WESTON

CLIMATE

Operation Manual

Air Source Inverter Heat Pump
for Space Heating Cooling and Domestic Hot Water

Models:

WESTON-JN-MN-TOP-R290-5KW-1F
WESTON-JN-MN-TOP-R290-7KW-1F
WESTON-JN-MN-TOP-R290-9KW-1F
WESTON-JN-MN-TOP-R290-12KW-1F
WESTON-JN-MN-TOP-R290-15KW-1F
WESTON-JN-MN-TOP-R290-15KW-3F

Please read the operation manual carefully before use. Please keep the manual properly too.

Catalogue

WESTON
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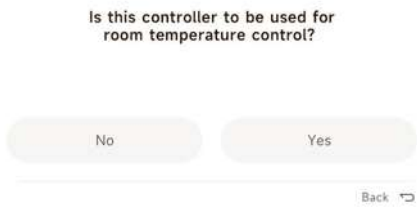
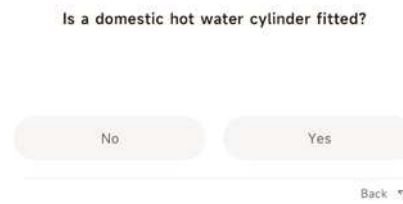
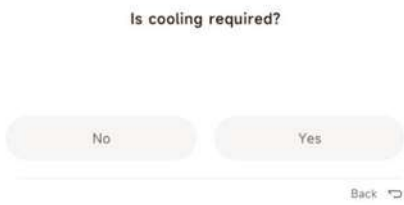
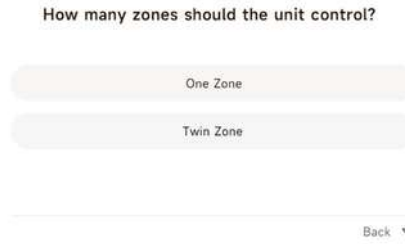
1. Main interface

The main interface has 16 configurations totally. The specific configuration has been initially set up by the installer during the first boot based on the installation scenario.







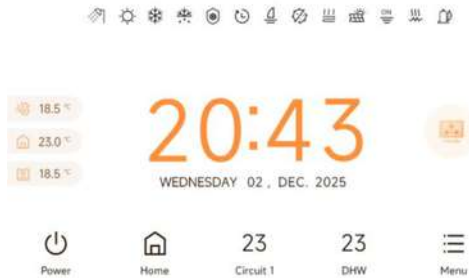


Configuration 1			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/N	No
4	How many zones should the unit control?	One Zone / Twin Zone	One Zone

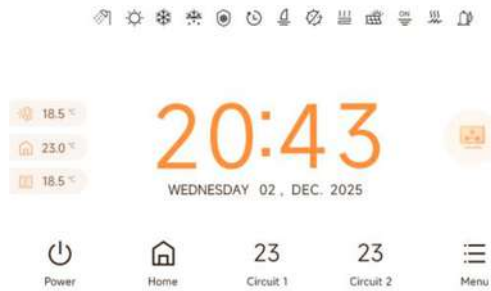
Configuration 2			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone / Twin Zone	One Zone

Configuration 3			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone /TwinZone	One Zone

Configuration 4			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone /Twin Zone	One Zone



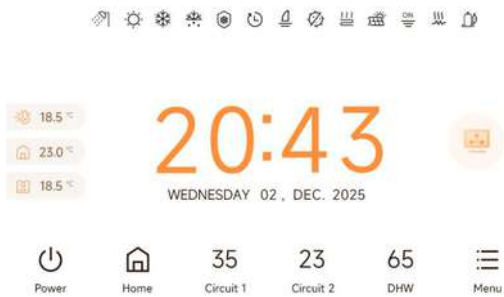
Configuration 5			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone / Twin Zone	Twin Zone



Configuration 6			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone /TwinZone	One Zone

Configuration 7			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone /TwinZone	OneZone

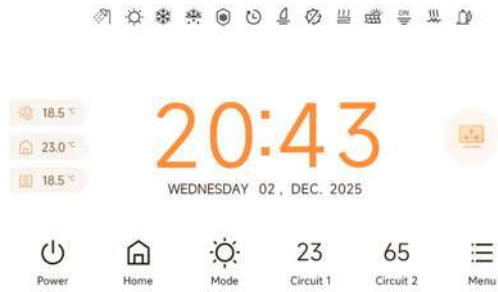
Configuration 8			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone/ Twin Zone	Twin Zone



Configuration 9			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone /TwinZone	One Zone

Configuration 10			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone /TwinZone	One Zone

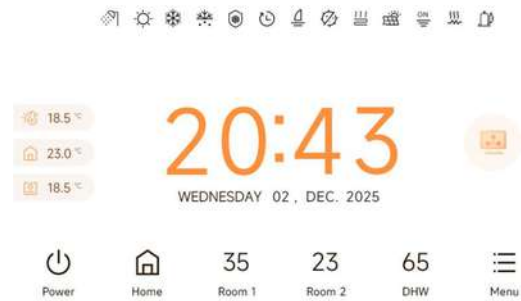
Configuration 11			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone/ Twin Zone	Twin Zone



Configuration 12			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	No
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone / Twin Zone	Twin Zone

Configuration 13			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone / Twin Zone	Twin Zone

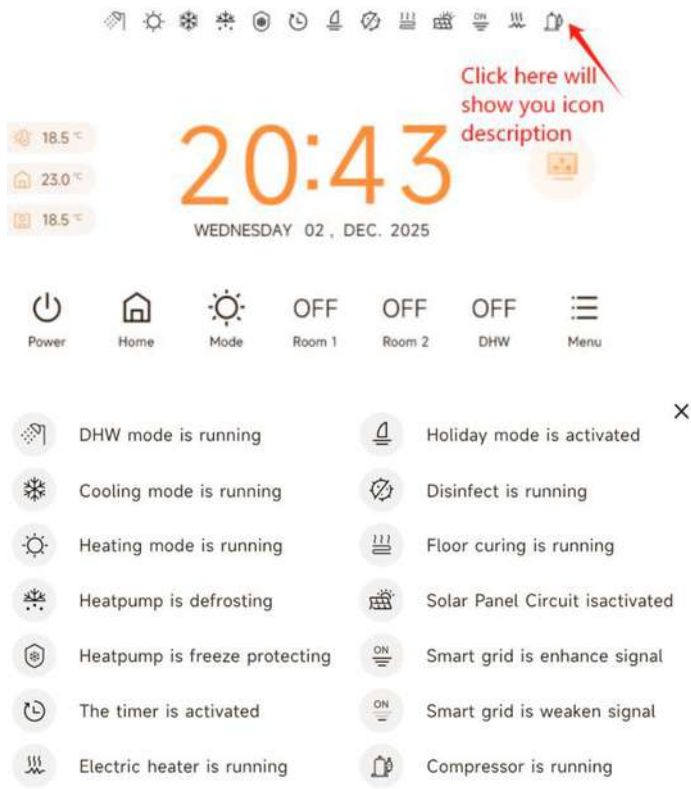
Configuration 14			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	No
4	How many zones should the unit control?	One Zone/ Twin Zone	Twin Zone



Configuration 15			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	No
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone/ Twin Zone	Twin Zone

Configuration 16			
Question		Answer	
1	Is this controller to be used for room temperature control?	Yes/No	Yes
2	Is a domestic hot water cylinder fitted?	Yes/No	Yes
3	Is cooling required?	Yes/No	Yes
4	How many zones should the unit control?	One Zone/ Twin Zone	Twin Zone

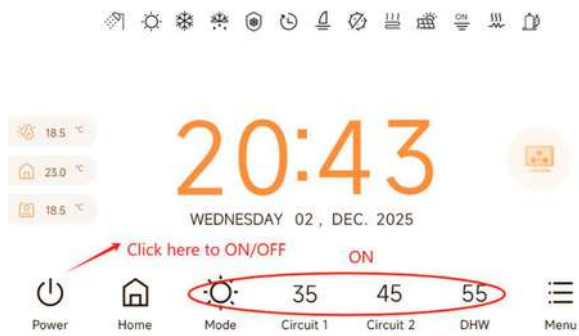
2. Function icon description



No.	Icon	Icon Name	Function
1	Power	**Turn On/Off**	Click to turn on/off the heat pump unit.
2	Home	**Main interface entry**	Click to display the current year, month, day, hour, minute, second and day of the week details.
3	**Top-Line**	**Icon List**	Click to check the detailed description of each icon.

4	 Menu	**Menu**	Click to enter the system parameters setting and controller parameters setting.
5	 18.5 ℃	**Outdoor Ambient Temp.**	Outdoor unit HP Ta temperature sensor
6	 23.0 ℃	**Indoor Ambient Temp.**	Indoor Tr ambient temperature sensor
7	 18.5 ℃	**Buffer Tank Water Temp.**	Show the water temperature value Tc of heating/cooling. If without Tc, show inlet water temperature value HP Ti of the heat pump.
8		**System Diagram entry**	Click to enter the system diagram interface.
9		**Fault query entry**	It will be displayed when there is a fault or protection. Click to enter the fault query interface.
10	 23 Room 1	**Room1**	Icon shows the setting temperature of Room 1. Click icon and enter the interface to display current room Temp. Click the room Temp. display interface to enter the room temperature setting interface.
11	 23 Room 2	**Room2**	Icon shows the setting temperature of Room 2. Click icon and enter the interface to display current room Temp. Click the room Temp. display interface to enter the room temperature setting interface.
12	 23 Circuit 1	**Circuit 1**	Icon shows the setting temperature of Circuit 1. Click icon and enter the interface to display current circuit Temp. Click the circuit Temp. display interface to enter the circuit temperature setting interface.
13	 65 Circuit 2	**Circuit 2**	Icon shows the setting temperature of Circuit 2. Click icon and enter the interface to display current circuit Temp. Click the circuit Temp. display interface to enter the circuit temperature setting interface.
14	 65 DHW	**DHW**	Icon shows the setting temperature of DHW. Click icon and enter the interface to display current DHW Temp. Click the DHW Temp. display interface to enter the DHW temperature setting interface.
15	 Mode	**Mode**	Icon shows the current mode setting. Click this icon to enter the current mode display interface.

3. Turn ON/OFF



Click the Power switch to turn on the heat pump unit.

Click the Power switch to turn off the heat pump unit.

Click the DHW switch to turn off the DHW Mode.

Click the Circuit/Room 1 switch to turn off Zone 1 Setting.

Click the Circuit/Room 2 switch to turn off Zone2 Setting.

4. Workingmodeselection

(If Cooling mode is configured)

a. Mode Shows the current working mode. Click Mode first and than click Mode again to enter the working mode setting interface. (This icon can only be shown if cooling mode is configured and cooling terminals of heat pump unit were installed).

b. If the domestic hot water function (DHW) function is not included in the mode configuration, users can select:

Heating / Cooling / Auto (Heating or Cooling)

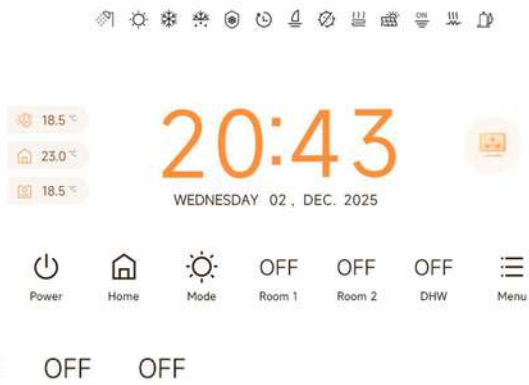
c. If the domestic hot water function (DHW) function is included in the mode configuration, users can select:
DHW / Heating / Cooling / Auto /
DHW+Heating / DHW+Cooling / DHW+Auto


Operation Mode
DHW&Heating
Cancel
Confirm


Operation Mode
DHW&Cooling
Cancel
Confirm


Operation Mode
DHW&Auto
Cancel
Confirm

5. Set target temperature



a.Click anditwilldisplaythereal-timetemperature (Circuit show water Temp. And Room shows room Temp.) and click the real-time temperature to enter the interface of temperature setting.

b. If confirm the controller to be used for circuit temperature control, please set room temperature in “User Parameters”. If confirm the controller to be used for room temperature control, please set circuit water temp. in “User Parameters” too.

c. User can set Heating and Cooling temperature together when click the real-time temperature if cooling terminals for heat pump unit were installed.

d. If Cooling is not included in mode configuration, and the heat pump is controlled by circuit water temperature.

Circuit water temperature control
(Target water temperature in Zone 1)

Circuit water temperature control
(Target water temperature in Zone 2)

e. If Cooling is not included in the mode configuration, and the heat pump is controlled by room temperature.

Room temperature control
(Target room temperature in Zone 1)

Room temperature control
(Target room temperature in Zone 2)

f. If Cooling is included in the mode configuration, and heat pump is controlled by circuit water temperature.

Circuit water temperature control
(Heating/Cooling Target water temperature in Zone 1)

Circuit water temperature control
(Heating/Cooling Target water temperature in Zone 2)

g. If Cooling is included in the mode configuration, and heat pump is controlled by room temperature.

Room temperature control
(Heating/Cooling Target room temperature in Zone 1)

Room temperature control
(Heating/Cooling Target room temperature in Zone 2)

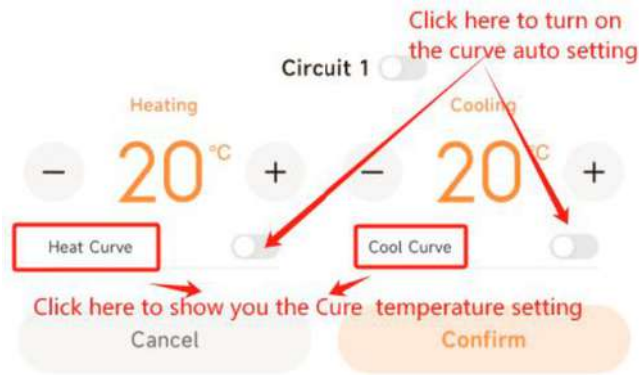
h. If DHW is included in mode configuration.

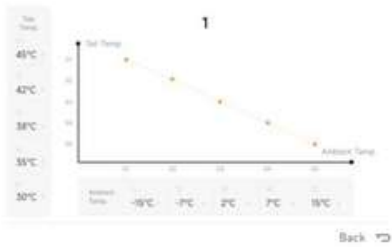
6. Automatic climate curve of target temperature

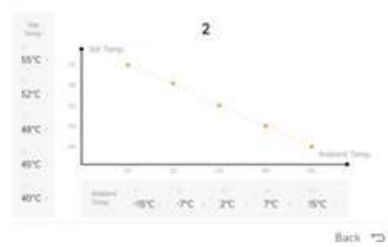
a. Click and it will display the real-time temperature (Circuit show water Temp. and Room shows room Temp.) and click the real-time temperature to enter the interface of temperature setting.

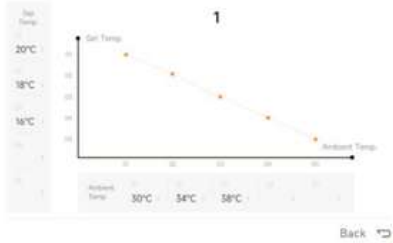
b. Regardless of whether room temperature or circuit water temperature is selected on controller configuration, the Heating Cooling curve can be set after click Heat Curve or Cool Curve .

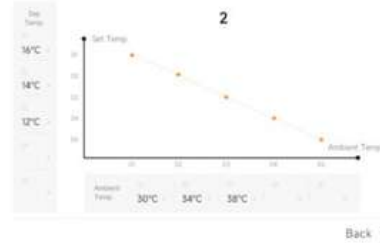
c. User can modify the ambient temperature and the corresponding target water temperature of the climate curve.



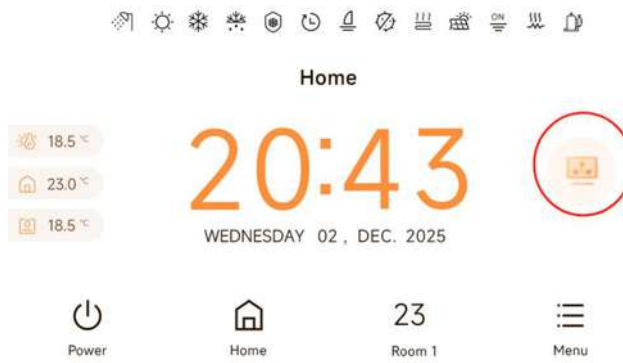

1
45°C
42°C
38°C
35°C
30°C
Set Temp
Ambient Temp
-15°C
-7°C
2°C
7°C
15°C
Back


2
55°C
52°C
48°C
45°C
40°C
Set Temp
Ambient Temp
-15°C
-7°C
2°C
7°C
15°C
Back

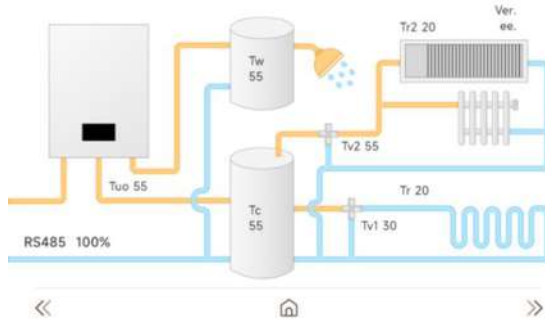

1
20°C
18°C
16°C
Set Temp
Ambient Temp
30°C
54°C
58°C
Back


2
16°C
14°C
12°C
Set Temp
Ambient Temp
30°C
54°C
58°C
Back

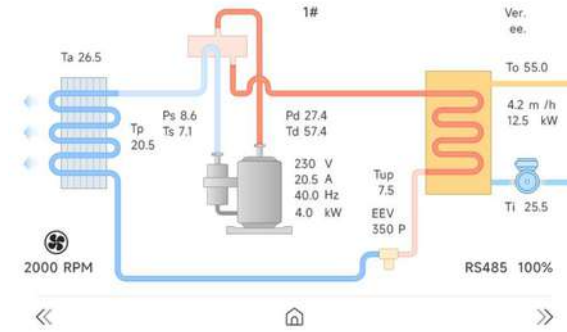
7. Check Heat Pump System Status



Press icon  to check water system and water system working status.



(Water System)



(Refrigerant System)

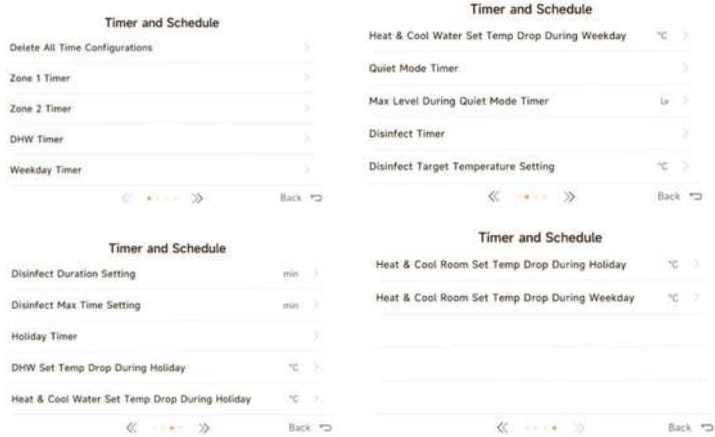
Following parameters that are related to the water system can be checked in this icon.
Ta: Ambient Temperature
Tp: Outer Coil Temperature
Ps: Refrigerant low pressure
Ts: Return gas temperature
Pd: Refrigerant high pressure
Td: Exhaust temperature
V: Input voltage
A: Input current
Hz: Current compressor speed
kW: Current input power
Tup: Inner Coil Temperature
EEV: EEV opening
RPM: Current fan speed
Ver: Control system version
ee: EE version
To: Outlet water temperature
m/h: Water flow
kW: Current heating capacity
Ti: Inlet water temperature
RS485: Current communication success rate
Tuo: Outlet water temperature
Tw: DHW tank temperature
Tc: Buffer tank temperature
Tv1: Water mixing valve 1 temperature
Tv2: Water mixing valve 2 temperature
Tr: Room 1 Temperature
Tr2: Room 2 Temperature

8. Menu

Menu includes: Timer and schedule, System Configuration, Alarm History, Screen Setting, Installer Access.

- Click “ ” to enter the corresponding sub-menu.
- Click “ Back ” to back the main menu.

a. Timer and Schedule



- Click “ ” to enter the corresponding sub-menu.
- Click “Back ” to back upper-level menu.

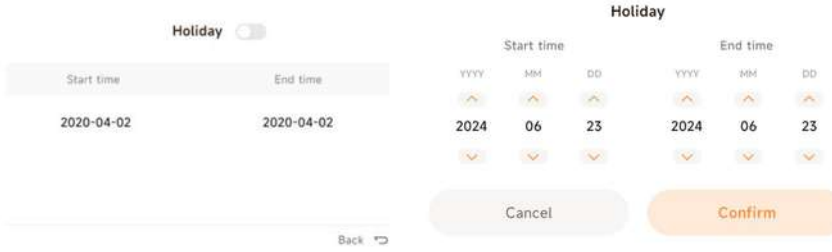
- Slide “ ” to be green and turn on the timer.

1) Zone 1 & Zone 2 total 8 Timers Setting.

Click the switch button (on the right side) to turn on/off timers.
Click values (on the left side) to enter the setting of timing week and timing time.

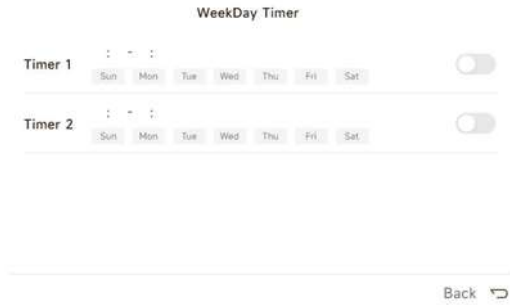
2) Domestic hot water DHW 4 Timers Setting

3) Holiday Timers Setting.



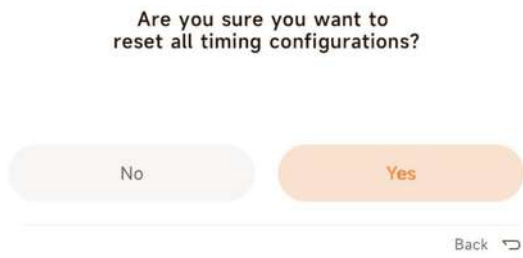
4) Disinfect Timer Setting.

5) WeekDay Timers Setting.

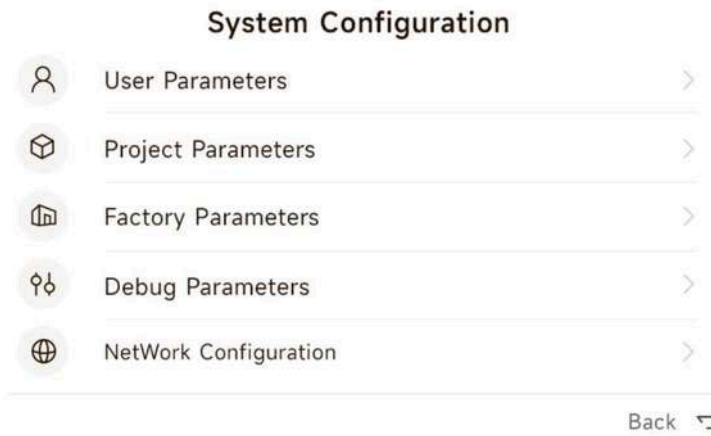


6) Quiet Mode Timers Setting.

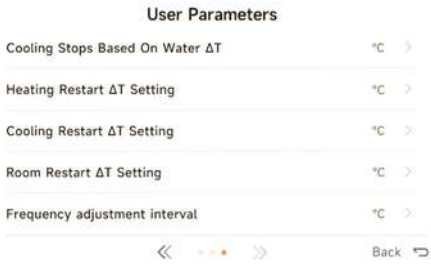
7) Cancel all timers.



b. System Configuration



1) User Parameters



-Click“ - ”toentertheparameterssetting.
Click“ Back ”tobacktheupper-levelmenu.

2) Project Parameters

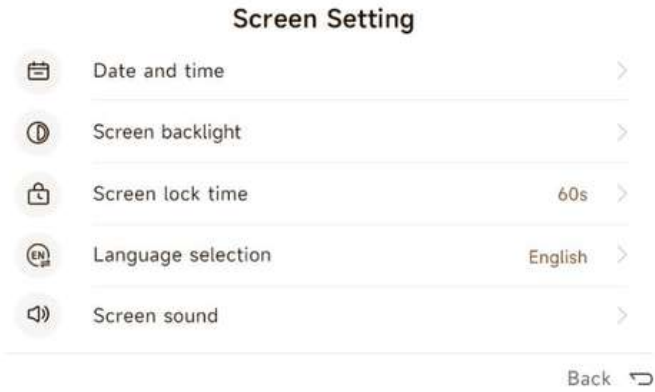
3) Factory Parameters

4) Debug Parameters

(Project Parameters, Factory Parameters, Debug Parameters can only be accessed with password. For specific details, please refer to the installation manual.)

c. Screen Setting

Screen Setting include Date and time, Screen backlight, Screen lock time, Language selection, Screen sound



d. Alarm History

The wire controller can record 10 latest unit faults. Please check the faults detail on the table “Fault Code and Description.

- Click “ ”or“ ”tocheckthefaultrecords.
- Click “Back ” to back the upper-level menu.

If the heat pump cannot operate with some fault, the controller will show the fault icon onthemaininterface.

Click“ ”tocheckthefailurehistory.

Fault Types

Hardware Fault Type	Software Protection Type
Ambient temperature sensor failure	Outdoor unit AC voltage overhigh/ultralow protection (three-phase model input lost phase)
Inlet water temperature sensor failure	Outdoor unit AC current protection to shutdown
Outlet water temperature sensor failure	Refrigerant high pressure switch protection
Exhaust temperature sensor failure	Refrigerant low pressure switch protection
Return gas temperature sensor failure	Refrigerant high pressure protection to shutdown
Inner coil temperature sensor failure	Refrigerant low pressure protection to shutdown
Outer coil temperature sensor failure	Exhaust temperature overheat protection to shutdown
Economizer inlet temperature sensor failure	Water flow switch disconnect protection
Economizer outlet temperature sensor failure	Heating inner coil overheat protection to shutdown
Refrigerant high-pressure pressure sensor failure	Cooling inner coil anti-freezing protection to shutdown
Refrigerant low-pressure pressure sensor failure	Cooling outer coil overheat protection to shutdown
Economizer pressure sensor failure	Outlet water temperature overheat protection
DC fan failure	Outlet water temperature ultralow protection
DC water pump failure	Heating ambient temperature overheat protection
Main control board EE failure	Cooling ambient temperature ultralow protection
Communication failure between main control board and the inner board	Inlet and outlet water temperature difference overlarge protection
Outer Driver Board Fault Type	
Communication failure between main control board and the driver board	
Compressor startup abnormal (phase lost, inversion)	
Driver board EE failure	
IPM Module failure	
Compressor overheat switch protection	
IPM overheat protection to shutdown	
Compressor phase current protection to shut down	
Dc busbar overhigh/ultralow voltage protection	

Error input and protection alarm

	Description	Fault analysis	Check method	Solution
1	Water flow protection	1. The system lacks water. 2. The water flow switch failure. 3. The water system is blocked. 4. The temperature difference between inlet water and outlet water is too big.	1. Check whether the water supply valve is closed or the water supply is cut off; 2. Check whether the water flow switch is blocked or interrupted 3. Check whether the Y-filter is clogged.	1. Turn on the valve; 2. Replace new one water flow switch; 3. Clean or replace new filter screen.
2	High pressure protection	1. Water flow is too sm a ll; 2. High-pressure switch failure; 3. Refrigeration system is blocked; 4. EEV is locked.	1. Check whether there is water shortage or insufficient water pump flow; 2. Check whether the high-pressure switch is disconnected due to heat pump are turned off; 3. Check whether the refrigeration system is blocked; 4. Check whether the EEV makes a resetting sound when the heat pump is in shutdown mode and the power is turned on or off.	1. Refill water or replace a water pump with a larger flow rate or add a booster pum p; 2. Replace new high-pressure switch; 3. Replace new filter; 4. Replace new EEV.
3	Low pressure protection	1. Lack of refrigerant; 2. Refrigeration system is blocked; 3. Exceeding the system working range;	1. Check if the refrigerant system is leaking; 2. Check if the filter is clo gge d; 3. Check if the ambient temperature or outlet water temperature exceeds the lim it.	1. Repair the leakage and refill the refrigerant. 2. Replace new filter; 3. If the system exceeds the operating limit, shut down the unit;
4	Exhaust temperature protection	1. Lack of refrigerant; 2. Exhaust temperature sensor failure.	1. Check if the refrigerant system is leaking; 2. Check whether the exhaust temperature sensor is faulty.	1. Repair the leakage and refill the refrigerant. 2. Replace new exhaust temperature sensor.
5	Refrigerant temperature of plate heat exchanger too low protection	1. Lack of refrigerant; 2. Water system is blocked; 3. Refrigeration system is blocked;	1. Check if the refrigerant system is leaking; 2. Check whether the water system is blocked; 3. Check whether the refrigeration system is blocked;	1. Repair the leakage and refill the refrigerant. 2. Replace new new filter; 3. Clean the refrigerant system.
6	Com m uni ca ti on failure	The communication wire is broken or reversed	Check the communication wire	Replace new wire or reconnect it again.
7	Outdoor	The temperature	Check the resistance of the	Replace new

	temperature sensor failure	sensor has temperature deviation or open circuit.	temperature sensor or whether the temperature sensor is disconnected	temperature sensor or reconnect the wire.
8	Defrosting temperature sensor failure	The temperature sensor has temperature deviation or open circuit.	Check the resistance of the temperature sensor or whether the temperature sensor is disconnected	Replace new temperature sensor or reconnect the wire.
9	Indoor return water temperature sensor failure	The temperature sensor has temperature deviation or open circuit.	Check the resistance of the temperature sensor or whether the temperature sensor is disconnected.	Replace new temperature sensor or reconnect the wire.
10	Indoor outlet water temperature sensor failure	The temperature sensor has temperature deviation or open circuit.	Check the resistance of the temperature sensor or whether the temperature sensor is disconnected.	Replace new temperature sensor or reconnect the wire.
11	Indoor refrigerant outl et temperature sensor failure	The temperature sensor has temperature deviation or open circuit.	Check the resistance of the temperature sensor or whether the temperature sensor is disconnected.	Replace new temperature sensor or reconnect the wire.
12	Indoor refrigerant inlet temperature sensor failure	The temperature sensor has temperature deviation or open circuit.	Check the resistance of the temperature sensor or whether the temperature sensor is disconnected.	Replace new temperature sensor or reconnect the wire.
13	Compressor current protection	Wire connection error or IPM module invalid; Check whether the wire connection is wrong or reconnect the wire or replace the IPM module.		
14	IPM module protection			
15	IPM module temperature sensing internal abnormal circuit			
16	IPM module temperature overheat protection			
17	PFC module protection			
18	PFC module temperature sensing internal abnormal circuit			
19	PFC module temperature overheat protection			
20	Abnormal input current protection			
21	Overlarge input current protection			
22	VDC overlarge voltage protection			
23	VDC ultralow volt a ge			

	protection	
24	Communication failure	
25	System control exception	
26	Communication failure	
27	Boot failure	
28	Lost phase failure	

9. Device Networking

a. First, please search and download the "MaxT" software in the Apple App Store or the Google Play Store.

b. The HP installer registers on the IOT platform and provides the account and password.

(Due to privacy regulations, allowing self-registration of accounts carries the risk of unauthorized individuals privately registering and binding devices. Therefore, self-registration is currently not supported. Users will need to receive their account credentials from a dealer and then change the password themselves.)

c. Device Networking Configuration(WIFI version)

1. Preparation:Themobilephoneusedforoperationshouldfirstconnect to their desired WIFI and turn on the phone's Bluetooth function.

2. OpentheindoorunitandremovetheDTUasshowninFigure1&2.
Use the screwdriver on the left and right handles of the DTU device, apply force in the same direction to release the handle buckles. Then slide the DTU upward to remove it.

Figure1

Figure2

3. Insertthepinintotheholeofnetworkconfigurationbuttonshownin Figure 3 and hold for 5 seconds until the WiFi indicator light flashes rapidly continually as shown in Figure 4, entering the network configuration mode.

Figure 3

Figure 4

4. Openthe"MaxT"APP,goto'More'andselect'Bluetoothprovisioning' (as shown in Figure 5).
Click the 'Add' button on the right side of the device detecting interface (as shown in Figure 6).
Enter the WIFI account and password (as shown in Figure 7), and finally complete the network configuration (as shown in Figure 8).

Figure 5

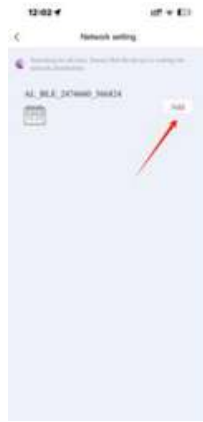


Figure 6

Figure 7

Figure 8

5. Aftercompletion,theaccountwillbeautomaticallyboundtothedevice.

6. OncecompletetheDTUnetworkconfiguration,positiontheDTUatthe top of the rail of indoor unit and slide it down. Fix the DTU onto the rail, then push handle buckles in the opposite direction to lock it.

d. DTU Binding (4G version can be bound directly)

1) Please provide the DTU serial number to seller for binding, or use the App to scan and bind it yourself.

2) The DTU Serial No. can be checked as below positions.

Nameplate of the indoor unit

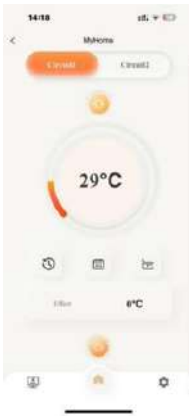
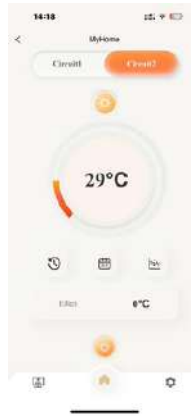
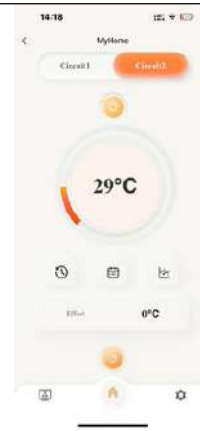
	Back of the Wire Controller
	On the DTU box in indoor unit

3) Steps for self-scanning and binding.

Scan the QR code of the DTU serial number to bind directly.

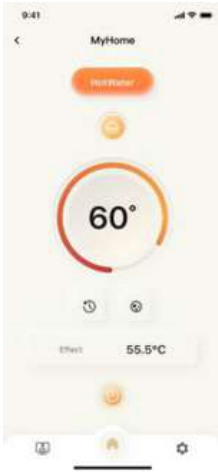
10. App operation

a. Power ON/OFF

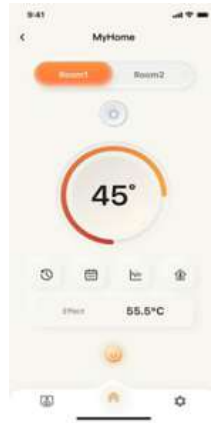
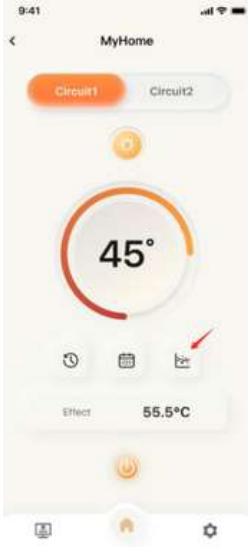
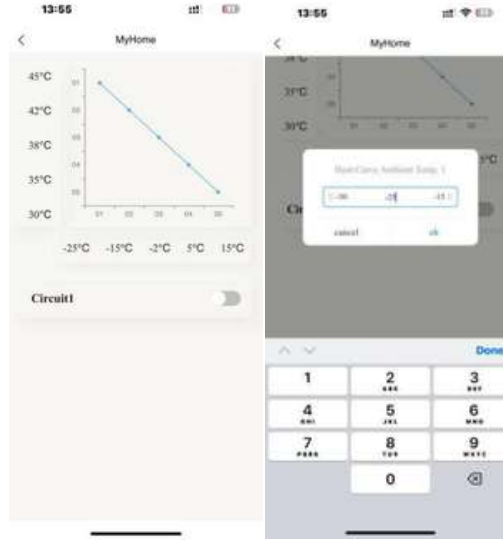
			
Unit Power On	Unit Power Off	Power on DHW mode	Power off DHW mode
			
Power on Circuit/Room 1	Power off Circuit/Room 1	Power on Circuit/Room 2	Power off Circuit/Room 2

b. Mode Setting

c. DHW Temperature Setting



d. Circuit/Room Temperature Setting

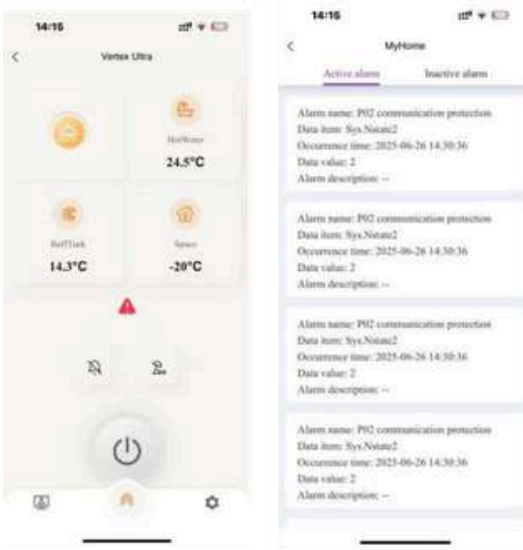
	
Circuit water temperature control setting	Room temperature control setting
	
Curve icon in Circuit/Room Temp. Setting interface	Press to enter Climate curve automatic setting. And click data on the curve to change.

e. Timing setting

	
Press to enter Mute function setting on the main interface.	Press to enter Holiday function timer setting on the main interface.
	
Press to enter disinfect function timer setting on the DHW setting interface	Press to enter DHW timer setting on the DHW setting interface (4 periods)

	
Press to enter Weekday function setting on the Circuit/Room Temp. setting interface	Press to enter Zone ½ timer setting on the Circuit/Room Temp. setting interface (8 periodsX2).

f. Fault Query



Thank you for choosing our quality product.

Please read this manual carefully before use and follow the instructions to operate the unit in order to prevent damages on the device or injuries to staff.

Specifications are subject to change with product improvements without prior notice. Please refer to the specification sticker on the unit for upgraded specification.

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