

MANUAL
STANDARD CONTROL PANEL

ENG



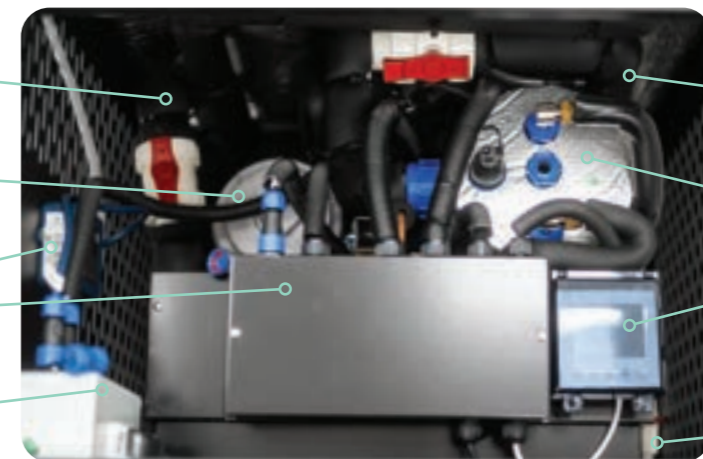
CONTROL PANEL & SETTINGS



Function Timer Up/Down On/Off

Components

- Tub Outlet Ball Valve
- Circulation Filter Pump
- Ozone
- Chiller
- Switch







- Tub Inlet Ball Valve
- Chiller
- Control Panel
- Drain Ball Valve

Key Definition and Operation

On/Off Key

- On the main interface, press this button to turn the Chill Tub on or off
- In the parameter interface and parameter setting interface, press this key to return to the main interface
- On the main interface, press and hold this button for 3 seconds to unlock or lock the screen.

Function Keys

- On the main interface of the power on, press the Function button to switch between working modes.
-  Cooling mode (regulates the set temperature only by cooling)
-  Heating mode (regulates the set temperature only by heating)
-  Both (regulates the set temperature by heating and cooling)
- Set temperature. Once temperature has been selected and changed, the temperature will continue to flash until you press the  to set and confirm

Up and Down Key



- On the main interface, the two keys can be used to adjust the current set temperature.

Timer Key



- Press and hold the timer button for 3 seconds to enter the real-time clock setting interface
- When entering the real-time clock setting interface, the hour and minute positions will flash together
- Press the timer button again, the hour position will flash and the minute position will remain on
- Move the up and down keys to adjust the hour position
- After adjusting the hour position, press the timer button again, the hour position will remain on and the minute position will flash. Move the up and down keys to adjust the minute position
- After adjusting the minute position, press the timer button again to confirm and return to the main interface

- Press the timer button to enter the timing setting interface. At this time, the timing group 1 flashes (you can select the timing group through the up and down keys)
- When the current timing group is selected, the timing group flashes. At this time, press the timer button to enter the current timing group setting
- Use the timer button to alter either the minute or the hour time. The order is as follows - the hour number for timing on, the minute number for timing on, the hour number for timing off, and the minute number for timing off.
- After adjusting the time with the up and down keys, press the timer key again to return to the timer group 2 interface.
- After repeating the above operation, return to the main interface. The current timer group flashes. At this time, press the timer key for a few seconds, and the ON/OFF button will light up, indicating that the current timer group is valid.



Reset

- Pressing and holding the  key and  key together for 10 seconds can restore the default values of the parameters



Forced Defrosting

- Press and hold  +  for 10 seconds to enter forced defrosting



Status Query

- Press and hold  +  for 5 seconds, collaborate with up and down keys to query running parameters.

Parameter Settings

- In the shutdown state, press and hold the  +  for 10 seconds, combined with the up and down keys, to set various parameters.

Conversion between Celsius and Fahrenheit

- Press and hold  +  together for 3 seconds to allow for the conversion between Fahrenheit and Celsius degrees, with Celsius degrees displayed by default.

System Protection

Water Flow Monitoring and Recovery System

- Upon initiating the water pump for a duration of 10 seconds, the detection of a disconnected water flow switch for 2 consecutive seconds results in the identification of a water flow fault, prompting an immediate shutdown of the entire machine as a safety measure
- In the event of a water flow fault, the system is designed for automatic recovery. Notably, this fault is not suppressed during defrosting periods. The recovery process involves the automatic cycling and activation of the water pump, continuously monitoring and awaiting closure of the water flow switch. This cycle repeats every 2 minutes and 30 seconds until the switch is successfully closed.
- To indicate the occurrence of this fault, the remote control interface will display the code FFF, notifying users of the issue.

Water Flow Fault

- After running the water pump for 10 seconds, if the water flow switch is detected to be disconnected for 2 consecutive seconds, it will be a water flow fault and the entire machine is shut down
- After a water flow fault occurs, it can automatically recover. Please do not shield this fault during defrosting. After a water flow fault occurs, the water pump automatically cycles and starts, detecting the water flow switch until it is closed. Cycle every 2 minutes and 30 seconds
- The remote control will display FFF
- Winter Antifreeze Protection
- Detect the inlet temperature T_{IN} and ambient temperature T_W in standby mode
- When $T_{IN} < 15^{\circ}\text{C}$ and $T_W \leq 0^{\circ}\text{C}$, enter the first level antifreeze state, and the unit will automatically start and operate the water pump mode; when $T_{IN} > 15^{\circ}\text{C}$ or $T_W \geq 2^{\circ}\text{C}$, exit the antifreeze process

- If $T_{IN} \leq 2^{\circ}\text{C}$ and $T_W \leq 0^{\circ}\text{C}$, enter the second level antifreeze state, and the unit will automatically start and operate in heating mode; until $T_{IN} > 15^{\circ}\text{C}$ or $T_W \geq 2^{\circ}\text{C}$ exit the antifreeze process
- If T_W malfunctions, it is up to T_{IN} to decide whether to prevent freezing. If T_{IN} malfunctions, T_W decides whether to prevent freezing (T_{IN} malfunctions can only enter first level antifreeze). If both T_{IN} and T_W malfunctions, the antifreeze function will not be processed
- The remote control will display AFP.

Water Inlet Temperature Sensor Fault Detection

- The detection of a short circuit or open circuit in the water inlet temperature sensor is identified as a fault in the sensor itself, specifically labeled as a water inlet temperature sensor fault. This triggers an automatic shutdown of the system as a protective measure
- The remote control will promptly indicate this issue with the identifier PP 1.

Discharge Temperature Sensor Fault Detection

- Detection of a short circuit or open circuit in the discharge temperature sensor is recognised as a fault in the sensor, termed as a discharge temperature sensor fault. This initiates an immediate system shutdown as a safety precaution
- The remote control will display the specific fault using the code PP 2 to notify users of this issue.

Coil Temperature Sensor Fault

- Detection of a short circuit or open circuit in the coil temperature sensor is recognised as a fault in the sensor itself, referred to as a coil temperature sensor fault
- In the event of this fault, the remote control will display the identifier PP 3 to indicate the specific issue.

**Fault Detection:
Ambient Temperature Sensor**

- Detection of a short circuit or open circuit in the ambient temperature sensor is identified as a fault in the sensor itself. Consequently, the antifreeze conditions associated with it are canceled, allowing the system to resume normal operation
- When this fault is detected, the remote control will indicate the issue with the code PP 5.

Low Pressure Protection

- Following the system compressor's initial five minutes of operation, if the system's low-pressure switch is identified as disconnected for 10 consecutive seconds, it triggers the activation of low-pressure protection
- Exiting the low-pressure protection mode occurs upon detecting the closure of the low-pressure switch. However, if this fault recurs three times within 30 minutes, restoration becomes contingent on a power-off reset
- Notably, this fault is exempted during defrosting periods
- The remote control interface will indicate the occurrence of this issue with the code EE 2.

High Discharge Temperature Protection

- Once the compressor has been running for one minute, if the discharge temperature exceeds or equals 95°C (adjustable parameter P09), it signifies an overheating issue
- As a safety measure, the machine will halt, indicating an EE5 error on display. If the discharge temperature drops to 80°C or 15 degrees less than the peak, normal display resumes, and the high discharge temperature protection deactivates
- The compressor includes a 3-minute shutdown safeguard

- If this issue occurs three times within a span of 30 minutes, a power-off reset becomes necessary for restoration

- The remote control will also display EE5 when this protection mechanism triggers.

Communication Failure

- In the event that the motherboard fails to receive any communication signal from the remote controller within the first 20 seconds after initial power-up, it is regarded as disconnected from the remote controller. During this period, the system operates solely based on the mode switch signal without displaying any indication of disconnection
- Alternatively, if the motherboard remains connected to a remote controller but fails to transmit its status signal for 10 consecutive seconds, it is identified as a communication fault
- The occurrence of this communication fault is signaled by the remote control displaying EE 6.

