



Upgrade · The Home Creator Way

Diesel Heater

Model: XMZ-TB20 Pro / XMZ-TB40 / XMZ-HTB1 / XMZ-TB30

VEVOR Support Center

1	XMZ-TB30 (US)		7	XMZ-TB40 (US)	
2	XMZ-TB30 (EU)		8	XMZ-TB40 (EU)	
3	XMZ-TB30 (AU)		9	XMZ-TB40 (AU)	
4	XMZ-HTB1 (US)		11	XMZ-TB20 Pro (US)	
5	XMZ-HTB1 (EU)		12	XMZ-TB20 Pro (EU)	
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Diesel Heater

Model:XMZ-TB20 Pro



Model:XMZ-TB40



Model:XMZ-TB30



Model:XMZ-HTB1



This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

The product complies with relevant standards and regulations. Installation of this device must comply with all applicable regulations, and it should only be operated in well-ventilated areas. Please read the user manual before installing and using this equipment.

Please properly keep product. Check whether the product is abnormal before use. If it is abnormal, please stop using it.

Please use the product according to the intended use, warn of potential injury from misuse.

Symbol	Symbol Description
	Warning: To reduce the risk of injury, the user must read the instructions manual carefully.
	This symbol, placed before a safety comment, indicates a kind of precaution, warning, or danger. Ignoring this warning may lead to an accident. To reduce the risk of injury, fire, or electrocution, please always follow the recommendations shown below.
	CORRECT DISPOSAL: This product is subject to the provision of European Directive 2012/ 19/EC. The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.
	Warning: Toxic material. Take care to avoid coming into contact with toxic material.
	Warning: Flammable material. Take care to avoid causing a fire by igniting flammable material.



Responsibility requirements:

·Vevor is not responsible for any issues arising from non-compliance with these instructions and the precautions included in these instructions.

Similarly, the company shall not be held responsible for any issues arising from repairs conducted without professional maintenance or the use of original spare parts/accessories. This type of maintenance will result in the invalidation of the heater's type approval and its ECE type approval certificate.

SAFETY INSTRUCTION



WARNING:



Read all safety warnings, instructions, illustrations, and specifications provided with this diesel heater. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

1. The following measures shall not be adopted
 - Change the important component of the diesel heater.
 - Make use of spare parts from other manufacturers without permission.
 - Disobey the instructions and the guidelines during installation or operation.
2. Only allow using original attachments and spare parts during installation and maintenance.
3. The heaters shall not be used in places where they may form flammable vapor or dust, for example:
 - Fuel depot
 - Carbon storehouse
 - Timber storehouse
 - Granary and similar sites
 - Diesel/petrol station

And keep away from fuel tanks, compression tanks, fire extinguishers, clothes, or other flammable objects.

4. Do not use cigarette lighter for startup.
5. Do not use the heater in closed and/or unventilated places.
6. The heaters shall be turned off when filling fuel.
7. Do not cut off the electric power during operation.
8. If there is a fuel leak or discharge from the fuel system of heaters, please

contact VEVOR for repair.

9. Place the exhaust outlet outside to prevent any penetration of exhaust fumes.

10. In the process of work, it is forbidden to cut off the electric power directly to stop the heater from working.

11. Seal all gaps between the mounting plate and the car body.

12. The machine will stop heating after over-temperature protection. Please do not power off. After the machine is naturally cooled and turned off, it can be restarted.

13. After turning off the machine, please do not immediately disconnect the power supply. It takes 3-5 minutes for the machine to stop working completely.

14. After starting the machine for 3-5 minutes, it will work normally and heat up. Please wait patiently.

15. When the heater is just started, the current is relatively high, so an adapter with a voltage of 12-24V and a current of 12A or greater is required for the power supply.

16. This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be done by children without supervision.

17. WARNING: Flammable material



During installation/use, service, and disposal of the appliance, please pay attention to the fact that there should be no flammable substances around the exhaust pipe. The temperature of the exhaust pipe is very high when it is working. Take care to avoid causing a fire by igniting flammable material.

Please strictly follow the following methods to correctly install insulation sleeves on the exhaust pipe and reduce surface temperature:



Installing insulation sleeves on exhaust pipes can effectively reduce surface temperature and prevent fire hazards caused by improper installation.



18. WARNING: Toxic material



During installation/use, service, and disposal of the appliance, please install the appliance with space for ventilation to prevent carbon monoxide poisoning. Place the exhaust outlet outdoors to prevent exhaust gas from seeping in.

① To prevent the risk of carbon monoxide poisoning caused by improper installation, the product is equipped with a carbon monoxide alarm. When the carbon monoxide content in the enclosed space reaches 300ppm, the LCD switch will prompt CO to exceed the limit. When the content reaches 500ppm, an alarm will be triggered and the machine will be shut down. The leakage point needs to be checked and repaired immediately before starting up for use.

② The carbon monoxide alarm device is equipped with a 2m extension cable to install the probe in any position. It is not recommended to install it too far away from the diesel heater or too close.



Carbon Monoxide Alarm



19. The fuel tank supplying fuel to the device shall meet the following requirements:

- a) If there is a leak, the fuel should be discharged to the ground and must not come into contact with the hot parts of the vehicle or load
- b) The fuel tank containing gasoline should be equipped with an effective flame arrester at the fuel filling port, or a sealing device should be used to completely seal the opening

20. Space that cannot be used for heating and transporting dangerous goods.

21. Please use the product according to the intended use, warn of potential injury from misuse.

22. The product complies with relevant standards and regulations. Installation of this device must comply with all applicable regulations, and it should only be operated in well-ventilated areas. Please read the user manual before installing and using this equipment.

23. WARNING: Use only the original supply.

Maintenance: If black smoke is found during the operation of the heater for a period of time or in the second year of use, it indicates that there is carbon accumulation in the combustion chamber that needs to be cleaned in a timely manner. Note: If any of the above situations occur, please replace the Air Filter and Fuel Filter.

SAVE THESE INSTRUCTIONS

FCC INFORMATION

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This product may cause harmful interference.
- 2) This product must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this product are not expressly approved by the party. Responsibility for compliance could void the user's authority to operate the product.

Note: This product 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 product 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 product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

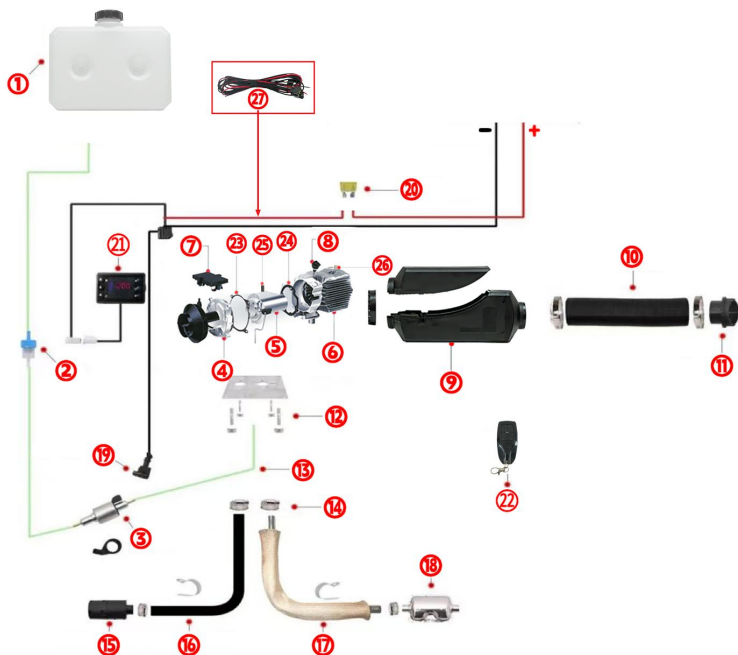
- Reorient or relocate the receiving antenna.
- Increase the distance between the product and the receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for assistance.

PRODUCT FUNCTION

1. The diesel heater (hereinafter referred to as the heater) is independent of the original engine system. It makes use of a 12-24V direct current to drive. There are two kinds of control modes for the heater: Automatic control mode and Manual control mode. The heater adopts light diesel, which corresponds to the environmental temperature as fuel, and it can be started and operated normally at a temperature of above 40N. The inhaled fresh air is heated to hot air through the heat exchanger by the energy that comes from burning fuel, then blown to where it is needed. This type of heater has the advantage of compact structure, lightweight, high thermal efficiency, economy of electricity and fuel, and easy installation.
2. The heater gets rid of damage to the car caused by the sudden drop in temperature, improves the temperature inside the car, and preheats the engine coolant to avoid engine wear at low temperatures. Conducive to car interior thawing, car start, and car glass defrost fog.

INTERNAL STRUCTURE



NO	Part Name	N O	Part Name
1	Fuel Tank	2	Fuel Filter
3	Fuel Pump	4	Motor Assembly
5	Combustion Chamber	6	Heat Exchanger
7	Mainboard	8	Glow Plug
9	Plastic Housing	10	Warm Air Duct
11	Air Outlet	12	Double-Ended Screw
13	Fuel Line	14	Clamp
15	Air Filter	16	Intake Pipe
17	Exhaust Pipe	18	Muffler
19	Power Cord Plug	20	Fuse
21	LCD Switch	22	Remote Control
23	Fan Assembly Gasket	24	Combustion Chamber Gasket
25	Glow Plug Atomizing Screen	26	Temperature Sensor
27	Wiring Harness		

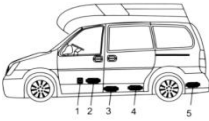
INSTALLATION POSITION

Truck



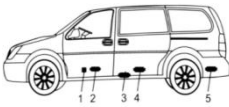
1. On the co-driver's legroom.
2. On the back wall of the cab.
3. Driver's seat backrest.
4. Within the tool box.

RV



1. In front of the passenger seat.
2. Between the driver's seat and passenger's seat.
3. 3&4 under the container.
4. In the trunk.

5 seater/7 seater



The heater is mainly installed in the passenger room or baggage room of the vehicle. If it cannot be installed, fix the heater under the underside of the vehicle, but beware of splashing.

excavator



1. Inside the driver's seat.
2. On the back wall of the cab.
3. Inside the protection box.



1. Installed in the garage against the wall
2. There should be no foreign objects blocking the front and rear air vents.
3. No flammable materials around the exhaust pipe



1. Installed against the wall of the warehouse
2. There should be no foreign objects blocking the front and rear air vents.
3. No flammable materials around the exhaust pipe



The installation of the machine requires professional personnel to install it.

MODEL

Model	XMZ-TB30	XMZ-HTB1	XMZ-TB40	XMZ-TB20 Pro
Appearance				
Heating medium	Air			
Fuel	Diesel			
Ratings	DC12-24V/40W			
Adapter	100-120V~, 50-60Hz, 12V/12A For US users 100-240V~, 50-60Hz, 12V/12A For European users			

PACKING LIST

Model		XMZ-TB30	XMZ-HTB1	XMZ-TB40	XMZ-TB20 Pro
Main engine		/	/	/	1
Main engine		/	/	1	/

Main engine		/	1	/	/
Main engine		1	/	/	/
Exhaust pipe		1	1	1	1
Blowpipe		1	1	1	1
Remote control		/	/	1	1
Remote control		1	1	/	/
Silencer		1	1	1	1
Insulation sleeve clamp		2	2	2	2
Pipe clip		2	2	2	2
Screw for the lock catch		2	2	2	2
Adapter		1	1	1	1
Extension line		1	1	1	1

Power cord		1	1	1	1
Carbon monoxide module		1	1	1	1
Quick connect air outlet		1	1	1	1
Rotary tuyere		1	1	1	1
Protective sleeve		1	1	1	1
Funnel		1	1	1	1
Fuel tank base		/	2	/	/
User Manual		1	1	1	1

Refer to the installation diagram below and carefully read the precautions when installing or using:

1. No Side Installation:

※ Side installation of the diesel heater will result in oil leaks inside the machine after a period of use, producing a large amount of smoke and carbon monoxide poisoning. During installation, leave a space of 10cm around the heater to ensure good ventilation.

※ If installing the heater inside a building: ① With the heater placed indoors: Make holes in the wall for the exhaust pipe to be placed outdoors. Pay attention to insulating the exhaust pipe as it can become very hot and could cause a fire. ②

With the heater placed outdoors: It's necessary to extend the exhaust pipe to avoid the exhaust from being sucked into the building from the back fan position of the heater, which can lead to carbon monoxide poisoning.



Incorrect Installation Direction



Correct Installation Direction

2. Precautions for the power supply:

※ The power supply for the diesel heater must meet the following requirements: Voltage: 12-24V; Current: $\geq 12A$, either from a direct power source or a battery. When powered by a battery, do not charge the battery while using the heater as insufficient current can cause malfunction. Ensure a firm and secure connection to the battery. Using clamps for fixation can result in poor contact.

※ When extending the power cable for the diesel heater, the wire diameter should be $> 2 \text{ mm}^2$. Using a thin wire can lead to insufficient current, causing the heater not to work. After connecting, use insulating tape to protect the connection and prevent electrical leakage, which might lead to fires.

※ Do not disconnect the power when the diesel heater is operating at high temperatures. This can cause a backfire due to high temperatures. Repeatedly doing so can cause permanent damage. Solutions:

- If power is cut and you immediately turn on the heater: Wait until the internal heat of the heater has completely dissipated before turning it on for normal operation.
- If the heater is turned on a long time after a power cut: Incomplete combustion inside may produce a large amount of smoke. Wait for the smoke to clear, and the heater will automatically start and operate normally.



It is recommended to use high-grade diesel fuel when refueling the diesel heater. Other types of fuels, such as kerosene, vegetable oil, gasoline, waste oil, etc., cannot be used. Otherwise, the heater may have an unpleasant odor and malfunction during operation.

PRODUCT INFORMATION

XMZ-HTB1



1	Hot air outlet	2	Carbon monoxide module
3	Liquid crystal switch	4	Air inlet
5	Power input interface	6	Exhaust pipe
7	Fuel tank	8	Machine upper cover
9	Carrying handle		

PRODUCT INFORMATION

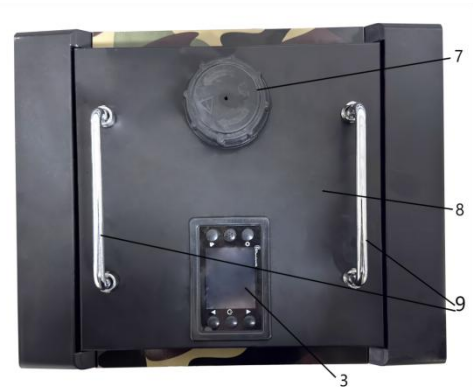
XMZ-TB30



1	Hot air outlet	2	Carbon monoxide module
3	Liquid crystal switch	4	Air inlet
5	Power input interface	6	Exhaust pipe
7	Fuel tank	8	Machine upper cover
9	Carrying handle	10	Fuel tank capacity scale line

PRODUCT INFORMATION

XMZ-TB40



1	Hot air outlet	2	Carbon monoxide module
3	Liquid crystal switch	4	Air inlet
5	Power input interface	6	Exhaust pipe
7	Fuel tank	8	Machine upper cover
9	Carrying handle	10	Fuel tank capacity scale line

PRODUCT INFORMATION

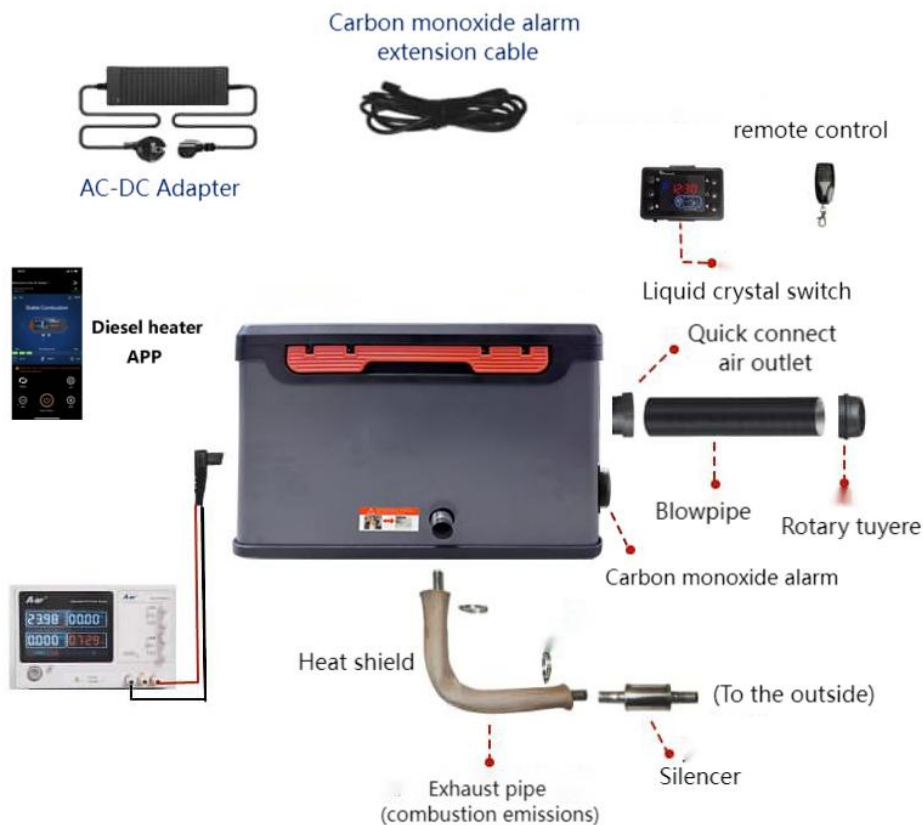
XMZ-TB20 PRO



1	Hot air outlet	2	Carbon monoxide module
3	Liquid crystal switch	4	Air inlet
5	Power input interface	6	Exhaust pipe
7	Fuel tank	8	Machine upper cover
9	Carrying handle	10	Fuel tank capacity scale line

INSTALLATION DIAGRAM

XMZ-TB20 PRO



INSTALLATION DIAGRAM

XMZ-TB30



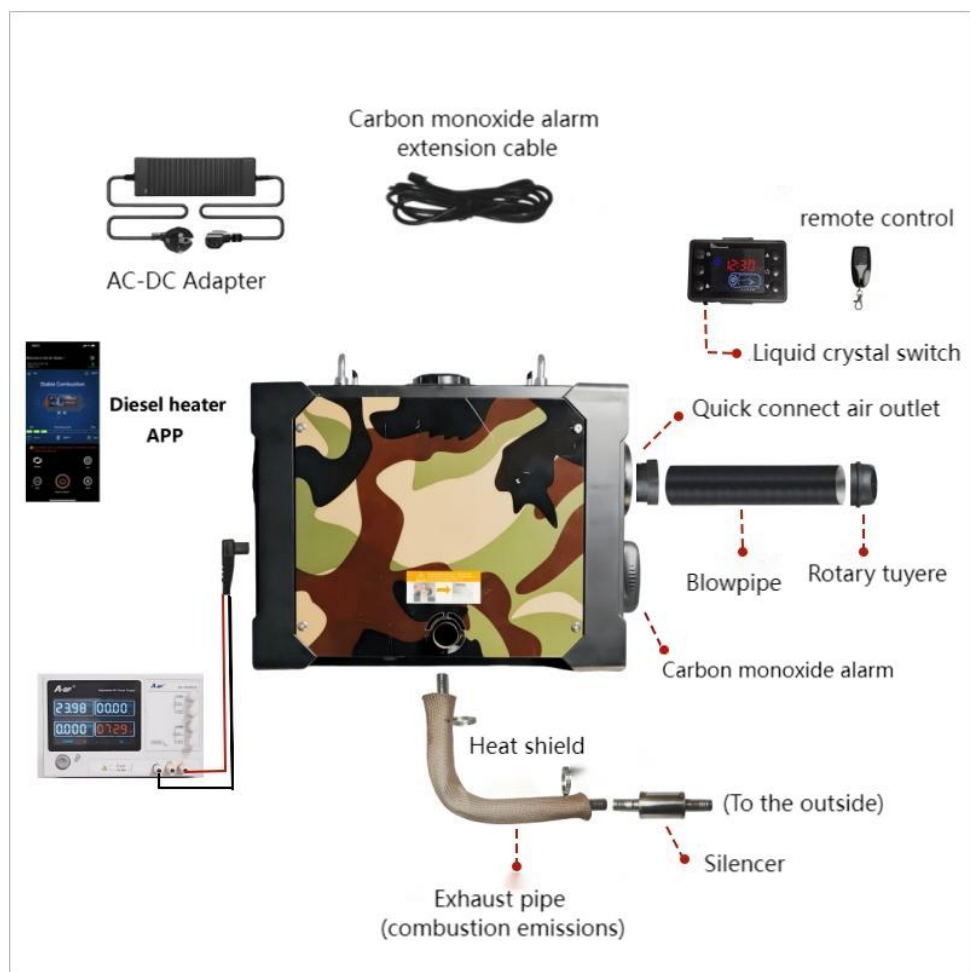
INSTALLATION DIAGRAM

XMZ-HTB1

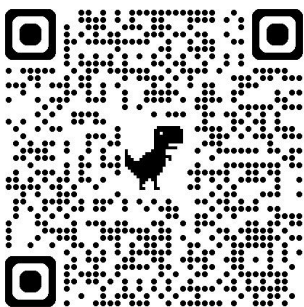


INSTALLATION DIAGRAM

XMZ-TB40



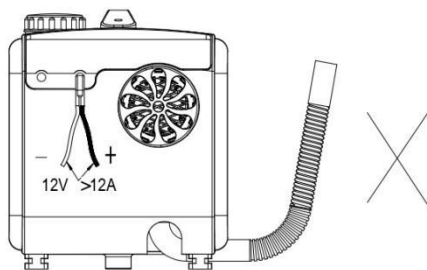
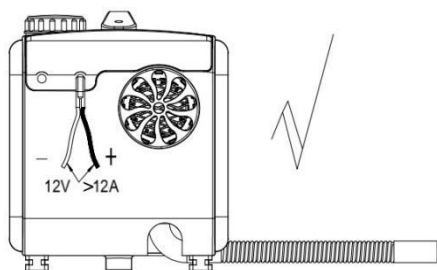
When the heater is just started, the current is relatively high, so an adapter with a voltage of 12-24V and a current of 12A or greater is required for the power supply.



For specific installation, please scan the QR code to view the installation video

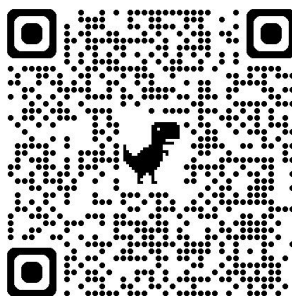
Warning:

1. The air inlet shall not be blocked to keep it open and clear.
2. Keep the exhaust pipe clear. The exhaust pipe outlet shall be kept away from anything flammable to avoid heating and igniting the flammable goods and loading cargo on the ground.
3. To ensure optimal combustion, please remember that the smoke exhaust pipe cannot be placed upward but must be placed horizontally or downward.



Panel operation instructions

Please refer to the instructions below for the LCD screen switch usage. To sync, scan the QR code on the right to watch the video.



1. 2100D rotary LCD switch [standard version]



Function	Parameter	Operation method	Specific operational steps
Liquid crystal shutter			
Power on	/	Long press the screen for 3 seconds	In the shutdown state, press and hold the screen for 3 seconds to turn on the machine. After the language broadcast, the machine will start working.
Shutdown	/	Long press the screen	In the power on state, long press the screen for 3

		for 3 seconds	seconds to stop the language broadcast from working, and the screen displays 'oF shutdown '. During the shutdown process, the buttons cannot be operated. Wait for the fan to stop working and the language will be announced to stop heating, which means the machine will be completely shut down Note: It is forbidden to forcefully cut off the power during the shutdown process. Otherwise, the internal heat will not be completely dissipated. A second startup will produce a large amount of smoke, and incomplete heat dissipation can easily damage the internal wind turbine of the machine. After restarting and waiting for complete internal combustion, it will return to normal.
Temperature& gear switching	/	Press the screen twice in a row	In the power on state, press the screen twice to switch between temperature and gear modes, and rotate the knob left and right to adjust

			the temperature and gear size.
Remote control matching	Effective distance $\leq$ 30m	Factory default matching completed	When powered on, press the LCD screen three times in a row to display 【PP】 Press the 【power on/off】 button on the remote control to turn it on and wake it up. Long press the 【query】 button for 5 seconds, and the interface will display 【-pp-】.The switch and remote control will automatically connect and match successfully.
Manual oil pump	/	Long press the screen for 7 seconds	For the first power on, press and hold the screen for 7 seconds to enter the oil pumping mode. When the oil enters the machine, it will automatically start working. Press the screen halfway to stop the oil pumping.
Remote control			
Key function	Bidirectional remote	/	The 'add button' is for increasing the

	control		gear/temperature, the 'subtract button' is for decreasing the gear/temperature, the 'power on/off button' is for turning on/off the machine, the 'set button' is for adjusting the function, and the 'query button' is for querying work information
Temperature - Fahrenheit	46~97°F	Default Fahrenheit upon startup	Press the power button twice on the remote control to wake it up. Long press the power button to turn it on, which defaults to Fahrenheit. Press the plus and minus buttons to adjust the temperature.
Temperature - Celsius	8~36°C	/	Press the power button twice on the remote control to wake it up, long press the power button to turn it on, long press the settings button for 5 seconds to display the RUN interface, short press the settings button to display the T interface, and press the plus and minus buttons to switch between °C and °F; Press the settings key for 3 seconds to save and exit,

			and press the 【add】 and 【subtract】 keys to adjust the temperature
Temperature switch mode	/	/	Press the power button twice on the remote control to wake it up, long press the power button to turn it on, long press the settings button for 5 seconds to display the RUN interface, press the plus and minus buttons to select the gear and temperature switch, and press the settings button for 3 seconds to save and exit.
Gear mode	1~10	/	Press the power button twice on the remote control to wake it up, long press the power button to turn it on, long press the settings button for 5 seconds to display the RUN interface, press the plus and minus buttons to select the gear and temperature switch, press the settings button for 3 seconds to save and exit, and press the plus and minus buttons to adjust the gear size.

Voice Announcements	Voice broadcasting during startup, shutdown, and fault code situations	Factory default English	Press the power button twice on the remote control to wake it up, long press the power button to turn it on, long press the settings button for 5 seconds to display the RUN interface, press the settings button twice to switch to voice mode, and press the plus and minus buttons to adjust; (GE German, EN English, RU Russian, OFF voice off) Press the settings key for 3 seconds to save and exit.
Basic setting mode	/	Press and hold the 【Settings】 button for 5 seconds, and RUN will appear	Press the power button twice on the remote control to wake it up, long press the power button to turn it on, long press the settings button for 5 seconds to display the RUN interface, press the settings button to switch functions, and then press the plus and minus buttons to adjust. The symbols are named as follows: 01: [RUN] - Temperature and gear mode switching, 02: [t] - Fahrenheit and Celsius switching, 03: En - Voice switching

Intelligent constant temperature control	Temperature Mode	Automatically run at the minimum setting temperature	Press the power button twice on the remote control to wake it up, press and hold the power button to turn it on. The LCD screen adjusts the set temperature and automatically matches the gear to run. The temperature displayed on the remote control screen is the ambient temperature. When the ambient temperature reaches the set temperature, the gear will automatically run in the minimum gear
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2. 2013LB-Large LCD switch [Bluetooth model]

			
Function	Parameter	Operation method	Specific operational steps
Power on	/	Short press the power on/off button	In the shutdown state, short press the [power on/off button] to turn on and start heating
Shutdown	/	Short press the power	In the power on state, short press the 'power on/off

		on/off button	button' to display 'OFF' for shutdown. During the shutdown process, the button cannot be operated. Wait for the fan to stop working and the language will announce that the heating will stop, which means the machine will be completely shut down Note: It is forbidden to forcefully cut off the power during the shutdown process. Otherwise, the internal heat will not be completely dissipated. A second startup will produce a large amount of smoke, and incomplete heat dissipation can easily damage the internal wind turbine of the machine. After restarting and waiting for complete internal combustion, it will return to normal.
Display time	24-hour clock system	Display in standby mode	In the power on state, long press the 【Settings】 button for 3 seconds to enter the basic settings interface as the display time. Press the

			【Settings】button to flash for hours, and press the 【Up】 and 【Down】 buttons to adjust; Press the 【Settings】 button to flash for minutes, press the 【Up】 and 【Down】 buttons to adjust; After completion, press the 'Settings' button to confirm, long press the 'Settings' button for 3 seconds to save and exit. Note: The display time will automatically reset to zero after power failure, and there is no memory saving function.
Run time	9999min	Display during work process	Short press the [Power On/Off] button to turn on the device, and the interface will display the display time. Long press the [Settings] button for 3 seconds to enter the basic settings. Press the [Down] button to display the [r-of] as the display time. Press the [Settings] button to flash the [r-of] button. Press

			the [Down] button to change it to [r-on] as the running time. After completion, press the [Settings] button to confirm. Long press the [Settings] button for 3 seconds to save and exit.
Temperature - Fahrenheit	46~97°F	【Up】 & 【Down】 Adjust	Short press the [power on/off] button to turn on the device, default to Fahrenheit. Press the [up] and [down] buttons to adjust the temperature
Temperature - Celsius	8~36°C	Long press the down button for 3 seconds	In the power on state, long press the 【Settings】 key for 3 seconds to enter the basic settings. Press the 【Up】 and 【Down】 keys to select the Fahrenheit and Celsius operation interface (C-F). Short press the 【Settings】 key to select the Fahrenheit and Celsius adjustment interface. Press the 【Up】 and 【Down】 keys to select Fahrenheit or Fahrenheit.

			Long press the【Settings】key for 3 seconds to save the settings and exit.
Temperature&gear switching	/	Press the settings button	The default temperature when turned on is Fahrenheit. Press the 【Settings】 key to switch the temperature range.
Gear mode	1~10	【Up】 & 【Down】 Adjust	The default temperature is Fahrenheit when turned on. Press the【Settings】button to switch the temperature range, and press the 【Up】 and 【Down】 buttons to adjust the range size;
Manual oil pump	Maximum 300 second countdown	Long press the pump oil button for 3 seconds	When powered on for the first time, long press the 'Pump Oil Key' for 3 seconds to automatically pump oil for 300 seconds. After the countdown, it will automatically stop. Short press the 'Power On/Off Key' to stop halfway. Note: Observe the oil inlet at the bottom of the machine and stop pumping oil until it

			reaches the inlet position. Excessive pumping of oil can cause excessive internal oil volume and failure to ignite.
Remote control matching	Effective distance $\leq$ 30m	Factory default matching	In the power on state, long press the 【up】 button for 3 seconds to display 【P-01】 , then press any key on the remote control to successfully match and exit the matching process. 【Add button】 Temperature increases, 【Subtract button】 Temperature decreases, 【ON】 Power button, 【OFF】 Power button. After turning on the machine, press the ON - Power button to switch the temperature range.
Timer setting	Maximum 10 hours	Minimum timed 30 minutes	In the power on state, long press the 【Settings】 button for 3 seconds to enter the basic settings. Set the

			following settings: current time→startup time→ timed running time→timed function switch settings. Short press the 【Settings】 button to confirm, and then short press the 【Up】 button to switch items: 1. Current time setting: In the power on state, long press the 【Settings】 button for 3 seconds to enter the basic settings interface, which will display the time. Press the 【Settings】 button to flash for hours, and press the 【Up】 and 【Down】 buttons to adjust; Press the 【Settings】 button to flash for minutes, press the 【Up】 and 【Down】 buttons to adjust; Once the settings are complete, press the 'Settings' button to confirm. 2. Start time setting: After
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			setting the current time, press the 【Up】 key briefly to switch the start time setting. Press the 【Set】 key to blink for hours, and press the 【Up】 and 【Down】 keys to adjust; Press the 【Settings】 button to flash for minutes, press the 【Up】 and 【Down】 buttons to adjust; Once the settings are complete, press the 'Settings' button to confirm. 3. Timed running time setting: After starting the time setting, press the 【Up】 key briefly to switch the running time setting, press the 【Set】 key to flash the time, and press the 【Up】 and 【Down】 keys to adjust; The minimum running time is 30 minutes, and the maximum is 10 hours. After
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			completion, press the 【Settings】 button to confirm. 4. Timer function switch setting: After setting the timer running time, short press the 【Up】 key to switch the timer function switch setting, short press the 【Set】 key to switch, press the 【Up】 and 【Down】 keys to adjust 【OF Off】 and 【ON On】, long press the 【Power On】 key to exit the setting screen and display the alarm icon. The setting is complete. Note: Set the start time and run time in sequence, for example: the current time is 15:00, set it to start at 15:10, run it at 15:40 and close it
Language broadcasting	There is a voice broadcast when turning on,	Factory default English broadcast (English,	When the device is turned on, press and hold the down button for 3 seconds to switch between voice commands. The interface

	turning off, or reporting fault codes	German, Russian)	shows that the voice function is turned off for u-oF, while u-ru is in Russian, u-GE is in German, and u-en is in English.
APP remote control	Bluetooth effective distance ≤ 50m	Android&IOS systems	1. Search and download the corresponding app name "airHeaterBLE" on your mobile phone; Or scan the QR code below with your phone, click on the corresponding system download, and then follow the steps below to connect and control the device with your phone. Please refer to the operating instructions on the APP interface for detailed functions. 2. In the power on state, long press the 【up】 and 【down】 combination keys for 3 seconds to enter the engineering mode. Press the 【up】 and 【down】 keys to select and adjust to the 10th Bluetooth name 【XXXX】 . Search for the pairing code on your phone's Bluetooth and connect to Bluetooth.

			You can use the APP to operate the heater.
Engineering mode	/	In the power on state, long press the up and down combination keys for 3 seconds to enter the engineering mode	In the power on state, press the 【up】 and 【down】 combination keys for 3 seconds to enter the engineering mode. Press the 【up】 and 【down】 keys to select, and the data display items will be shown in the display area in the engineering mode; 01: Heater motherboard version number [U00007]; 02: Fault code [E-00] 03: Shell temperature [86F] 04: Power supply voltage [12V]; 05: Heater operating gear [10L]; 06: Environmental temperature [86F] 07: Altitude 【----】 ; 08: Automatic oil pump [- PP -] 09: Remote control matching [RTE] 10: Bluetooth name [XXXX] 11: Restore factory settings [rest]

Fault table

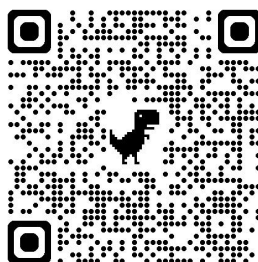
Fault alarm

Show the following figure, corresponding to the failure symbol flicker, and corresponding to the failure device icon flicker, display data as fault code, its meaning please refer to the fault table.

* Spark plug, oil pump, fan, sensor, power supply and other symbols, flicker indicates that the corresponding device is failing.

Fault table

Scan the QR code to view the troubleshooting method



Fault code	Cause of failure	solutions
E-01	Abnormal supply voltage and current	1. Check the power supply equipment to ensure that the input voltage is 12V/24V and the input current is $\geq 12A$, power: $\geq 150W$, there may be losses due to differences in installation wire diameter and length; ① 12V power supply: can be started under the conditions of minimum voltage $\geq 10V$ and minimum current 9.5A; ② 24V power supply: It can be started

		under the conditions of minimum voltage $\geq 24V$ and minimum current 4A Over voltage protection $>32.8V$ reports E-02 fault. 2. Power supply equipment selection: recommended for power supply, battery, adapter, etc. Input voltage: 12V/24V, input current: $\geq 15A$, power: $\geq 150W$. 3. Charging the battery with a heater is prohibited as low battery current can cause it to malfunction; 4. Prohibit the use of in-car cigarette lighters for power supply, as low current cannot work; 5. It is forbidden to use fixtures to fix the connection between the battery and the wires, as poor contact can also cause malfunction. When extending the wire harness, attention should be paid to wires with a diameter of $\geq 2mm^2$ to avoid voltage drop caused by thin wire diameter, and low voltage or current causing malfunction. If the wire harness does not work after being extended, measure the voltage and current at the power supply end and the heater wire harness end.
E-03	Ignition plug malfunction	1. Check if the ignition plug is securely connected. 2. Remove the ignition plug and inspect the appearance for any defects such as broken wire harness, broken ignition plug head, oxidation, carbonization, etc.

		3. Replace with new ignition plug accessories.
E-04	Oil pump malfunction	1. Check if the oil pump plug is loose, unplug and reinstall to confirm. 2. Confirm if there is any pumping sound in the oil pump. If there is no pumping sound, there may be impurities inside after repeated tapping after disassembly. 3. The oil pump has malfunctioned, please replace it.
E-05	Over Temperature Protection	The temperature sensor detects that if the surface temperature of the aluminum body is $\geq 280\text{ }^{\circ}\text{C}$, it will provide over-temperature protection. Pay attention to checking whether the inlet, outlet, and exhaust pipes are bent or too long, which affects the exhaust and prevents heat from dissipating.
E-06	Wind turbine motor malfunction	1. Check if the motor rotor is stuck, if the plug is loose, if the connection is incorrect, etc. If it is stuck, use two screwdrivers to move it parallel outward and return it to normal. 2. Check if the distance between the Huo sensor and the rotor magnet is too far, and if it cannot sense the rotor speed, causing an E-06 fault code to be reported; 3. Check if the induction magnet of the wind turbine is missing or has incorrect polarity, and adjust it to restore normal operation.

		4. The motor and motherboard have malfunctioned. Please replace the motor or motherboard.
E-07	Communication Failure	1. Check if the connection port of the remote control switch is loose 2. Check if the connecting wire (blue) of the remote control switch is open circuited
E-08	Secondary ignition failure (Oil circuit malfunction)	The program will automatically detect whether there is an oil pump entering the machine, perform 2 checks, and each check takes 4 minutes; 1. Newly purchased machines need to be filled with diesel in the fuel tank and patiently wait for 2-3 minutes before starting the heating process. If there is no oil in the oil pipe of the new machine, it will start slowly. 2. Check if the diesel in the fuel tank has been completely burned, and observe the fuel tank scale to confirm if the fuel is sufficient. If there is no fuel in the tank, replenish it in a timely manner before starting the machine and heating it up normally. 3. Refer to the troubleshooting method for E-10 fault code.
E-09	sensor fault	1. Check if the temperature sensor connection wire and connector are damaged or loose, and if there is no signal detected by the motherboard program due to signal interruption.

		2. Replace sensor accessories.
E-10	One ignition failure (Oil circuit malfunction)	1. Check if there is enough oil in the fuel tank and oil pipe, if the oil pipe is blocked, and if the oil pump is stuck. 2. Check if the intake and exhaust pipes are unobstructed. Insufficient oxygen intake or poor exhaust can cause ignition failure. 3. Does the altitude exceed the calibration parameters? Insufficient oxygen intake can cause ignition failure; 4. Refer to the E-02 fault code check, the ignition failed due to insufficient heat from the low point spark plug of the power supply voltage/current.
Installation Guide	The surface temperature of the exhaust pipe is around 752 °F, and attention should be paid to protection against flammable materials during installation	1. Please note that there are no flammable substances around the exhaust pipe and muffler hot air outlet, and insulation materials should be used for protection. It is forbidden to drill holes and install machines on wooden floors. The surface temperature of the exhaust pipe is around 752 °F. 2. Prohibit the use of non-high-temperature resistant adhesives to avoid odor poisoning, and be careful to avoid causing fires by igniting flammable materials. 3. Installation position: ① Reserve a 4-inch gap at the air inlet for smooth air intake; ② Keep the bottom exhaust pipe at a distance of 2 inches from the ground, and prevent fires when the exhaust pipe

		temperature is high Do not bend the exhaust pipe excessively, as it may cause poor exhaust flow; ④ The exhaust duct is not easily too long and multiple bends can cause heat to be unable to be discharged, resulting in a high temperature fault When refueling the fuel tank, do not let it flow onto the outer shell, as it will flow along the inside of the machine to the exhaust pipe position, causing smoke. Fill the fuel tank to a level close to the fuel tank opening. Do not block the intake pipe as it may cause insufficient oxygen and the heater to malfunction.
Accessories modification	Prohibit the use of non high temperature resistant materials and rubber seals that may cause odor and poisoning hazards	1. Extension of exhaust duct modification: It is recommended to purchase pipes made of the same material or high-temperature resistant material, with a length controlled within 2 meters and no large angle bending to avoid overheating. 2. Exhaust pipe modification and extension: It is recommended to purchase pipes made of the same material or high temperature resistant stainless steel material, with a length controlled within 2 meters and no large angle bending. The pipes must be discharged downwards to the outside and cannot be bent upwards multiple times to affect exhaust heat dissipation (the working temperature of the exhaust pipe reaches around 752 °F, and the

		installation position is prohibited from drilling holes in the wooden floor. Non-high-temperature resistant rubber seals are also prohibited, which may cause odor and poisoning hazards).
Emitting white smoke	Abnormal power outage/excessive manual pump oil volume	1. Manually pump oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. The correct way is to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly. 2. Abnormal power outage during operation: During normal operation, press the 'power on/off button' to display 'OFF' for shutdown. During the shutdown process, the button cannot be operated. Wait for the fan to stop working before completely shutting down, and then disconnect the power supply. During the shutdown process, it is forbidden to forcefully cut off the power. Otherwise, the internal heat will not be completely dissipated and a large amount of smoke will be generated during the second startup. At this time, it is necessary to wait for the internal to completely burn before returning to normal. 3. Refer to E-01/E-02 fault code troubleshooting.

Smoking	Insufficient oxygen intake or carbon deposition in the combustion chamber	1. Does the altitude exceed the calibration parameters? Insufficient oxygen intake can cause ignition failure and black smoke emission. 2. Check if there is any blockage in the intake pipe causing insufficient oxygen intake. 3. The small space at the air inlet position leads to air intake obstruction. 4. Refer to the E-01/E-02 fault code check, the low point of the power supply voltage/current has insufficient heat from the ignition plug, resulting in ignition failure and black smoke emission. 5. Disassemble the internal combustion chamber of the machine to check for carbon deposits and replace the combustion chamber in a timely manner.
Smoke blue	Poor oil quality	Only high-grade diesel can be used, and the use of mixed diesel, other types of oil, and non-brand-new oil products is prohibited. In winter, negative temperature diesel should be met;
Machine oil leakage	Oil tank/pipe damage, side installation (Side installation prohibited)	1. Check the appearance of the fuel tank/oil pipe and whether the fuel tank nozzle is damaged or cracked, which may cause oil leakage. 2. When filling the fuel tank with diesel, be careful not to pour it onto the machine casing. Otherwise, it will flow into the interior and smoke due to high internal heat during operation. 3. The heater cannot be installed on the

		side. The oxygen hole oil on the ignition plug side will flow out through the hole, and the correct installation method is to have the intake/exhaust port facing downwards; 4. Poor oil quality leads to blockage of the ignition plug atomization network in the combustion chamber, causing ignition to flow out through the exhaust pipe. The ignition plug atomization network and high-grade diesel should be replaced.
There is no oil or heat inside the machine	The oil pipe is bent	Check if there are any bent positions in the oil pipe that prevent air from supplying oil.
Oil flowing through the exhaust pipe	Excessive pump oil volume/blocked atomization network/abnormal voltage	1. Manually pumping oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. If the combustion chamber is filled with excessive pumping oil, it will flow out from the exhaust pipe; The correct way is to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly. 2. The ignition plug atomization net is blocked. After removing the ignition plug, take out the internal atomization net and check for any blockage. It should be cleaned or replaced immediately.

Oil flowing inside the intake pipe	Incorrect installation direction/excessive manual pump oil volume	1. Manually pumping oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. If the combustion chamber is filled with excessive pumping oil, it will flow out from the intake pipe; The correct way is to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly. 2. The heater cannot be installed on the side. The oxygen hole oil on the ignition plug side will flow out through the hole, and the correct installation method is to have the intake/exhaust port facing downwards.
The exhaust pipe temperature is too high and turns red	Combustion chamber malfunction	Immediately shut down, dismantle the aluminum body to check if the internal combustion chamber is sealed or replace the combustion chamber.
abnormal sound	Poor exhaust flow	Foreign matter blockage in the exhaust pipe affects the exhaust. It should be immediately shut down, and the exhaust pipe, muffler, and exhaust port should be checked for blockage. If there is any blockage, it should be cleaned and restored to normal operation.

Diesel odor	Oil leakage/fuel error	1. Only high-grade diesel can be used, and the use of mixed diesel, other types of oil, and non-brand-new oil products is prohibited. In winter, negative temperature diesel should be met, as other fuels may cause odors. 2. Disassemble the machine casing to check for any oil leaks inside and replace the parts promptly.
Plastic smell	Use external accessories	1. Extension or modification requires the purchase of high-temperature resistant accessories. If the heater has high heat, it may produce unpleasant and pungent odors. 2. Extend the pipe fittings without bending or being too long, as this can cause heat to be unable to dissipate and result in high internal temperature and plastic odor. 3. The working temperature of the exhaust pipe reaches around 752 °F. It is prohibited to drill holes in the wooden floor or use non-high-temperature resistant rubber seals for installation, which may cause odor and poisoning hazards.
Maintenance	Smoking/insufficient heat	If black smoke or insufficient heat is found during the operation of the heater for a period of time, it indicates that there is carbon deposition inside the combustion chamber and it needs to be cleaned or replaced in a timely manner.

Fuse burnt ou	hort circuit power-off inspection	1. Remove the fuse and check for damage. If damaged, replace the fuse. 2. Measure whether the positive and negative poles are short circuited. If there is a short circuit, replace the motherboard if it is damaged.
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CO CONTROLLER OPERATION INSTRUCTIONS

	Model: YAH-A2429 ①Indicator light ②On/Off key
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Operating instructions

1. Start detection: Press the on/off button to start the detection;
2. Stop detection: Press the on/off button to stop detection;
3. Re detection: When the gas concentration reaches the detection threshold of the controller, the indicator light starts to flash; At this time, press the on/off button, and the indicator light will change from flashing to constantly on;

Product specifications/parameters

1. To prevent the risk of carbon monoxide poisoning caused by improper installation, the product is equipped with a carbon monoxide alarm. When the carbon monoxide content in the enclosed space reaches 300ppm, the LCD switch will prompt CO to exceed the limit. When the content reaches 500ppm, an alarm will be triggered and the machine will be shut down. The leakage point needs to be

checked and repaired immediately before starting up for use.

2. The carbon monoxide alarm device is equipped with a 2m extension cable to install the probe in any position. It is not recommended to install it too far away from the diesel heater or too close.

Configuration Table - Model: YAH-A2429					
NO.	Function	Parameter	NO.	Function	Parameter
1	detection range	0-500ppm	7	life expectancy	3 years
2	Detecting overload	2000ppm	8	operation temperature	-20~50℃
3	repeatability	±2%	9	Supply Voltage	5.2V±0.2V
4	Response time (t90)	≤60 s	10	consumption	<6.0mA
5	Long-term Drift	<2%/month	11	Extension line	2m
6	recovery time	≤60 s	/	/	/

Emergency response methods for controller alarms

1. When the CO concentration within the detection range of the controller exceeds the limit, the switch will display a fault/the controller indicator light will flash, and the switch will automatically turn off the heater to avoid a continuous increase in CO concentration; Ventilation should be done immediately (if the environment is narrow and conditions permit, open the ventilation openings to create an open environment as much as possible. When the environment is open or ventilation is inconvenient, it is recommended to increase ventilation equipment to accelerate air circulation and discharge CO gas), and personnel in the environment should evacuate immediately from the environment where the current CO concentration exceeds the standard;
2. If the installation and usage environment is correct, it is recommended that personnel return to the working area and restart to check the CO concentration to see if it meets the standards.

3. During the use of this product, it is important to maintain long-term air circulation and regularly check the concentration of carbon monoxide (international standard $50\text{mg/m}^3 \approx 40\text{PPM}$) to ensure personal safety. If symptoms of carbon monoxide poisoning occur (such as dizziness, headache, nausea, etc.), one should immediately stay away from the source of pollution, breathe fresh air, and seek medical assistance.
4. This product uses electrochemical sensors, which are easily affected by local temperature and humidity interference, resulting in a slight impact on detection accuracy. Therefore, to ensure your safety, please use this product objectively and reasonably. Its service life is affected by the environment, and the accuracy of the sensor is regularly tested. If the error is too large, please replace the sensor.
5. Even if a carbon monoxide alarm is installed, the room must be properly ventilated to prevent excessive CO emissions during sleep from not being dealt with in a timely manner.

Precautions and usage specifications

1. Please do not open the product casing at will; Prevent external forces from damaging the sensor;
2. Products should avoid contact with organic solvents (including silicone rubber and other adhesives), coatings, chemicals, fuel oils, and high-concentration gases;
 1. The product should not be completely encapsulated with resin materials during use and storage, nor should it be immersed in an anaerobic environment for a long time. Otherwise, it will damage the performance of the sensor and affect the detection accuracy of the product.
2. This product cannot be used for a long time in environments containing corrosive gases;
3. During installation and use, it is necessary to avoid vertical air intake from the front;
4. The product air inlet must not be blocked or contaminated;
5. This product needs to be installed firmly and not subjected to excessive impact or vibration;
6. Do not use if the shell is damaged or deformed;
7. Prohibit long-term storage and use of this product in high-concentration alkaline

gases;

8. Please replace the controller with a new one in a timely manner when it reaches its expected service life;

BLUETOOTH OPERATION

Search and download the corresponding APP name "airHeaterBle" in the IOS or Android APP store, then please follow the below steps to connect and control the heater with a mobile phone.



IOS App
APP Store search “airHeaterBle”

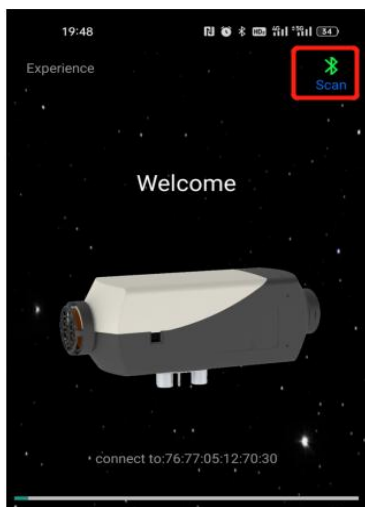
Android APP

	Scan the QR-Code by browser to download the Airheater app from GooglePlay or Search the“Airheaterble”in the google play app to install the Airheater app.
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1. **Query the Bluetooth name:** After turning on the machine, press **[⏻] [M]** for 3s at the same time, the screen displays the Bluetooth name in 4-digit characters (0-F).

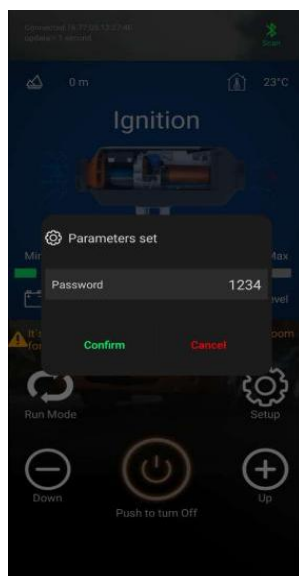


2. Connect to the mobile phone via Bluetooth: Click on the Bluetooth symbol in the upper right corner, find the corresponding local Bluetooth number: BYD+MAC address of the Bluetooth device+4 digits from the controller (Refer to the picture above), then click on the Bluetooth number to connect.

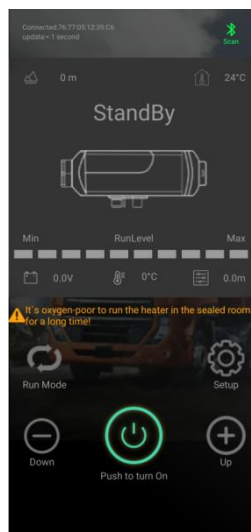


BYD-767705126B45
D4C7ED61-E28F-A0C4-2A0E-E5C3023FC18D
BYD-767705127024
33633C60-41A6-5B78-6C2A-E89FDE938B08
BYD-767705123708
1F85935A-D35D-03F2-BD30-920F18133D5E

3. Click the  button to go to the settings screen, you can set the password and click "Confirm" to save the settings. If the password is modified, the switch needs to modify the password according to the above Bluetooth matching operation method.



4. Long press the  to turn on/turn off the heater.



5. Click "mode" button to switch the gear mode or temperature control mode, then Click "up +" /"down -" button to increase + or decrease- the level (level 1-10)/temperature(8°C~36°C).

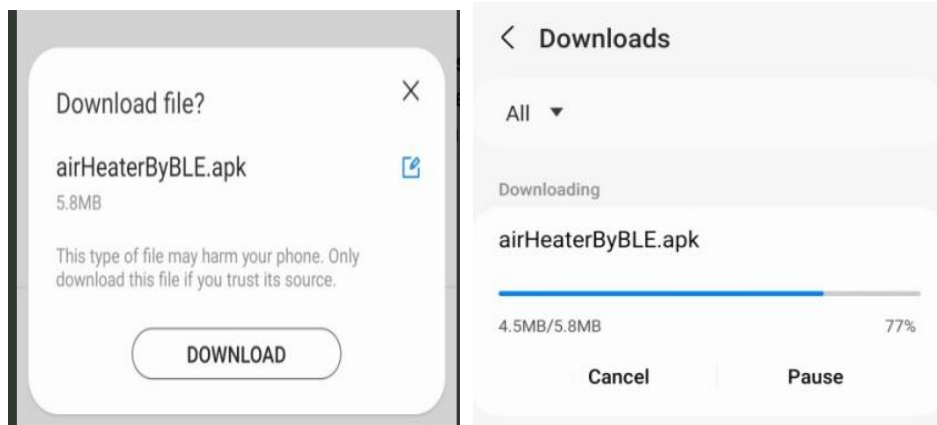


6. Fault display: When the heater fails, it will display the fault code E-xx, see the table mentioned earlier for the type of fault.

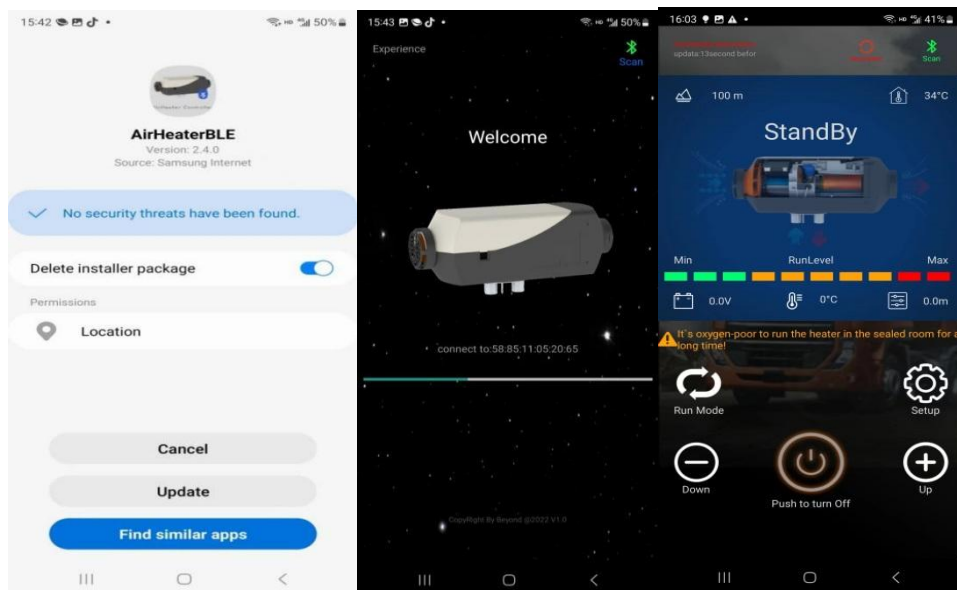


Samsung mobile phone installation and usage APP

1. Open the Samsung phone camera and scan the QR code below to pop up a download link. Click on download and install.



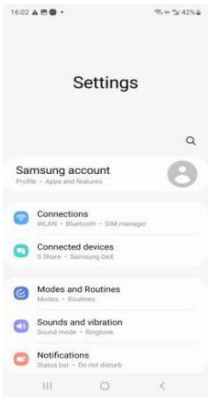
2. After installation is completed and Bluetooth is connected, the app can operate normally.



For some Samsung phones that cannot operate the APP normally after downloading and installing, long pressing and holding the 【】

button on the APP conflicts with the screen recognition function of Samsung phones. The solutions are as follows:

1. Open the settings function of your phone to search for Bixby Touch.



1. Click on the Bixby Touch screen recognition function and close it to return to the app for normal use.

