KANGLUCHI

KANGLUCHI Support Center

Diesel Heater

MODEL:A1

Model:A1



Product Introduction

This product is a new, highly efficient, pollution-free, low-cost, all-in-one intelligent diesel heating unit designed for temporary heating in various settings, including camping, fishing, and RV use. Its main unit features dual brushless motor technology, which further improves overall energy utilization by 8%~15% while providing convenience and energy efficiency.



Important Notice:
These are the original operating instructions. Read the entire manual carefully before use.
KANGLUCHI reserves the right to interpret this user manual.
The appearance of the product is subject to the product actually received. Technical or software updates may be made without prior notice.



Operate this product only in a well-ventilated area. Read the user manual before installation and use.
Store the product properly. Inspect it for abnormalities before use. Stop using it immediately if any abnormality is found.

Use this product only for its intended purpose. Be aware that misuse may cause injury.

Symbol	Symbol Description
	WARNING: To reduce the risk of injury, read the instructions carefully.
	This symbol appears before a safety instruction to indicate a precaution, warning, or hazard. Ignoring such warnings may cause an accident. Follow the recommendations below to reduce the risk of injury, fire, or electric shock.
	NOTICE: This signal word indicates a technical feature or possible product damage if the instruction is not followed.
	WARNING: Toxic substances. Avoid contact with toxic substances.
	WARNING: Flammable materials. Prevent fires caused by igniting flammable materials.
	This device complies with Part 15 of the FCC Rules. 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.

Liability:

· KANGLUCHI is not liable for any problems caused by failure to follow this manual and the precautions contained in it.

Likewise, the company assumes no liability for problems resulting from repairs that do not use professional maintenance methods or that use non-original parts.

Safety Instructions

WARNING:

Read all safety warnings, operating instructions, diagrams, and technical specifications supplied with this diesel air heater. Failure to follow all instructions below may result in electric shock, fire, and/or serious injury.

1. Do Not Do the Following
   - Do not replace key components of the diesel air heater.
   - Do not use replacement parts made by other manufacturers without authorization.
   - Follow all operating instructions and guidelines during installation and operation.

2. Use only original accessories and replacement parts during installation and maintenance.

3. Do not use the heater in locations where flammable vapors or dust may be present, such as:
   - Fuel storage facilities
   - Carbon storage facilities
   - Lumber warehouses
   - Barns and similar locations
   - Diesel/gasoline filling stations

Keep the heater away from fuel tanks, compressed-gas cylinders, fire extinguishers, clothing, and other flammable items.

4. Never use a lighter to start the unit.

5. Do not use the heater in an enclosed and/or unventilated area.

6. Turn off the heater before refueling.

7. Do not disconnect the power supply during operation.

8. If fuel leaks or spills from the heater's fuel system, contact KANGLUCHI for service.

9. Route the exhaust outlet outdoors to prevent exhaust gases from entering the occupied space.

10. Never stop the heater by disconnecting the power supply while the unit is operating.

11. The unit will stop heating when overtemperature protection is activated. Do not disconnect the power supply. Restart the unit only after it has cooled naturally and the power has been turned off.

12. After turning off the unit, do not disconnect the power supply immediately. Allow 3-10 minutes for the unit to complete the shutdown cooling cycle and stop completely.

13. The unit will begin operating normally and producing heat 3-5 minutes after startup. Wait patiently.

14. This unit may be used by children 8 years of age and older, by persons with reduced physical, sensory, or mental capabilities, and by persons lacking experience and knowledge, provided they have received instructions on safe use and fully understand the associated hazards. Children are strictly prohibited from operating the unit. Cleaning and user maintenance must be performed under guardian supervision; children must not perform these tasks alone.

15. WARNING: Flammable Materials



Keep all flammable materials away from the exhaust pipe during installation, use, maintenance, and disposal of the unit. The exhaust pipe becomes extremely hot during operation. Prevent fires caused by igniting flammable materials.

16. WARNING: Toxic Substances



During installation/use, maintenance, and disposal, ensure that adequate ventilation space is provided around the installed unit to prevent carbon monoxide poisoning. Route the exhaust outlet outdoors to prevent exhaust gases from entering the occupied space.

17. Do not use the heater in spaces used to heat or transport hazardous materials.

18. Use this product only for its intended purpose. Be aware that misuse may cause injury.

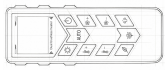
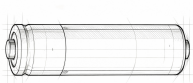
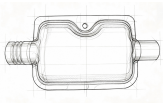
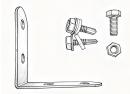
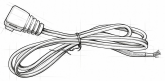
19. This product complies with applicable standards and regulatory requirements. Follow all applicable regulations when installing this unit, and operate it only in a well-ventilated area. Read the user manual before installation and use.

MODEL AND TECHNICAL SPECIFICATIONS

Product Model	KANGLUCHI-A1

Appearance	
Heating Medium	Air
Operating Voltage	DC12-24V 10A (Adapter: AC100-240V, 50/60Hz, 2.5A)
Rated Heat Output	5×（1±10%）KW
Rated Power	53W
Fuel Consumption	0.12L/h ~ 0.39L/h
Fuel	Diesel
Fuel Tank Capacity	7L
Operating Temperature	-40℃ ~ 40℃
Operating Noise	≤75dB
Dimensions	390*280*300mm
Weight (excluding packaging)	Approx. 11.5kg
Weight (including packaging)	Approx. 13.4 kg

INCLUDED ACCESSORIES

			
Remote control × 1	Dry-cell battery × 2	Air duct assembly × 2	Exhaust pipe × 1
			
Exhaust pipe insulation sleeve × 1	Insulation sleeve clamp × 2	Muffler × 1	Muffler installation kit × 1
			
Fuel funnel × 1	Power adapter × 1	Power cord × 1	User manual × 1

INSTALLATION GUIDE

Refer to the installation diagram below and carefully read the precautions before installation or use:

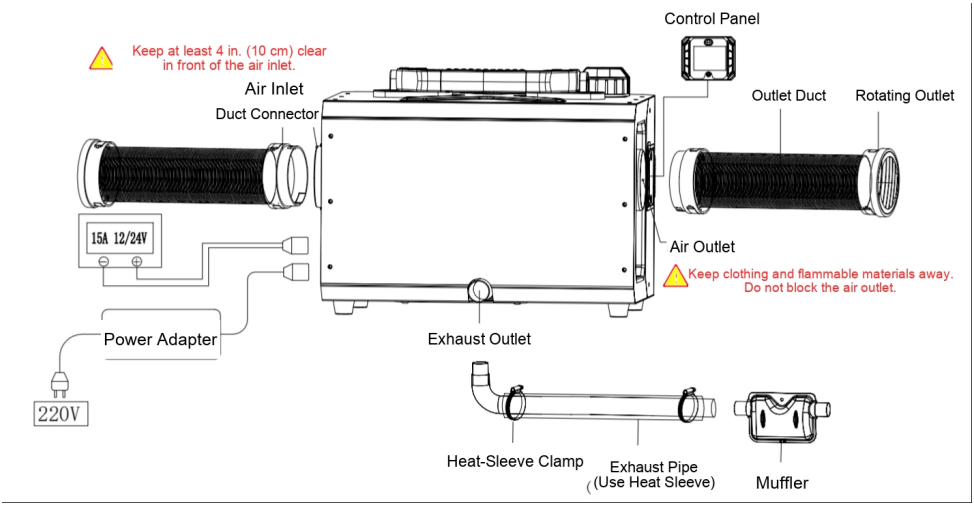


Fig. Installation Diagram

Suitable applications: RVs, boats, tents, etc.

1. Exhaust Pipe Installation Tips

- When the heater is indoors, route the exhaust pipe outdoors. Insulate the exhaust pipe, because its temperature may rise rapidly and create a fire hazard;
- When the heater is outdoors, extend the exhaust pipe to prevent exhaust gases from being drawn in at the fan on the rear of the heater and entering the building, which could cause carbon monoxide poisoning;
- Keep the bottom exhaust pipe approximately 5 cm above the ground. Take fire-prevention measures if the exhaust pipe becomes excessively hot;
- Do not bend the exhaust pipe excessively; this may cause uneven exhaust flow.

2. Air Duct Installation

- Leave 4 inches of clearance between the air inlets to ensure unobstructed airflow;
- Do not use an excessively long hot-air outlet duct. Multiple bends may prevent heat from dissipating effectively and cause an overtemperature fault;

3. Refueling

- Fill this unit only with diesel fuel that meets national standards. Use only nationally approved safe fuel. Never use gasoline, alcohol, methanol, or other volatile fuels;
- When refueling, do not allow fuel to enter the housing. Fuel may run down the inner wall of the unit and into the heater, causing a fuel odor;
- Fill the tank until the fuel level is close to the fuel tank opening.

4. Power Supply Precautions

- The diesel air heater power supply must meet the following requirements: voltage: 12V, current: ≥15A; voltage: 24V, current ≥10A (the unit may be powered directly by a power supply or battery). If using battery power, do not charge the battery while operating the heater; insufficient current may cause the unit to malfunction. Ensure the battery connection is secure and reliable. Securing it with clamps may result in poor contact.

■ When extending the diesel air heater power cable, use wire with a cross-sectional area greater than 2 mm². Wire that is too thin may provide insufficient current and prevent the heater from operating properly. After wiring, wrap all connections with electrical tape to prevent current leakage and fire hazards.

■ Never disconnect power while the diesel air heater is operating at high temperature. High temperatures may cause backfiring, and repeated power disconnection may cause permanent damage. Remedy: If power is disconnected and you attempt to restart the heater immediately, wait until all internal heat has dissipated before restarting to ensure proper operation.

5. Initial Startup

The heater has a long fuel line. Before initial startup, manually pump fuel to the fuel inlet. Otherwise, after starting the unit, allow time for it to detect fuel (the system will continuously monitor the fuel signal during this period). Once the glow plug detects fuel, ignition and heating will begin automatically. Refer to the controller user manual for detailed manual fuel-priming instructions.

6. Maintenance

To prevent mechanical components from seizing, operate the heater for approximately 10 minutes every four weeks.

When changing from summer to winter operation, replace the heater's summer diesel fuel with winter diesel fuel and run the heater at full power for 20 minutes.

Under normal conditions, the heater requires no maintenance. However, have a trained professional inspect it periodically, at least at the start of the heating season (before the heater is needed due to severe weather conditions).

After 3,000 operating hours or 3 years of use, perform the following maintenance to ensure reliable heater operation:

- Check the cold-air inlet and warm-air outlet for dirt and foreign objects. (Dirty or blocked cold- and warm-air ducts may cause overheating.)
- Clean the exterior of the heater. (Prevent water from entering the unit.)
- Inspect the electrical connections for contact corrosion and ensure all connections are secure.

- Inspect the exhaust pipe and combustion air line for signs of damage, and ensure they are clean and free of foreign objects.
- Replace the fuel filter, if installed.
- Inspect the fuel line and fuel filter for leaks.

⚠WARNING:

1. While the unit is operating, do not cover the air intake grille with clothing or other items. Keep the grille open and clean to ensure proper airflow.
2. After turning off heating, allow the 3-10 minute shutdown cooling cycle to finish and wait until the fan stops completely. Do not disconnect power during this process. Disconnect power only after heat dissipation is complete and the fan has stopped. The unit is fully shut down when the control panel turns off.
3. Keep the exhaust pipe unobstructed. Keep the exhaust outlet away from flammable materials, and do not heat or ignite flammable items. Do not load goods on the ground.
4. For optimal combustion, do not install the flue exhaust pipe vertically upward. Install it horizontally or with a downward slope.

Control Panel Display Instructions - LCD Controller



Display Description

Icon	Description	Icon	Description
	Heater operating in Energy-Saving Mode		Signal indicator
	Heater operating in Standard Mode		Altitude
	Heater operating in High-Power Mode		Diesel air heater “Preheating” indicator
	Diesel air heater operating in “Automatic Mode”		Diesel air heater “Operating” indicator
	Displayed while the fuel pump is operating		Diesel air heater “Shutdown Cooling” indicator
	Fuel level indicator		Displayed when the diesel air heater malfunctions
	Displayed after setting the timer		Displayed while the heat-dissipation fan is operating
	Displayed while the glow plug is operating		Displayed while the combustion air fan is operating
	Displayed after successful ignition	/	/
	Displayed when the temperature unit is Celsius		Ambient temperature display
	Displayed when the temperature unit is Fahrenheit		Heater body temperature display
	Operating parameter display		Heat-dissipation fan speed display
	Operating voltage display		Combustion air fan speed display

EN	Voice prompts: English	FR	Voice prompts: French
DE	Voice prompts: German	IT	Voice prompts: Italian
ES	Voice prompts: Spanish	PL	Voice prompts: Polish
NL	Voice prompts: Dutch	SV	Voice prompts: Swedish

CONTROL BUTTONS			
	**M Button**		**Timer Button**
	**Temperature "+" Button**		**Fan Speed "+" Button**
	**Temperature "-" Button**		**Fan Speed "-" Button**
	**On/Off Button**		**Settings Button**

Control Panel Instructions

OPERATING INSTRUCTIONS			
Operation	Parameter	Control Method	Detailed Procedure
Start	/	Press and hold the "On/Off" button	With the unit off, press and hold the "On/Off" button for 2 seconds to start it. When the display shows "Preheating," the unit has entered heating

			mode. At initial startup, the default is Manual Mode, and the display shows level "5L" in Standard Mode.
Shut Down	/	Press and hold the "On/Off" button	While the unit is operating, press and hold the "On/Off" button for 2 seconds. The display will show "OFF." Do not operate this button during shutdown. During the shutdown cooling cycle, the display will show "Shutdown Cooling" until cooling is complete and the unit shuts down. NOTICE: Never disconnect the power during shutdown. Otherwise, internal heat cannot dissipate completely. Restarting the unit may produce a large amount of smoke, and insufficient cooling can easily damage the internal combustion air fan impeller. Allow combustion inside the unit to finish completely before resuming normal operation.
Switch Modes	/	Press the "M" button	Press the "M" button to cycle through the manual and automatic modes in this order: Boost → Standard → Energy-Saving → Automatic.
Adjust the Output Level	/	Press the "Fan Speed +" or "Fan Speed -"	Press the "Fan Speed +" or "Fan Speed -" button to adjust the output level. Energy-Saving Mode can be adjusted from 1-9L; Standard Mode from

		button	4-9L; and Boost Mode from 7-9L.
Adjust the Temperature	/	Press the “Temperature +” or “Temperature -” button	In Automatic Mode, the default set temperature is 21℃. Press “Temperature +” or “Temperature -” to adjust the temperature from 10℃—45℃. (Automatic Mode stores the set temperature in memory.)
View Parameters	/	Press the “Settings” button	While the unit is on, the output level is displayed by default. Press the “Settings” button to view the parameters in this order: fuel pump frequency—glow plug power—altitude—total operating time. To return to the main screen, leave any parameter displayed for 20 seconds or press any button.
Switch the Temperature Unit	10~45℃ 50～113℉	Press and hold the “M” button for 3 seconds	When the unit is on, Celsius is displayed by default. Press and hold the “M” button for 3 seconds to switch between Celsius and Fahrenheit. Leave either unit displayed for 5 seconds to confirm it automatically. The setting is retained after power is disconnected.
Operating Time	9999 minutes	Displayed during operation	The operating time is displayed during operation, up to 9999 minutes. Timing starts automatically after startup, allowing the operating time to be monitored in real time. The timer automatically resets to

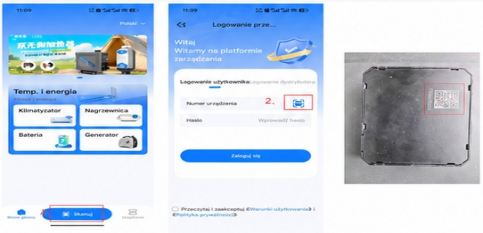
			zero after reaching 9999 minutes. The value is not retained after power is disconnected.
Manual Fuel Pump Operation	Maximum 200-second countdown	Press the "Settings" button 5 times in succession.	When starting the unit for the first time, press the "Settings" button 5 times in succession. The system will automatically start the 200-second fuel-priming mode, and the screen will display a 200-second countdown. During priming, the system continuously monitors the fuel signal. When the glow plug detects fuel, the unit will automatically ignite and start. You may also press any button to stop the process early.
Remote Control Pairing	Effective range: ≤ 25 meters	Press the "Settings" button 3 times in succession.	When power is first applied, press the "Settings" button 3 times to enter remote-control pairing mode. The display will show "315." While in this mode, press the "Settings" button on the remote control to complete pairing.
Timer Settings	Maximum: 24 hours	Minimum operating time: 5 minutes	In standby mode, press and hold the "Timer" button for 2S to set the scheduled start time. Press "Fan Speed +" or "Fan Speed -" to adjust the timer through 5 minutes, 10 minutes, 20 minutes, and 30 minutes; each subsequent press changes the setting by 30 minutes, up to 24 hours. After the setting appears on the

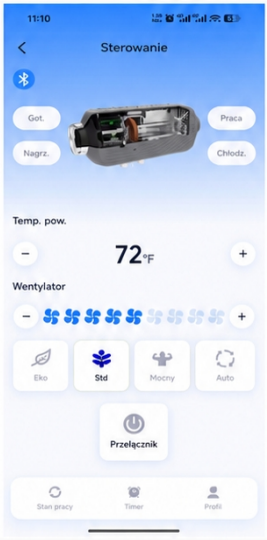
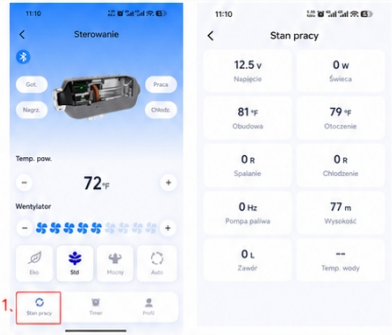
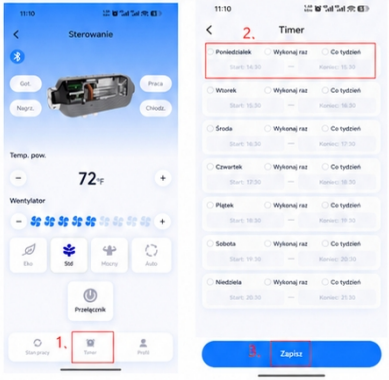
			screen for 5 seconds, the start time is confirmed automatically. Set the timer to 0 to cancel the timer function. While the unit is operating, press and hold the "Timer" button for 2S to set the scheduled shutdown time. Press "Fan Speed +" or "Fan Speed -" to adjust the timer through 5 minutes, 10 minutes, 20 minutes, and 30 minutes; each subsequent press changes the setting by 30 minutes, up to 24 hours. After the setting appears on the screen for 5 seconds, the shutdown time is confirmed automatically. Set the timer to 0 to cancel the timer function. Note: When the timer function is enabled, the colon in the center flashes. For models with Bluetooth or 4G, the control-panel start/stop timer function is unavailable. Set the timer in the Chihuitong app. (Refer to the app for specific procedures and settings.)
Voice Announcements	Voice announcements for startup, shutdown, and fault-code status	Default language: English	At startup, the default language is English. Press and hold the "Settings" button for 3 seconds to enter language-selection mode, then press the [Settings] button to cycle through English-French-German-Italian-Spanish-Polish-Dutch-Swedish. When a language remains on the screen for 5 seconds, it is

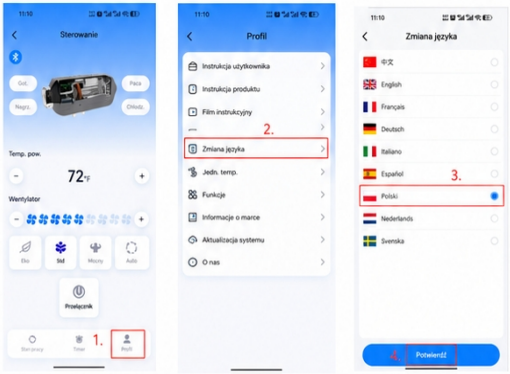
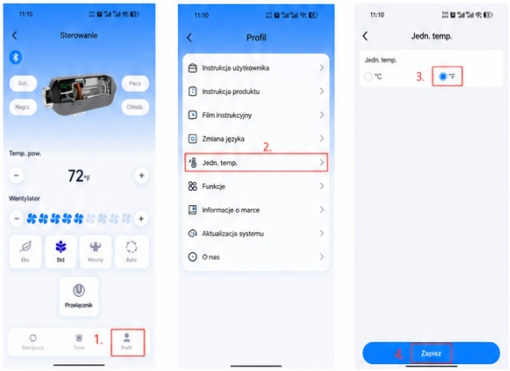
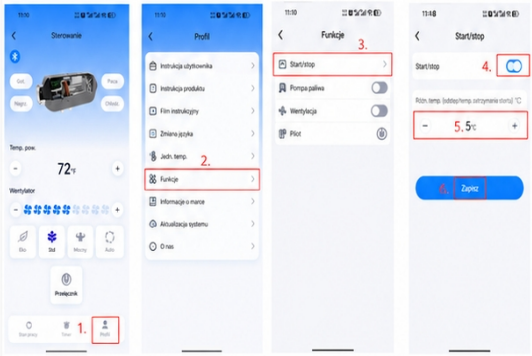
			confirmed automatically. The selection is retained after power is disconnected.

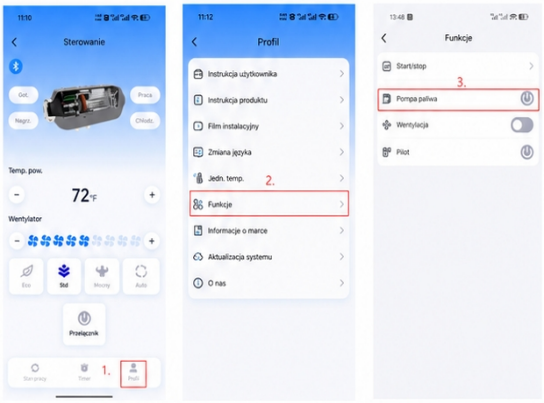
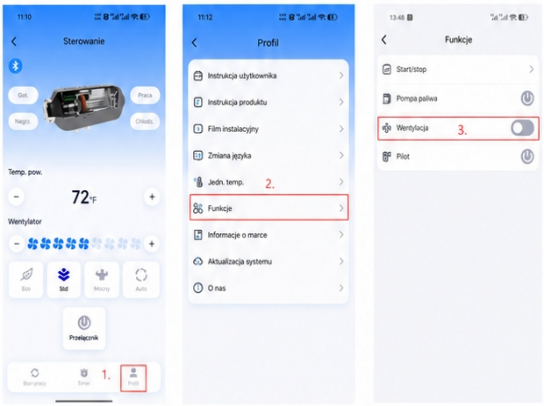
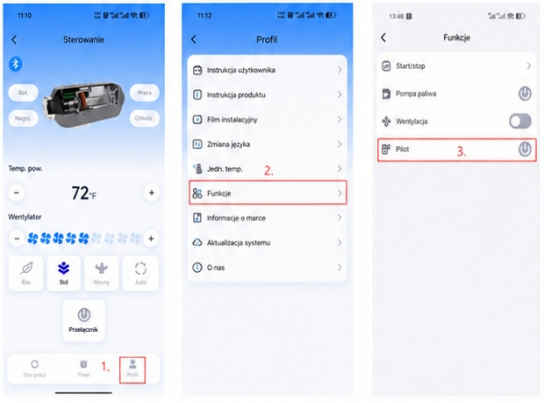
BLUETOOTH PAIRING GUIDE

Note: Ensure that your smartphone's Bluetooth is turned on before connecting via Bluetooth.

FUNCTION		SCREEN	INSTRUCTIONS
APP Download	APP Download – iOS		1. Search for "Chihuitong" in the App Store. 2. Tap Get to download the app. 3. You may also scan the QR code in the upper-right corner of the controller to download the app.
	APP Download – Android		1. Scan the QR code in the upper-right corner of the controller to download the app.
App Language			1. Open the CHT app and tap the arrow in the upper-right corner of the screen. 2. Select the language you want to use.
QR Code Connection			1. Tap Scan to enter the QR code login screen. 2. Tap the scan icon, then scan the QR code on the back cover of the controller. 3. After the QR code is recognized, the app logs in automatically.

FUNCTION	SCREEN	INSTRUCTIONS
Heater Control		1. Use this screen for basic heater control. ● Turn the heater on or off. ● Tap Energy Saving to switch to Energy Saving Mode. Use Fan + or Fan – to adjust the power level from 1L to 9L. ● Tap Standard to switch to Standard Mode. Use Fan + or Fan – to adjust the power level from 4L to 9L. ● Tap Super Power to switch to Super Power Mode. Use Fan + or Fan – to adjust the power level from 7L to 9L. ● Tap Auto to switch to Auto Mode. Use Temperature + or Temperature – to set the desired temperature.
Operating Status		1. Tap Operating Status to open the operating status screen. 2. View the heater operating parameters on this screen.
Timer Operation		1. Tap Timer to open the timer settings screen. 2. Select the desired days from Monday through Sunday. 3. Choose Run Once or Weekly Repeat. 4. Tap Save to complete the timer setting.

FUNCTION	SCREEN	INSTRUCTIONS
Controller Language Setting		1. Tap Profile to open the profile page. 2. Tap Language to open the language selection page. 3. Select the desired language. 4. Tap Confirm to save the language setting.
Temperature Unit Setting		1. Tap Profile to open the profile page. 2. Tap Temperature Unit to open the temperature unit screen. 3. Select either °C or °F. 4. Tap Save to complete the setting.
Start/Stop Mode Setting		1. Tap Profile to open the profile page. 2. Tap Functions to open the functions page. 3. Tap Start/Stop to open the Start/Stop Mode screen. 4. Turn on Start/Stop Mode. 5. Tap + or – to set the startup temperature difference. When the ambient temperature is higher than the stop temperature, the heater stops automatically. When the ambient temperature is lower than the startup temperature, the heater starts automatically. 6. Tap Save to complete the setting.

FUNCTION	SCREEN	INSTRUCTIONS
Manual Fuel Priming		1. Tap Profile to open the profile page. 2. Tap Functions to open the functions page. 3. Tap Fuel Pump to perform manual fuel priming.
Ventilation Setting		1. Tap Profile to open the profile page. 2. Tap Functions to open the functions page. 3. Tap Ventilation to turn on ventilation mode.
Remote Pairing		1. Tap Profile to open the profile page. 2. Tap Functions to open the functions page. 3. Tap Remote Pairing. When “315” appears, press the Settings key on the remote control to complete pairing.

Troubleshooting Table

Fault Code	Cause	Solution
E01	Supply voltage too high	1. Check the power supply and verify that the voltage at the supply terminals is normal; 2. If the voltage at the supply terminals is higher than 32V, the power supply is abnormal. Adjust the supply voltage; 3. If the power supply is normal, replace the controller.
E02	Supply voltage too low	1. Check the power supply. Ensure an input voltage of 12V/24V, an input current of ≥15A, and power of ≥150W; ① 12V power supply: the unit can start at a minimum voltage of ≥9V; ② 24V power supply: the unit can start at a minimum voltage of ≥18V. 2. Power supply selection: A power adapter, battery pack, converter, or similar device is recommended. Input voltage: 12V/24V; input current: ≥15A; power: ≥150W. 3. Never use a fastening device to connect the battery and wires, because poor contact may cause equipment failure. When extending the wiring harness, use particular care to select wire with a diameter of ≥2mm ^{2}. This prevents voltage drop caused by undersized wire and equipment malfunction caused by low voltage/current. If the unit still does not operate normally after the wiring harness is extended, measure the voltage and current separately at the power-supply end and the heater-harness end.
E03	Fuel pump open circuit	1、Check the fuel pump connector for damage, check whether any terminals have come loose, and inspect the fuel pump wiring harness for broken wires;

		2、Check whether the fuel pump plug is loose. Disconnect and reinstall it to confirm; If none of the above problems is found, replace the fuel pump.
E04	Fuel pump short circuit	1、Inspect the fuel pump wiring for insulation damage and short circuits caused by pinching; 2、If there is no short circuit, replace the fuel pump; 3、If replacing the fuel pump does not resolve the problem, replace the controller.
E05	Glow plug open circuit	1、Check that the glow plug connector is fully inserted and not loose; 2、If it is fully inserted, remove the glow plug and inspect it for damage; 3、If the glow plug is damaged, replace it; 4、If the glow plug is normal, replace the controller;
E-06	Glow plug short circuit	1、Inspect the glow plug wiring for damaged insulation or crossed wires causing a short circuit; 2、Carefully inspect the protective sleeves on the center electrode and side electrode at the base of the glow plug for damage that could cause a short circuit; **3、**If there is no short circuit, inspect the glow plug for damage; **4、**If the glow plug is normal, replace the controller.
E07	Abnormal heat-dissipation fan speed	1、Check that the entire unit is securely fastened and properly installed; 2、Check whether contact between the heat-dissipation fan and the housing is causing abnormal fan speed; 3、If the fan does not contact the housing, replace the motor assembly.
E08	Heat-dissipation fan short circuit	1、Inspect the heat-dissipation fan wiring for insulation damage and short circuits caused by pinching;

		2、If the wiring harness insulation is intact, inspect the plastic housing and the inside of the motor; 3、If no abnormality is found, replace the controller;
E09	Heater flameout	1、Check the fuel line for air and verify that fuel flows continuously through the line; 2、Inspect the fuel line for damage that could cause a fuel leak; 3、Check whether the fuel tank is low on fuel;
E10	Ignition failure	1、Check whether fuel is present in the fuel line; 2、If the heater is burning, inspect the sensor for damage and replace the sensor; 3、If the heater does not burn, repeatedly blow compressed air through the air intake and exhaust openings. Thoroughly clean the combustion chamber, then start the unit again.
E11	Overtemperature warning	The temperature sensor detects whether the aluminum housing surface reaches or exceeds 295℃ and activates the overtemperature protection mechanism. Carefully check whether the air inlet pipe, hot-air outlet pipe, or exhaust pipe is bent or excessively long. These conditions impair exhaust performance and prevent heat dissipation.
E12	Temperature sensor open circuit	1、Check that the temperature sensor connector is fully inserted and not loose; 2、If it is fully inserted, inspect the wiring for breaks; 3、If no problem is found, replace the temperature sensor; 4、If the problem persists after replacing the temperature sensor, replace the controller.

E13	Temperature sensor short circuit	1、Check the temperature sensor wiring for damaged insulation and short circuits. 2、If there is no damaged insulation or short circuit, replace the temperature sensor. 3、If the problem persists after replacing the temperature sensor, replace the controller.
E14	Communication lost	1、Check the control panel communication wire (blue wire) for damage. 2、Check whether any connector terminals have come loose. 3、If everything is normal, replace the control panel. 4、If the fault remains after replacement, replace the controller.
E15	Intake air temperature too high	Check the ambient temperature around the control panel. If the fault code remains displayed when the ambient temperature is below 65°C, replace the control panel.
E16	Abnormal combustion air fan speed	1、Check whether the combustion air fan impeller is contacting the combustion chamber U-shaped rubber plug/asbestos gasket, preventing the motor from rotating or causing abnormal operation. 2、If the combustion air fan impeller is not obstructed, replace the motor assembly.
E17	Combustion air fan short circuit	1、Check the combustion air fan wiring for pinched or damaged insulation that may be causing a short circuit. 2、If the wiring harness insulation is intact, inspect the plastic housing and the inside of the motor; 3、If no abnormality is found, replace the controller;
E18	Combustion air fan open circuit	1、Check that the combustion air fan connector is fully inserted and secure. 2、If the connector is fully inserted, check the combustion air fan wiring harness for broken

		wires. 3、If no wires are broken, replace the motor assembly. 4、If replacing the motor assembly does not resolve the problem, replace the controller.
E19	Heat-dissipation fan open circuit	1、Check that the heat-dissipation fan connector is fully inserted and secure. 2、If the connector is fully inserted, check the heat-dissipation fan wiring harness for broken wires. 3、If no wires are broken, replace the motor assembly. 4、If replacing the motor assembly does not resolve the problem, replace the controller.
E20	Combustion air fan circuit fault	Replace the controller.
E21	Heat-dissipation fan circuit fault	Replace the controller.
Installation Guide	The exhaust pipe surface temperature is approximately 350°C. During installation, prevent flammable materials from contacting the pipe.	1. Keep flammable materials away from the exhaust pipe and the muffler hot-air outlet, and use insulating material for protection. Never drill holes or install mechanical equipment on a wood floor. The exhaust pipe surface temperature is approximately 350°C. 2. Do not use adhesives that do not meet high-temperature resistance requirements. They may produce odors and create a poisoning hazard. Take special care to prevent flammable materials from igniting and causing a fire. 3. Installation location requirements: ① Leave 4 inches of clearance at the air inlet to ensure unrestricted airflow. ② Keep the bottom exhaust pipe 2 inches above the ground. Take fire-prevention measures for high temperatures, and avoid excessive exhaust pipe bends that could restrict exhaust flow. ④ Do not use an excessively long exhaust pipe or multiple bends. Otherwise,

		heat may not dissipate effectively and may cause an overtemperature fault.
Accessory modifications	Do not use materials or rubber seals with inadequate high-temperature resistance. They may produce odors and create a poisoning hazard.	1. Hot-air outlet duct modification and extension: Use ducting made of the same material or a high-temperature-resistant material. Keep the duct length within 2 meters and avoid sharp bends to prevent overheating. 2. Exhaust pipe modification and extension: Use pipe made of the same material or high-temperature-resistant stainless steel. Keep the length within 2 meters and do not make sharp bends. Route the pipe downward to discharge outdoors. Never make multiple upward bends, as they will impair exhaust flow and heat dissipation. (The exhaust pipe operating temperature may reach approximately 350°C. Never drill holes in a wood floor at the installation location. Do not use rubber seals with inadequate high-temperature resistance, as they may produce odors and create a poisoning hazard.)
White smoke from exhaust	Unexpected power loss/excessive manual fuel pumping	1. During manual priming, excess fuel inside the unit will prevent normal ignition and produce white smoke. Pump fuel only until it reaches the fuel inlet, then stop. If too much fuel has been pumped, disconnect the fuel line and restart the unit 2-3 times until normal operation is restored, then reconnect the fuel line. Alternatively, continuously blow air through the fuel inlet line with a hair dryer until the unit resumes normal operation. 2. Unexpected power loss during operation: While the unit is operating, press and hold the "Power" button for 2 seconds. When "OFF" appears on the display, the unit will begin shutting down. Never turn off the main power switch during the shutdown cooling cycle, or internal heat will not dissipate completely. Restarting the unit may produce a large amount of smoke, and residual heat can easily damage the internal combustion air fan impeller. Wait until the fuel inside has

		burned completely before resuming normal operation.
Black smoke from exhaust	Insufficient oxygen intake or carbon buildup in the combustion chamber	1. Is the altitude outside the calibrated parameter range? Insufficient oxygen intake may cause ignition failure and black smoke. 2. Check the combustion air intake line for blockages that could restrict oxygen intake. 3. Check whether limited space around the air inlet is restricting airflow. 4. Remove the unit's internal combustion chamber and inspect it for carbon buildup. Replace the combustion chamber promptly if necessary.
Blue smoke	Poor fuel quality	Use only high-quality diesel fuel. Never use blended diesel, other types of fuel, or previously used fuel. In winter, use diesel fuel suitable for low temperatures.
Diesel fuel leak	Damaged fuel tank/fuel line or side-mounted installation (side mounting is prohibited)	1. Inspect the fuel tank, fuel line, and fuel injector nozzle for damage or cracks that may cause a fuel leak. 2. When adding diesel fuel, do not pour fuel directly onto the unit housing. Fuel may seep inside and produce smoke due to the high internal temperature during operation. 3. Poor-quality fuel can clog the glow plug atomizer screen in the combustion chamber, causing the ignition mixture to escape through the exhaust pipe. Replace the glow plug atomizer screen and use high-quality diesel fuel.
No fuel or heat source inside the unit	Bent fuel line	Check the fuel line for bends, which may allow air to obstruct the fuel supply.
Abnormal noise	Restricted exhaust flow	Foreign objects blocking the exhaust line will impair exhaust system operation. Shut down the unit immediately and inspect the exhaust line and exhaust outlet for blockages. Remove any blockage promptly to restore normal operation.

Diesel fuel odor	Fuel leak/poor diesel fuel quality	1. Use only high-quality diesel fuel. Never use blended diesel, other types of fuel, or non-original fuel. In winter, use low-temperature diesel fuel, as other fuels may produce odors. 2. Remove the unit housing and inspect the interior for fuel leaks. Replace the affected components promptly.
Plastic odor	Use of external accessories	1. Use high-temperature-resistant accessories for extensions or modifications. The heater's high operating temperature may cause a strong, unpleasant odor. 2. When extending the duct, avoid bends and excessive length. Otherwise, heat may not dissipate effectively, causing excessive internal temperature and a plastic odor. 3. The exhaust pipe operating temperature may reach approximately 350°C. Never drill holes in a wood floor or use rubber seals with inadequate high-temperature resistance for installation. Doing so may produce odors and create a poisoning hazard.
Black smoke from exhaust	Black smoke/insufficient heat output	If black smoke persists or heating remains insufficient while the diesel air heater is operating, carbon deposits have accumulated in the combustion chamber. Clean or replace the combustion chamber promptly.

Email: kangluchi@outlook.com

Website：www.kangluchi.com