OPERATION INSTRUCTIONS

Thank you very much for purchasing this heat pump water heater.
Please read this instructions carefully before using this appliance
and keep this manual for future reference.

Operation instructions

Display panel

MODE

Press this button to select the operation mode.

FUNCTION

Used to set the auxiliary function.
Used to exit the lock mode by pressing it for 3 seconds.

MODE + UP

Used to enter the parameter setting mode by pressing them together for 3 seconds.

LOCK

Used to exit the Lock mode by pressing it for 3 seconds.

POWER

Pressing this button will start the appliance when it is powered-off or stop it when it is in operation.
Used to confirm the modify parameter value.

UP

Used to increase the temperature value.
Used to increase the modify parameter value.
Used to navigate up the parameter code .

DOWN

Used to decrease the temperature value.
Used to decrease the modify parameter value.
Used to navigate down the parameter code.

POWER + DOWN

Used to connect to the Wi-Fi by pressing them together for 3 seconds.

MODE + FUNCTION

In the power-on state，when the anti-cold water function is open, press them together for 3 seconds to send a signal to the control board, starting or stopping the back water pump.

Note:
In the power-off state, the POWER button light is on, displaying water temperature or fault messages.
In the power-on state, all button lights are on, displaying water temperature or fault messages.
If no operation occurs within approximately 3 minutes, the buttons will lock, preventing all buttons from being operated, and all buttons light is off except FUNCTION button. You can press the FUNCTION button for about 3 seconds to exit the lock mode. When any button is pressed in lock mode, the buzzer sounds three times, and the FUNCTION button flashes. After 5 seconds, the alert status exits and then returns to the lock status.

Indication symbols on LED:

Auto mode indicator	ECO mode indicator	Fast mode indicator	E-Ht mode indicator
Disinfection indicator	Vacation indicator	Timer indicator	Ventilation indicator
Alarm indicator	Wi-Fi indicator		Display temperature
Smart grid indicator	Photovoltaic power supply indicator		Display error code
Antifreeze indicator	Solar water heating indicator		Display time
			Display parameters

Note: Each mode and relevant function will be further specified in following pages.

Display panel

Indication symbols description:

Indicator	Mode / Function	Indicator description
ⒶＡ	Auto mode	Automatically adjust the operation of the heat pump and electric heater based on the water temperature and ambient temperature. This mode provides relatively low power consumption and high heating capacity. When setting or running the Auto mode, the light will be on, otherwise it will be off.
❦ ECO	ECO mode	Operate in the most economical mode according to the water temperature and ambient temperature. This mode minimizes the power consumption and the longer heating time may be needed. When setting or running the ECO mode, the light will be on, otherwise it will be off.
❦	FAST mode	Simultaneously start the heat pump and electric heater operation. This mode provides the highest heating capacity. When setting or running the Fast mode, the light will be on, otherwise it will be off.
♯	E-Ht mode	Operate electric heater separately. When setting or running the E-Ht mode, the light will be on, otherwise it will be off.
❀	Ventilation function	This function can activate the circulation ventilation. When setting/running the Ventilation function, the light will flash/stay on, otherwise it will be off.
☂	Vacation function	In this function, the tank temperature will be maintained at 25°C and will start heating and the disinfection function one day before the set time. When setting/running the Vacation function, the light will flash / stay on, otherwise it will be off.
☉	Timer function	This function allows you to set the water heater to turn on at specific time periods. When setting the current time or Timer function, the light will flash, otherwise it will be off.
✿	Disinfection function	The water in the tank is disinfected by being heated. When setting/running the Disinfection function, the light will flash / stay on, otherwise it will be off.
✸	Antifreeze	This function can prevent the water temperature in the tank from approaching 0°C. When entering the Antifreeze function, the light will stay on, otherwise it will be off.
⚠	Alarm	When the indicator is lit, it indicates that a malfunction has occurred in the water heater, and during this period, protective measures are implemented, causing the device to stop operating. When a fault is detected, the light will stay on, otherwise it will be off.
🛜	Wi-Fi	Wi-Fi enabled (only if present). Light on: connected; flash: connecting; off: failed to connect.
Ⓐl	Smart grid	When the indicator is lit, it indicates that the smart grid is in effect (only if present). Light on: the smart grid is in effect; off: no smart grid or the appliance is turned off.
☼	Photovoltaic power supply	When the indicator is lit, it indicates that the photovoltaic power will be used for heating (only if present). Light on: the Photovoltaic power supply is in effect; off: no Photovoltaic power or the appliance is turned off.
☼ⅲ	Solar water heating function	This function can utilize the heat generated by the solar energy system to heat the water tank (only if present). When the indicator is lit, it indicates that the solar water heating function is in effect. Light on: the solar water heating function is in effect;off: not in effect or the appliance is turned off.

Operation instructions

Button operation

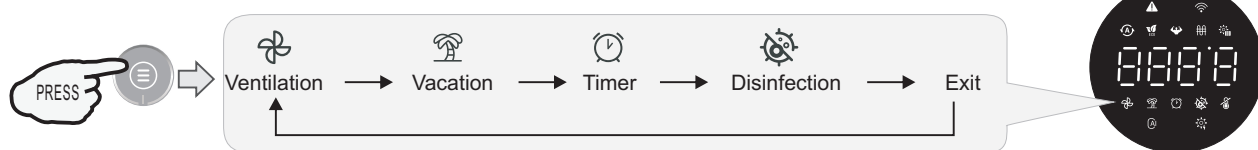◆ **Select mode**

Press Ⓜ button once by once

Result : The operation modes will change in sequence:

PRESS Ⓜ ⇨

Ⓐ	✔ ECO	❤	田
AUTO →	ECO →	FAST →	E-Ht

◆ **Select function**

Press ☰ button once by once

Result : The functions will change in sequence:

PRESS ☰ ⇨

Ventilation → Vacation → Timer → Disinfection → Exit

☑ *When entering the function setting mode, the selected function indicator will flash on the LED display. Press the POWER button to confirm your selection, or press the MODE button to cancel. If there is no action within approximately 10 seconds, the appliance will exit the function setting mode and return to its original mode.*

☑ *If there is no activity for more than 3 minutes, the appliance will automatically enter the lock mode. In lock mode, all buttons are disabled. However, pressing any button will cause the lock indicator to flash as a reminder.*
Exit the lock mode by pressing the button for 3 seconds.

◆ **UP/DOWN button**

Press the UP/DOWN button for the first time.

Result : Display the set temperature, and the value will flash once per second.

Press the UP/DOWN button a second time within about 5 seconds of the first time.

Result : Increase/decrease the set temperature value.
If there is no operation within about 5 seconds, the value will stop flashing, and the setting will be confirmed after about 3 seconds.

☑ *The method for viewing and setting parameters is similar.*

◆ **POWER button**

Press ⓞ button for about 3 seconds in power-off mode.

Result : The appliance powers on, all button lights turn on, and the LED displays the current temperature.

Press ⓞ button for about 3 seconds in power-on mode.

Result : The appliance powers off, the POWER button light remains on, and the LED displays the current temperature.

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Operation instructions

Function operation

◆ Set the current time

Press ⓜ button for 3 seconds.

Result : Enter the current time setting mode, the indicator 🕐 will display on the LED and flash quickly. If there is no operation for more than 30 seconds, the appliance will exit time setting mode.

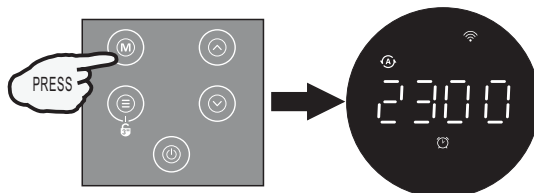In time setting mode, press the FUNCTION button the first time to set the hour value. You can increase or decrease the value by pressing the UP or DOWN button. Press the FUNCTION button a second time to set the minute value. You can increase or decrease the value by pressing the UP or DOWN button. You can press the POWER button to confirm the setting.

☑ *Press the MODE button to exit the time setting mode.*
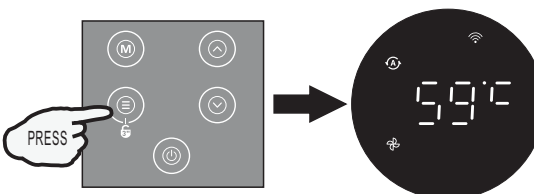
◆ Ventilation function

1、Press the FUNCTION button once in the power-on state.

Result : Book the ventilation function, the ventilation function indicator will flash.

2、Press the POWER button.

Result : Confirm and enter the Ventilation function, the ventilation function indicator light on.

☑ *In the ventilation function indicator flash state, press the MODE button to cancel and exit the ventilation setting mode.*

◆ Vacation function

This feature is recommended when the water heater is not in used for an extended period of time. In this function, the tank temperature will be maintained at 25°C and will start heating and the disinfection function one day before the set time.

The vacation duration can be set between 1 and 60 days.

1、Press the FUNCTION button twice in the power-on state.

Result : Book the vacation function, the vacation function indicator will flash.

2、Press the POWER button.

Result : Confirm and enter the vacation function, and the vacation days indicator will flash. Press the UP and DOWN buttons to set the vacation duration days, press the POWER button again to confirm and enter the vacation function, and the vacation function indicator light on.
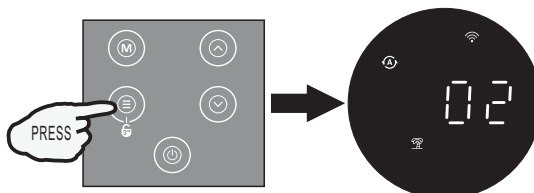
☑ *In the vacation function indicator flash state, press the MODE button to cancel and exit the vacation setting mode.*

Operation instructions

Function operation

◆ **Timer function**

This feature allows you to set the water heater to turn on at specific time periods. During the timer function setting stage, the first two digits of "8888" represent hours, and the last two digits represent minutes, the digit "·" lighting up represents the on-time, which is the time when the water heater is set to be powered on and operating, the digit "·" extinguished represents the off-time, which is the time when the water heater is set to be powered off and not operating.
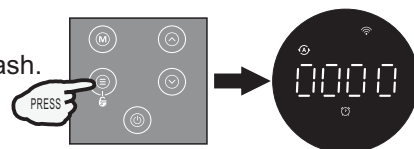
1、Press the FUNCTION button three times in the power-on state.

Result :　　Book the timer function, the timer function indicator will flash.

2、Press the POWER button.

Result :　　Confirm and enter the timer function, and the on-time hour value will flash. Press the UP and DOWN buttons to adjust the hour value, and press the POWER button to confirm. The on-time minute value will flash, press the UP and DOWN buttons to adjust the minute value, and press the POWER button to confirm. The off-time hour value will flash, press the UP and DOWN buttons to adjust the off-time hour, and press the POWER button to confirm. The off-time minute value will flash, press the UP and DOWN buttons to adjust the off-time minute, and press the POWER button to confirm. The timer function indicator will remain steadily lit, indicating that the timer function setting is complete. In the power-off state, press the FUNCTION button once, causing the timer function indicator to flash. Then the timer function can be set in the same way.

▨ *In the timer function indicator flash state, press the MODE button to cancel and exit the timer setting mode.*

◆ **Disinfection function**

Manual disinfection function

The water in the tank is disinfected by being heated, **higher water temperature increases the potential for HOT WATER SCALDS.**

1、Press the FUNCTION button four times in the power-on state.

Result :　　Book the disinfection function, the disinfection function indicator will flash.

2、Press the POWER button.

Result :　　Confirm and enter the disinfection function, and the manual disinfection function indicator light on.
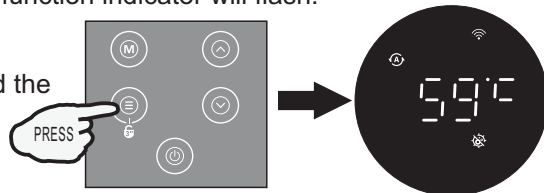
Automatic disinfection function

The water heater will periodically heat up to achieve automatic disinfection function.

▨ *In the disinfection function indicator flash state, press the MODE button to cancel and exit the disinfection setting mode.*

Operation instructions

Function operation

### ◆ Manual anti-cold water function

1、Press and hold the MODE and FUNCTION buttons for 3 seconds In the power-on state and the anti-cold water function will open.

Result :   Enter the anti-cold water function, and the main screen will display "P ON".

2、Press and hold the MODE and FUNCTION buttons for another 3 seconds in the power-on state and the anti-cold water function will be turn off.

Result :   Turn off the anti-cold water function, and the main screen will display "P OF".

Press together for about 3 seconds

Some products do not possess this function.
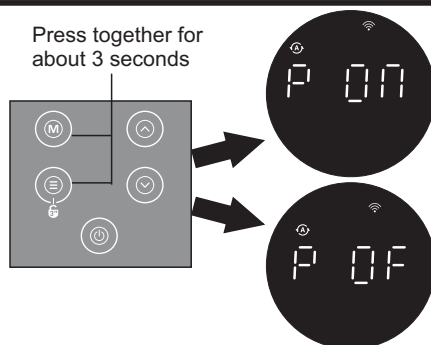
◆ Set parameter

Press the MODE and UP buttons together for about 3 seconds in the power-on or power-off state.

Result :   Enter the parameter setting mode, refer to the attached Table A for the code meanings.

In the parameter setting mode, press the UP or DOWN button to select the parameter code. Next, press the FUNCTION button to enter the specific parameter setting. Adjust the parameter value by pressing the UP or DOWN button. When you have finished adjusting the specific parameter, press the FUNCTION button to confirm and exit the specific parameter setting page.

Press together for about 3 seconds

Press the MODE or POWER button to exit the parameter setting mode.

If there is no activity for more than 1 minute, the appliance will automatically exit the parameter setting mode.
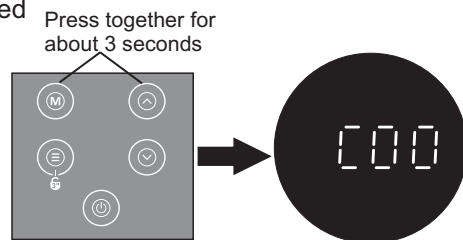
Operation instructions

Function operation

Table A

Code	Description	Default	Unit	Range
C00	Automatic anti-cold water function: 0:disabled; 1:enabled	0	/	0~1
C01	Startup interval of back water pump	120	min	30~600
C02	Running time of back water pump	2	min	1~10
C03	Disinfection function : 0 : disabled; 1 : enabled	1	/	0~1
C04	Water temp of manual disinfection	75	℃	63~75
C05	Water temp of automatic disinfection	63	℃	63~75
C06	Interval days of disinfection	14	days	7~21
C07	Smart grid function : 0 : disabled; 1 : enabled	0	/	0~1
C08	Water temp（when smart grid is activated and the system operates in non-high-priced heating mode）	60	℃	55~75
C09	Water temp（when smart grid is activated and the system operates in high-priced heating mode）	52	℃	35~65
C10	Solar water heating function: 0 :disabled; 1: enabled	0	/	0~1
C11	Solar pump start temperature difference （solar energy system outlet temperature minus water tank temperature）	7	℃	0~20
C12	Solar pump shutdown temperature difference(solar energy system outlet temperature minus water tank temperature)	4	℃	0~20
C13	Target temp for vacation mode	25	℃	15~45
C14	Electric heater: 0: disabled; 1: enabled	1	/	0~1
C15	Remote switch: 0: disabled; 1: enabled	0	/	0~1
C16	Shutdown at low temp: 0 : disabled; 1 : enabled	0	/	0~1
C17	Reserved	1	/	0~1
C18	Reserved	0	/	0~1
C19	The maximum water tank temperature that the solar energy system can reach for heating	75	℃	55~75

Operation instructions

Error code

When the unit has the following trouble, the 7-segment tube of the display board will show the error code as the following, and system will light the alarm indicator. Error code and water temperature display in turn.

Code	Description	The root cause maybe one of the following
Er01	Coil temperature sensor in trouble	a. The coil temperature sensor connect loose; b. The coil temperature sensor is failure; c. The driver board is failure.
Er02	Exhaust temperature sensor in trouble	a. The exhaust temperature sensor connect loose; b. The exhaust temperature sensor is failure; c. The driver board is failure.
Er07	Communication failure between the main control and driver board	a. The communication cable connect loose; b. The communication cable is failure; c. The power of the driver board is failure d. The connection between the filter board and the driver board is incorrect or loose; e. The connection between the filter board and the terminal is incorrect or loose; f. The driver board or main control board is failure.
Er14	Ambient temperature sensor in trouble	a. The ambient temperature sensor connect loose; b. The ambient temperature sensor is failure; c. The main control board is failure.
Er19	Driver board in trouble	a. The driver board is failure; b. The compressor is failure; c. The PFC is failure; d. The supply voltage is higher or lower than normal; e. The inner supply voltage of the unit is higher or lower than normal.
Er20	Fan motor run abnormally	a. The connection of the fan motor is loose; b. There are something block the fan; c. The fan motor is failure; d. The driver board is failure.
Er21	Compressor overload protection	a. The compressor exhaust temperature sensor connect loose b. The refrigerant of the unit is not enough.
Er27	Protection against too high system pressure	a. The high pressure switch fails; b. The connection of the high pressure switch is loose; c. The measured value of system pressure exceeds the limit.
Er38	EEPROM in trouble	a. The EEPROM chip is loose; b. The EEPROM chip is inserted with opposite direction; c. The EEPROM chip is failure; d. The main control board is failure.

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Operation instructions

Error code

Code	Description	The root cause maybe one of the following
Er50	Communication failure between the main control and display board	a. The connection between the display board and control board is loose; b. The power of the display board is failure c. The display board or main control board is failure.
Er51	Suction temperature sensor in trouble	a. The suction temperature sensor connect loose; b. The suction temperature sensor is failure; c. The driver board is failure
Er52	Both the ambient temperature sensor and coil temperature sensor are faulty	a. The coil temperature sensor and ambient temperature sensor connect loose; b. The coil temperature sensor and ambient temperature sensor is failure; c. The driver board and main control board is failure.
Er53	The temperature sensor in upper water tank and lower water tank both in trouble	a. The temperature sensor connect loose simultaneously; b. The temperature sensor is failure simultaneously; c. The main control board is failure
Er56	The back water temperature sensor is faulty	a. The back water temperature sensor connect loose; b. The back water temperature sensor is failure; c. The main control board is failure
Er57	Solar hot water temperature sensor is faulty	a. The temperature sensor connect loose; b. The temperature sensor is failure; c. The main control board is failure
Er59	The water level switch protection	a. The water level switch fails; b. The connection of the water level switch is loose; c. The condensate pipeline is blocked.
Er60	Protection against leakage	a. The leakage protection device fails; b. The connection of the Leakage protection device is loose; c. The measured value of leakage current exceeds the limit