EN

ENGINEERING DATA BOOK
01 | 10 - 01 - 2025

YUKON R290 SERIES
MONOBLOCK HEAT PUMPS

SMHM-260P-3
SMHM-300P-3
SMHM-350P-3
SMHM-400P-3

S-THERM | sinclair HEAT PUMPS

IMPORTANT NOTE:

Read this manual carefully before installing or operating your new heat pump.
Make sure to save this manual for future reference.

CONTENTS

Part 1 General Information **3**

Part 2 Engineering Data **19**

Part 1

General Information

1 System 4

2 Product Lineup 6

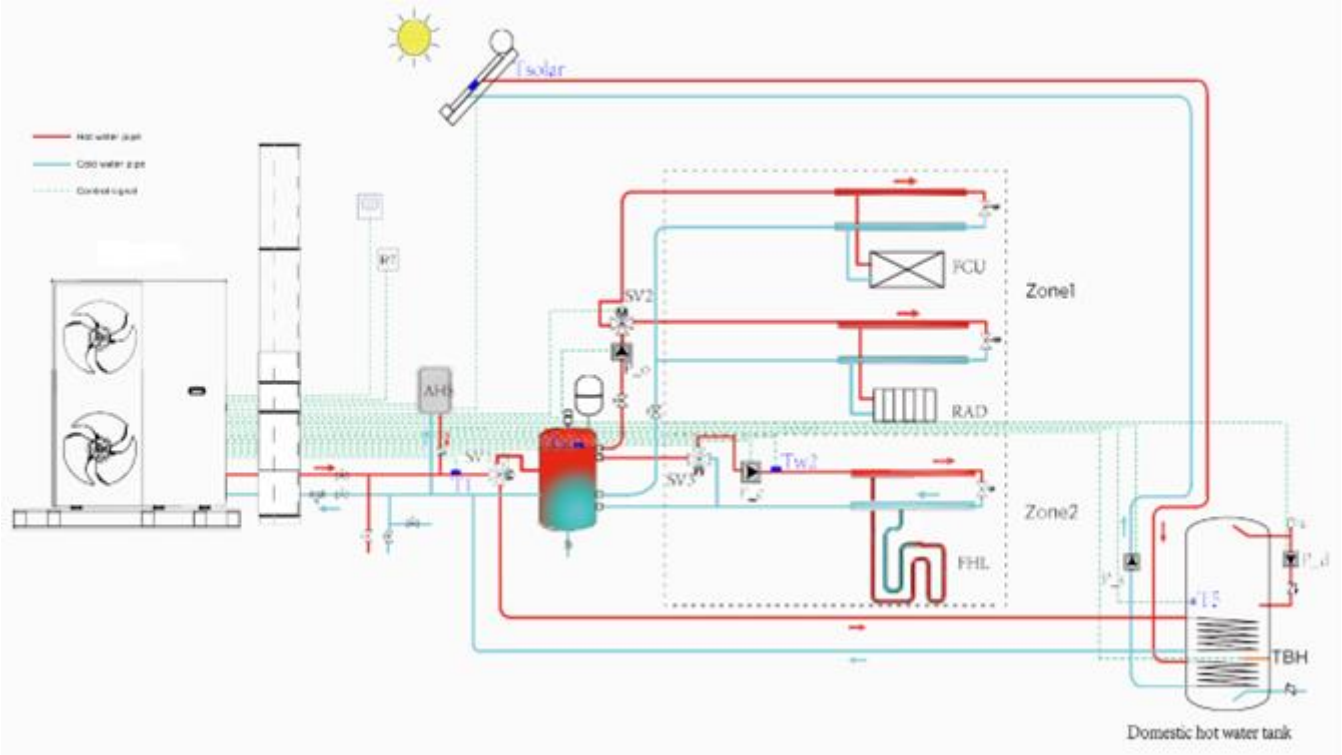
3 Nomenclature 7

4 System Design and Unit Selection 8

5 Typical Applications 10

1 System

1.1 System Schematic



Yukon is an integrated air to water heat pump system and a one-stop solution for space heating, space cooling and domestic/ commercial hot water. The outdoor heat pump system extracts heat from the outdoor air and transfers this heat throughrefrigerant piping to the plate heat exchanger in the hydronic system. The heated water in the hydronic system circulates tolow temperature heat emitters (floor heating loops or low temperature radiators) to provide space heating, and to thedomestic hot water tank to provide domestic hot water. The 4-way valve in the outdoor unit can reverse the refrigerant cycleso that the hydronic system can provide chilled water for cooling by fan coil.

The heating capacity of heat pumps decreases as the ambient temperature drops. Yukon can install electric heater on theoutside of the unit to provide additional heating capacity for use during extremely cold weather when the heat pumpcapacity alone is insufficient. The backup electric heater serves as a secondary heat source in the event of a heat pumpmalfunction and also prevents the external water pipes from freezing during winter.

1.2 System Configurations

Yukon can be configured to run with the external electric heater either, and can also be used in conjunction with an auxiliary

heat source such as a boiler.

The chosen configuration affects the size of heat pump that is required. Three typical configurations are described below.

Configuration 1: Heat pump only

- The heat pump covers the required capacity with no additional heating capacity required.
- Requires larger capacity heat pump and higher initial investment in most cases.
- Ideal for new construction or other projects where energy efficiency is paramount.

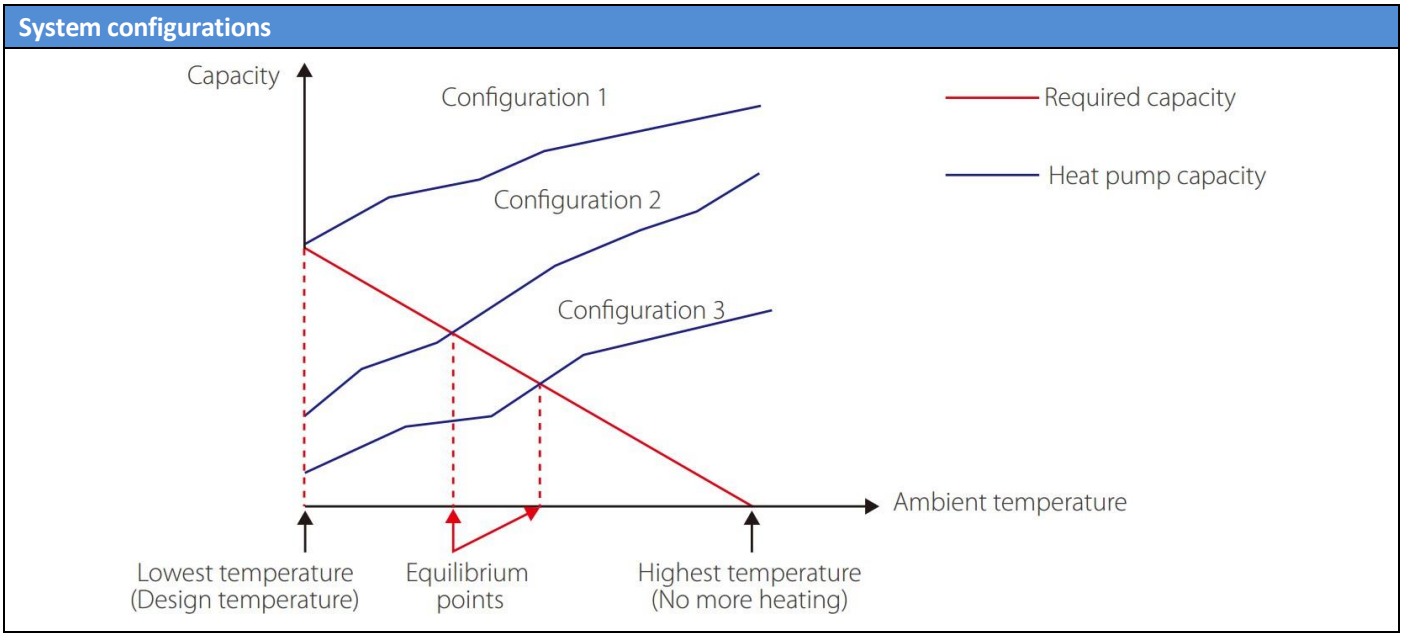
Configuration 2: Heat pump and external electric heater

- Heat pump provides required capacity until ambient temperature drops below the point at which the heat pump alone is sufficient. At this point, the backup electric heater engages to cover the heating capacity shortfall. (see diagram below)
- Optimal balance between initial investment and operating costs, ensuring lowest cost of ownership.
- Ideal for new construction.

Configuration 3: Heat pump with auxiliary heat source

- Heat pump provides required capacity until ambient temperature drops below the point at which the heat pump alone is sufficient. In such cases, the auxiliary heat source either provides the necessary supplemental heating capacity or takes over for the heat pump, depending on the system settings. (see diagram below).
- Enables selection of lower capacity heat pump.
- Ideal for remodeling and upgrades.

System configurations



2 Product Lineup

Power Supply	380-415V / 3N / 50Hz			
Model	SMHM-260P-3	SMHM-300P-3	SMHM-350P-3	SMHM-400P-3
Appearance				

3 Nomenclature

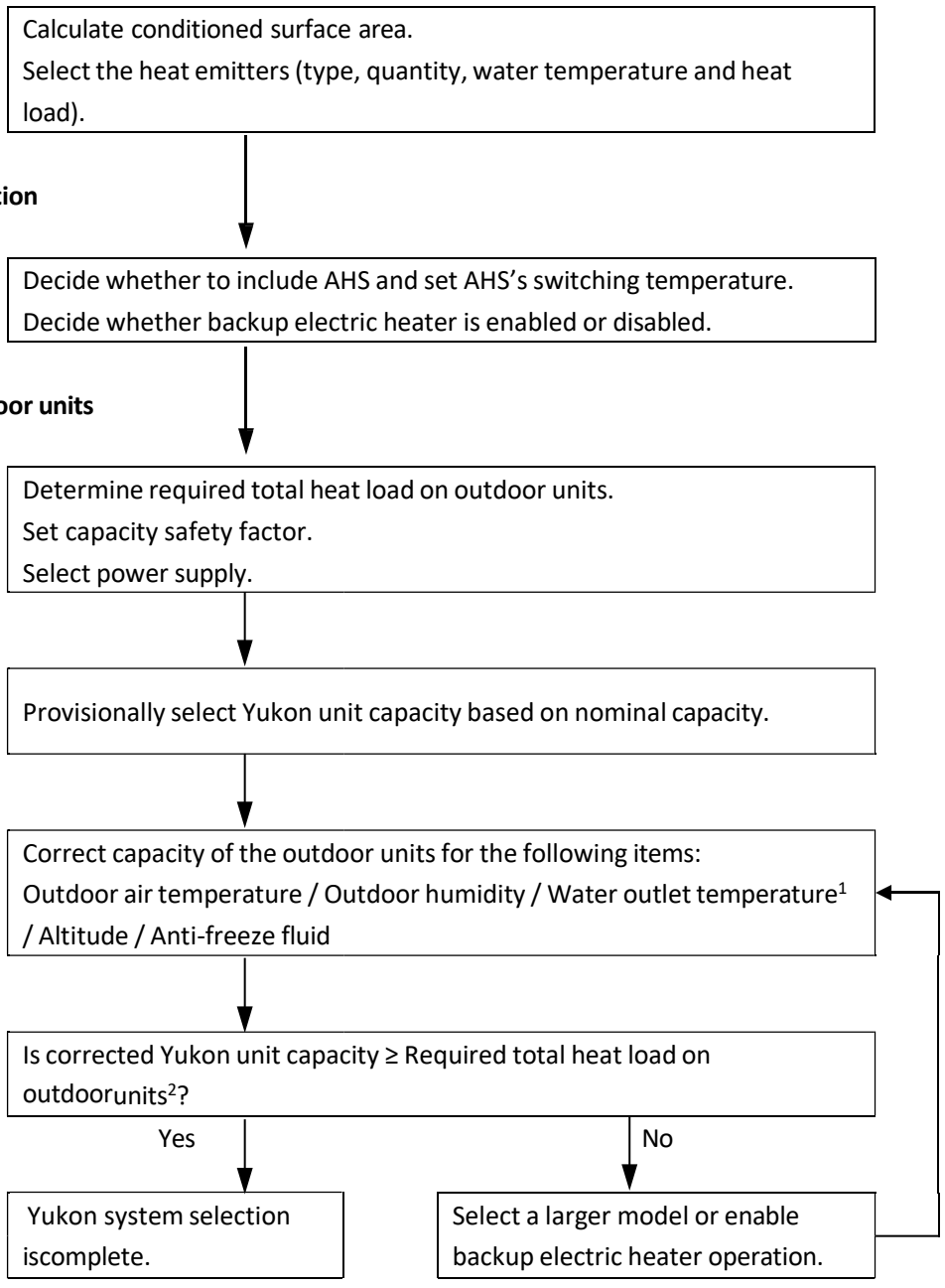
S	M	H	M	-	350	P	-	3
1	2	3	4		5	6		7

Legend		
No.	**Code**	**Remarks**
1	S	Brand: Sinclair
2	M	Structure: Mono
3	H	Type: Heat pump
4	M	Series: Yukon
5	350	Capacity Code: 260: 26 kW; 300: 30 kW; 350: 35 kW; 400: 40 kW;
6	P	Refrigerant: R290
7	3	Heat pump power supply 3-phase, 380-415V, 50Hz；

4 System Design and Unit Selection

4.1 Selection Procedure

Step 1: Total heat load calculation

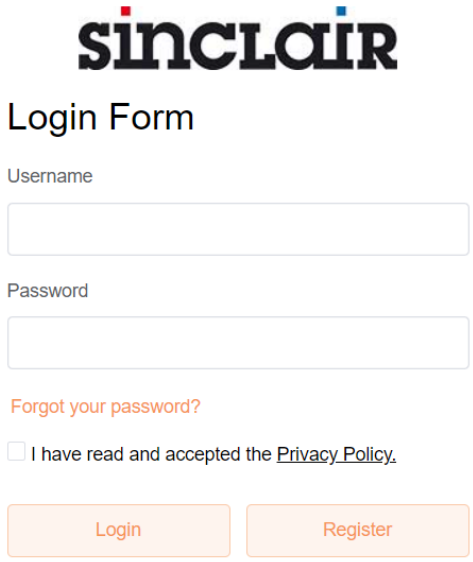


Notes:

1. If the required water temperatures of the heat emitters are not all the same, Yukon's outlet water temperature 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.
2. If the outdoor unit selection is to be based on total heating load and total cooling load, select Mono units which satisfy not only the total heating load requirements but also the total cooling load requirements.

4.2 Selection tool

Sinclair Heat pump selection website: [Heat Pump Selection]



4.3 Yukon Leaving Water Temperature (LWT) Selection

The recommended LTW ranges for different types of heat emitters are as follows:

- For floor heating: 30 to 35°C
- For fan coil units: 30 to 45°C
- For low temperature radiators: 40 to 50°C
- For some old radiators: 70 to 80°C

4.4 Optimizing System Design

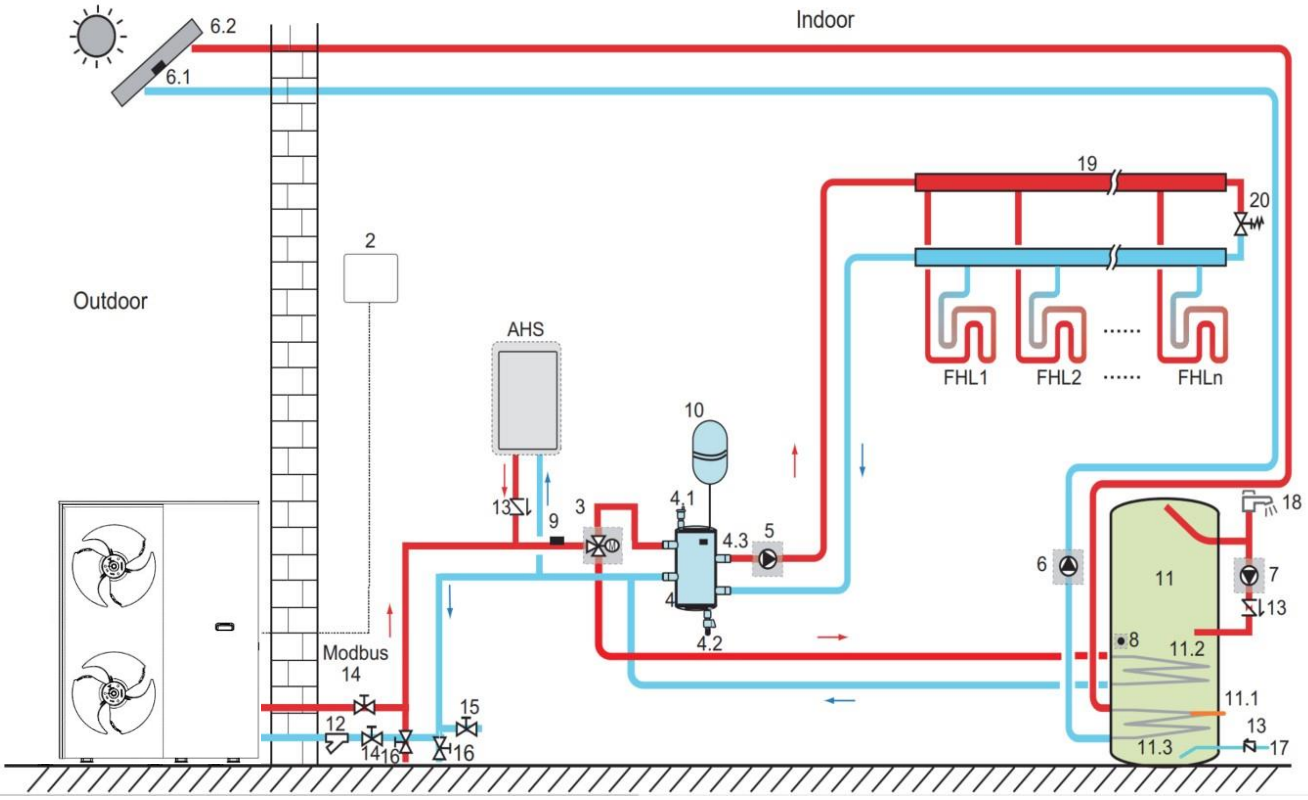
To get the most comfort with the lowest energy consumption with R290 M thermal, it is important to take account of the following considerations:

- Choose heat emitters that allow the heat pump system to operate at as low a hot water temperature as possible while still providing sufficient heating.
- Make sure the selected weather dependency curve matches the installation environment (building structure, climate) as well as end user's demands.
- Utilizing a room thermostat (supplied by user) to the hydronic system helps prevent excessive space heating by stopping the outdoor unit and circulation pump when the room temperature is above the thermostat set point.

5 Typical Applications

5.1 Controlled through the user interface

Single-zone control



Legend			
1	Main Unit	11	Domestic hot water tank (user supplied)
2	User interface	11.1	TBH: Domestic hot water tank booster heater (user supplied)
3	SV1: 3-way valve (user supplied)	11.2	Coil 1, heat exchanger for heat pump
4	Balance tank (user supplied)	11.3	Coil 2, heat exchanger for Solar energy
4.1	Automatic air purge valve	12	Filter (Accessory)
4.2	Drainage valve	13	Check valve (user supplied)
4.3	Tbt1: Upper temperature sensor of balance tank (Optional)	14	Shut-off valve (user supplied)
5	P_o: Outside circulation pump (user supplied)	15	Filling valve (user supplied)
6	P_s: Solar pump (user supplied)	16	Drainage valve (user supplied)
6.1	Tsolar: Solar temperature sensor (Optional)	17	Tap water inlet pipe (user supplied)
6.2	Solar panel (user supplied)	18	Hot water tap (user supplied)
7	P_d: DHW pipe pump (user supplied)	19	Collector/distributor (user supplied)
8	T5: Temperature sensor of domestic water tank (Accessory)	20	Bypass valve (user supplied)
9	T1: Final Water flow temperature sensor (Optional)	FHL1…n	Floor heating loop (user supplied)
10	Expansion vessel (user supplied)	AHS	Auxiliary heat source (user supplied)

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Space heating

The ON/OFF signal, operation mode, and temperature are set on the user interface. P_o keeps running as long as the unit is ON for space heating, while SV1 remains OFF.

Domestic water heating

The ON/OFF signal and target tank water temperature (T5S) are set on the user interface. P_o stops running as long as the unit is ON for domestic water heating while SV1 remains ON.

AHS (auxiliary heat source) control

The AHS function is set on the HMI (for maintenance personnel).

1) When the AHS is activated only for heating mode, AHS can be activated in the following ways:

a. Turn on the AHS via BACKHEATER function on the user interface;

b. AHS will be turned on automatically if the initial water temperature is too low or the target water temperature is too high at low ambient temperature. P_o keeps running as long as the AHS is ON while SV1 remains OFF

2) The AHS is activated for heating and DHW modes. In heating mode, AHS control is the same as item 1) listed above;

In DHW mode, AHS will be turned on automatically when the initial domestic water temperature T5 is too low or the target domestic water temperature is too high at low ambient temperatures. P_o stops running while SV1 remains ON.

3) When the AHS is activated, M1M2 can be set to be activated on the user interface. In heating mode, AHS will be turned on when the MIM2 dry contact closes. This function is invalid in DHW mode.

TBH (tank booster heater) control

The TBH function is set on the user interface.

1) When the TBH is activated, TBH can be turned on via TANKHEATER function on the user interface; In DHW mode, TBH will be turned on automatically when the initial domestic water temperature T5 is too low or the target domestic water temperature is too high at low ambient temperatures.

2) When the TBH is activated, M1M2 can be activated on the user interface. TBH will be turned on when the MIM2 dry contact closes

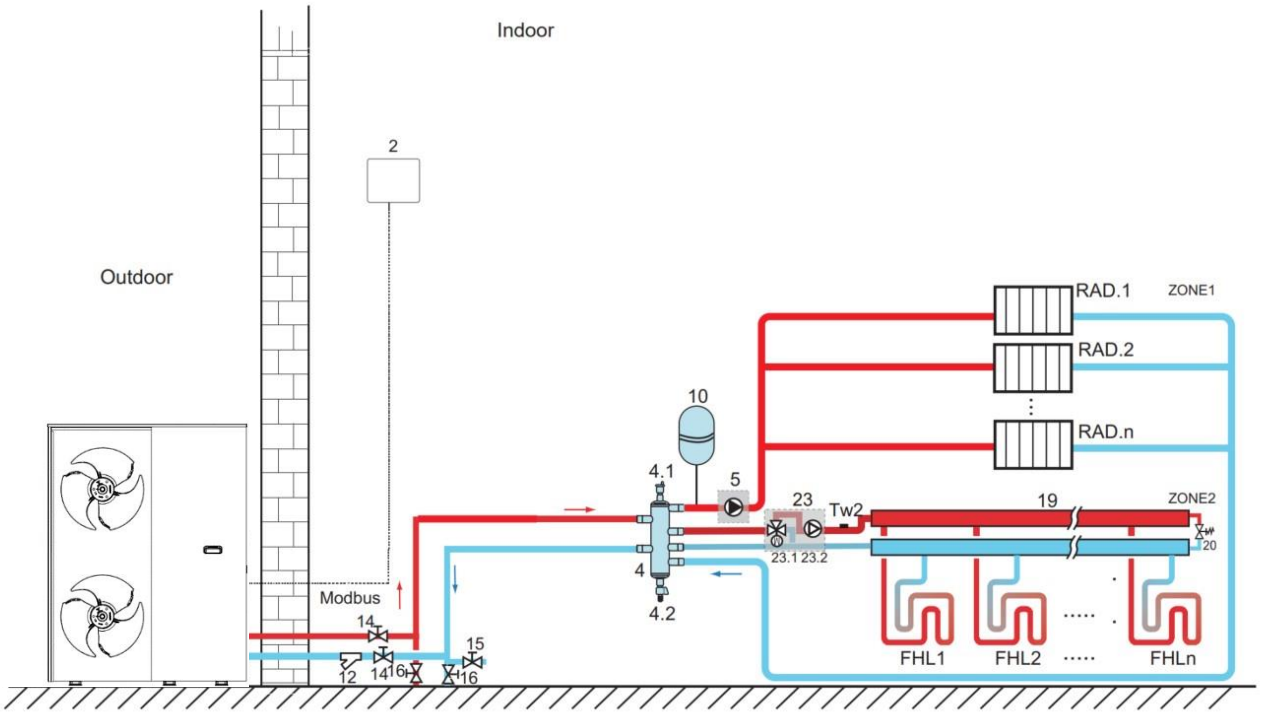
Solar energy control

The unit recognizes solar energy signals by recognizing Tsolar or receiving SL1 SL2 signals from the user interface. The recognition method can be set via SOLAR INPUT on the user interface.

1) When Tsolar is activated, solar energy turns ON when Tsolar is high enough, and P_s starts running; Solar energy turns OFF when Tsolar is low. and P_s stops running.

2) When SL1 SL2 control is activated, solar energy turns ON after receiving solar kit signals from the user interface, and P_s starts running; If no solar kit signals are received, solar energy turns OFF, and P_s stops running.

Dual-zone control



Legend			
1	Main Unit	16	Drainage valve (user supplied)
2	User interface	19	Collector/distributor (user supplied)
4	Balance tank (user supplied)	20	Bypass valve (user supplied)
4.1	Automatic air purge valve	23	Mixing station (user supplied)
4.2	Drainage valve	23.1	SV3: Mixing valve (user supplied)
5	P_o: Outside circulation pump (user supplied)	23.2	P_c: Zone 2 circulation pump (user supplied)
10	Expansion vessel (user supplied)	Tw2	Temperature sensor of Zone 2 water flow
12	Filter (Accessory)	FHL1…n	Floor heating loop (user supplied)
14	Shut-off valve (user supplied)	RAD.1…n	Radiator (user supplied)
15	Filling valve (user supplied)		

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Space heating

The ON/OFF signal, operation mode, and temperature are set on the user interface. Zone1 can operate in cooling mode or heating mode, while Zone 2 can only operate in heating mode; During operation, Zone1 is controlled by Final Water flow temperature (T1), Zone2 is controlled by Zone2 water outlet temperature (Tw2) or room temperature(Ta).

Circulation pump operation

When Zone1 turns ON, P_o starts running; When Zone1 turns OFF, P_o stops running;

When Zone2 turns ON, SV3 switches between ON and OFF according to the set TW2, and P_c remains ON; When Zone 2 turns OFF, SV3 remains OFF and P_c stops running.

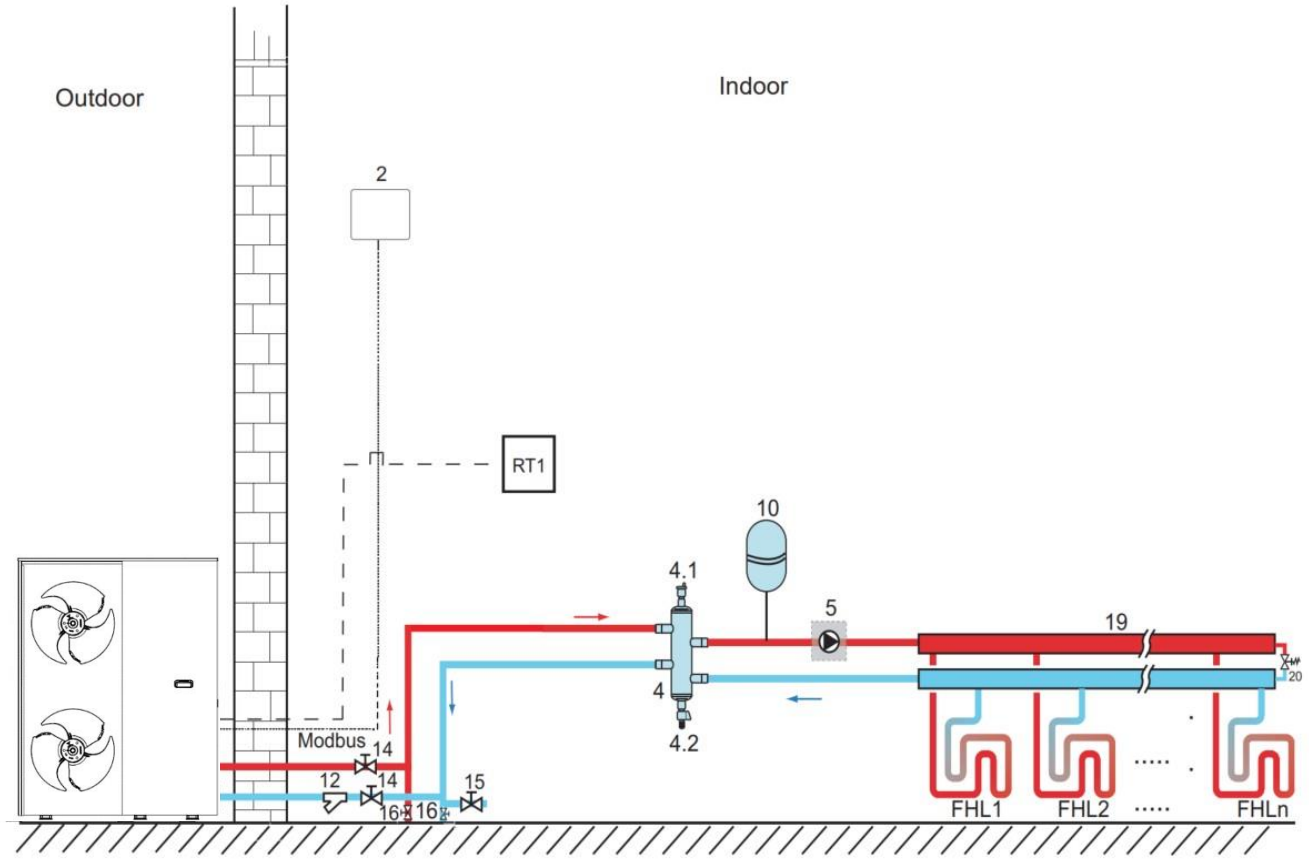
The floor heating loops require a lower water temperature in heating mode than radiators or fan coil units. To reach the set temperature points, a mixing station is used to adjust the water temperature to the requirements of the floor heating loops. The radiators are directly connected to the unit's water circuit and the floor heating loops and after the mixing station. The mixing station is controlled by the unit.

The domestic water tank, AHS (auxiliary heat source), TBH (water tank electric auxiliary heat), and solar system can be connected. The control method is the same as what is described in the section above.

5.2 Control through the user interface and room thermostat

Space heating or cooling control through the room thermostat is controlled using the user interface. It can be controlled through mode setting, single-zone control or double-zone control. The Yukon can only be connected to a low voltage roomthermostat.

Single-zone control



Legend			
1	Main Unit	14	Shut-off valve (user supplied)
2	User interface	15	Filling valve (user supplied)
4	Balance tank (user supplied)	16	Drainage valve (user supplied)
4.1	Automatic air purge valve	19	Collector/distributor (user supplied)
4.2	Drainage valve	20	Bypass valve (user supplied)
5	P_o: Outside circulation pump (user supplied)	RT1	Low voltage room thermostat (user supplied)
10	Expansion vessel (user supplied)	FHL1…n	Floor heating loop (user supplied)
12	Filter (Accessory)		

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Space heating

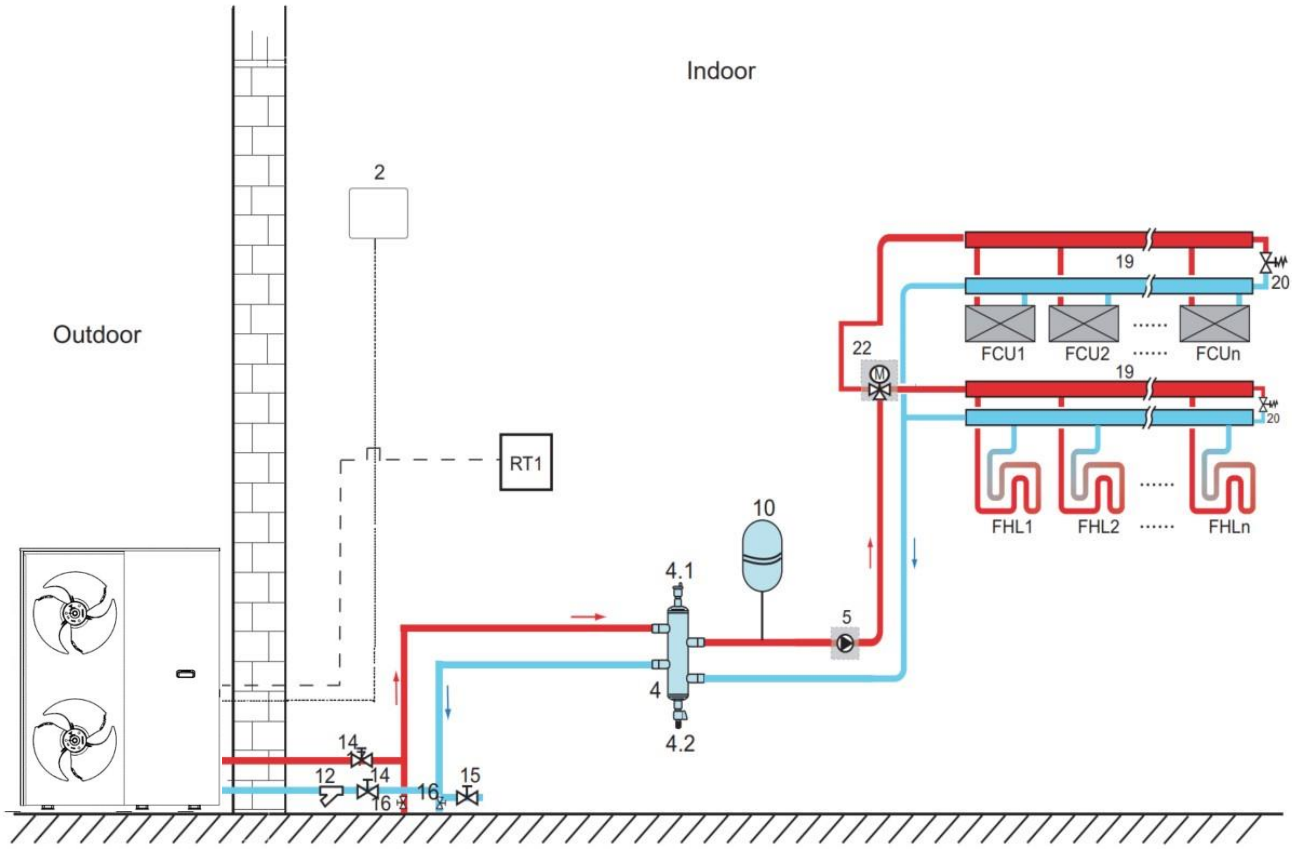
Single-zone control: the unit ON/OFF is controlled by the room thermostat. The cooling or heating mode and outlet water temperature are set on the user interface. The system is ON when “HT” of the thermostat closes. When “HT” open, the system turns OFF.

Circulation pump operation

When the system turns ON, which means “HT” of the thermostat closes, P_o starts running; When the system turns OFF, which means “HT” open, P_o stops running.

The domestic water tank, AHS (auxiliary heat source), TBH (water tank electric auxiliary heat), and solar system can be connected. The control method is the same as what is described in the section above

Control through mode setting



Legend			
1	Main Unit	15	Filling valve (user supplied)
2	User interface	16	Drainage valve (user supplied)
4	Balance tank (user supplied)	19	Collector/distributor (user supplied)
4.1	Automatic air purge valve	20	Bypass valve (user supplied)
4.2	Drainage valve	22	SV2: 3-way valve (user supplied)
5	P_o: Outside circulation pump (user supplied)	RT1	Low voltage room thermostat (user supplied)
10	Expansion vessel (user supplied)	FHL1…n	Floor heating loop (user supplied)
12	Filter (Accessory)	FCU1…n	Fan coil unit (user supplied)
14	Shut-ff valve (user supplied)		

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Space heating

The cooling or heating mode is set via the room thermostat, and the water temperature is set on the user interface.

1) When “CL” on the thermostat closes, the system is set to work in cooling mode.

2) When “HT” on the thermostat closes and all “CL” are open, the system is set to work in heating mode.

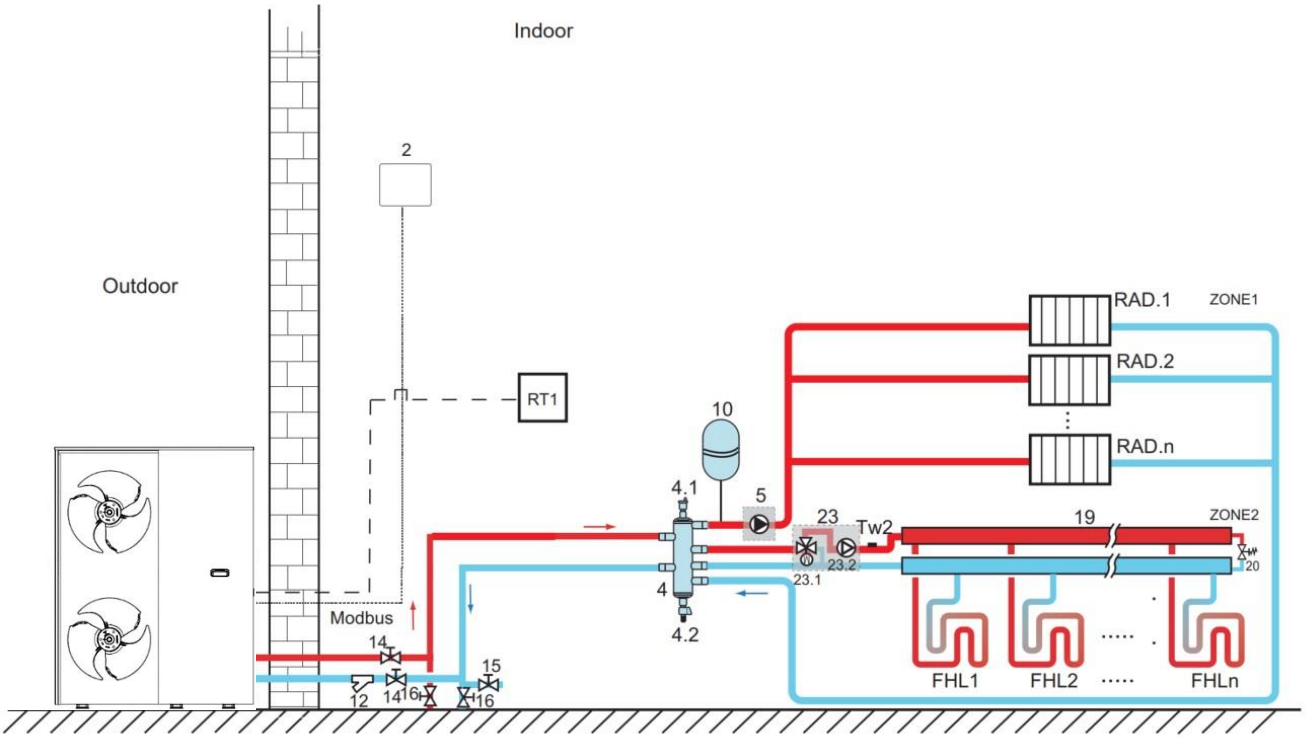
Circulation pump operation

1) When the system is in cooling ("CL" on the thermostat closes), SV2 remains OFF while P_o starts running.

2) When the system is in heating ("HT" closes and "CL" opens), SV2 remains ON while P_o starts running.

The domestic water tank, AHS (auxiliary heat source), TBH (water tank electric auxiliary heat), and solar system can be connected. The control method is the same as what is described in the section above.

Dual-zone control



Legend			
1	Main Unit	16	Drainage valve (user supplied)
2	User interface	19	Collector/distributor (user supplied)
4	Balance tank (user supplied)	20	Bypass valve (user supplied)
4.1	Automatic air purge valve	23	Mixing station (user supplied)
4.2	Drainage valve	23.1	SV3: Mixing valve (user supplied)
5	P_o: Outside circulation pump (user supplied)	23.2	P_c: Zone 2 circulation pump (user supplied)
10	Expansion vessel (user supplied)	RT1	Low voltage room thermostat (user supplied)
12	Filter (Accessory)	Tw2	Temperature sensor of Zone 2 water flow
14	Shut-off valve (user supplied)	FHL1…n	Floor heating loop (user supplied)
15	Filling valve (user supplied)	RAD.1…n	Radiator (user supplied)

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Space heating

Zone 1 can operate in cooling mode or heating mode, while Zone 2 can only operate in heating mode. During installation, for thermostat in Zone 1, only “HT” terminal needs to be connected. For thermostat in Zone 2, only “CL” terminals need to be connected.

1) ON/OFF of Zone 1 is controlled by the room thermostat there. When “HT” on thermostat in Zone 1 closes, Zone 1 turns ON. When “HT” turns OFF, Zone 1 turns OFF, The target temperature and operation mode are set on the user interface.

2) In heating mode, ON/OFF of Zone2 is controlled by the room thermostats there. When “CL” on temperature is set on the user interface, Zone 2 can only operate in heating mode. When cooling mode is set on the user interface, Zone 2 remains OFF.

Circulation pump operation

When Zone 1 turns ON, P_o starts running; When Zone 1 turns OFF, P_o stops running.

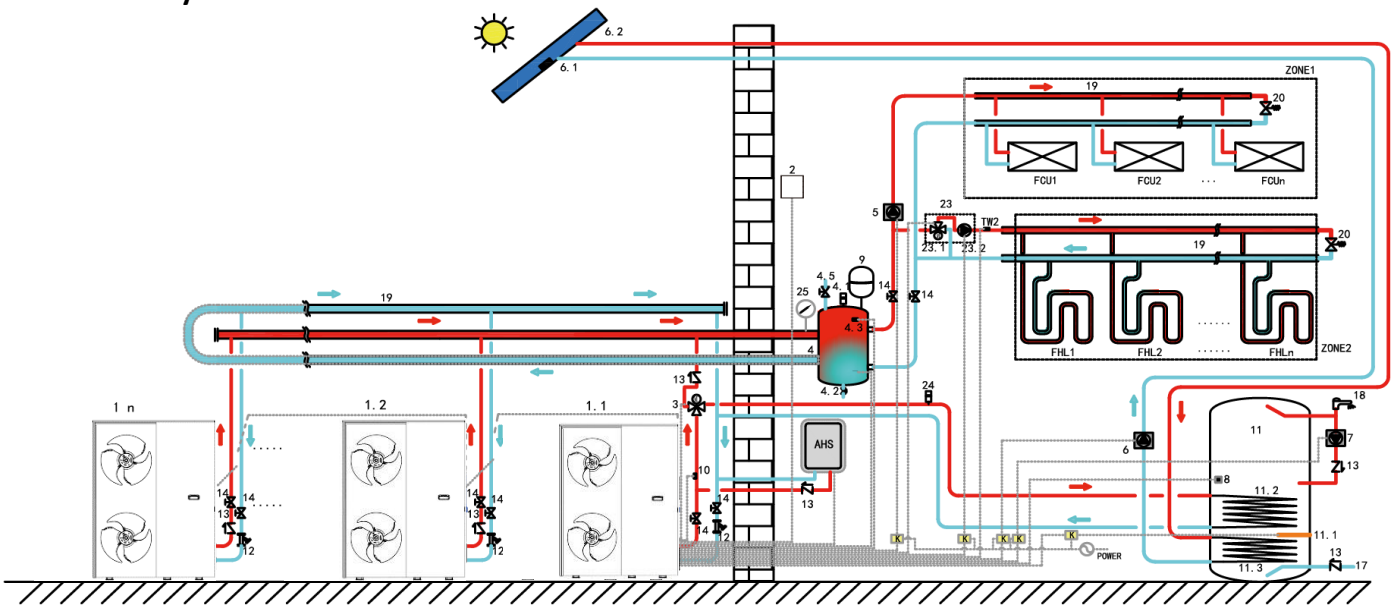
When Zone 2 turns ON, SV3 switches between ON and OFF according to the set TW2, and P_c remains ON; When Zone 2 Turns OFF, SV3 remains OFF and P_c stops running.

The floor heating loops require a lower water temperature in heating mode than radiators or fan coil units. To reach the set temperature points, a mixing station is used to adjust the water temperature according to requirements of the floor heating

loops. The radiators are directly connected to the unit's water circuit and the floor heating loops and after the mixing station. The mixing station is controlled by the unit.

The domestic water tank, AHS (auxiliary heat source), TBH (water tank electric auxiliary heat), and solar system can be connected. The control method is the same as what is described in the section above.

5.3 Cascade system



Legend			
1.1	Master Unit	12	Filter (accessory)
1.2…n	Slave Unit	13	Check valve (user supplied)
2	User interface	14	Shut-off valve (user supplied)
3	SV1:3-way valve (user supplied)	17	Tap water inlet pipe (user supplied)
4	Balance tank (user supplied)	18	Hot water tap (user supplied)
4.1	Automatic air purge valve	19	Collector/distributor (user supplied)
4.2	Drainage valve	20	Bypass valve (user supplied)
4.3	Tbt1: Upper temperature sensor of balance tank (Optional)	23	Mixing station
4.5	Filling valve	23.1	SV3: Mixing valve
5	P_o: Outside circulation pump (user supplied)	23.2	P_c: Zone 2 circulation pump (user supplied)
6	P_s: Solar pump (user supplied)	24	Automatic air purge valve(user supplied)
6.1	Tsolar: Solar temperature sensor (optional)	25	Water manometer (user supplied)
6.2	Solar panel (user supplied)	TW2	Zone 2 water flow temperature sensor (user supplied)
7	P_d: DHW pipe pump (user supplied)	FCU1…n	Fan coil unit (user supplied)
8	T5: Temperature sensor of domestic water tank (Accessory)	FHL1…n	Floor heating loop (user supplied)
9	T1: Final Water flow temperature sensor (optional)	K	Contactor (user supplied)
10	Expansion vessel (user supplied)	ZONE 1	Only heating mode is applicable to the space
11	Domestic hot water tank (user supplied)	ZONE 2	Only heating mode is applicable to the space
11.1	TBH: Domestic hot water tank booster heater (user supplied)	AHS	Auxiliary heat source (user supplied)
11.2	Coil 1, heat exchanger for heat pump		
11.3	Coil 2, heat exchanger for Solar energy		

Notes:

1. The example shown above is for illustration purposes only. Please be sure your installation complies with the installation manual requirements.
2. A bypass valve must be installed to make water recirculation possible when all shut-off valves are closed.

Domestic water heating

Only the master unit can operate in DHW mode. T5S is set on the user interface. In DHW mode, SV1 remains ON. When the master unit operates in DHW mode, the slave units can operate in space cooling/heating mode.

Heating mode of slave units

All slave units can operate in space heating mode. The operation mode and temperature are set on the user interface.

Due to changes in the outdoor temperature and the required load indoors, multiple outdoor units may operate at different time points.

In cooling mode, SV3 and P_c remains OFF while P_o remains ON.

In heating mode, when both Zone 1 and Zone 2 are running, P_c and P_o remain ON, and SV3 switches between ON and OFF according to the set TW2.

In heating mode, when only Zone 1 are running, P_o remains ON while SV3 and P_c remain OFF.

In heating mode, when only Zone 2 are running, P_o remains OFF while P_c remains ON, and SV3 switches between ON and OFF according to the set TW2.

AHS (auxiliary heat source) control

The AHS should be set via the DIP switch on the main board. The AHS is only controlled by the master unit. When the master unit operates in DHW mode, the AHS can only be used for producing domestic hot water; When the master unit operates in heating mode, the AHS can only operate in heating mode.

1) When the AHS is set to activate only in heating mode, it will be turned on in the following conditions:

a. The BACKUP HEATER function is enabled on user interface.

b. The master unit operates in heating mode. When the inlet water temperature or ambient temperature is too low while the target leaving water temperature, the AHS will be turned on automatically.

2) When the AHS is set to activate in heating mode and DHW mode, it will be turned on in following conditions:

When the master unit operates in heating mode, conditions for turning on the AHS is same as 1); When the master unit operates in DHW mode, if T5 or the ambient temperature is too low given the target T5 temperature, the AHS will be turned on automatically.

3) When the AHS is valid, the operation of the AHS is controlled by M1M2. When M1M2 closes, the AHS is turned on. When the master unit operates in DHW mode, the AHS can not be turned on by closing M1 M2.

TBH (tank booster heater) control

The TBH should be set via the DIP switch on the main board. The TBH is only controlled by the master unit.

Solar energy control

Solar energy is only controlled by the master unit.

Part 2

Engineering Data

1 Specifications 20

2 Electrical characteristics 23

3 3-dimensional drawings and Center of Gravity 24

4 Operating Limits 25

5 Hydronic Performance 27

6 Capacity Tables 28

7 Noise Levels 52

1 Specifications

Yukon Series			SMHM-400P-3	SMHM-350P-3	SMHM-300P-3	SMHM-260P-3
Power supply	V / Ph / Hz		380-415 / 3 / 50			
Heating A7W35	Capacity	W	39000	35000	30000	26000
	Rated input	W	9750	8400	6670	5450
	COP		4.00	4.17	4.50	4.77
Heating A7W45	Capacity	W	39000	35000	30000	26000
	Rated input	W	11900	10050	8260	6820
	COP		3.28	3.48	3.63	3.81
Heating A7W55	Capacity	W	39000	35000	30000	26000
	Rated input	W	14000	11750	9570	7850
	COP		2.79	2.98	3.13	3.31
Heating A7W65	Capacity	W	39000	35000	30000	26000
	Rated input	W	16660	14600	11850	9860
	COP		2.34	2.40	2.53	2.64
Heating A2W35	Capacity	W	30400	30400	26800	23500
	Rated input	W	9520	9520	7620	6350
	COP		3.19	3.19	3.52	3.70
Heating A2W45	Capacity	W	30000	30000	26100	22600
	Rated input	W	11200	11200	8380	7180
	COP		2.68	2.68	3.11	3.15
Heating A2W55	Capacity	W	29600	29600	25350	21950
	Rated input	W	12060	12060	9650	8100
	COP		2.45	2.45	2.63	2.71
Heating A-7W35	Capacity	W	28200	28200	24000	21000
	Rated input	W	11100	11100	8380	6930
	COP		2.54	2.54	2.86	3.03
Heating A-7W45	Capacity	W	26900	26900	23100	20100
	Rated input	W	12000	12000	9590	7530
	COP		2.24	2.24	2.41	2.67
Heating A-7W55	Capacity	W	24800	24800	21300	18800
	Rated input	W	11900	11900	9600	8170
	COP		2.08	2.08	2.22	2.30
Cooling A35W18	Capacity	W	39000	35000	30000	26000
	Rated input	W	9850	8500	6800	5600
	EER		3.96	4.12	4.41	4.64
Cooling A35W7	Capacity	W	32000	32000	30000	26000
	Rated input	W	11980	11980	10700	8400
	EER		2.67	2.67	2.80	3.10

Yukon Series			SMHM-400P-3	SMHM-350P-3	SMHM-300P-3	SMHM-260P-3
Seasonal space heating energy efficiency class	LWT (leaving water temperature)	35ºC	A++	A+++	A+++	A+++
		55ºC	A++	A++	A++	A+++
SCOP	Warmer climate	35ºC	5.35	6.08	6.26	6.57
		55ºC	4.50	4.75	4.90	4.94
	Average climate	35ºC	3.84	4.48	4.92	4.95
		55ºC	3.00	3.63	3.79	3.84
	Colder climate	35ºC	4.32	3.85	3.91	3.95
		55ºC	3.47	3.03	3.14	3.23
SEER	LWT (leaving water temperature)	7ºC	4.82	4.82	4.99	5.21
		18ºC	6.22	6.43	6.8	7.17
Erp Sound power level		dB	76	75	74	69
Sound power level	Heating A7W55	dB	77	75.6	75.0	70.2
	Heating Max.	dB	77.5	75.5	74.8	74.5
	Heating Silent mode 1	dB	68.9	65.5	64.6	62.9
	Heating Silent mode 2	dB	65.3	63.6	62.3	62.4
	Cooling A35W18	dB	73.7	74.3	73.8	69.8
	Cooling max	dB	74.1	75.0	75.9	74.6
	Cooling Silent mode 1	dB	65.5	68.4	66.6	65.9
	Cooling Silent mode 2	dB	62.3	65.1	62.9	62.4
Sound pressure level (1m)	Heating A7W55	dB(A)	62.3	61.7	61.3	54.8
	Heating Max.	dB(A)	63.1	62.8	61.4	61.1
	Heating Silent mode 1	dB(A)	54.2	51.3	50.4	48.5
	Heating Silent mode 2	dB(A)	50.6	48.1	47.0	45.0
	Cooling A35W18	dB(A)	60.2	60.7	60.3	59.9
	Cooling max	dB(A)	60.2	61.1	60.1	59.8
	Cooling Silent mode 1	dB(A)	52.0	53.5	53.8	50.2
	Cooling Silent mode 2	dB(A)	49.2	49.4	47.9	47.3
Sound pressure level (2m)	Heating A7W55	dB(A)	/	58.3	58.0	53.4
	Heating Max.	dB(A)	/	59.2	58.0	57.8
	Heating Silent mode 1	dB(A)	/	49.9	47.9	48.0
	Heating Silent mode 2	dB(A)	/	47.6	45.8	45.2
	Cooling A35W18	dB(A)	/	57.0	56.3	55.8
	Cooling max	dB(A)	/	57.0	56.7	56.4
	Cooling Silent mode 1	dB(A)	/	48.8	48.9	46.0
	Cooling Silent mode 2	dB(A)	/	46.7	44.9	43.7

Yukon **Series**			SMHM-400P-3	SMHM-350P-3	SMHM-300P-3	SMHM-260P-3
Water flow range		m^3/h	1.2-8.1	1.2-7.2	1.2-6.2	1.2-5.4
Compressor	Type		Scroll			
Outdoor fan	Motor type / Number of fans		DC fan / 2			
Air-side heat exchanger			Finned tube heat exchanger			
Refrigerant			R290 2900g			
Unit dimensions (W×H×D)		mm	1384×1816×523			
Packing dimensions (W×H×D)		mm	1480×2000×570			
Net weight		kg	260			
Gross weight		kg	285			
Water-side heat exchanger			Plate heat exchanger			
Water-side Connection method			Threaded connection			
Water pump	Max. pump head	m	12			
Expansion vessel (primary circuit)	Nominal volume	L	5			
	Charge pressure	Bar	8			
Safety valve		Bar	3			
Flow switch		m3/h	0.87			
Outdoor air temperature range	Cooling	℃	-15～48			
	Heating	℃	-25～43			
	DHW	℃	-25～43			
Water setting temperature range	Cooling	℃	5～25			
	Heating	℃	25～85			
	DHW	℃	20～75			

Notes:

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

2 Electrical characteristics

System	Outdoor unit			Power current			Fan	
	Power supply	Min. (V)	Max. (V)	MCA (A)	TOCA (A)	MFA (A)	kW	FLA (A)
SMHM-400P-3	380~415V / 3N / 50Hz	342	456	32	35	40	0.2	1.1
SMHM-350P-3	380~415V / 3N / 50Hz	342	456	32	35	40	0.2	1.1
SMHM-300P-3	380~415V / 3N / 50Hz	342	456	30	35	40	0.2	1.1
SMHM-260P-3	380~415V / 3N / 50Hz	342	456	28	35	40	0.2	1.1

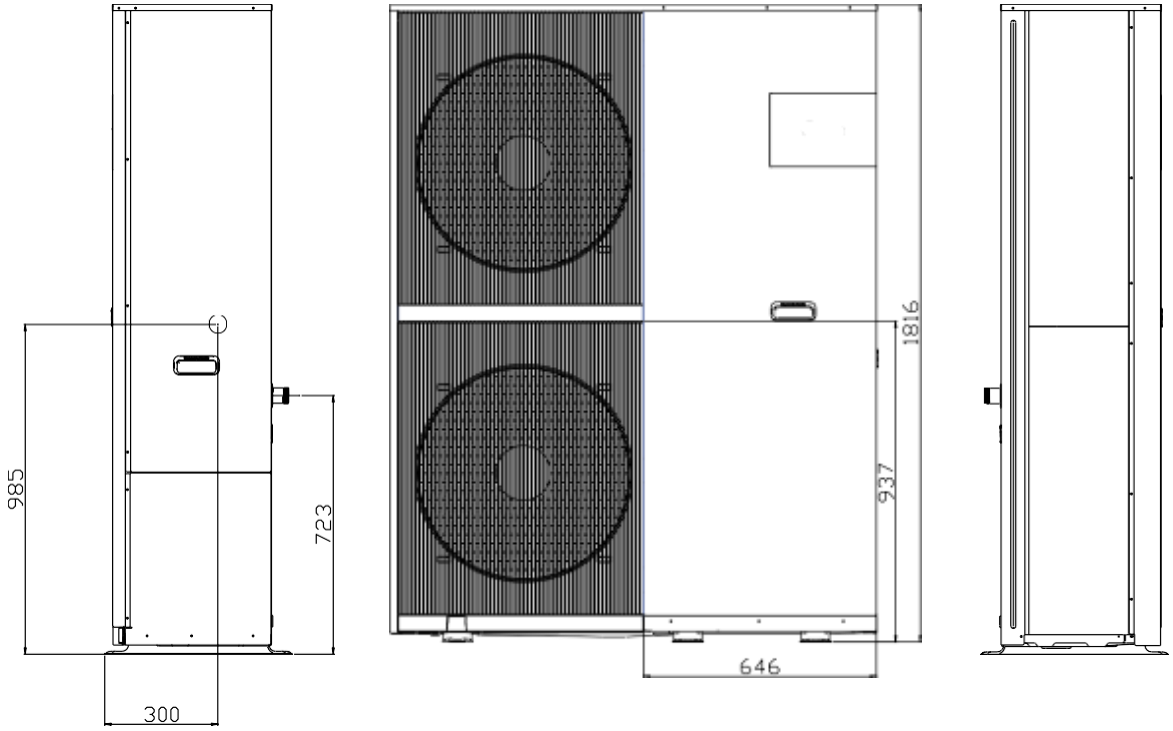
Notes:

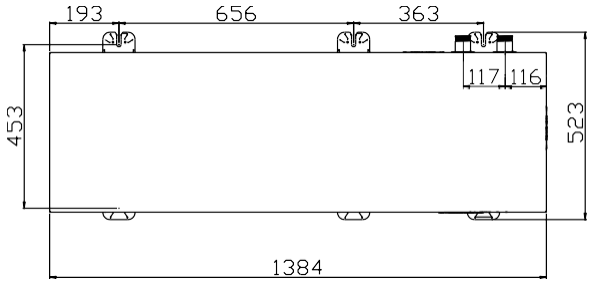
Name	Description	Explanation
Min. & Max.	Minimum & Maximum running voltage (V)	Required voltage range for system operation
MCA	Min. Circuit Amps. (A)	Determines minimum wire diameter
TOCA	Total Over-current Amps. (A)	The maximum current for protecting system
MFA	Max. Fuse Amps. (A)	Determines air-break switch /circuit breaker/ Fuse
MSC	Max. Starting Amps. (A)	Starting current of the inverter compressor is very small and can be ignored.
kW	Rated Motor Output	/
FLA	Full Load Amps. (A)	The current measured by the motor at rated voltage and rated speed (usually the highest motor speed) under rated load.

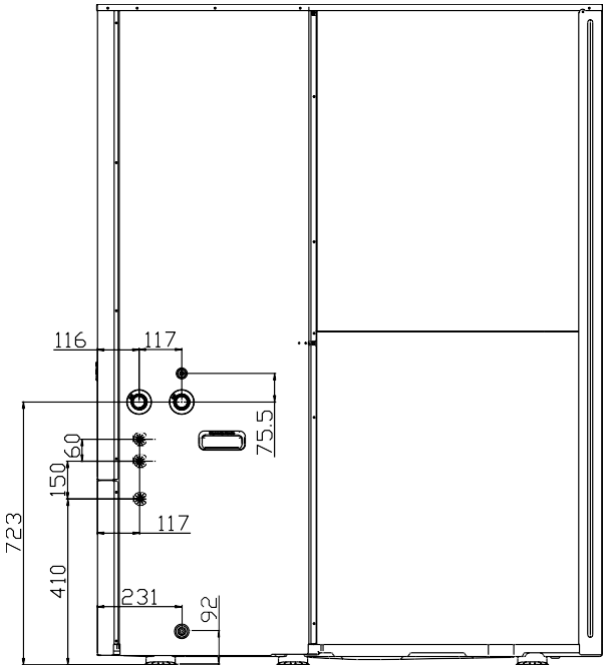
For models with backup heater, the backup heater does not share wiring with the unit. Separate connection required.

3 3-dimensional drawings and Center of Gravity

unit：mm

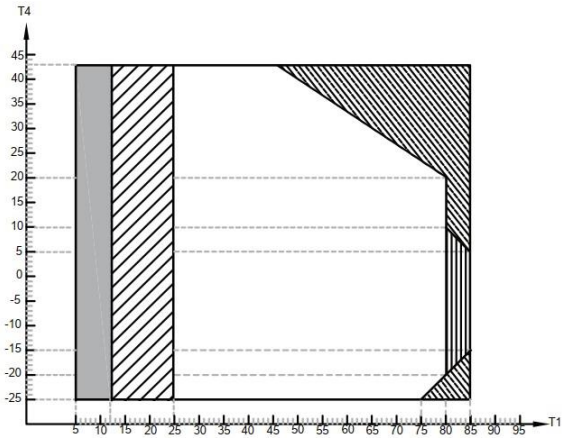






4 Operating Limits

Heating operating limits

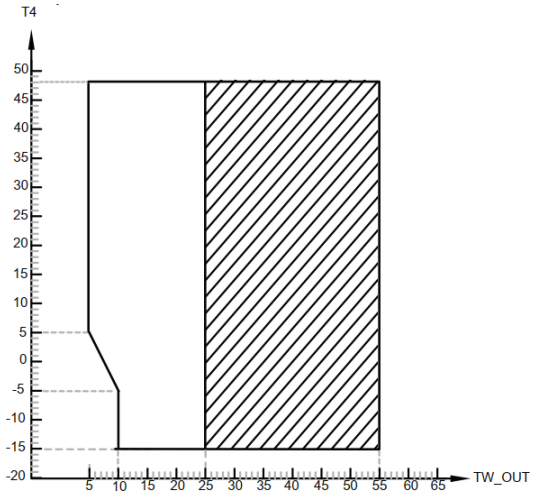


T1: leaving water temperature (°C)
T4: outdoor ambient temperature (°C)

Notes:

1. If IBH/AHS setting is valid, only IBH/AHS turns on; If IBH/AHS setting is invalid, only heat pump turns on. Limitation and protection may occur during heat pump operation.
2. Heat pump operating range with possible limitation and protection.
3. Heat pump turns off, only IBH/AHS turns on.
4. The minimum adjustable water flow of the pump needs to be as low as 1.2m³/h.

Cooling operating limits

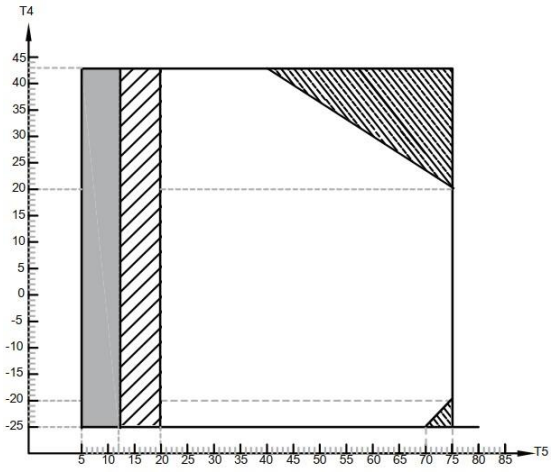


TW_OUT: leaving water temperature (°C)
T4: outdoor ambient temperature (°C)

Notes:

5. Heat pump operating range with possible limitation and protection.

Domestic hot water operating limits

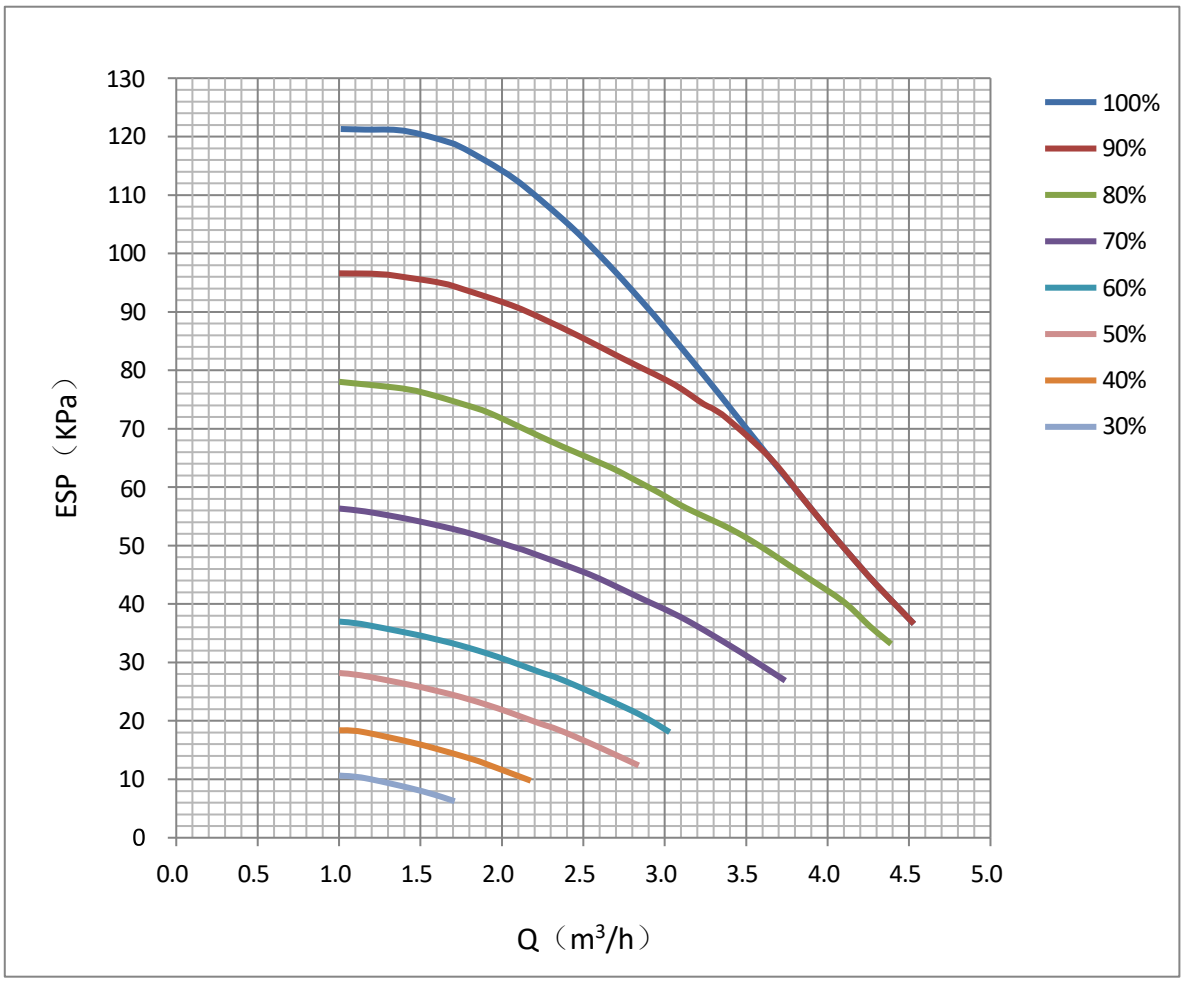


T5: DHW tank temperature(°C)
T4: outdoor ambient temperature (°C)

Notes:

6. ▭ If IBH/AHS setting is valid, only IBH/AHS turns on; If IBH/AHS setting is invalid, only heat pump turns on. Limitation and protection may occur during heat pump operation.
7. ▨ Heat pump operating range with possible limitation and protection.
8. ▨ Heat pump turns off, only IBH/AHS on.

5 Hydronic Performance



Abbreviations:
ESP: External static pressure

6 Capacity Tables

Heating Capacity Tables (Test standard: EN14511)

40kW Heating Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
25	-25	15.04	2.01	7.47	15.04	2.01	7.47	11.28	2.10	5.36	7.56	2.14	3.52	4.53	2.31	1.96
	-20	23.44	2.18	10.73	23.44	2.18	10.73	17.58	2.28	7.70	11.78	2.33	5.06	7.06	2.36	2.99
	-15	26.85	2.38	11.27	26.85	2.38	11.27	20.14	2.49	8.09	13.49	2.54	5.31	8.08	2.58	3.13
	-10	33.42	2.57	13.00	33.42	2.57	13.00	25.06	2.69	9.33	16.79	2.74	6.13	10.06	2.78	3.62
	-7	34.57	2.57	13.44	30.49	2.54	12.01	26.62	2.81	9.47	17.83	3.05	5.84	10.68	3.10	3.44
	-5	33.94	2.58	13.14	30.41	2.72	11.16	26.77	2.90	9.22	17.93	3.15	5.68	10.74	3.21	3.35
	0	34.96	3.07	11.37	31.48	3.12	10.11	27.45	3.34	8.22	18.39	3.42	5.37	11.02	3.72	2.96
	2	36.25	3.26	11.10	32.20	3.32	9.70	28.11	3.56	7.90	18.83	3.62	5.20	11.28	3.93	2.87
	5	37.27	3.43	10.86	32.76	3.47	9.44	28.87	3.70	7.81	19.34	4.09	4.72	11.59	4.16	2.79
	7	39.07	4.05	9.66	39.00	4.29	9.10	29.25	4.48	6.53	19.59	4.56	4.29	11.74	4.54	2.58
	10	41.25	4.34	9.51	39.04	4.43	8.81	29.28	4.63	6.32	19.62	4.72	4.16	11.75	4.70	2.50
	15	46.58	4.76	9.79	39.07	4.97	7.86	29.30	5.20	5.64	19.63	5.30	3.71	11.76	5.15	2.28
	20	50.05	4.95	10.12	39.07	5.17	7.56	29.30	5.40	5.42	19.63	5.51	3.56	11.76	5.35	2.20
	25	51.54	5.63	9.15	39.07	5.88	6.64	29.30	6.15	4.76	19.63	6.27	3.13	11.76	6.09	1.93
	30	52.36	5.97	8.77	39.09	6.24	6.26	29.32	6.52	4.49	19.64	6.65	2.95	11.77	6.46	1.82
	35	45.20	6.60	6.85	39.07	6.90	5.66	29.30	7.21	4.07	19.63	7.35	2.67	11.76	7.14	1.65
	40	39.42	6.76	5.83	39.07	7.07	5.53	29.30	7.38	3.97	19.63	7.53	2.61	11.76	7.32	1.61
	43	36.26	7.17	5.06	36.26	7.17	5.06	27.19	7.49	3.63	18.22	7.64	2.39	10.91	7.41	1.47
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
30	-25	16.16	1.97	8.22	16.16	1.97	8.22	12.12	2.05	5.90	8.12	2.09	3.88	4.86	2.13	2.29
	-20	24.57	2.10	11.71	24.57	2.10	11.71	18.43	2.19	8.40	12.35	2.24	5.52	7.40	2.27	3.26
	-15	27.99	2.29	12.23	27.99	2.29	12.23	20.99	2.39	8.78	14.06	2.44	5.77	8.43	2.48	3.40
	-10	34.60	2.42	14.29	34.60	2.42	14.29	25.95	2.53	10.25	17.38	2.58	6.74	10.41	2.62	3.97
	-7	35.33	2.32	15.25	31.16	2.28	13.64	27.20	2.53	10.75	18.22	2.75	6.63	10.92	2.79	3.91
	-5	34.98	2.42	14.46	31.34	2.55	12.28	27.59	2.72	10.14	18.48	2.96	6.25	11.07	3.00	3.69
	0	36.18	2.99	12.09	32.58	3.03	10.75	28.41	3.25	8.75	19.03	3.33	5.71	11.40	3.62	3.15
	2	37.23	3.21	11.59	33.07	3.27	10.12	28.87	3.50	8.24	19.34	3.57	5.42	11.59	3.86	3.00
	5	37.81	3.37	11.20	33.25	3.41	9.74	29.30	3.63	8.06	19.63	4.03	4.88	11.76	4.09	2.87
	7	39.98	4.00	10.00	39.00	4.18	9.33	29.25	4.37	6.70	19.59	4.45	4.40	11.74	4.43	2.65
	10	42.33	4.20	10.09	39.07	4.29	9.12	29.30	4.48	6.54	19.63	4.56	4.30	11.76	4.54	2.59
	15	47.42	4.61	10.30	39.07	4.81	8.12	29.30	5.03	5.83	19.63	5.13	3.83	11.76	4.98	2.36
	20	50.34	4.75	10.60	39.07	4.96	7.87	29.30	5.19	5.65	19.63	5.29	3.71	11.76	5.14	2.29
	25	51.65	5.49	9.41	39.07	5.74	6.81	29.30	5.99	4.89	19.63	6.11	3.21	11.76	5.94	1.98
	30	52.76	5.84	9.03	39.07	6.10	6.40	29.30	6.38	4.59	19.63	6.50	3.02	11.76	6.32	1.86
	35	45.54	6.50	7.00	39.07	6.80	5.75	29.30	7.10	4.12	19.63	7.24	2.71	11.76	7.04	1.67
	40	39.72	6.61	6.01	39.01	6.91	5.65	29.26	7.22	4.05	19.60	7.36	2.66	11.74	7.15	1.64
	43	36.64	6.98	5.25	36.64	6.98	5.25	27.48	7.29	3.77	18.41	7.43	2.48	11.03	7.25	1.52
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
35	-25	18.41	1.91	9.64	18.41	1.91	9.64	13.81	1.99	6.92	9.25	2.03	4.55	5.54	2.07	2.68
	-20	26.41	1.97	13.44	26.41	1.97	13.44	19.81	2.05	9.64	13.27	2.09	6.34	7.95	2.13	3.74
	-15	29.02	2.14	13.58	29.02	2.14	13.58	21.76	2.23	9.75	14.58	2.28	6.41	8.73	2.31	3.78
	-10	36.26	2.33	15.59	36.26	2.33	15.59	27.19	2.43	11.19	18.22	2.48	7.35	10.91	2.52	4.33
	-7	36.52	2.23	16.37	32.21	2.20	14.63	28.12	2.44	11.53	18.84	2.65	7.11	11.29	2.69	4.19
	-5	36.04	2.28	15.83	32.29	2.40	13.44	28.42	2.56	11.10	19.04	2.78	6.84	11.41	2.83	4.04
	0	36.78	2.89	12.73	33.12	2.93	11.31	28.88	3.14	9.21	19.35	3.22	6.01	11.59	3.49	3.32
	2	38.20	3.04	12.56	33.54	3.09	10.84	29.28	3.32	8.83	19.62	3.38	5.81	11.75	3.66	3.21
	5	38.70	3.26	11.85	33.21	3.30	10.06	29.27	3.51	8.33	19.60	3.89	5.03	11.75	3.96	2.97
	7	40.73	3.85	10.59	39.00	4.00	9.75	29.25	4.14	7.07	19.59	4.22	4.65	11.74	4.29	2.74
	10	43.08	3.99	10.80	39.07	4.07	9.59	29.30	4.26	6.89	19.63	4.34	4.53	11.76	4.32	2.72
	15	48.65	4.42	10.99	39.07	4.62	8.45	29.30	4.83	6.06	19.63	4.93	3.98	11.76	4.79	2.46
	20	50.53	4.61	10.97	39.07	4.81	8.12	29.30	5.03	5.83	19.63	5.13	3.83	11.76	4.98	2.36
	25	52.09	5.26	9.90	39.07	5.50	7.11	29.30	5.74	5.10	19.63	5.86	3.35	11.76	5.69	2.07
	30	53.11	5.69	9.34	39.07	5.94	6.57	29.30	6.21	4.72	19.63	6.33	3.10	11.76	6.16	1.91
	35	45.67	6.10	7.49	39.07	6.37	6.13	29.30	6.66	4.40	19.63	6.79	2.89	11.76	6.60	1.78
	40	39.95	6.22	6.42	39.01	6.39	6.10	29.26	6.68	4.38	19.60	6.81	2.88	11.74	6.73	1.74
	43	36.76	6.50	5.65	36.76	6.50	5.65	27.57	6.80	4.06	18.47	6.93	2.67	11.06	6.94	1.59

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
40	-25	19.37	1.69	11.43	19.37	1.69	11.43	14.53	1.77	8.20	9.73	1.81	5.39	5.83	1.83	3.18
	-20	27.80	1.79	15.57	27.80	1.79	15.57	20.85	1.87	11.18	13.97	1.90	7.35	8.37	1.93	4.33
	-15	29.36	2.05	14.35	29.36	2.05	14.35	22.02	2.14	10.30	14.75	2.18	6.77	8.84	2.21	3.99
	-10	37.36	2.26	16.53	37.36	2.26	16.53	28.02	2.36	11.87	18.77	2.41	7.80	11.25	2.45	4.60
	-7	36.88	2.14	17.25	32.52	2.11	15.42	28.40	2.34	12.16	19.02	2.54	7.49	11.40	2.58	4.42
	-5	36.61	2.19	16.69	32.80	2.32	14.17	28.87	2.47	11.71	19.34	2.68	7.22	11.59	2.72	4.25
	0	37.95	2.76	13.74	33.60	2.80	12.00	29.30	3.00	9.77	19.63	3.08	6.38	11.76	3.34	3.52
	2	38.51	2.91	13.21	33.58	3.00	11.19	29.32	3.22	9.11	19.64	3.28	5.99	11.77	3.50	3.36
	5	38.84	2.98	13.01	33.27	3.14	10.59	29.33	3.35	8.76	19.64	3.71	5.30	11.77	3.72	3.16
	7	40.95	3.42	11.98	39.00	3.66	10.64	29.25	3.83	7.64	19.59	3.90	5.02	11.74	3.89	3.02
	10	43.69	3.68	11.86	39.07	3.76	10.39	29.30	3.93	7.45	19.63	4.01	4.90	11.76	3.99	2.95
	15	48.86	4.06	12.02	39.07	4.25	9.20	29.30	4.44	6.60	19.63	4.52	4.34	11.76	4.40	2.67
	20	50.78	4.39	11.57	39.07	4.58	8.52	29.30	4.79	6.12	19.63	4.88	4.02	11.76	4.75	2.48
	25	52.13	5.05	10.32	39.07	5.28	7.40	29.30	5.52	5.31	19.63	5.62	3.49	11.76	5.47	2.15
	30	53.34	5.40	9.87	39.07	5.65	6.92	29.30	5.90	4.97	19.63	6.01	3.26	11.76	5.85	2.01
	35	45.85	5.84	7.85	39.07	6.10	6.40	29.30	6.38	4.59	19.63	6.50	3.02	11.76	6.32	1.86
	40	40.14	5.93	6.77	39.00	6.19	6.30	29.25	6.47	4.52	19.59	6.59	2.97	11.74	6.41	1.83
	43	36.83	6.31	5.83	36.83	6.31	5.83	27.62	6.60	4.19	18.50	6.73	2.75	11.08	6.63	1.67

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
45	-25	20.66	1.54	13.43	20.66	1.54	13.43	15.49	1.61	9.64	10.38	1.64	6.33	6.22	1.67	3.73
	-20	28.55	1.66	17.18	28.55	1.66	17.18	21.41	1.74	12.33	14.34	1.77	8.10	8.59	1.80	4.78
	-15	29.92	1.95	15.37	29.92	1.95	15.37	22.44	2.03	11.03	15.03	2.07	7.25	9.01	2.11	4.27
	-10	37.42	2.17	17.28	37.42	2.17	17.28	28.06	2.26	12.40	18.80	2.31	8.15	11.26	2.34	4.81
	-7	36.95	2.07	17.85	32.59	2.04	15.96	28.46	2.26	12.58	19.06	2.46	7.76	11.42	2.50	4.57
	-5	36.75	2.05	17.90	32.92	2.17	15.20	28.98	2.31	12.56	19.41	2.51	7.74	11.63	2.55	4.56
	0	38.09	2.53	15.04	33.60	2.57	13.09	29.30	2.75	10.65	19.63	2.82	6.96	11.76	3.06	3.84
	2	38.62	2.65	14.58	33.57	2.73	12.31	29.31	2.92	10.02	19.63	2.98	6.59	11.76	3.19	3.69
	5	38.99	2.80	13.93	33.25	2.91	11.43	29.30	3.10	9.46	19.63	3.43	5.72	11.76	3.44	3.42
	7	41.22	3.18	12.96	39.00	3.28	11.90	29.25	3.45	8.47	19.59	3.52	5.57	11.74	3.58	3.28
	10	44.85	3.46	12.98	39.07	3.53	11.07	29.30	3.69	7.95	19.63	3.76	5.22	11.76	3.74	3.14
	15	49.06	3.80	12.92	39.07	3.97	9.84	29.30	4.15	7.06	19.63	4.23	4.64	11.76	4.11	2.86
	20	50.87	4.16	12.23	39.07	4.35	8.99	29.30	4.54	6.45	19.63	4.63	4.24	11.76	4.50	2.61
	25	52.98	4.76	11.14	39.07	4.97	7.86	29.30	5.20	5.64	19.63	5.30	3.71	11.76	5.15	2.28
	30	53.47	4.95	10.81	39.07	5.17	7.56	29.30	5.40	5.42	19.63	5.51	3.56	11.76	5.35	2.20
	35	45.96	5.18	8.88	39.07	5.41	7.22	29.30	5.65	5.18	19.63	5.76	3.41	11.76	5.60	2.10
	40	40.35	5.43	7.43	39.03	5.51	7.09	29.28	5.76	5.09	19.61	5.87	3.34	11.75	5.88	2.00
	43	37.50	5.55	6.76	37.50	5.55	6.76	28.12	5.80	4.85	18.84	5.91	3.19	11.29	6.00	1.88

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
50	-25	23.00	1.44	15.99	23.00	1.44	15.99	17.25	1.50	11.48	11.56	1.53	7.54	6.92	1.56	4.45
	-20	28.66	1.58	18.13	28.66	1.58	18.13	21.49	1.65	13.01	14.40	1.68	8.55	8.63	1.71	5.04
	-15	30.01	1.81	16.59	30.01	1.81	16.59	22.51	1.89	11.91	15.08	1.93	7.83	9.03	1.96	4.61
	-10	37.53	2.01	18.69	37.53	2.02	18.58	28.15	2.11	13.33	18.85	2.15	8.76	11.30	2.17	5.20
	-7	37.28	1.95	19.11	32.88	1.94	16.98	28.71	2.14	13.39	19.23	2.33	8.25	11.52	2.35	4.89
	-5	36.97	1.96	18.88	33.12	2.08	15.94	29.16	2.21	13.17	19.53	2.41	8.12	11.70	2.43	4.81
	0	38.25	2.26	16.89	33.49	2.31	14.51	29.21	2.47	11.81	19.57	2.54	7.71	11.72	2.74	4.28
	2	38.98	2.38	16.35	33.51	2.45	13.65	29.26	2.63	11.11	19.60	2.68	7.31	11.74	2.87	4.09
	5	39.55	2.52	15.68	33.21	2.60	12.75	29.27	2.77	10.55	19.60	3.07	6.38	11.75	3.08	3.81
	7	41.84	2.94	14.21	39.00	3.13	12.45	29.25	3.27	8.94	19.59	3.34	5.87	11.74	3.32	3.54
	10	45.55	3.24	14.05	39.07	3.31	11.80	29.30	3.46	8.47	19.63	3.53	5.57	11.76	3.51	3.35
	15	49.75	3.58	13.90	39.01	3.74	10.43	29.26	3.91	7.48	19.60	3.98	4.92	11.74	3.87	3.03
	20	51.09	3.91	13.06	39.02	4.09	9.54	29.27	4.27	6.85	19.60	4.35	4.50	11.75	4.23	2.77
	25	53.34	4.43	12.04	39.08	4.63	8.44	29.31	4.84	6.06	19.63	4.93	3.98	11.76	4.79	2.45
	30	54.10	4.65	11.63	39.08	4.86	8.04	29.31	5.08	5.77	19.63	5.18	3.79	11.76	5.04	2.34
	35	47.41	4.96	9.57	39.07	5.18	7.54	29.30	5.41	5.41	19.63	5.52	3.56	11.76	5.37	2.19
	40	37.38	5.05	7.40	37.38	5.28	7.08	28.04	5.52	5.08	18.78	5.62	3.34	11.25	5.39	2.09
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
55	-25	25.35	1.34	18.93	25.35	1.34	18.93	19.01	1.40	13.59	12.74	1.43	8.93	7.63	1.45	5.27
	-20	28.77	1.50	19.18	28.77	1.50	19.18	21.58	1.57	13.76	14.45	1.60	9.04	8.66	1.62	5.33
	-15	30.11	1.67	18.02	30.11	1.67	18.02	22.58	1.75	12.93	15.13	1.78	8.50	9.06	1.81	5.01
	-10	39.01	1.85	21.07	39.01	1.87	20.81	29.26	1.96	14.93	19.60	2.00	9.81	11.74	2.00	5.86
	-7	38.01	1.83	20.75	33.52	1.83	18.32	29.27	2.03	14.44	19.60	2.20	8.90	11.75	2.21	5.32
	-5	37.25	1.86	19.99	33.28	1.99	16.72	29.30	2.12	13.82	19.63	2.30	8.52	11.76	2.31	5.08
	0	38.33	2.00	19.19	33.57	2.05	16.38	29.28	2.20	13.33	19.61	2.25	8.70	11.75	2.42	4.86
	2	39.28	2.12	18.53	33.54	2.18	15.37	29.28	2.34	12.51	19.62	2.38	8.23	11.75	2.55	4.61
	5	39.77	2.25	17.70	33.21	2.30	14.43	29.27	2.45	11.95	19.60	2.71	7.22	11.75	2.72	4.31
	7	42.18	2.71	15.58	39.00	2.79	14.00	29.25	2.96	9.89	19.59	3.01	6.50	11.74	3.06	3.83
	10	45.96	3.03	15.17	39.07	3.09	12.63	29.30	3.23	9.07	19.63	3.29	5.96	11.76	3.28	3.59
	15	49.98	3.36	14.87	39.07	3.51	11.12	29.30	3.67	7.98	19.63	3.74	5.25	11.76	3.64	3.23
	20	51.25	3.67	13.98	39.07	3.83	10.20	29.30	4.00	7.32	19.63	4.08	4.81	11.76	3.97	2.96
	25	53.49	4.10	13.04	39.07	4.29	9.11	29.30	4.48	6.54	19.63	4.57	4.30	11.76	4.44	2.65
	30	54.21	4.36	12.44	39.07	4.55	8.58	29.30	4.76	6.16	19.63	4.85	4.05	11.76	4.72	2.49
	35	44.85	4.74	9.47	39.07	4.95	7.89	29.30	5.17	5.66	19.63	5.27	3.72	11.76	4.98	2.36
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
60	-25	26.24	1.28	20.47	26.24	1.28	20.47	19.68	1.34	14.69	13.18	1.37	9.65	7.90	1.39	5.69
	-20	29.58	1.44	20.50	29.58	1.44	20.50	22.19	1.51	14.71	14.86	1.54	9.67	8.90	1.56	5.70
	-15	31.07	1.61	19.24	31.07	1.61	19.24	23.30	1.69	13.81	15.61	1.72	9.08	9.35	1.75	5.35
	-10	39.49	1.76	22.48	39.04	1.78	21.95	29.28	1.86	15.75	19.62	1.89	10.35	11.75	1.90	6.18
	-7	38.58	1.75	22.10	33.56	1.74	19.24	29.30	1.93	15.16	19.63	2.10	9.35	11.76	2.11	5.58
	-5	37.92	1.81	20.91	33.29	1.94	17.19	29.31	2.06	14.20	19.63	2.24	8.75	11.76	2.25	5.23
	0	38.94	1.91	20.36	33.62	1.96	17.13	29.32	2.10	13.94	19.64	2.16	9.10	11.77	2.31	5.09
	2	39.60	1.99	19.89	33.56	2.05	16.37	29.30	2.20	13.33	19.63	2.24	8.77	11.76	2.39	4.91
	5	40.18	2.08	19.34	33.25	2.13	15.63	29.30	2.26	12.94	19.63	2.51	7.82	11.76	2.52	4.67
	7	42.35	2.40	17.63	39.00	2.49	15.65	29.25	2.60	11.23	19.59	2.65	7.38	11.74	2.64	4.44
	10	46.41	2.71	17.15	39.01	2.76	14.12	29.26	2.89	10.13	19.60	2.94	6.66	11.74	2.93	4.01
	15	50.13	3.08	16.29	39.01	3.22	12.13	29.26	3.36	8.71	19.60	3.42	5.72	11.74	3.33	3.53
	20	51.87	3.36	15.43	39.01	3.51	11.11	29.26	3.67	7.97	19.60	3.74	5.24	11.74	3.64	3.23
	25	53.72	3.66	14.69	39.01	3.82	10.21	29.26	3.99	7.33	19.60	4.07	4.82	11.74	3.96	2.97
	30	54.32	4.00	13.59	39.07	4.18	9.35	29.30	4.37	6.71	19.63	4.45	4.41	11.76	4.61	2.55
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
65	-25	27.36	1.23	22.16	27.36	1.23	22.16	20.52	1.29	15.90	13.74	1.31	10.45	8.23	1.34	6.16
	-20	29.81	1.35	22.11	29.81	1.35	22.11	22.36	1.41	15.87	14.98	1.44	10.43	8.97	1.46	6.15
	-15	31.48	1.53	20.59	31.48	1.53	20.59	23.61	1.60	14.78	15.81	1.63	9.71	9.48	1.65	5.73
	-10	39.65	1.63	24.27	39.01	1.65	23.59	29.26	1.73	16.93	19.60	1.76	11.13	11.74	1.77	6.64
	-7	38.73	1.63	23.81	33.53	1.63	20.63	29.28	1.80	16.26	19.61	1.96	10.02	11.75	1.96	5.98
	-5	38.01	1.66	22.89	33.26	1.77	18.75	29.28	1.89	15.49	19.61	2.05	9.55	11.75	2.06	5.70
	0	38.30	1.79	21.36	33.58	1.84	18.25	29.28	1.97	14.85	19.62	2.02	9.70	11.75	2.17	5.42
	2	39.90	1.89	21.13	33.56	1.94	17.26	29.30	2.09	14.05	19.63	2.12	9.24	11.76	2.27	5.18
	5	40.39	1.94	20.80	33.25	1.99	16.72	29.31	2.12	13.84	19.63	2.35	8.37	11.76	2.35	5.00
	7	42.73	2.19	19.48	39.00	2.35	16.60	29.25	2.38	12.28	19.59	2.43	8.07	11.74	2.47	4.76
	10	46.52	2.56	18.15	39.07	2.62	14.92	29.30	2.74	10.71	19.63	2.79	7.04	11.76	2.78	4.24
	15	50.50	2.80	18.03	39.07	2.93	13.35	29.30	3.06	9.58	19.63	3.12	6.29	11.76	3.03	3.88
	20	52.43	3.09	16.99	39.07	3.22	12.11	29.30	3.37	8.69	19.63	3.44	5.71	11.76	3.34	3.52
	25	54.09	3.37	16.05	39.07	3.52	11.09	29.30	3.68	7.96	19.63	3.75	5.23	11.76	3.65	3.22
	30	54.59	3.69	14.78	39.07	3.86	10.12	29.30	4.03	7.26	19.63	4.11	4.77	11.76	4.42	2.66
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
70	-25	24.48	1.19	20.62	24.48	1.19	20.62	18.36	1.24	14.80	12.30	1.26	9.73	7.37	1.28	5.73
	-20	29.92	1.31	22.83	29.92	1.31	22.83	22.44	1.37	16.39	15.03	1.40	10.77	9.01	1.42	6.35
	-15	31.92	1.47	21.69	31.92	1.47	21.69	23.94	1.54	15.57	16.04	1.57	10.23	9.61	1.59	6.03
	-10	40.35	1.60	25.29	39.01	1.62	24.15	29.26	1.69	17.33	19.60	1.72	11.39	11.74	1.73	6.80
	-7	39.67	1.58	25.04	33.56	1.58	21.20	29.30	1.75	16.71	19.63	1.91	10.30	11.76	1.91	6.15
	-5	39.05	1.62	24.15	33.28	1.73	19.27	29.30	1.84	15.92	19.63	2.00	9.81	11.76	2.01	5.86
	0	39.32	1.69	23.25	33.60	1.74	19.36	29.30	1.86	15.76	19.63	1.91	10.29	11.76	2.05	5.75
	2	40.72	1.79	22.80	33.57	1.84	18.26	29.31	1.97	14.86	19.63	2.01	9.78	11.76	2.15	5.48
	5	41.57	1.83	22.68	33.20	1.88	17.69	29.26	2.00	14.64	19.60	2.21	8.85	11.74	2.22	5.28
	7	43.74	2.13	20.56	39.00	2.23	17.49	29.25	2.33	12.55	19.59	2.38	8.25	11.74	2.36	4.97
	10	46.30	2.32	19.94	39.07	2.37	16.48	29.30	2.48	11.83	19.63	2.53	7.77	11.76	2.51	4.68
	15	51.31	2.52	20.35	39.07	2.63	14.83	29.30	2.75	10.64	19.63	2.81	6.99	11.76	2.73	4.31
	20	52.76	2.64	20.02	39.07	2.75	14.19	29.30	2.88	10.18	19.63	2.93	6.69	11.76	2.85	4.12
	25	54.47	2.86	19.06	39.07	2.99	13.08	29.30	3.12	9.39	19.63	3.18	6.17	11.76	3.56	3.30
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
75	-25	21.59	1.14	18.95	21.59	1.14	18.95	16.20	1.19	13.60	10.85	1.21	8.94	6.50	1.23	5.27
	-20	26.24	1.21	21.76	26.24	1.21	21.76	19.68	1.26	15.62	13.18	1.28	10.26	7.90	1.31	6.05
	-15	29.55	1.42	20.75	29.55	1.42	20.75	22.17	1.49	14.89	14.85	1.52	9.79	8.90	1.54	5.77
	-10	33.71	1.56	21.64	33.71	1.56	21.64	25.28	1.63	15.53	16.93	1.66	10.21	10.15	1.69	6.02
	-7	36.38	1.54	23.60	32.08	1.52	21.09	28.01	1.68	16.63	18.77	1.83	10.25	11.24	1.86	6.04
	-5	37.99	1.57	24.14	33.29	1.68	19.80	29.31	1.79	16.36	19.63	1.95	10.09	11.76	1.95	6.02
	0	40.06	1.63	24.51	33.62	1.68	20.04	29.32	1.80	16.31	19.64	1.84	10.65	11.77	1.98	5.95
	2	41.54	1.73	24.06	33.56	1.78	18.88	29.30	1.91	15.37	19.63	1.94	10.11	11.76	2.08	5.66
	5	42.66	1.78	23.96	33.39	1.82	18.31	29.43	1.94	15.16	19.71	2.15	9.16	11.81	2.16	5.47
	7	44.88	2.04	21.98	39.00	2.18	17.88	29.25	2.28	12.83	19.59	2.32	8.43	11.74	2.31	5.08
	10	47.62	2.23	21.34	39.08	2.28	17.15	29.31	2.38	12.31	19.63	2.43	8.09	11.76	2.42	4.87
	15	51.87	2.38	21.76	39.09	2.38	16.40	29.32	2.49	11.77	19.64	2.54	7.74	11.77	2.58	4.56
	20	53.75	2.49	21.61	39.07	2.52	15.53	29.30	2.60	11.27	19.63	2.65	7.41	11.76	2.69	4.37
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
80	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	24.89	1.16	21.49	24.89	1.16	21.49	18.67	1.21	15.42	12.51	1.23	10.13	7.49	1.25	5.98
	-15	27.43	1.22	22.57	27.43	1.22	22.57	20.58	1.27	16.20	13.78	1.29	10.65	8.26	1.32	6.28
	-10	31.16	1.48	21.04	31.16	1.48	21.04	23.37	1.55	15.10	15.66	1.58	9.92	9.38	1.60	5.85
	-7	33.70	1.41	23.98	29.72	1.39	21.43	25.95	1.54	16.90	17.38	1.67	10.42	10.41	1.70	6.14
	-5	33.43	1.47	22.75	29.95	1.55	19.32	26.37	1.65	15.96	17.66	1.79	9.84	10.58	1.82	5.80
	0	34.61	1.57	22.01	31.16	1.59	19.56	27.18	1.71	15.92	18.21	1.75	10.39	10.91	1.90	5.74
	2	35.40	1.67	21.24	31.44	1.69	18.56	27.45	1.82	15.11	18.39	1.85	9.94	11.02	2.00	5.50
	5	35.61	1.76	20.19	31.30	1.72	18.16	27.59	1.83	15.03	18.48	2.03	9.09	11.07	2.07	5.36
	7	36.58	2.01	18.17	36.58	1.85	19.75	27.43	1.93	14.18	18.38	1.97	9.32	11.01	2.00	5.49
	10	36.46	2.13	17.14	36.46	1.89	19.29	27.34	1.97	13.85	18.32	2.01	9.10	10.97	2.05	5.37
	15	36.34	2.18	16.64	36.34	2.03	17.88	27.26	2.12	12.84	18.26	2.16	8.44	10.94	2.20	4.97
	20	36.27	2.30	15.78	36.27	2.35	15.46	27.20	2.40	11.33	18.22	2.45	7.44	10.92	2.49	4.39
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
85	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-15	20.09	1.18	17.06	20.09	1.18	17.06	15.07	1.23	12.25	10.09	1.25	8.05	6.05	1.27	4.74
	-10	21.12	1.42	14.82	21.12	1.42	14.82	15.84	1.49	10.64	10.61	1.52	6.99	6.36	1.54	4.12
	-7	21.19	1.37	15.45	18.68	1.35	13.81	16.31	1.50	10.89	10.93	1.63	6.71	6.55	1.65	3.96
	-5	21.03	1.37	15.40	18.85	1.44	13.07	16.59	1.54	10.80	11.11	1.67	6.66	6.66	1.70	3.93
	0	20.98	1.44	14.61	18.90	1.46	12.98	16.48	1.56	10.57	11.04	1.60	6.90	6.61	1.74	3.81
	2	21.03	1.54	13.67	18.68	1.56	11.95	16.31	1.68	9.73	10.93	1.71	6.40	6.55	1.85	3.54
	5	20.90	1.64	12.77	18.38	1.65	11.10	16.20	1.76	9.19	10.85	1.95	5.56	6.50	1.98	3.28
	7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Abbreviations:

HC: Total heating capacity (kW)

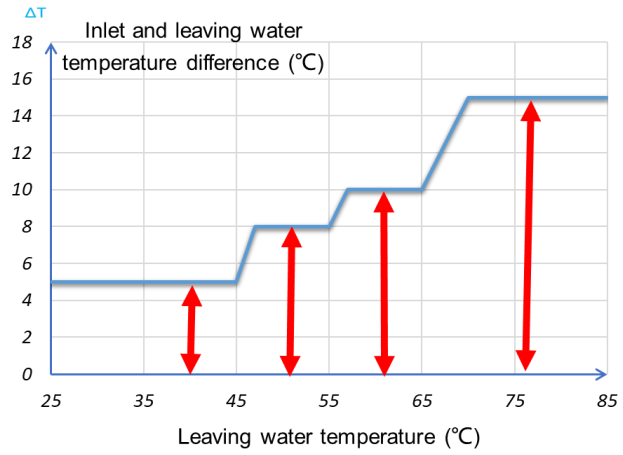
PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the heating mode, the temperature difference between the inlet and leaving water of the unit is shown in the figure below：



35kW Heating Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
25	-25	13.50	2.12	6.37	13.50	2.12	6.37	10.13	2.22	4.57	6.78	2.26	3.00	4.06	2.44	1.67
	-20	21.04	2.30	9.15	21.04	2.30	9.15	15.78	2.40	6.57	10.57	2.45	4.31	6.33	2.49	2.54
	-15	24.10	2.51	9.60	24.10	2.51	9.60	18.08	2.62	6.89	12.11	2.67	4.53	7.25	2.72	2.67
	-10	29.99	2.71	11.08	29.99	2.71	11.08	22.49	2.83	7.95	15.07	2.88	5.23	9.03	2.93	3.08
	-7	31.38	2.64	11.87	26.69	2.93	9.12	23.89	2.80	8.53	16.00	3.22	4.97	9.59	3.27	2.93
	-5	31.31	2.82	11.11	27.06	3.55	7.63	24.02	2.78	8.63	16.09	3.32	4.84	9.64	3.38	2.86
	0	29.94	3.28	9.12	27.98	3.85	7.27	24.64	3.44	7.16	16.50	3.74	4.42	9.89	3.92	2.53
	2	31.88	3.53	9.02	29.19	3.42	8.53	25.23	3.62	6.97	16.90	3.88	4.35	10.13	4.13	2.45
	5	33.26	3.81	8.73	32.73	4.27	7.66	25.91	3.93	6.59	17.36	4.31	4.03	10.40	4.38	2.37
	7	35.06	4.26	8.23	35.00	4.51	7.76	26.25	4.72	5.57	17.58	4.81	3.66	10.54	4.78	2.20
	10	37.02	4.57	8.10	35.04	4.67	7.51	26.28	4.88	5.39	17.60	4.97	3.54	10.55	4.95	2.13
	15	41.81	5.01	8.34	35.06	5.24	6.70	26.30	5.47	4.81	17.61	5.58	3.16	10.55	5.42	1.95
	20	44.92	5.21	8.62	35.06	5.44	6.44	26.30	5.69	4.62	17.61	5.80	3.04	10.55	5.64	1.87
	25	46.25	5.93	7.80	35.06	6.20	5.66	26.30	6.48	4.06	17.61	6.60	2.67	10.55	6.42	1.64
	30	46.99	6.29	7.47	35.08	6.57	5.34	26.31	6.87	3.83	17.62	7.00	2.52	10.56	6.81	1.55
	35	40.56	6.95	5.84	35.06	7.26	4.83	26.30	7.59	3.46	17.61	7.74	2.28	10.55	7.52	1.40
	40	35.38	7.12	4.97	35.06	7.44	4.71	26.30	7.78	3.38	17.61	7.93	2.22	10.55	7.71	1.37
	43	32.54	7.55	4.31	32.54	7.55	4.31	24.41	7.89	3.09	16.35	8.04	2.03	9.79	7.80	1.26

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
30	-25	14.50	2.07	7.00	14.50	2.07	7.00	10.88	2.16	5.03	7.28	2.20	3.30	4.36	2.24	1.95
	-20	22.05	2.21	9.98	22.05	2.21	9.98	16.54	2.31	7.16	11.08	2.35	4.71	6.64	2.39	2.77
	-15	25.12	2.41	10.42	25.12	2.41	10.42	18.84	2.52	7.48	12.62	2.57	4.92	7.56	2.61	2.90
	-10	31.05	2.55	12.18	31.05	2.55	12.18	23.29	2.66	8.74	15.60	2.72	5.74	9.35	2.76	3.39
	-7	32.07	2.38	13.48	27.28	2.64	10.35	24.41	2.52	9.68	16.35	2.90	5.65	9.80	2.94	3.33
	-5	32.27	2.64	12.22	27.89	3.32	8.39	24.76	2.61	9.50	16.58	3.11	5.33	9.94	3.16	3.14
	0	30.99	3.20	9.70	28.96	3.74	7.74	25.50	3.35	7.62	17.08	3.64	4.70	10.23	3.81	2.69
	2	32.75	3.48	9.42	29.97	3.37	8.90	25.91	3.56	7.28	17.36	3.82	4.54	10.40	4.07	2.56
	5	33.75	3.75	9.01	33.22	4.20	7.90	26.30	3.87	6.80	17.61	4.24	4.15	10.55	4.31	2.45
	7	35.88	4.21	8.52	35.00	4.40	7.95	26.25	4.60	5.71	17.58	4.69	3.75	10.54	4.67	2.26
	10	37.99	4.42	8.60	35.06	4.51	7.77	26.30	4.72	5.58	17.61	4.81	3.66	10.55	4.78	2.21
	15	42.56	4.85	8.78	35.06	5.07	6.92	26.30	5.30	4.96	17.61	5.40	3.26	10.55	5.25	2.01
	20	45.18	5.00	9.03	35.06	5.23	6.71	26.30	5.46	4.81	17.61	5.57	3.16	10.55	5.42	1.95
	25	46.35	5.78	8.02	35.06	6.04	5.80	26.30	6.31	4.17	17.61	6.43	2.74	10.55	6.26	1.69
	30	47.35	6.15	7.70	35.06	6.43	5.46	26.30	6.72	3.92	17.61	6.85	2.57	10.55	6.66	1.59
	35	40.87	6.85	5.97	35.06	7.16	4.90	26.30	7.48	3.52	17.61	7.62	2.31	10.55	7.41	1.42
	40	35.65	6.96	5.12	35.01	7.27	4.81	26.26	7.60	3.45	17.59	7.75	2.27	10.54	7.53	1.40
	43	32.88	7.35	4.47	32.88	7.35	4.47	24.66	7.68	3.21	16.52	7.83	2.11	9.90	7.63	1.30

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
35	-25	16.52	2.01	8.22	16.52	2.01	8.22	12.39	2.10	5.90	8.30	2.14	3.88	4.97	2.18	2.29
	-20	23.70	2.07	11.45	23.70	2.07	11.45	17.78	2.16	8.22	11.91	2.20	5.40	7.13	2.24	3.18
	-15	26.04	2.25	11.57	26.04	2.25	11.57	19.53	2.35	8.31	13.08	2.40	5.46	7.84	2.44	3.22
	-10	32.54	2.45	13.28	32.54	2.45	13.28	24.41	2.56	9.53	16.35	2.61	6.26	9.79	2.65	3.69
	-7	33.15	2.29	14.46	28.20	2.54	11.10	25.24	2.43	10.39	16.91	2.79	6.06	10.13	2.84	3.57
	-5	33.25	2.49	13.37	28.74	3.13	9.19	25.51	2.45	10.40	17.09	2.93	5.83	10.24	2.98	3.44
	0	31.50	3.09	10.20	29.44	3.62	8.14	25.92	3.23	8.02	17.36	3.51	2.28	10.40	3.68	2.83
	2	33.60	3.29	10.20	30.40	3.19	9.52	26.28	3.37	7.79	17.60	3.62	4.87	10.55	3.85	2.74
	5	34.55	3.62	9.54	33.18	4.07	8.16	26.27	3.74	7.02	17.59	4.10	4.29	10.54	4.17	2.53
	7	36.55	4.05	9.02	35.00	4.17	8.40	26.25	4.36	6.02	17.58	4.44	3.96	10.54	4.51	2.33
	10	38.66	4.20	9.20	35.06	4.29	8.18	26.30	4.48	5.87	17.61	4.57	3.86	10.55	4.55	2.32
	15	43.66	4.66	9.37	35.06	4.87	7.20	26.30	5.09	5.17	17.61	5.19	3.40	10.55	5.04	2.09
	20	45.35	4.85	9.35	35.06	5.07	6.92	26.30	5.30	4.96	17.61	5.40	3.26	10.55	5.25	2.01
	25	46.75	5.54	8.44	35.06	5.79	6.06	26.30	6.05	4.35	17.61	6.17	2.86	10.55	6.00	1.76
	30	47.66	5.99	7.96	35.06	6.26	5.60	26.30	6.54	4.02	17.61	6.67	2.64	10.55	6.48	1.63
	35	40.99	6.42	6.38	35.06	6.71	5.23	26.30	7.01	3.75	17.61	7.15	2.46	10.55	6.95	1.52
	40	35.85	6.55	5.47	35.01	6.73	5.20	26.26	7.03	3.73	17.59	7.17	2.45	10.54	7.09	1.49
	43	32.99	6.85	4.82	32.99	6.85	4.82	24.74	7.16	3.46	16.57	7.30	2.27	9.93	7.31	1.36

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
40	-25	17.38	1.79	9.74	17.38	1.79	9.74	13.04	1.87	6.99	8.73	1.90	4.59	5.23	1.93	2.71
	-20	24.95	1.88	13.27	24.95	1.88	13.27	18.71	1.96	9.52	12.53	2.00	6.26	7.51	2.03	3.69
	-15	26.35	2.16	12.23	26.35	2.16	12.23	19.76	2.25	8.78	13.24	2.30	5.77	7.93	2.33	3.40
	-10	33.53	2.38	14.09	33.53	2.38	14.09	25.15	2.49	10.11	16.85	2.54	6.64	10.09	2.58	3.92
	-7	33.48	2.20	15.24	28.48	2.43	11.70	25.49	2.33	10.95	17.07	2.67	6.39	10.23	2.72	3.76
	-5	33.78	2.40	14.10	29.19	3.01	9.69	25.91	2.36	10.96	17.36	2.82	6.15	10.40	2.87	3.63
	0	32.50	2.95	11.01	29.86	3.46	8.64	26.30	3.09	8.51	17.61	3.36	5.25	10.55	3.52	3.00
	2	33.87	3.15	10.74	30.43	3.09	9.84	26.31	3.27	8.05	17.62	3.51	5.02	10.56	3.69	2.86
	5	34.67	3.31	10.47	33.25	3.87	8.59	26.32	3.56	7.39	17.63	3.90	4.51	10.56	3.92	2.70
	7	36.75	3.60	10.21	35.00	3.86	9.07	26.25	4.03	6.51	17.58	4.11	4.28	10.54	4.09	2.57
	10	39.21	3.88	10.11	35.06	3.96	8.85	26.30	4.14	6.35	17.61	4.22	4.17	10.55	4.20	2.51
	15	43.85	4.28	10.25	35.06	4.47	7.84	26.30	4.67	5.63	17.61	4.76	3.70	10.55	4.63	2.28
	20	45.57	4.62	9.86	35.06	4.83	7.26	26.30	5.05	5.21	17.61	5.14	3.43	10.55	5.00	2.11
	25	46.78	5.32	8.79	35.06	5.56	6.31	26.30	5.81	4.53	17.61	5.92	2.97	10.55	5.76	1.83
	30	47.87	5.69	8.41	35.06	5.95	5.90	26.30	6.21	4.23	17.61	6.33	2.78	10.55	6.16	1.71
	35	41.15	6.15	6.69	35.06	6.43	5.46	26.30	6.72	3.92	17.61	6.85	2.57	10.55	6.66	1.59
	40	36.02	6.24	5.77	35.00	6.52	5.37	26.25	6.81	3.85	17.58	6.95	2.53	10.54	6.75	1.56
	43	33.05	6.65	4.97	33.05	6.65	4.97	24.79	6.95	3.57	16.60	7.08	2.34	9.95	6.98	1.42

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
45	-25	18.54	1.62	11.44	18.54	1.62	11.44	13.91	1.69	8.21	9.31	1.73	5.40	5.58	1.75	3.18
	-20	25.62	1.75	14.64	25.62	1.75	14.64	19.22	1.83	10.51	12.87	1.86	6.90	7.71	1.89	4.07
	-15	26.85	2.05	13.10	26.85	2.05	13.10	20.14	2.14	9.40	13.49	2.18	6.18	8.08	2.22	3.64
	-10	33.58	2.28	14.73	33.58	2.28	14.73	25.19	2.38	10.57	16.87	2.43	6.95	10.11	2.47	4.10
	-7	33.54	2.13	15.78	28.54	2.36	12.11	25.54	2.25	11.33	17.11	2.59	6.61	10.25	2.63	3.90
	-5	33.91	2.24	15.12	29.30	2.82	10.39	26.01	2.21	11.76	17.42	2.64	6.60	10.44	2.68	3.89
	0	32.62	2.71	12.06	29.86	3.17	9.42	26.30	2.83	9.28	17.61	3.08	5.72	10.55	3.23	3.27
	2	33.97	2.87	11.85	30.43	2.81	10.82	26.30	2.97	8.85	17.62	3.19	5.52	10.56	3.36	3.15
	5	34.80	3.11	11.21	33.22	3.58	9.27	26.30	3.29	7.98	17.61	3.61	4.87	10.55	3.63	2.91
	7	36.99	3.35	11.04	35.00	3.48	10.05	26.25	3.64	7.22	17.58	3.71	4.74	10.54	3.77	2.80
	10	40.25	3.64	11.06	35.06	3.72	9.43	26.30	3.88	6.77	17.61	3.96	4.45	10.55	3.94	2.68
	15	44.03	4.00	11.01	35.06	4.18	8.39	26.30	4.37	6.02	17.61	4.45	3.96	10.55	4.33	2.44
	20	45.65	4.38	10.42	35.06	4.58	7.66	26.30	4.78	5.50	17.61	4.88	3.61	10.55	4.74	2.23
	25	47.55	5.01	9.49	35.06	5.24	6.70	26.30	5.47	4.81	17.61	5.58	3.16	10.55	5.42	1.95
	30	47.99	5.21	9.21	35.06	5.44	6.44	26.30	5.69	4.62	17.61	5.80	3.04	10.55	5.64	1.87
	35	41.25	5.45	7.57	35.06	5.70	6.16	26.30	5.95	4.42	17.61	6.07	2.90	10.55	5.90	1.79
	40	36.21	5.72	6.33	35.03	5.80	6.04	26.27	6.06	4.33	17.60	6.18	2.85	10.54	6.19	1.70
	43	33.65	5.84	5.76	33.65	5.84	5.76	25.24	6.10	4.14	16.91	6.22	2.72	10.13	6.32	1.60

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
50	-25	20.65	1.52	13.63	20.65	1.52	13.63	15.48	1.58	9.78	10.37	1.61	6.43	6.21	1.64	3.79
	-20	25.72	1.67	15.45	25.72	1.67	15.45	19.29	1.74	11.09	12.92	1.77	7.29	7.74	1.80	4.30
	-15	26.94	1.91	14.14	26.94	1.91	14.14	20.20	1.99	10.15	13.53	2.03	6.67	8.11	2.06	3.93
	-10	33.68	2.12	15.92	33.68	2.13	15.83	25.26	2.22	11.36	16.92	2.27	7.47	10.14	2.29	4.43
	-7	33.84	2.00	16.89	28.79	2.23	12.89	25.76	2.14	12.06	17.26	2.45	7.03	10.34	2.48	4.17
	-5	34.11	2.14	15.95	29.48	2.71	10.89	26.17	2.12	12.33	17.53	2.53	6.92	10.50	2.56	4.10
	0	32.76	2.42	13.54	29.77	2.85	10.45	26.21	2.55	10.28	17.56	2.77	6.34	10.52	2.88	3.65
	2	34.29	2.58	13.29	30.37	2.53	12.00	26.26	2.68	9.81	17.59	2.87	6.13	10.54	3.02	3.49
	5	35.30	2.80	12.61	33.18	3.21	10.34	26.27	2.95	8.90	17.59	3.24	5.44	10.54	3.25	3.25
	7	37.55	3.10	12.11	35.00	3.30	10.61	26.25	3.45	7.62	17.58	3.51	5.01	10.54	3.50	3.01
	10	40.88	3.42	11.97	35.06	3.49	10.06	26.30	3.64	7.22	17.61	3.71	4.74	10.55	3.70	2.85
	15	44.65	3.77	11.84	35.01	3.94	8.89	26.26	4.12	6.38	17.59	4.20	4.19	10.54	4.08	2.58
	20	45.85	4.12	11.13	35.02	4.31	8.13	26.27	4.50	5.84	17.59	4.59	3.84	10.54	4.46	2.36
	25	47.87	4.67	10.26	35.07	4.87	7.19	26.30	5.09	5.16	17.62	5.19	3.39	10.56	5.05	2.09
	30	48.55	4.90	9.91	35.07	5.12	6.85	26.30	5.35	4.92	17.62	5.45	3.23	10.56	5.30	1.99
	35	42.55	5.22	8.15	35.06	5.45	6.43	26.30	5.70	4.61	17.61	5.81	3.03	10.55	5.65	1.87
	40	33.55	5.32	6.31	33.55	5.56	6.03	25.16	5.81	4.33	16.86	5.92	2.85	10.10	5.68	1.78
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
55	-25	22.75	1.41	16.13	22.75	1.41	16.13	17.06	1.47	11.58	11.43	1.50	7.61	6.85	1.53	4.49
	-20	25.82	1.58	16.34	25.82	1.58	16.34	19.37	1.65	11.73	12.97	1.68	7.71	7.77	1.71	4.54
	-15	27.02	1.76	15.35	27.02	1.76	15.35	20.27	1.84	11.02	13.57	1.87	7.24	8.13	1.91	4.27
	-10	35.01	1.95	17.95	35.01	1.97	17.73	26.26	2.06	12.73	17.59	2.10	8.36	10.54	2.11	4.99
	-7	34.90	1.92	18.18	24.80	2.08	11.90	26.27	2.18	12.05	17.59	2.32	7.59	10.54	2.33	4.53
	-5	33.50	2.05	16.34	26.60	2.24	11.90	26.30	2.22	11.84	17.61	2.43	7.26	10.55	2.44	4.33
	0	31.90	2.16	14.77	28.70	2.38	12.04	26.27	2.41	10.90	17.60	2.46	7.15	10.54	2.54	4.15
	2	33.20	2.29	14.50	29.60	2.45	12.06	26.28	2.52	10.43	17.60	2.56	6.88	10.55	2.68	3.93
	5	34.90	2.48	14.07	33.60	2.89	11.62	26.27	2.71	9.69	17.59	2.86	6.16	10.54	2.87	3.67
	7	37.85	2.85	13.28	35.00	2.98	11.75	26.25	3.11	8.43	17.58	3.17	5.54	10.54	3.23	3.27
	10	41.25	3.19	12.93	35.06	3.26	10.76	26.30	3.40	7.73	17.61	3.47	5.08	10.55	3.45	3.06
	15	44.85	3.54	12.67	35.06	3.70	9.48	26.30	3.87	6.80	17.61	3.94	4.47	10.55	3.83	2.75
	20	45.99	3.86	11.91	35.06	4.03	8.69	26.30	4.22	6.24	17.61	4.30	4.10	10.55	4.18	2.53
	25	48.00	4.32	11.11	35.06	4.51	7.77	26.30	4.72	5.57	17.61	4.81	3.66	10.55	4.68	2.26
	30	48.65	4.59	10.60	35.06	4.80	7.31	26.30	5.01	5.25	17.61	5.11	3.45	10.55	4.97	2.12
	35	40.25	4.99	8.07	35.06	5.21	6.72	26.30	5.45	4.83	17.61	5.55	3.17	10.55	5.24	2.01
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
60	-25	23.55	1.35	17.44	23.55	1.35	17.44	17.66	1.41	12.52	11.83	1.44	8.23	7.09	1.46	4.85
	-20	26.55	1.52	17.47	26.55	1.52	17.47	19.91	1.59	12.54	13.34	1.62	8.24	7.99	1.65	4.86
	-15	27.88	1.70	16.40	27.88	1.70	16.40	20.91	1.78	11.77	14.01	1.81	7.74	8.39	1.84	4.56
	-10	35.44	1.85	19.16	35.04	1.87	18.70	26.28	1.96	13.42	17.60	2.00	8.82	10.55	2.00	5.27
	-7	35.43	1.83	19.35	24.83	1.98	12.52	26.30	2.08	12.65	17.61	2.21	7.97	10.55	2.22	4.76
	-5	34.10	2.00	17.09	26.61	2.18	12.23	26.30	2.16	12.17	17.62	2.36	7.46	10.56	2.37	4.45
	0	32.40	2.07	15.67	28.74	2.28	12.59	26.31	2.31	11.40	17.62	2.36	7.48	10.56	2.44	4.34
	2	33.47	2.15	15.56	29.62	2.30	12.87	26.30	2.37	11.11	17.61	2.41	7.32	10.55	2.52	4.18
	5	35.26	2.29	15.38	33.56	2.42	13.87	26.30	2.51	10.50	17.61	2.64	6.67	10.55	2.65	3.98
	7	38.01	2.53	15.02	35.00	2.62	13.34	26.25	2.74	9.57	17.58	2.80	6.29	10.54	2.78	3.79
	10	41.65	2.85	14.61	35.01	2.91	12.03	26.26	3.04	8.64	17.59	3.10	5.67	10.54	3.08	3.42
	15	44.99	3.24	13.89	35.01	3.39	10.34	26.26	3.54	7.42	17.59	3.61	4.88	10.54	3.51	3.00
	20	46.55	3.54	13.15	35.01	3.70	9.46	26.26	3.87	6.79	17.59	3.94	4.46	10.54	3.83	2.75
	25	48.21	3.85	12.52	35.01	4.02	8.70	26.26	4.20	6.25	17.59	4.29	4.10	10.54	4.17	2.53
	30	48.75	4.21	11.58	35.06	4.40	7.97	26.30	4.60	5.72	17.61	4.69	3.76	10.55	4.85	2.18
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
65	-25	24.55	1.30	18.88	24.55	1.30	18.88	18.41	1.36	13.55	12.33	1.38	8.91	7.39	1.41	5.25
	-20	26.75	1.42	18.84	26.75	1.42	18.84	20.06	1.48	13.52	13.44	1.51	8.88	8.05	1.54	5.24
	-15	28.25	1.61	17.55	28.25	1.61	17.55	21.19	1.68	12.59	14.19	1.71	8.28	8.50	1.74	4.88
	-10	35.58	1.72	20.69	35.01	1.74	20.10	26.26	1.82	14.43	17.59	1.86	9.48	10.54	1.86	5.66
	-7	35.57	1.71	20.85	24.81	1.85	13.43	26.27	1.94	13.57	17.60	2.06	8.54	10.54	2.07	5.10
	-5	34.19	1.83	18.71	26.58	1.99	13.34	26.27	1.98	13.28	17.60	2.16	8.14	10.54	2.17	4.86
	0	31.87	1.94	16.43	28.71	2.14	13.41	26.28	2.16	12.14	17.60	2.21	7.97	10.55	2.28	4.62
	2	33.73	2.04	16.53	29.62	2.18	13.57	26.30	2.25	11.71	17.61	2.28	7.72	10.55	2.39	4.41
	5	35.45	2.14	16.54	33.56	2.31	14.53	26.30	2.34	11.23	17.62	2.47	7.13	10.56	2.48	4.26
	7	38.35	2.31	16.60	35.00	2.40	14.60	26.25	2.51	10.47	17.58	2.56	6.88	10.54	2.60	4.06
	10	41.75	2.70	15.46	35.06	2.76	12.72	26.30	2.88	9.13	17.61	2.94	6.00	10.55	2.92	3.61
	15	45.32	2.95	15.36	35.06	3.08	11.37	26.30	3.22	8.16	17.61	3.28	5.36	10.55	3.19	3.30
	20	47.05	3.25	14.48	35.06	3.40	10.32	26.30	3.55	7.41	17.61	3.62	4.87	10.55	3.52	3.00
	25	48.54	3.55	13.67	35.06	3.71	9.45	26.30	3.88	6.78	17.61	3.95	4.46	10.55	3.84	2.75
	30	48.99	3.89	12.59	35.06	4.07	8.62	26.30	4.25	6.19	17.61	4.33	4.07	10.55	4.65	2.27
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
70	-25	21.97	1.25	17.57	21.97	1.25	17.57	16.47	1.31	12.61	11.04	1.33	8.29	6.61	1.35	4.89
	-20	26.85	1.38	19.46	26.85	1.38	19.46	20.14	1.44	13.96	13.49	1.47	9.18	8.08	1.49	5.41
	-15	28.65	1.55	18.48	28.65	1.55	18.48	21.49	1.62	13.27	14.39	1.65	8.72	8.62	1.68	5.14
	-10	36.21	1.68	21.55	35.01	1.70	20.58	26.26	1.78	14.77	17.59	1.81	9.71	10.54	1.82	5.80
	-7	36.42	1.66	21.93	24.83	1.80	13.80	26.30	1.89	13.94	17.61	2.01	8.78	10.55	2.01	5.24
	-5	35.12	1.78	19.74	26.60	1.94	13.71	26.30	1.93	13.65	17.61	2.11	8.36	10.55	2.11	4.99
	0	32.72	1.83	17.89	28.72	2.02	14.23	26.30	2.04	12.88	17.61	2.08	8.46	10.55	2.15	4.90
	2	34.42	1.93	17.84	29.63	2.06	14.35	26.30	2.12	12.39	17.62	2.16	8.17	10.56	2.26	4.67
	5	36.48	2.02	18.03	33.47	2.18	15.35	26.26	2.21	11.88	17.59	2.33	7.54	10.54	2.34	4.50
	7	39.25	2.24	17.52	35.00	2.35	14.90	26.25	2.45	10.70	17.58	2.50	7.03	10.54	2.49	4.23
	10	41.55	2.45	16.99	35.06	2.50	14.04	26.30	2.61	10.08	17.61	2.66	6.62	10.55	2.65	3.99
	15	46.05	2.66	17.34	35.06	2.77	12.64	26.30	2.90	9.07	17.61	2.96	5.96	10.55	2.87	3.67
	20	47.35	2.78	17.06	35.06	2.90	12.09	26.30	3.03	8.68	17.61	3.09	5.70	10.55	3.00	3.51
	25	48.88	3.01	16.24	35.06	3.15	11.15	26.30	3.29	8.00	17.61	3.35	5.26	10.55	3.75	2.81
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
75	-25	19.38	1.20	16.15	19.38	1.20	16.15	14.54	1.25	11.59	9.74	1.28	7.62	5.83	1.30	4.49
	-20	23.55	1.27	18.54	23.55	1.27	18.54	17.66	1.33	13.31	11.83	1.35	8.75	7.09	1.37	5.16
	-15	26.52	1.50	17.68	26.52	1.50	17.68	19.89	1.57	12.69	13.33	1.60	8.34	7.98	1.62	4.92
	-10	30.25	1.64	18.45	30.25	1.64	18.45	22.69	1.71	13.24	15.20	1.75	8.70	9.11	1.78	5.13
	-7	33.41	1.62	20.67	23.74	1.73	13.73	25.14	1.81	13.87	16.84	1.93	8.73	10.09	1.96	5.15
	-5	34.17	1.73	19.73	26.61	1.89	14.09	26.30	1.88	14.03	17.62	2.05	8.60	10.56	2.06	5.13
	0	33.34	1.77	18.86	28.74	1.95	14.73	26.31	1.97	13.34	17.62	2.01	8.75	10.56	2.08	5.07
	2	35.11	1.87	18.82	29.62	2.00	14.84	26.30	2.05	12.81	17.61	2.09	8.45	10.55	2.19	4.83
	5	37.44	1.97	19.05	34.21	2.11	16.21	26.41	2.15	12.30	17.69	2.27	7.81	10.60	2.27	4.66
	7	40.28	2.15	18.73	35.00	2.30	15.24	26.25	2.40	10.93	17.58	2.45	7.19	10.54	2.44	4.33
	10	42.74	2.35	18.19	35.07	2.40	14.62	26.30	2.51	10.49	17.62	2.56	6.89	10.56	2.54	4.15
	15	46.55	2.51	18.55	35.08	2.51	13.98	26.31	2.62	10.03	17.62	2.67	6.59	10.56	2.72	3.89
	20	48.24	2.62	18.41	35.06	2.65	13.23	26.30	2.74	9.60	17.61	2.79	6.31	10.55	2.84	3.72
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
80	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	22.34	1.22	18.31	22.34	1.22	18.31	16.76	1.27	13.14	11.22	1.30	8.64	6.72	1.32	5.09
	-15	24.62	1.28	19.23	24.62	1.28	19.23	18.47	1.34	13.80	12.37	1.36	9.07	7.41	1.39	5.35
	-10	27.97	1.56	17.93	27.97	1.56	17.93	20.97	1.63	12.87	14.05	1.66	8.46	8.42	1.69	4.99
	-7	30.94	1.47	21.00	21.99	1.58	13.95	23.29	1.65	14.09	15.60	1.76	8.88	9.35	1.79	5.23
	-5	30.07	1.62	18.60	23.94	1.74	13.75	23.66	1.73	13.69	15.85	1.89	8.39	9.50	1.92	4.94
	0	28.80	1.70	16.94	26.64	1.85	14.38	24.39	1.87	13.02	16.34	1.91	8.54	9.79	2.00	4.89
	2	29.92	1.80	16.62	27.75	1.90	14.59	24.64	1.96	12.59	16.50	1.99	8.30	9.89	2.11	4.68
	5	31.25	1.95	16.05	30.14	1.92	15.70	24.76	2.03	12.20	16.58	2.14	7.75	9.94	2.18	4.57
	7	32.82	2.12	15.48	32.82	1.95	16.83	24.62	2.04	12.08	16.49	2.08	7.94	9.88	2.11	4.68
	10	32.72	2.24	14.61	32.72	1.99	16.44	24.54	2.08	11.80	16.44	2.12	7.75	9.85	2.15	4.57
	15	32.62	2.30	14.18	32.62	2.14	15.24	24.46	2.24	10.94	16.39	2.28	7.19	9.82	2.32	4.24
	20	32.55	2.42	13.45	32.55	2.47	13.18	24.41	2.53	9.65	16.35	2.58	6.34	9.80	2.62	3.74
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
85	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-15	18.03	1.24	14.54	18.03	1.24	14.54	13.52	1.30	10.44	9.06	1.32	6.86	5.43	1.34	4.04
	-10	18.95	1.50	12.63	18.95	1.50	12.63	14.21	1.57	9.07	9.52	1.60	5.96	5.70	1.62	3.51
	-7	19.45	1.44	13.53	13.82	1.54	8.99	14.64	1.61	9.08	9.81	1.71	5.72	5.88	1.74	3.37
	-5	18.92	1.50	12.58	15.06	1.62	9.30	14.89	1.61	9.26	9.97	1.76	5.67	5.97	1.79	3.35
	0	17.46	1.55	11.24	16.16	1.69	9.54	14.79	1.71	8.64	9.91	1.75	5.67	5.94	1.83	3.24
	2	17.78	1.66	10.70	16.49	1.76	9.39	14.64	1.81	8.11	9.81	1.83	5.34	5.88	1.95	3.02
	5	18.34	1.81	10.16	16.38	1.82	9.00	14.53	1.95	7.46	9.74	2.06	4.74	5.83	2.09	2.79
	7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Abbreviations:

HC: Total heating capacity (kW)

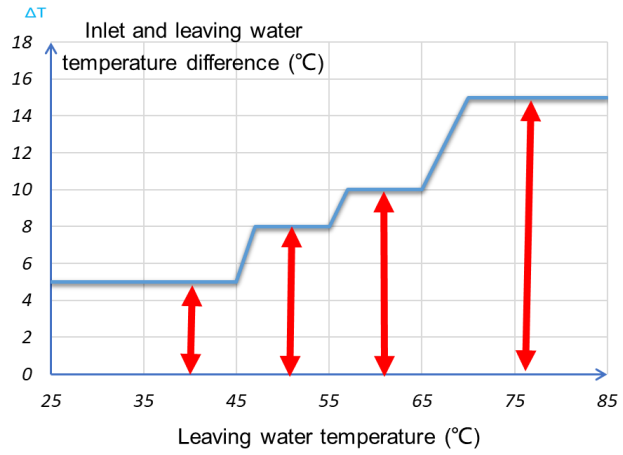
PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the heating mode, the temperature difference between the inlet and leaving water of the unit is shown in the figure below：



40kW Heating Capacity

30kW Heating Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
25	-25	13.50	2.25	6.00	13.50	2.25	6.00	10.15	2.36	4.31	6.83	2.39	2.86	4.74	2.43	1.95
	-20	18.22	2.46	7.40	18.22	2.46	7.40	13.70	2.58	5.32	9.22	2.61	3.53	6.40	2.66	2.40
	-15	20.87	2.69	7.77	20.87	2.69	7.77	15.69	2.81	5.58	10.56	2.85	3.70	7.33	2.90	2.52
	-10	25.97	2.90	8.97	25.97	2.90	8.97	19.53	3.03	6.44	13.14	3.07	4.27	9.12	3.13	2.91
	-7	27.49	2.89	9.53	22.72	3.30	6.89	20.74	3.24	6.39	13.96	3.43	4.07	9.68	3.49	2.77
	-5	26.44	3.04	8.69	23.19	3.13	7.41	20.86	3.26	6.40	14.04	3.54	3.96	9.74	3.61	2.70
	0	25.19	3.56	7.08	24.49	3.77	6.50	21.39	3.93	5.44	14.39	3.99	3.61	9.99	4.19	2.39
	2	26.53	3.77	7.03	26.01	3.71	7.01	21.91	4.11	5.33	14.74	4.15	3.55	10.23	4.42	2.31
	5	28.32	4.05	6.99	27.18	3.95	6.87	22.50	4.38	5.13	15.14	4.60	3.29	10.50	4.68	2.24
	7	30.36	4.56	6.66	30.00	4.66	6.44	22.56	4.88	4.62	15.18	4.95	3.07	10.53	5.04	2.09
	10	32.06	4.89	6.56	30.01	4.96	6.05	22.57	5.20	4.34	15.19	5.27	2.88	10.53	5.36	1.96
	15	36.20	5.36	6.75	30.02	5.44	5.52	22.58	5.70	3.96	15.19	5.77	2.63	10.54	5.88	1.79
	20	38.90	5.57	6.98	30.06	5.69	5.28	22.61	5.96	3.79	15.21	6.04	2.52	10.55	6.15	1.71
	25	40.05	6.35	6.31	30.15	6.55	4.60	22.67	6.86	3.30	15.26	6.95	2.19	10.58	7.08	1.49
	30	40.69	6.73	6.05	30.16	6.85	4.40	22.68	7.18	3.16	15.26	7.27	2.10	10.59	7.41	1.43
	35	35.12	7.44	4.72	30.25	7.59	3.99	22.75	7.95	2.86	15.31	8.06	1.90	10.62	8.21	1.29
	40	30.64	7.62	4.02	30.04	7.75	3.88	22.59	8.12	2.78	15.20	8.23	1.85	10.54	8.38	1.26
	43	28.18	8.08	3.49	28.18	8.08	3.49	21.19	8.46	2.50	14.26	8.58	1.66	9.89	8.74	1.13

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
30	-25	14.50	2.07	7.00	14.50	2.07	7.00	10.90	2.17	5.03	7.34	2.20	3.34	5.09	2.24	2.27
	-20	19.10	2.36	8.08	19.10	2.36	8.08	14.36	2.48	5.80	9.66	2.51	3.85	6.70	2.56	2.62
	-15	21.75	2.58	8.44	21.75	2.58	8.44	16.36	2.70	6.06	11.01	2.74	4.02	7.64	2.79	2.74
	-10	26.89	2.73	9.85	26.89	2.73	9.85	20.22	2.86	7.07	13.61	2.90	4.70	9.44	2.95	3.20
	-7	28.09	2.60	10.81	23.22	2.97	7.82	21.20	2.92	7.26	14.26	3.09	4.62	9.89	3.15	3.14
	-5	27.24	2.85	9.56	23.90	2.93	8.15	21.50	3.05	7.04	14.46	3.32	4.36	10.03	3.38	2.97
	0	26.08	3.46	7.53	25.35	3.66	6.92	22.14	3.82	5.79	14.90	3.88	3.84	10.33	4.07	2.54
	2	27.25	3.71	7.34	26.71	3.65	7.32	22.50	4.05	5.56	15.14	4.09	3.70	10.50	4.35	2.41
	5	28.73	3.99	7.21	27.30	3.97	6.87	22.60	4.40	5.13	15.21	4.62	3.29	10.55	4.70	2.24
	7	31.07	4.49	6.92	30.01	4.56	6.58	22.57	4.78	4.72	15.19	4.84	3.14	10.53	4.93	2.14
	10	32.90	4.73	6.96	30.01	4.85	6.19	22.57	5.08	4.44	15.19	5.15	2.95	10.53	5.25	2.01
	15	36.86	5.19	7.10	30.02	5.29	5.67	22.58	5.54	4.07	15.19	5.62	2.71	10.54	5.72	1.84
	20	39.13	5.35	7.31	30.01	5.46	5.50	22.57	5.72	3.95	15.19	5.80	2.62	10.53	5.90	1.78
	25	40.14	6.18	6.49	30.00	6.29	4.77	22.56	6.59	3.42	15.18	6.68	2.27	10.53	6.80	1.55
	30	41.01	6.58	6.23	30.00	6.75	4.44	22.56	7.07	3.19	15.18	7.17	2.12	10.53	7.30	1.44
	35	35.39	7.33	4.83	30.00	7.25	4.14	22.56	7.59	2.97	15.18	7.70	1.97	10.53	7.84	1.34
	40	30.87	7.45	4.15	30.06	7.69	3.91	22.61	8.06	2.81	15.21	8.16	1.86	10.55	8.32	1.27
	43	28.47	7.86	3.62	28.47	7.86	3.62	21.41	8.24	2.60	14.41	8.35	1.73	9.99	8.51	1.18

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
35	-25	16.52	2.01	8.22	16.52	2.01	8.22	12.42	2.11	5.90	8.36	2.13	3.92	5.80	2.17	2.67
	-20	20.52	2.21	9.27	20.52	2.21	9.27	15.43	2.32	6.65	10.39	2.35	4.42	7.20	2.40	3.01
	-15	22.55	2.41	9.37	22.55	2.41	9.37	16.96	2.52	6.72	11.41	2.56	4.47	7.92	2.60	3.04
	-10	28.18	2.62	10.75	28.18	2.62	10.75	21.19	2.75	7.72	14.26	2.78	5.12	9.89	2.84	3.49
	-7	29.04	2.50	11.60	24.00	2.86	8.38	21.91	2.81	7.79	14.75	2.98	4.96	10.23	3.03	3.37
	-5	28.07	2.68	10.47	24.62	2.76	8.92	22.15	2.87	7.71	14.90	3.12	4.77	10.34	3.18	3.25
	0	26.51	3.34	7.93	25.77	3.54	7.28	22.51	3.69	6.09	15.14	3.75	4.04	10.51	3.93	2.67
	2	27.96	3.52	7.95	26.80	3.52	7.62	22.58	3.90	5.78	15.19	3.94	3.85	10.54	4.20	2.51
	5	29.30	3.86	7.60	27.25	3.84	7.09	22.56	4.26	5.29	15.18	4.47	3.40	10.53	4.55	2.31
	7	31.56	4.40	7.17	30.00	4.50	6.67	22.56	4.71	4.79	15.18	4.78	3.18	10.53	4.87	2.16
	10	33.48	4.66	7.18	30.00	4.75	6.32	22.56	4.98	4.53	15.18	5.04	3.01	10.53	5.14	2.05
	15	37.81	4.99	7.58	30.02	5.05	5.94	22.58	5.29	4.27	15.19	5.36	2.83	10.54	5.46	1.93
	20	39.27	5.19	7.57	30.05	5.25	5.72	22.60	5.50	4.11	15.21	5.57	2.73	10.55	5.68	1.86
	25	40.49	5.93	6.83	30.00	6.05	4.96	22.56	6.34	3.56	15.18	6.42	2.36	10.53	6.54	1.61
	30	41.27	6.41	6.44	30.00	6.52	4.60	22.56	6.83	3.30	15.18	6.92	2.19	10.53	7.05	1.49
	35	35.50	6.87	5.17	30.04	6.96	4.32	22.59	7.29	3.10	15.20	7.39	2.06	10.54	7.53	1.40
	40	31.05	7.01	4.43	30.02	7.15	4.20	22.58	7.49	3.01	15.19	7.59	2.00	10.54	7.73	1.36
	43	28.57	7.33	3.90	28.57	7.33	3.90	21.48	7.68	2.80	14.46	7.78	1.86	10.03	7.93	1.27

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
40	-25	17.38	1.79	9.74	17.38	1.79	9.74	13.07	1.87	6.99	8.80	1.89	4.64	6.10	1.93	3.16
	-20	21.61	2.01	10.74	21.61	2.01	10.74	16.25	2.11	7.71	10.93	2.14	5.12	7.58	2.18	3.49
	-15	22.82	2.31	9.90	22.82	2.31	9.90	17.16	2.42	7.10	11.55	2.45	4.72	8.01	2.49	3.21
	-10	29.04	2.55	11.40	29.04	2.55	11.40	21.84	2.67	8.19	14.69	2.70	5.44	10.19	2.75	3.70
	-7	29.43	2.40	12.27	24.32	2.74	8.88	22.21	2.70	8.24	14.94	2.85	5.24	10.37	2.90	3.57
	-5	28.52	2.58	11.04	25.01	2.66	9.40	22.50	2.77	8.12	15.14	3.01	5.03	10.50	3.07	3.42
	0	27.35	3.20	8.56	25.84	3.46	7.46	22.58	3.61	6.25	15.19	3.67	4.14	10.54	3.85	2.74
	2	28.19	3.37	8.37	26.80	3.40	7.88	22.58	3.77	5.98	15.19	3.81	3.99	10.54	4.06	2.60
	5	29.52	3.52	8.37	27.25	3.52	7.75	22.56	3.90	5.79	15.18	4.09	3.71	10.53	4.16	2.53
	7	31.83	3.85	8.26	30.08	3.95	7.62	22.62	4.14	5.47	15.22	4.19	3.63	10.56	4.27	2.47
	10	33.96	4.15	8.18	30.01	4.25	7.06	22.57	4.45	5.07	15.19	4.51	3.37	10.53	4.60	2.29
	15	37.97	4.58	8.29	30.02	4.69	6.40	22.58	4.91	4.60	15.19	4.98	3.05	10.54	5.07	2.08
	20	39.46	4.94	7.98	30.01	5.05	5.94	22.57	5.29	4.27	15.19	5.36	2.83	10.53	5.46	1.93
	25	40.51	5.69	7.12	30.01	5.78	5.19	22.57	6.05	3.73	15.19	6.14	2.47	10.53	6.25	1.69
	30	41.46	6.09	6.81	30.02	6.19	4.85	22.58	6.48	3.48	15.19	6.57	2.31	10.54	6.69	1.57
	35	35.64	6.58	5.42	30.03	6.69	4.49	22.58	7.01	3.22	15.20	7.10	2.14	10.54	7.24	1.46
	40	31.19	6.68	4.67	30.06	6.75	4.45	22.61	7.07	3.20	15.21	7.17	2.12	10.55	7.30	1.45
	43	28.62	7.12	4.02	28.62	7.12	4.02	21.52	7.45	2.89	14.48	7.55	1.92	10.05	7.70	1.31

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
45	-25	17.85	1.62	11.02	17.85	1.62	11.02	13.42	1.70	7.91	9.03	1.72	5.25	6.27	1.75	3.58
	-20	22.19	1.82	12.19	22.19	1.82	12.19	16.68	1.91	8.75	11.23	1.93	5.81	7.79	1.97	3.96
	-15	23.25	2.13	10.91	23.25	2.13	10.91	17.49	2.23	7.83	11.77	2.26	5.20	8.16	2.31	3.54
	-10	29.08	2.37	12.26	29.08	2.37	12.26	21.87	2.48	8.80	14.71	2.52	5.85	10.21	2.56	3.98
	-7	29.39	2.26	13.02	24.29	2.58	9.42	22.17	2.54	8.74	14.92	2.68	5.56	10.35	2.73	3.79
	-5	28.62	2.35	12.18	25.08	2.49	10.09	22.56	2.59	8.72	15.18	2.81	5.40	10.53	2.87	3.67
	0	27.45	2.85	9.64	25.84	3.12	8.27	22.58	3.26	6.93	15.19	3.31	4.59	10.54	3.47	3.04
	2	28.27	2.98	9.50	26.78	3.01	8.89	22.56	3.34	6.76	15.18	3.37	4.50	10.53	3.59	2.93
	5	29.77	3.21	9.27	27.25	3.22	8.45	22.56	3.57	6.31	15.18	3.75	4.05	10.53	3.82	2.76
	7	32.75	3.53	9.28	30.00	3.63	8.26	22.56	3.80	5.93	15.18	3.85	3.94	10.53	3.93	2.68
	10	34.86	3.79	9.21	30.01	3.84	7.82	22.57	4.02	5.61	15.19	4.08	3.73	10.53	4.15	2.54
	15	38.13	4.16	9.17	30.02	4.28	7.01	22.58	4.48	5.04	15.19	4.54	3.34	10.54	4.63	2.28
	20	39.53	4.56	8.68	30.01	4.66	6.44	22.57	4.88	4.62	15.19	4.95	3.07	10.53	5.04	2.09
	25	41.18	5.21	7.90	30.01	5.35	5.61	22.57	5.60	4.03	15.19	5.68	2.67	10.53	5.79	1.82
	30	41.56	5.42	7.67	30.03	5.49	5.47	22.58	5.75	3.93	15.20	5.83	2.61	10.54	5.94	1.78
	35	35.72	5.67	6.30	30.02	5.76	5.21	22.58	6.03	3.74	15.19	6.11	2.48	10.54	6.23	1.69
	40	31.36	5.95	5.27	30.00	6.01	4.99	22.56	6.30	3.58	15.18	6.38	2.38	10.53	6.50	1.62
	43	29.14	6.07	4.80	29.14	6.07	4.80	21.91	6.36	3.44	14.75	6.45	2.29	10.23	6.57	1.56

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
50	-25	19.39	1.52	12.80	19.39	1.52	12.80	14.58	1.59	9.19	9.81	1.61	6.10	6.81	1.64	4.15
	-20	22.27	1.73	12.86	22.27	1.73	12.86	16.75	1.81	9.23	11.27	1.84	6.13	7.82	1.87	4.17
	-15	23.33	1.98	11.77	23.33	1.98	11.77	17.54	2.08	8.45	11.80	2.10	5.61	8.19	2.14	3.82
	-10	29.65	2.20	13.48	29.65	2.20	13.48	22.30	2.30	9.68	15.00	2.33	6.43	10.41	2.38	4.37
	-7	29.65	2.13	13.94	24.50	2.43	10.08	22.37	2.39	9.36	15.05	2.53	5.95	10.44	2.58	4.05
	-5	28.80	2.24	12.85	25.09	2.37	10.57	22.58	2.47	9.14	15.19	2.69	5.66	10.54	2.74	3.85
	0	27.56	2.55	10.82	25.83	2.73	9.45	22.56	2.85	7.91	15.18	2.89	5.24	10.53	3.04	3.46
	2	28.54	2.68	10.65	26.79	2.68	10.01	22.57	2.97	7.61	15.19	3.00	5.07	10.53	3.19	3.30
	5	30.05	2.90	10.38	27.25	2.88	9.47	22.56	3.19	7.07	15.18	3.34	4.54	10.53	3.41	3.09
	7	33.25	3.22	10.31	30.00	3.32	9.04	22.56	3.48	6.49	15.18	3.52	4.31	10.53	3.59	2.93
	10	35.40	3.55	9.97	30.01	3.65	8.22	22.57	3.82	5.90	15.19	3.87	3.92	10.53	3.95	2.67
	15	38.67	3.92	9.86	30.02	3.99	7.52	22.58	4.18	5.40	15.19	4.24	3.59	10.54	4.32	2.44
	20	39.71	4.28	9.27	30.01	4.35	6.90	22.57	4.56	4.95	15.19	4.62	3.29	10.53	4.70	2.24
	25	41.46	4.85	8.54	30.03	4.96	6.05	22.58	5.20	4.35	15.20	5.27	2.89	10.54	5.36	1.96
	30	42.04	5.10	8.25	30.01	5.24	5.73	22.57	5.49	4.11	15.19	5.56	2.73	10.53	5.67	1.86
	35	36.85	5.43	6.79	30.00	5.64	5.32	22.56	5.91	3.82	15.18	5.99	2.54	10.53	6.10	1.73
	40	32.55	5.53	5.88	30.01	5.76	5.21	22.57	6.03	3.74	15.19	6.11	2.48	10.53	6.23	1.69
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
55	-25	20.93	1.41	14.84	20.93	1.41	14.84	15.74	1.48	10.66	10.59	1.50	7.08	7.35	1.52	4.82
	-20	22.36	1.64	13.61	22.36	1.64	13.61	16.81	1.72	9.77	11.31	1.74	6.49	7.85	1.78	4.42
	-15	23.40	1.83	12.78	23.40	1.83	12.78	17.60	1.92	9.18	11.84	1.94	6.09	8.21	1.98	4.15
	-10	30.05	2.03	14.82	30.05	2.03	14.82	22.60	2.12	10.64	15.21	2.15	7.06	10.55	2.19	4.81
	-7	30.22	2.00	15.14	21.30	2.22	9.60	22.57	2.28	9.90	15.19	2.41	6.30	10.53	2.46	4.29
	-5	29.01	2.13	13.61	22.76	2.38	9.55	22.56	2.37	9.51	15.18	2.58	5.88	10.53	2.63	4.01
	0	27.63	2.25	12.30	24.59	2.48	9.70	22.57	2.57	8.79	15.19	2.61	5.83	10.53	2.74	3.85
	2	28.75	2.38	12.07	25.35	2.63	9.64	22.56	2.67	8.46	15.18	2.69	5.64	10.53	2.87	3.67
	5	30.22	2.58	11.72	25.37	2.60	9.75	22.58	2.89	7.82	15.19	3.03	5.02	10.54	3.08	3.42
	7	33.75	3.02	11.18	30.00	3.13	9.57	22.56	3.28	6.88	15.18	3.32	4.57	10.53	3.39	3.11
	10	35.72	3.32	10.77	30.01	3.42	8.77	22.57	3.58	6.30	15.19	3.63	4.18	10.53	3.70	2.85
	15	38.84	3.68	10.55	30.02	3.75	8.01	22.58	3.93	5.75	15.19	3.98	3.82	10.54	4.06	2.60
	20	39.83	4.01	9.92	30.01	4.15	7.23	22.57	4.35	5.19	15.19	4.41	3.45	10.53	4.49	2.35
	25	41.57	4.49	9.25	30.01	4.56	6.58	22.57	4.78	4.72	15.19	4.84	3.14	10.53	4.93	2.14
	30	42.13	4.77	8.83	30.03	4.85	6.19	22.58	5.08	4.45	15.20	5.15	2.95	10.54	5.25	2.01
	35	34.86	5.19	6.72	30.01	5.29	5.67	22.57	5.54	4.07	15.19	5.62	2.70	10.53	5.72	1.84
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
60	-25	21.67	1.35	16.05	21.67	1.35	16.05	16.29	1.41	11.52	10.96	1.43	7.65	7.60	1.46	5.21
	-20	22.99	1.58	14.54	22.99	1.58	14.54	17.29	1.66	10.44	11.63	1.68	6.93	8.07	1.71	4.72
	-15	24.14	1.77	13.66	24.14	1.77	13.66	18.16	1.85	9.80	12.22	1.88	6.51	8.47	1.91	4.43
	-10	30.69	1.92	15.95	30.00	1.92	15.59	22.56	2.02	11.19	15.18	2.04	7.43	10.53	2.08	5.06
	-7	30.68	1.90	16.11	21.29	2.11	10.08	22.56	2.17	10.41	15.18	2.29	6.62	10.53	2.34	4.51
	-5	29.53	2.08	14.23	22.76	2.33	9.75	22.56	2.32	9.70	15.18	2.53	6.01	10.53	2.57	4.09
	0	28.06	2.15	13.05	24.59	2.35	10.45	22.57	2.44	9.26	15.19	2.47	6.14	10.53	2.60	4.06
	2	28.99	2.24	12.96	25.35	2.48	10.22	22.56	2.51	8.97	15.18	2.54	5.98	10.53	2.70	3.89
	5	30.53	2.38	12.81	25.37	2.42	10.49	22.58	2.68	8.42	15.19	2.81	5.40	10.54	2.87	3.68
	7	34.05	2.63	12.94	30.01	2.75	10.91	22.57	2.88	7.83	15.19	2.92	5.20	10.53	2.97	3.54
	10	36.07	2.96	12.17	30.01	3.12	9.62	22.57	3.27	6.91	15.19	3.31	4.59	10.53	3.37	3.12
	15	38.96	3.37	11.56	30.01	3.45	8.70	22.57	3.61	6.24	15.19	3.66	4.15	10.53	3.73	2.82
	20	40.31	3.68	10.95	30.05	3.76	7.99	22.60	3.94	5.74	15.21	3.99	3.81	10.55	4.07	2.59
	25	41.75	4.00	10.43	30.02	4.15	7.23	22.58	4.35	5.19	15.19	4.41	3.45	10.54	4.49	2.35
	30	42.55	4.38	9.72	30.02	4.48	6.70	22.58	4.69	4.81	15.19	4.76	3.19	10.54	4.85	2.17
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
65	-25	21.88	1.30	16.83	21.88	1.30	16.83	16.45	1.36	12.08	11.07	1.38	8.02	7.68	1.41	5.46
	-20	23.17	1.48	15.69	23.17	1.48	15.69	17.42	1.55	11.26	11.72	1.57	7.48	8.13	1.60	5.09
	-15	24.46	1.67	14.61	24.46	1.67	14.61	18.40	1.75	10.49	12.38	1.78	6.96	8.59	1.81	4.74
	-10	30.81	1.79	17.23	30.01	1.79	16.77	22.57	1.88	12.04	15.19	1.90	7.99	10.53	1.94	5.44
	-7	30.80	1.77	17.36	21.29	1.97	10.83	22.56	2.02	11.18	15.18	2.13	7.11	10.53	2.17	4.84
	-5	29.61	1.90	15.58	22.77	2.05	11.13	22.57	2.04	11.08	15.19	2.21	6.86	10.53	2.26	4.67
	0	28.40	2.02	14.08	24.58	2.24	10.95	22.56	2.32	9.70	15.18	2.36	6.43	10.53	2.48	4.25
	2	29.68	2.12	13.99	25.36	2.37	10.69	22.57	2.40	9.39	15.19	2.43	6.25	10.53	2.58	4.08
	5	31.76	2.23	14.25	25.37	2.27	11.16	22.58	2.52	8.96	15.19	2.64	5.75	10.54	2.69	3.91
	7	35.25	2.43	14.51	30.00	2.53	11.85	22.56	2.65	8.51	15.18	2.69	5.65	10.53	2.74	3.85
	10	36.65	2.81	13.05	30.01	2.89	10.38	22.57	3.03	7.45	15.19	3.07	4.95	10.53	3.13	3.37
	15	39.25	3.07	12.79	30.02	3.21	9.35	22.58	3.36	6.71	15.19	3.41	4.46	10.54	3.47	3.04
	20	40.75	3.38	12.05	30.05	3.56	8.44	22.60	3.73	6.06	15.21	3.78	4.02	10.55	3.85	2.74
	25	42.04	3.69	11.39	30.03	3.79	7.92	22.58	3.97	5.69	15.20	4.02	3.78	10.54	4.10	2.57
	30	43.25	4.05	10.69	30.01	4.21	7.13	22.57	4.41	5.12	15.19	4.47	3.40	10.53	4.55	2.31
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
70	-25	21.97	1.25	17.58	21.97	1.25	17.58	16.52	1.31	12.62	11.12	1.33	8.38	7.71	1.35	5.70
	-20	23.45	1.44	16.34	23.45	1.44	16.34	17.63	1.50	11.73	11.87	1.52	7.79	8.23	1.55	5.30
	-15	24.81	1.61	15.39	24.81	1.61	15.39	18.66	1.69	11.05	12.55	1.71	7.34	8.71	1.74	5.00
	-10	31.36	1.75	17.95	30.00	1.85	16.22	22.56	1.94	11.64	15.18	1.96	7.73	10.53	2.00	5.26
	-7	31.54	1.73	18.26	21.31	2.00	10.63	22.58	2.06	10.97	15.19	2.18	6.98	10.54	2.22	4.75
	-5	30.41	1.85	16.43	22.76	2.11	10.79	22.56	2.10	10.74	15.18	2.28	6.65	10.53	2.33	4.53
	0	28.92	1.90	15.20	24.59	2.13	11.56	22.57	2.20	10.24	15.19	2.24	6.79	10.53	2.35	4.49
	2	30.10	2.01	15.00	25.36	2.26	11.21	22.57	2.29	9.84	15.19	2.32	6.56	10.53	2.47	4.27
	5	32.04	2.10	15.23	25.37	2.15	11.83	22.58	2.38	9.49	15.19	2.49	6.09	10.54	2.54	4.15
	7	35.65	2.33	15.30	30.00	2.46	12.20	22.56	2.58	8.75	15.18	2.61	5.81	10.53	2.66	3.96
	10	37.01	2.54	14.55	30.01	2.65	11.32	22.57	2.78	8.13	15.19	2.81	5.40	10.53	2.87	3.68
	15	39.88	2.76	14.44	30.02	2.85	10.53	22.58	2.99	7.56	15.19	3.03	5.02	10.54	3.08	3.42
	20	41.35	2.89	14.33	30.01	2.95	10.17	22.57	3.09	7.30	15.19	3.13	4.85	10.53	3.19	3.30
	25	42.55	3.13	13.59	30.01	3.21	9.35	22.57	3.36	6.71	15.19	3.41	4.46	10.53	3.47	3.03
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
75	-25	19.38	1.20	16.15	19.38	1.20	16.15	14.57	1.26	11.59	9.81	1.27	7.70	6.80	1.30	5.24
	-20	20.39	1.32	15.44	20.39	1.32	15.44	15.34	1.38	11.08	10.32	1.40	7.36	7.16	1.43	5.01
	-15	22.97	1.56	14.72	22.97	1.56	14.72	17.27	1.63	10.57	11.62	1.66	7.02	8.06	1.69	4.78
	-10	26.20	1.71	15.36	26.20	1.71	15.36	19.70	1.79	11.03	13.26	1.81	7.32	9.19	1.84	4.98
	-7	28.93	1.68	17.21	20.60	1.84	11.19	21.83	1.89	11.55	14.69	2.00	7.35	10.19	2.04	5.00
	-5	29.59	1.80	16.43	22.76	1.97	11.54	22.56	1.96	11.49	15.18	2.13	7.11	10.53	2.17	4.84
	0	29.09	1.84	15.82	24.58	2.01	12.23	22.56	2.08	10.84	15.18	2.11	7.19	10.53	2.22	4.75
	2	30.59	1.94	15.77	25.36	2.14	11.83	22.57	2.17	10.39	15.19	2.19	6.92	10.53	2.34	4.51
	5	32.42	2.04	15.86	25.37	2.05	12.40	22.57	2.27	9.95	15.19	2.38	6.39	10.53	2.42	4.35
	7	35.99	2.24	16.10	30.00	2.34	12.82	22.56	2.45	9.20	15.18	2.48	6.11	10.53	2.53	4.16
	10	37.56	2.44	15.37	30.01	2.51	11.96	22.57	2.63	8.58	15.19	2.66	5.70	10.53	2.71	3.88
	15	40.31	2.61	15.44	30.02	2.71	11.08	22.58	2.84	7.95	15.19	2.88	5.28	10.54	2.93	3.60
	20	41.78	2.65	15.76	30.01	2.66	11.28	22.57	2.78	8.12	15.19	2.81	5.40	10.53	2.87	3.67
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
80	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	19.35	1.27	15.25	19.35	1.27	15.25	14.55	1.33	10.95	9.79	1.35	7.27	6.79	1.37	4.95
	-15	21.32	1.33	16.02	21.32	1.33	16.02	16.03	1.39	11.50	10.79	1.41	7.63	7.48	1.44	5.20
	-10	24.22	1.62	14.93	24.22	1.62	14.93	18.21	1.70	10.72	12.25	1.72	7.12	8.50	1.75	4.84
	-7	26.80	1.53	17.49	19.09	1.68	11.37	20.22	1.72	11.74	13.61	1.82	7.47	9.44	1.86	5.09
	-5	26.04	1.68	15.49	20.73	1.81	11.45	20.55	1.80	11.40	13.83	1.96	7.06	9.59	2.00	4.80
	0	24.94	1.77	14.10	23.07	1.89	12.23	21.18	1.95	10.84	14.25	1.98	7.19	9.88	2.08	4.75
	2	25.91	1.87	13.84	24.04	2.01	11.94	21.39	2.04	10.49	14.39	2.06	6.99	9.99	2.19	4.55
	5	27.06	2.02	13.37	24.16	1.98	12.23	21.50	2.19	9.82	14.46	2.30	6.30	10.03	2.34	4.29
	7	28.43	2.20	12.89	28.43	2.20	12.89	21.38	2.31	9.26	14.38	2.34	6.15	9.98	2.38	4.18
	10	28.34	2.33	12.16	28.34	2.33	12.16	21.31	2.44	8.73	14.34	2.47	5.80	9.95	2.52	3.95
	15	28.24	2.39	11.81	28.24	2.39	11.81	21.24	2.51	8.48	14.29	2.54	5.63	9.91	2.59	3.83
	20	28.19	2.46	11.46	28.19	2.49	11.32	21.20	2.58	8.22	14.26	2.61	5.46	9.89	2.61	3.79
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
85	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-15	18.03	1.29	13.98	18.03	1.29	13.98	13.56	1.35	10.04	9.12	1.37	6.66	6.33	1.39	4.54
	-10	18.95	1.56	12.15	18.95	1.56	12.15	14.25	1.63	8.72	9.59	1.66	5.79	6.65	1.69	3.94
	-7	19.45	1.50	13.01	13.85	1.64	8.46	14.68	1.68	8.73	9.88	1.78	5.56	6.85	1.81	3.78
	-5	18.92	1.56	12.10	15.06	1.68	8.95	14.93	1.68	8.91	10.04	1.82	5.51	6.97	1.86	3.75
	0	17.46	1.62	10.81	16.16	1.72	9.38	14.83	1.78	8.31	9.98	1.81	5.51	6.92	1.90	3.64
	2	17.78	1.73	10.29	16.49	1.86	8.88	14.68	1.88	7.80	9.88	1.90	5.19	6.85	2.02	3.38
	5	18.34	1.88	9.77	16.38	1.83	8.94	14.57	2.03	7.17	9.81	2.13	4.60	6.80	2.17	3.13
	7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Abbreviations:

HC: Total heating capacity (kW)

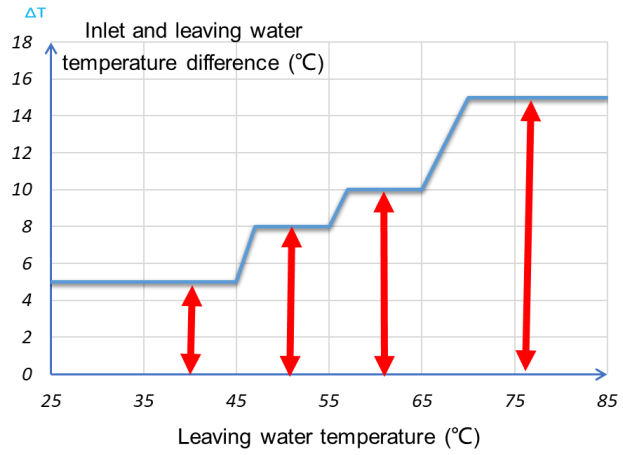
PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the heating mode, the temperature difference between the inlet and leaving water of the unit is shown in the figure below：



26kW Heating Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
25	-25	13.50	2.25	6.00	13.50	2.25	6.00	10.14	2.34	4.33	6.76	2.40	2.82	5.05	2.44	2.07
	-20	16.54	2.46	6.72	16.54	2.46	6.72	12.42	2.56	4.85	8.29	2.63	3.15	6.19	2.67	2.31
	-15	18.94	2.69	7.05	18.94	2.69	7.05	14.23	2.80	5.09	9.49	2.87	3.31	7.08	2.92	2.43
	-10	23.57	2.90	8.14	23.57	2.90	8.14	17.70	3.02	5.87	11.81	3.09	3.82	8.82	3.14	2.80
	-7	24.66	2.83	8.72	20.21	3.44	5.88	18.80	2.99	6.30	12.54	3.45	3.64	9.36	3.51	2.67
	-5	24.61	3.02	8.16	21.27	3.30	6.44	18.91	2.97	6.37	12.61	3.56	3.54	9.42	3.62	2.60
	0	23.53	3.51	6.70	21.99	3.79	5.81	19.39	3.67	5.29	12.94	4.01	3.23	9.66	4.20	2.30
	2	25.06	3.78	6.63	23.50	3.99	5.89	19.54	4.28	4.56	13.04	4.62	2.82	9.73	4.93	1.97
	5	26.15	4.08	6.42	24.64	5.20	4.74	19.53	4.76	4.10	13.03	5.25	2.48	9.73	5.34	1.82
	7	27.56	4.56	6.05	26.00	5.21	4.99	19.53	5.43	3.60	13.03	5.56	2.34	9.72	5.66	1.72
	10	29.10	4.89	5.95	26.01	5.41	4.81	19.53	5.63	3.47	13.03	5.78	2.26	9.73	5.87	1.66
	15	32.86	5.36	6.13	26.01	5.65	4.60	19.53	5.88	3.32	13.03	6.03	2.16	9.73	6.13	1.59
	20	35.30	5.57	6.33	26.02	6.21	4.19	19.54	6.47	3.02	13.04	6.63	1.97	9.73	6.74	1.44
	25	36.35	6.35	5.73	26.01	7.02	3.71	19.53	7.31	2.67	13.03	7.49	1.74	9.73	7.62	1.28
	30	36.93	6.73	5.49	26.02	7.21	3.61	19.54	7.51	2.60	13.04	7.70	1.69	9.73	7.83	1.24
	35	31.88	7.44	4.29	26.01	7.56	3.44	19.53	7.87	2.48	13.03	8.07	1.61	9.73	8.21	1.19
	40	27.81	7.62	3.65	26.01	7.95	3.27	19.53	8.28	2.36	13.03	8.49	1.54	9.73	8.63	1.13
	43	25.58	8.08	3.17	25.58	8.08	3.17	19.21	8.41	2.28	12.81	8.62	1.49	9.57	8.77	1.09

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
30	-25	14.50	2.07	7.00	14.50	2.07	7.00	10.89	2.16	5.05	7.26	2.21	3.29	5.42	2.25	2.41
	-20	17.33	2.36	7.33	17.33	2.36	7.33	13.02	2.46	5.29	8.68	2.52	3.44	6.48	2.57	2.52
	-15	19.74	2.58	7.66	19.74	2.58	7.66	14.83	2.69	5.52	9.89	2.75	3.59	7.38	2.80	2.64
	-10	24.41	2.73	8.94	24.41	2.73	8.94	18.33	2.84	6.45	12.23	2.91	4.20	9.13	2.96	3.08
	-7	25.20	2.55	9.90	20.66	3.09	6.68	19.21	2.69	7.15	12.82	3.11	4.13	9.57	3.16	3.03
	-5	25.37	2.83	8.97	21.92	3.10	7.08	19.49	2.78	7.01	13.00	3.34	3.89	9.70	3.39	2.86
	0	24.36	3.42	7.12	22.15	3.74	5.93	19.53	3.62	5.40	13.03	3.96	3.29	9.73	4.15	2.35
	2	25.74	3.72	6.92	23.50	3.85	6.10	19.54	4.13	4.73	13.04	4.46	2.92	9.73	4.76	2.05
	5	26.52	4.01	6.62	24.65	5.02	4.91	19.54	4.60	4.25	13.04	5.07	2.57	9.73	5.16	1.89
	7	28.20	4.50	6.26	26.00	4.85	5.36	19.53	5.05	3.87	13.03	5.18	2.52	9.72	5.27	1.85
	10	29.86	4.73	6.31	26.01	5.21	4.99	19.53	5.43	3.60	13.03	5.56	2.34	9.73	5.66	1.72
	15	33.45	5.19	6.45	26.02	5.51	4.72	19.54	5.74	3.41	13.04	5.88	2.22	9.73	5.98	1.63
	20	35.51	5.35	6.63	26.01	5.85	4.45	19.53	6.09	3.21	13.03	6.24	2.09	9.73	6.35	1.53
	25	36.43	6.18	5.89	26.02	6.59	3.95	19.54	6.86	2.85	13.04	7.03	1.85	9.73	7.15	1.36
	30	37.22	6.58	5.66	26.01	6.95	3.74	19.53	7.24	2.70	13.03	7.42	1.76	9.73	7.55	1.29
	35	32.12	7.33	4.38	26.02	7.52	3.46	19.54	7.83	2.50	13.04	8.03	1.62	9.73	8.16	1.19
	40	28.02	7.45	3.76	26.01	7.78	3.34	19.53	8.10	2.41	13.03	8.31	1.57	9.73	8.45	1.15
	43	25.84	7.86	3.29	25.84	7.86	3.29	19.41	8.19	2.37	12.95	8.40	1.54	9.67	8.54	1.13

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
35	-25	16.52	2.01	8.22	16.52	2.01	8.22	12.41	2.09	5.93	8.28	2.15	3.86	6.18	2.18	2.83
	-20	18.63	2.21	8.41	18.63	2.21	8.41	13.99	2.31	6.07	9.33	2.36	3.95	6.97	2.40	2.90
	-15	20.47	2.41	8.50	20.47	2.41	8.50	15.37	2.51	6.13	10.25	2.57	3.99	7.65	2.61	2.93
	-10	25.58	2.62	9.76	25.58	2.62	9.76	19.21	2.73	7.04	12.81	2.80	4.58	9.57	2.85	3.36
	-7	26.06	2.45	10.62	21.00	3.03	6.93	19.53	2.63	7.42	13.03	3.04	4.28	9.73	3.09	3.14
	-5	26.13	2.66	9.82	21.98	2.98	7.37	19.53	2.68	7.30	13.03	3.21	4.06	9.73	3.27	2.98
	0	24.76	3.30	7.50	22.16	3.64	6.09	19.54	3.53	5.54	13.04	3.85	3.38	9.73	4.04	2.41
	2	26.41	3.52	7.50	23.50	3.70	6.35	19.54	3.97	4.92	13.04	4.29	3.04	9.73	4.57	2.13
	5	27.15	3.88	7.00	24.64	4.80	5.13	19.53	4.40	4.44	13.03	4.86	2.68	9.73	4.94	1.97
	7	28.73	4.33	6.63	26.00	4.77	5.45	19.53	4.97	3.93	13.03	5.09	2.56	9.72	5.18	1.88
	10	30.39	4.49	6.76	26.01	5.10	5.10	19.53	5.31	3.68	13.03	5.44	2.39	9.73	5.54	1.76
	15	34.32	4.99	6.88	26.02	5.35	4.86	19.54	5.57	3.51	13.04	5.71	2.28	9.73	5.81	1.68
	20	35.65	5.19	6.87	26.01	5.72	4.55	19.53	5.96	3.28	13.03	6.11	2.13	9.73	6.21	1.57
	25	36.75	5.93	6.20	26.02	6.31	4.12	19.54	6.57	2.97	13.04	6.74	1.94	9.73	6.85	1.42
	30	37.46	6.41	5.84	26.01	6.75	3.85	19.53	7.03	2.78	13.03	7.21	1.81	9.73	7.33	1.33
	35	32.22	6.87	4.69	26.01	7.21	3.61	19.53	7.51	2.60	13.03	7.70	1.69	9.73	7.83	1.24
	40	28.18	7.01	4.02	26.01	7.30	3.56	19.53	7.60	2.57	13.03	7.79	1.67	9.73	7.93	1.23
	43	25.93	7.33	3.54	25.93	7.33	3.54	19.47	7.63	2.55	12.99	7.82	1.66	9.70	7.96	1.22

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
40	-25	17.38	1.79	9.74	17.38	1.79	9.74	13.05	1.86	7.02	8.71	1.91	4.57	6.50	1.94	3.35
	-20	19.61	2.01	9.75	19.61	2.01	9.75	14.73	2.09	7.03	9.82	2.15	4.58	7.33	2.18	3.36
	-15	20.71	2.31	8.98	20.71	2.31	8.98	15.55	2.40	6.48	10.38	2.46	4.22	7.75	2.50	3.09
	-10	26.35	2.55	10.35	26.02	2.58	10.09	19.54	2.69	7.27	13.04	2.75	4.73	9.73	2.80	3.47
	-7	26.31	2.35	11.20	21.00	2.96	7.11	19.53	2.57	7.60	13.03	2.97	4.39	9.73	3.02	3.22
	-5	26.55	2.56	10.36	21.98	2.92	7.53	19.54	2.62	7.45	13.04	3.15	4.14	9.73	3.20	3.04
	0	25.55	3.16	8.09	22.15	3.57	6.20	19.53	3.46	5.65	13.03	3.78	3.45	9.73	3.96	2.45
	2	26.63	3.38	7.89	23.49	3.53	6.65	19.53	3.79	5.15	13.03	4.09	3.18	9.73	4.36	2.23
	5	27.25	3.54	7.69	24.64	4.59	5.36	19.53	4.21	4.64	13.03	4.64	2.81	9.73	4.72	2.06
	7	28.89	3.85	7.50	26.00	4.52	5.75	19.53	4.71	4.15	13.03	4.83	2.70	9.72	4.91	1.98
	10	30.82	4.15	7.42	26.01	5.01	5.19	19.53	5.22	3.74	13.03	5.35	2.44	9.73	5.44	1.79
	15	34.47	4.58	7.53	26.01	5.21	4.99	19.53	5.43	3.60	13.03	5.56	2.34	9.73	5.66	1.72
	20	35.82	4.94	7.25	26.02	5.55	4.69	19.54	5.78	3.38	13.04	5.92	2.20	9.73	6.03	1.62
	25	36.77	5.69	6.46	26.02	6.21	4.19	19.54	6.47	3.02	13.04	6.63	1.97	9.73	6.74	1.44
	30	37.63	6.09	6.18	26.01	6.52	3.99	19.53	6.79	2.88	13.03	6.96	1.87	9.73	7.08	1.37
	35	32.34	6.58	4.92	26.02	7.00	3.72	19.54	7.29	2.68	13.04	7.47	1.74	9.73	7.60	1.28
	40	28.31	6.68	4.24	26.01	7.10	3.66	19.53	7.39	2.64	13.03	7.58	1.72	9.73	7.71	1.26
	43	25.98	7.12	3.65	25.98	7.12	3.65	19.51	7.41	2.63	13.01	7.60	1.71	9.72	7.73	1.26

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
45	-25	17.85	1.62	11.02	17.85	1.62	11.02	13.41	1.69	7.95	8.94	1.73	5.17	6.68	1.76	3.80
	-20	20.14	1.87	10.75	20.14	1.87	10.75	15.12	1.95	7.76	10.09	2.00	5.05	7.53	2.03	3.70
	-15	21.10	2.19	9.62	21.10	2.19	9.62	15.85	2.28	6.94	10.57	2.34	4.52	7.89	2.38	3.31
	-10	26.39	2.44	10.82	26.02	2.50	10.41	19.54	2.60	7.51	13.04	2.67	4.88	9.73	2.71	3.59
	-7	26.37	2.28	11.59	21.00	2.87	7.32	19.53	2.49	7.83	13.03	2.88	4.52	9.73	2.93	3.32
	-5	26.65	2.40	11.11	21.98	2.87	7.66	19.54	2.58	7.58	13.04	3.10	4.21	9.73	3.15	3.09
	0	25.64	2.90	8.86	22.15	3.23	6.86	19.53	3.13	6.25	13.03	3.42	3.81	9.73	3.58	2.72
	2	26.70	3.07	8.70	23.49	3.08	7.64	19.53	3.30	5.91	13.03	3.56	3.66	9.73	3.80	2.56
	5	27.36	3.32	8.23	24.64	3.91	6.31	19.53	3.58	5.46	13.03	3.95	3.30	9.73	4.02	2.42
	7	29.07	3.58	8.11	26.00	3.81	6.82	19.53	3.97	4.92	13.03	4.07	3.20	9.72	4.14	2.35
	10	31.64	3.89	8.12	26.02	4.65	5.60	19.54	4.84	4.04	13.04	4.96	2.63	9.73	5.05	1.93
	15	34.61	4.28	8.09	26.02	4.95	5.26	19.54	5.15	3.79	13.04	5.28	2.47	9.73	5.37	1.81
	20	35.88	4.69	7.66	26.01	5.31	4.90	19.53	5.53	3.53	13.03	5.67	2.30	9.73	5.77	1.69
	25	37.37	5.36	6.97	26.02	5.85	4.45	19.54	6.09	3.21	13.04	6.24	2.09	9.73	6.35	1.53
	30	37.72	5.57	6.77	26.02	6.21	4.19	19.54	6.47	3.02	13.04	6.63	1.97	9.73	6.74	1.44
	35	32.42	5.83	5.56	26.02	6.75	3.85	19.54	7.03	2.78	13.04	7.21	1.81	9.73	7.33	1.33
	40	28.46	6.12	4.65	26.01	6.85	3.80	19.53	7.13	2.74	13.03	7.31	1.78	9.73	7.44	1.31
	43	26.45	7.01	3.77	26.01	7.01	3.71	19.53	7.30	2.68	13.03	7.48	1.74	9.73	7.61	1.28

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
50	-25	18.26	1.52	12.05	18.26	1.52	12.05	13.71	1.58	8.69	9.15	1.62	5.66	6.83	1.64	4.15
	-20	20.22	1.78	11.35	20.22	1.78	11.35	15.18	1.86	8.18	10.13	1.90	5.33	7.56	1.93	3.91
	-15	21.17	2.04	10.39	21.17	2.04	10.39	15.90	2.12	7.49	10.61	2.18	4.87	7.92	2.21	3.58
	-10	26.47	2.26	11.70	26.02	2.40	10.84	19.54	2.50	7.82	13.04	2.56	5.09	9.73	2.61	3.73
	-7	26.60	2.14	12.41	21.01	2.76	7.60	19.54	2.40	8.13	13.04	2.78	4.70	9.73	2.82	3.45
	-5	26.81	2.29	11.72	21.98	2.71	8.10	19.53	2.44	8.02	13.03	2.92	4.46	9.73	2.97	3.27
	0	25.75	2.59	9.94	22.15	2.98	7.42	19.53	2.89	6.76	13.03	3.16	4.13	9.73	3.31	2.94
	2	26.95	2.76	9.76	23.49	2.92	8.05	19.53	3.13	6.23	13.03	3.38	3.85	9.73	3.60	2.70
	5	27.75	3.00	9.26	24.64	3.64	6.76	19.53	3.34	5.85	13.03	3.68	3.54	9.73	3.75	2.60
	7	29.51	3.32	8.90	26.00	3.65	7.12	19.53	3.80	5.14	13.03	3.90	3.34	9.72	3.96	2.45
	10	32.13	3.65	8.79	26.01	4.01	6.49	19.53	4.18	4.68	13.03	4.28	3.04	9.73	4.35	2.23
	15	35.09	4.03	8.70	26.01	4.65	5.59	19.53	4.84	4.03	13.03	4.96	2.63	9.73	5.05	1.93
	20	36.04	4.41	8.17	26.02	5.02	5.18	19.54	5.23	3.74	13.04	5.36	2.43	9.73	5.45	1.79
	25	37.63	4.99	7.54	26.02	5.64	4.61	19.54	5.87	3.33	13.04	6.02	2.17	9.73	6.12	1.59
	30	38.16	5.24	7.28	26.01	6.01	4.33	19.53	6.26	3.12	13.03	6.42	2.03	9.73	6.53	1.49
	35	33.44	5.59	5.99	26.01	6.45	4.03	19.53	6.72	2.91	13.03	6.89	1.89	9.73	7.00	1.39
	40	29.55	5.69	5.19	26.01	6.58	3.95	19.53	6.85	2.85	13.03	7.02	1.86	9.73	7.14	1.36
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
55	-25	18.67	1.41	13.24	18.67	1.41	13.24	14.02	1.47	9.55	9.35	1.51	6.21	6.98	1.53	4.56
	-20	20.29	1.69	12.00	20.29	1.69	12.00	15.24	1.76	8.66	10.17	1.80	5.63	7.59	1.84	4.14
	-15	21.24	1.88	11.28	21.24	1.88	11.28	15.95	1.96	8.13	10.64	2.01	5.29	7.94	2.04	3.88
	-10	27.52	2.09	13.19	26.01	2.31	11.26	19.53	2.41	8.12	13.03	2.47	5.28	9.73	2.51	3.88
	-7	27.43	2.05	13.35	18.80	2.30	8.17	19.53	2.51	7.77	13.03	2.69	4.84	9.73	2.74	3.56
	-5	26.33	2.19	12.00	19.73	2.35	8.40	19.53	2.57	7.59	13.03	2.83	4.61	9.73	2.88	3.38
	0	25.07	2.31	10.85	21.31	2.51	8.49	19.53	2.88	6.79	13.03	2.95	4.41	9.73	3.09	3.14
	2	26.10	2.45	10.65	21.95	2.71	8.10	19.53	3.01	6.49	13.03	3.08	4.24	9.73	3.27	2.98
	5	27.43	2.65	10.34	21.99	2.94	7.48	19.54	3.24	6.03	13.04	3.44	3.79	9.73	3.50	2.78
	7	29.75	3.05	9.76	26.00	3.31	7.85	19.53	3.45	5.67	13.03	3.53	3.69	9.72	3.59	2.71
	10	32.42	3.41	9.50	26.01	3.78	6.88	19.53	3.94	4.96	13.03	4.04	3.23	9.73	4.10	2.37
	15	35.25	3.79	9.31	26.02	4.21	6.18	19.54	4.38	4.46	13.04	4.49	2.90	9.73	4.57	2.13
	20	36.15	4.13	8.75	26.02	4.75	5.48	19.54	4.95	3.95	13.04	5.07	2.57	9.73	5.16	1.89
	25	37.73	4.62	8.16	26.01	5.21	4.99	19.53	5.43	3.60	13.03	5.56	2.34	9.73	5.66	1.72
	30	38.24	4.91	7.79	26.01	5.64	4.61	19.53	5.87	3.33	13.03	6.02	2.16	9.73	6.12	1.59
	35	31.64	5.34	5.93	26.01	5.95	4.37	19.53	6.20	3.15	13.03	6.35	2.05	9.73	6.46	1.51
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
60	-25	19.05	1.35	14.11	19.05	1.35	14.11	14.31	1.41	10.18	9.54	1.44	6.62	7.12	1.47	4.86
	-20	20.87	1.63	12.83	20.87	1.63	12.83	15.67	1.69	9.25	10.46	1.74	6.02	7.80	1.77	4.42
	-15	21.91	1.82	12.05	21.91	1.82	12.05	16.46	1.89	8.69	10.98	1.94	5.65	8.20	1.97	4.15
	-10	27.86	1.98	14.07	26.02	2.21	11.77	19.54	2.30	8.49	13.04	2.36	5.53	9.73	2.40	4.06
	-7	27.85	1.96	14.22	18.80	2.14	8.77	19.53	2.34	8.33	13.03	2.51	5.19	9.73	2.55	3.81
	-5	26.80	2.14	12.55	19.73	2.17	9.08	19.53	2.38	8.21	13.03	2.62	4.98	9.73	2.66	3.66
	0	25.47	2.21	11.51	21.32	2.42	8.80	19.54	2.78	7.04	13.04	2.85	4.58	9.73	2.99	3.26
	2	26.31	2.30	11.43	21.95	2.57	8.55	19.53	2.85	6.85	13.03	2.91	4.48	9.73	3.09	3.14
	5	27.71	2.45	11.30	21.98	2.69	8.16	19.53	2.97	6.58	13.03	3.15	4.14	9.73	3.20	3.04
	7	29.88	2.71	11.04	26.00	3.10	8.39	19.53	3.23	6.05	13.03	3.31	3.94	9.72	3.37	2.89
	10	32.74	3.05	10.74	26.01	3.55	7.33	19.53	3.70	5.28	13.03	3.79	3.44	9.73	3.85	2.52
	15	35.36	3.47	10.20	26.02	4.01	6.49	19.54	4.18	4.68	13.04	4.28	3.05	9.73	4.35	2.24
	20	36.59	3.79	9.66	26.01	4.56	5.70	19.53	4.75	4.11	13.03	4.87	2.68	9.73	4.95	1.96
	25	37.89	4.12	9.20	26.01	4.99	5.21	19.53	5.20	3.76	13.03	5.33	2.45	9.73	5.42	1.80
	30	38.32	4.50	8.51	26.01	5.31	4.90	19.53	5.53	3.53	13.03	5.67	2.30	9.73	5.77	1.69
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
65	-25	19.68	1.30	15.14	19.68	1.30	15.14	14.78	1.35	10.92	9.86	1.39	7.10	7.36	1.41	5.21
	-20	21.03	1.52	13.84	21.03	1.52	13.84	15.79	1.58	9.98	10.53	1.62	6.49	7.86	1.65	4.77
	-15	22.20	1.72	12.89	22.20	1.72	12.89	16.68	1.79	9.30	11.12	1.84	6.05	8.30	1.87	4.44
	-10	27.97	1.84	15.20	26.01	2.10	12.39	19.53	2.19	8.93	13.03	2.24	5.81	9.73	2.28	4.27
	-7	27.96	1.83	15.32	18.81	2.02	9.32	19.54	2.21	8.86	13.04	2.36	5.53	9.73	2.40	4.06
	-5	26.87	1.96	13.74	19.73	2.05	9.63	19.53	2.24	8.71	13.03	2.47	5.28	9.73	2.51	3.88
	0	25.32	2.08	12.20	21.32	2.14	9.96	19.54	2.45	7.97	13.04	2.52	5.18	9.73	2.64	3.69
	2	26.51	2.18	12.14	21.95	2.24	9.79	19.53	2.49	7.85	13.03	2.54	5.12	9.73	2.70	3.60
	5	27.86	2.29	12.15	21.98	2.32	9.48	19.53	2.56	7.64	13.03	2.71	4.81	9.73	2.76	3.53
	7	30.14	2.47	12.20	26.00	2.64	9.86	19.53	2.75	7.10	13.03	2.82	4.62	9.72	2.87	3.39
	10	32.82	2.89	11.36	26.01	3.15	8.26	19.53	3.28	5.96	13.03	3.36	3.88	9.73	3.42	2.84
	15	35.62	3.16	11.29	26.01	3.69	7.05	19.53	3.84	5.08	13.03	3.94	3.31	9.73	4.01	2.43
	20	36.98	3.48	10.63	26.01	4.02	6.47	19.53	4.19	4.67	13.03	4.29	3.04	9.73	4.36	2.23
	25	38.15	3.80	10.04	26.01	4.52	5.75	19.53	4.71	4.15	13.03	4.83	2.70	9.73	4.91	1.98
	30	38.51	4.16	9.25	26.01	5.01	5.19	19.53	5.22	3.74	13.03	5.35	2.44	9.73	5.44	1.79
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
70	-25	19.99	1.25	15.99	19.99	1.25	15.99	15.01	1.30	11.53	10.01	1.33	7.51	7.48	1.36	5.51
	-20	21.10	1.48	14.29	21.10	1.48	14.29	15.85	1.54	10.31	10.57	1.58	6.71	7.89	1.60	4.92
	-15	22.52	1.66	13.58	22.52	1.66	13.58	16.91	1.73	9.79	11.28	1.77	6.37	8.42	1.80	4.68
	-10	28.46	1.80	15.83	26.01	1.95	13.34	19.53	2.03	9.62	13.03	2.08	6.26	9.73	2.12	4.59
	-7	28.63	1.78	16.11	18.81	1.92	9.81	19.54	2.10	9.33	13.04	2.24	5.82	9.73	2.28	4.27
	-5	27.60	1.90	14.50	19.73	1.96	10.07	19.53	2.15	9.10	13.03	2.36	5.52	9.73	2.40	4.05
	0	25.72	1.96	13.14	21.31	2.02	10.57	19.53	2.31	8.45	13.03	2.37	5.49	9.73	2.49	3.91
	2	27.05	2.06	13.10	21.95	2.07	10.60	19.53	2.30	8.49	13.03	2.35	5.55	9.73	2.50	3.90
	5	28.67	2.16	13.24	21.99	2.24	9.83	19.54	2.47	7.93	13.04	2.62	4.98	9.73	2.66	3.66
	7	30.85	2.40	12.87	26.00	2.45	10.61	19.53	2.55	7.65	13.03	2.62	4.98	9.72	2.66	3.66
	10	32.66	2.62	12.48	26.01	2.85	9.13	19.53	2.97	6.58	13.03	3.04	4.28	9.73	3.09	3.14
	15	36.20	2.84	12.74	26.01	2.95	8.82	19.53	3.07	6.36	13.03	3.15	4.14	9.73	3.20	3.04
	20	37.22	2.97	12.53	26.01	3.42	7.61	19.53	3.56	5.49	13.03	3.65	3.57	9.73	3.71	2.62
	25	38.64	3.22	12.00	26.01	4.01	6.49	19.53	4.18	4.68	13.03	4.28	3.04	9.73	4.35	2.23
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
75	-25	17.55	1.20	14.63	17.55	1.20	14.63	13.18	1.25	10.55	8.79	1.28	6.86	6.56	1.30	17.55
	-20	18.51	1.36	13.62	18.51	1.36	13.62	13.90	1.42	9.82	9.27	1.45	6.39	6.92	1.48	18.51
	-15	20.85	1.61	12.99	20.85	1.61	12.99	15.66	1.67	9.37	10.44	1.71	6.10	7.80	1.74	20.85
	-10	23.78	1.75	13.55	23.78	1.75	13.55	17.86	1.83	9.77	11.91	1.87	6.36	8.89	1.91	23.78
	-7	26.26	1.73	15.18	18.80	1.81	10.40	19.53	1.98	9.89	13.03	2.11	6.17	9.73	2.15	4.53
	-5	26.86	1.85	14.49	19.73	1.85	10.65	19.53	2.03	9.63	13.03	2.23	5.84	9.73	2.27	4.29
	0	26.21	1.89	13.85	21.31	1.87	11.41	19.53	2.14	9.13	13.03	2.20	5.93	9.73	2.30	4.23
	2	27.60	2.00	13.83	21.95	2.03	10.84	19.53	2.25	8.68	13.03	2.30	5.67	9.73	2.44	3.98
	5	29.43	2.10	13.99	21.98	2.14	10.29	19.53	2.35	8.30	13.03	2.50	5.22	9.73	2.54	3.83
	7	31.66	2.30	13.76	26.00	2.35	11.06	19.53	2.45	7.98	13.03	2.51	5.19	9.72	2.55	31.66
	10	33.59	2.51	13.36	26.01	2.61	9.97	19.53	2.72	7.19	13.03	2.79	4.68	9.73	2.83	33.59
	15	36.59	2.69	13.62	26.02	2.73	9.53	19.54	2.84	6.87	13.04	2.91	4.47	9.73	2.96	36.59
	20	37.92	2.72	13.94	26.02	2.74	9.50	19.54	2.83	6.90	13.04	2.90	4.50	9.73	2.95	37.92
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
80	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	17.56	1.31	13.45	17.56	1.31	13.45	13.19	1.36	9.70	8.80	1.39	6.31	6.57	1.42	4.63
	-15	19.35	1.37	14.13	19.35	1.37	14.13	14.53	1.43	10.19	9.70	1.46	6.63	7.24	1.49	4.87
	-10	21.98	1.67	13.17	21.98	1.67	13.17	16.51	1.74	9.50	11.01	1.78	6.18	8.22	1.81	4.54
	-7	24.32	1.58	15.43	17.64	1.61	10.95	18.33	1.76	10.40	12.23	1.88	6.49	9.13	1.92	4.76
	-5	23.63	1.73	13.66	18.81	1.68	11.17	18.62	1.84	10.10	12.42	2.03	6.13	9.27	2.06	4.50
	0	22.64	1.82	12.44	20.94	1.74	12.01	19.20	2.00	9.61	12.81	2.05	6.24	9.56	2.15	4.45
	2	23.52	1.93	12.21	21.79	1.88	11.60	19.39	2.09	9.29	12.94	2.13	6.07	9.66	2.27	4.26
	5	24.56	2.08	11.79	21.93	2.03	10.79	19.49	2.24	8.70	13.00	2.38	5.47	9.70	2.42	4.02
	7	25.80	2.27	11.37	25.80	2.27	11.37	19.38	2.36	8.20	12.93	2.42	5.34	9.65	2.46	3.92
	10	25.72	2.40	10.73	25.72	2.40	10.73	19.31	2.50	7.74	12.88	2.56	5.04	9.62	2.60	3.70
	15	25.64	2.46	10.42	25.64	2.46	10.42	19.25	2.56	7.51	12.84	2.63	4.89	9.59	2.67	3.59
	20	25.58	2.52	10.15	25.58	2.54	10.07	19.21	2.62	7.33	12.82	2.69	4.76	9.57	2.74	3.49
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI	HC	COP	PI
85	-25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-15	18.03	1.33	13.59	18.03	1.33	13.59	13.54	1.38	9.80	9.03	1.42	6.38	6.74	1.44	4.68
	-10	18.95	1.61	11.81	18.95	1.61	11.81	14.23	1.67	8.52	9.49	1.71	5.54	7.09	1.74	4.07
	-7	19.45	1.54	12.64	14.11	1.57	8.97	14.66	1.72	8.53	9.78	1.84	5.32	7.30	1.87	3.90
	-5	18.92	1.61	11.76	15.06	1.57	9.62	14.91	1.71	8.70	9.94	1.88	5.28	7.42	1.92	3.87
	0	17.46	1.66	10.51	16.16	1.59	10.14	14.81	1.82	8.12	9.88	1.87	5.27	7.38	1.96	3.76
	2	17.78	1.78	10.00	16.47	1.73	9.50	14.66	1.93	7.61	9.78	1.97	4.97	7.30	2.09	3.49
	5	18.34	1.93	9.49	16.38	1.89	8.69	14.55	2.08	7.00	9.71	2.20	4.40	7.25	2.24	3.23
	7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	25	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	30	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	35	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	40	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Abbreviations:

HC: Total heating capacity (kW)

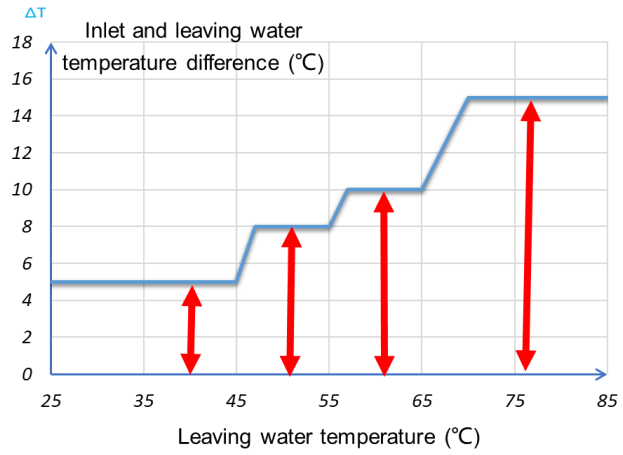
PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the heating mode, the temperature difference between the inlet and leaving water of the unit is shown in the figure below：



Cooling Capacity Tables (Test standard: EN14511)

40kW Cooling Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
5	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	17.55	4.01	4.38	17.55	4.01	4.38	13.17	4.17	3.16	8.88	4.26	2.08	5.70	4.31	1.32
	10	17.99	3.95	4.55	17.99	3.95	4.55	13.50	4.11	3.29	9.10	4.20	2.17	5.85	4.25	1.38
	15	22.52	3.65	6.17	22.52	3.65	6.17	16.90	3.80	4.45	11.40	3.88	2.94	7.32	3.92	1.86
	20	24.25	3.36	7.22	24.25	3.36	7.22	18.20	3.50	5.21	12.27	3.57	3.44	7.88	3.61	2.18
	25	26.55	3.25	8.17	26.55	3.25	8.17	19.93	3.38	5.89	13.43	3.45	3.89	8.63	3.49	2.47
	30	28.01	3.05	9.18	28.01	3.05	9.18	21.02	3.17	6.62	14.17	3.24	4.37	9.10	3.28	2.78
	35	30.25	2.50	12.10	30.25	2.50	12.10	22.70	2.60	8.73	15.31	2.66	5.76	9.83	2.69	3.66
	40	24.35	2.44	9.98	24.35	2.44	9.98	18.27	2.54	7.20	12.32	2.59	4.75	7.91	2.62	3.02
	45	13.55	2.35	5.77	13.55	2.35	5.77	10.17	2.45	4.16	6.86	2.50	2.75	4.40	2.53	1.74
	48	7.99	2.30	3.47	7.99	2.30	3.47	6.00	2.39	2.51	4.04	2.44	1.65	2.60	2.47	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
7	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	17.39	4.13	4.21	17.39	4.13	4.21	13.05	4.30	3.04	8.80	4.39	2.01	5.65	4.44	1.27
	5	18.25	4.10	4.45	18.25	4.10	4.45	13.70	4.27	3.21	9.23	4.36	2.12	5.93	4.41	1.35
	10	19.52	4.07	4.80	19.52	4.07	4.80	14.65	4.23	3.46	9.88	4.32	2.29	6.34	4.37	1.45
	15	23.52	3.75	6.28	23.52	3.75	6.28	17.65	3.90	4.53	11.90	3.98	2.99	7.64	4.03	1.90
	20	25.10	3.55	7.07	25.10	3.55	7.07	18.84	3.69	5.10	12.70	3.77	3.37	8.16	3.82	2.14
	25	28.05	3.36	8.35	28.05	3.36	8.35	21.05	3.50	6.02	14.19	3.57	3.98	9.12	3.61	2.52
	30	29.01	3.13	9.27	29.01	3.13	9.27	21.77	3.26	6.69	14.68	3.33	4.41	9.43	3.37	2.80
	35	32.00	2.67	11.99	32.00	2.67	11.98	24.02	2.78	8.64	16.19	2.84	5.71	10.40	2.87	3.62
	40	25.33	2.51	10.09	25.33	2.51	10.09	19.01	2.61	7.28	12.82	2.67	4.81	8.23	2.70	3.05
	45	14.60	2.49	5.86	14.60	2.49	5.86	10.95	2.59	4.23	7.39	2.65	2.79	4.74	2.68	1.77
	48	8.53	2.45	3.48	8.53	2.45	3.48	6.40	2.55	2.51	4.32	2.60	1.66	2.77	2.63	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
10	-15	20.00	4.22	4.74	20.00	4.22	4.74	15.00	4.39	3.42	10.00	4.48	2.23	6.50	4.54	1.43
	-10	20.67	4.24	4.88	20.67	4.24	4.88	15.50	4.41	3.52	10.34	4.50	2.30	6.72	4.56	1.47
	-5	20.97	4.09	5.12	20.97	4.09	5.12	15.73	4.26	3.69	10.49	4.35	2.41	6.82	4.40	1.55
	0	21.45	3.99	5.37	21.45	3.99	5.37	16.09	4.16	3.87	10.73	4.24	2.53	6.97	4.30	1.62
	5	21.78	3.86	5.64	21.78	3.86	5.64	16.34	4.02	4.07	10.89	4.10	2.66	7.08	4.15	1.71
	10	22.90	3.72	6.16	22.90	3.72	6.16	17.17	3.87	4.44	11.45	3.95	2.90	7.44	4.00	1.86
	15	27.47	3.56	7.72	27.47	3.56	7.72	20.60	3.70	5.57	13.73	3.78	3.63	8.93	3.82	2.33
	20	30.10	3.66	8.22	30.10	3.66	8.22	22.58	3.81	5.92	15.05	3.89	3.87	9.78	3.94	2.48
	25	32.70	3.41	9.59	32.70	3.41	9.59	24.52	3.55	6.91	16.35	3.62	4.51	10.63	3.67	2.90
	30	35.81	3.08	11.64	35.81	3.08	11.64	26.85	3.20	8.39	17.90	3.27	5.48	11.64	3.31	3.52
	35	37.38	2.64	14.15	37.38	2.64	14.15	28.04	2.75	10.20	18.69	2.81	6.66	12.15	2.84	4.28
	40	28.99	2.51	11.55	28.99	2.51	11.55	21.74	2.61	8.33	14.49	2.67	5.44	9.42	2.70	3.49
	45	16.99	2.48	6.85	16.99	2.48	6.85	12.74	2.58	4.94	8.50	2.63	3.23	5.52	2.67	2.07
	48	10.61	2.42	4.38	10.61	2.42	4.38	7.96	2.52	3.16	5.30	2.57	2.06	3.45	2.60	1.32

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
15	-15	21.75	4.55	4.78	21.75	4.55	4.78	16.31	4.74	3.44	10.88	4.84	2.25	7.07	4.90	1.44
	-10	22.90	4.49	5.09	22.90	4.49	5.09	17.17	4.68	3.67	11.45	4.78	2.40	7.44	4.83	1.54
	-5	23.76	4.42	5.37	23.76	4.42	5.37	17.82	4.60	3.87	11.88	4.70	2.53	7.72	4.75	1.62
	0	24.63	4.32	5.70	24.63	4.32	5.70	18.47	4.50	4.11	12.31	4.59	2.68	8.00	4.65	1.72
	5	24.07	4.17	5.77	24.07	4.17	5.77	18.05	4.34	4.16	12.04	4.43	2.72	7.82	4.49	1.74
	10	24.89	4.01	6.20	24.89	4.01	6.20	18.67	4.17	4.47	12.45	4.26	2.92	8.09	4.31	1.88
	15	29.62	3.81	7.78	29.62	3.81	7.78	22.21	3.96	5.61	14.81	4.04	3.66	9.63	4.09	2.35
	20	33.90	3.97	8.55	33.90	3.97	8.55	25.43	4.13	6.16	16.95	4.21	4.02	11.02	4.27	2.58
	25	36.55	3.71	9.85	36.55	3.71	9.85	27.41	3.86	7.10	18.28	3.94	4.64	11.88	3.99	2.98
	30	39.72	3.22	12.34	38.95	3.22	12.10	29.21	3.35	8.72	19.47	3.42	5.69	12.66	3.46	3.66
	35	40.84	3.06	13.36	39.00	3.42	11.40	29.25	3.56	8.22	19.50	3.63	5.36	12.68	3.68	3.45
	40	35.49	3.12	11.36	35.49	3.12	11.36	26.62	3.25	8.19	17.75	3.32	5.35	11.54	3.36	3.43
	45	24.57	2.93	8.38	24.57	2.93	8.38	18.42	3.05	6.04	12.28	3.11	3.94	7.98	3.15	2.53
	48	12.26	2.84	4.32	12.26	2.84	4.32	9.20	2.95	3.12	6.13	3.01	2.04	3.99	3.05	1.31

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
18	-15	24.02	4.60	5.22	24.02	4.60	5.22	18.02	4.79	3.76	12.01	4.89	2.46	7.81	4.95	1.58
	-10	25.46	4.59	5.54	25.46	4.59	5.54	19.10	4.78	4.00	12.73	4.88	2.61	8.27	4.94	1.68
	-5	25.83	4.55	5.67	25.83	4.55	5.67	19.37	4.74	4.09	12.91	4.84	2.67	8.39	4.90	1.71
	0	26.61	4.52	5.89	26.61	4.52	5.89	19.96	4.70	4.24	13.30	4.80	2.77	8.65	4.86	1.78
	5	27.37	4.45	6.16	27.37	4.45	6.16	20.53	4.63	4.44	13.68	4.72	2.90	8.89	4.78	1.86
	10	29.18	4.37	6.68	29.18	4.37	6.68	21.89	4.55	4.81	14.59	4.64	3.14	9.48	4.70	2.02
	15	32.85	4.30	7.65	32.85	4.30	7.65	24.64	4.47	5.51	16.42	4.56	3.60	10.68	4.62	2.31
	20	36.58	4.22	8.67	36.58	4.22	8.67	27.44	4.39	6.25	18.29	4.48	4.08	11.89	4.54	2.62
	25	40.24	3.71	10.85	39.07	4.15	9.42	29.30	4.31	6.79	19.54	4.41	4.43	12.70	4.46	2.85
	30	41.00	3.32	12.35	39.05	4.07	9.59	29.29	4.24	6.91	19.53	4.33	4.51	12.69	4.38	2.90
	35	42.51	3.14	13.54	39.00	3.96	9.85	29.25	4.12	7.10	19.50	4.21	4.64	12.68	4.26	2.98
	40	41.06	3.07	13.37	39.10	3.70	10.57	29.33	3.85	7.62	19.55	3.93	4.97	12.71	3.98	3.19
	45	28.63	3.00	9.55	28.63	3.00	9.55	21.47	3.12	6.88	14.31	3.19	4.49	9.30	3.22	2.89
	48	15.21	2.97	5.12	15.21	2.97	5.12	11.41	3.09	3.69	7.61	3.16	2.41	4.94	3.19	1.55

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
20	-15	24.12	4.85	4.98	24.12	4.85	4.98	18.09	5.04	3.59	12.06	5.15	2.34	7.84	5.21	1.50
	-10	25.63	4.90	5.23	25.63	4.90	5.23	19.22	5.10	3.77	12.81	5.21	2.46	8.33	5.27	1.58
	-5	26.61	4.67	5.70	26.61	4.67	5.70	19.96	4.86	4.11	13.30	4.96	2.68	8.65	5.02	1.72
	0	27.36	4.72	5.80	27.36	4.72	5.80	20.52	4.91	4.18	13.68	5.01	2.73	8.89	5.07	1.75
	5	28.59	4.67	6.13	28.59	4.67	6.13	21.44	4.85	4.42	14.30	4.96	2.88	9.29	5.02	1.85
	10	30.70	4.51	6.81	30.70	4.51	6.81	23.02	4.69	4.91	15.35	4.79	3.21	9.98	4.84	2.06
	15	34.22	4.48	7.64	34.22	4.48	7.64	25.66	4.66	5.50	17.11	4.76	3.59	11.12	4.82	2.31
	20	40.15	4.33	9.27	39.11	4.65	8.41	29.33	4.84	6.06	19.56	4.94	3.96	12.71	5.00	2.54
	25	42.79	3.89	10.99	38.97	4.21	9.25	29.23	4.39	6.67	19.48	4.48	4.35	12.67	4.53	2.79
	30	43.69	3.38	12.92	39.05	4.17	9.37	29.28	4.34	6.75	19.52	4.43	4.41	12.69	4.48	2.83
	35	45.25	3.22	14.06	39.00	4.07	9.57	29.25	4.24	6.90	19.50	4.33	4.50	12.68	4.38	2.89
	40	43.04	3.17	13.57	39.08	3.80	10.29	29.31	3.95	7.42	19.54	4.03	4.84	12.70	4.08	3.11
	45	29.57	3.12	9.47	29.57	3.12	9.47	22.18	3.25	6.82	14.79	3.32	4.46	9.61	3.36	2.86
	48	16.17	3.08	5.26	16.17	3.08	5.26	12.13	3.20	3.79	8.08	3.27	2.47	5.25	3.31	1.59
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
25	-15	25.13	5.10	4.93	25.13	5.10	4.93	18.85	5.31	3.55	12.56	5.42	2.32	8.17	5.48	1.49
	-10	26.36	5.16	5.11	26.36	5.16	5.11	19.77	5.37	3.69	13.18	5.48	2.41	8.57	5.54	1.55
	-5	27.47	4.98	5.51	27.47	4.98	5.51	20.60	5.19	3.97	13.73	5.30	2.59	8.93	5.36	1.67
	0	28.58	4.88	5.86	28.58	4.88	5.86	21.44	5.08	4.22	14.29	5.18	2.76	9.29	5.25	1.77
	5	29.81	4.71	6.33	29.81	4.71	6.33	22.36	4.90	4.56	14.90	5.01	2.98	9.69	5.07	1.91
	10	31.82	4.59	6.93	31.82	4.59	6.93	23.87	4.78	4.99	15.91	4.88	3.26	10.34	4.94	2.09
	15	36.27	4.71	7.70	36.27	4.71	7.70	27.20	4.90	5.55	18.14	5.01	3.62	11.79	5.07	2.33
	20	44.35	4.85	9.15	39.01	4.91	7.95	29.26	5.11	5.73	19.51	5.21	3.74	12.68	5.28	2.40
	25	47.71	4.29	11.12	39.00	4.39	8.89	29.25	4.57	6.41	19.50	4.66	4.18	12.68	4.72	2.69
	30	48.60	3.96	12.28	39.00	4.26	9.15	29.25	4.44	6.59	19.50	4.53	4.31	12.68	4.58	2.77
	35	48.86	3.87	12.62	39.00	4.18	9.33	29.25	4.35	6.72	19.50	4.44	4.39	12.68	4.50	2.82
	40	44.90	3.80	11.83	39.07	4.08	9.56	29.30	4.25	6.89	19.53	4.34	4.50	12.70	4.39	2.89
	45	31.03	3.60	8.61	31.03	3.60	8.61	23.27	3.75	6.21	15.52	3.83	4.05	10.09	3.88	2.60
	48	17.48	3.51	4.98	17.48	3.51	4.98	13.11	3.65	3.59	8.74	3.73	2.35	5.68	3.77	1.51

Abbreviations:

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the cooling mode, the temperature difference between the inlet and leaving water of the unit is 5℃.

35kW Cooling Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
5	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	17.55	4.01	4.38	17.55	4.01	4.38	13.17	4.17	3.16	8.88	4.26	2.08	5.70	4.31	1.32
	10	17.99	3.95	4.55	17.99	3.95	4.55	13.50	4.11	3.29	9.10	4.20	2.17	5.85	4.25	1.38
	15	22.52	3.65	6.17	22.52	3.65	6.17	16.90	3.80	4.45	11.40	3.88	2.94	7.32	3.92	1.86
	20	24.25	3.36	7.22	24.25	3.36	7.22	18.20	3.50	5.21	12.27	3.57	3.44	7.88	3.61	2.18
	25	26.55	3.25	8.17	26.55	3.25	8.17	19.93	3.38	5.89	13.43	3.45	3.89	8.63	3.49	2.47
	30	28.01	3.05	9.18	28.01	3.05	9.18	21.02	3.17	6.62	14.17	3.24	4.37	9.10	3.28	2.78
	35	30.25	2.50	12.10	30.25	2.50	12.10	22.70	2.60	8.73	15.31	2.66	5.76	9.83	2.69	3.66
	40	24.35	2.44	9.98	24.35	2.44	9.98	18.27	2.54	7.20	12.32	2.59	4.75	7.91	2.62	3.02
	45	13.55	2.35	5.77	13.55	2.35	5.77	10.17	2.45	4.16	6.86	2.50	2.75	4.40	2.53	1.74
	48	7.99	2.30	3.47	7.99	2.30	3.47	6.00	2.39	2.51	4.04	2.44	1.65	2.60	2.47	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
7	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	17.39	4.13	4.21	17.39	4.13	4.21	13.05	4.30	3.04	8.80	4.39	2.01	5.65	4.44	1.27
	5	18.25	4.10	4.45	18.25	4.10	4.45	13.70	4.27	3.21	9.23	4.36	2.12	5.93	4.41	1.35
	10	19.52	4.07	4.80	19.52	4.07	4.80	14.65	4.23	3.46	9.88	4.32	2.29	6.34	4.37	1.45
	15	23.52	3.75	6.28	23.52	3.75	6.28	17.65	3.90	4.53	11.90	3.98	2.99	7.64	4.03	1.90
	20	25.10	3.55	7.07	25.10	3.55	7.07	18.84	3.69	5.10	12.70	3.77	3.37	8.16	3.82	2.14
	25	28.05	3.36	8.35	28.05	3.36	8.35	21.05	3.50	6.02	14.19	3.57	3.98	9.12	3.61	2.52
	30	29.01	3.13	9.27	29.01	3.13	9.27	21.77	3.26	6.69	14.68	3.33	4.41	9.43	3.37	2.80
	35	32.00	2.67	11.99	32.00	2.67	11.98	24.02	2.78	8.64	16.19	2.84	5.71	10.40	2.87	3.62
	40	25.33	2.51	10.09	25.33	2.51	10.09	19.01	2.61	7.28	12.82	2.67	4.81	8.23	2.70	3.05
	45	14.60	2.49	5.86	14.60	2.49	5.86	10.95	2.59	4.23	7.39	2.65	2.79	4.74	2.68	1.77
	48	8.53	2.45	3.48	8.53	2.45	3.48	6.40	2.55	2.51	4.32	2.60	1.66	2.77	2.63	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
10	-15	17.95	4.31	4.16	17.95	4.31	4.16	13.47	4.48	3.00	9.08	4.58	1.98	13.47	4.63	2.91
	-10	18.55	4.29	4.32	18.55	4.29	4.32	13.92	4.46	3.12	9.39	4.56	2.06	13.92	4.61	3.02
	-5	18.82	4.28	4.40	18.82	4.28	4.40	14.12	4.45	3.17	9.52	4.55	2.09	14.12	4.60	3.07
	0	19.25	4.25	4.53	19.25	4.25	4.53	14.45	4.42	3.27	9.74	4.52	2.16	14.45	4.57	3.16
	5	19.55	4.22	4.63	19.55	4.22	4.63	14.67	4.39	3.34	9.89	4.48	2.21	14.67	4.54	3.23
	10	20.55	4.15	4.95	20.55	4.15	4.95	15.42	4.32	3.57	10.40	4.41	2.36	15.42	4.46	3.46
	15	24.65	3.85	6.40	24.65	3.85	6.40	18.50	4.01	4.62	12.47	4.09	3.05	18.50	4.14	4.47
	20	27.01	3.74	7.22	27.01	3.74	7.22	20.27	3.89	5.21	13.67	3.97	3.44	20.27	4.02	5.04
	25	29.37	3.52	8.34	29.37	3.52	8.34	22.05	3.66	6.02	14.86	3.74	3.97	22.05	3.79	5.82
	30	32.19	3.21	10.03	32.19	3.21	10.03	24.16	3.34	7.23	16.29	3.41	4.78	24.16	3.45	7.00
	35	33.55	2.75	12.20	33.55	2.75	12.20	25.18	2.86	8.80	16.98	2.92	5.81	25.18	2.96	8.51
	40	25.98	2.61	9.96	25.98	2.61	9.96	19.50	2.72	7.18	13.15	2.77	4.74	19.50	2.81	6.95
	45	15.25	2.58	5.91	15.25	2.58	5.91	11.45	2.68	4.26	7.72	2.74	2.82	11.45	2.77	4.13
	48	9.52	2.52	3.78	9.52	2.52	3.78	7.14	2.62	2.72	4.82	2.68	1.80	7.14	2.71	2.64

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
15	-15	19.52	4.65	4.20	19.52	4.65	4.20	14.65	4.84	3.03	9.88	4.94	2.00	6.34	5.00	1.27
	-10	20.55	4.55	4.52	20.55	4.55	4.52	15.42	4.73	3.26	10.40	4.83	2.15	6.68	4.89	1.37
	-5	21.32	4.62	4.61	21.32	4.62	4.61	16.00	4.81	3.33	10.79	4.91	2.20	6.93	4.97	1.39
	0	22.10	4.60	4.80	22.10	4.60	4.80	16.59	4.79	3.47	11.18	4.89	2.29	7.18	4.95	1.45
	5	21.60	4.56	4.74	21.60	4.56	4.74	16.21	4.74	3.42	10.93	4.84	2.26	7.02	4.90	1.43
	10	22.34	4.48	4.99	22.34	4.48	4.99	16.76	4.66	3.60	11.30	4.76	2.38	7.26	4.82	1.51
	15	26.58	4.12	6.45	26.58	4.12	6.45	19.95	4.29	4.65	13.45	4.38	3.07	8.64	4.43	1.95
	20	30.43	4.05	7.51	30.43	4.05	7.51	22.83	4.21	5.42	15.40	4.30	3.58	9.89	4.35	2.27
	25	32.84	3.83	8.57	32.84	3.83	8.57	24.64	3.99	6.18	16.62	4.07	4.08	10.67	4.12	2.59
	30	35.71	3.36	10.63	35.01	3.36	10.42	26.28	3.50	7.52	17.72	3.57	4.96	11.38	3.61	3.15
	35	36.65	3.18	11.53	35.00	3.56	9.83	26.27	3.70	7.09	17.71	3.78	4.68	11.38	3.83	2.97
	40	31.82	3.25	9.79	31.82	3.25	9.79	23.88	3.38	7.06	16.10	3.45	4.66	10.34	3.49	2.96
	45	22.05	3.05	7.23	22.05	3.05	7.23	16.55	3.17	5.21	11.16	3.24	3.44	7.16	3.28	2.18
	48	11.00	2.95	3.73	11.00	2.95	3.73	8.26	3.07	2.69	5.57	3.13	1.78	3.58	3.17	1.13

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
18	-15	21.56	4.70	4.59	21.56	4.70	4.59	16.18	4.89	3.31	10.91	4.99	2.18	7.01	5.05	1.39
	-10	22.85	4.65	4.91	22.85	4.65	4.91	17.15	4.84	3.54	11.56	4.94	2.34	7.43	5.00	1.49
	-5	23.18	4.76	4.87	23.18	4.76	4.87	17.40	4.95	3.51	11.73	5.06	2.32	7.53	5.12	1.47
	0	23.88	4.81	4.96	23.88	4.81	4.96	17.92	5.00	3.58	12.08	5.11	2.36	7.76	5.17	1.50
	5	24.56	4.86	5.05	24.56	4.86	5.05	18.43	5.06	3.65	12.43	5.16	2.41	7.98	5.23	1.53
	10	26.19	4.88	5.37	26.19	4.88	5.37	19.66	5.08	3.87	13.25	5.18	2.56	8.51	5.25	1.62
	15	29.48	4.65	6.34	29.48	4.65	6.34	22.12	4.84	4.57	14.92	4.94	3.02	9.58	5.00	1.92
	20	32.83	4.31	7.62	32.83	4.31	7.62	24.64	4.48	5.49	16.61	4.58	3.63	10.67	4.63	2.30
	25	36.49	3.91	9.33	35.10	4.28	8.20	26.34	4.45	5.92	17.76	4.55	3.91	11.41	4.60	2.48
	30	38.55	3.46	11.14	35.10	4.25	8.26	26.34	4.42	5.96	17.76	4.52	3.93	11.41	4.57	2.50
	35	41.57	3.25	12.80	35.00	4.12	8.50	26.27	4.32	6.08	17.71	4.41	4.02	11.38	4.46	2.55
	40	37.68	3.21	11.74	35.05	3.85	9.10	26.31	4.01	6.57	17.74	4.09	4.34	11.39	4.14	2.75
	45	25.69	3.12	8.23	25.69	3.12	8.23	19.28	3.25	5.94	13.00	3.31	3.92	8.35	3.35	2.49
	48	13.65	3.09	4.42	13.65	3.09	4.42	10.24	3.22	3.19	6.91	3.28	2.10	4.44	3.32	1.34

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
20	-15	21.65	4.95	4.37	21.65	4.95	4.37	16.25	5.15	3.15	10.95	5.26	2.08	7.04	5.32	1.32
	-10	23.00	4.96	4.64	23.00	4.96	4.64	17.26	5.16	3.34	11.64	5.27	2.21	7.48	5.33	1.40
	-5	23.88	4.88	4.89	23.88	4.88	4.89	17.92	5.08	3.53	12.08	5.18	2.33	7.76	5.25	1.48
	0	24.55	5.02	4.89	24.55	5.02	4.89	18.42	5.22	3.53	12.42	5.33	2.33	7.98	5.40	1.48
	5	25.66	5.10	5.03	25.66	5.10	5.03	19.26	5.31	3.63	12.98	5.42	2.40	8.34	5.48	1.52
	10	27.55	5.03	5.48	27.55	5.03	5.48	20.68	5.23	3.95	13.94	5.34	2.61	8.95	5.41	1.66
	15	30.71	4.85	6.33	30.71	4.85	6.33	23.05	5.05	4.57	15.54	5.15	3.02	9.98	5.22	1.91
	20	36.03	4.65	7.75	35.10	4.75	7.39	26.34	4.94	5.33	17.76	5.05	3.52	11.41	5.11	2.23
	25	38.44	4.02	9.56	35.01	4.35	8.05	26.28	4.53	5.81	17.72	4.62	3.83	11.38	4.68	2.43
	30	39.27	3.53	11.12	35.10	4.35	8.07	26.34	4.53	5.82	17.76	4.62	3.84	11.41	4.68	2.44
	35	42.58	3.35	12.71	35.00	4.24	8.25	26.27	4.41	5.95	17.71	4.50	3.93	11.38	4.56	2.49
	40	38.58	3.30	11.69	35.03	3.95	8.87	26.29	4.11	6.40	17.73	4.20	4.22	11.38	4.25	2.68
	45	26.54	3.25	8.17	26.54	3.25	8.17	19.92	3.38	5.89	13.43	3.45	3.89	8.63	3.49	2.47
	48	14.51	3.20	4.53	14.51	3.20	4.53	10.89	3.33	3.27	7.34	3.40	2.16	4.72	3.44	1.37
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
25	-15	22.55	5.21	4.33	22.55	5.21	4.33	16.92	5.42	3.12	11.41	5.54	2.06	7.33	5.60	22.55
	-10	23.66	5.22	4.53	23.66	5.22	4.53	17.76	5.43	3.27	11.97	5.55	2.16	7.69	5.61	23.66
	-5	24.65	5.21	4.73	24.65	5.21	4.73	18.50	5.42	3.41	12.47	5.54	2.25	8.01	5.60	24.65
	0	25.65	5.19	4.94	25.65	5.19	4.94	19.25	5.40	3.56	12.98	5.51	2.35	8.34	5.58	25.65
	5	26.75	5.15	5.19	26.75	5.15	5.19	20.08	5.36	3.75	13.54	5.47	2.47	8.69	5.54	26.75
	10	28.56	5.13	5.57	28.56	5.13	5.57	21.43	5.34	4.02	14.45	5.45	2.65	9.28	5.52	28.56
	15	32.55	5.10	6.38	32.55	5.10	6.38	24.43	5.31	4.60	16.47	5.42	3.04	10.58	5.48	32.55
	20	39.80	4.95	8.04	35.01	5.01	6.99	26.28	5.21	5.04	17.72	5.32	3.33	11.38	5.39	39.80
	25	42.86	4.43	9.67	35.04	4.53	7.74	26.30	4.71	5.58	17.73	4.81	3.68	11.39	4.87	42.86
	30	43.69	4.13	10.58	35.06	4.45	7.88	26.31	4.63	5.68	17.74	4.73	3.75	11.39	4.79	43.69
	35	43.85	4.03	10.88	35.00	4.35	8.05	26.27	4.53	5.80	17.71	4.62	3.83	11.38	4.68	43.85
	40	40.25	3.95	10.19	35.02	4.25	8.24	26.28	4.42	5.94	17.72	4.52	3.92	11.38	4.57	40.25
	45	27.85	3.75	7.43	27.85	3.75	7.43	20.90	3.90	5.36	14.09	3.98	3.54	9.05	4.03	27.85
	48	15.69	3.65	4.30	15.69	3.65	4.30	11.78	3.80	3.10	7.94	3.88	2.05	5.10	3.92	15.69

Abbreviations:

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the cooling mode, the temperature difference between the inlet and leaving water of the unit is 5℃.

30kW Cooling Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
5	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	17.28	4.16	4.16	17.28	4.16	4.16	13.03	4.29	3.04	8.77	4.39	2.00	5.70	4.31	1.32
	10	17.71	4.09	4.33	17.71	4.09	4.33	13.35	4.23	3.16	8.99	4.33	2.08	5.85	4.25	1.38
	15	22.12	3.78	5.85	22.12	3.78	5.85	16.68	3.91	4.27	11.23	4.00	2.81	7.32	3.92	1.86
	20	23.82	3.48	6.84	23.82	3.48	6.84	17.96	3.60	5.00	12.09	3.68	3.29	7.88	3.61	2.18
	25	26.08	3.37	7.74	26.08	3.37	7.74	19.67	3.48	5.65	13.24	3.56	3.72	8.63	3.49	2.47
	30	27.52	3.16	8.71	27.52	3.16	8.71	20.75	3.26	6.36	13.97	3.34	4.18	9.10	3.28	2.78
	35	29.72	2.59	11.47	29.72	2.59	11.47	22.41	2.68	8.38	15.08	2.74	5.51	9.83	2.69	3.66
	40	23.92	2.53	9.46	23.92	2.53	9.46	18.04	2.61	6.91	12.14	2.67	4.54	7.91	2.62	3.02
	45	13.31	2.44	5.47	13.31	2.44	5.47	10.04	2.51	3.99	6.76	2.57	2.63	4.40	2.53	1.74
	48	7.85	2.38	3.29	7.85	2.38	3.29	5.92	2.46	2.40	3.98	2.52	1.58	2.60	2.47	1.05
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
7	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	17.12	4.28	4.00	17.12	4.28	4.00	12.91	4.42	2.92	8.69	4.52	1.92	5.65	4.44	1.27
	5	17.97	4.25	4.23	17.97	4.25	4.23	13.55	4.39	3.09	9.12	4.49	2.03	5.93	4.41	1.35
	10	19.21	4.22	4.56	19.21	4.22	4.56	14.49	4.35	3.33	9.75	4.45	2.19	6.34	4.37	1.45
	15	23.10	3.88	5.95	23.10	3.88	5.95	17.42	4.01	4.35	11.73	4.10	2.86	7.64	4.03	1.90
	20	24.66	3.68	6.70	24.66	3.68	6.70	18.59	3.80	4.89	12.52	3.89	3.22	8.16	3.82	2.14
	25	27.56	3.48	7.91	27.56	3.48	7.91	20.78	3.60	5.78	13.99	3.68	3.80	9.12	3.61	2.52
	30	28.50	3.24	8.79	28.50	3.24	8.79	21.49	3.35	6.42	14.47	3.43	4.22	9.43	3.37	2.80
	35	31.58	2.77	11.41	30.00	2.80	10.70	22.62	2.89	7.82	15.23	2.96	5.15	10.40	2.87	3.62
	40	24.89	2.60	9.57	24.89	2.60	9.57	18.76	2.69	6.99	12.63	2.75	4.59	8.23	2.70	3.05
	45	14.34	2.65	5.40	14.34	2.65	5.40	10.81	2.74	3.95	7.28	2.80	2.60	4.74	2.68	1.77
	48	8.38	2.60	3.22	8.38	2.60	3.22	6.32	2.69	2.35	4.25	2.75	1.55	2.77	2.63	1.05
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
10	-15	17.67	4.47	3.96	17.67	4.47	3.96	13.32	4.61	2.89	8.97	4.72	1.90	13.32	4.63	2.88
	-10	18.26	4.45	4.11	18.26	4.45	4.11	13.77	4.59	3.00	9.27	4.70	1.97	13.77	4.61	2.98
	-5	18.53	4.44	4.18	18.53	4.44	4.18	13.97	4.58	3.05	9.40	4.69	2.01	13.97	4.60	3.04
	0	18.95	4.40	4.30	18.95	4.40	4.30	14.29	4.55	3.14	9.62	4.65	2.07	14.29	4.57	3.13
	5	19.25	4.37	4.40	19.25	4.37	4.40	14.51	4.52	3.21	9.77	4.62	2.11	14.51	4.54	3.20
	10	20.23	4.30	4.70	20.23	4.30	4.70	15.25	4.44	3.44	10.27	4.55	2.26	15.25	4.46	3.42
	15	24.22	3.99	6.07	24.22	3.99	6.07	18.26	4.12	4.43	12.29	4.22	2.92	18.26	4.14	4.41
	20	26.54	3.88	6.85	26.54	3.88	6.85	20.01	4.00	5.00	13.47	4.10	3.29	20.01	4.02	4.98
	25	28.86	3.65	7.91	28.86	3.65	7.91	21.76	3.77	5.78	14.65	3.86	3.80	21.76	3.79	5.75
	30	31.62	3.33	9.50	30.02	3.45	8.70	22.64	3.56	6.35	15.24	3.65	4.18	22.64	3.45	6.56
	35	32.96	2.85	11.56	30.00	2.95	10.17	22.62	3.05	7.43	15.23	3.12	4.88	22.62	2.96	7.65
	40	25.53	2.71	9.44	25.53	2.71	9.44	19.25	2.79	6.89	12.96	2.86	4.53	19.25	2.81	6.86
	45	14.98	2.85	5.26	14.98	2.85	5.26	11.30	2.94	3.84	7.60	3.01	2.52	11.30	2.77	4.07
	48	9.35	2.80	3.34	9.35	2.80	3.34	7.05	2.89	2.44	4.75	2.96	1.61	7.05	2.71	2.60
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
15	-15	19.22	4.82	3.99	19.22	4.82	3.99	14.49	4.98	2.91	9.75	5.09	1.92	6.34	5.00	1.27
	-10	20.23	4.72	4.29	20.23	4.72	4.29	15.25	4.87	3.13	10.27	4.98	2.06	6.68	4.89	1.37
	-5	20.99	4.79	4.38	20.99	4.79	4.38	15.83	4.94	3.20	10.65	5.06	2.11	6.93	4.97	1.39
	0	21.76	4.77	4.56	21.76	4.77	4.56	16.41	4.92	3.33	11.04	5.04	2.19	7.18	4.95	1.45
	5	21.27	4.73	4.50	21.27	4.73	4.50	16.04	4.88	3.29	10.80	4.99	2.16	7.02	4.90	1.43
	10	21.99	4.64	4.74	21.99	4.64	4.74	16.58	4.79	3.46	11.16	4.91	2.28	7.26	4.82	1.51
	15	26.11	4.27	6.12	26.11	4.27	6.12	19.69	4.41	4.47	13.26	4.51	2.94	8.64	4.43	1.95
	20	29.89	4.20	7.12	29.89	4.20	7.12	22.54	4.33	5.20	15.17	4.44	3.42	9.89	4.35	2.27
	25	32.26	3.97	8.13	30.03	4.15	7.24	22.64	4.28	5.28	15.24	4.39	3.48	10.67	4.12	2.59
	30	35.08	3.48	10.07	30.01	4.01	7.48	22.63	4.14	5.47	15.23	4.24	3.59	11.38	3.61	3.15
	35	36.00	3.20	11.25	30.00	3.85	7.79	22.62	3.98	5.69	15.23	4.07	3.74	11.38	3.83	2.97
	40	31.26	3.21	9.73	30.03	3.21	9.36	22.64	3.31	6.83	15.24	3.39	4.49	10.34	3.49	2.96
	45	21.66	3.29	6.59	21.66	3.29	6.59	16.33	3.40	4.81	10.99	3.48	3.16	7.16	3.28	2.18
	48	10.81	3.28	3.30	10.81	3.28	3.30	8.15	3.38	2.41	5.49	3.46	1.59	3.58	3.17	1.13
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
18	-15	21.23	4.87	4.36	21.23	4.87	4.36	16.00	5.03	3.18	10.77	5.15	2.09	7.01	5.05	1.39
	-10	22.50	4.82	4.67	22.50	4.82	4.67	16.96	4.98	3.41	11.42	5.09	2.24	7.43	5.00	1.49
	-5	22.82	4.93	4.63	22.82	4.93	4.63	17.21	5.09	3.38	11.58	5.21	2.22	7.53	5.12	1.47
	0	23.51	4.99	4.72	23.51	4.99	4.72	17.73	5.15	3.44	11.93	5.27	2.27	7.76	5.17	1.50
	5	24.18	5.04	4.80	24.18	5.04	4.80	18.23	5.20	3.51	12.27	5.32	2.31	7.98	5.23	1.53
	10	25.78	5.06	5.10	25.78	5.06	5.10	19.44	5.22	3.72	13.09	5.34	2.45	8.51	5.25	1.62
	15	28.96	4.82	6.01	28.96	4.82	6.01	21.84	4.98	4.39	14.70	5.09	2.89	9.58	5.00	1.92
	20	32.25	4.47	7.22	30.03	4.65	6.46	22.64	4.80	4.72	15.24	4.91	3.10	10.67	4.63	2.30
	25	35.85	4.05	8.85	30.01	4.52	6.64	22.63	4.67	4.85	15.23	4.78	3.19	11.41	4.60	2.48
	30	37.87	3.59	10.56	30.01	4.49	6.68	22.63	4.64	4.88	15.23	4.75	3.21	11.41	4.57	2.50
	35	40.84	3.37	12.13	30.00	4.41	6.80	22.62	4.55	4.97	15.23	4.66	3.27	11.38	4.46	2.55
	40	37.01	3.35	11.05	30.02	4.25	7.06	22.64	4.39	5.16	15.24	4.49	3.39	11.39	4.14	2.75
	45	25.24	3.44	7.33	25.24	3.44	7.33	19.03	3.55	5.36	12.81	3.64	3.52	8.35	3.35	2.49
	48	13.41	3.42	3.92	13.41	3.42	3.92	10.11	3.53	2.86	6.81	3.61	1.88	4.44	3.32	1.34

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
20	-15	21.31	5.13	4.15	21.31	5.13	4.15	16.07	5.30	3.03	10.82	5.42	2.00	7.04	5.32	1.32
	-10	22.64	5.14	4.40	22.64	5.14	4.40	17.07	5.31	3.22	11.49	5.43	2.12	7.48	5.33	1.40
	-5	23.51	5.06	4.65	23.51	5.06	4.65	17.73	5.22	3.39	11.93	5.34	2.23	7.76	5.25	1.48
	0	24.17	5.20	4.65	24.17	5.20	4.65	18.22	5.37	3.39	12.27	5.50	2.23	7.98	5.40	1.48
	5	25.26	5.29	4.78	25.26	5.29	4.78	19.05	5.46	3.49	12.82	5.59	2.30	8.34	5.48	1.52
	10	27.12	5.21	5.20	27.12	5.21	5.20	20.45	5.38	3.80	13.77	5.51	2.50	8.95	5.41	1.66
	15	30.17	5.03	6.00	30.17	5.03	6.00	22.75	5.19	4.38	15.31	5.31	2.88	9.98	5.22	1.91
	20	35.40	4.82	7.34	30.02	4.86	6.18	22.64	5.02	4.51	15.24	5.14	2.97	11.41	5.11	2.23
	25	37.77	4.17	9.06	30.04	4.62	6.50	22.65	4.77	4.75	15.25	4.88	3.12	11.38	4.68	2.43
	30	38.58	3.66	10.55	30.04	4.57	6.57	22.65	4.72	4.80	15.25	4.83	3.16	11.41	4.68	2.44
	35	40.95	3.47	11.79	30.00	4.49	6.68	22.62	4.64	4.88	15.23	4.75	3.21	11.38	4.56	2.49
	40	38.54	3.68	10.48	30.02	4.30	6.98	22.64	4.44	5.10	15.24	4.54	3.35	11.38	4.25	2.68
	45	26.07	3.65	7.15	26.07	3.65	7.15	19.66	3.77	5.22	13.23	3.86	3.43	8.63	3.49	2.47
	48	14.25	3.54	4.02	14.25	3.54	4.02	10.75	3.66	2.94	7.24	3.75	1.93	4.72	3.44	1.37
LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
25	-15	22.20	5.40	4.11	22.20	5.40	4.11	16.74	5.58	3.00	11.27	5.71	1.97	7.33	5.60	1.31
	-10	23.29	5.41	4.31	23.29	5.41	4.31	17.56	5.59	3.14	11.82	5.72	2.07	7.69	5.61	1.37
	-5	24.27	5.40	4.49	24.27	5.40	4.49	18.30	5.58	3.28	12.32	5.71	2.16	8.01	5.60	1.43
	0	25.25	5.38	4.69	25.25	5.38	4.69	19.04	5.55	3.43	12.82	5.68	2.25	8.34	5.58	1.49
	5	26.34	5.34	4.93	26.34	5.34	4.93	19.86	5.51	3.60	13.37	5.64	2.37	8.69	5.54	1.57
	10	28.12	5.32	5.29	28.12	5.32	5.29	21.20	5.49	3.86	14.27	5.62	2.54	9.28	5.52	1.68
	15	31.98	5.29	6.05	30.00	5.25	5.71	22.62	5.42	4.17	15.23	5.55	2.74	10.58	5.48	1.93
	20	39.10	5.13	7.62	30.02	4.95	6.06	22.64	5.11	4.43	15.24	5.23	2.91	11.38	5.39	2.11
	25	42.11	4.59	9.17	30.03	4.75	6.32	22.64	4.90	4.62	15.24	5.02	3.04	11.39	4.87	2.34
	30	42.92	4.28	10.03	30.02	4.66	6.44	22.64	4.81	4.70	15.24	4.92	3.09	11.39	4.79	2.38
	35	41.52	4.18	9.94	30.00	4.56	6.58	22.62	4.71	4.80	15.23	4.82	3.16	11.38	4.68	2.43
	40	40.25	4.27	9.43	30.01	4.45	6.74	22.63	4.59	4.92	15.23	4.70	3.24	11.38	4.57	2.49
	45	27.36	3.89	7.04	27.36	3.89	7.04	20.63	4.01	5.14	13.89	4.11	3.38	9.05	4.03	2.24
	48	15.41	3.78	4.07	15.41	3.78	4.07	11.62	3.91	2.98	7.82	4.00	1.96	5.10	3.92	1.30

Abbreviations:

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the cooling mode, the temperature difference between the inlet and leaving water of the unit is 5℃.

26kW Cooling Capacity

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
5	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	16.16	4.52	3.58	16.16	4.52	3.58	12.15	4.72	2.57	8.34	4.80	1.74	5.70	4.31	1.32
	10	16.57	4.45	3.72	16.57	4.45	3.72	12.46	4.65	2.68	8.55	4.72	1.81	5.85	4.25	1.38
	15	20.74	4.11	5.04	20.74	4.11	5.04	15.60	4.30	3.63	10.70	4.36	2.45	7.32	3.92	1.86
	20	22.33	3.79	5.90	22.33	3.79	5.90	16.80	3.96	4.24	11.52	4.02	2.87	7.88	3.61	2.18
	25	24.45	3.66	6.68	24.45	3.66	6.68	18.39	3.83	4.80	12.62	3.89	3.25	8.63	3.49	2.47
	30	25.01	3.44	7.28	25.01	3.44	7.28	18.81	3.59	5.24	12.91	3.65	3.54	9.10	3.28	2.78
	35	25.57	2.82	9.08	25.57	2.82	9.08	19.23	2.94	6.53	13.19	2.99	4.41	9.83	2.69	3.66
	40	22.43	2.75	8.16	22.43	2.75	8.16	16.86	2.87	5.87	11.57	2.92	3.97	7.91	2.62	3.02
	45	12.48	2.65	4.71	12.48	2.65	4.71	9.38	2.77	3.39	6.44	2.81	2.29	4.40	2.53	1.74
	48	7.36	2.59	2.84	7.36	2.59	2.84	5.53	2.71	2.04	3.80	2.75	1.38	2.60	2.47	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
7	-15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	16.01	4.65	3.44	16.01	4.65	3.44	12.04	4.86	2.48	8.26	4.94	1.67	5.65	4.44	1.27
	5	16.81	4.62	3.64	16.81	4.62	3.64	12.64	4.83	2.62	8.67	4.90	1.77	5.93	4.41	1.35
	10	17.98	4.58	3.92	17.98	4.58	3.92	13.52	4.79	2.82	9.28	4.86	1.91	6.34	4.37	1.45
	15	21.66	4.22	5.13	21.66	4.22	5.13	16.29	4.41	3.69	11.18	4.48	2.50	7.64	4.03	1.90
	20	23.12	4.00	5.78	23.12	4.00	5.78	17.38	4.18	4.16	11.93	4.25	2.81	8.16	3.82	2.14
	25	25.83	3.79	6.83	25.83	3.79	6.83	19.43	3.96	4.91	13.33	4.02	3.32	9.12	3.61	2.52
	30	26.72	3.53	7.58	26.01	3.62	7.19	19.56	3.79	5.17	13.42	3.84	3.49	9.43	3.37	2.80
	35	27.01	3.01	8.98	26.00	3.10	8.40	19.55	3.24	6.03	13.42	3.29	4.08	10.40	2.87	3.62
	40	23.33	2.83	8.25	23.33	2.83	8.25	17.54	2.96	5.93	12.04	3.00	4.01	8.23	2.70	3.05
	45	13.44	2.88	4.66	13.44	2.88	4.66	10.11	3.02	3.35	6.94	3.06	2.27	4.74	2.68	1.77
	48	7.86	2.83	2.78	7.86	2.83	2.78	5.91	2.96	2.00	4.05	3.00	1.35	2.77	2.63	1.05

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
10	-15	16.53	4.86	3.40	16.53	4.86	3.40	12.43	5.08	2.45	8.53	5.15	1.66	12.43	4.63	2.68
	-10	17.08	4.83	3.54	17.08	4.83	3.54	12.85	5.05	2.54	8.82	5.13	1.72	12.85	4.61	2.79
	-5	17.33	4.82	3.60	17.33	4.82	3.60	13.03	5.04	2.59	8.94	5.12	1.75	13.03	4.60	2.83
	0	17.73	4.79	3.70	17.73	4.79	3.70	13.33	5.01	2.66	9.15	5.08	1.80	13.33	4.57	2.92
	5	18.01	4.75	3.79	18.01	4.75	3.79	13.54	4.97	2.72	9.29	5.05	1.84	13.54	4.54	2.98
	10	18.93	4.67	4.05	18.93	4.67	4.05	14.23	4.89	2.91	9.77	4.96	1.97	14.23	4.46	3.19
	15	22.70	4.34	5.23	22.70	4.34	5.23	17.07	4.53	3.76	11.71	4.60	2.54	17.07	4.14	4.12
	20	24.88	4.21	5.91	24.88	4.21	5.91	18.71	4.41	4.25	12.84	4.47	2.87	18.71	4.02	4.65
	25	27.05	3.97	6.82	26.01	4.10	6.34	19.56	4.29	4.56	13.42	4.35	3.08	19.56	3.79	5.17
	30	27.85	3.62	7.70	26.02	3.72	6.99	19.57	3.89	5.03	13.43	3.95	3.40	19.57	3.45	5.67
	35	27.99	3.21	8.72	26.00	3.25	8.00	19.55	3.40	5.75	13.42	3.45	3.89	19.55	2.96	6.61
	40	23.93	2.94	8.14	23.93	2.94	8.14	18.00	3.07	5.85	12.35	3.12	3.96	18.00	2.81	6.41
	45	14.05	3.10	4.53	14.05	3.10	4.53	10.56	3.24	3.26	7.25	3.29	2.20	10.56	2.77	3.81
	48	8.77	3.04	2.88	8.77	3.04	2.88	6.59	3.18	2.07	4.52	3.23	1.40	6.59	2.71	2.43

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
15	-15	17.98	5.24	3.43	17.98	5.24	3.43	13.52	5.48	2.47	9.28	5.56	1.67	6.34	5.00	1.27
	-10	18.93	5.13	3.69	18.93	5.13	3.69	14.23	5.36	2.66	9.77	5.44	1.79	6.68	4.89	1.37
	-5	19.64	5.20	3.77	19.64	5.20	3.77	14.77	5.44	2.71	10.13	5.52	1.83	6.93	4.97	1.39
	0	20.35	5.18	3.93	20.35	5.18	3.93	15.31	5.42	2.82	10.50	5.50	1.91	7.18	4.95	1.45
	5	20.38	5.14	3.97	20.38	5.14	3.97	14.96	5.37	2.79	10.27	5.45	1.88	7.02	4.90	1.43
	10	21.59	5.05	4.28	21.59	5.05	4.28	15.47	5.28	2.93	10.62	5.36	1.98	7.26	4.82	1.51
	15	24.48	4.64	5.27	24.48	4.64	5.27	18.41	4.85	3.79	12.63	4.93	2.56	8.64	4.43	1.95
	20	28.02	4.56	6.14	26.01	4.61	5.64	19.56	4.82	4.06	13.42	4.89	2.74	9.89	4.35	2.27
	25	30.24	4.31	7.01	26.03	4.42	5.89	19.57	4.62	4.24	13.43	4.69	2.86	10.67	4.12	2.59
	30	32.89	3.79	8.69	26.03	4.35	5.98	19.57	4.55	4.30	13.43	4.62	2.91	11.38	3.61	3.15
	35	33.75	3.37	10.02	26.00	4.21	6.18	19.55	4.40	4.44	13.42	4.47	3.00	11.38	3.83	2.97
	40	29.30	3.49	8.40	26.02	3.99	6.52	19.57	4.17	4.69	13.43	4.24	3.17	10.34	3.49	2.96
	45	20.30	3.57	5.68	20.30	3.57	5.68	15.27	3.74	4.09	10.48	3.79	2.76	7.16	3.28	2.18
	48	10.13	3.40	2.98	10.13	3.40	2.98	7.62	3.56	2.14	5.23	3.61	1.45	3.58	3.17	1.13

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
18	-15	18.65	5.29	3.52	18.65	5.29	3.52	14.02	5.54	2.53	9.62	5.62	1.71	7.01	5.05	1.39
	-10	19.95	5.24	3.81	19.95	5.24	3.81	15.00	5.48	2.74	10.29	5.56	1.85	7.43	5.00	1.49
	-5	21.35	5.36	3.98	21.35	5.36	3.98	16.05	5.61	2.86	11.02	5.69	1.94	7.53	5.12	1.47
	0	21.99	5.42	4.06	21.99	5.42	4.06	16.54	5.67	2.92	11.35	5.75	1.97	7.76	5.17	1.50
	5	22.62	5.47	4.13	22.62	5.47	4.13	17.01	5.72	2.97	11.67	5.81	2.01	7.98	5.23	1.53
	10	24.12	5.50	4.39	24.12	5.50	4.39	18.14	5.75	3.16	12.45	5.84	2.13	8.51	5.25	1.62
	15	27.15	5.24	5.18	26.01	5.32	4.89	19.56	5.56	3.52	13.42	5.65	2.38	9.58	5.00	1.92
	20	30.24	4.86	6.23	26.04	4.99	5.22	19.58	5.22	3.75	13.44	5.30	2.54	10.67	4.63	2.30
	25	33.61	4.40	7.63	26.01	4.85	5.36	19.56	5.07	3.86	13.42	5.15	2.61	11.41	4.60	2.48
	30	35.50	3.90	9.10	26.05	4.52	5.76	19.59	4.73	4.14	13.44	4.80	2.80	11.41	4.57	2.50
	35	38.29	3.66	10.46	26.00	4.64	5.60	19.55	4.85	4.03	13.42	4.93	2.72	11.38	4.46	2.55
	40	34.70	3.62	9.60	26.03	4.25	6.12	19.57	4.44	4.40	13.43	4.51	2.98	11.39	4.14	2.75
	45	26.85	3.74	7.18	26.02	4.32	6.02	19.57	4.52	4.33	13.43	4.59	2.93	8.35	3.35	2.49
	48	14.21	3.72	3.82	14.21	3.72	3.82	10.69	3.89	2.75	7.33	3.95	1.86	4.44	3.32	1.34

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
20	-15	19.94	5.58	3.58	19.94	5.58	3.58	14.99	5.83	2.57	10.29	5.92	1.74	7.04	5.32	1.32
	-10	21.18	5.59	3.79	21.18	5.59	3.79	15.93	5.84	2.73	10.93	5.93	1.84	7.48	5.33	1.40
	-5	21.99	5.50	4.00	21.99	5.50	4.00	16.54	5.75	2.88	11.35	5.84	1.94	7.76	5.25	1.48
	0	22.61	5.66	4.00	22.61	5.66	4.00	17.00	5.91	2.88	11.67	6.00	1.94	7.98	5.40	1.48
	5	23.63	5.75	4.11	23.63	5.75	4.11	17.77	6.01	2.96	12.19	6.10	2.00	8.34	5.48	1.52
	10	25.37	5.67	4.48	25.37	5.67	4.48	19.08	5.92	3.22	13.09	6.01	2.18	8.95	5.41	1.66
	15	28.28	5.46	5.18	26.03	5.54	4.70	19.57	5.79	3.38	13.43	5.88	2.28	9.98	5.22	1.91
	20	33.18	5.24	6.33	26.01	5.46	4.76	19.56	5.71	3.43	13.42	5.80	2.32	11.41	5.11	2.23
	25	35.41	4.53	7.82	26.02	5.35	4.86	19.57	5.59	3.50	13.43	5.68	2.36	11.38	4.68	2.43
	30	37.55	3.98	9.44	26.01	5.02	5.18	19.56	5.25	3.73	13.42	5.33	2.52	11.41	4.68	2.44
	35	39.00	3.77	10.33	26.00	4.95	5.25	19.55	5.18	3.78	13.42	5.25	2.55	11.38	4.56	2.49
	40	36.52	4.00	9.13	26.01	4.62	5.63	19.56	4.83	4.05	13.42	4.90	2.74	11.38	4.25	2.68
	45	27.55	3.97	6.95	26.03	4.53	5.75	19.57	4.74	4.13	13.43	4.81	2.79	8.63	3.49	2.47
	48	14.65	3.85	3.80	14.65	3.85	3.80	11.02	4.03	2.73	7.56	4.09	1.85	4.72	3.44	1.37

LWT	DB	Maximum			100% (normal)			75%			50%			Minimum		
		CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI	CC	EER	PI
25	-15	20.77	5.87	3.54	20.77	5.87	3.54	15.62	6.14	2.55	10.72	6.23	1.72	7.33	5.60	1.31
	-10	21.79	5.88	3.71	21.79	5.88	3.71	16.39	6.15	2.67	11.24	6.24	1.80	7.69	5.61	1.37
	-5	22.70	5.87	3.87	22.70	5.87	3.87	17.07	6.14	2.78	11.71	6.23	1.88	8.01	5.60	1.43
	0	23.62	5.85	4.04	23.62	5.85	4.04	17.76	6.11	2.91	12.19	6.21	1.96	8.34	5.58	1.49
	5	24.64	5.80	4.25	24.64	5.80	4.25	18.53	6.07	3.05	12.71	6.16	2.06	8.69	5.54	1.57
	10	26.30	5.78	4.55	26.01	5.85	4.45	19.56	6.12	3.20	13.42	6.21	2.16	9.28	5.52	1.68
	15	29.98	5.75	5.22	26.03	5.80	4.49	19.57	6.06	3.23	13.43	6.16	2.18	10.58	5.48	1.93
	20	36.66	5.58	6.57	26.03	5.75	4.53	19.57	6.01	3.26	13.43	6.10	2.20	11.38	5.39	2.11
	25	38.56	4.99	7.73	26.01	5.41	4.81	19.56	5.66	3.46	13.42	5.74	2.34	11.39	4.87	2.34
	30	39.75	4.65	8.54	26.01	5.38	4.83	19.56	5.63	3.48	13.42	5.71	2.35	11.39	4.79	2.38
	35	40.25	4.54	8.87	26.00	5.12	5.08	19.55	5.35	3.65	13.42	5.43	2.47	11.38	4.68	2.43
	40	38.51	4.64	8.30	26.02	4.85	5.36	19.57	5.07	3.86	13.43	5.15	2.61	11.38	4.57	2.49
	45	28.95	4.22	6.85	26.01	4.65	5.59	19.56	4.86	4.02	13.42	4.94	2.72	9.05	4.03	2.24
	48	16.52	4.11	4.02	16.52	4.11	4.02	12.42	4.30	2.89	8.52	4.36	1.95	5.10	3.92	1.30

Abbreviations:

CC: Total cooling capacity (kW)

PI: Power input (kW)

LWT: Leaving water temperature (°C)

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

Note:

In the cooling mode, the temperature difference between the inlet and leaving water of the unit is 5℃.

7 Noise Levels

Overall

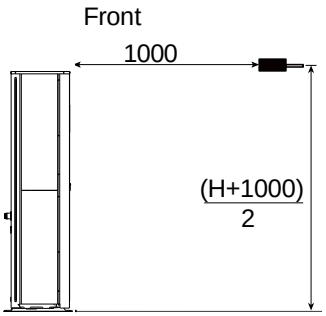
Sound pressure levels[1]

Model name	dB(A) [2]
40kW-3ph	77.5
35kW-3ph	75.5
30kW-3ph	74.8
26kW-3ph	74.5

Notes:

1. Sound pressure level is measured at a position 1m in front of the unit and (1+H)/2m (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.

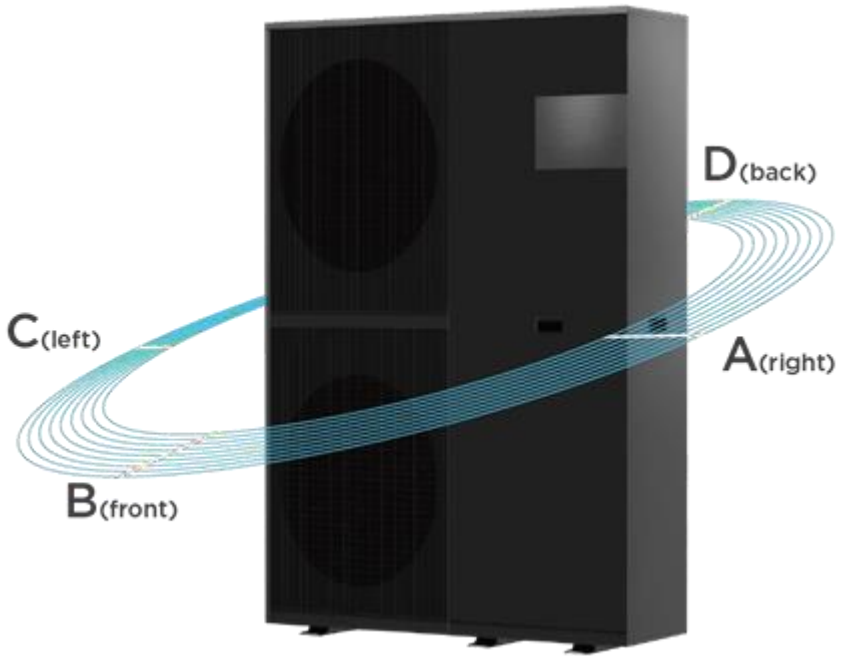
Sound pressure level measurement (unit: mm)



2. dB(A) is the maximum value tested under the conditions below:
Outdoor air temperature 7°C DB, 85% R.H.; EWT 47°C, LWT 55°C. Free compressor frequency.

Octave Band Levels

We measure unit noise levels from 4 sides as below, with a rated frequency at the distance of 1m.

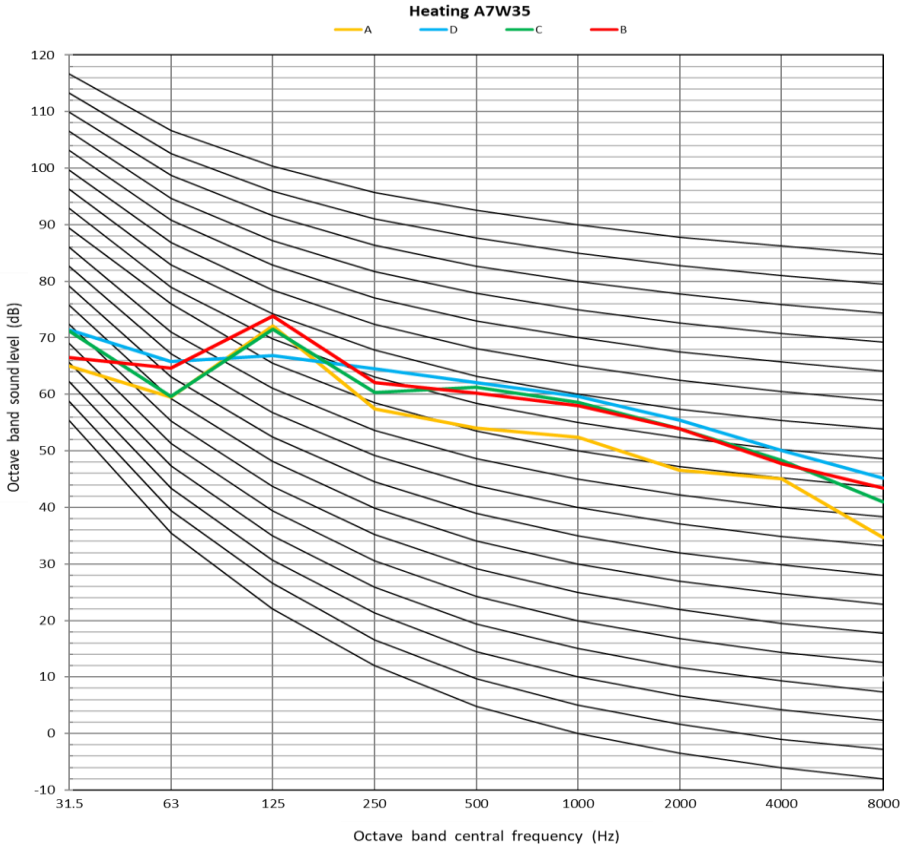


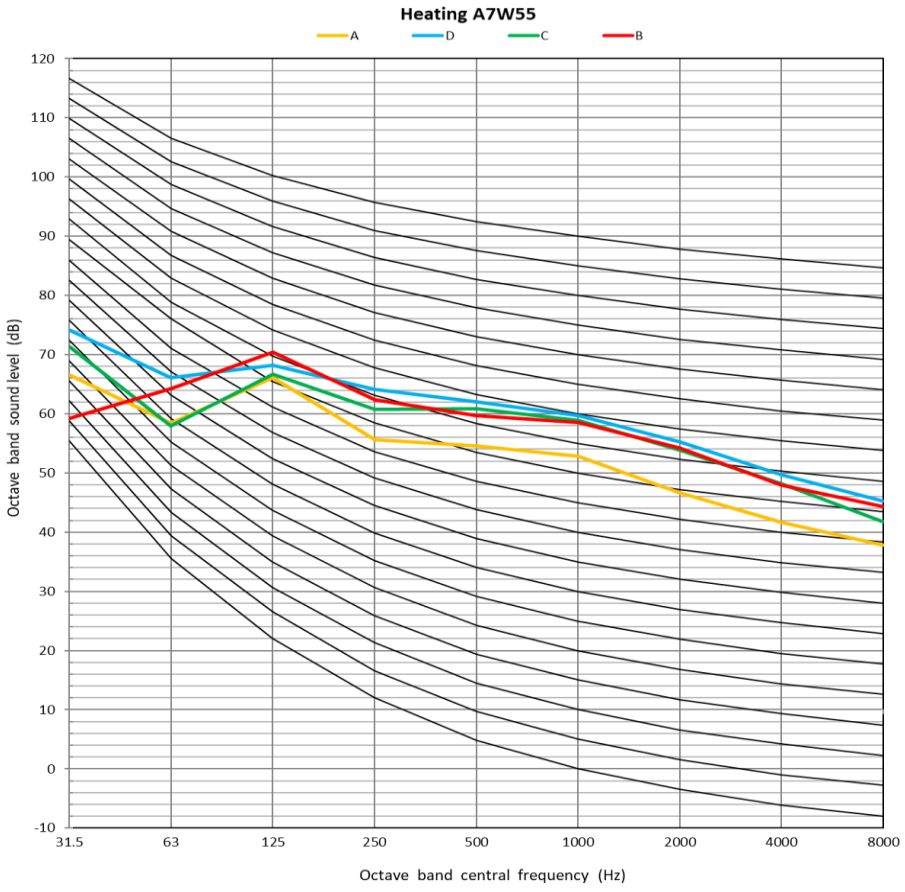
Test conditions as follows:

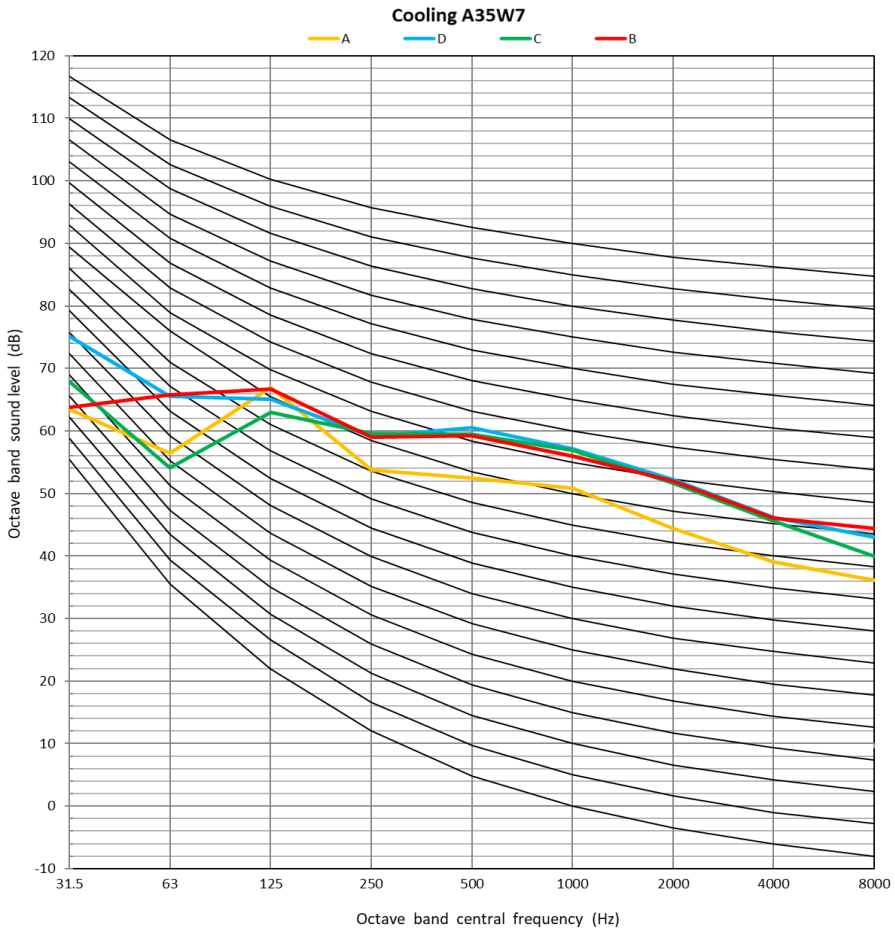
Heating A7W35: Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C

Heating A7W55: Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C

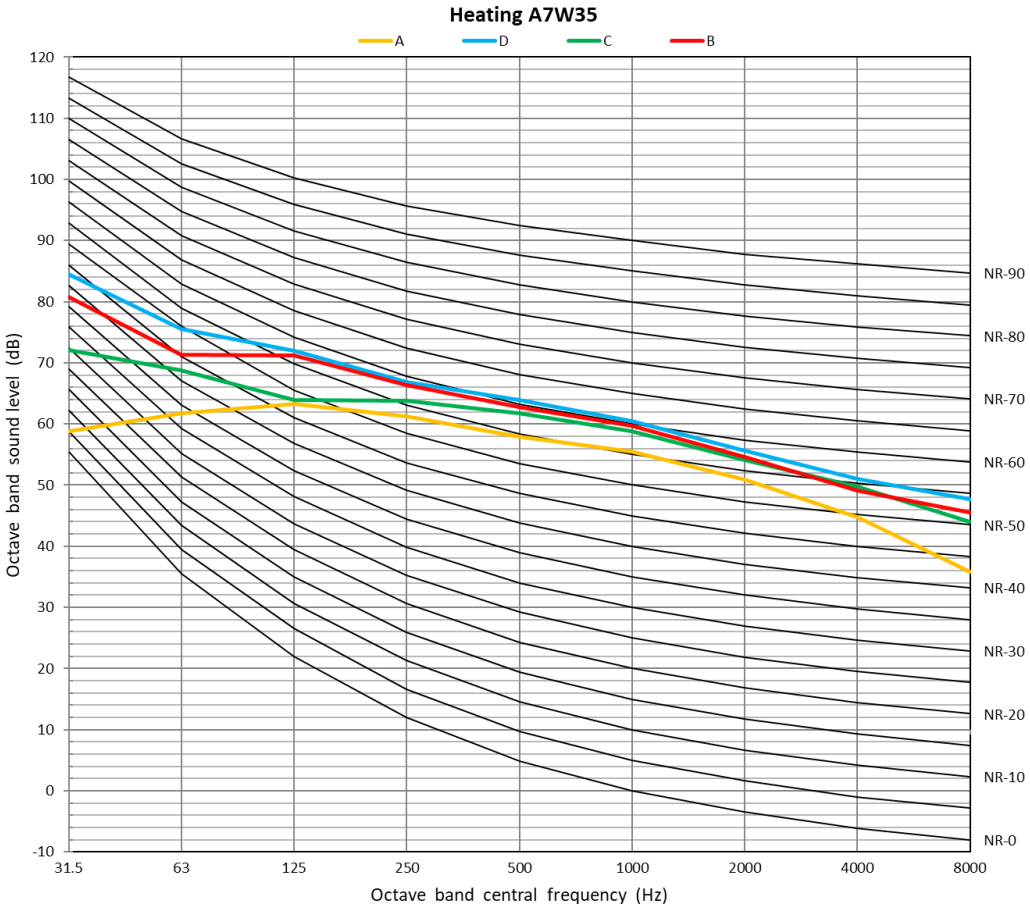
Cooling A35W18: Condenser air in 35°C. Evaporator water in/out 23/18°C

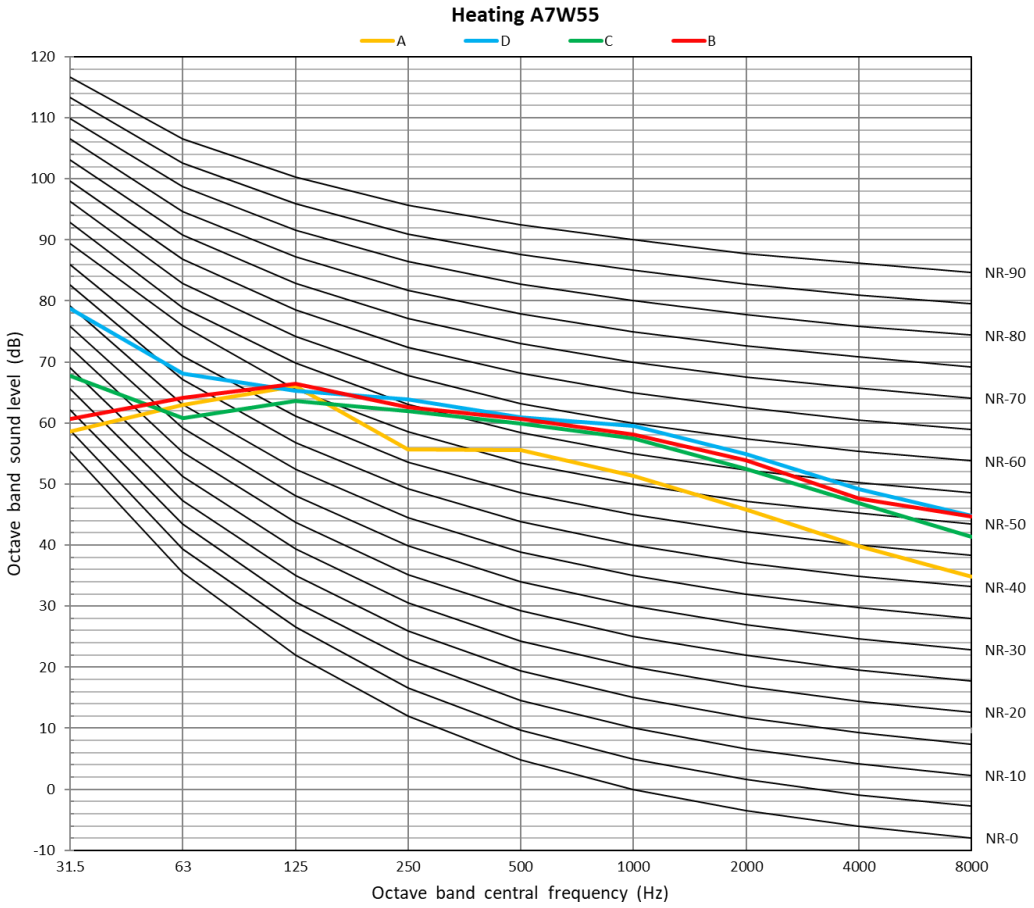

Heating A7W35
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

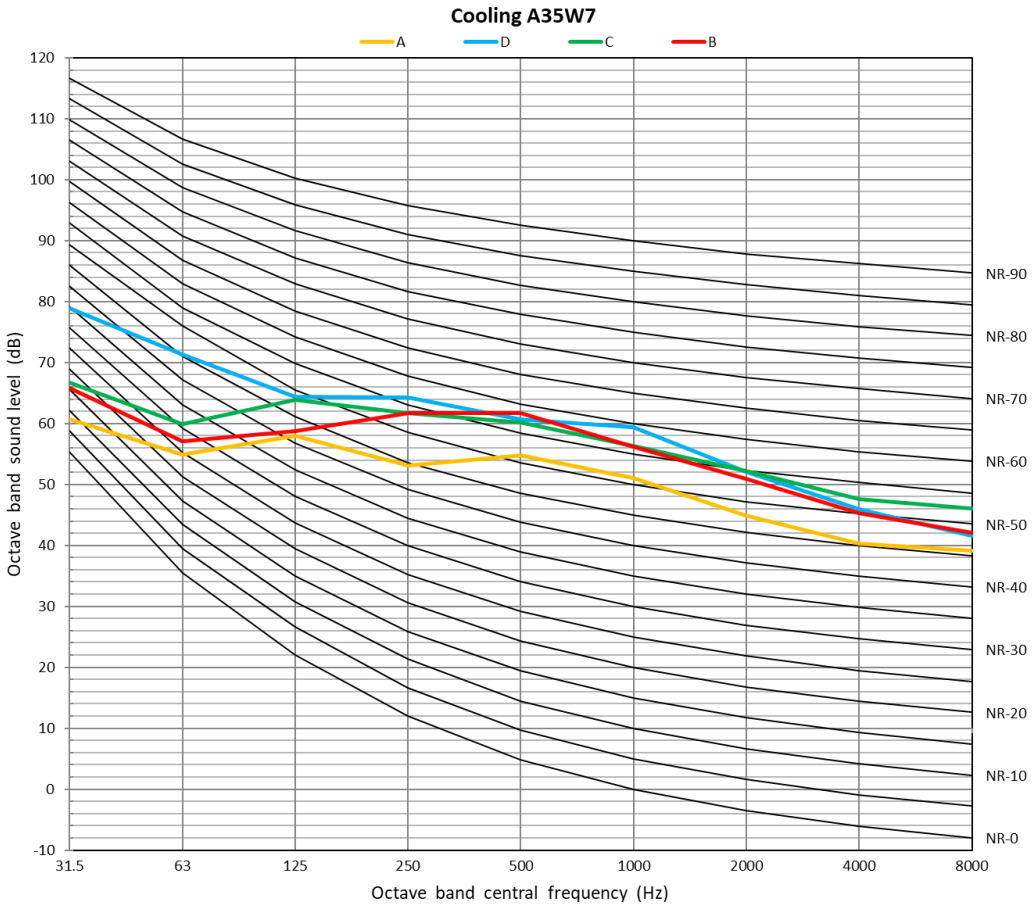

Heating A7W55
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)


Cooling A35W7
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

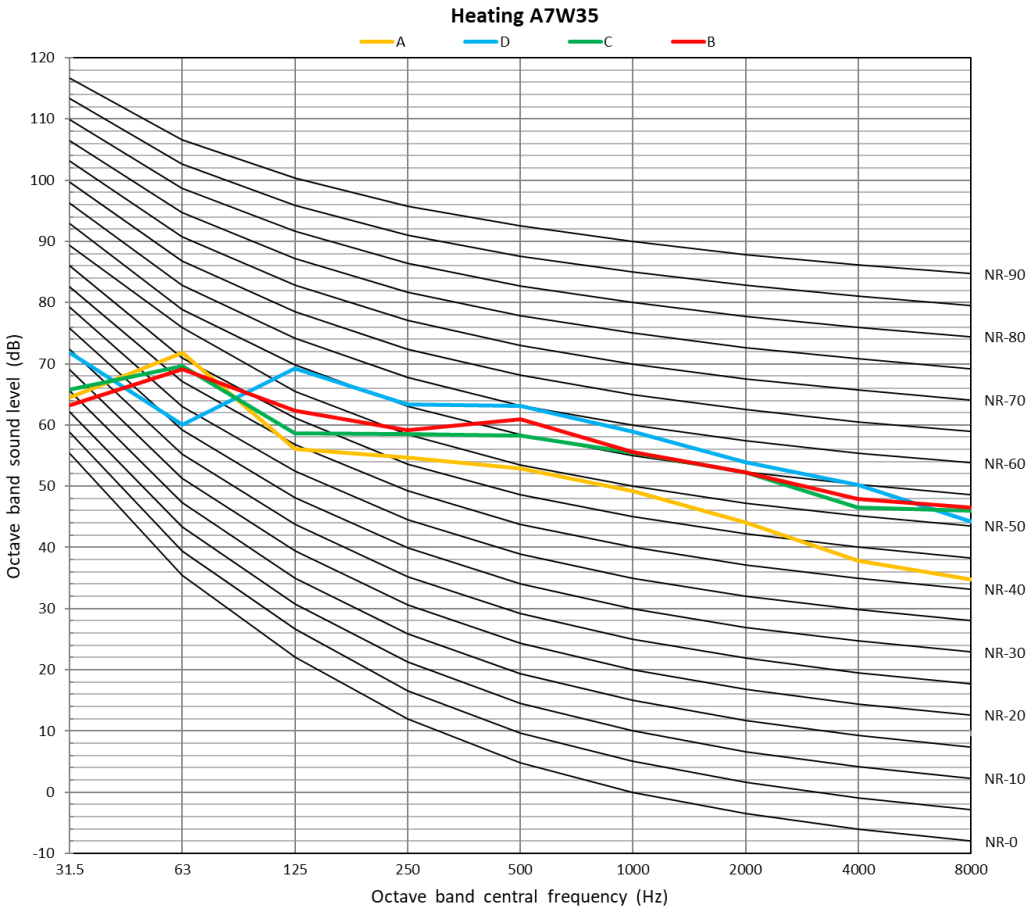
7.2.2 35kW

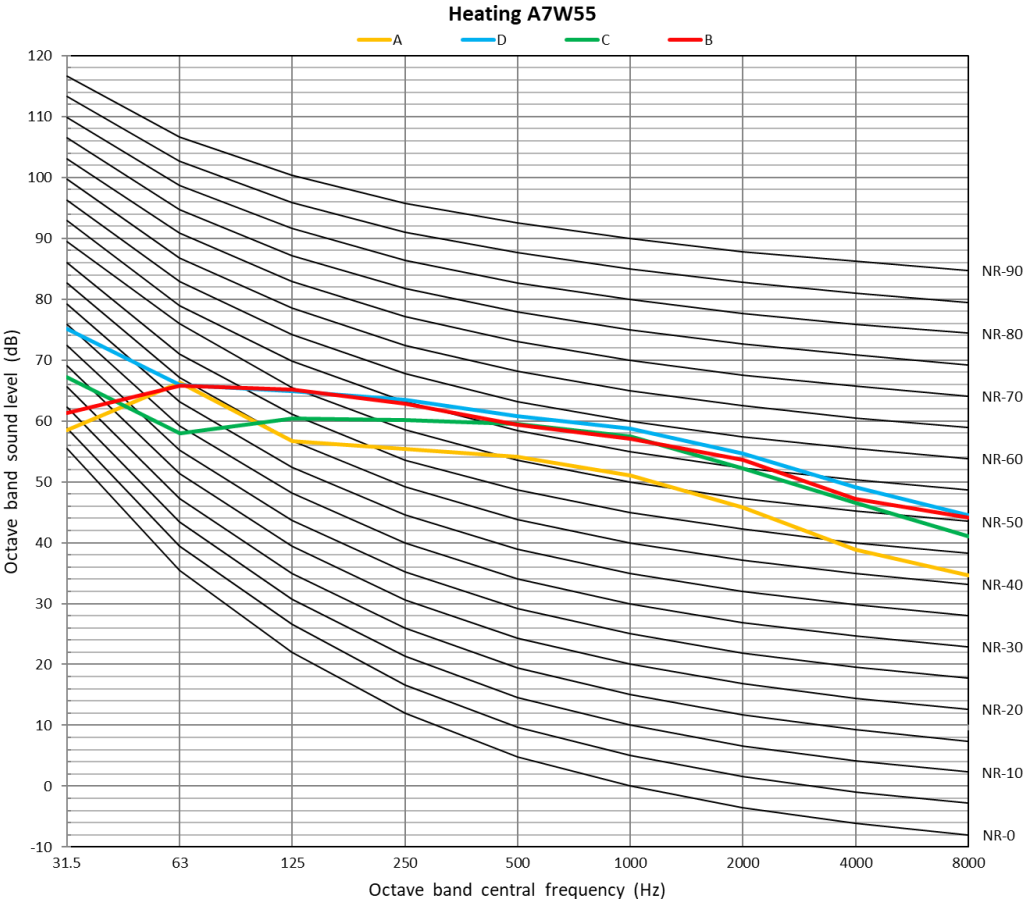

Heating A7W35
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

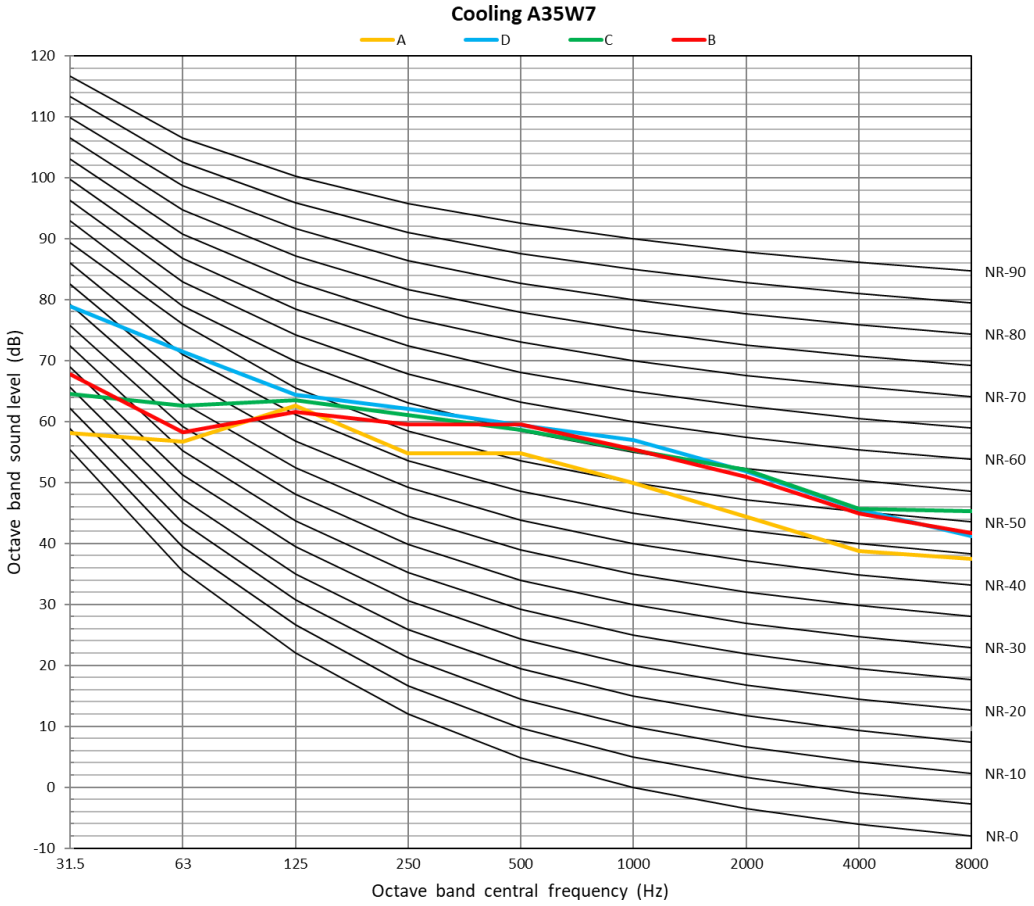

Heating A7W55
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)


Cooling A35W7
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

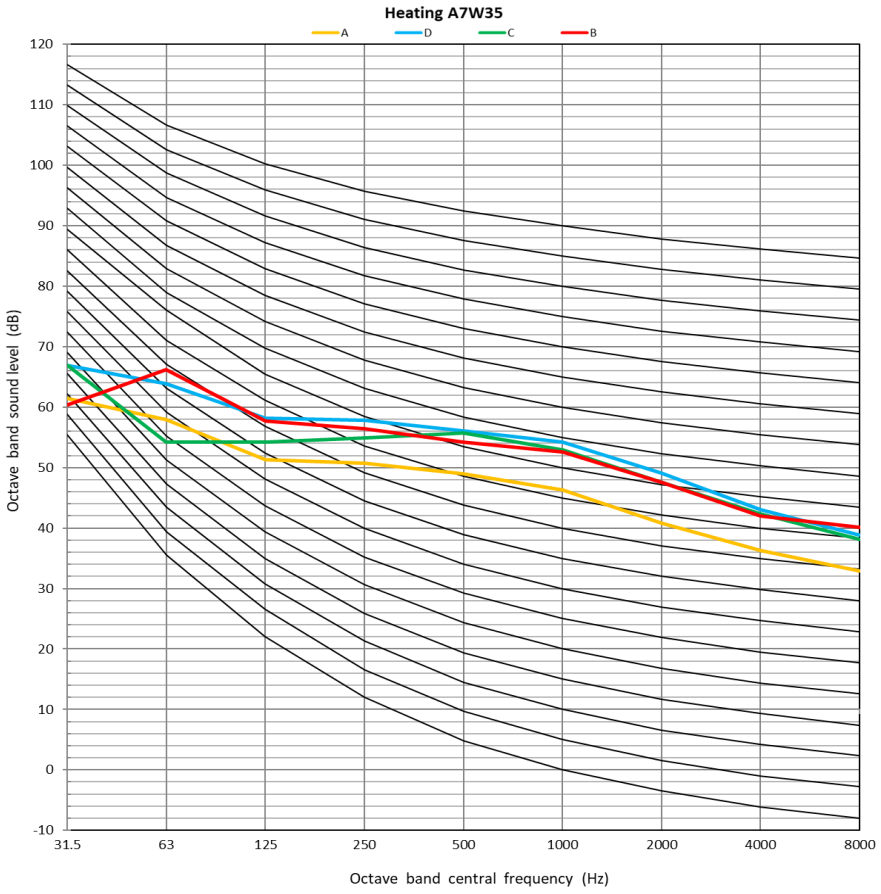
7.2.3 30kW

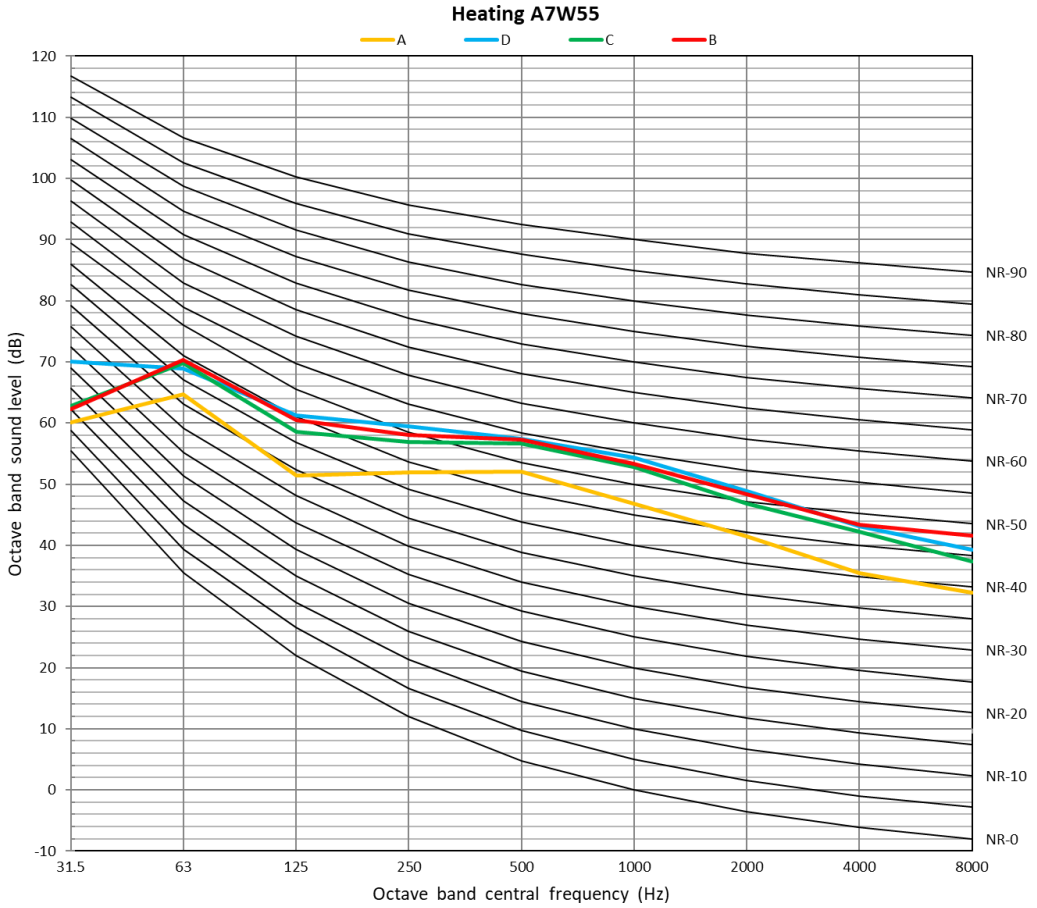

Heating A7W35
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

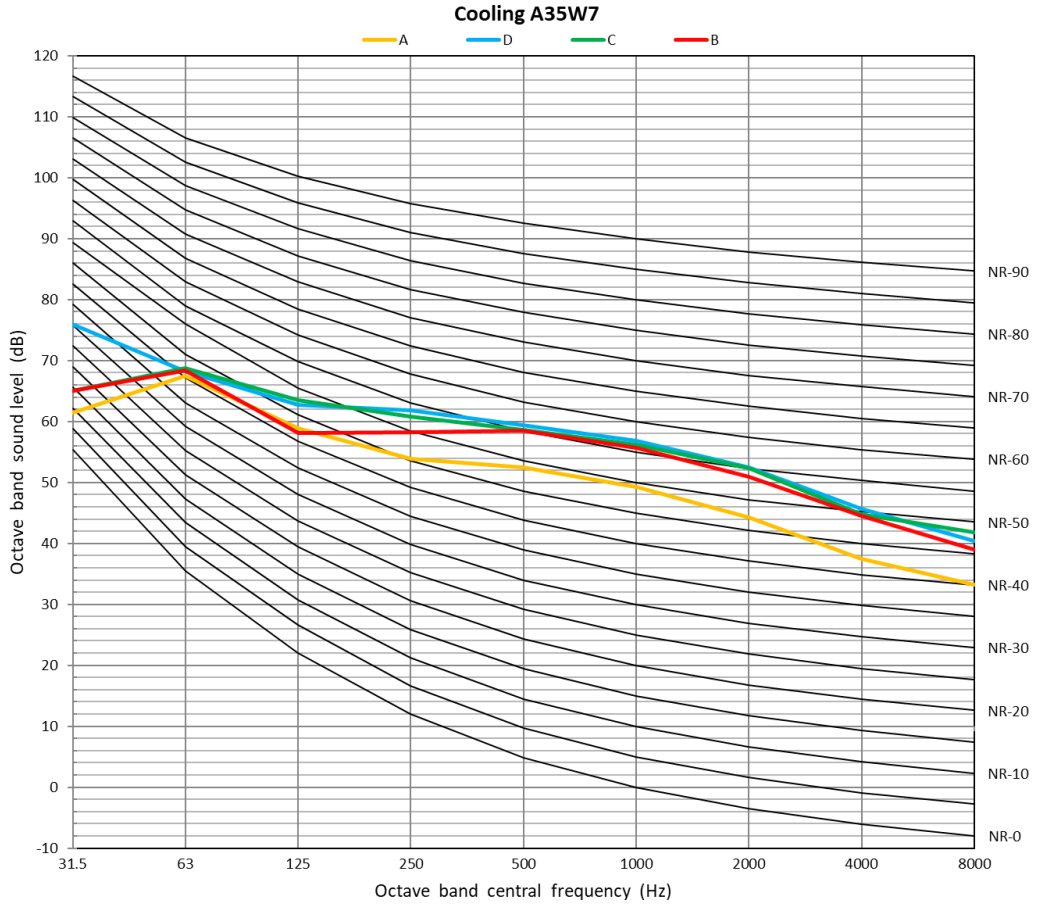

Heating A7W55
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)


Cooling A35W7
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

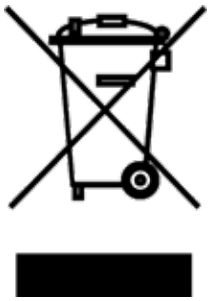
7.2.4 26kW


Heating A7W35
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)


Heating A7W55
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)


Cooling A35W7
A
D
C
B
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
Octave band sound level (dB)
NR-90
NR-80
NR-70
NR-60
NR-50
NR-40
NR-30
NR-20
NR-10
NR-0
31.5
63
125
250
500
1000
2000
4000
8000
Octave band central frequency (Hz)

NOTE CONCERNING PROTECTION OF ENVIRONMENT



This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

INFORMATION CONCERNING USED REFRIGERANT MEDIUM

This unit is containing fluorinated gases included in the Kyoto protocol.
The maintenance and the liquidation must be carried out by qualified personnel.

Type of refrigerant: R290
The quantity of the refrigerant: Please see the unit label.
The value GWP: 3 (1 kg R290 = 0,003 t CO_2 eq)
GWP = Global Warming Potential

 Appliance filled with flammable gas R290.

In case of quality problem or other please contact your local supplier or authorized service center.
Emergency number: 112

PRODUCER

SINCLAIR CORPORATION Ltd.
16 Great Queen Street
WC2B 5AH London
United Kingdom
www.sinclair-world.com

This product was manufactured in China (Made in China).

REPRESENTATIVE

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Czech Republic

TECHNICAL SUPPORT

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Tel.: +420 800 100 285 | Fax: +420 541 590 124
www.sinclair-solutions.com | info@sinclair-solutions.com

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