103.02	14.17	4.31
		362.50	112.57	14.26	3.82	113.12	14.52	3.83	111.97	15.17	3.76	108.36	15.38	3.61	110.52	15.79	3.68	103.02	14.17	3.45
		435.00	112.57	14.16	3.18	113.12	14.32	3.20	111.97	15.03	3.14	108.36	15.27	3.01	110.52	15.79	3.06	103.02	14.17	2.87
	35	145.00	123.22	15.77	10.43	122.35	16.11	10.31	118.31	15.62	9.97	110.88	14.82	9.32	110.52	14.55	9.31	103.02	12.92	8.74
		290.00	123.22	15.27	5.24	122.35	15.74	5.17	118.31	15.32	5.00	110.88	14.56	4.67	110.52	14.25	4.67	103.02	12.42	4.40
		362.50	123.22	15.27	4.19	122.35	15.59	4.14	118.31	15.06	4.01	110.88	14.31	3.75	110.52	13.99	3.75	103.02	12.42	3.52
		435.00	123.22	15.27	3.49	122.35	15.51	3.46	118.31	14.91	3.34	110.88	14.16	3.13	110.52	13.88	3.13	103.02	12.42	2.93
	40	145.00	123.22	15.27	10.48	122.35	15.59	10.36	118.31	15.06	10.02	110.88	14.31	9.37	110.52	13.99	9.37	103.02	12.17	8.82
		290.00	123.22	14.73	5.26	122.35	15.17	5.20	118.31	14.54	5.04	110.88	13.76	4.71	110.52	13.44	4.71	103.02	11.67	4.43
		362.50	123.22	14.48	4.22	122.35	14.95	4.17	118.31	14.54	4.03	110.88	13.76	3.77	110.52	13.44	3.77	103.02	11.67	3.55
		435.00	123.22	14.34	3.52	122.35	14.79	3.48	118.31	14.54	3.36	110.88	13.76	3.14	110.52	13.44	3.14	103.02	11.67	2.96
	45	145.00	123.22	14.73	10.53	122.35	15.06	10.41	118.31	14.54	10.07	110.88	13.76	9.43	110.52	13.44	9.42	103.02	11.38	8.89
		290.00	123.22	14.23	5.29	122.35	14.64	5.23	118.31	13.72	5.08	110.88	12.99	4.75	110.52	12.65	4.75	103.02	10.88	4.47
		362.50	123.22	13.69	4.25	122.35	14.27	4.20	118.31	13.98	4.05	110.88	13.21	3.79	110.52	12.91	3.79	103.02	10.88	3.58
		435.00	123.22	13.44	3.55	122.35	14.08	3.50	118.31	14.13	3.37	110.88	13.35	3.15	110.52	13.06	3.15	103.02	10.88	2.98
120	10	145.00	88.92	16.99	6.98	88.87	17.45	6.93	89.61	18.07	6.94	88.45	18.10	6.83	88.04	18.41	6.76	87.30	18.39	6.69
		290.00	90.73	17.24	3.57	90.10	17.72	3.51	90.57	18.32	3.51	89.42	18.20	3.46	89.03	18.34	3.43	88.35	18.47	3.39
		362.50	91.04	17.16	2.87	90.10	17.72	2.81	91.20	18.38	2.83	89.74	18.27	2.77	89.36	18.45	2.75	88.69	19.08	2.70
		435.00	91.34	17.13	2.40	89.79	17.72	2.33	91.20	18.44	2.35	89.74	18.33	2.31	89.36	18.48	2.29	89.04	19.42	2.25
	15	145.00	89.52	15.07	7.23	89.17	15.43	7.16	89.61	16.05	7.14	88.45	16.28	7.00	88.04	16.39	6.95	87.30	16.53	6.87
		290.00	91.34	15.18	3.70	91.33	15.55	3.68	91.84	16.15	3.67	90.38	16.05	3.61	89.70	15.91	3.58	89.39	16.26	3.55
		362.50	91.94	14.96	2.99	91.33	15.43	2.95	92.48	16.15	2.96	91.02	16.05	2.91	90.69	15.91	2.90	90.09	17.36	2.82
		435.00	92.25	14.84	2.50	91.02	15.37	2.45	92.80	16.15	2.48	91.34	16.05	2.44	91.02	15.91	2.43	90.43	17.90	2.35
	20	145.00	91.94	13.52	7.61	91.63	13.70	7.56	92.16	14.10	7.58	90.38	14.39	7.37	90.03	14.91	7.29	89.39	15.65	7.16
		290.00	94.36	13.52	3.92	93.79	13.91	3.88	94.07	14.35	3.87	92.63	14.61	3.79	92.34	14.87	3.76	91.48	15.42	3.69
		362.50	94.67	13.38	3.16	93.79	13.79	3.11	95.03	14.35	3.13	93.27	14.61	3.05	93.00	14.91	3.03	92.17	15.99	2.96
		435.00	94.97	13.32	2.64	93.79	13.73	2.59	95.35	14.35	2.62	93.60	14.61	2.55	93.00	14.94	2.53	92.52	16.26	2.47
	25	145.00	103.27	14.53	8.61	102.73	14.85	8.53	101.87	15.32	8.40	101.58	15.74	8.33	101.00	16.07	8.24	94.94	14.73	7.78
		290.00	103.60	14.30	4.33	102.73	14.74	4.27	101.87	15.21	4.20	101.58	15.47	4.18	101.00	15.79	4.13	94.94	14.46	3.91
		362.50	103.92	13.79	3.50	102.73	14.37	3.43	101.87	14.92	3.37	101.58	15.47	3.34	101.00	15.51	3.32	94.94	14.46	3.12
		435.00	103.92	13.53	2.92	102.73	14.16	2.87	101.87	14.82	2.82	101.58	15.47	2.79	101.00	15.35	2.77	94.94	14.46	2.60
	30	145.00	112.83	15.66	9.43	111.68	15.93	9.29	109.08	15.75	9.06	105.62	14.99	8.79	102.15	14.57	8.50	94.94	12.81	7.97
		290.00	112.83	15.11	4.74	111.68	15.58	4.66	109.08	15.47	4.54	105.62	14.72	4.41	102.15	13.99	4.28	94.94	12.55	4.00
		362.50	112.83	14.64	3.81	111.68	15.23	3.74	109.08	15.16	3.65	105.62	14.72	3.53	102.15	13.99	3.42	94.94	12.29	3.21
		435.00	112.83	14.38	3.18	111.68	15.03	3.13	109.08	15.00	3.04	105.62	14.72	2.94	102.15	13.99	2.85	94.94	12.18	2.68
	35	145.00	121.78	16.87	10.18	116.01	15.50	9.75	109.08	14.11	9.22	105.62	13.41	8.95	102.15	12.78	8.67	94.94	11.29	8.12
		290.00	121.78	15.92	5.14	116.01	14.90	4.91	109.08	13.54	4.64	105.62	12.89	4.50	102.15	12.26	4.36	94.94	11.04	4.07
		362.50	121.78	15.71	4.12	116.01	14.78	3.93	109.08	13.54	3.71	105.62	12.89	3.60	102.15	12.26	3.49	94.94	10.79	

8HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	145.00	89.68	18.34	6.92	89.96	18.87	6.90	89.70	19.60	6.80	89.36	19.56	6.77	88.70	20.23	6.64	85.01	18.28	6.48
		290.00	90.95	18.49	3.52	90.95	19.09	3.49	90.04	19.84	3.41	90.05	19.66	3.42	89.41	20.16	3.36	85.36	18.35	3.25
		362.50	91.27	18.49	2.83	91.28	19.09	2.80	90.37	19.80	2.74	90.39	19.63	2.75	89.41	20.27	2.68	85.72	18.54	2.61
		435.00	91.59	18.49	2.36	91.61	19.09	2.35	90.71	19.77	2.29	90.39	19.59	2.29	89.77	20.31	2.25	85.72	18.66	2.17
	15	145.00	89.68	16.20	7.13	90.29	16.75	7.14	89.70	17.49	7.01	89.36	17.58	6.97	88.70	18.01	6.86	85.01	16.42	6.66
		290.00	91.27	16.11	3.65	91.61	16.75	3.63	90.71	17.49	3.55	90.39	17.34	3.54	90.12	17.48	3.52	86.08	16.16	3.39
		362.50	91.91	15.99	2.95	91.93	16.62	2.92	91.05	17.28	2.86	90.73	17.09	2.86	90.12	17.48	2.82	86.43	16.42	2.72
		435.00	92.23	15.93	2.47	92.26	16.56	2.45	91.38	17.14	2.40	91.08	16.95	2.40	90.48	17.48	2.36	86.79	16.57	2.27
	20	145.00	91.59	14.03	7.53	91.93	14.54	7.51	91.05	15.03	7.38	90.39	15.29	7.29	90.12	15.85	7.21	86.08	14.91	6.91
		290.00	93.50	14.12	3.85	92.92	14.54	3.80	92.05	15.03	3.74	91.77	15.29	3.71	91.19	15.55	3.67	87.15	14.80	3.51
		362.50	94.13	14.12	3.11	93.91	14.54	3.08	92.39	15.03	3.00	92.11	15.05	2.99	91.54	15.55	2.95	87.51	14.80	2.82
		435.00	94.45	14.12	2.60	94.23	14.54	2.58	92.73	15.03	2.51	92.45	14.90	2.51	91.90	15.55	2.47	87.51	14.80	2.35
	25	145.00	101.76	15.06	8.41	101.58	15.69	8.33	100.13	15.91	8.17	96.67	15.15	7.91	93.50	14.43	7.67	87.15	12.68	7.23
		290.00	102.44	14.95	4.25	101.58	15.42	4.18	100.13	15.63	4.10	96.67	14.87	3.97	93.50	14.12	3.85	87.15	12.68	3.61
		362.50	103.13	14.95	3.42	101.58	15.50	3.34	100.13	15.31	3.29	96.67	14.87	3.18	93.50	13.88	3.09	87.15	12.42	2.90
		435.00	103.47	14.95	2.86	101.58	15.50	2.78	100.13	15.15	2.75	96.67	14.87	2.65	93.50	13.73	2.58	87.15	12.31	2.42
	30	145.00	111.39	16.11	9.25	106.48	15.23	8.86	100.13	13.59	8.40	96.67	13.16	8.10	93.50	12.57	7.85	87.15	11.63	7.33
		290.00	111.39	15.81	4.64	106.48	14.90	4.44	100.13	13.28	4.21	96.67	12.89	4.07	93.50	12.26	3.94	87.15	11.33	3.68
		362.50	111.39	15.69	3.71	106.48	14.65	3.56	100.13	13.01	3.38	96.67	12.63	3.26	93.50	12.26	3.15	87.15	11.33	2.94
		435.00	111.39	15.65	3.10	106.48	14.49	2.98	100.13	12.86	2.82	96.67	12.51	2.72	93.50	12.26	2.63	87.15	11.33	2.45
	35	145.00	112.83	14.82	9.51	106.48	13.32	9.04	100.13	12.20	8.53	96.67	11.83	8.23	93.50	11.00	8.01	87.15	9.99	7.49
		290.00	112.83	14.25	4.78	106.48	13.05	4.53	100.13	11.90	4.28	96.67	11.56	4.13	93.50	10.78	4.01	87.15	9.73	3.76
		362.50	112.83	13.88	3.84	106.48	12.77	3.64	100.13	11.64	3.44	96.67	11.56	3.30	93.50	10.78	3.21	87.15	9.73	3.01
		435.00	112.83	13.71	3.21	106.48	12.62	3.04	100.13	11.53	2.87	96.67	11.56	2.75	93.50	10.78	2.68	87.15	9.73	2.50
	40	145.00	112.83	13.96	9.59	106.48	12.77	9.09	100.13	11.38	8.61	96.67	11.03	8.31	93.50	10.22	8.08	87.15	9.19	7.57
		290.00	112.83	13.39	4.83	106.48	12.19	4.58	100.13	10.85	4.33	96.67	10.72	4.17	93.50	9.96	4.05	87.15	8.93	3.80
		362.50	112.83	13.18	3.87	106.48	11.91	3.67	100.13	10.85	3.47	96.67	10.46	3.35	93.50	9.66	3.25	87.15	8.68	3.05
		435.00	112.83	13.10	3.23	106.48	11.75	3.06	100.13	10.85	2.89	96.67	10.31	2.79	93.50	9.55	2.72	87.15	8.54	2.54
	45	145.00	112.83	13.06	9.68	106.48	12.19	9.15	100.13	10.55	8.69	96.67	10.19	8.39	93.50	9.40	8.16	87.15	8.39	7.64
		290.00	112.83	12.48	4.87	106.48	11.36	4.62	100.13	9.73	4.39	96.67	9.89	4.21	93.50	9.14	4.09	87.15	8.14	3.83
		362.50	112.83	12.48	3.90	106.48	11.05	3.70	100.13	10.03	3.50	96.67	9.35	3.39	93.50	8.58	3.30	87.15	7.63	3.09
		435.00	112.83	12.48	3.25	106.48	10.89	3.09	100.13	10.18	2.91	96.67	9.09	2.83	93.50	8.32	2.76	87.15	7.34	2.58
100	10	145.00	89.68	19.30	6.83	90.72	20.32	6.83	90.00	21.34	6.66	88.01	19.83	6.62	85.13	19.24	6.39	79.36	17.11	6.04
		290.00	90.68	19.68	3.44	91.07	20.59	3.42	90.00	21.60	3.32	88.01	19.94	3.30	85.13	19.31	3.19	79.36	17.18	3.02
		362.50	91.34	19.58	2.79	91.42	20.59	2.75	90.00	21.57	2.66	88.01	19.90	2.64	85.13	19.24	2.56	79.36	17.11	2.42
		435.00	91.68	19.55	2.33	91.77	20.59	2.30	90.00	21.53	2.21	88.01	19.86	2.20	85.13	19.24	2.13	79.36	17.07	2.01
	15	145.00	90.34	17.04	7.11	90.72	17.96	7.06	90.00	19.04	6.89	88.01	17.83	6.81	85.13	17.13	6.60	79.36	15.37	6.21
		290.00	90.68	17.36	3.56	91.07	18.03	3.54	90.00	19.04	3.44	88.01	17.58	3.42	85.13	16.87	3.31	79.36	15.12	3.12
		362.50	91.34	17.08	2.88	91.77	17.86	2.87	90.00	18.82	2.76	88.01	17.33	2.74	85.13	16.62	2.66	79.36	14.88	2.50
		435.00	91.68	16.92	2.42	91.77	17.79	2.39	90.00	18.67	2.31	88.01	17.18	2.29	85.13	16.47	2.22	79.36	14.73	2.09
	20	145.00	91.01	14.57	7.42	91.42	15.22	7.39	90.00	16.11	7.17	88.01	15.26	7.06	85.13	14.50	6.85	79.36	13.32	6.41
		290.00	92.34	14.82	3.76	91.77	15.29	3.71	90.00	16.11	3.59	88.01	15.00	3.54	85.13	14.25	3.44	79.36	12.79	3.23
		362.50	92.68	14.57	3.03	92.46	15.16	3.00	90.00	15.85	2.88	88.01	14.72	2.85	85.13	13.96	2.76	79.36	12.57	2.59
		435.00	93.01	14.44	2.54	92.81	15.09	2.51	90.00	15.70	2.40	88.01	14.61	2.37	85.13	13.81	2.31	79.36	12.43	2.16
	25	145.00	99.56	15.67	8.14	96.67	15.23	7.90	90.00	13.82	7.39	88.01	13.16	7.26	85.13	12.47	7.05	79.36	11.01	6.63
		290.00	101.00	15.71	4.14	96.67	14.87	3.97	90.00	13.52	3.71	88.01	12.87	3.65	85.13	12.21	3.54	79.36	11.01	3.32
		362.50	101.36	15.36	3.34	96.67	14.76	3.18	90.00	13.29	2.98	88.01	12.61	2.93	85.13	12.21	2.83	79.36	10.72	2.66
		435.00	101.72	15.20	2.80	96.67	14.72	2.65	90.00	13.14	2.49	88.01	12.46	2.44	85.13	12.21	2.36	79.36	10.61	2.22
	30	145.00	102.44	14.33	8.55	96.67	13.17	8.10	90.00	11.86	7.58	88.01	11.50	7.43	85.13	10.65	7.23	79.36	9.93	6.74
		290.00	102.44	14.09	4.29	96.67	12.89	4.07	90.00	11.74	3.80	88.01	11.19	3.73	85.13	10.65	3.61	79.36	9.63	3.38
		362.50	102.44	13.77	3.44	96.67	12.89	3.25	90.00	11.59	3.04	88.01	11.19	2.98	85.13	10.38	2.90	79.36	9.63	2.71
		435.00	102.44	13.62	2.87	96.67	12.89	2.71	90.00	11.51	2.54	88.01	11.19	2.48	85.13	10.23	2.42	79.36	9.63	2.26
	35	145.00	102.44	12.93	8.69	96.67	11.87	8.23	90.00	10.47	7.72	88.01	10.19	7.55	85.13	9.69	7.32	79.36	8.80	6.85
		290.00	102.44	12.34	4.37	96.67	11.33	4.14	90.00	10.36	3.86	88.01	9.89	3.79	85.13	9.42	3.67	79.36	8.53	3.44
		362.50	102.44	12.34	3.50	96.67	11.33	3.31	90.00	10.21	3.10	88.01	9.89	3.03	85.13	9.42	2.94	79.36	8.53	2.75
		435.00	102.44	12.34	2.91	96.67	11.33	2.76	90.00	10.13	2.58	88.01								

VRF MW



8HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	145.00	90.81	21.45	6.73	87.15	20.09	6.51	81.95	17.99	6.21	79.07	17.07	6.02	76.47	16.54	5.82	71.28	14.41	5.52
		290.00	90.44	21.52	3.34	86.78	20.20	3.23	81.95	18.07	3.10	79.07	17.18	3.00	76.47	16.51	2.91	71.28	14.48	2.76
		362.50	91.19	21.45	2.71	87.15	20.13	2.60	81.95	17.99	2.48	79.07	17.11	2.41	76.47	16.54	2.33	71.28	14.52	2.20
		435.00	91.56	21.41	2.27	87.15	20.09	2.17	81.95	17.99	2.07	79.07	17.07	2.01	76.47	16.58	1.94	71.28	14.56	1.83
	15	145.00	91.19	18.49	7.05	87.52	17.56	6.79	81.95	16.03	6.40	79.07	15.38	6.18	76.47	14.76	5.99	71.28	12.97	5.66
		290.00	90.44	18.18	3.51	86.78	17.26	3.37	81.95	15.78	3.21	79.07	15.13	3.10	76.47	14.25	3.02	71.28	12.69	2.84
		362.50	91.19	17.95	2.84	87.15	16.99	2.72	81.95	15.52	2.58	79.07	14.84	2.49	76.47	14.25	2.42	71.28	12.69	2.27
		435.00	91.56	17.79	2.39	87.52	16.87	2.29	81.95	15.38	2.15	79.07	14.73	2.08	76.47	14.25	2.01	71.28	12.69	1.90
	20	145.00	91.56	15.66	7.37	87.89	14.96	7.08	81.95	13.67	6.63	79.07	13.00	6.41	76.47	12.64	6.19	71.28	11.46	5.80
		290.00	91.19	15.66	3.66	87.15	14.77	3.51	81.95	13.41	3.33	79.07	12.79	3.22	76.47	12.13	3.12	71.28	10.93	2.93
		362.50	91.56	15.42	2.96	87.52	14.66	2.83	81.95	13.41	2.66	79.07	12.79	2.57	76.47	12.13	2.50	71.28	10.93	2.34
		435.00	91.94	15.27	2.48	87.52	14.62	2.36	81.95	13.41	2.22	79.07	12.79	2.14	76.47	12.13	2.08	71.28	10.93	1.95
	25	145.00	91.25	13.95	7.50	87.15	12.77	7.22	81.95	11.79	6.81	79.07	11.01	6.60	76.47	10.76	6.38	71.28	9.76	5.97
		290.00	92.34	13.83	3.81	87.15	12.66	3.61	81.95	11.53	3.42	79.07	11.01	3.30	76.47	10.46	3.20	71.28	9.47	3.00
		362.50	92.71	13.47	3.08	87.15	12.39	2.90	81.95	11.53	2.73	79.07	10.72	2.65	76.47	10.46	2.56	71.28	9.47	2.40
		435.00	92.71	13.28	2.57	87.15	12.23	2.42	81.95	11.53	2.28	79.07	10.61	2.21	76.47	10.46	2.14	71.28	9.47	2.00
	30	145.00	92.34	12.27	7.77	87.15	11.24	7.37	81.95	10.34	6.95	79.07	9.93	6.71	76.47	9.45	6.50	71.28	8.32	6.11
		290.00	92.34	12.00	3.90	87.15	11.01	3.69	81.95	10.07	3.49	79.07	9.63	3.37	76.47	9.19	3.26	71.28	8.32	3.05
		362.50	92.34	11.73	3.13	87.15	10.71	2.97	81.95	10.07	2.79	79.07	9.63	2.70	76.47	9.19	2.61	71.28	8.07	2.45
		435.00	92.34	11.58	2.61	87.15	10.56	2.48	81.95	10.07	2.33	79.07	9.63	2.25	76.47	9.19	2.18	71.28	7.96	2.05
	35	145.00	92.34	10.90	7.90	87.15	10.03	7.48	81.95	9.19	7.06	79.07	8.83	6.82	76.47	8.40	6.61	71.28	7.67	6.17
		290.00	92.34	10.59	3.97	87.15	9.73	3.76	81.95	8.92	3.54	79.07	8.53	3.42	76.47	8.14	3.32	71.28	7.41	3.10
		362.50	92.34	10.33	3.18	87.15	9.47	3.02	81.95	8.63	2.85	79.07	8.27	2.75	76.47	8.14	2.65	71.28	7.41	2.48
		435.00	92.34	10.18	2.66	87.15	9.32	2.52	81.95	8.48	2.38	79.07	8.16	2.29	76.47	8.14	2.21	71.28	7.41	2.07
	40	145.00	92.34	10.07	7.98	87.15	9.21	7.56	81.95	8.10	7.17	79.07	7.76	6.92	76.47	7.62	6.68	71.28	6.86	6.25
		290.00	92.34	9.51	4.02	87.15	8.95	3.79	81.95	7.84	3.60	79.07	7.50	3.47	76.47	7.32	3.36	71.28	6.61	3.14
		362.50	92.34	9.51	3.22	87.15	8.95	3.04	81.95	7.84	2.88	79.07	7.50	2.78	76.47	7.32	2.68	71.28	6.61	2.51
		435.00	92.34	9.51	2.68	87.15	8.95	2.53	81.95	7.84	2.40	79.07	7.50	2.32	76.47	7.32	2.24	71.28	6.61	2.09
	45	145.00	92.34	9.24	8.06	87.15	8.39	7.64	81.95	7.02	7.27	79.07	6.69	7.02	76.47	6.79	6.76	71.28	6.06	6.33
		290.00	92.34	8.42	4.07	87.15	8.12	3.83	81.95	6.76	3.65	79.07	6.43	3.52	76.47	6.53	3.39	71.28	5.80	3.18
		362.50	92.34	8.68	3.25	87.15	8.39	3.06	81.95	7.02	2.91	79.07	6.69	2.81	76.47	6.53	2.72	71.28	5.80	2.54
		435.00	92.34	8.83	2.70	87.15	8.54	2.54	81.95	7.13	2.42	79.07	6.83	2.34	76.47	6.53	2.26	71.28	5.80	2.12
80	10	145.00	81.59	18.11	6.16	76.97	16.57	5.86	72.72	14.68	5.63	70.41	14.28	5.45	68.10	13.53	5.30	63.49	12.29	4.97
		290.00	81.95	17.99	3.10	77.34	16.46	2.95	72.72	14.68	2.82	70.41	14.31	2.72	68.10	13.57	2.65	63.49	12.29	2.48
		362.50	81.95	17.95	2.48	77.34	16.54	2.36	72.72	14.76	2.25	70.41	14.24	2.18	68.10	13.49	2.12	63.49	12.22	1.99
		435.00	81.95	17.91	2.07	76.97	16.57	1.95	72.72	14.79	1.87	70.41	14.20	1.82	68.10	13.46	1.77	63.49	12.19	1.66
	15	145.00	81.95	16.41	6.36	77.34	14.87	6.06	72.72	13.06	5.79	70.41	12.86	5.58	68.10	12.08	5.44	63.49	11.05	5.09
		290.00	81.95	15.84	3.21	77.34	14.32	3.06	72.72	12.84	2.91	70.41	12.57	2.81	68.10	11.83	2.73	63.49	10.80	2.56
		362.50	81.95	15.52	2.58	77.34	14.32	2.45	72.72	12.84	2.32	70.41	12.32	2.25	68.10	11.54	2.20	63.49	10.52	2.06
		435.00	81.95	15.36	2.15	77.34	14.32	2.04	72.72	12.84	1.94	70.41	12.17	1.88	68.10	11.39	1.83	63.49	10.41	1.72
	20	145.00	81.95	13.77	6.62	77.34	12.65	6.28	72.72	11.25	5.97	70.41	11.02	5.76	68.10	10.52	5.59	63.49	9.52	5.24
		290.00	81.95	13.49	3.32	77.34	12.34	3.15	72.72	11.25	2.98	70.41	10.73	2.90	68.10	10.23	2.81	63.49	9.24	2.63
		362.50	81.95	13.21	2.67	77.34	12.07	2.53	72.72	10.99	2.40	70.41	10.73	2.32	68.10	9.98	2.26	63.49	9.24	2.11
		435.00	81.95	13.05	2.23	77.34	11.96	2.11	72.72	10.85	2.00	70.41	10.73	1.93	68.10	9.83	1.89	63.49	9.24	1.75
	25	145.00	81.95	11.90	6.80	77.34	10.92	6.45	72.72	9.73	6.11	70.41	9.55	5.91	68.10	9.13	5.72	63.49	8.32	5.35
		290.00	81.95	11.59	3.41	77.34	10.65	3.24	72.72	9.73	3.06	70.41	9.29	2.97	68.10	8.87	2.87	63.49	8.06	2.69
		362.50	81.95	11.35	2.74	77.34	10.65	2.59	72.72	9.44	2.46	70.41	9.29	2.37	68.10	8.87	2.30	63.49	8.06	2.15
		435.00	81.95	11.19	2.29	77.34	10.65	2.16	72.72	9.33	2.05	70.41	9.29	1.98	68.10	8.87	1.92	63.49	8.06	1.79
	30	145.00	81.95	10.30	6.95	77.34	9.58	6.58	72.72	8.86	6.20	70.41	8.48	6.01	68.10	8.09	5.82	63.49	7.42	5.44
		290.00	81.95	9.99	3.49	77.34	9.32	3.30	72.72	8.56	3.11	70.41	8.22	3.02	68.10	7.83	2.92	63.49	7.12	2.73
		362.50	81.95	9.99	2.79	77.34	9.32	2.64	72.72	8.56	2.49	70.41	8.22	2.41	68.10	7.83	2.34	63.49	7.12	2.19
		435.00	81.95	9.99	2.33	77.34	9.32	2.20	72.72	8.56	2.08	70.41	8.22	2.01	68.10	7.83	1.95	63.49	7.12	1.82
	35	145.00	81.95	9.35	7.05	77.34	8.53	6.68	72.72	7.88	6.29	70.41	7.31	6.12	68.10	7.25	5.91	63.49	6.39	5.54
		290.00	81.95	9.08	3.54	77.34	8.27	3.35	72.72	7.62	3.16	70.41	7.31	3.06	68.10	6.99	2.97	63.49	6.39	2.77
		362.50	81.95	9.08	2.83	77.34	8.01	2.69	72.72	7.62	2.53	70.41	7.02	2.46	68.10	6.99	2.37	63.49	6.15	2.23
		435.00	81.95	9.08	2.36	77.34	7.87	2.25	72.72	7.62	2.11	70.41	6.91	2.05	68.10	6.99	1.98	63.49	6.00	1.86
	40	145.00	81.95	8.78	7.10	77.34	7.76	6.75	72.72	7.06	6.37	70.41	6.77	6.18	68.10	6.47	5.98	63.		

8HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
70	10	145.00	71.49	15.03	5.48	67.81	13.71	5.25	63.77	12.47	4.98	61.47	11.61	4.84	59.45	11.25	4.68	55.41	9.97	4.41
		290.00	71.85	14.91	2.76	67.81	13.60	2.63	63.77	12.36	2.49	61.47	11.61	2.42	59.45	11.25	2.34	55.41	9.97	2.20
		362.50	71.85	14.99	2.21	67.81	13.67	2.10	63.77	12.40	1.99	61.47	11.64	1.93	59.45	11.14	1.88	55.41	9.97	1.76
		435.00	71.85	14.99	1.84	67.81	13.67	1.75	63.77	12.43	1.66	61.47	11.68	1.61	59.45	11.11	1.56	55.41	10.00	1.47
	15	145.00	71.85	13.61	5.65	67.81	12.35	5.38	63.77	11.11	5.11	61.47	10.41	4.95	59.45	10.01	4.80	55.41	8.94	4.51
		290.00	71.85	13.07	2.85	67.81	11.78	2.72	63.77	10.58	2.58	61.47	10.20	2.49	59.45	9.76	2.41	55.41	8.69	2.27
		362.50	71.85	13.07	2.28	67.81	11.78	2.18	63.77	10.58	2.07	61.47	10.20	1.99	59.45	9.51	1.94	55.41	8.69	1.81
		435.00	71.85	13.07	1.90	67.81	11.78	1.81	63.77	10.58	1.72	61.47	10.20	1.66	59.45	9.37	1.62	55.41	8.69	1.51
	20	145.00	71.85	11.38	5.87	67.81	10.42	5.57	63.77	9.58	5.26	61.47	9.14	5.08	59.45	8.73	4.92	55.41	7.94	4.61
		290.00	71.85	11.06	2.95	67.81	10.15	2.80	63.77	9.29	2.64	61.47	8.90	2.55	59.45	8.48	2.47	55.41	7.70	2.31
		362.50	71.85	11.06	2.36	67.81	10.15	2.24	63.77	9.29	2.11	61.47	8.65	2.05	59.45	8.48	1.98	55.41	7.46	1.86
		435.00	71.85	11.06	1.97	67.81	10.15	1.87	63.77	9.29	1.76	61.47	8.55	1.71	59.45	8.48	1.65	55.41	7.32	1.56
	25	145.00	71.85	9.82	6.02	67.81	9.08	5.70	63.77	8.34	5.38	61.47	8.00	5.19	59.45	7.41	5.05	55.41	6.76	4.72
		290.00	71.85	9.55	3.02	67.81	8.82	2.86	63.77	8.09	2.70	61.47	7.75	2.61	59.45	7.41	2.52	55.41	6.76	2.36
		362.50	71.85	9.29	2.43	67.81	8.53	2.30	63.77	8.09	2.16	61.47	7.75	2.09	59.45	7.16	2.03	55.41	6.76	1.89
		435.00	71.85	9.17	2.03	67.81	8.38	1.92	63.77	8.09	1.80	61.47	7.75	1.74	59.45	7.02	1.70	55.41	6.76	1.57
	30	145.00	71.85	8.67	6.13	67.81	8.04	5.80	63.77	7.44	5.47	61.47	6.86	5.30	59.45	6.83	5.11	55.41	6.03	4.79
		290.00	71.85	8.40	3.08	67.81	7.78	2.91	63.77	7.15	2.75	61.47	6.86	2.65	59.45	6.58	2.57	55.41	6.03	2.40
		362.50	71.85	8.40	2.46	67.81	7.78	2.33	63.77	7.15	2.20	61.47	6.62	2.13	59.45	6.58	2.05	55.41	6.03	1.92
		435.00	71.85	8.40	2.05	67.81	7.78	1.94	63.77	7.15	1.83	61.47	6.48	1.78	59.45	6.58	1.71	55.41	6.03	1.60
	35	145.00	71.85	7.75	6.22	67.81	7.20	5.88	63.77	6.42	5.57	61.47	6.38	5.35	59.45	5.92	5.19	55.41	5.71	4.82
		290.00	71.85	7.49	3.12	67.81	6.94	2.95	63.77	6.42	2.78	61.47	6.13	2.68	59.45	5.92	2.60	55.41	5.45	2.42
		362.50	71.85	7.49	2.50	67.81	6.94	2.36	63.77	6.17	2.24	61.47	6.13	2.15	59.45	5.92	2.08	55.41	5.45	1.94
		435.00	71.85	7.49	2.08	67.81	6.94	1.97	63.77	6.03	1.87	61.47	6.13	1.79	59.45	5.92	1.73	55.41	5.45	1.62
	40	145.00	71.85	7.19	6.27	67.81	6.68	5.93	63.77	5.89	5.62	61.47	5.60	5.42	59.45	5.42	5.24	55.41	5.17	4.88
		290.00	71.85	6.94	3.15	67.81	6.42	2.98	63.77	5.64	2.82	61.47	5.60	2.71	59.45	5.42	2.62	55.41	4.95	2.45
		362.50	71.85	6.94	2.52	67.81	6.42	2.38	63.77	5.64	2.26	61.47	5.36	2.18	59.45	5.14	2.11	55.41	4.95	1.96
		435.00	71.85	6.94	2.10	67.81	6.42	1.99	63.77	5.64	1.88	61.47	5.22	1.82	59.45	5.03	1.76	55.41	4.95	1.63
	45	145.00	71.85	6.68	6.33	67.81	6.13	5.99	63.77	5.39	5.67	61.47	4.86	5.49	59.45	4.92	5.29	55.41	4.66	4.92
		290.00	71.85	6.42	3.18	67.81	5.87	3.01	63.77	4.89	2.86	61.47	5.08	2.74	59.45	4.92	2.65	55.41	4.41	2.47
		362.50	71.85	6.42	2.54	67.81	5.87	2.40	63.77	5.11	2.28	61.47	4.58	2.21	59.45	4.39	2.14	55.41	4.41	1.98
		435.00	71.85	6.42	2.12	67.81	5.87	2.00	63.77	5.25	1.89	61.47	4.34	1.85	59.45	4.10	1.79	55.41	4.41	1.65
60	10	145.00	61.47	11.55	4.84	58.00	10.90	4.57	54.54	10.20	4.30	52.81	9.47	4.21	51.08	9.22	4.06	47.61	8.13	3.83
		290.00	61.47	11.55	2.42	58.00	10.90	2.29	54.54	10.20	2.15	52.81	9.58	2.10	51.08	9.18	2.03	47.61	8.23	1.91
		362.50	61.47	11.58	1.94	58.00	10.79	1.83	54.54	10.09	1.73	52.81	9.47	1.68	51.08	9.11	1.63	47.61	8.13	1.53
		435.00	61.47	11.58	1.61	58.00	10.72	1.53	54.54	10.02	1.44	52.81	9.40	1.40	51.08	9.08	1.36	47.61	8.09	1.28
	15	145.00	61.47	10.47	4.95	58.00	9.80	4.68	54.54	9.09	4.41	52.81	8.51	4.30	51.08	8.19	4.16	47.61	7.33	3.91
		290.00	61.47	10.21	2.49	58.00	9.51	2.35	54.54	8.83	2.22	52.81	8.51	2.15	51.08	7.94	2.09	47.61	7.33	1.95
		362.50	61.47	10.21	1.99	58.00	9.25	1.89	54.54	8.58	1.78	52.81	8.23	1.73	51.08	7.70	1.68	47.61	7.08	1.57
		435.00	61.47	10.21	1.66	58.00	9.11	1.58	54.54	8.44	1.49	52.81	8.08	1.45	51.08	7.55	1.41	47.61	6.94	1.32
	20	145.00	61.47	9.13	5.08	58.00	8.45	4.81	54.54	7.79	4.54	52.81	7.48	4.40	51.08	7.20	4.26	47.61	6.56	3.98
		290.00	61.47	8.87	2.55	58.00	8.19	2.42	54.54	7.54	2.28	52.81	7.23	2.21	51.08	6.92	2.14	47.61	6.32	2.00
		362.50	61.47	8.87	2.04	58.00	8.19	1.93	54.54	7.54	1.82	52.81	7.23	1.77	51.08	6.92	1.71	47.61	6.32	1.60
		435.00	61.47	8.87	1.70	58.00	8.19	1.61	54.54	7.54	1.52	52.81	7.23	1.47	51.08	6.92	1.43	47.61	6.32	1.34
	25	145.00	61.47	8.01	5.19	58.00	7.47	4.90	54.54	6.63	4.65	52.81	6.61	4.48	51.08	6.11	4.36	47.61	5.86	4.05
		290.00	61.47	7.75	2.61	58.00	7.18	2.47	54.54	6.63	2.32	52.81	6.37	2.25	51.08	6.11	2.18	47.61	5.61	2.04
		362.50	61.47	7.75	2.09	58.00	7.18	1.97	54.54	6.38	1.87	52.81	6.37	1.80	51.08	6.11	1.75	47.61	5.61	1.63
		435.00	61.47	7.75	1.74	58.00	7.18	1.64	54.54	6.28	1.56	52.81	6.37	1.50	51.08	6.11	1.45	47.61	5.61	1.36
	30	145.00	61.47	7.12	5.27	58.00	6.62	4.99	54.54	6.21	4.69	52.81	5.94	4.55	51.08	5.71	4.40	47.61	5.32	4.10
		290.00	61.47	6.86	2.65	58.00	6.37	2.51	54.54	5.92	2.36	52.81	5.69	2.29	51.08	5.45	2.21	47.61	5.04	2.07
		362.50	61.47	6.86	2.12	58.00	6.37	2.00	54.54	5.92	1.89	52.81	5.69	1.83	51.08	5.45	1.77	47.61	5.04	1.65
		435.00	61.47	6.86	1.77	58.00	6.37	1.67	54.54	5.92	1.57	52.81	5.69	1.52	51.08	5.45	1.48	47.61	5.04	1.38
	35	145.00	61.47	6.16	5.37	58.00	5.99	5.05	54.54	5.35	4.77	52.81	5.43	4.60	51.08	5.17	4.45	47.61	4.88	4.15
		290.00	61.47	6.16	2.68	58.00	5.74	2.54	54.54	5.35	2.39	52.81	5.14	2.31	51.08	4.96	2.24	47.61	4.59	2.09
		362.50	61.47	6.16	2.15	58.00	5.74	2.03	54.54	5.07	1.92	52.81	5.14	1.85	51.08	4.96	1.79	47.61	4.59	1.67
		435.00	61.47	6.16	1.79	58.00	5.74	1.69	54.54	4.96	1.60	52.81	5.14	1.54	51.08	4.96	1.49	47.61	4.59	1.39
40	145.00	61.47	5.63	5.42	58.00	5.49	5.10	54.54	4.86	4.82	52.81	4.93	4.65	51.08	4.67	4.50	47.61	4.35	4.20	
	290.00	61.47	5.63	2.71	58.00	5.20	2.56	54.54	4.86	2.41	52.81	4.64	2.34	51.08	4.42	2.26	47.61	4.35	2.10	
	362.																			

VRF MW



8HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	145.00	51.00	9.19	4.06	48.12	8.67	3.83	48.48	7.88	3.94	43.86	7.62	3.52	42.42	7.10	3.43	39.53	6.54	3.20
		290.00	51.37	9.12	2.05	48.48	8.67	1.93	48.48	7.85	1.97	43.86	7.54	1.76	42.42	7.17	1.71	39.53	6.47	1.60
		362.50	51.37	9.19	1.64	48.48	8.67	1.55	48.48	7.85	1.58	43.86	7.58	1.41	42.42	7.06	1.37	39.53	6.50	1.28
		435.00	51.37	9.19	1.36	48.48	8.70	1.29	48.48	7.88	1.31	43.86	7.58	1.17	42.42	6.99	1.15	39.53	6.50	1.07
	15	145.00	51.37	8.30	4.18	48.48	7.81	3.95	48.48	7.02	4.02	43.86	6.82	3.59	42.42	6.33	3.50	39.53	5.87	3.27
		290.00	51.37	8.04	2.10	48.48	7.55	1.99	48.48	6.77	2.02	43.86	6.57	1.81	42.42	6.33	1.75	39.53	5.62	1.65
		362.50	51.37	8.04	1.68	48.48	7.55	1.59	48.48	6.77	1.62	43.86	6.57	1.45	42.42	6.04	1.41	39.53	5.62	1.32
		435.00	51.37	8.04	1.40	48.48	7.55	1.32	48.48	6.77	1.35	43.86	6.57	1.21	42.42	5.90	1.18	39.53	5.62	1.10
	20	145.00	51.37	7.23	4.28	48.48	6.73	4.05	48.48	6.26	4.10	43.86	6.02	3.67	42.42	5.79	3.56	39.53	5.09	3.34
		290.00	51.37	6.97	2.15	48.48	6.47	2.04	48.48	5.98	2.06	43.86	5.77	1.85	42.42	5.53	1.79	39.53	5.09	1.67
		362.50	51.37	6.97	1.72	48.48	6.47	1.63	48.48	5.98	1.65	43.86	5.77	1.48	42.42	5.53	1.43	39.53	5.09	1.34
		435.00	51.37	6.97	1.44	48.48	6.47	1.36	48.48	5.98	1.37	43.86	5.77	1.23	42.42	5.53	1.19	39.53	5.09	1.11
	25	145.00	51.37	6.43	4.36	48.48	5.71	4.15	48.48	5.62	4.16	43.86	5.11	3.76	42.42	4.93	3.64	39.53	4.57	3.39
		290.00	51.37	6.13	2.19	48.48	5.71	2.08	48.48	5.32	2.09	43.86	5.11	1.88	42.42	4.93	1.82	39.53	4.57	1.70
		362.50	51.37	6.13	1.76	48.48	5.71	1.66	48.48	5.32	1.68	43.86	5.11	1.50	42.42	4.93	1.46	39.53	4.57	1.36
		435.00	51.37	6.13	1.46	48.48	5.71	1.38	48.48	5.32	1.40	43.86	5.11	1.25	42.42	4.93	1.21	39.53	4.57	1.13
	30	145.00	51.37	5.76	4.43	48.48	5.36	4.18	48.48	5.10	4.21	43.86	4.62	3.81	42.42	4.72	3.66	39.53	4.40	3.41
		290.00	51.37	5.51	2.23	48.48	5.14	2.10	48.48	4.80	2.12	43.86	4.62	1.90	42.42	4.46	1.84	39.53	4.15	1.72
		362.50	51.37	5.51	1.78	48.48	5.14	1.68	48.48	4.80	1.70	43.86	4.62	1.52	42.42	4.46	1.47	39.53	4.15	1.37
		435.00	51.37	5.51	1.48	48.48	5.14	1.40	48.48	4.80	1.41	43.86	4.62	1.27	42.42	4.46	1.23	39.53	4.15	1.14
	35	145.00	51.37	5.20	4.48	48.48	4.67	4.25	48.48	4.38	4.28	43.86	4.48	3.82	42.42	4.10	3.72	39.53	3.81	3.47
		290.00	51.37	4.98	2.25	48.48	4.67	2.13	48.48	4.38	2.14	43.86	4.23	1.92	42.42	4.10	1.86	39.53	3.81	1.73
		362.50	51.37	4.98	1.80	48.48	4.67	1.70	48.48	4.38	1.71	43.86	4.23	1.54	42.42	4.10	1.49	39.53	3.81	1.39
		435.00	51.37	4.98	1.50	48.48	4.67	1.42	48.48	4.38	1.43	43.86	4.23	1.28	42.42	4.10	1.24	39.53	3.81	1.16
	40	145.00	51.37	4.70	4.53	48.48	4.42	4.28	48.48	4.13	4.30	43.86	3.97	3.87	42.42	3.85	3.74	39.53	3.53	3.49
		290.00	51.37	4.44	2.28	48.48	4.17	2.15	48.48	3.89	2.16	43.86	3.97	1.94	42.42	3.57	1.89	39.53	3.53	1.75
		362.50	51.37	4.44	1.82	48.48	4.17	1.72	48.48	3.89	1.73	43.86	3.97	1.55	42.42	3.57	1.51	39.53	3.53	1.40
		435.00	51.37	4.44	1.52	48.48	4.17	1.43	48.48	3.89	1.44	43.86	3.97	1.29	42.42	3.57	1.26	39.53	3.53	1.16
	45	145.00	51.37	4.19	4.58	48.48	4.17	4.30	48.48	3.89	4.33	43.86	3.43	3.92	42.42	3.57	3.77	39.53	3.29	3.52
		290.00	51.37	3.94	2.30	48.48	3.63	2.18	48.48	3.35	2.19	43.86	3.68	1.95	42.42	3.07	1.91	39.53	3.29	1.76
		362.50	51.37	3.94	1.84	48.48	3.63	1.74	48.48	3.35	1.75	43.86	3.68	1.56	42.42	3.07	1.53	39.53	3.29	1.41
		435.00	51.37	3.94	1.53	48.48	3.63	1.45	48.48	3.35	1.46	43.86	3.68	1.30	42.42	3.07	1.27	39.53	3.29	1.17

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
130	10	150.00	75.80	7.22	7.83	96.38	12.60	10.28	96.90	10.22	10.10	97.95	10.27	10.20	99.15	10.27	10.32	101.32	10.34	10.53	102.85	10.25	10.66			
		300.00	75.80	6.69	3.89	96.38	11.81	5.10	96.90	9.57	5.02	97.95	9.59	5.07	99.15	9.51	5.12	101.32	9.68	5.23	102.85	9.75	5.31			
		375.00	75.80	6.48	3.10	96.38	11.57	4.07	96.90	9.35	4.01	97.95	9.35	4.05	99.15	9.42	4.09	101.32	9.45	4.18	102.85	9.47	4.24			
		450.00	75.80	6.38	2.58	96.38	11.41	3.39	96.90	9.29	3.34	97.95	9.25	3.37	99.15	9.37	3.41	101.32	9.35	3.48	102.85	9.33	3.53			
	15	150.00	74.71	9.48	7.94	95.10	16.53	10.53	95.33	13.39	10.25	96.48	13.43	10.36	97.35	13.46	10.45	99.89	13.56	10.70	101.45	13.52	10.84			
		300.00	74.71	8.75	3.93	95.10	15.51	5.21	95.33	12.52	5.08	96.48	12.56	5.14	97.35	12.55	5.18	99.89	12.72	5.31	101.45	12.73	5.38			
		375.00	74.71	8.48	3.14	95.10	15.11	4.16	95.33	12.25	4.06	96.48	12.31	4.10	97.35	12.32	4.14	99.89	12.44	4.24	101.45	12.46	4.30			
		450.00	74.71	8.38	2.61	95.10	14.96	3.46	95.33	12.14	3.38	96.48	12.17	3.41	97.35	12.22	3.44	99.89	12.30	3.53	101.45	12.28	3.57			
	20	150.00	73.62	11.54	8.03	93.81	20.07	10.74	93.75	16.24	10.37	95.01	16.31	10.50	96.27	16.26	10.61	98.47	16.42	10.83	100.04	16.41	10.98			
		300.00	73.62	10.59	3.97	93.81	18.81	5.31	93.75	15.14	5.13	95.01	15.23	5.20	96.27	15.27	5.26	98.47	15.39	5.37	100.04	15.45	5.44			
		375.00	73.62	10.28	3.16	93.81	18.34	4.23	93.75	14.87	4.10	95.01	14.94	4.15	96.27	14.93	4.19	98.47	15.11	4.28	100.04	15.08	4.34			
		450.00	73.62	10.12	2.63	93.81	18.11	3.52	93.75	14.71	3.41	95.01	14.75	3.45	96.27	14.79	3.49	98.47	14.92	3.56	100.04	14.90	3.61			
	25	150.00	73.62	13.58	8.22	87.78	17.76	9.95	90.92	18.03	10.27	92.18	18.07	10.40	93.44	18.20	10.53	95.33	18.22	10.71	96.58	18.22	10.82			
		300.00	73.62	12.47	4.06	87.78	16.63	4.92	90.92	16.84	5.08	92.18	16.93	5.14	93.44	17.00	5.21	95.33	17.09	5.30	96.58	17.15	5.36			
		375.00	73.62	12.12	3.23	87.78	16.29	3.92	90.92	16.55	4.05	92.18	16.58	4.10	93.44	16.69	4.15	95.33	16.75	4.23	96.58	16.77	4.28			
		450.00	73.62	11.97	2.69	87.78	16.07	3.26	90.92	16.35	3.37	92.18	16.41	3.41	93.44	16.52	3.46	95.33	16.58	3.52	96.58	16.57	3.56			
	30	150.00	73.62	16.09	8.46	84.94	19.61	9.86	87.78	19.85	10.15	88.72	19.92	10.24	89.98	19.96	10.37	91.55	20.06	10.52	92.81	19.99	10.64			
		300.00	73.62	14.75	4.17	84.94	18.36	4.87	87.78	18.54	5.01	88.72	18.63	5.06	89.98	18.69	5.12	91.55	18.79	5.20	92.81	18.82	5.26			
		375.00	73.62	14.40	3.32	84.94	17.94	3.88	87.78	18.18	4.00	88.72	18.27	4.04	89.98	18.38	4.09	91.55	18.40	4.15	92.81	18.40	4.19			
		450.00	73.62	14.20	2.76	84.94	17.74	3.23	87.78	18.00	3.32	88.72	18.07	3.36	89.98	18.22	3.40	91.55	18.25	3.45	92.81	18.17	3.49			
	35	150.00	73.62	19.16	8.75	81.17	21.50	9.68	83.69	21.64	9.93	84.94	21.80	10.06	85.89	21.79	10.15	87.15	21.86	10.28	88.09	21.83	10.36			
		300.00	73.62	17.63	4.30	81.17	20.09	4.77	83.69	20.27	4.90	84.94	20.36	4.96	85.89	20.42	5.01	87.15	20.49	5.07	88.09	20.49	5.12			
		375.00	73.62	17.11	3.42	81.17	19.64	3.80	83.69	19.83	3.90	84.94	19.93	3.96	85.89	20.04	4.00	87.15	20.11	4.05	88.09	20.04	4.08			
		450.00	73.62	16.87	2.84	81.17	19.42	3.16	83.69	19.64	3.25	84.94	19.75	3.29	85.89	19.83	3.32	87.15	19.90	3.36	88.09	19.83	3.39			
	40	150.00	65.12	20.21	8.05	72.10	22.68	8.94	74.30	22.86	9.16	75.47	22.97	9.28	76.23	22.98	9.35	77.70	23.07	9.50	78.46	23.02	9.57			
		300.00	65.12	18.57	3.95	72.10	21.16	4.40	74.30	21.39	4.51	75.47	21.45	4.57	76.23	21.53	4.61	77.70	21.65	4.68	78.46	21.63	4.72			
		375.00	65.12	18.04	3.14	72.10	20.71	3.50	74.30	20.91	3.59	75.47	21.06	3.64	76.23	21.11	3.67	77.70	21.19	3.73	78.46	21.14	3.76			
		450.00	65.12	17.81	2.61	72.10	20.48	2.91	74.30	20.66	2.98	75.47	20.84	3.03	76.23	20.89	3.05	77.70	20.98	3.10	78.46	20.89	3.12			
	45	150.00	57.03	21.26	7.38	63.04	23.80	8.19	64.91	24.03	8.39	65.99	24.19	8.50	66.56	24.21	8.56	67.90	24.23	8.69	68.48	24.20	8.74			
		300.00	57.03	19.51	3.61	63.04	22.29	4.02	64.91	22.47	4.12	65.99	22.58	4.18	66.56	22.59	4.20	67.90	22.78	4.27	68.48	22.77	4.30			
		375.00	57.03	18.98	2.87	63.04	21.78	3.20	64.91	21.98	3.28	65.99	22.15	3.32	66.56	22.21	3.35	67.90	22.32	3.40	68.48	22.20	3.42			
		450.00	57.03	18.75	2.38	63.04	21.50	2.66	64.91	21.73	2.72	65.99	21.97	2.76	66.56	22.00	2.78	67.90	22.07	2.83	68.48	21.91	2.84			
	120	10	150.00	69.36	6.28	7.13	82.72	8.14	8.57	94.21	10.04	9.83	95.71	10.01	9.97	96.93	10.12	10.09	99.10	10.14	10.30	100.97	10.15	10.48		
			300.00	69.36	5.74	3.54	82.72	7.61	4.26	94.21	9.30	4.88	95.71	9.41	4.96	96.93	9.38	5.01	99.10	9.51	5.12	100.97	9.43	5.20		
			375.00	69.36	5.70	2.83	82.72	7.44	3.40	94.21	9.19	3.90	95.71	9.21	3.96	96.93	9.23	4.00	99.10	9.31	4.09	100.97	9.29	4.16		
			450.00	69.36	5.65	2.36	82.72	7.39	2.83	94.21	9.13	3.25	95.71	9.11	3.29	96.93	9.13	3.33	99.10	9.21	3.40	100.97	9.19	3.46		
		15	150.00	68.66	8.35	7.26	81.95	10.84	8.75	93.40	13.25	10.06	94.57	13.28	10.17	95.82	13.38	10.30	98.00	13.43	10.51	99.88	13.43	10.68		
			300.00	68.66	7.63	3.60	81.95	10.14	4.34	93.40	12.35	4.99	94.57	12.43	5.04	95.82	12.49	5.11	98.00	12.56	5.21	99.88	12.58	5.30		
			375.00	68.66	7.48	2.87	81.95	9.92	3.46	93.40	12.12	3.98	94.57	12.18	4.03	95.82	12.24	4.08	98.00	12.37	4.16	99.88	12.29	4.23		
			450.00	68.66	7.39	2.39	81.95	9.82	2.88	93.40	12.01	3.31	94.57	12.07	3.35	95.82	12.14	3.39	98.00	12.22	3.46	99.88	12.19	3.52		
		20	150.00	67.96	10.14	7.36	81.17	13.21	8.90	92.18	16.12	10.21	93.44	16.20	10.34	94.70	16.24	10.46	96.90	16.39	10.68	98.79	16.34	10.85		
			300.00	67.96	9.32	3.64	81.17	12.35	4.41	92.18	15.05	5.06	93.44	15.14	5.12	94.70	15.20	5.18	96.90	15.33	5.29	98.79	15.39	5.38		
			375.00	67.96	9.08	2.91	81.17	12.08	3.52	92.18	14.71	4.03	93.44	14.84	4.08	94.70	14.96	4.14	96.90	15.03	4.22	98.79	15.01	4.29		
			450.00	67.96	8.93	2.42	81.17	11.97	2.93	92.18	14.55	3.35	93.44	14.69	3.40	94.70	14.81	3.44	96.90	14.89	3.51	98.79	14.81	3.57		
		25	150.00	67.96	11.91	7.53	81.17	15.55	9.12	89.35	17.93	10.11	90.61	17.98	10.24	92.18	18.11	10.40	94.07	18.16	10.58	95.64	18.25	10.74		
			300.00	67.96	10.99	3.72	81.17	14.57	4.51	89.35	16.75	5.00	90.61	16.84	5.07	92.18	16.90	5.14	94.07	17.03	5.24	95.64	17.09	5.31		
			375.00	67.96	10.66	2.97	81.17	14.21	3.60	89.35	16.45	3.99	90.61	16.48	4.04	92.18	16.64	4.10	94.07	16.68	4.18	95.64	16.70	4.24		
			450.00	67.96	10.52	2.47	81.17	14.05	2.99	89.35	16.24	3.32	90.61	16.30	3.36	92.18	16.46	3.41	94.07							

VRF MW



10HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	150.00	62.97	5.44	6.45	74.99	7.03	7.73	87.31	8.84	9.07	92.33	9.79	9.63	93.57	9.84	9.75	96.46	9.87	10.03	98.34	9.92	10.21
		300.00	62.97	5.00	3.20	74.99	6.54	3.84	87.31	8.31	4.51	92.33	9.17	4.78	93.57	9.27	4.85	96.46	9.17	4.98	98.34	9.27	5.07
		375.00	62.97	4.83	2.56	74.99	6.40	3.07	87.31	8.15	3.60	92.33	9.01	3.82	93.57	9.02	3.87	96.46	9.02	3.98	98.34	9.18	4.05
		450.00	62.97	4.74	2.13	74.99	6.35	2.56	87.31	8.04	3.00	92.33	8.91	3.18	93.57	8.91	3.22	96.46	8.92	3.31	98.34	9.08	3.38
	15	150.00	62.63	7.24	6.59	74.62	9.38	7.92	86.92	11.93	9.32	91.94	13.13	9.91	93.19	13.17	10.03	96.08	13.23	10.31	97.59	13.34	10.46
		300.00	62.63	6.67	3.27	74.62	8.74	3.93	86.92	11.13	4.62	91.94	12.29	4.91	93.19	12.35	4.98	96.08	12.38	5.11	97.59	12.50	5.19
		375.00	62.63	6.45	2.61	74.62	8.55	3.14	86.92	10.92	3.69	91.94	12.03	3.92	93.19	12.14	3.97	96.08	12.13	4.08	97.59	12.20	4.14
		450.00	62.63	6.36	2.17	74.62	8.50	2.61	86.92	10.76	3.07	91.94	11.93	3.26	93.19	11.99	3.31	96.08	12.03	3.40	97.59	12.05	3.45
	20	150.00	62.29	8.87	6.71	74.25	11.52	8.09	86.52	14.59	9.53	91.55	16.04	10.14	92.81	16.19	10.28	95.33	16.24	10.52	97.21	16.37	10.71
		300.00	62.29	8.16	3.32	74.25	10.74	4.01	86.52	13.69	4.72	91.55	15.05	5.03	92.81	15.11	5.09	95.33	15.23	5.21	97.21	15.33	5.31
		375.00	62.29	7.90	2.65	74.25	10.50	3.20	86.52	13.37	3.77	91.55	14.74	4.01	92.81	14.91	4.06	95.33	14.93	4.16	97.21	14.93	4.23
		450.00	62.29	7.77	2.20	74.25	10.40	2.66	86.52	13.21	3.13	91.55	14.58	3.34	92.81	14.75	3.38	95.33	14.78	3.46	97.21	14.73	3.52
	25	150.00	62.29	10.43	6.86	74.25	13.55	8.28	86.52	17.28	9.79	89.03	17.86	10.08	90.29	17.97	10.21	92.49	18.03	10.42	94.38	18.20	10.61
		300.00	62.29	9.59	3.39	74.25	12.66	4.10	86.52	16.15	4.84	89.03	16.72	4.99	90.29	16.81	5.05	92.49	16.93	5.16	94.38	17.03	5.25
		375.00	62.29	9.34	2.70	74.25	12.37	3.27	86.52	15.79	3.86	89.03	16.34	3.97	90.29	16.53	4.03	92.49	16.57	4.11	94.38	16.62	4.19
		450.00	62.29	9.17	2.25	74.25	12.23	2.72	86.52	15.63	3.21	89.03	16.16	3.31	90.29	16.35	3.35	92.49	16.39	3.42	94.38	16.39	3.48
	30	150.00	62.29	12.30	7.03	74.25	16.09	8.52	84.63	19.57	9.82	85.89	19.70	9.96	86.83	19.81	10.06	89.03	19.91	10.27	90.61	20.02	10.43
		300.00	62.29	11.32	3.47	74.25	14.99	4.21	84.63	18.33	4.85	85.89	18.42	4.92	86.83	18.51	4.97	89.03	18.63	5.08	90.61	18.76	5.16
		375.00	62.29	11.03	2.77	74.25	14.72	3.36	84.63	17.90	3.87	85.89	18.08	3.92	86.83	18.18	3.96	89.03	18.26	4.05	90.61	18.31	4.11
		450.00	62.29	10.87	2.30	74.25	14.53	2.79	84.63	17.71	3.22	85.89	17.87	3.26	86.83	18.01	3.29	89.03	18.10	3.37	90.61	18.06	3.42
	35	150.00	62.15	14.71	7.25	74.25	19.17	8.81	80.85	23.41	9.83	82.11	21.55	9.77	83.06	21.61	9.87	84.94	21.75	10.06	86.52	21.86	10.22
		300.00	62.15	13.54	3.57	74.25	17.91	4.34	80.85	21.92	4.85	82.11	20.15	4.82	83.06	20.24	4.87	84.94	20.36	4.96	86.52	20.45	5.04
		375.00	62.15	13.16	2.84	74.25	17.54	3.46	80.85	21.48	3.86	82.11	19.79	3.84	83.06	19.85	3.88	84.94	19.97	3.96	86.52	19.98	4.02
		450.00	62.15	12.97	2.36	74.25	17.33	2.88	80.85	21.21	3.21	82.11	19.57	3.20	83.06	19.62	3.23	84.94	19.80	3.29	86.52	19.73	3.34
	40	150.00	57.79	16.17	6.97	69.03	21.06	8.49	74.85	25.78	9.49	75.77	23.66	9.37	76.81	23.77	9.48	78.80	23.87	9.68	80.41	24.00	9.84
		300.00	57.79	14.85	3.42	69.03	19.69	4.18	74.85	24.07	4.66	75.77	22.13	4.62	76.81	22.23	4.67	78.80	22.35	4.77	80.41	22.50	4.85
		375.00	57.79	14.43	2.72	69.03	19.27	3.33	74.85	23.58	3.71	75.77	21.73	3.68	76.81	21.79	3.72	78.80	21.92	3.80	80.41	21.95	3.86
		450.00	57.79	14.24	2.26	69.03	19.06	2.77	74.85	23.36	3.09	75.77	21.50	3.06	76.81	21.61	3.09	78.80	21.75	3.16	80.41	21.65	3.21
	45	150.00	53.07	17.62	6.67	63.41	22.95	8.14	69.25	28.09	9.18	69.80	25.77	9.01	70.93	25.89	9.13	72.65	25.98	9.30	73.95	26.13	9.44
		300.00	53.07	16.17	3.26	63.41	21.48	4.00	69.25	26.16	4.50	69.80	24.15	4.43	70.93	24.17	4.48	72.65	24.34	4.57	73.95	24.55	4.64
		375.00	53.07	15.74	2.60	63.41	21.00	3.18	69.25	25.72	3.58	69.80	23.66	3.52	70.93	23.77	3.57	72.65	23.91	3.64	73.95	23.91	3.69
		450.00	53.07	15.51	2.16	63.41	20.74	2.64	69.25	25.50	2.98	69.80	23.43	2.93	70.93	23.55	2.97	72.65	23.69	3.03	73.95	23.61	3.07
100	10	150.00	56.63	4.57	5.77	67.64	5.90	6.93	78.65	7.51	8.12	84.00	8.34	8.71	89.35	9.28	9.30	99.39	9.68	10.28	95.33	9.78	9.91
		300.00	56.63	4.21	2.87	67.64	5.47	3.45	78.65	7.03	4.04	84.00	7.87	4.33	89.35	8.77	4.63	99.39	9.06	5.11	95.33	9.06	4.92
		375.00	56.63	4.13	2.29	67.64	5.33	2.75	78.65	6.89	3.23	84.00	7.63	3.46	89.35	8.51	3.69	99.39	8.90	4.08	95.33	8.90	3.93
		450.00	56.63	4.13	1.91	67.64	5.29	2.29	78.65	6.84	2.69	84.00	7.54	2.88	89.35	8.41	3.07	99.39	8.79	3.40	95.33	8.85	3.27
	15	150.00	56.63	6.24	5.93	67.64	8.00	7.13	78.65	10.18	8.38	84.00	11.37	8.99	89.35	12.56	9.61	99.39	13.11	10.61	95.33	13.23	10.24
		300.00	56.63	5.72	2.94	67.64	7.48	3.54	78.65	9.51	4.16	84.00	10.62	4.46	89.35	11.79	4.77	99.39	12.28	5.26	95.33	12.35	5.08
		375.00	56.63	5.60	2.35	67.64	7.30	2.83	78.65	9.32	3.32	84.00	10.43	3.56	89.35	11.53	3.80	99.39	12.02	4.20	95.33	12.04	4.05
		450.00	56.63	5.52	1.95	67.64	7.21	2.35	78.65	9.23	2.76	84.00	10.28	2.96	89.35	11.43	3.17	99.39	11.92	3.50	95.33	11.89	3.37
	20	150.00	56.63	7.67	6.06	67.64	9.84	7.31	78.65	12.58	8.60	84.00	14.03	9.24	89.35	15.53	9.89	99.39	16.13	10.89	95.33	16.26	10.52
		300.00	56.63	7.07	3.00	67.64	9.23	3.62	78.65	11.71	4.26	84.00	13.08	4.58	89.35	14.51	4.90	99.39	15.14	5.40	95.33	15.23	5.21
		375.00	56.63	6.87	2.39	67.64	9.05	2.89	78.65	11.52	3.40	84.00	12.89	3.65	89.35	14.25	3.91	99.39	14.83	4.31	95.33	14.82	4.15
		450.00	56.63	6.75	1.99	67.64	8.92	2.41	78.65	11.38	2.83	84.00	12.75	3.04	89.35	14.15	3.25	99.39	14.68	3.58	95.33	14.57	3.45
	25	150.00	56.63	9.01	6.19	67.64	11.63	7.47	78.65	14.78	8.81	84.00	16.47	9.47	88.40	17.90	10.02	90.61	17.93	10.23	92.49	18.16	10.43
		300.00	56.63	8.29	3.06	67.64	10.86	3.70	78.65	13.81	4.36	84.00	15.42	4.69	88.40	16.69	4.95	90.61	16.84	5.07	92.49	16.93	5.16
		375.00	56.63	8.06	2.44	67.64	10.65	2.95	78.65	13.49	3.47	84.00	15.10	3.74	88.40	16.40	3.95	90.61	16.51	4.04	92.49	16.51	4.11
		450.00	56.63	7.94	2.03	67.64	10.53	2.46	78.65	13.35	2.89	84.00	14.96	3.11	88.40	16.21	3.29	90.61	16.37	3.36	92.49	16.28	3.42
	30	150.00	56																				

10HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
90	10	150.00	50.97	3.97	5.18	60.72	5.04	6.20	70.79	6.28	7.27	75.51	7.04	7.78	80.54	7.80	8.33	90.29	9.48	9.41	93.44	9.68	9.72			
		300.00	50.97	3.69	2.58	60.72	4.73	3.09	70.79	5.95	3.62	75.51	6.62	3.87	80.54	7.30	4.14	90.29	8.83	4.67	93.44	9.03	4.83			
		375.00	50.97	3.53	2.06	60.72	4.65	2.47	70.79	5.77	2.89	75.51	6.48	3.09	80.54	7.15	3.31	90.29	8.65	3.73	93.44	8.79	3.86			
		450.00	50.97	3.45	1.71	60.72	4.60	2.05	70.79	5.67	2.40	75.51	6.39	2.57	80.54	7.10	2.75	90.29	8.60	3.11	93.44	8.67	3.21			
	15	150.00	50.97	5.36	5.31	60.72	6.86	6.37	70.79	8.58	7.48	75.51	9.58	8.02	80.54	10.55	8.59	90.29	12.78	9.72	93.44	13.12	10.05			
		300.00	50.97	4.96	2.64	60.72	6.38	3.16	70.79	8.06	3.72	75.51	8.93	3.98	80.54	9.90	4.26	90.29	11.95	4.82	93.44	12.29	4.98			
		375.00	50.97	4.80	2.10	60.72	6.25	2.53	70.79	7.88	2.97	75.51	8.79	3.18	80.54	9.70	3.40	90.29	11.72	3.85	93.44	11.94	3.97			
		450.00	50.97	4.72	1.75	60.72	6.21	2.10	70.79	7.78	2.47	75.51	8.70	2.65	80.54	9.60	2.83	90.29	11.60	3.20	93.44	11.76	3.31			
	20	150.00	50.97	6.59	5.43	60.72	8.42	6.52	70.79	10.60	7.67	75.51	11.80	8.23	80.54	13.00	8.82	90.29	15.72	10.00	93.44	16.15	10.33			
		300.00	50.97	6.07	2.69	60.72	7.86	3.23	70.79	9.89	3.80	75.51	11.02	4.08	80.54	12.20	4.37	90.29	14.72	4.95	93.44	15.14	5.12			
		375.00	50.97	5.91	2.15	60.72	7.69	2.58	70.79	9.75	3.04	75.51	10.83	3.26	80.54	12.00	3.49	90.29	14.42	3.95	93.44	14.73	4.08			
		450.00	50.97	5.83	1.79	60.72	7.60	2.15	70.79	9.66	2.53	75.51	10.74	2.71	80.54	11.85	2.90	90.29	14.31	3.29	93.44	14.55	3.39			
	25	150.00	50.97	7.71	5.53	60.72	9.85	6.65	70.79	12.47	7.85	75.51	13.84	8.42	80.54	15.40	9.05	88.40	17.79	10.01	90.61	18.01	10.24			
		300.00	50.97	7.10	2.74	60.72	9.23	3.30	70.79	11.65	3.89	75.51	12.99	4.17	80.54	14.39	4.48	88.40	16.69	4.95	90.61	16.81	5.06			
		375.00	50.97	6.87	2.18	60.72	9.02	2.63	70.79	11.47	3.10	75.51	12.72	3.33	80.54	14.09	3.57	88.40	16.36	3.95	90.61	16.43	4.04			
		450.00	50.97	6.76	1.81	60.72	8.93	2.19	70.79	11.34	2.58	75.51	12.59	2.77	80.54	14.00	2.97	88.40	16.20	3.29	90.61	16.22	3.36			
	30	150.00	50.97	9.11	5.66	60.72	11.61	6.82	70.79	15.53	8.14	75.51	16.46	8.67	80.54	18.22	9.31	85.26	19.67	9.89	87.15	19.80	10.08			
		300.00	50.97	8.35	2.80	60.72	10.90	3.38	70.79	14.48	4.02	75.51	15.39	4.28	80.54	17.06	4.60	85.26	18.39	4.89	87.15	18.54	4.98			
		375.00	50.97	8.16	2.23	60.72	10.66	2.69	70.79	14.16	3.20	75.51	15.08	3.42	80.54	16.73	3.67	85.26	18.05	3.90	87.15	18.06	3.97			
		450.00	50.97	8.05	1.85	60.72	10.54	2.24	70.79	14.02	2.67	75.51	14.91	2.84	80.54	16.59	3.05	85.26	17.85	3.24	87.15	17.77	3.30			
	35	150.00	50.97	10.77	5.82	60.72	13.84	7.03	70.79	17.64	8.34	75.51	19.63	8.97	79.60	21.36	9.52	81.80	21.46	9.74	83.37	21.62	9.90			
		300.00	50.97	9.89	2.87	60.72	12.96	3.47	70.79	16.48	4.11	75.51	18.39	4.43	79.60	19.94	4.69	81.80	20.12	4.80	83.37	20.24	4.88			
		375.00	50.97	9.61	2.28	60.72	12.69	2.77	70.79	16.14	3.28	75.51	18.01	3.53	79.60	19.64	3.74	81.80	19.72	3.83	83.37	19.70	3.89			
		450.00	50.97	9.45	1.90	60.72	12.52	2.30	70.79	15.95	2.73	75.51	17.82	2.93	79.60	19.43	3.11	81.80	19.52	3.18	83.37	19.41	3.23			
	40	150.00	49.30	12.33	5.81	58.89	15.91	7.05	68.82	20.29	8.40	73.19	22.54	9.03	77.23	24.54	9.60	79.46	24.69	9.82	80.67	24.86	9.95			
		300.00	49.30	11.37	2.86	58.89	14.90	3.48	68.82	18.94	4.14	73.19	21.06	4.44	77.23	22.98	4.72	79.46	23.10	4.84	80.67	23.24	4.90			
		375.00	49.30	11.01	2.27	58.89	14.55	2.77	68.82	18.55	3.30	73.19	20.68	3.54	77.23	22.52	3.76	79.46	22.70	3.85	80.67	22.65	3.90			
		450.00	49.30	10.85	1.89	58.89	14.37	2.30	68.82	18.36	2.74	73.19	20.49	2.94	77.23	22.32	3.13	79.46	22.46	3.20	80.67	22.35	3.24			
	45	150.00	47.97	13.92	5.84	57.06	17.98	7.08	66.85	22.89	8.46	71.27	25.49	9.12	74.87	27.73	9.67	77.12	27.92	9.90	78.35	28.05	10.03			
		300.00	47.97	12.85	2.87	57.06	16.79	3.48	66.85	21.39	4.16	71.27	23.77	4.48	74.87	25.96	4.75	77.12	26.08	4.87	78.35	26.29	4.93			
		375.00	47.97	12.45	2.28	57.06	16.44	2.77	66.85	20.96	3.31	71.27	23.35	3.57	74.87	25.45	3.78	77.12	25.64	3.88	78.35	25.65	3.92			
		450.00	47.97	12.25	1.89	57.06	16.22	2.30	66.85	20.72	2.75	71.27	23.11	2.97	74.87	25.20	3.15	77.12	25.39	3.22	78.35	25.30	3.26			
80	10	150.00	45.30	3.33	4.59	54.11	4.20	5.50	62.92	5.27	6.43	67.33	5.91	6.91	71.42	6.46	7.34	80.22	7.84	8.30	89.03	9.18	9.26			
		300.00	45.30	3.05	2.28	54.11	3.99	2.74	62.92	4.90	3.20	67.33	5.50	3.43	71.42	6.01	3.65	80.22	7.26	4.12	89.03	8.58	4.60			
		375.00	45.30	2.97	1.82	54.11	3.86	2.19	62.92	4.80	2.55	67.33	5.32	2.74	71.42	5.87	2.91	80.22	7.14	3.30	89.03	8.44	3.68			
		450.00	45.30	2.97	1.52	54.11	3.77	1.82	62.92	4.80	2.13	67.33	5.22	2.28	71.42	5.77	2.43	80.22	7.14	2.75	89.03	8.44	3.06			
	15	150.00	45.30	4.53	4.70	54.11	5.72	5.64	62.92	7.18	6.61	67.33	7.97	7.10	71.42	8.73	7.56	80.22	10.57	8.56	89.03	12.49	9.57			
		300.00	45.30	4.17	2.33	54.11	5.37	2.80	62.92	6.67	3.28	67.33	7.42	3.52	71.42	8.18	3.75	80.22	9.87	4.25	89.03	11.68	4.75			
		375.00	45.30	4.05	1.86	54.11	5.24	2.24	62.92	6.58	2.62	67.33	7.24	2.81	71.42	7.99	2.99	80.22	9.70	3.39	89.03	11.41	3.79			
		450.00	45.30	4.01	1.55	54.11	5.16	1.86	62.92	6.48	2.18	67.33	7.19	2.34	71.42	7.89	2.49	80.22	9.64	2.82	89.03	11.28	3.15			
	20	150.00	45.30	5.61	4.80	54.11	7.06	5.77	62.92	8.86	6.77	67.33	9.76	7.27	71.42	10.80	7.75	80.22	13.01	8.79	89.03	15.40	9.85			
		300.00	45.30	5.13	2.38	54.11	6.59	2.86	62.92	8.25	3.36	67.33	9.17	3.61	71.42	10.11	3.84	80.22	12.14	4.35	89.03	14.39	4.88			
		375.00	45.30	5.01	1.90	54.11	6.46	2.28	62.92	8.11	2.68	67.33	8.98	2.88	71.42	9.91	3.07	80.22	11.97	3.48	89.03	14.05	3.89			
		450.00	45.30	4.93	1.58	54.11	6.41	1.90	62.92	8.02	2.23	67.33	8.89	2.40	71.42	9.81	2.55	80.22	11.85	2.89	89.03	13.84	3.23			
	25	150.00	45.30	6.51	4.88	54.11	8.24	5.88	62.92	10.39	6.91	67.33	11.53	7.43	71.42	12.76	7.94	80.22	15.33	9.01	88.40	17.85	10.02			
		300.00	45.30	6.01	2.42	54.11	7.74	2.92	62.92	9.71	3.42	67.33	10.77	3.68	71.42	11.90	3.93	80.22	14.32	4.46	88.40	16.69	4.95			
		375.00	45.30	5.82	1.93	54.11	7.57	2.33	62.92	9.53	2.73	67.33	10.60	2.94	71.42	11.66	3.13	80.22	14.04	3.56	88.40	16.31	3.95			
		450.00	45.30	5.74	1.60	54.11	7.49	1.94	62.92	9.44	2.27	67.33	10.46	2.44	71.42	11.56	2.61	80.22	13.93	2.96	88.40	16.05	3.28			
	30	150.00	45.30	7.66	4.99	54.11	9.74	6.02	62.92	12.26	7.09	67.33	13.68	7.64	71.42											

VRF MW



10HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	150.00	39.64	2.82	4.00	47.19	3.51	4.78	55.06	4.37	5.60	58.83	4.81	6.00	62.61	5.22	6.40	70.16	6.31	7.21	78.02	7.38	8.05
		300.00	39.64	2.58	1.99	47.19	3.29	2.38	55.06	4.10	2.79	58.83	4.50	2.99	62.61	4.93	3.18	70.16	5.86	3.58	78.02	6.99	4.01
		375.00	39.64	2.50	1.59	47.19	3.16	1.90	55.06	3.96	2.23	58.83	4.36	2.38	62.61	4.79	2.54	70.16	5.80	2.86	78.02	6.79	3.20
		450.00	39.64	2.42	1.32	47.19	3.12	1.58	55.06	3.91	1.85	58.83	4.32	1.98	62.61	4.69	2.12	70.16	5.75	2.39	78.02	6.73	2.66
	15	150.00	39.64	3.79	4.09	47.19	4.73	4.90	55.06	5.89	5.75	58.83	6.48	6.16	62.61	7.11	6.57	70.16	8.51	7.42	78.02	10.06	8.30
		300.00	39.64	3.50	2.03	47.19	4.47	2.44	55.06	5.52	2.86	58.83	6.07	3.06	62.61	6.68	3.27	70.16	7.94	3.68	78.02	9.41	4.12
		375.00	39.64	3.38	1.62	47.19	4.34	1.94	55.06	5.39	2.28	58.83	5.94	2.44	62.61	6.53	2.61	70.16	7.83	2.94	78.02	9.21	3.29
		450.00	39.64	3.34	1.35	47.19	4.29	1.62	55.06	5.34	1.90	58.83	5.89	2.03	62.61	6.43	2.17	70.16	7.72	2.45	78.02	9.08	2.74
	20	150.00	39.64	4.67	4.18	47.19	5.85	5.00	55.06	7.27	5.88	58.83	7.96	6.30	62.61	8.80	6.73	70.16	10.48	7.60	78.02	12.41	8.53
		300.00	39.64	4.31	2.07	47.19	5.46	2.48	55.06	6.77	2.91	58.83	7.47	3.13	62.61	8.22	3.34	70.16	9.80	3.77	78.02	11.56	4.22
		375.00	39.64	4.19	1.65	47.19	5.38	1.98	55.06	6.63	2.33	58.83	7.33	2.50	62.61	8.08	2.67	70.16	9.63	3.01	78.02	11.30	3.37
		450.00	39.64	4.11	1.37	47.19	5.29	1.65	55.06	6.58	1.94	58.83	7.29	2.08	62.61	8.03	2.22	70.16	9.52	2.50	78.02	11.11	2.80
	25	150.00	39.64	5.43	4.25	47.19	6.78	5.09	55.06	8.45	5.99	58.83	9.38	6.43	62.61	10.30	6.87	70.16	12.38	7.78	78.02	14.57	8.73
		300.00	39.64	5.01	2.10	47.19	6.37	2.53	55.06	7.92	2.97	58.83	8.77	3.19	62.61	9.65	3.41	70.16	11.56	3.85	78.02	13.63	4.32
		375.00	39.64	4.85	1.68	47.19	6.21	2.01	55.06	7.74	2.37	58.83	8.55	2.54	62.61	9.47	2.72	70.16	11.34	3.07	78.02	13.25	3.44
		450.00	39.64	4.81	1.40	47.19	6.13	1.68	55.06	7.66	1.97	58.83	8.47	2.12	62.61	9.37	2.26	70.16	11.29	2.56	78.02	13.12	2.86
	30	150.00	39.64	6.37	4.34	47.19	8.01	5.20	55.06	10.02	6.14	58.83	11.06	6.59	62.61	12.22	7.05	70.16	14.63	7.99	78.02	17.27	8.98
		300.00	39.64	5.86	2.14	47.19	7.50	2.58	55.06	9.35	3.04	58.83	10.35	3.26	62.61	11.41	3.49	70.16	13.69	3.95	78.02	16.18	4.44
		375.00	39.64	5.71	1.71	47.19	7.34	2.06	55.06	9.18	2.42	58.83	10.14	2.60	62.61	11.19	2.78	70.16	13.48	3.15	78.02	15.75	3.54
		450.00	39.64	5.60	1.42	47.19	7.26	1.71	55.06	9.09	2.02	58.83	10.06	2.17	62.61	11.10	2.32	70.16	13.32	2.62	78.02	15.57	2.94
	35	150.00	39.64	7.47	4.44	47.19	9.45	5.34	55.06	11.83	6.31	58.83	13.18	6.79	62.61	15.87	7.40	70.16	17.39	8.25	78.02	20.64	9.30
		300.00	39.64	6.89	2.19	47.19	8.86	2.64	55.06	11.02	3.11	58.83	12.29	3.35	62.61	14.83	3.65	70.16	16.33	4.08	78.02	19.33	4.59
		375.00	39.64	6.70	1.75	47.19	8.69	2.11	55.06	10.84	2.49	58.83	12.11	2.68	62.61	14.56	2.91	70.16	15.99	3.25	78.02	18.81	3.65
		450.00	39.64	6.58	1.45	47.19	8.57	1.75	55.06	10.70	2.07	58.83	11.98	2.23	62.61	14.46	2.42	70.16	15.82	2.70	78.02	18.48	3.03
	40	150.00	39.64	8.86	4.57	47.19	11.21	5.51	55.06	13.98	6.51	58.83	15.59	7.02	62.61	18.75	7.67	70.16	20.65	8.56	78.02	24.43	9.66
		300.00	39.64	8.13	2.25	47.19	10.50	2.72	55.06	13.08	3.21	58.83	14.56	3.46	62.61	17.60	3.78	70.16	19.30	4.22	78.02	22.86	4.76
		375.00	39.64	7.93	1.79	47.19	10.25	2.17	55.06	12.82	2.56	58.83	14.34	2.76	62.61	17.24	3.01	70.16	18.96	3.36	78.02	22.27	3.78
		450.00	39.64	7.82	1.49	47.19	10.12	1.80	55.06	12.68	2.13	58.83	14.21	2.30	62.61	17.08	2.50	70.16	18.74	2.79	78.02	22.01	3.14
	45	150.00	39.64	10.26	4.70	47.19	12.94	5.67	55.06	16.14	6.71	58.83	17.99	7.24	62.61	21.69	7.95	70.16	23.85	8.86	78.02	28.28	10.02
		300.00	39.64	9.37	2.31	47.19	12.14	2.80	55.06	15.11	3.31	58.83	16.83	3.57	62.61	20.38	3.91	70.16	22.33	4.36	78.02	26.39	4.92
		375.00	39.64	9.17	1.84	47.19	11.84	2.23	55.06	14.79	2.63	58.83	16.57	2.84	62.61	19.91	3.11	70.16	21.88	3.47	78.02	25.80	3.92
		450.00	39.64	9.06	1.53	47.19	11.72	1.85	55.06	14.66	2.19	58.83	16.39	2.36	62.61	19.70	2.59	70.16	21.71	2.89	78.02	25.54	3.25
60	10	150.00	33.98	2.32	3.42	40.58	2.85	4.10	47.19	3.45	4.77	50.34	3.83	5.11	53.80	4.17	5.47	60.09	5.01	6.14	66.70	5.86	6.84
		300.00	33.98	2.11	1.70	40.58	2.68	2.04	47.19	3.22	2.38	50.34	3.61	2.54	53.80	3.84	2.72	60.09	4.62	3.05	66.70	5.47	3.40
		375.00	33.98	2.03	1.36	40.58	2.59	1.63	47.19	3.18	1.90	50.34	3.51	2.03	53.80	3.79	2.17	60.09	4.51	2.44	66.70	5.28	2.71
		450.00	33.98	1.99	1.13	40.58	2.54	1.36	47.19	3.18	1.58	50.34	3.47	1.69	53.80	3.74	1.81	60.09	4.45	2.03	66.70	5.15	2.26
	15	150.00	33.98	3.11	3.50	40.58	3.86	4.19	47.19	4.70	4.89	50.34	5.18	5.23	53.80	5.66	5.61	60.09	6.74	6.30	66.70	7.92	7.03
		300.00	33.98	2.86	1.74	40.58	3.60	2.08	47.19	4.37	2.43	50.34	4.87	2.60	53.80	5.23	2.78	60.09	6.24	3.13	66.70	7.40	3.49
		375.00	33.98	2.77	1.39	40.58	3.51	1.66	47.19	4.28	1.94	50.34	4.78	2.08	53.80	5.18	2.22	60.09	6.12	2.50	66.70	7.14	2.78
		450.00	33.98	2.73	1.15	40.58	3.47	1.38	47.19	4.24	1.62	50.34	4.73	1.73	53.80	5.13	1.85	60.09	6.07	2.08	66.70	7.01	2.32
	20	150.00	33.98	3.81	3.56	40.58	4.74	4.27	47.19	5.75	4.99	50.34	6.35	5.35	53.80	6.96	5.73	60.09	8.24	6.44	66.70	9.72	7.20
		300.00	33.98	3.52	1.77	40.58	4.43	2.12	47.19	5.43	2.48	50.34	5.95	2.65	53.80	6.52	2.84	60.09	7.74	3.20	66.70	9.07	3.57
		375.00	33.98	3.44	1.41	40.58	4.34	1.69	47.19	5.29	1.98	50.34	5.86	2.12	53.80	6.38	2.27	60.09	7.63	2.55	66.70	8.88	2.85
		450.00	33.98	3.40	1.17	40.58	4.30	1.41	47.19	5.25	1.65	50.34	5.81	1.76	53.80	6.33	1.89	60.09	7.57	2.13	66.70	8.75	2.37
	25	150.00	33.98	4.45	3.62	40.58	5.49	4.34	47.19	6.79	5.09	50.34	7.50	5.45	53.80	8.16	5.84	60.09	9.69	6.58	66.70	11.36	7.36
		300.00	33.98	4.10	1.79	40.58	5.16	2.16	47.19	6.34	2.52	50.34	6.98	2.70	53.80	7.65	2.90	60.09	9.10	3.26	66.70	10.68	3.65
		375.00	33.98	3.98	1.43	40.58	5.08	1.72	47.19	6.25	2.02	50.34	6.85	2.16	53.80	7.51	2.31	60.09	8.89	2.60	66.70	10.37	2.91
		450.00	33.98	3.94	1.19	40.58	5.03	1.43	47.19	6.17	1.68	50.34	6.81	1.80	53.80	7.46	1.93	60.09	8.78	2.16	66.70	10.25	2.42
	30	150.00	33.98	5.25	3.70	40.58	6.48	4.44	47.19	7.98	5.20	50.34	8.77	5.57	53.80	9.64	5.98	60.09	11.52	6.			

10HP+10HP+10HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
50	10	150.00	28.31	1.86	2.84	33.66	2.25	3.39	39.33	2.75	3.97	42.16	3.00	4.26	44.67	3.19	4.51	50.34	3.76	5.10	55.69	4.42	5.67
		300.00	28.31	1.77	1.42	33.66	2.11	1.69	39.33	2.51	1.97	42.16	2.77	2.12	44.67	3.04	2.25	50.34	3.53	2.54	55.69	4.16	2.82
		375.00	28.31	1.68	1.13	33.66	2.07	1.35	39.33	2.51	1.58	42.16	2.67	1.69	44.67	2.94	1.80	50.34	3.41	2.03	55.69	3.96	2.25
		450.00	28.31	1.63	0.94	33.66	2.02	1.12	39.33	2.51	1.31	42.16	2.63	1.41	44.67	2.89	1.49	50.34	3.36	1.69	55.69	3.83	1.87
	15	150.00	28.31	2.54	2.91	33.66	3.05	3.46	39.33	3.67	4.05	42.16	4.03	4.36	44.67	4.39	4.63	50.34	5.12	5.23	55.69	5.91	5.81
		300.00	28.31	2.35	1.45	33.66	2.86	1.72	39.33	3.43	2.02	42.16	3.75	2.16	44.67	4.09	2.30	50.34	4.78	2.60	55.69	5.59	2.89
		375.00	28.31	2.26	1.15	33.66	2.77	1.37	39.33	3.38	1.61	42.16	3.66	1.73	44.67	3.99	1.84	50.34	4.67	2.07	55.69	5.39	2.30
		450.00	28.31	2.22	0.96	33.66	2.72	1.14	39.33	3.33	1.34	42.16	3.61	1.44	44.67	3.94	1.53	50.34	4.61	1.73	55.69	5.33	1.92
	20	150.00	28.31	3.12	2.96	33.66	3.76	3.53	39.33	4.49	4.13	42.16	4.97	4.44	44.67	5.39	4.72	50.34	6.26	5.34	55.69	7.28	5.94
		300.00	28.31	2.85	1.47	33.66	3.52	1.75	39.33	4.25	2.05	42.16	4.64	2.21	44.67	5.04	2.34	50.34	5.92	2.65	55.69	6.89	2.95
		375.00	28.31	2.76	1.17	33.66	3.47	1.40	39.33	4.15	1.64	42.16	4.55	1.76	44.67	4.94	1.87	50.34	5.80	2.12	55.69	6.69	2.35
		450.00	28.31	2.72	0.98	33.66	3.43	1.17	39.33	4.10	1.36	42.16	4.50	1.47	44.67	4.89	1.56	50.34	5.75	1.76	55.69	6.56	1.96
	25	150.00	28.31	3.61	3.01	33.66	4.38	3.59	39.33	5.27	4.20	42.16	5.71	4.51	44.67	6.27	4.80	50.34	7.45	5.45	55.69	8.70	6.07
		300.00	28.31	3.31	1.49	33.66	4.07	1.78	39.33	4.95	2.09	42.16	5.40	2.24	44.67	5.89	2.38	50.34	6.95	2.70	55.69	8.07	3.01
		375.00	28.31	3.22	1.19	33.66	4.02	1.42	39.33	4.85	1.67	42.16	5.27	1.79	44.67	5.75	1.90	50.34	6.84	2.16	55.69	7.88	2.40
		450.00	28.31	3.22	0.99	33.66	3.98	1.18	39.33	4.81	1.39	42.16	5.18	1.49	44.67	5.65	1.58	50.34	6.73	1.79	55.69	7.82	2.00
	30	150.00	28.31	4.19	3.06	33.66	5.07	3.65	39.33	6.21	4.29	42.16	6.77	4.61	44.67	7.37	4.91	50.34	8.69	5.57	55.69	10.16	6.21
		300.00	28.31	3.82	1.52	33.66	4.73	1.81	39.33	5.77	2.13	42.16	6.34	2.29	44.67	6.92	2.43	50.34	8.16	2.76	55.69	9.50	3.07
		375.00	28.31	3.70	1.21	33.66	4.61	1.44	39.33	5.63	1.70	42.16	6.21	1.82	44.67	6.78	1.94	50.34	8.01	2.20	55.69	9.26	2.45
		450.00	28.31	3.66	1.01	33.66	4.57	1.20	39.33	5.59	1.41	42.16	6.17	1.52	44.67	6.74	1.62	50.34	7.90	1.83	55.69	9.08	2.04
	35	150.00	28.31	4.84	3.13	33.66	5.95	3.74	39.33	7.31	4.40	42.16	7.97	4.73	44.67	8.75	5.04	50.34	10.32	5.72	55.69	12.13	6.39
		300.00	28.31	4.46	1.55	33.66	5.55	1.85	39.33	6.80	2.17	42.16	7.47	2.34	44.67	8.16	2.49	50.34	9.65	2.83	55.69	11.29	3.16
		375.00	28.31	4.33	1.23	33.66	5.46	1.48	39.33	6.66	1.73	42.16	7.33	1.87	44.67	8.02	1.99	50.34	9.48	2.26	55.69	11.03	2.52
		450.00	28.31	4.25	1.02	33.66	5.38	1.23	39.33	6.61	1.44	42.16	7.28	1.55	44.67	7.97	1.65	50.34	9.37	1.88	55.69	10.84	2.09
	40	150.00	28.31	5.72	3.21	33.66	7.02	3.84	39.33	8.61	4.52	42.16	9.47	4.87	44.67	10.35	5.19	50.34	12.22	5.90	55.69	14.39	6.61
		300.00	28.31	5.26	1.58	33.66	6.58	1.90	39.33	8.06	2.23	42.16	8.83	2.40	44.67	9.67	2.56	50.34	11.44	2.91	55.69	13.42	3.26
		375.00	28.31	5.13	1.26	33.66	6.44	1.51	39.33	7.92	1.78	42.16	8.69	1.92	44.67	9.48	2.04	50.34	11.21	2.32	55.69	13.10	2.59
		450.00	28.31	5.05	1.05	33.66	6.40	1.26	39.33	7.82	1.48	42.16	8.60	1.60	44.67	9.38	1.70	50.34	11.10	1.93	55.69	12.90	2.16
	45	150.00	28.31	6.61	3.29	33.66	8.13	3.94	39.33	9.92	4.64	42.16	10.97	5.01	44.67	11.95	5.34	50.34	14.11	6.08	55.69	16.58	6.81
		300.00	28.31	6.10	1.62	33.66	7.60	1.95	39.33	9.27	2.29	42.16	10.20	2.47	44.67	11.18	2.63	50.34	13.22	3.00	55.69	15.55	3.36
		375.00	28.31	5.93	1.29	33.66	7.46	1.55	39.33	9.13	1.83	42.16	10.01	1.97	44.67	10.93	2.10	50.34	12.94	2.39	55.69	15.16	2.67
		450.00	28.31	5.81	1.07	33.66	7.38	1.29	39.33	9.08	1.52	42.16	9.88	1.64	44.67	10.84	1.74	50.34	12.83	1.99	55.69	14.97	2.22

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



10HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	150.00	92.78	17.76	7.04	92.39	17.92	6.99	92.23	18.55	6.91	91.80	18.50	6.88	91.37	18.33	6.85	90.47	19.14	6.69
		300.00	94.88	17.62	3.62	93.91	17.98	3.56	93.79	18.68	3.52	93.39	18.50	3.51	92.67	18.30	3.49	91.84	19.07	3.41
		375.00	95.48	17.88	2.91	94.52	18.25	2.86	94.42	18.74	2.84	93.71	18.57	2.82	93.32	18.57	2.80	92.52	20.00	2.72
		450.00	95.78	18.00	2.43	94.83	18.37	2.39	94.73	18.81	2.37	94.03	18.60	2.36	93.64	18.74	2.34	92.86	20.43	2.26
	15	150.00	93.08	15.89	7.24	92.70	15.90	7.20	92.23	16.62	7.09	91.80	16.66	7.05	91.37	16.34	7.04	90.47	17.19	6.87
		300.00	96.08	15.25	3.79	95.43	15.63	3.74	95.04	16.46	3.69	94.98	16.17	3.70	93.97	15.84	3.66	93.55	16.65	3.61
		375.00	96.68	15.63	3.04	96.35	16.00	3.02	96.29	16.46	3.00	95.94	16.17	2.99	95.27	16.28	2.96	94.57	18.33	2.86
		450.00	96.98	15.80	2.54	96.65	16.18	2.52	96.91	16.46	2.52	96.26	16.17	2.50	95.92	16.51	2.48	95.25	19.18	2.38
	20	150.00	96.68	14.60	7.70	96.04	14.59	7.64	95.97	15.02	7.59	95.30	14.98	7.53	94.62	15.06	7.46	93.55	16.65	7.21
		300.00	99.69	14.19	4.01	99.08	14.53	3.97	98.78	14.99	3.93	98.17	15.21	3.89	97.87	15.47	3.86	96.96	16.06	3.79
		375.00	99.99	14.19	3.22	99.69	14.53	3.20	100.02	15.08	3.19	99.45	15.21	3.16	98.52	15.47	3.12	97.64	17.08	3.02
		450.00	100.29	14.19	2.69	100.30	14.53	2.68	100.65	15.12	2.67	99.77	15.21	2.64	98.84	15.47	2.61	97.98	17.62	2.51
	25	150.00	109.69	15.12	8.87	109.08	15.46	8.78	108.17	16.12	8.64	107.87	16.38	8.58	107.26	16.67	8.50	106.35	17.32	8.35
		300.00	109.69	14.90	4.45	109.08	15.36	4.40	108.17	15.84	4.33	107.87	16.12	4.30	107.26	16.40	4.26	106.35	17.03	4.19
		375.00	109.69	14.68	3.56	109.08	14.96	3.53	108.17	15.59	3.47	107.87	15.86	3.45	107.26	16.14	3.42	106.35	16.73	3.36
		450.00	109.69	14.58	2.97	109.08	14.76	2.95	108.17	15.48	2.90	107.87	15.72	2.88	107.26	15.99	2.85	106.35	16.61	2.81
	30	150.00	118.20	16.25	9.56	118.78	16.32	9.61	117.56	17.14	9.42	113.78	17.31	9.05	116.05	17.78	9.22	108.17	16.00	8.65
		300.00	118.20	15.72	4.81	118.78	16.21	4.81	117.56	16.74	4.73	113.78	17.03	4.54	116.05	17.14	4.64	108.17	15.38	4.35
		375.00	118.20	15.48	3.85	118.78	15.76	3.87	117.56	16.47	3.79	113.78	16.70	3.64	116.05	17.14	3.71	108.17	15.38	3.48
		450.00	118.20	15.37	3.22	118.78	15.54	3.23	117.56	16.31	3.17	113.78	16.58	3.04	116.05	17.14	3.09	108.17	15.38	2.90
	35	150.00	129.38	17.12	10.53	128.47	17.49	10.41	124.23	16.95	10.06	116.42	16.09	9.41	116.05	15.80	9.40	108.17	14.03	8.83
		300.00	129.38	16.57	5.29	128.47	17.08	5.22	124.23	16.63	5.05	116.42	15.81	4.72	116.05	15.48	4.72	108.17	13.49	4.44
		375.00	129.38	16.57	4.23	128.47	16.92	4.19	124.23	16.35	4.05	116.42	15.53	3.79	116.05	15.19	3.78	108.17	13.49	3.55
		450.00	129.38	16.57	3.53	128.47	16.84	3.49	124.23	16.19	3.38	116.42	15.37	3.16	116.05	15.07	3.16	108.17	13.49	2.96
	40	150.00	129.38	16.57	10.58	128.47	16.92	10.46	124.23	16.35	10.12	116.42	15.53	9.46	116.05	15.19	9.46	108.17	13.21	8.91
		300.00	129.38	15.99	5.32	128.47	16.47	5.25	124.23	15.78	5.09	116.42	14.93	4.76	116.05	14.59	4.76	108.17	12.67	4.48
		375.00	129.38	15.72	4.27	128.47	16.23	4.21	124.23	15.78	4.07	116.42	14.93	3.81	116.05	14.59	3.81	108.17	12.67	3.58
		450.00	129.38	15.56	3.56	128.47	16.06	3.52	124.23	15.78	3.39	116.42	14.93	3.17	116.05	14.59	3.17	108.17	12.67	2.99
	45	150.00	129.38	15.99	10.64	128.47	16.35	10.52	124.23	15.78	10.17	116.42	14.93	9.52	116.05	14.59	9.52	108.17	12.36	8.99
		300.00	129.38	15.45	5.34	128.47	15.90	5.28	124.23	14.89	5.13	116.42	14.10	4.80	116.05	13.74	4.80	108.17	11.81	4.52
		375.00	129.38	14.87	4.30	128.47	15.49	4.24	124.23	15.18	4.09	116.42	14.34	3.83	116.05	14.02	3.83	108.17	11.81	3.62
		450.00	129.38	14.59	3.59	128.47	15.29	3.54	124.23	15.34	3.41	116.42	14.50	3.19	116.05	14.18	3.19	108.17	11.81	3.01
120	10	150.00	93.36	18.44	7.03	93.31	18.95	6.98	94.09	19.61	6.99	92.87	19.65	6.87	92.44	19.99	6.80	91.67	19.97	6.73
		300.00	95.27	18.72	3.59	94.60	19.24	3.53	95.09	19.89	3.53	93.89	19.76	3.48	93.48	19.92	3.45	92.76	20.05	3.41
		375.00	95.59	18.63	2.89	94.60	19.24	2.83	95.76	19.96	2.84	94.22	19.83	2.79	93.83	20.03	2.77	93.13	20.71	2.72
		450.00	95.91	18.60	2.42	94.28	19.24	2.35	95.76	20.02	2.37	94.22	19.90	2.32	93.83	20.06	2.31	93.49	21.08	2.26
	15	150.00	94.00	16.36	7.28	93.63	16.75	7.21	94.09	17.43	7.19	92.87	17.67	7.05	92.44	17.79	7.00	91.67	17.94	6.92
		300.00	95.91	16.48	3.73	95.89	16.88	3.71	96.43	17.53	3.70	94.90	17.42	3.63	94.18	17.27	3.61	93.86	17.65	3.57
		375.00	96.54	16.24	3.01	95.89	16.75	2.97	97.10	17.53	2.99	95.57	17.42	2.93	95.22	17.27	2.93	94.59	18.85	2.84
		450.00	96.86	16.12	2.52	95.57	16.68	2.47	97.44	17.53	2.50	95.91	17.42	2.45	95.57	17.27	2.45	94.96	19.43	2.36
	20	150.00	96.54	14.68	7.68	96.21	14.87	7.63	96.77	15.31	7.64	94.90	15.62	7.44	94.53	16.19	7.35	93.86	16.99	7.21
		300.00	99.08	14.68	3.96	98.48	15.10	3.91	98.78	15.58	3.90	97.26	15.87	3.82	96.96	16.15	3.79	96.05	16.74	3.72
		375.00	99.40	14.52	3.18	98.48	14.97	3.13	99.78	15.58	3.16	97.94	15.87	3.08	97.66	16.19	3.06	96.78	17.36	2.98
		450.00	99.72	14.46	2.67	98.48	14.91	2.61	100.12	15.58	2.64	98.28	15.87	2.58	97.66	16.22	2.55	97.15	17.65	2.49
	25	150.00	108.43	15.77	8.69	107.87	16.12	8.61	106.96	16.63	8.47	106.66	17.09	8.40	106.05	17.44	8.31	99.69	15.99	7.85
		300.00	108.78	15.53	4.37	107.87	16.01	4.31	106.96	16.52	4.24	106.66	16.80	4.21	106.05	17.14	4.17	99.69	15.70	3.94
		375.00	109.12	14.97	3.53	107.87	15.60	3.46	106.96	16.20	3.41	106.66	16.80	3.37	106.05	16.84	3.35	99.69	15.70	3.15
		450.00	109.12	14.69	2.95	107.87	15.37	2.89	106.96	16.08	2.84	106.66	16.80	2.81	106.05	16.67	2.80	99.69	15.70	2.63
	30	150.00	118.47	17.00	9.52	117.26	17.29	9.38	114.53	17.10	9.14	110.90	16.28	8.88	107.26	15.82	8.58	99.69	13.91	8.05
		300.00	118.47	16.40	4.79	117.26	16.91	4.71	114.53	16.80	4.58	110.90	15.98	4.45	107.26	15.19	4.32	99.69	13.63	4.04
		375.00	118.47	15.89	3.85	117.26	16.53	3.78	114.53	16.46	3.68	110.90	15.98	3.56	107.26	15.19	3.46	99.69	13.35	3.24
		450.00	118.47	15.61	3.22	117.26	16.32	3.16	114.53	16.28	3.07	110.90	15.98	2.97	107.26	15.19	2.88	99.69	13.23	2.70
	35	150.00	127.87	18.31	10.28	121.81	16.83	9.85	114.53	15.31	9.31	110.90	14.56	9.04	107.26	13.88	8.76	99.69	12.25	8.20
		300.00	127.87	17.28	5.19	121.81	16.18	4.95	114.53	14.70	4.68	110.90	14.00	4.55	107.26	13.32	4.41	99.69	11.98	4.11
		375.00	127.87	17.06	4.16	121.81	16.05	3.97	114.53	14.70	3.75	110.90	14.00	3.64	107.26	13.32	3.53	99.69	11.71	3.30
		450.00	127.87																	

10HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	150.00	94.16	19.91	6.97	94.46	20.48	6.94	94.19	21.28	6.84	93.83	21.23	6.81	93.14	21.97	6.68	89.26	19.84	6.51
		300.00	95.50	20.08	3.54	95.50	20.73	3.51	94.54	21.54	3.42	94.55	21.35	3.43	93.89	21.89	3.38	89.63	19.93	3.27
		375.00	95.83	20.08	2.84	95.84	20.73	2.82	94.89	21.50	2.75	94.91	21.31	2.76	93.89	22.01	2.70	90.01	20.13	2.62
		450.00	96.17	20.08	2.38	96.19	20.73	2.36	95.25	21.46	2.31	94.91	21.27	2.30	94.26	22.05	2.26	90.01	20.25	2.18
	15	150.00	94.16	17.59	7.18	94.81	18.18	7.19	94.19	18.98	7.05	93.83	19.09	7.01	93.14	19.55	6.90	89.26	17.83	6.70
		300.00	95.83	17.49	3.67	96.19	18.18	3.66	95.25	18.98	3.58	94.91	18.82	3.57	94.63	18.98	3.55	90.38	17.54	3.42
		375.00	96.50	17.36	2.97	96.53	18.04	2.95	95.60	18.76	2.88	95.27	18.55	2.88	94.63	18.98	2.84	90.76	17.83	2.74
		450.00	96.84	17.29	2.49	96.88	17.97	2.47	95.95	18.61	2.42	95.63	18.40	2.42	95.00	18.98	2.38	91.13	17.99	2.29
	20	150.00	96.17	15.23	7.59	96.53	15.78	7.58	95.60	16.32	7.44	94.91	16.60	7.35	94.63	17.21	7.26	90.38	16.19	6.96
		300.00	98.17	15.33	3.89	97.57	15.78	3.84	96.66	16.32	3.77	96.35	16.60	3.74	95.75	16.89	3.70	91.51	16.06	3.54
		375.00	98.84	15.33	3.13	98.60	15.78	3.11	97.01	16.32	3.03	96.71	16.33	3.02	96.12	16.89	2.97	91.88	16.06	2.84
		450.00	99.17	15.33	2.62	98.95	15.78	2.60	97.36	16.32	2.53	97.08	16.18	2.53	96.49	16.89	2.49	91.88	16.06	2.37
	25	150.00	106.84	16.35	8.49	106.66	17.04	8.41	105.14	17.27	8.24	101.51	16.45	7.98	98.17	15.67	7.74	91.51	13.77	7.29
		300.00	107.57	16.23	4.28	106.66	16.74	4.22	105.14	16.97	4.14	101.51	16.15	4.00	98.17	15.33	3.89	91.51	13.77	3.65
		375.00	108.29	16.23	3.45	106.66	16.83	3.37	105.14	16.62	3.32	101.51	16.15	3.20	98.17	15.07	3.12	91.51	13.49	2.93
		450.00	108.65	16.23	2.89	106.66	16.83	2.81	105.14	16.45	2.77	101.51	16.15	2.67	98.17	14.90	2.60	91.51	13.36	2.44
	30	150.00	116.96	17.49	9.33	111.81	16.54	8.94	105.14	14.75	8.48	101.51	14.28	8.18	98.17	13.65	7.93	91.51	12.63	7.40
		300.00	116.96	17.17	4.68	111.81	16.18	4.49	105.14	14.42	4.26	101.51	14.00	4.10	98.17	13.32	3.98	91.51	12.30	3.72
		375.00	116.96	17.03	3.75	111.81	15.91	3.60	105.14	14.13	3.42	101.51	13.71	3.29	98.17	13.32	3.18	91.51	12.30	2.97
		450.00	116.96	16.99	3.13	111.81	15.73	3.00	105.14	13.96	2.85	101.51	13.58	2.75	98.17	13.32	2.65	91.51	12.30	2.48
	35	150.00	118.47	16.09	9.60	111.81	14.46	9.13	105.14	13.24	8.62	101.51	12.84	8.32	98.17	11.94	8.09	91.51	10.84	7.57
		300.00	118.47	15.47	4.83	111.81	14.17	4.58	105.14	12.92	4.33	101.51	12.55	4.17	98.17	11.70	4.06	91.51	10.57	3.80
		375.00	118.47	15.07	3.88	111.81	13.87	3.68	105.14	12.63	3.47	101.51	12.55	3.34	98.17	11.70	3.24	91.51	10.57	3.04
		450.00	118.47	14.89	3.24	111.81	13.70	3.07	105.14	12.51	2.90	101.51	12.55	2.78	98.17	11.70	2.70	91.51	10.57	2.53
	40	150.00	118.47	15.16	9.69	111.81	13.87	9.19	105.14	12.35	8.70	101.51	11.97	8.40	98.17	11.10	8.17	91.51	9.98	7.65
		300.00	118.47	14.53	4.88	111.81	13.23	4.62	105.14	11.78	4.38	101.51	11.64	4.21	98.17	10.81	4.10	91.51	9.70	3.84
		375.00	118.47	14.31	3.91	111.81	12.93	3.71	105.14	11.78	3.50	101.51	11.35	3.38	98.17	10.49	3.29	91.51	9.42	3.08
		450.00	118.47	14.22	3.26	111.81	12.76	3.10	105.14	11.78	2.92	101.51	11.19	2.82	98.17	10.37	2.75	91.51	9.27	2.57
	45	150.00	118.47	14.18	9.78	111.81	13.23	9.25	105.14	11.46	8.79	101.51	11.06	8.48	98.17	10.21	8.25	91.51	9.11	7.73
		300.00	118.47	13.55	4.92	111.81	12.34	4.67	105.14	10.56	4.44	101.51	10.73	4.26	98.17	9.93	4.14	91.51	8.83	3.88
		375.00	118.47	13.55	3.94	111.81	12.00	3.75	105.14	10.89	3.54	101.51	10.16	3.43	98.17	9.32	3.33	91.51	8.28	3.12
		450.00	118.47	13.55	3.28	111.81	11.83	3.13	105.14	11.05	2.94	101.51	9.87	2.87	98.17	9.04	2.79	91.51	7.97	2.61
100	10	150.00	94.16	20.95	6.87	95.25	22.06	6.87	94.50	23.17	6.69	92.42	21.53	6.65	89.39	20.89	6.43	83.33	18.57	6.07
		300.00	95.21	21.36	3.46	95.62	22.36	3.44	94.50	23.45	3.33	92.42	21.64	3.32	89.39	20.97	3.21	83.33	18.65	3.03
		375.00	95.91	21.26	2.80	95.99	22.36	2.76	94.50	23.41	2.67	92.42	21.60	2.66	89.39	20.89	2.57	83.33	18.57	2.43
		450.00	96.26	21.23	2.35	96.35	22.36	2.31	94.50	23.37	2.22	92.42	21.57	2.22	89.39	20.89	2.14	83.33	18.54	2.03
	15	150.00	94.86	18.50	7.16	95.25	19.50	7.11	94.50	20.67	6.93	92.42	19.35	6.85	89.39	18.59	6.64	83.33	16.69	6.25
		300.00	95.21	18.85	3.58	95.62	19.57	3.57	94.50	20.67	3.46	92.42	19.08	3.44	89.39	18.32	3.33	83.33	16.42	3.14
		375.00	95.91	18.54	2.90	96.35	19.39	2.89	94.50	20.43	2.78	92.42	18.81	2.76	89.39	18.04	2.68	83.33	16.15	2.52
		450.00	96.26	18.37	2.44	96.35	19.31	2.41	94.50	20.27	2.32	92.42	18.66	2.31	89.39	17.88	2.24	83.33	16.00	2.11
	20	150.00	95.56	15.82	7.48	95.99	16.53	7.45	94.50	17.49	7.22	92.42	16.56	7.12	89.39	15.75	6.91	83.33	14.46	6.46
		300.00	96.96	16.09	3.79	96.35	16.60	3.74	94.50	17.49	3.61	92.42	16.29	3.57	89.39	15.47	3.47	83.33	13.88	3.26
		375.00	97.31	15.82	3.06	97.09	16.45	3.03	94.50	17.21	2.90	92.42	15.98	2.87	89.39	15.15	2.79	83.33	13.65	2.61
		450.00	97.66	15.68	2.56	97.45	16.38	2.54	94.50	17.05	2.42	92.42	15.86	2.39	89.39	14.99	2.33	83.33	13.50	2.18
	25	150.00	104.54	17.01	8.21	101.51	16.54	7.97	94.50	15.00	7.46	92.42	14.29	7.33	89.39	13.54	7.11	83.33	11.96	6.70
		300.00	106.05	17.06	4.17	101.51	16.15	4.00	94.50	14.68	3.74	92.42	13.97	3.68	89.39	13.26	3.57	83.33	11.96	3.35
		375.00	106.43	16.67	3.37	101.51	16.02	3.21	94.50	14.43	3.00	92.42	13.69	2.95	89.39	13.26	2.86	83.33	11.64	2.69
		450.00	106.81	16.50	2.82	101.51	15.98	2.67	94.50	14.27	2.51	92.42	13.52	2.47	89.39	13.26	2.38	83.33	11.52	2.25
	30	150.00	107.57	15.56	8.63	101.51	14.30	8.18	94.50	12.87	7.66	92.42	12.48	7.50	89.39	11.56	7.30	83.33	10.78	6.81
		300.00	107.57	15.30	4.33	101.51	14.00	4.10	94.50	12.75	3.83	92.42	12.15	3.76	89.39	11.56	3.65	83.33	10.45	3.42
		375.00	107.57	14.95	3.48	101.51	14.00	3.28	94.50	12.58	3.07	92.42	12.15	3.01	89.39	11.27	2.93	83.33	10.45	2.73
		450.00	107.57	14.78	2.90	101.51	14.00	2.74	94.50	12.50	2.56	92.42	12.15	2.51	89.39	11.11	2.45	83.33	10.45	2.28
	35	150.00	107.57	14.03	8.77	101.51	12.89	8.31	94.50	11.37	7.80	92.42	11.07	7.63	89.39	10.52	7.40	83.33	9.55	6.92
		300.00	107.57	13.40	4.42	101.51	12.30	4.18	94.50	11.25	3.90	92.42	10.74	3.83	89.39	10.23	3.71	83.33	9.26	3.47
		375.00	107.57	13.40	3.53	101.51	12.30	3.35	94.50	11.08	3.13	92.42	10.74	3.06	89.39	10.23	2.97	83.33	9.26	2.78
		450.00	107.57	13.40	2.94	101.51	12.3													

VRF MW



10HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	150.00	95.36	23.28	6.76	91.51	21.81	6.54	86.05	19.53	6.24	83.02	18.54	6.05	80.30	17.96	5.85	74.84	15.65	5.55
		300.00	94.96	23.37	3.36	91.11	21.93	3.24	86.05	19.61	3.12	83.02	18.65	3.02	80.30	17.92	2.93	74.84	15.73	2.77
		375.00	95.75	23.28	2.72	91.51	21.85	2.61	86.05	19.53	2.50	83.02	18.57	2.42	80.30	17.96	2.34	74.84	15.76	2.22
		450.00	96.14	23.24	2.28	91.51	21.81	2.18	86.05	19.53	2.08	83.02	18.54	2.02	80.30	18.00	1.95	74.84	15.80	1.85
	15	150.00	95.75	20.08	7.10	91.90	19.07	6.83	86.05	17.40	6.44	83.02	16.70	6.22	80.30	16.02	6.03	74.84	14.08	5.70
		300.00	94.96	19.74	3.53	91.11	18.74	3.39	86.05	17.13	3.23	83.02	16.42	3.12	80.30	15.47	3.04	74.84	13.78	2.86
		375.00	95.75	19.49	2.86	91.51	18.44	2.74	86.05	16.85	2.60	83.02	16.11	2.51	80.30	15.47	2.43	74.84	13.78	2.29
		450.00	96.14	19.32	2.40	91.90	18.32	2.30	86.05	16.69	2.17	83.02	15.99	2.10	80.30	15.47	2.03	74.84	13.78	1.91
	20	150.00	96.14	17.00	7.42	92.29	16.24	7.13	86.05	14.84	6.68	83.02	14.12	6.46	80.30	13.73	6.24	74.84	12.44	5.85
		300.00	95.75	17.00	3.69	91.51	16.04	3.54	86.05	14.56	3.35	83.02	13.88	3.24	80.30	13.17	3.15	74.84	11.87	2.95
		375.00	96.14	16.75	2.98	91.90	15.91	2.85	86.05	14.56	2.68	83.02	13.88	2.59	80.30	13.17	2.52	74.84	11.87	2.36
		450.00	96.53	16.58	2.50	91.90	15.87	2.38	86.05	14.56	2.24	83.02	13.88	2.16	80.30	13.17	2.10	74.84	11.87	1.97
	25	150.00	95.81	15.14	7.57	91.51	13.87	7.28	86.05	12.80	6.87	83.02	11.96	6.67	80.30	11.68	6.44	74.84	10.60	6.03
		300.00	96.96	15.02	3.84	91.51	13.74	3.65	86.05	12.52	3.45	83.02	11.96	3.33	80.30	11.36	3.23	74.84	10.28	3.03
		375.00	97.34	14.63	3.10	91.51	13.45	2.93	86.05	12.52	2.76	83.02	11.64	2.68	80.30	11.36	2.59	74.84	10.28	2.42
		450.00	97.34	14.41	2.59	91.51	13.28	2.45	86.05	12.52	2.30	83.02	11.52	2.24	80.30	11.36	2.16	74.84	10.28	2.02
	30	150.00	96.96	13.33	7.85	91.51	12.20	7.44	86.05	11.22	7.02	83.02	10.78	6.78	80.30	10.26	6.57	74.84	9.04	6.17
		300.00	96.96	13.03	3.94	91.51	11.96	3.73	86.05	10.94	3.52	83.02	10.45	3.40	80.30	9.97	3.30	74.84	9.04	3.09
		375.00	96.96	12.74	3.16	91.51	11.63	3.00	86.05	10.94	2.82	83.02	10.45	2.72	80.30	9.97	2.64	74.84	8.76	2.48
		450.00	96.96	12.57	2.64	91.51	11.46	2.50	86.05	10.94	2.35	83.02	10.45	2.27	80.30	9.97	2.20	74.84	8.65	2.07
	35	150.00	96.96	11.83	7.99	91.51	10.89	7.56	86.05	9.97	7.14	83.02	9.59	6.89	80.30	9.12	6.68	74.84	8.32	6.24
		300.00	96.96	11.50	4.01	91.51	10.57	3.80	86.05	9.69	3.58	83.02	9.26	3.46	80.30	8.84	3.35	74.84	8.05	3.13
		375.00	96.96	11.22	3.22	91.51	10.28	3.05	86.05	9.36	2.88	83.02	8.98	2.78	80.30	8.84	2.68	74.84	8.05	2.51
		450.00	96.96	11.05	2.69	91.51	10.12	2.54	86.05	9.20	2.40	83.02	8.86	2.32	80.30	8.84	2.23	74.84	8.05	2.09
	40	150.00	96.96	10.93	8.07	91.51	10.00	7.65	86.05	8.80	7.25	83.02	8.42	7.00	80.30	8.27	6.76	74.84	7.45	6.32
		300.00	96.96	10.32	4.06	91.51	9.71	3.84	86.05	8.51	3.64	83.02	8.14	3.51	80.30	7.94	3.39	74.84	7.17	3.17
		375.00	96.96	10.32	3.25	91.51	9.71	3.07	86.05	8.51	2.91	83.02	8.14	2.81	80.30	7.94	2.71	74.84	7.17	2.54
		450.00	96.96	10.32	2.71	91.51	9.71	2.56	86.05	8.51	2.42	83.02	8.14	2.34	80.30	7.94	2.26	74.84	7.17	2.12
	45	150.00	96.96	10.03	8.15	91.51	9.10	7.73	86.05	7.62	7.36	83.02	7.26	7.11	80.30	7.37	6.84	74.84	6.58	6.40
		300.00	96.96	9.14	4.12	91.51	8.82	3.88	86.05	7.34	3.69	83.02	6.98	3.57	80.30	7.09	3.43	74.84	6.30	3.21
		375.00	96.96	9.42	3.28	91.51	9.10	3.09	86.05	7.62	2.94	83.02	7.26	2.84	80.30	7.09	2.75	74.84	6.30	2.57
		450.00	96.96	9.59	2.73	91.51	9.27	2.57	86.05	7.74	2.45	83.02	7.42	2.36	80.30	7.09	2.29	74.84	6.30	2.14
80	10	150.00	85.67	19.66	6.19	80.82	17.99	5.89	76.36	15.94	5.67	73.93	15.50	5.48	71.51	14.69	5.33	66.66	13.35	5.00
		300.00	86.05	19.53	3.12	81.20	17.87	2.97	76.36	15.94	2.83	73.93	15.54	2.74	71.51	14.73	2.66	66.66	13.35	2.50
		375.00	86.05	19.49	2.50	81.20	17.95	2.37	76.36	16.02	2.26	73.93	15.46	2.19	71.51	14.65	2.13	66.66	13.27	2.00
		450.00	86.05	19.44	2.08	80.82	17.99	1.96	76.36	16.06	1.89	73.93	15.42	1.83	71.51	14.61	1.78	66.66	13.23	1.67
	15	150.00	86.05	17.81	6.40	81.20	16.14	6.10	76.36	14.17	5.83	73.93	13.96	5.63	71.51	13.11	5.48	66.66	12.00	5.13
		300.00	86.05	17.20	3.23	81.20	15.55	3.08	76.36	13.94	2.93	73.93	13.65	2.83	71.51	12.84	2.75	66.66	11.73	2.58
		375.00	86.05	16.85	2.60	81.20	15.55	2.46	76.36	13.94	2.34	73.93	13.37	2.27	71.51	12.52	2.21	66.66	11.42	2.07
		450.00	86.05	16.67	2.17	81.20	15.55	2.05	76.36	13.94	1.95	73.93	13.22	1.90	71.51	12.37	1.85	66.66	11.30	1.73
	20	150.00	86.05	14.95	6.67	81.20	13.74	6.33	76.36	12.21	6.02	73.93	11.96	5.81	71.51	11.42	5.64	66.66	10.34	5.28
		300.00	86.05	14.65	3.35	81.20	13.40	3.18	76.36	12.21	3.01	73.93	11.64	2.92	71.51	11.11	2.83	66.66	10.03	2.66
		375.00	86.05	14.34	2.69	81.20	13.11	2.56	76.36	11.94	2.42	73.93	11.64	2.34	71.51	10.83	2.28	66.66	10.03	2.13
		450.00	86.05	14.16	2.25	81.20	12.98	2.13	76.36	11.78	2.02	73.93	11.64	1.95	71.51	10.67	1.90	66.66	10.03	1.77
	25	150.00	86.05	12.92	6.86	81.20	11.85	6.51	76.36	10.57	6.17	73.93	10.36	5.96	71.51	9.91	5.78	66.66	9.03	5.41
		300.00	86.05	12.58	3.45	81.20	11.56	3.27	76.36	10.57	3.09	73.93	10.09	2.99	71.51	9.63	2.90	66.66	8.75	2.72
		375.00	86.05	12.32	2.77	81.20	11.56	2.61	76.36	10.25	2.48	73.93	10.09	2.40	71.51	9.63	2.32	66.66	8.75	2.17
		450.00	86.05	12.15	2.31	81.20	11.56	2.18	76.36	10.13	2.07	73.93	10.09	2.00	71.51	9.63	1.93	66.66	8.75	1.81
	30	150.00	86.05	11.18	7.02	81.20	10.40	6.64	76.36	9.61	6.26	73.93	9.20	6.07	71.51	8.78	5.88	66.66	8.05	5.50
		300.00	86.05	10.85	3.53	81.20	10.11	3.33	76.36	9.29	3.15	73.93	8.93	3.05	71.51	8.50	2.96	66.66	7.73	2.76
		375.00	86.05	10.85	2.82	81.20	10.11	2.67	76.36	9.29	2.52	73.93	8.93	2.44	71.51	8.50	2.36	66.66	7.73	2.21
		450.00	86.05	10.85	2.35	81.20	10.11	2.22	76.36	9.29	2.10	73.93	8.93	2.03	71.51	8.50	1.97	66.66	7.73	1.84
	35	150.00	86.05	10.15	7.12	81.20	9.26	6.75	76.36	8.56	6.36	73.93	7.93	6.19	71.51	7.88	5.97	66.66	6.94	5.60
		300.00	86.05	9.86	3.57	81.20	8.98	3.39	76.36	8.27	3.19	73.93	7.93	3.10	71.51	7.59	3.00	66.66	6.94	2.80
		375.00	86.05	9.86	2.86	81.20	8.70	2.72	76.36	8.27	2.55	73.93	7.62	2.49	71.51	7.59	2.40	66.66	6.67	2.25
		450.00	86.05	9.86	2.38	81.20	8.54	2.27	76.36	8.27	2.13	73.93	7.50	2.08	71.51	7.59	2.00	66.66	6.52	1.88
	40	150.00	86.05	9.53	7.18	81.20	8.42	6.83	76.36	7.66	6.44	73.93	7.35	6.25</						

10HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	150.00	75.06	16.31	5.51	71.21	14.89	5.28	66.96	13.54	5.01	64.54	12.60	4.87	62.42	12.21	4.71	58.18	10.82	4.44
		300.00	75.45	16.19	2.78	71.21	14.76	2.65	66.96	13.42	2.51	64.54	12.60	2.44	62.42	12.21	2.35	58.18	10.82	2.22
		375.00	75.45	16.27	2.22	71.21	14.85	2.11	66.96	13.46	2.01	64.54	12.64	1.95	62.42	12.10	1.89	58.18	10.82	1.78
		450.00	75.45	16.27	1.85	71.21	14.85	1.76	66.96	13.50	1.67	64.54	12.68	1.62	62.42	12.06	1.57	58.18	10.86	1.48
	15	150.00	75.45	14.78	5.69	71.21	13.41	5.42	66.96	12.06	5.15	64.54	11.30	4.99	62.42	10.86	4.84	58.18	9.70	4.55
		300.00	75.45	14.18	2.87	71.21	12.79	2.74	66.96	11.48	2.60	64.54	11.07	2.51	62.42	10.59	2.43	58.18	9.44	2.29
		375.00	75.45	14.18	2.30	71.21	12.79	2.19	66.96	11.48	2.08	64.54	11.07	2.01	62.42	10.32	1.95	58.18	9.44	1.83
		450.00	75.45	14.18	1.92	71.21	12.79	1.83	66.96	11.48	1.73	64.54	11.07	1.67	62.42	10.17	1.63	58.18	9.44	1.52
	20	150.00	75.45	12.35	5.92	71.21	11.31	5.62	66.96	10.40	5.31	64.54	9.93	5.12	62.42	9.48	4.97	58.18	8.62	4.65
		300.00	75.45	12.01	2.98	71.21	11.02	2.82	66.96	10.09	2.67	64.54	9.66	2.57	62.42	9.21	2.50	58.18	8.36	2.34
		375.00	75.45	12.01	2.38	71.21	11.02	2.26	66.96	10.09	2.13	64.54	9.39	2.07	62.42	9.21	2.00	58.18	8.10	1.88
		450.00	75.45	12.01	1.98	71.21	11.02	1.88	66.96	10.09	1.78	64.54	9.28	1.73	62.42	9.21	1.66	58.18	7.95	1.57
	25	150.00	75.45	10.66	6.08	71.21	9.86	5.76	66.96	9.06	5.43	64.54	8.69	5.24	62.42	8.05	5.10	58.18	7.34	4.77
		300.00	75.45	10.37	3.05	71.21	9.58	2.89	66.96	8.78	2.73	64.54	8.41	2.63	62.42	8.05	2.55	58.18	7.34	2.38
		375.00	75.45	10.08	2.45	71.21	9.26	2.32	66.96	8.78	2.18	64.54	8.41	2.11	62.42	7.78	2.05	58.18	7.34	1.91
		450.00	75.45	9.96	2.05	71.21	9.10	1.94	66.96	8.78	1.82	64.54	8.41	1.76	62.42	7.62	1.71	58.18	7.34	1.59
	30	150.00	75.45	9.41	6.20	71.21	8.72	5.86	66.96	8.08	5.52	64.54	7.45	5.36	62.42	7.42	5.16	58.18	6.54	4.84
		300.00	75.45	9.12	3.11	71.21	8.44	2.94	66.96	7.76	2.78	64.54	7.45	2.68	62.42	7.14	2.59	58.18	6.54	2.42
		375.00	75.45	9.12	2.49	71.21	8.44	2.36	66.96	7.76	2.22	64.54	7.18	2.15	62.42	7.14	2.07	58.18	6.54	1.94
		450.00	75.45	9.12	2.07	71.21	8.44	1.96	66.96	7.76	1.85	64.54	7.03	1.80	62.42	7.14	1.73	58.18	6.54	1.61
	35	150.00	75.45	8.41	6.29	71.21	7.82	5.95	66.96	6.97	5.63	64.54	6.93	5.40	62.42	6.43	5.25	58.18	6.19	4.88
		300.00	75.45	8.13	3.16	71.21	7.54	2.99	66.96	6.97	2.81	64.54	6.66	2.71	62.42	6.43	2.63	58.18	5.92	2.45
		375.00	75.45	8.13	2.53	71.21	7.54	2.39	66.96	6.70	2.26	64.54	6.66	2.17	62.42	6.43	2.10	58.18	5.92	1.96
		450.00	75.45	8.13	2.10	71.21	7.54	1.99	66.96	6.55	1.89	64.54	6.66	1.81	62.42	6.43	1.75	58.18	5.92	1.63
	40	150.00	75.45	7.81	6.34	71.21	7.26	6.00	66.96	6.39	5.68	64.54	6.08	5.48	62.42	5.89	5.30	58.18	5.61	4.93
		300.00	75.45	7.53	3.19	71.21	6.97	3.01	66.96	6.12	2.85	64.54	6.08	2.74	62.42	5.89	2.65	58.18	5.38	2.48
		375.00	75.45	7.53	2.55	71.21	6.97	2.41	66.96	6.12	2.28	64.54	5.82	2.20	62.42	5.58	2.13	58.18	5.38	1.98
		450.00	75.45	7.53	2.12	71.21	6.97	2.01	66.96	6.12	1.90	64.54	5.66	1.84	62.42	5.46	1.78	58.18	5.38	1.65
	45	150.00	75.45	7.25	6.40	71.21	6.65	6.06	66.96	5.85	5.73	64.54	5.28	5.56	62.42	5.35	5.35	58.18	5.06	4.98
		300.00	75.45	6.97	3.21	71.21	6.37	3.04	66.96	5.31	2.89	64.54	5.51	2.77	62.42	5.35	2.68	58.18	4.79	2.50
		375.00	75.45	6.97	2.57	71.21	6.37	2.43	66.96	5.54	2.30	64.54	4.97	2.24	62.42	4.77	2.16	58.18	4.79	2.00
		450.00	75.45	6.97	2.14	71.21	6.37	2.03	66.96	5.70	1.92	64.54	4.71	1.87	62.42	4.46	1.81	58.18	4.79	1.67
60	10	150.00	64.54	12.53	4.88	60.90	11.83	4.60	57.27	11.07	4.33	55.45	10.28	4.24	53.63	10.01	4.09	50.00	8.83	3.86
		300.00	64.54	12.53	2.44	60.90	11.83	2.30	57.27	11.07	2.17	55.45	10.40	2.11	53.63	9.97	2.05	50.00	8.94	1.93
		375.00	64.54	12.57	1.95	60.90	11.72	1.85	57.27	10.96	1.74	55.45	10.28	1.69	53.63	9.89	1.64	50.00	8.83	1.54
		450.00	64.54	12.57	1.62	60.90	11.64	1.54	57.27	10.88	1.45	55.45	10.21	1.41	53.63	9.86	1.37	50.00	8.79	1.29
	15	150.00	64.54	11.37	4.99	60.90	10.64	4.71	57.27	9.86	4.45	55.45	9.24	4.33	53.63	8.89	4.20	50.00	7.95	3.94
		300.00	64.54	11.08	2.51	60.90	10.33	2.37	57.27	9.59	2.24	55.45	9.24	2.17	53.63	8.62	2.11	50.00	7.95	1.97
		375.00	64.54	11.08	2.01	60.90	10.05	1.91	57.27	9.32	1.80	55.45	8.93	1.75	53.63	8.35	1.70	50.00	7.69	1.59
		450.00	64.54	11.08	1.67	60.90	9.89	1.60	57.27	9.16	1.50	55.45	8.78	1.46	53.63	8.20	1.42	50.00	7.54	1.33
	20	150.00	64.54	9.91	5.12	60.90	9.17	4.85	57.27	8.46	4.58	55.45	8.12	4.44	53.63	7.82	4.30	50.00	7.12	4.02
		300.00	64.54	9.63	2.58	60.90	8.90	2.44	57.27	8.19	2.30	55.45	7.85	2.23	53.63	7.51	2.16	50.00	6.86	2.02
		375.00	64.54	9.63	2.06	60.90	8.90	1.95	57.27	8.19	1.84	55.45	7.85	1.79	53.63	7.51	1.73	50.00	6.86	1.62
		450.00	64.54	9.63	1.72	60.90	8.90	1.63	57.27	8.19	1.53	55.45	7.85	1.49	53.63	7.51	1.44	50.00	6.86	1.35
	25	150.00	64.54	8.69	5.24	60.90	8.11	4.95	57.27	7.20	4.70	55.45	7.18	4.53	53.63	6.63	4.41	50.00	6.36	4.09
		300.00	64.54	8.41	2.63	60.90	7.79	2.49	57.27	7.20	2.35	55.45	6.91	2.28	53.63	6.63	2.20	50.00	6.09	2.06
		375.00	64.54	8.41	2.11	60.90	7.79	1.99	57.27	6.93	1.89	55.45	6.91	1.82	53.63	6.63	1.76	50.00	6.09	1.65
		450.00	64.54	8.41	1.76	60.90	7.79	1.66	57.27	6.81	1.58	55.45	6.91	1.52	53.63	6.63	1.47	50.00	6.09	1.37
	30	150.00	64.54	7.73	5.33	60.90	7.19	5.04	57.27	6.74	4.74	55.45	6.45	4.60	53.63	6.19	4.45	50.00	5.77	4.15
		300.00	64.54	7.45	2.68	60.90	6.91	2.53	57.27	6.43	2.38	55.45	6.18	2.31	53.63	5.92	2.24	50.00	5.47	2.09
		375.00	64.54	7.45	2.14	60.90	6.91	2.03	57.27	6.43	1.91	55.45	6.18	1.85	53.63	5.92	1.79	50.00	5.47	1.67
		450.00	64.54	7.45	1.79	60.90	6.91	1.69	57.27	6.43	1.59	55.45	6.18	1.54	53.63	5.92	1.49	50.00	5.47	1.39
	35	150.00	64.54	6.69	5.43	60.90	6.51	5.10	57.27	5.81	4.83	55.45	5.89	4.65	53.63	5.62	4.50	50.00	5.29	4.19
		300.00	64.54	6.69	2.71	60.90	6.23	2.56	57.27	5.81	2.41	55.45	5.58	2.34	53.63	5.38	2.26	50.00	4.99	2.11
		375.00	64.54	6.69	2.17	60.90	6.23	2.05	57.27	5.50	1.94	55.45	5.58	1.87	53.63	5.38	1.81	50.00	4.99	1.69
		450.00	64.54	6.69	1.81	60.90	6.23	1.71	57.27	5.39	1.62	55.45	5.58	1.56	53.63	5.38	1.51	50.00	4.99	1.41
40	150.00	64.54	6.11	5.48	60.90	5.96	5.15	57.27	5.27	4.88	55.45	5.35	4.70	53.63	5.07	4.56	50.00	4.72	4.25	
	300.00	64.54	6.11	2.74																

VRF MW



10HP+10HP+10HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	150.00	53.55	9.98	4.09	50.52	9.41	3.86	50.90	8.56	3.97	46.06	8.27	3.54	44.54	7.71	3.46	41.51	7.10	3.23
		300.00	53.93	9.90	2.07	50.90	9.41	1.95	50.90	8.52	1.99	46.06	8.19	1.78	44.54	7.78	1.72	41.51	7.02	1.62
		375.00	53.93	9.98	1.65	50.90	9.41	1.56	50.90	8.52	1.59	46.06	8.23	1.42	44.54	7.67	1.38	41.51	7.06	1.29
		450.00	53.93	9.98	1.37	50.90	9.45	1.30	50.90	8.56	1.32	46.06	8.23	1.18	44.54	7.59	1.16	41.51	7.06	1.08
	15	150.00	53.93	9.01	4.21	50.90	8.48	3.98	50.90	7.62	4.06	46.06	7.40	3.63	44.54	6.88	3.53	41.51	6.37	3.30
		300.00	53.93	8.73	2.12	50.90	8.20	2.00	50.90	7.35	2.04	46.06	7.13	1.83	44.54	6.88	1.77	41.51	6.10	1.66
		375.00	53.93	8.73	1.70	50.90	8.20	1.60	50.90	7.35	1.63	46.06	7.13	1.46	44.54	6.56	1.43	41.51	6.10	1.33
		450.00	53.93	8.73	1.41	50.90	8.20	1.34	50.90	7.35	1.36	46.06	7.13	1.22	44.54	6.40	1.19	41.51	6.10	1.11
	20	150.00	53.93	7.85	4.32	50.90	7.31	4.09	50.90	6.80	4.14	46.06	6.54	3.71	44.54	6.28	3.59	41.51	5.52	3.38
		300.00	53.93	7.56	2.17	50.90	7.03	2.06	50.90	6.49	2.08	46.06	6.26	1.87	44.54	6.01	1.81	41.51	5.52	1.69
		375.00	53.93	7.56	1.74	50.90	7.03	1.65	50.90	6.49	1.67	46.06	6.26	1.49	44.54	6.01	1.45	41.51	5.52	1.35
		450.00	53.93	7.56	1.45	50.90	7.03	1.37	50.90	6.49	1.39	46.06	6.26	1.24	44.54	6.01	1.20	41.51	5.52	1.13
	25	150.00	53.93	6.98	4.40	50.90	6.20	4.19	50.90	6.10	4.20	46.06	5.55	3.80	44.54	5.35	3.68	41.51	4.96	3.43
		300.00	53.93	6.66	2.22	50.90	6.20	2.10	50.90	5.78	2.12	46.06	5.55	1.90	44.54	5.35	1.84	41.51	4.96	1.71
		375.00	53.93	6.66	1.77	50.90	6.20	1.68	50.90	5.78	1.69	46.06	5.55	1.52	44.54	5.35	1.47	41.51	4.96	1.37
		450.00	53.93	6.66	1.48	50.90	6.20	1.40	50.90	5.78	1.41	46.06	5.55	1.27	44.54	5.35	1.23	41.51	4.96	1.14
	30	150.00	53.93	6.25	4.47	50.90	5.82	4.23	50.90	5.53	4.26	46.06	5.01	3.85	44.54	5.12	3.70	41.51	4.78	3.45
		300.00	53.93	5.98	2.25	50.90	5.58	2.13	50.90	5.21	2.14	46.06	5.01	1.93	44.54	4.84	1.86	41.51	4.50	1.74
		375.00	53.93	5.98	1.80	50.90	5.58	1.70	50.90	5.21	1.71	46.06	5.01	1.54	44.54	4.84	1.49	41.51	4.50	1.39
		450.00	53.93	5.98	1.50	50.90	5.58	1.42	50.90	5.21	1.43	46.06	5.01	1.28	44.54	4.84	1.24	41.51	4.50	1.16
	35	150.00	53.93	5.65	4.53	50.90	5.07	4.30	50.90	4.76	4.33	46.06	4.87	3.86	44.54	4.45	3.76	41.51	4.14	3.51
		300.00	53.93	5.41	2.28	50.90	5.07	2.15	50.90	4.76	2.16	46.06	4.59	1.94	44.54	4.45	1.88	41.51	4.14	1.75
		375.00	53.93	5.41	1.82	50.90	5.07	1.72	50.90	4.76	1.73	46.06	4.59	1.56	44.54	4.45	1.50	41.51	4.14	1.40
		450.00	53.93	5.41	1.52	50.90	5.07	1.43	50.90	4.76	1.44	46.06	4.59	1.30	44.54	4.45	1.25	41.51	4.14	1.17
	40	150.00	53.93	5.10	4.58	50.90	4.80	4.33	50.90	4.49	4.35	46.06	4.31	3.92	44.54	4.18	3.79	41.51	3.83	3.53
		300.00	53.93	4.82	2.30	50.90	4.53	2.18	50.90	4.22	2.19	46.06	4.31	1.96	44.54	3.87	1.91	41.51	3.83	1.77
		375.00	53.93	4.82	1.84	50.90	4.53	1.74	50.90	4.22	1.75	46.06	4.31	1.57	44.54	3.87	1.53	41.51	3.83	1.41
		450.00	53.93	4.82	1.54	50.90	4.53	1.45	50.90	4.22	1.46	46.06	4.31	1.31	44.54	3.87	1.27	41.51	3.83	1.18
	45	150.00	53.93	4.55	4.63	50.90	4.53	4.35	50.90	4.22	4.38	46.06	3.72	3.97	44.54	3.87	3.82	41.51	3.57	3.56
		300.00	53.93	4.27	2.33	50.90	3.94	2.20	50.90	3.64	2.22	46.06	4.00	1.97	44.54	3.34	1.93	41.51	3.57	1.78
		375.00	53.93	4.27	1.86	50.90	3.94	1.76	50.90	3.64	1.77	46.06	4.00	1.58	44.54	3.34	1.55	41.51	3.57	1.42
		450.00	53.93	4.27	1.55	50.90	3.94	1.47	50.90	3.64	1.48	46.06	4.00	1.32	44.54	3.34	1.29	41.51	3.57	1.19

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+10HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	160.00	80.77	7.97	7.84	102.70	13.90	10.31	103.25	11.28	10.12	104.36	11.34	10.23	105.65	11.34	10.34	107.95	11.41	10.55	109.59	11.32	10.69
		320.00	80.77	7.39	3.90	102.70	13.03	5.11	103.25	10.56	5.03	104.36	10.58	5.08	105.65	10.50	5.13	107.95	10.69	5.24	109.59	10.76	5.32
		400.00	80.77	7.15	3.11	102.70	12.77	4.08	103.25	10.32	4.02	104.36	10.32	4.05	105.65	10.39	4.10	107.95	10.43	4.19	109.59	10.45	4.24
		480.00	80.77	7.04	2.59	102.70	12.60	3.40	103.25	10.26	3.34	104.36	10.21	3.38	105.65	10.34	3.42	107.95	10.32	3.48	109.59	10.30	3.53
	15	160.00	79.60	10.47	7.96	101.33	18.25	10.57	101.57	14.78	10.28	102.80	14.83	10.40	103.73	14.86	10.48	106.43	14.97	10.73	108.09	14.92	10.87
		320.00	79.60	9.66	3.94	101.33	17.12	5.23	101.57	13.82	5.10	102.80	13.86	5.16	103.73	13.86	5.20	106.43	14.04	5.32	108.09	14.06	5.40
		400.00	79.60	9.36	3.15	101.33	16.68	4.17	101.57	13.52	4.07	102.80	13.59	4.12	103.73	13.60	4.15	106.43	13.73	4.25	108.09	13.75	4.31
		480.00	79.60	9.25	2.62	101.33	16.51	3.47	101.57	13.40	3.39	102.80	13.43	3.42	103.73	13.49	3.45	106.43	13.58	3.54	108.09	13.55	3.58
	20	160.00	78.44	12.74	8.06	99.96	22.16	10.79	99.89	17.92	10.41	101.23	18.00	10.54	102.57	17.95	10.65	104.92	18.12	10.88	106.60	18.12	11.02
		320.00	78.44	11.69	3.98	99.96	20.77	5.34	99.89	16.72	5.15	101.23	16.82	5.22	102.57	16.85	5.28	104.92	16.98	5.39	106.60	17.05	5.46
		400.00	78.44	11.34	3.17	99.96	20.25	4.25	99.89	16.41	4.11	101.23	16.49	4.16	102.57	16.48	4.21	104.92	16.67	4.30	106.60	16.65	4.36
		480.00	78.44	11.17	2.64	99.96	19.99	3.53	99.89	16.23	3.42	101.23	16.28	3.46	102.57	16.33	3.50	104.92	16.47	3.58	106.60	16.44	3.63
	25	160.00	78.44	14.99	8.26	93.52	19.61	10.00	96.87	19.90	10.32	98.22	19.95	10.45	99.56	20.09	10.58	101.57	20.11	10.76	102.91	20.12	10.87
		320.00	78.44	13.77	4.08	93.52	18.36	4.94	96.87	18.59	5.10	98.22	18.69	5.17	99.56	18.76	5.23	101.57	18.86	5.32	102.91	18.93	5.38
		400.00	78.44	13.38	3.25	93.52	17.98	3.94	96.87	18.27	4.07	98.22	18.31	4.12	99.56	18.43	4.17	101.57	18.49	4.24	102.91	18.52	4.29
		480.00	78.44	13.21	2.70	93.52	17.73	3.28	96.87	18.05	3.39	98.22	18.11	3.43	99.56	18.24	3.47	101.57	18.30	3.53	102.91	18.29	3.57
	30	160.00	78.44	17.76	8.50	90.51	21.64	9.91	93.52	21.91	10.20	94.53	21.99	10.30	95.87	22.03	10.42	97.54	22.14	10.58	98.89	22.06	10.69
		320.00	78.44	16.28	4.19	90.51	20.27	4.90	93.52	20.47	5.04	94.53	20.57	5.09	95.87	20.64	5.15	97.54	20.74	5.23	98.89	20.77	5.29
		400.00	78.44	15.90	3.34	90.51	19.81	3.90	93.52	20.07	4.02	94.53	20.17	4.06	95.87	20.29	4.11	97.54	20.31	4.17	98.89	20.31	4.21
		480.00	78.44	15.68	2.77	90.51	19.58	3.24	93.52	19.87	3.34	94.53	19.95	3.37	95.87	20.11	3.42	97.54	20.14	3.47	98.89	20.06	3.50
	35	160.00	78.44	21.14	8.80	86.48	23.73	9.74	89.16	23.88	9.99	90.51	24.06	10.13	91.51	24.05	10.21	92.85	24.13	10.34	93.86	24.10	10.43
		320.00	78.44	19.46	4.33	86.48	22.18	4.80	89.16	22.38	4.93	90.51	22.48	4.99	91.51	22.54	5.04	92.85	22.61	5.10	93.86	22.61	5.15
		400.00	78.44	18.88	3.44	86.48	21.68	3.82	89.16	21.89	3.93	90.51	22.00	3.98	91.51	22.12	4.02	92.85	22.20	4.07	93.86	22.12	4.10
		480.00	78.44	18.62	2.86	86.48	21.43	3.18	89.16	21.68	3.27	90.51	21.81	3.31	91.51	21.89	3.34	92.85	21.97	3.38	93.86	21.89	3.41
	40	160.00	69.39	22.31	8.11	76.83	25.03	9.00	79.17	25.23	9.23	80.41	25.36	9.35	81.22	25.36	9.42	82.78	25.46	9.57	83.59	25.40	9.63
		320.00	69.39	20.50	3.97	76.83	23.36	4.43	79.17	23.61	4.54	80.41	23.68	4.60	81.22	23.77	4.64	82.78	23.90	4.71	83.59	23.87	4.75
		400.00	69.39	19.92	3.16	76.83	22.86	3.52	79.17	23.08	3.61	80.41	23.25	3.66	81.22	23.30	3.70	82.78	23.39	3.75	83.59	23.33	3.78
		480.00	69.39	19.66	2.62	76.83	22.61	2.93	79.17	22.81	3.00	80.41	23.01	3.05	81.22	23.06	3.07	82.78	23.16	3.12	83.59	23.06	3.14
	45	160.00	60.77	23.47	7.45	67.17	26.28	8.26	69.17	26.52	8.46	70.31	26.70	8.58	70.92	26.73	8.63	72.34	26.75	8.76	72.96	26.71	8.81
		320.00	60.77	21.53	3.64	67.17	24.60	4.06	69.17	24.80	4.15	70.31	24.93	4.21	70.92	24.94	4.24	72.34	25.14	4.31	72.96	25.13	4.34
		400.00	60.77	20.95	2.89	67.17	24.04	3.22	69.17	24.26	3.30	70.31	24.45	3.35	70.92	24.52	3.37	72.34	24.63	3.43	72.96	24.50	3.45
		480.00	60.77	20.69	2.40	67.17	23.73	2.68	69.17	23.99	2.74	70.31	24.26	2.79	70.92	24.28	2.81	72.34	24.36	2.85	72.96	24.19	2.86
120	10	160.00	73.91	6.93	7.14	88.14	8.99	8.59	100.38	11.08	9.85	101.97	11.05	9.99	103.28	11.17	10.12	105.59	11.19	10.32	107.58	11.20	10.50
		320.00	73.91	6.34	3.55	88.14	8.39	4.27	100.38	10.27	4.89	101.97	10.39	4.97	103.28	10.35	5.02	105.59	10.49	5.13	107.58	10.41	5.21
		400.00	73.91	6.29	2.84	88.14	8.22	3.41	100.38	10.14	3.91	101.97	10.16	3.96	103.28	10.19	4.01	105.59	10.28	4.10	107.58	10.25	4.17
		480.00	73.91	6.23	2.36	88.14	8.16	2.84	100.38	10.08	3.25	101.97	10.05	3.30	103.28	10.08	3.34	105.59	10.17	3.41	107.58	10.15	3.47
	15	160.00	73.15	9.22	7.28	87.31	11.97	8.78	99.51	14.62	10.09	100.77	14.66	10.20	102.09	14.77	10.33	104.42	14.83	10.54	106.42	14.83	10.72
		320.00	73.15	8.42	3.61	87.31	11.19	4.35	99.51	13.63	5.00	100.77	13.72	5.06	102.09	13.79	5.12	104.42	13.87	5.23	106.42	13.88	5.32
		400.00	73.15	8.26	2.88	87.31	10.95	3.47	99.51	13.38	3.99	100.77	13.44	4.04	102.09	13.51	4.09	104.42	13.65	4.17	106.42	13.57	4.24
		480.00	73.15	8.15	2.40	87.31	10.84	2.89	99.51	13.26	3.32	100.77	13.33	3.36	102.09	13.40	3.40	104.42	13.49	3.47	106.42	13.46	3.53
	20	160.00	72.40	11.19	7.39	86.48	14.59	8.93	98.22	17.80	10.25	99.56	17.88	10.38	100.90	17.93	10.50	103.24	18.09	10.73	105.25	18.04	10.90
		320.00	72.40	10.28	3.65	86.48	13.63	4.42	98.22	16.62	5.08	99.56	16.72	5.14	100.90	16.78	5.20	103.24	16.92	5.31	105.25	16.98	5.40
		400.00	72.40	10.02	2.91	86.48	13.34	3.53	98.22	16.24	4.05	99.56	16.38	4.10	100.90	16.51	4.15	103.24	16.60	4.24	105.25	16.56	4.31
		480.00	72.40	9.86	2.42	86.48	13.22	2.94	98.22	16.06	3.37	99.56	16.22	3.41	100.90	16.35	3.45	103.24	16.44	3.53	105.25	16.35	3.58
	25	160.00	72.40	13.15	7.56	86.48	17.16	9.16	95.20	19.79	10.16	96.54	19.85	10.29	98.22	19.99	10.45	100.23	20.05	10.63	101.90	20.15	10.79
		320.00	72.40	12.13	3.74	86.48	16.08	4.53	95.20	18.49	5.02	96.54	18.59	5.09	98.22	18.66	5.17	100.23	18.79	5.26	101.90	18.86	5.34
		400.00	72.40	11.77	2.98	86.48	15.68	3.61	95.20	18.15	4.01	96.54	18.19	4.06	98.22	18.36	4.12	100.23	18.41	4.19	101.90	18.43	4.25
		480.00																					

VRF MW



10HP+10HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	160.00	67.09	6.01	6.46	79.90	7.76	7.75	93.03	9.76	9.09	98.37	10.81	9.65	99.70	10.86	9.77	102.78	10.90	10.05	104.78	10.95	10.23
		320.00	67.09	5.52	3.21	79.90	7.22	3.85	93.03	9.17	4.52	98.37	10.12	4.79	99.70	10.24	4.86	102.78	10.12	4.99	104.78	10.24	5.08
		400.00	67.09	5.33	2.56	79.90	7.06	3.07	93.03	8.99	3.61	98.37	9.95	3.83	99.70	9.95	3.88	102.78	9.96	3.99	104.78	10.13	4.06
		480.00	67.09	5.23	2.13	79.90	7.01	2.56	93.03	8.88	3.00	98.37	9.83	3.19	99.70	9.84	3.23	102.78	9.85	3.32	104.78	10.02	3.38
	15	160.00	66.73	7.99	6.61	79.51	10.35	7.94	92.61	13.17	9.35	97.96	14.49	9.94	99.29	14.53	10.06	102.37	14.60	10.34	103.98	14.73	10.49
		320.00	66.73	7.36	3.27	79.51	9.65	3.94	92.61	12.29	4.64	97.96	13.57	4.93	99.29	13.63	4.99	102.37	13.66	5.13	103.98	13.80	5.21
		400.00	66.73	7.12	2.61	79.51	9.43	3.14	92.61	12.05	3.70	97.96	13.28	3.93	99.29	13.40	3.98	102.37	13.39	4.09	103.98	13.47	4.15
		480.00	66.73	7.02	2.17	79.51	9.38	2.62	92.61	11.87	3.08	97.96	13.17	3.27	99.29	13.23	3.32	102.37	13.28	3.41	103.98	13.30	3.46
	20	160.00	66.37	9.79	6.73	79.11	12.72	8.12	92.18	16.11	9.57	97.54	17.71	10.19	98.89	17.87	10.32	101.57	17.92	10.56	103.58	18.07	10.75
		320.00	66.37	9.01	3.33	79.11	11.86	4.02	92.18	15.11	4.74	97.54	16.62	5.05	98.89	16.68	5.11	101.57	16.82	5.23	103.58	16.92	5.33
		400.00	66.37	8.72	2.66	79.11	11.59	3.21	92.18	14.76	3.78	97.54	16.27	4.02	98.89	16.46	4.08	101.57	16.48	4.17	103.58	16.48	4.24
		480.00	66.37	8.58	2.21	79.11	11.48	2.67	92.18	14.58	3.15	97.54	16.10	3.35	98.89	16.29	3.39	101.57	16.32	3.47	103.58	16.26	3.53
	25	160.00	66.37	11.52	6.88	79.11	14.95	8.31	92.18	19.07	9.83	94.86	19.71	10.13	96.20	19.84	10.26	98.55	19.90	10.47	100.56	20.09	10.66
		320.00	66.37	10.59	3.40	79.11	13.97	4.11	92.18	17.82	4.86	94.86	18.46	5.01	96.20	18.56	5.07	98.55	18.69	5.18	100.56	18.79	5.28
		400.00	66.37	10.31	2.71	79.11	13.66	3.28	92.18	17.42	3.88	94.86	18.04	3.99	96.20	18.25	4.05	98.55	18.29	4.13	100.56	18.35	4.20
		480.00	66.37	10.12	2.25	79.11	13.50	2.73	92.18	17.25	3.22	94.86	17.83	3.32	96.20	18.05	3.37	98.55	18.09	3.44	100.56	18.10	3.50
	30	160.00	66.37	13.58	7.07	79.11	17.76	8.56	90.17	21.61	9.88	91.51	21.75	10.01	92.52	21.87	10.11	94.86	21.98	10.33	96.54	22.09	10.49
		320.00	66.37	12.50	3.49	79.11	16.55	4.23	90.17	20.23	4.88	91.51	20.33	4.94	92.52	20.43	4.99	94.86	20.57	5.10	96.54	20.70	5.18
		400.00	66.37	12.18	2.78	79.11	16.25	3.37	90.17	19.76	3.89	91.51	19.96	3.94	92.52	20.06	3.98	94.86	20.16	4.07	96.54	20.21	4.13
		480.00	66.37	12.00	2.31	79.11	16.04	2.80	90.17	19.55	3.23	91.51	19.72	3.28	92.52	19.88	3.31	94.86	19.98	3.38	96.54	19.94	3.43
	35	160.00	66.22	16.24	7.29	79.11	21.16	8.86	86.15	25.84	9.90	87.49	23.78	9.84	88.49	23.85	9.93	90.51	24.01	10.12	92.18	24.13	10.28
		320.00	66.22	14.94	3.59	79.11	19.76	4.37	86.15	24.20	4.88	87.49	22.24	4.85	88.49	22.34	4.90	90.51	22.48	4.99	92.18	22.58	5.07
		400.00	66.22	14.53	2.86	79.11	19.36	3.48	86.15	23.71	3.88	87.49	21.85	3.87	88.49	21.91	3.90	90.51	22.05	3.98	92.18	22.06	4.04
		480.00	66.22	14.32	2.37	79.11	19.13	2.89	86.15	23.41	3.23	87.49	21.60	3.21	88.49	21.66	3.25	90.51	21.86	3.31	92.18	21.78	3.36
	40	160.00	61.57	17.85	7.02	73.55	23.24	8.56	79.75	28.46	9.56	80.73	26.12	9.44	81.84	26.24	9.55	83.96	26.34	9.75	85.68	26.49	9.92
		320.00	61.57	16.39	3.45	73.55	21.74	4.21	79.75	26.57	4.70	80.73	24.43	4.65	81.84	24.53	4.70	83.96	24.67	4.80	85.68	24.84	4.88
		400.00	61.57	15.93	2.74	73.55	21.27	3.35	79.75	26.02	3.74	80.73	23.98	3.70	81.84	24.05	3.74	83.96	24.20	3.82	85.68	24.23	3.89
		480.00	61.57	15.72	2.28	73.55	21.04	2.79	79.75	25.78	3.11	80.73	23.73	3.08	81.84	23.85	3.11	83.96	24.01	3.18	85.68	23.90	3.23
	45	160.00	56.54	19.45	6.72	67.56	25.33	8.21	73.78	31.01	9.26	74.37	28.45	9.09	75.57	28.57	9.21	77.41	28.68	9.38	78.79	28.85	9.51
		320.00	56.54	17.85	3.29	67.56	23.71	4.03	73.78	28.88	4.54	74.37	26.66	4.47	75.57	26.68	4.52	77.41	26.87	4.61	78.79	27.10	4.68
		400.00	56.54	17.38	2.61	67.56	23.18	3.21	73.78	28.39	3.61	74.37	26.12	3.55	75.57	26.24	3.60	77.41	26.39	3.67	78.79	26.40	3.72
		480.00	56.54	17.12	2.17	67.56	22.89	2.67	73.78	28.15	3.00	74.37	25.87	2.95	75.57	25.99	2.99	77.41	26.15	3.05	78.79	26.07	3.09
100	10	160.00	60.34	5.04	5.78	72.07	6.52	6.95	83.80	8.29	8.14	89.50	9.21	8.72	95.20	10.24	9.32	105.89	10.68	10.30	101.57	10.79	9.93
		320.00	60.34	4.65	2.87	72.07	6.03	3.45	83.80	7.76	4.05	89.50	8.68	4.34	95.20	9.68	4.64	105.89	10.00	5.12	101.57	10.00	4.93
		400.00	60.34	4.56	2.29	72.07	5.89	2.76	83.80	7.60	3.23	89.50	8.42	3.46	95.20	9.39	3.70	105.89	9.82	4.09	101.57	9.83	3.94
		480.00	60.34	4.56	1.91	72.07	5.84	2.30	83.80	7.55	2.69	89.50	8.32	2.88	95.20	9.28	3.08	105.89	9.71	3.41	101.57	9.77	3.28
	15	160.00	60.34	6.88	5.94	72.07	8.83	7.15	83.80	11.24	8.40	89.50	12.55	9.02	95.20	13.86	9.64	105.89	14.48	10.64	101.57	14.60	10.27
		320.00	60.34	6.31	2.95	72.07	8.25	3.55	83.80	10.50	4.17	89.50	11.72	4.47	95.20	13.01	4.78	105.89	13.56	5.28	101.57	13.64	5.09
		400.00	60.34	6.18	2.35	72.07	8.06	2.83	83.80	10.29	3.33	89.50	11.51	3.57	95.20	12.73	3.82	105.89	13.27	4.21	101.57	13.29	4.06
		480.00	60.34	6.10	1.96	72.07	7.96	2.36	83.80	10.19	2.77	89.50	11.35	2.97	95.20	12.62	3.18	105.89	13.15	3.51	101.57	13.12	3.38
	20	160.00	60.34	8.46	6.08	72.07	10.86	7.33	83.80	13.88	8.63	89.50	15.48	9.28	95.20	17.14	9.93	105.89	17.81	10.93	101.57	17.95	10.56
		320.00	60.34	7.81	3.01	72.07	10.18	3.64	83.80	12.93	4.28	89.50	14.44	4.59	95.20	16.01	4.92	105.89	16.72	5.42	101.57	16.82	5.23
		400.00	60.34	7.59	2.40	72.07	9.99	2.90	83.80	12.72	3.41	89.50	14.23	3.67	95.20	15.73	3.92	105.89	16.37	4.32	101.57	16.36	4.17
		480.00	60.34	7.45	2.00	72.07	9.85	2.41	83.80	12.56	2.84	89.50	14.07	3.05	95.20	15.62	3.27	105.89	16.20	3.60	101.57	16.08	3.47
	25	160.00	60.34	9.95	6.21	72.07	12.83	7.50	83.80	16.31	8.85	89.50	18.18	9.52	94.19	19.76	10.07	96.54	19.80	10.28	98.55	20.04	10.48
		320.00	60.34	9.15	3.07	72.07	11.99	3.72	83.80	15.24	4.38	89.50	17.02	4.71	94.19	18.42	4.98	96.54	18.59	5.09	98.55	18.69	5.18
		400.00	60.34	8.89	2.45	72.07	11.76	2.96	83.80	14.89	3.49	89.50	16.67	3.75	94.19	18.10	3.97	96.54	18.23	4.06	98.55	18.23	4.13
		480.00	60.34	8.77	2.04	72.07	11.62	2.47	83.80	14.73	2.90	89.50	16.51	3.12	94.19	17.89	3.30	96.54	18.07	3.38	98.5		

10HP+10HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
90	10	160.00	54.30	4.38	5.19	64.69	5.56	6.21	75.42	6.94	7.28	80.45	7.77	7.80	85.81	8.61	8.35	96.20	10.46	9.43	99.56	10.69	9.74
		320.00	54.30	4.07	2.58	64.69	5.22	3.09	75.42	6.57	3.62	80.45	7.31	3.88	85.81	8.06	4.15	96.20	9.75	4.68	99.56	9.96	4.84
		400.00	54.30	3.90	2.06	64.69	5.13	2.47	75.42	6.37	2.89	80.45	7.15	3.10	85.81	7.89	3.31	96.20	9.55	3.74	99.56	9.70	3.86
		480.00	54.30	3.81	1.71	64.69	5.08	2.06	75.42	6.26	2.41	80.45	7.05	2.58	85.81	7.84	2.76	96.20	9.49	3.11	99.56	9.57	3.22
	15	160.00	54.30	5.91	5.32	64.69	7.57	6.39	75.42	9.47	7.50	80.45	10.58	8.05	85.81	11.65	8.61	96.20	14.10	9.75	99.56	14.49	10.08
		320.00	54.30	5.47	2.64	64.69	7.05	3.17	75.42	8.90	3.73	80.45	9.86	3.99	85.81	10.93	4.28	96.20	13.19	4.83	99.56	13.57	5.00
		400.00	54.30	5.30	2.11	64.69	6.90	2.53	75.42	8.70	2.97	80.45	9.71	3.19	85.81	10.71	3.41	96.20	12.93	3.86	99.56	13.18	3.99
		480.00	54.30	5.21	1.75	64.69	6.85	2.11	75.42	8.59	2.48	80.45	9.61	2.65	85.81	10.60	2.84	96.20	12.80	3.21	99.56	12.98	3.32
	20	160.00	54.30	7.27	5.44	64.69	9.30	6.54	75.42	11.70	7.70	80.45	13.03	8.26	85.81	14.35	8.85	96.20	17.35	10.04	99.56	17.83	10.38
		320.00	54.30	6.70	2.70	64.69	8.68	3.24	75.42	10.92	3.82	80.45	12.16	4.09	85.81	13.47	4.39	96.20	16.25	4.97	99.56	16.72	5.14
		400.00	54.30	6.52	2.15	64.69	8.48	2.59	75.42	10.77	3.05	80.45	11.96	3.27	85.81	13.25	3.50	96.20	15.92	3.96	99.56	16.26	4.09
		480.00	54.30	6.44	1.79	64.69	8.39	2.15	75.42	10.66	2.54	80.45	11.85	2.72	85.81	13.08	2.91	96.20	15.79	3.30	99.56	16.06	3.41
	25	160.00	54.30	8.51	5.55	64.69	10.87	6.68	75.42	13.76	7.88	80.45	15.27	8.46	85.81	17.00	9.09	94.19	19.63	10.06	96.54	19.88	10.29
		320.00	54.30	7.84	2.75	64.69	10.18	3.31	75.42	12.86	3.90	80.45	14.34	4.19	85.81	15.88	4.49	94.19	18.42	4.98	96.54	18.56	5.09
		400.00	54.30	7.59	2.19	64.69	9.95	2.64	75.42	12.66	3.11	80.45	14.04	3.34	85.81	15.56	3.58	94.19	18.06	3.97	96.54	18.14	4.05
		480.00	54.30	7.46	1.82	64.69	9.86	2.20	75.42	12.51	2.59	80.45	13.89	2.78	85.81	15.45	2.98	94.19	17.88	3.30	96.54	17.90	3.37
	30	160.00	54.30	10.06	5.69	64.69	12.82	6.85	75.42	17.14	8.18	80.45	18.17	8.72	85.81	20.11	9.36	90.84	21.71	9.95	92.85	21.86	10.14
		320.00	54.30	9.21	2.81	64.69	12.03	3.39	75.42	15.98	4.04	80.45	16.98	4.31	85.81	18.83	4.62	90.84	20.30	4.91	92.85	20.47	5.01
		400.00	54.30	9.01	2.24	64.69	11.76	2.70	75.42	15.63	3.22	80.45	16.65	3.43	85.81	18.47	3.69	90.84	19.92	3.92	92.85	19.93	3.99
		480.00	54.30	8.89	1.86	64.69	11.63	2.25	75.42	15.48	2.68	80.45	16.46	2.86	85.81	18.31	3.07	90.84	19.71	3.26	92.85	19.61	3.31
	35	160.00	54.30	11.89	5.85	64.69	15.28	7.07	75.42	19.47	8.39	80.45	21.67	9.03	84.81	23.57	9.58	87.15	23.69	9.80	88.83	23.86	9.96
		320.00	54.30	10.92	2.88	64.69	14.30	3.49	75.42	18.19	4.14	80.45	20.30	4.45	84.81	22.01	4.72	87.15	22.21	4.83	88.83	22.34	4.91
		400.00	54.30	10.61	2.30	64.69	14.01	2.78	75.42	17.82	3.30	80.45	19.88	3.55	84.81	21.67	3.76	87.15	21.77	3.85	88.83	21.75	3.91
		480.00	54.30	10.44	1.91	64.69	13.82	2.31	75.42	17.60	2.74	80.45	19.67	2.95	84.81	21.45	3.13	87.15	21.55	3.20	88.83	21.42	3.25
	40	160.00	52.53	13.61	5.85	62.75	17.56	7.10	73.33	22.39	8.46	77.99	24.88	9.09	82.29	27.09	9.67	84.66	27.26	9.89	85.95	27.44	10.02
		320.00	52.53	12.55	2.88	62.75	16.44	3.50	73.33	20.90	4.16	77.99	23.25	4.47	82.29	25.36	4.76	84.66	25.50	4.87	85.95	25.65	4.93
		400.00	52.53	12.15	2.29	62.75	16.06	2.79	73.33	20.48	3.32	77.99	22.82	3.56	82.29	24.86	3.79	84.66	25.06	3.88	85.95	25.00	3.92
		480.00	52.53	11.98	1.90	62.75	15.86	2.32	73.33	20.26	2.76	77.99	22.61	2.96	82.29	24.63	3.15	84.66	24.79	3.22	85.95	24.68	3.26
	45	160.00	51.11	15.37	5.88	60.80	19.85	7.13	71.23	25.26	8.53	75.93	28.14	9.20	79.77	30.61	9.76	82.17	30.82	9.99	83.48	30.97	10.12
		320.00	51.11	14.18	2.89	60.80	18.54	3.51	71.23	23.62	4.19	75.93	26.24	4.52	79.77	28.66	4.79	82.17	28.79	4.90	83.48	29.01	4.97
		400.00	51.11	13.74	2.29	60.80	18.15	2.79	71.23	23.14	3.34	75.93	25.77	3.60	79.77	28.10	3.81	82.17	28.30	3.91	83.48	28.31	3.95
		480.00	51.11	13.52	1.90	60.80	17.90	2.32	71.23	22.87	2.77	75.93	25.51	2.99	79.77	27.82	3.17	82.17	28.02	3.25	83.48	27.93	3.28
80	10	160.00	48.27	3.67	4.59	57.66	4.64	5.51	67.04	5.82	6.44	71.73	6.53	6.92	76.09	7.13	7.36	85.48	8.66	8.32	94.86	10.14	9.28
		320.00	48.27	3.36	2.28	57.66	4.40	2.74	67.04	5.41	3.20	71.73	6.07	3.44	76.09	6.64	3.66	85.48	8.01	4.13	94.86	9.47	4.61
		400.00	48.27	3.27	1.82	57.66	4.26	2.19	67.04	5.30	2.56	71.73	5.87	2.74	76.09	6.48	2.92	85.48	7.89	3.30	94.86	9.32	3.68
		480.00	48.27	3.27	1.52	57.66	4.16	1.82	67.04	5.30	2.13	71.73	5.77	2.28	76.09	6.37	2.43	85.48	7.89	2.75	94.86	9.32	3.07
	15	160.00	48.27	5.00	4.71	57.66	6.31	5.65	67.04	7.93	6.63	71.73	8.80	7.12	76.09	9.63	7.58	85.48	11.67	8.59	94.86	13.79	9.60
		320.00	48.27	4.60	2.34	57.66	5.93	2.81	67.04	7.36	3.29	71.73	8.19	3.53	76.09	9.03	3.76	85.48	10.90	4.26	94.86	12.90	4.76
		400.00	48.27	4.47	1.86	57.66	5.79	2.24	67.04	7.26	2.63	71.73	7.99	2.82	76.09	8.82	3.00	85.48	10.71	3.40	94.86	12.60	3.80
		480.00	48.27	4.42	1.55	57.66	5.69	1.87	67.04	7.16	2.19	71.73	7.94	2.35	76.09	8.71	2.50	85.48	10.64	2.83	94.86	12.45	3.16
	20	160.00	48.27	6.19	4.81	57.66	7.80	5.79	67.04	9.78	6.79	71.73	10.77	7.29	76.09	11.92	7.78	85.48	14.36	8.83	94.86	17.00	9.89
		320.00	48.27	5.66	2.38	57.66	7.27	2.87	67.04	9.11	3.37	71.73	10.12	3.62	76.09	11.16	3.86	85.48	13.40	4.37	94.86	15.88	4.89
		400.00	48.27	5.53	1.90	57.66	7.13	2.29	67.04	8.96	2.69	71.73	9.91	2.89	76.09	10.94	3.08	85.48	13.21	3.49	94.86	15.51	3.90
		480.00	48.27	5.44	1.58	57.66	7.08	1.91	67.04	8.85	2.24	71.73	9.81	2.40	76.09	10.83	2.56	85.48	13.08	2.90	94.86	15.28	3.25
	25	160.00	48.27	7.18	4.90	57.66	9.09	5.90	67.04	11.46	6.94	71.73	12.72	7.47	76.09	14.08	7.97	85.48	16.92	9.05	94.19	19.70	10.07
		320.00	48.27	6.63	2.43	57.66	8.54	2.93	67.04	10.72	3.44	71.73	11.89	3.70	76.09	13.13	3.94	85.48	15.81	4.48	94.19	18.42	4.98
		400.00	48.27	6.42	1.93	57.66	8.36	2.33	67.04	10.52	2.74	71.73	11.70	2.95	76.09	12.87	3.15	85.48	15.50	3.57	94.19	18.00	3.97
		480.00	48.27	6.34	1.61	57.66	8.27	1.94	67.04	10.42	2.28	71.73	11.55	2.45	76.09	12.76	2.62	85.48	15.38	2.97	94.19	17.72	3.30
	30	160.00	48.27	8.46	5.01	57.66	10.75	6.05	67.04	13.53	7.12	71.73	15.10	7.68	76.09	16.61	8.19	85.48	20.07	9.33	90.84	21.70	9.95
		320.00																					

VRF MW



10HP+10HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
70	10	160.00	42.24	3.11	4.01	50.28	3.88	4.79	58.66	4.83	5.61	62.68	5.31	6.01	66.71	5.77	6.41	74.75	6.96	7.22	83.13	8.15	8.07
		320.00	42.24	2.85	1.99	50.28	3.64	2.38	58.66	4.52	2.79	62.68	4.96	2.99	66.71	5.45	3.19	74.75	6.47	3.59	83.13	7.72	4.02
		400.00	42.24	2.76	1.59	50.28	3.49	1.90	58.66	4.37	2.23	62.68	4.82	2.39	66.71	5.29	2.55	74.75	6.41	2.87	83.13	7.50	3.20
		480.00	42.24	2.67	1.32	50.28	3.45	1.58	58.66	4.32	1.86	62.68	4.77	1.99	66.71	5.18	2.12	74.75	6.34	2.39	83.13	7.43	2.67
	15	160.00	42.24	4.18	4.10	50.28	5.22	4.91	58.66	6.50	5.76	62.68	7.15	6.17	66.71	7.85	6.59	74.75	9.39	7.44	83.13	11.10	8.33
		320.00	42.24	3.87	2.04	50.28	4.93	2.44	58.66	6.10	2.86	62.68	6.70	3.07	66.71	7.37	3.27	74.75	8.77	3.69	83.13	10.38	4.13
		400.00	42.24	3.73	1.63	50.28	4.79	1.95	58.66	5.95	2.28	62.68	6.55	2.45	66.71	7.21	2.61	74.75	8.64	2.95	83.13	10.17	3.30
		480.00	42.24	3.69	1.35	50.28	4.74	1.62	58.66	5.89	1.90	62.68	6.50	2.04	66.71	7.10	2.17	74.75	8.52	2.45	83.13	10.02	2.74
	20	160.00	42.24	5.16	4.19	50.28	6.46	5.02	58.66	8.03	5.89	62.68	8.79	6.32	66.71	9.72	6.76	74.75	11.57	7.63	83.13	13.70	8.56
		320.00	42.24	4.76	2.08	50.28	6.03	2.49	58.66	7.47	2.92	62.68	8.24	3.13	66.71	9.08	3.35	74.75	10.82	3.78	83.13	12.76	4.24
		400.00	42.24	4.62	1.66	50.28	5.93	1.99	58.66	7.32	2.33	62.68	8.09	2.50	66.71	8.92	2.67	74.75	10.63	3.02	83.13	12.47	3.38
		480.00	42.24	4.53	1.38	50.28	5.84	1.65	58.66	7.27	1.94	62.68	8.04	2.08	66.71	8.86	2.23	74.75	10.51	2.51	83.13	12.26	2.81
	25	160.00	42.24	6.00	4.26	50.28	7.49	5.11	58.66	9.33	6.01	62.68	10.35	6.46	66.71	11.37	6.90	74.75	13.67	7.82	83.13	16.09	8.77
		320.00	42.24	5.53	2.11	50.28	7.03	2.53	58.66	8.74	2.98	62.68	9.68	3.20	66.71	10.65	3.42	74.75	12.76	3.87	83.13	15.04	4.34
		400.00	42.24	5.36	1.68	50.28	6.85	2.02	58.66	8.55	2.38	62.68	9.44	2.55	66.71	10.45	2.73	74.75	12.52	3.09	83.13	14.62	3.46
		480.00	42.24	5.31	1.40	50.28	6.76	1.68	58.66	8.45	1.98	62.68	9.35	2.12	66.71	10.35	2.27	74.75	12.46	2.57	83.13	14.48	2.88
	30	160.00	42.24	7.03	4.35	50.28	8.84	5.23	58.66	11.06	6.16	62.68	12.20	6.62	66.71	13.48	7.09	74.75	16.15	8.03	83.13	19.06	9.03
		320.00	42.24	6.47	2.15	50.28	8.27	2.59	58.66	10.32	3.05	62.68	11.42	3.28	66.71	12.60	3.50	74.75	15.11	3.97	83.13	17.86	4.46
		400.00	42.24	6.30	1.72	50.28	8.10	2.06	58.66	10.13	2.43	62.68	11.19	2.61	66.71	12.35	2.80	74.75	14.88	3.17	83.13	17.39	3.55
		480.00	42.24	6.18	1.43	50.28	8.01	1.72	58.66	10.04	2.02	62.68	11.10	2.17	66.71	12.25	2.33	74.75	14.70	2.64	83.13	17.18	2.96
	35	160.00	42.24	8.25	4.46	50.28	10.43	5.37	58.66	13.05	6.34	62.68	14.55	6.83	66.71	17.52	7.45	74.75	19.20	8.30	83.13	22.78	9.36
		320.00	42.24	7.60	2.20	50.28	9.78	2.65	58.66	12.16	3.13	62.68	13.57	3.37	66.71	16.36	3.67	74.75	18.02	4.10	83.13	21.34	4.62
		400.00	42.24	7.39	1.75	50.28	9.60	2.12	58.66	11.96	2.50	62.68	13.37	2.69	66.71	16.08	2.93	74.75	17.65	3.27	83.13	20.76	3.67
		480.00	42.24	7.26	1.46	50.28	9.46	1.76	58.66	11.81	2.08	62.68	13.22	2.24	66.71	15.96	2.44	74.75	17.47	2.72	83.13	20.40	3.05
	40	160.00	42.24	9.78	4.60	50.28	12.38	5.54	58.66	15.44	6.55	62.68	17.20	7.06	66.71	20.70	7.73	74.75	22.79	8.62	83.13	26.96	9.73
		320.00	42.24	8.97	2.26	50.28	11.59	2.73	58.66	14.44	3.23	62.68	16.07	3.48	66.71	19.43	3.81	74.75	21.31	4.25	83.13	25.23	4.79
		400.00	42.24	8.76	1.80	50.28	11.31	2.18	58.66	14.15	2.57	62.68	15.83	2.78	66.71	19.02	3.03	74.75	20.93	3.38	83.13	24.58	3.81
		480.00	42.24	8.63	1.50	50.28	11.17	1.81	58.66	14.00	2.14	62.68	15.68	2.31	66.71	18.85	2.52	74.75	20.69	2.81	83.13	24.29	3.17
	45	160.00	42.24	11.32	4.73	50.28	14.28	5.71	58.66	17.82	6.76	62.68	19.86	7.30	66.71	23.94	8.01	74.75	26.32	8.93	83.13	31.22	10.11
		320.00	42.24	10.34	2.32	50.28	13.40	2.81	58.66	16.68	3.33	62.68	18.58	3.59	66.71	22.49	3.94	74.75	24.65	4.39	83.13	29.12	4.96
		400.00	42.24	10.12	1.85	50.28	13.07	2.24	58.66	16.33	2.65	62.68	18.29	2.86	66.71	21.97	3.14	74.75	24.15	3.50	83.13	28.48	3.95
		480.00	42.24	10.00	1.54	50.28	12.93	1.86	58.66	16.18	2.21	62.68	18.09	2.38	66.71	21.74	2.61	74.75	23.97	2.91	83.13	28.19	3.28
60	10	160.00	36.20	2.56	3.43	43.24	3.15	4.10	50.28	3.81	4.78	53.63	4.23	5.11	57.32	4.61	5.47	64.02	5.53	6.15	71.06	6.46	6.85
		320.00	36.20	2.33	1.70	43.24	2.95	2.04	50.28	3.56	2.38	53.63	3.98	2.55	57.32	4.24	2.72	64.02	5.10	3.06	71.06	6.04	3.41
		400.00	36.20	2.24	1.36	43.24	2.86	1.63	50.28	3.51	1.90	53.63	3.88	2.03	57.32	4.18	2.17	64.02	4.98	2.44	71.06	5.83	2.72
		480.00	36.20	2.19	1.13	43.24	2.81	1.36	50.28	3.51	1.58	53.63	3.83	1.69	57.32	4.13	1.81	64.02	4.92	2.03	71.06	5.68	2.26
	15	160.00	36.20	3.43	3.50	43.24	4.26	4.20	50.28	5.18	4.90	53.63	5.72	5.25	57.32	6.25	5.62	64.02	7.44	6.32	71.06	8.74	7.05
		320.00	36.20	3.15	1.74	43.24	3.97	2.09	50.28	4.83	2.44	53.63	5.37	2.61	57.32	5.77	2.79	64.02	6.88	3.13	71.06	8.17	3.50
		400.00	36.20	3.06	1.39	43.24	3.87	1.67	50.28	4.73	1.94	53.63	5.27	2.08	57.32	5.72	2.23	64.02	6.76	2.50	71.06	7.89	2.79
		480.00	36.20	3.02	1.16	43.24	3.83	1.39	50.28	4.68	1.62	53.63	5.22	1.73	57.32	5.67	1.86	64.02	6.70	2.08	71.06	7.74	2.32
	20	160.00	36.20	4.21	3.57	43.24	5.23	4.28	50.28	6.35	5.01	53.63	7.01	5.36	57.32	7.68	5.75	64.02	9.10	6.46	71.06	10.73	7.23
		320.00	36.20	3.89	1.77	43.24	4.89	2.13	50.28	6.00	2.49	53.63	6.57	2.66	57.32	7.20	2.85	64.02	8.54	3.21	71.06	10.02	3.58
		400.00	36.20	3.79	1.41	43.24	4.79	1.70	50.28	5.84	1.98	53.63	6.47	2.12	57.32	7.04	2.28	64.02	8.42	2.56	71.06	9.80	2.86
		480.00	36.20	3.75	1.18	43.24	4.75	1.41	50.28	5.79	1.65	53.63	6.42	1.77	57.32	6.99	1.89	64.02	8.36	2.13	71.06	9.66	2.38
	25	160.00	36.20	4.91	3.63	43.24	6.07	4.36	50.28	7.49	5.11	53.63	8.28	5.47	57.32	9.00	5.86	64.02	10.70	6.61	71.06	12.54	7.39
		320.00	36.20	4.52	1.80	43.24	5.69	2.16	50.28	7.00	2.53	53.63	7.70	2.71	57.32	8.44	2.91	64.02	10.05	3.27	71.06	11.79	3.66
		400.00	36.20	4.39	1.44	43.24	5.60	1.73	50.28	6.90	2.02	53.63	7.56	2.16	57.32	8.29	2.32	64.02	9.81	2.61	71.06	11.45	2.92
		480.00	36.20	4.35	1.19	43.24	5.56	1.44	50.28	6.81	1.68	53.63	7.51	1.80	57.32	8.24	1.93	64.02	9.70	2.17	71.06	11.31	2.43
	30	160.00	36.20	5.79	3.71	43.24	7.15	4.45	50.28	8.81	5.22	53.63	9.68	5.60	57.32	10.64	6.01	64.02	12.71	6.78	71.06	14.82	7.59
		320.00	36.20	5.29	1.83																		

10HP+10HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	160.00	30.17	2.05	2.85	35.87	2.49	3.39	41.90	3.04	3.97	44.92	3.31	4.26	47.60	3.52	4.52	53.63	4.15	5.11	59.33	4.88	5.68
		320.00	30.17	1.95	1.42	35.87	2.33	1.69	41.90	2.77	1.97	44.92	3.05	2.12	47.60	3.36	2.25	53.63	3.89	2.54	59.33	4.59	2.83
		400.00	30.17	1.85	1.13	35.87	2.28	1.35	41.90	2.77	1.58	44.92	2.95	1.69	47.60	3.25	1.80	53.63	3.77	2.03	59.33	4.38	2.25
		480.00	30.17	1.80	0.94	35.87	2.23	1.12	41.90	2.77	1.32	44.92	2.90	1.41	47.60	3.19	1.50	53.63	3.71	1.69	59.33	4.23	1.87
	15	160.00	30.17	2.80	2.91	35.87	3.37	3.47	41.90	4.05	4.06	44.92	4.45	4.36	47.60	4.85	4.64	53.63	5.65	5.24	59.33	6.53	5.82
		320.00	30.17	2.60	1.45	35.87	3.16	1.72	41.90	3.78	2.02	44.92	4.14	2.17	47.60	4.51	2.30	53.63	5.28	2.60	59.33	6.17	2.89
		400.00	30.17	2.50	1.16	35.87	3.06	1.38	41.90	3.73	1.61	44.92	4.04	1.73	47.60	4.40	1.84	53.63	5.15	2.08	59.33	5.95	2.31
		480.00	30.17	2.45	0.96	35.87	3.01	1.15	41.90	3.68	1.34	44.92	3.99	1.44	47.60	4.35	1.53	53.63	5.09	1.73	59.33	5.88	1.92
	20	160.00	30.17	3.45	2.97	35.87	4.14	3.54	41.90	4.96	4.14	44.92	5.49	4.46	47.60	5.95	4.73	53.63	6.91	5.35	59.33	8.03	5.95
		320.00	30.17	3.15	1.47	35.87	3.89	1.76	41.90	4.69	2.06	44.92	5.13	2.21	47.60	5.56	2.35	53.63	6.53	2.66	59.33	7.60	2.96
		400.00	30.17	3.05	1.17	35.87	3.83	1.40	41.90	4.58	1.64	44.92	5.02	1.77	47.60	5.45	1.88	53.63	6.41	2.12	59.33	7.39	2.36
		480.00	30.17	3.00	0.98	35.87	3.78	1.17	41.90	4.53	1.37	44.92	4.97	1.47	47.60	5.40	1.56	53.63	6.34	1.77	59.33	7.25	1.96
	25	160.00	30.17	3.98	3.02	35.87	4.83	3.60	41.90	5.82	4.22	44.92	6.31	4.53	47.60	6.92	4.82	53.63	8.22	5.47	59.33	9.61	6.09
		320.00	30.17	3.65	1.49	35.87	4.49	1.78	41.90	5.46	2.09	44.92	5.96	2.25	47.60	6.50	2.39	53.63	7.67	2.71	59.33	8.91	3.02
		400.00	30.17	3.56	1.19	35.87	4.44	1.43	41.90	5.36	1.67	44.92	5.82	1.79	47.60	6.34	1.91	53.63	7.55	2.16	59.33	8.70	2.41
		480.00	30.17	3.56	0.99	35.87	4.39	1.19	41.90	5.31	1.39	44.92	5.72	1.49	47.60	6.24	1.59	53.63	7.43	1.80	59.33	8.63	2.00
	30	160.00	30.17	4.62	3.08	35.87	5.60	3.67	41.90	6.85	4.31	44.92	7.47	4.63	47.60	8.14	4.93	53.63	9.59	5.59	59.33	11.22	6.24
		320.00	30.17	4.22	1.52	35.87	5.23	1.82	41.90	6.36	2.13	44.92	7.00	2.29	47.60	7.64	2.44	53.63	9.01	2.77	59.33	10.49	3.09
		400.00	30.17	4.09	1.21	35.87	5.09	1.45	41.90	6.22	1.70	44.92	6.86	1.83	47.60	7.49	1.95	53.63	8.84	2.21	59.33	10.22	2.46
		480.00	30.17	4.04	1.01	35.87	5.04	1.21	41.90	6.17	1.42	44.92	6.81	1.52	47.60	7.44	1.62	53.63	8.72	1.84	59.33	10.02	2.04
	35	160.00	30.17	5.34	3.14	35.87	6.57	3.75	41.90	8.07	4.42	44.92	8.79	4.75	47.60	9.65	5.06	53.63	11.39	5.75	59.33	13.39	6.43
		320.00	30.17	4.92	1.55	35.87	6.13	1.86	41.90	7.50	2.18	44.92	8.24	2.35	47.60	9.01	2.50	53.63	10.65	2.84	59.33	12.46	3.17
		400.00	30.17	4.79	1.24	35.87	6.03	1.48	41.90	7.35	1.74	44.92	8.09	1.87	47.60	8.85	2.00	53.63	10.47	2.27	59.33	12.18	2.53
		480.00	30.17	4.69	1.03	35.87	5.93	1.23	41.90	7.30	1.45	44.92	8.04	1.56	47.60	8.80	1.66	53.63	10.34	1.89	59.33	11.96	2.10
	40	160.00	30.17	6.32	3.23	35.87	7.75	3.86	41.90	9.51	4.54	44.92	10.45	4.89	47.60	11.43	5.22	53.63	13.49	5.93	59.33	15.88	6.65
		320.00	30.17	5.81	1.59	35.87	7.26	1.91	41.90	8.89	2.24	44.92	9.75	2.42	47.60	10.67	2.58	53.63	12.62	2.93	59.33	14.81	3.28
		400.00	30.17	5.67	1.27	35.87	7.11	1.52	41.90	8.74	1.79	44.92	9.60	1.93	47.60	10.46	2.05	53.63	12.38	2.33	59.33	14.46	2.61
		480.00	30.17	5.57	1.05	35.87	7.06	1.26	41.90	8.63	1.49	44.92	9.50	1.60	47.60	10.35	1.71	53.63	12.25	1.94	59.33	14.24	2.17
	45	160.00	30.17	7.29	3.31	35.87	8.97	3.96	41.90	10.95	4.67	44.92	12.11	5.04	47.60	13.20	5.37	53.63	15.58	6.12	59.33	18.30	6.86
		320.00	30.17	6.74	1.63	35.87	8.39	1.96	41.90	10.23	2.30	44.92	11.26	2.48	47.60	12.34	2.65	53.63	14.59	3.02	59.33	17.16	3.38
		400.00	30.17	6.55	1.30	35.87	8.24	1.56	41.90	10.07	1.84	44.92	11.05	1.98	47.60	12.07	2.11	53.63	14.29	2.40	59.33	16.73	2.69
		480.00	30.17	6.41	1.08	35.87	8.14	1.30	41.90	10.02	1.53	44.92	10.90	1.64	47.60	11.96	1.75	53.63	14.16	2.00	59.33	16.52	2.23

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



10HP+10HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI	ΔT °C	TC kW	PI	ΔT °C	TC kW	PI	ΔT °C	TC kW	PI	ΔT °C	TC kW	PI	ΔT °C	TC kW	PI	ΔT °C
130	10	160.00	98.67	19.77	6.94	98.26	19.93	6.89	98.09	20.64	6.81	97.63	20.58	6.78	97.17	20.40	6.75	96.22	21.30	6.59
		320.00	100.91	19.60	3.58	99.88	20.00	3.51	99.75	20.78	3.47	99.32	20.58	3.46	98.55	20.36	3.44	97.67	21.21	3.36
		400.00	101.55	19.90	2.87	100.52	20.31	2.82	100.41	20.85	2.80	99.66	20.66	2.78	99.24	20.66	2.76	98.40	22.25	2.68
		480.00	101.87	20.03	2.40	100.85	20.44	2.36	100.74	20.92	2.34	100.00	20.69	2.32	99.59	20.85	2.31	98.76	22.73	2.23
	15	160.00	98.99	17.68	7.15	98.58	17.70	7.11	98.09	18.50	7.00	97.63	18.54	6.96	97.17	18.19	6.95	96.22	19.13	6.78
		320.00	102.18	16.96	3.75	101.49	17.39	3.70	101.07	18.32	3.64	101.02	17.99	3.65	99.93	17.62	3.62	99.49	18.52	3.56
		400.00	102.82	17.39	3.01	102.46	17.80	2.98	102.40	18.32	2.96	102.03	17.99	2.96	101.32	18.11	2.93	100.57	20.39	2.82
		480.00	103.14	17.58	2.51	102.79	18.00	2.49	103.06	18.32	2.48	102.37	17.99	2.47	102.01	18.37	2.45	101.30	21.34	2.34
	20	160.00	102.82	16.25	7.61	102.14	16.24	7.55	102.07	16.71	7.51	101.35	16.67	7.45	100.63	16.76	7.38	99.49	18.52	7.12
		320.00	106.02	15.79	3.97	105.37	16.17	3.92	105.05	16.68	3.89	104.41	16.93	3.85	104.08	17.21	3.82	103.12	17.87	3.75
		400.00	106.34	15.79	3.19	106.02	16.17	3.16	106.38	16.78	3.15	105.76	16.93	3.13	104.77	17.21	3.08	103.84	19.00	2.98
		480.00	106.65	15.79	2.66	106.66	16.17	2.65	107.04	16.82	2.64	106.10	16.93	2.61	105.12	17.21	2.58	104.21	19.61	2.48
	25	160.00	116.65	16.83	8.78	116.01	17.20	8.69	115.04	17.94	8.54	114.72	18.22	8.49	114.07	18.55	8.40	113.11	19.27	8.25
		320.00	116.65	16.58	4.40	116.01	17.08	4.35	115.04	17.62	4.28	114.72	17.94	4.26	114.07	18.25	4.21	113.11	18.94	4.14
		400.00	116.65	16.33	3.53	116.01	16.64	3.50	115.04	17.35	3.44	114.72	17.65	3.41	114.07	17.96	3.38	113.11	18.62	3.32
		480.00	116.65	16.23	2.94	116.01	16.42	2.92	115.04	17.23	2.87	114.72	17.49	2.85	114.07	17.79	2.82	113.11	18.48	2.77
	30	160.00	125.70	18.08	9.47	126.32	18.15	9.51	125.03	19.07	9.32	121.00	19.26	8.95	123.42	19.78	9.11	115.04	17.80	8.55
		320.00	125.70	17.49	4.76	126.32	18.03	4.76	125.03	18.63	4.68	121.00	18.94	4.49	123.42	19.07	4.59	115.04	17.12	4.31
		400.00	125.70	17.22	3.82	126.32	17.54	3.83	125.03	18.32	3.75	121.00	18.58	3.60	123.42	19.07	3.67	115.04	17.12	3.44
		480.00	125.70	17.10	3.18	126.32	17.29	3.20	125.03	18.15	3.13	121.00	18.45	3.01	123.42	19.07	3.06	115.04	17.12	2.87
	35	160.00	137.60	19.04	10.43	136.63	19.46	10.30	132.12	18.86	9.96	123.82	17.90	9.32	123.42	17.58	9.31	115.04	15.61	8.74
		320.00	137.60	18.44	5.24	136.63	19.01	5.17	132.12	18.50	5.00	123.82	17.59	4.67	123.42	17.22	4.67	115.04	15.00	4.40
		400.00	137.60	18.44	4.19	136.63	18.83	4.14	132.12	18.19	4.01	123.82	17.28	3.75	123.42	16.90	3.75	115.04	15.00	3.52
		480.00	137.60	18.44	3.49	136.63	18.73	3.46	132.12	18.01	3.35	123.82	17.10	3.13	123.42	16.77	3.13	115.04	15.00	2.93
	40	160.00	137.60	18.44	10.48	136.63	18.83	10.36	132.12	18.19	10.02	123.82	17.28	9.37	123.42	16.90	9.37	115.04	14.70	8.82
		320.00	137.60	17.79	5.27	136.63	18.33	5.20	132.12	17.56	5.04	123.82	16.62	4.71	123.42	16.23	4.71	115.04	14.10	4.44
		400.00	137.60	17.49	4.23	136.63	18.05	4.17	132.12	17.56	4.03	123.82	16.62	3.77	123.42	16.23	3.77	115.04	14.10	3.55
		480.00	137.60	17.32	3.53	136.63	17.87	3.48	132.12	17.56	3.36	123.82	16.62	3.14	123.42	16.23	3.14	115.04	14.10	2.96
	45	160.00	137.60	17.79	10.54	136.63	18.19	10.42	132.12	17.56	10.07	123.82	16.62	9.43	123.42	16.23	9.43	115.04	13.75	8.91
		320.00	137.60	17.19	5.29	136.63	17.69	5.23	132.12	16.57	5.08	123.82	15.69	4.75	123.42	15.28	4.75	115.04	13.15	4.48
		400.00	137.60	16.54	4.26	136.63	17.23	4.20	132.12	16.89	4.05	123.82	15.95	3.79	123.42	15.60	3.79	115.04	13.15	3.58
		480.00	137.60	16.24	3.56	136.63	17.01	3.51	132.12	17.07	3.37	123.82	16.13	3.16	123.42	15.78	3.16	115.04	13.15	2.99
120	10	160.00	99.29	20.52	6.93	99.23	21.08	6.87	100.06	21.82	6.88	98.77	21.87	6.76	98.31	22.24	6.69	97.49	22.22	6.62
		320.00	101.32	20.83	3.54	100.61	21.41	3.48	101.13	22.13	3.47	99.85	21.99	3.42	99.42	22.16	3.40	98.65	22.31	3.36
		400.00	101.66	20.73	2.85	100.61	21.41	2.79	101.84	22.20	2.80	100.21	22.07	2.75	99.79	22.28	2.73	99.04	23.05	2.67
		480.00	101.99	20.69	2.38	100.26	21.41	2.31	101.84	22.28	2.33	100.21	22.14	2.29	99.79	22.32	2.27	99.43	23.46	2.23
	15	160.00	99.97	18.20	7.19	99.58	18.64	7.12	100.06	19.39	7.09	98.77	19.66	6.96	98.31	19.79	6.91	97.49	19.96	6.82
		320.00	101.99	18.34	3.68	101.98	18.78	3.66	102.56	19.50	3.65	100.92	19.39	3.59	100.16	19.21	3.56	99.82	19.64	3.53
		400.00	102.67	18.07	2.98	101.98	18.64	2.93	103.27	19.50	2.95	101.64	19.39	2.89	101.27	19.21	2.89	100.60	20.98	2.80
		480.00	103.01	17.93	2.49	101.64	18.56	2.44	103.63	19.50	2.47	102.00	19.39	2.42	101.64	19.21	2.42	100.98	21.62	2.33
	20	160.00	102.67	16.33	7.59	102.32	16.55	7.54	102.91	17.03	7.55	100.92	17.38	7.35	100.53	18.01	7.26	99.82	18.91	7.12
		320.00	105.37	16.33	3.92	104.73	16.80	3.87	105.05	17.34	3.86	103.44	17.65	3.77	103.12	17.97	3.74	102.15	18.63	3.67
		400.00	105.71	16.16	3.15	104.73	16.66	3.10	106.12	17.34	3.12	104.16	17.65	3.04	103.86	18.01	3.02	102.93	19.32	2.94
		480.00	106.05	16.09	2.64	104.73	16.59	2.58	106.47	17.34	2.61	104.52	17.65	2.55	103.86	18.05	2.52	103.31	19.64	2.45
	25	160.00	115.32	17.55	8.60	114.72	17.93	8.51	113.75	18.51	8.38	113.43	19.02	8.30	112.78	19.41	8.21	106.02	17.79	7.76
		320.00	115.68	17.27	4.33	114.72	17.81	4.26	113.75	18.38	4.19	113.43	18.69	4.17	112.78	19.07	4.12	106.02	17.46	3.89
		400.00	116.05	16.65	3.50	114.72	17.35	3.43	113.75	18.03	3.37	113.43	18.69	3.33	112.78	18.74	3.31	106.02	17.46	3.12
		480.00	116.05	16.34	2.92	114.72	17.10	2.86	113.75	17.90	2.81	113.43	18.69	2.78	112.78	18.54	2.76	106.02	17.46	2.60
	30	160.00	126.00	18.91	9.42	124.71	19.24	9.28	121.81	19.03	9.04	117.94	18.11	8.78	114.07	17.60	8.48	106.02	15.47	7.96
		320.00	126.00	18.25	4.74	124.71	18.82	4.66	121.81	18.69	4.53	117.94	17.78	4.40	114.07	16.90	4.27	106.02	15.16	4.00
		400.00	126.00	17.68	3.81	124.71	18.40	3.74	121.81	18.31	3.64	117.94	17.78	3.52	114.07	16.90	3.42	106.02	14.85	3.21
		480.00	126.00	17.37	3.18	124.71	18.16	3.12	121.81	18.12	3.04	117.94	17.78	2.94	114.07	16.90	2.85	106.02	14.72	2.68
	35	160.00	135.98	20.38	10.17	129.54	18.72	9.75	121.81	17.04	9.21	117.94	16.20	8.95	114.07	15.44	8.67	106.02	13.63	8.12
		320.00	135.98	19.23	5.13	129.54	18.00	4.90	121.81	16.36	4.64	117.94	15.57	4.50	114.07	14.82	4.36	106.02	13.33	4.08
		400.00	135.98	18.98	4.12	129.54	17.85	3.93	121.81	16.36										

10HP+10HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
110	10	160.00	100.14	22.15	6.86	100.46	22.79	6.83	100.17	23.67	6.73	99.79	23.62	6.70	99.05	24.44	6.56	94.92	22.08	6.41
		320.00	101.56	22.34	3.48	101.56	23.06	3.45	100.54	23.96	3.37	100.55	23.75	3.38	99.85	24.35	3.32	95.32	22.17	3.22
		400.00	101.92	22.34	2.80	101.93	23.06	2.77	100.92	23.92	2.71	100.94	23.71	2.72	99.85	24.49	2.65	95.72	22.40	2.58
		480.00	102.27	22.34	2.34	102.29	23.06	2.32	101.29	23.88	2.27	100.94	23.66	2.27	100.24	24.53	2.22	95.72	22.54	2.15
	15	160.00	100.14	19.57	7.09	100.83	20.23	7.09	100.17	21.12	6.95	99.79	21.24	6.91	99.05	21.75	6.80	94.92	19.84	6.60
		320.00	101.92	19.46	3.63	102.29	20.23	3.61	101.29	21.12	3.53	100.94	20.94	3.52	100.64	21.11	3.50	96.12	19.52	3.37
		400.00	102.63	19.31	2.93	102.66	20.08	2.91	101.67	20.87	2.84	101.32	20.64	2.84	100.64	21.11	2.80	96.52	19.84	2.70
		480.00	102.98	19.24	2.46	103.03	20.00	2.43	102.04	20.71	2.38	101.70	20.47	2.38	101.03	21.11	2.34	96.92	20.02	2.25
	20	160.00	102.27	16.94	7.50	102.66	17.56	7.48	101.67	18.16	7.34	100.94	18.47	7.25	100.64	19.15	7.17	96.12	18.01	6.87
		320.00	104.41	17.05	3.84	103.76	17.56	3.79	102.79	18.16	3.72	102.47	18.47	3.69	101.83	18.79	3.65	97.32	17.87	3.49
		400.00	105.12	17.05	3.10	104.86	17.56	3.07	103.17	18.16	2.99	102.86	18.17	2.98	102.22	18.79	2.94	97.71	17.87	2.81
		480.00	105.47	17.05	2.59	105.23	17.56	2.57	103.54	18.16	2.50	103.24	18.00	2.50	102.62	18.79	2.46	97.71	17.87	2.34
	25	160.00	113.63	18.19	8.39	113.43	18.96	8.31	111.82	19.22	8.14	107.95	18.30	7.88	104.41	17.43	7.65	97.32	15.32	7.21
		320.00	114.39	18.06	4.24	113.43	18.63	4.17	111.82	18.88	4.09	107.95	17.97	3.96	104.41	17.05	3.84	97.32	15.32	3.61
		400.00	115.16	18.06	3.42	113.43	18.72	3.33	111.82	18.50	3.28	107.95	17.97	3.17	104.41	16.77	3.08	97.32	15.00	2.90
		480.00	115.55	18.06	2.86	113.43	18.72	2.78	111.82	18.30	2.74	107.95	17.97	2.64	104.41	16.58	2.57	97.32	14.87	2.42
	30	160.00	124.38	19.46	9.23	118.91	18.40	8.84	111.82	16.41	8.39	107.95	15.89	8.10	104.41	15.19	7.85	97.32	14.05	7.32
		320.00	124.38	19.10	4.63	118.91	18.00	4.44	111.82	16.04	4.21	107.95	15.57	4.06	104.41	14.82	3.94	97.32	13.68	3.68
		400.00	124.38	18.95	3.71	118.91	17.70	3.56	111.82	15.72	3.38	107.95	15.25	3.26	104.41	14.82	3.15	97.32	13.68	2.94
		480.00	124.38	18.90	3.09	118.91	17.50	2.97	111.82	15.54	2.82	107.95	15.11	2.72	104.41	14.82	2.63	97.32	13.68	2.45
	35	160.00	126.00	17.91	9.51	118.91	16.09	9.04	111.82	14.74	8.54	107.95	14.29	8.24	104.41	13.29	8.01	97.32	12.06	7.50
		320.00	126.00	17.21	4.78	118.91	15.76	4.54	111.82	14.37	4.28	107.95	13.96	4.13	104.41	13.02	4.02	97.32	11.76	3.76
		400.00	126.00	16.76	3.84	118.91	15.43	3.64	111.82	14.06	3.44	107.95	13.96	3.31	104.41	13.02	3.21	97.32	11.76	3.01
		480.00	126.00	16.57	3.21	118.91	15.24	3.04	111.82	13.92	2.87	107.95	13.96	2.76	104.41	13.02	2.68	97.32	11.76	2.51
	40	160.00	126.00	16.86	9.60	118.91	15.43	9.10	111.82	13.74	8.63	107.95	13.32	8.32	104.41	12.35	8.10	97.32	11.10	7.58
		320.00	126.00	16.17	4.83	118.91	14.72	4.58	111.82	13.11	4.34	107.95	12.95	4.18	104.41	12.03	4.06	97.32	10.79	3.80
		400.00	126.00	15.92	3.87	118.91	14.39	3.68	111.82	13.11	3.47	107.95	12.63	3.35	104.41	11.67	3.26	97.32	10.49	3.05
		480.00	126.00	15.82	3.23	118.91	14.20	3.07	111.82	13.11	2.89	107.95	12.45	2.80	104.41	11.54	2.72	97.32	10.31	2.55
	45	160.00	126.00	15.77	9.69	118.91	14.72	9.16	111.82	12.75	8.71	107.95	12.31	8.41	104.41	11.36	8.18	97.32	10.13	7.67
		320.00	126.00	15.08	4.88	118.91	13.73	4.63	111.82	11.75	4.40	107.95	11.94	4.22	104.41	11.04	4.11	97.32	9.83	3.85
		400.00	126.00	15.08	3.90	118.91	13.35	3.71	111.82	12.11	3.51	107.95	11.30	3.40	104.41	10.37	3.31	97.32	9.21	3.10
		480.00	126.00	15.08	3.25	118.91	13.16	3.10	111.82	12.29	2.92	107.95	10.98	2.84	104.41	10.06	2.77	97.32	8.86	2.59
100	10	160.00	100.14	23.31	6.76	101.30	24.55	6.75	100.50	25.78	6.57	98.28	23.95	6.54	95.06	23.24	6.32	88.62	20.67	5.98
		320.00	101.25	23.77	3.41	101.69	24.88	3.38	100.50	26.10	3.27	98.28	24.08	3.26	95.06	23.33	3.15	88.62	20.75	2.98
		400.00	102.00	23.66	2.76	102.08	24.88	2.72	100.50	26.05	2.62	98.28	24.04	2.61	95.06	23.24	2.53	88.62	20.67	2.39
		480.00	102.37	23.62	2.31	102.47	24.88	2.27	100.50	26.01	2.18	98.28	23.99	2.18	95.06	23.24	2.11	88.62	20.62	1.99
	15	160.00	100.88	20.59	7.06	101.30	21.70	7.00	100.50	23.00	6.82	98.28	21.53	6.75	95.06	20.69	6.54	88.62	18.57	6.16
		320.00	101.25	20.97	3.53	101.69	21.78	3.51	100.50	23.00	3.41	98.28	21.23	3.39	95.06	20.38	3.28	88.62	18.27	3.09
		400.00	102.00	20.63	2.86	102.47	21.57	2.85	100.50	22.73	2.74	98.28	20.93	2.72	95.06	20.07	2.64	88.62	17.97	2.49
		480.00	102.37	20.43	2.40	102.47	21.49	2.37	100.50	22.55	2.29	98.28	20.76	2.27	95.06	19.90	2.20	88.62	17.80	2.08
	20	160.00	101.63	17.60	7.39	102.08	18.39	7.36	100.50	19.46	7.13	98.28	18.43	7.02	95.06	17.52	6.82	88.62	16.09	6.38
		320.00	103.12	17.90	3.75	102.47	18.47	3.69	100.50	19.46	3.56	98.28	18.13	3.52	95.06	17.21	3.42	88.62	15.45	3.22
		400.00	103.49	17.60	3.02	103.25	18.31	2.99	100.50	19.15	2.86	98.28	17.78	2.83	95.06	16.86	2.75	88.62	15.19	2.58
		480.00	103.86	17.44	2.53	103.64	18.22	2.50	100.50	18.97	2.39	98.28	17.65	2.36	95.06	16.68	2.30	88.62	15.02	2.16
	25	160.00	111.17	18.93	8.11	107.95	18.40	7.88	100.50	16.69	7.37	98.28	15.90	7.25	95.06	15.07	7.03	88.62	13.30	6.62
		320.00	112.78	18.98	4.12	107.95	17.97	3.96	100.50	16.33	3.70	98.28	15.54	3.64	95.06	14.75	3.53	88.62	13.30	3.31
		400.00	113.19	18.55	3.33	107.95	17.82	3.17	100.50	16.06	2.97	98.28	15.23	2.92	95.06	14.75	2.83	88.62	12.95	2.66
		480.00	113.59	18.36	2.79	107.95	17.78	2.64	100.50	15.88	2.48	98.28	15.05	2.44	95.06	14.75	2.35	88.62	12.82	2.22
	30	160.00	114.39	17.31	8.54	107.95	15.91	8.09	100.50	14.32	7.58	98.28	13.89	7.42	95.06	12.86	7.23	88.62	11.99	6.74
		320.00	114.39	17.02	4.28	107.95	15.57	4.06	100.50	14.18	3.80	98.28	13.52	3.73	95.06	12.86	3.61	88.62	11.63	3.39
		400.00	114.39	16.64	3.44	107.95	15.57	3.25	100.50	14.00	3.04	98.28	13.52	2.98	95.06	12.54	2.90	88.62	11.63	2.71
		480.00	114.39	16.45	2.87	107.95	15.57	2.71	100.50	13.91	2.54	98.28	13.52	2.48	95.06	12.36	2.42	88.62	11.63	2.26
	35	160.00	114.39	15.61	8.69	107.95	14.34	8.23	100.50	12.65	7.73	98.28	12.31	7.56	95.06	11.70	7.33	88.62	10.63	6.86
		320.00	114.39	14.91	4.37	107.95	13.68	4.15	100.50	12.51	3.87	98.28	11.95	3.80	95.06	11.38	3.68	88.62	10.31	3.44
		400.00	114.39	14.91	3.50	107.95	13.68	3.32	100.50	12.33	3.10	98.28	11.95	3.04	95.06	11.38	2.94	88.62	10.31	2.75
		480.00	114.39	14.																

VRF MW



10HP+10HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	160.00	101.41	25.91	6.64	97.32	24.27	6.42	91.52	21.73	6.14	88.29	20.62	5.95	85.39	19.98	5.75	79.59	17.41	5.47
		320.00	100.99	26.00	3.30	96.90	24.40	3.19	91.52	21.82	3.06	88.29	20.75	2.97	85.39	19.94	2.88	79.59	17.50	2.73
		400.00	101.83	25.91	2.67	97.32	24.31	2.57	91.52	21.73	2.45	88.29	20.67	2.38	85.39	19.98	2.30	79.59	17.54	2.18
		480.00	102.24	25.86	2.24	97.32	24.27	2.14	91.52	21.73	2.05	88.29	20.62	1.98	85.39	20.03	1.92	79.59	17.58	1.82
	15	160.00	101.83	22.34	6.99	97.73	21.22	6.73	91.52	19.36	6.35	88.29	18.58	6.13	85.39	17.83	5.94	79.59	15.67	5.62
		320.00	100.99	21.96	3.48	96.90	20.85	3.34	91.52	19.06	3.19	88.29	18.27	3.08	85.39	17.21	3.00	79.59	15.33	2.83
		400.00	101.83	21.68	2.82	97.32	20.52	2.70	91.52	18.75	2.56	88.29	17.93	2.48	85.39	17.21	2.40	79.59	15.33	2.26
		480.00	102.24	21.49	2.37	97.73	20.38	2.27	91.52	18.57	2.14	88.29	17.80	2.07	85.39	17.21	2.00	79.59	15.33	1.88
	20	160.00	102.24	18.91	7.33	98.15	18.07	7.04	91.52	16.51	6.60	88.29	15.71	6.38	85.39	15.27	6.17	79.59	13.84	5.78
		320.00	101.83	18.91	3.65	97.32	17.84	3.49	91.52	16.20	3.31	88.29	15.45	3.20	85.39	14.66	3.11	79.59	13.21	2.92
		400.00	102.24	18.63	2.94	97.73	17.70	2.82	91.52	16.20	2.65	88.29	15.45	2.56	85.39	14.66	2.49	79.59	13.21	2.34
		480.00	102.66	18.44	2.47	97.73	17.66	2.35	91.52	16.20	2.21	88.29	15.45	2.14	85.39	14.66	2.07	79.59	13.21	1.95
	25	160.00	101.89	16.85	7.48	97.32	15.43	7.20	91.52	14.25	6.80	88.29	13.30	6.60	85.39	13.00	6.37	79.59	11.79	5.96
		320.00	103.12	16.71	3.80	97.32	15.29	3.61	91.52	13.93	3.41	88.29	13.30	3.30	85.39	12.64	3.20	79.59	11.44	3.00
		400.00	103.52	16.28	3.07	97.32	14.96	2.90	91.52	13.93	2.73	88.29	12.95	2.65	85.39	12.64	2.56	79.59	11.44	2.40
		480.00	103.52	16.04	2.56	97.32	14.78	2.42	91.52	13.93	2.27	88.29	12.82	2.21	85.39	12.64	2.13	79.59	11.44	2.00
	30	160.00	103.12	14.83	7.76	97.32	13.58	7.36	91.52	12.49	6.95	88.29	11.99	6.71	85.39	11.41	6.51	79.59	10.06	6.12
		320.00	103.12	14.50	3.90	97.32	13.30	3.69	91.52	12.17	3.49	88.29	11.63	3.37	85.39	11.10	3.27	79.59	10.06	3.06
		400.00	103.12	14.17	3.13	97.32	12.94	2.97	91.52	12.17	2.79	88.29	11.63	2.70	85.39	11.10	2.61	79.59	9.75	2.46
		480.00	103.12	13.99	2.61	97.32	12.75	2.48	91.52	12.17	2.33	88.29	11.63	2.25	85.39	11.10	2.18	79.59	9.62	2.05
	35	160.00	103.12	13.16	7.91	97.32	12.12	7.49	91.52	11.10	7.07	88.29	10.66	6.83	85.39	10.15	6.62	79.59	9.26	6.19
		320.00	103.12	12.80	3.97	97.32	11.76	3.76	91.52	10.78	3.55	88.29	10.31	3.43	85.39	9.83	3.32	79.59	8.95	3.11
		400.00	103.12	12.48	3.19	97.32	11.44	3.02	91.52	10.42	2.85	88.29	10.00	2.75	85.39	9.83	2.66	79.59	8.95	2.49
		480.00	103.12	12.30	2.66	97.32	11.26	2.52	91.52	10.24	2.38	88.29	9.86	2.30	85.39	9.83	2.22	79.59	8.95	2.07
	40	160.00	103.12	12.16	8.00	97.32	11.12	7.58	91.52	9.79	7.19	88.29	9.37	6.94	85.39	9.20	6.70	79.59	8.29	6.27
		320.00	103.12	11.48	4.03	97.32	10.81	3.80	91.52	9.47	3.61	88.29	9.06	3.48	85.39	8.84	3.37	79.59	7.98	3.15
		400.00	103.12	11.48	3.22	97.32	10.81	3.04	91.52	9.47	2.89	88.29	9.06	2.79	85.39	8.84	2.69	79.59	7.98	2.52
		480.00	103.12	11.48	2.69	97.32	10.81	2.54	91.52	9.47	2.41	88.29	9.06	2.32	85.39	8.84	2.24	79.59	7.98	2.10
	45	160.00	103.12	11.16	8.09	97.32	10.13	7.67	91.52	8.48	7.30	88.29	8.08	7.05	85.39	8.20	6.79	79.59	7.32	6.36
		320.00	103.12	10.17	4.09	97.32	9.81	3.85	91.52	8.16	3.67	88.29	7.76	3.54	85.39	7.89	3.41	79.59	7.01	3.19
		400.00	103.12	10.48	3.26	97.32	10.13	3.07	91.52	8.48	2.92	88.29	8.08	2.82	85.39	7.89	2.73	79.59	7.01	2.55
		480.00	103.12	10.66	2.71	97.32	10.31	2.55	91.52	8.62	2.43	88.29	8.26	2.35	85.39	7.89	2.27	79.59	7.01	2.13
80	10	160.00	91.11	21.88	6.09	85.95	20.02	5.80	81.20	17.74	5.58	78.63	17.24	5.40	76.05	16.34	5.25	70.89	14.85	4.93
		320.00	91.52	21.73	3.07	86.36	19.88	2.92	81.20	17.74	2.79	78.63	17.29	2.70	76.05	16.39	2.62	70.89	14.85	2.46
		400.00	91.52	21.68	2.46	86.36	19.97	2.34	81.20	17.82	2.23	78.63	17.20	2.16	76.05	16.30	2.10	70.89	14.76	1.97
		480.00	91.52	21.63	2.05	85.95	20.02	1.93	81.20	17.87	1.86	78.63	17.16	1.80	76.05	16.26	1.75	70.89	14.72	1.65
	15	160.00	91.52	19.82	6.31	86.36	17.96	6.02	81.20	15.77	5.75	78.63	15.54	5.55	76.05	14.59	5.40	70.89	13.35	5.06
		320.00	91.52	19.14	3.18	86.36	17.30	3.04	81.20	15.51	2.89	78.63	15.19	2.79	76.05	14.28	2.72	70.89	13.05	2.54
		400.00	91.52	18.74	2.56	86.36	17.30	2.43	81.20	15.51	2.31	78.63	14.88	2.24	76.05	13.93	2.19	70.89	12.70	2.05
		480.00	91.52	18.55	2.14	86.36	17.30	2.02	81.20	15.51	1.93	78.63	14.71	1.87	76.05	13.76	1.83	70.89	12.58	1.71
	20	160.00	91.52	16.64	6.59	86.36	15.28	6.25	81.20	13.59	5.95	78.63	13.31	5.74	76.05	12.71	5.57	70.89	11.50	5.22
		320.00	91.52	16.30	3.31	86.36	14.91	3.14	81.20	13.59	2.97	78.63	12.96	2.89	76.05	12.36	2.80	70.89	11.16	2.63
		400.00	91.52	15.95	2.66	86.36	14.58	2.53	81.20	13.28	2.39	78.63	12.96	2.31	76.05	12.05	2.25	70.89	11.16	2.10
		480.00	91.52	15.76	2.22	86.36	14.44	2.11	81.20	13.11	2.00	78.63	12.96	1.93	76.05	11.87	1.88	70.89	11.16	1.75
	25	160.00	91.52	14.37	6.78	86.36	13.19	6.44	81.20	11.76	6.11	78.63	11.53	5.90	76.05	11.03	5.72	70.89	10.04	5.35
		320.00	91.52	14.00	3.41	86.36	12.86	3.23	81.20	11.76	3.05	78.63	11.22	2.96	76.05	10.72	2.87	70.89	9.74	2.69
		400.00	91.52	13.71	2.74	86.36	12.86	2.59	81.20	11.41	2.46	78.63	11.22	2.37	76.05	10.72	2.30	70.89	9.74	2.15
		480.00	91.52	13.52	2.29	86.36	12.86	2.15	81.20	11.28	2.05	78.63	11.22	1.98	76.05	10.72	1.92	70.89	9.74	1.79
	30	160.00	91.52	12.44	6.95	86.36	11.57	6.58	81.20	10.70	6.20	78.63	10.24	6.01	76.05	9.77	5.83	70.89	8.96	5.45
		320.00	91.52	12.07	3.49	86.36	11.25	3.30	81.20	10.34	3.12	78.63	9.93	3.02	76.05	9.46	2.93	70.89	8.61	2.74
		400.00	91.52	12.07	2.79	86.36	11.25	2.64	81.20	10.34	2.49	78.63	9.93	2.42	76.05	9.46	2.34	70.89	8.61	2.19
		480.00	91.52	12.07	2.33	86.36	11.25	2.20	81.20	10.34	2.08	78.63	9.93	2.01	76.05	9.46	1.95	70.89	8.61	1.83
	35	160.00	91.52	11.29	7.06	86.36	10.30	6.69	81.20	9.52	6.30	78.63	8.83	6.14	76.05	8.76	5.92	70.89	7.72	5.56
		320.00	91.52	10.97	3.54	86.36	9.99	3.36	81.20	9.20	3.17	78.63	8.83	3.07	76.05	8.45	2.97	70.89	7.72	2.78
		400.00	91.52	10.97	2.83	86.36	9.68	2.70	81.20	9.20	2.53	78.63	8.48	2.47	76.05	8.45	2.38	70.89	7.42	2.23
		480.00	91.52	10.97	2.36	86.36	9.50	2.25	81.20	9.20	2.11	78.63	8.35	2.06	76.05	8.45	1.98	70.89	7.25	1.87
	40	160.00	91.52	10.60	7.12	86.36														

10HP+10HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
70	10	160.00	79.83	18.15	5.42	75.73	16.56	5.20	71.21	15.06	4.94	68.64	14.02	4.80	66.38	13.59	4.64	61.87	12.04	4.38
		320.00	80.24	18.01	2.74	75.73	16.43	2.61	71.21	14.93	2.47	68.64	14.02	2.40	66.38	13.59	2.32	61.87	12.04	2.19
		400.00	80.24	18.10	2.19	75.73	16.52	2.08	71.21	14.98	1.98	68.64	14.06	1.92	66.38	13.46	1.86	61.87	12.04	1.75
		480.00	80.24	18.10	1.82	75.73	16.52	1.74	71.21	15.02	1.65	68.64	14.11	1.60	66.38	13.42	1.55	61.87	12.08	1.46
	15	160.00	80.24	16.45	5.61	75.73	14.92	5.35	71.21	13.42	5.08	68.64	12.58	4.93	66.38	12.09	4.77	61.87	10.79	4.49
		320.00	80.24	15.78	2.83	75.73	14.23	2.70	71.21	12.78	2.57	68.64	12.32	2.48	66.38	11.79	2.40	61.87	10.50	2.26
		400.00	80.24	15.78	2.27	75.73	14.23	2.16	71.21	12.78	2.06	68.64	12.32	1.98	66.38	11.49	1.93	61.87	10.50	1.81
		480.00	80.24	15.78	1.89	75.73	14.23	1.80	71.21	12.78	1.71	68.64	12.32	1.65	66.38	11.32	1.61	61.87	10.50	1.51
	20	160.00	80.24	13.74	5.85	75.73	12.58	5.55	71.21	11.57	5.25	68.64	11.05	5.06	66.38	10.54	4.91	61.87	9.59	4.60
		320.00	80.24	13.37	2.94	75.73	12.26	2.79	71.21	11.22	2.64	68.64	10.75	2.55	66.38	10.24	2.47	61.87	9.30	2.31
		400.00	80.24	13.37	2.35	75.73	12.26	2.23	71.21	11.22	2.11	68.64	10.45	2.05	66.38	10.24	1.97	61.87	9.01	1.86
		480.00	80.24	13.37	1.96	75.73	12.26	1.86	71.21	11.22	1.76	68.64	10.32	1.71	66.38	10.24	1.65	61.87	8.84	1.55
	25	160.00	80.24	11.86	6.01	75.73	10.97	5.70	71.21	10.08	5.38	68.64	9.66	5.19	66.38	8.95	5.05	61.87	8.16	4.72
		320.00	80.24	11.54	3.02	75.73	10.65	2.86	71.21	9.77	2.70	68.64	9.36	2.61	66.38	8.95	2.53	61.87	8.16	2.36
		400.00	80.24	11.22	2.43	75.73	10.30	2.30	71.21	9.77	2.16	68.64	9.36	2.09	66.38	8.65	2.03	61.87	8.16	1.89
		480.00	80.24	11.08	2.03	75.73	10.12	1.92	71.21	9.77	1.80	68.64	9.36	1.74	66.38	8.48	1.70	61.87	8.16	1.57
	30	160.00	80.24	10.47	6.14	75.73	9.71	5.81	71.21	8.99	5.47	68.64	8.29	5.31	66.38	8.25	5.11	61.87	7.28	4.80
		320.00	80.24	10.15	3.08	75.73	9.39	2.92	71.21	8.64	2.75	68.64	8.29	2.65	66.38	7.94	2.57	61.87	7.28	2.40
		400.00	80.24	10.15	2.47	75.73	9.39	2.33	71.21	8.64	2.20	68.64	7.99	2.13	66.38	7.94	2.06	61.87	7.28	1.92
		480.00	80.24	10.15	2.05	75.73	9.39	1.94	71.21	8.64	1.83	68.64	7.82	1.78	66.38	7.94	1.71	61.87	7.28	1.60
	35	160.00	80.24	9.36	6.23	75.73	8.70	5.89	71.21	7.75	5.58	68.64	7.71	5.36	66.38	7.16	5.21	61.87	6.89	4.84
		320.00	80.24	9.05	3.13	75.73	8.38	2.96	71.21	7.75	2.79	68.64	7.41	2.69	66.38	7.16	2.60	61.87	6.59	2.43
		400.00	80.24	9.05	2.50	75.73	8.38	2.37	71.21	7.45	2.24	68.64	7.41	2.15	66.38	7.16	2.08	61.87	6.59	1.94
		480.00	80.24	9.05	2.09	75.73	8.38	1.97	71.21	7.28	1.87	68.64	7.41	1.79	66.38	7.16	1.74	61.87	6.59	1.62
	40	160.00	80.24	8.69	6.29	75.73	8.07	5.95	71.21	7.11	5.64	68.64	6.77	5.44	66.38	6.55	5.26	61.87	6.24	4.89
		320.00	80.24	8.38	3.16	75.73	7.76	2.99	71.21	6.81	2.83	68.64	6.77	2.72	66.38	6.55	2.63	61.87	5.98	2.46
		400.00	80.24	8.38	2.53	75.73	7.76	2.39	71.21	6.81	2.27	68.64	6.47	2.19	66.38	6.21	2.12	61.87	5.98	1.97
		480.00	80.24	8.38	2.11	75.73	7.76	1.99	71.21	6.81	1.89	68.64	6.30	1.83	66.38	6.08	1.77	61.87	5.98	1.64
	45	160.00	80.24	8.07	6.35	75.73	7.40	6.01	71.21	6.51	5.69	68.64	5.88	5.52	66.38	5.95	5.31	61.87	5.63	4.95
		320.00	80.24	7.75	3.19	75.73	7.09	3.02	71.21	5.91	2.87	68.64	6.13	2.75	66.38	5.95	2.66	61.87	5.33	2.49
		400.00	80.24	7.75	2.55	75.73	7.09	2.41	71.21	6.17	2.29	68.64	5.53	2.22	66.38	5.30	2.15	61.87	5.33	1.99
		480.00	80.24	7.75	2.12	75.73	7.09	2.01	71.21	6.34	1.90	68.64	5.24	1.86	66.38	4.96	1.80	61.87	5.33	1.66
60	10	160.00	68.64	13.95	4.81	64.77	13.17	4.54	60.90	12.32	4.27	58.97	11.44	4.18	57.04	11.14	4.04	53.17	9.82	3.81
		320.00	68.64	13.95	2.40	64.77	13.17	2.27	60.90	12.32	2.14	58.97	11.57	2.08	57.04	11.09	2.02	53.17	9.95	1.90
		400.00	68.64	13.99	1.92	64.77	13.04	1.82	60.90	12.19	1.71	58.97	11.44	1.67	57.04	11.01	1.62	53.17	9.82	1.52
		480.00	68.64	13.99	1.60	64.77	12.95	1.52	60.90	12.10	1.43	58.97	11.36	1.40	57.04	10.97	1.35	53.17	9.78	1.27
	15	160.00	68.64	12.65	4.92	64.77	11.84	4.65	60.90	10.98	4.39	58.97	10.28	4.28	57.04	9.90	4.15	53.17	8.85	3.90
		320.00	68.64	12.33	2.48	64.77	11.49	2.34	60.90	10.67	2.21	58.97	10.28	2.14	57.04	9.60	2.09	53.17	8.85	1.95
		400.00	68.64	12.33	1.98	64.77	11.18	1.89	60.90	10.37	1.78	58.97	9.94	1.72	57.04	9.30	1.68	53.17	8.56	1.57
		480.00	68.64	12.33	1.65	64.77	11.00	1.58	60.90	10.19	1.49	58.97	9.76	1.44	57.04	9.12	1.40	53.17	8.39	1.31
	20	160.00	68.64	11.03	5.07	64.77	10.21	4.80	60.90	9.41	4.53	58.97	9.03	4.39	57.04	8.70	4.25	53.17	7.92	3.98
		320.00	68.64	10.72	2.55	64.77	9.90	2.41	60.90	9.11	2.28	58.97	8.73	2.21	57.04	8.35	2.14	53.17	7.63	2.00
		400.00	68.64	10.72	2.04	64.77	9.90	1.93	60.90	9.11	1.82	58.97	8.73	1.77	57.04	8.35	1.71	53.17	7.63	1.60
		480.00	68.64	10.72	1.70	64.77	9.90	1.61	60.90	9.11	1.52	58.97	8.73	1.47	57.04	8.35	1.43	53.17	7.63	1.34
	25	160.00	68.64	9.67	5.19	64.77	9.02	4.90	60.90	8.01	4.65	58.97	7.99	4.48	57.04	7.38	4.37	53.17	7.08	4.05
		320.00	68.64	9.36	2.61	64.77	8.67	2.47	60.90	8.01	2.33	58.97	7.69	2.25	57.04	7.38	2.18	53.17	6.78	2.04
		400.00	68.64	9.36	2.09	64.77	8.67	1.97	60.90	7.71	1.87	58.97	7.69	1.80	57.04	7.38	1.75	53.17	6.78	1.63
		480.00	68.64	9.36	1.74	64.77	8.67	1.64	60.90	7.58	1.56	58.97	7.69	1.50	57.04	7.38	1.46	53.17	6.78	1.36
	30	160.00	68.64	8.60	5.28	64.77	8.00	4.99	60.90	7.50	4.70	58.97	7.17	4.56	57.04	6.89	4.41	53.17	6.42	4.11
		320.00	68.64	8.29	2.65	64.77	7.69	2.51	60.90	7.16	2.36	58.97	6.87	2.29	57.04	6.59	2.22	53.17	6.08	2.07
		400.00	68.64	8.29	2.12	64.77	7.69	2.01	60.90	7.16	1.89	58.97	6.87	1.83	57.04	6.59	1.77	53.17	6.08	1.66
		480.00	68.64	8.29	1.77	64.77	7.69	1.67	60.90	7.16	1.58	58.97	6.87	1.53	57.04	6.59	1.48	53.17	6.08	1.38
	35	160.00	68.64	7.44	5.38	64.77	7.24	5.06	60.90	6.46	4.79	58.97	6.55	4.61	57.04	6.25	4.47	53.17	5.89	4.16
		320.00	68.64	7.44	2.69	64.77	6.93	2.54	60.90	6.46	2.39	58.97	6.21	2.32	57.04	5.99	2.24	53.17	5.55	2.09
		400.00	68.64	7.44	2.15	64.77	6.93	2.03	60.90	6.12	1.93	58.97	6.21	1.86	57.04	5.99	1.80	53.17	5.55	1.68
		480.00	68.64	7.44	1.79	64.77	6.93	1.70	60.90	5.99	1.61	58.97	6.21	1.55	57.04	5.99	1.50	53.17	5.55	1.40
40	160.00	68.64	6.80	5.44	64.77	6.63	5.11	60.90	5.87	4.84	58.97	5.95	4.66	57.04	5.64	4.52	53.17	5.25	4.21	
	320.00	68.64	6.80	2.72	64.77	6.28	2.57	60.90	5.87	2.42	58.97	5.61								

VRF MW



10HP+10HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	160.00	56.95	11.10	4.03	53.73	10.47	3.80	54.14	9.52	3.92	48.98	9.20	3.50	47.37	8.57	3.41	44.15	7.90	3.19
		320.00	57.36	11.01	2.04	54.14	10.47	1.92	54.14	9.48	1.96	48.98	9.11	1.75	47.37	8.66	1.70	44.15	7.81	1.60
		400.00	57.36	11.10	1.63	54.14	10.47	1.54	54.14	9.48	1.57	48.98	9.16	1.40	47.37	8.53	1.37	44.15	7.85	1.28
		480.00	57.36	11.10	1.36	54.14	10.51	1.28	54.14	9.52	1.31	48.98	9.16	1.17	47.37	8.44	1.14	44.15	7.85	1.06
	15	160.00	57.36	10.03	4.16	54.14	9.43	3.93	54.14	8.48	4.02	48.98	8.24	3.58	47.37	7.65	3.49	44.15	7.09	3.26
		320.00	57.36	9.71	2.10	54.14	9.12	1.98	54.14	8.18	2.02	48.98	7.93	1.81	47.37	7.65	1.75	44.15	6.79	1.64
		400.00	57.36	9.71	1.68	54.14	9.12	1.58	54.14	8.18	1.62	48.98	7.93	1.44	47.37	7.30	1.41	44.15	6.79	1.31
		480.00	57.36	9.71	1.40	54.14	9.12	1.32	54.14	8.18	1.35	48.98	7.93	1.20	47.37	7.12	1.18	44.15	6.79	1.10
	20	160.00	57.36	8.73	4.28	54.14	8.13	4.05	54.14	7.57	4.10	48.98	7.27	3.67	47.37	6.99	3.55	44.15	6.15	3.34
		320.00	57.36	8.42	2.15	54.14	7.82	2.04	54.14	7.22	2.06	48.98	6.97	1.85	47.37	6.68	1.79	44.15	6.15	1.67
		400.00	57.36	8.42	1.72	54.14	7.82	1.63	54.14	7.22	1.65	48.98	6.97	1.48	47.37	6.68	1.43	44.15	6.15	1.34
		480.00	57.36	8.42	1.43	54.14	7.82	1.36	54.14	7.22	1.38	48.98	6.97	1.23	47.37	6.68	1.19	44.15	6.15	1.11
	25	160.00	57.36	7.76	4.36	54.14	6.90	4.15	54.14	6.79	4.16	48.98	6.18	3.76	47.37	5.96	3.64	44.15	5.52	3.40
		320.00	57.36	7.41	2.20	54.14	6.90	2.08	54.14	6.43	2.10	48.98	6.18	1.88	47.37	5.96	1.82	44.15	5.52	1.70
		400.00	57.36	7.41	1.76	54.14	6.90	1.66	54.14	6.43	1.68	48.98	6.18	1.51	47.37	5.96	1.46	44.15	5.52	1.36
		480.00	57.36	7.41	1.46	54.14	6.90	1.38	54.14	6.43	1.40	48.98	6.18	1.25	47.37	5.96	1.21	44.15	5.52	1.13
	30	160.00	57.36	6.96	4.43	54.14	6.48	4.19	54.14	6.16	4.22	48.98	5.58	3.82	47.37	5.70	3.66	44.15	5.31	3.42
		320.00	57.36	6.65	2.23	54.14	6.21	2.11	54.14	5.80	2.13	48.98	5.58	1.91	47.37	5.39	1.85	44.15	5.01	1.72
		400.00	57.36	6.65	1.78	54.14	6.21	1.69	54.14	5.80	1.70	48.98	5.58	1.53	47.37	5.39	1.48	44.15	5.01	1.38
		480.00	57.36	6.65	1.49	54.14	6.21	1.40	54.14	5.80	1.42	48.98	5.58	1.27	47.37	5.39	1.23	44.15	5.01	1.15
	35	160.00	57.36	6.28	4.49	54.14	5.64	4.26	54.14	5.30	4.30	48.98	5.41	3.83	47.37	4.95	3.73	44.15	4.60	3.48
		320.00	57.36	6.02	2.26	54.14	5.64	2.13	54.14	5.30	2.15	48.98	5.11	1.93	47.37	4.95	1.87	44.15	4.60	1.74
		400.00	57.36	6.02	1.81	54.14	5.64	1.71	54.14	5.30	1.72	48.98	5.11	1.54	47.37	4.95	1.49	44.15	4.60	1.39
		480.00	57.36	6.02	1.50	54.14	5.64	1.42	54.14	5.30	1.43	48.98	5.11	1.29	47.37	4.95	1.24	44.15	4.60	1.16
	40	160.00	57.36	5.67	4.55	54.14	5.34	4.29	54.14	4.99	4.32	48.98	4.80	3.89	47.37	4.65	3.76	44.15	4.26	3.51
		320.00	57.36	5.37	2.29	54.14	5.03	2.16	54.14	4.69	2.17	48.98	4.80	1.94	47.37	4.31	1.89	44.15	4.26	1.75
		400.00	57.36	5.37	1.83	54.14	5.03	1.73	54.14	4.69	1.74	48.98	4.80	1.55	47.37	4.31	1.51	44.15	4.26	1.40
		480.00	57.36	5.37	1.52	54.14	5.03	1.44	54.14	4.69	1.45	48.98	4.80	1.30	47.37	4.31	1.26	44.15	4.26	1.17
	45	160.00	57.36	5.06	4.60	54.14	5.03	4.32	54.14	4.69	4.35	48.98	4.14	3.94	47.37	4.31	3.79	44.15	3.97	3.53
		320.00	57.36	4.76	2.31	54.14	4.38	2.19	54.14	4.05	2.20	48.98	4.45	1.96	47.37	3.71	1.92	44.15	3.97	1.77
		400.00	57.36	4.76	1.85	54.14	4.38	1.75	54.14	4.05	1.76	48.98	4.45	1.57	47.37	3.71	1.54	44.15	3.97	1.41
		480.00	57.36	4.76	1.54	54.14	4.38	1.46	54.14	4.05	1.47	48.98	4.45	1.31	47.37	3.71	1.28	44.15	3.97	1.18

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

10HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	170.00	85.73	8.72	7.86	109.01	15.21	10.33	109.59	12.35	10.14	110.77	12.40	10.25	112.14	12.40	10.36	114.58	12.48	10.57	116.32	12.38	10.71
		340.00	85.73	8.08	3.90	109.01	14.26	5.13	109.59	11.55	5.04	110.77	11.58	5.09	112.14	11.49	5.14	114.58	11.69	5.25	116.32	11.77	5.33
		425.00	85.73	7.83	3.11	109.01	13.98	4.09	109.59	11.29	4.02	110.77	11.29	4.06	112.14	11.37	4.11	114.58	11.41	4.19	116.32	11.44	4.25
		510.00	85.73	7.70	2.59	109.01	13.79	3.41	109.59	11.22	3.35	110.77	11.17	3.38	112.14	11.31	3.42	114.58	11.30	3.49	116.32	11.27	3.54
	15	170.00	84.49	11.45	7.98	107.55	19.96	10.61	107.81	16.18	10.31	109.11	16.22	10.43	110.10	16.25	10.51	112.98	16.38	10.76	114.73	16.32	10.90
		340.00	84.49	10.56	3.95	107.55	18.73	5.25	107.81	15.12	5.11	109.11	15.17	5.17	110.10	15.16	5.21	112.98	15.36	5.34	114.73	15.38	5.41
		425.00	84.49	10.25	3.15	107.55	18.25	4.19	107.81	14.79	4.08	109.11	14.87	4.13	110.10	14.87	4.16	112.98	15.02	4.26	114.73	15.05	4.32
		510.00	84.49	10.12	2.62	107.55	18.06	3.48	107.81	14.66	3.40	109.11	14.70	3.43	110.10	14.76	3.46	112.98	14.85	3.54	114.73	14.82	3.59
	20	170.00	83.26	13.94	8.09	106.10	24.24	10.84	106.03	19.61	10.45	107.45	19.69	10.58	108.88	19.64	10.69	111.37	19.82	10.91	113.15	19.82	11.06
		340.00	83.26	12.79	4.00	106.10	22.72	5.36	106.03	18.29	5.17	107.45	18.40	5.24	108.88	18.43	5.30	111.37	18.58	5.41	113.15	18.65	5.48
		425.00	83.26	12.41	3.18	106.10	22.15	4.27	106.03	17.96	4.13	107.45	18.05	4.18	108.88	18.03	4.22	111.37	18.24	4.31	113.15	18.21	4.37
		510.00	83.26	12.22	2.65	106.10	21.87	3.55	106.03	17.76	3.43	107.45	17.81	3.47	108.88	17.86	3.51	111.37	18.02	3.59	113.15	17.99	3.64
	25	170.00	83.26	16.40	8.29	99.27	21.45	10.04	102.83	21.77	10.37	104.25	21.83	10.49	105.67	21.98	10.62	107.81	22.01	10.80	109.23	22.01	10.92
		340.00	83.26	15.06	4.09	99.27	20.08	4.96	102.83	20.34	5.12	104.25	20.45	5.19	105.67	20.52	5.25	107.81	20.63	5.34	109.23	20.71	5.41
		425.00	83.26	14.64	3.26	99.27	19.67	3.96	102.83	19.98	4.09	104.25	20.03	4.14	105.67	20.16	4.19	107.81	20.23	4.26	109.23	20.26	4.31
		510.00	83.26	14.46	2.71	99.27	19.40	3.29	102.83	19.75	3.40	104.25	19.81	3.44	105.67	19.95	3.48	107.81	20.02	3.54	109.23	20.01	3.58
	30	170.00	83.26	19.43	8.54	96.07	23.68	9.96	99.27	23.97	10.25	100.34	24.06	10.35	101.76	24.10	10.47	103.54	24.22	10.63	104.96	24.14	10.74
		340.00	83.26	17.81	4.20	96.07	22.17	4.92	99.27	22.39	5.06	100.34	22.50	5.11	101.76	22.58	5.17	103.54	22.69	5.25	104.96	22.72	5.31
		425.00	83.26	17.39	3.35	96.07	21.67	3.92	99.27	21.96	4.03	100.34	22.07	4.07	101.76	22.20	4.12	103.54	22.22	4.18	104.96	22.22	4.23
		510.00	83.26	17.15	2.78	96.07	21.42	3.26	99.27	21.74	3.36	100.34	21.82	3.39	101.76	22.00	3.43	103.54	22.03	3.48	104.96	21.95	3.52
	35	170.00	83.26	23.13	8.85	91.80	25.96	9.80	94.64	26.13	10.05	96.07	26.33	10.18	97.13	26.31	10.27	98.56	26.40	10.40	99.63	26.37	10.48
		340.00	83.26	21.29	4.35	91.80	24.26	4.83	94.64	24.48	4.96	96.07	24.59	5.02	97.13	24.67	5.07	98.56	24.74	5.13	99.63	24.74	5.17
		425.00	83.26	20.66	3.46	91.80	23.72	3.84	94.64	23.95	3.95	96.07	24.07	4.00	97.13	24.20	4.04	98.56	24.29	4.09	99.63	24.20	4.12
		510.00	83.26	20.37	2.87	91.80	23.45	3.20	94.64	23.72	3.28	96.07	23.86	3.33	97.13	23.95	3.36	98.56	24.03	3.40	99.63	23.95	3.43
	40	170.00	73.65	24.41	8.16	81.55	27.39	9.06	84.03	27.60	9.29	85.35	27.75	9.41	86.21	27.75	9.48	87.87	27.86	9.63	88.73	27.79	9.69
		340.00	73.65	22.43	4.00	81.55	25.55	4.45	84.03	25.84	4.57	85.35	25.91	4.63	86.21	26.00	4.67	87.87	26.15	4.74	88.73	26.12	4.78
		425.00	73.65	21.79	3.18	81.55	25.01	3.55	84.03	25.25	3.64	85.35	25.43	3.69	86.21	25.49	3.72	87.87	25.59	3.78	88.73	25.53	3.80
		510.00	73.65	21.51	2.64	81.55	24.74	2.95	84.03	24.95	3.02	85.35	25.17	3.06	86.21	25.23	3.09	87.87	25.34	3.14	88.73	25.23	3.16
	45	170.00	64.50	25.68	7.50	71.29	28.75	8.32	73.42	29.01	8.52	74.63	29.22	8.64	75.28	29.24	8.70	76.79	29.26	8.82	77.44	29.22	8.87
		340.00	64.50	23.56	3.66	71.29	26.91	4.09	73.42	27.13	4.18	74.63	27.27	4.24	75.28	27.29	4.27	76.79	27.50	4.34	77.44	27.50	4.37
		425.00	64.50	22.92	2.91	71.29	26.30	3.25	73.42	26.54	3.33	74.63	26.75	3.37	75.28	26.82	3.40	76.79	26.95	3.45	77.44	26.81	3.47
		510.00	64.50	22.64	2.42	71.29	25.96	2.70	73.42	26.25	2.76	74.63	26.54	2.81	75.28	26.57	2.82	76.79	26.65	2.87	77.44	26.46	2.88
120	10	170.00	78.45	7.58	7.16	93.55	9.84	8.60	106.55	12.12	9.87	108.24	12.09	10.01	109.63	12.22	10.14	112.08	12.24	10.34	114.19	12.25	10.52
		340.00	78.45	6.94	3.55	93.55	9.18	4.27	106.55	11.23	4.90	108.24	11.36	4.98	109.63	11.33	5.03	112.08	11.48	5.14	114.19	11.39	5.22
		425.00	78.45	6.88	2.84	93.55	8.99	3.41	106.55	11.10	3.91	108.24	11.12	3.97	109.63	11.15	4.02	112.08	11.25	4.10	114.19	11.22	4.17
		510.00	78.45	6.82	2.36	93.55	8.92	2.84	106.55	11.03	3.26	108.24	11.00	3.31	109.63	11.03	3.35	112.08	11.13	3.42	114.19	11.10	3.47
	15	170.00	77.65	10.09	7.30	92.68	13.09	8.80	105.63	16.00	10.12	106.96	16.04	10.23	108.36	16.16	10.36	110.83	16.22	10.57	112.96	16.22	10.75
		340.00	77.65	9.21	3.61	92.68	12.25	4.36	105.63	14.91	5.01	106.96	15.01	5.07	108.36	15.08	5.13	110.83	15.17	5.24	112.96	15.19	5.33
		425.00	77.65	9.04	2.88	92.68	11.99	3.48	105.63	14.64	4.00	106.96	14.70	4.05	108.36	14.78	4.10	110.83	14.94	4.19	112.96	14.84	4.25
		510.00	77.65	8.92	2.40	92.68	11.86	2.90	105.63	14.50	3.33	106.96	14.58	3.37	108.36	14.67	3.41	110.83	14.76	3.48	112.96	14.73	3.54
	20	170.00	76.85	12.24	7.41	91.80	15.96	8.96	104.25	19.47	10.29	105.67	19.56	10.42	107.10	19.61	10.54	109.59	19.80	10.76	111.72	19.73	10.94
		340.00	76.85	11.25	3.66	91.80	14.92	4.44	104.25	18.18	5.09	105.67	18.29	5.16	107.10	18.36	5.22	109.59	18.51	5.33	111.72	18.58	5.42
		425.00	76.85	10.96	2.92	91.80	14.59	3.54	104.25	17.77	4.06	105.67	17.92	4.11	107.10	18.06	4.17	109.59	18.16	4.25	111.72	18.12	4.32
		510.00	76.85	10.79	2.43	91.80	14.46	2.95	104.25	17.57	3.38	105.67	17.74	3.42	107.10	17.88	3.47	109.59	17.98	3.54	111.72	17.89	3.59
	25	170.00	76.85	14.38	7.59	91.80	18.78	9.20	101.05	21.65	10.21	102.47	21.72	10.33	104.25	21.87	10.49	106.39	21.93	10.68	108.16	22.04	10.83
		340.00	76.85	13.27	3.75	91.80	17.59	4.55	101.05	20.23	5.04	102.47	20.34	5.11	104.25	20.41	5.19	106.39	20.56	5.28	108.16	20.63	5.36
		425.00	76.85	12.88	2.99	91.80	17.16	3.63	101.05	19.86	4.02	102.47	19.90	4.07	104.25	20.09	4.14	106.39	20.14	4.21	1		

VRF MW



10HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	170.00	71.22	6.57	6.47	84.81	8.49	7.76	98.75	10.68	9.10	104.42	11.83	9.67	105.83	11.88	9.79	109.09	11.92	10.07	111.22	11.98	10.25
		340.00	71.22	6.04	3.21	84.81	7.90	3.86	98.75	10.03	4.52	104.42	11.07	4.80	105.83	11.20	4.87	109.09	11.08	5.00	111.22	11.20	5.09
		425.00	71.22	5.83	2.56	84.81	7.73	3.08	98.75	9.84	3.61	104.42	10.88	3.84	105.83	10.89	3.88	109.09	10.89	3.99	111.22	11.08	4.07
		510.00	71.22	5.72	2.13	84.81	7.67	2.56	98.75	9.71	3.01	104.42	10.76	3.19	105.83	10.77	3.23	109.09	10.77	3.32	111.22	10.96	3.39
	15	170.00	70.83	8.75	6.62	84.39	11.32	7.96	98.30	14.41	9.38	103.98	15.85	9.97	105.39	15.90	10.09	108.66	15.98	10.37	110.37	16.11	10.52
		340.00	70.83	8.06	3.28	84.39	10.56	3.95	98.30	13.44	4.65	103.98	14.84	4.94	105.39	14.91	5.00	108.66	14.95	5.14	110.37	15.09	5.22
		425.00	70.83	7.79	2.62	84.39	10.32	3.15	98.30	13.18	3.71	103.98	14.53	3.94	105.39	14.66	4.00	108.66	14.65	4.10	110.37	14.73	4.16
		510.00	70.83	7.69	2.18	84.39	10.26	2.62	98.30	12.99	3.09	103.98	14.40	3.28	105.39	14.48	3.32	108.66	14.53	3.42	110.37	14.56	3.46
	20	170.00	70.45	10.71	6.75	83.97	13.92	8.14	97.85	17.62	9.61	103.54	19.37	10.23	104.96	19.55	10.36	107.81	19.61	10.60	109.94	19.77	10.79
		340.00	70.45	9.86	3.34	83.97	12.97	4.03	97.85	16.53	4.76	103.54	18.18	5.06	104.96	18.25	5.13	107.81	18.40	5.25	109.94	18.51	5.34
		425.00	70.45	9.54	2.66	83.97	12.68	3.22	97.85	16.14	3.79	103.54	17.80	4.04	104.96	18.00	4.09	107.81	18.04	4.19	109.94	18.03	4.26
		510.00	70.45	9.38	2.21	83.97	12.56	2.68	97.85	15.95	3.16	103.54	17.61	3.36	104.96	17.82	3.40	107.81	17.85	3.48	109.94	17.79	3.54
	25	170.00	70.45	12.60	6.91	83.97	16.36	8.35	97.85	20.86	9.88	100.69	21.56	10.17	102.12	21.71	10.30	104.61	21.77	10.51	106.74	21.97	10.71
		340.00	70.45	11.58	3.41	83.97	15.28	4.13	97.85	19.50	4.88	100.69	20.19	5.03	102.12	20.30	5.09	104.61	20.45	5.20	106.74	20.56	5.30
		425.00	70.45	11.28	2.72	83.97	14.94	3.29	97.85	19.06	3.89	100.69	19.74	4.01	102.12	19.97	4.06	104.61	20.01	4.15	106.74	20.07	4.22
		510.00	70.45	11.07	2.26	83.97	14.77	2.74	97.85	18.88	3.24	100.69	19.51	3.33	102.12	19.74	3.38	104.61	19.79	3.45	106.74	19.80	3.51
	30	170.00	70.45	14.85	7.10	83.97	19.43	8.60	95.71	23.64	9.93	97.13	23.80	10.06	98.20	23.93	10.16	100.69	24.04	10.38	102.47	24.17	10.54
		340.00	70.45	13.67	3.50	83.97	18.11	4.25	95.71	22.14	4.90	97.13	22.25	4.97	98.20	22.36	5.01	100.69	22.50	5.12	102.47	22.65	5.20
		425.00	70.45	13.33	2.79	83.97	17.77	3.39	95.71	21.62	3.90	97.13	21.83	3.96	98.20	21.95	4.00	100.69	22.06	4.08	102.47	22.11	4.15
		510.00	70.45	13.13	2.32	83.97	17.55	2.82	95.71	21.39	3.25	97.13	21.58	3.29	98.20	21.75	3.33	100.69	21.86	3.40	102.47	21.81	3.45
	35	170.00	70.29	17.76	7.33	83.97	23.15	8.91	91.44	28.27	9.96	92.87	26.02	9.89	93.93	26.10	9.99	96.07	26.26	10.18	97.85	26.40	10.34
		340.00	70.29	16.35	3.60	83.97	21.62	4.39	91.44	26.48	4.90	92.87	24.34	4.88	93.93	24.45	4.92	96.07	24.59	5.02	97.85	24.70	5.10
		425.00	70.29	15.89	2.87	83.97	21.18	3.50	91.44	25.94	3.91	92.87	23.90	3.89	93.93	23.97	3.92	96.07	24.12	4.00	97.85	24.13	4.06
		510.00	70.29	15.66	2.38	83.97	20.93	2.91	91.44	25.61	3.25	92.87	23.63	3.23	93.93	23.70	3.26	96.07	23.91	3.33	97.85	23.83	3.37
	40	170.00	65.36	19.52	7.06	78.07	25.43	8.61	84.65	31.13	9.63	85.69	28.57	9.51	86.87	28.71	9.61	89.12	28.82	9.81	90.94	28.98	9.98
		340.00	65.36	17.94	3.46	78.07	23.78	4.24	84.65	29.07	4.73	85.69	26.73	4.68	86.87	26.84	4.73	89.12	26.99	4.83	90.94	27.18	4.91
		425.00	65.36	17.42	2.75	78.07	23.27	3.37	84.65	28.47	3.76	85.69	26.24	3.72	86.87	26.31	3.77	89.12	26.47	3.85	90.94	26.51	3.91
		510.00	65.36	17.20	2.29	78.07	23.02	2.80	84.65	28.21	3.13	85.69	25.97	3.10	86.87	26.10	3.13	89.12	26.26	3.20	90.94	26.15	3.25
	45	170.00	60.01	21.28	6.76	71.71	27.71	8.27	78.31	33.93	9.34	78.94	31.13	9.16	80.22	31.26	9.27	82.17	31.38	9.45	83.64	31.56	9.58
		340.00	60.01	19.52	3.31	71.71	25.94	4.06	78.31	31.60	4.57	78.94	29.17	4.50	80.22	29.19	4.55	82.17	29.40	4.64	83.64	29.65	4.71
		425.00	60.01	19.01	2.63	71.71	25.36	3.23	78.31	31.07	3.64	78.94	28.57	3.58	80.22	28.71	3.62	82.17	28.87	3.70	83.64	28.88	3.74
		510.00	60.01	18.73	2.18	71.71	25.05	2.68	78.31	30.80	3.03	78.94	28.30	2.97	80.22	28.44	3.01	82.17	28.61	3.07	83.64	28.52	3.11
100	10	170.00	64.04	5.52	5.79	76.50	7.13	6.96	88.95	9.07	8.15	95.00	10.07	8.74	101.05	11.20	9.34	112.40	11.69	10.32	107.81	11.81	9.95
		340.00	64.04	5.09	2.88	76.50	6.60	3.46	88.95	8.49	4.05	95.00	9.50	4.35	101.05	10.59	4.64	112.40	10.94	5.13	107.81	10.94	4.94
		425.00	64.04	4.99	2.30	76.50	6.44	2.76	88.95	8.31	3.24	95.00	9.21	3.47	101.05	10.28	3.70	112.40	10.75	4.10	107.81	10.75	3.95
		510.00	64.04	4.99	1.91	76.50	6.39	2.30	88.95	8.26	2.70	95.00	9.10	2.89	101.05	10.15	3.08	112.40	10.62	3.41	107.81	10.69	3.29
	15	170.00	64.04	7.53	5.95	76.50	9.66	7.17	88.95	12.30	8.42	95.00	13.74	9.05	101.05	15.17	9.67	112.40	15.84	10.67	107.81	15.97	10.30
		340.00	64.04	6.91	2.95	76.50	9.03	3.56	88.95	11.49	4.18	95.00	12.82	4.48	101.05	14.24	4.80	112.40	14.83	5.29	107.81	14.92	5.11
		425.00	64.04	6.76	2.36	76.50	8.82	2.84	88.95	11.26	3.33	95.00	12.59	3.58	101.05	13.93	3.83	112.40	14.52	4.22	107.81	14.54	4.07
		510.00	64.04	6.67	1.96	76.50	8.71	2.36	88.95	11.14	2.78	95.00	12.42	2.98	101.05	13.80	3.19	112.40	14.39	3.52	107.81	14.36	3.39
	20	170.00	64.04	9.26	6.10	76.50	11.88	7.35	88.95	15.19	8.66	95.00	16.94	9.31	101.05	18.76	9.97	112.40	19.48	10.97	107.81	19.64	10.60
		340.00	64.04	8.54	3.02	76.50	11.14	3.65	88.95	14.15	4.29	95.00	15.80	4.61	101.05	17.52	4.93	112.40	18.29	5.44	107.81	18.40	5.25
		425.00	64.04	8.30	2.41	76.50	10.93	2.91	88.95	13.92	3.42	95.00	15.57	3.68	101.05	17.21	3.94	112.40	17.91	4.34	107.81	17.90	4.18
		510.00	64.04	8.16	2.00	76.50	10.77	2.42	88.95	13.74	2.85	95.00	15.40	3.06	101.05	17.09	3.28	112.40	17.72	3.61	107.81	17.59	3.48
	25	170.00	64.04	10.88	6.23	76.50	14.04	7.53	88.95	17.84	8.88	95.00	19.89	9.56	99.98	21.62	10.12	102.47	21.66	10.33	104.61	21.93	10.53
		340.00	64.04	10.01	3.08	76.50	13.12	3.73	88.95	16.68	4.39	95.00	18.62	4.73	99.98	20.16	5.00	102.47	20.34	5.11	104.61	20.45	5.20
		425.00	64.04	9.73	2.45	76.50	12.87	2.97	88.95	16.29	3.50	95.00	18.23	3.77	99.98	19.81	3.99	102.47	19.94	4.07	104.61	19.94	4.14
		510.00	64.04	9.59	2.04	76.50	12.7																

10HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																					
			14.00			16.00			18.00			19.00			20.00			22.00			24.00			
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	TC °C	
90	10	170.00	57.64	4.79	5.19	68.67	6.08	6.22	80.06	7.59	7.29	85.39	8.50	7.81	91.09	9.42	8.36	102.12	11.45	9.45	105.67	11.69	9.76	
		340.00	57.64	4.46	2.58	68.67	5.72	3.09	80.06	7.19	3.63	85.39	7.99	3.88	91.09	8.82	4.16	102.12	10.67	4.69	105.67	10.90	4.85	
		425.00	57.64	4.26	2.06	68.67	5.61	2.47	80.06	6.96	2.90	85.39	7.83	3.10	91.09	8.63	3.32	102.12	10.45	3.75	105.67	10.61	3.87	
		510.00	57.64	4.17	1.71	68.67	5.56	2.06	80.06	6.85	2.41	85.39	7.71	2.58	91.09	8.57	2.76	102.12	10.38	3.12	105.67	10.47	3.22	
	15	170.00	57.64	6.47	5.33	68.67	8.29	6.40	80.06	10.36	7.52	85.39	11.57	8.07	91.09	12.74	8.64	102.12	15.43	9.78	105.67	15.85	10.11	
		340.00	57.64	5.99	2.65	68.67	7.71	3.18	80.06	9.74	3.74	85.39	10.79	4.00	91.09	11.96	4.29	102.12	14.43	4.85	105.67	14.85	5.01	
		425.00	57.64	5.80	2.11	68.67	7.55	2.54	80.06	9.51	2.98	85.39	10.62	3.20	91.09	11.71	3.42	102.12	14.15	3.87	105.67	14.42	4.00	
		510.00	57.64	5.70	1.76	68.67	7.50	2.11	80.06	9.40	2.48	85.39	10.51	2.66	91.09	11.59	2.85	102.12	14.01	3.22	105.67	14.20	3.32	
	20	170.00	57.64	7.95	5.46	68.67	10.17	6.56	80.06	12.80	7.72	85.39	14.25	8.29	91.09	15.70	8.88	102.12	18.98	10.07	105.67	19.51	10.41	
		340.00	57.64	7.33	2.70	68.67	9.49	3.25	80.06	11.95	3.83	85.39	13.30	4.11	91.09	14.73	4.40	102.12	17.78	4.99	105.67	18.29	5.16	
		425.00	57.64	7.14	2.16	68.67	9.28	2.59	80.06	11.78	3.06	85.39	13.08	3.28	91.09	14.49	3.51	102.12	17.42	3.98	105.67	17.79	4.11	
		510.00	57.64	7.04	1.79	68.67	9.18	2.16	80.06	11.66	2.54	85.39	12.97	2.73	91.09	14.31	2.92	102.12	17.28	3.31	105.67	17.57	3.42	
	25	170.00	57.64	9.31	5.57	68.67	11.89	6.70	80.06	15.06	7.91	85.39	16.71	8.49	91.09	18.60	9.13	99.98	21.48	10.10	102.47	21.75	10.33	
		340.00	57.64	8.58	2.75	68.67	11.14	3.32	80.06	14.07	3.92	85.39	15.69	4.20	91.09	17.37	4.51	99.98	20.16	5.00	102.47	20.30	5.11	
		425.00	57.64	8.30	2.19	68.67	10.89	2.65	80.06	13.85	3.13	85.39	15.36	3.35	91.09	17.02	3.60	99.98	19.76	3.98	102.47	19.85	4.07	
		510.00	57.64	8.16	1.82	68.67	10.79	2.20	80.06	13.69	2.60	85.39	15.20	2.79	91.09	16.90	2.99	99.98	19.56	3.32	102.47	19.58	3.38	
	30	170.00	57.64	11.00	5.71	68.67	14.02	6.88	80.06	18.75	8.22	85.39	19.88	8.76	91.09	22.00	9.41	96.42	23.75	10.00	98.56	23.92	10.19	
		340.00	57.64	10.08	2.82	68.67	13.16	3.40	80.06	17.48	4.06	85.39	18.58	4.33	91.09	20.60	4.65	96.42	22.21	4.93	98.56	22.39	5.03	
		425.00	57.64	9.86	2.25	68.67	12.87	2.71	80.06	17.10	3.23	85.39	18.22	3.45	91.09	20.20	3.70	96.42	21.80	3.93	98.56	21.81	4.01	
		510.00	57.64	9.73	1.87	68.67	12.72	2.26	80.06	16.93	2.69	85.39	18.01	2.87	91.09	20.03	3.08	96.42	21.56	3.27	98.56	21.46	3.33	
	35	170.00	57.64	13.01	5.88	68.67	16.71	7.10	80.06	21.30	8.43	85.39	23.71	9.08	90.02	25.79	9.63	92.51	25.92	9.85	94.29	26.11	10.02	
		340.00	57.64	11.95	2.89	68.67	15.65	3.51	80.06	19.90	4.16	85.39	22.21	4.48	90.02	24.08	4.75	92.51	24.30	4.86	94.29	24.45	4.94	
		425.00	57.64	11.61	2.30	68.67	15.33	2.80	80.06	19.49	3.31	85.39	21.75	3.57	90.02	23.71	3.78	92.51	23.82	3.87	94.29	23.79	3.93	
		510.00	57.64	11.42	1.92	68.67	15.12	2.32	80.06	19.26	2.75	85.39	21.52	2.96	90.02	23.47	3.15	92.51	23.58	3.22	94.29	23.44	3.26	
	40	170.00	55.76	14.89	5.88	66.60	19.22	7.14	77.83	24.50	8.51	82.78	27.22	9.15	87.34	29.64	9.73	89.87	29.82	9.96	91.23	30.02	10.09	
		340.00	55.76	13.73	2.89	66.60	17.99	3.52	77.83	22.87	4.19	82.78	25.43	4.50	87.34	27.75	4.79	89.87	27.90	4.90	91.23	28.06	4.96	
		425.00	55.76	13.30	2.30	66.60	17.57	2.80	77.83	22.40	3.34	82.78	24.97	3.59	87.34	27.20	3.81	89.87	27.42	3.90	91.23	27.35	3.95	
		510.00	55.76	13.10	1.91	66.60	17.35	2.33	77.83	22.17	2.77	82.78	24.74	2.98	87.34	26.95	3.17	89.87	27.12	3.24	91.23	27.00	3.28	
	45	170.00	54.25	16.81	5.91	64.53	21.72	7.18	75.61	27.64	8.59	80.60	30.78	9.27	84.67	33.49	9.83	87.22	33.72	10.06	88.61	33.88	10.19	
		340.00	54.25	15.51	2.90	64.53	20.28	3.53	75.61	25.84	4.22	80.60	28.71	4.55	84.67	31.35	4.83	87.22	31.50	4.94	88.61	31.74	5.01	
		425.00	54.25	15.03	2.31	64.53	19.85	2.81	75.61	25.31	3.36	80.60	28.19	3.62	84.67	30.74	3.84	87.22	30.96	3.93	88.61	30.97	3.98	
		510.00	54.25	14.79	1.91	64.53	19.59	2.33	75.61	25.02	2.79	80.60	27.91	3.01	84.67	30.44	3.19	87.22	30.66	3.27	88.61	30.56	3.30	
	80	10	170.00	51.24	4.02	4.60	61.20	5.08	5.51	71.16	6.36	6.45	76.14	7.14	6.93	80.77	7.80	7.37	90.73	9.47	8.34	100.69	11.09	9.30
			340.00	51.24	3.68	2.28	61.20	4.81	2.75	71.16	5.91	3.21	76.14	6.64	3.44	80.77	7.26	3.66	90.73	8.77	4.14	100.69	10.36	4.62
			425.00	51.24	3.58	1.82	61.20	4.66	2.19	71.16	5.80	2.56	76.14	6.42	2.75	80.77	7.08	2.92	90.73	8.63	3.31	100.69	10.19	3.69
			510.00	51.24	3.58	1.52	61.20	4.55	1.82	71.16	5.80	2.13	76.14	6.31	2.29	80.77	6.97	2.43	90.73	8.63	2.76	100.69	10.19	3.08
		15	170.00	51.24	5.47	4.72	61.20	6.91	5.67	71.16	8.67	6.64	76.14	9.63	7.14	80.77	10.54	7.60	90.73	12.77	8.61	100.69	15.09	9.63
			340.00	51.24	5.03	2.34	61.20	6.49	2.82	71.16	8.05	3.30	76.14	8.97	3.54	80.77	9.88	3.77	90.73	11.92	4.27	100.69	14.11	4.78
			425.00	51.24	4.89	1.87	61.20	6.33	2.25	71.16	7.94	2.63	76.14	8.74	2.82	80.77	9.64	3.01	90.73	11.71	3.41	100.69	13.78	3.81
			510.00	51.24	4.84	1.56	61.20	6.23	1.87	71.16	7.83	2.19	76.14	8.69	2.35	80.77	9.53	2.50	90.73	11.64	2.84	100.69	13.62	3.17
		20	170.00	51.24	6.77	4.83	61.20	8.53	5.80	71.16	10.70	6.81	76.14	11.79	7.32	80.77	13.04	7.80	90.73	15.71	8.86	100.69	18.60	9.92
			340.00	51.24	6.19	2.39	61.20	7.95	2.88	71.16	9.97	3.37	76.14	11.07	3.63	80.77	12.20	3.87	90.73	14.66	4.38	100.69	17.37	4.91
			425.00	51.24	6.05	1.91	61.20	7.80	2.30	71.16	9.80	2.69	76.14	10.85	2.89	80.77	11.97	3.09	90.73	14.45	3.50	100.69	16.96	3.92
			510.00	51.24	5.95	1.59	61.20	7.74	1.91	71.16	9.69	2.24	76.14	10.74	2.41	80.77	11.85	2.57	90.73	14.31	2.91	100.69	16.72	3.26
		25	170.00	51.24	7.86	4.92	61.20	9.95	5.92	71.16	12.54	6.96	76.14	13.92	7.49	80.77	15.41	8.00	90.73	18.52	9.09	99.98	21.55	10.11
			340.00	51.24	7.26	2.43	61.20	9.35	2.93	71.16	11.73	3.45	76.14	13.01	3.71	80.77	14.37	3.96	90.73	17.30	4.49	99.98	20.16	5.00
			425.00	51.24	7.03	1.94	61.20	9.14	2.34	71.16	11.51	2.75	76.14	12.80	2.96	80.77	14.08	3.16	90.73	16.96	3.58	99.98	19.69	3.98
			510.00	51.24	6.93	1.61	61.20	9.04	1.95	71.16	11.40	2.29	76.14	12.64	2.46	80.77	13.96	2.63	90.73	16.83	2.98	99.98	19.38	3.31
30		170.00	51.24	9.26																				

VRF MW



10HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																							
			14.00			16.00			18.00			19.00			20.00			22.00			24.00					
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC			
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C			
70	10	170.00	44.83	3.40	4.01	53.37	4.24	4.79	62.27	5.28	5.62	66.54	5.81	6.02	70.81	6.31	6.42	79.34	7.62	7.23	88.24	8.91	8.08			
		340.00	44.83	3.11	1.99	53.37	3.98	2.39	62.27	4.95	2.80	66.54	5.43	2.99	70.81	5.96	3.19	79.34	7.08	3.59	88.24	8.44	4.02			
		425.00	44.83	3.02	1.59	53.37	3.82	1.90	62.27	4.78	2.23	66.54	5.27	2.39	70.81	5.78	2.55	79.34	7.01	2.87	88.24	8.20	3.21			
		510.00	44.83	2.92	1.32	53.37	3.77	1.58	62.27	4.73	1.86	66.54	5.21	1.99	70.81	5.67	2.12	79.34	6.94	2.39	88.24	8.13	2.67			
	15	170.00	44.83	4.57	4.11	53.37	5.71	4.91	62.27	7.12	5.77	66.54	7.82	6.19	70.81	8.59	6.61	79.34	10.27	7.46	88.24	12.15	8.35			
		340.00	44.83	4.23	2.04	53.37	5.39	2.44	62.27	6.67	2.87	66.54	7.33	3.07	70.81	8.06	3.28	79.34	9.59	3.70	88.24	11.36	4.14			
		425.00	44.83	4.09	1.63	53.37	5.24	1.95	62.27	6.51	2.29	66.54	7.17	2.45	70.81	7.89	2.62	79.34	9.46	2.96	88.24	11.12	3.31			
		510.00	44.83	4.04	1.36	53.37	5.18	1.62	62.27	6.45	1.91	66.54	7.11	2.04	70.81	7.77	2.18	79.34	9.32	2.46	88.24	10.97	2.75			
	20	170.00	44.83	5.64	4.20	53.37	7.07	5.03	62.27	8.78	5.91	66.54	9.61	6.34	70.81	10.63	6.78	79.34	12.65	7.65	88.24	14.99	8.59			
		340.00	44.83	5.20	2.08	53.37	6.60	2.49	62.27	8.17	2.93	66.54	9.02	3.14	70.81	9.93	3.36	79.34	11.84	3.79	88.24	13.96	4.25			
		425.00	44.83	5.06	1.66	53.37	6.49	1.99	62.27	8.01	2.34	66.54	8.85	2.51	70.81	9.76	2.68	79.34	11.63	3.03	88.24	13.65	3.39			
		510.00	44.83	4.96	1.38	53.37	6.39	1.66	62.27	7.95	1.95	66.54	8.80	2.09	70.81	9.70	2.23	79.34	11.50	2.52	88.24	13.41	2.82			
	25	170.00	44.83	6.56	4.28	53.37	8.19	5.12	62.27	10.20	6.03	66.54	11.32	6.48	70.81	12.44	6.93	79.34	14.95	7.84	88.24	17.60	8.81			
		340.00	44.83	6.05	2.12	53.37	7.70	2.54	62.27	9.57	2.99	66.54	10.59	3.21	70.81	11.65	3.43	79.34	13.96	3.88	88.24	16.46	4.35			
		425.00	44.83	5.86	1.69	53.37	7.50	2.03	62.27	9.35	2.38	66.54	10.33	2.56	70.81	11.43	2.74	79.34	13.70	3.10	88.24	16.00	3.47			
		510.00	44.83	5.81	1.40	53.37	7.40	1.69	62.27	9.25	1.98	66.54	10.23	2.13	70.81	11.32	2.28	79.34	13.63	2.58	88.24	15.85	2.89			
	30	170.00	44.83	7.69	4.37	53.37	9.67	5.24	62.27	12.11	6.19	66.54	13.35	6.65	70.81	14.75	7.12	79.34	17.67	8.07	88.24	20.86	9.08			
		340.00	44.83	7.07	2.16	53.37	9.05	2.60	62.27	11.29	3.06	66.54	12.50	3.29	70.81	13.78	3.52	79.34	16.53	3.99	88.24	19.53	4.48			
		425.00	44.83	6.90	1.72	53.37	8.86	2.07	62.27	11.08	2.44	66.54	12.25	2.62	70.81	13.51	2.81	79.34	16.28	3.18	88.24	19.02	3.57			
		510.00	44.83	6.76	1.43	53.37	8.77	1.72	62.27	10.98	2.03	66.54	12.15	2.18	70.81	13.40	2.34	79.34	16.09	2.65	88.24	18.80	2.97			
	35	170.00	44.83	9.02	4.48	53.37	11.41	5.39	62.27	14.28	6.37	66.54	15.92	6.86	70.81	19.17	7.49	79.34	21.01	8.35	88.24	24.92	9.41			
		340.00	44.83	8.32	2.21	53.37	10.70	2.67	62.27	13.30	3.14	66.54	14.84	3.39	70.81	17.90	3.69	79.34	19.72	4.12	88.24	23.35	4.64			
		425.00	44.83	8.09	1.76	53.37	10.50	2.13	62.27	13.09	2.51	66.54	14.63	2.70	70.81	17.59	2.94	79.34	19.31	3.28	88.24	22.72	3.69			
		510.00	44.83	7.95	1.46	53.37	10.35	1.77	62.27	12.92	2.09	66.54	14.47	2.25	70.81	17.46	2.45	79.34	19.11	2.73	88.24	22.32	3.07			
	40	170.00	44.83	10.70	4.62	53.37	13.54	5.57	62.27	16.89	6.59	66.54	18.82	7.10	70.81	22.65	7.77	79.34	24.94	8.68	88.24	29.50	9.79			
		340.00	44.83	9.82	2.27	53.37	12.68	2.75	62.27	15.80	3.25	66.54	17.59	3.50	70.81	21.26	3.83	79.34	23.31	4.27	88.24	27.61	4.82			
		425.00	44.83	9.58	1.81	53.37	12.38	2.19	62.27	15.48	2.59	66.54	17.32	2.79	70.81	20.81	3.05	79.34	22.90	3.40	88.24	26.90	3.83			
		510.00	44.83	9.44	1.51	53.37	12.22	1.82	62.27	15.31	2.15	66.54	17.16	2.32	70.81	20.62	2.54	79.34	22.63	2.83	88.24	26.58	3.18			
	45	170.00	44.83	12.39	4.76	53.37	15.62	5.74	62.27	19.49	6.80	66.54	21.73	7.34	70.81	26.19	8.07	79.34	28.80	9.00	88.24	34.15	10.18			
		340.00	44.83	11.31	2.34	53.37	14.66	2.83	62.27	18.25	3.35	66.54	20.33	3.61	70.81	24.61	3.97	79.34	26.97	4.42	88.24	31.86	5.00			
		425.00	44.83	11.08	1.86	53.37	14.30	2.25	62.27	17.87	2.67	66.54	20.01	2.88	70.81	24.04	3.16	79.34	26.43	3.52	88.24	31.15	3.97			
		510.00	44.83	10.94	1.55	53.37	14.15	1.87	62.27	17.70	2.22	66.54	19.79	2.39	70.81	23.79	2.62	79.34	26.22	2.93	88.24	30.84	3.30			
60	10	170.00	38.43	2.80	3.43	45.90	3.44	4.10	53.37	4.17	4.79	56.93	4.63	5.12	60.84	5.04	5.48	67.96	6.05	6.16	75.43	7.07	6.86			
		340.00	38.43	2.55	1.70	45.90	3.23	2.04	53.37	3.89	2.38	56.93	4.35	2.55	60.84	4.64	2.72	67.96	5.58	3.06	75.43	6.61	3.41			
		425.00	38.43	2.45	1.36	45.90	3.13	1.63	53.37	3.84	1.90	56.93	4.24	2.04	60.84	4.58	2.18	67.96	5.45	2.44	75.43	6.37	2.72			
		510.00	38.43	2.40	1.13	45.90	3.07	1.36	53.37	3.84	1.59	56.93	4.19	1.69	60.84	4.52	1.81	67.96	5.38	2.03	75.43	6.22	2.26			
	15	170.00	38.43	3.75	3.51	45.90	4.66	4.21	53.37	5.67	4.91	56.93	6.26	5.26	60.84	6.84	5.63	67.96	8.14	6.33	75.43	9.56	7.07			
		340.00	38.43	3.45	1.74	45.90	4.34	2.09	53.37	5.28	2.44	56.93	5.88	2.61	60.84	6.32	2.79	67.96	7.53	3.14	75.43	8.94	3.51			
		425.00	38.43	3.35	1.39	45.90	4.24	1.67	53.37	5.17	1.95	56.93	5.77	2.09	60.84	6.26	2.23	67.96	7.40	2.51	75.43	8.63	2.80			
		510.00	38.43	3.30	1.16	45.90	4.19	1.39	53.37	5.11	1.62	56.93	5.71	1.74	60.84	6.20	1.86	67.96	7.33	2.09	75.43	8.47	2.33			
	20	170.00	38.43	4.60	3.58	45.90	5.72	4.29	53.37	6.95	5.02	56.93	7.67	5.37	60.84	8.40	5.76	67.96	9.95	6.48	75.43	11.74	7.25			
		340.00	38.43	4.25	1.78	45.90	5.35	2.13	53.37	6.56	2.49	56.93	7.18	2.67	60.84	7.88	2.86	67.96	9.35	3.22	75.43	10.96	3.59			
		425.00	38.43	4.15	1.42	45.90	5.24	1.70	53.37	6.39	1.99	56.93	7.07	2.13	60.84	7.71	2.28	67.96	9.21	2.57	75.43	10.73	2.87			
		510.00	38.43	4.10	1.18	45.90	5.19	1.42	53.37	6.34	1.66	56.93	7.02	1.77	60.84	7.65	1.90	67.96	9.14	2.14	75.43	10.57	2.38			
	25	170.00	38.43	5.38	3.64	45.90	6.64	4.37	53.37	8.20	5.12	56.93	9.06	5.49	60.84	9.85	5.88	67.96	11.71	6.63	75.43	13.72	7.42			
		340.00	38.43	4.95	1.80	45.90	6.23	2.17	53.37	7.66	2.54	56.93	8.43	2.72	60.84	9.24	2.92	67.96	11.00	3.28	75.43	12.90	3.67			
		425.00	38.43	4.81	1.44	45.90	6.13	1.73	53.37	7.55	2.03	56.93	8.27	2.17	60.84	9.07	2.33	67.96	10.74	2.62	75.43	12.53	2.93			
		510.00	38.43	4.76	1.20	45.90	6.08	1.44	53.37	7.45	1.69	56.93	8.22	1.81	60.84	9.01	1.94	67.96	10.61	2.18	75.43	12.38	2.44			
	30	170.00	38.43	6.34	3.72	45.90	7.82	4.47	53.37	9.64	5.24	56.93	10.60	5.62	60.84	11.64	6.03	67								

10HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	170.00	32.02	2.24	2.85	38.07	2.72	3.39	44.48	3.32	3.98	47.68	3.63	4.27	50.52	3.86	4.52	56.93	4.54	5.11	62.98	5.34	5.68
		340.00	32.02	2.13	1.42	38.07	2.55	1.69	44.48	3.03	1.98	47.68	3.34	2.12	50.52	3.67	2.25	56.93	4.26	2.55	62.98	5.02	2.83
		425.00	32.02	2.02	1.13	38.07	2.49	1.35	44.48	3.03	1.58	47.68	3.23	1.69	50.52	3.55	1.80	56.93	4.12	2.03	62.98	4.79	2.26
		510.00	32.02	1.97	0.94	38.07	2.44	1.12	44.48	3.03	1.32	47.68	3.17	1.41	50.52	3.49	1.50	56.93	4.05	1.69	62.98	4.63	1.87
	15	170.00	32.02	3.06	2.92	38.07	3.68	3.47	44.48	4.43	4.07	47.68	4.87	4.37	50.52	5.30	4.64	56.93	6.18	5.25	62.98	7.14	5.83
		340.00	32.02	2.84	1.45	38.07	3.46	1.73	44.48	4.14	2.02	47.68	4.53	2.17	50.52	4.94	2.31	56.93	5.77	2.61	62.98	6.75	2.90
		425.00	32.02	2.73	1.16	38.07	3.34	1.38	44.48	4.08	1.62	47.68	4.42	1.73	50.52	4.82	1.84	56.93	5.63	2.08	62.98	6.51	2.31
		510.00	32.02	2.68	0.96	38.07	3.29	1.15	44.48	4.02	1.34	47.68	4.36	1.44	50.52	4.76	1.53	56.93	5.57	1.73	62.98	6.44	1.92
	20	170.00	32.02	3.77	2.98	38.07	4.53	3.54	44.48	5.42	4.15	47.68	6.00	4.47	50.52	6.51	4.74	56.93	7.56	5.36	62.98	8.79	5.97
		340.00	32.02	3.45	1.48	38.07	4.25	1.76	44.48	5.13	2.06	47.68	5.61	2.22	50.52	6.08	2.35	56.93	7.15	2.67	62.98	8.32	2.97
		425.00	32.02	3.34	1.18	38.07	4.19	1.41	44.48	5.01	1.65	47.68	5.49	1.77	50.52	5.96	1.88	56.93	7.01	2.13	62.98	8.08	2.36
		510.00	32.02	3.28	0.98	38.07	4.14	1.17	44.48	4.96	1.37	47.68	5.44	1.47	50.52	5.90	1.56	56.93	6.94	1.77	62.98	7.93	1.97
	25	170.00	32.02	4.36	3.03	38.07	5.29	3.61	44.48	6.36	4.23	47.68	6.90	4.54	50.52	7.57	4.83	56.93	8.99	5.48	62.98	10.51	6.11
		340.00	32.02	3.99	1.50	38.07	4.91	1.79	44.48	5.97	2.10	47.68	6.52	2.25	50.52	7.11	2.40	56.93	8.39	2.72	62.98	9.75	3.03
		425.00	32.02	3.89	1.20	38.07	4.86	1.43	44.48	5.86	1.68	47.68	6.36	1.80	50.52	6.94	1.91	56.93	8.26	2.17	62.98	9.52	2.41
		510.00	32.02	3.89	1.00	38.07	4.80	1.19	44.48	5.81	1.39	47.68	6.25	1.50	50.52	6.82	1.59	56.93	8.13	1.80	62.98	9.44	2.01
	30	170.00	32.02	5.06	3.08	38.07	6.12	3.68	44.48	7.50	4.32	47.68	8.18	4.65	50.52	8.91	4.94	56.93	10.49	5.61	62.98	12.27	6.26
		340.00	32.02	4.62	1.52	38.07	5.72	1.82	44.48	6.96	2.14	47.68	7.66	2.30	50.52	8.36	2.45	56.93	9.86	2.78	62.98	11.47	3.10
		425.00	32.02	4.47	1.21	38.07	5.57	1.45	44.48	6.80	1.71	47.68	7.50	1.84	50.52	8.19	1.95	56.93	9.67	2.22	62.98	11.18	2.47
		510.00	32.02	4.42	1.01	38.07	5.52	1.21	44.48	6.75	1.42	47.68	7.45	1.53	50.52	8.14	1.63	56.93	9.54	1.84	62.98	10.96	2.05
	35	170.00	32.02	5.84	3.15	38.07	7.19	3.77	44.48	8.83	4.43	47.68	9.62	4.77	50.52	10.56	5.08	56.93	12.46	5.77	62.98	14.65	6.46
		340.00	32.02	5.39	1.56	38.07	6.71	1.86	44.48	8.21	2.19	47.68	9.02	2.36	50.52	9.86	2.51	56.93	11.65	2.85	62.98	13.63	3.19
		425.00	32.02	5.24	1.24	38.07	6.60	1.49	44.48	8.04	1.75	47.68	8.85	1.88	50.52	9.68	2.00	56.93	11.45	2.28	62.98	13.32	2.54
		510.00	32.02	5.13	1.03	38.07	6.49	1.24	44.48	7.98	1.45	47.68	8.80	1.57	50.52	9.62	1.67	56.93	11.32	1.89	62.98	13.09	2.11
	40	170.00	32.02	6.91	3.24	38.07	8.48	3.87	44.48	10.40	4.57	47.68	11.43	4.92	50.52	12.50	5.24	56.93	14.75	5.96	62.98	17.37	6.68
		340.00	32.02	6.35	1.60	38.07	7.94	1.91	44.48	9.73	2.25	47.68	10.67	2.43	50.52	11.68	2.59	56.93	13.81	2.94	62.98	16.20	3.29
		425.00	32.02	6.20	1.27	38.07	7.78	1.53	44.48	9.56	1.80	47.68	10.50	1.94	50.52	11.44	2.06	56.93	13.54	2.35	62.98	15.82	2.62
		510.00	32.02	6.10	1.06	38.07	7.73	1.27	44.48	9.45	1.50	47.68	10.39	1.61	50.52	11.33	1.72	56.93	13.41	1.95	62.98	15.58	2.18
	45	170.00	32.02	7.98	3.33	38.07	9.82	3.98	44.48	11.98	4.70	47.68	13.25	5.07	50.52	14.44	5.40	56.93	17.04	6.15	62.98	20.02	6.91
		340.00	32.02	7.37	1.64	38.07	9.18	1.97	44.48	11.19	2.32	47.68	12.31	2.50	50.52	13.50	2.66	56.93	15.97	3.03	62.98	18.78	3.40
		425.00	32.02	7.17	1.30	38.07	9.01	1.57	44.48	11.02	1.85	47.68	12.09	1.99	50.52	13.20	2.12	56.93	15.63	2.41	62.98	18.31	2.70
		510.00	32.02	7.01	1.08	38.07	8.91	1.30	44.48	10.96	1.54	47.68	11.93	1.65	50.52	13.09	1.76	56.93	15.49	2.01	62.98	18.07	2.25

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



10HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	170.00	104.56	21.77	6.85	104.13	21.95	6.80	103.95	22.73	6.72	103.45	22.67	6.69	102.97	22.46	6.66	101.96	23.46	6.50
		340.00	106.93	21.59	3.53	105.84	22.03	3.47	105.70	22.89	3.43	105.25	22.67	3.42	104.43	22.42	3.39	103.50	23.36	3.32
		425.00	107.61	21.91	2.84	106.52	22.36	2.79	106.40	22.96	2.76	105.61	22.75	2.74	105.17	22.75	2.73	104.27	24.51	2.64
		510.00	107.95	22.05	2.37	106.87	22.51	2.33	106.76	23.04	2.31	105.97	22.79	2.30	105.53	22.96	2.28	104.66	25.03	2.20
	15	170.00	104.90	19.47	7.07	104.47	19.49	7.03	103.95	20.37	6.92	103.45	20.41	6.87	102.97	20.03	6.87	101.96	21.07	6.70
		340.00	108.28	18.68	3.71	107.55	19.15	3.66	107.11	20.17	3.60	107.05	19.81	3.61	105.90	19.41	3.58	105.42	20.40	3.52
		425.00	108.96	19.15	2.97	108.58	19.60	2.95	108.51	20.17	2.92	108.12	19.81	2.92	107.37	19.94	2.89	106.58	22.45	2.79
		510.00	109.30	19.36	2.48	108.92	19.82	2.46	109.21	20.17	2.46	108.48	19.81	2.45	108.10	20.23	2.42	107.35	23.50	2.31
	20	170.00	108.96	17.89	7.54	108.24	17.88	7.48	108.16	18.40	7.43	107.41	18.36	7.37	106.63	18.46	7.30	105.42	20.40	7.04
		340.00	112.35	17.39	3.93	111.66	17.81	3.88	111.32	18.36	3.85	110.64	18.64	3.81	110.30	18.95	3.78	109.27	19.68	3.71
		425.00	112.68	17.39	3.16	112.35	17.81	3.13	112.73	18.48	3.12	112.08	18.64	3.09	111.03	18.95	3.05	110.04	20.92	2.95
		510.00	113.02	17.39	2.64	113.03	17.81	2.63	113.43	18.52	2.62	112.43	18.64	2.59	111.40	18.95	2.55	110.43	21.59	2.45
	25	170.00	123.61	18.53	8.70	122.93	18.94	8.61	121.91	19.75	8.46	121.57	20.07	8.40	120.88	20.42	8.32	119.86	21.22	8.16
		340.00	123.61	18.26	4.36	122.93	18.81	4.31	121.91	19.40	4.24	121.57	19.75	4.21	120.88	20.10	4.17	119.86	20.86	4.10
		425.00	123.61	17.99	3.50	122.93	18.33	3.46	121.91	19.10	3.40	121.57	19.44	3.38	120.88	19.77	3.35	119.86	20.50	3.29
		510.00	123.61	17.87	2.92	122.93	18.08	2.89	121.91	18.97	2.84	121.57	19.26	2.82	120.88	19.59	2.79	119.86	20.35	2.75
	30	170.00	133.21	19.91	9.38	133.86	19.99	9.43	132.49	21.00	9.23	128.23	21.21	8.86	130.79	21.78	9.02	121.91	19.60	8.47
		340.00	133.21	19.27	4.72	133.86	19.86	4.72	132.49	20.52	4.63	128.23	20.86	4.44	130.79	21.00	4.54	121.91	18.85	4.27
		425.00	133.21	18.96	3.78	133.86	19.31	3.79	132.49	20.18	3.72	128.23	20.47	3.57	130.79	21.00	3.63	121.91	18.85	3.41
		510.00	133.21	18.84	3.16	133.86	19.04	3.17	132.49	19.99	3.10	128.23	20.32	2.98	130.79	21.00	3.03	121.91	18.85	2.84
	35	170.00	145.81	20.97	10.33	144.79	21.43	10.21	140.01	20.77	9.87	131.21	19.71	9.23	130.79	19.36	9.22	121.91	17.19	8.67
		340.00	145.81	20.31	5.19	144.79	20.93	5.13	140.01	20.38	4.95	131.21	19.37	4.63	130.79	18.96	4.63	121.91	16.52	4.36
		425.00	145.81	20.31	4.16	144.79	20.73	4.11	140.01	20.03	3.97	131.21	19.03	3.71	130.79	18.61	3.71	121.91	16.52	3.49
		510.00	145.81	20.31	3.46	144.79	20.63	3.43	140.01	19.83	3.32	131.21	18.83	3.10	130.79	18.47	3.10	121.91	16.52	2.91
	40	170.00	145.81	20.31	10.39	144.79	20.73	10.27	140.01	20.03	9.93	131.21	19.03	9.29	130.79	18.61	9.28	121.91	16.19	8.75
		340.00	145.81	19.59	5.22	144.79	20.18	5.16	140.01	19.34	4.99	131.21	18.30	4.67	130.79	17.87	4.67	121.91	15.52	4.40
		425.00	145.81	19.26	4.19	144.79	19.88	4.14	140.01	19.34	4.00	131.21	18.30	3.74	130.79	17.87	3.74	121.91	15.52	3.52
		510.00	145.81	19.07	3.50	144.79	19.68	3.45	140.01	19.34	3.33	131.21	18.30	3.12	130.79	17.87	3.12	121.91	15.52	2.94
	45	170.00	145.81	19.59	10.45	144.79	20.03	10.33	140.01	19.34	9.99	131.21	18.30	9.35	130.79	17.87	9.35	121.91	15.14	8.84
		340.00	145.81	18.93	5.25	144.79	19.48	5.19	140.01	18.25	5.04	131.21	17.28	4.72	130.79	16.83	4.72	121.91	14.48	4.45
		425.00	145.81	18.21	4.22	144.79	18.98	4.17	140.01	18.60	4.02	131.21	17.57	3.76	130.79	17.18	3.76	121.91	14.48	3.56
		510.00	145.81	17.88	3.53	144.79	18.73	3.48	140.01	18.79	3.34	131.21	17.76	3.13	130.79	17.38	3.13	121.91	14.48	2.96
120	10	170.00	105.22	22.60	6.84	105.16	23.22	6.78	106.04	24.03	6.79	104.67	24.08	6.67	104.18	24.49	6.60	103.31	24.47	6.53
		340.00	107.37	22.94	3.49	106.61	23.57	3.44	107.17	24.37	3.43	105.81	24.21	3.38	105.36	24.40	3.35	104.54	24.57	3.31
		425.00	107.73	22.82	2.81	106.61	23.57	2.75	107.92	24.45	2.76	106.19	24.30	2.71	105.75	24.54	2.69	104.96	25.38	2.63
		510.00	108.08	22.79	2.35	106.25	23.57	2.28	107.92	24.54	2.30	106.19	24.39	2.26	105.75	24.58	2.24	105.37	25.83	2.19
	15	170.00	105.94	20.05	7.11	105.52	20.52	7.04	106.04	21.35	7.01	104.67	21.65	6.87	104.18	21.80	6.82	103.31	21.98	6.73
		340.00	108.08	20.20	3.64	108.07	20.68	3.62	108.68	21.48	3.61	106.95	21.35	3.54	106.14	21.16	3.52	105.78	21.63	3.48
		425.00	108.80	19.90	2.94	108.07	20.52	2.90	109.43	21.48	2.91	107.71	21.35	2.86	107.31	21.16	2.85	106.60	23.10	2.76
		510.00	109.16	19.75	2.47	107.70	20.44	2.41	109.81	21.48	2.44	108.09	21.35	2.39	107.71	21.16	2.39	107.01	23.81	2.30
	20	170.00	108.80	17.98	7.52	108.43	18.22	7.47	109.06	18.76	7.47	106.95	19.14	7.27	106.53	19.83	7.18	105.78	20.82	7.03
		340.00	111.66	17.98	3.88	110.98	18.50	3.83	111.32	19.09	3.82	109.61	19.44	3.73	109.27	19.79	3.70	108.25	20.52	3.63
		425.00	112.02	17.79	3.12	110.98	18.34	3.07	112.45	19.09	3.09	110.38	19.44	3.01	110.06	19.83	2.99	109.07	21.28	2.91
		510.00	112.38	17.72	2.61	110.98	18.26	2.56	112.83	19.09	2.59	110.76	19.44	2.52	110.06	19.88	2.49	109.48	21.63	2.42
	25	170.00	122.20	19.32	8.52	121.57	19.75	8.43	120.54	20.38	8.29	120.20	20.94	8.22	119.52	21.37	8.12	112.35	19.60	7.68
		340.00	122.59	19.02	4.29	121.57	19.61	4.22	120.54	20.24	4.15	120.20	20.58	4.12	119.52	21.00	4.08	112.35	19.23	3.85
		425.00	122.98	18.34	3.46	121.57	19.11	3.39	120.54	19.85	3.33	120.20	20.58	3.30	119.52	20.63	3.27	112.35	19.23	3.08
		510.00	122.98	17.99	2.90	121.57	18.83	2.83	120.54	19.71	2.78	120.20	20.58	2.75	119.52	20.42	2.73	112.35	19.23	2.57
	30	170.00	133.52	20.83	9.33	132.15	21.19	9.18	129.08	20.95	8.95	124.98	19.94	8.69	120.88	19.38	8.40	112.35	17.04	7.89
		340.00	133.52	20.10	4.69	132.15	20.72	4.61	129.08	20.58	4.49	124.98	19.58	4.36	120.88	18.61	4.23	112.35	16.70	3.96
		425.00	133.52	19.47	3.78	132.15	20.26	3.70	129.08	20.16	3.61	124.98	19.58	3.49	120.88	18.61	3.39	112.35	16.35	3.18
		510.00	133.52	19.13	3.16	132.15	20.00	3.09	129.08	19.95	3.01	124.98	19.58	2.91	120.88	18.61	2.82	112.35	16.21	2.65
	35	170.00	144.10	22.44	10.07	137.27	20.62	9.66	129.08	18.76	9.13	124.98	17.84	8.87	120.88	17.00	8.60	112.35	15.01	8.06
		340.00	144.10	21.17	5.09	137.27	19.82	4.86	129.08	18.02	4.60	124.98	17.15	4.46	120.88	16.32	4.33	112.35	14.68	4.04
		425.00	144.10																	

10HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	170.00	106.12	24.40	6.76	106.46	25.10	6.73	106.15	26.07	6.63	105.74	26.01	6.60	104.97	26.92	6.46	100.59	24.31	6.31
		340.00	107.63	24.60	3.44	107.62	25.40	3.40	106.55	26.39	3.32	106.56	26.15	3.33	105.81	26.82	3.27	101.01	24.41	3.17
		425.00	108.00	24.60	2.76	108.01	25.40	2.74	106.94	26.34	2.67	106.96	26.11	2.68	105.81	26.97	2.61	101.44	24.67	2.54
		510.00	108.38	24.60	2.31	108.40	25.40	2.29	107.34	26.30	2.24	106.96	26.06	2.23	106.23	27.02	2.19	101.44	24.82	2.11
	15	170.00	106.12	21.55	7.00	106.85	22.28	7.00	106.15	23.26	6.86	105.74	23.39	6.82	104.97	23.95	6.71	100.59	21.85	6.52
		340.00	108.00	21.43	3.58	108.40	22.28	3.56	107.34	23.26	3.48	106.96	23.06	3.47	106.65	23.25	3.45	101.86	21.49	3.33
		425.00	108.76	21.27	2.90	108.79	22.11	2.87	107.74	22.99	2.81	107.37	22.73	2.80	106.65	23.25	2.76	102.28	21.85	2.66
		510.00	109.13	21.19	2.43	109.18	22.02	2.40	108.14	22.81	2.35	107.78	22.54	2.35	107.07	23.25	2.31	102.70	22.05	2.23
	20	170.00	108.38	18.66	7.43	108.79	19.34	7.40	107.74	19.99	7.26	106.96	20.34	7.17	106.65	21.09	7.08	101.86	19.83	6.79
		340.00	110.64	18.78	3.80	109.96	19.34	3.75	108.93	19.99	3.68	108.59	20.34	3.65	107.91	20.69	3.61	103.13	19.68	3.45
		425.00	111.39	18.78	3.07	111.12	19.34	3.04	109.33	19.99	2.96	109.00	20.01	2.95	108.33	20.69	2.90	103.55	19.68	2.78
		510.00	111.77	18.78	2.57	111.51	19.34	2.54	109.73	19.99	2.48	109.40	19.83	2.47	108.75	20.69	2.43	103.55	19.68	2.31
	25	170.00	120.41	20.03	8.31	120.20	20.88	8.22	118.49	21.17	8.06	114.39	20.15	7.80	110.64	19.20	7.57	103.13	16.87	7.14
		340.00	121.22	19.89	4.19	120.20	20.52	4.13	118.49	20.79	4.04	114.39	19.79	3.92	110.64	18.78	3.80	103.13	16.87	3.57
		425.00	122.04	19.89	3.38	120.20	20.62	3.30	118.49	20.37	3.25	114.39	19.79	3.13	110.64	18.47	3.05	103.13	16.52	2.87
		510.00	122.44	19.89	2.83	120.20	20.62	2.75	118.49	20.15	2.71	114.39	19.79	2.61	110.64	18.26	2.55	103.13	16.37	2.39
	30	170.00	131.81	21.43	9.14	126.00	20.26	8.75	118.49	18.08	8.31	114.39	17.50	8.02	110.64	16.73	7.77	103.13	15.47	7.26
		340.00	131.81	21.04	4.58	126.00	19.82	4.39	118.49	17.67	4.17	114.39	17.15	4.02	110.64	16.32	3.90	103.13	15.07	3.64
		425.00	131.81	20.87	3.67	126.00	19.49	3.53	118.49	17.31	3.35	114.39	16.80	3.23	110.64	16.32	3.12	103.13	15.07	2.92
		510.00	131.81	20.81	3.06	126.00	19.27	2.94	118.49	17.11	2.80	114.39	16.64	2.70	110.64	16.32	2.60	103.13	15.07	2.43
		170.00	133.52	19.72	9.42	126.00	17.72	8.96	118.49	16.23	8.46	114.39	15.73	8.17	110.64	14.63	7.95	103.13	13.29	7.44
		340.00	133.52	18.95	4.74	126.00	17.36	4.50	118.49	15.83	4.25	114.39	15.38	4.10	110.64	14.34	3.99	103.13	12.95	3.73
		425.00	133.52	18.46	3.81	126.00	16.99	3.61	118.49	15.48	3.41	114.39	15.38	3.28	110.64	14.34	3.19	103.13	12.95	2.99
		510.00	133.52	18.24	3.18	126.00	16.78	3.01	118.49	15.33	2.85	114.39	15.38	2.73	110.64	14.34	2.66	103.13	12.95	2.49
	40	170.00	133.52	18.57	9.51	126.00	16.99	9.02	118.49	15.13	8.56	114.39	14.67	8.25	110.64	13.59	8.03	103.13	12.22	7.52
		340.00	133.52	17.81	4.79	126.00	16.21	4.54	118.49	14.44	4.31	114.39	14.27	4.14	110.64	13.25	4.03	103.13	11.89	3.78
		425.00	133.52	17.53	3.84	126.00	15.84	3.65	118.49	14.44	3.45	114.39	13.91	3.33	110.64	12.85	3.24	103.13	11.55	3.03
		510.00	133.52	17.42	3.20	126.00	15.64	3.05	118.49	14.44	2.87	114.39	13.71	2.78	110.64	12.71	2.70	103.13	11.35	2.53
	45	170.00	133.52	17.37	9.61	126.00	16.21	9.09	118.49	14.04	8.65	114.39	13.56	8.35	110.64	12.51	8.12	103.13	11.16	7.61
		340.00	133.52	16.60	4.84	126.00	15.12	4.59	118.49	12.94	4.37	114.39	13.15	4.19	110.64	12.16	4.08	103.13	10.82	3.82
		425.00	133.52	16.60	3.87	126.00	14.70	3.69	118.49	13.34	3.48	114.39	12.44	3.38	110.64	11.42	3.29	103.13	10.15	3.08
		510.00	133.52	16.60	3.23	126.00	14.49	3.08	118.49	13.54	2.90	114.39	12.09	2.82	110.64	11.07	2.75	103.13	9.76	2.58
100	10	170.00	106.12	25.67	6.66	107.35	27.03	6.65	106.50	28.39	6.47	104.15	26.38	6.44	100.74	25.59	6.22	93.91	22.76	5.89
		340.00	107.30	26.18	3.36	107.76	27.40	3.33	106.50	28.74	3.22	104.15	26.52	3.21	100.74	25.69	3.11	93.91	22.85	2.94
		425.00	108.09	26.05	2.72	108.18	27.40	2.67	106.50	28.69	2.58	104.15	26.47	2.57	100.74	25.59	2.49	93.91	22.76	2.36
		510.00	108.48	26.01	2.28	108.59	27.40	2.24	106.50	28.64	2.15	104.15	26.42	2.14	100.74	25.59	2.07	93.91	22.71	1.96
	15	170.00	106.91	22.67	6.97	107.35	23.89	6.91	106.50	25.33	6.72	104.15	23.71	6.66	100.74	22.78	6.45	93.91	20.45	6.08
		340.00	107.30	23.09	3.48	107.76	23.98	3.47	106.50	25.33	3.36	104.15	23.38	3.34	100.74	22.44	3.24	93.91	20.12	3.05
		425.00	108.09	22.71	2.83	108.59	23.75	2.81	106.50	25.03	2.70	104.15	23.05	2.69	100.74	22.10	2.60	93.91	19.79	2.45
		510.00	108.48	22.50	2.37	108.59	23.66	2.34	106.50	24.84	2.25	104.15	22.86	2.24	100.74	21.91	2.17	93.91	19.60	2.05
	20	170.00	107.69	19.38	7.31	108.18	20.25	7.28	106.50	21.43	7.04	104.15	20.29	6.94	100.74	19.29	6.74	93.91	17.72	6.31
		340.00	109.27	19.72	3.71	108.59	20.34	3.65	106.50	21.43	3.52	104.15	19.96	3.48	100.74	18.95	3.38	93.91	17.01	3.18
		425.00	109.67	19.38	2.99	109.42	20.16	2.96	106.50	21.08	2.83	104.15	19.58	2.80	100.74	18.57	2.72	93.91	16.73	2.56
		510.00	110.06	19.21	2.51	109.83	20.07	2.48	106.50	20.89	2.36	104.15	19.44	2.34	100.74	18.37	2.27	93.91	16.54	2.13
	25	170.00	117.81	20.85	8.03	114.39	20.26	7.79	106.50	18.38	7.29	104.15	17.51	7.17	100.74	16.59	6.96	93.91	14.65	6.56
		340.00	119.52	20.90	4.08	114.39	19.79	3.92	106.50	17.98	3.66	104.15	17.11	3.60	100.74	16.25	3.50	93.91	14.65	3.28
		425.00	119.94	20.43	3.29	114.39	19.63	3.14	106.50	17.68	2.94	104.15	16.77	2.89	100.74	16.25	2.80	93.91	14.26	2.64
		510.00	120.37	20.22	2.76	114.39	19.58	2.62	106.50	17.48	2.46	104.15	16.57	2.42	100.74	16.25	2.33	93.91	14.12	2.20
	30	170.00	121.22	19.06	8.46	114.39	17.52	8.02	106.50	15.77	7.51	104.15	15.29	7.35	100.74	14.16	7.17	93.91	13.20	6.68
		340.00	121.22	18.75	4.24	114.39	17.15	4.02	106.50	15.62	3.76	104.15	14.89	3.69	100.74	14.16	3.58	93.91	12.81	3.36
		425.00	121.22	18.32	3.41	114.39	17.15	3.22	106.50	15.42	3.02	104.15	14.89	2.96	100.74	13.81	2.88	93.91	12.81	2.69
		510.00	121.22	18.11	2.84	114.39	17.15	2.68	106.50	15.32	2.52	104.15	14.89	2.46	100.74	13.61	2.40	93.91	12.81	2.24
	35	170.00	121.22	17.19	8.61	114.39	15.79	8.16	106.50	13.93	7.66	104.15	13.56	7.50	100.74	12.89	7.27	93.91	11.71	6.80
		340.00	121.22	16.42	4.34	114.39	15.07	4.11	106.50	13.78	3.84	104.15	13.16	3.77	100.74	12.53	3.65	93.91	11.35	3.42
		425.00	121.22	16.																

VRF MW



10HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	170.00	107.46	28.53	6.53	103.13	26.72	6.32	96.98	23.94	6.05	93.56	22.71	5.86	90.49	22.01	5.67	84.34	19.17	5.39
		340.00	107.02	28.63	3.24	102.69	26.88	3.14	96.98	24.03	3.02	93.56	22.85	2.93	90.49	21.96	2.84	84.34	19.27	2.69
		425.00	107.91	28.53	2.63	103.13	26.77	2.53	96.98	23.94	2.42	93.56	22.76	2.34	90.49	22.01	2.27	84.34	19.32	2.15
		510.00	108.35	28.48	2.20	103.13	26.72	2.11	96.98	23.94	2.02	93.56	22.71	1.95	90.49	22.06	1.89	84.34	19.36	1.79
	15	170.00	107.91	24.60	6.90	103.57	23.36	6.64	96.98	21.32	6.26	93.56	20.46	6.05	90.49	19.63	5.87	84.34	17.26	5.55
		340.00	107.02	24.19	3.43	102.69	22.96	3.30	96.98	20.99	3.15	93.56	20.12	3.04	90.49	18.95	2.96	84.34	16.88	2.79
		425.00	107.91	23.88	2.78	103.13	22.60	2.67	96.98	20.65	2.53	93.56	19.74	2.44	90.49	18.95	2.37	84.34	16.88	2.23
		510.00	108.35	23.67	2.34	103.57	22.45	2.24	96.98	20.45	2.11	93.56	19.60	2.04	90.49	18.95	1.97	84.34	16.88	1.86
	20	170.00	108.35	20.83	7.24	104.01	19.90	6.96	96.98	18.18	6.52	93.56	17.30	6.31	90.49	16.82	6.10	84.34	15.25	5.72
		340.00	107.91	20.83	3.60	103.13	19.65	3.45	96.98	17.84	3.28	93.56	17.01	3.17	90.49	16.14	3.08	84.34	14.54	2.89
		425.00	108.35	20.52	2.91	103.57	19.49	2.78	96.98	17.84	2.62	93.56	17.01	2.53	90.49	16.14	2.46	84.34	14.54	2.31
		510.00	108.79	20.31	2.44	103.57	19.44	2.32	96.98	17.84	2.18	93.56	17.01	2.11	90.49	16.14	2.05	84.34	14.54	1.93
	25	170.00	107.98	18.56	7.40	103.13	16.99	7.13	96.98	15.69	6.73	93.56	14.65	6.53	90.49	14.31	6.31	84.34	12.99	5.91
		340.00	109.27	18.40	3.76	103.13	16.84	3.57	96.98	15.34	3.38	93.56	14.65	3.27	90.49	13.92	3.17	84.34	12.60	2.97
		425.00	109.70	17.92	3.04	103.13	16.48	2.87	96.98	15.34	2.70	93.56	14.26	2.63	90.49	13.92	2.54	84.34	12.60	2.38
		510.00	109.70	17.66	2.54	103.13	16.27	2.40	96.98	15.34	2.25	93.56	14.12	2.19	90.49	13.92	2.11	84.34	12.60	1.98
	30	170.00	109.27	16.33	7.69	103.13	14.95	7.30	96.98	13.75	6.89	93.56	13.20	6.65	90.49	12.57	6.45	84.34	11.07	6.06
		340.00	109.27	15.97	3.86	103.13	14.65	3.66	96.98	13.40	3.46	93.56	12.81	3.34	90.49	12.22	3.24	84.34	11.07	3.03
		425.00	109.27	15.61	3.10	103.13	14.24	2.94	96.98	13.40	2.77	93.56	12.81	2.67	90.49	12.22	2.59	84.34	10.74	2.44
		510.00	109.27	15.40	2.59	103.13	14.04	2.46	96.98	13.40	2.31	93.56	12.81	2.23	90.49	12.22	2.16	84.34	10.59	2.03
	35	170.00	109.27	14.49	7.85	103.13	13.35	7.43	96.98	12.22	7.02	93.56	11.74	6.77	90.49	11.18	6.56	84.34	10.20	6.14
		340.00	109.27	14.09	3.94	103.13	12.95	3.73	96.98	11.87	3.52	93.56	11.35	3.40	90.49	10.83	3.30	84.34	9.86	3.08
		425.00	109.27	13.74	3.16	103.13	12.60	3.00	96.98	11.47	2.83	93.56	11.01	2.73	90.49	10.83	2.64	84.34	9.86	2.47
		510.00	109.27	13.54	2.64	103.13	12.40	2.50	96.98	11.28	2.36	93.56	10.86	2.28	90.49	10.83	2.20	84.34	9.86	2.06
	40	170.00	109.27	13.39	7.94	103.13	12.25	7.52	96.98	10.78	7.14	93.56	10.32	6.89	90.49	10.13	6.65	84.34	9.13	6.23
		340.00	109.27	12.64	4.00	103.13	11.90	3.78	96.98	10.43	3.58	93.56	9.98	3.46	90.49	9.73	3.34	84.34	8.79	3.13
		425.00	109.27	12.64	3.20	103.13	11.90	3.02	96.98	10.43	2.87	93.56	9.98	2.77	90.49	9.73	2.67	84.34	8.79	2.50
		510.00	109.27	12.64	2.67	103.13	11.90	2.52	96.98	10.43	2.39	93.56	9.98	2.31	90.49	9.73	2.23	84.34	8.79	2.08
	45	170.00	109.27	12.29	8.03	103.13	11.16	7.61	96.98	9.34	7.25	93.56	8.89	7.01	90.49	9.03	6.74	84.34	8.06	6.31
		340.00	109.27	11.19	4.06	103.13	10.81	3.82	96.98	8.99	3.64	93.56	8.55	3.52	90.49	8.68	3.39	84.34	7.72	3.17
		425.00	109.27	11.54	3.24	103.13	11.16	3.05	96.98	9.34	2.90	93.56	8.89	2.80	90.49	8.68	2.71	84.34	7.72	2.54
		510.00	109.27	11.74	2.69	103.13	11.35	2.53	96.98	9.49	2.41	93.56	9.09	2.33	90.49	8.68	2.26	84.34	7.72	2.11
80	10	170.00	96.55	24.09	6.00	91.09	22.05	5.71	86.05	19.53	5.51	83.32	18.99	5.32	80.59	18.00	5.18	75.12	16.35	4.86
		340.00	96.98	23.93	3.02	91.52	21.89	2.88	86.05	19.53	2.75	83.32	19.04	2.66	80.59	18.05	2.59	75.12	16.35	2.43
		425.00	96.98	23.87	2.42	91.52	22.00	2.30	86.05	19.63	2.20	83.32	18.94	2.13	80.59	17.95	2.07	75.12	16.26	1.95
		510.00	96.98	23.82	2.02	91.09	22.05	1.90	86.05	19.68	1.83	83.32	18.89	1.78	80.59	17.90	1.73	75.12	16.21	1.63
	15	170.00	96.98	21.83	6.22	91.52	19.78	5.94	86.05	17.37	5.69	83.32	17.11	5.48	80.59	16.07	5.34	75.12	14.70	5.00
		340.00	96.98	21.07	3.14	91.52	19.05	3.00	86.05	17.08	2.85	83.32	16.73	2.76	80.59	15.73	2.68	75.12	14.37	2.51
		425.00	96.98	20.64	2.53	91.52	19.05	2.40	86.05	17.08	2.28	83.32	16.39	2.22	80.59	15.34	2.16	75.12	13.99	2.02
		510.00	96.98	20.43	2.11	91.52	19.05	2.00	86.05	17.08	1.90	83.32	16.20	1.85	80.59	15.15	1.81	75.12	13.85	1.69
	20	170.00	96.98	18.32	6.51	91.52	16.83	6.18	86.05	14.96	5.88	83.32	14.65	5.68	80.59	13.99	5.51	75.12	12.67	5.17
		340.00	96.98	17.95	3.27	91.52	16.42	3.11	86.05	14.96	2.94	83.32	14.27	2.86	80.59	13.61	2.77	75.12	12.29	2.60
		425.00	96.98	17.57	2.63	91.52	16.06	2.50	86.05	14.62	2.36	83.32	14.27	2.29	80.59	13.27	2.23	75.12	12.29	2.08
		510.00	96.98	17.35	2.20	91.52	15.90	2.09	86.05	14.43	1.98	83.32	14.27	1.91	80.59	13.08	1.86	75.12	12.29	1.73
	25	170.00	96.98	15.83	6.72	91.52	14.52	6.37	86.05	12.95	6.05	83.32	12.70	5.85	80.59	12.15	5.67	75.12	11.06	5.30
		340.00	96.98	15.41	3.38	91.52	14.16	3.20	86.05	12.95	3.03	83.32	12.36	2.94	80.59	11.80	2.85	75.12	10.73	2.67
		425.00	96.98	15.10	2.71	91.52	14.16	2.56	86.05	12.56	2.43	83.32	12.36	2.35	80.59	11.80	2.28	75.12	10.73	2.13
		510.00	96.98	14.89	2.26	91.52	14.16	2.13	86.05	12.42	2.03	83.32	12.36	1.96	80.59	11.80	1.90	75.12	10.73	1.78
	30	170.00	96.98	13.70	6.89	91.52	12.75	6.52	86.05	11.78	6.15	83.32	11.28	5.96	80.59	10.76	5.78	75.12	9.87	5.40
		340.00	96.98	13.30	3.46	91.52	12.39	3.27	86.05	11.39	3.09	83.32	10.94	3.00	80.59	10.41	2.90	75.12	9.48	2.72
		425.00	96.98	13.30	2.77	91.52	12.39	2.62	86.05	11.39	2.47	83.32	10.94	2.40	80.59	10.41	2.32	75.12	9.48	2.17
		510.00	96.98	13.30	2.31	91.52	12.39	2.18	86.05	11.39	2.06	83.32	10.94	2.00	80.59	10.41	1.94	75.12	9.48	1.81
	35	170.00	96.98	12.43	7.00	91.52	11.35	6.64	86.05	10.49	6.25	83.32	9.72	6.09	80.59	9.65	5.87	75.12	8.50	5.51
		340.00	96.98	12.08	3.51	91.52	11.00	3.33	86.05	10.14	3.14	83.32	9.72	3.05	80.59	9.30	2.95	75.12	8.50	2.76
		425.00	96.98	12.08	2.81	91.52	10.66	2.68	86.05	10.14	2.51	83.32	9.34	2.45	80.59	9.30	2.36	75.12	8.18	2.22
		510.00	96.98	12.08	2.34	91.52	10.46	2.24	86.05	10.14	2.09	83.32	9.19	2.05	80.59	9.30	1.97	75.12	7.99	

10HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	170.00	84.60	19.99	5.35	80.25	18.24	5.13	75.47	16.59	4.87	72.73	15.44	4.74	70.34	14.96	4.58	65.56	13.26	4.33
		340.00	85.03	19.83	2.70	80.25	18.09	2.57	75.47	16.45	2.44	72.73	15.44	2.37	70.34	14.96	2.29	65.56	13.26	2.16
		425.00	85.03	19.94	2.16	80.25	18.19	2.05	75.47	16.49	1.95	72.73	15.49	1.90	70.34	14.82	1.84	65.56	13.26	1.73
		510.00	85.03	19.94	1.80	80.25	18.19	1.71	75.47	16.54	1.63	72.73	15.53	1.58	70.34	14.77	1.53	65.56	13.30	1.44
	15	170.00	85.03	18.11	5.54	80.25	16.43	5.28	75.47	14.78	5.02	72.73	13.85	4.87	70.34	13.31	4.72	65.56	11.89	4.44
		340.00	85.03	17.38	2.80	80.25	15.67	2.67	75.47	14.07	2.54	72.73	13.57	2.45	70.34	12.98	2.37	65.56	11.57	2.23
		425.00	85.03	17.38	2.24	80.25	15.67	2.14	75.47	14.07	2.03	72.73	13.57	1.96	70.34	12.65	1.91	65.56	11.57	1.79
		510.00	85.03	17.38	1.87	80.25	15.67	1.78	75.47	14.07	1.69	72.73	13.57	1.63	70.34	12.46	1.60	65.56	11.57	1.49
	20	170.00	85.03	15.14	5.79	80.25	13.86	5.50	75.47	12.74	5.19	72.73	12.16	5.01	70.34	11.61	4.86	65.56	10.56	4.55
		340.00	85.03	14.72	2.91	80.25	13.50	2.76	75.47	12.36	2.61	72.73	11.84	2.52	70.34	11.28	2.44	65.56	10.24	2.29
		425.00	85.03	14.72	2.33	80.25	13.50	2.21	75.47	12.36	2.09	72.73	11.51	2.03	70.34	11.28	1.96	65.56	9.92	1.84
		510.00	85.03	14.72	1.94	80.25	13.50	1.84	75.47	12.36	1.74	72.73	11.37	1.69	70.34	11.28	1.63	65.56	9.74	1.54
	25	170.00	85.03	13.06	5.96	80.25	12.08	5.64	75.47	11.10	5.33	72.73	10.64	5.14	70.34	9.86	5.01	65.56	8.99	4.68
		340.00	85.03	12.70	2.99	80.25	11.73	2.84	75.47	10.76	2.68	72.73	10.31	2.58	70.34	9.86	2.50	65.56	8.99	2.34
		425.00	85.03	12.35	2.41	80.25	11.34	2.28	75.47	10.76	2.14	72.73	10.31	2.07	70.34	9.53	2.01	65.56	8.99	1.87
		510.00	85.03	12.20	2.01	80.25	11.14	1.91	75.47	10.76	1.79	72.73	10.31	1.72	70.34	9.34	1.68	65.56	8.99	1.56
	30	170.00	85.03	11.53	6.08	80.25	10.69	5.76	75.47	9.90	5.43	72.73	9.13	5.26	70.34	9.09	5.07	65.56	8.02	4.76
		340.00	85.03	11.18	3.06	80.25	10.34	2.89	75.47	9.51	2.73	72.73	9.13	2.63	70.34	8.75	2.55	65.56	8.02	2.38
		425.00	85.03	11.18	2.45	80.25	10.34	2.31	75.47	9.51	2.18	72.73	8.80	2.12	70.34	8.75	2.04	65.56	8.02	1.91
		510.00	85.03	11.18	2.04	80.25	10.34	1.93	75.47	9.51	1.82	72.73	8.61	1.77	70.34	8.75	1.70	65.56	8.02	1.59
	35	170.00	85.03	10.31	6.18	80.25	9.58	5.85	75.47	8.54	5.54	72.73	8.49	5.32	70.34	7.88	5.17	65.56	7.59	4.80
		340.00	85.03	9.96	3.11	80.25	9.23	2.94	75.47	8.54	2.77	72.73	8.16	2.67	70.34	7.88	2.59	65.56	7.26	2.41
		425.00	85.03	9.96	2.49	80.25	9.23	2.35	75.47	8.21	2.23	72.73	8.16	2.14	70.34	7.88	2.07	65.56	7.26	1.93
		510.00	85.03	9.96	2.07	80.25	9.23	1.96	75.47	8.02	1.86	72.73	8.16	1.78	70.34	7.88	1.72	65.56	7.26	1.61
	40	170.00	85.03	9.57	6.25	80.25	8.89	5.91	75.47	7.83	5.60	72.73	7.45	5.40	70.34	7.22	5.23	65.56	6.87	4.86
		340.00	85.03	9.23	3.14	80.25	8.55	2.97	75.47	7.50	2.81	72.73	7.45	2.70	70.34	7.22	2.61	65.56	6.59	2.44
		425.00	85.03	9.23	2.51	80.25	8.55	2.37	75.47	7.50	2.25	72.73	7.13	2.17	70.34	6.84	2.10	65.56	6.59	1.95
		510.00	85.03	9.23	2.09	80.25	8.55	1.98	75.47	7.50	1.88	72.73	6.94	1.82	70.34	6.69	1.76	65.56	6.59	1.63
	45	170.00	85.03	8.88	6.30	80.25	8.15	5.97	75.47	7.17	5.65	72.73	6.47	5.48	70.34	6.55	5.28	65.56	6.20	4.91
		340.00	85.03	8.54	3.17	80.25	7.81	3.00	75.47	6.51	2.85	72.73	6.75	2.73	70.34	6.55	2.64	65.56	5.87	2.47
		425.00	85.03	8.54	2.53	80.25	7.81	2.40	75.47	6.79	2.27	72.73	6.09	2.21	70.34	5.84	2.14	65.56	5.87	1.98
		510.00	85.03	8.54	2.11	80.25	7.81	2.00	75.47	6.98	1.89	72.73	5.77	1.85	70.34	5.46	1.79	65.56	5.87	1.65
60	10	170.00	72.73	15.36	4.75	68.64	14.50	4.48	64.54	13.57	4.22	62.49	12.60	4.13	60.44	12.27	3.99	56.34	10.81	3.77
		340.00	72.73	15.36	2.37	68.64	14.50	2.24	64.54	13.57	2.11	62.49	12.74	2.06	60.44	12.22	2.00	56.34	10.95	1.88
		425.00	72.73	15.41	1.90	68.64	14.35	1.80	64.54	13.42	1.69	62.49	12.60	1.65	60.44	12.12	1.60	56.34	10.81	1.51
		510.00	72.73	15.41	1.58	68.64	14.26	1.50	64.54	13.33	1.41	62.49	12.50	1.38	60.44	12.08	1.33	56.34	10.77	1.26
	15	170.00	72.73	13.93	4.87	68.64	13.04	4.60	64.54	12.09	4.34	62.49	11.32	4.24	60.44	10.90	4.10	56.34	9.75	3.86
		340.00	72.73	13.58	2.45	68.64	12.65	2.32	64.54	11.75	2.18	62.49	11.32	2.12	60.44	10.57	2.06	56.34	9.75	1.93
		425.00	72.73	13.58	1.96	68.64	12.31	1.86	64.54	11.42	1.76	62.49	10.94	1.71	60.44	10.24	1.66	56.34	9.42	1.55
		510.00	72.73	13.58	1.63	68.64	12.12	1.56	64.54	11.23	1.47	62.49	10.75	1.43	60.44	10.05	1.39	56.34	9.24	1.30
	20	170.00	72.73	12.15	5.01	68.64	11.24	4.75	64.54	10.37	4.48	62.49	9.95	4.35	60.44	9.58	4.21	56.34	8.73	3.94
		340.00	72.73	11.80	2.52	68.64	10.90	2.39	64.54	10.03	2.26	62.49	9.62	2.19	60.44	9.20	2.12	56.34	8.40	1.98
		425.00	72.73	11.80	2.02	68.64	10.90	1.91	64.54	10.03	1.80	62.49	9.62	1.75	60.44	9.20	1.70	56.34	8.40	1.59
		510.00	72.73	11.80	1.68	68.64	10.90	1.59	64.54	10.03	1.50	62.49	9.62	1.46	60.44	9.20	1.41	56.34	8.40	1.32
	25	170.00	72.73	10.65	5.14	68.64	9.94	4.86	64.54	8.82	4.61	62.49	8.80	4.44	60.44	8.12	4.33	56.34	7.79	4.02
		340.00	72.73	10.31	2.58	68.64	9.55	2.45	64.54	8.82	2.31	62.49	8.47	2.24	60.44	8.12	2.17	56.34	7.46	2.02
		425.00	72.73	10.31	2.07	68.64	9.55	1.96	64.54	8.49	1.86	62.49	8.47	1.79	60.44	8.12	1.73	56.34	7.46	1.62
		510.00	72.73	10.31	1.72	68.64	9.55	1.63	64.54	8.35	1.55	62.49	8.47	1.49	60.44	8.12	1.44	56.34	7.46	1.35
	30	170.00	72.73	9.47	5.24	68.64	8.81	4.95	64.54	8.26	4.66	62.49	7.90	4.52	60.44	7.59	4.37	56.34	7.07	4.08
		340.00	72.73	9.13	2.63	68.64	8.47	2.49	64.54	7.88	2.34	62.49	7.57	2.27	60.44	7.26	2.20	56.34	6.70	2.05
		425.00	72.73	9.13	2.11	68.64	8.47	1.99	64.54	7.88	1.88	62.49	7.57	1.82	60.44	7.26	1.76	56.34	6.70	1.64
		510.00	72.73	9.13	1.75	68.64	8.47	1.66	64.54	7.88	1.56	62.49	7.57	1.52	60.44	7.26	1.47	56.34	6.70	1.37
	35	170.00	72.73	8.19	5.34	68.64	7.97	5.02	64.54	7.12	4.75	62.49	7.22	4.58	60.44	6.88	4.43	56.34	6.49	4.13
		340.00	72.73	8.19	2.67	68.64	7.64	2.52	64.54	7.12	2.38	62.49	6.84	2.30	60.44	6.60	2.23	56.34	6.11	2.08
		425.00	72.73	8.19	2.14	68.64	7.64	2.02	64.54	6.74	1.91	62.49	6.84	1.84	60.44	6.60	1.78	56.34	6.11	1.66
		510.00	72.73	8.19	1.78	68.64	7.64	1.68	64.54	6.60	1.60	62.49	6.84	1.54	60.44	6.60	1.49	56.34	6.11	1.39
40	170.00	72.73	7.49	5.40	68.64	7.30	5.08	64.54	6.46	4.81	62.49	6.55	4.63	60.44	6.21	4.				

VRF MW



10HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	170.00	60.35	12.23	3.98	56.94	11.53	3.76	57.37	10.49	3.88	51.90	10.13	3.46	50.20	9.44	3.37	46.78	8.70	3.15
		340.00	60.78	12.13	2.01	57.37	11.53	1.90	57.37	10.44	1.94	51.90	10.04	1.73	50.20	9.54	1.68	46.78	8.60	1.58
		425.00	60.78	12.23	1.61	57.37	11.53	1.52	57.37	10.44	1.55	51.90	10.08	1.38	50.20	9.39	1.35	46.78	8.65	1.26
		510.00	60.78	12.23	1.34	57.37	11.58	1.26	57.37	10.49	1.29	51.90	10.08	1.15	50.20	9.30	1.13	46.78	8.65	1.05
	15	170.00	60.78	11.04	4.12	57.37	10.39	3.89	57.37	9.34	3.98	51.90	9.07	3.55	50.20	8.42	3.46	46.78	7.80	3.23
		340.00	60.78	10.70	2.07	57.37	10.04	1.96	57.37	9.00	2.00	51.90	8.73	1.79	50.20	8.42	1.73	46.78	7.47	1.63
		425.00	60.78	10.70	1.66	57.37	10.04	1.57	57.37	9.00	1.60	51.90	8.73	1.43	50.20	8.04	1.40	46.78	7.47	1.30
		510.00	60.78	10.70	1.38	57.37	10.04	1.31	57.37	9.00	1.33	51.90	8.73	1.19	50.20	7.84	1.17	46.78	7.47	1.08
	20	170.00	60.78	9.61	4.24	57.37	8.96	4.01	57.37	8.33	4.06	51.90	8.01	3.63	50.20	7.70	3.52	46.78	6.77	3.31
		340.00	60.78	9.27	2.13	57.37	8.61	2.02	57.37	7.95	2.05	51.90	7.67	1.83	50.20	7.36	1.77	46.78	6.77	1.66
		425.00	60.78	9.27	1.71	57.37	8.61	1.61	57.37	7.95	1.64	51.90	7.67	1.46	50.20	7.36	1.42	46.78	6.77	1.32
		510.00	60.78	9.27	1.42	57.37	8.61	1.35	57.37	7.95	1.36	51.90	7.67	1.22	50.20	7.36	1.18	46.78	6.77	1.10
	25	170.00	60.78	8.55	4.32	57.37	7.60	4.12	57.37	7.47	4.13	51.90	6.80	3.73	50.20	6.56	3.61	46.78	6.07	3.37
		340.00	60.78	8.16	2.18	57.37	7.60	2.06	57.37	7.08	2.08	51.90	6.80	1.87	50.20	6.56	1.81	46.78	6.07	1.68
		425.00	60.78	8.16	1.74	57.37	7.60	1.65	57.37	7.08	1.66	51.90	6.80	1.49	50.20	6.56	1.44	46.78	6.07	1.35
		510.00	60.78	8.16	1.45	57.37	7.60	1.37	57.37	7.08	1.39	51.90	6.80	1.24	50.20	6.56	1.20	46.78	6.07	1.12
	30	170.00	60.78	7.66	4.40	57.37	7.14	4.16	57.37	6.78	4.19	51.90	6.14	3.79	50.20	6.27	3.64	46.78	5.85	3.39
		340.00	60.78	7.32	2.21	57.37	6.84	2.09	57.37	6.39	2.11	51.90	6.14	1.89	50.20	5.94	1.83	46.78	5.52	1.71
		425.00	60.78	7.32	1.77	57.37	6.84	1.67	57.37	6.39	1.69	51.90	6.14	1.52	50.20	5.94	1.47	46.78	5.52	1.37
		510.00	60.78	7.32	1.47	57.37	6.84	1.39	57.37	6.39	1.41	51.90	6.14	1.26	50.20	5.94	1.22	46.78	5.52	1.14
	35	170.00	60.78	6.92	4.46	57.37	6.21	4.23	57.37	5.83	4.27	51.90	5.96	3.80	50.20	5.45	3.70	46.78	5.07	3.45
		340.00	60.78	6.63	2.24	57.37	6.21	2.12	57.37	5.83	2.13	51.90	5.62	1.92	50.20	5.45	1.85	46.78	5.07	1.73
		425.00	60.78	6.63	1.79	57.37	6.21	1.69	57.37	5.83	1.71	51.90	5.62	1.53	50.20	5.45	1.48	46.78	5.07	1.38
		510.00	60.78	6.63	1.49	57.37	6.21	1.41	57.37	5.83	1.42	51.90	5.62	1.28	50.20	5.45	1.23	46.78	5.07	1.15
	40	170.00	60.78	6.25	4.51	57.37	5.88	4.26	57.37	5.50	4.29	51.90	5.28	3.86	50.20	5.12	3.73	46.78	4.70	3.48
		340.00	60.78	5.91	2.27	57.37	5.54	2.14	57.37	5.17	2.16	51.90	5.28	1.93	50.20	4.75	1.88	46.78	4.70	1.74
		425.00	60.78	5.91	1.82	57.37	5.54	1.72	57.37	5.17	1.73	51.90	5.28	1.54	50.20	4.75	1.50	46.78	4.70	1.39
		510.00	60.78	5.91	1.51	57.37	5.54	1.43	57.37	5.17	1.44	51.90	5.28	1.29	50.20	4.75	1.25	46.78	4.70	1.16
	45	170.00	60.78	5.57	4.57	57.37	5.54	4.29	57.37	5.17	4.32	51.90	4.56	3.92	50.20	4.75	3.76	46.78	4.37	3.51
		340.00	60.78	5.24	2.30	57.37	4.83	2.17	57.37	4.46	2.19	51.90	4.90	1.95	50.20	4.09	1.91	46.78	4.37	1.76
		425.00	60.78	5.24	1.84	57.37	4.83	1.74	57.37	4.46	1.75	51.90	4.90	1.56	50.20	4.09	1.53	46.78	4.37	1.40
		510.00	60.78	5.24	1.53	57.37	4.83	1.45	57.37	4.46	1.46	51.90	4.90	1.30	50.20	4.09	1.27	46.78	4.37	1.17

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

12HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
130	10	180.00	90.69	9.47	7.87	115.32	16.52	10.36	115.94	13.41	10.16	117.19	13.47	10.27	118.63	13.47	10.38	121.22	13.55	10.59	123.06	13.45	10.73
		360.00	90.69	8.78	3.91	115.32	15.49	5.14	115.94	12.55	5.05	117.19	12.58	5.10	118.63	12.47	5.15	121.22	12.70	5.26	123.06	12.78	5.34
		450.00	90.69	8.50	3.12	115.32	15.18	4.10	115.94	12.26	4.03	117.19	12.26	4.07	118.63	12.35	4.12	121.22	12.39	4.20	123.06	12.42	4.26
		540.00	90.69	8.36	2.59	115.32	14.97	3.41	115.94	12.19	3.36	117.19	12.13	3.39	118.63	12.29	3.43	121.22	12.27	3.50	123.06	12.24	3.54
	15	180.00	89.39	12.44	8.00	113.78	21.68	10.64	114.05	17.57	10.34	115.43	17.62	10.45	116.47	17.65	10.54	119.52	17.79	10.79	121.38	17.73	10.93
		360.00	89.39	11.47	3.96	113.78	20.34	5.27	114.05	16.42	5.13	115.43	16.47	5.18	116.47	16.46	5.22	119.52	16.68	5.35	121.38	16.70	5.42
		450.00	89.39	11.13	3.16	113.78	19.82	4.20	114.05	16.06	4.09	115.43	16.15	4.14	116.47	16.15	4.17	119.52	16.32	4.27	121.38	16.34	4.33
		540.00	89.39	10.99	2.63	113.78	19.62	3.49	114.05	15.92	3.40	115.43	15.96	3.44	116.47	16.03	3.47	119.52	16.13	3.55	121.38	16.10	3.60
	20	180.00	88.08	15.13	8.11	112.24	26.33	10.89	112.17	21.29	10.49	113.67	21.38	10.61	115.18	21.33	10.73	117.81	21.53	10.95	119.70	21.52	11.10
		360.00	88.08	13.89	4.01	112.24	24.68	5.38	112.17	19.86	5.19	113.67	19.98	5.25	115.18	20.02	5.31	117.81	20.18	5.42	119.70	20.26	5.50
		450.00	88.08	13.48	3.19	112.24	24.06	4.28	112.17	19.50	4.14	113.67	19.60	4.19	115.18	19.58	4.24	117.81	19.81	4.33	119.70	19.78	4.38
		540.00	88.08	13.27	2.65	112.24	23.75	3.56	112.17	19.29	3.44	113.67	19.34	3.48	115.18	19.40	3.52	117.81	19.57	3.60	119.70	19.54	3.65
	25	180.00	88.08	17.81	8.32	105.02	23.29	10.08	108.78	23.64	10.40	110.29	23.70	10.53	111.79	23.87	10.66	114.05	23.90	10.84	115.56	23.90	10.96
		360.00	88.08	16.36	4.10	105.02	21.81	4.98	108.78	22.09	5.14	110.29	22.21	5.21	111.79	22.29	5.27	114.05	22.41	5.36	115.56	22.49	5.42
		450.00	88.08	15.90	3.27	105.02	21.37	3.97	108.78	21.70	4.10	110.29	21.75	4.15	111.79	21.89	4.20	114.05	21.97	4.27	115.56	22.00	4.32
		540.00	88.08	15.70	2.72	105.02	21.07	3.30	108.78	21.44	3.41	110.29	21.52	3.45	111.79	21.67	3.50	114.05	21.75	3.56	115.56	21.73	3.60
	30	180.00	88.08	21.10	8.58	101.63	25.72	10.01	105.02	26.03	10.30	106.15	26.13	10.39	107.65	26.17	10.51	109.53	26.31	10.67	111.04	26.22	10.78
		360.00	88.08	19.34	4.22	101.63	24.08	4.94	105.02	24.32	5.08	106.15	24.44	5.13	107.65	24.52	5.19	109.53	24.64	5.27	111.04	24.68	5.33
		450.00	88.08	18.89	3.36	101.63	23.53	3.93	105.02	23.85	4.05	106.15	23.96	4.09	107.65	24.10	4.14	109.53	24.13	4.20	111.04	24.13	4.25
		540.00	88.08	18.63	2.79	101.63	23.26	3.27	105.02	23.61	3.37	106.15	23.70	3.40	107.65	23.90	3.45	109.53	23.93	3.50	111.04	23.83	3.53
	35	180.00	88.08	25.12	8.89	97.11	28.19	9.85	100.12	28.38	10.10	101.63	28.59	10.23	102.76	28.57	10.32	104.26	28.67	10.44	105.39	28.63	10.53
		360.00	88.08	23.12	4.37	97.11	26.35	4.85	100.12	26.59	4.98	101.63	26.71	5.04	102.76	26.79	5.09	104.26	26.87	5.15	105.39	26.87	5.20
		450.00	88.08	22.43	3.47	97.11	25.76	3.86	100.12	26.01	3.96	101.63	26.14	4.02	102.76	26.28	4.06	104.26	26.37	4.11	105.39	26.28	4.14
		540.00	88.08	22.13	2.89	97.11	25.46	3.21	100.12	25.76	3.30	101.63	25.91	3.34	102.76	26.00	3.37	104.26	26.10	3.41	105.39	26.01	3.44
	40	180.00	77.92	26.50	8.20	86.27	29.74	9.12	88.89	29.97	9.34	90.29	30.13	9.46	91.20	30.13	9.53	92.96	30.25	9.68	93.87	30.18	9.75
		360.00	77.92	24.35	4.02	86.27	27.75	4.48	88.89	28.06	4.59	90.29	28.13	4.65	91.20	28.24	4.69	92.96	28.39	4.77	93.87	28.36	4.80
		450.00	77.92	23.66	3.19	86.27	27.16	3.56	88.89	27.42	3.66	90.29	27.62	3.71	91.20	27.68	3.74	92.96	27.79	3.80	93.87	27.72	3.82
		540.00	77.92	23.35	2.65	86.27	26.86	2.96	88.89	27.10	3.04	90.29	27.33	3.08	91.20	27.40	3.11	92.96	27.52	3.16	93.87	27.40	3.18
	45	180.00	68.24	27.89	7.55	75.42	31.22	8.38	77.67	31.51	8.58	78.95	31.73	8.70	79.64	31.75	8.75	81.23	31.78	8.88	81.93	31.74	8.93
		360.00	68.24	25.58	3.69	75.42	29.23	4.11	77.67	29.46	4.21	78.95	29.62	4.27	79.64	29.63	4.29	81.23	29.87	4.36	81.93	29.86	4.39
		450.00	68.24	24.89	2.93	75.42	28.56	3.27	77.67	28.82	3.35	78.95	29.05	3.39	79.64	29.13	3.42	81.23	29.27	3.47	81.93	29.11	3.49
		540.00	68.24	24.58	2.43	75.42	28.19	2.71	77.67	28.50	2.78	78.95	28.82	2.82	79.64	28.85	2.84	81.23	28.94	2.89	81.93	28.74	2.90
120	10	180.00	82.99	8.23	7.17	98.97	10.68	8.62	112.72	13.16	9.89	114.51	13.13	10.03	115.97	13.27	10.16	118.57	13.29	10.36	120.80	13.31	10.54
		360.00	82.99	7.53	3.56	98.97	9.97	4.28	112.72	12.20	4.91	114.51	12.34	4.98	115.97	12.30	5.04	118.57	12.47	5.15	120.80	12.37	5.23
		450.00	82.99	7.47	2.84	98.97	9.76	3.42	112.72	12.05	3.92	114.51	12.07	3.98	115.97	12.11	4.03	118.57	12.21	4.11	120.80	12.18	4.18
		540.00	82.99	7.41	2.37	98.97	9.69	2.85	112.72	11.98	3.27	114.51	11.94	3.31	115.97	11.98	3.35	118.57	12.09	3.42	120.80	12.06	3.48
	15	180.00	82.15	10.95	7.31	98.04	14.22	8.82	111.74	17.38	10.15	113.15	17.42	10.26	114.64	17.54	10.39	117.25	17.62	10.60	119.49	17.62	10.77
		360.00	82.15	10.00	3.62	98.04	13.30	4.37	111.74	16.19	5.03	113.15	16.30	5.09	114.64	16.38	5.15	117.25	16.47	5.25	119.49	16.49	5.34
		450.00	82.15	9.81	2.89	98.04	13.02	3.49	111.74	15.90	4.01	113.15	15.97	4.06	114.64	16.06	4.11	117.25	16.22	4.19	119.49	16.12	4.26
		540.00	82.15	9.69	2.41	98.04	12.87	2.90	111.74	15.75	3.34	113.15	15.84	3.38	114.64	15.93	3.42	117.25	16.03	3.49	119.49	15.99	3.55
	20	180.00	81.30	13.30	7.43	97.11	17.33	8.99	110.29	21.15	10.33	111.79	21.25	10.45	113.30	21.30	10.58	115.93	21.50	10.80	118.19	21.43	10.97
		360.00	81.30	12.22	3.67	97.11	16.20	4.45	110.29	19.74	5.11	111.79	19.86	5.17	113.30	19.94	5.23	115.93	20.10	5.34	118.19	20.18	5.44
		450.00	81.30	11.90	2.93	97.11	15.85	3.55	110.29	19.30	4.07	111.79	19.46	4.13	113.30	19.62	4.18	115.93	19.72	4.26	118.19	19.68	4.33
		540.00	81.30	11.71	2.44	97.11	15.70	2.95	110.29	19.08	3.39	111.79	19.27	3.43	113.30	19.42	3.48	115.93	19.53	3.55	118.19	19.43	3.60
	25	180.00	81.30	15.62	7.62	97.11	20.39	9.23	106.90	23.51	10.25	108.40	23.58	10.37	110.29	23.75	10.53	112.54	23.82	10.71	114.43	23.94	10.87
		360.00	81.30	14.41	3.76	97.11	19.10	4.57	106.90	21.97	5.06	108.40	22.09	5.13	110.29	22.17	5.20	112.54	22.33	5.30	114.43	22.41	5.38
		450.00	81.30	13.98	2.99	97.11	18.63	3.64	106.90	21.57	4.04	108.40	21.61	4.09									

VRF MW



12HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
		kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	
110	10	180.00	75.34	7.14	6.48	89.72	9.22	7.77	104.47	11.59	9.12	110.46	12.84	9.69	111.95	12.90	9.81	115.41	12.95	10.09	117.66	13.01	10.27
		360.00	75.34	6.56	3.22	89.72	8.58	3.86	104.47	10.90	4.53	110.46	12.02	4.81	111.95	12.16	4.88	115.41	12.03	5.01	117.66	12.16	5.10
		450.00	75.34	6.33	2.57	89.72	8.39	3.08	104.47	10.69	3.62	110.46	11.82	3.84	111.95	11.83	3.89	115.41	11.83	4.00	117.66	12.03	4.08
		540.00	75.34	6.22	2.14	89.72	8.33	2.57	104.47	10.55	3.01	110.46	11.68	3.20	111.95	11.69	3.24	115.41	11.70	3.33	117.66	11.90	3.39
	15	180.00	74.93	9.50	6.63	89.28	12.30	7.98	103.99	15.65	9.40	110.00	17.21	10.00	111.50	17.27	10.12	114.96	17.35	10.40	116.76	17.50	10.55
		360.00	74.93	8.75	3.29	89.28	11.46	3.96	103.99	14.60	4.66	110.00	16.12	4.95	111.50	16.19	5.02	114.96	16.23	5.15	116.76	16.39	5.23
		450.00	74.93	8.46	2.62	89.28	11.21	3.16	103.99	14.32	3.72	110.00	15.78	3.95	111.50	15.92	4.00	114.96	15.91	4.11	116.76	16.00	4.17
		540.00	74.93	8.35	2.18	89.28	11.14	2.63	103.99	14.11	3.09	110.00	15.64	3.29	111.50	15.72	3.33	114.96	15.77	3.42	116.76	15.81	3.47
	20	180.00	74.53	11.63	6.77	88.83	15.11	8.17	103.51	19.14	9.64	109.53	21.04	10.26	111.04	21.23	10.39	114.05	21.29	10.63	116.31	21.47	10.83
		360.00	74.53	10.71	3.35	88.83	14.09	4.04	103.51	17.95	4.77	109.53	19.74	5.08	111.04	19.82	5.14	114.05	19.98	5.27	116.31	20.10	5.36
		450.00	74.53	10.36	2.67	88.83	13.77	3.22	103.51	17.53	3.80	109.53	19.33	4.05	111.04	19.55	4.10	114.05	19.59	4.20	116.31	19.58	4.27
		540.00	74.53	10.19	2.22	88.83	13.64	2.68	103.51	17.32	3.16	109.53	19.13	3.37	111.04	19.35	3.41	114.05	19.39	3.49	116.31	19.32	3.55
	25	180.00	74.53	13.69	6.93	88.83	17.76	8.38	103.51	22.66	9.91	106.52	23.42	10.21	108.03	23.57	10.34	110.66	23.64	10.55	112.92	23.86	10.75
		360.00	74.53	12.58	3.42	88.83	16.60	4.14	103.51	21.17	4.90	106.52	21.93	5.05	108.03	22.05	5.11	110.66	22.21	5.22	112.92	22.33	5.31
		450.00	74.53	12.24	2.73	88.83	16.23	3.30	103.51	20.70	3.90	106.52	21.43	4.02	108.03	21.68	4.08	110.66	21.73	4.16	112.92	21.80	4.23
		540.00	74.53	12.02	2.27	88.83	16.04	2.75	103.51	20.50	3.25	106.52	21.19	3.34	108.03	21.44	3.39	110.66	21.49	3.46	112.92	21.50	3.52
	30	180.00	74.53	16.13	7.12	88.83	21.10	8.64	101.25	25.67	9.97	102.76	25.84	10.10	103.89	25.99	10.20	106.52	26.11	10.42	108.40	26.25	10.58
		360.00	74.53	14.85	3.51	88.83	19.66	4.26	101.25	24.04	4.92	102.76	24.16	4.99	103.89	24.28	5.04	106.52	24.44	5.14	108.40	24.60	5.23
		450.00	74.53	14.47	2.80	88.83	19.30	3.40	101.25	23.47	3.92	102.76	23.71	3.97	103.89	23.84	4.01	106.52	23.95	4.10	108.40	24.01	4.16
		540.00	74.53	14.26	2.33	88.83	19.06	2.83	101.25	23.22	3.26	102.76	23.43	3.30	103.89	23.62	3.34	106.52	23.74	3.41	108.40	23.69	3.46
	35	180.00	74.36	19.29	7.36	88.83	25.14	8.95	96.74	30.70	10.01	98.24	28.26	9.94	99.37	28.34	10.03	101.63	28.52	10.23	103.51	28.67	10.39
		360.00	74.36	17.75	3.62	88.83	23.48	4.41	96.74	28.75	4.93	98.24	26.43	4.90	99.37	26.55	4.95	101.63	26.71	5.04	103.51	26.83	5.12
		450.00	74.36	17.26	2.88	88.83	23.00	3.51	96.74	28.17	3.93	98.24	25.96	3.90	99.37	26.03	3.94	101.63	26.20	4.02	103.51	26.21	4.08
		540.00	74.36	17.01	2.39	88.83	22.73	2.92	96.74	27.81	3.26	98.24	25.66	3.25	99.37	25.74	3.28	101.63	25.97	3.34	103.51	25.87	3.39
	40	180.00	69.14	21.20	7.10	82.59	27.61	8.66	89.55	33.81	9.69	90.65	31.03	9.56	91.90	31.17	9.67	94.28	31.30	9.87	96.21	31.47	10.03
		360.00	69.14	19.48	3.48	82.59	25.82	4.26	89.55	31.57	4.76	90.65	29.02	4.70	91.90	29.15	4.76	94.28	29.31	4.86	96.21	29.51	4.94
		450.00	69.14	18.92	2.77	82.59	25.27	3.39	89.55	30.92	3.79	90.65	28.49	3.74	91.90	28.57	3.79	94.28	28.75	3.87	96.21	28.79	3.93
		540.00	69.14	18.68	2.30	82.59	25.00	2.82	89.55	30.63	3.15	90.65	28.20	3.11	91.90	28.34	3.15	94.28	28.52	3.22	96.21	28.39	3.26
	45	180.00	63.49	23.11	6.80	75.87	30.09	8.33	82.85	36.84	9.40	83.51	33.80	9.22	84.86	33.95	9.34	86.93	34.08	9.51	88.48	34.27	9.64
		360.00	63.49	21.20	3.33	75.87	28.17	4.09	82.85	34.31	4.60	83.51	31.68	4.53	84.86	31.69	4.58	86.93	31.92	4.67	88.48	32.20	4.74
		450.00	63.49	20.65	2.64	75.87	27.55	3.25	82.85	33.74	3.66	83.51	31.03	3.60	84.86	31.17	3.65	86.93	31.36	3.72	88.48	31.36	3.77
		540.00	63.49	20.34	2.20	75.87	27.20	2.70	82.85	33.45	3.05	83.51	30.73	2.99	84.86	30.89	3.03	86.93	31.07	3.09	88.48	30.97	3.13
100	10	180.00	67.75	5.99	5.79	80.93	7.74	6.97	94.10	9.84	8.17	100.50	10.94	8.76	106.90	12.17	9.36	118.91	12.69	10.34	114.05	12.83	9.97
		360.00	67.75	5.52	2.88	80.93	7.17	3.46	94.10	9.22	4.06	100.50	10.32	4.35	106.90	11.50	4.65	118.91	11.88	5.14	114.05	11.88	4.95
		450.00	67.75	5.42	2.30	80.93	7.00	2.76	94.10	9.03	3.24	100.50	10.01	3.47	106.90	11.16	3.71	118.91	11.67	4.10	114.05	11.68	3.95
		540.00	67.75	5.42	1.92	80.93	6.94	2.30	94.10	8.97	2.70	100.50	9.88	2.89	106.90	11.03	3.09	118.91	11.53	3.42	114.05	11.61	3.29
	15	180.00	67.75	8.18	5.97	80.93	10.49	7.18	94.10	13.36	8.44	100.50	14.92	9.07	106.90	16.47	9.69	118.91	17.20	10.69	114.05	17.35	10.32
		360.00	67.75	7.50	2.96	80.93	9.81	3.56	94.10	12.48	4.19	100.50	13.92	4.50	106.90	15.46	4.81	118.91	16.11	5.30	114.05	16.20	5.12
		450.00	67.75	7.35	2.36	80.93	9.58	2.84	94.10	12.23	3.34	100.50	13.67	3.59	106.90	15.13	3.84	118.91	15.77	4.23	114.05	15.80	4.08
		540.00	67.75	7.24	1.96	80.93	9.46	2.37	94.10	12.10	2.78	100.50	13.49	2.99	106.90	14.99	3.19	118.91	15.63	3.52	114.05	15.59	3.40
	20	180.00	67.75	10.06	6.11	80.93	12.90	7.37	94.10	16.49	8.69	100.50	18.40	9.34	106.90	20.37	10.00	118.91	21.16	11.01	114.05	21.33	10.64
		360.00	67.75	9.27	3.03	80.93	12.10	3.65	94.10	15.36	4.30	100.50	17.15	4.62	106.90	19.02	4.95	118.91	19.86	5.45	114.05	19.98	5.27
		450.00	67.75	9.01	2.41	80.93	11.87	2.92	94.10	15.11	3.43	100.50	16.91	3.69	106.90	18.69	3.95	118.91	19.45	4.35	114.05	19.44	4.20
		540.00	67.75	8.86	2.01	80.93	11.70	2.43	94.10	14.92	2.86	100.50	16.72	3.07	106.90	18.55	3.29	118.91	19.25	3.62	114.05	19.10	3.49
	25	180.00	67.75	11.82	6.25	80.93	15.25	7.56	94.10	19.38	8.92	100.50	21.59	9.59	105.77	23.48	10.16	108.40	23.52	10.37	110.66	23.81	10.57
		360.00	67.75	10.87	3.09	80.93	14.25	3.74	94.10	18.11	4.41	100.50	20.22	4.74	105.77	21.89	5.02	108.40	22.09	5.13	110.66	22.21	5.22
		450.00	67.75	10.57	2.46	80.93	13.97	2.98	94.10	17.69	3.51	100.50	19.80	3.78	105.77	21.51	4.00	108.40	21.65	4.09	110.66	21.65	4.16

12HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
90	10	180.00	60.98	5.20	5.20	72.65	6.61	6.23	84.69	8.24	7.30	90.34	9.23	7.82	96.36	10.23	8.37	108.03	12.43	9.46	111.79	12.70	9.78
		360.00	60.98	4.84	2.59	72.65	6.21	3.10	84.69	7.81	3.63	90.34	8.68	3.89	96.36	9.57	4.16	108.03	11.58	4.70	111.79	11.84	4.86
		450.00	60.98	4.63	2.06	72.65	6.09	2.47	84.69	7.56	2.90	90.34	8.50	3.11	96.36	9.38	3.32	108.03	11.35	3.75	111.79	11.53	3.88
		540.00	60.98	4.53	1.72	72.65	6.04	2.06	84.69	7.44	2.41	90.34	8.38	2.59	96.36	9.31	2.77	108.03	11.27	3.12	111.79	11.37	3.23
	15	180.00	60.98	7.02	5.34	72.65	9.00	6.41	84.69	11.25	7.54	90.34	12.57	8.09	96.36	13.84	8.66	108.03	16.76	9.80	111.79	17.21	10.14
		360.00	60.98	6.50	2.65	72.65	8.37	3.18	84.69	10.58	3.74	90.34	11.72	4.01	96.36	12.98	4.30	108.03	15.67	4.86	111.79	16.12	5.03
		450.00	60.98	6.30	2.11	72.65	8.20	2.54	84.69	10.33	2.99	90.34	11.53	3.20	96.36	12.72	3.43	108.03	15.37	3.88	111.79	15.65	4.01
		540.00	60.98	6.19	1.76	72.65	8.14	2.12	84.69	10.21	2.49	90.34	11.41	2.66	96.36	12.59	2.85	108.03	15.21	3.23	111.79	15.42	3.33
	20	180.00	60.98	8.64	5.47	72.65	11.05	6.58	84.69	13.90	7.75	90.34	15.48	8.31	96.36	17.05	8.91	108.03	20.62	10.11	111.79	21.18	10.45
		360.00	60.98	7.96	2.71	72.65	10.31	3.26	84.69	12.98	3.84	90.34	14.45	4.12	96.36	16.00	4.41	108.03	19.30	5.00	111.79	19.86	5.17
		450.00	60.98	7.75	2.16	72.65	10.08	2.60	84.69	12.79	3.06	90.34	14.20	3.29	96.36	15.74	3.52	108.03	18.92	3.99	111.79	19.32	4.12
		540.00	60.98	7.65	1.80	72.65	9.97	2.16	84.69	12.67	2.55	90.34	14.08	2.73	96.36	15.54	2.93	108.03	18.76	3.32	111.79	19.08	3.43
	25	180.00	60.98	10.11	5.59	72.65	12.92	6.72	84.69	16.35	7.94	90.34	18.15	8.52	96.36	20.20	9.16	105.77	23.33	10.14	108.40	23.61	10.37
		360.00	60.98	9.31	2.76	72.65	12.10	3.33	84.69	15.28	3.93	90.34	17.03	4.22	96.36	18.87	4.53	105.77	21.89	5.02	108.40	22.05	5.12
		450.00	60.98	9.01	2.20	72.65	11.83	2.65	84.69	15.05	3.13	90.34	16.68	3.36	96.36	18.48	3.61	105.77	21.46	4.00	108.40	21.55	4.08
		540.00	60.98	8.87	1.83	72.65	11.72	2.21	84.69	14.87	2.61	90.34	16.51	2.80	96.36	18.36	3.00	105.77	21.24	3.33	108.40	21.27	3.40
	30	180.00	60.98	11.95	5.73	72.65	15.23	6.90	84.69	20.36	8.25	90.34	21.59	8.79	96.36	23.90	9.45	102.01	25.79	10.04	104.26	25.97	10.23
		360.00	60.98	10.95	2.83	72.65	14.29	3.42	84.69	18.99	4.07	90.34	20.18	4.34	96.36	22.37	4.66	102.01	24.12	4.95	104.26	24.32	5.05
		450.00	60.98	10.71	2.25	72.65	13.97	2.72	84.69	18.57	3.25	90.34	19.78	3.46	96.36	21.94	3.72	102.01	23.67	3.95	104.26	23.68	4.02
		540.00	60.98	10.56	1.87	72.65	13.82	2.26	84.69	18.39	2.70	90.34	19.56	2.88	96.36	21.76	3.09	102.01	23.41	3.28	104.26	23.30	3.34
	35	180.00	60.98	14.13	5.90	72.65	18.15	7.13	84.69	23.13	8.47	90.34	25.74	9.12	95.23	28.01	9.68	97.87	28.15	9.90	99.75	28.35	10.06
		360.00	60.98	12.98	2.91	72.65	17.00	3.52	84.69	21.61	4.18	90.34	24.12	4.50	95.23	26.15	4.77	97.87	26.39	4.88	99.75	26.55	4.96
		450.00	60.98	12.61	2.31	72.65	16.65	2.81	84.69	21.17	3.33	90.34	23.62	3.58	95.23	25.75	3.80	97.87	25.87	3.89	99.75	25.84	3.95
		540.00	60.98	12.40	1.92	72.65	16.42	2.33	84.69	20.92	2.77	90.34	23.37	2.98	95.23	25.49	3.16	97.87	25.61	3.23	99.75	25.45	3.28
	40	180.00	58.98	16.17	5.90	70.46	20.87	7.18	82.34	26.60	8.56	87.57	29.56	9.20	92.40	32.19	9.79	95.07	32.38	10.01	96.51	32.60	10.15
		360.00	58.98	14.91	2.90	70.46	19.54	3.54	82.34	24.83	4.21	87.57	27.62	4.53	92.40	30.13	4.81	95.07	30.30	4.93	96.51	30.48	4.99
		450.00	58.98	14.44	2.31	70.46	19.08	2.81	82.34	24.33	3.35	87.57	27.12	3.60	92.40	29.53	3.83	95.07	29.78	3.92	96.51	29.70	3.97
		540.00	58.98	14.23	1.92	70.46	18.84	2.34	82.34	24.08	2.79	87.57	26.87	3.00	92.40	29.27	3.19	95.07	29.45	3.26	96.51	29.32	3.30
	45	180.00	57.39	18.26	5.94	68.27	23.58	7.22	79.99	30.02	8.64	85.27	33.43	9.33	89.57	36.37	9.90	92.27	36.62	10.13	93.74	36.79	10.26
		360.00	57.39	16.85	2.92	68.27	22.02	3.55	79.99	28.06	4.24	85.27	31.18	4.57	89.57	34.05	4.86	92.27	34.21	4.97	93.74	34.47	5.04
		450.00	57.39	16.32	2.32	68.27	21.56	2.82	79.99	27.49	3.38	85.27	30.62	3.64	89.57	33.38	3.86	92.27	33.62	3.96	93.74	33.64	4.00
		540.00	57.39	16.06	1.92	68.27	21.27	2.35	79.99	27.17	2.81	85.27	30.31	3.03	89.57	33.05	3.21	92.27	33.29	3.29	93.74	33.18	3.32
80	10	180.00	54.20	4.36	4.60	64.74	5.51	5.52	75.28	6.91	6.46	80.55	7.75	6.94	85.44	8.47	7.38	95.98	10.28	8.35	106.52	12.05	9.32
		360.00	54.20	3.99	2.29	64.74	5.23	2.75	75.28	6.42	3.21	80.55	7.21	3.45	85.44	7.89	3.67	95.98	9.52	4.14	106.52	11.25	4.63
		450.00	54.20	3.89	1.83	64.74	5.06	2.19	75.28	6.30	2.56	80.55	6.97	2.75	85.44	7.69	2.93	95.98	9.37	3.31	106.52	11.07	3.70
		540.00	54.20	3.89	1.52	64.74	4.94	1.83	75.28	6.30	2.14	80.55	6.85	2.29	85.44	7.56	2.44	95.98	9.37	2.76	106.52	11.07	3.08
	15	180.00	54.20	5.94	4.73	64.74	7.50	5.68	75.28	9.42	6.66	80.55	10.46	7.15	85.44	11.44	7.61	95.98	13.86	8.63	106.52	16.39	9.66
		360.00	54.20	5.47	2.34	64.74	7.05	2.82	75.28	8.75	3.30	80.55	9.74	3.55	85.44	10.73	3.78	95.98	12.95	4.28	106.52	15.32	4.79
		450.00	54.20	5.31	1.87	64.74	6.88	2.25	75.28	8.62	2.64	80.55	9.50	2.83	85.44	10.47	3.01	95.98	12.72	3.42	106.52	14.97	3.82
		540.00	54.20	5.25	1.56	64.74	6.76	1.87	75.28	8.50	2.19	80.55	9.44	2.36	85.44	10.34	2.51	95.98	12.64	2.85	106.52	14.79	3.18
	20	180.00	54.20	7.36	4.84	64.74	9.26	5.81	75.28	11.62	6.83	80.55	12.80	7.33	85.44	14.16	7.83	95.98	17.06	8.88	106.52	20.19	9.96
		360.00	54.20	6.73	2.39	64.74	8.64	2.88	75.28	10.83	3.38	80.55	12.02	3.64	85.44	13.25	3.88	95.98	15.92	4.40	106.52	18.87	4.93
		450.00	54.20	6.57	1.91	64.74	8.47	2.30	75.28	10.64	2.70	80.55	11.78	2.90	85.44	13.00	3.09	95.98	15.69	3.51	106.52	18.42	3.93
		540.00	54.20	6.46	1.59	64.74	8.41	1.92	75.28	10.52	2.25	80.55	11.66	2.42	85.44	12.87	2.57	95.98	15.54	2.92	106.52	18.16	3.27
	25	180.00	54.20	8.53	4.93	64.74	10.80	5.94	75.28	13.62	6.99	80.55	15.12	7.52	85.44	16.73	8.03	95.98	20.11	9.12	105.77	23.41	10.15
		360.00	54.20	7.88	2.44	64.74	10.15	2.94	75.28	12.74	3.46	80.55	14.13	3.72	85.44	15.60	3.97	95.98	18.79	4.51	105.77	21.89	5.02
		450.00	54.20	7.63	1.94	64.74	9.93	2.35	75.28	12.50	2.76	80.55	13.90	2.97	85.44	15.29	3.17	95.98	18.42	3.60	105.77	21.39	4.00
		540.00	54.20	7.53	1.62	64.74	9.82	1.95	75.28	12.38	2.30	80.55	13.72	2.47	85.44	15.16	2.						

VRF MW



12HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	180.00	47.43	3.70	4.02	56.46	4.61	4.80	65.87	5.74	5.63	70.39	6.31	6.03	74.90	6.85	6.42	83.94	8.27	7.25	93.35	9.68	8.10
		360.00	47.43	3.38	2.00	56.46	4.32	2.39	65.87	5.37	2.80	70.39	5.90	3.00	74.90	6.47	3.20	83.94	7.68	3.60	93.35	9.17	4.03
		450.00	47.43	3.27	1.59	56.46	4.15	1.90	65.87	5.19	2.23	70.39	5.72	2.39	74.90	6.28	2.55	83.94	7.61	2.88	93.35	8.91	3.21
		540.00	47.43	3.17	1.33	56.46	4.09	1.59	65.87	5.13	1.86	70.39	5.66	1.99	74.90	6.15	2.12	83.94	7.54	2.40	93.35	8.82	2.68
	15	180.00	47.43	4.97	4.12	56.46	6.20	4.92	65.87	7.73	5.78	70.39	8.49	6.20	74.90	9.33	6.62	83.94	11.16	7.47	93.35	13.19	8.37
		360.00	47.43	4.60	2.04	56.46	5.86	2.45	65.87	7.25	2.87	70.39	7.96	3.08	74.90	8.76	3.29	83.94	10.42	3.71	93.35	12.34	4.15
		450.00	47.43	4.44	1.63	56.46	5.69	1.95	65.87	7.06	2.29	70.39	7.79	2.46	74.90	8.57	2.62	83.94	10.27	2.96	93.35	12.08	3.31
		540.00	47.43	4.38	1.36	56.46	5.63	1.63	65.87	7.00	1.91	70.39	7.73	2.05	74.90	8.44	2.18	83.94	10.12	2.46	93.35	11.91	2.76
	20	180.00	47.43	6.13	4.21	56.46	7.68	5.04	65.87	9.54	5.93	70.39	10.44	6.35	74.90	11.55	6.79	83.94	13.74	7.67	93.35	16.28	8.61
		360.00	47.43	5.65	2.09	56.46	7.16	2.50	65.87	8.88	2.94	70.39	9.79	3.15	74.90	10.79	3.37	83.94	12.86	3.80	93.35	15.16	4.26
		450.00	47.43	5.49	1.66	56.46	7.05	2.00	65.87	8.69	2.34	70.39	9.61	2.51	74.90	10.60	2.69	83.94	12.63	3.04	93.35	14.82	3.40
		540.00	47.43	5.39	1.38	56.46	6.94	1.66	65.87	8.63	1.95	70.39	9.56	2.09	74.90	10.53	2.24	83.94	12.49	2.53	93.35	14.56	2.83
	25	180.00	47.43	7.12	4.29	56.46	8.90	5.14	65.87	11.08	6.05	70.39	12.30	6.50	74.90	13.51	6.95	83.94	16.24	7.87	93.35	19.11	8.84
		360.00	47.43	6.57	2.12	56.46	8.36	2.55	65.87	10.39	3.00	70.39	11.50	3.22	74.90	12.66	3.44	83.94	15.16	3.89	93.35	17.87	4.37
		450.00	47.43	6.37	1.69	56.46	8.14	2.03	65.87	10.16	2.39	70.39	11.22	2.56	74.90	12.41	2.74	83.94	14.88	3.11	93.35	17.37	3.48
		540.00	47.43	6.31	1.41	56.46	8.03	1.69	65.87	10.04	1.99	70.39	11.11	2.13	74.90	12.29	2.28	83.94	14.81	2.59	93.35	17.21	2.90
	30	180.00	47.43	8.35	4.38	56.46	10.50	5.26	65.87	13.15	6.21	70.39	14.50	6.67	74.90	16.02	7.14	83.94	19.19	8.10	93.35	22.65	9.11
		360.00	47.43	7.68	2.16	56.46	9.83	2.60	65.87	12.26	3.07	70.39	13.57	3.30	74.90	14.97	3.53	83.94	17.95	4.00	93.35	21.21	4.50
		450.00	47.43	7.49	1.73	56.46	9.62	2.08	65.87	12.04	2.45	70.39	13.30	2.63	74.90	14.67	2.82	83.94	17.68	3.19	93.35	20.66	3.58
		540.00	47.43	7.35	1.43	56.46	9.52	1.73	65.87	11.93	2.04	70.39	13.19	2.19	74.90	14.55	2.34	83.94	17.47	2.66	93.35	20.42	2.98
	35	180.00	47.43	9.80	4.50	56.46	12.39	5.41	65.87	15.51	6.39	70.39	17.29	6.89	74.90	20.82	7.52	83.94	22.81	8.39	93.35	27.07	9.46
		360.00	47.43	9.03	2.22	56.46	11.62	2.67	65.87	14.45	3.16	70.39	16.12	3.40	74.90	19.44	3.71	83.94	21.41	4.14	93.35	25.35	4.66
		450.00	47.43	8.78	1.77	56.46	11.40	2.13	65.87	14.21	2.52	70.39	15.89	2.71	74.90	19.10	2.95	83.94	20.97	3.30	93.35	24.67	3.71
		540.00	47.43	8.63	1.47	56.46	11.24	1.77	65.87	14.03	2.09	70.39	15.71	2.25	74.90	18.96	2.46	83.94	20.75	2.74	93.35	24.24	3.08
	40	180.00	47.43	11.62	4.64	56.46	14.71	5.59	65.87	18.34	6.62	70.39	20.44	7.14	74.90	24.60	7.82	83.94	27.08	8.72	93.35	32.03	9.85
		360.00	47.43	10.66	2.28	56.46	13.77	2.76	65.87	17.16	3.26	70.39	19.10	3.52	74.90	23.08	3.85	83.94	25.31	4.29	93.35	29.98	4.84
		450.00	47.43	10.41	1.82	56.46	13.44	2.20	65.87	16.81	2.60	70.39	18.81	2.80	74.90	22.60	3.06	83.94	24.87	3.42	93.35	29.21	3.85
		540.00	47.43	10.25	1.51	56.46	13.27	1.83	65.87	16.63	2.16	70.39	18.63	2.33	74.90	22.40	2.55	83.94	24.58	2.84	93.35	28.86	3.20
	45	180.00	47.43	13.45	4.78	56.46	16.96	5.77	65.87	21.17	6.84	70.39	23.60	7.38	74.90	28.44	8.12	83.94	31.27	9.05	93.35	37.09	10.25
		360.00	47.43	12.28	2.35	56.46	15.92	2.84	65.87	19.81	3.37	70.39	22.08	3.63	74.90	26.73	3.99	83.94	29.29	4.45	93.35	34.60	5.03
		450.00	47.43	12.03	1.87	56.46	15.53	2.26	65.87	19.40	2.68	70.39	21.73	2.90	74.90	26.11	3.17	83.94	28.70	3.54	93.35	33.83	4.00
		540.00	47.43	11.88	1.55	56.46	15.37	1.88	65.87	19.22	2.23	70.39	21.49	2.41	74.90	25.83	2.64	83.94	28.48	2.94	93.35	33.49	3.32
60	10	180.00	40.65	3.04	3.43	48.56	3.74	4.11	56.46	4.53	4.79	60.22	5.02	5.13	64.37	5.47	5.49	71.89	6.57	6.17	79.80	7.68	6.87
		360.00	40.65	2.77	1.71	48.56	3.51	2.05	56.46	4.23	2.38	60.22	4.73	2.55	64.37	5.03	2.73	71.89	6.06	3.06	79.80	7.17	3.42
		450.00	40.65	2.66	1.36	48.56	3.39	1.63	56.46	4.17	1.91	60.22	4.61	2.04	64.37	4.97	2.18	71.89	5.91	2.45	79.80	6.92	2.73
		540.00	40.65	2.61	1.13	48.56	3.34	1.36	56.46	4.17	1.59	60.22	4.55	1.70	64.37	4.91	1.81	71.89	5.84	2.04	79.80	6.75	2.27
	15	180.00	40.65	4.07	3.51	48.56	5.06	4.21	56.46	6.16	4.92	60.22	6.80	5.27	64.37	7.42	5.64	71.89	8.83	6.34	79.80	10.38	7.09
		360.00	40.65	3.75	1.74	48.56	4.72	2.09	56.46	5.74	2.44	60.22	6.38	2.62	64.37	6.86	2.80	71.89	8.18	3.15	79.80	9.71	3.52
		450.00	40.65	3.64	1.39	48.56	4.60	1.67	56.46	5.61	1.95	60.22	6.26	2.09	64.37	6.80	2.24	71.89	8.03	2.51	79.80	9.37	2.80
		540.00	40.65	3.58	1.16	48.56	4.55	1.39	56.46	5.55	1.62	60.22	6.21	1.74	64.37	6.73	1.86	71.89	7.96	2.09	79.80	9.20	2.33
	20	180.00	40.65	5.00	3.59	48.56	6.21	4.30	56.46	7.55	5.03	60.22	8.33	5.39	64.37	9.12	5.77	71.89	10.81	6.50	79.80	12.74	7.27
		360.00	40.65	4.62	1.78	48.56	5.81	2.14	56.46	7.12	2.50	60.22	7.80	2.67	64.37	8.56	2.86	71.89	10.15	3.22	79.80	11.90	3.60
		450.00	40.65	4.51	1.42	48.56	5.70	1.71	56.46	6.94	1.99	60.22	7.68	2.13	64.37	8.37	2.29	71.89	10.00	2.57	79.80	11.65	2.87
		540.00	40.65	4.45	1.18	48.56	5.64	1.42	56.46	6.88	1.66	60.22	7.62	1.78	64.37	8.31	1.90	71.89	9.93	2.14	79.80	11.48	2.39
	25	180.00	40.65	5.84	3.65	48.56	7.21	4.38	56.46	8.90	5.14	60.22	9.84	5.50	64.37	10.70	5.90	71.89	12.71	6.65	79.80	14.90	7.44
		360.00	40.65	5.37	1.81	48.56	6.77	2.17	56.46	8.32	2.54	60.22	9.15	2.73	64.37	10.03	2.92	71.89	11.94	3.29	79.80	14.01	3.69
		450.00	40.65	5.22	1.44	48.56	6.66	1.74	56.46	8.20	2.03	60.22	8.98	2.18	64.37	9.85	2.33	71.89	11.66	2.63	79.80	13.61	2.94
		540.00	40.65	5.17	1.20	48.56	6.60	1.44	56.46	8.09	1.69	60.22	8.93	1.81	64.37	9.79	1.94	71.89	11.52	2.18	79.80	13.44	2.44
	30	180.00	40.65	6.88	3.73	48.56	8.50	4.48	56.46	10.47	5.26	60.22	11.51	5.64	64.37	12.64	6.05	71.89	15.11	6.84	79		

12HP+12HP+12HP cooling mode

CR (%)	Inlet water Temp.(°C)	Water Flow Rate (L/min)	Indoor Air temperature (°CWB)																				
			14.00			16.00			18.00			19.00			20.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	TC
50	10	180.00	33.88	2.43	2.85	40.28	2.95	3.40	47.05	3.61	3.98	50.44	3.94	4.27	53.45	4.19	4.53	60.22	4.93	5.12	66.62	5.80	5.69
		360.00	33.88	2.32	1.42	40.28	2.77	1.69	47.05	3.29	1.98	50.44	3.63	2.12	53.45	3.99	2.26	60.22	4.63	2.55	66.62	5.45	2.83
		450.00	33.88	2.20	1.13	40.28	2.71	1.35	47.05	3.29	1.58	50.44	3.51	1.70	53.45	3.86	1.80	60.22	4.48	2.03	66.62	5.20	2.26
		540.00	33.88	2.14	0.94	40.28	2.65	1.12	47.05	3.29	1.32	50.44	3.44	1.41	53.45	3.79	1.50	60.22	4.40	1.69	66.62	5.03	1.88
	15	180.00	33.88	3.33	2.92	40.28	4.00	3.48	47.05	4.81	4.07	50.44	5.29	4.38	53.45	5.76	4.65	60.22	6.72	5.26	66.62	7.76	5.84
		360.00	33.88	3.09	1.45	40.28	3.76	1.73	47.05	4.50	2.03	50.44	4.92	2.17	53.45	5.36	2.31	60.22	6.27	2.61	66.62	7.33	2.91
		450.00	33.88	2.97	1.16	40.28	3.63	1.38	47.05	4.43	1.62	50.44	4.80	1.74	53.45	5.23	1.84	60.22	6.12	2.09	66.62	7.07	2.32
		540.00	33.88	2.91	0.96	40.28	3.57	1.15	47.05	4.37	1.35	50.44	4.74	1.45	53.45	5.17	1.54	60.22	6.04	1.74	66.62	6.99	1.93
	20	180.00	33.88	4.10	2.98	40.28	4.92	3.55	47.05	5.89	4.16	50.44	6.52	4.48	53.45	7.06	4.75	60.22	8.21	5.38	66.62	9.55	5.98
		360.00	33.88	3.74	1.48	40.28	4.62	1.76	47.05	5.57	2.07	50.44	6.09	2.22	53.45	6.61	2.36	60.22	7.76	2.67	66.62	9.03	2.97
		450.00	33.88	3.62	1.18	40.28	4.56	1.41	47.05	5.45	1.65	50.44	5.97	1.77	53.45	6.48	1.88	60.22	7.61	2.13	66.62	8.78	2.37
		540.00	33.88	3.56	0.98	40.28	4.49	1.17	47.05	5.38	1.37	50.44	5.91	1.48	53.45	6.41	1.57	60.22	7.54	1.77	66.62	8.61	1.97
	25	180.00	33.88	4.73	3.03	40.28	5.74	3.62	47.05	6.91	4.24	50.44	7.49	4.55	53.45	8.22	4.85	60.22	9.77	5.50	66.62	11.41	6.13
		360.00	33.88	4.34	1.50	40.28	5.33	1.79	47.05	6.49	2.10	50.44	7.08	2.26	53.45	7.72	2.40	60.22	9.11	2.72	66.62	10.59	3.03
		450.00	33.88	4.23	1.20	40.28	5.27	1.43	47.05	6.37	1.68	50.44	6.91	1.80	53.45	7.53	1.92	60.22	8.97	2.17	66.62	10.34	2.42
		540.00	33.88	4.23	1.00	40.28	5.22	1.19	47.05	6.31	1.40	50.44	6.79	1.50	53.45	7.41	1.59	60.22	8.83	1.81	66.62	10.26	2.01
	30	180.00	33.88	5.49	3.09	40.28	6.65	3.69	47.05	8.14	4.34	50.44	8.88	4.66	53.45	9.67	4.96	60.22	11.39	5.63	66.62	13.33	6.28
		360.00	33.88	5.01	1.53	40.28	6.21	1.83	47.05	7.56	2.15	50.44	8.32	2.31	53.45	9.07	2.46	60.22	10.71	2.79	66.62	12.46	3.11
		450.00	33.88	4.86	1.22	40.28	6.04	1.46	47.05	7.39	1.71	50.44	8.15	1.84	53.45	8.90	1.96	60.22	10.50	2.22	66.62	12.14	2.48
		540.00	33.88	4.80	1.01	40.28	5.99	1.21	47.05	7.33	1.42	50.44	8.09	1.53	53.45	8.84	1.63	60.22	10.36	1.85	66.62	11.91	2.06
	35	180.00	33.88	6.35	3.16	40.28	7.81	3.78	47.05	9.59	4.45	50.44	10.45	4.78	53.45	11.47	5.10	60.22	13.53	5.80	66.62	15.91	6.48
		360.00	33.88	5.85	1.56	40.28	7.28	1.87	47.05	8.92	2.20	50.44	9.79	2.37	53.45	10.71	2.52	60.22	12.66	2.86	66.62	14.81	3.20
		450.00	33.88	5.69	1.24	40.28	7.17	1.49	47.05	8.73	1.75	50.44	9.61	1.89	53.45	10.52	2.01	60.22	12.44	2.28	66.62	14.47	2.55
		540.00	33.88	5.57	1.03	40.28	7.05	1.24	47.05	8.67	1.46	50.44	9.55	1.57	53.45	10.45	1.67	60.22	12.29	1.90	66.62	14.21	2.12
	40	180.00	33.88	7.51	3.25	40.28	9.21	3.89	47.05	11.30	4.58	50.44	12.42	4.94	53.45	13.57	5.27	60.22	16.02	5.99	66.62	18.87	6.72
		360.00	33.88	6.90	1.60	40.28	8.62	1.92	47.05	10.56	2.26	50.44	11.58	2.44	53.45	12.68	2.60	60.22	15.00	2.96	66.62	17.60	3.31
		450.00	33.88	6.73	1.28	40.28	8.45	1.53	47.05	10.38	1.80	50.44	11.40	1.94	53.45	12.43	2.07	60.22	14.71	2.35	66.62	17.17	2.63
		540.00	33.88	6.62	1.06	40.28	8.39	1.27	47.05	10.26	1.50	50.44	11.28	1.62	53.45	12.30	1.72	60.22	14.56	1.96	66.62	16.92	2.19
	45	180.00	33.88	8.67	3.34	40.28	10.66	4.00	47.05	13.01	4.72	50.44	14.39	5.09	53.45	15.68	5.43	60.22	18.51	6.19	66.62	21.74	6.94
		360.00	33.88	8.00	1.65	40.28	9.96	1.97	47.05	12.15	2.33	50.44	13.37	2.51	53.45	14.66	2.68	60.22	17.34	3.05	66.62	20.39	3.42
		450.00	33.88	7.78	1.31	40.28	9.79	1.57	47.05	11.97	1.85	50.44	13.13	2.00	53.45	14.34	2.13	60.22	16.97	2.43	66.62	19.88	2.72
		540.00	33.88	7.62	1.09	40.28	9.67	1.31	47.05	11.91	1.54	50.44	12.96	1.66	53.45	14.21	1.77	60.22	16.83	2.02	66.62	19.63	2.26

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

VRF MW



12HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
130	10	180.00	110.45	23.77	6.78	109.99	23.97	6.72	109.80	24.82	6.64	109.28	24.75	6.61	108.77	24.53	6.59	107.71	25.61	6.42
		360.00	112.96	23.57	3.49	111.80	24.05	3.43	111.66	24.99	3.39	111.18	24.75	3.38	110.32	24.48	3.36	109.33	25.51	3.28
		450.00	113.67	23.92	2.81	112.53	24.42	2.76	112.40	25.07	2.73	111.56	24.84	2.71	111.09	24.84	2.70	110.14	26.76	2.61
		540.00	114.03	24.08	2.34	112.89	24.58	2.30	112.77	25.16	2.28	111.94	24.88	2.27	111.48	25.07	2.25	110.55	27.33	2.17
	15	180.00	110.81	21.26	7.00	110.36	21.28	6.96	109.80	22.24	6.85	109.28	22.29	6.80	108.77	21.87	6.79	107.71	23.00	6.62
		360.00	114.39	20.40	3.67	113.61	20.91	3.62	113.14	22.03	3.56	113.08	21.63	3.57	111.87	21.19	3.54	111.36	22.27	3.48
		450.00	115.10	20.91	2.95	114.70	21.40	2.92	114.63	22.03	2.90	114.22	21.63	2.90	113.41	21.78	2.87	112.58	24.52	2.75
		540.00	115.46	21.14	2.46	115.06	21.65	2.43	115.37	22.03	2.43	114.59	21.63	2.42	114.19	22.09	2.40	113.40	25.66	2.29
	20	180.00	115.10	19.54	7.47	114.34	19.53	7.41	114.25	20.09	7.36	113.46	20.05	7.30	112.64	20.15	7.23	111.36	22.27	6.96
		360.00	118.68	18.99	3.90	117.95	19.44	3.85	117.59	20.05	3.81	116.87	20.35	3.77	116.51	20.70	3.75	115.43	21.49	3.67
		450.00	119.03	18.99	3.13	118.68	19.44	3.10	119.08	20.18	3.09	118.39	20.35	3.07	117.28	20.70	3.02	116.24	22.85	2.92
		540.00	119.39	18.99	2.62	119.40	19.44	2.60	119.82	20.22	2.60	118.77	20.35	2.56	117.67	20.70	2.53	116.65	23.58	2.43
	25	180.00	130.58	20.23	8.63	129.86	20.68	8.54	128.78	21.57	8.38	128.41	21.91	8.33	127.69	22.30	8.24	126.61	23.17	8.09
		360.00	130.58	19.94	4.32	129.86	20.54	4.27	128.78	21.19	4.21	128.41	21.57	4.18	127.69	21.95	4.13	126.61	22.78	4.06
		450.00	130.58	19.64	3.47	129.86	20.01	3.43	128.78	20.86	3.37	128.41	21.23	3.35	127.69	21.59	3.32	126.61	22.39	3.26
		540.00	130.58	19.51	2.89	129.86	19.74	2.87	128.78	20.72	2.82	128.41	21.03	2.80	127.69	21.39	2.77	126.61	22.22	2.72
	30	180.00	140.71	21.74	9.30	141.40	21.83	9.35	139.96	22.93	9.15	135.45	23.16	8.78	138.15	23.78	8.94	128.78	21.40	8.39
		360.00	140.71	21.04	4.68	141.40	21.68	4.68	139.96	22.40	4.59	135.45	22.78	4.40	138.15	22.93	4.50	128.78	20.58	4.23
		450.00	140.71	20.71	3.75	141.40	21.09	3.76	139.96	22.03	3.69	135.45	22.35	3.54	138.15	22.93	3.60	128.78	20.58	3.38
		540.00	140.71	20.57	3.13	141.40	20.79	3.14	139.96	21.82	3.08	135.45	22.18	2.95	138.15	22.93	3.00	128.78	20.58	2.82
	35	180.00	154.03	22.90	10.25	152.94	23.40	10.13	147.89	22.68	9.79	138.60	21.52	9.15	138.15	21.14	9.15	128.78	18.77	8.60
		360.00	154.03	22.17	5.15	152.94	22.86	5.08	147.89	22.25	4.91	138.60	21.15	4.59	138.15	20.70	4.59	128.78	18.04	4.33
		450.00	154.03	22.17	4.12	152.94	22.64	4.07	147.89	21.87	3.94	138.60	20.78	3.68	138.15	20.33	3.68	128.78	18.04	3.46
		540.00	154.03	22.17	3.44	152.94	22.53	3.40	147.89	21.66	3.29	138.60	20.57	3.08	138.15	20.16	3.07	128.78	18.04	2.89
	40	180.00	154.03	22.17	10.31	152.94	22.64	10.19	147.89	21.87	9.85	138.60	20.78	9.21	138.15	20.33	9.21	128.78	17.68	8.68
		360.00	154.03	21.39	5.18	152.94	22.04	5.12	147.89	21.12	4.96	138.60	19.98	4.64	138.15	19.51	4.64	128.78	16.95	4.37
		450.00	154.03	21.03	4.16	152.94	21.71	4.10	147.89	21.12	3.96	138.60	19.98	3.71	138.15	19.51	3.71	128.78	16.95	3.50
		540.00	154.03	20.82	3.47	152.94	21.49	3.43	147.89	21.12	3.30	138.60	19.98	3.09	138.15	19.51	3.09	128.78	16.95	2.91
	45	180.00	154.03	21.39	10.37	152.94	21.87	10.25	147.89	21.12	9.91	138.60	19.98	9.27	138.15	19.51	9.27	128.78	16.53	8.77
		360.00	154.03	20.67	5.21	152.94	21.27	5.15	147.89	19.93	5.00	138.60	18.87	4.68	138.15	18.38	4.68	128.78	15.81	4.42
		450.00	154.03	19.89	4.19	152.94	20.72	4.13	147.89	20.31	3.99	138.60	19.18	3.73	138.15	18.76	3.73	128.78	15.81	3.53
		540.00	154.03	19.53	3.50	152.94	20.45	3.45	147.89	20.52	3.32	138.60	19.40	3.11	138.15	18.97	3.11	128.78	15.81	2.94
120	10	180.00	111.15	24.68	6.76	111.08	25.35	6.70	112.01	26.24	6.71	110.56	26.30	6.59	110.05	26.74	6.51	109.13	26.72	6.44
		360.00	113.42	25.05	3.45	112.62	25.74	3.40	113.21	26.61	3.38	111.77	26.44	3.34	111.29	26.64	3.31	110.43	26.83	3.27
		450.00	113.79	24.92	2.78	112.62	25.74	2.72	114.01	26.70	2.73	112.17	26.53	2.68	111.71	26.79	2.66	110.87	27.71	2.60
		540.00	114.17	24.88	2.33	112.24	25.74	2.25	114.01	26.79	2.27	112.17	26.63	2.23	111.71	26.84	2.21	111.30	28.21	2.17
	15	180.00	111.90	21.89	7.04	111.47	22.41	6.96	112.01	23.32	6.93	110.56	23.64	6.79	110.05	23.80	6.74	109.13	24.01	6.65
		360.00	114.17	22.05	3.60	114.16	22.58	3.58	114.80	23.45	3.57	112.97	23.31	3.50	112.12	23.10	3.48	111.74	23.62	3.44
		450.00	114.93	21.72	2.91	114.16	22.41	2.87	115.60	23.45	2.88	113.78	23.31	2.83	113.36	23.10	2.82	112.61	25.22	2.73
		540.00	115.31	21.56	2.44	113.77	22.32	2.38	116.00	23.45	2.41	114.18	23.31	2.37	113.77	23.10	2.36	113.04	26.00	2.27
	20	180.00	114.93	19.63	7.45	114.54	19.90	7.40	115.20	20.48	7.40	112.97	20.89	7.20	112.53	21.66	7.10	111.74	22.73	6.96
		360.00	117.95	19.63	3.84	117.23	20.20	3.79	117.59	20.85	3.78	115.79	21.23	3.70	115.43	21.61	3.67	114.35	22.40	3.59
		450.00	118.33	19.43	3.09	117.23	20.03	3.04	118.79	20.85	3.06	116.59	21.23	2.98	116.26	21.66	2.96	115.22	23.23	2.88
		540.00	118.71	19.35	2.59	117.23	19.94	2.54	119.19	20.85	2.56	117.00	21.23	2.50	116.26	21.71	2.46	115.65	23.62	2.40
	25	180.00	129.09	21.10	8.44	128.41	21.57	8.35	127.33	22.26	8.21	126.97	22.87	8.14	126.25	23.34	8.05	118.68	21.40	7.60
		360.00	129.50	20.77	4.25	128.41	21.42	4.18	127.33	22.10	4.11	126.97	22.48	4.08	126.25	22.93	4.04	118.68	21.00	3.82
		450.00	129.90	20.02	3.44	128.41	20.87	3.36	127.33	21.68	3.30	126.97	22.48	3.27	126.25	22.53	3.24	118.68	21.00	3.05
		540.00	129.90	19.65	2.87	128.41	20.57	2.81	127.33	21.52	2.76	126.97	22.48	2.72	126.25	22.30	2.71	118.68	21.00	2.55
	30	180.00	141.04	22.74	9.25	139.60	23.14	9.10	136.35	22.88	8.87	132.02	21.78	8.62	127.69	21.16	8.33	118.68	18.61	7.82
		360.00	141.04	21.95	4.66	139.60	22.63	4.57	136.35	22.48	4.45	132.02	21.38	4.32	127.69	20.32	4.20	118.68	18.23	3.93
		450.00	141.04	21.26	3.75	139.60	22.12	3.67	136.35	22.02	3.58	132.02	21.38	3.46	127.69	20.32	3.36	118.68	17.86	3.15
		540.00	141.04	20.89	3.13	139.60	21.84	3.07	136.35	21.79	2.99	132.02	21.38	2.88	127.69	20.32	2.80	118.68	17.70	2.63
	35	180.00	152.22	24.50	9.98	145.01	22.51	9.58	136.35	20.49	9.06	132.02	19.48	8.80	127.69	18.56	8.53	118.68	16.39	8.00
		360.00	152.22	23.12	5.05	145.01	21.64	4.82	136.35	19.67	4.56	132.02	18.72	4.43	127.69	17.81	4.29	118.68	16.03	4.01
		450.00	152.22	2																

12HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
110	10	180.00	112.10	26.64	6.68	112.46	27.40	6.65	112.13	28.47	6.54	111.70	28.40	6.51	110.88	29.39	6.37	106.26	26.55	6.23
		360.00	113.69	26.86	3.39	113.69	27.73	3.36	112.55	28.81	3.27	112.56	28.56	3.28	111.77	29.28	3.22	106.70	26.66	3.13
		450.00	114.09	26.86	2.73	114.10	27.73	2.70	112.97	28.76	2.63	112.99	28.51	2.64	111.77	29.44	2.57	107.15	26.93	2.51
		540.00	114.49	26.86	2.28	114.51	27.73	2.26	113.39	28.71	2.21	112.99	28.46	2.20	112.21	29.50	2.16	107.15	27.10	2.09
	15	180.00	112.10	23.53	6.92	112.87	24.33	6.92	112.13	25.40	6.78	111.70	25.54	6.74	110.88	26.15	6.62	106.26	23.86	6.44
		360.00	114.09	23.40	3.54	114.51	24.33	3.52	113.39	25.40	3.44	112.99	25.18	3.43	112.66	25.39	3.41	107.60	23.47	3.29
		450.00	114.88	23.22	2.87	114.92	24.14	2.84	113.81	25.10	2.77	113.42	24.82	2.77	112.66	25.39	2.73	108.04	23.86	2.63
		540.00	115.28	23.14	2.40	115.33	24.05	2.38	114.23	24.90	2.33	113.85	24.62	2.33	113.10	25.39	2.29	108.49	24.08	2.20
	20	180.00	114.49	20.37	7.36	114.92	21.11	7.33	113.81	21.83	7.19	112.99	22.21	7.10	112.66	23.03	7.01	107.60	21.66	6.72
		360.00	116.87	20.51	3.77	116.15	21.11	3.71	115.07	21.83	3.64	114.71	22.21	3.62	113.99	22.59	3.57	108.94	21.49	3.42
		450.00	117.67	20.51	3.04	117.38	21.11	3.01	115.49	21.83	2.93	115.14	21.85	2.92	114.43	22.59	2.87	109.38	21.49	2.75
		540.00	118.06	20.51	2.54	117.79	21.11	2.52	115.91	21.83	2.45	115.57	21.65	2.45	114.87	22.59	2.40	109.38	21.49	2.29
	25	180.00	127.19	21.87	8.23	126.97	22.80	8.14	125.17	23.11	7.98	120.84	22.01	7.73	116.87	20.96	7.50	108.94	18.42	7.08
		360.00	128.05	21.72	4.16	126.97	22.40	4.09	125.17	22.70	4.01	120.84	21.61	3.88	116.87	20.51	3.77	108.94	18.42	3.54
		450.00	128.91	21.72	3.35	126.97	22.51	3.27	125.17	22.24	3.22	120.84	21.61	3.10	116.87	20.17	3.02	108.94	18.04	2.84
		540.00	129.34	21.72	2.80	126.97	22.51	2.72	125.17	22.01	2.69	120.84	21.61	2.59	116.87	19.94	2.53	108.94	17.88	2.37
	30	180.00	139.24	23.40	9.06	133.10	22.12	8.68	125.17	19.74	8.24	120.84	19.11	7.95	116.87	18.26	7.71	108.94	16.89	7.20
		360.00	139.24	22.97	4.54	133.10	21.64	4.36	125.17	19.29	4.14	120.84	18.72	3.99	116.87	17.81	3.87	108.94	16.45	3.62
		450.00	139.24	22.79	3.64	133.10	21.28	3.50	125.17	18.90	3.32	120.84	18.34	3.21	116.87	17.81	3.10	108.94	16.45	2.89
		540.00	139.24	22.73	3.04	133.10	21.04	2.92	125.17	18.68	2.77	120.84	18.17	2.68	116.87	17.81	2.58	108.94	16.45	2.41
	35	180.00	141.04	21.53	9.34	133.10	19.35	8.89	125.17	17.72	8.40	120.84	17.18	8.10	116.87	15.98	7.89	108.94	14.51	7.38
		360.00	141.04	20.70	4.70	133.10	18.95	4.46	125.17	17.28	4.22	120.84	16.79	4.07	116.87	15.65	3.96	108.94	14.14	3.71
		450.00	141.04	20.16	3.78	133.10	18.55	3.58	125.17	16.90	3.39	120.84	16.79	3.25	116.87	15.65	3.17	108.94	14.14	2.96
		540.00	141.04	19.92	3.16	133.10	18.33	2.99	125.17	16.74	2.83	120.84	16.79	2.71	116.87	15.65	2.64	108.94	14.14	2.47
	40	180.00	141.04	20.28	9.44	133.10	18.55	8.95	125.17	16.52	8.49	120.84	16.02	8.19	116.87	14.84	7.98	108.94	13.35	7.47
		360.00	141.04	19.44	4.75	133.10	17.70	4.51	125.17	15.76	4.28	120.84	15.58	4.11	116.87	14.47	4.00	108.94	12.98	3.75
		450.00	141.04	19.14	3.81	133.10	17.30	3.62	125.17	15.76	3.42	120.84	15.19	3.30	116.87	14.03	3.22	108.94	12.61	3.01
		540.00	141.04	19.03	3.18	133.10	17.07	3.02	125.17	15.76	2.85	120.84	14.97	2.76	116.87	13.87	2.68	108.94	12.40	2.52
	45	180.00	141.04	18.97	9.54	133.10	17.70	9.02	125.17	15.33	8.59	120.84	14.80	8.29	116.87	13.66	8.07	108.94	12.19	7.56
		360.00	141.04	18.13	4.80	133.10	16.50	4.56	125.17	14.13	4.34	120.84	14.36	4.16	116.87	13.28	4.05	108.94	11.82	3.80
		450.00	141.04	18.13	3.84	133.10	16.05	3.66	125.17	14.57	3.46	120.84	13.59	3.35	116.87	12.47	3.26	108.94	11.08	3.06
		540.00	141.04	18.13	3.20	133.10	15.82	3.06	125.17	14.78	2.88	120.84	13.20	2.80	116.87	12.09	2.73	108.94	10.66	2.56
100	10	180.00	112.09	28.03	6.57	113.40	29.52	6.56	112.50	31.00	6.37	110.02	28.80	6.35	106.41	27.95	6.13	99.20	24.85	5.81
		360.00	113.35	28.58	3.31	113.83	29.91	3.28	112.50	31.38	3.17	110.02	28.96	3.17	106.41	28.05	3.06	99.20	24.95	2.90
		450.00	114.18	28.44	2.68	114.27	29.91	2.64	112.50	31.33	2.54	110.02	28.90	2.54	106.41	27.95	2.45	99.20	24.85	2.32
		540.00	114.60	28.40	2.25	114.71	29.91	2.21	112.50	31.27	2.12	110.02	28.85	2.12	106.41	27.95	2.04	99.20	24.80	1.94
	15	180.00	112.93	24.76	6.89	113.40	26.09	6.83	112.50	27.66	6.63	110.02	25.89	6.58	106.41	24.88	6.37	99.20	22.33	6.01
		360.00	113.35	25.22	3.44	113.83	26.19	3.43	112.50	27.66	3.32	110.02	25.53	3.30	106.41	24.51	3.20	99.20	21.97	3.02
		450.00	114.18	24.80	2.79	114.71	25.94	2.78	112.50	27.34	2.66	110.02	25.17	2.65	106.41	24.14	2.57	99.20	21.61	2.43
		540.00	114.60	24.57	2.35	114.71	25.84	2.32	112.50	27.12	2.22	110.02	24.96	2.22	106.41	23.92	2.15	99.20	21.40	2.03
	20	180.00	113.76	21.16	7.24	114.27	22.11	7.20	112.50	23.40	6.97	110.02	22.16	6.87	106.41	21.07	6.67	99.20	19.34	6.24
		360.00	115.43	21.53	3.67	114.71	22.21	3.62	112.50	23.40	3.48	110.02	21.79	3.45	106.41	20.70	3.35	99.20	18.57	3.15
		450.00	115.85	21.16	2.96	115.58	22.01	2.93	112.50	23.02	2.80	110.02	21.38	2.77	106.41	20.27	2.69	99.20	18.26	2.53
		540.00	116.26	20.98	2.48	116.02	21.91	2.45	112.50	22.81	2.34	110.02	21.22	2.31	106.41	20.06	2.25	99.20	18.06	2.11
	25	180.00	124.45	22.76	7.95	120.84	22.12	7.72	112.50	20.07	7.23	110.02	19.12	7.11	106.41	18.12	6.90	99.20	16.00	6.50
		360.00	126.25	22.82	4.04	120.84	21.61	3.88	112.50	19.63	3.63	110.02	18.69	3.57	106.41	17.74	3.47	99.20	16.00	3.25
		450.00	126.70	22.31	3.26	120.84	21.43	3.11	112.50	19.31	2.91	110.02	18.31	2.87	106.41	17.74	2.77	99.20	15.57	2.61
		540.00	127.15	22.08	2.74	120.84	21.38	2.59	112.50	19.09	2.43	110.02	18.09	2.40	106.41	17.74	2.31	99.20	15.42	2.18
	30	180.00	128.05	20.81	8.38	120.84	19.13	7.95	112.50	17.22	7.45	110.02	16.70	7.30	106.41	15.46	7.11	99.20	14.42	6.63
		360.00	128.05	20.47	4.21	120.84	18.72	3.99	112.50	17.06	3.73	110.02	16.26	3.66	106.41	15.46	3.55	99.20	13.99	3.33
		450.00	128.05	20.01	3.38	120.84	18.72	3.19	112.50	16.84	2.99	110.02	16.26	2.93	106.41	15.08	2.86	99.20	13.99	2.66
		540.00	128.05	19.78	2.82	120.84	18.72	2.66	112.50	16.72	2.50	110.02	16.26	2.44	106.41	14.86	2.39	99.20	13.99	2.22
	35	180.00	128.05	18.77	8.54	120.84	17.24	8.10	112.50	15.21	7.61	110.02	14.81	7.44	106.41	14.07	7.22	99.20	12.78	6.76
		360.00	128.05	17.93	4.30	120.84	16.45	4.08	112.50	15.05	3.81	110.02	14.37	3.74	106.41	13.68	3.62	99.20	12.39	3.39
		450.00	128.																	

VRF MW



12HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C	TC kW	PI kW	ΔT °C
90	10	180.00	113.52	31.15	6.44	108.94	29.18	6.23	102.44	26.14	5.97	98.84	24.80	5.79	95.59	24.03	5.59	89.10	20.94	5.33
		360.00	113.05	31.26	3.20	108.47	29.35	3.09	102.44	26.24	2.98	98.84	24.96	2.89	95.59	23.98	2.80	89.10	21.04	2.66
		450.00	113.99	31.15	2.59	108.94	29.23	2.49	102.44	26.14	2.39	98.84	24.85	2.31	95.59	24.03	2.24	89.10	21.09	2.13
		540.00	114.45	31.09	2.17	108.94	29.18	2.08	102.44	26.14	1.99	98.84	24.80	1.93	95.59	24.08	1.86	89.10	21.14	1.77
	15	180.00	113.99	26.86	6.81	109.40	25.51	6.56	102.44	23.28	6.19	98.84	22.34	5.98	95.59	21.44	5.80	89.10	18.84	5.49
		360.00	113.05	26.41	3.39	108.47	25.07	3.26	102.44	22.91	3.11	98.84	21.97	3.00	95.59	20.70	2.93	89.10	18.44	2.76
		450.00	113.99	26.07	2.75	108.94	24.68	2.63	102.44	22.55	2.50	98.84	21.56	2.42	95.59	20.70	2.34	89.10	18.44	2.21
		540.00	114.45	25.85	2.31	109.40	24.51	2.21	102.44	22.33	2.09	98.84	21.40	2.02	95.59	20.70	1.95	89.10	18.44	1.84
	20	180.00	114.45	22.74	7.17	109.87	21.73	6.89	102.44	19.85	6.46	98.84	18.89	6.25	95.59	18.37	6.04	89.10	16.65	5.66
		360.00	113.99	22.74	3.57	108.94	21.45	3.42	102.44	19.48	3.24	98.84	18.57	3.14	95.59	17.63	3.05	89.10	15.88	2.86
		450.00	114.45	22.40	2.88	109.40	21.29	2.76	102.44	19.48	2.59	98.84	18.57	2.51	95.59	17.63	2.44	89.10	15.88	2.29
		540.00	114.92	22.18	2.42	109.40	21.23	2.30	102.44	19.48	2.16	98.84	18.57	2.09	95.59	17.63	2.03	89.10	15.88	1.91
	25	180.00	114.06	20.26	7.33	108.94	18.55	7.07	102.44	17.13	6.67	98.84	16.00	6.48	95.59	15.63	6.25	89.10	14.18	5.86
		360.00	115.43	20.09	3.73	108.94	18.38	3.54	102.44	16.75	3.35	98.84	16.00	3.24	95.59	15.20	3.14	89.10	13.76	2.94
		450.00	115.88	19.57	3.01	108.94	17.99	2.84	102.44	16.75	2.68	98.84	15.57	2.60	95.59	15.20	2.51	89.10	13.76	2.36
		540.00	115.88	19.28	2.52	108.94	17.77	2.38	102.44	16.75	2.23	98.84	15.42	2.17	95.59	15.20	2.09	89.10	13.76	1.96
	30	180.00	115.43	17.83	7.63	108.94	16.33	7.24	102.44	15.01	6.83	98.84	14.42	6.60	95.59	13.72	6.40	89.10	12.09	6.02
		360.00	115.43	17.44	3.83	108.94	16.00	3.63	102.44	14.63	3.43	98.84	13.99	3.32	95.59	13.34	3.21	89.10	12.09	3.01
		450.00	115.43	17.04	3.08	108.94	15.55	2.92	102.44	14.63	2.75	98.84	13.99	2.65	95.59	13.34	2.57	89.10	11.73	2.42
		540.00	115.43	16.82	2.57	108.94	15.33	2.44	102.44	14.63	2.29	98.84	13.99	2.21	95.59	13.34	2.14	89.10	11.57	2.02
	35	180.00	115.43	15.83	7.79	108.94	14.57	7.38	102.44	13.34	6.97	98.84	12.82	6.72	95.59	12.21	6.52	89.10	11.14	6.09
		360.00	115.43	15.39	3.91	108.94	14.14	3.71	102.44	12.96	3.50	98.84	12.39	3.38	95.59	11.83	3.27	89.10	10.76	3.06
		450.00	115.43	15.01	3.14	108.94	13.76	2.98	102.44	12.53	2.81	98.84	12.02	2.71	95.59	11.83	2.62	89.10	10.76	2.45
		540.00	115.43	14.79	2.62	108.94	13.54	2.49	102.44	12.31	2.35	98.84	11.86	2.27	95.59	11.83	2.18	89.10	10.76	2.04
	40	180.00	115.43	14.63	7.88	108.94	13.38	7.47	102.44	11.77	7.09	98.84	11.27	6.85	95.59	11.06	6.61	89.10	9.97	6.19
		360.00	115.43	13.81	3.97	108.94	13.00	3.75	102.44	11.39	3.56	98.84	10.89	3.44	95.59	10.63	3.32	89.10	9.60	3.11
		450.00	115.43	13.81	3.18	108.94	13.00	3.00	102.44	11.39	2.85	98.84	10.89	2.75	95.59	10.63	2.66	89.10	9.60	2.49
		540.00	115.43	13.81	2.65	108.94	13.00	2.50	102.44	11.39	2.37	98.84	10.89	2.29	95.59	10.63	2.21	89.10	9.60	2.07
	45	180.00	115.43	13.42	7.97	108.94	12.18	7.56	102.44	10.20	7.21	98.84	9.71	6.97	95.59	9.86	6.70	89.10	8.80	6.28
		360.00	115.43	12.22	4.03	108.94	11.80	3.80	102.44	9.82	3.62	98.84	9.34	3.50	95.59	9.48	3.37	89.10	8.43	3.15
		450.00	115.43	12.61	3.22	108.94	12.18	3.03	102.44	10.20	2.88	98.84	9.71	2.79	95.59	9.48	2.69	89.10	8.43	2.52
		540.00	115.43	12.82	2.67	108.94	12.40	2.52	102.44	10.36	2.40	98.84	9.93	2.32	95.59	9.48	2.24	89.10	8.43	2.10
80	10	180.00	101.99	26.31	5.92	96.22	24.07	5.64	90.90	21.33	5.44	88.01	20.74	5.26	85.13	19.65	5.12	79.36	17.86	4.81
		360.00	102.44	26.13	2.98	96.67	23.90	2.84	90.90	21.33	2.72	88.01	20.79	2.63	85.13	19.71	2.56	79.36	17.86	2.40
		450.00	102.44	26.07	2.39	96.67	24.02	2.27	90.90	21.43	2.17	88.01	20.68	2.11	85.13	19.60	2.05	79.36	17.75	1.93
		540.00	102.44	26.01	1.99	96.22	24.07	1.88	90.90	21.48	1.81	88.01	20.63	1.76	85.13	19.55	1.71	79.36	17.70	1.61
	15	180.00	102.44	23.83	6.15	96.67	21.59	5.87	90.90	18.96	5.62	88.01	18.68	5.42	85.13	17.55	5.28	79.36	16.05	4.95
		360.00	102.44	23.01	3.10	96.67	20.80	2.97	90.90	18.65	2.82	88.01	18.26	2.73	85.13	17.18	2.66	79.36	15.69	2.49
		450.00	102.44	22.54	2.50	96.67	20.80	2.37	90.90	18.65	2.26	88.01	17.89	2.19	85.13	16.76	2.14	79.36	15.28	2.00
		540.00	102.44	22.30	2.09	96.67	20.80	1.98	90.90	18.65	1.88	88.01	17.68	1.83	85.13	16.54	1.79	79.36	15.12	1.67
	20	180.00	102.44	20.01	6.44	96.67	18.38	6.12	90.90	16.34	5.83	88.01	16.00	5.63	85.13	15.28	5.46	79.36	13.83	5.12
		360.00	102.44	19.60	3.24	96.67	17.93	3.08	90.90	16.34	2.91	88.01	15.58	2.83	85.13	14.86	2.75	79.36	13.42	2.58
		450.00	102.44	19.18	2.60	96.67	17.53	2.47	90.90	15.97	2.34	88.01	15.58	2.27	85.13	14.49	2.21	79.36	13.42	2.06
		540.00	102.44	18.95	2.18	96.67	17.36	2.07	90.90	15.76	1.96	88.01	15.58	1.89	85.13	14.28	1.85	79.36	13.42	1.72
	25	180.00	102.44	17.28	6.66	96.67	15.86	6.32	90.90	14.14	6.00	88.01	13.87	5.80	85.13	13.26	5.62	79.36	12.08	5.26
		360.00	102.44	16.83	3.35	96.67	15.46	3.17	90.90	14.14	3.00	88.01	13.49	2.91	85.13	12.89	2.82	79.36	11.71	2.64
		450.00	102.44	16.49	2.69	96.67	15.46	2.54	90.90	13.72	2.41	88.01	13.49	2.33	85.13	12.89	2.26	79.36	11.71	2.12
		540.00	102.44	16.26	2.25	96.67	15.46	2.12	90.90	13.56	2.02	88.01	13.49	1.94	85.13	12.89	1.88	79.36	11.71	1.76
	30	180.00	102.44	14.96	6.84	96.67	13.92	6.47	90.90	12.86	6.10	88.01	12.31	5.92	85.13	11.75	5.74	79.36	10.77	5.36
		360.00	102.44	14.52	3.44	96.67	13.53	3.25	90.90	12.43	3.07	88.01	11.94	2.97	85.13	11.37	2.88	79.36	10.35	2.70
		450.00	102.44	14.52	2.75	96.67	13.53	2.60	90.90	12.43	2.45	88.01	11.94	2.38	85.13	11.37	2.31	79.36	10.35	2.16
		540.00	102.44	14.52	2.29	96.67	13.53	2.17	90.90	12.43	2.04	88.01	11.94	1.98	85.13	11.37	1.92	79.36	10.35	1.80
	35	180.00	102.44	13.58	6.95	96.67	12.39	6.59	90.90	11.45	6.21	88.01	10.61	6.05	85.13	10.54	5.83	79.36	9.29	5.48
		360.00	102.44	13.19	3.49	96.67	12.02	3.31	90.90	11.07	3.12	88.01	10.61	3.03	85.13	10.16	2.93	79.36	9.29	2.74
		450.00	102.44	13.19	2.79	96.67	11.64	2.66	90.90	11.07	2.50	88.01	10.19	2.43	85.13	10.16	2.34	79.36	8.93	2.20
		540.00	102.44	13.19	2.33	96.67	11.43	2.22	90.90	11.07	2.									

12HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
70	10	180.00	89.36	21.83	5.28	84.77	19.92	5.07	79.72	18.11	4.82	76.83	16.86	4.69	74.31	16.34	4.53	69.26	14.48	4.28
		360.00	89.82	21.66	2.66	84.77	19.75	2.54	79.72	17.96	2.41	76.83	16.86	2.34	74.31	16.34	2.27	69.26	14.48	2.14
		450.00	89.82	21.77	2.13	84.77	19.86	2.03	79.72	18.01	1.93	76.83	16.91	1.87	74.31	16.18	1.82	69.26	14.48	1.71
		540.00	89.82	21.77	1.77	84.77	19.86	1.69	79.72	18.06	1.61	76.83	16.96	1.56	74.31	16.13	1.52	69.26	14.53	1.43
	15	180.00	89.82	19.78	5.48	84.77	17.94	5.22	79.72	16.14	4.97	76.83	15.12	4.82	74.31	14.54	4.67	69.26	12.98	4.40
		360.00	89.82	18.98	2.77	84.77	17.11	2.64	79.72	15.36	2.52	76.83	14.82	2.42	74.31	14.17	2.35	69.26	12.63	2.21
		450.00	89.82	18.98	2.22	84.77	17.11	2.12	79.72	15.36	2.01	76.83	14.82	1.94	74.31	13.81	1.89	69.26	12.63	1.77
		540.00	89.82	18.98	1.85	84.77	17.11	1.76	79.72	15.36	1.68	76.83	14.82	1.62	74.31	13.61	1.58	69.26	12.63	1.48
	20	180.00	89.82	16.53	5.73	84.77	15.13	5.44	79.72	13.91	5.14	76.83	13.28	4.97	74.31	12.68	4.82	69.26	11.53	4.51
		360.00	89.82	16.07	2.88	84.77	14.74	2.74	79.72	13.49	2.59	76.83	12.93	2.50	74.31	12.32	2.42	69.26	11.18	2.27
		450.00	89.82	16.07	2.31	84.77	14.74	2.19	79.72	13.49	2.07	76.83	12.57	2.01	74.31	12.32	1.94	69.26	10.83	1.83
		540.00	89.82	16.07	1.92	84.77	14.74	1.82	79.72	13.49	1.73	76.83	12.41	1.68	74.31	12.32	1.62	69.26	10.63	1.53
	25	180.00	89.82	14.26	5.91	84.77	13.19	5.60	79.72	12.12	5.28	76.83	11.62	5.10	74.31	10.76	4.97	69.26	9.82	4.65
		360.00	89.82	13.87	2.97	84.77	12.81	2.81	79.72	11.75	2.66	76.83	11.26	2.56	74.31	10.76	2.48	69.26	9.82	2.32
		450.00	89.82	13.49	2.39	84.77	12.38	2.26	79.72	11.75	2.13	76.83	11.26	2.05	74.31	10.41	2.00	69.26	9.82	1.86
		540.00	89.82	13.32	1.99	84.77	12.17	1.89	79.72	11.75	1.77	76.83	11.26	1.71	74.31	10.20	1.67	69.26	9.82	1.55
	30	180.00	89.82	12.59	6.04	84.77	11.67	5.71	79.72	10.81	5.39	76.83	9.97	5.23	74.31	9.92	5.03	69.26	8.76	4.73
		360.00	89.82	12.21	3.03	84.77	11.30	2.87	79.72	10.39	2.71	76.83	9.97	2.61	74.31	9.55	2.53	69.26	8.76	2.36
		450.00	89.82	12.21	2.43	84.77	11.30	2.30	79.72	10.39	2.17	76.83	9.61	2.10	74.31	9.55	2.02	69.26	8.76	1.89
		540.00	89.82	12.21	2.02	84.77	11.30	1.91	79.72	10.39	1.81	76.83	9.41	1.76	74.31	9.55	1.69	69.26	8.76	1.58
	35	180.00	89.82	11.25	6.14	84.77	10.46	5.81	79.72	9.32	5.50	76.83	9.27	5.28	74.31	8.60	5.14	69.26	8.29	4.77
		360.00	89.82	10.88	3.09	84.77	10.08	2.92	79.72	9.32	2.75	76.83	8.91	2.65	74.31	8.60	2.57	69.26	7.92	2.40
		450.00	89.82	10.88	2.47	84.77	10.08	2.34	79.72	8.96	2.21	76.83	8.91	2.12	74.31	8.60	2.05	69.26	7.92	1.92
		540.00	89.82	10.88	2.06	84.77	10.08	1.95	79.72	8.76	1.85	76.83	8.91	1.77	74.31	8.60	1.71	69.26	7.92	1.60
	40	180.00	89.82	10.45	6.20	84.77	9.71	5.87	79.72	8.55	5.56	76.83	8.14	5.37	74.31	7.88	5.19	69.26	7.51	4.83
		360.00	89.82	10.07	3.12	84.77	9.33	2.95	79.72	8.19	2.80	76.83	8.14	2.69	74.31	7.88	2.60	69.26	7.19	2.43
		450.00	89.82	10.07	2.49	84.77	9.33	2.36	79.72	8.19	2.24	76.83	7.78	2.16	74.31	7.46	2.09	69.26	7.19	1.94
		540.00	89.82	10.07	2.08	84.77	9.33	1.97	79.72	8.19	1.86	76.83	7.58	1.80	74.31	7.31	1.75	69.26	7.19	1.62
	45	180.00	89.82	9.70	6.26	84.77	8.90	5.93	79.72	7.83	5.62	76.83	7.06	5.45	74.31	7.15	5.25	69.26	6.78	4.88
		360.00	89.82	9.32	3.15	84.77	8.53	2.98	79.72	7.11	2.84	76.83	7.37	2.72	74.31	7.15	2.62	69.26	6.41	2.46
		450.00	89.82	9.32	2.52	84.77	8.53	2.38	79.72	7.42	2.26	76.83	6.66	2.19	74.31	6.38	2.12	69.26	6.41	1.97
		540.00	89.82	9.32	2.10	84.77	8.53	1.99	79.72	7.62	1.88	76.83	6.30	1.84	74.31	5.96	1.78	69.26	6.41	1.64
60	10	180.00	76.83	16.77	4.70	72.50	15.83	4.43	68.18	14.81	4.17	66.01	13.76	4.08	63.85	13.39	3.94	59.52	11.81	3.73
		360.00	76.83	16.77	2.35	72.50	15.83	2.22	68.18	14.81	2.09	66.01	13.91	2.04	63.85	13.34	1.97	59.52	11.96	1.86
		450.00	76.83	16.82	1.88	72.50	15.67	1.78	68.18	14.66	1.67	66.01	13.76	1.63	63.85	13.24	1.58	59.52	11.81	1.49
		540.00	76.83	16.82	1.56	72.50	15.57	1.48	68.18	14.55	1.40	66.01	13.65	1.36	63.85	13.19	1.32	59.52	11.76	1.24
	15	180.00	76.83	15.21	4.82	72.50	14.24	4.55	68.18	13.20	4.30	66.01	12.36	4.19	63.85	11.90	4.06	59.52	10.64	3.82
		360.00	76.83	14.83	2.42	72.50	13.81	2.29	68.18	12.83	2.16	66.01	12.36	2.10	63.85	11.54	2.04	59.52	10.64	1.91
		450.00	76.83	14.83	1.94	72.50	13.44	1.85	68.18	12.47	1.74	66.01	11.95	1.69	63.85	11.18	1.65	59.52	10.29	1.54
		540.00	76.83	14.83	1.62	72.50	13.23	1.54	68.18	12.26	1.46	66.01	11.74	1.41	63.85	10.97	1.38	59.52	10.09	1.29
	20	180.00	76.83	13.26	4.97	72.50	12.27	4.71	68.18	11.32	4.44	66.01	10.86	4.31	63.85	10.46	4.17	59.52	9.53	3.91
		360.00	76.83	12.89	2.50	72.50	11.90	2.37	68.18	10.95	2.24	66.01	10.50	2.17	63.85	10.04	2.10	59.52	9.17	1.97
		450.00	76.83	12.89	2.00	72.50	11.90	1.90	68.18	10.95	1.79	66.01	10.50	1.74	63.85	10.04	1.68	59.52	9.17	1.57
		540.00	76.83	12.89	1.67	72.50	11.90	1.58	68.18	10.95	1.49	66.01	10.50	1.45	63.85	10.04	1.40	59.52	9.17	1.31
	25	180.00	76.83	11.63	5.10	72.50	10.85	4.82	68.18	9.63	4.58	66.01	9.61	4.41	63.85	8.87	4.30	59.52	8.51	3.99
		360.00	76.83	11.26	2.56	72.50	10.42	2.43	68.18	9.63	2.29	66.01	9.25	2.22	63.85	8.87	2.15	59.52	8.15	2.01
		450.00	76.83	11.26	2.05	72.50	10.42	1.94	68.18	9.27	1.84	66.01	9.25	1.77	63.85	8.87	1.72	59.52	8.15	1.61
		540.00	76.83	11.26	1.71	72.50	10.42	1.62	68.18	9.12	1.54	66.01	9.25	1.48	63.85	8.87	1.43	59.52	8.15	1.34
	30	180.00	76.83	10.34	5.20	72.50	9.62	4.92	68.18	9.02	4.62	66.01	8.63	4.49	63.85	8.29	4.34	59.52	7.72	4.05
		360.00	76.83	9.97	2.61	72.50	9.25	2.47	68.18	8.60	2.33	66.01	8.26	2.26	63.85	7.92	2.19	59.52	7.32	2.04
		450.00	76.83	9.97	2.09	72.50	9.25	1.98	68.18	8.60	1.86	66.01	8.26	1.81	63.85	7.92	1.75	59.52	7.32	1.63
		540.00	76.83	9.97	1.74	72.50	9.25	1.65	68.18	8.60	1.55	66.01	8.26	1.50	63.85	7.92	1.46	59.52	7.32	1.36
	35	180.00	76.83	8.95	5.31	72.50	8.71	4.99	68.18	7.77	4.72	66.01	7.88	4.54	63.85	7.51	4.40	59.52	7.08	4.10
		360.00	76.83	8.95	2.65	72.50	8.34	2.51	68.18	7.77	2.36	66.01	7.47	2.29	63.85	7.20	2.21	59.52	6.67	2.07
		450.00	76.83	8.95	2.12	72.50	8.34	2.01	68.18	7.36	1.90	66.01	7.47	1.83	63.85	7.20	1.77	59.52	6.67	1.65
		540.00	76.83	8.95	1.77	72.50	8.34	1.67	68.18	7.21	1.59	66.01	7.47	1.53	63.85	7.20	1.48	59.52	6.67	1.38
	40	180.00	76.83	8.17	5.37	72.50	7.97	5.04	68.18	7.05	4.78	66.01	7.							

VRF MW



12HP+12HP+12HP heating mode

CR (%)	Inlet water Temp.(°C)	Water flow rate [L/min]	Indoor Air temperature (°CDB)																	
			16.00			18.00			20.00			21.00			22.00			24.00		
			TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT	TC	PI	ΔT
			kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
50	10	180.00	63.75	13.35	3.94	60.14	12.59	3.72	60.60	11.45	3.84	54.83	11.06	3.42	53.03	10.31	3.34	49.42	9.50	3.12
		360.00	64.21	13.24	1.99	60.60	12.59	1.88	60.60	11.40	1.92	54.83	10.96	1.71	53.03	10.41	1.67	49.42	9.39	1.56
		450.00	64.21	13.35	1.59	60.60	12.59	1.50	60.60	11.40	1.54	54.83	11.01	1.37	53.03	10.26	1.34	49.42	9.44	1.25
		540.00	64.21	13.35	1.33	60.60	12.64	1.25	60.60	11.45	1.28	54.83	11.01	1.14	53.03	10.15	1.12	49.42	9.44	1.04
	15	180.00	64.21	12.06	4.08	60.60	11.35	3.85	60.60	10.20	3.94	54.83	9.90	3.51	53.03	9.20	3.43	49.42	8.52	3.20
		360.00	64.21	11.68	2.05	60.60	10.97	1.94	60.60	9.83	1.98	54.83	9.54	1.77	53.03	9.20	1.71	49.42	8.16	1.61
		450.00	64.21	11.68	1.64	60.60	10.97	1.55	60.60	9.83	1.59	54.83	9.54	1.42	53.03	8.78	1.38	49.42	8.16	1.29
		540.00	64.21	11.68	1.37	60.60	10.97	1.29	60.60	9.83	1.32	54.83	9.54	1.18	53.03	8.56	1.16	49.42	8.16	1.08
	20	180.00	64.21	10.50	4.20	60.60	9.78	3.97	60.60	9.10	4.03	54.83	8.75	3.60	53.03	8.41	3.49	49.42	7.39	3.29
		360.00	64.21	10.12	2.11	60.60	9.40	2.00	60.60	8.68	2.03	54.83	8.38	1.82	53.03	8.04	1.76	49.42	7.39	1.64
		450.00	64.21	10.12	1.69	60.60	9.40	1.60	60.60	8.68	1.62	54.83	8.38	1.45	53.03	8.04	1.41	49.42	7.39	1.31
		540.00	64.21	10.12	1.41	60.60	9.40	1.33	60.60	8.68	1.35	54.83	8.38	1.21	53.03	8.04	1.17	49.42	7.39	1.10
	25	180.00	64.21	9.34	4.29	60.60	8.30	4.09	60.60	8.16	4.10	54.83	7.43	3.71	53.03	7.16	3.59	49.42	6.63	3.34
		360.00	64.21	8.91	2.16	60.60	8.30	2.04	60.60	7.73	2.07	54.83	7.43	1.85	53.03	7.16	1.79	49.42	6.63	1.67
		450.00	64.21	8.91	1.73	60.60	8.30	1.64	60.60	7.73	1.65	54.83	7.43	1.48	53.03	7.16	1.43	49.42	6.63	1.34
		540.00	64.21	8.91	1.44	60.60	8.30	1.36	60.60	7.73	1.38	54.83	7.43	1.24	53.03	7.16	1.20	49.42	6.63	1.11
	30	180.00	64.21	8.37	4.37	60.60	7.79	4.13	60.60	7.40	4.16	54.83	6.71	3.76	53.03	6.85	3.61	49.42	6.39	3.36
		360.00	64.21	8.00	2.20	60.60	7.47	2.08	60.60	6.97	2.10	54.83	6.71	1.88	53.03	6.48	1.82	49.42	6.03	1.70
		450.00	64.21	8.00	1.76	60.60	7.47	1.66	60.60	6.97	1.68	54.83	6.71	1.50	53.03	6.48	1.46	49.42	6.03	1.36
		540.00	64.21	8.00	1.46	60.60	7.47	1.38	60.60	6.97	1.40	54.83	6.71	1.25	53.03	6.48	1.21	49.42	6.03	1.13
	35	180.00	64.21	7.55	4.43	60.60	6.78	4.21	60.60	6.37	4.24	54.83	6.51	3.78	53.03	5.95	3.68	49.42	5.53	3.43
		360.00	64.21	7.24	2.23	60.60	6.78	2.10	60.60	6.37	2.12	54.83	6.14	1.90	53.03	5.95	1.84	49.42	5.53	1.72
		450.00	64.21	7.24	1.78	60.60	6.78	1.68	60.60	6.37	1.70	54.83	6.14	1.52	53.03	5.95	1.47	49.42	5.53	1.37
		540.00	64.21	7.24	1.48	60.60	6.78	1.40	60.60	6.37	1.41	54.83	6.14	1.27	53.03	5.95	1.23	49.42	5.53	1.14
	40	180.00	64.21	6.82	4.49	60.60	6.42	4.24	60.60	6.01	4.27	54.83	5.77	3.84	53.03	5.59	3.71	49.42	5.13	3.46
		360.00	64.21	6.45	2.26	60.60	6.05	2.13	60.60	5.64	2.15	54.83	5.77	1.92	53.03	5.18	1.87	49.42	5.13	1.73
		450.00	64.21	6.45	1.81	60.60	6.05	1.71	60.60	5.64	1.72	54.83	5.77	1.53	53.03	5.18	1.50	49.42	5.13	1.38
		540.00	64.21	6.45	1.50	60.60	6.05	1.42	60.60	5.64	1.43	54.83	5.77	1.28	53.03	5.18	1.25	49.42	5.13	1.15
	45	180.00	64.21	6.09	4.54	60.60	6.05	4.26	60.60	5.64	4.30	54.83	4.98	3.90	53.03	5.18	3.74	49.42	4.77	3.49
		360.00	64.21	5.72	2.29	60.60	5.27	2.16	60.60	4.87	2.18	54.83	5.35	1.93	53.03	4.46	1.90	49.42	4.77	1.75
		450.00	64.21	5.72	1.83	60.60	5.27	1.73	60.60	4.87	1.74	54.83	5.35	1.55	53.03	4.46	1.52	49.42	4.77	1.40
		540.00	64.21	5.72	1.52	60.60	5.27	1.44	60.60	4.87	1.45	54.83	5.35	1.29	53.03	4.46	1.27	49.42	4.77	1.16

Note:

1. The above table shows the average value of conditions may operate
2. It is recommended to connect less than 130%

6.2 Capacity Correction Factors for Piping Length and Level Difference

Figure 2-6.1: Rate of change in cooling capacity

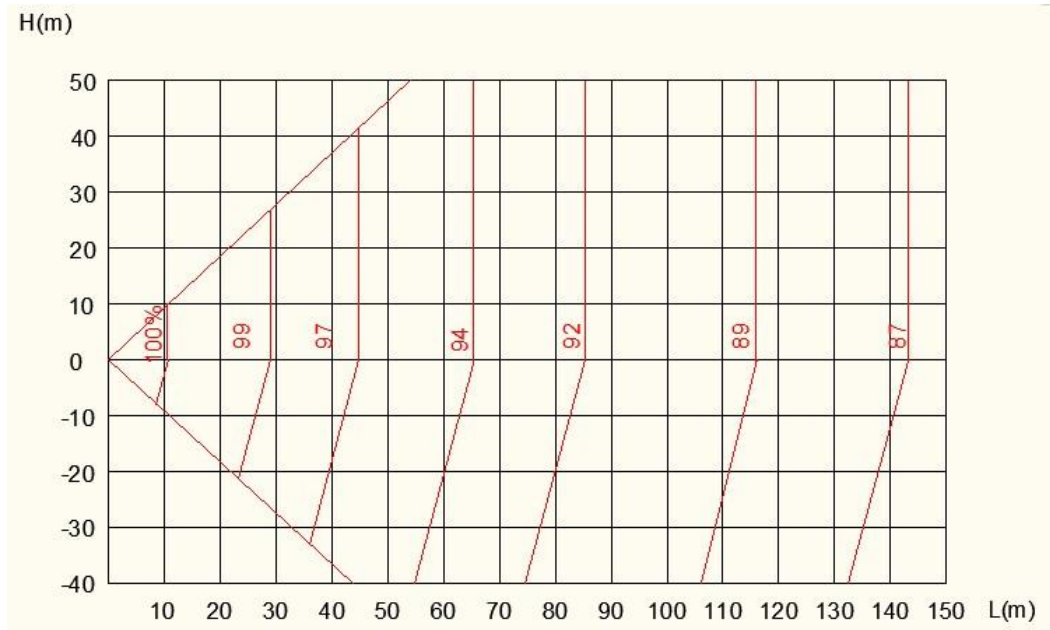
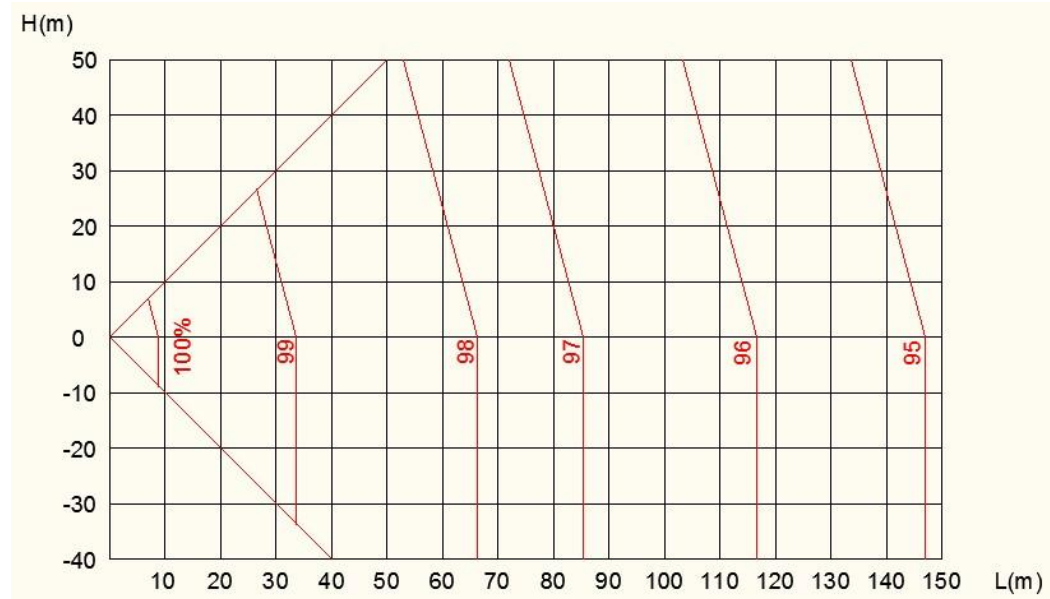


Figure 2-6.2: Rate of change in heating capacity



Notes:

1. The horizontal axis shows equivalent length of piping between farthest indoor unit and first outdoor branch joint; the vertical axis shows the largest level difference between indoor unit and outdoor unit. For level differences, positive values indicate that the outdoor unit is above the indoor unit, negative values indicate that the outdoor unit is below the indoor unit.
2. These figures illustrate the rate of change in capacity of a system with only standard indoor units at maximum load (with the thermostat set to maximum) under standard conditions. Under partial load conditions there is only a minor deviation from the rate of change in capacity shown in these figures.
3. The capacity of the system is either the total capacity of the indoor units obtained from indoor unit capacity tables or the corrected capacity of the outdoor units as per the calculations below, whichever is smaller.

Corrected capacity of outdoor units	=	Capacity of outdoor units obtained from outdoor unit capacity tables at the combination ratio	x	Capacity correction factor
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7 Sound Levels

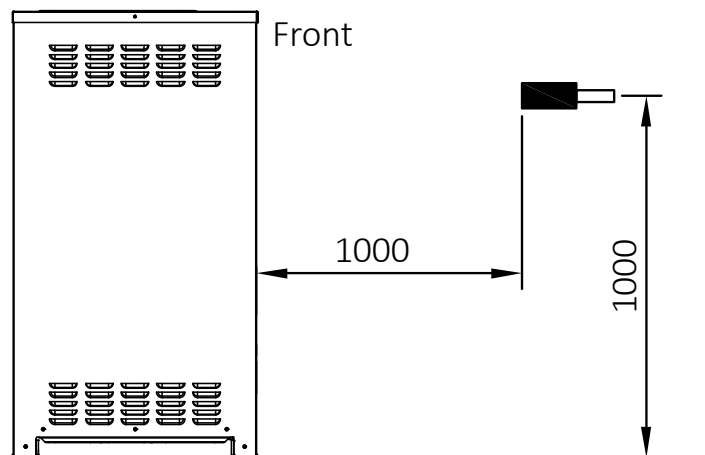
7.1 Overall

Model	dB(A)
8HP	51
10HP	52
12HP	52

Notes:

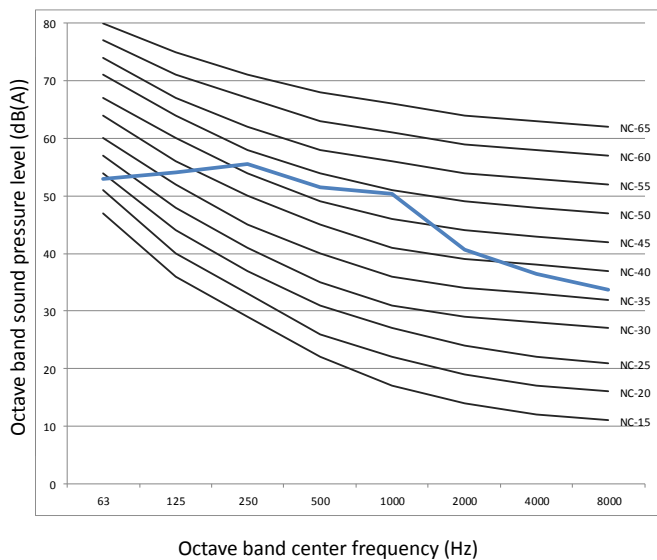
1. Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber. During in-situ operation, sound pressure levels may be higher as a result of ambient noise.

Figure 2-7.1: Sound pressure level measurement (unit: mm)



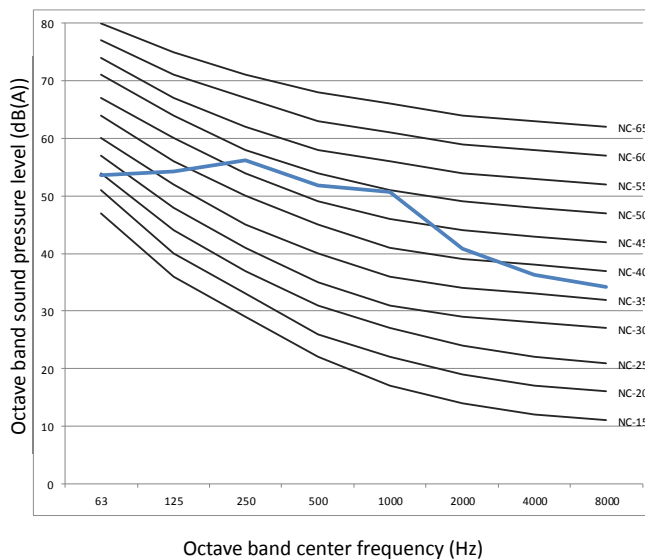
7.2 Octave Band Levels

Figure 2-7.2: 8HP octave band level



63	125	250	500	1k	2k	4k	8k	dB(A)
53	54.1	55.6	51.5	50.3	40.6	36.5	33.7	51

Figure 2-7.3: 10/12HP octave band level



63	125	250	500	1k	2k	4k	8k	dB(A)
53.6	54.3	56.2	51.8	50.7	40.9	36.3	34.2	52

8 Accessories

8.1 Standard Accessories

No	Name	Quantity	Purpose
1	Main unit installation manual	1	/
2	Main unit owner's manual	1	Be sure to deliver it to the customer
3	Indoor unit owner's manual	1	Be sure to deliver it to the customer
4	User's guideline	1	Be sure to deliver it to the customer
5	Bolts bag	1	Stone for service
6	Toggling flathead screw	1	For toggling of indoor and main units
7	Water outlet connector	1	For draining the internal condensed water of the unit
8	Water outlet plug	1	Block a drainage port of the unit chassis which do not need to drainage
9	Seal ring	2	For avoiding water leakage of the chassis
10	Y-shape water filter	1	Connect to the side of water inlet pie
11	Indoor unit branch pipes installation	1	
12	Main unit branch pipes installation	1	
13	Seal plug	8	For pipe cleaning
14	Connective pipe accessory	1	Connect to the side of liquid pipe
15	Air side connective pipe	1 or 2	Connect to the air pipe side(8/10HP 1pc,12HP 2pcs)

8.2 Optional Accessories

Optional accessories	Model	Packed dimensions (mm)	Net/gross weight (kg)	Function
Outdoor branch joint kits	FQZHW-02N1D	255×150×185	1.2 / 1.5	Distribute refrigerant to indoor units and balance flow resistance between outdoor units
	FQZHW-03N1D	345×160×285	2.4 / 3.4	
Indoor branch joint kits	FQZHN-01D	290×105×100	0.3 / 0.4	
	FQZHN-02D	290×105×100	0.4 / 0.6	
	FQZHN-03D	310×130×125	0.6 / 0.9	
	FQZHN-04D	350×170×180	1.1 / 1.5	
	FQZHN-05D	365×195×215	1.4 / 1.9	

9 Functional Parts and Safety Devices

Item	Symbol	Capacity	8HP	10HP	12HP
Compressor	Inverter	Inverter compressor	E655DHD-65D2YG	E655DHD-65D2YG	E655DHD-65D2YG
	Safety OLP	Current protection board	MDV-POWER-50A(IR341)-1		
	CCH	Crank case heater	DJRD-520A-1500-27.6W		
Temperature sensor	TSJ	Water inlet temp. of double-pipe heat exchanger	B:4100, R(25°C): 10KΩ		
	TSC1	Water outlet temp. of upper pipe	B:4100, R(25°C): 10KΩ		
	TSC2	Water outlet temp. of lower pipe	B:4100, R(25°C): 10KΩ		
	T7	Discharge temp. sensor	B:3950, R(25°C):56104.8Ω		
	T5	Temp. sensor of inverter module	B:3950, R(25°C):56104.8Ω		
Pressure sensor	HPS	High pressure sensor (discharge)	Model: YLCGQ-NSK-BD046I-U289 0-5Mpa		
	LPS	Low pressure sensor (suction)	YK-0.05/0.15-2000 0.05MPa		
Functional Parts	PMV	Electronic expansion valve	D32MISZ-1R 4.2MPa		
	4-W/V	4-way valve	STF-01VN1		
	SV	Solenoid valve	FDF6A-049-PK(ZB) or FDF6A11 4.2MPa		

Part 3

Installation

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1. Precautions

- Be sure only trained and qualified service personnel to install, repair or service the equipment.

Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.

If installation is defective, it will cause water leakage, electrical shock fire.

- When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage. Contact the place of purchase for more information. Excessive refrigerant in a closed ambient can lead to oxygen deficiency.
- Use the attached accessories parts and specified parts for installation.

Otherwise, it will cause the set to fall, water leakage, electrical shock fire.

- Install at a strong and firm location which is able to withstand the set's weight.

If the strength is not enough or installation is not properly done, the set will drop to cause injury.

- The appliance shall be installed in accordance with national wiring regulations
- The appliance shall not be installed in the laundry.
- Before obtaining access to terminals, all supply circuits must be disconnected.
- The appliance must be positioned so that the plug is accessible.
- The enclosure of the appliance shall be marked by word, or by symbols, with the direction of the fluid flow.
- For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and single outlet must be used.

If electrical circuit capacity is not enough or defect in electrical work, it will cause electrical shock fire.

- Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal.

If connection or fixing is not perfect, it will cause heat-up or fire at the connection.

- Wiring routing must be properly arranged so that control board cover is fixed properly.

If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.

- If the supply cord is damaged, it must be replaced by the manufacture or its service agent or similarly qualified person in order to avoid a hazard.
- An all-pole disconnection device which has at least 3mm separation distance in all pole and a residual current device(RCD)with the rating of above 10mA shall be incorporated in the fixed wiring according to the national rule.
- When carrying out piping connection, take care not let air substances go into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.
- Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock.
- Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.

Improper installation work may result in the equipment falling and causing accidents.

- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- The power cord type designation is H07RN-F. Equipment complying with IEC 61000-3-12.
- If the refrigerant leaks during installation, ventilate the area immediately.

Toxic gas may be produced if the refrigerant comes into the place contacting with fire.

- After completing the installation work, check that the refrigerant does not leak.

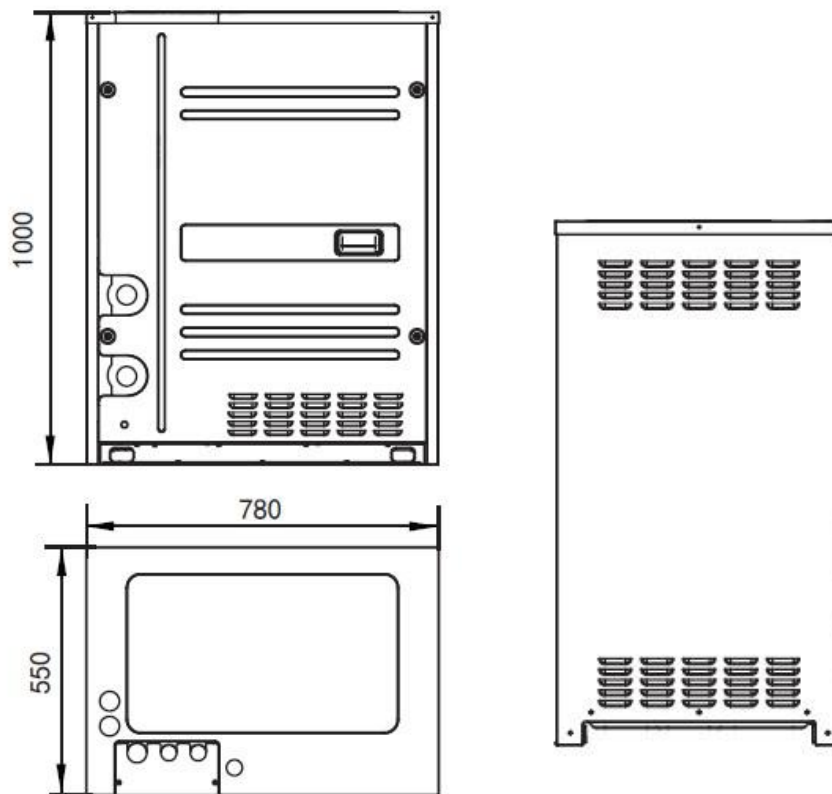
Toxic gas may be produced if the refrigerant leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.

2. Main units installation

2.1 Main unit combination

HP	Mode	Qty. of indoor unit	HP	Mode	Qty. of indoor unit
8	8HP×1	13	24	12HP×2	39
10	10HP×1	16	26	8HP×2+10HP	43
12	12HP×1	19	28	10HP×2+8HP	46
16	8HP×2	23	30	10HP×3	50
18	10HP+8HP	29	32	10HP×2+12HP	53
20	10HP+10HP	33	34	12HP×2+10HP	56
22	10HP+12HP	36	36	12HP×3	59

2.2 Dimension of main unit



2.3 Select installation position

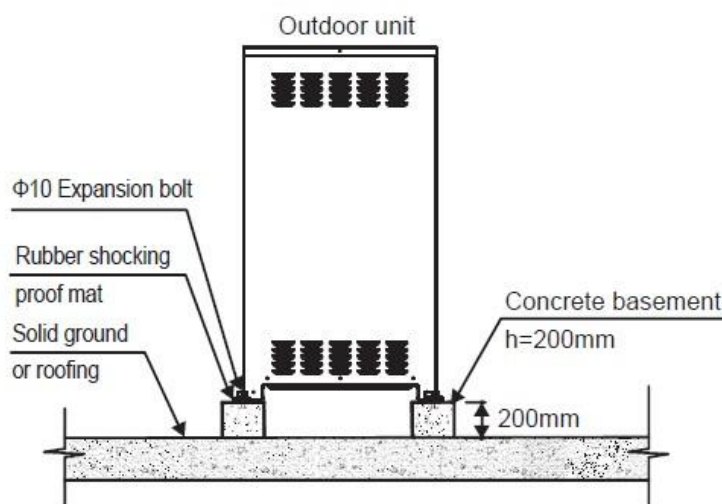
- Ensure that the main unit is installed in a place convenient to connect water, refrigerant and electricity.
- Ensure that the noise and exhaust ventilation of the main unit do not affect the neighbors of the property owner or the surrounding ventilation.
- Ensure that the main unit is installed in a well-ventilated place that is possibly closest to the indoor unit.
- Ensure that the main unit is installed in a cool place without direct sunshine exposure or direct radiation of high-temp heat source.
- Do not install the main unit in a dirty or severely polluted place, so as to avoid blockage of the heat exchanger in the main unit.
- Do not install the main unit in a place with oil pollution, salt or high content of harmful gases such as sulfurous gas.

2.4 Hoisting main unit

- It is banned to take wooden cork base as the force bearing point of lifting up the unit during hoisting, the correct method is use the braces or lifting ropes which can bear the unit's weight and go through the lifting holes of the front and back bottom plates in the unit for hoisting.
- It is banned to tear down any packages during hoisting installation; it should use two longer than 4m ropes to lift up the unit with the packages, and keep the unit in balance, lift it up stably. Under transporting the unit with no packages or the package has been damaged, it should use base plate or packaging materials for protection.
- Pay attention to keep the main unit vertical during transportation, hoisting, and make sure the safety during transportation and hoisting.

2.5 Base for main unit

- A solid, correct base can:
 - Avoid the main unit from sinking.
 - Avoid the abnormal noise generated due to base.
- Base types
 - Steel structure base
 - Concrete base (see the figure below for the general making method)



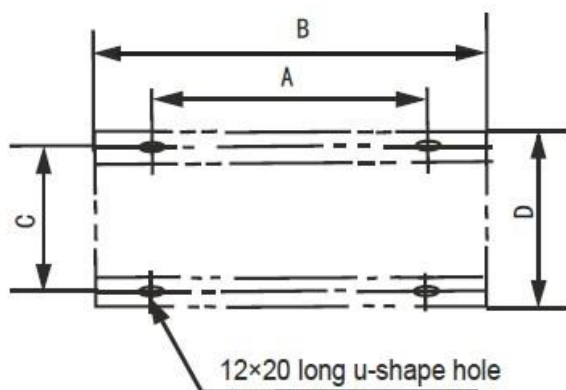
CAUTION:

The key points to make basement:

- The master unit's basement must be made on the solid concrete ground. Refer to the structure diagram to make concrete basement in detail, or make after field measurements.
- In order to ensure every point can contact equality, the basement should be on completely level.
- If the basement is placed on the roofing, the detritus layer isn't needed, but the concrete surface must be flat. The standard concrete mixture ratio is cement 1/ sand 2/ carpolite 4, and add Φ10 strengthen reinforcing steel bar, the surface of the cement and sand plasm must be flat, border of the basement must be chamfer angle.
- Before construct the unit base, please ensure the base is directly supporting the rear and front folding edges of the bottom panel vertically, for the reason of these edges are the actual supported sites to the unit.
- In order to drain off the sweeper around the equipment, a discharge ditch must be setup around the basement.
- Please check the afford ability of the roofing to ensure the load capacity.

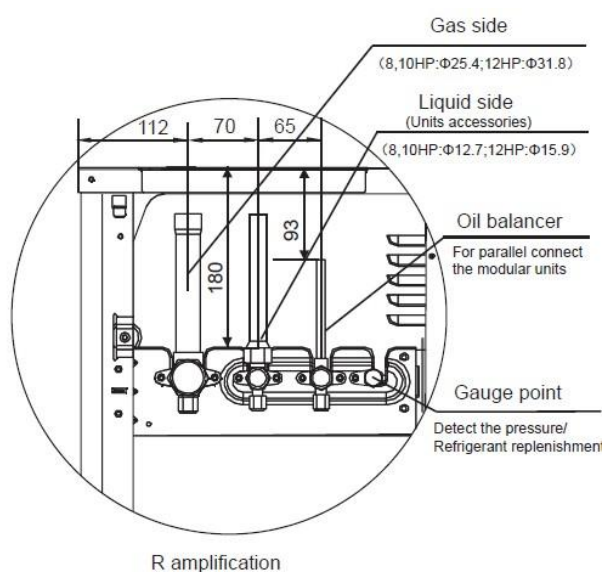
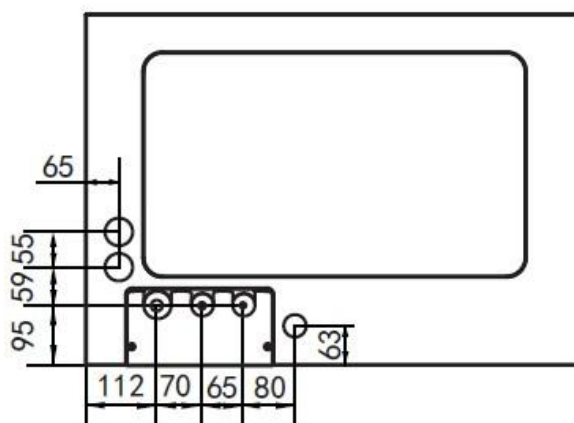
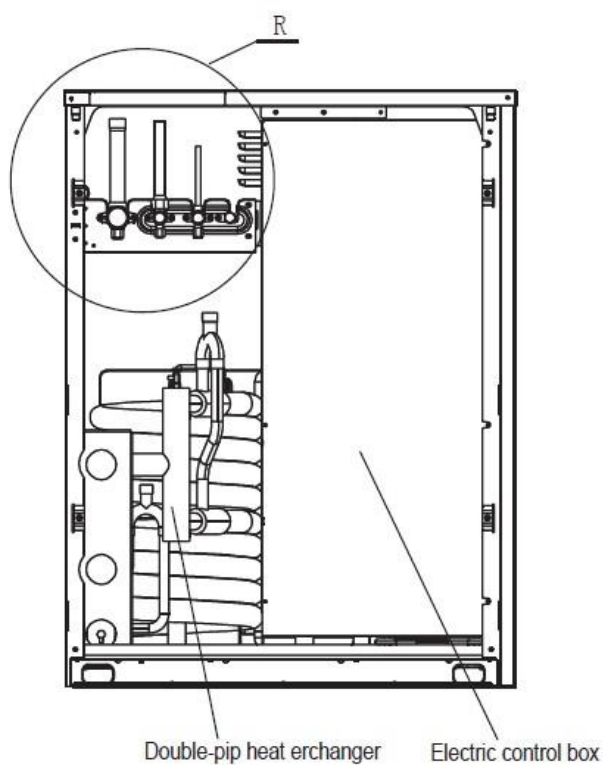
Position illustration of screw bolt (Unit: mm)

(Unit: mm)



SIZE \ HP	8,10,12
A	650
B	780
C	518
D	550

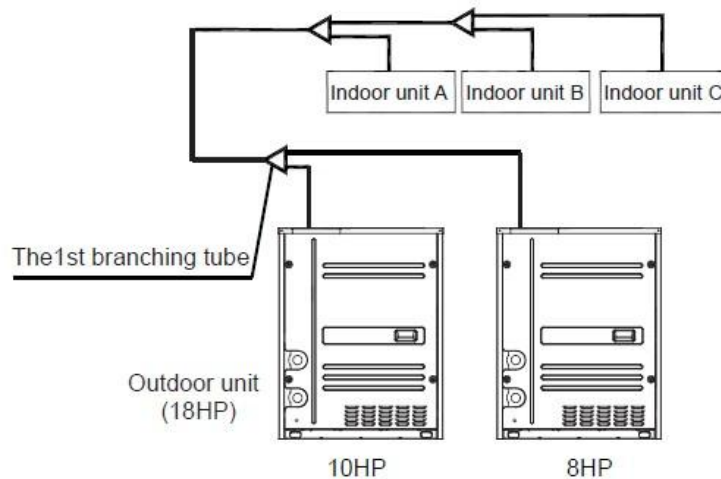
Centering position illustration of each connective pipe (Unit: mm)



2.6 Main units' placement sequence & master and slave units' settings

A system, which provide with more than two main units, will be set as the followings method: The main units in this system should place sequentially from the large to the small capacity; the largest capacity main unit must be mounted at the first branching site; and set the largest capacity main unit address as the master unit, while the other setting as the slave unit. Take 18HP (composed by 10HP, 8HP) as an example:

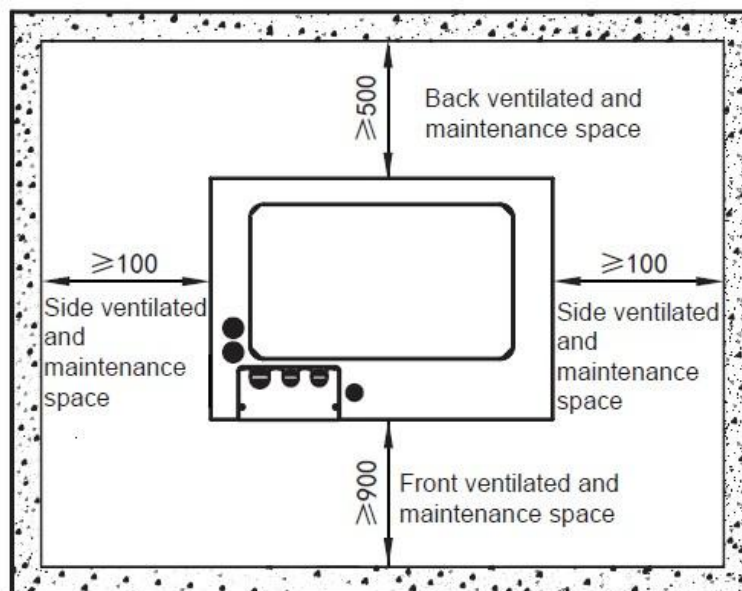
- 1) Place the 10HP at a side of the first branching site.
- 2) Place the unit from the large capacity to the small (See the detail placement illustration).
- 3) Set 10HP as the master unit, while the 8HP as the aux. unit.

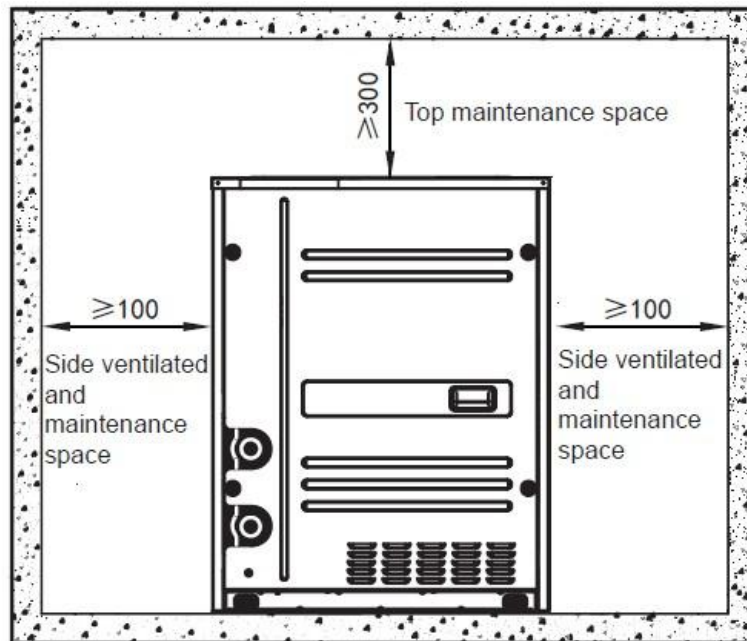


2.7 Installation space for main unit

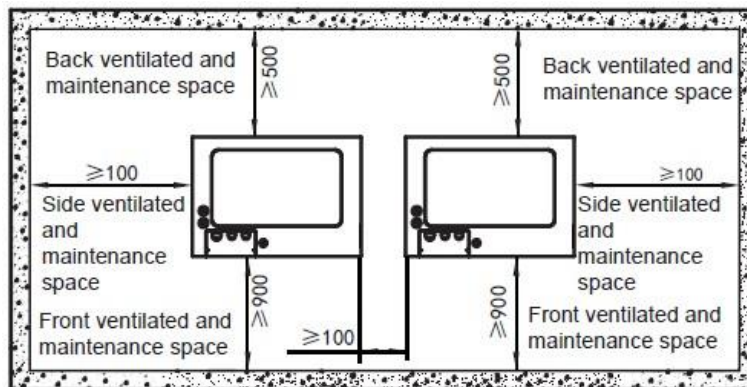
- Ensure enough space for maintenance. The modules in the same system must be on the same height.
- When installing the unit, leave a space for maintenance. Install the power supply at the side of the main unit. For installation procedure, see the power supply device installation manual.

Installation space of single main unit





Installation space of several main units



CAUTION:

When install several main units, please reserve the top maintenance space as the single main unit installation.

3. Water system installation

3.1 Basic requirements of connection of chilled water pipes

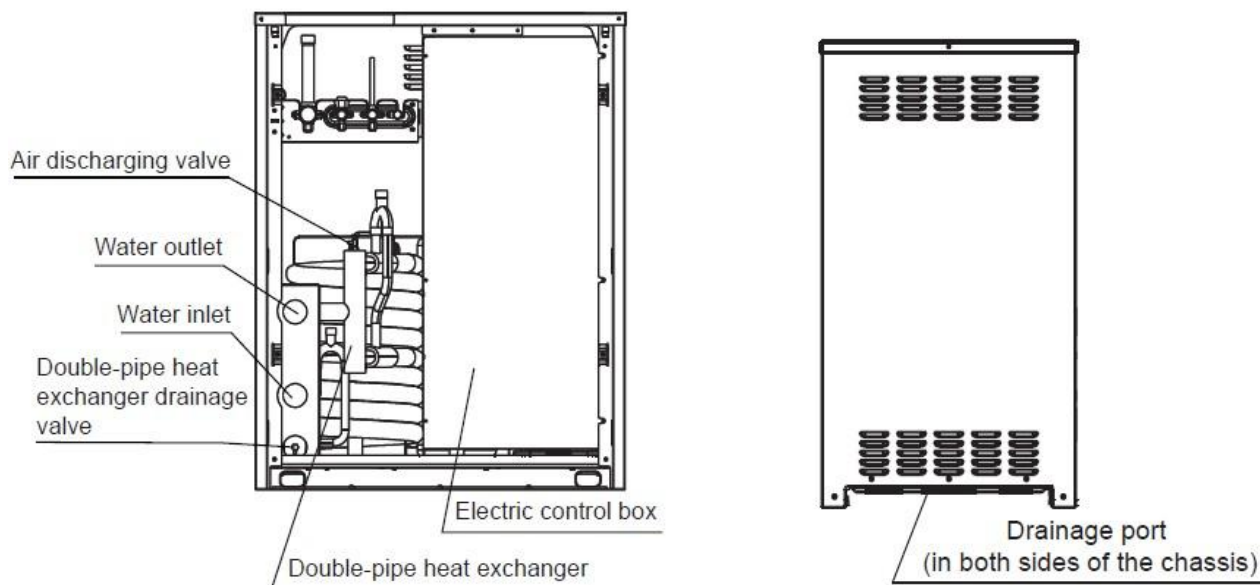
CAUTION:

- After the unit is in place, chilled water pipes can be laid.
 - The relevant installation regulations should be abided with when conducting connection of water pipes.
 - All water pipes must conform to local rules and regulations of pipeline engineering.
 - The size of water pipe should be the same as or larger than the connector size of the unit (DN32).
 - The heat exchanger of the unit is double-pipe heat exchanger. There are different operation and maintenance methods between the double-pipe heat exchanger double-pipe heat exchanger and the other heat exchangers.
- 1) All connected water pipes should be thoroughly flushed, and cannot be cleaned after connected to the double-pipe heat exchanger of the unit, for in case any impurity been flushed into the heat exchanger. After connection, all the water pipes should be washed down, and no any impurity left.
 - 2) Water must enter the double-pipe heat exchanger through the inlet; otherwise the performance of the unit will decline.
 - 3) The inlet pipe of each double-pipe heat exchanger in the unit must be provided with a target flow switch, to realize flow-break protection for the unit. Both ends of the water flow switch must be supplied with horizontal straight pipe sections whose diameter is 5 times that of the inlet pipe. The water flow switch must be installed in strict accordance with "Installation & Regulation Guide for Water Flow Switch" (See Section 3-5). The wires of the water flow switch should be led to the electric cabinet through shielded cable (see Electric Wiring section for details). After the pipelines are installed, the water flow switch will be set properly according to the rated water flow of the unit.
 - 4) The pump installed in the water system should be equipped with starter and should be controlled by the unit. The unit only supplies the on, off controlling signal of water pump, and do not supply the power for the water pump.
 - 5) The pipes and their ports must be independently supported but should not be supported on the unit.
 - 6) The pipes and their ports of the double-pipe heat exchanger should be easy to disassemble for operation and cleaning, as well as inspection of port pipes of the evaporator.
 - 7) The inlet of the double-pipe heat exchanger should be provided with a water filter with more than 40 meshes per inch (in the accessories). The filter should be installed near to the inlet port as much as possible, and be under heat preservation. Periodically clean the water filter according to the blocking condition of the filter.
 - 8) The flexible connectors must be mounted between the double-pipe heat exchangers and the on-site pipes, to reduce transfer of vibration to the building.
 - 9) To facilitate maintenance, the inlet and outlet pipes should be provided with thermometer or manometer. The unit is not equipped with pressure and temperature instruments, so they need to be purchased by the user.
 - 10) All low positions of the water system should be provided with drainage valves, to drain water in the heat exchanger of water side and the system completely; and all high positions should be supplied with discharge valves, to facilitate expelling air from the pipeline. The discharge valves and drainage valves should not be under heat preservation, to facilitate maintenance.
 - 11) All possible water pipes in the system to be chilled should be under heat preservation.
 - 12) When the unit will not be used for a long time, water inside the unit should be drained and cut off the power. If the unit is not drained in winter, then the double-pipe heat exchanger and the water pipes system of the unit might be freezing and cracking under low temperature.
 - 13) The rated water flow volume of different models is as follow:

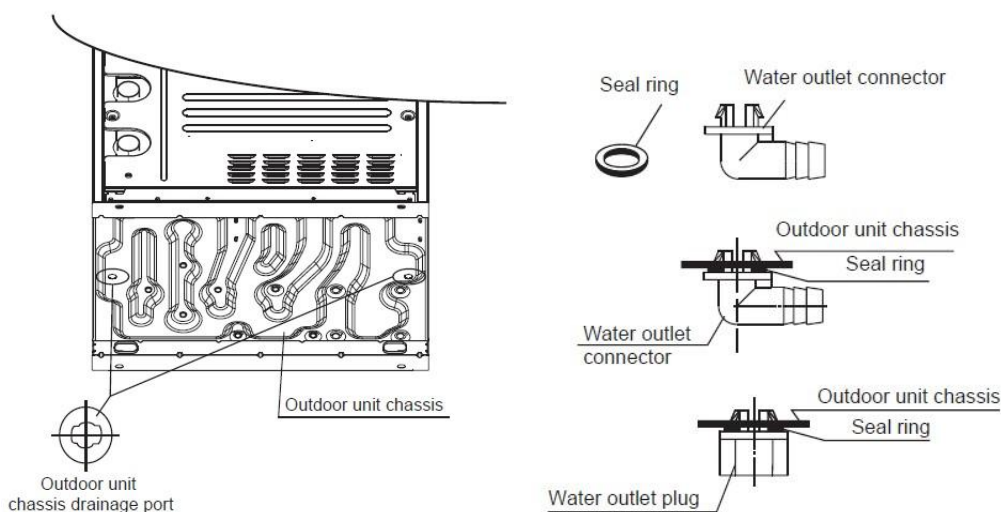
Model	Rated water flow volume(m ³ /h)
8HP	5.4
10HP	6.0
12HP	7.2

WARNING:

- The water pipes network including water filters and heat exchangers should be periodically cleaned, otherwise, dreg or dirt may seriously damages the heat exchangers and water pipes.
- The installation persons or the users must ensure the quality of chilled water, and de-icing salt mixtures and air should be excluded from the water system, since they may oxidize and corrode steel parts inside the heat exchanger.

3.2 Positions of water inlet, outlet and drainage port**3.3 Installation of drainage port connecting pipes**

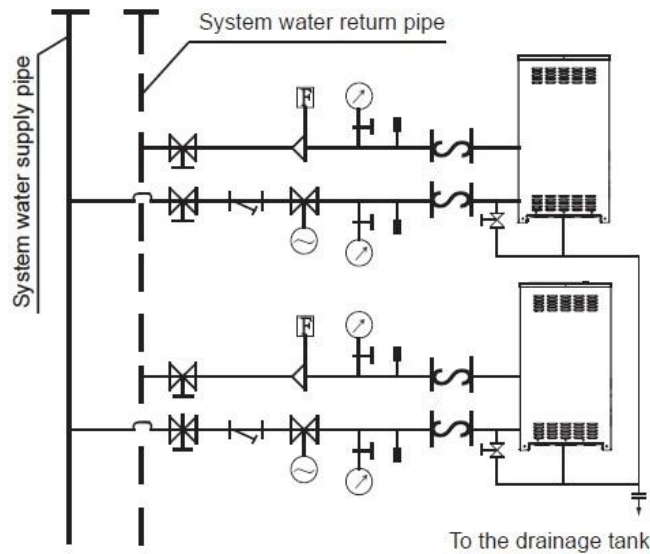
According to the field installation condition, it is selected the side which is draining easily for installing the drainage port connecting pipes. During installation, the seal ring should be put on the water outlet connector, then install into the drainage hole in the chassis from the bottom of the unit, and then rotate 90°, to make it firmly assembled. And connect a drainage pipe (commercially available) with the water outlet connector, for draining the condensed water of the main unit out to the suitable place. Main unit chassis seal ring Water outlet connector main unit chassis drainage port water outlet connector main unit chassis seal ring water outlet plug main unit chassis seal.



WARNING:

It is needed to block the water outlet in the side which do not need to be connected with drainage pipes with water outlet plug and seal ring, otherwise the condensed water produced during the system operation will drain near the installation place, to cause inconvenience.

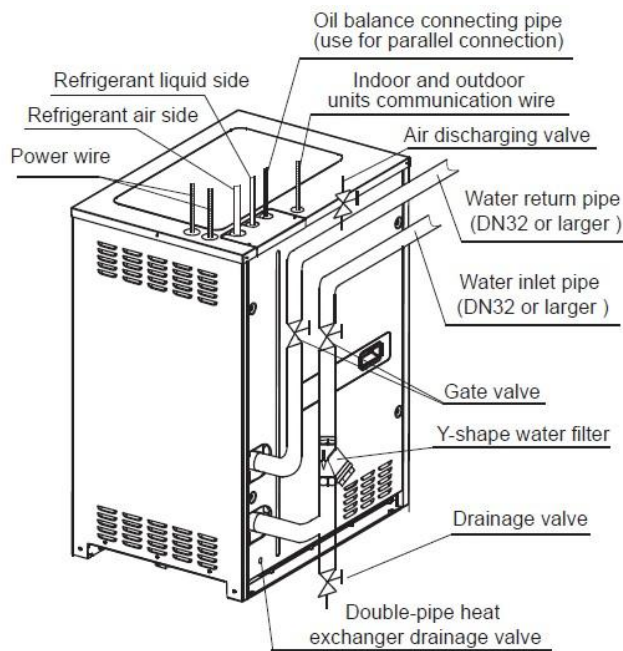
3.4 Installation of the main unit water pipelines



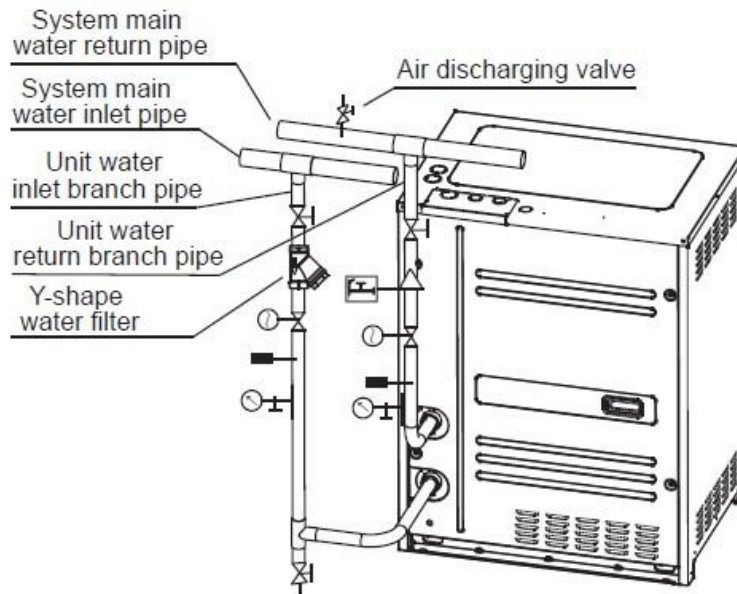
Symbols description

	Gate valve		Y-shape filter
	Pressure gage		Thermometer
	Water flow switch		Motorized valve
	Flexible connection		Drainage valve

Main unit side water pipelines connecting figure (Recommended)



Direction schematic diagram of water system pipes



Symbols description

	Gate valve		Thermometer
	Pressure gage		Motorized valve
	Water flow switch		Drainage valve

As the above Fig.3-5, when horizontal installing the water system main water inlet pipe and main water return pipe, the water inlet branch pipe and water return branch pipe which connected with the unit must be separate connected from the vertically lower direction of main water inlet pipe and main water return pipe; if connected from the side direction and the top direction will affect the unit performance.

3.5 Installation & regulation guide for water flow switch

3.5.1. Please carefully check flow switches before conducting installation of the water flow switch. Packing should be in good condition, and the appearance should be free of damage and deformation. If any problem, please contact the manufacturer.

3.5.2. Flow switches can be installed in the horizontal pipeline or the vertical pipeline with upward flowing direction but cannot be mounted in the pipeline with downward flowing direction. The inlet water of gravity should be taken into account when flow switches are installed in the pipeline with upward flowing direction.

3.5.3. Water flow switch must be installed on a section of straight-line pipeline, and its both ends must be supplied with straight-line pipes whose length is at least 5 times diameter of the pipe. In the meanwhile, the fluid flowing direction in the pipeline must be consistent with the direction of arrow on the switch. The connection terminal should be located where wiring connection can be easily done. (Fig.3-6).

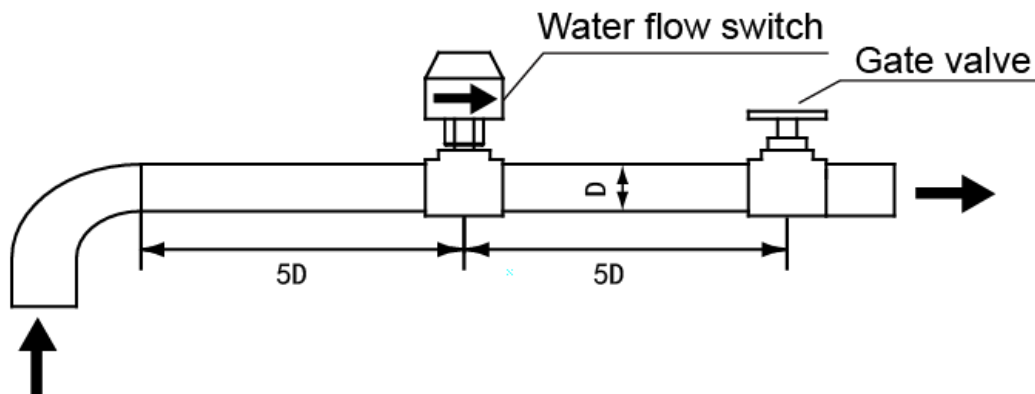
3.5.4. Pay attention to the following items when conducting installation and wire connection:

- 1) Collision of the wrench with the soleplate of the flow switch is prohibited, since such collision may cause deformation and failure of the flow switch.
- 2) To avoid electric shock and damages to the devices, the power supply should be cut off, when wires are connected or adjustment is done.
- 3) When wiring connection is conducted, adjustment of other screws except connection terminals of micro switches and ground screws is prohibited. In the meanwhile, over great force should not applied when wires of micro switches are connected, otherwise micro switches may suffer displacement, thus leading to failure of flow switches.
- 4) Special grounding screws should be used for earth connection. Bolts should not be installed or removed at will; otherwise flow switches may suffer deformation and failure.

5) Flow switches have been set at minimal flow value prior to ex-factory. They should not be adjusted below the ex-factory setting value, or they may suffer failure. After installing flow switches, please press the flow switch lever several times to check them. When the lever is found not to respond with “clatter”, rotate the screw in a clockwise direction, until “clatter” occurs.

6) Be sure to determine the model of target slice according to the rated flow of the unit, the diameter of the outlet pipe and the adjustment range of the target slice of the flow switch. Besides, the target slice should not contact with other restrictors in the pipeline or on the inner wall of the pipeline, or the flow switch cannot be reset normally.

3.5.5. Determine whether the flow switch and the system connected with it are in good operation according to the measured value by flow meter, namely, when the measured value on flow meter is less than 50% of rated water flow of the unit, the water flow controller should be cut off and observed for 3 working periods, and it should be covered with flow switch shell timely.

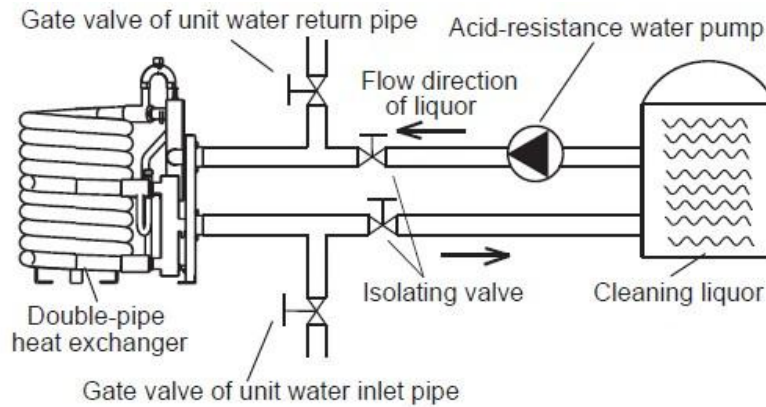


3.6 Operations and maintenance of double-pipe heat exchanger

3.6.1 Operations of double-pipe heat exchanger

- 1) Please note that correctly install the water inlet and outlet pipes. The thread of water inlet and outlet are inner thread G1-1/4.
- 2) For the double-pipe heat exchanger is internal thread copper pipe, and for avoiding the impurities enter into and affect the performance then cause corrosion of the double-pipe heat exchanger, it must be installed the water filter (accessory) near the water inlet pipes of the unit.
- 3) Please use water pipes which conform to local rules and regulations of pipeline engineering. The size of water pipe should not smaller than the connector size of the unit (DN32).
- 4) Periodically clean the water filter according to the water quality situation and the blocking condition of the filter. Otherwise, it might damage the filter screen of the water filter because of the abnormal pressure.
- 5) When the unit will not be used for a long time in winter, water inside the double-pipe heat exchanger and the water pipes should be drained out in case for being frozen. The water inside the double-pipe heat exchanger can be drained out by its drainage valve, the drain age valve position as Fig.3-1 display. The user can take down the front plate and open the drainage valve for water draining, and also can without taking down the front plate then use a straight screwdriver to go through the small hole in the front plate and open the drainage for water draining, the small hole position as Fig.3-5 display.
- 6) According to the different water quality the situations of double-pipe heat exchanger and water system pipelines are different. For removing the scale, it is needed to periodically clean the double-pipe heat exchanger and water system pipelines. It is suggested that set isolating valves in the suitable places during water system installation and it is convenient to connect the cleaning system for cleaning.

3.6.2 Double-pipe heat exchanger cleaning



Cleaning system schematic diagram of double-pipe heat exchanger

3.6.2.1 Preparation of cleaning liquor:

- 1) The material of water side double-pipe is red copper, and for general corrosion situation it is suggested that use the pickle liquor with 5% oxalic acid, 1.2% buffer and 0.8% surfactant, and the temperature should be controlled in 60°C, that will has prefect cleaning effect.
- 2) If use hydrochloric acid as the cleaning liquor, for avoiding to the corrosion and shorten the working life of the heat exchanger, it should limit the concentration of the hydrochloric acid to be 3%~5%, and add corrosion inhibitor with 0.2%~0.3% concentration. When it is cleaning, pay attention to the PH value change, when the PH=8, then stop cleaning immediately. Then change to fresh water for cleaning.

3.6.2.2 Cleaning method:

- 1) Before connecting to the cleaning system, it must stop the unit operation, close the circulating water pump of water system, and close the gate valves in inlet and outlet water return pipes.
- 2) Correctly connect the cleaning system as the above figure 3-7, make the cleaning liquor counter flush the double-pipe heat exchanger (opposite the general flow direction).
- 3) Acid cleaning: After make sure it will not leak water, and then open the water pump to make the double-pipe heat exchanger fill with acid liquor, and close the water pump, and then let the double-pipe heat exchanger static state for 2h. And open the water pump continuously dynamic loop for 3~4h. During that every 0.5h, it is done both side alternative cleaning. During the acid cleaning, it should timely do sampling test for acid concentration, if the continuous twice testing concentration difference is lower than 0.2%, which means the acid cleaning finish reaction. Put the waste liquor to the waste liquor tank.
- 4) Neutralization: After acid cleaning, use NaOH, Na₃PO₄ and soften liquid mixed accord to some proportion, and use dynamic loop to alkali cleaning for the heat exchanger, in order to alkalis counteract acids. Drain the waste liquor to the waste liquor tank.
- 5) Water cleaning: After alkali cleaning, use clean soften liquor repeatedly wash the heat exchanger for 0.5h, thoroughly wash the heat exchanger. Then drain the waste liquor to the waste liquor tank.
- 6) Passivating treatment : Expose the double-pipe heat exchanger in the air for 3~4h, or blow for 2h with high pressure air. Make the pipe surface form a oxidation passivating layer.
- 7) After cleaning, close the isolating valve, and take down the cleaning system devices and keeping properly for backup.
- 8) Please contact the waste liquor treating company to treat the collected waste liquor.
- 9) Connect the unit water system as the state before cleaning, thoroughly check the unit and assist devices whether work normally. Make sure there is no abnormal situation then re-operates the unit.

WARNING:

- The cleaning liquor flow direction must be correctly connected.
- Because different water quality and different using situations of the heat exchanger, the cleaning period and method will be big different, the above method is only for reference.
- The double-pipe heat exchanger is internal thread red copper pipe, so that it cannot use nitric acid as cleaning agent!
- The cleaning liquor and neutralization will be irritated and corrosive to human eyes and skin, so please do well

protection measurements during the cleaning.

- It is strongly suggested that the user calls for professional cleaning company to do component analysis of the water quality and scale, and make a effective cleaning solution and method, then do the cleaning.

3.7 System water quality requirements and management

3.7.1 The unit water system must select the closed cooling tower.

3.7.2 Circulating Chilled Water Processing Design Standard, other index also should meet with the below table.

3.7.3 It should periodically to detect and handle the chilled water quality in the water system. When handling the water, please make sure with the water dealing person to confirm that use any water scale inhibitor and antiseptic agent etc. will not have corrosion to the stainless steel and copper products.

ITEMS	CONCENTRATION (mg/L)
Chromaticity	≤15, and cannot display other colors
Turbidity NTU	≤1
Smell	None
Visible objects	None
PH Value	7.5~9
Total hardness(Take CaCO_3 for calculation)	≤200
Fe	<0.5
AL	<0.2
Mn	<0.1
Cu	<0.2
Zn	≤0.1
Alkalinity concentration(HCO_3^-)	70~300
Sulfate radical (SO_4^{2-})	<70
$\text{HCO}_3^-/\text{SO}_4^{2-}$	>1
Conductivity	10~500 $\mu\text{S}/\text{cm}(20^\circ\text{C})$
NH_3	<0.1
Cl^-	<100
Chlorine	<1
H_2S	<0.05
Free carbon dioxide (CO_2)	<5
Nitrate radical (NO_3^-)	<100
Suspended matter	≤20
Soluble solid	500~1000
Oxygen consumption (Take O_2 for calculation)	≤3
Ammonium ion (NH_4^+)	<1
SiO_2 (Ion state)	<50

4. Refrigerant pipe engineering

4.1 Length and drop height permitted of the refrigerant piping

Table.4-1

			Permitted value	piping
Pipe length	Total pipe length (Actual)		300m (Note1)	$L1+(L2+L3+L4+L5+L6+L7+L8+L9) \times 2 + a + b + c + d + e + f + g + h + i + j$
	Maximum piping (L1)	Actual length	120m	$L1+L5+L8+L9+j$
		Equivalent length	150m	
	Piping (farthest from the first line pipe branch) equivalent length(L2)		40m(90m,Note2)	$L5+L8+L9+j$
Drop height	Indoor unit main unit drop height	Main unit up	H=50m	
		Main unit down	H=40m	
	Indoor unit to indoor unit drop height		H=30m	

Table.4-2

No	Permitted value	Examples	Piping
1	The size of indoor unit main pipe should be bigger than the indoor unit aux. pipe. The indoor unit main pipe needn't increase when it is equal to main pipe .	L2~L9 need to increase the pipe diameter	$\phi 9.52 \rightarrow \phi 12.7$ $\phi 12.7 \rightarrow \phi 15.9$ $\phi 15.9 \rightarrow \phi 19.1$ $\phi 19.1 \rightarrow \phi 22.2$ $\phi 22.2 \rightarrow \phi 25.4$ $\phi 25.4 \rightarrow \phi 28.6$ $\phi 28.6 \rightarrow \phi 31.8$ $\phi 31.8 \rightarrow \phi 38.1$ $\phi 38.1 \rightarrow \phi 41.3$
2	The length of indoor unit aux. pipe is no longer than 40m.	$a, b, \dots, j \leq 40m$.	
3	The distance difference between [the main unit to the farthest indoor unit] and [the main unit to the nearest indoor unit] is $\leq 40m$.	If the farthest indoor unit is N10, the nearest indoor unit is N1, i.e. $(L1+L5+L8+L9+j) - (L1+L2+L3+a) \leq 40m$.	

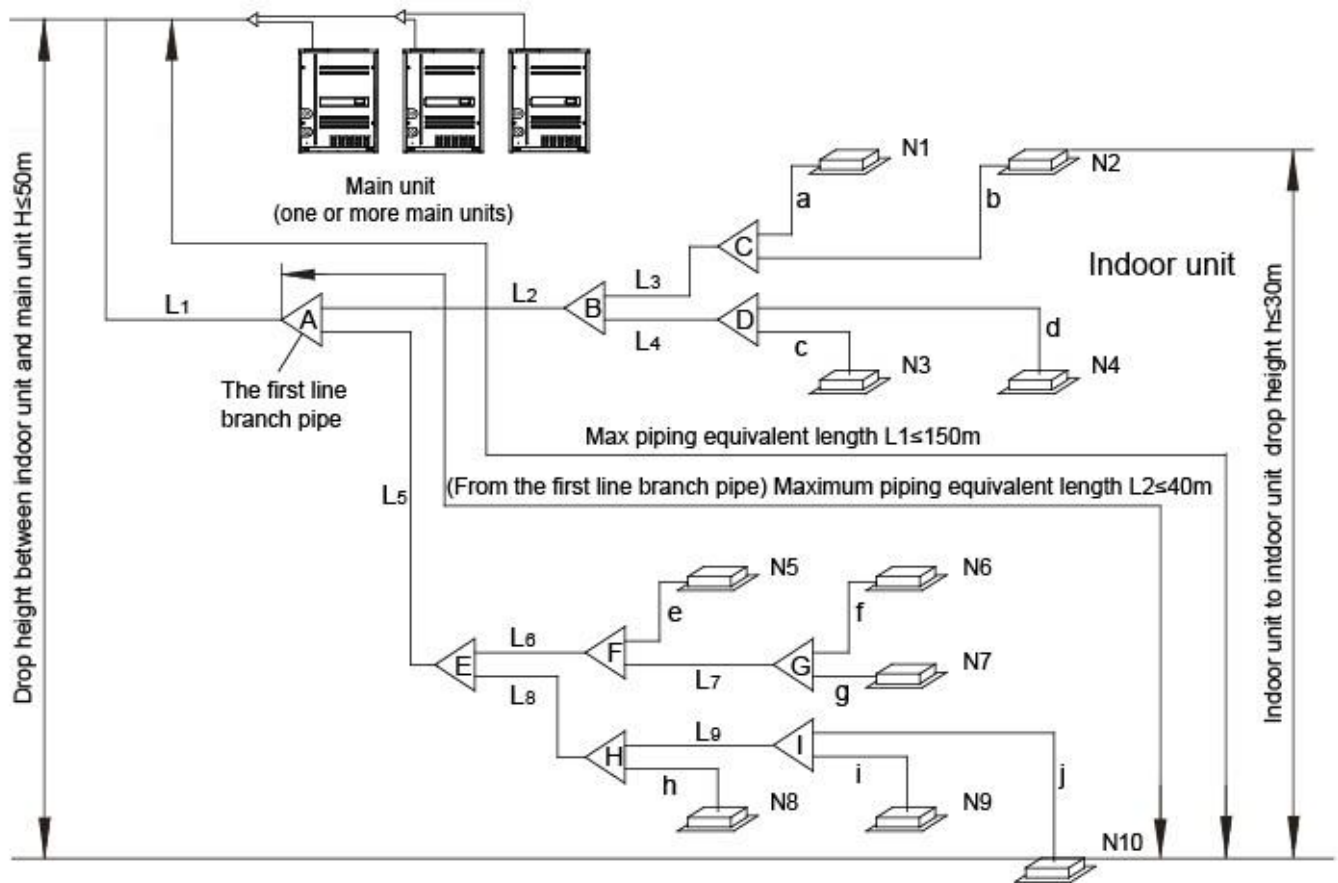


Fig.4-1

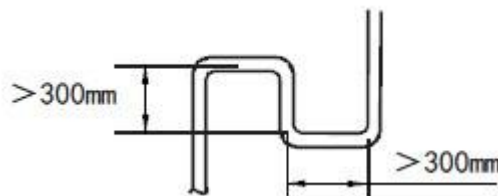


Fig.4-2

CAUTION:

1. All branch pipes must apply the branch pipes specified by Clivet, otherwise, that will cause serious error of the system!
2. Indoor units should be placed as equally as possible at the both sides of the U-shape branch pipe.
3. When the main unit is over 20m from the above places, it is recommended to set a return oil bending every 10m of the air pipe in the main pipe, the return oil bending specification is as Fig. 4-2.

4.2 Select the Refrigerant Piping Type

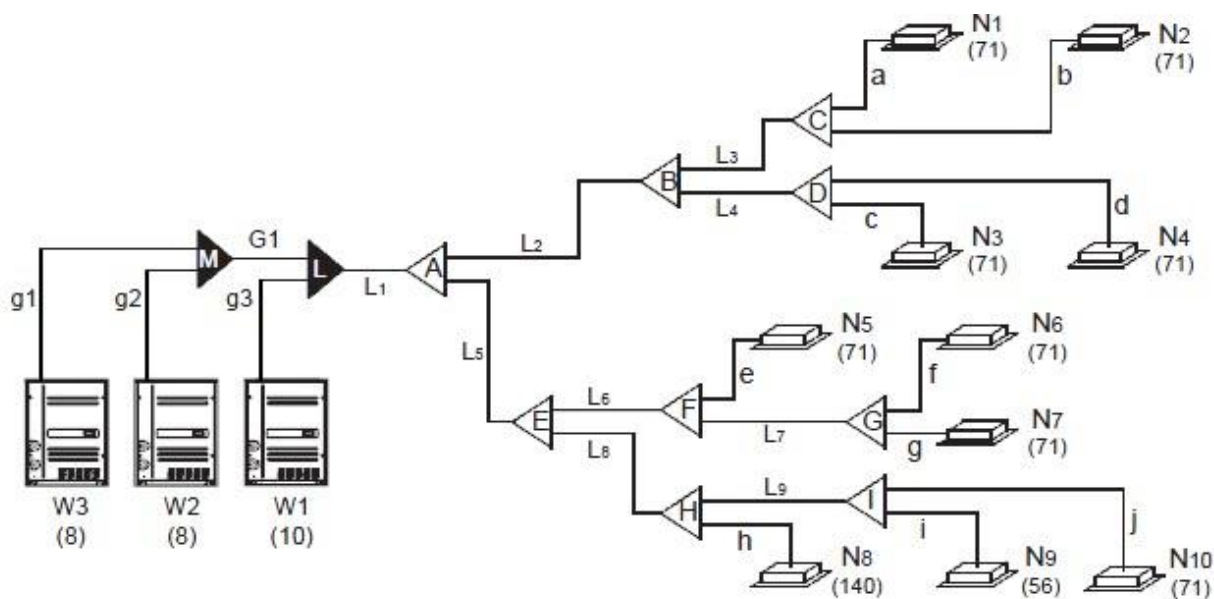


Table.4-3

Pipe name	Code (As per the Fig. 4-2)
Main pipe	L1
Indoor unit main pipe	L2~L9
Indoor unit aux. pipe	a, b, c, d, e, f, g, h, i, j
Indoor unit branching pipe assembly	A, B, C, D, E, F, G, H, I
Main unit branching pipe assembly	L, M
Main unit connective pipe	g1, g2, g3, G1

4.3 Size of joint pipes for indoor unit

Capacity of indoor unit (A)	Size of main pipe(mm)		Available branching pipe
	Gas side	Liquid side	
$A < 166$	Φ15.9	Φ9.5	FQZHN-01D
$166 \leq A < 230$	Φ19.1	Φ9.5	FQZHN-01D
$230 \leq A < 330$	Φ22.2	Φ9.5	FQZHN-02D
$330 \leq A < 460$	Φ28.6	Φ12.7	FQZHN-03D
$460 \leq A < 660$	Φ28.6	Φ15.9	FQZHN-03D
$660 \leq A < 920$	Φ31.8	Φ19.1	FQZHN-03D
$920 \leq A < 1350$	Φ38.1	Φ19.1	FQZHN-04D

4.4 Size of joint pipes for main unit

Base on the following tables, select the diameters of the main unit connective pipes. In case of the main accessory pipe large than the main pipe, take the large one for the selection.

Example: parallel connect with the three main units 10+10+8 (the total capacity is 28HP), all indoor units total capacity is 812, provided that the equivalent length of all pipes are $\geq 90\text{m}$, according to the Table 4-3 the main pipe diameter are $\Phi 31.8/\Phi 22.2$; in according to all indoor unit capacity 1360, we could find out the master unit diameter is $\Phi 31.8/\Phi 19.1$ base on Table 4-6. Take the large one for the selection, we final confirm the main pipe diameter is $\Phi 38.1/\Phi 22.2$.

Table.4-5 Size of joint pipes for 410A main unit

Model	When the equivalent length of all liquid pipes < 90m, the size of main pipe(mm)		
	Gas side	Liquid side	The 1st branching pipe
8HP	Φ22.2	Φ9.5	FQZHN-02D
10HP	Φ22.2	Φ9.5	FQZHN-02D
12HP	Φ25.4	Φ12.7	FQZHN-02D
16HP	Φ28.6	Φ12.7	FQZHN-03D
18~22HP	Φ28.6	Φ15.9	FQZHN-03D
24HP	Φ28.6	Φ15.9	FQZHN-03D
26~32HP	Φ31.8	Φ19.1	FQZHN-03D
34~36HP	Φ38.1	Φ19.1	FQZHN-04D

Table.4-6 Size of joint pipes for 410A main unit

Model	When the equivalent length of all liquid pipes ≥ 90m, the size of main pipe(mm)		
	Gas side	Liquid side	The 1st branching pipe
8HP	Φ22.2	Φ12.7	FQZHN-02D
10HP	Φ25.4	Φ12.7	FQZHN-02D
12HP	Φ28.6	Φ15.9	FQZHN-03D
16HP	Φ31.8	Φ15.9	FQZHN-03D
18~22HP	Φ31.8	Φ19.1	FQZHN-03D
24HP	Φ31.8	Φ19.1	FQZHN-03D
26~32HP	Φ38.1	Φ22.2	FQZHN-04D
34~36HP	Φ38.1	Φ22.2	FQZHN-04D

4.5 Branch pipes for main unit

Table.4-7

Model	Main unit pipe connective opening dimension(mm)	
	Gas side	Liquid side
8HP, 10HP	Φ25.4	Φ12.7
12HP	Φ31.8	Φ15.9

4.6 Branch pipes for indoor unit

Base on Table 4-8 and Table 4-9 select the multi connecting pipes of main unit. Before installation, please read the Main unit Branching Pipe Installation Manual carefully.

Table.4-8 Main unit multi-connective pipe assembly (Illustration)

Main unit Qty.	Illustration
2 units	
3 units	

Table.4-9 Main unit multi-connective pipe assembly

Main unit Qty.	Main unit connective pipe diameter	Parallel connect with the branching pipes	Main pipe
2 units	g1, g2: 8, 10HP: $\Phi 25.4/\Phi 12.7$; 12HP: $\Phi 31.8/\Phi 15.9$	L: FQZHW-02N1C	Refer to Table 6-5 for main pipe dimension
3 units	g1, g2, g3: 8, 10HP: $\Phi 25.4/\Phi 12.7$; 12HP: $\Phi 31.8/\Phi 15.9$; G1: $\Phi 38.1/\Phi 19.1$	L+M: FQZHW-03N1C	

Note: The pipe assemblies in above table is special for this model, must be purchased separately

4.7 Example

- 1) Take (10+8+8) HP that composed by three modules as an example to clarify the pipe selection.
- 2) Take Fig.4-4 as an example. Provided that the equivalent length of all pipes in this system is larger than 90m.

Table.4-10

Unit: mm

Indoor unit capacity A($\times 100W$)	When branching Pipe's length $\leq 10m$		When branching Pipe's length $> 10m$	
	Gas side	Liquid side	Gas side	Liquid side
$A \leq 45$	$\Phi 12.7$	$\Phi 6.4$	$\Phi 15.9$	$\Phi 9.5$
$A \geq 56$	$\Phi 15.9$	$\Phi 9.5$	$\Phi 19.1$	$\Phi 12.7$

A. The branching pipe at the inside of the unit. There are a~j branching pipes at the inside of the unit, the branching pipe diameter should be select as per Table 4-10.

B. Main pipe at the inside the unit (Refer to Table 1-4)

- 1) The main pipe L3 with N1, N2 downstream indoor units that total capacity is $71 \times 2 = 142$, the pipe L3 diameter is $\Phi 15.9/\Phi 9.5$, thus select FQZHN-01C for the branching pipe C.
- 2) The main pipe L4 with N3, N4 downstream indoor units that total capacity is $71 \times 2 = 142$, the pipe L3 diameter is $\Phi 15.9/\Phi 9.5$, thus select FQZHN-01C for the branching pipe D.
- 3) The main pipe L2 with N1~N4 downstream indoor units that total capacity is $71 \times 4 = 284$, the pipe L2 diameter is $\Phi 22.2/\Phi 9.5$, thus select FQZHN-02C for the branching pipe B.
- 4) The main pipe L7 with N6, N7 downstream indoor units that total capacity is $56 + 71 = 127$, the pipe L7 diameter is $\Phi 15.9/\Phi 9.5$, thus select FQZHN-01C for the branching pipe G.
- 5) The main pipe L6 with N5~N7 downstream indoor units that total capacity is $56 + 71 \times 2 = 282$, the pipe L6 diameter is $\Phi 19.1/\Phi 9.5$, thus select FQZHN-01C for the branching pipe F.
- 6) The main pipe L9 with N9, N10 downstream indoor units that total capacity is $56 \times 2 = 112$, the pipe L9 diameter is $\Phi 15.9/\Phi 9.5$, thus select FQZHN-01C for the branching pipe I.
- 7) The main pipe L8 with N8~N10 downstream indoor units that total capacity is $112 + 56 \times 2 = 224$ the pipe L8 diameter is $\Phi 19.1/\Phi 9.5$, thus select FQZHN-01C for the branching pipe H.
- 8) The main pipe L5 with N5~N10 downstream indoor units that total capacity is $112 + 56 \times 3 + 71 \times 2 = 366$, the pipe L5 diameter is $\Phi 28.6/\Phi 12.7$, thus select FQZHN-03C for the branching pipe E.
- 9) The main pipe A with N1~N10 downstream indoor units that total capacity is $56 \times 3 + 71 \times 6 + 112 = 706$, thus select FQZHN-03C for the branching pipe A.

C Main pipe (Refer to Table 5-4, Table 5-5, Table 5-6): Main pipe L1 in the Fig.6-2, which upstream main units total capacity is $10 + 8 + 8 = 26HP$, based on table 6-5, the gas/liquid pipe diameter are $\Phi 38.1/\Phi 22.2$, total capacity of the downstream indoor unit is $56 \times 3 + 71 \times 6 + 112 = 706$, based on table 5-4, the gas/liquid pipe diameter are $\Phi 31.8/\Phi 19.1$, take the large one for

your selection, final confirm the main pipe diameter is: gas/liquid pipe $\Phi 38.1/\Phi 22.2$.

D Parallel connect the main units

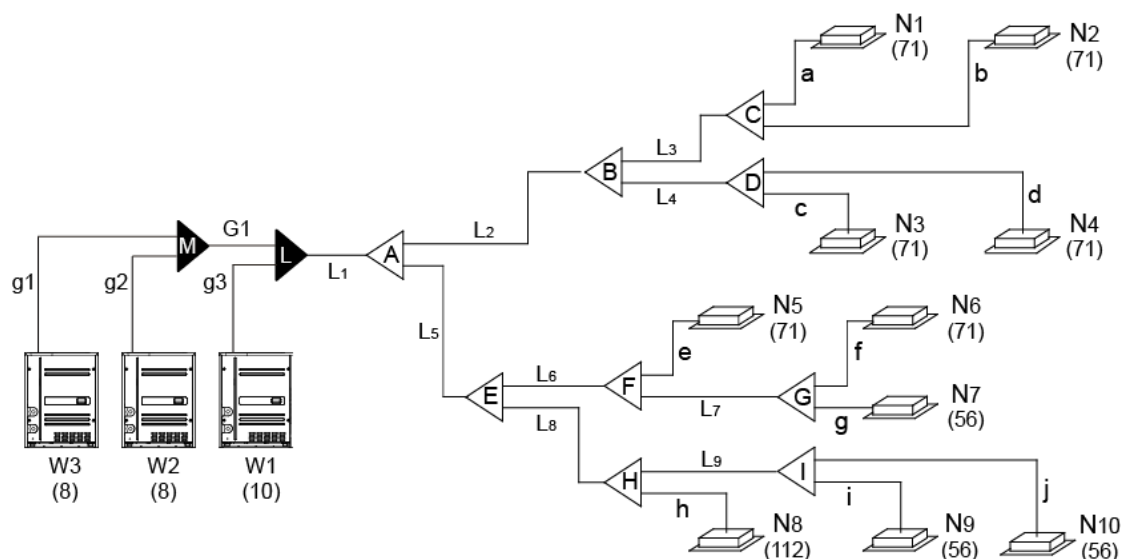
1) The main unit linked by Pipe g1 is 8HP, parallel connects with main unit. the connective pipe diameter to be selected according to its connector size is $\Phi 25.4/\Phi 12.7$; The main unit linked by Pipe g2 is 8HP, parallel connects with main unit. the connective pipe diameter to be selected according to its connector size is $\Phi 25.4/\Phi 12.7$; The main unit linked by Pipe g3 is 10HP, parallel connects with main unit. the connective pipe diameter to be selected according to its connector size is $\Phi 25.4/\Phi 12.7$.

2) The upstream of G1 is the two parallel connected main units, refer to Table 5-9 select the three parallel connected main unit, the pipe diameter is $\Phi 38.1/\Phi 19.1$.

3) Parallel connect the three main units, refer to Table 5-7 should select FQZHW-03N1C for main unit connective pipes (L+M).

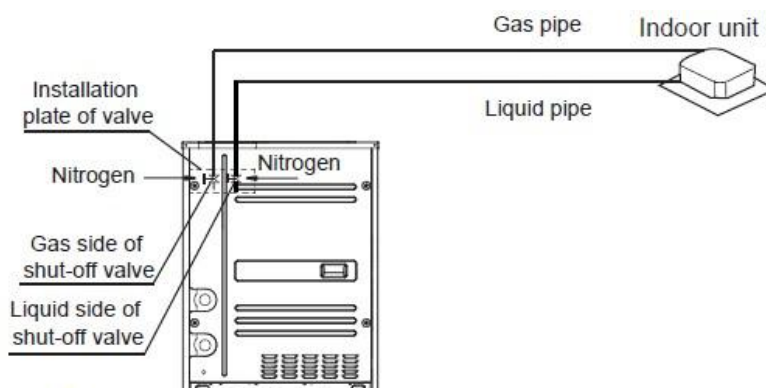
4.8 Remove dirt or water in the piping

1. Make sure there is no any dirt or water before connecting the piping to the main units.
2. Wash the piping with high pressure nitrogen, never use refrigerant of the main unit.



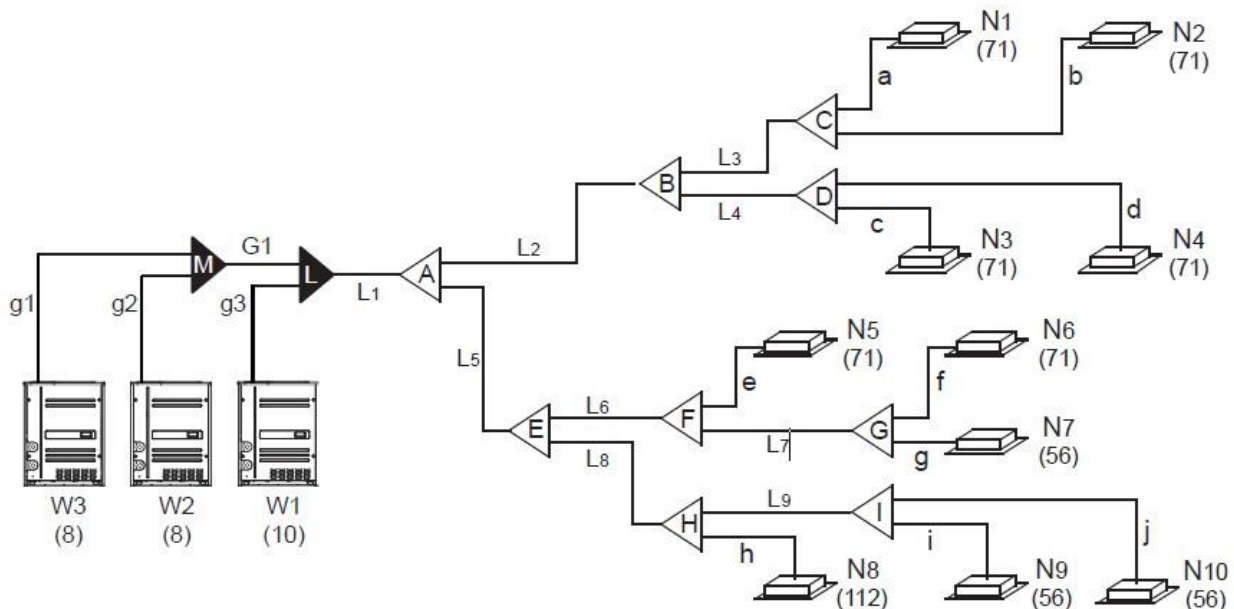
4.9 Gas tight test

- 1) Upon set up the indoor unit pipeline, please connect the Hi-pressure pipe with shut-off valve firstly.
- 2) Weld the pipe at the low pressure side to the meter connector.
- 3) Use the vacuum pump discharging air inside the liquid side shut-off valve and meter connector, until to the -0.1MPa.
- 4) Close the vacuum pump, charge 3.9MPa nitrogen gas from the piston of shut-off valve and from the meter connector. Pressure inside should be maintained at there no less than 24 hrs.

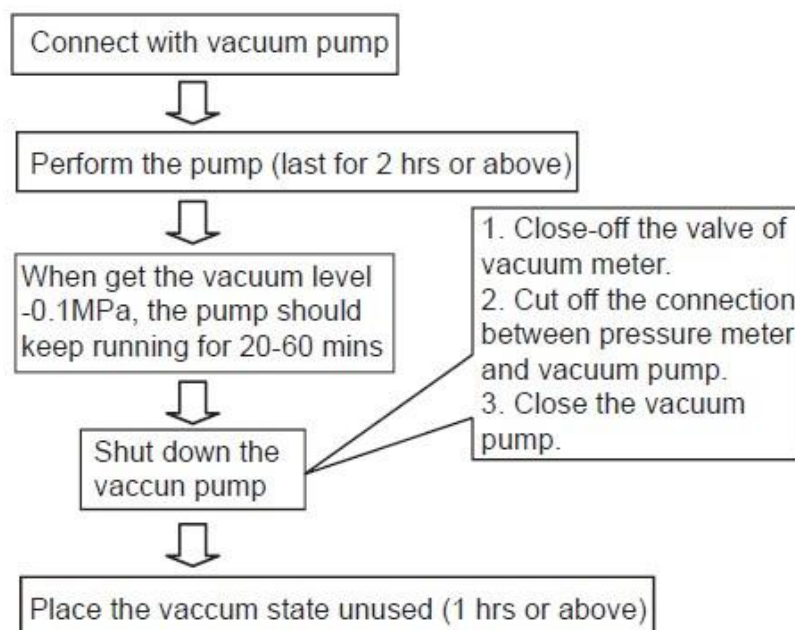


CAUTION:

1. Pressurized nitrogen (3.9MPa) is used for air tightness test.
2. It is not allow to use oxygen, combustible gas or toxic gas to conduct the air tightness test.
3. When welding, please use wet cloth insulating the low pressure valve for protection.
4. For avoid the equipment be damaged, the pressure maintained time should not last too long.

**4.10 Vacuum with vacuum pump**

1. Use the vacuum pump which vacuum level lower than -0.1MPa and the air discharge capacity above 40L/min.
2. The main unit is not necessary to vacuum, don't open the main unit gas and liquid pipe shut-off valves.
3. Make sure the vacuum pump could result as -0.1MPa or below after 2 hrs or above operation. If the pump operated 3 hrs or above could not achieve to -0.1MPa or below, please check whether water mix or gas leak inside of the pipe.



CAUTION:

1. Don't mix up the different refrigerants or abuse the tools and measurements which directly contact with refrigerants
2. Don't adopt refrigerant gas for air vacuuming.
3. If vacuum level could not get to -0.1MPa, please check whether resulted by leakage and confirm the leakage site. If no leakage, please operate the vacuum pump again 1 or 2 hrs.

Refrigerant amount to be added

$$W = W1 + W2$$

W = total additional refrigerant amount to be added

W1 = Refrigerant revised amount after unit left the factory

W2 = Refrigerant added amount of connected liquid side pipes

Unit capacity (HP)	W1 (KG)
8	2.0
10	2.0
12	2.0

Calculate the added refrigerant W1 according the following table:

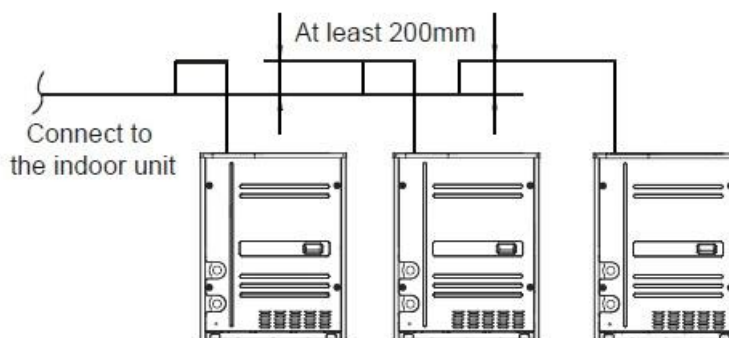
Calculate the added refrigerant according to the diameter and the length of the liquid side pipe of the main/indoor unit connection. The refrigerant is R410A.

Table.4-11

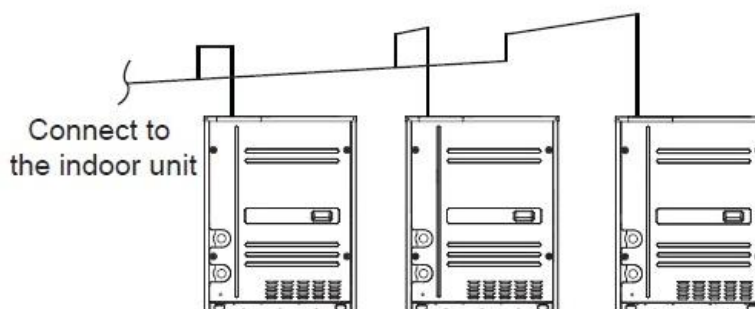
Pipe size on liquid side	Refrigerant to be Added per meter
Φ6.4	0.022kg
Φ9.5	0.057kg
Φ12.7	0.110kg
Φ15.9	0.170kg
Φ19.1	0.260kg
Φ22.2	0.360kg
Φ25.4	0.520kg
Φ28.6	0.680kg

4.11 The Installation key points of connective pipes between main units

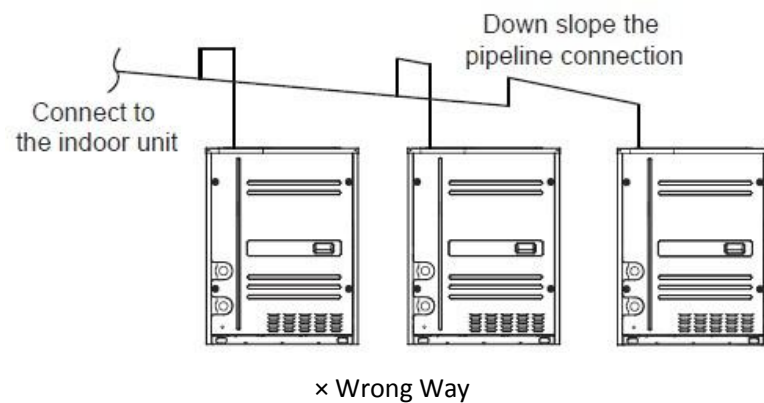
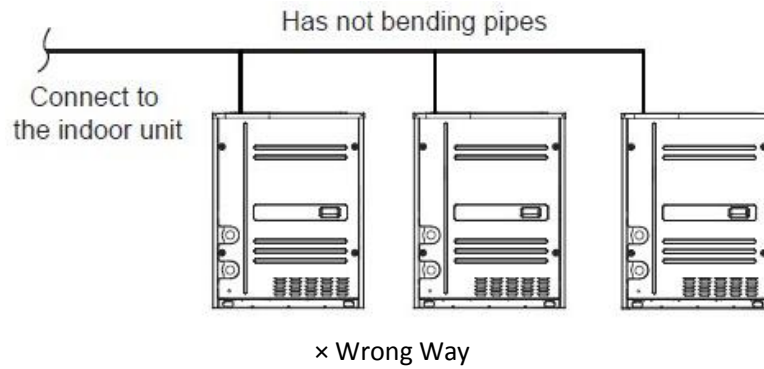
- 1) Connect the pipes between main units, the pipes should place horizontally (Fig.5-7, Fig.5-8), it is not allow the concave at junction site and set longer than 200mm bending pipes for saving oil.
- 2) All connective pipes between the main units are not allowed to over than the height of every outlets of the pipes.



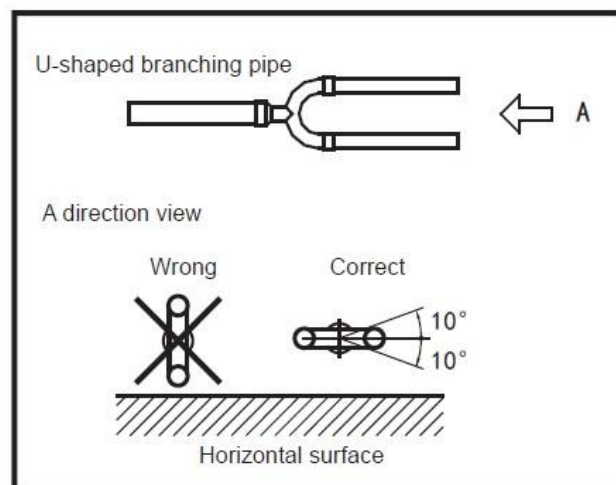
✓ Correct Way



✓ Correct Way



3) The branching pipe must be installed horizontally, error angle of it should not large than 10° . Otherwise, malfunction will be caused.



5. Trial run

5.1 Inspection and confirmation before commissioning

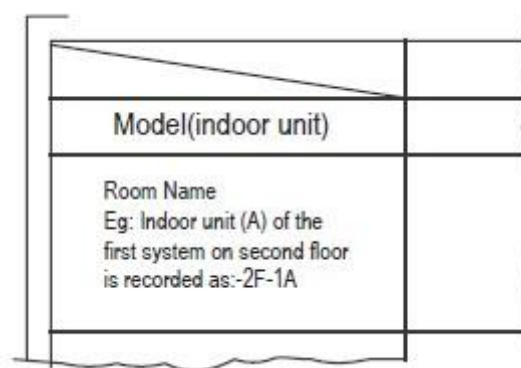
- 1) Check and confirm that refrigeration pipe line and communication wire with indoor and main unit have been connected to the same refrigeration system. Otherwise, operation troubles shall happen.
- 2) Power voltage is within $\pm 10\%$ of rated voltage.
- 3) Check and confirm that the power wire and control wire are correctly connected.
- 4) Before powering on, confirm there is no short circuit to each line.
- 5) Check whether all units have passed nitrogen pressure-keeping test for 24 hours with R410A: 40kg/cm².
- 6) Confirm whether the system to debugging has been carried out vacuum drying and packed with refrigeration as required.
- 7) Make sure all the water pipelines are correct, including the installation directions of water filter and water flow switch.
- 8) Check whether the water filter has been blocked, and clean the filter screen. If it is seriously blocked, then it should be checked whether the water quality has meet the requirements.
- 9) Open the gate valve, make sure the double-pipe heat exchanger have been filled with circulating water, and open the water pump and air discharge valve, after make sure the air in the water pipelines and unit has been drain out and then close the air discharge valve.
- 10) Check whether the pressure meters in the water inlet and water return pips of the unit, thermometer, water flow switch etc. work normally, and make sure the water pipelines system operate normal, and the water flow is suitable.

5.2 Preparation before debugging

- 1) Calculating the additional refrigerant quantity for each set of unit according to the actual length of liquid pipe.
- 2) Keep required refrigerant ready.
- 3) Keep system plan, system piping diagram and control wiring diagram ready.
- 4) Record the setting address code on the system plan.
- 5) Turn on power switches main unit in advance, and keep connected for above 12 hours so that heater heating up refrigerant oil in compressor.
- 6) Turn on air pipe stop valve, liquid pipe stop valve, oil balance valve and air balance valve totally. If the above valves do not be turned on totally, the unit should –be damaged.
- 7) Check whether the power phase sequence of main unit is correct.
- 8) All dial switch to indoor and main unit have been set according to the Technical Requirement of Product.

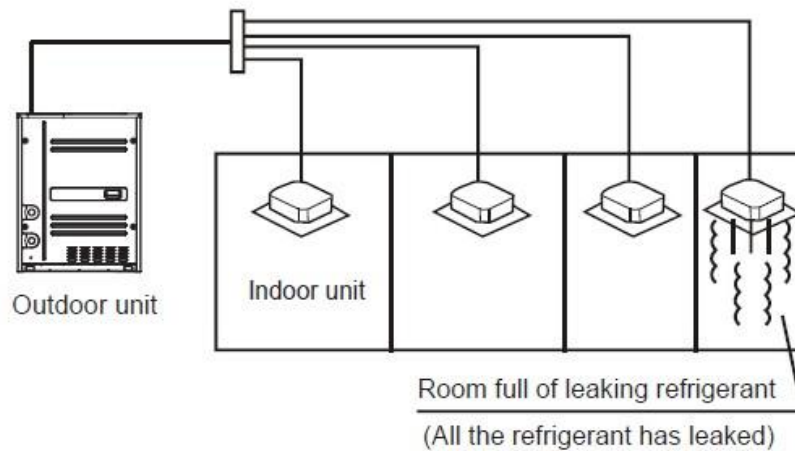
5.3 Fill the name of connected system

To clearly identify the connected systems between two or more indoor units and main unit, select names for every system and record them on the nameplate on the outdoor electric control box cover.



5.4 Caution on refrigerant leakage

- 1) This air conditioner adopts R410A as refrigerant, which is safe and noncombustible.
- 2) The room for air conditioner should be big enough that refrigerant leakage can not reach the critical thickness. Besides this, you can take some action on time.
- 3) Critical thickness-----the max thickness of Freon without any harm to person. R410A critical thickness: 0.3 [kg/m³]



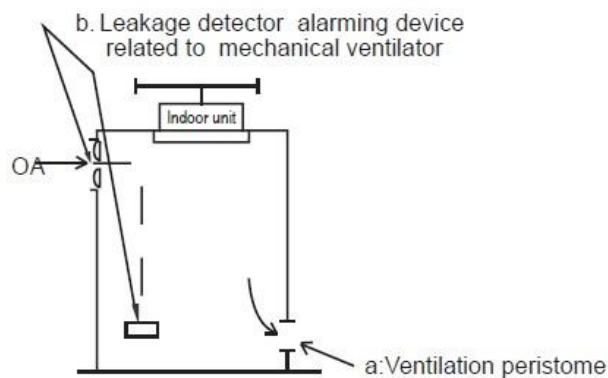
4) Calculate the critical thickness through following steps, and take necessary actions.

- Calculate the sum of the charge volume (A[kg]) total refrigerant volume=refrigerant volume when delivered (nameplate)+super addition
- Calculate the indoor cubage (B[m³]) (as the minimum cubage)
- Calculate the refrigerant thickness.

$$\frac{A[\text{kg}]}{B[\text{m}^3]} \leq \text{Critical thickness: } 0.3 [\text{kg/m}^3]$$

5) Counter measure against over high thickness

- Install mechanical ventilator to reduce the refrigerant thickness under critical level. (ventilate regularly)
- Install leakage detector alarming device related to mechanical ventilator if you cannot regularly ventilate.



Commissioning Report for Clivet MV System

Date: dd mm yy

Item name:	
Address:	Tel:
Supplier:	Delivery date: dd mm yy
Installation section:	Principal:
Commissioning section:	Principal:
Remark: recharged refrigeration quantity to system: kg Name of refrigerant:	

Installing section:
(seal)

Signature:

Date: ____dd____mm____yy

Commissioning name:
(seal)

Signature:

Date: ____dd____mm____yy

Test Data for Test Run of _____ System

Model of main unit	Production series no.

Operation data of main unit (Cooling)

Unit	No.1	No.2	No.3
Run Voltage V			
Total current of run A			
Operation current of compressor A			
High-pressure pressure bar			
Low-pressure pressure bar			
Inlet air temperature °C			
Outlet air temperature °C			

Operation data of indoor unit

No.	Position	Model	Bar code of indoor unit	Inlet air temperature °C	Outlet air temperature °C
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

System parameter

SW1:

(CHECK)—Used to query main unit data. Check point sequence and corresponding actuality is as follows:

No.	Display content	Note	No.	Display content	Remark
1	Main unit address	0,1,2,3	14	TSC1, water outlet temp. of upper pipe	Actual value
2	Capacity of main unit	8,10,12	15	TSC2, water outlet temp. of lower pipe	Actual value
3	Qty. of modular main unit	Effective to master unit	16	Current 1 of inverter compressor	Actual value
4	Total capacity of main unit	Capacity requirement	17	Current 2 of inverter compressor	Actual value
5	Total capacity requirement of indoor unit	Effective to master unit	18	High pressure	Actual value
6	Total capacity requirement of master unit after correction	Effective to master unit	19	Low pressure	Actual value
7	Operation mode	0,2,3,4	20	Opening degree of EEV A	Display value ×8
8	The actual operation capacity of main unit	Capacity requirement	21	Opening degree of EEV B	Display value ×8
9	Water flow switch	0-OFF,1-ON	22	Priority mode	0,1,2,3,4
10	T2B/T2 average temp.	Actual value	23	Quantity of communicated indoor units	Actual value
11	T5, inverter module temp.	Actual value	24	The qty. of installed indoor units	Actual value
12	T7, discharge temp. of inverter compressor	Actual value	25	The last time error or protective code	Without protection or error display code 00
13	TSJ, water inlet temp.	Actual value	26	—	Check end

Normal display:

- When in standby mode, it displays number of indoor units that can communicate with outdoor unit. When it is operating, it will display the rotation frequency of the compressor.
 - Operating mode: 0---Off/Fan; 1---fan only; 2---Cooling; 3---Heating; 4---Forced cooling
 - Water flow switch state:0---close;1---open.
 - Priority mode:0---Heating priority mode;1---Cooling priority mode;2---Priority mode;3---Only respond the heating mode; 4---Only respond the cooling mode
 - EXV opening angle: pulse count=display value×8. ENC1: Outdoor unit address setting switch,
 - ENC1: Main unit address setting switch.
ENC2: Main unit capacity setting switch.
ECN3: Network address setting switch.
S10, ENC4: combination setting the qty. of the installed indoor units.
 - SW1: Query button; SW2: Constraint cooling.
- Note: Setting 0 or 1, all mean install 1 set indoor unit.



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