Cooper & Hunter

AIR-TO-WATER HEAT PUMPS

2023

"COOPER&HUNTER" SOCIAL RESPONSIBILITY PROJECT "WE SAVE THE PLANET" HAS LAUNCHED

In Autumn 2019, Global HVAC brand Cooper&Hunter announced the launch of long-term project “We Save the Planet”.

This project has been covering more than 45 countries all over the world where C&H equipment is sold.

By definition, corporate social responsibility is a a voluntary contribution of a company to social, economic and environmental areas, which is directly related to the company’s business.

C&H company has decided to implement strategic and systematic approach to support environmental efforts, sport associations and other social activities.

Cooper&Hunter

SERIES

UNITHERM R32

UNITHERM R32

SERIES:
SPLIT
ALL-IN-ONE
MONOTYPE

Heat pumps Unitherm 4 embraces DC-inverter technology to transfer the heat of outdoor air into the heat for heating the premises and sanitary warm water. In the summertime, Unitherm 4 works in reverse mode to cool the indoor air. Using a free energy outdoor air heat pump significantly reduces heating, air conditioning, and hot water expenses. Unitherm utilizes environmentally friendly refrigerant and thus minimizes the negative impact.

NOMENCLATURE

CH-HP 16 SIRK4

Cooper&Hunter

Heat pump

Nominal heating capacity (kW)

S – Split series
M – Monoblock

Generation

Power supply:
K – ~220–240V/50 Hz/1 Ph
M – ~380–415V/50 Hz/3 Ph

Refrigerant type: R32

DC inverter

AIR-WATER HEAT PUMP WITH DC-INVERTER TECHNOLOGY

IDU ALL IN ONE

IDU SPLIT

UNIVRTSAL OUTDOOR UNIT FOR SPLIT AND AIO SERIES

MONOTYPE

EVOLUTION OF PRODUCT

Cooper&Hunter develops Unitherm heat pumps for many years. Three generations of Unitherm proved to be reliable and durable machines. Unitherm 4 attained the highest standards of quality control (EN14511–2018) and energy efficiency – COP=5,13

The 1st generation
UNITHERM
COP = 4.5
(EN14511- 2007)

The 2st generation
UNITHERM
COP = 4.55
(EN14511- 2011)

The 2st and 4st generation
UNITHERM
COP = 5.13
(EN14511- 2018)

FIVE MODES OF OPERATION

HEATING	COOLING	WATER HEATING	HEATING+WATER HEATING	COOLING + WATER HEATING

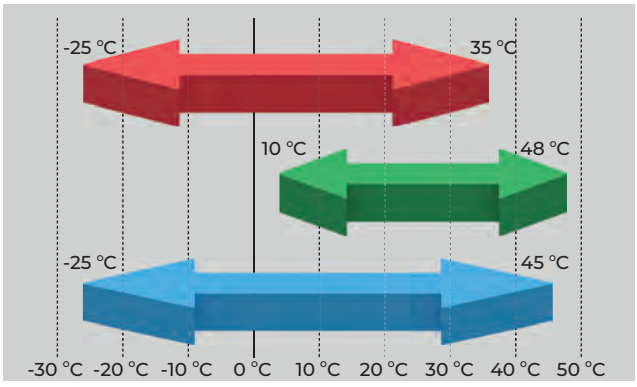
Wide Range of Operation Temperature

Heating	-25~35 °C
Cooling	10~48 °C
Water Heating	-25~45 °C

Hot Water Temperature Range

Domestic water: 40 °C to 80 °C

HEATING: -20~60°C	COOLING: 7~25°C

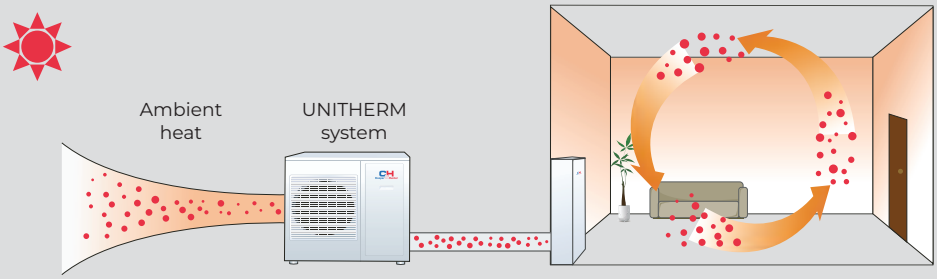


OUTDOOR UNIT: EFFICIENT ENERGY CONVERSION

Unitherm 4 uses DC-inverter technology in combination with the most efficient and ozone-friendly refrigerant R32. The COP coefficient reaches 5.13.

ECONOMICAL ELECTRICITY CONSUMPTION AND SUPER LOW LEVEL OF CO_2 EMISSIONS

Thanks to the heat pump technology, Unitherm 4 uses the thermal energy of the outside air to bring the water temperature to the temperature required for heating and domestic hot water, while consuming a minimum of electricity and with a low level of CO_2 emissions.

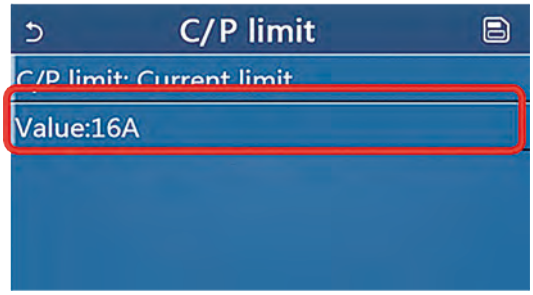


Heat from Outside Air

SUPER DC-INVERTOR TECHNOLOGY

- **2-stage rotary DC-inverter compressor**
  Compared to traditional compressors, the two-stage compressor has a higher level of power and energy efficiency, and a wider range of operation. Ideal for low-temperature heat pumps;
- **Due to the lower discharge temperature, a more stable** operation of the compressor is achieved in extreme operating conditions.

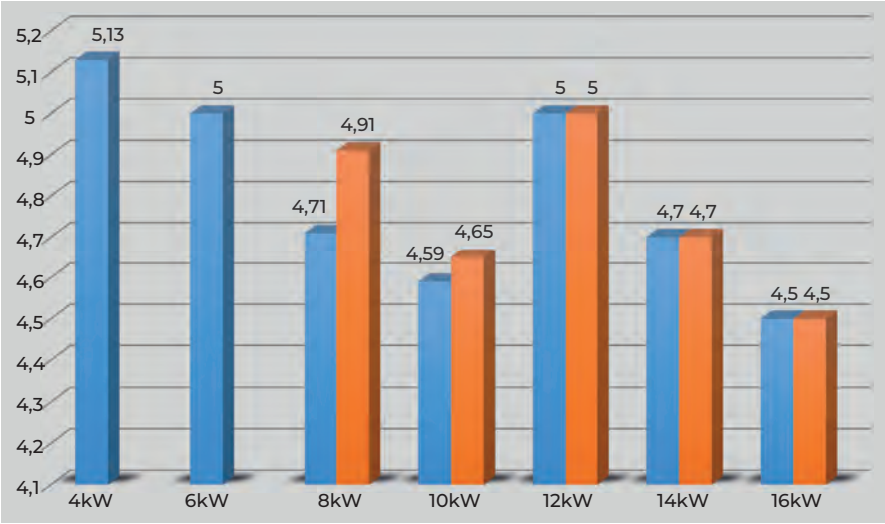
CURRENT LIMIT



If there is a restriction on the power limit of the power grid at the facility, the customer can set the maximum level of current consumption of the heat pump compressor on the control panel.

HIGH EFFICIENCY & ENERGY SAVING

The energy efficiency reaches up to 5.13. It adopts a two-stage gas compression and enthalpy increase system, which has a stronger heating capacity at low temperature.

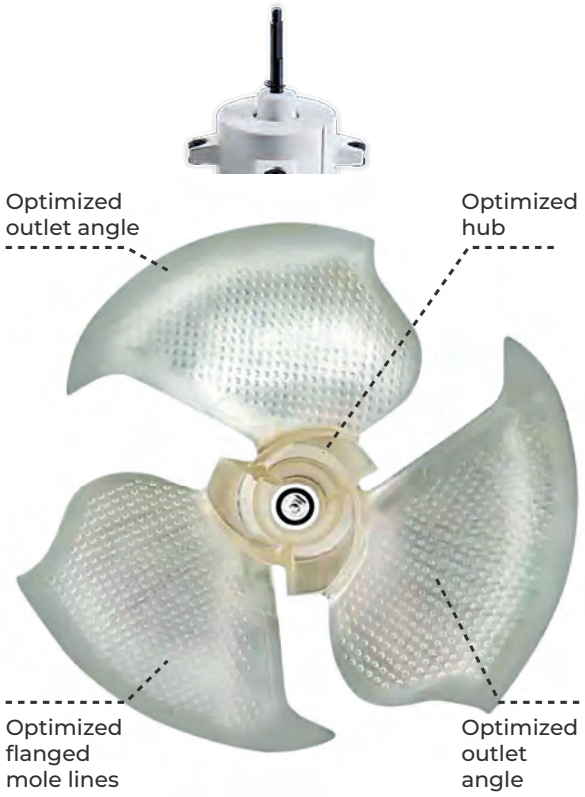


Note: for 1ph models
for 3ph models

FAN AND MOTOR

The inverter brushless DC motor allows precise control of the device and guarantees reliable energy-efficient operation of the heat pump.

- **DC-inverter (Direct current inverter)**
  Effectively provides cooling at low temperatures and heating at high temperatures with a small pressure drop, and also increases the stability of the system.
- **L605 Low Temperature Grease**
  with a minimum temperature resistance of -40 °C, effectively solves the noise problem caused by poor engine lubrication at low temperature.
- **CFD modeling of 3D blades:**
  tens of thousands of CFD simulations optimized the shape to increase heat transfer and reduce noise by 2 dB (compared to previous versions).
- **EMC motor**
  The motor has passed the EMC (electromagnetic compatibility) test, shock resistance, radiation test, resistance to rapid changes in the voltage of the power source. The engine is designed with increased protection against obstacles and high reliability in continuous operation.



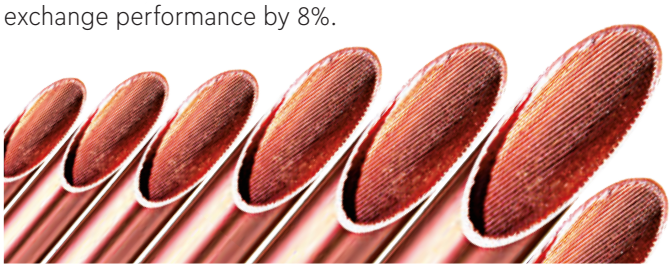
HEAT EXCHANGER

The new shape of the fins of the heat exchanger increases the heat exchange by 5% in comparison with the previous versions.

PREVIOUS MODELS
NORMAL FIN

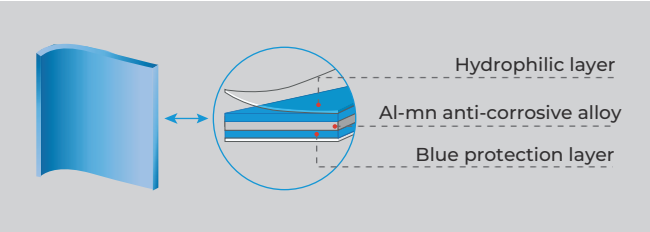
UNITHERM 3 (4):
NEW CHANGED FORM

The special thickened groove of the inner copper pipe distributes heat more effectively and increases the heat exchange performance by 8%.



RELIABILITY OF THE SYSTEM

Heat exchanger with anti-corrosion coating
The Gold Fin coating with a hydrophobic (water-repellent) effect and high anti-corrosion protection has a longer service life than the previous version with a Blue Fin coating.

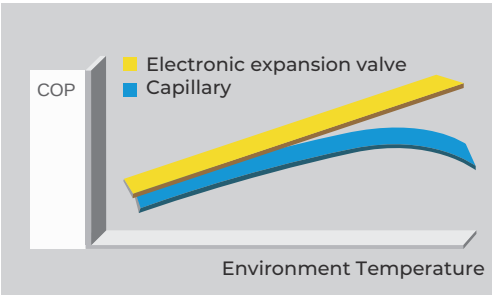


Wide voltage operation range

SELF-DIAGNOSIS OF THE OUTDOOR UNIT

If the supply voltage or current exceeds the normal range, the outdoor unit, thanks to the self-diagnosis function, activates automatic protection. If the power is restored to normal parameters, the system will start operation automatically.

ELECTRONIC EXPANSOPN VALVE (EEV)



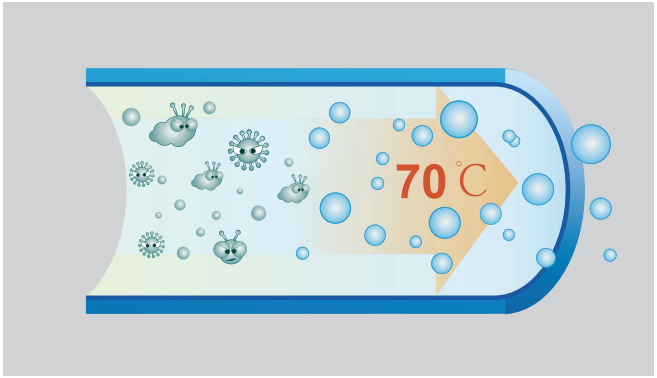
A valve with a wide range of refrigerant flow, which can automatically adjust the throttle according to the required amount of refrigerant. EEV is more energy-saving and stable than TRV and capillary throttling.

COMFORT

Precise temperature regulation
EEV guarantees automatic adjustment according to parameters and water temperature.

Quiet mode
By adjusting the power of the compressor and the fan, the operating noise of the device can be reduced by 3 dB(A), which meets the requirements of night mode or special circumstances.

DISINFECTION OF DOMESTIC HOT WATER (DHW)



Domestic water that meets the sanitary requirements can be used without additional treatment.

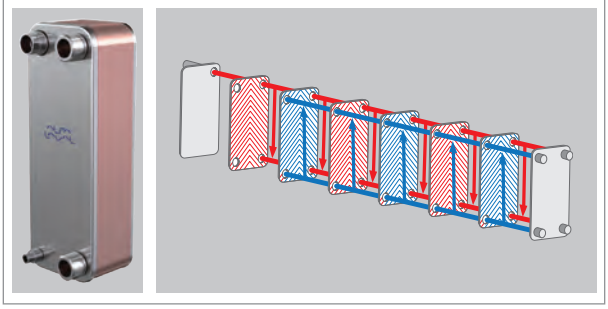
The tank and heat exchanger do not affect the quality of water in the system.

The disinfection function (heating the water to a temperature of 70 °C) prevents the growth of bacteria.

HIGH EFFICIENCY

High COP plate heat exchanger

ALFA LAVAL PHE HEAT EXCHANGER



DANFOSS PHE ECONOMIZER

Highly efficient pump

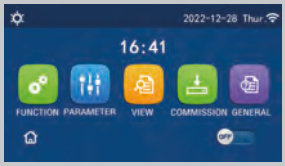
DC CIRCULATING PUMP

ENVIRONMENT-DEPEND MODE

Automatically calculates the capacity demand (heating/cooling) in the room according to the temperature of the outside environment for energy savings and comfort.

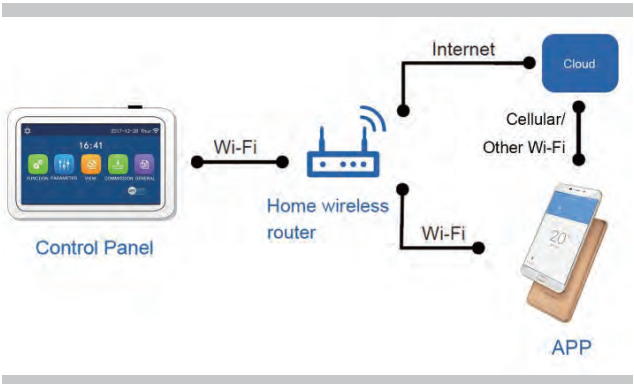
INTELLIGENT TEMPERATURE CONTROL

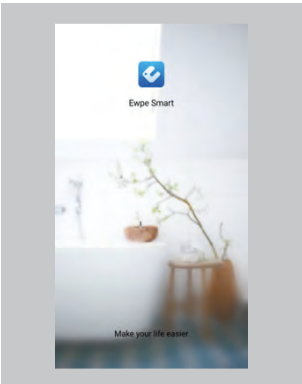
Advanced system management capabilities are integrated into the automation of the indoor unit (hydro module). The timer can be programmed for an hour or a day. In this way, the temperature drops automatically, but will be comfortably warm when you wake up or come home.



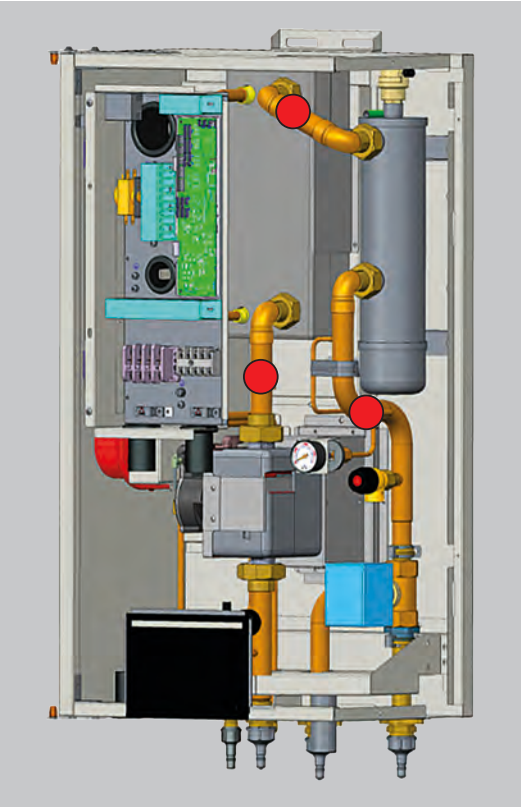
WI-FI MODULE

The display panel comes with a Wi-Fi module. Remote control via WI-FI works by connecting to the EWPE SMART application.





FREEZING PROTECTION



When the device is not working, in order to avoid freezing of components and pipelines on the water side due to low ambient temperature, the integrated three temperature sensors work constantly.
When the detected temperature at any sensor is less than 3 °C, the device will start the water pump to circulate the water in the system. If the temperature continues to drop below 2 °C, the unit enters heating mode and will not exit it until the water temperature reaches 20 °C.

Note:
●Freeze protection temperature sensor

SEVERAL ADDITIONAL USER-FRIENDLY FUNCTIONS

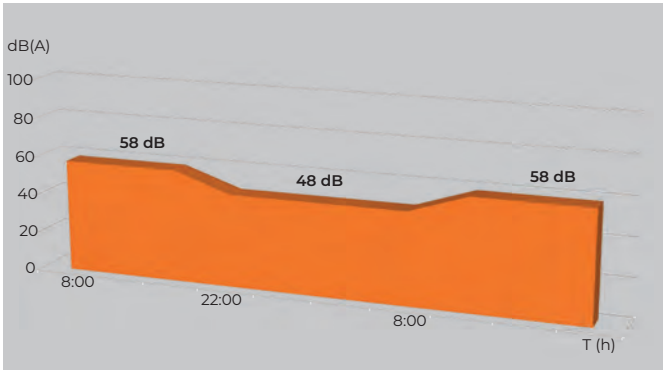
- **Urgent water heating**
  The heat pump uses a backup electric heater in case of any malfunction.
- **Floor protection**
  The heat pump uses a backup electric heater in case of any malfunction.
- **Floor heating**
  The function is relevant for floor heating, the highest water temperature by default is 45 °C, so as not to damage the floor, resulting in a shorter service life. (The highest outlet water temperature during heating operation is 55 °C)
- **Floor cooling**
  The function is relevant for floor cooling, the lowest water temperature by default is 18 °C, so that condensation does not form, which can damage the floor or reduce its life. (The lowest leaving water temperature during cooling is 7 °C)
- **Fast water heating**
  The heat pump and electric water tank heater work simultaneously for fast heating.
- **Disinfection**
  The water will be heated to 70 °C at a set time to kill bacteria in the water. Disinfection is usually carried out at night.
- **Vacation mode**
  During winter holidays, the device can be set to automatic operation to maintain the room temperature between 10–15 °C
- **Work depending on the weather**
  The device can automatically adjust the operating mode according to the temperature range set by the user.

- **Convenient and large LED display.**
- **On/off timer**
  Daily/weekly countdown timer
  Weekly program
-

- **Emergency operation mode**
- (only for heating and water heating)
- **Forced operation mode**
- **Silent mode**
- **Central control**

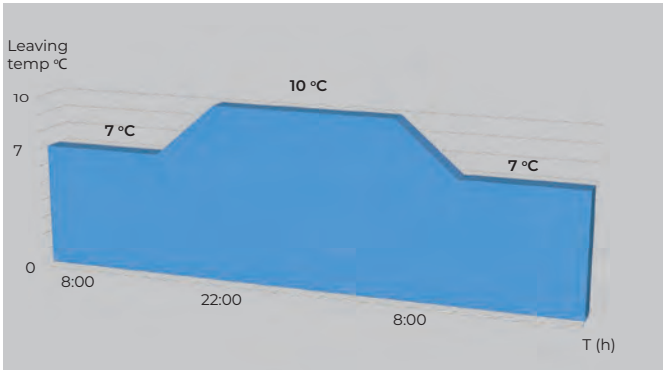
ADJUSTMENT OF OPERATION ACCORDING TO TIME

TIMING FOR QUIET OPERATION



1. Settable time for quiet operation
2. Quiet operation for sleeping

TIMING FOR TEMPERATURE SET POINTS



1. Two time periods can be set
2. Different temperature regimes for different periods of time

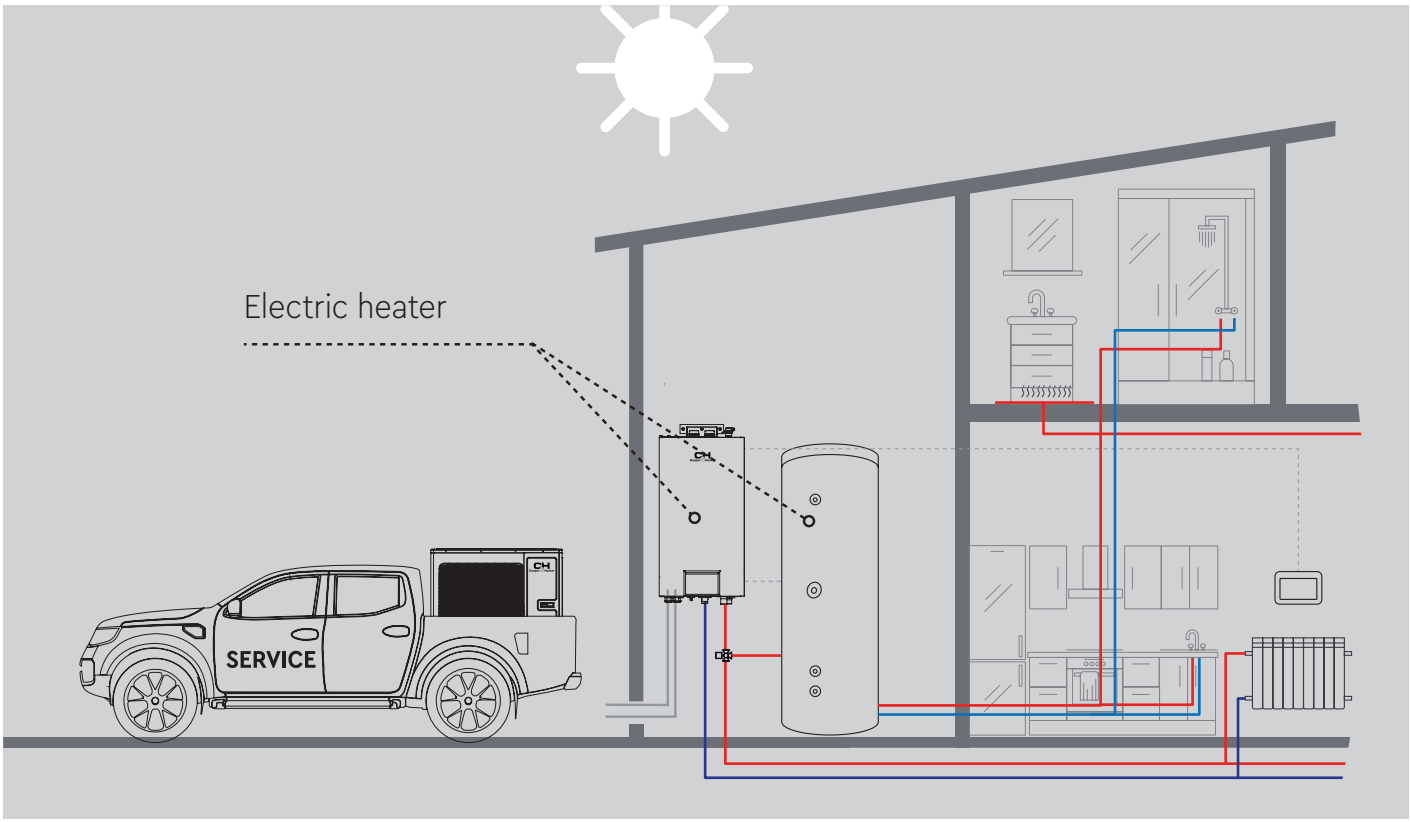
OUT MODE

When the outside temperature is below 0 °C, to avoid freezing of the elements in contact with water, you can activate OUT MODE to maintain the indoor temperature around 10 °C with low energy consumption.
The device maintains low power consumption and the indoor temperature is around 10 °C.

1. Under room temperature control, 10 °C is programmed by default.
2. Under water temperature control, the default programmed temperature is 30 °C.

EMERGENCY

If the outdoor unit has a serious fault, which causes the unit not to start normally and needs to be repaired to meet its normal heating needs, the user can start the emergency mode.
In this mode, the electric heaters of the indoor unit and the hot water tank are working simultaneously.



UNITHERM 4 SPLIT R32
SERIES

INVERTER R32

+10˚C … +48˚C

–25˚C … +35˚C

-30°C... +48°C | Max. water temperature +60°C | Energy Efficiency A+++ | Self-diagnostics | Auto-protection | Anti-corrosive Coating | 2-Stage Compressor | Timer 24h | Wired Controller | BMS Control Systems | Intelligent Defrosting | Intelligent Control | Wi-Fi

COMPACT AND FLEXIBLE DESIGN OF INDOOR UNIT

Compact design, easy to install.
Dimensions (W×D×H) (mm)

460×318×860mm

Safety valve, plate heat exchanger, expansion tank, circulation pump and control unit, all in one device.

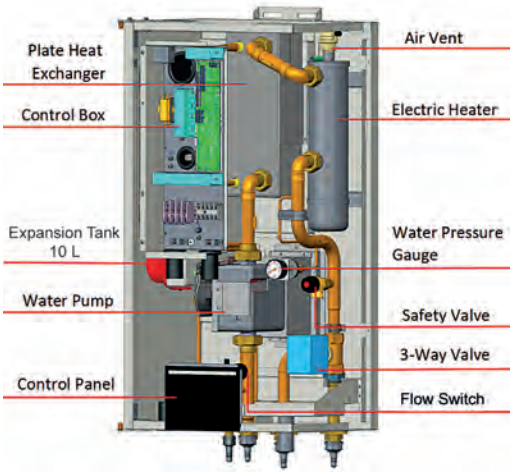
See the table below regarding the configuration of E-heater for heating and connecting E-heater for domestic hot water.

	E-heater for heating (built-in)	E-heater for DHW (external)
CH-HP6.0SIRK4(I)	1.5 + 1.5 kW	3 kW
CH-HP8.0SIRK4(I) CH-HP10SIRK4(I)	3 + 3 kW	3 kW
CH-HP12SIRK(M)4(I) CH-HP14SIRK(M)4(I) CH-HP16SIRK(M)4(I)	3 + 3 kW	3 kW

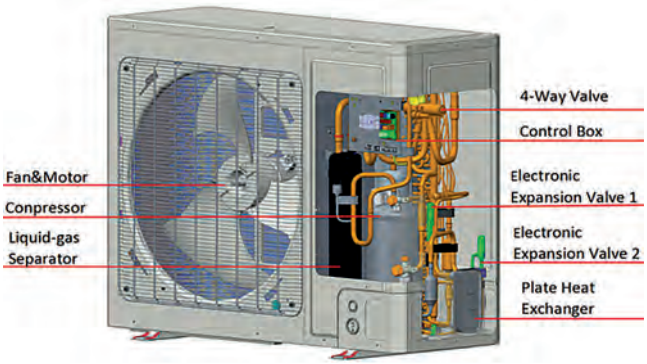
INDOOR UNIT (HYDROMODULE): HEATING/COOLING AND DHW

The indoor unit (hydromodule) regulates the supply of heat/cold/DHW to heating floor/ convectors/fancoils, etc.

You can manage your comfort: changing the temperature and water supply, adjust the modes through the central controller installed on the indoor unit (hydromodule).



OUTDOOR UNIT IS UNIVERSAL FOR SPLIT AND ALL-IN-ONE SERIES



Two-Stage technology enables efficient heating of water at extremely low temperatures without additional losses of electricity.

TECHNICAL PARAMETERS OF UNIT SPLIT SERIES 1 PHASE

			CH-HP6.0SIRK4	CH-HP8.0SIRK4	CH-HP10SIRK4	CH-HP12SIRK4	CH-HP14SIRK4	CH-HP16SIRK4
Capacity *	Cooling	kW	5,80	7,00	8,50	11,00	12,60	13,00
	Heating	kW	6,00	8,00	9,50	12,00	14,00	15,50
Power input*	Cooling	kW	1,32	1,75	2,24	2,50	3,41	3,60
	Heating	kW	1,20	1,70	2,07	2,40	2,98	3,44
EER*[1]			4,40	4,00	3,80	4,40	3,70	3,60
COP*[1]			5,00	4,70	4,60	5,00	4,70	4,50
Capacity **	Cooling	kW	4,09	5,30	6,50	10,59	11,07	11,51
	Heating	kW	5,90	8,00	9,50	12,40	14,48	16,09
Power input**	Cooling	kW	1,28	1,73	2,27	3,79	4,18	4,49
	Heating	kW	1,51	2,14	2,64	3,29	3,93	4,44
EER**			3,20	3,00	2,90	2,79	2,65	2,57
COP **			3,90	3,70	3,60	3,77	3,68	3,62
Refrigerant charge volume		kg	1,00	1,60	1,60	1,84	1,84	1,84
Power supply			~220-240V/50 Hz/1 Ph					
Sound pressure level	Colling	dB (A)	52	55		68		
	Heating	dB (A)	52	55		68		
Dimensions (W×D×H)	Indoor unit	mm	460×318×860					
	Outdoor unit	mm	975×396×702	982×427×787		940×460×820		
Net weight	Indoor unit	kg	62					
	Outdoor unit	kg	55	82		110		
Water circulating pipe inlet/outlet, DHW			1" Male BSP					
Diameter of pipe	Liquid	inch (mm)	1/4" (6,35)					
	Gas	inch (mm)	1/2" (12,7)			5/8" (15,6)		

NOTE

«*» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +23°C/+18°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +30°C/+35°C; Outdoor temperature: +7°C DB; +6°C WB
«**» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +12°C/+7°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +40°C/+45°C; Outdoor temperature: +7°C DB; +6°C WB

TECHNICAL PARAMETERS OF UNIT SPLIT SERIES 3 PHASE

			CH-HP12SIRM4	CH-HP14SIRM4	CH-HP16SIRM4
Capacity *	Cooling	kW	11,00	12,60	13,00
	Heating	kW	12,00	14,00	15,50
Power input*	Cooling	kW	2,50	3,41	3,60
	Heating	kW	2,40	2,98	3,44
EER*[1]			4,40	3,70	3,60
COP*[1]			5,00	4,70	4,51
Capacity **	Cooling	kW	10,65	11,24	11,52
	Heating	kW	12,29	14,44	16,13
Power input**	Cooling	kW	3,74	4,13	4,38
	Heating	kW	3,09	3,63	4,16
EER **			2,85	2,72	2,63
COP **			3,98	3,98	3,88
Refrigerant charge volume		kg	1,84	1,84	1,84
Power supply			~380-415V/50 Hz/3 Ph		
Sound pressure level	Cooling	dB (A)	68	68	68
	Heating	dB (A)	68	68	68
Dimensions (W×D×H)	Indoor unit	mm	460×318×860	460×318×860	460×318×860
	OUTDOOR UNIT	mm	940×460×820	940×460×820	940×460×820
Net weight	Indoor unit	kg	62	62	62
	Outdoor unit	kg	110	110	110
Water circulating pipe inlet/outlet, DHW			1" Male BSP	1" Male BSP	1" Male BSP
Diameter of pipe	Liquid	inch (mm)	1/4" (6,35)	1/4" (6,35)	1/4" (6,35)
	Gas	inch (mm)	5/8" (15,9)	5/8" (15,9)	5/8" (15,9)

NOTE

«*» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +23°C/+18°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +30°C/+35°C; Outdoor temperature: +7°C DB; +6°C WB
«**» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +12°C/+7°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +40°C/+45°C; Outdoor temperature: +7°C DB; +6°C WB

ELECTRICAL PARAMETERS OF UNUTHERM 4 SPLIT

	Power supply	Automatic switch (A)	The minimum cross-sectional area of the grounding wire (mm^2)	The minimum cross-sectional area of the power cable (mm^2)
CH-HP6.0SIRK4(O)	~220-240V/50 Hz/1 Ph	16	1,5	1,5
CH-HP6.0SIRK4(I)		20	6	6
CH-HP8.0SIRK4(O)		25	4	4
CH-HP8.0SIRK4(I)		40	6	6
CH-HP10SIRK4(O)		25	4	4
CH-HP10SIRK4(I)		40	6	6
CH-HP12SIRK4(O)		32	6	6
CH-HP12SIRK4(I)		40	6	6
CH-HP14SIRK4(O)		40	6	6
CH-HP14SIRK4(I)		40	6	6
CH-HP16SIRK4(O)		40	6	6
CH-HP16SIRK4(I)		40	6	6
CH-HP12SIRM4(O)	~380-415V/50 Hz/3 Ph	16	2,5	2,5
CH-HP12SIRM4(I)		20	4	4
CH-HP14SIRM4(O)		16	2,5	2,5
CH-HP14SIRM4(I)		20	4	4
CH-HP16SIRM4(O)		16	2,5	2,5
CH-HP16SIRM4(I)		20	4	4

NOTES:

A. If circuit breakers with leakage protection are used, the trip time should be less than 0.1 second and the leakage current should be 30 mA.

B. The diameter of the power cables selected above is determined based on the assumption that the distance from the distribution box to the device is less than 75 m. If the cables are laid at a distance of 75 to 150 m, then the diameter of the power cable must be increased.

C. The power source must meet the rated voltage of the device and must be connected to a separate electrical line.

D. All electrical work must be performed by professional technicians in accordance with local codes and ordinances.

E. Implement safety grounding. The grounding wire must be connected to a special grounding line in the building, the connection must be made by professional technicians.

F. The switch and power cord specifications in the table above are based on the maximum power (maximum current) of the device.

G. The power cable specifications in the table above refer to a stranded copper cable in a protective sheath (e.g. YJV cross-linked polyethylene insulated power cable) used at +40 °C and resistant to +90 °C (see IEC 60364-5-52). If the requirements are changed, the cables must be replaced according to the relevant standard.

H. The switch specifications in the table above refer to the switch with an operating temperature of +40 °C. In the event of a change in conditions, they must be changed in accordance with the current national standard.

I. An automatic switch must be installed in the power supply line. Automatic switch with disconnection of all poles. The opening distance between the contacts should be at least 3 mm.

PIPE CONNECTION OF UNITHERM 4 SPLIT

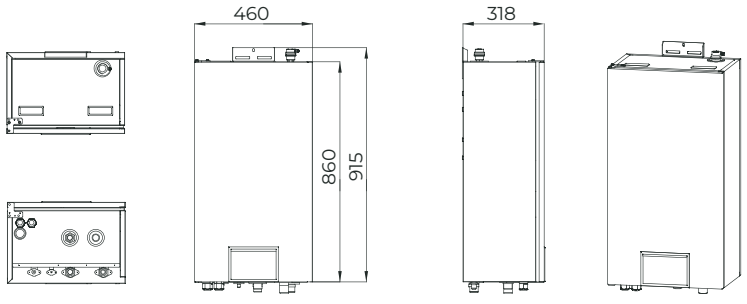
	Diameter tube		Length B		Height A		Additional
	GAS	Liquid	Std	Max	Std	Max	Refrigerant
CH-HP6.0SIRK4	1/2"	1/4"	5 m	20 m	0 m	15 m	16 g/m
CH-HP8.0SIRK4	1/2"	1/4"	5 m	25 m	0 m	15 m	16 g/m
CH-HP10SIRK4	1/2"	1/4"	5 m	25 m	0 m	15 m	16 g/m
CH-HP12SIRM4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP14SIRM4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP16SIRM4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP12SIRK4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP14SIRK4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP16SIRK4	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m

* Under certain conditions, the length can be increased to 25 m.

NOTES:

A. Additional refrigerant charging is not required if the pipe length is less than 10m, if the pipe length is more than 10m, additional refrigerant charging is required according to the table. For example: if a 10 kW model is installed at a distance of 25 m, you should add (25–10) x 16 = 240 g of refrigerant.
B. Rated capacity is based on standard pipe length and maximum allowable length is based on working length. The grease intake loop should be installed every 5–7 meters if the external unit is located above the internal unit (hydro module).
C. Each 90° bend is approximately equal to 0.5 meters of pipe length.

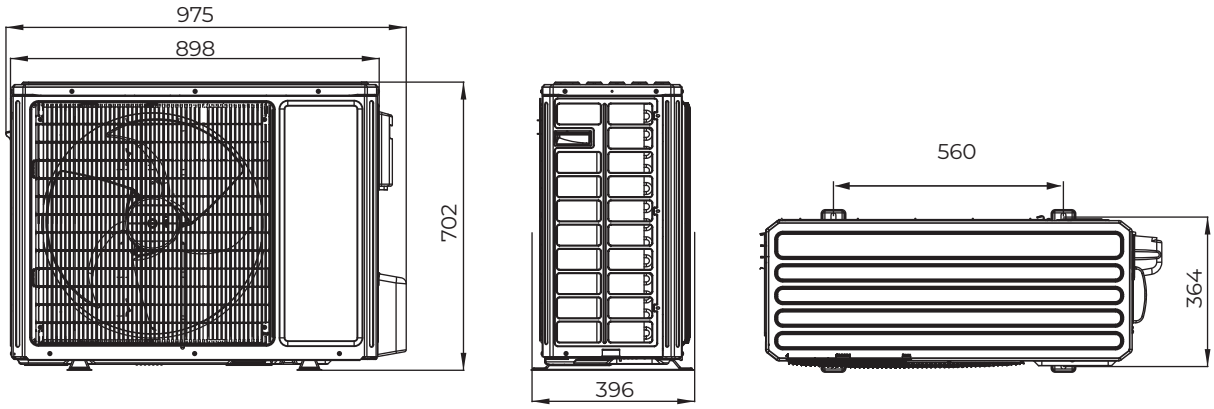
OVERALL DIMENSIONS OF THE INDOOR UNIT (HYDROMODULE)



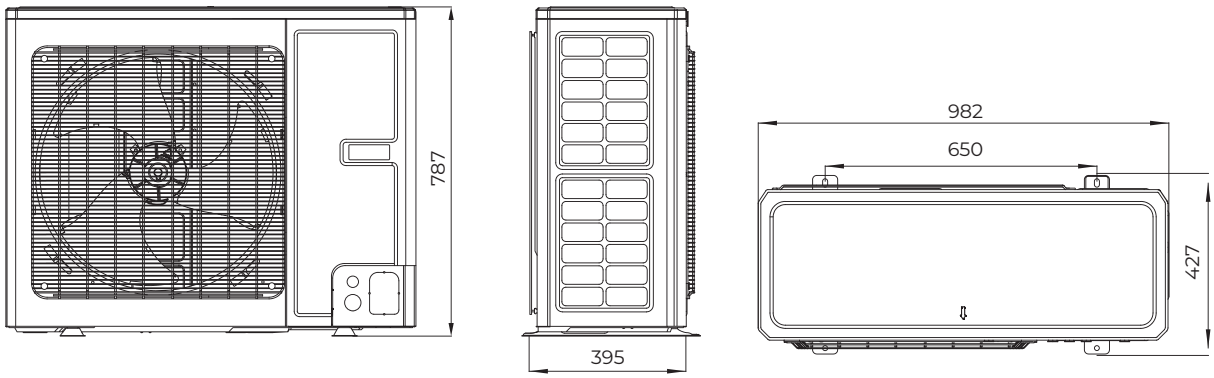
№.	Description	Connection thread	
1	Diameter of outlet pipe (water)	1" Male BSP	
2	Diameter of return water flow pipe	1" Male BSP	
3	Liquid pipe	1/4"	CH-HP8.0SIRK4(I), CH-HP10SIRK4(I), CH-HP12SIRM4(I), CH-HP14SIRM4(I), CH-HP16SIRM4(I), CH-HP12SIRK4(I), CH-HP14SIRK4(I), CH-HP16SIRK4(I)
4	Gas pipe	1/2"	CH-HP8.0SIRK4(I), CH-HP10SIRK4(I)
5	Gas pipe	5/8"	CH-HP12SIRM4(I), CH-HP14SIRM4(I), CH-HP16SIRM4(I), CH-HP12SIRK4(I), CH-HP14SIRK4(I), CH-HP16SIRK4(I)

OVERALL DIMENSIONS OF THE OUTDOOR UNIT

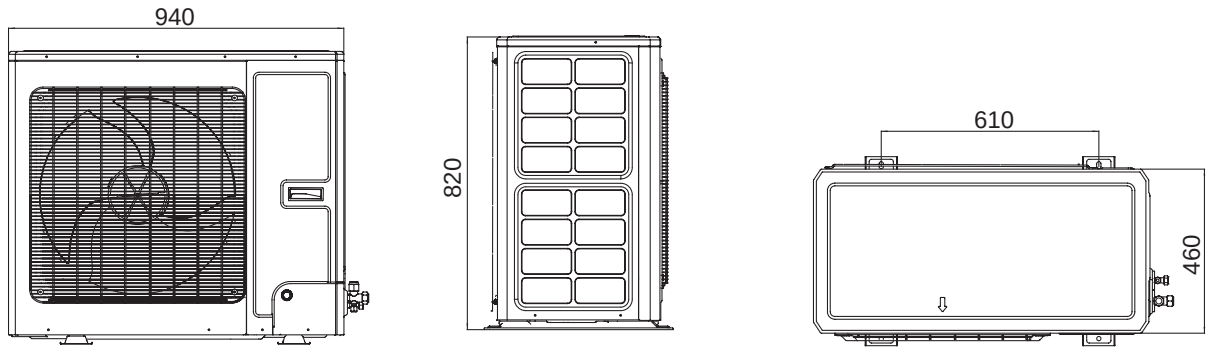
CH-HP6.0SIRK4 (O)



CH-HP8.0SIRK4 (O), CH-HP10SIRK4 (O)



CH-HP12SIRM4(O) , CH-HP14SIRM4(O), CH-HP16SIRM4(O),
CH-HP12SIRK4(O) ,CH-HP14SIRK4(O), CH-HP16SIRK4(O)



UNITHERM 3 ALL-IN-ONE R32
SERIES

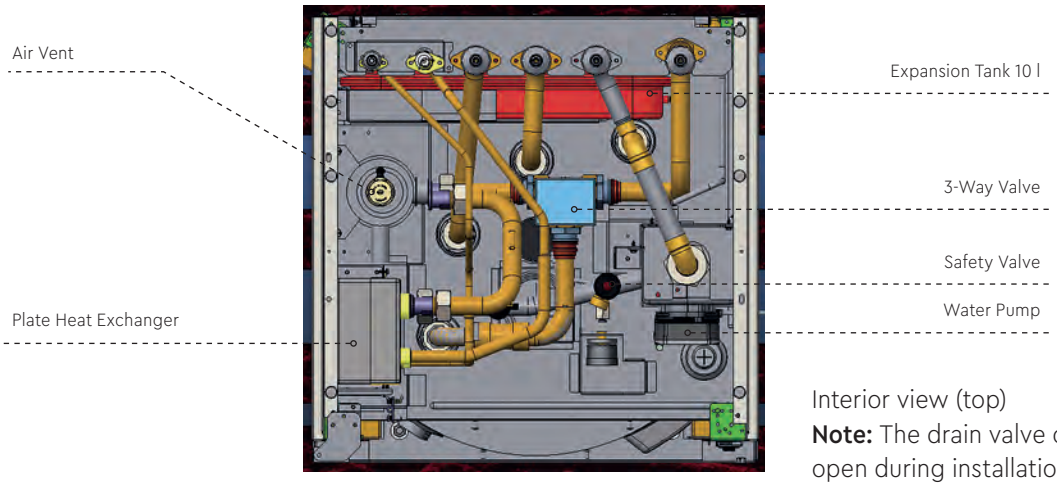
INVERTER R32

+10°C ... +48°C

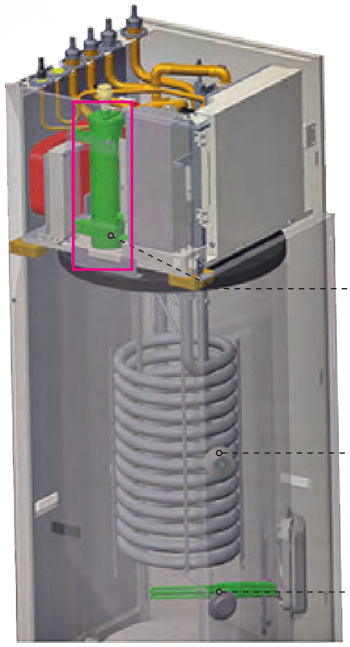
–25°C ... +35°C

-30°C... +48°C | Max. water temperature | Energy Efficiency | Self-diagnostics | Auto-protection | Anti-corrosive Coating | 2-Stage Compressor | Timer | Wired Controller | BMS Control Systems | Intelligent Defrosting | Intelligent Control | Wi-Fi

INDOOR UNIT



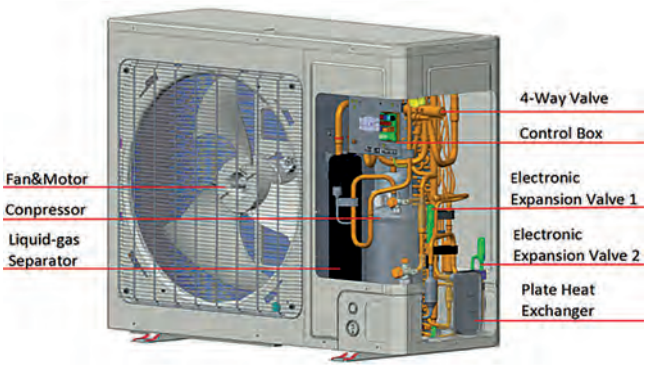
Interior view (top)
Note: The drain valve cover must be open during installation



See the table below regarding the configuration of the electric heater for heating and domestic hot water.

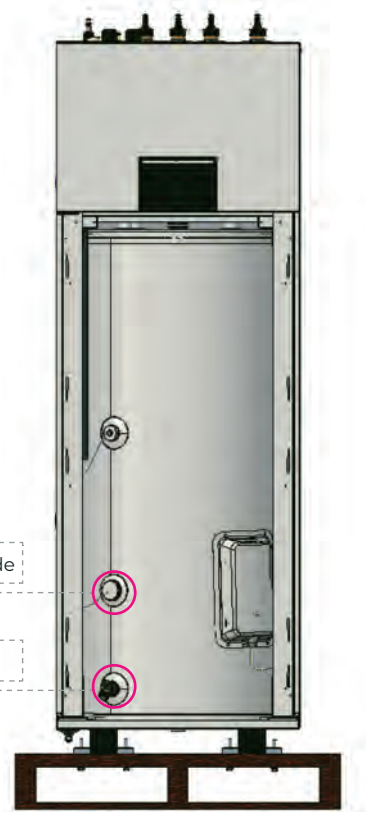
	E-heater for heating	E-heater for DHW
CH-HP6.0WTSIRK3(I)	1.5 + 1.5 kW	3 kW
CH-HP8.0WTSIRK3(I) CH-HP10WTSIRK3(I)	3 + 3 kW	3 kW
CH-HP12WTSIRK3(I) CH-HP14WTSIRK3(I) CH-HP16WTSIRK3(I)	3 + 3 kW	3 kW

OUTDOOR UNIT IS UNIVERSAL FOR SPLIT AND ALL-IN-ONE SERIES



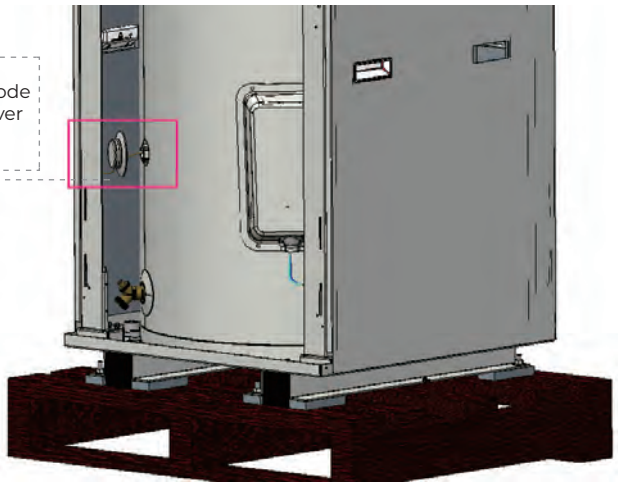
Two-Stage technology enables efficient heating of water at extremely low temperatures without additional losses of electricity

ALL-IN-ONE SERIES WITH BUILT-IN DHW WATER TANK

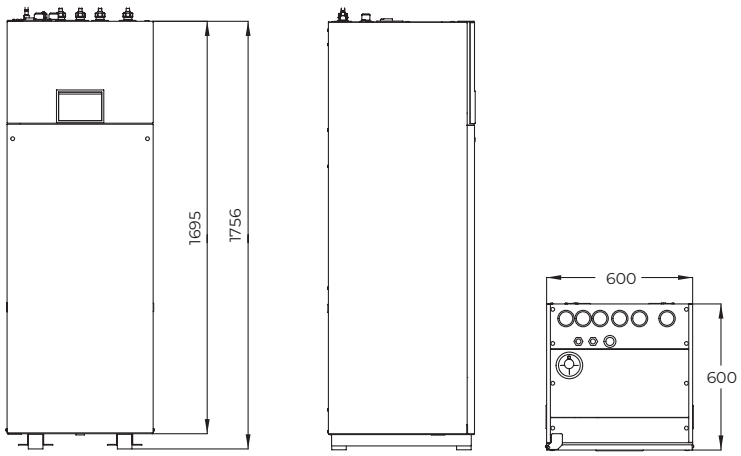


Opening the bottom panel, you can see the position of the electron anode and the water drain. Open the drain switch and drain the water from the water tank.

Remove the electronic anode protective cover stuck on the water tank



OVERALL DIMENSIONS OF INDOOR UNITS



No.	Description	Connection thread	
1	Diameter of outlet pipe (water)		1″ Male BSP
2	Diameter of return water flow pipe		1″ Male BSP
3	Tap water		1″ Male BSP
4	DHW		1″ Male BSP
5	Liquid pipe	1/4″	CH-HP4.0WTSIRK4(I), CH-HP6.0WTSIRK4(I), CH-HP8.0WTSIRK4(I), CH-HP10WTSIRK4(I), CH-HP12WTSIRK4(I), CH-HP14WTSIRK4(I), CH-HP16WTSIRK4(I), CH-HP8.0WTSIRM4(I), CH-HP10WTSIRM4(I), CH-HP12WTSIRM4(I) CH-HP14WTSIRM4(I), CH-HP16WTSIRM4(I)
6	Gas pipe	1/2″	CH-HP4.0WTSIRK4(I), CH-HP6.0WTSIRK4(I), CH-HP8.0WTSIRK4(I), CH-HP10WTSIRK4(I), CH-HP8.0WTSIRM4(I), CH-HP10WTSIRM4(I)
7	Gas pipe	5/8″	CH-HP12WTSIRK4(I), CH-HP14WTSIRK4(I), CH-HP16WTSIRK4(I) CH-HP12WTSIRM4(I), CH-HP14WTSIRM4(I), CH-HP16WTSIRM4(I)

TECHNICAL PARAMETERS OF ALL IN ONE SERIES 1 PHASE

			CH-HP6.0WTSIRK3	CH-HP8.0WTSIRK3	CH-HP10WTSIRK3	CH-HP12WTSIRK3	CH-HP14WTSIRK3	CH-HP16WTSIRK3
Capacity*	**Cooling**	**kW**	5,80	7,00	8,50	11,00	12,60	13,00
	Heating	**kW**	6,00	8,00	9,50	12,00	14,00	15,50
Power input*	**Cooling**	**kW**	1,32	1,75	2,24	2,50	3,41	3,60
	Heating	**kW**	1,20	1,70	2,07	2,40	2,98	3,44
EER *			4,40	4,00	3,80	4,40	3,70	3,60
COP*			5,00	4,70	4,60	5,00	4,70	4,50
Capacity*	**Cooling**	**kW**	4,09	5,30	6,50	10,59	11,07	11,51
	Heating	**kW**	5,90	8,00	9,50	12,40	14,48	16,09
Power input*	**Cooling**	**kW**	1,28	1,73	2,27	3,79	4,18	4,49
	Heating	**kW**	1,51	2,14	2,64	3,29	3,93	4,44
EER **			3,20	3,00	2,90	2,79	2,65	2,57
COP **			3,90	3,70	3,60	3,77	3,68	3,62
Refrigerant charge volume		**kg**	1,00	1,60	1,60	1,84	1,84	1,84
Power supply			~220-240V/50 Hz/1 Ph					
Sound pressure level	**Cooling**	**dB (A)**	52	55		68		
	Heating	**dB (A)**	52	55		68		
Dimensions (W×D×H)	**Indoor unit**	**mm**	600×600×1756					
	Outdoor unit	**mm**	975×396×702	982×427×787		940×460×820		
Net weight	**Indoor unit**	**kg**	210					
	Outdoor unit	**kg**	55	82		110		
Water circulating pipe inlet/outlet, DHW			1" Male BSP					
Diameter of pipe	**Liquid**	**Inch (mm)**	1/4" (6,35)					
	Gas	**Inch (mm)**	1/2" (12,7)			5/8" (15,6)		

NOTE

«*» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +23°C/+18°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +30°C/+35°C; Outdoor temperature: +7°C DB; +6°C WB
«» capacity and power input are specified under the following conditions:**	
Cooling	Water temperature: +12°C/+7°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +40°C/+45°C; Outdoor temperature: +7°C DB; +6°C WB

TECHNICAL PARAMETERS UNITHERM 3 ALL-IN-ONE, 3 PHASE

			CH-HP12WTSIRM3	CH-HP14WTSIRM3	CH-HPWT16SIRM3
Capacity*	**Cooling**	**kW**	11,00	12,60	13,00
	Heating	**kW**	12,00	14,00	15,50
Power input*	**Cooling**	**kW**	2,50	3,41	3,60
	Heating	**kW**	2,40	2,98	3,44
EER *			4,40	3,70	3,60
COP *			5,00	4,70	4,51
Capacity*	**Cooling**	**kW**	10,65	11,24	11,52
	Heating	**kW**	12,29	14,44	16,13
Power input**	**Cooling**	**kW**	3,74	4,13	4,38
	Heating	**kW**	3,09	3,63	4,16
EER **			2,85	2,72	2,63
COP **			3,98	3,98	3,88
Refrigerant charge volume		**kg**	1,84	1,84	1,84
Power supply			~380–415V/50 Hz/3 Ph		
Sound pressure level	**Cooling**	**dB (A)**	62		
	Heating	**dB (A)**	58		
Dimensions (W×D×H)	**Indoor unit**	**mm**	600×600×1756		
	Outdoor unit	**mm**	940×460×820		
Net weight	**Indoor unit**	**kg**	210		
	Outdoor unit	**kg**	110		
Water circulating pipe inlet/outlet, DHW			1" Male BSP		
Diameter of pipe	**Liquid**	**Inch (mm)**	1/4" (6,35)		
	Gas	**Inch (mm)**	5/8" (15,6)		

NOTE:

«*» capacity and power input are specified under the following conditions:	
Cooling	Water temperature: +23°C/+18°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +30°C/+35°C; Outdoor temperature: +7°C DB; +6°C WB
«» capacity and power input are specified under the following conditions:**	
Cooling	Water temperature: +12°C/+7°C; Outdoor temperature: +35°C DB; +24°C WB
Heating	Water temperature: +40°C/+45°C; Outdoor temperature: +7°C DB; +6°C WB

ELECTRICAL PARAMETERS UNITHERM 3 ALL-IN-ONE

	Power supply V/ Hz	Automatic switch (A)	The minimum cross-sectional area of the grounding wire (mm^2)	The minimum cross-sectional area of the power cable (mm^2)
CH-HP6.0WTSIRK3(O)	~220-240V/50 Hz/1 Ph	16	1,5	1,5
CH-HP6.0WTSIRK3(I)		20	6	6
CH-HP8.0WTSIRK3(O)		25	4	4
CH-HP8.0WTSIRK3(I)		40	6	6
CH-HP10WTSIRK3(O)		25	4	4
CH-HP10WTSIRK3(I)		40	6	6
CH-HP12WTSIRK3(O)		32	6	6
CH-HP12WTSIRK3(I)		40	6	6
CH-HP14WTSIRK3(O)		40	6	6
CH-HP14WTSIRK3(I)		40	6	6
CH-HP16WTSIRK3(O)		40	6	6
CH-HP16WTSIRK3(I)		40	6	6
CH-HP12WTSIRM3(O)	~380-415V/50 Hz/3 Ph	16	2,5	2,5
CH-HP12WTSIRM3(I)		20	4	4
CH-HP14WTSIRM3(O)		16	2,5	2,5
CH-HP14WTSIRM3(I)		20	4	4
CH-HP16WTSIRM3(O)		16	2,5	2,5
CH-HP16WTSIRM3(I)			4	4

NOTES:

A. If circuit breakers with leakage protection are used, the trip time should be less than 0.1 second and the leakage current should be 30 mA.

B. The diameter of the power cables selected above is determined based on the assumption that the distance from the distribution box to the device is less than 75 m. If the cables are laid at a distance of 75 to 150 m, then the diameter of the power cable must be increased.

C. The power source must meet the rated voltage of the device and must be connected to a separate electrical line.

D. All electrical work must be performed by professional technicians in accordance with local codes and ordinances.

E. Implement safety grounding. The grounding wire must be connected to a special grounding line in the building, the connection must be made by professional technicians.

F. The switch and power cord specifications in the table above are based on the maximum power (maximum current) of the device.

G. The power cable specifications in the table above refer to a stranded copper cable in a protective sheath (e.g. YJV cross-linked polyethylene insulated power cable) used at +40 °C and resistant to +90 °C (see IEC 60364-5-52). If the requirements are changed, the cables must be replaced according to the relevant standard.

H. The switch specifications in the table above refer to the switch with an operating temperature of +40 °C. In the event of a change in conditions, they must be changed in accordance with the current national standard.

I. An automatic switch must be installed in the power supply line. Automatic switch with disconnection of all poles. The opening distance between the contacts should be at least 3 mm.

PIPE CONNECTION OF UNITHERM 3 ALL-IN-ONE

	Diameter of pipe		Length B		Height A		Additional
ALL-IN-ONE	Gas	Liquid	Standard	Max	Standard	Max	Refrigerant
CH-HP6.0WTSIRK3	1/2"	1/4"	5 m	20 m	0 m	15 m	16 g/m
CH-HP8.0WTSIRK3	1/2"	1/4"	5 m	25 m	0 m	15 m	0 g/m
CH-HP10WTSIRK3	1/2"	1/4"	5 m	25 m	0 m	15 m	0 g/m
CH-HP12WTSIRM3	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP14WTSIRM3	5/8"	1/4"	5 m	15 m *	0 m	15 m	0 g/m
CH-HP16WTSIRM3	5/8"	1/4"	5 m	15 m*	0 m	15 m	0 g/m
CH-HP12WTSIRK3	5/8"	1/4"	5 m	15 m*	0 m	15 m	0 g/m
CH-HP14WTSIRK3	5/8"	1/4"	5 m	15 m*	0 m	15 m	0 g/m
CH-HP16WTSIRK3	5/8"	1/4"	5 m	15 m*	0 m	15 m	0 g/m

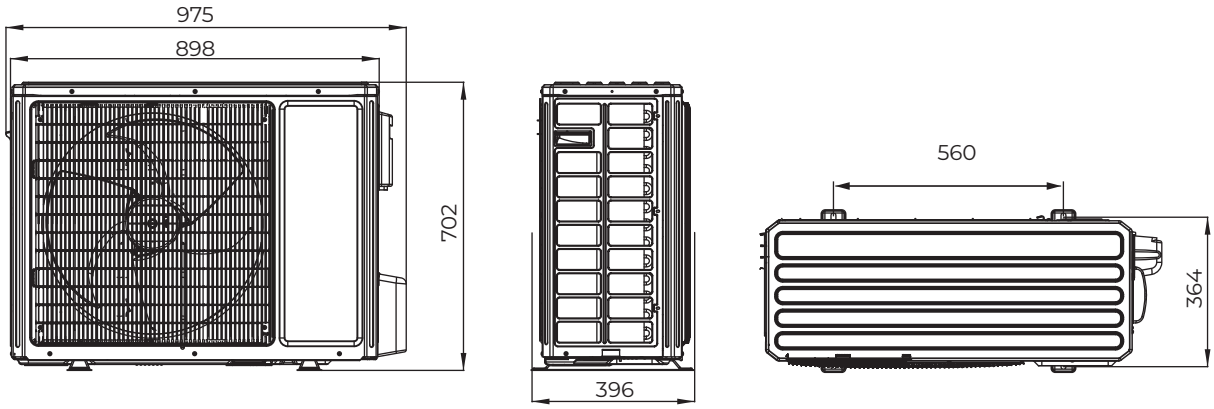
* Under certain conditions, the length can be increased to 25 m.

NOTES:

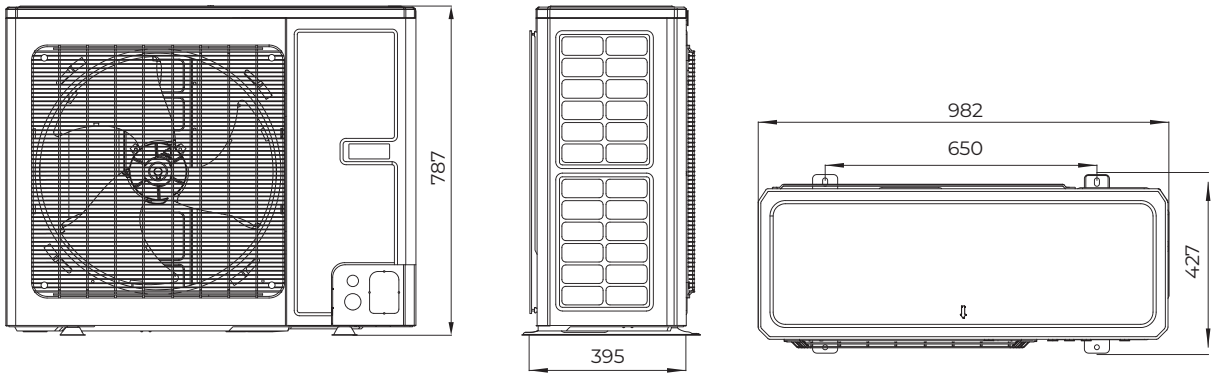
A. Additional refrigerant charging is not required if the pipe length is less than 10m, if the pipe length is more than 10m, additional refrigerant charging is required according to the table. For example: if a 10 kW model is installed at a distance of 25 m, you should add (25–10) x 16 = 240 g of refrigerant.
B. Rated capacity is based on standard pipe length and maximum allowable length is based on working length. The grease intake loop should be installed every 5–7 meters if the external unit is located above the internal unit (hydro module).
C. Each 90° bend is approximately equal to 0.5 meters of pipe length.

OVERALL DIMENSIONS OF OUTDOOR UNIT

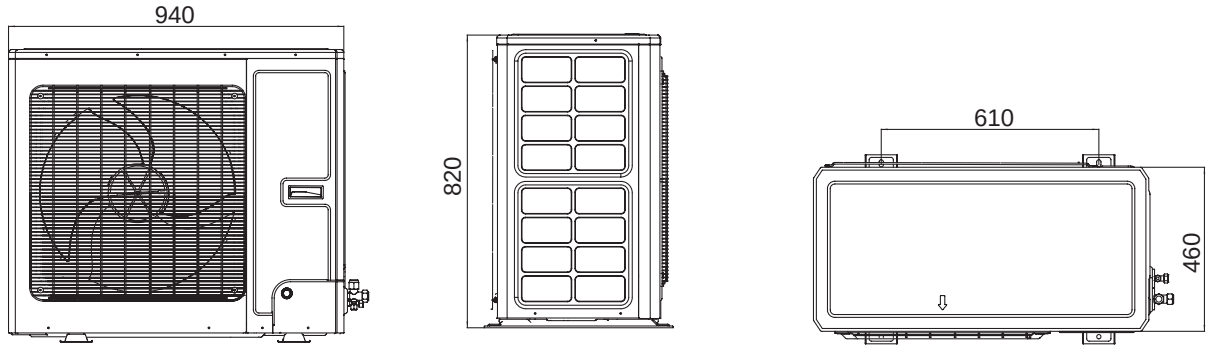
CH-HP4.0WTSIRK3 (O), CH-HP6.0WTSIRK3 (O)



CH-HP8.0WTSIRK3 (O), CH-HP10WTSIRK3 (O)



CH-HP12SIRM3(O) , CH-HP14SIRM3(O), CH-HP16SIRM3(O), CH-HP12SIRK3(O) , CH-HP14SIRK3(O), CH-HP16SIRK3(O)



UNITHERM MONOTYPE SERIES

INVERTER R32

+10°C ... +48°C

–25°C ... +35°C

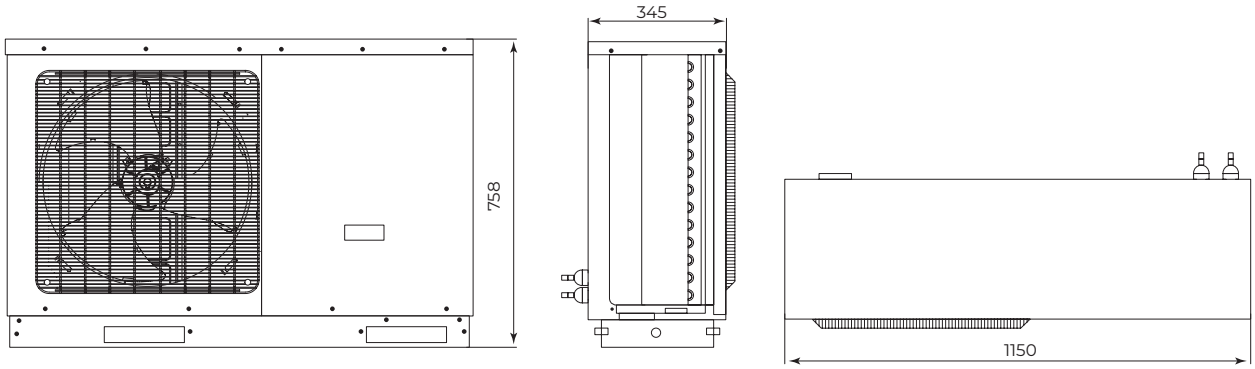
-30°C... +48°C | Max. water temperature | Energy Efficiency | Self-diagnostics | Auto-protection | Anti-corrosive Coating | 2-Stage Compressor | Timer | Wired Controller | BMS Control Systems | Intelligent Defrosting | Intelligent Control | Wi-Fi

The only DC-inverter unit with a built-in circulation pump that combines the functions of cooling, heating and DHW with an energy efficiency level of up to 5.0. R32 refrigerant and a two-stage compressor are used. For heating, the ambient temperature range is -25~35 °C. At the same time, the temperature range of the inlet water is 20~60 °C.

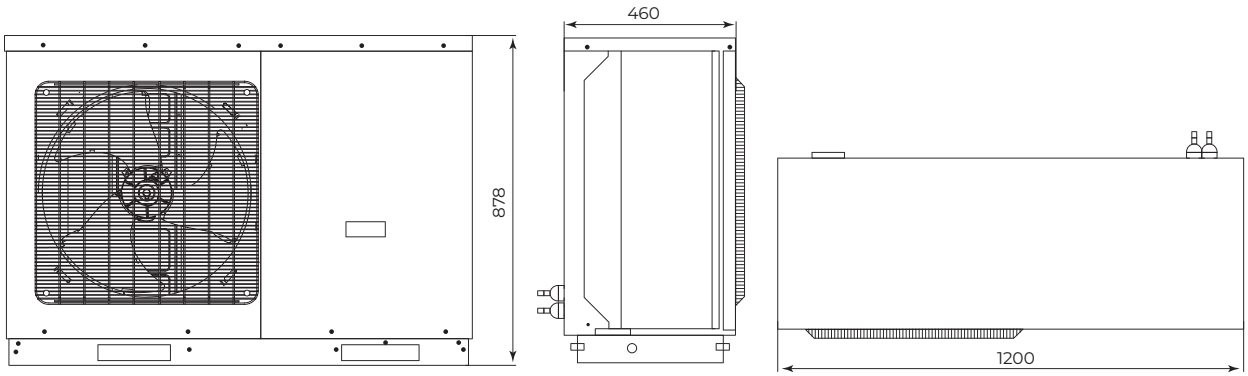
UNITHERM MONOTYPE: REVIEW

UNITHERM MONOTYPE: OVERALL DIMENSIONS

CH-HP4.0MIRK, CH-HP6.0MIRK, CH-HP8.0MIRK



CH-HP10MIRK, CH-HP12MIRK,CH-HP14MIRK, CH-HP16MIRK,
CH-HP10MIRM, CH-HP12MIRM, CH-HP14MIRM, CH-HP16MIRM



TECHNICAL PARAMETERS UNITHERM MONOTYPE

			CH-HP4.0MIRK	CH-HP6.0MIRK	CH-HP8.0MIRK	CH-HP10MIRK	CH-HP12MIRK
Capacity*	Cooling	kW	3,8	5,8	6,8	8,8	11
	Heating	kW	4	6	7,5	10	12
Power input*	Cooling	kW	0,82	1,32	1,55	1,96	2,56
	Heating	kW	0,78	1,2	1,63	2,15	2,64
EER			4,65	4,4	4,4	4,5	4,2
COP			5,1	5	4,6	4,65	4,55
Power supply			~220-240V/50 Hz/1 Ph				
Capacity**	Cooling	kW	3	4	5	7,8	9,5
	Heating	kW	4	6	7,5	10	12
Power input**	Cooling	kW	0,94	1,27	1,56	2,48	3,11
	Heating	kW	0,98	1,56	2	2,67	3,48
EER*2			3,2	3,15	3,2	3,15	3,05
COP*2			4,1	3,85	3,75	3,75	3,6
Refrigerant charge volume		kg	0,87			2,2	
Sound pressure level	Cooling	dB (A)	56			59	
	Heating	dB (A)	58			61	
Dimensions (W×D×H)		mm	1150×345×758			1200×460×878	
Weight		kg	96			151	
Water circulating pipe inlet/outlet			1" Male BSP				

			CH-HP12MIRM	CH-HP14MIRK	CH-HP14MIRM	CH-HP16MIRK	CH-HP16MIRM
Capacity*	Cooling	kW	11	12,5	12,5	14,5	14,5
	Heating	kW	12	14	14	15,5	15,5
Power input*	Cooling	kW	2,56	3,05	3,05	3,82	3,82
	Heating	kW	2,64	3,22	3,22	3,6	3,6
EER			4,2	4	4,2	3,7	4
COP			4,5	4,35	4,55	4,3	4,35
Power supply			~380-415V/50 Hz/3 Ph	~220-240V/50 Hz/1 Ph	~380-415V/50 Hz/3 Ph	~220-240V/50 Hz/1 Ph	~380-415V/50 Hz/3 Ph
Capacity**	Cooling	kW	9,5	12	12	13	13
	Heating	kW	12	14	14	15,5	15,5
Power input**	Cooling	kW	3,11	4,14	4,14	4,73	4,73
	Heating	kW	3,48	4,18	4,18	4,7	4,7
EER*2			3	2,9	3,05	2,75	2,9
COP*2			3,5	3,55	3,6	3,4	3,55
Refrigerant charge volume		kg	2,2				
Sound pressure level	Cooling	dB (A)	59				
	Heating	dB (A)	61				
Dimensions (W×D×H)		mm	1200×460×878				
Weight		kg	151				
Water circulating pipe inlet/outlet			1" Male BSP				

*Efficiency and performance measured under the following conditions: cooling - water inlet/outlet 23°C/18°C, outdoor temperature 23°C DB/24°C WB heating - water inlet/outlet 30°C/35°C, outdoor temperature 7 °C DB/6 °C WB
**Efficiency and performance measured under the following conditions: cooling - inlet/outlet water 12°C/7°C, outdoor air temperature 35°C DB/24°C WB heating - inlet/outlet water 40°C/45°C , outdoor air temperature 7°C DB/6°C WB

ELECTRICAL PARAMETERS OF MONOTYPE SERIES

	Power supply	Automatic switch (A)	The minimum cross-sectional area of the grounding wire (mm^2)	The minimum cross-sectional area of the power cable (mm^2)
CH-HP4.0MIRK	~220-240V/50 Hz/1 Ph	16	1,5	2*1.5
CH-HP6.0MIRK		16	1,5	2*1.5
CH-HP8.0MIRK		16	1,5	2*1.5
CH-HP10MIRK		32	4.0	2*4.0
CH-HP12MIRK		32	4.0	2*4.0
CH-HP14MIRK		40	4.0	2*4.0
CH-HP16MIRK		40	4.0	2*4.0
CH-HP12MIRM	~380-415V/50 Hz/3 Ph	16	1,5	4*1.5
CH-HP14MIRM		16	1,5	4*1.5
CH-HP16MIRM		16	1,5	4*1.5

NOTES:

A. If circuit breakers with leakage protection are used, the trip time should be less than 0.1 second and the leakage current should be 30 mA.
B. The diameter of the power cables selected above is determined based on the assumption that the distance from the distribution box to the device is less than 75 m. If the cables are laid at a distance of 75 to 150 m, then the diameter of the power cable must be increased.
C. The power source must meet the rated voltage of the device and must be connected to a separate electrical line.
D. All electrical work must be performed by professional technicians in accordance with local codes and ordinances.
E. Implement safety grounding. The grounding wire must be connected to a special grounding line in the building, the connection must be made by professional technicians.
F. The switch and power cord specifications in the table above are based on the maximum power (maximum current) of the device.
G. The power cable specifications in the table above refer to a stranded copper cable in a protective sheath (e.g. YJV cross-linked polyethylene insulated power cable) used at +40 °C and resistant to +90 °C (see IEC 60364-5-52). If the requirements are changed, the cables must be replaced according to the relevant standard.
H. The switch specifications in the table above refer to the switch with an operating temperature of +40 °C. In the event of a change in conditions, they must be changed in accordance with the current national standard.
I. An automatic switch must be installed in the power supply line. Automatic switch with disconnection of all poles. The opening distance between the contacts should be at least 3 mm.

Cooper&Hunter

SERIES

EASY THERM

EASY THERM
SERIES

INVERTER R32

–5°C … +46°C

–25°C … +43°C

-25°C... +46°C	Max. water temperature	Wide operation range	Energy Efficiency	Self-diagnostics	Auto-protection	Anti-corrosive Coating	DC-Inverter Compressor	Timer	Touch control management	Intelligent Defrosting	Intelligent Control	Wi-Fi

Universal multifunctional heat pump of the «air-water» type.
Designed for heating, cooling and hot water supply of your home.
The heat pump is able to meet the needs for heating from 8 kW to 16 kW, and for cooling – from 5 kW to 14 kW.

- Economical: low energy consumption, saving your money.
- Ergonomic: ultra-light indoor/outdoor unit.
- Reliable: works in heating mode even at the lowest temperature: up to – 25 °C.

High power outdoor units (14 kW .. 16 kW) are equipped with two fans. This significantly increases the ventilated surface of the heat exchanger of the outdoor unit.

NOMENCLATURE

CH-HP 16 SIRK-E

Cooper&Hunter

Heat pump

Nominal capacity (kW)

S – Split series

E – Easy Therm

Power supply:
K – ~220–240V/50 Hz/1 Ph
M – ~380–415V/50 Hz/3 Ph

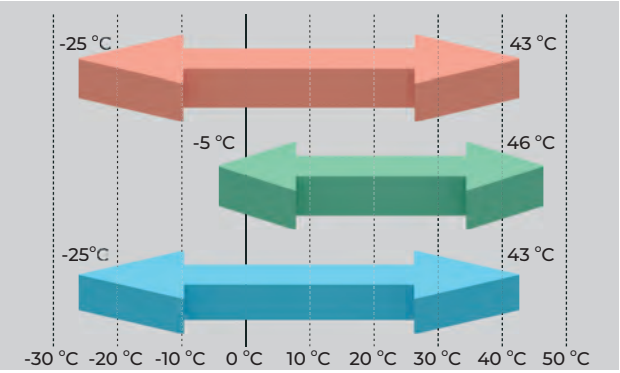
Refrigerant type: R32

DC-inverter

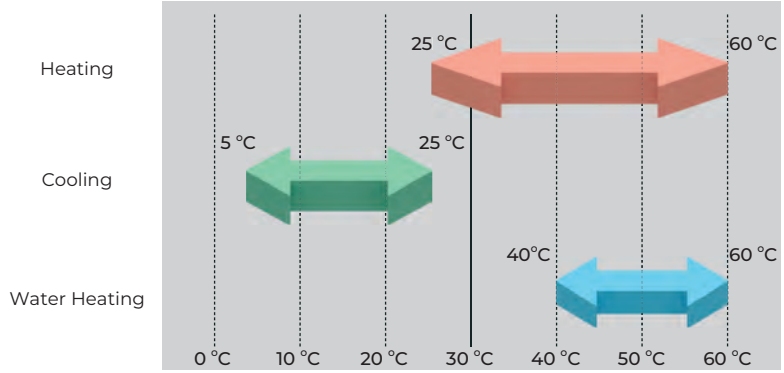
WIDE TEMPERATURE RANGE

HEATING | COOLING | WATER HEATING | HEATING + WATER HEATING | COOLING + WATER HEATING

Hot Water Temperature Range



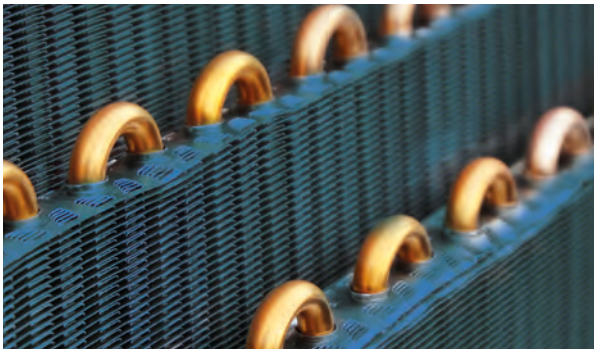
Wide Range of Operation Temperature



COMPRESSOR WITH DC-INVERTER TECHNOLOGY

- High pressure compressor has better performance at low ambient temperature. This ensures greater efficiency of the system and increases its flexibility.
- World-renowned component brands such as Mitsubishi and GMCC guarantee stable and safe operation.
- The rotary inverter DC compressor has a higher level
- efficiency at low power. This can be useful for compact spaces.
- Charged with R32 refrigerant, the latest and safest refrigerant with low environmental impact and negligible GWP.
- EASY THERM – safe and ecological heat pump.

HEAT EXCHANGER

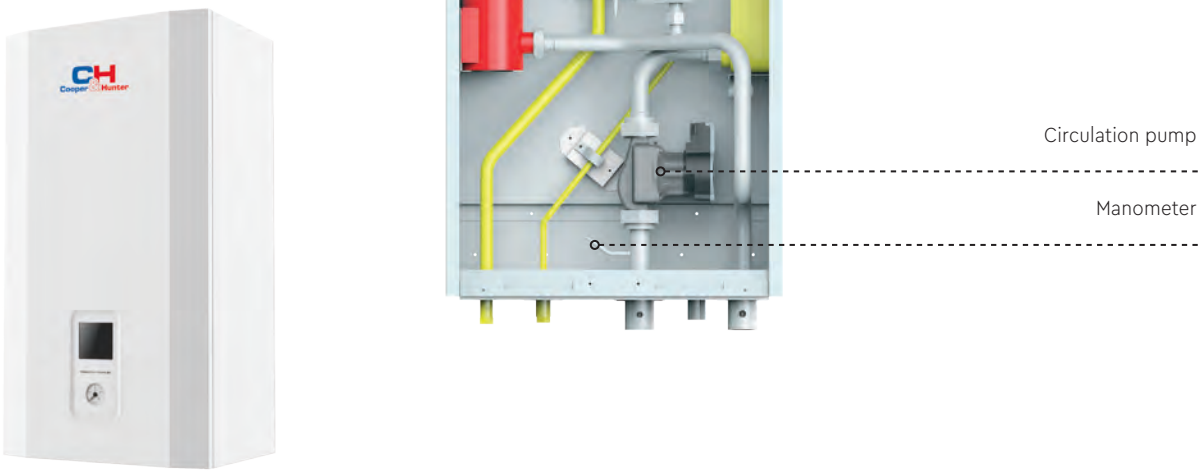


The increased size of the external heat exchanger allows efficient functioning at low external temperatures. This guarantees reliable long-term operation of the system as a whole. The use of such a heat exchanger significantly increases the possibilities of using a heat pump regardless of climatic zones.

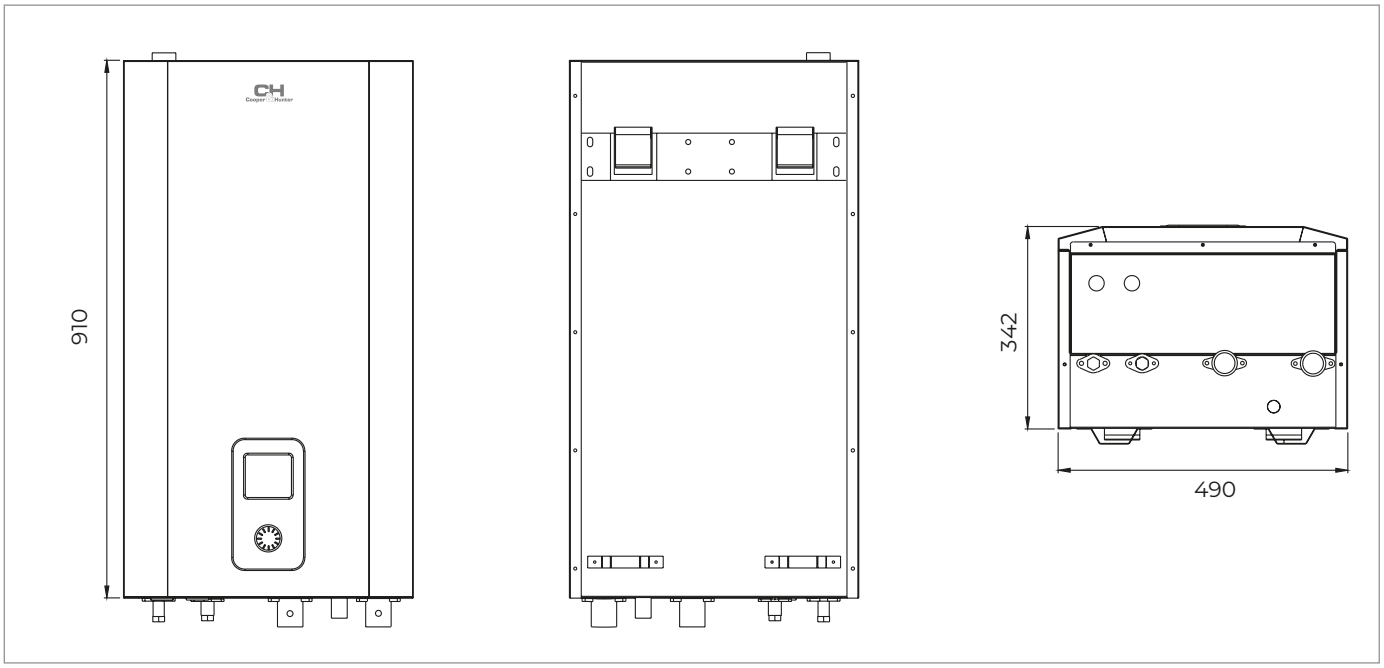
DC-FAN MOTOR

- Brushless DC (BLDC) fan motor. Compared to brushed motors, brushless motors have higher power, GWP and are significantly more durable.
- Brushless motors avoid the limitations of brushed motors, providing much higher power output, smaller size and weight, better heat dissipation and efficiency, a wider range of operating speeds, and very low electrical noise in operation.

REVIEW OF THE INDOOR UNIT

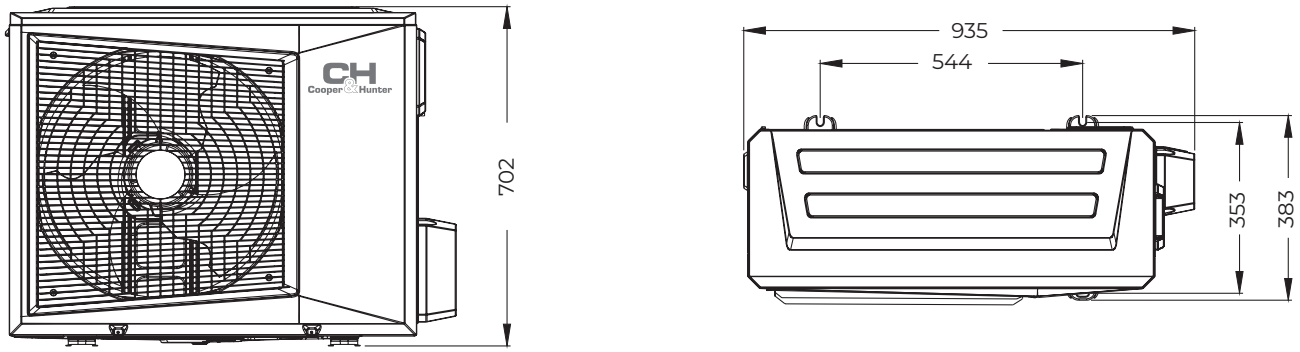


OVERALL DIMENSIONS OF INDOOR UNITS (5-16 KW)

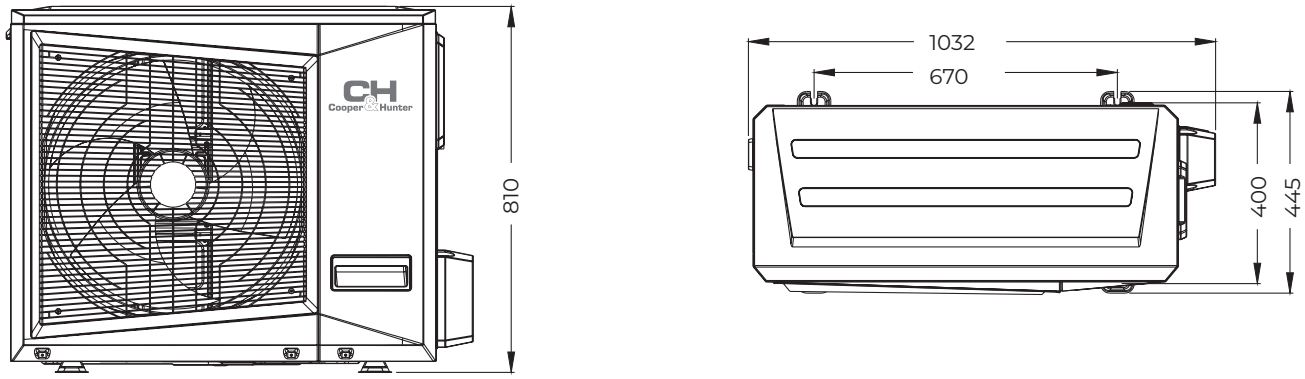


OVERALL DIMENSIONS OF OUTDOOR UNIT

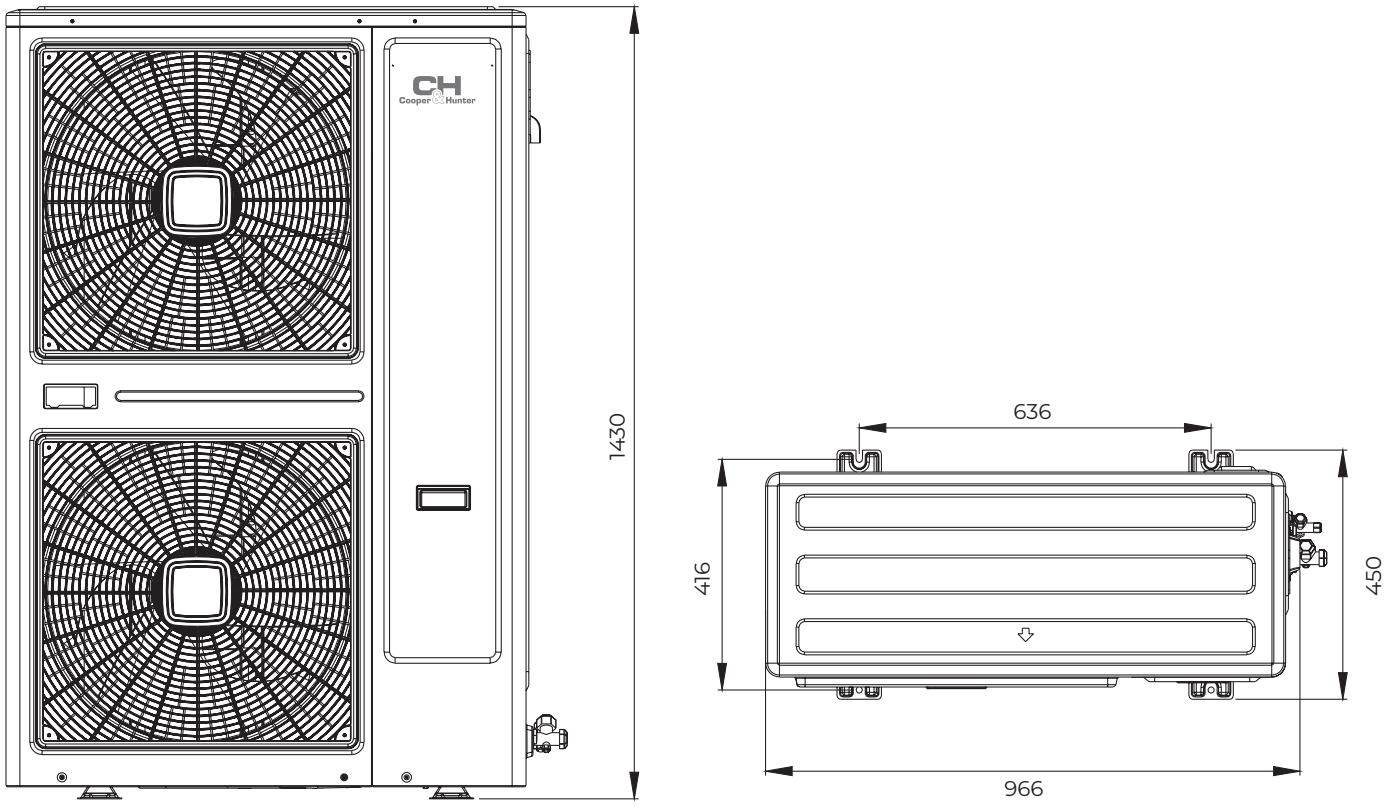
CH-HP5.0SIRK-E(O), CH-HP8.0SIRK-E(O)



CH-HP10SIRK-E(O), CH-HP12SIRK-E(O)

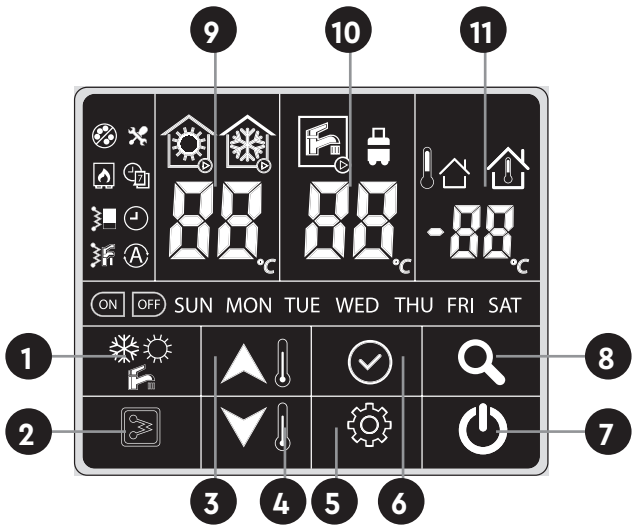


CH-HP14SIRM-E(O), CH-HP16SIRM-E(O)



The display design is easy to use and view.
As standard, it is equipped with a touch screen wired controller, which allows you to implement more functions and provides simpler management.
The controller can be removed from the hydromodule, and the hole is closed with the included cover.

TOUCH SCREEN: OPERATION AND FUNCTIONS



Functions	
1	Mode selection
2	Additional electric heater
3	Increase temperature
4	Decrease temperature
5	Settings
6	OK (conformation)
7	ON/OFF
8	Inquiry
9	Heating/cooling temperature
10	DHW temperature
11	Temperature outdoor / indoor.

	Antifreeze		Malfunction		Cooling mode ON
	Modular water heater		Weekly timer		Heating mode ON
	Tank heater		Clock		DHW mode ON
	Timer ON		Timer OFF		Outdoor temperature
	Cooling mode		Heating mode		Indoor temperature
	Day		Time/Temperature		DHW mode

TECHNICAL PARAMETERS

				CH-HP5.0SIRK-E(O)	CH-HP8.0SIRK-E(O)	CH-HP10SIRK-E(O)	CH-HP12SIRK-E(O)	CH-HP14SIRM-E(O)	CH-HP16SIRM-E(O)
Power supply			V / Hz / Ph	~220-240 V/50 Hz/1 Ph				~380-415 V/50 Hz/3 Ph	
Technical parameters									
Rated heating*	Capacity		kW	5	8	10	12	14	16
	Power input		kW	1.13	1.95	2.22	2.9	3.26	3.75
	COP		kW/kW	4.4	4.1	4.5	4.14	4.29	4.27
Rated cooling*2	Capacity		kW	4.2	6.5	8.5	10	13.8	15.2
	Power input		kW	1.47	2.32	3.04	3.7	4.9	5.4
	EER		kW/kW	2.85	2.8	2.8	2.7	2.82	2.81
Heating*3	Capacity		kW	5	8	10	12	14	16
	Power input		kW	1.56	2.5	2.94	3.53	4.12	4.71
	COP		kW/kW	3.2	3.2	3.4	3.4	3.4	3.4
Cooling*4	Capacity		kW	4.2	6.5	8.5	10	13.8	15.2
	Power input		kW	1.1	1.7	1.77	2.08	2.88	3.17
	EER		kW/kW	3.8	3.8	4.8	4.8	4.8	4.8
SCOP (average climate general) water temperature		outlet 35oC		A++	A++	A++	A++	A++	A++
		outlet 55oC		A++	A++	A++	A++	A++	A++
Max. power input			kW	2.86	4.2	5	5	5.5	6.4
Max. current input			A	13	19	22	22	10.5	12.1
Sound pressure level			dB (A)	64	66	68	68	68	70
Dimensions (DxHxW)			mm	935×702×382		1032×810×445		1014×1430×450	
Dimensions (DxHxW) with packing			mm	975×770×435		1075×875×495		1095×1545×485	
Net/gross weight			kg	43/46	55/58	56.3/61	63.5/68	124/138	124/138
Compressor		Brand		Mitsubishi	GMCC				
		Type		Rotary DC-inverter					
		Oil		FW68S/350ml	POE/670ml	POE/1000ml	POE/1000ml	POE/1000ml	POE/1400ml
Piping connections									
Liquid pipe			mm	Ø 9.52	Ø 9.52	Ø 9.52	Ø 9.52	Ø 9.52	Ø 9.52
Gas pipe			mm	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88
Max. piping length			m	20	20	20	50	50	50
Max. height difference	Outdoor unit upside		m	10	10	10	20	20	20
	Outdoor unit downside		m	10	10	10	20	20	20
Refrigerant	Type			R32					
	Volume		kg	1.1	1.4	3	3.1	3.6	3.8
	Throttle type		g	Additional charge of grams (Total length of the pipe - 5) m x 30 g/m					

Indoor unit						
				CH-HP8.0SIRK-E(I)	CH-HP12SIRK-E(I)	CH-HP16SIRK-E(I)
Power supply			V / Hz / Ph	~220-240 V/50 Hz/1 Ph	~220-240 V/50 Hz/1 Ph	~220-240 V/50 Hz/ 1 Ph
Max. power input			kW	3.6	3.6	3.6
Max. current input			A	17	17	17
Sound pressure level			dB (A)	30	32	32
Indoor unit dimensions (W×D×H)			mm	490×910×340		
Packing dimensions (W×D×H)			mm	620×1105×425		
Net/gross weight			kg	47/55	48/56	48/56
Water circuit	Piping connection diameter	Outlet	mm	DN32		
		Inlet	mm	DN32		
	Safety valve		kPa	600		
	Drainage pipe diameter		mm	DN20		
	Expansion tank	Volume	L	2		
		Max. water pressure	kPa	800		
		Pre. pressure	kPa	150		
	Water side heat exchanger	Type		Plate type	Plate type	Plate type
		Volume	L	0.658	1.22	1.22
	Water pump	Brand		wilo	wilo	wilo
		Model		Para 25/9	Para 25/9	Para 25/9
		Pump head	m	9	9	9
Back-up E-heater	Capacity		kW	3 kW	3 kW	3 kW
	Step			1	1	1
	Max. power input		kW	3 kW	3 kW	3 kW
	Max. current input		A	13.6 A	13.6 A	13.6 A

NOTES

1. Nominal heating conditions: water consumption 0.172 m^3/(h·kW), ambient temperature 7 °C DB, inlet/outlet water temperature 30/35 °C.
2. Nominal cooling conditions: water consumption 0.172 m^3/(h·kW), ambient temperature 35 °C DB, inlet/outlet water temperature 12/7 °C.
3. Heating conditions: water consumption 0.172 m^3/(h·kW), ambient temperature 7 °C, inlet/outlet water temperature 40/45 °C.
4. Cooling conditions: water consumption 0.172 m^3/(h·kW), ambient temperature 35 °C, inlet/outlet water temperature 23/18 °C.

Cooper&Hunter

SERIES

INVERTER MODULAR HEAT PUMP

INVERTER MODULAR HEAT PUMPS

FOR HEATING AND COOLING

R32 FREON

INVERTER

−15˚C … +52˚C

−20˚C … +40˚C

OPTIONAL

XE73-25/G

-20°C... +52°C | Max. water temperature | Wide Operation Range | Self-diagnostics | Auto-protection | Golden Fin Coating | DC-Inverter Compressor | Timer | Copper internal grooves | Touch Screen Control | Intelligent Defrosting | Intelligent Control | BMS Control Systems

- Highly efficient and energy-saving, all models equiped with DC-inverter compressors and fans;
- Low noise level and wide operation range;
- Easy installation, simultaneous connection to 16 blocks;
- Remote control;
- High level of comfort and energy saving;
- Reliable protection systems;
- Balanced load for each compressor

NOMENCLATURE

CH-HP 35 UIMRM

Cooper&Hunter

Heat pump

Nominal capacity (kW)

U – UNIVERSAL – heating + cooling

Power supply:
K – ~220-240V/50 Hz/1 Ph
M – ~380-415V/50 Hz/3 Ph

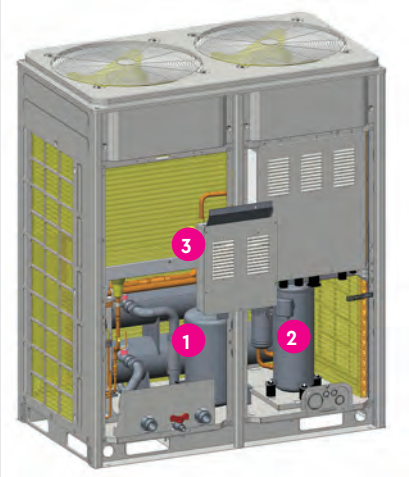
Refrigerant type:
R – R32
N – R410A

Monoblock

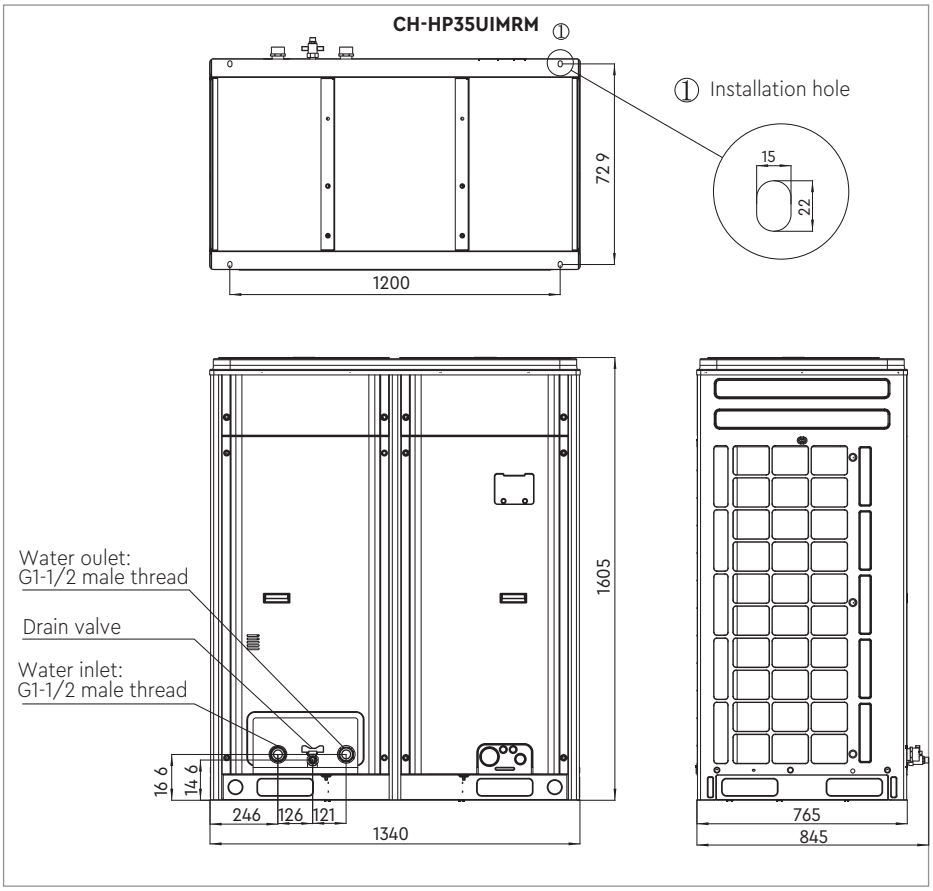
DC-inverter

OVERALL DIMENSIONS

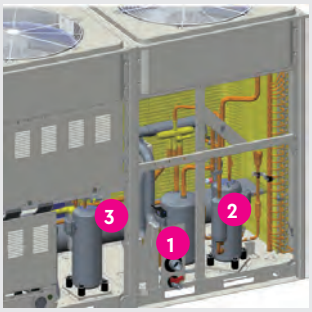
Review



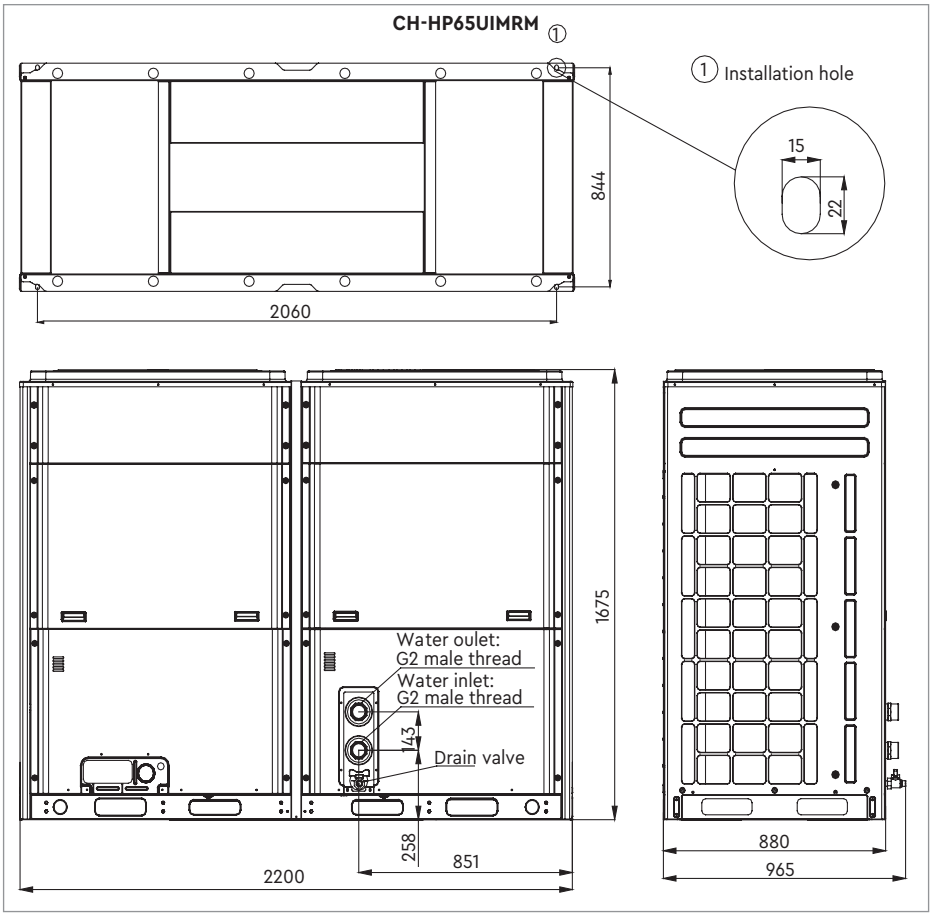
1. Vapor-liquid separator
2. Compressor
3. A shell-and-tube heat exchanger

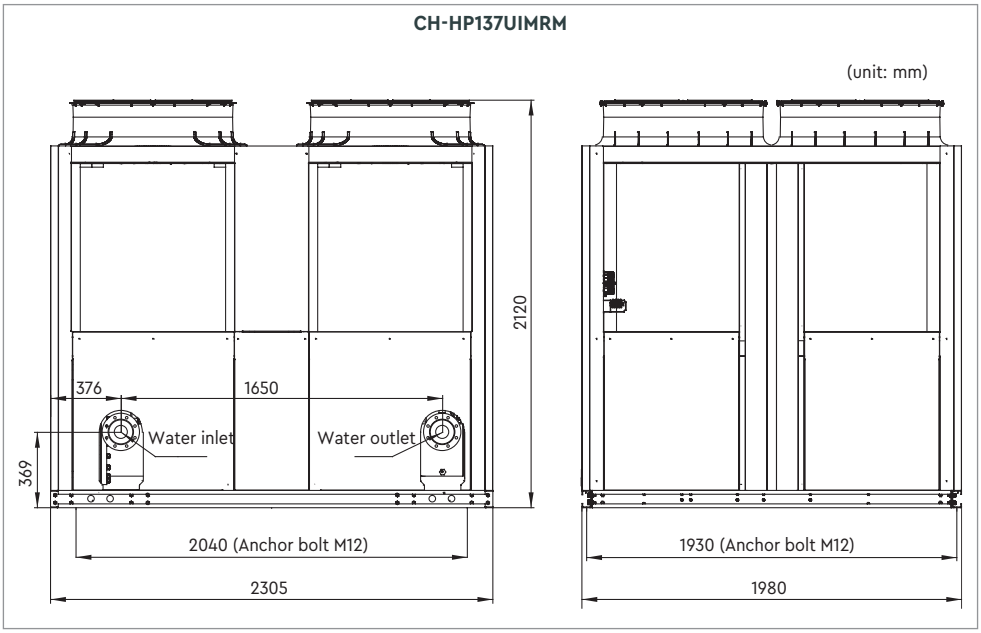


Review



1. Two vapor-liquid separators
2. Two compressors
3. A shell-and-tube heat exchanger





Review

1. Four vapor-liquid separators
2. Four compressors
3. A shell-and-tube heat exchanger

TECHNICAL PARAMETERS

			CH-HP35UIMRM	CH-HP65UIMRM	CH-HP137UIMRM
Cooling capacity		**kW**	32	60	130
Heating capacity		**kW**	35	65	137
Rated cooling capacity		**kW**	11.7	20.8	43.9
Rated heating capacity		**kW**	10.6	19.9	41
Sound pressure level		**dB (A)**	62	68	69
Power supply			~380-415V/50 Hz/3 Ph		
Operation control			The microcomputer implementing fully automatic control, displaying the operation state and giving an alarm		
Safety systems			High-pressure and low-pressure safety cut-out, high-discharge temperature cut-out, freeze-up control, overflow control, phase safety device, water flow safety control, pressure sensor cutout, temperature sensor cutout, four-way valve safety control, compressor overheating control		
Compressor	**Type**		Fully enclosed rotor-type compressor		
	Quantity		1	2	4
	Starting mode		With variable frequency		
Water-side heat exchanger			High-efficiency shell-and-tube heat exchanger		
Water flow volume		**m³/h**	5.5	10.32	22.36
Water resistance		**kPa**	80	55	60
The highest bearing pressure		**MPa**	4.6		
Connection method			By external threads		By flanges
Piping inlet/outlet			1 1/4 Male BSP		DN80
Air side	**Air-side heat exchanger**		High-efficiency finned coil heat exchanger		
	Rated power input of fan	**W**	750×2		750×4
	Airflow volume	**m³/h**	2×0.63×10⁴	2×1.2×10⁴	4×1.55×10⁴
Outline dimensions	**Width**	**mm**	1340	2200	2305
	Depth	**mm**	845	965	1980
	Height	**mm**	1605	1675	2120
Net weight		**kg**	405	686	1286
Operating weight		**kg**	445	755	1413

ELECTRICAL PARAMETERS

	Power supply	Min. sectional area of the power cable (mm²)			Capacity of the air switch (A)
		Live line	Neutral line	ground line	
CH-HP35UIMRM	~380-415V/50 Hz/3 Ph	6	6	6	32
CH-HP65UIMRM	~380-415V/50 Hz/3 Ph	16	16	16	63
CH-HP137UIMRM	~380-415V/50 Hz/3 Ph	35	35	35	150

Cooper&Hunter

SERIES

MODULAR HEAT PUMP

MODULAR HEAT PUMPS

FOR HEATING OR DHW

R410A FREON

ON/OFF

- Simple installation;
- Compact dimensions;
- A wide range of operating temperatures: -26 °C ... +46 °C;
- Fast water heating;
- Reliable and high-performance DANFOSS spiral compressor with a high COP value;
- Anti-corrosion treatment of the heat exchanger;
- Low noise level;
- The possibility of installing up to 16 units in one system with a capacity of up to 768 kW;
- Group control.

OPTIONAL

CF122

NOMENCLATURE

CH-HP 20 CMFNM

Cooper&Hunter

Heat pump

Nominal capacity (kW)

C – CIRCULATING HEAT PUMP TYPE

Power supply:
K – ~220–240V/50 Hz/1 Ph
M – ~380–415V/50 Hz/3 Ph

Refrigerant type:
R – R32
N – R410A

On/Off compressor type

M – Monoblock

TECHNICAL PARAMETERS

			CH-HP20CMFNM	CH-HP30CMFNM	CH-HP40CMFNM
DHW mode	Heating capacity	kW	20.22	29.77	40.19
	Heating power input	kW	8.52	8.87	13.27
	Heating current input	A	13.9	16.9	26
	Water flow volume	L/h	602	775	1140
Power input		kW	10.1	13.2	19
Current input		A	20	24	38
Set temperature		°C	By default at 50°C. 30°C~60°C adjustable (water tank temperature)		
Power supply			~380-415V/50 Hz/3 Ph		
Refrigerant	Name		R410A		
	Ex-factory charge	kg	4.2	4.2	5.9
Compressor	Type		Totally-enclosed scroll compressor		
	Quantity		1		
Heat exchanger	Air side		Finned type heat exchanger		
	Water side		Shell-and-tube heat exchanger		
Fan	Type		Low noise axial flow fan		
	Air discharge type		Top air discharge		
	Airflow (ambient temperature 25°C)	m^3/h	11400		12400
Hydraulic characteristics	Circulating water flow	m^3/h	4.8	6.2	9.2
	Water pressure	kPa	70	130	70
	Highest bearing pressure	MPa	0.8	0.8	0.8
	Piping inlet/outlet	inch	1-1/4 Male BSP		2 Male BSP
Unit dimensions	W×D×H	mm	930×800×1605		1340×800×1605
Package dimensions	W×D×H	mm	1010×865×1775		1420×880×1775
Noise level		dB(A)	≤67	≤67	≤67
Net weight		kg	243	260	358

WATER TANK MAXIMUM TEMPERATURE

Ambient temperature/°C	Tank temperature/°C	Ambient temperature/°C	Tank temperature/°C	Ambient temperature/°C	Tank temperature/°C
-26	53	-1	58	24	60
-25	53	0	58	25	60
-24	53	1	58	26	59
-23	53	2	58	27	59
-22	53	3	59	28	58
-21	54	4	59	29	58
-20	54	5	59	30	58
-19	54	6	59	31	57
-18	54	7	60	32	57
-17	54	8	60	33	57
-16	55	9	60	34	56
-15	55	10	60	35	56
-14	55	11	60	36	56
-13	55	12	60	37	55
-12	55	13	60	38	55
-11	56	14	60	39	55
-10	56	15	60	40	54
-9	56	16	60	41	54
-8	56	17	60	42	54
-7	57	18	60	43	53
-6	57	19	60	44	53
-5	57	20	60	45	53
-4	57	21	60	46	52
-3	57	22	60		
-2	58	23	60		

ELECTRICAL PARAMETERS

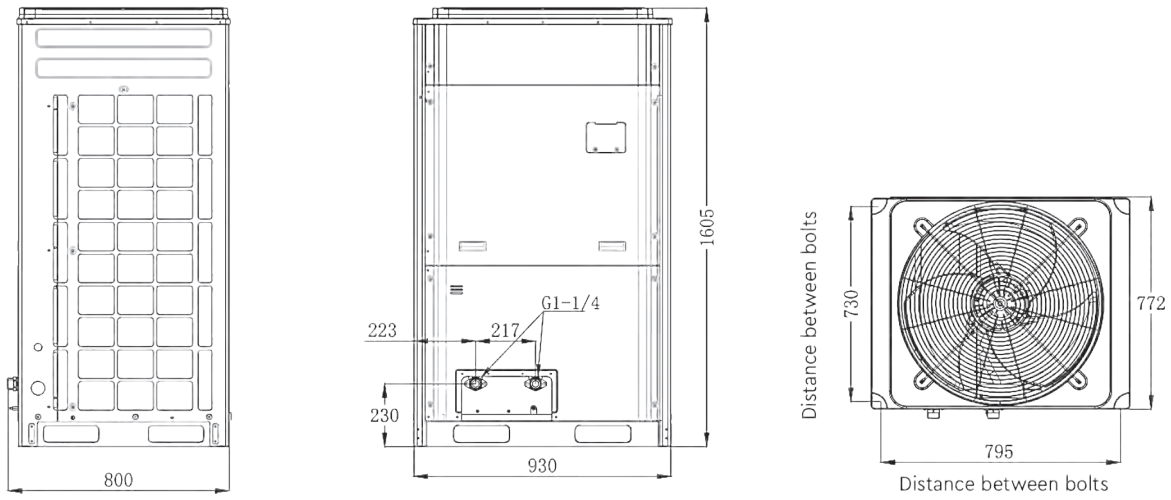
	Power supply	Min cross-sectional area of power cord (mm²)			Automatic switch capacity (A)
		Live wire	Neutral wire	Grounding wire	
CH-HP20CMFNM	~380-415V/50 Hz/3 Ph	2.5	2.5	2.5	25
CH-HP30CMFNM	~380-415V/50 Hz/3 Ph	4	4	4	32
CH-HP40CMFNM	~380-415V/50 Hz/3 Ph	6	6	6	40

1. The circuit breaker and the power cable are selected according to the maximum power of the device (maximum current).
2. If the length of the power cable exceeds 15m, please increase the cross-sectional area of the power cable appropriately to prevent excess current.
3. A water heater with a heat pump belongs to type I electrical appliances, which must be safely grounded.
4. The yellow-green wire inside the unit is the ground wire. Do not connect the ground wire to the following locations:

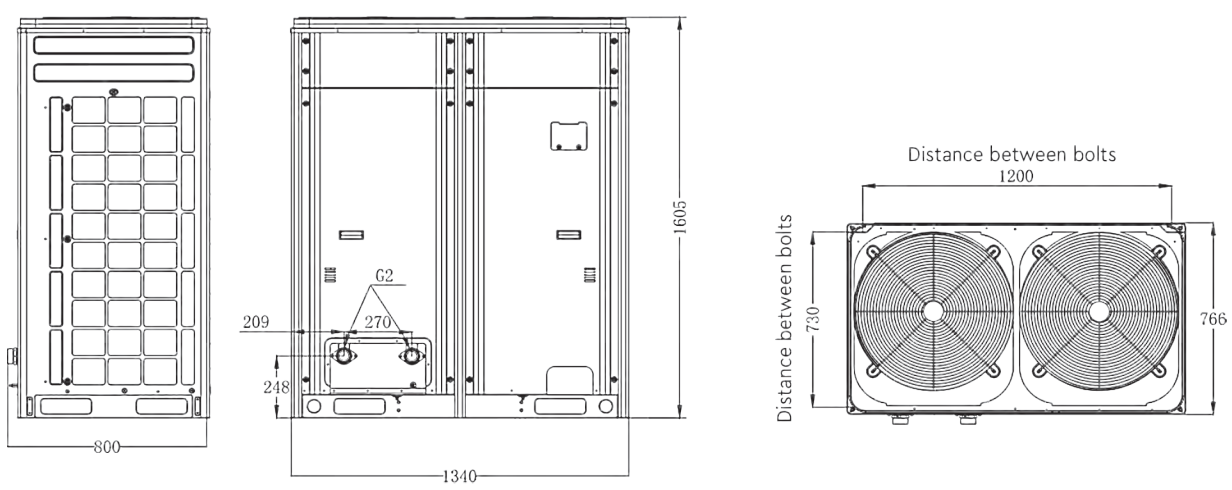
   a. water pipe **b.** gas pipe **c.** blow pipe **d.** unreliable places

OVERALL DIMENSIONS

CH-HP20CMFNM CH-HP30CMFNM



CH-HP40CMFNM



EVI TECHNOLOGY

SERIES: ECOPOWER
EVIPOWER PREMIUM INVERTER
EVIPOWER INVERTER
EVIPOWER

New R32 air-to-water heat pump for highly efficient heating/cooling and hot water supply with EVI technology.
The body is made of ultra-light and ultra-strong plastic, in combination with environmentally friendly refrigerant R32, that is an ideal solution for the implementation of heating and cooling needs.

NOMENCLATURE

CH-HP 22 UIMPZM

Cooper&Hunter

Heat pump

Nominal capacity (kW)

U – UNIVERSAL – Heating + Cooling

I – DC-inverter
_- ON/OFF

Power supply:
K – ~220–240V/50 Hz/1 Ph
M – ~380–415V/50 Hz/3 Ph

Refrigerant type:
R – R32
N – R410A
Z – R290

P – with circulation pump
_- without circulation pump

M – Monoblock

HEAT EXCHANGER

Highly efficient tubular heat exchanger, the shape of which does not contain welding seams, which reduces the effect of corrosion.

DC-MOTOR

Special electric motor of fan improves COP and thermal performance.

FINNED HEAT EXCHANGER

Copper-aluminum heat exchanger with fins with heat exchange increased by 25%.

COMPRESSOR

A special ZW-type spiral compressor with EVI technology guarantees reliable and stable operation of the system. (only for CH-HP 42 UMNM, CH-HP 84 UMNM)

FAN

The aerodynamic shape of the fan blades ensures dynamic balance, low noise and correct turbulent air flow.

ELECTRONIC EXPANSION VALVE

Advanced control logic of EEV ensures stable temperature control.

5-INCH COLOR DISPLAY

The multifunctional display provides simple and intuitive control and maintenance.

INTELLIGENT CONTROL BOARD

Range of power source fluctuations: 185–265 V.

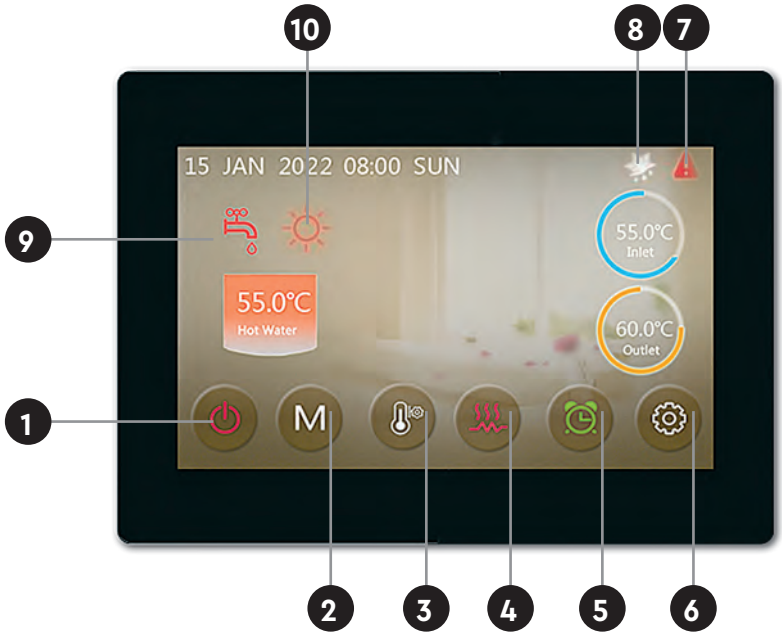
STANDARD CONTROLLER
OPERATION AND FUNCTIONS OF THE TOUCH SCREEN

The latest 5-inch color display smart touch controller with a lot of different functions.

These include remote control functions such as BMS (Building Management System) and 4G MmN (Management and Monitoring Network).

Multilingual menu that allows you to specify and adjust temperature modes of operation: inlet water temperature, switching of operation modes, such as cooling/heating/hot water supply and mixed operation mode.

Accurate temperature control up to 0.5 °C. Indication of the temperature graph using the «Curve key» button. Various schedule timer functions, such as weekly time programming. In addition, the controller has standard functions that help the user himself, such as screen unlock, auto mode/mute. Powerful operating modes, failure log, color display calibration.



		Function
1	On/Off	Red means ON and gray means OFF
2	Mode	Can be selected one of five modes: DHW, heating mode, cooling mode, DHW+heating mode or DHW+cooling.
3	Temp. Setting	Temp. setting – setting the set temperature.
4	Fast heating	Fast heating – start of fast heating. This key will be displayed during heating.
5	Timer Setting	Timer settings – set a timer. White means off, while green means on.
6	Setup	Settings – Check device status, time, factory settings, temperature curve, timer settings and mute settings.
7	Fault	Fault – This icon flashes whenever an error occurs. After pressing this icon, the display will enter the error recording menu.
8	Defrost	Defrosting – the unit is in defrosting mode when this icon is displayed.
9	Hot Water Mode	Hot water mode – the unit is in DHW mode when this icon is displayed.
10	Cooling Mode	Cooling Mode – The device is in cooling mode when this icon is displayed.

Note: The controller may display temperature in °F or °C depending on the heat pump model.

WATER KIT

HYDROMODULE FOR SERIES:

ECOPOWER
EVIPOWER PREMIUM INVERTER
EVIPOWER INVERTER

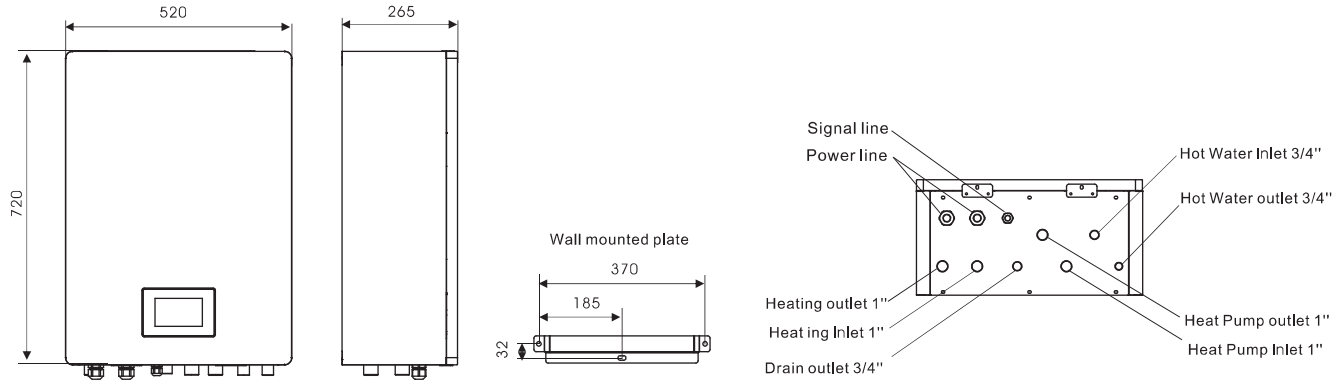
- Thanks to the technology of stepless electronic regulation of the heating speed, the most accurate temperature control is achieved.
- Reliable operation is ensured by GRUNDFOS TM DC-inverter circulation pumps.
- The relief valve can automatically open and close according to the set working pressure.
- A well-thought-out combination of WATER KIT elements made it possible to create one of the thinnest cases on the market.
- Unlike a traditional heat pump without a WATER KIT, a system with a WATER KIT allows you to automatically switch the heat pump between heating, DHW and cooling modes.
- The automatic feed valve maintains accurate pressure and guarantees reliable operation.

TECHNICAL PARAMETERS

		CH-HB10WK-B (W)
Power supply		~220-240V/50 Hz/1 Ph
Heating capacity	**kW**	10
Cooling capacity	**kW**	8
Domestic hot water	**l/h**	300
Water temperature range	**°C**	5~60
Water connection	**inch**	1" Male BSP
Heating side connection	**inch**	1" Male BSP
Water supply side connection	**inch**	3/4" Male BSP
Heating side pressure (Max.)	**bar**	3
Water supply side pressure (Max.)	**bar**	10
Heating circulation pump		Grundfos DC pump
Water height rate	**m**	10,5
Water supply circulation pump		Grundfos DC pump
Water height rate	**m**	7,5
Expansion tank	**l**	6
Electric heating power	**kW**	0~6
Sound pressure level	**dB (A)**	35
Weight	**kg**	30
Dimension(LxHxD)	**mm**	520×720×265

OVERALL DIMENSIONS

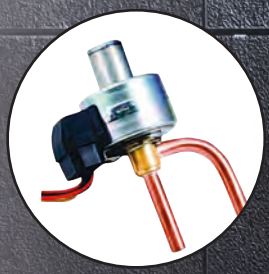
CH-HB10WK-B (W)



CENTRALIZED MANAGEMENT RS485 PROTOCOL

ECO POWER has a separate centralized control system through the RS485 port, the port is designed to control each individual device.

ELECTRONIC EXPANSION VALVE



Thanks to EEV, the system can instantly adjust the refrigerant flow to ensure stability.

ERGONOMIC DESIGN WITH HIDDEN FASTENING

The ECOPOWER series features a stylish and innovative casing design with no visible screws on the surface.

CIRCULATION WATER PUMP

The built-in circulation pump simplifies maintenance and service of the heat pump.

SWEP PLATE HEAT EXCHANGER

Thin air channels are formed between adjacent plates, through which heat exchange is carried out, which is more efficient than in traditional heat exchangers.

PRESSURE SENSOR

The pressure sensor can monitor the system pressure and send a signal to the main board to protect the device.

ASA MATERIAL

The body is made of ASA plastic, which provides high resistance to corrosion and atmospheric influences and ensures a long service life.

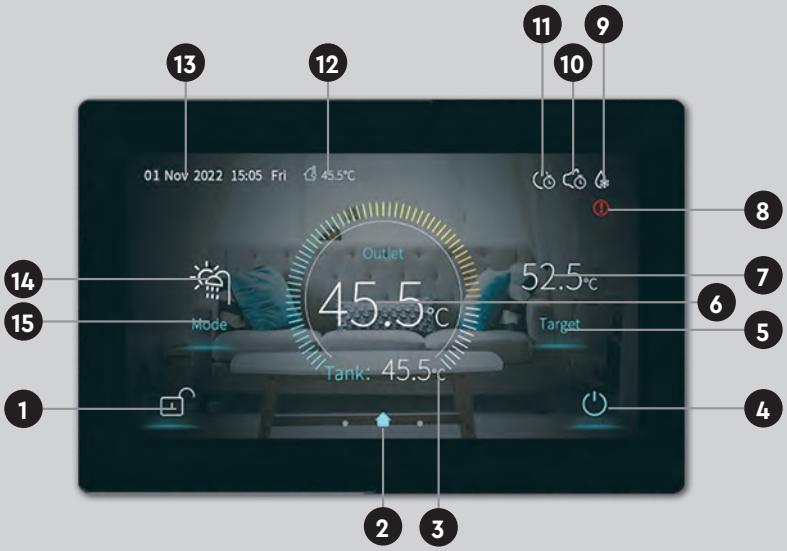
OPERATION AND FUNCTIONS OF THE TOUCH SCREEN

(STANDARD FOR ECOPOWER SERIES)

Universal multifunctional control touch screen with many intelligent functions, such as weekly timer, building management system, 4G control and monitoring network, operation modes (cooling/heating/DHW), screen lock/unlock, temperature curve indication, fault log, calibration display, etc. Display of the desired/current temperature up to 0.5 ℃ allows you to control the water temperature with high accuracy.

The possibility of combining different types of work modes:

1. Hot water (DHW)
2. Heating
3. Cooling
4. DHW + Heating
5. DHW + Cooling

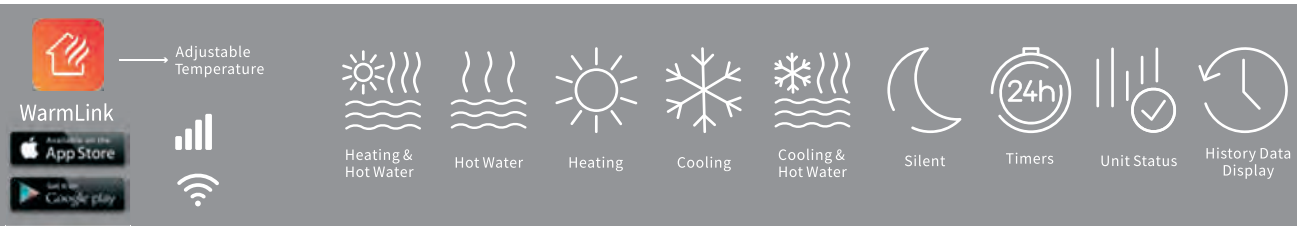


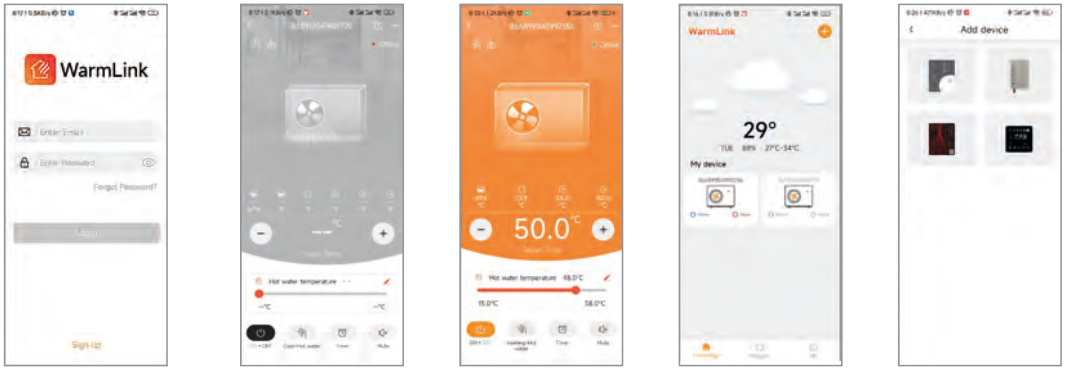
	Name	Function
1	Lock screen	Press this key to lock the screen. White means that the mode is not activated, blue means that the mode is activated.
2	HOME	Main menu page.
3	Water tank temperature	Indication of water tank temperature. The device is in DHW mode when this icon is displayed; Otherwise, this icon will not be displayed.
4	ON/OFF	Press this key to turn the device on or off. Blue means that the device is on, and white means that it is off.
5	Temperature setting	Press this key to set the desired temperature.
6	Outlet water/Room temperature	he leaving water temperature or room temperature is displayed. If H25=0 appears, the leaving water temperature will be displayed. If H25=1, room temperature will be displayed.
7	Target temperature	Setting the target (set) temperature of the device.
8	Fault	Malfunction (error). Fault indication. This icon blinks when an error occurs and a list of errors will appear on the display when this icon is pressed.
9	Defrosting icon	Will be displayed when the device is defrosting.
10	Silent timer	Quiet mode timer function. The indicator turns on only after the function is activated.
11	Timer	Enable/disable timer of the device. Displayed only after the function is activated.
12	Outdoor temperature	Indication of external temperature (ambient temperature).
13	Time setting	Setting of the time. System time display.
14	Current mode	Indication of the current mode.
15	Mode	Mode selection. Five modes can be selected by pressing the Mode button: DHW, heating, cooling, DHW + cooling, DHW + heating.

CONTROL: SMART CONTROL FAMILY

Intelligent and remote control of the device gives users many conveniences. Adjusting the temperature, switching modes and setting the timer can be done on your smartphone via 4G mobile internet.

In addition, you can check your electricity consumption and fault records anytime, anywhere, again with the help of 4G mobile internet.

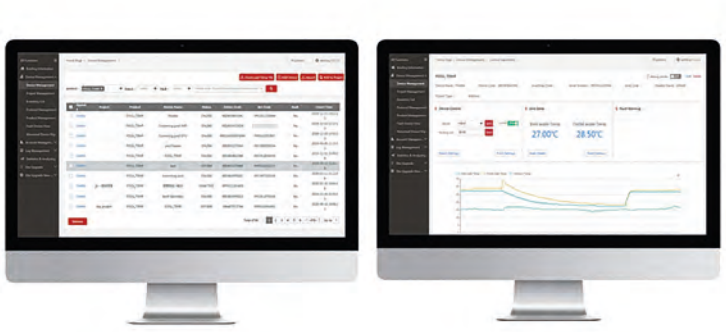




WEB PLATFORM

Central remote control can be realized by DTU or Wi-Fi, effectively saving maintenance/system status notification costs.

An error message is displayed on the responsible personnel's computer. When an error is detected on the screen, the service department/representative of C&H must be notified.



ECOPOWER
SERIES

R290 FREON

70°C

FOR HEATING OR COOLING AND DHW

+15°C ... +43°C

–25°C ... +43°C

-25°C... +43°C | Max. water temperature +70°C | Energy Efficiency A+++ | Self-diagnostics | Auto-protection | Anti-corrosive Coating | DC-Inverter Compressor | Timer 24h | Wired Controller | Intelligent Defrosting | Intelligent Control | 4G | BMS Control Systems

- The maximum water heating temperature is up to 70°C.
- DC-inverter technology.
- The minimum sound pressure level is 37.2 dB.
- LCD SMART Display with a new generation 5-inch touch screen.
- 4G MMN (Management and Monitoring Network).
- Weather-dependent mode.
- IoT cloud platform.
- Wi-Fi (optional).
- Smart Pro 360 option: cascade control of up to 4 heat pumps, control of heat circuits, monitoring of energy efficiency.

SUPER HIGH LEVEL OF ENERGY EFFICIENCY A+++

The ECOPOWER series of air-to-water heat pumps is designed to meet the strict requirements of efficient, stable operation with low noise.

The combination of ecological freon R290 with inverter technologies makes ECOPOWER a unique heat pump with energy efficiency class A+++ at a heat carrier temperature of 55 oC. Using this level of technology significantly reduces energy bills for users.

ECO REFRIGERANT R290

R290
FREON

To reduce CO_2 emissions into the environment and curb global warming, Cooper&Hunter uses R290 freon. Refrigerant R290 is recognized as the refrigerant with the greatest development potential in the industry and contributes to the reduction of CO_2 emissions into the Earth's atmosphere.

QUIET OPERATION

Cooper&Hunter is dedicated to creating an ultra-quiet, efficient and environmentally friendly heat pump. The ECOPOWER series introduces significant noise reduction technologies, each product is repeatedly tested and optimized.

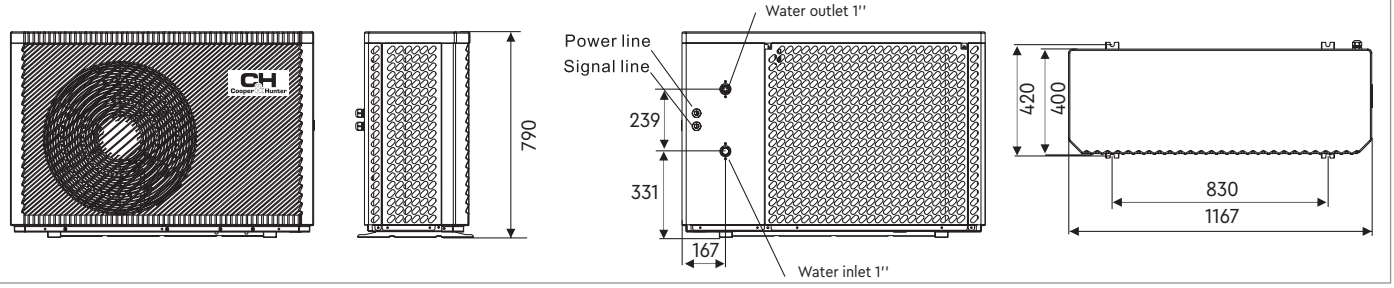
TECHNICAL PARAMETERS

		CH-HP09UIMPZK	CH-HP15UIMPZK	CH-HP15UIMPZM	CH-HP22UIMPZM
Heating capacity	**kW**	1,20–5,72	3,60–10,50		4,20–15,00
Cooling capacity	**kW**	3,10–8,90	5,40–14,95		8,00–22,00
Power input for cooling	**kW**	0,65–2,40	1,12–4,47		1,80–7,30
Power input for heating	**kW**	0,65–2,10	1,05–3,85		1,60–6,90
Max. power input	**kW**	3	5,3		9
Max. current input	**A**	13,5	24,5	10,5	15,8
Power supply		~220–240V/50 Hz/1 Ph		~380–415V/50 Hz/3 Ph	
Compressor type		Rotary			
Circulation pump		DC			
Number of fans		1			2
Sound pressure level (1m)	**dB(A)**	42	43	44	47
Piping inlet/outlet	**inch**	1" Female			
Water flow	**m3/h**	1	1.7		2.9
Heat exchanger resistance	**kPa**	40	45	20	65
Circulation pump pressure	**m**	7,5	5,5	7,5	12,5
Refrigerant charge volume	**kg**	0,5	0,85		1,3
Dimensions (W×D×H)	**mm**	1167×407×795	1287x458x928		1250×540×1330
Net weight	**kg**	80	160		202

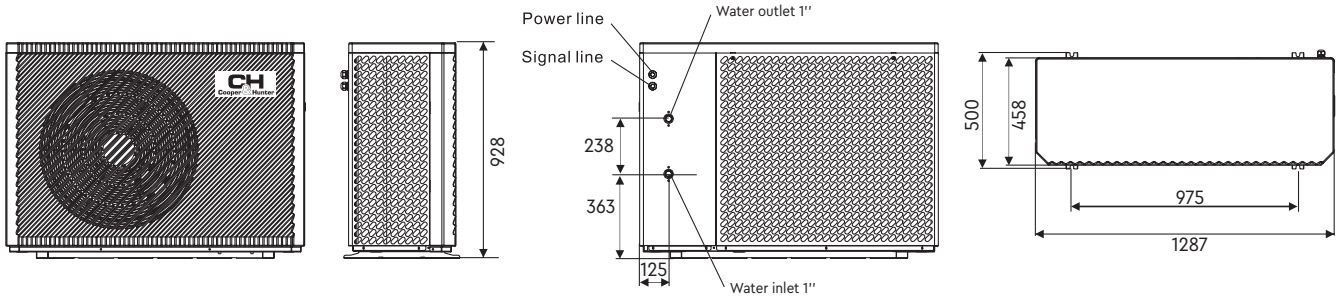
Cooling: external temperature DB / WB 35 °C / 24 °C outlet water temperature 7 °C. inlet water temperature 12 °C.
* Heating: external temperature DB / WB 7 °C/ 6 °C outlet water temperature 35 °C, inlet water temperature 30 °C.

OVERALL DIMENSIONS

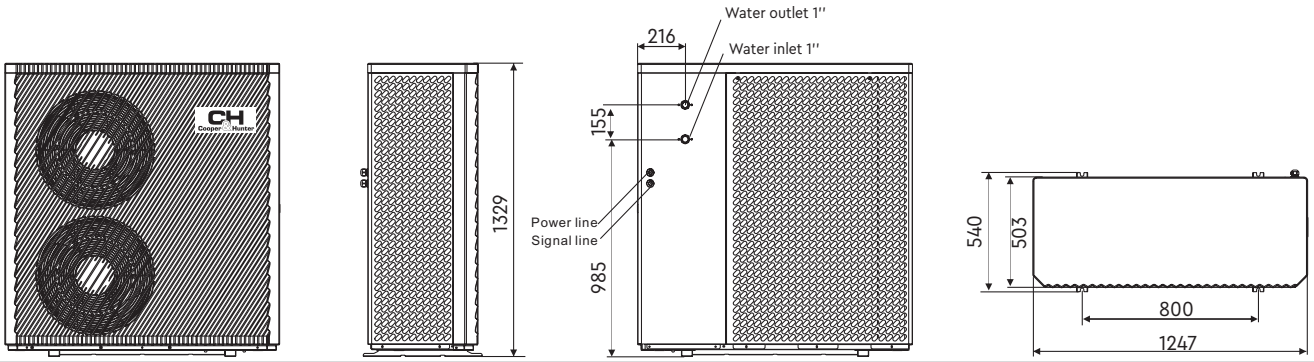
CH-HP09UIMPZK



CH-HP15UIMPZK (M)



CH-HP22UIMPZM



EVIPOWER PREMIUM INVERTER SERIES

FOR HEATING OR COOLING AND DHW

+60°C

+15°C ... +43°C

–25°C ... +43°C

-25°C... +43°C | Max. water temperature | Energy Efficiency | Self-diagnostics | Auto-protection | Anti-corrosive Coating | EVI Compressor | Timer | Wired Controller | Intelligent Defrosting | Intelligent Control | 4G | BMS Control Systems

- Five modes of operation: heating, cooling, DHW, heating + DHW, cooling + DHW;
- Patented and certified heat exchanger: does not freeze for 20 hours at a temperature of -20 °C;
- Operating conditions: up to -25 °C ambient temperature for heating; up to +45 °C for cooling;
- EVI DC-inverter technology;
- 4G MMN (Management and Monitoring Network);
- Intelligent defrosting;
- Quiet mode.

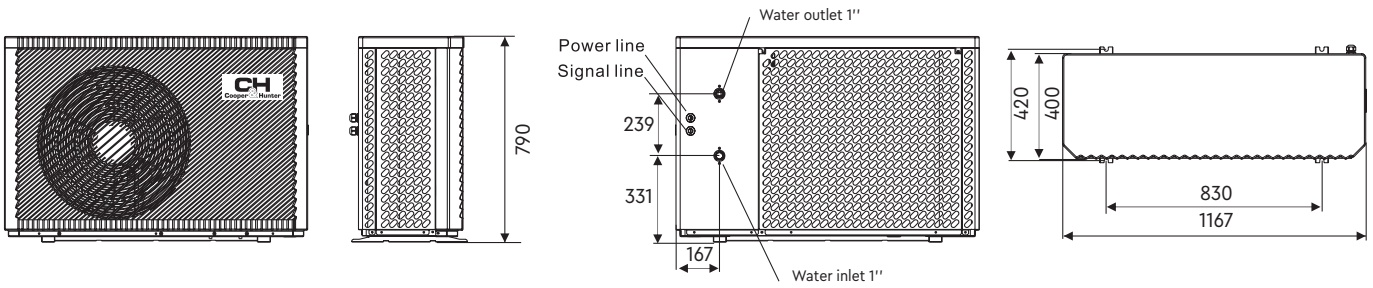
TECHNICAL PARAMETERS

		CH-HP08UIMPRK-P	CH-HP12UIMPRM-P	CH-HP23UIMPRM-P
Power supply		~220-240V/50 Hz/1 Ph	~380-415V/50 Hz/3 Ph	
Heating Capacity Range	**kW**	2.30~8.20	3.80~12.50	7.00~23.00
Heating Power Input Range	**kW**	0.50~1.84	0.80~2.95	1.27~5.20
Cooling Capacity Range	**kW**	1.56~6.00	2.20~10.00	6.30~18.40
Cooling Power Input Range	**kW**	0.63~2.36	1.10~3.80	1.63~7.05
Max. power input	**kW**	2.90	4.95	8.30
Max. current input	**A**	13.0	8.0	15.0
Water flow	**m^3/h**	1.0	1.7	2.9
Water Pressure Drop	**kPa**	20	30	45
Circulation Pump Water Head	**m**	7.5	5.5	10.2
Piping inlet/outlet	**inch**		1	
Circulation Pump Water Head	**m**	1,1	1,8	1,35
Sound pressure level (1m)	**dB(A)**	37~48	39~52	42~54
Number of fans		1		2
Fan speed	**RPM**		600	
Unit Dimensions (LxWxH)	**mm**	1167×407×795	1287×458×928	1250×540×1330
Shipping Dimensions (LxWxH)	**mm**	1300×485×940	1420×540×1080	1380×570×1480
Net weight	**kg**	90	132	208

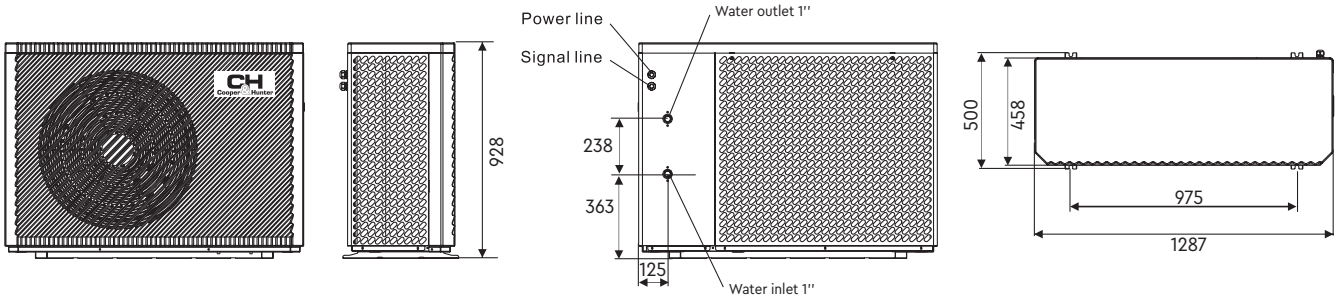
Cooling: external temperature DB / WB 35 °C / 24 °C outlet water temperature 7 °C, inlet water temperature 12 °C.
* Heating: external temperature DB / WB 7 °C/ 6 °C outlet water temperature 35 °C, inlet water temperature 30 °C.

OVERRALL DIMENSIONS

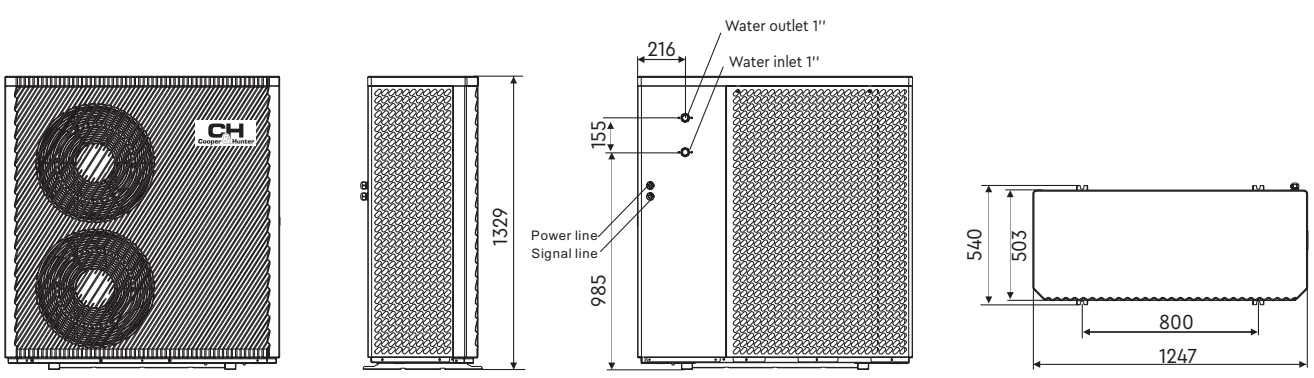
CH-HP08UIMPRK-P



CH-HP12UIMPRM-P



CH-HP23UIMPRM-P



EVIPOWER INVERTER
SERIES
FOR HEATING OR COOLING AND DHW

+60°C

+15°C ... +43°C

−25°C ... +43°C

-25°C... +43°C | Max. water temperature | Energy Efficiency | Self-diagnostics | Auto-protection | Anti-corrosive Coating | EVI Compressor | Timer | Wired Controller | Intelligent Defrosting | Intelligent Control | 4G | BMS Control Systems

- The maximum water heating temperature is up to 60°C.
- Using EVI DC-inverter technology.
- Availability of LCD SMART Display with a new generation 5-inch touch screen.
- Support 4G MMN (Management and Monitoring Network).
- Weather-dependent mode function.
- Integration with IoT cloud platform.

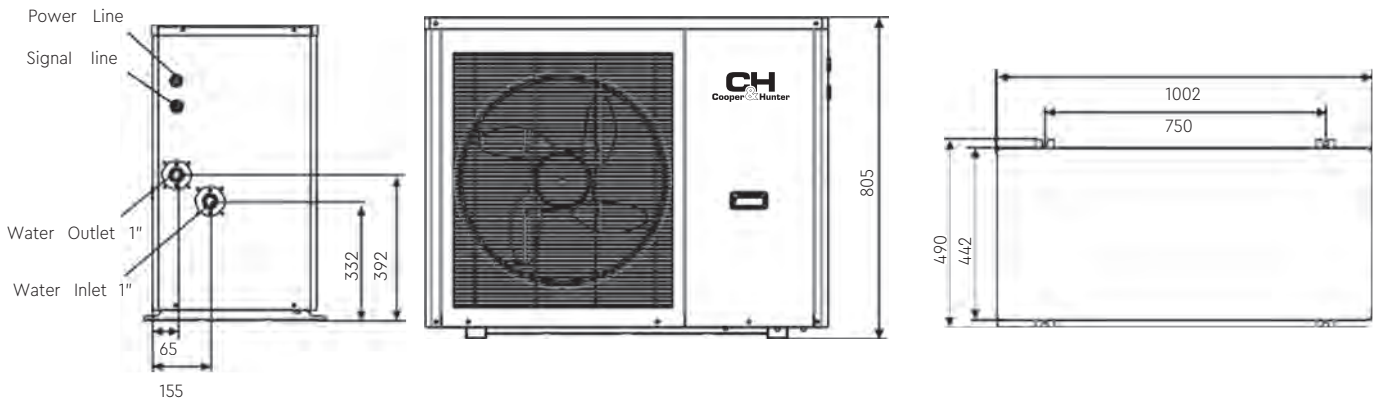
TECHNICAL PARAMETERS

		CH-HP08UIMPRK	CH-HP12UIMPRM	CH-HP20UIMPRM	CH-HP24UIMPRM
Cooling capacity	**kW**	1.98~6.10	3.22~11.30	5.50~15.50	6.4~15.8
Heating capacity	**kW**	2.29~8.25	4.70~12.50	7.00~20.50	10.00~25.00
Power input for cooling	**kW**	0.70~2.22	1.27~4.64	1.50~6.00	3.4~6.8
Power input for heating	**kW**	0.63~1.81	1.08~3.44	1.50~6.00	2.80~5.70
Max. power input	**kW**	2.9	4.64	7.20	12.8
Max. current input	**A**	13.0	7.6	12.0	20.5
Power supply		~220–240V/50 Hz/1 Ph	~380–415V/50 Hz/3 Ph		
Compressor type		Rotary			
Circulation pump		DC			
Number of fans		1		2	
Sound pressure level (1m)	**dB(A)**	37~54	42~55	44~58	53~59
Piping inlet/outlet	**inch**	1" Female		1 1/4" Female	
Water flow	**m^3/h**	1	1.7	2.9	4.2
Heat exchanger resistance	**kPa**	28	35	65	68
Circulation pump pressure	**m**	5.5	5.5	12.5	21
Refrigerant charge volume	**kg**	1,3	1,6	2	3,4
Dimensions (W×D×H)	**mm**	1002×490×805	953×460×915	997×437×1315	1178×450×1605
Net weight	**kg**	90	100	155	206

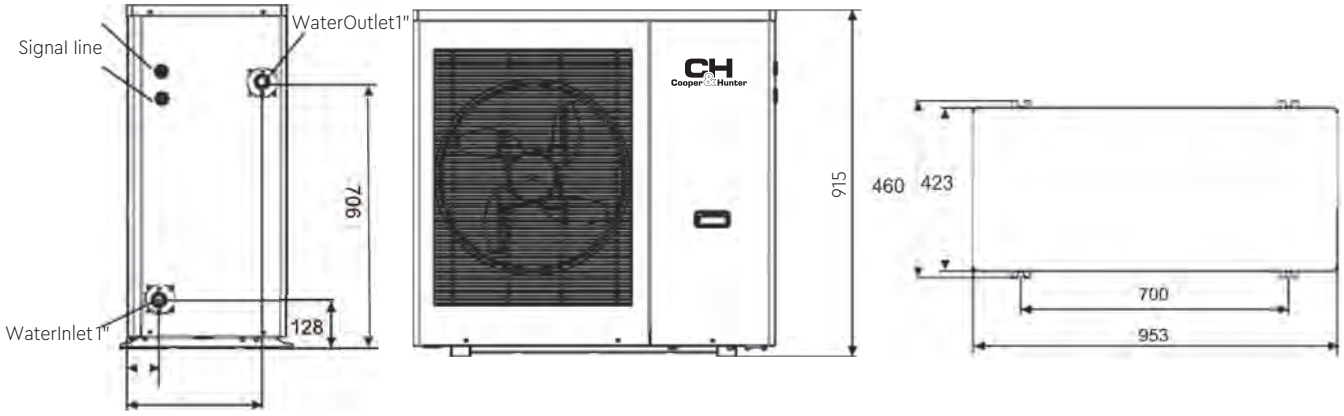
Cooling: external temperature DB / WB 35 °C / 24 °C outlet water temperature 7 °C, inlet water temperature 12 °C.
* Heating: external temperature DB / WB 7 °C/ 6 °C outlet water temperature 35 °C, inlet water temperature 30 °C.

OVERALL DIMENSIONS

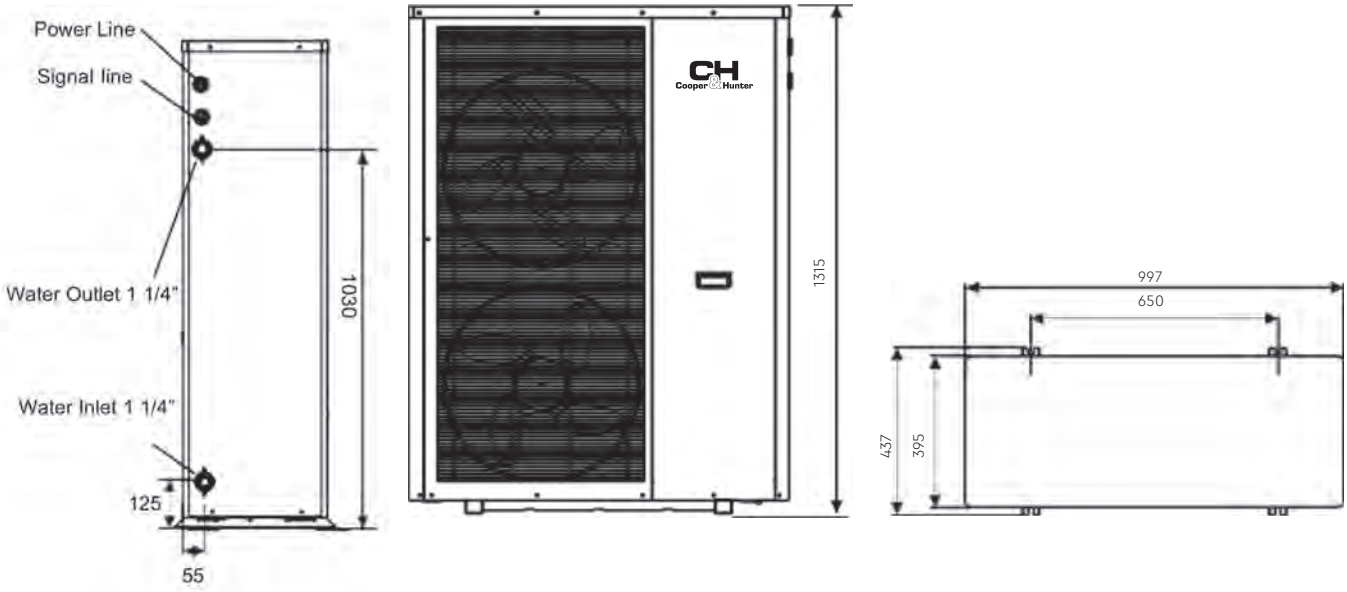
CH-HP08UIMPRK



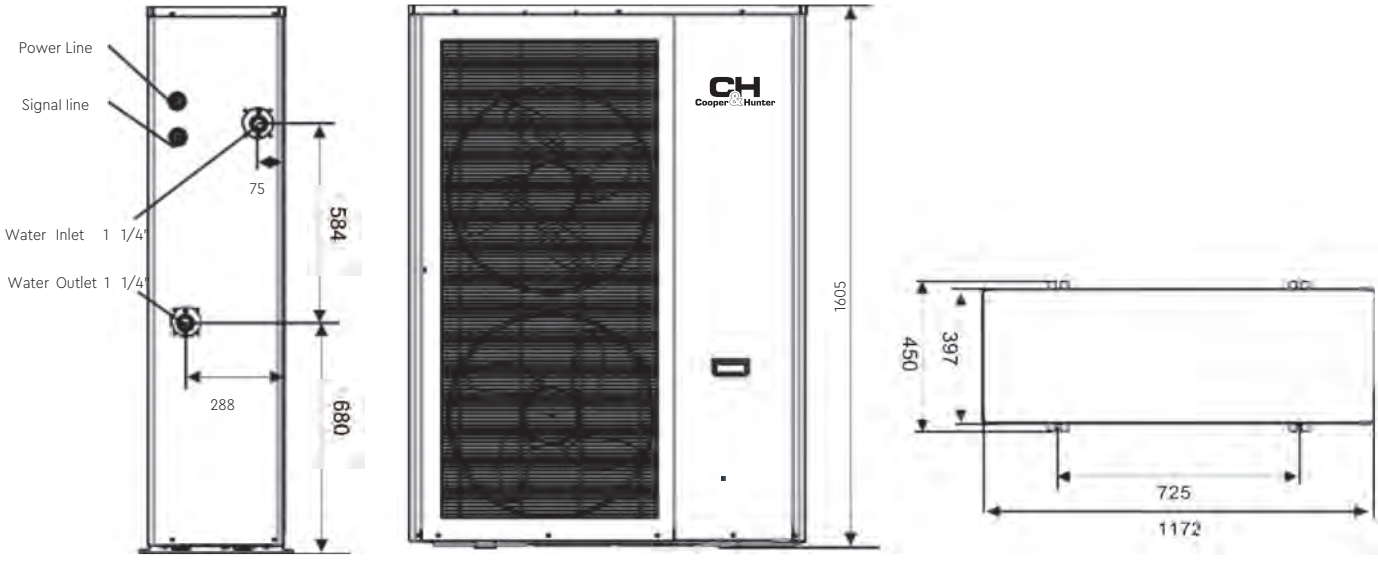
CH-HP12UIMPRM



CH-HP20UIMPRM



CH-HP24UIMPRM



EVIPOWER
SERIES
FOR HEATING OR COOLING AND DHW

+60°C | EVI | R410A FREON

ON/OFF

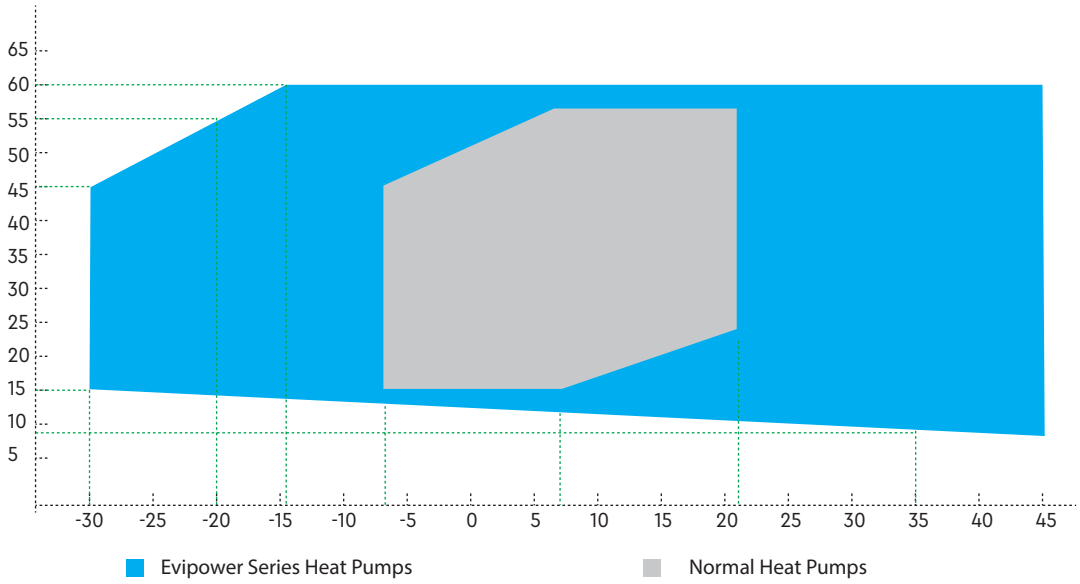
-30°C... +43°C | Max. water temperature | Energy Efficiency | Self-diagnostics | Auto-protection | Golden Fin Coating | EVI Compressor | Timer | Wired Controller | Intelligent Defrosting | Intelligent Control | 4G | BMS Control Systems

- Five operating modes: heating, cooling, DHW, heating + DHW, cooling + DHW;
- Convenient wired control touch screen;
- Protection against freezing;
- Protection of the compressor from overheating;
- 4G MMN (Management and Monitoring Network).

+21˚C ... +43˚C

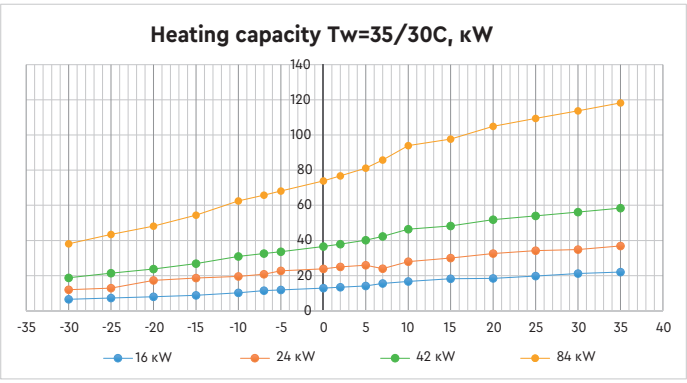
–30˚C ... +43˚C

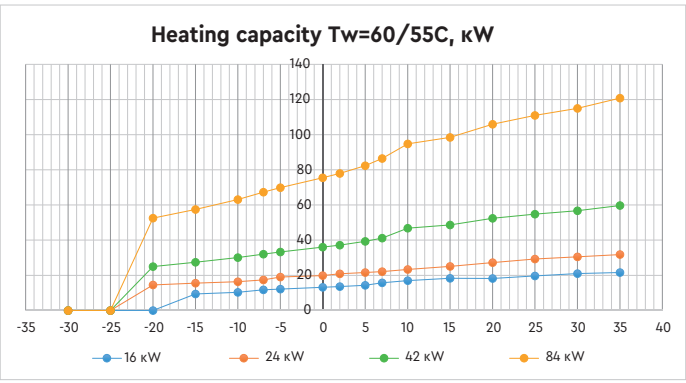
OPERATION RANGE IN HEATING MODE

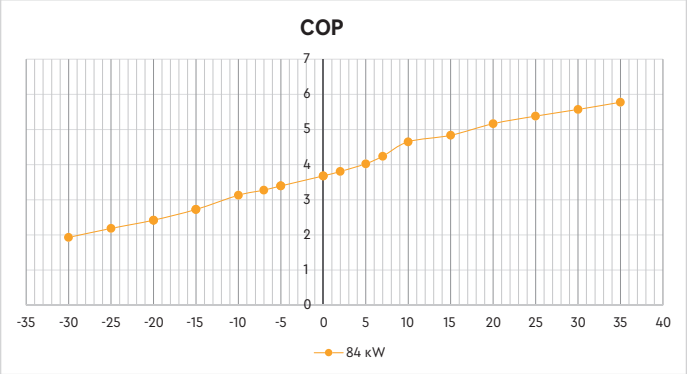


Heating water temperature up to 60 °C.
Thanks to EVI technology, the EVIPOWER series has a wide operating temperature range. It enables high water temperatures (55–60 °C) even in cold climates from -20 °C to 43 °C and can operate safely and reliably at ambient temperatures down to -30 °C, thanks to the unique heat exchanger and EVI technology .

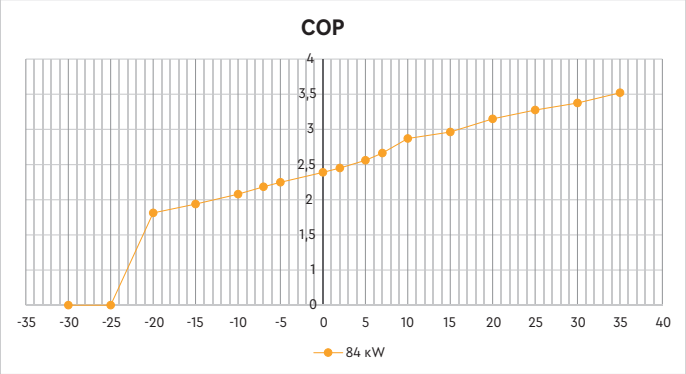
TECHNICAL PARAMETERS IN HEATING MODE







T water= +35/30°C



T water = +60/55°C

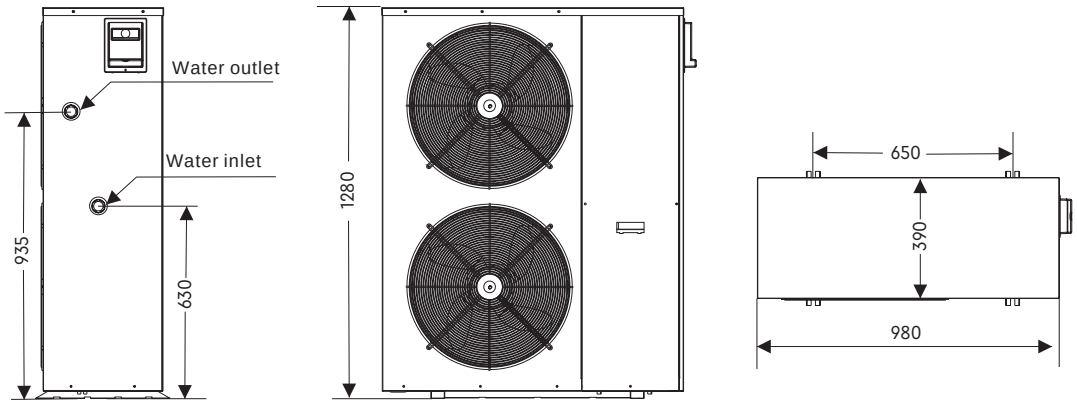
TECHNICAL PARAMETERS

		CH-HP16UMNM	CH-HP24UMNM	CH-HP42UMNM	CH-HP84UMNM
Heating capacity [3]	kW	15.4	24	42	84.0
Power input for heating [3]	kW	3.79	5.97	10	20.0
Heating capacity [2]	kW	15.7	22.6	43	86.0
Power input for heating [2]	kW	5.3	8.9	14.5	29.0
DHW capacity [1]	kW	18.5	29.1	50	100.0
DHW power input [1]	kW	4.14	7.25	10.8	22.0
Cooling capacity [4]	kW	10.8	17	27.3	59.0
Power input for cooling [4]	kW	4.7	7.84	10.6	21.9
Power input	kW	8.1	10.2	16.7	33.5
Current input	A	13.5	18.7	25.8	61.5
Power supply		~380–415 V / 50 Hz / 3 Ph			
Number of compressors		1	2	1	2
Compressor type		EVI Rotary		EVI Scroll	
Number of fans		2		1	2
Fan power input	W	75×2	150×2	1100×1	1100×2
Fan speed	RPM	800		900	
Noise level	dB(A)	55	58	68	73
Piping inlet/outlet	inch	1 1/4	1 1/2	1 1/2	DN80 Flange
Water flow	m^3/h	2.7	4.1	8.5	17
Water Pressure Drop	kPa	29	43	60	65
Unit Dimensions (L/W/H)	mm	955×435×1315	1175×450×1588	1415×860×1870	2170×1070×2100
Packing Dimensions (L/W/H)	mm	1070×435×1340	1225×430×1600	1490×1000×2050	2300×1230×2240
Net weight	kg	132	215	430	778
Gross weight	kg	147	229	458	814
Refrigerant R410A charge	kg	3	2.2×2	9	9×2

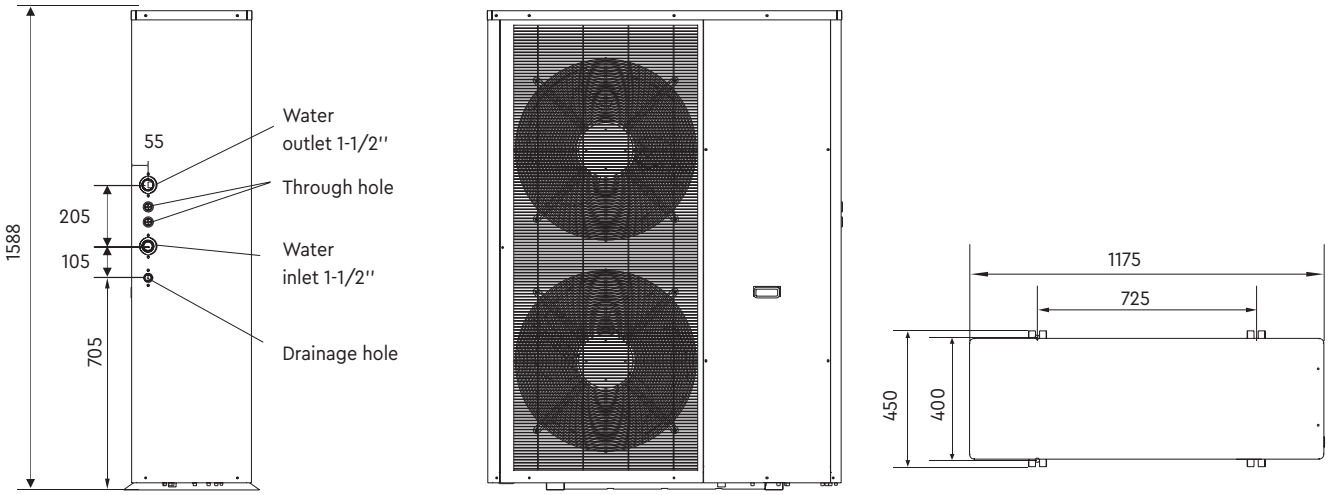
1.*Outside temperature – hot water DB/WB 20°C / 15°C, outlet water circulation from 15°C to 55°C;
2.**External temperature – DB/WB heating 7°C / 6°C, outlet water 55°C, inlet water 50°C;
3.***External temperature – DB/WB heating 7 °C /6 °C, outlet water 35°C, inlet water 30°C;
4. External temperature – cooling DB/WB 35 °C /24 °C, outlet water 7 °C inlet water 12 °C.

OVERALL DIMENSIONS

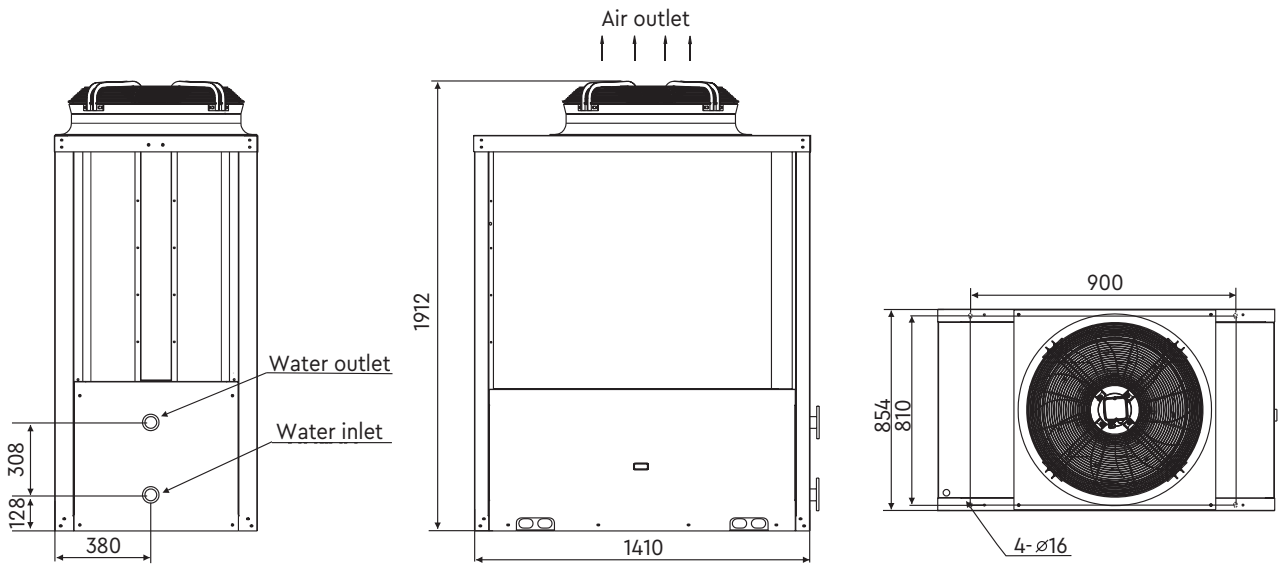
CH-HP16UMNM



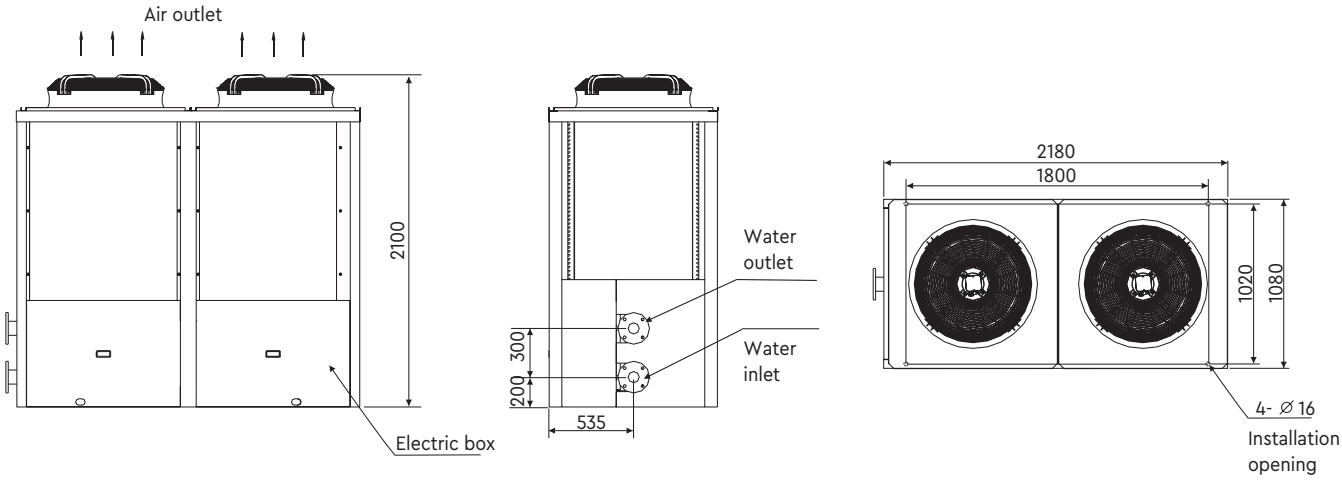
CH-HP24UMNM



CH-HP42UMNM



CH-HP84UMNM



MINIPOWER
SERIES

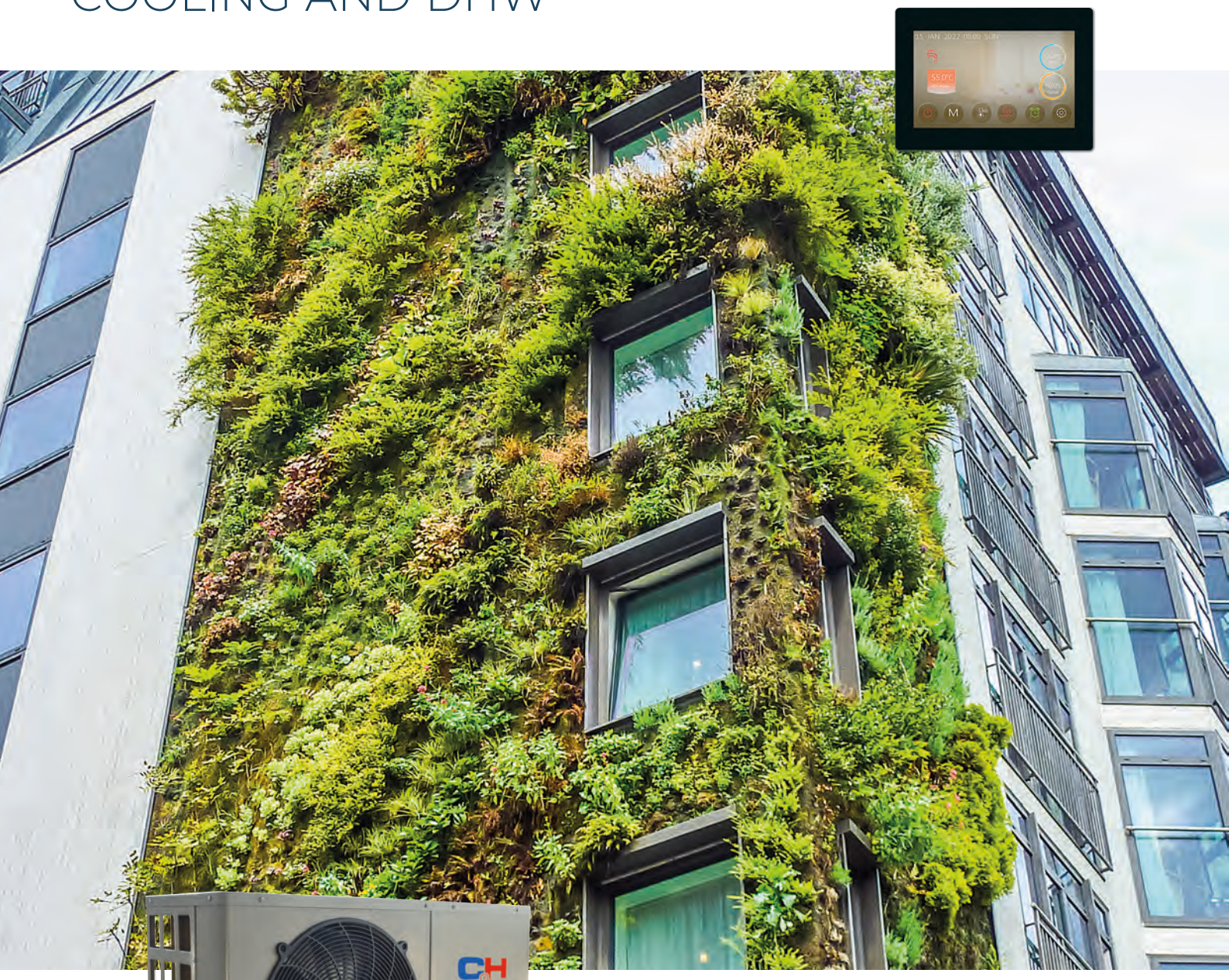
+21°C ... +43°C

–15°C ... +43°C

R410A
FREON

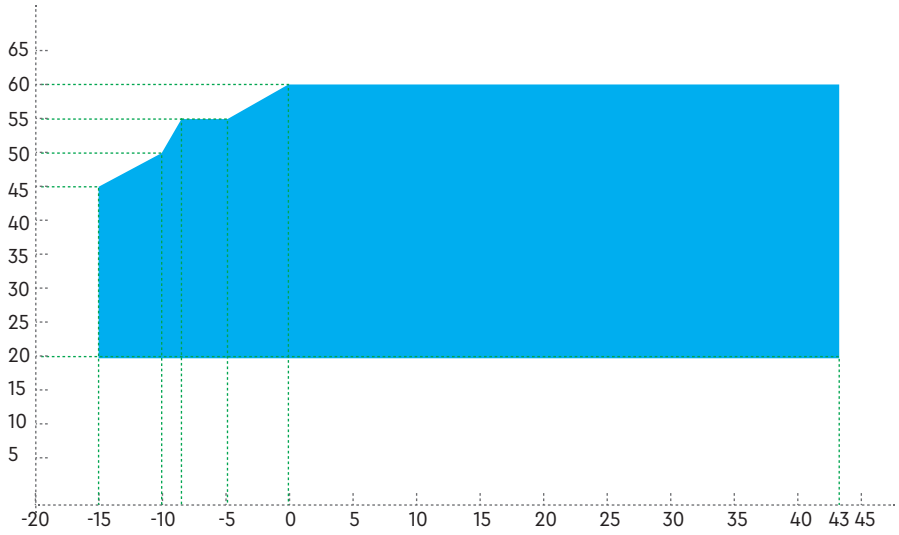
ON/OFF

FOR HEATING OR COOLING AND DHW



- Five operating modes: heating, cooling, DHW, heating + DHW, cooling + DHW;
- Convenient wired control touch screen;
- Protection against freezing;
- Compressor protection against overheating.

OPERATION RANGE IN HEATING MODE



This air source heat pump uses advanced heating technology and an intelligent control system to produce hot water up to 60 °C.

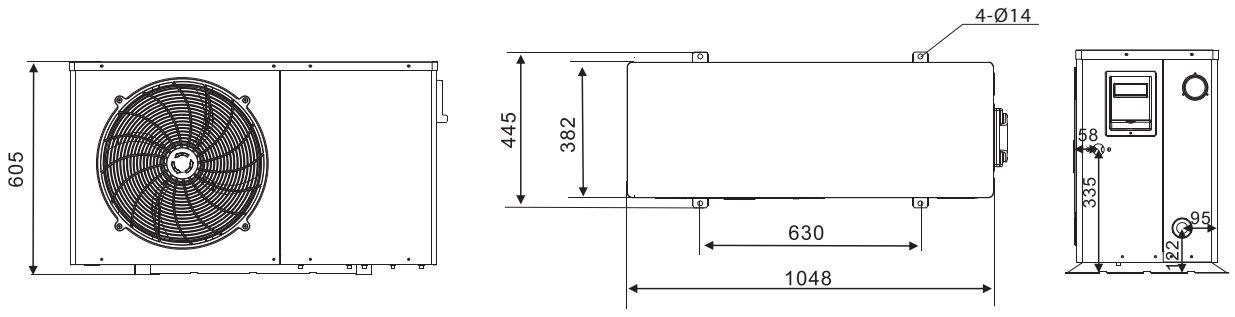
TECHNICAL PARAMETERS

			CH-HP07UMPNK
Capacity *	Cooling	kW	5,9
	Heating	kW	7,4
Energy characteristics	Cooling	EER	2,56
	Heating	COP	4,11
Power input	Cooling	kW	2,3
	Heating	kW	1,8
Current input	Cooling	A	10,2
	Heating	A	8,1
Sound pressure level		dB(A)	56
Power supply			~220–240 V / 50 Hz / 1 Ph
Operational temperature range		°C	-15~+43
Piping inlet/outlet		inch	1
Maximum water temperature		°C	60
Water flow		m^3/h	1,55

Cooling: external temperature DB / WB 35 °C / 24 °C outlet water temperature 7 °C, inlet water temperature 12 °C.
* Heating: external temperature DB / WB 7 °C/ 6 °C outlet water temperature 35 °C, inlet water temperature 30 °C.

OVERALL DIMENSIONS

CH-HP07UMPNK



WIRED CONTROLLER

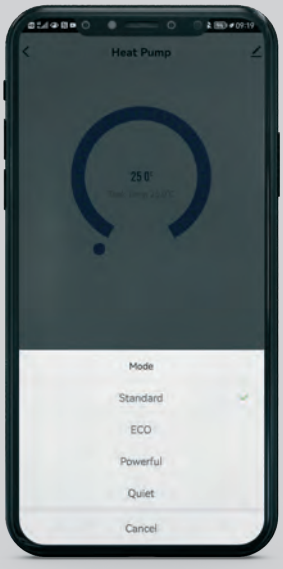
1. Operation settings: Hot water, Auto, Turbo, Quiet mode and ECO.
2. Range of temperature settings.
3. On/off timer, range from 00:00 to 23:59.
4. Manual/automatic on/off.
5. Checking the current parameters.
6. Touch buttons.

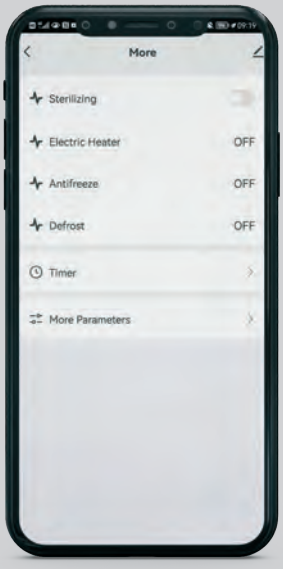
No.	Button name	Description
1	Mode	Selection of functions Turbo, Quiet, ECO, Standard.
2	Timer	Timer setting.
3	Increase/Up	Setting the operating temperature, setting the timer parameters and others.
4	Decrease/Down	
5	Function	Functions setting.
6	ON/OFF	Device ON/OFF.

Thanks to the Cooper&Hunter's Smart application, you can conveniently and efficiently control heat pumps from anywhere using the mobile Internet. This app gives you full access to the functions and settings of your heat pump, allowing you to change heating and cooling settings from a convenient mobile device.

You can remotely turn on and off the heat pump, change the temperature of the room, configure work schedules, and monitor the energy efficiency of the system. You have options such as «Heating», «Cooling» and «Automatic» modes, as well as the ability to set timers to automatically turn the system on or off at the specified time.

With this app, you can save energy and money by switching your heat pump to a more optimal operating mode according to your schedule and needs. No more going home or looking for the remote control, because all the control is right in your mobile phone.





MINIPOWER INVERTER
FOR HEATING OR COOLING

INVERTER

R32 FREON

+15°C ... +52°C

–20°C ... +30°C

-20°C... +52°C | Max. water temperature +55°C | Self-diagnostics | Auto-protection | Anti-corrosive Coating | DC-Inverter Compressor | Timer 24h | Wired Controller | Intelligent Defrosting | Wi-Fi

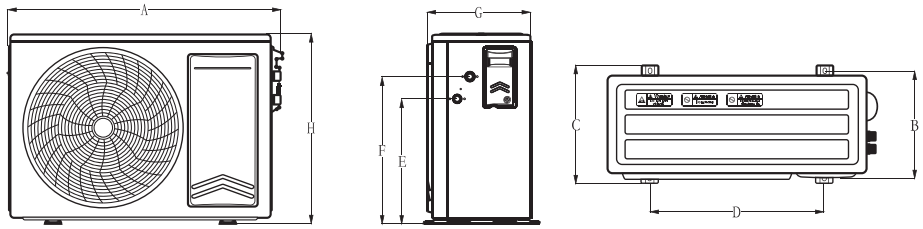
- Daily timer
- Touch control panel
- GMCC DC inverter rotary compressor
- Electric heater of the tray of the outdoor unit
- Built-in circulation pump
- Remote control via Wi-Fi
- Control of an additional electric heater

TECHNICAL PARAMETERS

			CH-HP5.0UIMPRK
Power supply			~220-240V/50 Hz/1 Ph
Efficiency data			
Cooling [1]	Capacity	kW	3,50
	Power	kW	1,25
	EER1		2,81
Cooling [2]	Capacity	kW	5,00
	Power	kW	1,28
	EER2		3,90
Heating [1]	Capacity	kW	3,50
	Power	kW	1,10
	COP1		3,20
Heating [2]	Capacity	kW	5,00
	Power	kW	1,25
	COP2		4,00
Heating (35 °C)	SCOP		3,50
	Energy class		A+
Heating (55 °C)	SCOP		2,50
	Energy class		A
SEER			3,50
Specification data			
Dimensions	H x W x D	mm	863×598×372
Weight	Net/Gross	kg	52/56
Circulation pump	Total head	m	6
	External head	m	2
	Water flow	m^3/h	1,5
Water Side Heat exchanger	Type	-	Double-pipe exchanger
Compressor	Quantity	-	1
	Type		Rotary
	Manufacturer		GMCC
Refrigerant	Type	-	R32
	Charged volume	kg	0,8
Temperature regulating valve		-	Electronic expansion valve
Max. power input		kW	1,80
Max. current input		A	8,00
Operation range	Heating (water)	°C	20~60
	Cooling (water)	°C	5~25
	Heating (air side)	°C	-20~30
	Cooling (air side)	°C	15~52
Sound power level	Nominal	dB(A)	62
Sound pressure level	Nominal	dB(A)	52
Piping inlet/outlet		inch	1 Male BSP

Rated characteristics are specified for the following conditions:
Cooling1: Outside air DB 7 °C, Inlet/outlet water 12/7 °C
Cooling2: Outside air DB 35 °C, Water inlet/outlet 23/18 °C
Heating1: Outside air DB 7 °C/WB 6 °C, Water inlet/outlet 40/45 °C
Heating2: Outside air DB 7 °C/WB 6 °C, Water inlet/outlet 30/35 °C

OVERALL DIMENSIONS



Code	Dimensions	Code	Dimensions
A	863	E	393
B	338	F	463
C	372	G	324
D	550	H	598

MINIPOWER INVERTER
FOR DHW

–15°C … +45°C

R32 FREON

INVERTER

-15°C... +45°C | Max. water temperature +55°C | Self-diagnostics | Auto-protection | Anti-corrosive Coating | DC-Inverter Compressor | Timer 24h | Wired Controller | Intelligent Defrosting | Wi-Fi

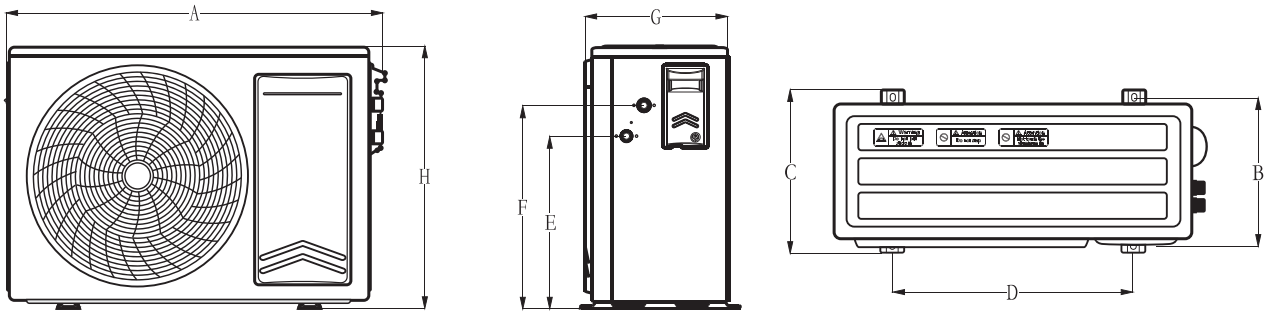
- Daily timer;
- Touch control panel;
- GMCC DC-inverter rotary compressor;
- Electric heater of the tray of the outdoor unit;
- Built-in circulation pump;
- Remote control via Wi-Fi;
- Control of an additional electric heater.

TECHNICAL PARAMETERS

		CH-WH5.0MIPRK
Power supply	**–**	~220–240V/50 Hz/1 Ph
Min./Max. voltage	**V**	185/264
Heating capacity	**W**	5000
	Btu/hours	18000
Water flow	**l/h**	108
Power input for heating	**W**	1150
Current input for heating	**A**	5,50
Power input	**W**	1900
Current input	**A**	8,9
COP	**W/W**	4,35
Compressor Trademark	**–**	GMCC
Compressor type	**–**	Rotary
Outdoor Unit Air Flow Volume	**m³/h**	1800
Operation Ambient Temperature Range	**°C**	-15~45
Throttling Method	**–**	Electronic expansion valve
Defrosting method	**–**	Automatic defrosting
Moisture protection	**–**	IPX4
Sound pressure level	**dB(A)**	52
Sound power level	**dB(A)**	62
Piping inlet/outlet	**inch**	1 Male BSP
Dimensions (W×D×H)	**mm**	863×598×372
Packing dimensions (W×D×H)	**mm**	941×663×412
Net weight	**kg**	45
Gross weight	**kg**	49
Refrigerant	**–**	R32
Refrigerant charge	**kg**	0,4

(1) Testing conditions:
Outdoor temperature: 20 °C DB/15 °C WB, start/end hot water temperature: 15 °C /55 °C

OVERALL DIMENSIONS



Code	Dimensions	Code	Dimensions
A	863	E	393
B	338	F	463
C	372	G	324
D	550	H	598

HEAT PUMPS FOR SWIMMING POOLS

AIR-WATER

NOMENCLATURE

CH-HP 050 LBIRM

Cooper&Hunter

Heat pump

Nominal capacity (kW)

L – Heat pump for the pool

SERIES:
T - Turbo
B – Boost
E – Eco

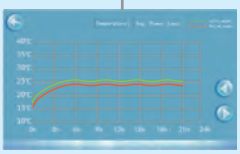
Power supply:
K – ~220-240V/50 Hz/1 Ph
M – ~380-415V/50 Hz/3 Ph

Refrigerant type:
R – R32
N – R410A

I – DC-inverter
_- on/off

5-INCH COLOR TOUCH SCREEN
FOR TURBO AND BOOST SERIES

Unlike the ON/OFF heat pump, the inverter heat pump for swimming pool has a high-end controller with a 5-inch color touch screen. The temperature and energy consumption curve allows users to always monitor energy consumption.



Temperature curve

Energy consumption curve

	Function
1	Ambient Temperature
2	Silent Mode/Silent Mode Timer
3	Current Pool Temperature
4	Power ON/OFF
5	Screen Lock
6	Setting
7	Timer
8	Fault
9	Fan
10	Mode

TURBO INVERTER
SERIES

- Titanium heat exchanger;
- Ozone-safe refrigerant R32;
- 5-inch touch control panel;
- High efficiency;
- Wi-Fi remote control;
- Vertical air release;
- Low noise level;
- Intelligent defrosting system;
- High accuracy of temperature maintenance;
- Operating temperature range from -15 °C to +43 °C;
- It is used for pools up to 136 m³.

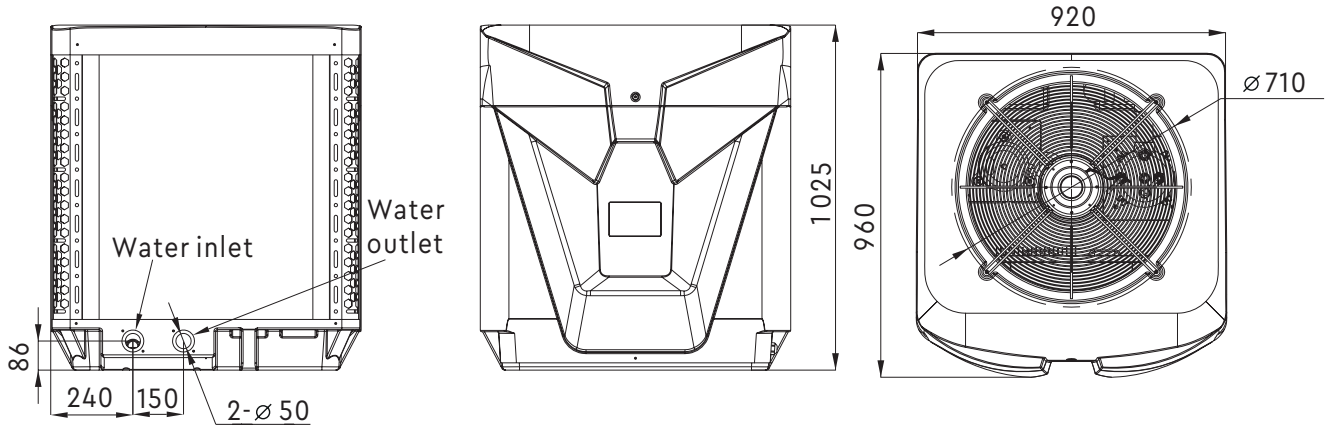
−15°C … +43°C

Titanium heat exchanger | Self-diagnostics | Auto-protection | Anti-corrosive Coating | DC-Inverter Compressor | Timer | Touch Screen Control | Intelligent Defrosting | Intelligent Control | Wi-Fi

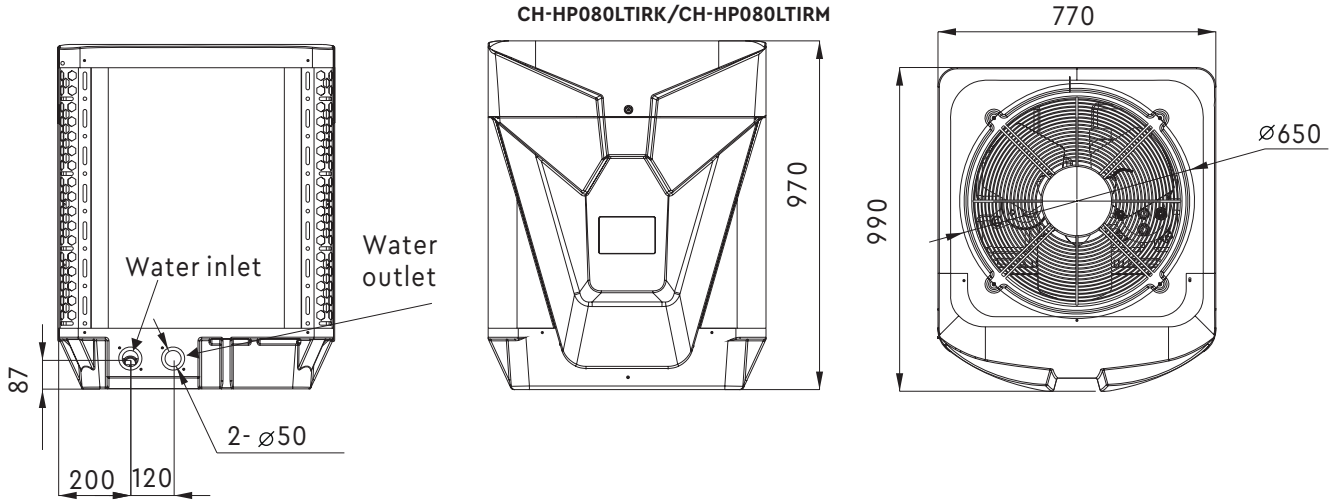
		CH-HP050LTIRK	CH-HP050LTIRM	CH-HP060LTIRK	CH-HP060LTIRM	CH-HP070LTIRK	CH-HP070LTIRM	CH-P080LTIRM
Recommended pool volume	m³	42–84	42–84	50–100	50–100	58–116	60–120	68–136
Working conditions: Air 27°C / Water 26°C / Humidity 80%								
Heating capacity	kW	4.9~21.0	5.1~21.6	5.9~24.6	5.8~24.4	6.7~28.6	7.0~29.5	8.2~34.7
	Btu	16660~71400	17340~73440	20060~83460	19720~82960	22780~97240	23800~100300	27880~117980
Power input	kW	0.43~4.08	0.43~4.29	0.47~4.94	0.47~4.65	0.53~5.4	0.55~5.6	0.66~6.9
COP		5.15~11.4	5.03~11.86	4.98~12.55	5.25~12.34	5.3~12.64	5.27~12.7	5.03~12.42
Working conditions: Air 24°C / Water 26°C / Humidity 62%								
Heating capacity	kW	3.8~16.2	3.9~16.3	4.8~18.4	4.5~19.0	5.50~23.40	5.8~24.6	6.5~27.7
	Btu	12920~55080	13090~55420	16252~62560	15198~64600	18700~79560	19652~83640	22100~94180
Power input	kW	0.57~3.86	0.59~3.82	0.73~4.64	0.68~4.39	0.82~5.40	0.99~4.53	0.97~6.46
COP		4.2~6.67	4.27~6.53	3.96~6.55	4.33~6.57	4.33~6.71	4.53~5.84	4.29~6.7
Working conditions: Air 15°C / Water 26°C / Humidity 70%								
Heating capacity	kW	3.44~14.1	3.5~14.0	4.3~18.2	4.0~17.0	4.9~20.9	4.9~20.9	6.1~25.9
	Btu	11696~47940	11798~47600	14552~61880	13600~57800	16660~71060	16660~71060	20740~88060
Power input	kW	0.62~3.52	0.62~3.59	0.74~4.35	0.70~4.10	0.86~5.05	0.84~4.93	1.07~6.32
COP		4.01~5.55	3.90~5.60	4.18~5.78	4.15~5.71	4.14~5.70	4.24~5.83	4.1~5.7
Power supply		230V/1 Ph/50 Hz	400V/3 Ph/50 Hz	230V/1 Ph/50 Hz	400V/3 Ph/50 Hz	230V/1 Ph/50 Hz	400V/3 Ph/50 Hz	400V/3 Ph/50 Hz
Corpus material		ABS plastic						
Refrigerant		R32						
Number of fans		1						
Fan speed	RPM	500–750	500–750	600–800	600–800	600–800	600–800	500–800
Noise level from 1m	dB(A)	48–58	48–58	48–58	48–58	49–60	49–60	50–61
Noise level from 1m (min.)	dB(A)	48	48	50	50	53	53	55
Noise level from 10m	dB(A)	28–38	28–38	30–40	30–40	33–43	33–43	35–45
Noise level from 10m (min.)	dB(A)	28	28	30	30	33	33	35
Piping inlet/outlet	inch	2						
Water flow	m³/h	6,8	7,1	8,3	8,1	9,5	9,8	11,5
Water pressure loss	kPa	4	4	11	11	16	16	20
Dimensions (LxWxH)	mm	770×990×970				920×960×1025		

OVERALL DIMENSIONS

CH-HP050LTIRK/CH-HP050LTIRM
CH-HP060LTIRK/CH-HP060LTIRM



CH-HP070LTIRK/CH-HP070LTIRM,
CH-HP080LTIRK/CH-HP080LTIRM

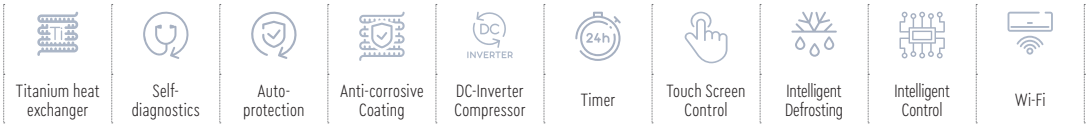


BOOST INVERTER

SERIES

- Titanium heat exchanger;
- Ozone-safe refrigerant R32;
- Touch control panel 5 inches;
- High efficiency;
- Wi-Fi remote control;
- High accuracy of temperature maintenance;
- Operating temperature range from -15 °C to +43 °C;
- It is used for pools up to 120 m³.

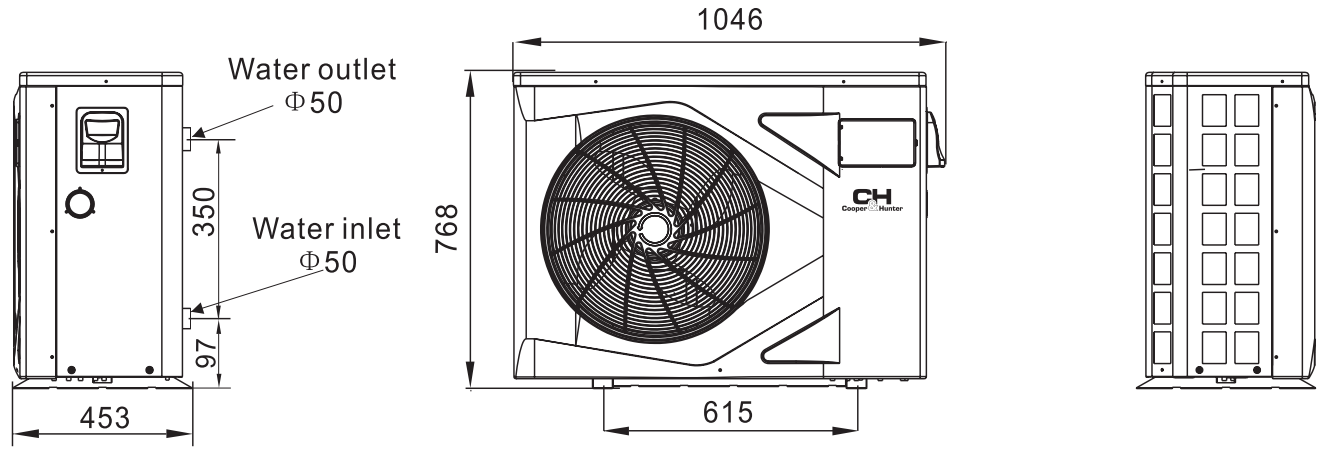
−15°C … +43°C



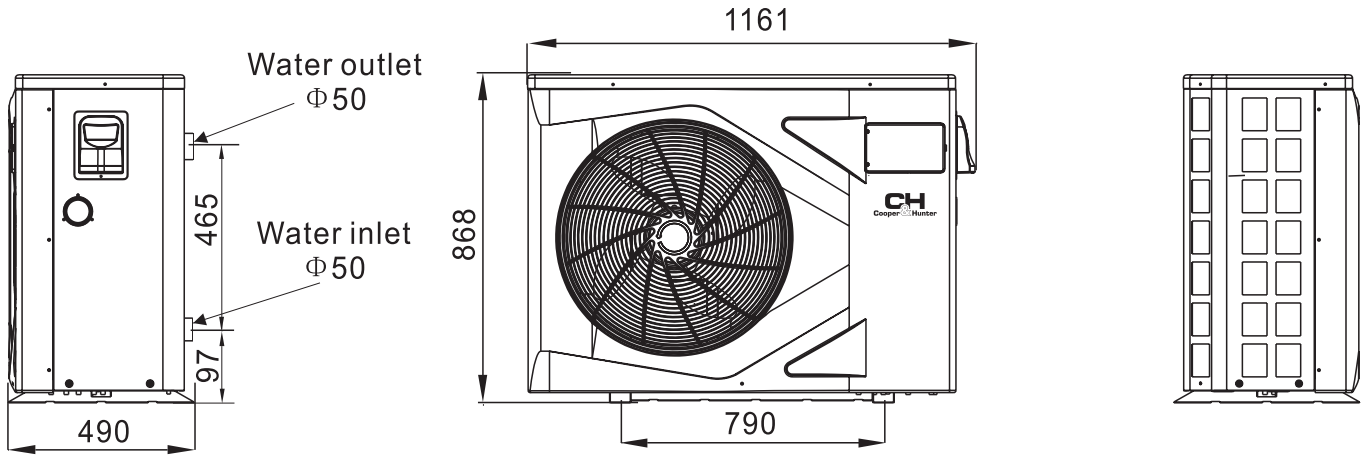
		CH-HP050LBIRK	CH-HP060LBIRK	CH-HP075LBIRK	CH-HP095LBIRK	CH-HP095LBIRM	CH-HP120LBIRM
Recommended pool volume	m³	25-50	30-60	40-75	50-95	50-95	65-120
Working conditions: Air 27°C / Water 26°C / Humidity 80%							
Heating capacity	kW	2.15~9	2.85~12	3.77~17	4.6~19.5	4.6~19.5	5.7~24.2
	Btu	7310~30600	9690~40800	12818~57800	15640~66300	15640~66300	19380~82280
Power input	kW	0.16~1.6	0.21~2.12	0.3~3.02	0.37~3.94	0.37~3.94	0.46~4.8
COP		13.44~5.63	13.57~5.66	12.57~5.63	12.43~4.95	12.43~4.95	12.39~5.04
Working conditions: Air 15°C / Water 26°C / Humidity 62%							
Heating capacity	kW	1.75~7.4	2.25~9.7	2.92~12.4	3.84~15.4	3.84~15.4	4.68~19.9
	Btu	5950~25160	7650~32980	9928~42160	13056~52360	13056~52360	15912~67660
Power input	kW	0.25~1.6	0.32~2.08	0.44~2.86	0.6~3.81	0.6~3.81	0.72~4.74
COP		7~4.63	7.03~4.66	6.64~4.34	6.4~4.04	6.4~4.04	6.5~4.2
Working conditions: Air 10°C / Water 26°C / Humidity 70%							
Heating capacity	kW	1.42~6.1	1.88~8	2.5~10.7	3.38~14.4	3.38~14.4	4.2~17.8
	Btu	4828~20740	6392~27200	8500~36380	11492~48960	11492~48960	14280~60520
Power input	kW	0.25~1.5	0.33~1.95	0.45~2.64	0.62~3.62	0.62~3.62	0.75~4.4
COP		5.68~4.07	5.7~4.1	5.56~4.05	5.45~3.98	5.45~3.98	5.6~4.05
Power supply		~220-240V/50 Hz/1 Ph				~380-415V/50 Hz/3 Ph	
Corpus material		ABS plastic					
Refrigerant		R32					
Number of fans		1				1	2
Fan speed	RPM	400-800	400-800	500-750	500-900	500-900	400-800
Noise level from 1m	dB(A)	40-50	42-52	44-53	45-56	45-56	46-57
Noise level from 1m (min.)	dB(A)	40	42	44	45	45	46
Noise level from 10m	dB(A)	20-30	22-32	24-33	25-36	25-36	26-37
Noise level from 10m (min.)	dB(A)	20	22	24	25	25	26
Piping inlet/outlet	inch	2					
Water consumption	m³/h	3,5	4,7	5,4	6,7	6,7	8,5
Pressure loss (max.)	kPa	4	4,5	5	6	6	11
Dimensions (LxWxH)	mm	950×400×620		1110×480×870			1165×470×1275

OVERALL DIMENSIONS

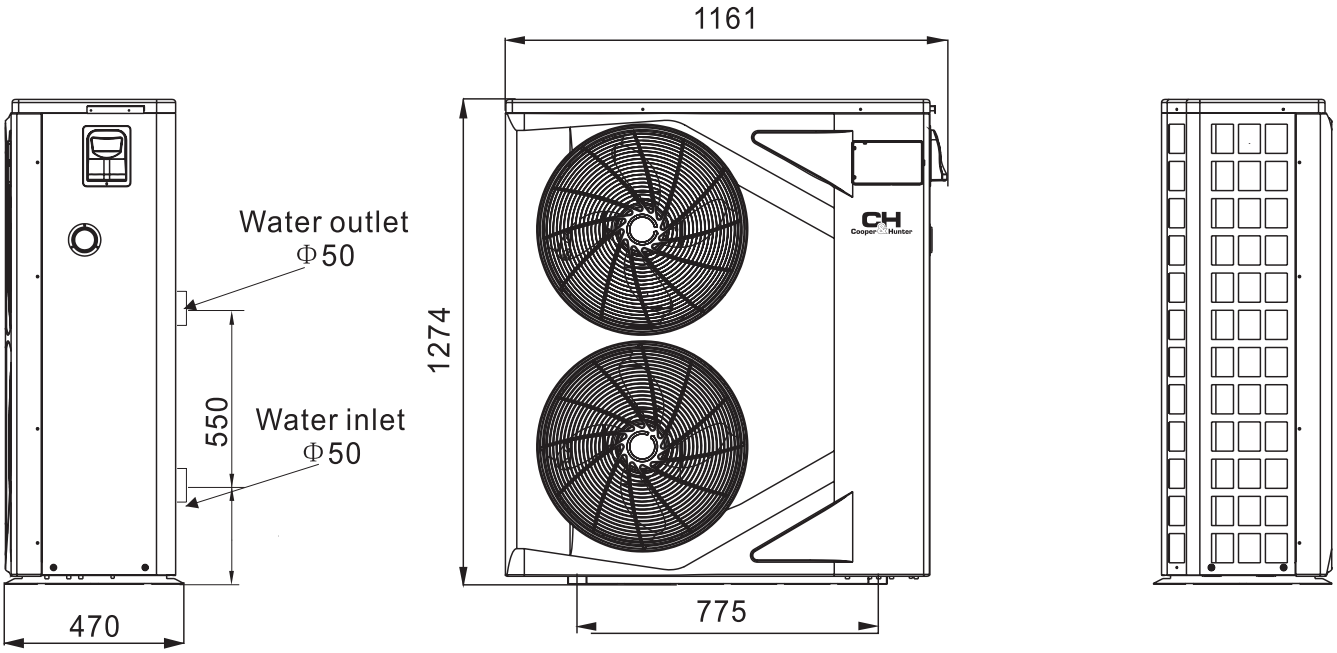
CH-HP050/060LBIRK



CH-HP075LBIRK CH-HP095LBIRK (M)



CH-HP120LBIRM



ECO
SERIES

- Titanium heat exchanger;
- Ozone-safe refrigerant R32;
- Convenient control panel;
- High efficiency;
- Operating temperature range from -7°C to +43°C;
- It is used for pools up to 58 m³.

-7°C ... +43°C

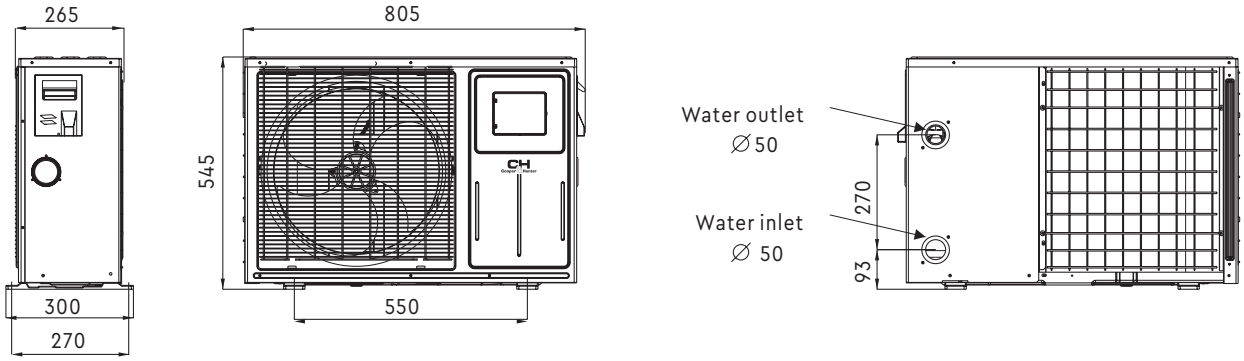
Titanium heat exchanger | Self-diagnostics | Auto-protection | Anti-corrosive Coating | ON/OFF Compressor | Timer | Wi-Fi

TECHNICAL PARAMETERS

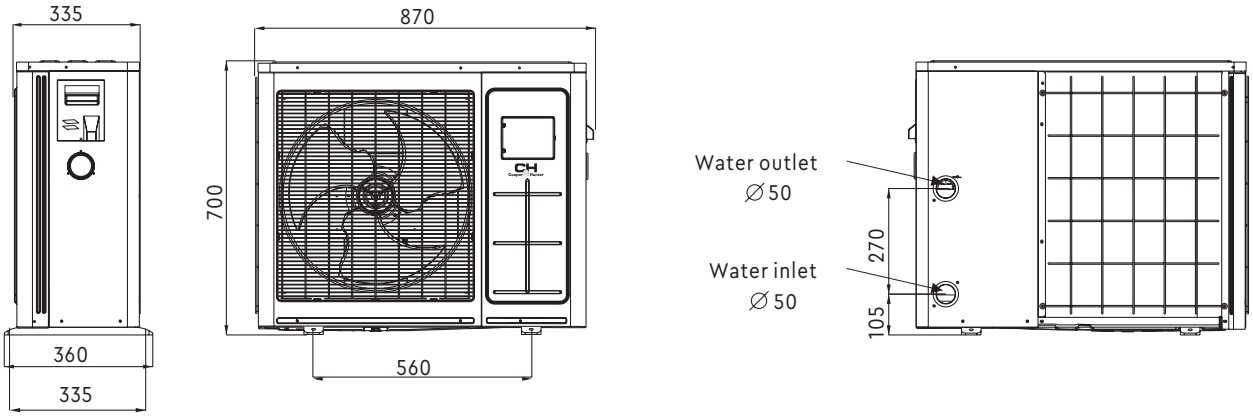
		CH-HP010LERK	CH-HP015LERK	CH-HP020LERK	CH-HP030LERK	CH-HP035LERK
Recommended pool volume	m³	17	25	35	45	58
Operating temperature range	°C	-7 ~ 43				
WORKING CONDITIONS: AIR 27°C / WATER 26°C / HUMIDITY 80%						
Heating capacity	kW	3.40	5.00	8.00	11.00	12.30
	Btu	11560	17000	27200	37400	41820
Power input	kW	0.66	0.96	1.55	2.16	2.33
COP		5.15	5.20	5.16	5.10	5.28
WORKING CONDITIONS: AIR 24°C / WATER 26°C / HUMIDITY 62%						
Heating capacity	kW	2.90	4.40	7.00	9.50	10.50
	Btu	9860	14858	23800	32300	35700
Power input	kW	0.60	0.91	1.45	2.00	2.24
COP		4.83	4.80	4.83	4.75	4.68
WORKING CONDITIONS: AIR 15°C / WATER 26°C / HUMIDITY 70%						
Heating capacity	kW	2.60	3.40	5.20	7.60	8.40
	Btu	8840	11560	17680	25840	28560
Power input	kW	0.77	0.9	1.33	1.97	2.27
COP		3.40	3.78	3.90	3.85	3.70
Power supply		~220–240 V / 50 Hz / 1 Ph				
Corpus material		Metal				
Refrigerant		R32				
Number of fans		1				
Piping inlet/outlet	mm	50				
Fan speed	RPM	870		810		
Noise level from 1 m	dB (A)	49	51	53	54	55
Dimensions (LxWxH)	mm	805×300×545		850×320×700		

OVERALL DIMENSIONS

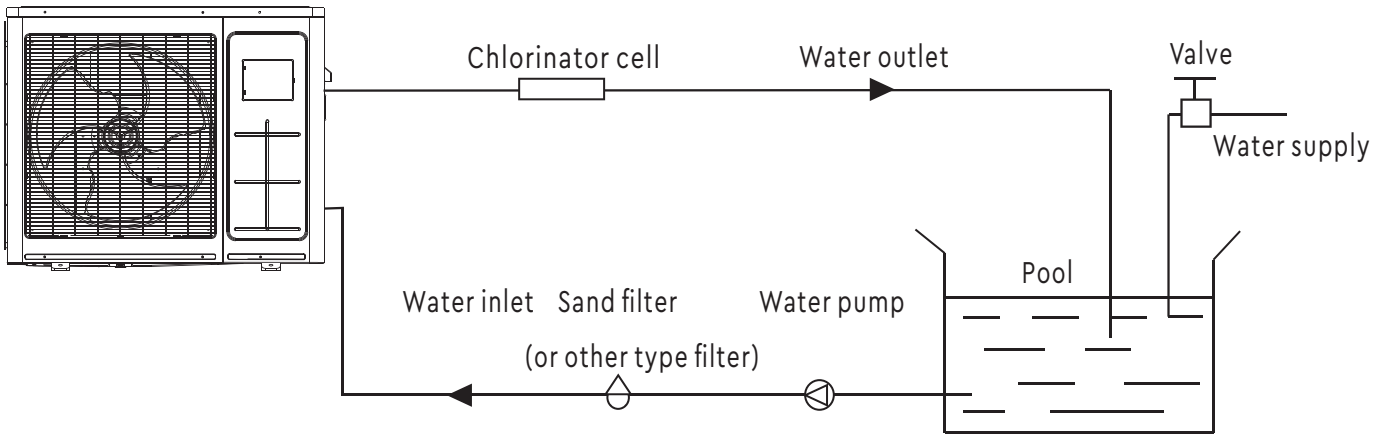
CH-HP010LERK CH-HP015LERK



CH-HP020LERK CH-HP030LERK CH-HP035LERK



INSTALLATION ITEMS:



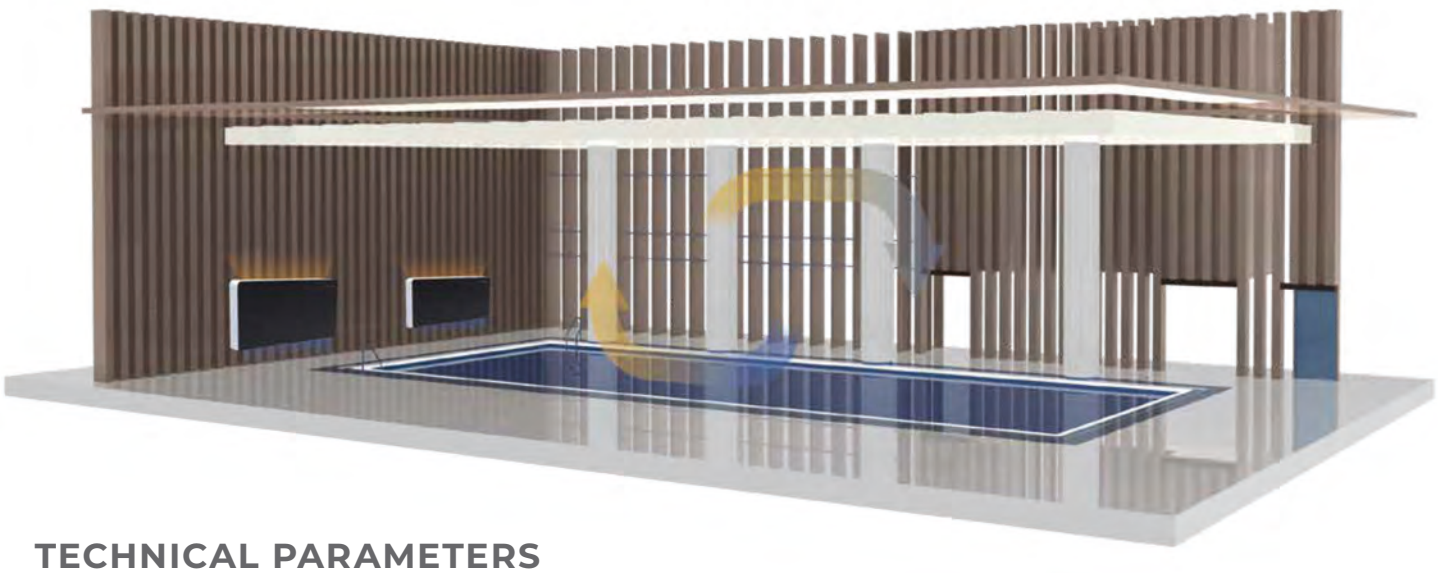
The factory provides only an external unit; other elements in the illustration are necessary components for the heat supply system and provided by the installation organization to the users.

The schematic diagram is for reference only. Please check the water inlet/outlet on the heat pump when installing the water pipe.

The controller can be mounted on the wall.

DEHUMIDIFIER
WITH GLASS DESIGN PANEL

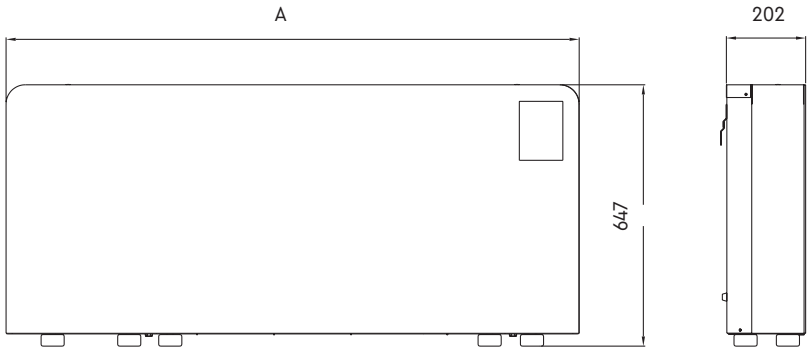
- Thanks to improved sound insulation and a DC fan motor, the dehumidifier operates extremely quietly (44-46 dB(A)). This allows you to install the unit in any room.
- The dehumidifier creates a warm and comfortable air flow.
- The heat exchanger is covered with a special golden epoxy resin – a coating that has extraordinary anti-corrosive properties. Which allows you to extend the service life of the device in places with high relative humidity.
- Modern and refined body design. C&H pool dehumidifiers are available in two variants, gloss white and gloss black. Users can choose one of the options.



TECHNICAL PARAMETERS

		CH-D22RK (B)	CH-D35RK (B)	CH-D45RK (B)
Dehumidification capacity	l/h	2,2	3,5	4,5
Dehumidification capacity per day	l	53	84	108
Pool surface	m²	10	15	20
Noise level	dB(A)	44	46	48
Power supply		~220-240V/50 Hz/1 Ph		
Power input	kW	0,892	1,095	1,95
Current input	A	4,0	5,0	8,0
Range of relative humidity	%	40-90	40-90	40-90
Operating temperature range	°C	10 – 36 °C		
Dimensions (LxWxH)	mm	1295×202×647	1495×202×647	1695×202×647
Refrigerant		R32		
Drain pipe	mm	16	16	16

OVERALL DIMENSIONS



	CH-D22RK	CH-D35RK	CH-D45RK
A	1295	1495	1695

CONSOLE TYPE FANCOILS
WITH GLASS DESIGN PANEL

- **ULTRA-THIN CASE**
  Water fancoil with ultra-thin design. Compared to a regular fancoil, it has a thinner body – 130 mm, which significantly decreases space for installation. The simple and laconic exterior will easily fit into your room.
- **ORIENTATION ON DETAILS**
  The three-way valve ensures the required flow of water in the fancoil and optimizes the use of energy.
- **SUPER QUIET**
  The use of modern fans in combination with special air flow distribution technology makes the units so quiet that they will not affect your healthy and sound sleep.
- **WATER CONNECTION**
  Optionally, the water is connected from the right or left side, which adds flexibility for users during installation work.

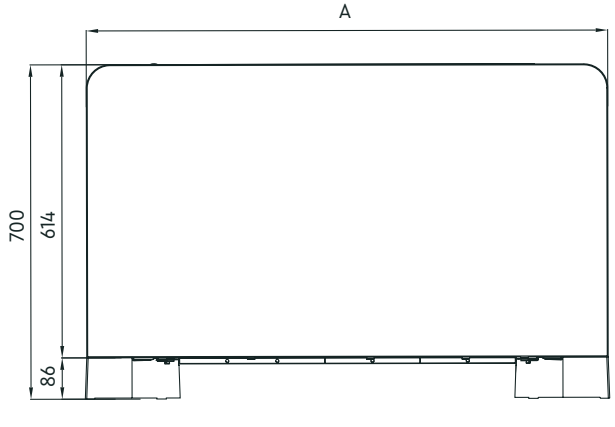
- **HIGH EFFICIENCY**
  The thermal performance of fan coils is two times higher than the power parameters of ordinary radiators. The distribution of heat between rooms allows you to save 30% of energy consumption compared to conventional heating radiators.

TECHNICAL PARAMETERS

		CH-FK10SW(B)K2	CH-FK18SW(B)K2	CH-FK25SW(B)K2	CH-FK34SW(B)K2	CH-FK44SW(B)K2
Heating: Ambient temperature (DB/WB): 20 °C, Water temperature (inlet/outlet): 60 °C/70 °C						
Heating capacity	W	2250	3950	5750	7200	9400
Water flow	m^3/h	0,22	0.34	0.49	0.62	0.81
Water pressure drop	kPa	10,6	12.2	26.2	27.5	28.2
Heating: Ambient temperature (DB/WB): 20 °C, Water temperature (inlet/outlet): 45 °C/50 °C;						
Heating capacity	W	1350	2500	3350	4300	5200
Water flow	m^3/h	0,23	0.43	0.58	0.74	0.89
Water pressure drop	kPa	10,8	13.1	27.5	27.9	28.5
Cooling: Ambient temperature (DB/WB): 27 °C/19 °C, Water temperature (inlet/outlet): 7 °C/12 °C.						
Cooling capacity	W	1000	1900	2500	3500	4350
Water flow	m^3/h	0,17	0.33	0.43	0.60	0.75
Water pressure drop	kPa	11,1	13.3	27.7	28.3	30.6
Air flow	m^3/h	160	320	460	580	650
Noise pressure at max air flow	dB(A)	40	44	46	47	48
Noise pressure at min air flow	dB(A)	24	27	28	28	30
Power supply		220~240 V / 50 Hz / 1 Ph				
Power input	W	15	20	23	25	32
Piping inlet/outlet	inch	3/4 Male BSP				
Drainage pipe	mm	16				
Dimensions (D×W×H)	mm	695×130×700	895×130×700	1095×130×700	1295×130×700	1495×130×700
Packing dimensions (D×W×H)	mm	740×180×730	940×180×730	1140×180×730	1340×180×730	1540×180×730
Net weight	kg	18	21	24	28	32
Gross weight	kg	20	24	27	31	36

OVERALL DIMENSIONS

CH-FK10SW(B)K2, CH-FK18SW(B)K2, CH-FK25SW(B)K2, CH-FK34SW(B)K2, CH-FK44SW(B)K2

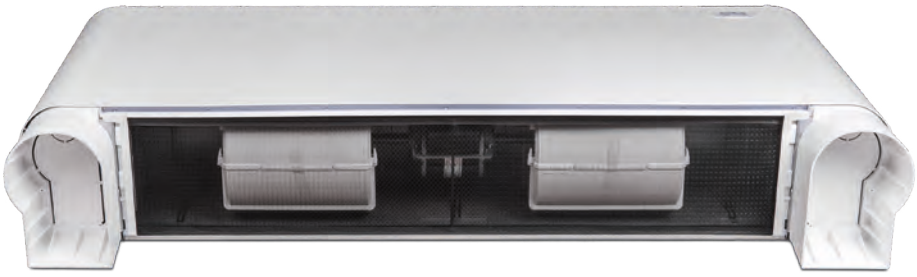


	CH-FK10SW(B)K2	CH-FK18SW(B)K2	CH-FK25SW(B)K2	CH-FK34SW(B)K2	CH-FK44SW(B)K2
A	695	895	1095	1295	1495

FLOOR-CEILING
TYPE FANCOILS

KJR-18B/E-B

KJRP-86I/MFK-E



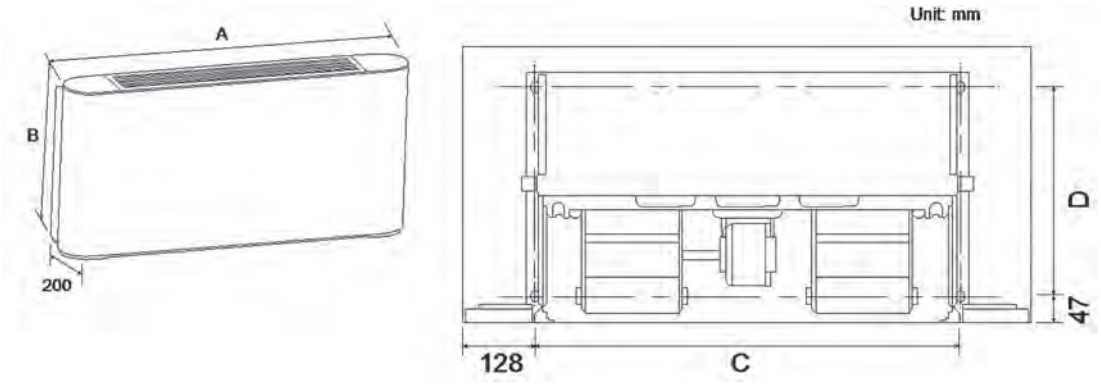
- Finned type heat exchanger with copper tubes and aluminum fins, with the possibility of choosing the connection side (left/right).
- Three speeds of the low-noise centrifugal fan.
- The direct drive motor is equipped with internal thermal protection and a capacitor.
- The body is made of pre-painted, galvanized steel sheet, covered with a protective PVC coating, equipped with sound insulation, grills made of heat-resistant ABS plastic.
- A tray for collecting condensate with a drain included in the set – with anti-condensate insulation.
- Filter from regenerated polypropylene.

TECHNICAL PARAMETERS

			CH-FFC22K2	CH-FFC30K2	CH-FFC42K2	CH-FFC53K2	CH-FFC67K2	CH-FFC82K2
Power supply			~220-240 V/50 Hz/1 Ph					
Air flow (H/M/L)*		m^3/h	255/192/139	425/284/184	595/450/319	800/574/404	1150/885/591	1300/1132/836
		CFM	150/113/82	250/167/109	350/265/188	471/338/238	677/521/348	766/667/492
External static pressure		Pa	0					
Cooling	Capacity (H/M/L)*	kW	2.25/1.85/1.46	3.05/2.26/1.63	4.20/3.38/2.48	5.35/4.25/3.31	6.75/5.80/4.24	8.25/7.52/5.87
	Water flow (H/M/L)*	l/h	386/317/249	523/387/280	720/580/425	917/729/567	1157/995/727	1414/1289/1007
	Water pressure drop (H/M/L)*	kPa	49.29/33.22/21.74	33.66/19.73/10.61	44.3/29.14/16.91	68.61/46.24/29.71	46.5/33.73/18.66	74.76/63.56/40.28
Heating	Capacity (H/M/L)*	kW	2.35/1.87/1.40	3.15/2.09/1.38	4.10/3.25/2.39	5.70/4.36/3.22	7.15/5.81/4.04	8.50/7.60/5.72
	Water flow (H/M/L)*	l/h	403/320/240	540/357/237	703/557/409	977/747/552	1226/996/692	1457/1302/981
Water pressure drop (H/M/L)*		kPa	36.51/24.61/16.1	25.84/13.93/6.77	39.56/26.06/14.63	59.39/36.80/21.25	44.27/30.11/15.39	65.06/49.83/30.28
Power input (H/M/L)*		W	40/24/15	47/26/14	51/32/19	91/54/35	110/89/64	118/104/82
Current input		A	0.17/0.10/0.07	0.20/0.11/0.06	0.22/0.14/0.08	0.40/0.24/0.15	0.48/0.39/0.28	0.51/0.45/0.36
Sound power level (H/M/L)*		dB(A)	53/47/39	47/38/32	52/45/37	59/51/43	62/56/46	62/58/50
Fan motor	Type		AC fan motor					
	Quantity		1					
Fan	Type		Centrifugal, forward-curved Blades					
	Quantity		1	2			3	
Coil	Row		4					
	Max. pressure	MPa	1.6					
Dimensions (W×D×H)		mm	495×200×790	495×200×1020	495×200×1240	495×200×1240	495×200×1360	591×200×1360
Packing dimensions (W×D×H)		mm	595×300×895	595×300×1125	595×300×1345	595×300×1345	595×300×1465	695×300×1465
Net weight		kg	16.7	20.8	25.4	25.4	28.5	34.0
Gross weight		kg	22.2	26.8	32.4	32.4	36.0	42.0
Piping inlet/outlet		inch	3/4'' Female BSP					
Drainage pipe		mm	OD Ø 18.5					

Notes
1. H: high fan speed; M: average fan speed; L: low fan speed
2. Cooling conditions: inlet water 7°C, outlet water 12°C, inlet air temperature 27°C DB, 19°C WB.
3. Heating conditions: inlet water 40°C, outlet water 45°C, inlet air temperature 20°C DB.
4. Noise is tested in a semi-anechoic test room

OVERALL DIMENSIONS



CH-FFC__K2	22	30	42	53	67	82
A	790	1020	1240	1240	1360	1360
B	495	495	495	495	495	591
C	534	764	984	984	1104	1104
D	375	375	375	375	375	391

DUCT TYPE FANCOILS

KJR-18B/E-B

KJRP-86I/MFK-E

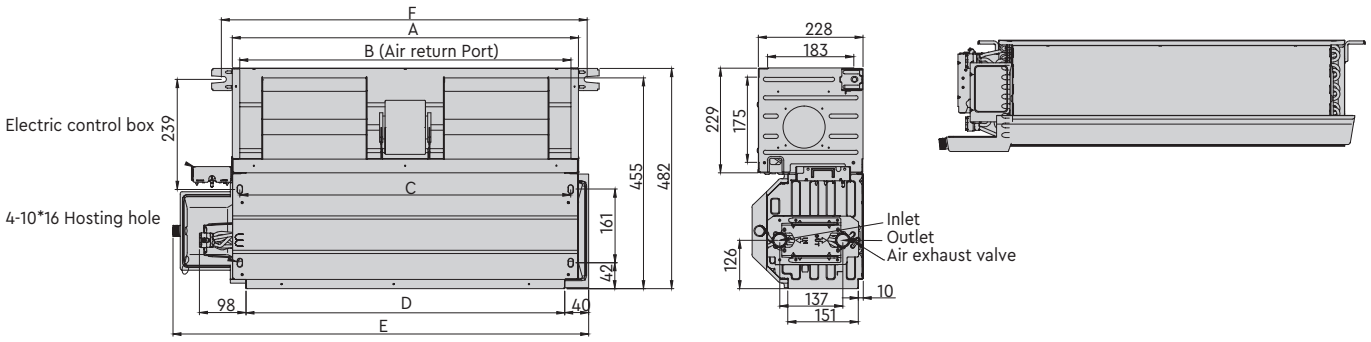
- Connection of pipelines on the left or right;
- Patented construction that can prevent strong noise.
- Aerodynamic and uniform distribution of air;
- The design of the fan coil considers various installation options, which allows you to optimize installation of device;
- Possibility of inflow of fresh air;
- Air recirculation;
- Washable filter;
- Iron frame of the filter – in the standard configuration, additional aluminum frame is possible by separate order;
- Air outlet flange and multi-directional retractable filter can be optional;
- Additional wired controller;
- An additional wired controller provides simplicity and flexibility in controlling the unit.

TECHNICAL PARAMETERS

				CH-FDH25K2 CH-FDVH25K2	CH-FDH34K2 CH-FDVH34K2	CH-FDH44K2 CH-FDVH44K2	CH-FDH50K2 CH-FDVH50K2	CH-FDH60K2 CH-FDVH60K2
Power supply				~220-240 V/50 Hz/1 Ph				
Air flow (H/M/L)*		12Pa/30Pa/50Pa	m^3/h	340/275/190	510/416/286	680/551/381	850/691/476	1020/826/571
		(H/M/L)*	CFM	200/162/112	300/245/168	400/324/224	500/407/280	600/486/336
Standard external static pressure			Pa	FDH model: 30; FDVH models: 50				
Cooling[2]	Capacity	30Pa (H/M/L)*	kW	2.50/2.20/1.90	3.40/3.00/2.50	4.41/3.80/3.30	5.00/4.30/3.80	6.00/5.00/4.60
		50Pa (H/M/L)*		2.50/2.20/1.90	3.40/3.00/2.50	4.41/3.80/3.30	5.00/4.30/3.80	6.00/5.00/4.60
	Water pressure drop	30Pa (H/M/L)*	kPa	27/24/19	24/19/14	24/21/16	30/23/18	38/28/25
		50Pa (H/M/L)*		27/24/19	24/19/14	24/21/16	30/23/18	38/28/25
Heating[3]	Capacity	30Pa (H/M/L)*	kW	4.10/3.61/3.12	5.67/5.00/4.17	7.35/6.17/5.50	8.60/7.40/6.54	9.98/8.32/7.65
		50Pa (H/M/L)*		4.10/3.61/3.12	5.67/5.00/4.17	7.35/6.17/5.50	8.60/7.40/6.54	9.98/8.32/7.65
	Water pressure drop	30Pa (H/M/L)*	kPa	22/20/16	20/16/12	20/17/13	24/19/15	31/23/20
		50Pa (H/M/L)*		22/20/16	20/16/12	20/17/13	24/19/15	31/23/20
Water flow		30Pa (H/M/L)*	l/min.	7.17/6.31/5.45	9.75/8.60/7.17	12.64/10.89/9.46	14.33/12.33/10.89	17.20/14.33/13.19
		50Pa (H/M/L)*			7.17/6.31/5.45	9.75/8.60/7.17	12.64/10.89/9.46	14.33/12.33/10.89
Power input		30Pa (H/M/L)*	W	42/36/29	57/40/32	70/47/40	83/67/56	102/78/64
		50Pa (H/M/L)*	W	48/38/31	64/50/38	81/64/57	97/65/55	114/85/76
Sound pressure level		30Pa (H/M/L)*	dB(A)	37/30/23	40.5/33/26	40.5/34/26	42/36/27	43/37/27
		50Pa (H/M/L)*	dB(A)	40/32/24	42/34/31	44/37/33	46/40/33	47/42/33
Fan motor		Type		Low noise 3-speed AC capacitor motor				
		Quantity		1	1	1	1	1
Fan		Type		Centrifugal, forward-curved Blades				
		Quantity		1	2	2	2	2
Coil		Row		3				
		Max. working pressure	MPa	1.6MPa				
		Diameter	mm	7				
Dimensions (W×D×H)			mm	627×240×455	772×240×455	907×240×455	907×240×455	1002×240×455
Packing dimensions (W×D×H)			mm	682×270×500	817×270×500	952×270×500	952×270×500	1047×270×500
Net weight			kg	11,9	14,1	16,9	18,0	20,5
Gross weight			kg	14,0	16,3	19,5	20,7	23,6
Piping inlet/outlet			inch	3/4 Female BSP				
Drainage pipe			inch	3/4 Female BSP				

Notes:
1. B: high fan speed; C: average fan speed; H: low fan speed;
2. Cooling conditions: inlet water 7°C, outlet water 12°C, inlet air temperature 27°C DB/19.5°C WB, available fan pressure;
3. Heating conditions: inlet water 60°C, inlet air temperature 21°C DB/15°C, available fan pressure. Water consumption: the same under cooling conditions;
4. The above sound level is tested in a semi-anechoic room according to the GB/T19232 standard when the device is without accessories and operating in dry conditions.
The background noise level is 17.5 dB (A);
5. Air consumption is determined at the nominal pressure of the fan without filter and exhaust air adapter in dry conditions and 20 °C DB;
6. The connection of the unit from the left side to the right can be changed at the installation site, but the cooling and heating capacity should be multiplied by the correction factor of 0.9;
7. The performance data on the above sheet has been tested at 220V~50 Hz;

OVERALL DIMENSIONS



	CH-FDH25K2 CH-FDVH25K2	CH-FDH34K2 CH-FDVH34K2	CH-FDH44K2 CH-FDVH44K2 CH-FDH50K2 CH-FDVH50K2	CH-FDH60K2 CH-FDVH60K2	CH-FDH72K2 CH-FDVH72K2	CH-FDH80K2 CH-FDVH80K2 CH-FDH93K2 CH-FDVH93K2	CH-FDH112K2 CH-FDVH112K2	CH-FDH130K2 CH-FDVH130K2
A	475	620	755	850	1025	1215	1505	1745
B	443	588	723	818	993	1183	1473	1713
C	443	588	723	818	993	1183	1473	1713
D	415	560	695	790	965	1155	1445	1685
E	627	772	907	1002	1177	1367	1657	1897
F	513	658	793	888	1063	1253	1543	1783

TECHNICAL PARAMETERS

				CH-FDH72K2 CH-FDVH72K2	CH-FDH80K2 CH-FDVH80K2	CH-FDH93K2 CH-FDVH93K2	CH-FDH112K2 CH-FDVH112K2	CH-FDH130K2 CH-FDVH130K2
Power supply				~220-240V/50 Hz/1 Ph				
Air flow (H/M/L)*		30Pa (H/M/L)*	m^3/h	1190/936/682	1360/1102/762	1700/1416/978	2040/1652/1142	2380/1928/1333
			CFM	700/551/401	800/648/448	1000/833/576	1200/972/672	1400/1135/785
		50Pa (H/M/L)*	m^3/h	1190/936/682	1360/1102/762	1700/1416/978	2040/1652/1142	2380/1928/1333
			CFM	700/551/401	800/648/448	1000/833/576	1200/972/672	1400/1135/785
Standard external static pressure			Pa	FDH model: 30; FDVH models: 50				
Cooling [2]	Capacity	30Pa (H/M/L)*	kW	7.20/6.10/5.50	8.03/6.80/6.10	9.27/8.00/6.80	11.20/10.00/8.50	13.00/11.20/9.80
		50Pa (H/M/L)*		7.20/6.10/5.50	8.03/6.80/6.10	9.27/8.00/6.80	11.20/10.00/8.50	13.00/11.20/9.80
	Water pressure drop	30Pa (H/M/L)*	kPa	30/23/20	40/31/25	40/31/23	40/32/24	50/39/31
		50Pa (H/M/L)*		30/23/20	40/31/25	40/31/23	40/32/24	50/39/31
Heating [3]	Capacity	30Pa (H/M/L)*	kW	12.00/10.17/9.00	13.60/11.35/10.33	16.00/13.81/11.74	19.20/17.14/14.57	22.16/19.09/16.71
		50Pa (H/M/L)*		12.00/10.17/9.00	13.60/11.35/10.33	16.00/13.81/11.74	19.20/17.14/14.57	22.16/19.09/16.71
	Water pressure drop	30Pa (H/M/L)*	kPa	24/19/16	32/25/20	32/25/19	32/26/20	40/32/25
		50Pa (H/M/L)*		24/19/16	32/25/20	32/25/19	32/26/20	40/32/25
Water flow		30Pa (H/M/L)*	l/min	20.64/17.49/15.77	23.02/19.49/17.49	26.57/22.93/19.49	32.11/28.67/24.37	37.27/32.11/28.09
		50Pa (H/M/L)*		20.64/17.49/15.77	23.02/19.49/17.49	26.57/22.93/19.49	32.11/28.67/24.37	37.27/32.11/28.09
Power input		30Pa (H/M/L)*	W	121/88/72	135/100/80	169/149/133	206/157/126	245/179/145
		50Pa (H/M/L)*	W	131/110/80	169/122/83	204/141/125	243/173/128	291/259/221
Sound pressure level		30Pa (H/M/L)*	dB(A)	46/39/31	44.5/40/33	47/42/35	48/42/35	49.5/43/36
		50Pa (H/M/L)*	dB(A)	48/43/37	50/39/36	51/45/40	52/46/40	53/49/42.5
Fan motor		Type		Low noise 3-speed AC capacitor motor				
		Quantity		1	2	1	2	2
Fan		Type		Centrifugal, forward-curved Blades				
		Quantity		2	3	4	4	4
Coil		Row		3				
		Max. working pressure	MPa	1.6MPa				
		Diameter	mm	7				
Dimensions (W×D×H)			mm	1177×240×455	1367×240×455	1367×240×455	1657×240×455	1897×240×455
Packing dimensions (W×D×H)			mm	1192×270×500	1382×270×500	1382×270×500	1672×270×500	1957×270×500
Net weight			kg	20,5	25,5	26,0	33,8	35,3
Gross weight			kg	23,6	29,1	29,7	39,5	39,8
Piping inlet/outlet			inch	3/4 Female BSP				
Drainage pipe			inch	3/4 Female BSP				

Notes:
1. B: high fan speed; C: average fan speed; H: low fan speed;
2. Cooling conditions: inlet water 7°C, outlet water 12°C, inlet air temperature 27°C DB/19.5°C WB, available fan pressure;
3. Heating conditions: inlet water 60°C, inlet air temperature 21°C DB/15°C, available fan pressure. Water consumption: the same under cooling conditions;
4. The above sound level is tested in a semi-anechoic room according to the GB/T19232 standard when the device is without accessories and operating in dry conditions.
The background noise level is 17.5 dB (A);
5. Air consumption is determined at the nominal pressure of the fan without filter and exhaust air adapter in dry conditions and 20 °C DB;
6. The connection of the unit from left to right can be changed at the site, but the cooling and heating capacity should be multiplied by a correction factor of 0.9;
7. The performance data on the above sheet has been tested at 220V~50 Hz;

WALL TYPE
FANCOILS WITH BUILT-IN 3-WAY VALVE

KJR-29B1/BK-E

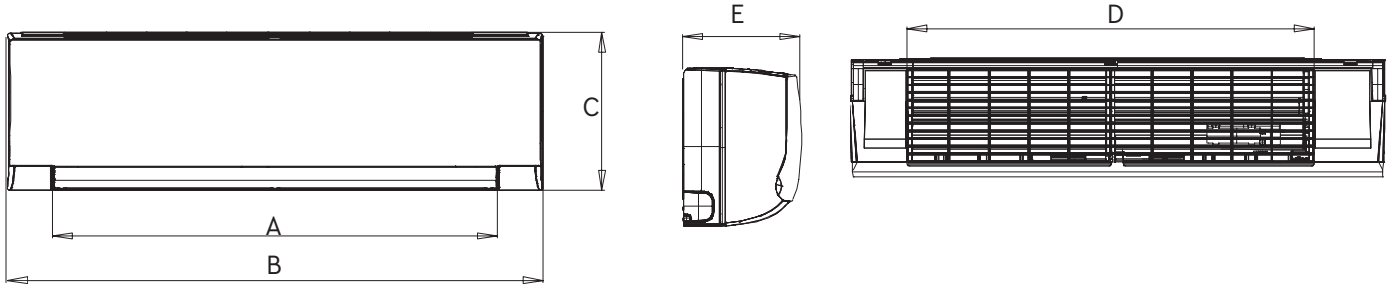
- The new control panel provides more options for customization;
- Water pipe with three connection options: left/right/rear;
- It is possible to adjust the movement of air in horizontal and vertical directions with the help of rotary louvers;
- Built-in 3-way valve with electric drive;
- Remote control panel with LCD display – standard delivery, wired controller – available by separate order;
- Four-speed motor with super high speed for more choices.

TECHNICAL PARAMETERS

			CH-FW025K2A	CH-FW030K2A	CH-FW040K2A	CH-FW050K2A	CH-FW060K2A
Power supply			~220-240V / 50 Hz / 1 Ph				
Air flow (H/M/L)*		m^3/h	435/396/342	523/426/351	660/534/480	841/723/594	915/836/714
		CFM	256/233/201	308/251/206	388/314/282	495/425/349	538/492/420
Cooling	Capacity (H/M/L)*	kW	1.94/1.84/1.68	2.64/2.4/1.99	2.94/2.58/2.34	4.01/3.61/3.1	4.61/4.33/3.84
	Water flow (H/M/L)*	m^3/h	0.35/0.33/0.3	0.47/0.43/0.36	0.53/0.46/0.42	0.72/0.65/0.56	0.83/0.78/0.69
	Water pressure drop (H/M/L)*	kW	31.6/28.6/25.2	37.5/30/24	57.2/47.6/38.7	47.1/33.5/29.7	51/39.5/34
Heating	Capacity (H/M/L)*	m^3/h	2.34/2.15/1.94	2.9/2.6/2.22	3.46/2.75/2.52	4.39/3.8/3.27	4.55/4.2/3.82
	Water flow (H/M/L)*	kW	0.43/0.39/0.35	0.53/0.47/0.4	0.63/0.5/0.46	0.8/0.69/0.6	0.83/0.76/0.69
	Water pressure drop (H/M/L)*	kPa	35.2/34.9/30	39.3/31.5/25	70.8/55.1/46.2	48.6/40.8/31.7	48/43/33
Power input (H/M/L)*		W	35/32/31	47/43/39	50/51/47	60/54/48	72/60/55
Current input		A	0.11	0.17	0.18	0.22	0.29
Sound pressure level		dB(A)	30/24/20	35/29/24	37/31/26	39/33/28	40/34/29
Fan motor		Type	Low noise 3-speed fan motor				
		Quantity	1				
Fan	Type		Tangential fan				
	Quantity		1				
Coil	Row		2				
	Dimensions (W×D×H)	mm	635×315×26.74			785×315×26.74	
	Fin type		Hydrophilic aluminum				
	Circuit		5				
	Max. working pressure	MPa	1.6				
Casing	Dimensions (W×D×H)	mm	915×290×230			1072×315×230	
	Packing dimensions (W×D×H)	mm	1020×390×315			1180×415×315	
	Net weight	kg	13		13.3	15.8	
	Gross weight	kg	16.3		16.7	19.4	
Piping	Inlet/outlet	inch	3/4 Female BSP				
	Drainage	mm	OD Ø 20				

Notes:
1. B: high fan speed; C: average fan speed; H: low fan speed
2. Cooling conditions: inlet water 7°C, outlet water 12°C, inlet air temperature 27°C DB, 19°C WB.
Heating conditions: inlet water 40°C, outlet water 45°C, inlet air temperature 20°C DB.
3. Noise is tested in a semi-anechoic test room

OVERALL DIMENSIONS



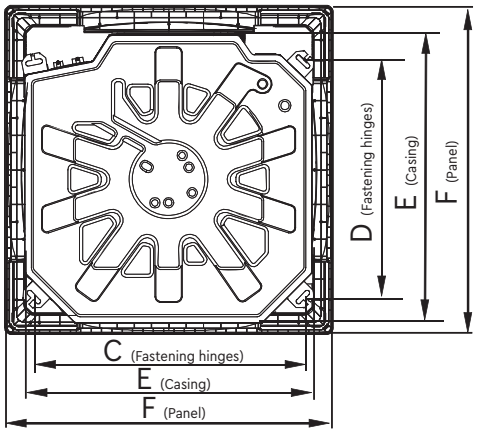
	A	B	C	D	E
CH-025(030,040)-K2A	732	915	290	663	233
CH-050(060)-K2A	892	1072	315	813	237

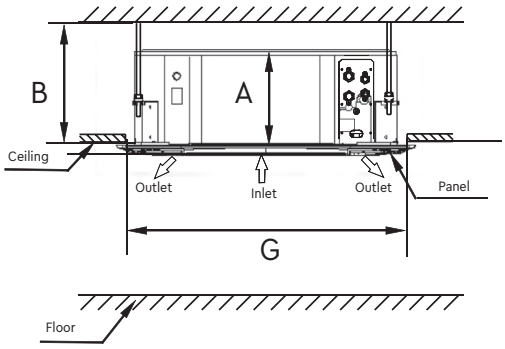
CASSETTE TYPE
FANCOILS

KJR-29B1/BK-E

- Water cooling/heating (2 pipes).
- Low height for easy installation.
- Single-phase 3-speed fan with direct drive and low noise level.
- Copper tube/aluminum finned heat exchanger.
- Aluminum annular fins with hydrophobic coating (optional).
- Casing is made with galvanic zinc coating, which provides maximum protection against corrosion.
- Steel drainage tray also has zinc coating.

OVERALL DIMENSIONS





	A	B	C	D	E	F	G
CH-FC030K2, CH-FC040K2, CH-FC050K2	261	>300	545	523	575	647	600
CH-FC060K2, CH-FC075K2	230	>260	780	680	840	950	880
CH-FC085K2 – CH-FC150K2	300	>330	780	680	840	950	880

TECHNICAL PARAMETERS

			CH-FC030K2	CH-FC040K2	CH-FC050K2	CH-FC060K2	CH-FC075K2	CH-FC085K2	CH-FC100K2	CH-FC120K2	CH-FC150K2
Air flow	High	m³/h	510	680	850	1000	1250	1400	1600	2000	2550
	Medium		440	580	730	850	1060	1190	1360	1700	2170
	Low		360	480	600	720	900	1010	1150	1440	1840
Cooling capacity (High speed)		W	3000	3700	4500	5700	7000	7270	8220	10390	12900
		Btu/h	10236	12624	15354	19510	23840	24800	28050	35450	44010
Heating capacity (High speed)		W	4000	5100	6000	9660	11550	12420	13850	17580	17600
		Btu/h	13648	17401	20472	32970	39420	42360	47240	60000	60050
Noise level (High speed)		dB(A)	36	42	45	45	46	47	48	49	50
Water flow		l/min	8.7	10.7	12.9	16.4	20	20.8	23.6	29.8	36.9
Water pressure drop		kPa	14	15	16	23.8	25.2	27	31.2	44	40
Coil	Row		2								
	Circuit		5	6	7	8		12			
Fan motor	Type		Low noise 4-speed fan motor								
	Quantity		1								
	Power input	W	35	60	75	120	125	145	150	185	
Indoor unit	Dimensions (W×D×H)	mm	575×261×575			840×230×840		840×300×840			
	Packing dimensions (W×D×H)	mm	705×340×705			955×260×955		955×330×955			
	Net/Gross Weight	kg	17.5/22.5			25/31 (27/33)		30.5/37.2 (33/40)			35/42
Panel	Dimensions (W×D×H)	mm	647×50×647			950×46×950					
	Packing dimensions (W×D×H)	mm	715×123×715			1035×90×1035					
	Net/Gross Weight	kg	3/5			6/9					
Control Mode			Remote controller								
Piping	Inlet/outlet		3/4" Female BSP								
	Drainage		EVA+LDPE 3/4" Male BSP								

Note: 1. All performance data above is for 0 Pa external static pressure.
2. Cooling capacity test conditions: inlet air temperature: 27 DB oC/19 WB oC, inlet water temperature 7 oC, water temperature difference 5 oC.
3. Heating power test conditions: Temp. 21 DB oC, inlet water temperature 60 DB oC The volume of air and water is the same as cooling.
4. The noise level is checked in an anechoic room.

MARKINGS

	Titanium heat exchanger	A specially designed titanium heat exchanger for the needs of heat pumps for swimming pools. Guarantees reliable and long-term operation of the heat pump for swimming pools. Thanks to a special titanium alloy, the heat exchanger is protected from the effects of water disinfectants.
	Heating/Cooling	A wide range of temperatures ensures stable and efficient operation of the heat pump at any outside temperature. Regardless of the season, the heat pump efficiently provides you with heat or cold and DHW. A guarantee of reliable operation of the heat pump all year round!
		Stable temperature control of hot water supply and ensuring the comfort of your home. A heat pump heats water for hot water supply, thereby providing your home with comfort and independence from central hot water supply systems.
	Energy Efficiency	The energy efficiency class determines the degree of efficiency of the heat pump. Thanks to a simple gradation of efficiency, the degree of efficiency of the heat pump is easily determined.
	Self-diagnostics	The system constantly monitors possible malfunctions of the heat pump. Sensors signal in time about possible limit states of the heat pump, and reliable automation notifies about probable malfunctions.
	Auto-protection	Protects the heat pump from voltage drops, which in turn guarantees stable and safe operation during critical voltage surges in the power grid. This protects the electrical equipment of the heat pump.
	Anti-corrosive Coating	A specially developed coating of the heat exchanger protects the heat exchanger itself from the influence of external factors, such as the sea climate or high air humidity. The anti-corrosion coating makes the heat pump heat exchanger reliable and durable.
	Golden Fin Coating	The innovative Golden Fin coating ensures the stability of the heat exchanger surface and increases its service life. It also extends the service life of the heat pump in regions with high humidity, in places where the air is contaminated with sand, salt, industrial smoke and other pollutants.
	DC-Inverter Compressor	The compressor's DC motor allows less electricity consumption. Which is especially urgent during the constant operation of the heat pump. Makes the system highly efficient and economical.
	2-Stage Compressor	Thanks to the 2-stage design of the compressor, it was possible to increase the temperature range of the heat pump without significant loss of efficiency. Which, in turn, significantly decreases energy consumption of the heat pump at extremely low (up to -30 °C) temperatures outside.
	EVI Compressor	Increases the operating range of the heat pump, reduces the temperature in the compressor and increases the level of performance of the heat pump. EVI technology saves heat pump energy resources at low outside temperature in winter.
	Timer	Thanks to the timer, you have the opportunity to program the start of the heat pump. This function will be especially useful when there is a need to save energy for heating or cooling the room. Or in the case of supporting your home in the absence of people. The timer can be configured both by hours and days of the week.
	Touch Screen Control	5-inch color touch-screen panel with a large number of control functions of the heat pump. Allows you to control the modes, set the temperature, carry out actual monitoring of the heat pump and adjust the comfort functions.
	Wired Controller	Allows you to install the controller in a separate special room. Which, in turn, allows only authorized personnel to control the heat pump. The wired controller has all the necessary control functions to implement professional control of the heat pump.
	Intelligent Control	A wide range of functions allows you to manage, monitor, adjust and control the operation of the heat pump. Provides additional options for controlling the heat pump.
	BMS Control Systems	The remote monitoring interface allows you to control the heat pump via the Modbus protocol and integrate it into the Building Management System (smart building management system).
	Intelligent Defrosting	The function implements a more advanced defrosting system of the heat pump. The defrosting program is not activated after fixed time intervals, as it is implemented in standard systems, but only when defrosting is necessary.
	Wi-Fi	Easy and relaxed control of the heat pump from anywhere. It is enough just to activate the necessary software for Wi-Fi and you will be able to control the heat pump remotely. Temperature control, changing operating modes and many other useful functions are available through the mobile application.
	4G	The 4G MMN (Management & Monitoring Network) function makes it possible to control the heat pump using mobile communication. A special slot for a SIM card allows you to activate communication with the heat pump using mobile networks.

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CHV6

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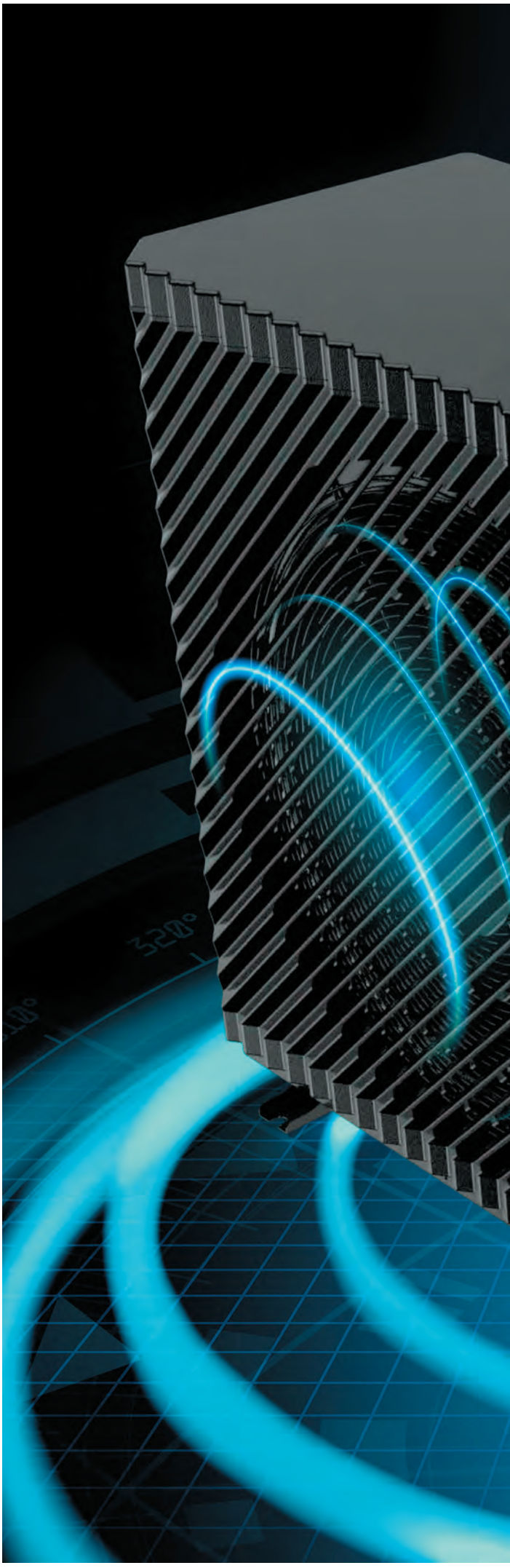

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