



Technical manuel

EDHX

Air to Water heat pump

EN



Dear Customer,

Thank you for purchasing this device.

We invite you to read this manual carefully before using your appliance. Keep this document in a safe place for future reference.

To ensure safe and efficient operation, we recommend that you carry out the necessary maintenance operations regularly. Our After-Sales service can help you with these operations.

We hope that you will be satisfied with our services for many years.

AIRWELL

This manual is referring to the following unit :

Designation	Code
EDHX-500R-04T35	7MB140055
EDHX-600R-04T35	7MB140056
EDHX-700R-04T35	7MB140057

The data contained in this manual are not binding and may be modified by the manufacturer without prior notice.



SUMMARY

1	SYSTEM DESIGN AND UNIT SELECTION	5
1.1	System configurations	5
1.2	Selection Procedure	6
2	SPECIFICATIONS	7
3	Electrical characteristics	10
3.1	Cable requirements	10
3.2	Operating current and wire section	10
3.3	Dimensions and Center of Gravity	11
3.4	Operating limit	12
3.5	Hydronic Performance	13
4	Capacity tables	14
4.1	EDHX-500R-04T35	14
4.1.1	100% heating capacity	14
4.1.2	90% heating capacity	16
4.1.3	70% heating capacity	18
4.1.4	50% heating capacity	20
4.1.5	30% heating capacity	22
4.1.6	100% cooling capacity	24
4.1.7	90% cooling capacity	25
4.1.8	70% cooling capacity	26
4.1.9	50% cooling capacity	27
4.1.10	30% cooling capacity	28
4.2	EDHX-600R-04T35	29
4.2.1	100% heating capacity	29
4.2.2	90% heating capacity	31
4.2.3	70% heating capacity	33
4.2.4	50% heating capacity	35
4.2.5	30% heating capacity	37
4.2.6	100% cooling capacity	39
4.2.7	90% cooling capacity	40
4.2.8	70% cooling capacity	41
4.2.9	50% cooling capacity	42
4.2.10	30% cooling capacity	43
4.3	EDHX-700R-04T35	44
4.3.1	100% heating capacity	44
4.3.2	90% heating capacity	46
4.3.3	70% heating capacity	48
4.3.4	50% heating capacity	50
4.3.5	30% heating capacity	52

4.3.6	100% cooling capacity	54
4.3.7	90% cooling capacity	55
4.3.8	70% cooling capacity	56
4.3.9	50% cooling capacity	57
4.3.10	30% cooling capacity	58
5	Capacity correction	59
5.1	Plate Heat Exchangers- Fouling Coefficients	59
5.2	Air Heat Exchanger - Altitude Correction Factor	59
5.3	Minimum Antifreeze Percentage in Low-Temperature Air Environment	59
5.3.1	Ethylene Glycol (Toxic).....	60
5.3.2	Propylene Glycol (Low Toxic; Including the necessary, classified as Category III according to EN1717)	60
6	Noise levels	61
6.1	Octave band levels	62
6.1.1	Cooling ; Outdoor ambient temperature 35°C DB. LWT 7°C	62
6.1.2	Heating ; Outdoor ambient temperature 7C DB. LWT 35°C	63

1 SYSTEM DESIGN AND UNIT SELECTION

1.1 System configurations

Configuration 1: Heat pump only

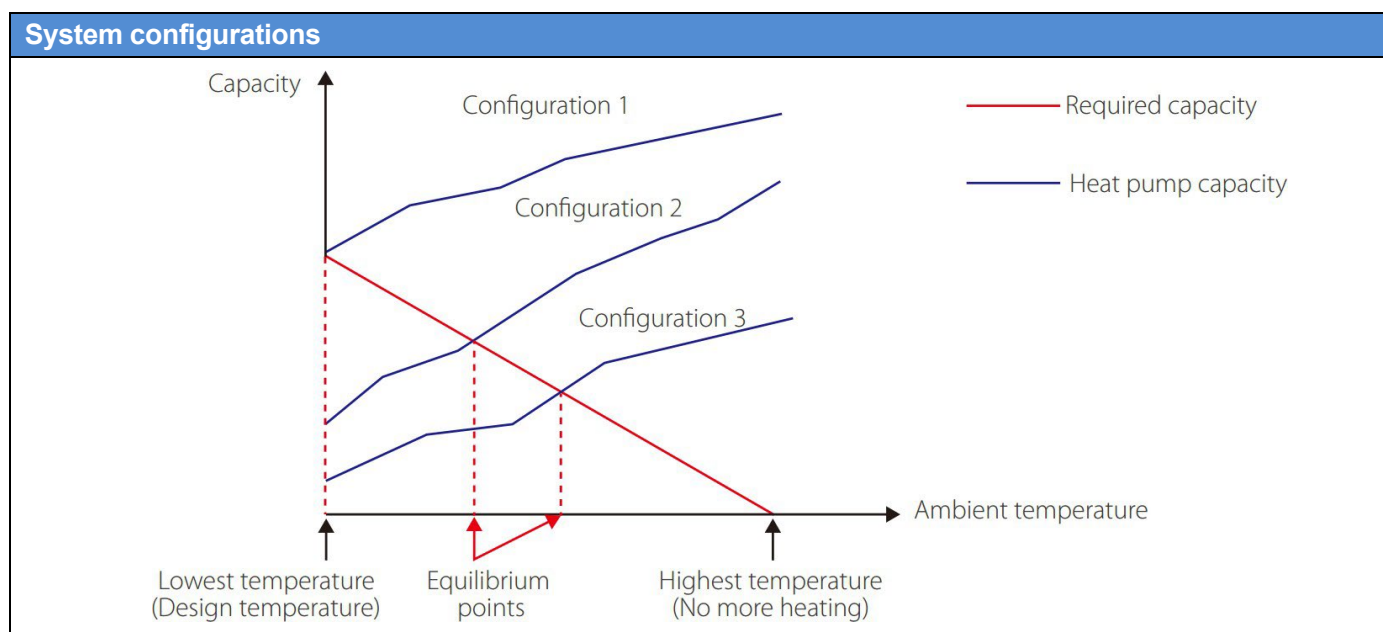
- The heat pump covers the required capacity and no extra heating capacity is necessary.
- Requires selection of larger capacity heat pump and implies higher initial investment.
- Ideal for new construction in projects where energy efficiency is paramount.

Configuration 2: Heat pump and backup electric heater

- Heat pump covers the required capacity until the ambient temperature drops below the point at which the heat pump is able to provide sufficient capacity. When the ambient temperature is below this equilibrium point (as shown below), the backup electric heater supplies the required additional heating capacity.
- Best balance between initial investment and running costs, results in lowest lifecycle cost.
- Ideal for new construction.

Configuration 3: Heat pump with auxiliary heat source

- Heat pump covers the required capacity until the ambient temperature drops below the point at which the heat pump is able to provide sufficient capacity. When the ambient temperature is below this equilibrium point (as shown below), depending on the system settings, either the auxiliary heat source supplies the required additional heating capacity or the heat pump does not run and the auxiliary heat source covers the required capacity.
- Enables selection of lower capacity heat pump.
- Ideal for refurbishments and upgrades.



1.2 Selection Procedure

Step 1: Total heat load calculation

Calculate conditioned surface area
Select the heat emitters (type, quantity, water temperature and heat load)

Step 2: System configuration

Decide whether to include AHS and set AHS's switching temperature
Decide whether backup electric heater is enabled or disabled

Step 3: Selection of outdoor units

Determine required total heat load on outdoor units
Set capacity safety factor

Provisionally select WELLEA MAX unit capacity based on nominal capacity

Correct capacity of the outdoor units for the following items:
Outdoor air temperature / Outdoor humidity / Water outlet temperature¹ / Altitude / Anti-freeze fluid

Is corrected WELLEA MAX unit capacity $\geq$ Required total heat load on outdoor units²

Yes

No

WELLEA MAX system selection is complete

Select a larger model or enable backup electric heater operation

NOTE

1. Up to 8 units can be connected together, giving a system cooling/heating capacity range from 50kW to 560kW.

2. If the required water temperatures of the heat emitters are not all the same, the outlet water temperature of WELLEA MAX setting should be set at the highest of the heat emitter required water temperatures. If the water outlet design temperature falls between two temperatures listed in the outdoor unit's capacity table, calculate the corrected capacity by interpolation.

3. Select WELLEA MAX which satisfies both total heating and cooling load requirements.

2 SPECIFICATIONS

Model			EDHX-500R-04T35	EDHX-600R-04T35	EDHX-700R-04T35
Power supply		V/Ph/Hz	380-415V/3N/50Hz		
Cooling (A35W7)	Capacity	kW	50.00	60.00	65.00
	Input	kW	15.15	20.00	23.21
	EER		3.30	3.00	2.80
Cooling (A35W18)	Capacity	kW	50.00	60.00	70.00
	Input	kW	10.42	13.33	16.87
	EER		4.80	4.50	4.15
Heating (A7W35)	Capacity	kW	50.00	60.00	70.00
	Input	kW	10.64	13.95	17.50
	COP		4.70	4.30	4.00
Heating (A7W45)	Capacity	kW	50.00	60.00	70.00
	Input	kW	13.16	17.05	20.90
	COP		3.80	3.52	3.35
Heating (A7W55)	Capacity	kW	50.00	60.00	70.00
	Input	kW	15.15	19.61	23.73
	COP		3.30	3.06	2.95
Heating (A7W65)	Capacity	kW	50.00	60.00	70.00
	Input	kW	17.86	22.22	27.45
	COP		2.80	2.70	2.55
Heating (A2W35)	Capacity	kW	50.00	60.00	60.00
	Input	kW	14.29	19.05	19.05
	COP		3.50	3.15	3.15
Heating (A2W45)	Capacity	kW	50.00	60.00	60.00
	Input	kW	16.67	22.64	22.64
	COP		3.00	2.65	2.65
Heating (A2W55)	Capacity	kW	50.00	60.00	60.00
	Input	kW	20.00	26.09	26.09
	COP		2.50	2.30	2.30
Heating (A-7W35)	Capacity	kW	50.00	60.00	60.00
	Input	kW	18.87	26.09	26.09
	COP		2.65	2.30	2.30
Heating (A-7W45)	Capacity	kW	50.00	60.00	60.00
	Input	kW	20.83	29.27	29.27
	COP		2.40	2.05	2.05
Heating (A-7W55)	Capacity	kW	50.00	60.00	60.00
	Input	kW	22.22	33.33	33.33
	COP		2.25	1.80	1.80
Space heating energy efficiency class	LWT 35°C	SCOP	4.70	4.60	4.50
		η_s	185.00%	181.00%	177.00%
		class	A+++	A+++	A+++
	LWT 55°C	SCOP	3.90	3.85	3.76
		η_s	153.00%	151.00%	147.40%
		class	A+++	A+++	A++

Model			EDHX-500R-04T35	EDHX-600R-04T35	EDHX-700R-04T35
Colder climate W35		SCOP	3.95	3.69	3.68
		nsh	154.90%	144.50%	144.30%
Colder climate W55		SCOP	3.52	3.29	3.28
		nsh	137.70%	128.50%	128.20%
Warmer climate W35		SCOP	6.27	6.29	6.16
		nsh	247.70%	248.70%	243.20%
Warmer climate W55		SCOP	4.81	4.76	4.76
		nsh	189.30%	187.20%	187.20%
Cooling W7		SEER	4.85	4.80	4.70
		nsc	191.00%	189.00%	185.00%
Cooling W18		SEER	6.80	6.60	6.50
		nsc	269.00%	261.00%	257.00%
TOCA (Total Over-Current Amps.)		A	70	70	70
MOP (Maximum Overcurrent Protector)		A	80	80	80
MCA (Minimum Circuit Amps)		A	60	62	64
MFA (Maximum Fuse Amps)		A	80	80	80
Compressor	Type		Scroll Type		
	Poles		4 Poles		
	Speed range	rps	14~130		
	Capacity (60rps)	kW	18.44		
	Input (60rps)	kW	5.590		
	Max. heating speed	rps	14~130		
	Max. cooling speed	rps	14~130		
	RLA	A	15.45		
Fan	Motor type		DC brushless motor		
	Number of fans		2		
	Air flow	m3/h	28670		
	Rated Motor input	kW	0.92		
	FLA(Full Load Amps)	A	4		
Air side heat exchanger	Number of rows		3		
	Number of circuits		19		
Refrigerant	Type (GWP)		R290 (0.02)		
	Charged volume	kg	2.8×2		
Throttle type			EEV		
sound power Level	Heating A7W35	dB(A)	79.40	84.20	86.40
	Heating max.	dB(A)	/	/	83.3
	heating silence mode 1	dB(A)	/	/	73.4
	heating silence mode 2	dB(A)	/	/	70.0
	Cooling A35W7	dB(A)	78.20	81.20	83.2
	Cooling max.	dB(A)	/	/	82.8
	Cooling silence mode1	dB(A)	/	/	73.2
	Cooling silence mode2	dB(A)	/	/	70.3

Model			EDHX-500R-04T35	EDHX-600R-04T35	EDHX-700R-04T35
sound pressure Level (1m)	Heating A7W35	dB(A)	62.4	67.6	69.5
	Heating max.	dB(A)	/	/	69.6
	heating silence mode 1	dB(A)	/	/	59.4
	heating silence mode 2	dB(A)	/	/	56.3
	Cooling A35W7	dB(A)	62.20	65.10	66.8
	Cooling max.	dB(A)	/	/	67.4
	Cooling silence mode1	dB(A)	/	/	57.9
	Cooling silence mode2	dB(A)	/	/	54.8
Unit dimension (W×D×H)		mm	2000×960×1880		
Packing dimension (W×D×H)		mm	2085×1030×2050		
Net weight		kg	560		
Gross weight		kg	585		
Water circuit	Inlet dimension	Inch	2		
	Outlet dimension	Inch	2		
Connection method	Water side		Hoop connection		
Outdoor air temperature range	Cooling	°C	5~25 (-5~25)1		
	Heating	°C	25~70 (25~85)2		
	DHW	°C	20~70 (20~80)2		
Water side heat exchanger	Type		Plate heat exchanger		
Safety valve		MPa	0.6		
Flow switch		m3/h	1.2		
Water flow range		m3/h	1.8-10.3	1.8-12.4	1.8-14.4
Water outlet temperature setting range	Cooling	°C	-5~25		
	Heating	°C	25~85		
	DHW (tank)	°C	20~80		

NOTE

1. The above data test reference standard EN14511; EN14825; EN50564; EN 12102; (EU) No:811.

2. Sound pressure level is the test average measured in a semi-anechoic chamber. The test position is 1m right in front of the unit for four sides and $(1+H)/2m$ (where H is the height of the unit) above the floor. During in-situ operation, sound pressure levels may be higher as a result of ambient noise.

3. If the unit is operating in the temperature range with Low temp mode, The antifreeze system must be used instead of the water system, and the antifreeze (especially the glycol solution) must meet the following two requirements at the same time:

- Volume concentration $\geq 30\%$;
- The freezing point temperature of antifreeze < the coldest temperature at the using site - 5.5°C; The dial code S1-2 needs to be set to ON. The inverter water pump needs to be matched, and the minimum water flow of the water pump should be able to be as low as 1.8 m³/h.

4. If the unit is operating in the temperature range with High temp mode, the dial code S1-2 needs to be set to ON. The inverter water pump needs to be matched, and the minimum water flow of the water pump should be able to be as low as 1.8 m³/h.

3 Electrical characteristics

3.1 Cable requirements

The cables connected to the circuit breaker must comply with the requirements for electrical clearance and creepage distance between live conductors and earthed parts as specified in Tables 1 and 2 of IEC 61439-1, and also conform to local national regulations. The cable connected to the main switch shall be tightened with a double wrench. Follow the uniform tightening torque value based on the quality of the washers, screws and nuts used.

The grounding conductor (yellow/green bicolor wire) must be connected to the PE grounding terminal. The cross-sectional area of the equipotential bonding conductor (grounding wire) shall comply with the provisions of Table 1 in Clause 5.2 of EN 60204-1 standard (as shown below). According to Clause 8.2.8 of this standard, the cross-sectional area of the equipotential bonding conductor (grounding wire) shall not be less than 10 mm² under any circumstances.

Table 2-1

Section of the copper phase conductors feeding the equipment S[mm ²]	Minimum cross-section of the external copper protection conductor Sp [mm ²]
S≤16	S
16<S≤35	16
S>35	S/2

3.2 Operating current and wire section

Please select the wire gauge (minimum value) for each unit based on Table 2-2 and Table 2-3 respectively. The rated current in Table 2-2 corresponds to the MCA (Minimum Circuit Ampacity) in Table 2-3.

The maximum allowable phase-to-phase voltage deviation is 2%, and the power line length is less than 20 m. MFA (Maximum Fuse Ampere) is used to select current circuit breakers.

The electric control box is equipped with an overcurrent protector (fuse). If additional overcurrent protectors are needed, please refer to the TOCA (Total Overcurrent Protection Value) parameter in Table 2-3 for selection.

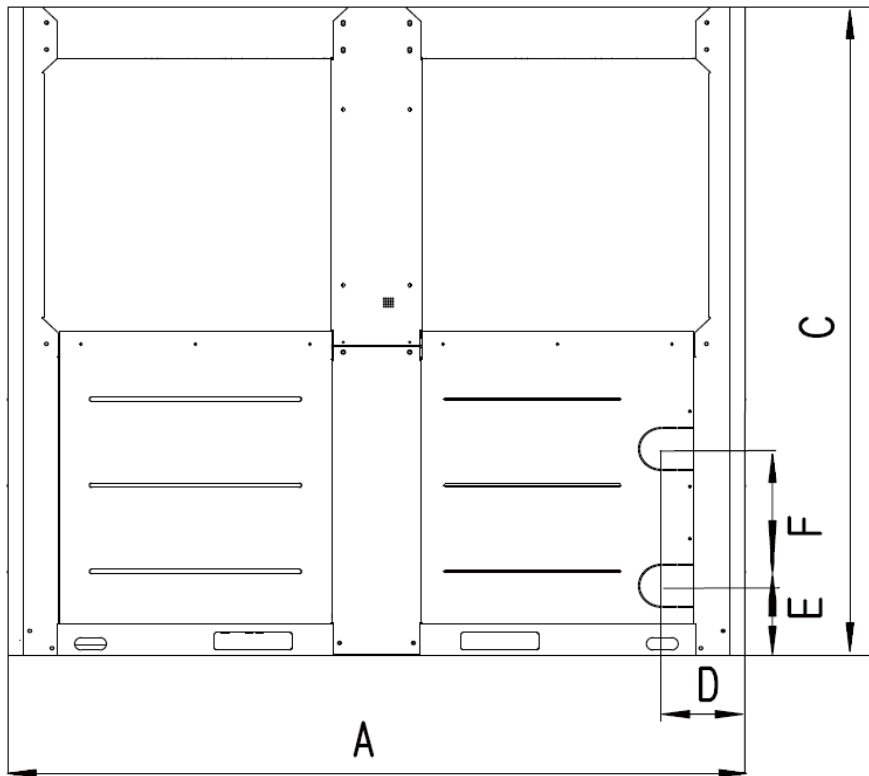
Table 2-2

System	MCA(A)	Nominal cross-sectional area (mm ²)	
		Flexible cord	Cable for fixed wiring
EDHX-500R-04T35	65	16 and 25	25 and 35
EDHX-600R-04T35	67	16 and 25	25 and 35
EDHX-700R-04T35	68	16 and 25	25 and 35

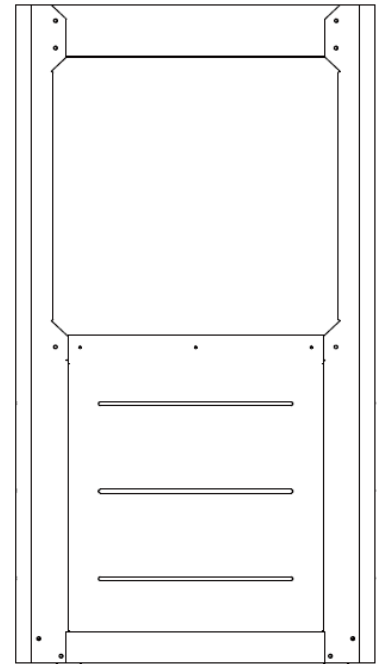
Table 2-3

System	Outdoor unit				Power current		
	Voltage(V)	Hz	Min.(V)	Max.(V)	MCA(A)	TOCA(A)	MFA(A)
EDHX-500R-04T35	380-415	50	342	456	65	75	85
EDHX-600R-04T35	380-415	50	342	456	67	75	85
EDHX-700R-04T35	380-415	50	342	456	68	75	85

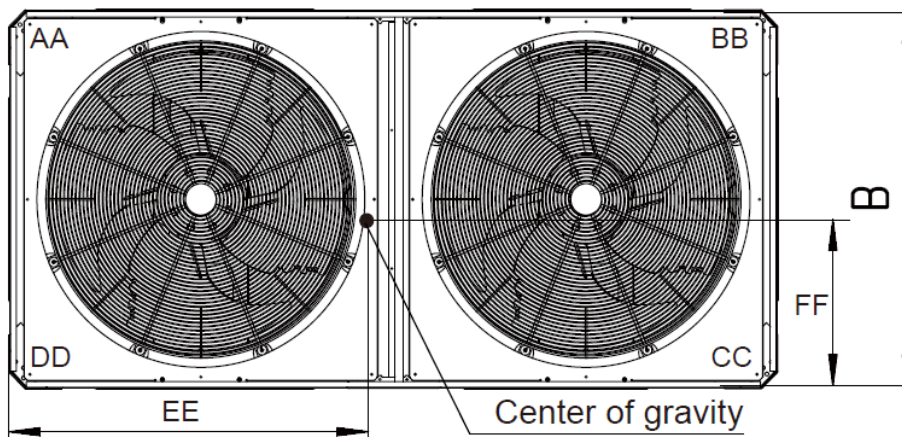
3.3 Dimensions and Center of Gravity



Front view



Side view



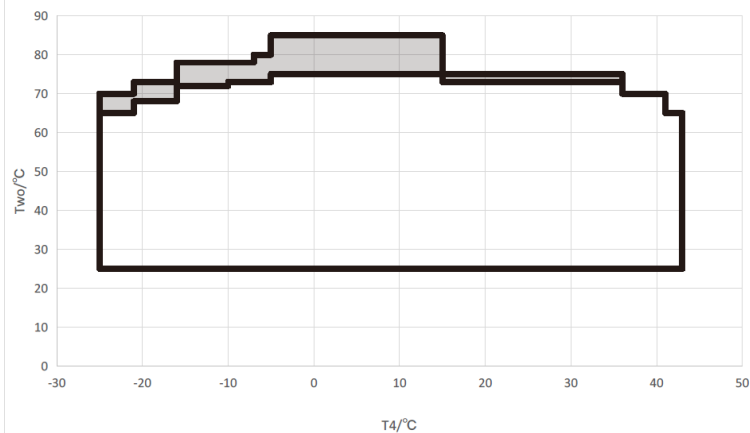
Top view

Letter	A	B	C	D	E	F
mm	2 000	960	1 880	226	200	397

Corner gravity (mm)	EE	1 018
	FF	454
Corner weights (kg)	AA	120
	BB	171
	CC	142
	DD	182

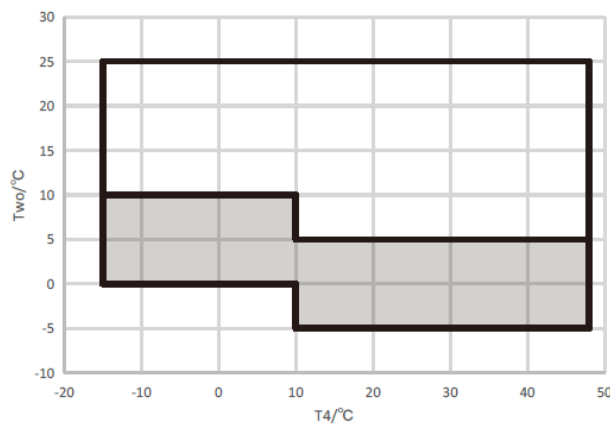
3.4 Operating limit

Heating operating limits



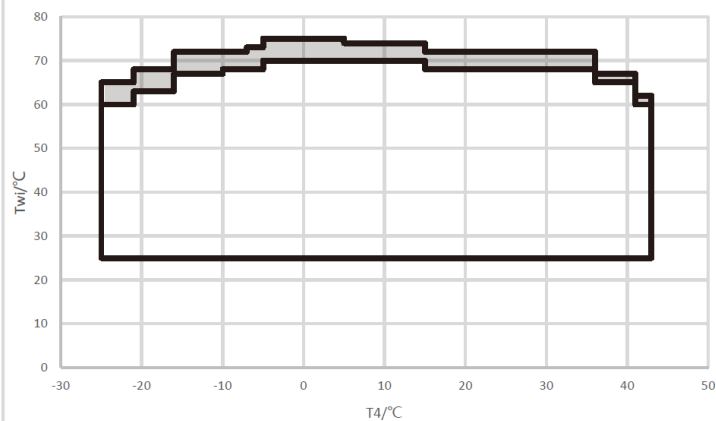
T_{2o} leaving water temperature (°C)
 T_4 outdoor ambient temperature (°C)

Cooling operating limits



T_{2o} leaving water temperature (°C)
 T_4 outdoor ambient temperature (°C)

Domestic hot water operating limits

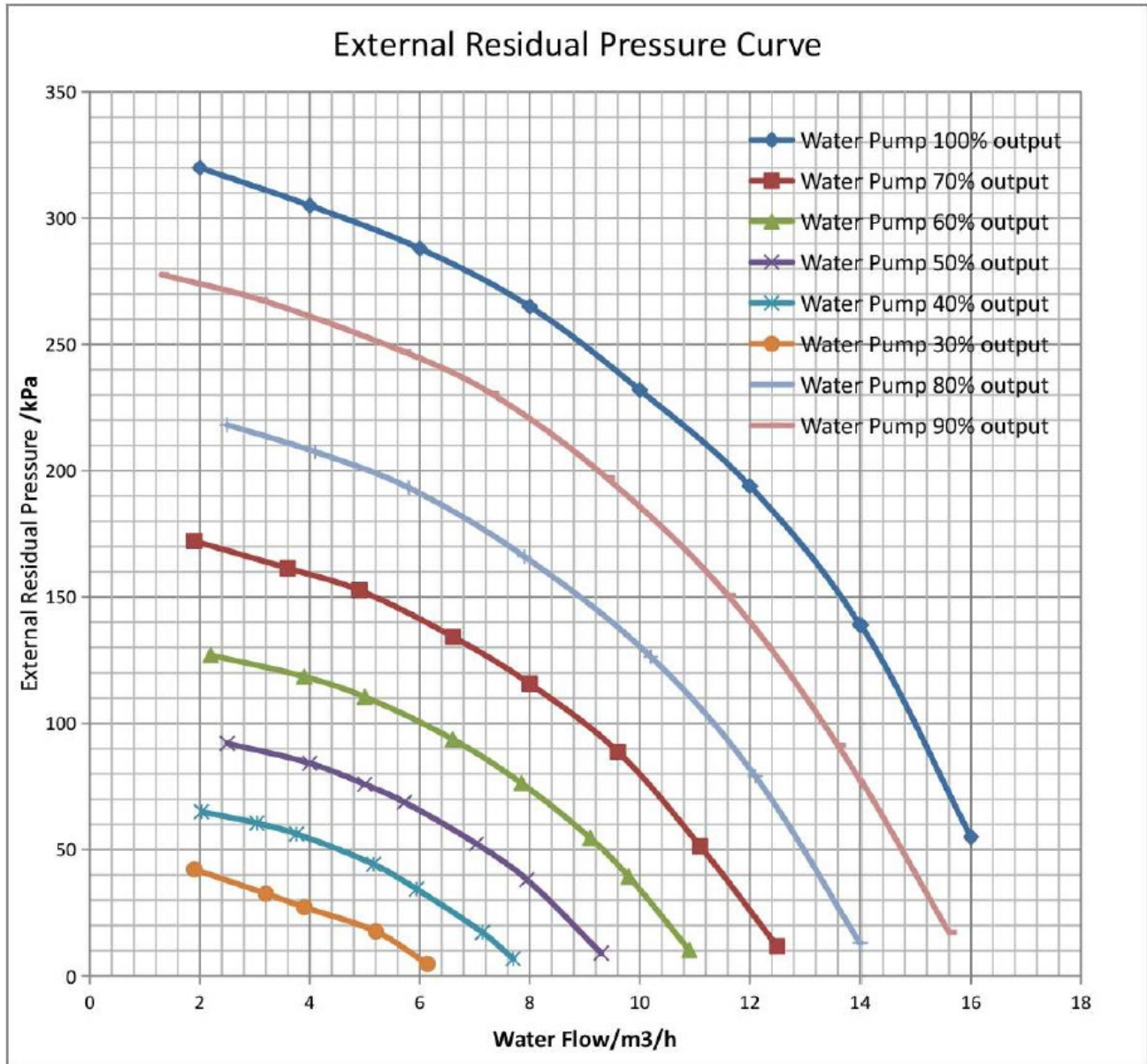


T_{2i} leaving water temperature (°C)
 T_4 outdoor ambient temperature (°C)

3.5 Hydronic Performance

You can find below the external pressure available according to the waterflow rate.

To avoid over consumption of the water pump, you can set minimum and maximum output of the water pump.



Water temperature (°C)	EDHX-500R-04T35	EDHX-600R-04T35	EDHX-700R-04T35
	Nominal water flow (m³/h)		
35 / 45	8.6	10.3	12
47 / 55	5.4	6.5	7.5
57 / 70	4.3	5.2	6
75 / 85	2.9	3.5	4

4 Capacity tables

4.1 EDHX-500R-04T35

4.1.1 100% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	34.60	20.34	1.70	40.12	20.48	1.96	49.12	17.75	2.77	53.31	18.32	2.91	51.49	17.33	2.97
30	35.09	21.94	1.60	40.76	22.09	1.85	49.73	21.00	2.37	53.10	19.84	2.68	51.81	18.80	2.76
35	35.87	23.02	1.56	41.14	22.67	1.81	50.99	23.57	2.16	53.24	21.13	2.52	50.00	18.87	2.65
40	36.65	25.00	1.47	43.43	26.31	1.65	52.26	26.97	1.94	53.49	22.62	2.36	51.97	21.74	2.39
45	37.89	28.00	1.35	44.90	30.21	1.49	52.84	29.80	1.77	53.88	23.97	2.25	50.00	20.83	2.40
50	38.40	30.71	1.25	46.37	33.02	1.40	53.56	32.45	1.65	53.36	24.94	2.14	53.86	25.13	2.14
55	38.43	31.98	1.20	46.07	33.64	1.37	53.51	34.34	1.56	53.90	27.11	1.99	50.00	22.22	2.25
60	38.41	33.48	1.15	46.12	34.40	1.34	55.45	36.55	1.52	56.53	31.40	1.80	56.26	31.38	1.79
65	29.38	25.59	1.15	34.19	26.47	1.29	44.51	31.01	1.44	50.75	32.13	1.58	50.35	31.32	1.61
70	24.30	23.01	1.06	29.96	24.41	1.23	37.61	27.58	1.36	46.36	30.97	1.50	48.79	31.81	1.53
75							35.42	31.41	1.13	40.56	30.91	1.31	41.50	31.24	1.33
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	50.27	16.43	3.06	50.07	14.14	3.54	50.04	13.61	3.68	49.99	12.87	3.88	50.31	9.90	5.08
30	50.96	17.73	2.87	51.29	15.79	3.25	51.17	15.09	3.39	50.98	14.73	3.46	50.00	10.16	4.92
35	51.59	19.15	2.69	51.17	17.47	2.93	50.00	14.29	3.50	50.16	14.80	3.39	50.00	10.64	4.70
40	50.95	20.99	2.43	50.85	18.87	2.70	50.00	15.41	3.25	50.67	16.74	3.03	51.16	11.49	4.45
45	51.16	22.36	2.29	51.64	20.55	2.51	50.00	16.67	3.00	51.32	17.95	2.86	50.00	13.16	3.80
50	54.20	25.23	2.15	54.35	23.50	2.31	50.00	19.03	2.63	52.89	19.23	2.75	50.00	14.12	3.54
55	52.60	26.40	1.99	53.31	24.70	2.16	50.00	20.00	2.50	52.76	21.14	2.50	50.00	15.15	3.30
60	56.08	31.47	1.78	55.06	29.28	1.88	54.37	26.90	2.02	53.32	23.91	2.23	50.00	16.18	3.09
65	50.09	30.36	1.65	53.03	31.26	1.70	52.82	27.65	1.91	52.49	25.48	2.06	50.00	17.86	2.80
70	50.42	31.71	1.59	51.97	31.50	1.65	52.15	29.14	1.79	52.43	27.31	1.92	51.31	23.50	2.18
75	42.13	31.13	1.35	44.87	31.72	1.41	47.20	32.50	1.45	50.69	33.60	1.51	50.65	28.68	1.77
80	41.47	33.43	1.24	44.53	32.17	1.38	45.43	32.25	1.41	46.78	32.37	1.45	48.38	29.46	1.64
85	38.50	37.55	1.03	41.26	36.26	1.14	42.84	36.09	1.19	45.21	35.85	1.26	45.48	33.97	1.34

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	50.80	9.91	5.12	51.06	8.18	6.24	53.54	7.70	6.95	54.61	7.44	7.34	53.12	6.32	8.41
30	51.14	10.23	5.00	51.37	9.18	5.59	53.23	8.56	6.22	54.78	8.36	6.56	54.22	7.12	7.61
35	50.85	10.42	4.88	51.65	9.62	5.37	53.54	9.21	5.82	54.66	8.76	6.24	53.96	7.73	6.98
40	51.22	10.98	4.67	51.30	10.29	4.98	53.90	10.02	5.38	55.14	9.56	5.77	53.81	8.37	6.43
45	53.76	13.60	3.95	54.32	12.32	4.41	54.91	11.10	4.95	56.00	10.82	5.18	53.62	9.13	5.88
50	51.87	14.30	3.63	53.25	12.76	4.17	55.61	12.14	4.58	56.29	11.64	4.83	52.97	9.56	5.54
55	52.05	15.32	3.40	52.27	13.90	3.76	53.77	13.04	4.12	53.47	12.23	4.37	52.09	10.29	5.06
60	51.32	15.53	3.30	51.74	14.19	3.65	52.14	13.43	3.88	52.10	12.60	4.13	51.08	11.80	4.33
65	51.21	16.92	3.03	51.28	15.39	3.33	50.83	14.55	3.49	51.00	13.19	3.87	50.76	12.55	4.04
70	49.63	19.25	2.58	52.28	19.35	2.70	52.10	16.05	3.25	52.33	14.51	3.61	50.56	13.11	3.86
75	50.58	23.50	2.15	50.25	21.93	2.29	51.90	18.79	2.76	51.62	16.36	3.16	50.13	14.63	3.43
80	50.77	26.20	1.94	50.78	23.93	2.12									
85	45.88	31.51	1.46	50.29	26.52	1.90									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	52.91	5.44	9.72	52.48	5.28	9.94	52.29	5.15	10.16						
30	53.14	6.11	8.70	53.28	6.02	8.86	52.55	5.70	9.22						
35	53.35	6.54	8.15	52.86	6.35	8.32	52.02	5.98	8.69						
40	53.60	7.22	7.43	52.47	6.83	7.68	51.94	6.50	7.99						
45	53.20	8.23	6.47	52.74	7.73	6.83	52.03	7.31	7.12						
50	50.96	8.36	6.09	51.05	8.31	6.15	51.53	8.14	6.33						
55	52.67	9.72	5.42	50.79	9.00	5.64	50.88	8.63	5.90						
60	50.53	10.29	4.91	50.47	9.83	5.13	49.98	9.42	5.31						
65	50.29	11.49	4.38	50.13	10.74	4.67									
70	49.85	12.24	4.07	49.72	11.48	4.33									
75	49.36	13.58	3.64												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

HC: Total heating capacity (kW)

PI: Power input (kW)

4.1.2 90% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-25			-10			-25		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	31.14	17.44	1.79	36.11	17.55	2.06	44.20	15.22	2.90	47.98	15.70	3.06	46.34	14.86	3.12
30	31.58	18.81	1.68	36.68	18.93	1.94	44.75	18.00	2.49	47.79	17.01	2.81	46.63	16.12	2.89
35	32.28	19.73	1.64	37.03	19.43	1.91	45.89	20.21	2.27	47.91	18.11	2.65	45.00	16.17	2.78
40	32.98	21.43	1.54	39.09	22.55	1.73	47.03	23.12	2.03	48.14	19.39	2.48	46.77	18.64	2.51
45	34.10	24.00	1.42	40.41	25.89	1.56	47.56	25.54	1.86	48.49	20.54	2.36	45.00	19.05	2.36
50	34.56	26.32	1.31	41.73	28.30	1.47	48.20	27.81	1.73	48.02	21.37	2.25	48.48	21.54	2.25
55	34.59	27.41	1.26	41.46	28.84	1.44	48.16	29.43	1.64	48.51	23.24	2.09	45.00	21.98	2.05
60	34.57	28.70	1.20	41.51	29.49	1.41	49.90	31.33	1.59	50.87	26.91	1.89	50.63	26.89	1.88
65	26.44	21.94	1.21	30.77	22.69	1.36	40.06	26.58	1.51	45.67	27.54	1.66	45.32	26.84	1.69
70	21.87	19.72	1.11	26.97	20.93	1.29	33.85	23.64	1.43	41.72	26.55	1.57	43.91	27.26	1.61
75							31.88	26.92	1.18	36.51	26.50	1.38	37.35	26.78	1.40
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	45.25	14.08	3.21	45.06	12.12	3.72	45.04	11.66	3.86	44.99	11.03	4.08	45.28	8.49	5.33
30	45.86	15.19	3.02	46.16	13.53	3.41	46.05	12.94	3.56	45.89	12.62	3.63	45.00	8.71	5.17
35	46.43	16.42	2.83	46.05	14.97	3.08	45.90	13.25	3.47	45.14	12.69	3.56	45.00	9.12	4.93
40	45.86	17.99	2.55	45.76	16.17	2.83	45.90	14.92	3.08	45.60	14.35	3.18	46.05	9.85	4.67
45	46.05	19.16	2.40	46.47	17.62	2.64	46.80	16.51	2.84	46.19	15.38	3.00	45.00	11.28	3.99
50	48.78	21.62	2.26	48.91	20.14	2.43	46.80	17.14	2.73	47.60	16.49	2.89	45.00	12.11	3.72
55	47.34	22.63	2.09	47.98	21.17	2.27	46.80	18.19	2.57	47.48	18.12	2.62	45.00	12.99	3.47
60	50.47	26.97	1.87	49.56	25.09	1.97	48.93	23.06	2.12	47.99	20.49	2.34	45.00	13.87	3.24
65	45.08	26.02	1.73	47.73	26.79	1.78	47.53	23.70	2.01	47.24	21.84	2.16	45.00	15.31	2.94
70	45.37	27.18	1.67	46.77	27.00	1.73	46.94	24.97	1.88	47.19	23.41	2.02	46.18	20.14	2.29
75	37.92	26.69	1.42	40.38	27.18	1.49	42.48	27.86	1.52	45.62	28.80	1.58	45.58	24.58	1.85
80	37.32	28.65	1.30	40.07	27.58	1.45	40.89	27.65	1.48	42.11	27.74	1.52	43.54	25.25	1.72
85	34.65	32.19	1.08	37.13	31.08	1.19	38.55	30.93	1.25	40.69	30.73	1.32	40.93	29.11	1.41

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	45.72	8.50	5.38	45.96	7.01	6.55	48.19	6.60	7.30	49.15	6.38	7.71	47.81	5.42	8.83
30	46.02	8.77	5.25	46.23	7.87	5.87	47.90	7.33	6.53	49.30	7.16	6.88	48.80	6.11	7.99
35	45.76	8.93	5.12	46.48	8.24	5.64	48.19	7.89	6.11	49.20	7.51	6.55	48.56	6.63	7.33
40	46.10	9.41	4.90	46.17	8.82	5.23	48.51	8.59	5.65	49.62	8.19	6.06	48.43	7.17	6.75
45	48.39	11.66	4.15	48.89	10.56	4.63	49.42	9.51	5.20	50.40	9.27	5.44	48.26	7.82	6.17
50	46.68	12.26	3.81	47.92	10.94	4.38	50.05	10.40	4.81	50.66	9.98	5.08	47.67	8.20	5.82
55	46.84	13.13	3.57	47.04	11.91	3.95	48.40	11.17	4.33	48.13	10.49	4.59	46.88	8.82	5.32
60	46.19	13.31	3.47	46.56	12.16	3.83	46.93	11.51	4.08	46.89	10.80	4.34	45.97	10.11	4.55
65	46.09	14.50	3.18	46.15	13.19	3.50	45.75	12.47	3.67	45.90	11.31	4.06	45.68	10.76	4.25
70	44.67	16.50	2.71	47.05	16.59	2.84	46.89	13.76	3.41	47.09	12.44	3.79	45.50	11.24	4.05
75	45.52	20.14	2.26	45.23	18.80	2.41	46.71	16.11	2.90	46.46	14.02	3.31	45.12	12.54	3.60
80	45.69	22.46	2.03	45.70	20.51	2.23									
85	41.29	27.01	1.53	45.26	22.73	1.99									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	47.62	4.66	10.21	47.23	4.53	10.44	47.06	4.41	10.67						
30	47.82	5.23	9.14	47.96	5.16	9.30	47.29	4.89	9.68						
35	48.01	5.61	8.56	47.57	5.45	8.74	46.82	5.13	9.13						
40	48.24	6.18	7.80	47.23	5.86	8.07	46.75	5.57	8.39						
45	47.88	7.05	6.79	47.47	6.62	7.17	46.83	6.27	7.47						
50	45.87	7.17	6.40	45.95	7.12	6.45	46.37	6.98	6.64						
55	47.40	8.33	5.69	45.71	7.72	5.92	45.79	7.40	6.19						
60	45.48	8.82	5.16	45.42	8.43	5.39	44.98	8.07	5.57						
65	45.26	9.85	4.60	45.12	9.20	4.90									
70	44.87	10.49	4.28	44.75	9.84	4.55									
75	44.42	11.64	3.82												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

HC: Total heating capacity (kW)

PI: Power input (kW)

4.1.3 70% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	24.22	12.38	1.96	28.08	12.47	2.25	34.38	10.81	3.18	37.31	11.15	3.35	36.04	10.55	3.42
30	24.56	13.36	1.84	28.53	13.44	2.12	34.81	12.78	2.72	37.17	12.08	3.08	36.27	11.45	3.17
35	25.11	14.01	1.79	28.80	13.80	2.09	35.70	14.35	2.49	37.27	12.86	2.90	35.00	11.48	3.05
40	25.65	15.22	1.69	30.40	16.02	1.90	36.58	16.42	2.23	37.45	13.77	2.72	36.38	13.24	2.75
45	26.53	17.05	1.56	31.43	18.39	1.71	36.99	18.14	2.04	37.72	14.59	2.59	35.00	13.53	2.59
50	26.88	18.69	1.44	32.46	20.10	1.62	37.49	19.75	1.90	37.35	15.18	2.46	37.70	15.30	2.46
55	26.90	19.46	1.38	32.25	20.48	1.57	37.46	20.90	1.79	37.73	16.50	2.29	35.00	15.61	2.24
60	26.89	20.38	1.32	32.29	20.94	1.54	38.81	22.25	1.74	39.57	19.11	2.07	39.38	19.10	2.06
65	20.57	15.58	1.32	23.94	16.11	1.49	31.15	18.88	1.65	35.52	19.56	1.82	35.25	19.06	1.85
70	17.01	14.01	1.21	20.97	14.86	1.41	26.32	16.79	1.57	32.45	18.85	1.72	34.16	19.36	1.76
75							24.79	19.12	1.30	28.39	18.82	1.51	29.05	19.01	1.53
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	35.19	10.00	3.52	35.05	8.61	4.07	35.03	8.28	4.23	35.00	7.83	4.47	35.22	6.03	5.84
30	35.67	10.79	3.31	35.90	9.61	3.74	35.82	9.19	3.90	35.69	8.96	3.98	35.00	6.19	5.66
35	36.11	11.66	3.10	35.82	10.63	3.37	35.70	9.41	3.80	35.11	9.01	3.90	35.00	6.48	5.41
40	35.67	12.77	2.79	35.59	11.48	3.10	35.70	10.60	3.37	35.47	10.19	3.48	35.81	7.00	5.12
45	35.81	13.61	2.63	36.14	12.51	2.89	36.40	11.72	3.10	35.93	10.92	3.29	35.00	8.01	4.37
50	37.94	15.35	2.47	38.04	14.31	2.66	36.40	12.17	2.99	37.02	11.71	3.16	35.00	8.60	4.07
55	36.82	16.07	2.29	37.32	15.04	2.48	36.40	12.92	2.82	36.93	12.87	2.87	35.00	9.22	3.79
60	39.26	19.16	2.05	38.54	17.82	2.16	38.06	16.38	2.32	37.32	14.55	2.57	35.00	9.85	3.55
65	35.06	18.48	1.90	37.12	19.03	1.95	36.97	16.83	2.20	36.74	15.51	2.37	35.00	10.87	3.22
70	35.29	19.30	1.83	36.38	19.17	1.90	36.51	17.74	2.06	36.70	16.62	2.21	35.92	14.30	2.51
75	29.49	18.95	1.56	31.41	19.31	1.63	33.04	19.78	1.67	35.48	20.45	1.73	35.45	17.45	2.03
80	29.03	20.35	1.43	31.17	19.58	1.59	31.80	19.63	1.62	32.75	19.70	1.66	33.86	17.93	1.89
85	26.95	22.86	1.18	28.88	22.07	1.31	29.99	21.97	1.37	31.65	21.82	1.45	31.83	20.68	1.54

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	35.56	6.03	5.89	35.74	4.98	7.18	37.48	4.69	8.00	38.23	4.53	8.44	37.18	3.85	9.67
30	35.80	6.22	5.75	35.96	5.59	6.43	37.26	5.21	7.15	38.35	5.09	7.54	37.96	4.34	8.75
35	35.59	6.34	5.61	36.15	5.85	6.18	37.48	5.60	6.69	38.27	5.34	7.17	37.77	4.71	8.02
40	35.85	6.68	5.36	35.91	6.26	5.73	37.73	6.10	6.19	38.60	5.82	6.63	37.67	5.09	7.39
45	37.64	8.28	4.55	38.02	7.50	5.07	38.44	6.75	5.69	39.20	6.58	5.95	37.53	5.55	6.76
50	36.31	8.71	4.17	37.27	7.77	4.80	38.92	7.39	5.27	39.40	7.09	5.56	37.08	5.82	6.37
55	36.43	9.33	3.91	36.59	8.46	4.33	37.64	7.94	4.74	37.43	7.45	5.03	36.47	6.26	5.82
60	35.92	9.45	3.80	36.22	8.64	4.19	36.50	8.17	4.47	36.47	7.67	4.75	35.76	7.18	4.98
65	35.85	10.30	3.48	35.90	9.37	3.83	35.58	8.85	4.02	35.70	8.03	4.45	35.53	7.64	4.65
70	34.74	11.71	2.97	36.59	11.78	3.11	36.47	9.77	3.73	36.63	8.83	4.15	35.39	7.98	4.43
75	35.41	14.30	2.48	35.18	13.35	2.63	36.33	11.44	3.18	36.14	9.96	3.63	35.09	8.91	3.94
80	35.54	15.95	2.23	35.55	14.57	2.44									
85	32.11	19.18	1.67	35.20	16.14	2.18									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	37.04	3.31	11.18	36.74	3.21	11.43	36.60	3.13	11.69						
30	37.20	3.72	10.01	37.30	3.66	10.19	36.78	3.47	10.60						
35	37.34	3.98	9.37	37.00	3.87	9.57	36.42	3.64	10.00						
40	37.52	4.39	8.54	36.73	4.16	8.83	36.36	3.96	9.19						
45	37.24	5.01	7.44	36.92	4.70	7.85	36.42	4.45	8.18						
50	35.67	5.09	7.01	35.74	5.06	7.07	36.07	4.96	7.28						
55	36.87	5.92	6.23	35.55	5.48	6.49	35.61	5.25	6.78						
60	35.37	6.26	5.65	35.33	5.98	5.90	34.98	5.73	6.10						
65	35.20	6.99	5.03	35.09	6.53	5.37									
70	34.90	7.45	4.68	34.80	6.99	4.98									
75	34.55	8.26	4.18												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

HC: Total heating capacity (kW)

PI: Power input (kW)

4.1.4 50% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	17.30	8.14	2.13	20.06	8.19	2.45	24.56	7.10	3.46	26.65	7.33	3.64	25.74	6.93	3.71
30	17.55	8.78	2.00	20.38	8.84	2.31	24.86	8.40	2.96	26.55	7.94	3.34	25.91	7.52	3.44
35	17.93	9.21	1.95	20.57	9.07	2.27	25.50	9.43	2.70	26.62	8.45	3.15	25.00	7.55	3.31
40	18.32	10.00	1.83	21.71	10.52	2.06	26.13	10.79	2.42	26.75	9.05	2.96	25.99	8.70	2.99
45	18.95	11.20	1.69	22.45	12.08	1.86	26.42	11.92	2.22	26.94	9.59	2.81	25.00	8.89	2.81
50	19.20	12.28	1.56	23.19	13.21	1.76	26.78	12.98	2.06	26.68	9.97	2.67	26.93	10.05	2.68
55	19.22	12.79	1.50	23.03	13.46	1.71	26.75	13.74	1.95	26.95	10.85	2.48	25.00	10.26	2.44
60	19.21	13.39	1.43	23.06	13.76	1.68	27.72	14.62	1.90	28.26	12.56	2.25	28.13	12.55	2.24
65	14.69	10.24	1.44	17.10	10.59	1.61	22.25	12.40	1.79	25.37	12.85	1.97	25.18	12.53	2.01
70	12.15	9.20	1.32	14.98	9.77	1.53	18.80	11.03	1.70	23.18	12.39	1.87	24.40	12.72	1.92
75							17.71	12.56	1.41	20.28	12.36	1.64	20.75	12.50	1.66
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	25.14	6.57	3.83	25.03	5.66	4.42	25.02	5.44	4.60	25.00	5.15	4.86	25.16	3.96	6.35
30	25.48	7.09	3.59	25.64	6.32	4.06	25.58	6.04	4.24	25.49	5.89	4.33	25.00	4.07	6.15
35	25.79	7.66	3.37	25.58	6.99	3.66	25.50	6.18	4.13	25.08	5.92	4.24	25.00	4.26	5.88
40	25.48	8.39	3.04	25.42	7.55	3.37	25.50	6.96	3.66	25.33	6.70	3.78	25.58	4.60	5.56
45	25.58	8.94	2.86	25.82	8.22	3.14	26.00	7.70	3.38	25.66	7.18	3.58	25.00	5.26	4.75
50	27.10	10.09	2.69	27.17	9.40	2.89	26.00	8.00	3.25	26.44	7.69	3.44	25.00	5.65	4.42
55	26.30	10.56	2.49	26.65	9.88	2.70	26.00	8.49	3.06	26.38	8.46	3.12	25.00	6.06	4.13
60	28.04	12.59	2.23	27.53	11.71	2.35	27.18	10.76	2.53	26.66	9.56	2.79	25.00	6.47	3.86
65	25.04	12.14	2.06	26.52	12.50	2.12	26.41	11.06	2.39	26.25	10.19	2.57	25.00	7.14	3.50
70	25.21	12.68	1.99	25.98	12.60	2.06	26.08	11.65	2.24	26.22	10.92	2.40	25.66	9.40	2.73
75	21.07	12.45	1.69	22.43	12.69	1.77	23.60	13.00	1.82	25.34	13.44	1.89	25.32	11.47	2.21
80	20.73	13.37	1.55	22.26	12.87	1.73	22.71	12.90	1.76	23.39	12.95	1.81	24.19	11.78	2.05
85	19.25	15.02	1.28	20.63	14.50	1.42	21.42	14.43	1.48	22.61	14.34	1.58	22.74	13.59	1.67

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	25.40	3.97	6.41	25.53	3.27	7.80	26.77	3.21	8.34	27.31	3.10	8.81	26.56	2.63	10.09
30	25.57	4.09	6.25	25.68	3.67	6.99	26.61	3.56	7.47	27.39	3.48	7.87	27.11	2.97	9.13
35	25.42	4.17	6.10	25.82	3.85	6.71	26.77	3.84	6.98	27.33	3.65	7.48	26.98	3.22	8.37
40	25.61	4.39	5.83	25.65	4.12	6.23	26.95	4.17	6.46	27.57	3.98	6.92	26.91	3.49	7.72
45	26.88	5.44	4.94	27.16	4.93	5.51	27.46	4.62	5.94	28.00	4.51	6.21	26.81	3.80	7.05
50	25.94	5.72	4.53	26.62	5.11	5.21	27.80	5.06	5.50	28.14	4.85	5.80	26.48	3.98	6.65
55	26.02	6.13	4.25	26.13	5.56	4.70	26.89	5.43	4.95	26.74	5.10	5.24	26.05	4.29	6.07
60	25.66	6.21	4.13	25.87	5.68	4.56	26.07	5.59	4.66	26.05	5.25	4.96	25.54	4.92	5.20
65	25.61	6.77	3.78	25.64	6.16	4.17	25.41	6.06	4.19	25.50	5.50	4.64	25.38	5.23	4.85
70	24.82	7.70	3.22	26.14	7.74	3.38	26.05	6.69	3.89	26.16	6.05	4.33	25.28	5.46	4.63
75	25.29	9.40	2.69	25.13	8.77	2.86	25.95	7.83	3.31	25.81	6.82	3.79	25.06	6.10	4.11
80	25.38	10.48	2.42	25.39	9.57	2.65									
85	22.94	12.61	1.82	25.14	10.61	2.37									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	26.45	2.27	11.67	26.24	2.20	11.93	26.15	2.14	12.19						
30	26.57	2.54	10.44	26.64	2.51	10.63	26.27	2.38	11.06						
35	26.67	2.73	9.78	26.43	2.65	9.98	26.01	2.49	10.43						
40	26.80	3.01	8.91	26.24	2.85	9.22	25.97	2.71	9.59						
45	26.60	3.43	7.76	26.37	3.22	8.19	26.02	3.05	8.54						
50	25.48	3.48	7.31	25.53	3.46	7.37	25.76	3.39	7.59						
55	26.33	4.05	6.50	25.39	3.75	6.77	25.44	3.60	7.07						
60	25.27	4.29	5.89	25.23	4.10	6.16	24.99	3.92	6.37						
65	25.14	4.79	5.25	25.06	4.47	5.60									
70	24.93	5.10	4.89	24.86	4.78	5.20									
75	24.68	5.66	4.36												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.1.5 30% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	10.38	4.07	2.55	12.04	4.10	2.94	14.73	3.55	4.15	15.99	3.66	4.36	15.45	3.47	4.46
30	10.53	4.39	2.40	12.23	4.42	2.77	14.92	4.20	3.55	15.93	3.97	4.01	15.54	3.76	4.13
35	10.76	4.60	2.34	12.34	4.53	2.72	15.30	4.71	3.24	15.97	4.23	3.78	15.00	3.77	3.98
40	10.99	5.00	2.20	13.03	5.26	2.48	15.68	5.39	2.91	16.05	4.52	3.55	15.59	4.35	3.59
45	11.37	5.60	2.03	13.47	6.04	2.23	15.85	5.96	2.66	16.16	4.79	3.37	15.00	4.44	3.38
50	11.52	6.14	1.88	13.91	6.60	2.11	16.07	6.49	2.48	16.01	4.99	3.21	16.16	5.03	3.21
55	11.53	6.40	1.80	13.82	6.73	2.05	16.05	6.87	2.34	16.17	5.42	2.98	15.00	5.13	2.93
60	11.52	6.70	1.72	13.84	6.88	2.01	16.63	7.31	2.28	16.96	6.28	2.70	16.88	6.28	2.69
65	8.81	5.12	1.72	10.26	5.29	1.94	13.35	6.20	2.15	15.22	6.43	2.37	15.11	6.26	2.41
70	7.29	4.60	1.58	8.99	4.88	1.84	11.28	5.52	2.05	13.91	6.19	2.25	14.64	6.36	2.30
75							10.63	6.28	1.69	12.17	6.18	1.97	12.45	6.25	1.99
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	15.08	3.29	4.59	15.02	2.83	5.31	15.01	2.72	5.52	15.00	2.57	5.83	15.09	1.98	7.62
30	15.29	3.55	4.31	15.39	3.16	4.87	15.35	3.02	5.08	15.30	2.95	5.19	15.00	2.03	7.38
35	15.48	3.83	4.04	15.35	3.49	4.39	15.30	3.09	4.95	15.05	2.96	5.08	15.00	2.13	7.05
40	15.29	4.20	3.64	15.25	3.77	4.04	15.30	3.48	4.40	15.20	3.35	4.54	15.35	2.30	6.68
45	15.35	4.47	3.43	15.49	4.11	3.77	15.60	3.85	4.05	15.40	3.59	4.29	15.00	2.63	5.70
50	16.26	5.05	3.22	16.30	4.70	3.47	15.60	4.00	3.90	15.87	3.85	4.12	15.00	2.82	5.31
55	15.78	5.28	2.99	15.99	4.94	3.24	15.60	4.24	3.67	15.83	4.23	3.74	15.00	3.03	4.95
60	16.82	6.29	2.67	16.52	5.86	2.82	16.31	5.38	3.03	16.00	4.78	3.35	15.00	3.24	4.63
65	15.03	6.07	2.48	15.91	6.70	2.38	15.84	5.53	2.87	15.75	5.46	2.88	15.00	3.97	3.78
70	15.12	6.34	2.39	15.59	6.75	2.31	15.65	5.83	2.69	15.73	5.85	2.69	15.39	5.22	2.95
75	12.64	6.23	2.03	13.46	6.80	1.98	14.16	6.50	2.18	15.21	7.20	2.11	15.19	6.37	2.38
80	12.44	6.69	1.86	13.36	6.89	1.94	13.63	6.45	2.11	14.04	6.94	2.02	14.51	6.55	2.22
85	11.55	7.51	1.54	12.38	7.77	1.59	12.85	7.22	1.78	13.56	7.68	1.77	13.64	7.55	1.81

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	15.24	1.98	7.69	15.32	1.75	8.74	16.06	1.71	9.39	16.38	1.65	9.91	15.94	1.46	10.93
30	15.34	2.05	7.50	15.41	1.97	7.83	15.97	1.90	8.40	16.43	1.86	8.85	16.27	1.64	9.89
35	15.25	2.08	7.32	15.49	2.06	7.52	16.06	2.05	7.85	16.40	1.95	8.42	16.19	1.78	9.07
40	15.37	2.20	7.00	15.39	2.21	6.98	16.17	2.23	7.27	16.54	2.12	7.79	16.14	1.93	8.36
45	16.13	2.72	5.93	16.30	2.64	6.18	16.47	2.47	6.68	16.80	2.40	6.99	16.09	2.11	7.64
50	15.56	2.86	5.44	15.97	2.74	5.84	16.68	2.70	6.18	16.89	2.59	6.53	15.89	2.21	7.20
55	15.61	3.06	5.10	15.68	2.98	5.27	16.13	2.90	5.57	16.04	2.72	5.90	15.63	2.37	6.58
60	15.40	3.11	4.96	15.52	3.04	5.10	15.64	3.10	5.05	15.63	2.91	5.37	15.32	2.72	5.63
65	15.36	3.90	3.94	15.38	3.55	4.33	15.25	3.36	4.54	15.30	3.04	5.03	15.23	2.90	5.26
70	14.89	4.44	3.35	15.68	4.47	3.51	15.63	3.70	4.22	15.70	3.35	4.69	15.17	3.03	5.01
75	15.17	5.42	2.80	15.08	5.06	2.98	15.57	4.34	3.59	15.49	3.78	4.10	15.04	3.38	4.45
80	15.23	6.05	2.52	15.23	5.52	2.76									
85	13.76	7.27	1.89	15.09	6.12	2.47									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	15.87	1.31	12.15	15.74	1.27	12.42	15.69	1.24	12.70						
30	15.94	1.47	10.88	15.99	1.44	11.07	15.76	1.37	11.52						
35	16.00	1.57	10.19	15.86	1.52	10.40	15.61	1.44	10.87						
40	16.08	1.73	9.29	15.74	1.64	9.60	15.58	1.56	9.99						
45	15.96	1.97	8.08	15.82	1.85	8.53	15.61	1.75	8.89						
50	15.29	2.01	7.62	15.32	1.99	7.68	15.46	1.88	8.22						
55	15.80	2.33	6.77	15.24	2.08	7.33	15.26	1.99	7.66						
60	15.16	2.37	6.38	15.14	2.27	6.67	14.99	2.17	6.90						
65	15.09	2.65	5.69	15.04	2.48	6.07									
70	14.96	2.83	5.29	14.92	2.65	5.63									
75	14.81	3.13	4.73												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.1.6 100% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	33.46	6.44	5.20	33.96	7.05	4.82	35.74	8.22	4.35	36.18	8.76	4.13	37.35	10.19	3.67
5	37.18	5.72	6.50	37.74	6.26	6.02	39.71	7.31	5.43	40.20	7.79	5.16	41.50	9.05	4.58
7	40.81	6.06	6.73	41.43	6.63	6.24	43.59	7.74	5.63	44.13	8.25	5.35	45.55	9.59	4.75
10	46.26	6.57	7.04	46.96	7.19	6.53	49.41	8.39	5.89	50.03	8.94	5.60	51.64	10.39	4.97
15	53.04	7.29	7.27	53.84	7.98	6.74	56.65	9.31	6.08	57.36	9.92	5.78	59.20	11.54	5.13
18	56.22	8.48	6.63	57.07	9.18	6.22	60.05	10.18	5.90	60.80	10.77	5.64	62.75	11.88	5.28
20	58.34	9.27	6.29	59.22	9.97	5.94	62.31	10.76	5.79	63.09	11.34	5.56	65.12	12.11	5.38
25	61.26	7.09	8.64	62.18	7.76	8.01	65.43	9.05	7.23	66.25	9.65	6.87	68.38	11.22	6.10

LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	37.73	11.68	3.23	38.84	12.36	3.14	38.11	12.70	3.00	37.45	13.00	2.88	36.85	13.20	2.79
0	44.39	12.37	3.59	45.70	13.09	3.49	44.83	13.45	3.33	44.06	13.76	3.20	43.35	13.98	3.10
5	48.52	10.75	4.51	58.04	17.54	3.31	55.27	17.21	3.21	52.64	16.58	3.18	50.14	15.97	3.14
7	53.26	11.39	4.68	60.98	16.87	3.62	57.44	16.75	3.43	55.08	16.25	3.39	52.98	15.91	3.33
10	60.37	12.34	4.89	65.38	15.85	4.12	60.70	16.06	3.78	58.75	15.77	3.73	57.24	15.83	3.62
15	63.20	13.70	4.61	66.78	14.63	4.56	66.12	15.21	4.35	64.85	15.17	4.27	64.35	15.72	4.09
18	66.99	13.38	5.01	71.15	14.48	4.91	70.61	14.95	4.72	69.61	15.05	4.62	65.11	13.89	4.69
20	69.52	13.16	5.28	74.06	14.38	5.15	73.60	14.78	4.98	72.79	14.98	4.86	70.62	14.66	4.82
25	72.99	13.32	5.48	81.34	14.90	5.46	81.07	14.99	5.41	80.72	15.12	5.34	76.89	14.64	5.25

LWT	DB											
	35			40			45			48		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	35.78	12.97	2.76	34.64	14.59	2.37	31.66	14.35	2.21	26.95	17.46	1.54
0	42.09	13.73	3.07	40.67	14.39	2.83	34.40	12.92	2.66	28.51	16.78	1.70
5	49.83	15.69	3.18	42.25	13.81	3.06	38.60	13.71	2.81	31.54	15.51	2.03
7	50.00	15.15	3.30	43.28	12.68	3.41	39.20	12.70	3.09	33.27	14.50	2.29
10	50.51	15.73	3.21	45.81	12.58	3.64	41.11	12.27	3.35	35.86	14.35	2.50
15	50.68	14.10	3.59	47.57	12.49	3.81	43.61	12.42	3.51	40.19	14.00	2.87
18	50.00	10.42	4.80	48.04	12.02	4.00	44.64	12.40	3.60	41.09	13.43	3.06
20	55.09	11.42	4.82	52.37	12.17	4.30	48.66	12.39	3.93	43.36	12.76	3.40
25	66.98	13.20	5.08	62.12	12.72	4.88	56.74	12.36	4.59	46.53	12.28	3.79

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.1.7 90% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	25.09	5.52	4.55	25.47	6.04	4.22	26.80	7.05	3.80	27.14	7.51	3.61	28.01	8.73	3.21
5	27.88	4.90	5.69	28.30	5.37	5.27	29.78	6.26	4.75	30.15	6.68	4.52	31.12	7.76	4.01
7	30.61	5.19	5.89	31.07	5.69	5.46	32.69	6.63	4.93	33.10	7.07	4.68	34.17	8.22	4.16
10	34.70	5.63	6.16	35.22	6.16	5.71	37.06	7.19	5.15	37.52	7.66	4.90	38.73	8.91	4.35
15	41.51	6.25	6.64	42.13	6.84	6.16	44.33	7.98	5.55	44.89	8.51	5.28	46.33	9.89	4.69
18	44.00	6.25	7.04	44.66	6.84	6.53	46.99	7.98	5.89	47.58	8.51	5.59	49.11	9.89	4.97
20	45.66	6.25	7.31	46.35	6.84	6.77	48.77	7.98	6.11	49.38	8.51	5.80	50.97	9.89	5.15
25	47.94	6.08	7.89	48.67	6.65	7.32	51.21	7.76	6.60	51.84	8.27	6.27	53.51	9.61	5.57
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	28.30	10.01	2.83	29.13	10.60	2.75	28.58	10.89	2.62	28.09	11.14	2.52	27.64	11.32	2.44
0	33.29	10.60	3.14	34.27	11.22	3.05	33.62	11.53	2.92	33.05	11.80	2.80	32.52	11.98	2.71
5	36.39	9.22	3.95	49.75	15.04	3.31	47.38	14.75	3.21	45.12	14.21	3.18	42.97	13.69	3.14
7	39.95	9.76	4.09	51.25	14.46	3.54	49.24	14.36	3.43	47.21	13.93	3.39	45.41	13.64	3.33
10	45.28	10.58	4.28	53.49	13.59	3.94	52.03	13.77	3.78	50.35	13.52	3.73	49.07	13.57	3.62
15	54.17	11.74	4.61	57.24	12.54	4.56	56.68	13.04	4.35	55.58	13.00	4.27	55.16	13.48	4.09
18	57.42	11.74	4.89	60.98	12.62	4.83	60.52	12.97	4.66	59.67	12.99	4.59	55.99	11.97	4.68
20	59.59	11.74	5.07	63.48	12.67	5.01	63.08	12.93	4.88	62.39	12.98	4.81	60.52	12.70	4.77
25	62.57	11.42	5.48	69.72	12.77	5.46	69.49	12.85	5.41	69.19	12.96	5.34	65.91	12.55	5.25
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	26.83	11.11	2.41	25.98	12.51	2.08	23.74	12.30	1.93	20.21	14.97	1.35			
0	31.57	11.77	2.68	30.50	12.34	2.47	25.80	11.07	2.33	21.38	14.39	1.49			
5	41.72	13.44	3.10	36.21	11.83	3.06	33.09	11.76	2.81	27.03	13.29	2.03			
7	44.30	13.60	3.26	37.10	10.87	3.41	33.60	10.88	3.09	28.52	12.43	2.29			
10	48.16	13.83	3.48	39.27	10.78	3.64	35.23	10.52	3.35	30.74	12.30	2.50			
15	54.60	14.13	3.86	40.77	10.70	3.81	37.38	10.65	3.51	34.45	12.00	2.87			
18	57.91	13.61	4.26	41.18	10.30	4.00	38.26	10.63	3.60	35.22	11.51	3.06			
20	60.11	13.26	4.53	44.89	10.43	4.30	41.70	10.62	3.93	37.17	10.94	3.40			
25	60.62	11.65	5.20	53.25	10.90	4.88	48.63	10.60	4.59	39.88	10.53	3.79			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.1.8 70% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	19.52	3.92	4.98	19.81	4.29	4.62	20.85	5.00	4.17	21.11	5.33	3.96	21.79	6.20	3.51
5	21.69	3.48	6.23	22.01	3.81	5.77	23.16	4.45	5.21	23.45	4.74	4.95	24.21	5.51	4.39
7	23.81	3.69	6.45	24.17	4.04	5.98	25.43	4.71	5.40	25.74	5.02	5.13	26.57	5.84	4.55
10	26.99	4.00	6.75	27.39	4.38	6.26	28.82	5.11	5.65	29.18	5.44	5.36	30.12	6.33	4.76
15	32.28	4.44	7.27	32.77	4.86	6.74	34.48	5.67	6.08	34.91	6.04	5.78	36.04	7.02	5.13
18	34.22	4.44	7.71	34.74	4.86	7.15	36.55	5.67	6.45	37.01	6.04	6.13	38.20	7.02	5.44
20	35.51	4.44	8.00	36.05	4.86	7.42	37.93	5.67	6.69	38.40	6.04	6.36	39.64	7.02	5.64
25	37.29	4.32	8.64	37.85	4.72	8.01	39.83	5.51	7.23	40.32	5.87	6.87	41.62	6.83	6.10

LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	22.01	7.11	3.09	22.66	7.52	3.01	22.23	7.73	2.87	21.85	7.91	2.76	21.50	8.04	2.68
0	25.89	7.53	3.44	26.66	7.97	3.35	26.15	8.19	3.19	25.70	8.38	3.07	25.29	8.51	2.97
5	28.30	6.54	4.32	38.69	10.68	3.62	36.85	10.48	3.52	35.10	10.09	3.48	33.42	9.72	3.44
7	31.07	6.93	4.48	39.86	10.27	3.88	38.30	10.20	3.76	36.72	9.89	3.71	35.32	9.69	3.65
10	35.22	7.51	4.69	41.61	9.65	4.31	40.47	9.78	4.14	39.16	9.60	4.08	38.16	9.63	3.96
15	42.13	8.34	5.05	44.52	8.91	5.00	44.08	9.26	4.76	43.23	9.23	4.68	42.90	9.57	4.48
18	44.66	8.34	5.36	47.43	8.96	5.29	47.07	9.21	5.11	46.41	9.23	5.03	45.42	9.35	4.86
20	46.35	8.34	5.56	49.37	9.00	5.49	49.06	9.18	5.34	48.52	9.22	5.26	47.08	9.20	5.12
25	48.66	8.11	6.00	54.22	9.07	5.98	54.05	9.12	5.92	53.82	9.21	5.85	51.26	8.91	5.75

LWT	DB											
	35			40			45			48		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	20.87	7.89	2.64	20.21	8.88	2.27	18.46	8.74	2.11	15.72	10.63	1.48
0	24.55	8.36	2.94	23.72	8.76	2.71	20.07	7.86	2.55	16.63	10.22	1.63
5	32.45	9.55	3.40	28.17	8.40	3.35	25.73	8.35	3.08	21.03	9.44	2.23
7	34.45	9.66	3.57	28.85	7.72	3.74	26.13	7.73	3.38	22.18	8.83	2.51
10	37.46	9.82	3.82	30.54	7.66	3.99	27.40	7.47	3.67	23.91	8.73	2.74
15	42.47	10.04	4.23	31.71	7.60	4.17	29.07	7.56	3.84	26.79	8.52	3.14
18	45.04	9.66	4.66	32.03	7.36	4.35	29.76	7.60	3.92	27.39	8.23	3.33
20	46.75	9.41	4.97	34.91	7.46	4.68	32.44	7.59	4.27	28.91	7.82	3.70
25	47.15	8.27	5.70	41.41	7.80	5.31	37.83	7.58	4.99	31.02	7.53	4.12

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.1.9 50% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	13.94	2.57	5.41	14.15	2.82	5.02	14.89	3.29	4.53	15.08	3.50	4.30	15.56	4.07	3.82
5	15.49	2.29	6.77	15.72	2.51	6.28	16.55	2.92	5.66	16.75	3.12	5.38	17.29	3.62	4.77
7	17.00	2.42	7.01	17.26	2.65	6.50	18.16	3.10	5.87	18.39	3.30	5.57	18.98	3.84	4.95
10	19.28	2.63	7.34	19.57	2.88	6.80	20.59	3.35	6.14	20.84	3.58	5.83	21.52	4.16	5.18
15	23.06	2.92	7.91	23.41	3.19	7.33	24.63	3.72	6.61	24.94	3.97	6.28	25.74	4.61	5.58
18	24.44	2.92	8.38	24.81	3.19	7.77	26.11	3.72	7.01	26.43	3.97	6.66	27.28	4.61	5.91
20	25.37	2.92	8.70	25.75	3.19	8.06	27.09	3.72	7.27	27.43	3.97	6.91	28.31	4.61	6.14
25	26.63	2.84	9.39	27.04	3.10	8.71	28.45	3.62	7.86	28.80	3.86	7.46	29.73	4.49	6.63

LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	15.72	4.67	3.36	16.18	4.94	3.27	15.88	5.08	3.12	15.61	5.20	3.00	15.35	5.28	2.91
0	18.50	4.95	3.74	19.04	5.24	3.64	18.68	5.38	3.47	18.36	5.51	3.33	18.06	5.59	3.23
5	20.22	4.30	4.70	27.64	7.02	3.94	26.32	6.88	3.82	25.07	6.63	3.78	23.87	6.39	3.74
7	22.19	4.55	4.87	28.47	6.75	4.22	27.35	6.70	4.08	26.23	6.50	4.03	25.23	6.37	3.96
10	25.16	4.94	5.10	29.72	6.34	4.69	28.90	6.42	4.50	27.97	6.31	4.43	27.26	6.33	4.31
15	30.09	5.48	5.49	31.80	5.85	5.43	31.49	6.08	5.17	30.88	6.07	5.09	30.64	6.29	4.87
18	31.90	5.48	5.82	33.88	5.89	5.75	33.62	6.05	5.55	33.15	6.06	5.47	32.44	6.14	5.28
20	33.10	5.48	6.04	35.27	5.91	5.97	35.05	6.03	5.81	34.66	6.06	5.72	33.63	6.05	5.56
25	34.76	5.33	6.52	38.73	5.96	6.50	38.60	5.99	6.44	38.44	6.05	6.35	36.62	5.86	6.25

LWT	DB											
	35			40			45			48		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	14.91	5.19	2.87	14.43	5.84	2.47	13.19	5.74	2.30	11.23	6.99	1.61
0	17.54	5.49	3.19	16.95	5.76	2.94	14.33	5.17	2.77	11.88	6.71	1.77
5	23.18	6.27	3.69	20.12	5.52	3.64	18.38	5.49	3.35	15.02	6.20	2.42
7	24.61	6.35	3.88	20.61	5.07	4.06	18.67	5.08	3.68	15.84	5.80	2.73
10	26.76	6.45	4.15	21.81	5.03	4.33	19.57	4.91	3.99	17.08	5.74	2.98
15	30.34	6.59	4.60	22.65	4.99	4.54	20.77	4.97	4.18	19.14	5.60	3.42
18	32.17	6.35	5.07	22.88	4.81	4.76	21.26	4.96	4.28	19.57	5.37	3.64
20	33.40	6.19	5.40	24.94	4.87	5.12	23.17	4.96	4.68	20.65	5.11	4.04
25	33.68	5.44	6.20	29.58	5.09	5.81	27.02	4.95	5.46	22.16	4.91	4.51

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.1.10 30% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	8.36	1.14	7.36	8.49	1.24	6.83	8.93	1.45	6.16	9.05	1.55	5.85	9.34	1.80	5.19
5	9.29	1.01	9.20	9.43	1.11	8.53	9.93	1.29	7.70	10.05	1.37	7.31	10.37	1.60	6.49
7	10.20	1.07	9.54	10.36	1.17	8.85	10.90	1.37	7.98	11.03	1.46	7.58	11.39	1.69	6.73
10	11.57	1.16	9.98	11.74	1.27	9.25	12.35	1.48	8.35	12.51	1.58	7.93	12.91	1.83	7.04
15	13.84	1.29	10.75	14.04	1.41	9.97	14.78	1.64	8.99	14.96	1.75	8.54	15.44	2.04	7.59
18	14.67	1.29	11.40	14.89	1.41	10.57	15.66	1.64	9.53	15.86	1.75	9.06	16.37	2.04	8.04
20	15.22	1.29	11.83	15.45	1.41	10.97	16.26	1.64	9.89	16.46	1.75	9.40	16.99	2.04	8.34
25	15.98	1.25	12.77	16.22	1.37	11.84	17.07	1.60	10.68	17.28	1.70	10.15	17.84	1.98	9.01
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	9.43	2.06	4.57	9.71	2.18	4.45	9.53	2.24	4.25	9.36	2.29	4.08	9.21	2.33	3.95
0	11.10	2.18	5.08	11.42	2.31	4.95	11.21	2.37	4.72	11.02	2.43	4.54	10.84	2.47	4.39
5	12.13	1.90	6.39	16.58	3.10	5.36	15.79	3.04	5.20	15.04	2.93	5.14	14.32	2.82	5.08
7	13.32	2.01	6.63	17.08	2.98	5.74	16.41	2.96	5.55	15.74	2.87	5.49	15.14	2.81	5.39
10	15.09	2.18	6.93	17.83	2.80	6.37	17.34	2.83	6.12	16.78	2.78	6.03	16.36	2.79	5.86
15	18.06	2.42	7.47	19.08	2.58	7.39	18.89	2.68	7.04	18.53	2.68	6.92	18.39	2.77	6.63
18	19.14	2.42	7.92	20.33	2.60	7.83	20.17	2.67	7.55	19.89	2.67	7.44	19.46	2.71	7.18
20	19.86	2.42	8.21	21.16	2.61	8.11	21.03	2.66	7.90	20.80	2.67	7.78	20.18	2.67	7.57
25	20.86	2.35	8.87	23.24	2.63	8.84	23.16	2.64	8.76	23.06	2.67	8.64	21.97	2.58	8.50
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	8.94	2.29	3.91	8.66	2.58	3.36	7.91	2.53	3.12	6.74	3.08	2.19			
0	10.52	2.42	4.34	10.17	2.54	4.00	8.60	2.28	3.77	7.13	2.96	2.41			
5	13.91	2.77	5.02	12.07	2.44	4.95	11.03	2.42	4.56	9.01	2.74	3.29			
7	14.77	2.80	5.27	12.37	2.24	5.53	11.20	2.24	5.00	9.51	2.56	3.71			
10	16.05	2.85	5.64	13.09	2.22	5.89	11.74	2.17	5.42	10.25	2.53	4.05			
15	18.20	2.91	6.26	13.59	2.20	6.17	12.46	2.19	5.68	11.48	2.47	4.65			
18	19.30	2.80	6.89	13.73	2.12	6.47	12.75	2.19	5.83	11.74	2.37	4.96			
20	20.04	2.73	7.34	14.96	2.15	6.97	13.90	2.19	6.36	12.39	2.25	5.50			
25	20.21	2.40	8.43	17.75	2.25	7.91	16.21	2.18	7.43	13.29	2.17	6.13			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.2 EDHX-600R-04T35

4.2.1 100% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	35.67	21.29	1.68	41.36	21.43	1.93	50.64	18.58	2.73	55.53	19.46	2.85	54.30	18.72	2.90
30	36.18	22.96	1.58	42.02	23.11	1.82	51.26	21.97	2.33	57.71	22.43	2.57	55.61	20.91	2.66
35	36.98	24.09	1.54	42.42	23.73	1.79	52.57	24.67	2.13	59.15	24.65	2.40	60.00	26.09	2.30
40	37.78	26.16	1.44	44.77	27.53	1.63	53.88	28.22	1.91	59.44	26.39	2.25	59.74	26.77	2.23
45	39.07	29.30	1.33	46.29	31.61	1.46	54.48	31.18	1.75	59.87	27.96	2.14	60.00	29.27	2.05
50	39.59	32.13	1.23	47.80	34.55	1.38	55.21	33.95	1.63	63.21	31.61	2.00	62.24	30.95	2.01
55	39.62	33.46	1.18	47.49	35.21	1.35	55.16	35.93	1.54	63.52	33.87	1.88	60.00	33.33	1.80
60	39.60	35.04	1.13	47.55	36.00	1.32	57.16	38.24	1.49	62.81	36.63	1.71	62.51	36.61	1.71
65	30.29	26.78	1.13	35.25	27.70	1.27	45.88	32.45	1.41	53.99	35.20	1.53	54.99	35.43	1.55
70	25.05	24.08	1.04	30.89	25.55	1.21	38.77	28.86	1.34	47.79	32.41	1.47	52.73	35.23	1.50
75							36.51	32.87	1.11	41.82	32.35	1.29	42.79	32.69	1.31
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	53.48	18.00	2.97	56.90	17.04	3.34	56.86	16.39	3.47	56.81	15.50	3.66	59.48	13.22	4.50
30	54.21	19.42	2.79	56.98	19.30	2.95	57.37	18.64	3.08	57.94	17.74	3.27	59.89	13.58	4.41
35	59.32	25.14	2.36	59.15	21.64	2.73	60.00	19.05	3.15	59.71	19.03	3.14	60.00	13.95	4.30
40	59.62	25.68	2.32	59.78	23.53	2.54	58.80	22.22	2.65	60.32	21.53	2.80	60.00	15.50	3.87
45	59.14	26.93	2.20	59.68	25.76	2.32	60.00	22.64	2.65	61.10	23.07	2.65	60.00	17.05	3.52
50	61.59	30.39	2.03	61.76	28.31	2.18	62.24	26.74	2.33	62.96	24.73	2.55	60.00	18.07	3.32
55	61.17	32.85	1.86	61.99	30.74	2.02	60.00	26.09	2.30	62.81	27.18	2.31	60.00	19.61	3.06
60	62.31	36.72	1.70	62.57	35.26	1.77	62.93	33.29	1.89	63.48	30.74	2.07	60.00	20.34	2.95
65	55.66	35.22	1.58	60.26	36.75	1.64	61.15	34.59	1.77	62.49	31.88	1.96	60.00	22.22	2.70
70	56.02	36.61	1.53	59.05	37.14	1.59	60.40	36.39	1.66	62.42	34.49	1.81	60.66	29.85	2.03
75	43.43	32.58	1.33	46.26	33.19	1.39	49.32	34.68	1.42	53.93	36.82	1.46	54.84	32.28	1.70
80	42.75	34.98	1.22	45.90	33.67	1.36	46.83	33.75	1.39	48.23	33.87	1.42	49.87	30.82	1.62
85	39.69	39.30	1.01	42.53	37.94	1.12	44.16	37.76	1.17	46.61	37.52	1.24	46.88	35.54	1.32

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	63.50	13.63	4.66	65.47	11.65	5.62	68.65	10.96	6.26	70.01	10.59	6.61	68.10	8.99	7.57
30	65.56	14.55	4.51	66.71	13.30	5.02	69.12	12.39	5.58	71.14	12.10	5.88	70.42	10.32	6.83
35	66.91	15.36	4.36	67.96	14.17	4.79	70.45	13.57	5.19	71.93	12.92	5.57	71.00	11.40	6.23
40	67.32	16.94	3.97	67.50	15.17	4.45	70.93	14.76	4.81	72.55	14.09	5.15	70.81	12.33	5.74
45	67.21	18.70	3.59	67.90	16.93	4.01	72.25	16.35	4.42	73.68	15.94	4.62	70.55	13.45	5.25
50	68.25	20.02	3.41	70.07	18.81	3.72	73.17	17.89	4.09	74.06	17.16	4.32	69.69	14.09	4.94
55	63.47	20.37	3.12	63.74	18.47	3.45	65.58	17.33	3.78	65.21	16.26	4.01	63.53	13.68	4.64
60	62.59	20.64	3.03	61.59	18.25	3.38	62.08	17.26	3.60	62.02	16.21	3.83	58.05	14.21	4.09
65	62.45	22.49	2.78	61.05	19.79	3.09	60.51	18.70	3.24	60.72	16.96	3.58	57.76	14.95	3.86
70	60.53	25.58	2.37	62.23	24.88	2.50	62.03	20.64	3.01	62.29	18.66	3.34	57.56	16.31	3.53
75	56.20	27.41	2.05	57.10	26.42	2.16	58.98	22.63	2.61	60.03	20.35	2.95	57.13	17.43	3.28
80	52.34	27.42	1.91	55.20	27.05	2.04									
85	47.29	32.98	1.43	51.84	27.75	1.87									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	67.83	7.74	8.76	67.29	7.51	8.95	67.04	7.32	9.15						
30	69.01	8.84	7.80	69.20	8.71	7.94	68.24	8.26	8.27						
35	70.19	9.64	7.28	69.55	9.36	7.43	68.45	8.82	7.76						
40	70.52	10.63	6.63	69.05	10.07	6.86	68.35	9.58	7.14						
45	70.01	12.13	5.77	69.40	11.39	6.10	68.46	10.78	6.35						
50	67.06	12.32	5.44	65.05	11.61	5.60	65.53	11.34	5.78						
55	60.85	12.51	4.86	60.79	12.20	4.98	60.88	11.63	5.23						
60	57.93	13.28	4.36	56.47	12.23	4.62	56.98	12.02	4.74						
65	56.29	13.89	4.05	56.13	13.14	4.27									
70	55.85	15.04	3.71	55.72	14.20	3.92									
75	55.36	15.98	3.47												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.2.2 90% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	32.10	18.25	1.76	37.23	18.37	2.03	45.57	15.92	2.86	49.97	16.68	3.00	48.87	16.05	3.05
30	32.56	19.68	1.65	37.82	19.81	1.91	46.14	18.83	2.45	51.94	19.23	2.70	50.05	17.92	2.79
35	33.28	20.65	1.61	38.17	20.34	1.88	47.31	21.14	2.24	53.24	21.13	2.52	51.30	19.54	2.63
40	34.00	22.42	1.52	40.29	23.60	1.71	48.49	24.19	2.00	53.49	22.62	2.36	51.97	21.74	2.39
45	35.16	25.12	1.40	41.66	27.09	1.54	49.03	26.72	1.83	53.88	23.97	2.25	52.20	23.67	2.21
50	35.63	27.54	1.29	43.02	29.61	1.45	49.69	29.10	1.71	56.89	27.09	2.10	56.01	26.53	2.11
55	35.66	28.68	1.24	42.74	30.18	1.42	49.65	30.80	1.61	57.17	29.03	1.97	54.00	28.10	1.92
60	35.64	30.03	1.19	42.79	30.86	1.39	51.45	32.78	1.57	56.53	31.40	1.80	56.26	31.38	1.79
65	27.26	22.95	1.19	31.73	23.74	1.34	41.30	27.81	1.48	48.59	30.17	1.61	49.49	30.37	1.63
70	22.54	20.64	1.09	27.80	21.90	1.27	34.89	24.74	1.41	43.02	27.78	1.55	47.46	30.20	1.57
75							32.86	28.17	1.17	37.63	27.72	1.36	38.51	28.02	1.37
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	48.13	15.43	3.12	51.21	14.60	3.51	51.18	14.05	3.64	51.13	13.29	3.85	53.54	11.33	4.73
30	48.79	16.65	2.93	51.29	16.54	3.10	51.63	15.97	3.23	52.14	15.21	3.43	53.90	11.64	4.63
35	51.59	19.15	2.69	52.33	18.04	2.90	53.10	17.44	3.05	53.74	16.31	3.29	54.00	11.96	4.52
40	50.95	20.99	2.43	52.00	19.48	2.67	52.92	19.04	2.78	54.28	18.45	2.94	54.00	13.29	4.06
45	52.32	23.08	2.27	52.81	21.22	2.49	54.00	20.57	2.62	54.99	19.78	2.78	54.00	14.61	3.70
50	55.43	26.04	2.13	55.58	24.26	2.29	56.01	22.92	2.44	56.66	21.20	2.67	54.00	15.49	3.49
55	55.05	28.16	1.96	55.79	26.35	2.12	54.00	22.86	2.36	56.53	23.30	2.43	54.00	16.81	3.21
60	56.08	31.47	1.78	56.32	30.23	1.86	56.64	28.53	1.99	57.13	26.34	2.17	54.00	17.43	3.10
65	50.09	30.19	1.66	54.24	31.50	1.72	55.04	29.65	1.86	56.24	27.33	2.06	54.00	19.05	2.84
70	50.42	31.38	1.61	53.15	31.84	1.67	54.36	31.19	1.74	56.18	29.56	1.90	54.59	25.58	2.13
75	39.09	27.92	1.40	41.63	28.45	1.46	44.39	29.73	1.49	48.53	31.56	1.54	49.35	27.67	1.78
80	38.47	29.98	1.28	41.31	28.86	1.43	42.15	28.93	1.46	43.41	29.03	1.50	44.89	26.42	1.70
85	35.72	33.68	1.06	38.28	32.52	1.18	39.75	32.37	1.23	41.95	32.16	1.30	42.19	30.47	1.39

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	57.15	11.68	4.89	58.92	9.98	5.90	61.78	9.39	6.58	63.01	9.07	6.95	61.29	7.71	7.95
30	59.00	12.47	4.73	60.04	11.40	5.27	62.21	10.62	5.86	64.03	10.37	6.17	63.38	8.84	7.17
35	60.22	13.16	4.57	61.16	12.15	5.03	63.41	11.63	5.45	64.73	11.07	5.85	63.90	9.77	6.54
40	60.59	14.52	4.17	60.75	13.00	4.67	63.83	12.65	5.05	65.29	12.08	5.41	63.72	10.57	6.03
45	60.49	16.03	3.77	61.11	14.51	4.21	65.03	14.02	4.64	66.31	13.66	4.85	63.50	11.53	5.51
50	61.43	17.16	3.58	63.06	16.12	3.91	65.85	15.33	4.29	66.65	14.71	4.53	62.72	12.08	5.19
55	57.13	17.46	3.27	57.37	15.83	3.62	59.02	14.85	3.97	58.69	13.94	4.21	57.18	11.73	4.88
60	56.33	17.70	3.18	55.43	15.64	3.54	55.87	14.80	3.78	55.82	13.89	4.02	52.24	12.18	4.29
65	56.21	19.28	2.92	54.94	16.96	3.24	54.46	16.03	3.40	54.64	14.54	3.76	51.98	12.81	4.06
70	54.47	21.93	2.48	56.01	21.33	2.63	55.83	17.69	3.16	56.06	15.99	3.51	51.80	13.98	3.71
75	50.58	23.50	2.15	51.39	22.65	2.27	53.08	19.40	2.74	54.02	17.45	3.10	51.42	14.94	3.44
80	47.11	23.50	2.00	49.68	23.19	2.14									
85	42.57	28.27	1.51	46.66	23.78	1.96									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	61.05	6.64	9.20	60.56	6.44	9.40	60.34	6.28	9.61						
30	62.11	7.58	8.19	62.28	7.47	8.34	61.42	7.08	8.68						
35	63.17	8.27	7.64	62.59	8.03	7.80	61.61	7.56	8.15						
40	63.47	9.11	6.96	62.14	8.63	7.20	61.51	8.21	7.49						
45	63.01	10.39	6.06	62.46	9.76	6.40	61.62	9.24	6.67						
50	60.35	10.56	5.71	58.55	9.95	5.88	58.97	9.72	6.06						
55	54.76	10.72	5.11	54.71	10.46	5.23	54.79	9.97	5.50						
60	52.13	11.38	4.58	50.82	10.48	4.85	51.28	10.30	4.98						
65	50.66	11.91	4.25	50.52	11.26	4.49									
70	50.27	12.89	3.90	50.15	12.17	4.12									
75	49.82	13.69	3.64												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.2.3 70% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	24.97	12.96	1.93	28.95	13.04	2.22	35.44	11.31	3.13	38.87	11.85	3.28	38.01	11.40	3.34
30	25.32	13.98	1.81	29.41	14.07	2.09	35.88	13.37	2.68	40.40	13.66	2.96	38.93	12.73	3.06
35	25.88	14.66	1.77	29.69	14.44	2.06	36.80	15.02	2.45	41.41	15.00	2.76	39.90	13.88	2.87
40	26.45	15.92	1.66	31.34	16.76	1.87	37.71	17.18	2.20	41.61	16.06	2.59	40.42	15.44	2.62
45	27.35	17.84	1.53	32.41	19.24	1.68	38.13	18.98	2.01	41.91	17.02	2.46	40.60	16.81	2.42
50	27.71	19.56	1.42	33.46	21.03	1.59	38.65	20.67	1.87	44.25	19.24	2.30	43.57	18.84	2.31
55	27.73	20.37	1.36	33.24	21.43	1.55	38.61	21.87	1.77	44.47	20.62	2.16	42.00	19.96	2.10
60	27.72	21.33	1.30	33.28	21.91	1.52	40.01	23.28	1.72	43.97	22.30	1.97	43.76	22.28	1.96
65	21.20	16.30	1.30	24.68	16.86	1.46	32.12	19.75	1.63	37.79	21.43	1.76	38.49	21.56	1.79
70	17.53	14.66	1.20	21.62	15.55	1.39	27.14	17.57	1.54	33.46	19.73	1.70	36.91	21.44	1.72
75							25.56	20.01	1.28	29.27	19.69	1.49	29.95	19.90	1.51
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	37.44	10.96	3.42	39.83	10.37	3.84	39.80	9.98	3.99	39.77	9.44	4.21	41.64	8.05	5.18
30	37.95	11.82	3.21	39.89	11.75	3.40	40.16	11.34	3.54	40.56	10.80	3.76	41.92	8.27	5.07
35	40.12	13.60	2.95	40.70	12.81	3.18	41.30	12.38	3.33	41.80	11.58	3.61	42.00	8.49	4.95
40	39.63	14.90	2.66	40.45	13.83	2.92	41.16	13.52	3.04	42.22	13.10	3.22	42.00	9.44	4.45
45	40.70	16.39	2.48	41.07	15.07	2.73	42.00	14.61	2.87	42.77	14.04	3.05	42.00	10.38	4.05
50	43.11	18.50	2.33	43.23	17.23	2.51	43.57	16.28	2.68	44.07	15.05	2.93	42.00	11.00	3.82
55	42.82	20.00	2.14	43.39	18.71	2.32	42.00	16.23	2.59	43.96	16.54	2.66	42.00	11.94	3.52
60	43.62	22.35	1.95	43.80	21.47	2.04	44.05	20.26	2.17	44.43	18.71	2.38	42.00	12.38	3.39
65	38.96	21.44	1.82	42.18	22.37	1.89	42.81	21.05	2.03	43.74	19.41	2.25	42.00	13.53	3.11
70	39.21	22.29	1.76	41.34	22.61	1.83	42.28	22.15	1.91	43.69	20.99	2.08	42.46	18.17	2.34
75	30.40	19.83	1.53	32.38	20.20	1.60	34.53	21.11	1.64	37.75	22.41	1.68	38.39	19.65	1.95
80	29.92	21.29	1.41	32.13	20.49	1.57	32.78	20.54	1.60	33.76	20.62	1.64	34.91	18.76	1.86
85	27.78	23.92	1.16	29.77	23.09	1.29	30.91	22.98	1.35	32.63	22.84	1.43	32.82	21.63	1.52

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	44.45	8.30	5.36	45.83	7.09	6.46	48.05	6.67	7.20	49.01	6.44	7.61	47.67	5.47	8.71
30	45.89	8.86	5.18	46.70	8.09	5.77	48.39	7.54	6.42	49.80	7.36	6.76	49.30	6.28	7.85
35	46.83	9.35	5.01	47.57	8.63	5.51	49.32	8.26	5.97	50.35	7.86	6.40	49.70	6.94	7.16
40	47.12	10.31	4.57	47.25	9.23	5.12	49.65	8.98	5.53	50.78	8.58	5.92	49.56	7.51	6.60
45	47.04	11.38	4.13	47.53	10.31	4.61	50.58	9.95	5.08	51.57	9.70	5.32	49.39	8.19	6.03
50	47.78	12.18	3.92	49.05	11.45	4.28	51.22	10.89	4.70	51.84	10.44	4.96	48.78	8.58	5.69
55	44.43	12.40	3.58	44.62	11.24	3.97	45.90	10.55	4.35	45.65	9.90	4.61	44.47	8.33	5.34
60	43.81	12.57	3.49	43.11	11.11	3.88	43.45	10.51	4.14	43.41	9.86	4.40	40.63	8.65	4.70
65	43.72	13.69	3.19	42.73	12.04	3.55	42.36	11.38	3.72	42.50	10.32	4.12	40.43	9.10	4.44
70	42.37	15.57	2.72	43.56	15.15	2.88	43.42	12.56	3.46	43.61	11.36	3.84	40.29	9.93	4.06
75	39.34	16.69	2.36	39.97	16.08	2.49	41.29	13.78	3.00	42.02	12.39	3.39	39.99	10.61	3.77
80	36.64	16.69	2.20	38.64	16.47	2.35									
85	33.11	20.07	1.65	36.29	16.89	2.15									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	47.48	4.71	10.07	47.10	4.57	10.30	46.93	4.46	10.53						
30	48.31	5.38	8.98	48.44	5.30	9.14	47.77	5.02	9.51						
35	49.14	5.87	8.37	48.68	5.70	8.54	47.92	5.37	8.93						
40	49.37	6.47	7.63	48.33	6.13	7.89	47.84	5.83	8.21						
45	49.00	7.38	6.64	48.58	6.93	7.01	47.92	6.56	7.31						
50	46.94	7.50	6.26	45.54	7.07	6.44	45.87	6.91	6.64						
55	42.59	7.62	5.59	42.55	7.43	5.73	42.61	7.08	6.02						
60	40.55	8.08	5.02	39.53	7.44	5.31	39.88	7.31	5.45						
65	39.40	8.45	4.66	39.29	8.00	4.91									
70	39.10	9.16	4.27	39.00	8.64	4.51									
75	38.75	9.72	3.98												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.2.4 50% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	17.84	8.52	2.09	20.68	8.57	2.41	25.32	7.43	3.41	27.76	7.79	3.57	27.15	7.49	3.63
30	18.09	9.18	1.97	21.01	9.25	2.27	25.63	8.79	2.92	28.86	8.97	3.22	27.81	8.36	3.33
35	18.49	9.63	1.92	21.21	9.49	2.23	26.29	9.87	2.66	29.58	9.86	3.00	28.50	9.12	3.13
40	18.89	10.46	1.81	22.39	11.01	2.03	26.94	11.29	2.39	29.72	10.56	2.82	28.87	10.15	2.85
45	19.53	11.72	1.67	23.15	12.64	1.83	27.24	12.47	2.18	29.93	11.18	2.68	29.00	11.05	2.63
50	19.80	12.85	1.54	23.90	13.82	1.73	27.61	13.58	2.03	31.61	12.64	2.50	31.12	12.38	2.51
55	19.81	13.38	1.48	23.75	14.08	1.69	27.58	14.37	1.92	31.76	13.55	2.34	30.00	13.11	2.29
60	19.80	14.01	1.41	23.77	14.40	1.65	28.58	15.30	1.87	31.40	14.65	2.14	31.26	14.64	2.13
65	15.15	10.71	1.41	17.63	11.08	1.59	22.94	12.98	1.77	26.99	14.08	1.92	27.49	14.17	1.94
70	12.52	9.63	1.30	15.44	10.22	1.51	19.38	11.54	1.68	23.90	12.96	1.84	26.36	14.09	1.87
75							18.26	13.15	1.39	20.91	12.94	1.62	21.39	13.08	1.64
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	26.74	7.20	3.71	28.45	6.82	4.17	28.43	6.56	4.34	28.41	6.20	4.58	29.74	5.29	5.62
30	27.10	7.77	3.49	28.49	7.72	3.69	28.68	7.45	3.85	28.97	7.10	4.08	29.95	5.43	5.51
35	28.66	8.94	3.21	29.07	8.42	3.45	29.50	8.14	3.62	29.86	7.61	3.92	30.00	5.58	5.38
40	28.31	9.79	2.89	28.89	9.09	3.18	29.40	8.89	3.31	30.16	8.61	3.50	30.00	6.20	4.84
45	29.07	10.77	2.70	29.34	9.90	2.96	30.00	9.60	3.13	30.55	9.23	3.31	30.00	6.82	4.40
50	30.80	12.15	2.53	30.88	11.32	2.73	31.12	10.70	2.91	31.48	9.89	3.18	30.00	7.23	4.15
55	30.58	13.14	2.33	30.99	12.29	2.52	30.00	10.67	2.81	31.40	10.87	2.89	30.00	7.84	3.82
60	31.16	14.69	2.12	31.29	14.11	2.22	31.47	13.31	2.36	31.74	12.29	2.58	30.00	8.14	3.69
65	27.83	14.09	1.98	30.13	14.70	2.05	30.58	13.84	2.21	31.24	12.75	2.45	30.00	8.89	3.38
70	28.01	14.64	1.91	29.53	14.86	1.99	30.20	14.55	2.07	31.21	13.79	2.26	30.33	11.94	2.54
75	21.72	13.03	1.67	23.13	13.27	1.74	24.66	13.87	1.78	26.96	14.73	1.83	27.42	12.91	2.12
80	21.37	13.99	1.53	22.95	13.47	1.70	23.42	13.50	1.73	24.12	13.55	1.78	24.94	12.33	2.02
85	19.85	15.72	1.26	21.27	15.18	1.40	22.08	15.10	1.46	23.30	15.01	1.55	23.44	14.22	1.65

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	31.75	5.45	5.82	32.73	4.66	7.03	34.32	4.57	7.52	35.01	4.41	7.94	34.05	3.75	9.09
30	32.78	5.82	5.63	33.36	5.32	6.27	34.56	5.16	6.70	35.57	5.04	7.06	35.21	4.30	8.19
35	33.45	6.14	5.45	33.98	5.67	5.99	35.23	5.65	6.23	35.96	5.38	6.68	35.50	4.75	7.48
40	33.66	6.77	4.97	33.75	6.07	5.56	35.46	6.15	5.77	36.27	5.87	6.18	35.40	5.14	6.89
45	33.60	7.48	4.49	33.95	6.77	5.01	36.13	6.81	5.30	36.84	6.64	5.55	35.28	5.60	6.30
50	34.13	8.01	4.26	35.03	7.52	4.66	36.58	7.45	4.91	37.03	7.15	5.18	34.85	5.87	5.93
55	31.74	8.15	3.90	31.87	7.39	4.31	32.79	7.22	4.54	32.61	6.78	4.81	31.76	5.70	5.57
60	31.29	8.26	3.79	30.80	7.30	4.22	31.04	7.19	4.32	31.01	6.75	4.59	29.02	5.92	4.90
65	31.23	9.00	3.47	30.52	7.91	3.86	30.26	7.79	3.88	30.36	7.07	4.30	28.88	6.23	4.64
70	30.26	10.23	2.96	31.12	9.95	3.13	31.01	8.60	3.61	31.15	7.77	4.01	28.78	6.80	4.23
75	28.10	10.96	2.56	28.55	10.57	2.70	29.49	9.43	3.13	30.01	8.48	3.54	28.56	7.26	3.93
80	26.17	10.97	2.39	27.60	10.82	2.55									
85	23.65	13.19	1.79	25.92	11.10	2.34									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	33.92	3.23	10.51	33.64	3.13	10.75	33.52	3.05	10.98						
30	34.50	3.68	9.37	34.60	3.63	9.53	34.12	3.44	9.92						
35	35.10	4.02	8.73	34.77	3.90	8.91	34.23	3.67	9.31						
40	35.26	4.43	7.96	34.52	4.19	8.23	34.17	3.99	8.57						
45	35.00	5.05	6.93	34.70	4.74	7.31	34.23	4.49	7.62						
50	33.53	5.13	6.53	32.53	4.84	6.73	32.76	4.73	6.93						
55	30.42	5.21	5.84	30.39	5.09	5.98	30.44	4.85	6.28						
60	28.96	5.53	5.23	28.23	5.10	5.54	28.49	5.01	5.69						
65	28.14	5.79	4.86	28.06	5.47	5.13									
70	27.93	6.27	4.46	27.86	5.92	4.71									
75	27.68	6.66	4.16												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.2.5 30% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	10.70	4.26	2.51	12.41	4.29	2.90	15.19	3.72	4.09	16.66	3.89	4.28	16.29	3.74	4.35
30	10.85	4.59	2.36	12.61	4.62	2.73	15.38	4.39	3.50	17.31	4.49	3.86	16.68	4.18	3.99
35	11.09	4.82	2.30	12.72	4.75	2.68	15.77	4.93	3.20	17.75	4.93	3.60	17.10	4.56	3.75
40	11.33	5.23	2.17	13.43	5.51	2.44	16.16	5.64	2.86	17.83	5.28	3.38	17.32	5.07	3.41
45	11.72	5.86	2.00	13.89	6.32	2.20	16.34	6.24	2.62	17.96	5.59	3.21	17.40	5.52	3.15
50	11.88	6.43	1.85	14.34	6.91	2.08	16.56	6.79	2.44	18.96	6.32	3.00	18.67	6.19	3.02
55	11.89	6.69	1.78	14.25	7.04	2.02	16.55	7.19	2.30	19.06	6.77	2.81	18.00	6.56	2.75
60	11.88	7.01	1.70	14.26	7.20	1.98	17.15	7.65	2.24	18.84	7.33	2.57	18.75	7.32	2.56
65	9.09	5.36	1.70	10.58	5.54	1.91	13.77	6.49	2.12	16.20	7.04	2.30	16.50	7.09	2.33
70	7.51	4.82	1.56	9.27	5.11	1.81	11.63	5.77	2.01	14.34	6.48	2.21	15.82	7.05	2.25
75							10.95	6.57	1.67	12.54	6.47	1.94	12.84	6.54	1.96
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	16.04	3.60	4.46	17.07	3.41	5.01	17.06	3.28	5.20	17.04	3.10	5.50	17.85	2.64	6.75
30	16.26	3.88	4.19	17.10	3.86	4.43	17.21	3.73	4.62	17.38	3.55	4.90	17.97	2.72	6.61
35	17.20	4.47	3.85	17.44	4.21	4.15	17.70	4.07	4.35	17.91	3.81	4.71	18.00	2.79	6.45
40	16.98	4.90	3.47	17.33	4.55	3.81	17.64	4.44	3.97	18.09	4.31	4.20	18.00	3.10	5.80
45	17.44	5.39	3.24	17.60	4.95	3.55	18.00	4.80	3.75	18.33	4.61	3.97	18.00	3.41	5.28
50	18.48	6.08	3.04	18.53	5.66	3.27	18.67	5.35	3.49	18.89	4.95	3.82	18.00	3.61	4.98
55	18.35	6.57	2.79	18.60	6.15	3.03	18.00	5.33	3.37	18.84	5.44	3.47	18.00	3.92	4.59
60	18.69	7.34	2.55	18.77	7.05	2.66	18.88	6.66	2.84	19.04	6.15	3.10	18.00	4.07	4.43
65	16.70	7.04	2.37	18.08	7.87	2.30	18.35	6.92	2.65	18.75	6.83	2.74	18.00	4.44	4.05
70	16.81	7.32	2.29	17.72	7.96	2.23	18.12	7.28	2.49	18.73	7.39	2.53	18.20	5.97	3.05
75	13.03	6.52	2.00	13.88	7.11	1.95	14.80	6.94	2.13	16.18	7.89	2.05	16.45	6.46	2.55
80	12.82	7.00	1.83	13.77	7.21	1.91	14.05	6.75	2.08	14.47	7.26	1.99	14.96	6.16	2.43
85	11.91	7.86	1.52	12.76	8.13	1.57	13.25	7.55	1.75	13.98	8.04	1.74	14.06	7.90	1.78

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	19.05	2.73	6.99	19.64	2.50	7.87	20.59	2.44	8.46	21.00	2.35	8.93	20.43	2.07	9.85
30	19.67	2.91	6.76	20.01	2.85	7.02	20.74	2.75	7.53	21.34	2.69	7.94	21.13	2.38	8.87
35	20.07	3.07	6.53	20.39	3.04	6.71	21.14	3.02	7.01	21.58	2.87	7.52	21.30	2.63	8.10
40	20.20	3.39	5.96	20.25	3.25	6.23	21.28	3.28	6.49	21.76	3.13	6.95	21.24	2.85	7.46
45	20.16	3.74	5.39	20.37	3.63	5.61	21.68	3.63	5.96	22.10	3.54	6.24	21.17	3.10	6.82
50	20.48	4.00	5.11	21.02	4.03	5.21	21.95	3.97	5.52	22.22	3.81	5.83	20.91	3.25	6.43
55	19.04	4.07	4.67	19.12	3.96	4.83	19.67	3.85	5.11	19.56	3.61	5.41	19.06	3.16	6.04
60	18.78	4.13	4.55	18.48	3.91	4.73	18.62	3.98	4.67	18.61	3.74	4.98	17.41	3.28	5.31
65	18.74	5.19	3.61	18.31	4.57	4.01	18.15	4.32	4.21	18.21	3.91	4.65	17.33	3.45	5.02
70	18.16	5.90	3.08	18.67	5.74	3.25	18.61	4.76	3.91	18.69	4.31	4.34	17.27	3.76	4.59
75	16.86	6.33	2.67	17.13	6.10	2.81	17.69	5.22	3.39	18.01	4.70	3.83	17.14	4.02	4.26
80	15.70	6.33	2.48	16.56	6.24	2.65									
85	14.19	7.61	1.86	15.55	6.40	2.43									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	20.35	1.86	10.95	20.19	1.80	11.19	20.11	1.76	11.44						
30	20.70	2.12	9.76	20.76	2.09	9.93	20.47	1.98	10.33						
35	21.06	2.31	9.10	20.86	2.25	9.29	20.54	2.12	9.70						
40	21.16	2.55	8.29	20.71	2.42	8.57	20.50	2.30	8.92						
45	21.00	2.91	7.22	20.82	2.73	7.62	20.54	2.59	7.94						
50	20.12	2.96	6.80	19.52	2.68	7.29	19.66	2.62	7.51						
55	18.25	2.89	6.32	18.24	2.82	6.47	18.26	2.68	6.80						
60	17.38	3.06	5.67	16.94	2.82	6.00	17.09	2.77	6.16						
65	16.89	3.21	5.27	16.84	3.03	5.55									
70	16.76	3.47	4.83	16.72	3.28	5.10									
75	16.61	3.69	4.50												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.2.6 100% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	34.16	9.02	3.79	34.67	9.88	3.51	36.48	11.52	3.17	36.94	12.28	3.01	38.13	14.28	2.67
5	37.95	8.02	4.73	38.52	8.78	4.39	40.54	10.24	3.96	41.04	10.92	3.76	42.36	12.69	3.34
7	41.66	8.50	4.90	42.29	9.30	4.55	44.50	10.85	4.10	45.05	11.56	3.90	46.07	13.24	3.48
10	47.22	9.21	5.13	47.94	10.08	4.76	50.44	11.76	4.29	51.07	12.53	4.08	51.64	14.06	3.67
15	56.50	10.24	5.52	57.35	11.19	5.13	60.34	13.05	4.62	61.10	13.91	4.39	61.78	15.16	4.07
18	59.89	10.23	5.86	60.79	11.19	5.43	63.96	13.05	4.90	64.76	13.91	4.66	65.48	15.43	4.24
20	62.15	10.22	6.08	63.08	11.19	5.64	66.38	13.05	5.09	67.21	13.91	4.83	67.95	15.61	4.35
25	65.25	9.94	6.57	66.24	10.88	6.09	69.70	12.69	5.49	70.57	13.52	5.22	71.35	14.74	4.84

LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	38.52	16.38	2.35	39.65	17.33	2.29	38.90	17.81	2.18	38.23	18.22	2.10	37.62	18.51	2.03
0	45.31	17.34	2.61	46.65	18.35	2.54	45.77	18.86	2.43	44.98	19.29	2.33	44.26	19.59	2.26
5	49.53	15.07	3.29	60.80	20.93	2.90	59.22	21.20	2.79	58.91	21.75	2.71	57.30	21.61	2.65
7	53.87	15.72	3.43	63.82	20.47	3.12	62.70	20.91	3.00	61.64	21.09	2.92	60.00	21.03	2.85
10	60.37	16.70	3.62	68.35	19.78	3.46	67.92	20.47	3.32	65.74	20.10	3.27	64.06	20.18	3.17
15	66.21	16.35	4.05	69.96	17.46	4.01	69.27	18.15	3.82	67.94	18.10	3.75	67.42	18.77	3.59
18	70.18	16.35	4.29	74.54	17.57	4.24	73.97	18.06	4.09	72.93	18.09	4.03	71.36	18.33	3.89
20	72.83	16.35	4.45	77.59	17.64	4.40	77.10	18.00	4.28	76.25	18.07	4.22	73.99	18.04	4.10
25	76.47	15.90	4.81	85.21	17.78	4.79	84.93	17.88	4.75	84.57	18.05	4.69	80.55	17.47	4.61

LWT	DB											
	35			40			45			48		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	36.52	18.18	2.01	34.64	22.19	1.56	31.66	20.64	1.53	28.95	23.85	1.21
0	42.97	19.25	2.23	40.67	22.09	1.84	34.40	20.33	1.69	30.51	23.72	1.29
5	56.79	21.95	2.59	49.20	21.30	2.31	38.60	18.23	2.12	33.54	21.06	1.59
7	60.00	20.00	3.00	53.28	20.68	2.58	41.20	18.32	2.25	35.27	19.29	1.83
10	60.20	19.69	3.06	55.81	18.75	2.98	45.11	18.80	2.40	37.86	17.91	2.11
15	60.52	17.30	3.50	57.57	18.19	3.17	51.61	18.68	2.76	42.19	17.22	2.45
18	60.00	13.33	4.50	58.04	17.43	3.33	54.64	18.25	2.99	44.09	16.66	2.65
20	63.79	13.71	4.65	60.37	17.75	3.40	56.66	17.63	3.21	45.36	15.69	2.89
25	74.09	16.23	4.56	70.12	17.77	3.95	61.70	17.40	3.55	48.53	15.53	3.12

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.2.7 90% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	30.74	7.73	3.97	31.21	8.47	3.69	32.83	9.88	3.32	33.24	10.53	3.16	34.31	12.24	2.80
5	34.16	6.88	4.97	34.67	7.53	4.61	36.48	8.78	4.16	36.94	9.36	3.95	38.13	10.88	3.50
7	37.49	7.28	5.15	38.06	7.97	4.77	40.05	9.30	4.31	40.55	9.91	4.09	41.47	11.35	3.65
10	42.50	7.89	5.39	43.14	8.64	4.99	45.40	10.08	4.50	45.96	10.74	4.28	46.47	12.05	3.86
15	50.85	8.76	5.80	51.61	9.59	5.38	54.31	11.19	4.85	54.99	11.92	4.61	55.60	13.00	4.28
18	53.90	8.76	6.15	54.71	9.59	5.70	57.57	11.19	5.15	58.29	11.92	4.89	58.93	13.23	4.46
20	55.93	8.76	6.38	56.78	9.59	5.92	59.74	11.19	5.34	60.49	11.92	5.07	61.16	13.38	4.57
25	58.73	8.52	6.90	59.61	9.32	6.39	62.73	10.88	5.77	63.51	11.59	5.48	64.22	12.64	5.08
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	34.66	14.04	2.47	35.69	14.85	2.40	35.01	15.26	2.29	34.41	15.62	2.20	33.86	15.86	2.13
0	40.78	14.86	2.74	41.98	15.73	2.67	41.19	16.16	2.55	40.48	16.54	2.45	39.83	16.79	2.37
5	44.58	12.92	3.45	54.72	17.94	3.05	53.30	18.17	2.93	53.02	18.64	2.84	51.57	18.52	2.78
7	48.48	13.48	3.60	57.44	17.55	3.27	56.43	17.92	3.15	55.48	18.08	3.07	54.00	18.03	3.00
10	54.34	14.31	3.80	61.52	16.95	3.63	61.13	17.55	3.48	59.16	17.23	3.43	57.65	17.30	3.33
15	59.59	14.01	4.25	62.96	14.97	4.21	62.34	15.56	4.01	61.14	15.52	3.94	60.68	16.08	3.77
18	63.16	14.01	4.51	67.08	15.06	4.46	66.57	15.48	4.30	65.63	15.50	4.23	64.22	15.71	4.09
20	65.55	14.01	4.68	69.83	15.12	4.62	69.39	15.43	4.50	68.63	15.49	4.43	66.59	15.46	4.31
25	68.82	13.63	5.05	76.69	15.24	5.03	76.44	15.33	4.99	76.11	15.47	4.92	72.50	14.97	4.84
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	32.87	15.58	2.11	25.08	19.02	1.32	28.49	17.69	1.61	26.05	20.45	1.27			
0	38.67	16.50	2.34	32.17	18.93	1.70	30.96	17.43	1.78	27.46	20.33	1.35			
5	51.11	18.85	2.71	33.52	18.28	1.83	34.74	15.62	2.22	30.18	18.05	1.67			
7	52.34	18.06	2.90	34.46	18.67	1.85	37.08	15.70	2.36	31.74	16.54	1.92			
10	54.18	16.87	3.21	35.88	16.07	2.23	40.59	16.12	2.52	34.08	15.35	2.22			
15	54.47	14.83	3.67	47.12	15.59	3.02	46.45	16.01	2.90	37.97	14.76	2.57			
18	56.23	12.98	4.33	47.51	16.97	2.80	49.17	15.65	3.14	39.68	14.28	2.78			
20	57.41	11.75	4.89	47.78	15.21	3.14	50.99	15.11	3.37	40.82	13.45	3.04			
25	66.68	13.90	4.80	52.85	15.21	3.47	55.53	14.91	3.72	43.68	13.31	3.28			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.2.8 70% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	23.91	5.49	4.35	24.27	6.01	4.04	25.54	7.01	3.64	25.86	7.48	3.46	26.69	8.69	3.07
5	26.57	4.88	5.44	26.97	5.34	5.05	28.38	6.23	4.55	28.73	6.64	4.32	29.65	7.73	3.84
7	29.16	5.17	5.64	29.60	5.66	5.23	31.15	6.60	4.72	31.54	7.04	4.48	32.25	8.06	4.00
10	33.06	5.60	5.90	33.56	6.13	5.47	35.31	7.16	4.93	35.75	7.63	4.69	36.15	8.56	4.22
15	39.55	6.22	6.36	40.14	6.81	5.89	42.24	7.95	5.32	42.77	8.47	5.05	43.24	9.23	4.69
18	41.92	6.22	6.74	42.55	6.81	6.25	44.77	7.95	5.64	45.33	8.47	5.35	45.84	9.39	4.88
20	43.50	6.22	6.99	44.16	6.81	6.48	46.46	7.95	5.85	47.04	8.47	5.56	47.57	9.50	5.01
25	45.68	6.05	7.55	46.37	6.62	7.00	48.79	7.72	6.32	49.40	8.23	6.00	49.95	8.97	5.57
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	26.96	9.97	2.70	27.76	10.55	2.63	27.23	10.84	2.51	26.76	11.09	2.41	26.33	11.26	2.34
0	31.72	10.56	3.00	32.65	11.17	2.92	32.04	11.48	2.79	31.49	11.74	2.68	30.98	11.93	2.60
5	34.67	9.17	3.78	42.56	12.74	3.34	41.46	12.91	3.21	41.24	13.24	3.12	40.11	13.15	3.05
7	37.71	9.57	3.94	44.68	12.46	3.59	43.89	12.73	3.45	43.15	12.84	3.36	42.00	12.80	3.28
10	42.26	10.16	4.16	47.85	12.04	3.97	47.55	12.46	3.82	46.02	12.24	3.76	44.84	12.28	3.65
15	46.35	9.95	4.66	48.97	10.63	4.61	48.49	11.05	4.39	47.56	11.02	4.32	47.19	11.42	4.13
18	49.13	9.95	4.94	52.17	10.69	4.88	51.78	11.00	4.71	51.05	11.01	4.64	49.95	11.15	4.48
20	50.98	9.95	5.12	54.31	10.74	5.06	53.97	10.96	4.92	53.38	11.00	4.85	51.79	10.98	4.72
25	53.53	9.68	5.53	59.65	10.83	5.51	59.45	10.89	5.46	59.20	10.99	5.39	56.39	10.63	5.30
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	25.57	11.06	2.31	19.51	13.51	1.44	22.16	12.56	1.76	20.26	14.52	1.40			
0	30.08	11.71	2.57	25.02	13.45	1.86	24.08	12.38	1.95	21.35	14.44	1.48			
5	39.75	13.38	2.97	26.07	12.98	2.01	27.02	11.09	2.44	23.48	12.82	1.83			
7	40.71	12.82	3.17	26.80	13.26	2.02	28.84	11.15	2.59	24.69	11.74	2.10			
10	42.14	11.98	3.52	27.91	11.41	2.45	31.57	11.44	2.76	26.50	10.90	2.43			
15	42.36	10.53	4.02	36.65	11.07	3.31	36.13	11.37	3.18	29.53	10.48	2.82			
18	43.73	9.22	4.75	36.96	12.05	3.07	38.25	11.11	3.44	30.86	10.14	3.04			
20	44.65	8.34	5.35	37.16	10.80	3.44	39.66	10.73	3.69	31.75	9.55	3.32			
25	51.86	9.87	5.25	41.11	10.80	3.80	43.19	10.59	4.08	33.97	9.45	3.59			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.2.9 50% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	17.08	3.61	4.73	17.34	3.95	4.39	18.24	4.61	3.96	18.47	4.91	3.76	19.06	5.71	3.34
5	18.98	3.21	5.91	19.26	3.51	5.48	20.27	4.10	4.95	20.52	4.37	4.70	21.18	5.08	4.17
7	20.83	3.40	6.13	21.14	3.72	5.68	22.25	4.34	5.13	22.53	4.62	4.87	23.04	5.30	4.35
10	23.61	3.68	6.41	23.97	4.03	5.95	25.22	4.70	5.36	25.53	5.01	5.09	25.82	5.62	4.59
15	28.25	4.09	6.91	28.67	4.48	6.41	30.17	5.22	5.78	30.55	5.56	5.49	30.89	6.07	5.09
18	29.94	4.09	7.32	30.40	4.48	6.79	31.98	5.22	6.13	32.38	5.56	5.82	32.74	6.17	5.30
20	31.07	4.09	7.60	31.54	4.48	7.05	33.19	5.22	6.36	33.60	5.56	6.04	33.98	6.24	5.44
25	32.63	3.97	8.21	33.12	4.35	7.61	34.85	5.08	6.87	35.28	5.41	6.52	35.68	5.90	6.05

LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	19.26	6.55	2.94	19.83	6.93	2.86	19.45	7.12	2.73	19.12	7.29	2.62	18.81	7.40	2.54
0	22.66	6.94	3.27	23.32	7.34	3.18	22.88	7.54	3.03	22.49	7.72	2.91	22.13	7.84	2.82
5	24.76	6.03	4.11	30.40	8.37	3.63	29.61	8.48	3.49	29.45	8.70	3.39	28.65	8.64	3.32
7	26.93	6.29	4.28	31.91	8.19	3.90	31.35	8.36	3.75	30.82	8.44	3.65	30.00	8.41	3.57
10	30.19	6.68	4.52	34.18	7.91	4.32	33.96	8.19	4.15	32.87	8.04	4.09	32.03	8.07	3.97
15	33.10	6.54	5.06	34.98	6.98	5.01	34.64	7.26	4.77	33.97	7.24	4.69	33.71	7.50	4.49
18	35.09	6.54	5.37	37.27	7.03	5.30	36.98	7.23	5.12	36.46	7.23	5.04	35.68	7.33	4.87
20	36.41	6.54	5.57	38.79	7.05	5.50	38.55	7.20	5.35	38.13	7.23	5.27	36.99	7.21	5.13
25	38.23	6.36	6.01	42.61	7.11	5.99	42.46	7.15	5.94	42.28	7.22	5.86	40.28	6.99	5.76

LWT	DB											
	35			40			45			48		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	18.26	7.27	2.51	13.94	8.88	1.57	15.83	8.26	1.92	14.47	9.54	1.52
0	21.48	7.70	2.79	17.87	8.84	2.02	17.20	8.13	2.11	15.25	9.49	1.61
5	28.39	8.79	3.23	18.62	8.53	2.18	19.30	7.29	2.65	16.77	8.42	1.99
7	29.08	8.43	3.45	19.15	8.71	2.20	20.60	7.33	2.81	17.63	7.72	2.28
10	30.10	7.87	3.82	19.93	7.50	2.66	22.55	7.52	3.00	18.93	7.17	2.64
15	30.26	6.92	4.37	26.18	7.27	3.60	25.81	7.47	3.45	21.10	6.89	3.06
18	31.24	6.06	5.16	26.40	7.92	3.33	27.32	7.30	3.74	22.05	6.66	3.31
20	31.90	5.48	5.82	26.54	7.10	3.74	28.33	7.05	4.02	22.68	6.28	3.61
25	37.04	6.49	5.71	29.36	7.10	4.14	30.85	6.96	4.43	24.27	6.21	3.91

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.2.10 30% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	10.25	1.59	6.44	10.40	1.74	5.97	10.94	2.03	5.38	11.08	2.17	5.11	11.44	2.52	4.54
5	11.39	1.42	8.04	11.56	1.55	7.46	12.16	1.81	6.73	12.31	1.93	6.39	12.71	2.24	5.67
7	12.50	1.50	8.34	12.69	1.64	7.73	13.35	1.91	6.97	13.52	2.04	6.62	13.82	2.34	5.92
10	14.17	1.62	8.72	14.38	1.78	8.09	15.13	2.07	7.29	15.32	2.21	6.93	15.49	2.48	6.24
15	16.95	1.80	9.40	17.20	1.97	8.71	18.10	2.30	7.86	18.33	2.45	7.47	18.53	2.68	6.93
18	17.97	1.80	9.96	18.24	1.97	9.24	19.19	2.30	8.33	19.43	2.45	7.91	19.64	2.72	7.21
20	18.64	1.80	10.34	18.93	1.97	9.58	19.91	2.30	8.65	20.16	2.45	8.21	20.39	2.75	7.40
25	19.58	1.75	11.16	19.87	1.92	10.35	20.91	2.24	9.34	21.17	2.39	8.87	21.41	2.60	8.23
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	11.55	2.89	4.00	11.90	3.06	3.89	11.67	3.14	3.71	11.47	3.22	3.57	11.29	3.27	3.46
0	13.59	3.06	4.44	13.99	3.24	4.32	13.73	3.33	4.13	13.49	3.40	3.96	13.28	3.46	3.84
5	14.86	2.66	5.59	18.24	3.69	4.94	17.77	3.74	4.75	17.67	3.84	4.61	17.19	3.81	4.51
7	16.16	2.77	5.82	19.15	3.61	5.30	18.81	3.69	5.10	18.49	3.72	4.97	18.00	3.71	4.85
10	18.11	2.95	6.15	20.51	3.49	5.87	20.38	3.61	5.64	19.72	3.55	5.56	19.22	3.56	5.40
15	19.86	2.89	6.88	20.99	3.08	6.81	20.78	3.20	6.49	20.38	3.19	6.38	20.23	3.31	6.11
18	21.05	2.89	7.30	22.36	3.10	7.21	22.19	3.19	6.96	21.88	3.19	6.85	21.41	3.23	6.62
20	21.85	2.89	7.57	23.28	3.11	7.48	23.13	3.18	7.28	22.88	3.19	7.17	22.20	3.18	6.97
25	22.94	2.81	8.18	25.56	3.14	8.15	25.48	3.16	8.07	25.37	3.19	7.96	24.17	3.08	7.84
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	10.96	3.21	3.42	8.36	3.92	2.14	9.50	3.64	2.61	8.68	4.21	2.06			
0	12.89	3.40	3.80	10.72	3.90	2.75	10.32	3.59	2.88	9.15	4.19	2.19			
5	17.04	3.88	4.39	11.17	3.76	2.97	11.58	3.22	3.60	10.06	3.72	2.71			
7	17.45	3.72	4.69	11.49	3.84	2.99	12.36	3.23	3.82	10.58	3.40	3.11			
10	18.06	3.47	5.20	11.96	3.31	3.61	13.53	3.32	4.08	11.36	3.16	3.59			
15	18.16	3.92	4.63	15.71	4.12	3.81	15.48	3.30	4.70	12.66	3.04	4.17			
18	18.75	3.43	5.47	15.84	4.48	3.53	16.39	3.22	5.09	13.23	2.94	4.50			
20	19.14	3.10	6.17	15.93	4.01	3.97	17.00	3.11	5.46	13.61	2.77	4.92			
25	22.23	2.86	7.77	17.62	3.13	5.62	18.51	3.07	6.03	14.56	2.74	5.31			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.3 EDHX-700R-04T35

4.3.1 100% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	36.40	21.94	1.66	42.21	22.09	1.91	51.67	19.15	2.70	56.66	20.06	2.82	55.41	19.30	2.87
30	36.91	23.66	1.56	42.88	23.82	1.80	52.31	22.64	2.31	58.89	23.12	2.55	56.75	21.55	2.63
35	37.73	24.82	1.52	43.28	24.45	1.77	53.64	25.42	2.11	60.36	25.36	2.38	60.00	26.09	2.30
40	38.55	26.96	1.43	45.68	28.38	1.61	54.98	29.09	1.89	60.65	27.20	2.23	58.92	26.14	2.25
45	39.86	30.20	1.32	47.24	32.58	1.45	55.59	32.13	1.73	61.09	28.82	2.12	60.00	29.27	2.05
50	40.40	33.11	1.22	48.78	35.61	1.37	56.34	34.99	1.61	64.50	32.58	1.98	63.51	31.90	1.99
55	40.43	34.48	1.17	48.46	36.28	1.34	56.29	37.03	1.52	64.82	34.91	1.86	60.00	33.33	1.80
60	40.41	36.11	1.12	48.52	37.10	1.31	58.33	39.41	1.48	64.09	40.56	1.58	63.79	39.37	1.62
65	30.91	28.10	1.10	35.97	28.55	1.26	46.82	33.44	1.40	55.09	36.28	1.52	56.11	36.58	1.53
70	25.56	24.82	1.03	31.52	26.33	1.20	39.56	29.74	1.33	48.77	33.40	1.46	53.80	36.25	1.48
75							37.26	33.87	1.10	42.67	33.34	1.28	43.66	33.69	1.30
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	54.57	18.55	2.94	58.06	17.56	3.31	58.51	17.10	3.42	59.18	16.47	3.59	63.73	14.92	4.27
30	55.32	20.02	2.76	58.15	19.89	2.92	58.54	19.21	3.05	59.12	18.28	3.23	65.27	15.77	4.14
35	59.49	23.43	2.54	59.33	21.69	2.74	60.00	19.05	3.15	60.93	19.61	3.11	70.00	17.50	4.00
40	59.77	25.63	2.33	59.96	23.82	2.52	60.00	22.90	2.62	61.55	22.19	2.77	70.00	19.66	3.56
45	59.32	27.75	2.14	59.87	25.52	2.35	60.00	22.64	2.65	62.35	23.78	2.62	70.00	20.90	3.35
50	62.85	31.32	2.01	63.02	29.17	2.16	63.04	27.31	2.31	65.58	26.28	2.50	70.00	23.97	2.92
55	62.42	33.85	1.84	63.25	31.68	2.00	60.00	26.09	2.30	65.42	28.88	2.27	70.00	23.73	2.95
60	63.58	37.84	1.68	63.85	36.34	1.76	63.22	33.50	1.89	64.77	31.68	2.04	70.00	26.72	2.62
65	56.79	36.47	1.56	61.49	37.62	1.63	62.40	35.52	1.76	63.76	32.87	1.94	70.00	27.45	2.55
70	57.16	37.60	1.52	60.26	37.31	1.62	61.63	36.69	1.68	63.70	34.12	1.87	64.53	30.30	2.13
75	44.32	33.58	1.32	47.20	34.20	1.38	50.33	35.75	1.41	55.03	37.95	1.45	55.96	31.44	1.78
80	43.62	36.05	1.21	46.84	34.70	1.35	47.79	34.78	1.37	49.22	34.90	1.41	50.89	31.77	1.60
85	40.50	40.50	1.00	43.40	39.10	1.11	45.06	38.92	1.16	47.56	38.67	1.23	47.84	36.63	1.31

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	70.55	15.90	4.44	77.02	14.73	5.23	80.76	13.86	5.83	82.37	13.39	6.15	80.12	11.37	7.05
30	74.50	17.53	4.25	78.49	16.82	4.67	81.32	15.67	5.19	83.70	15.30	5.47	82.85	13.05	6.35
35	76.03	18.50	4.11	79.95	17.93	4.46	82.88	17.16	4.83	84.62	16.34	5.18	83.53	14.41	5.80
40	76.50	20.40	3.75	79.41	19.18	4.14	83.44	18.67	4.47	85.35	17.82	4.79	83.30	15.60	5.34
45	76.37	22.53	3.39	79.88	21.42	3.73	85.00	20.68	4.11	86.68	20.16	4.30	83.00	17.01	4.88
50	77.56	25.39	3.06	82.43	23.79	3.47	86.08	22.62	3.80	87.13	21.70	4.01	81.99	17.82	4.60
55	72.13	24.53	2.94	74.99	23.36	3.21	77.15	21.92	3.52	76.72	20.57	3.73	74.74	17.30	4.32
60	71.12	24.87	2.86	72.46	23.08	3.14	73.03	21.83	3.35	72.96	20.50	3.56	68.29	17.97	3.80
65	70.97	27.09	2.62	71.82	25.02	2.87	71.19	23.65	3.01	71.43	21.45	3.33	68.06	18.50	3.68
70	65.79	28.92	2.27	67.65	28.13	2.41	70.49	24.86	2.84	70.79	22.47	3.15	67.56	19.83	3.41
75	57.35	28.25	2.03	58.27	27.23	2.14	60.18	23.33	2.58	61.25	20.98	2.92	60.13	19.03	3.16
80	53.41	28.26	1.89	56.32	27.88	2.02									
85	48.26	33.99	1.42	52.90	28.59	1.85									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	79.80	9.79	8.15	79.16	9.50	8.33	78.87	9.26	8.52						
30	81.19	11.18	7.26	81.41	11.02	7.39	80.29	10.44	7.69						
35	82.58	12.20	6.77	81.82	11.84	6.91	80.53	11.15	7.22						
40	82.97	13.45	6.17	81.23	12.73	6.38	80.41	12.11	6.64						
45	82.36	15.34	5.37	81.64	14.40	5.67	80.54	13.63	5.91						
50	78.89	15.59	5.06	78.05	15.01	5.20	75.53	14.13	5.34						
55	73.41	16.21	4.53	72.79	15.62	4.66	70.88	14.76	4.80						
60	68.62	16.77	4.09	68.47	16.02	4.27	66.98	15.02	4.46						
65	68.29	17.69	3.86	67.13	16.91	3.97									
70	66.85	18.70	3.57	64.72	17.50	3.70									
75	59.36	17.98	3.30												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.3.2 90% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	32.76	18.81	1.74	37.99	18.93	2.01	46.50	16.41	2.83	50.99	17.19	2.97	49.87	16.54	3.02
30	33.22	20.28	1.64	38.59	20.42	1.89	47.08	19.41	2.43	53.00	19.82	2.67	51.07	18.47	2.77
35	33.96	21.28	1.60	38.95	20.96	1.86	48.28	21.79	2.22	54.32	21.74	2.50	54.00	21.43	2.52
40	34.70	23.11	1.50	41.12	24.32	1.69	49.48	24.93	1.98	54.59	23.31	2.34	53.03	22.41	2.37
45	35.88	25.88	1.39	42.51	27.92	1.52	50.03	27.54	1.82	54.98	24.70	2.23	54.00	25.09	2.15
50	36.36	28.38	1.28	43.90	30.52	1.44	50.71	29.99	1.69	58.05	27.92	2.08	57.16	27.34	2.09
55	36.39	29.56	1.23	43.61	31.10	1.40	50.66	31.74	1.60	58.34	29.92	1.95	54.90	29.05	1.89
60	36.37	30.95	1.18	43.67	31.80	1.37	52.50	33.78	1.55	57.68	34.77	1.66	57.41	33.75	1.70
65	27.82	24.09	1.16	32.37	24.47	1.32	42.14	28.67	1.47	49.58	31.10	1.59	50.50	31.36	1.61
70	23.00	21.27	1.08	28.37	22.57	1.26	35.60	25.50	1.40	43.89	28.63	1.53	48.42	31.08	1.56
75							33.53	29.03	1.15	38.40	28.57	1.34	39.29	28.88	1.36
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	49.12	15.90	3.09	52.25	15.05	3.47	52.66	14.66	3.59	53.26	14.12	3.77	57.35	12.79	4.48
30	49.78	17.16	2.90	52.33	17.05	3.07	52.68	16.46	3.20	53.21	15.67	3.40	58.74	13.51	4.35
35	52.64	19.74	2.67	53.40	18.59	2.87	54.00	18.37	2.94	54.84	16.81	3.26	63.00	15.00	4.20
40	51.99	21.63	2.40	53.07	20.08	2.64	54.00	19.63	2.75	55.39	19.02	2.91	63.00	16.85	3.74
45	53.39	23.79	2.24	53.89	21.87	2.46	55.80	22.14	2.52	56.11	20.38	2.75	63.00	17.91	3.52
50	56.56	26.84	2.11	56.72	25.01	2.27	57.64	23.93	2.41	59.03	22.52	2.62	63.00	20.55	3.07
55	56.17	29.02	1.94	56.93	27.15	2.10	57.60	26.07	2.21	58.88	24.75	2.38	63.00	21.05	2.99
60	57.23	32.43	1.76	57.46	31.15	1.84	57.80	29.40	1.97	58.29	27.15	2.15	63.00	22.90	2.75
65	51.11	31.26	1.63	55.34	32.25	1.72	56.16	30.45	1.84	57.39	28.17	2.04	63.00	23.53	2.68
70	51.44	32.23	1.60	54.23	31.98	1.70	55.47	31.45	1.76	57.33	29.25	1.96	58.08	25.97	2.24
75	39.89	28.78	1.39	42.48	29.32	1.45	45.30	30.64	1.48	49.52	32.53	1.52	50.36	26.94	1.87
80	39.26	30.90	1.27	42.16	29.74	1.42	43.01	29.81	1.44	44.29	29.92	1.48	45.80	27.23	1.68
85	36.45	34.71	1.05	39.06	33.51	1.17	40.56	33.36	1.22	42.80	33.14	1.29	43.06	31.40	1.37

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	63.50	13.63	4.66	69.32	12.63	5.49	72.68	11.88	6.12	74.13	11.47	6.46	72.11	9.75	7.40
30	67.05	15.03	4.46	70.64	14.41	4.90	73.19	13.43	5.45	75.33	13.12	5.74	74.56	11.18	6.67
35	68.43	15.86	4.32	71.96	15.37	4.68	74.59	14.71	5.07	76.16	14.00	5.44	75.18	12.35	6.08
40	68.85	17.49	3.94	71.47	16.44	4.35	75.10	16.00	4.69	76.81	15.27	5.03	74.97	13.37	5.61
45	68.73	19.31	3.56	71.89	18.36	3.92	76.50	17.73	4.32	78.01	17.28	4.51	74.70	14.58	5.12
50	69.80	21.76	3.21	74.19	20.39	3.64	77.47	19.39	4.00	78.42	18.60	4.22	73.79	15.28	4.83
55	64.92	21.03	3.09	67.49	20.02	3.37	69.44	18.79	3.70	69.05	17.63	3.92	67.27	14.83	4.54
60	64.01	21.31	3.00	65.21	19.78	3.30	65.73	18.71	3.51	65.67	17.57	3.74	61.46	15.40	3.99
65	63.87	23.22	2.75	64.64	21.45	3.01	64.07	20.27	3.16	64.29	18.39	3.50	61.25	15.85	3.86
70	59.21	24.79	2.39	60.88	24.11	2.53	63.44	21.31	2.98	63.71	19.26	3.31	60.80	17.00	3.58
75	51.61	24.21	2.13	52.44	23.34	2.25	54.17	19.99	2.71	55.13	17.98	3.07	54.12	16.31	3.32
80	48.07	24.22	1.98	50.69	23.90	2.12									
85	43.43	29.13	1.49	47.61	24.51	1.94									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	71.82	8.39	8.56	71.24	8.15	8.75	70.98	7.94	8.94						
30	73.07	9.59	7.62	73.27	9.44	7.76	72.26	8.95	8.07						
35	74.32	10.46	7.11	73.64	10.15	7.26	72.48	9.56	7.58						
40	74.67	11.53	6.48	73.11	10.91	6.70	72.37	10.38	6.97						
45	74.12	13.15	5.64	73.48	12.34	5.95	72.49	11.68	6.21						
50	71.00	13.36	5.31	70.25	12.86	5.46	67.97	12.12	5.61						
55	66.07	13.90	4.75	65.51	13.39	4.89	63.79	12.65	5.04						
60	61.76	14.37	4.30	61.62	13.73	4.49	60.28	12.87	4.68						
65	61.46	15.16	4.05	60.42	14.50	4.17									
70	60.17	16.03	3.75	58.25	15.00	3.88									
75	53.42	15.41	3.47												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.3.3 70% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	25.48	13.35	1.91	29.54	13.44	2.20	36.17	11.65	3.10	39.66	12.21	3.25	38.79	11.75	3.30
30	25.84	14.40	1.79	30.01	14.50	2.07	36.62	13.78	2.66	41.22	14.07	2.93	39.72	13.12	3.03
35	26.41	15.11	1.75	30.30	14.88	2.04	37.55	15.48	2.43	42.25	15.44	2.74	42.00	15.22	2.76
40	26.99	16.41	1.64	31.98	17.27	1.85	38.48	17.71	2.17	42.46	16.55	2.56	41.25	15.91	2.59
45	27.90	18.38	1.52	33.07	19.83	1.67	38.91	19.56	1.99	42.76	17.54	2.44	42.00	17.82	2.36
50	28.28	20.16	1.40	34.15	21.67	1.58	39.44	21.30	1.85	45.15	19.83	2.28	44.46	19.42	2.29
55	28.30	20.99	1.35	33.92	22.09	1.54	39.40	22.54	1.75	45.37	21.25	2.14	42.70	20.63	2.07
60	28.29	21.98	1.29	33.96	22.58	1.50	40.83	23.99	1.70	44.86	24.69	1.82	44.65	23.96	1.86
65	21.64	17.10	1.27	25.18	17.38	1.45	32.77	20.36	1.61	38.56	22.08	1.75	39.28	22.27	1.76
70	17.89	15.11	1.18	22.06	16.03	1.38	27.69	18.11	1.53	34.14	20.33	1.68	37.66	22.07	1.71
75							26.08	20.62	1.26	29.87	20.29	1.47	30.56	20.51	1.49
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	38.20	11.29	3.38	40.64	10.69	3.80	40.95	10.41	3.93	41.42	10.03	4.13	44.61	9.08	4.91
30	38.72	12.18	3.18	40.70	12.11	3.36	40.98	11.69	3.50	41.38	11.13	3.72	45.69	9.60	4.76
35	40.94	14.02	2.92	41.53	13.20	3.15	42.00	13.04	3.22	42.65	11.94	3.57	49.00	10.65	4.60
40	40.44	15.36	2.63	41.27	14.26	2.90	42.00	13.94	3.01	43.08	13.51	3.19	49.00	11.97	4.09
45	41.53	16.89	2.46	41.91	15.53	2.70	43.40	15.72	2.76	43.64	14.47	3.02	49.00	12.72	3.85
50	43.99	19.06	2.31	44.11	17.76	2.48	44.83	16.99	2.64	45.91	15.99	2.87	49.00	14.59	3.36
55	43.69	20.61	2.12	44.28	19.28	2.30	44.80	18.51	2.42	45.80	17.58	2.61	49.00	14.95	3.28
60	44.51	23.03	1.93	44.69	22.12	2.02	44.95	20.88	2.15	45.34	19.28	2.35	49.00	16.26	3.01
65	39.75	22.20	1.79	43.05	22.90	1.88	43.68	21.62	2.02	44.63	20.01	2.23	49.00	16.71	2.93
70	40.01	22.89	1.75	42.18	22.71	1.86	43.14	22.33	1.93	44.59	20.77	2.15	45.17	18.44	2.45
75	31.02	20.44	1.52	33.04	20.82	1.59	35.23	21.76	1.62	38.52	23.10	1.67	39.17	19.13	2.05
80	30.53	21.94	1.39	32.79	21.12	1.55	33.45	21.17	1.58	34.45	21.25	1.62	35.62	19.34	1.84
85	28.35	24.65	1.15	30.38	23.80	1.28	31.54	23.69	1.33	33.29	23.54	1.41	33.49	22.30	1.50

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	49.39	9.68	5.10	53.91	8.97	6.01	56.53	8.44	6.70	57.66	8.15	7.08	56.08	6.92	8.10
30	52.15	10.67	4.89	54.94	10.24	5.37	56.93	9.54	5.97	58.59	9.31	6.29	57.99	7.94	7.30
35	53.22	11.26	4.73	55.97	10.91	5.13	58.02	10.45	5.55	59.23	9.94	5.96	58.47	8.77	6.66
40	53.55	12.42	4.31	55.59	11.68	4.76	58.41	11.36	5.14	59.74	10.85	5.51	58.31	9.50	6.14
45	53.46	13.71	3.90	55.92	13.04	4.29	59.50	12.59	4.73	60.68	12.27	4.95	58.10	10.35	5.61
50	54.29	15.45	3.51	57.70	14.48	3.98	60.25	13.77	4.38	60.99	13.21	4.62	57.39	10.85	5.29
55	50.49	14.93	3.38	52.49	14.22	3.69	54.01	13.34	4.05	53.70	12.52	4.29	52.32	10.53	4.97
60	49.78	15.14	3.29	50.72	14.05	3.61	51.12	13.29	3.85	51.07	12.48	4.09	47.80	10.94	4.37
65	49.68	16.49	3.01	50.27	15.23	3.30	49.83	14.40	3.46	50.00	13.06	3.83	47.64	11.26	4.23
70	46.05	17.60	2.62	47.35	17.12	2.77	49.34	15.13	3.26	49.55	13.68	3.62	47.29	12.07	3.92
75	40.14	17.20	2.33	40.79	16.57	2.46	42.13	14.20	2.97	42.88	12.77	3.36	42.09	11.58	3.63
80	37.38	17.20	2.17	39.43	16.97	2.32									
85	33.78	20.69	1.63	37.03	17.41	2.13									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	55.86	5.96	9.37	55.41	5.78	9.58	55.21	5.64	9.79						
30	56.83	6.81	8.35	56.99	6.71	8.50	56.20	6.36	8.84						
35	57.81	7.42	7.79	57.27	7.21	7.95	56.37	6.79	8.30						
40	58.08	8.19	7.10	56.86	7.75	7.34	56.29	7.37	7.64						
45	57.65	9.34	6.18	57.15	8.76	6.52	56.38	8.30	6.80						
50	55.22	9.49	5.82	54.64	9.13	5.98	52.87	8.60	6.14						
55	51.39	9.87	5.21	50.95	9.51	5.36	49.61	8.99	5.52						
60	48.03	10.21	4.71	47.93	9.75	4.91	46.88	9.14	5.13						
65	47.80	10.77	4.44	46.99	10.30	4.56									
70	46.80	11.39	4.11	45.30	10.65	4.25									
75	41.55	10.94	3.80												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.3.4 50% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	18.20	8.78	2.07	21.10	8.83	2.39	25.83	7.66	3.37	28.33	8.02	3.53	27.70	7.72	3.59
30	18.46	9.47	1.95	21.44	9.53	2.25	26.15	9.06	2.89	29.45	9.25	3.18	28.37	8.62	3.29
35	18.87	9.93	1.90	21.64	9.78	2.21	26.82	10.17	2.64	30.18	10.14	2.97	30.00	10.00	3.00
40	19.28	10.78	1.79	22.84	11.35	2.01	27.49	11.64	2.36	30.33	10.88	2.79	29.46	10.46	2.82
45	19.93	12.08	1.65	23.62	13.03	1.81	27.79	12.85	2.16	30.55	11.53	2.65	30.00	11.71	2.56
50	20.20	13.25	1.52	24.39	14.24	1.71	28.17	14.00	2.01	32.25	13.03	2.47	31.75	12.76	2.49
55	20.22	13.79	1.47	24.23	14.51	1.67	28.15	14.81	1.90	32.41	13.96	2.32	30.50	13.56	2.25
60	20.21	14.44	1.40	24.26	14.84	1.63	29.17	15.76	1.85	32.05	16.23	1.97	31.89	15.75	2.03
65	15.46	11.24	1.38	17.99	11.42	1.57	23.41	13.38	1.75	27.55	14.51	1.90	28.06	14.63	1.92
70	12.78	9.93	1.29	15.76	10.53	1.50	19.78	11.90	1.66	24.39	13.36	1.82	26.90	14.50	1.86
75							18.63	13.55	1.37	21.34	13.33	1.60	21.83	13.48	1.62
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	27.29	7.42	3.68	29.03	7.02	4.13	29.25	6.84	4.28	29.59	6.59	4.49	31.86	5.97	5.34
30	27.66	8.01	3.45	29.07	7.96	3.65	29.27	7.68	3.81	29.56	7.31	4.04	32.64	6.31	5.17
35	29.24	9.21	3.17	29.67	8.67	3.42	30.00	8.57	3.50	30.47	7.85	3.88	35.00	7.00	5.00
40	28.89	10.09	2.86	29.48	9.37	3.15	30.00	9.16	3.28	30.77	8.87	3.47	35.00	7.87	4.45
45	29.66	11.10	2.67	29.94	10.21	2.93	31.00	10.33	3.00	31.17	9.51	3.28	35.00	8.36	4.19
50	31.42	12.53	2.51	31.51	11.67	2.70	32.02	11.17	2.87	32.79	10.51	3.12	35.00	9.59	3.65
55	31.21	13.54	2.30	31.63	12.67	2.50	32.00	12.17	2.63	32.71	11.55	2.83	35.00	9.82	3.56
60	31.79	15.14	2.10	31.92	14.54	2.20	32.11	13.72	2.34	32.39	12.67	2.56	35.00	10.69	3.28
65	28.40	14.59	1.95	30.75	15.05	2.04	31.20	14.21	2.20	31.88	13.15	2.42	35.00	10.98	3.19
70	28.58	15.04	1.90	30.13	14.92	2.02	30.82	14.67	2.10	31.85	13.65	2.33	32.27	12.12	2.66
75	22.16	13.43	1.65	23.60	13.68	1.73	25.17	14.30	1.76	27.51	15.18	1.81	27.98	12.57	2.23
80	21.81	14.42	1.51	23.42	13.88	1.69	23.90	13.91	1.72	24.61	13.96	1.76	25.45	12.71	2.00
85	20.25	16.20	1.25	21.70	15.64	1.39	22.53	15.57	1.45	23.78	15.47	1.54	23.92	14.65	1.63

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	35.28	6.36	5.55	38.51	5.89	6.54	40.38	5.77	6.99	41.19	5.58	7.38	40.06	4.74	8.45
30	37.25	7.01	5.31	39.24	6.73	5.83	40.66	6.53	6.23	41.85	6.38	6.56	41.42	5.44	7.62
35	38.02	7.40	5.14	39.98	7.17	5.58	41.44	7.15	5.80	42.31	6.81	6.22	41.77	6.01	6.95
40	38.25	8.16	4.69	39.71	7.67	5.18	41.72	7.78	5.36	42.67	7.42	5.75	41.65	6.50	6.41
45	38.19	9.01	4.24	39.94	8.57	4.66	42.50	8.62	4.93	43.34	8.40	5.16	41.50	7.09	5.86
50	38.78	10.16	3.82	41.22	9.52	4.33	43.04	9.43	4.57	43.57	9.04	4.82	41.00	7.43	5.52
55	36.07	9.81	3.68	37.50	9.34	4.01	38.58	9.13	4.22	38.36	8.57	4.48	37.37	7.21	5.18
60	35.56	9.95	3.58	36.23	9.23	3.93	36.52	9.10	4.01	36.48	8.54	4.27	34.15	7.49	4.56
65	35.49	10.84	3.28	35.91	10.01	3.59	35.60	9.85	3.61	35.72	8.94	4.00	34.03	7.71	4.42
70	32.90	11.57	2.84	33.82	11.25	3.01	35.24	10.36	3.40	35.39	9.36	3.78	33.78	8.26	4.09
75	28.67	11.30	2.54	29.14	10.89	2.68	30.09	9.72	3.10	30.63	8.74	3.50	30.06	7.93	3.79
80	26.70	11.30	2.36	28.16	11.15	2.52									
85	24.13	13.59	1.77	26.45	11.44	2.31									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	39.90	4.08	9.78	39.58	3.96	10.00	39.44	3.86	10.22						
30	40.59	4.66	8.71	40.71	4.59	8.87	40.14	4.35	9.23						
35	41.29	5.08	8.12	40.91	4.93	8.29	40.27	4.65	8.66						
40	41.49	5.60	7.40	40.62	5.30	7.66	40.21	5.05	7.97						
45	41.18	6.39	6.44	40.82	6.00	6.80	40.27	5.68	7.09						
50	39.45	6.49	6.07	39.03	6.25	6.24	37.76	5.89	6.41						
55	36.71	6.75	5.43	36.39	6.51	5.59	35.44	6.15	5.76						
60	34.31	6.99	4.91	34.23	6.68	5.13	33.49	6.26	5.35						
65	34.14	7.37	4.63	33.56	7.05	4.76									
70	33.43	7.79	4.29	32.36	7.29	4.44									
75	29.68	7.49	3.96												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.3.5 30% heating capacity

HEATING (Test standard : EN14511)

LWT	Outdoor temperature (DB)														
	-25			-20			-15			-10			-7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	10.92	4.39	2.49	12.66	4.42	2.87	15.50	3.83	4.05	17.00	4.01	4.24	16.62	3.86	4.31
30	11.07	4.73	2.34	12.86	4.76	2.70	15.69	4.53	3.46	17.67	4.62	3.82	17.02	4.31	3.95
35	11.32	4.96	2.28	12.98	4.89	2.66	16.09	5.08	3.17	18.11	5.07	3.57	18.00	5.00	3.60
40	11.57	5.39	2.14	13.71	5.68	2.41	16.49	5.82	2.83	18.20	5.44	3.35	17.68	5.23	3.38
45	11.96	6.04	1.98	14.17	6.52	2.17	16.68	6.43	2.60	18.33	5.76	3.18	18.00	5.85	3.07
50	12.12	6.62	1.83	14.63	7.12	2.06	16.90	7.00	2.42	19.35	6.52	2.97	19.05	6.38	2.99
55	12.13	6.90	1.76	14.54	7.26	2.00	16.89	7.41	2.28	19.45	6.98	2.79	18.30	6.78	2.70
60	12.12	7.22	1.68	14.56	7.42	1.96	17.50	7.88	2.22	19.23	8.11	2.37	19.14	7.87	2.43
65	9.27	5.62	1.65	10.79	5.71	1.89	14.05	6.69	2.10	16.53	7.26	2.28	16.83	7.32	2.30
70	7.67	4.96	1.54	9.46	5.27	1.80	11.87	5.95	2.00	14.63	6.68	2.19	16.14	7.25	2.23
75							11.18	6.77	1.65	12.80	6.67	1.92	13.10	6.74	1.94
80															
85															
LWT	Outdoor temperature (DB)														
	-5			0			2			5			7		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	16.37	3.71	4.41	17.42	3.51	4.96	17.55	3.42	5.13	17.75	3.29	5.39	19.12	2.98	6.40
30	16.59	4.00	4.15	17.44	3.98	4.39	17.56	3.84	4.57	17.74	3.66	4.85	19.58	3.15	6.21
35	17.55	4.61	3.81	17.80	4.34	4.10	18.00	4.29	4.20	18.28	3.92	4.66	21.00	3.50	6.00
40	17.33	5.05	3.43	17.69	4.68	3.78	18.00	4.58	3.93	18.46	4.44	4.16	21.00	3.93	5.34
45	17.80	5.55	3.21	17.96	5.10	3.52	18.60	5.17	3.60	18.70	4.76	3.93	21.00	4.18	5.02
50	18.85	6.26	3.01	18.91	5.83	3.24	19.21	5.58	3.44	19.68	5.26	3.74	21.00	4.79	4.38
55	18.72	6.77	2.77	18.98	6.34	3.00	19.20	6.08	3.16	19.63	5.78	3.40	21.00	4.91	4.28
60	19.08	7.57	2.52	19.15	7.27	2.64	19.27	6.86	2.81	19.43	6.34	3.07	21.00	5.34	3.93
65	17.04	7.29	2.34	18.45	8.06	2.29	18.72	7.10	2.64	19.13	7.04	2.72	21.00	5.49	3.82
70	17.15	7.52	2.28	18.08	7.99	2.26	18.49	7.34	2.52	19.11	7.31	2.61	19.36	6.06	3.19
75	13.30	6.72	1.98	14.16	7.33	1.93	15.10	7.15	2.11	16.51	8.13	2.03	16.79	6.29	2.67
80	13.09	7.21	1.81	14.05	7.43	1.89	14.34	6.96	2.06	14.76	7.48	1.97	15.27	6.35	2.40
85	12.15	8.10	1.50	13.02	8.38	1.55	13.52	7.78	1.74	14.27	8.29	1.72	14.35	7.33	1.96

LWT	Outdoor temperature (DB)														
	10			15			20			25			30		
	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP	HC	PI	COP
25	21.17	3.18	6.65	23.11	3.16	7.32	24.23	3.08	7.87	24.71	2.97	8.31	24.04	2.62	9.16
30	22.35	3.51	6.37	23.55	3.60	6.53	24.40	3.48	7.01	25.11	3.40	7.38	24.85	3.01	8.26
35	22.81	3.70	6.17	23.99	3.84	6.24	24.86	3.81	6.52	25.39	3.63	6.99	25.06	3.33	7.53
40	22.95	4.08	5.63	23.82	4.11	5.80	25.03	4.15	6.03	25.60	3.96	6.47	24.99	3.60	6.94
45	22.91	4.51	5.08	23.96	4.59	5.22	25.50	4.60	5.55	26.00	4.48	5.81	24.90	3.92	6.34
50	23.27	5.08	4.58	24.73	5.10	4.85	25.82	5.03	5.14	26.14	4.82	5.42	24.60	4.11	5.98
55	21.64	4.91	4.41	22.50	5.01	4.49	23.15	4.87	4.75	23.02	4.57	5.04	22.42	3.99	5.62
60	21.34	4.97	4.29	21.74	4.94	4.40	21.91	5.04	4.35	21.89	4.73	4.63	20.49	4.15	4.94
65	21.29	6.25	3.41	21.55	5.77	3.73	21.36	5.46	3.91	21.43	4.95	4.33	20.42	4.27	4.79
70	19.74	6.67	2.96	20.29	6.49	3.13	21.15	5.74	3.69	21.24	5.19	4.10	20.27	4.58	4.43
75	17.20	6.52	2.64	17.48	6.28	2.78	18.06	5.38	3.35	18.38	4.84	3.80	18.04	4.39	4.11
80	16.02	6.52	2.46	16.90	6.43	2.63									
85	14.48	7.84	1.85	15.87	6.60	2.40									
LWT	Outdoor temperature (DB)														
	35			40			43								
	HC	PI	COP	HC	PI	COP	HC	PI	COP						
25	23.94	2.35	10.19	23.75	2.28	10.41	23.66	2.22	10.64						
30	24.36	2.68	9.08	24.42	2.64	9.24	24.09	2.51	9.61						
35	24.77	2.93	8.46	24.55	2.84	8.64	24.16	2.68	9.03						
40	24.89	3.23	7.71	24.37	3.06	7.98	24.12	2.91	8.30						
45	24.71	3.68	6.71	24.49	3.46	7.09	24.16	3.27	7.39						
50	23.67	3.74	6.33	23.42	3.46	6.76	22.66	3.26	6.95						
55	22.02	3.74	5.89	21.84	3.60	6.06	21.26	3.41	6.24						
60	20.59	3.87	5.32	20.54	3.70	5.56	20.09	3.46	5.80						
65	20.49	4.08	5.02	20.14	3.90	5.16									
70	20.06	4.32	4.65	19.42	4.04	4.81									
75	17.81	4.15	4.29												
80															
85															

Abbreviations:

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for Outdoor air temperature (°C)

CC: Total cooling capacity (kW)

PI: Power input (kW)

4.3.6 100% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	34.85	9.25	3.77	35.38	10.13	3.49	37.23	11.82	3.15	37.69	12.59	2.99	38.90	14.64	2.66
5	38.73	8.23	4.71	39.31	9.00	4.37	41.36	10.50	3.94	41.88	11.20	3.74	43.23	13.01	3.32
7	42.51	8.71	4.88	43.15	9.54	4.52	45.41	11.13	4.08	45.97	11.86	3.88	47.45	13.78	3.44
10	48.19	9.44	5.10	48.92	10.34	4.73	51.47	12.06	4.27	52.11	12.85	4.06	53.79	14.94	3.60
15	57.65	10.50	5.49	58.52	11.47	5.10	61.58	13.39	4.60	62.34	14.27	4.37	64.35	16.59	3.88
18	61.11	10.49	5.83	62.03	11.47	5.41	65.27	13.39	4.88	66.08	14.27	4.63	68.21	16.59	4.11
20	63.42	10.48	6.05	64.37	11.47	5.61	67.73	13.39	5.06	68.58	14.27	4.81	70.79	16.59	4.27
25	66.59	10.19	6.53	67.59	11.16	6.06	71.12	13.01	5.46	72.01	13.87	5.19	74.32	16.12	4.61
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	39.30	16.80	2.34	40.46	17.77	2.28	39.69	18.26	2.17	39.02	18.69	2.09	38.39	18.98	2.02
0	46.24	17.78	2.60	49.61	19.61	2.53	48.70	19.94	2.44	47.90	20.31	2.36	47.16	21.09	2.24
5	50.54	15.46	3.27	69.09	25.22	2.74	65.80	24.74	2.66	63.67	23.99	2.65	61.68	23.76	2.60
7	55.48	16.37	3.39	71.17	24.25	2.94	68.39	24.08	2.84	66.88	23.76	2.81	65.27	23.28	2.80
10	62.89	17.74	3.54	74.30	22.79	3.26	72.26	23.09	3.13	69.93	22.67	3.08	68.15	22.75	3.00
15	75.24	19.70	3.82	79.50	21.03	3.78	78.72	21.87	3.60	77.20	21.81	3.54	76.61	22.61	3.39
18	79.75	19.70	4.05	84.70	21.16	4.00	84.06	21.76	3.86	82.87	21.79	3.80	81.09	22.08	3.67
20	82.76	19.70	4.20	88.17	21.24	4.15	87.61	21.69	4.04	86.65	21.77	3.98	84.08	21.72	3.87
25	86.90	19.15	4.54	96.83	21.42	4.52	96.51	21.54	4.48	96.10	21.74	4.42	91.54	21.04	4.35
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	37.27	18.64	2.00	36.64	22.59	1.62	31.66	20.64	1.53	28.95	23.85	1.21			
0	45.84	19.74	2.32	42.67	22.49	1.90	34.40	20.33	1.69	30.51	23.72	1.29			
5	59.95	22.52	2.66	56.20	22.50	2.50	38.60	18.23	2.12	33.54	21.06	1.59			
7	65.00	23.21	2.80	57.27	21.48	2.67	41.20	18.32	2.25	35.27	19.29	1.83			
10	66.89	23.19	2.89	59.81	19.95	3.00	45.11	18.80	2.40	37.86	17.91	2.11			
15	68.00	20.61	3.30	60.58	19.39	3.12	51.61	18.68	2.76	42.19	17.22	2.45			
18	70.00	16.87	4.15	64.07	19.43	3.30	54.64	18.25	2.99	44.09	16.66	2.65			
20	72.49	16.51	4.39	66.37	19.20	3.46	56.66	17.63	3.21	45.36	15.69	2.89			
25	84.19	19.56	4.31	74.12	19.17	3.87	61.70	17.40	3.55	48.53	15.53	3.12			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.3.7 90% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	31.37	7.93	3.95	31.84	8.68	3.67	33.50	10.13	3.31	33.92	10.80	3.14	35.01	12.55	2.79
5	34.85	7.05	4.94	35.38	7.72	4.58	37.23	9.00	4.13	37.69	9.60	3.93	38.90	11.16	3.49
7	38.26	7.47	5.12	38.84	8.17	4.75	40.86	9.54	4.29	41.37	10.16	4.07	42.71	11.82	3.61
10	43.37	8.09	5.36	44.02	8.86	4.97	46.32	10.33	4.48	46.90	11.01	4.26	48.41	12.80	3.78
15	51.89	8.98	5.77	52.67	9.84	5.36	55.42	11.47	4.83	56.11	12.23	4.59	57.92	14.22	4.07
18	55.00	8.98	6.12	55.83	9.84	5.68	58.74	11.47	5.12	59.48	12.23	4.86	61.39	14.22	4.32
20	57.07	8.98	6.35	57.93	9.84	5.89	60.96	11.47	5.31	61.72	12.23	5.05	63.71	14.22	4.48
25	59.93	8.73	6.86	60.83	9.56	6.36	64.01	11.15	5.74	64.81	11.89	5.45	66.89	13.82	4.84
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	35.37	14.40	2.46	36.41	15.23	2.39	35.73	15.65	2.28	35.11	16.02	2.19	34.55	16.27	2.12
0	41.61	15.24	2.73	44.65	16.81	2.66	43.83	17.09	2.56	43.11	17.41	2.48	42.44	18.08	2.35
5	45.49	13.25	3.43	62.18	21.61	2.88	59.22	21.20	2.79	57.30	20.56	2.79	55.51	20.36	2.73
7	49.93	14.03	3.56	64.06	20.78	3.08	61.55	20.64	2.98	60.19	20.37	2.95	58.74	19.95	2.94
10	56.60	15.21	3.72	66.87	19.53	3.42	65.03	19.79	3.29	62.94	19.43	3.24	61.33	19.50	3.14
15	67.71	16.88	4.01	71.55	18.03	3.97	70.85	18.74	3.78	69.48	18.69	3.72	68.95	19.37	3.56
18	71.78	16.88	4.25	76.23	18.14	4.20	75.65	18.65	4.06	74.58	18.67	3.99	72.98	18.92	3.86
20	74.48	16.88	4.41	79.35	18.21	4.36	78.85	18.59	4.24	77.99	18.66	4.18	75.67	18.62	4.06
25	78.21	16.41	4.77	87.15	18.36	4.75	86.86	18.46	4.70	86.49	18.64	4.64	82.39	18.04	4.57
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	33.54	15.98	2.10	32.98	19.36	1.70	28.49	17.69	1.61	26.05	20.45	1.27			
0	41.26	16.92	2.44	38.40	19.28	1.99	30.96	17.43	1.78	27.46	20.33	1.35			
5	53.95	19.30	2.80	50.58	19.29	2.62	34.74	15.62	2.22	30.18	18.05	1.67			
7	55.37	19.55	2.83	51.55	18.41	2.80	37.08	15.70	2.36	31.74	16.54	1.92			
10	60.20	19.87	3.03	53.83	17.10	3.15	40.59	16.12	2.52	34.08	15.35	2.22			
15	61.20	17.66	3.47	54.52	16.62	3.28	46.45	16.01	2.90	37.97	14.76	2.57			
18	63.62	15.55	4.09	57.66	16.66	3.46	49.17	15.65	3.14	39.68	14.28	2.78			
20	65.24	14.15	4.61	59.73	16.45	3.63	50.99	15.11	3.37	40.82	13.45	3.04			
25	75.77	16.74	4.53	66.71	16.43	4.06	55.53	14.91	3.72	43.68	13.31	3.28			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.3.8 70% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	24.40	5.63	4.33	24.77	6.17	4.02	26.06	7.19	3.62	26.38	7.67	3.44	27.23	8.91	3.06
5	27.11	5.01	5.41	27.52	5.48	5.02	28.95	6.39	4.53	29.32	6.81	4.30	30.26	7.92	3.82
7	29.76	5.30	5.61	30.21	5.81	5.20	31.78	6.77	4.69	32.18	7.22	4.46	33.22	8.39	3.96
10	33.73	5.75	5.87	34.24	6.29	5.44	36.03	7.34	4.91	36.48	7.82	4.66	37.65	9.09	4.14
15	40.36	6.38	6.32	40.96	6.98	5.87	43.10	8.15	5.29	43.64	8.68	5.03	45.05	10.10	4.46
18	42.78	6.38	6.70	43.42	6.98	6.22	45.69	8.15	5.61	46.26	8.68	5.33	47.75	10.10	4.73
20	44.39	6.38	6.96	45.06	6.98	6.45	47.41	8.15	5.82	48.00	8.68	5.53	49.55	10.10	4.91
25	46.61	6.20	7.51	47.31	6.79	6.97	49.78	7.92	6.28	50.40	8.44	5.97	52.03	9.81	5.30
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	27.51	10.22	2.69	28.32	10.82	2.62	27.79	11.12	2.50	27.31	11.37	2.40	26.87	11.55	2.33
0	32.37	10.82	2.99	34.73	11.94	2.91	34.09	12.14	2.81	33.53	12.36	2.71	33.01	12.84	2.57
5	35.38	9.41	3.76	48.37	15.35	3.15	46.06	15.06	3.06	44.57	14.60	3.05	43.18	14.46	2.99
7	38.84	9.96	3.90	49.82	14.76	3.38	47.87	14.66	3.27	46.81	14.47	3.24	45.69	14.17	3.22
10	44.02	10.80	4.08	52.01	13.87	3.75	50.58	14.05	3.60	48.95	13.80	3.55	47.70	13.85	3.44
15	52.67	11.99	4.39	55.65	12.80	4.35	55.10	13.31	4.14	54.04	13.27	4.07	53.63	13.76	3.90
18	55.83	11.99	4.66	59.29	12.88	4.60	58.84	13.24	4.44	58.01	13.26	4.37	56.76	13.44	4.22
20	57.93	11.99	4.83	61.72	12.93	4.77	61.33	13.20	4.65	60.66	13.25	4.58	58.85	13.22	4.45
25	60.83	11.66	5.22	67.78	13.04	5.20	67.56	13.11	5.15	67.27	13.23	5.08	64.08	12.81	5.00
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	26.09	11.35	2.30	25.65	13.75	1.87	22.16	12.56	1.76	20.26	14.52	1.40			
0	32.09	12.01	2.67	29.87	13.69	2.18	24.08	12.38	1.95	21.35	14.44	1.48			
5	41.96	13.70	3.06	39.34	13.70	2.87	27.02	11.09	2.44	23.48	12.82	1.83			
7	43.07	13.88	3.10	40.09	13.07	3.07	28.84	11.15	2.59	24.69	11.74	2.10			
10	46.83	14.11	3.32	41.87	12.14	3.45	31.57	11.44	2.76	26.50	10.90	2.43			
15	47.60	12.54	3.80	42.40	11.80	3.59	36.13	11.37	3.18	29.53	10.48	2.82			
18	49.48	11.05	4.48	44.85	11.83	3.79	38.25	11.11	3.44	30.86	10.14	3.04			
20	50.74	10.05	5.05	46.46	11.68	3.98	39.66	10.73	3.69	31.75	9.55	3.32			
25	58.93	11.89	4.96	51.88	11.67	4.45	43.19	10.59	4.08	33.97	9.45	3.59			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.3.9 50% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	17.43	3.70	4.71	17.69	4.05	4.37	18.61	4.73	3.94	18.85	5.04	3.74	19.45	5.86	3.32
5	19.36	3.29	5.89	19.66	3.60	5.46	20.68	4.20	4.92	20.94	4.48	4.68	21.61	5.21	4.15
7	21.26	3.48	6.10	21.58	3.81	5.66	22.70	4.45	5.10	22.99	4.74	4.85	23.73	5.51	4.30
10	24.09	3.78	6.38	24.46	4.13	5.92	25.73	4.82	5.34	26.06	5.14	5.07	26.89	5.98	4.50
15	28.83	4.19	6.87	29.26	4.59	6.38	30.79	5.35	5.75	31.17	5.71	5.46	32.18	6.63	4.85
18	30.55	4.19	7.29	31.02	4.59	6.76	32.63	5.35	6.09	33.04	5.71	5.79	34.11	6.63	5.14
20	31.71	4.19	7.56	32.19	4.59	7.01	33.87	5.35	6.32	34.29	5.71	6.01	35.39	6.63	5.34
25	33.29	4.08	8.17	33.80	4.46	7.57	35.56	5.21	6.83	36.00	5.55	6.49	37.16	6.45	5.76
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	19.65	6.72	2.92	20.23	7.11	2.85	19.85	7.31	2.72	19.51	7.47	2.61	19.19	7.59	2.53
0	23.12	7.11	3.25	24.81	7.85	3.16	24.35	7.97	3.05	23.95	8.12	2.95	23.58	8.44	2.79
5	25.27	6.18	4.09	34.55	10.09	3.42	32.90	9.90	3.33	31.83	9.60	3.32	30.84	9.50	3.25
7	27.74	6.55	4.24	35.59	9.70	3.67	34.19	9.63	3.55	33.44	9.51	3.52	32.64	9.31	3.51
10	31.44	7.10	4.43	37.15	9.12	4.08	36.13	9.23	3.91	34.97	9.07	3.86	34.07	9.10	3.74
15	37.62	7.88	4.77	39.75	8.41	4.72	39.36	8.75	4.50	38.60	8.72	4.43	38.31	9.04	4.24
18	39.88	7.88	5.06	42.35	8.46	5.00	42.03	8.70	4.83	41.44	8.71	4.75	40.54	8.83	4.59
20	41.38	7.88	5.25	44.08	8.50	5.19	43.81	8.67	5.05	43.33	8.71	4.98	42.04	8.69	4.84
25	43.45	7.66	5.67	48.42	8.57	5.65	48.26	8.62	5.60	48.05	8.70	5.53	45.77	8.42	5.44
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	18.63	7.46	2.50	18.32	9.04	2.03	15.83	8.26	1.92	14.47	9.54	1.52			
0	22.92	7.89	2.90	21.34	9.00	2.37	17.20	8.13	2.11	15.25	9.49	1.61			
5	29.97	9.01	3.33	28.10	9.00	3.12	19.30	7.29	2.65	16.77	8.42	1.99			
7	30.76	9.12	3.37	28.64	8.59	3.33	20.60	7.33	2.81	17.63	7.72	2.28			
10	33.45	9.27	3.61	29.91	7.98	3.75	22.55	7.52	3.00	18.93	7.17	2.64			
15	34.00	8.24	4.13	30.29	7.75	3.91	25.81	7.47	3.45	21.10	6.89	3.06			
18	35.35	7.26	4.87	32.04	7.77	4.12	27.32	7.30	3.74	22.05	6.66	3.31			
20	36.25	6.61	5.48	33.19	7.68	4.32	28.33	7.05	4.02	22.68	6.28	3.61			
25	42.10	7.81	5.39	37.06	7.67	4.83	30.85	6.96	4.43	24.27	6.21	3.91			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

4.3.10 30% cooling capacity

COOLING (Test standard : EN14511)

LWT	DB														
	-15			-10			-5			0			5		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5															
0	10.46	1.63	6.40	10.61	1.79	5.94	11.17	2.09	5.36	11.31	2.22	5.09	11.67	2.58	4.52
5	11.62	1.45	8.00	11.79	1.59	7.42	12.41	1.85	6.69	12.56	1.98	6.36	12.97	2.30	5.65
7	12.75	1.54	8.30	12.95	1.68	7.69	13.62	1.96	6.94	13.79	2.09	6.59	14.24	2.43	5.85
10	14.46	1.67	8.68	14.67	1.82	8.05	15.44	2.13	7.26	15.63	2.27	6.89	16.14	2.64	6.12
15	17.30	1.85	9.35	17.56	2.02	8.67	18.47	2.36	7.82	18.70	2.52	7.43	19.31	2.93	6.60
18	18.33	1.85	9.91	18.61	2.02	9.19	19.58	2.36	8.29	19.83	2.52	7.87	20.46	2.93	6.99
20	19.02	1.85	10.29	19.31	2.02	9.54	20.32	2.36	8.60	20.57	2.52	8.17	21.24	2.93	7.26
25	19.98	1.80	11.11	20.28	1.97	10.30	21.34	2.30	9.29	21.60	2.45	8.83	22.30	2.85	7.84
LWT	DB														
	10			15			20			25			30		
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER
-5	11.79	2.96	3.98	12.14	3.14	3.87	11.91	3.22	3.69	11.70	3.30	3.55	11.52	3.35	3.44
0	13.87	3.14	4.42	14.88	3.46	4.30	14.61	3.52	4.15	14.37	3.58	4.01	14.15	3.72	3.80
5	15.16	2.73	5.56	20.73	4.45	4.66	19.74	4.37	4.52	19.10	4.23	4.51	18.50	4.19	4.41
7	16.64	2.89	5.76	21.35	4.28	4.99	20.52	4.25	4.83	20.06	4.19	4.78	19.58	4.11	4.77
10	18.87	3.13	6.03	22.29	4.02	5.54	21.68	4.07	5.32	20.98	4.00	5.24	20.44	4.02	5.09
15	22.57	3.48	6.49	23.85	3.71	6.43	23.62	3.86	6.12	23.16	3.85	6.02	22.98	3.99	5.76
18	23.93	3.48	6.88	25.41	3.73	6.80	25.22	3.84	6.57	24.86	3.84	6.47	24.33	3.90	6.24
20	24.83	3.48	7.14	26.45	3.75	7.06	26.28	3.83	6.87	26.00	3.84	6.77	25.22	3.83	6.58
25	26.07	3.38	7.71	29.05	3.78	7.68	28.95	3.80	7.62	28.83	3.84	7.51	27.46	3.71	7.39
LWT	DB														
	35			40			45			48					
	CC	PI	EER	CC	PI	EER	CC	PI	EER	CC	PI	EER			
-5	11.18	3.29	3.40	10.99	3.99	2.76	9.50	3.64	2.61	8.68	4.21	2.06			
0	13.75	3.48	3.95	12.80	3.97	3.23	10.32	3.59	2.88	9.15	4.19	2.19			
5	17.98	3.97	4.53	16.86	3.97	4.25	11.58	3.22	3.60	10.06	3.72	2.71			
7	18.46	4.02	4.59	17.18	3.79	4.53	12.36	3.23	3.82	10.58	3.40	3.11			
10	20.07	4.09	4.90	17.94	3.52	5.10	13.53	3.32	4.08	11.36	3.16	3.59			
15	20.40	4.58	4.45	18.17	3.42	5.31	15.48	3.30	4.70	12.66	3.04	4.17			
18	21.21	4.03	5.26	19.22	3.43	5.61	16.39	3.22	5.09	13.23	2.94	4.50			
20	21.75	3.67	5.93	19.91	3.39	5.88	17.00	3.11	5.46	13.61	2.77	4.92			
25	25.26	3.45	7.33	22.24	3.38	6.57	18.51	3.07	6.03	14.56	2.74	5.31			

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

DB: Dry-bulb temperature for outdoor air temperature (°C)

5 Capacity correction

5.1 Plate Heat Exchangers- Fouling Coefficients

A	B	C	D
0.0176	1.000	1.000	1.000
0.0440	0.978	0.986	0.992
0.0880	0.957	0.974	0.983
0.1320	0.938	0.962	0.975

A = Fouling coefficient ($\text{m}^2 \cdot ^\circ\text{C}/\text{kW}$)

B = Cooling capacity correction coefficient

C = Absorption power correction coefficient

D = Energy efficiency ratio correction coefficient

5.2 Air Heat Exchanger - Altitude Correction Factor

A	0	300	600	900	1200	1500	1800
B	1013	977	942	908	875	843	812
C	1.000	0.993	0.986	0.979	0.973	0.967	0.960
D	1.000	1.005	1.009	1.015	1.021	1.026	1.031

A = Altitude (m)

B = Atmospheric pressure (mbar)

C = Cooling capacity correction coefficient

D = Absorption power correction coefficient

- The maximum operating altitude is 2,000 m above sea level.
- If the unit is installed in an area with an altitude of 1000 to 2000 m, please contact the factory.

5.3 Minimum Antifreeze Percentage in Low-Temperature Air Environment

AAT (2)	0	-5	-10	-18
A(1)	10%	20%	30%	40%
AAT (2)	1	-4	-9	-17
B(1)	10%	20%	30%	40%

AAT=Ambient air temperature ($^\circ\text{C}$)

(2) A=Ethylene glycol (%)

(1) B=Propylene glycol (%) (1)

(1)The minimum percentage of antifreeze required to prevent water circuits from freezing at the specified ambient air temperature.

(2)Ambient air temperature overrunning the running limits of the unit.

Even when the unit is not running, the water circuit needs to be protected in winter.

According to the expected minimum environment temperature, it shall be ensured that the concentration of the ethylene glycol solution in the water system complies with the values specified in the following table. After adding ethylene glycol, the freezing point of the water will decrease, and it will cause the performance of the unit to deteriorate. The system needs to make corrections to the unit capacity, water flow rate and pipeline pressure drop. The relevant correction coefficients are detailed in the data mentioned in the following table.

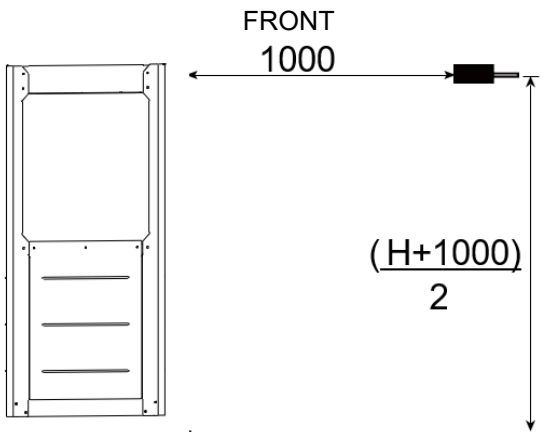
5.3.1 Ethylene Glycol (Toxic)

Concentration of ethylene glycol (%)	Modification coefficient				Minimum outdoor temperature(°C)
	Cooling capacity modification	Power input modification	Water resistance	Water flow modification	
10	0.991	0.996	1.070	1.013	0
20	0.982	0.992	1.129	1.040	-5
30	0.972	0.986	1.181	1.074	-10
40	0.961	0.976	1.263	1.121	-18
50	0.946	0.966	1.308	1.178	-30

5.3.2 Propylene Glycol (Low Toxic; Including the necessary, classified as Category III according to EN1717)

Concentration of propylene glycol (%)	Modification coefficient				Minimum outdoor temperature(°C)
	Cooling capacity modification	Power input modification	Water resistance	Water flow modification	
10	0.985	0.993	1.120	1.017	1
20	0.964	0.983	1.272	1.032	-4
30	0.932	0.969	1.496	1.056	-9
40	0.889	0.948	1.792	1.092	-17
50	0.846	0.929	2.128	1.139	-29

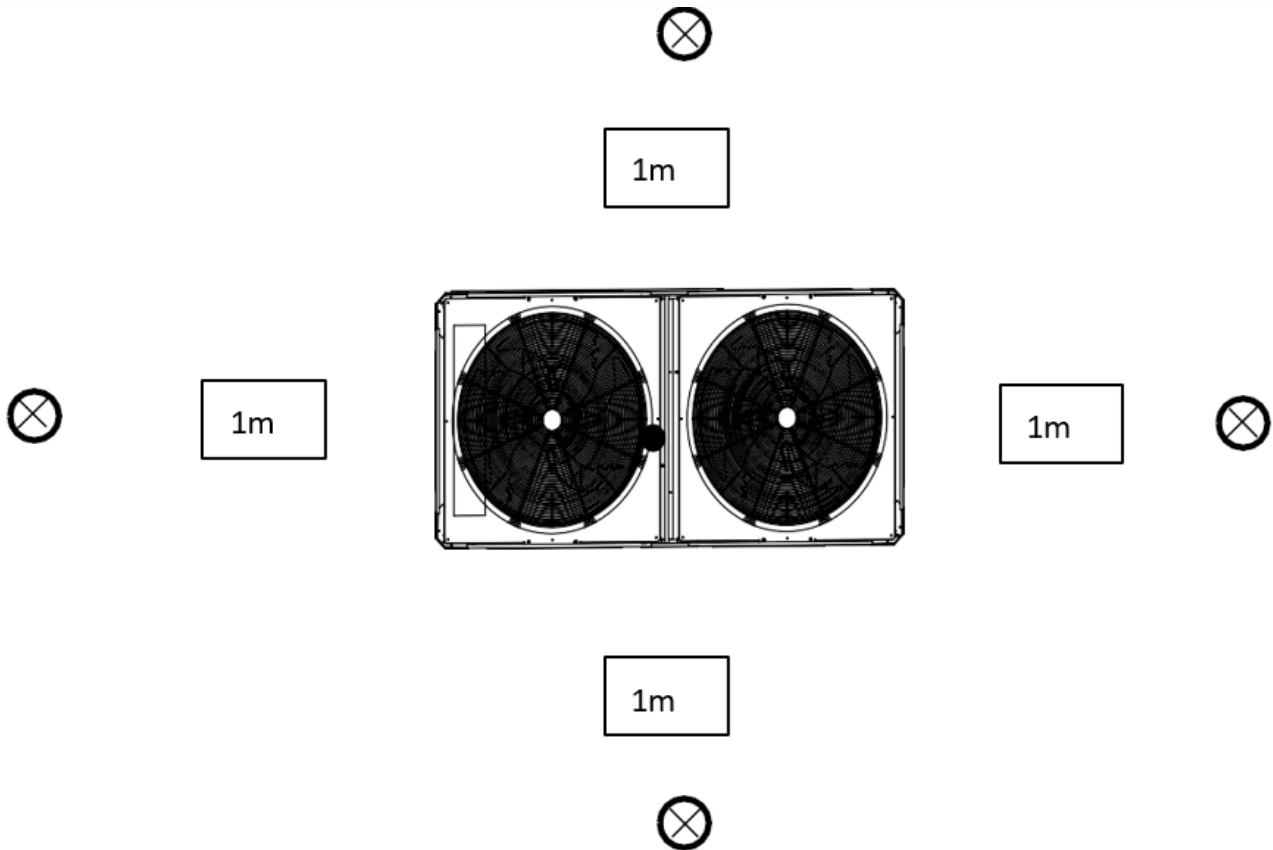
6 Noise levels



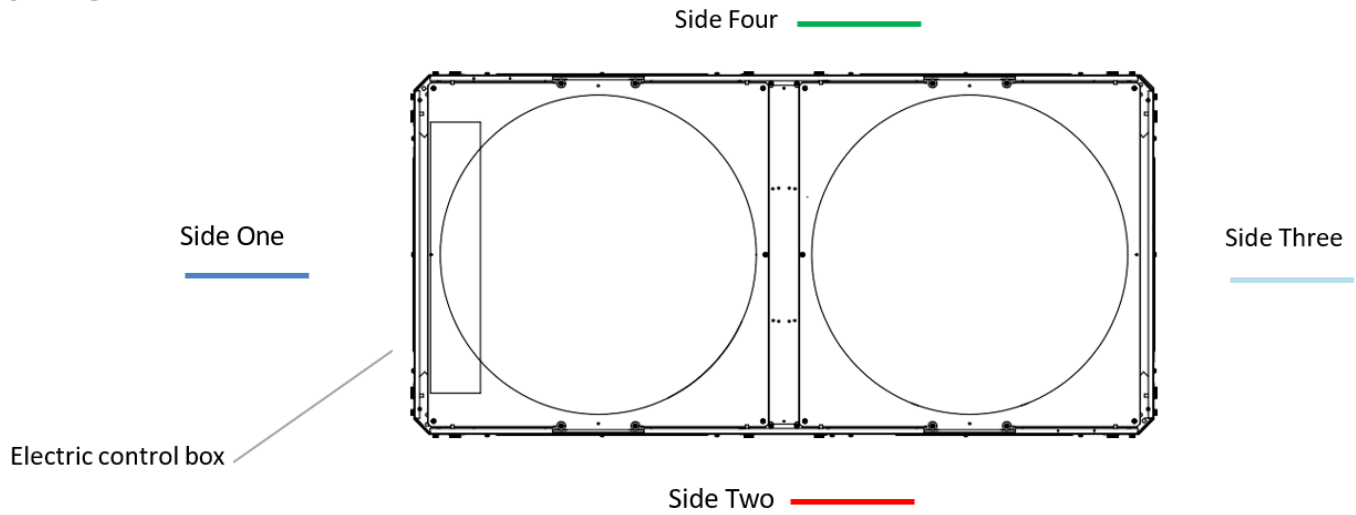
Notes:

1. Sound pressure level is measured at a position 1m in front of the unit and $\frac{(1+H)}{2}$ m (where H is the height of the unit) above the floor in a semi-anechoic chamber. During on-site operation, sound pressure levels may be higher as a result of ambient noise.

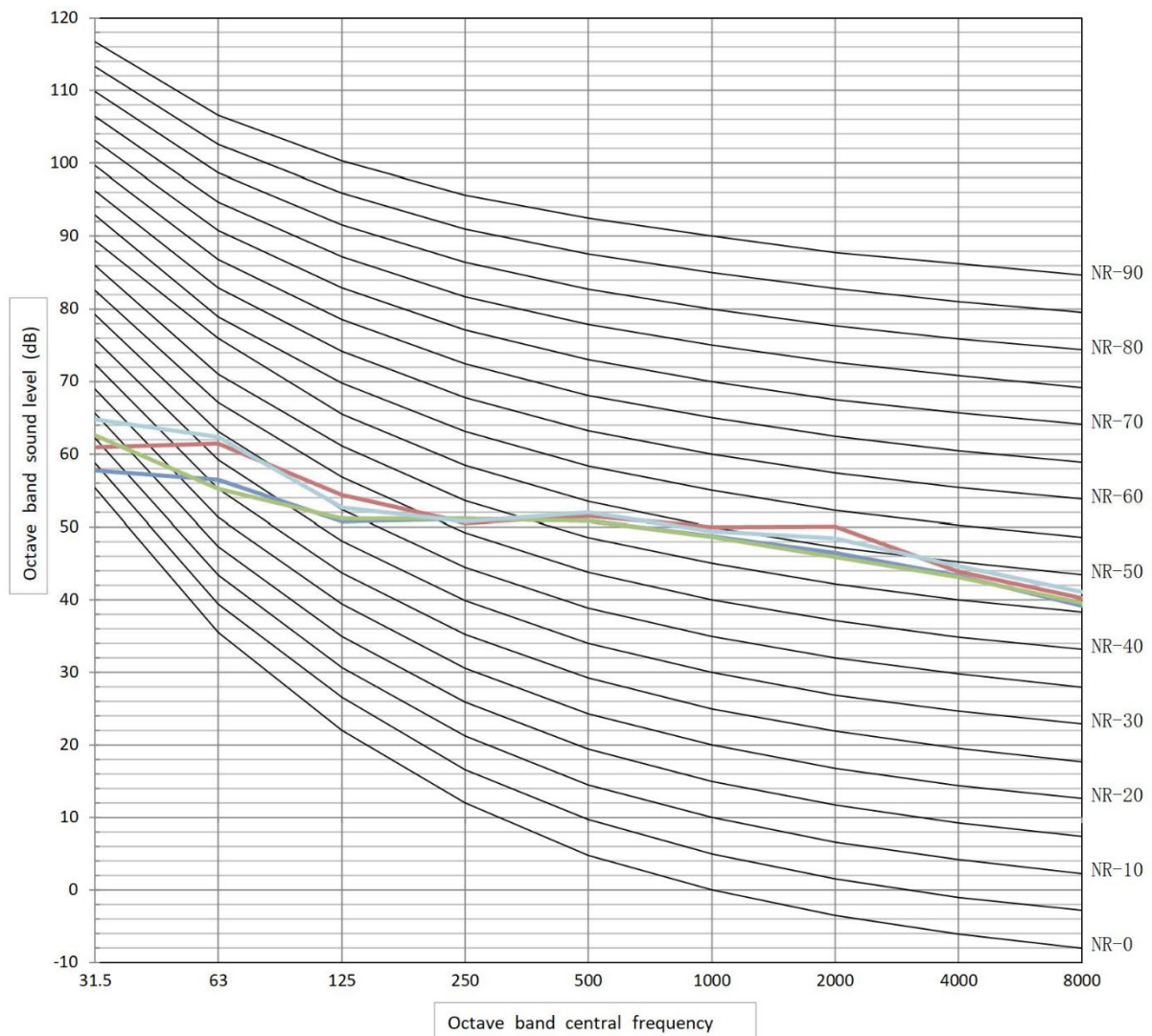
Sound pressure level measurement (unit: mm)



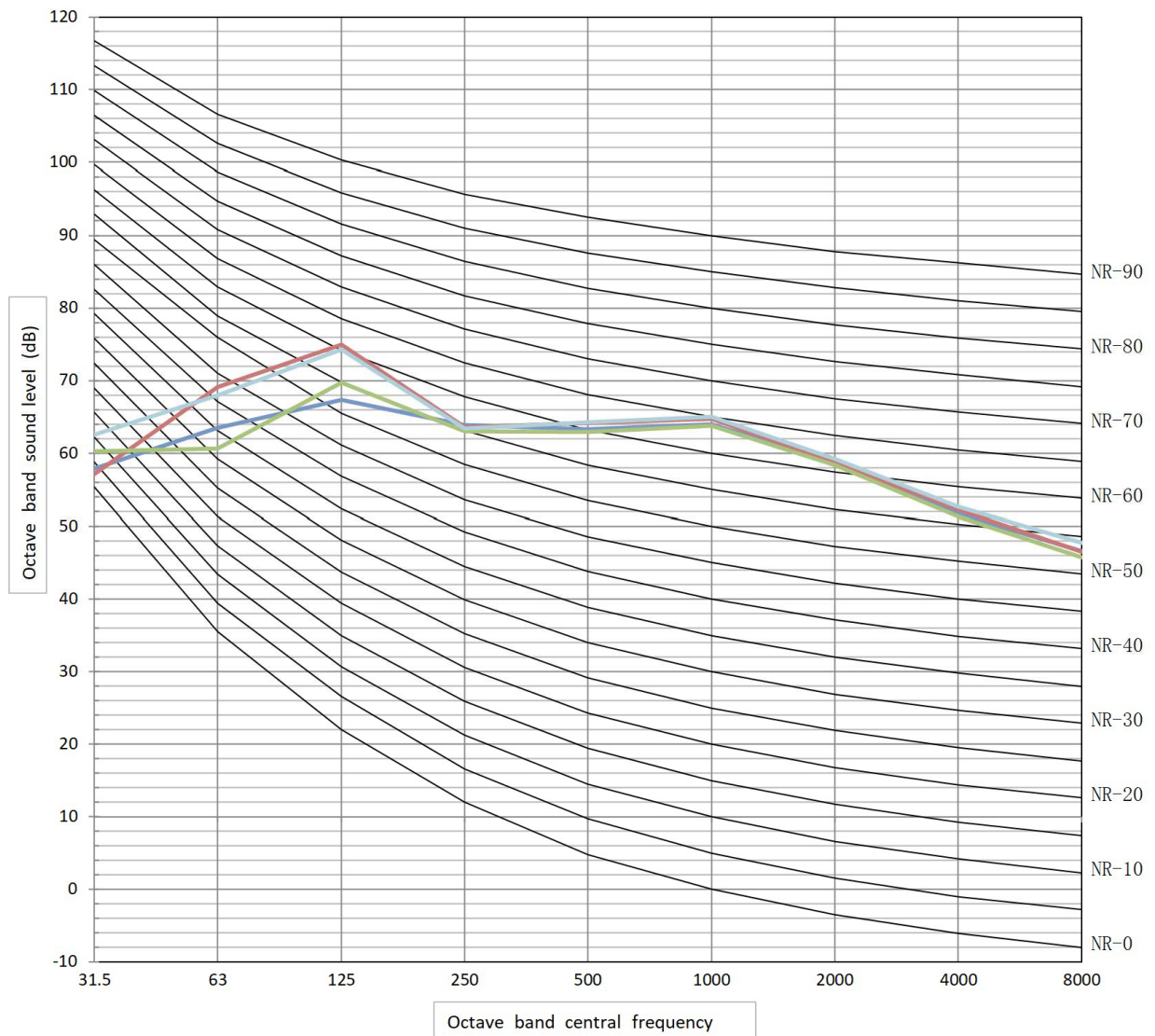
6.1 Octave band levels



6.1.1 Cooling ; Outdoor ambient temperature 35°C DB. LWT 7°C



6.1.2 Heating ; Outdoor ambient temperature 7C DB. LWT 35°C





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