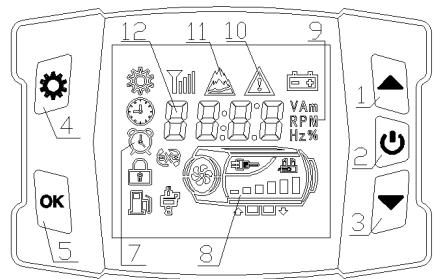


# Use the control panel instructions

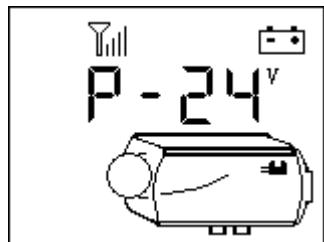
## 一、 The control panel is shown below



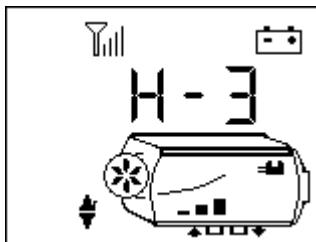
1. Add key; 2. On/off key; 3. Reduce key; 4. Set key; 5. OK key; 7. Status symbol; 8. Host diagram; 9. Data unit; 10. Fault symbol; 11. Plateau symbol; 12. Display data and parameters;

## 2. Operation

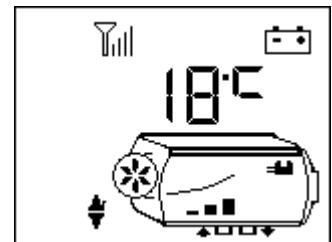
### 1. On/off operation



Off state  
mode)



On state (manual mode)



On state (constant temperature

#### 1) Start up operation

In the shutdown state, long press the "U" key for 2S, and the device will be turned on and display the "on state" as shown in the figure above.

#### 2) Shutdown operation

When the device is powered on, long press the "U" button for 2 seconds to initiate the shutdown cooling process, which will display "OFF". After the device has cooled down, it will shut down, and the display will show the shutdown status as shown in the figure above. When the display shows "OFF", do not force the power off, as this can damage the components due to overheating and lack of proper cooling. Wait until the machine displays the shutdown status before disconnecting the power.

#### 3) Manual mode operation

There are 6 gears in manual mode (H1-H6). H6 represents the maximum power. As shown in the "on state" above, press "▲" or "▼" to add/subtract gears.

#### 4) Constant temperature mode operation

Constant temperature mode. The figure above shows the setting of 20°C. Press "▲" or "▼" to add/subtract the temperature value, and the setting range is 0~40°C.

Long press the "⚙" button for 2S to switch between manual and constant temperature mode.

#### 2. Switch the display data when starting up

Short press the "⌚" key to switch the display data and order: case temperature-> working voltage-> ambient temperature-> carbon monoxide concentration-> current gear (or current set temperature).

#### 3. Switch temperature units

At the same time, hold down "⌚" + "▲" for 2s to switch between Celsius and Fahrenheit.

#### 4. Display Bluetooth number (with Bluetooth)

Press the "OK" key to display the 4-digit number of the Bluetooth name of this switch. Press any key or 3S to exit.

#### 5. Manual oiling operation

In the shutdown state, press "▲" + "▼" keys for 2s at the same time, then manually control the oil pump to pump oil. Stop pumping oil after releasing the button. Please use it carefully!

#### 6. Plateau mode operation

At the same time, long press "⚙" + "OK" button for 2s to enter plateau mode. The icon "▲" shows that plateau mode is started. In plateau mode, the ratio of wind oil is reduced to adapt to the plateau oxygen concentration. Then, long press "⚙" + "OK" button for 2s to exit plateau mode. Please use it carefully!

#### 7. Timed on/off operation

At the same time, long press "OK" + "▼" for 2s. If the timing function is not enabled, open and enter the timing setting, and the indicator symbol "⚙" "⌚" will be displayed. If "⌚" is displayed, it means that the shutdown time is set; if "⌚" is not displayed, it means that the startup time is set. If the timing function is already enabled, turn off the timing function, and the "⌚" symbol will be extinguished.

10:00

- 1) Press "▲" or "▼" to adjust the time value, time adjustment range: 00:00~23:59
- 2) Press "⌚" to switch the number of adjustment digits, and the corresponding number flashes.

3) Press "OK" key or no button operation for 15s to save the set value. If you are setting the startup time, switch to the shutdown time setting; otherwise, exit the timing setting.

4) Press "⚙" to cancel the setting value. If you are setting the startup time, switch to the shutdown time setting; otherwise, exit the timing setting.

5) In the non-set state, press "⚙" to display the timing of the day in a loop.

After the timing function is enabled, the clock will automatically start up when it reaches the timing startup time, and automatically shut down when it reaches the timing shutdown time. The panel is set to the cycle mode "every day".

## 8. Clock synchronization operation

Long press the OK key for 2s to enter the clock adjustment interface, and the indicator symbol "⚙" will be displayed.

1) Press "▲" or "▼" to adjust the time value. Time adjustment range: 00:00~23:59

2) Press the "⌚" key to switch the number of adjustment digits, and the corresponding number flashes.

3) Press OK to confirm the time and enter the setting of the week.

4) Press "⚙" to enter the setting of the week.

5) Exit the clock adjustment interface after 10S without button operation.

### 8.1. Set the week operation

The digital display shows "EE-1"

1) Press "▲" or "▼" to adjust the tail number,

2) Press the "OK" key to confirm the time and exit the clock adjustment interface.

3) Press the "⚙" key, or press no key for 10S to exit the clock adjustment interface.

When the APP opens the Bluetooth connection, it automatically synchronizes the phone time.

## 9. Match the wireless remote control operation

In the shutdown state, long press "⌚" + "▼" keys for 2s at the same time to display HFA1.

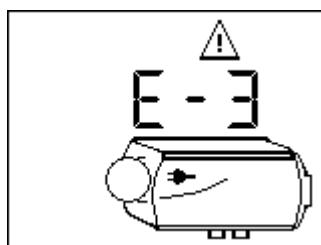
1) Press "▲" or "▼" to adjust the fourth digit, which is the remote control number, ranging from 1 to 4, corresponding to 4 remote controls.

2) Select the remote control number, press the remote control button to code at will, and exit the code status after success.

3) Press "⚙" to exit the remote control code.

\* Remote control requirements: frequency band 433MHZ, 24-bit code.

## 10. Fault alarm



As shown in the figure below, the corresponding fault symbol flashes and the icon of the faulty device flashes. The displayed data is the fault code. Please refer to the fault table for its meaning.

\* Symbols such as spark plug, oil pump, fan, sensor and power supply indicate that the corresponding device is faulty.

### Use the code

1. Do not use in high humidity, conductive dust, inflammable and explosive gas, dust, material, corrosive medium, strong light irradiation, nearby strong magnetic, high voltage, large current equipment operation environment.
2. Power supply voltage range: DC24V controller is applicable (18~32) V; DC12V controller is applicable (9~16) V; different voltage controllers are not universal, and it is forbidden to use beyond the applicable voltage range.
3. The 5kW controller can only be used on the 5kW body; the 2kW controller can only be used on the 2kW body.
4. If the controller or external device is damaged, the same model and parameter devices must be selected and replaced by professionals.
5. Do not open the controller shell without permission.
6. The equipment must be installed strictly according to the requirements and used under safe conditions.
7. The company shall not be responsible for any loss or liability caused by the controller due to incorrect connection, short circuit or damage of external devices and lines.
8. When the engine is high temperature and the fan cannot operate normally, it must be cooled quickly. Cold air is blown into the combustion air inlet to cool down the engine so that its temperature is lower than 80°C. Prevent high temperature from scalding parts or causing fire.
9. When heating the equipment, ensure that all air ducts are unobstructed and undamaged to effectively maintain the heating efficiency and normal operation of the equipment. Obstructed air ducts can lead to high temperatures in the equipment, reduce heating efficiency, shorten the service life, or even damage the equipment.

Using qualified fuel is essential for ensuring the normal operation and longevity of the equipment.

\* The company shall not be responsible for any loss or liability caused by failure to install and use the above articles.

\* The ignition point of cotton and sponge is 150°C, paper is 130°C, cloth is 270°C, diesel is 220°C. The hot air outlet can be higher than 150°C, exhaust pipe outlet can be higher than 270°C.

## fault list

fault code	failure cause	method of disposition
E-2	Power supply voltage range	Normal range: 24V (18-32V), 12V (9-16V), Check that the battery or generator is working properly and that the fuse is not aging
E-3	Ignition plug fault	1) Check whether the ignition plug connection plug is loose or the wire is short circuit with the housing 2) Check whether the ignition plug is damaged
E-4	Oil pump failure	Check whether the oil pump connection wire and plug are damaged, loose, oxidized, short circuit or broken.
E-5	High temperature alarm (air intake> 50°C; housing> 230°C)	1) Check whether the heating air duct is unblocked 2) Check whether the fan is running normally 3) Check that the temperature sensor is normal
E-6	Fan failure	1) Check whether the impeller is stuck 2) Check if the connection plug is loose 3) The gap between the magnet on the wind wheel and the Hall sensor on the controller is too large 4) Whether the circuit is short circuit or open circuit; leakage of motor
E-7	Communication failure	Check the connection line
E-8	flameout	1) Check whether there is no oil, low temperature solidification of oil, oil line blockage, oil pump stuck 2) Check that the oxygen and exhaust air ducts are unobstructed 3) Check whether the housing temperature sensor is in full contact with the housing and whether the pressure spring is strong.
E-9	Sensor malfunction	Whether the temperature sensor connection line and plug is damaged or loose, whether the sensor is damaged
E-10	The startup failed	1) The temperature of the housing is too high and the housing cannot be cooled after 3 minutes of starting

	<p>2) There is a lot of white smoke from the waste gas</p> <p>2.1) Check whether the filter screen next to the ignition plug is clean, and clean or replace it if not clean</p> <p>2.2) Check whether the oil pump is spraying fuel effectively</p> <p>2.3) Check whether the ignition plug is aging</p> <p>3) A small amount of white smoke or no smoke from the exhaust gas</p> <p>3.1) Check whether there is no oil, the oil line is frozen or blocked</p> <p>3.2) Check whether the oil pump is stuck or damaged and unable to pump oil</p> <p>3.3) Check whether the combustion air intake and exhaust channels are unobstructed</p> <p>3.4) Check whether the ignition plug is damaged</p> <p>3.5) Whether the gap of the inner wind wheel is too large</p> <p>4) Ignition is normal but still reports ignition failure fault</p> <p>Check whether the housing temperature sensor is in full contact with the housing, whether the pressure spring is strong, and whether the sensor is normal.</p>
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## FCC and IC Warning Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with Part 15 of the FCC Rules and contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation

RF warning for portable device:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne doit pas causer d'interférences. (2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil