



Installation Guide

Nordkapp™ Cube GSM



ECE 122R - 000056
ECE 10R - 025849

Welcome to the Nordkapp® Air diesel air heater. This guide will walk you through the safe and proper installation and operation of your unit.

Please read all instructions carefully before beginning installation or use.

Important Safety Instructions

 Follow these precautions to avoid injury or damage:

- Do not use biofuels. Use only EN590 standard diesel.
- Do not use the heater to dry people or animals.
- Do not cover the heater, air intake, or air outlet.
- Exhaust pipe gets hot. Do not install near flammable materials or fuel system components.
- Turn off the heater before refueling or maintenance.
- Do not use the heater in areas with flammable vapors or materials (e.g., gas stations, storage sheds).
- Ensure proper ventilation at the installation site.
- A fire extinguisher must be present in the vehicle.
- Disconnect the heater from the battery before repairs or welding.
- Never connect or disconnect plugs while the device is operating.
- Use only parts and accessories approved by the manufacturer.
- This heater is not intended for uninterrupted, continuous use.

NORDKAPP™ CUBE-CASE MODEL

The Nordkapp™ case model heater includes the Nordkapp™ Air heating unit.

In the suitcase model, the heating unit, 5-liter fuel tank, fuel hoses, and fuel pump are pre-installed inside the case.

You only need to connect the air intake pipe and the exhaust pipe, after which the device is ready for use.

If necessary, the suitcase can be opened by removing the mounting screws. This does not affect the warranty.



⚠ The heater can be installed either indoors or outdoors. When installing outdoors, careful protection against splashing water must be ensured—both for the air intake and the heater components in general.

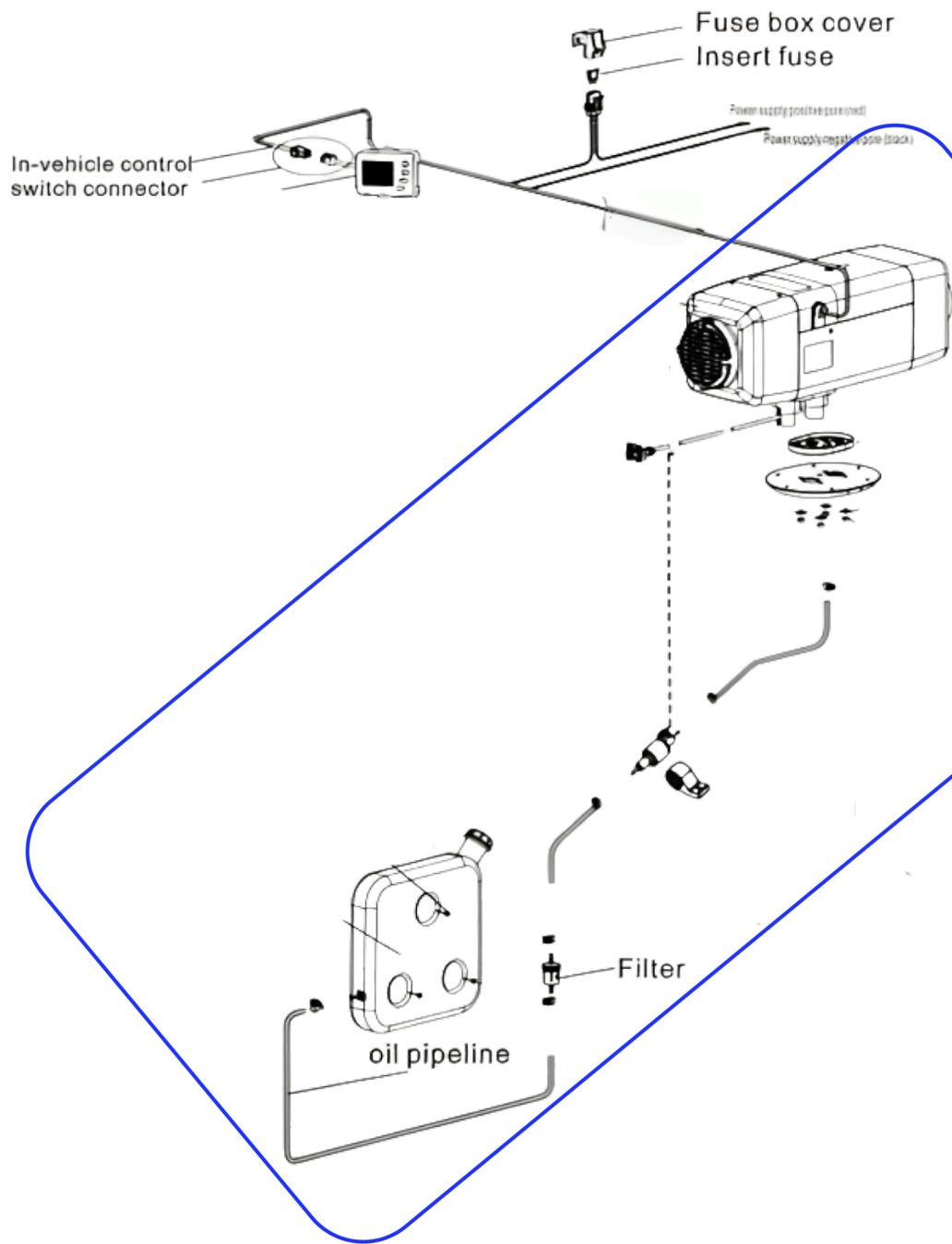
CONNECTING TO 230V MAINS POWER

Cube heaters can be connected to mains power using the Nordkapp 12V–230V converter. The converter is connected to the device's positive (+ red) and negative (– black) terminals.



⚠ Before using the mains power converter, carefully inspect its cables and connections. If you notice any damage to the cables, use of the converter is strictly prohibited.

⚠ Do not handle the converter in freezing conditions! Cables stiffened by cold may become damaged when handled.



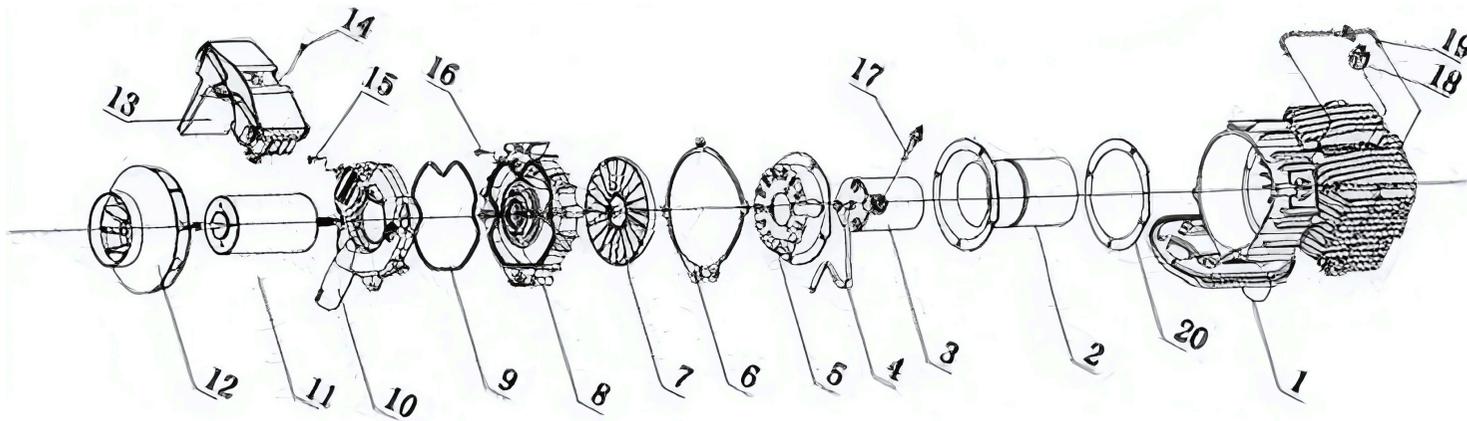
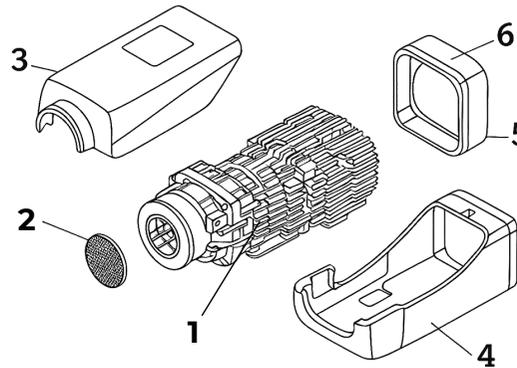
Pre-installed inside the Cube



NORDKAPP™ Air-Heater Installation

Structure Overview

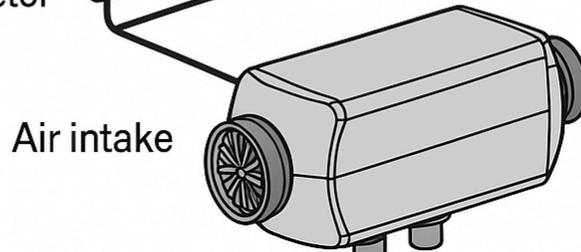
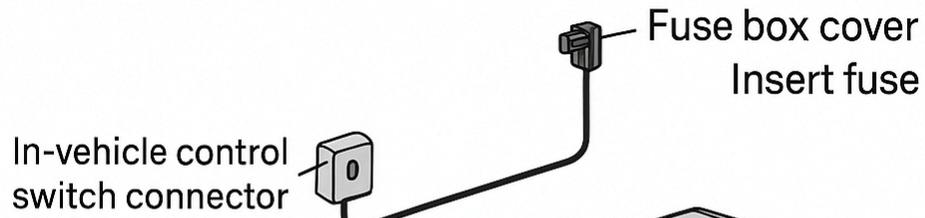
- 1.Engine
- 2.Air intake
- 3.Upper protective cover
- 4.Lower protective cover
- 5.Air outlet
- 6.Rear protection cover



- 1.Exhaust pipe
- 2.Combustion chamber pipe
- 3.Combustion chamber
- 4.Fuel line
- 5.Air intake guide
- 6.Gasket
- 7. Fan blades
- 8. Fan housing
- 9. Gasket
- 10. Combustion chamber air intake pipe
- 11. Fan motor
- 12. Hot air fan
- 13. Control panel
- 14. Adjustment screws
- 15. Adjustment screws
- 16. Adjustment screws
- 17. Igniter
- 18. Temperature sensor
- 19. Sensor bracket

Fuse box cover
Insert fuse

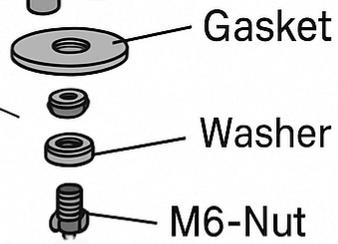
In-vehicle control
switch connector



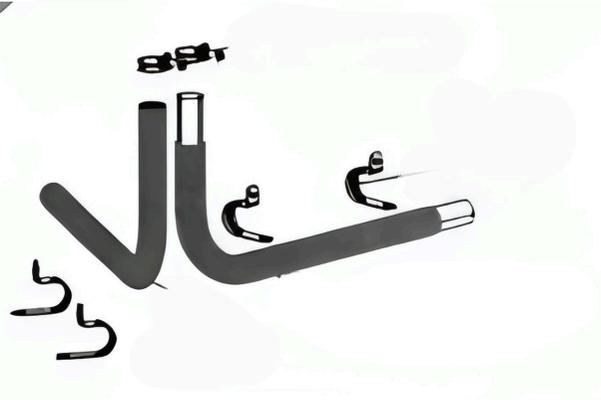
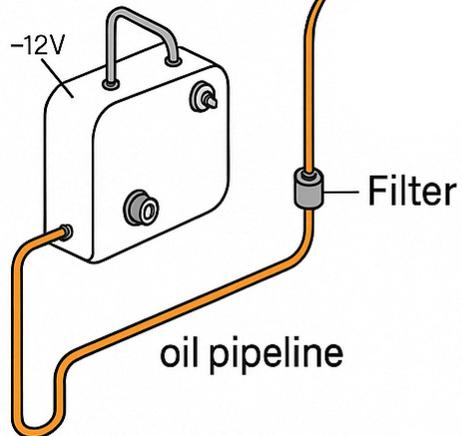
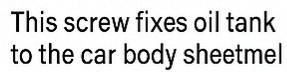
Gasket

Washer

M6-Nut



This screw fixes oil tank
to the car body sheetmetal



Site Selection

Choose an installation location with:

- At least 50 mm clearance for air intake
- At least 150 mm clearance for air outlet
- Protection from water, impact, and excessive heat
- Splash protection if installed outside
- Unobstructed airflow if installed inside
- Proper exhaust placement in boats to avoid water ingress during tilt

Required Tools and Materials

- Drill and M6 drill bit
- Screwdriver or socket wrench for M6 screws
- The heater comes with fixing plates.
- Fire extinguisher (mandatory in vehicles)

Mounting the Heater

1: Choose the Location

- Flat, dry, unobstructed
- Not exposed to luggage or the elements
- Where air intake and exhaust can operate unhindered
- Flat mounting surface (max deviation 1 mm)

Installation of Air Intake and Exhaust Pipes

- The heater requires fresh air for combustion and expels used gases through the exhaust pipe.
- Both the air intake and exhaust pipes must be installed so that they point outside the vehicle.
- Ensure that the pipes do not become blocked and are not positioned too close to the ground or obstacles.
- Make sure there is sufficient space around the heater to ensure good ventilation. The distance between the heater's air intake opening and the nearest walls or partitions must be at least 50 mm. The distance between the heater's exhaust outlet and the nearest walls or partitions must be at least 150 mm. When installing the heater, carefully check that no foreign objects can block the air intake or exhaust openings.

Air Intake Pipe

- The air intake hose is made of aluminium and is connected to the heater's intake port.
- Ensure the pipe is not exposed to water, dirt, or direct rain.
- The air intake pipe should be directed downwards or horizontally and fastened in place using the supplied brackets.



Air Filter

The unit includes two air filters of different sizes: one small and one large.

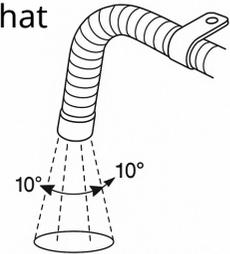
If the intake air is drawn from the same space in which the heater is installed, the smaller air filter can be connected directly to the intake port at the bottom of the unit. In this case, a separate intake pipe is not needed.

If the intake air is drawn from a different space, the larger air filter must be attached to the end of the intake pipe.

If a filter is installed, it should be cleaned regularly to maintain optimal performance.

Exhaust Pipe

- The exhaust pipe is made of stainless steel and becomes very hot during operation.
- Position the end of the exhaust pipe so that it does not face the driving direction, and install it at a 90° downward angle relative to the road surface.
- The included 90-degree elbow allows the exhaust pipe to be attached to the side of the heater.
- Ensure that exhaust gases do not enter the vehicle or come near the air intake. The distance between the ends of the air intake and exhaust pipes must be at least 20 cm to prevent exhaust gases from being drawn back into the device. It is recommended that both pipe ends face downward to prevent water from entering.
- The pipe can be bent, but the bend radius must be at least 50 mm.
- If necessary, you may drill small holes (approx. 4 mm) in the exhaust pipe to allow condensation to drain.
- If the installation area is exposed to splashes or physical contact, use a heat shield.

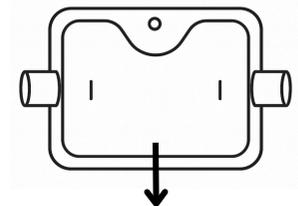


⚠ Safety

- The exhaust pipe must not touch fuel lines, electrical wires, or vehicle structures.
- The pipe can reach temperatures of up to 500 °C during use. If it passes through a wall, door, or vehicle structure, always use fireproof insulation and seals.
- Do not use polyurethane foam, plastic, or other easily flammable insulation materials.
- Always ensure safe clearance from flammable materials. Consult a professional installer if necessary.

Installing the Silencer (Exhaust)

- A silencer can be installed on the exhaust pipe to reduce the operational noise outside the vehicle. Install the silencer near the end of the exhaust pipe and ensure it does not collect water. Silencers are equipped with a notch or small hole for condensation drainage – install the silencer so that the notch faces downward. You may also drill a condensation hole before the silencer, if desired. Secure the silencer using the supplied brackets or metal hose clamps.



Air Duct Installation

General Information

- Air ducts transport heated air to desired areas within the vehicle.
- The ducts are connected to the warm air outlet of the heater.
- You can use the supplied hose or purchase an optional distribution kit to heat multiple spaces.

Heating air can be drawn from either outside (fresh air) or inside (recirculated air):

- **Using fresh air:** Air is drawn from outside, heated, and directed indoors. This improves ventilation in heated areas and reduces humidity. It is important to consider the location of ventilation outlets in the cabin and ensure that there are enough of them.
- **Using indoor air:** In this option, indoor air is used for heating. This allows for faster heating since already warm air is reused. However, this method does not reduce humidity and does not refresh the air in the heated areas.

Routing the Air Duct

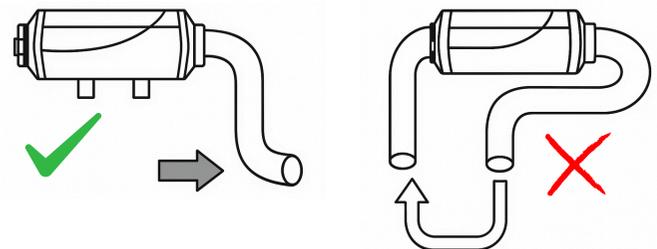
- Avoid sharp bends immediately after the heater – the first 1 meter of the duct should be as straight as possible.
- Ensure the duct is not compressed and cannot be stepped on.
- Avoid 90° bends or curves that may obstruct airflow.

Placement of the Air Outlet

- Direct the airflow so that hot air does not blow directly onto people, fabrics, or sensitive surfaces.
- You may use grilles or adjustable nozzles to guide the airflow direction.

Safety

- Never recirculate hot air back into the heater's intake.
- Do not connect the heater to the vehicle's original air duct system.
- Use only heat-resistant hoses (minimum 130 °C).



Nordkapp™ Air Share Kit (optional, sold separately)

If necessary, you can install an air distribution kit on the heater to distribute the heat to multiple separate spaces.

You can find the Air Share Kit in the Nordkapp online store.



- Use only simple configurations to avoid airflow restriction
- Excessive complexity can cause overheating and loss of efficiency
- Keep first meter of duct straight
- Do not use 90° bends in the first meter

Electrical Wiring

1: General Notes

- Compatible with 12V or 24V systems (check model)
- Power from vehicle battery or external AC-DC adapter (230V/220V → 12V/24V)
- Always use correct polarity and fuse

2: Battery Connection

- Red wire to positive, black to negative terminal
- Use 15A fuse close to battery on positive wire
- Never connect/disconnect while heater is on
- Avoid routing wires near metal without protection

3: AC Operation (Optional)

- Use Nordkapp™ AC adapter in dry, protected area
- Check all wires and connections before starting
- UPS (uninterruptible power supply) recommended for outages



Do not handle the adapter in freezing conditions! The wire, stiffened by frost, may be damaged when handling it.

⚠ If operating on AC without UPS

If the heater is used via a mains power adapter without a UPS device, the power supply will be suddenly interrupted in the event of a power outage.

This may lead to the following issues:

- Fuel remaining in the combustion chamber can cause sooting or malfunction during the next start-up
- The heater does not have time to complete the automatic cooling process
- The control unit may lose settings or remain in an error state
- The heater must always be turned off from the control panel and the power must only be disconnected when the fan has stopped.

⚠ It is the user's responsibility to ensure that the heater is turned off as instructed. Do not leave the heater on unattended when connected to the mains if the UPS is not in use.

4: Wire Protection and Finishing

- Route wires neatly and secure with clips
- Keep away from moving or hot parts
- Check all connections are tight and safe from being pulled

Startup and Shutdown

1: First Startup

- Ensure all installations are correctly and securely completed.
- Check fuel lines for leaks or air bubbles.
- Initial use may produce smoke and strong odor (normal).
- Odors typically fade after a few hours at full power.
- Ensure good ventilation during initial operation.
- Heater begins with a glow plug preheating cycle (up to 2 minutes, no visible signs).

2: Shutdown

- Always turn off using the control panel or power switch.
- Never disconnect power during operation.
- Heater performs an automatic cooling cycle with low-speed fan.
- Wait until the fan fully stops before cutting power.

3: Restarting the Heater

- If the heater fails to start, wait 5–10 seconds before retrying.
- Check for error codes on the display (refer to control panel manual).

Maintenance and Service

⚠ Warranty is void if the following maintenance is neglected.

Regular maintenance improves the reliability of the heater, prevents sooting and extends its service life. Below are instructions that will keep the device in good condition.

Monthly Maintenance:

- Run the heater at full power for 20 minutes monthly.
- Burns off potential deposits and ensures fuel circulation.

Annual Inspection:

- Check all fuel line and connector seals.
- Inspect electrical wiring and signs of corrosion.
- Clean and inspect air intake and exhaust systems.
- Remove debris or soot from exhaust outlet.

Fuel System Maintenance:

- If unused for long periods, drain tank and lines (for separate tanks).
- Flush with clean diesel (never use gasoline).
- If using kerosene, ensure system is completely dry before switching back to diesel.

Storage

- Disconnect from battery or power supply.
- Store in a dry, clean location.

GSM-Control Panel Manual

Display

While the heater is running, relevant data such as system voltage, ambient temperature, altitude, and equipment temperature are displayed in real time to help users understand the heater's operating status.



To switch displayed content:

- Press the "Settings Key" briefly. The screen will switch cyclically through:
 - System voltage
 - Ambient temperature
 - Altitude (not available on non-high-altitude models)
 - Device temperature
 - Device code
 - System time
 - Pump oil mode selection (this item is not available after the heater is turned ON)

Buttons and Functions:

Button:

Power: Short press = ON, long press = OFF

Up(+): Raise the temperature, adjust the time, etc. upwards

Down (-): Lower the temperature / adjust the time, etc. downwards

Settings: Enter or confirm settings.

Fuel Pump Key Starts and stops fuel pumping

Usage Instructions

Turn on the machine

- When the heater is not turned ON, press and hold the "Power on/off" button for 3 seconds or press it briefly. The screen will display "ON", and the gear lights will light up in a clockwise sequence, indicating that the heater is on.

Turn off the machine

- After the heater is turned on, press and hold the "Power on/OFF" button for 3 seconds or press it briefly. The screen will display "OFF", and the gear lights will light up in a counter-clockwise order, indicating shutdown. After the power OFF is completed, the screen automatically switches to ambient temperature display, showing that shutdown and heat dissipation are complete.
- **Note:** During the heat dissipation process when the heater is turned off, it is NOT allowed to turn it on again.

Pump oil separately

When using the heater for the first time or after replacing the oil pump or pipe, you must fill the oil line fully for normal operation.

Steps:

- Ensure the heater is not turned on.
- Press and hold the "Fuel Pump Key" for 3 seconds, or:
 - Briefly press "Settings Key" to enter pump oil mode
 - Then press and hold "Settings Key" for 3 seconds to activate individual oil pumping
- The screen shows "P-E" indicating pump oil mode
- To stop pumping: briefly press either "Fuel Pump Key" or "Settings Key"
- Auto-stop: After 3 minutes, the heater will automatically stop pumping to avoid overfilling
- If the oil line is still not filled, repeat the procedure.

Note: This function **cannot be used if the heater has a fault.**

Ventilation mode

Steps:

1. Ensure the heater is not turned on
2. Press and hold the "Down key" for 3 seconds
3. Screen shows "P-F", indicating ventilation mode is active
4. Briefly press "Down key" again to stop ventilation

Note: Ventilation mode **cannot be used if the heater has a fault.**

Remote control matching

Before using a remote control, it must be paired with the screen panel.

Steps:

1. Ensure the heater is not turned on
2. Press and hold "Up" key and "Down" key simultaneously for 3 seconds
3. Screen shows "---", indicating matching mode
4. Press and hold "Power on/off" button on the remote until pairing completes
5. Pairing successful → system exits automatically
6. To exit pairing manually, briefly press any key

Note: If the remote is replaced or lost, re-pairing is required.

Query device code

To retrieve the device's unique code for app binding, activation, or support:

- After turning on the heater, press and hold the "Down key" for 3 seconds
- The device code will be shown on the screen

Selection of working mode

The heater supports two modes:

- Gear mode: User sets the gear manually
- Constant temperature mode: Heater adjusts output to maintain target temperature

Default mode after ignition is gear mode.

► To switch to constant temperature mode:

1. Press and hold the "Up key" for 3 seconds
2. Temperature icon lights up, gear icon turns off
3. Screen displays "F+ Constant Temperature"
4. Adjust temperature:
 - Up key = +2°C
 - Down key = -2°C
 - Range: 18°C to 30°C, default: 24°C

► To switch back to gear mode:

1. Press and hold the "Up key" again for 3 seconds
2. Gear icon lights up, temperature icon turns off
3. Screen displays "P+ Gear"
4. Adjust gear:
 - Up key = +1 gear
 - Down key = -1 gear
 - Range: 1 to 8, default: 4

Note: If the heater is turned off or has a fault, it will **automatically exit constant temperature mode** and return to gear mode.

System time setting

Users can pre-set scheduled functions such as automatic start/shutdown by setting the system clock.

Steps:

1. When the heater is not turned on, press and hold the "Setting key" for 3 seconds. The screen displays "A" and the alarm icon flashes, indicating entry to system time setting.
2. Briefly press the "Setting key". The current time appears, and the first two digits (hours) will flash:
 - "Up key" = increase by 1 hour
 - "Down key" = decrease by 1 hour
 - Range: 0–23 hours
3. Press the "Setting key" again. The last two digits (minutes) flash:
 - "Up key" = increase by 1 minute
 - "Down key" = decrease by 1 minute

Range: 0–59 minutes

Note: If the screen shows device code or pump oil mode, press "Setting key" briefly to switch to another display first, then press and hold for 3 seconds to enter time setting.

Set the scheduled startup time

Allows the heater to start automatically at a specific time.

Steps:

1. When the heater is not turned on, press and hold the "Setting key" for 3 seconds → screen shows "A"
2. Briefly press the "Setting key" → screen changes to "b", alarm icon and "ON" icon flash
3. Briefly press the "Setting key" again → scheduled startup time appears:
 - First two digits (hours) flash
 - Up/Down key = adjust 0–23 h
 - Press "Setting key" → last two digits (minutes) flash
 - Up/Down key = adjust 0–59 min

Once the system time matches the scheduled ON time, the heater automatically turns on.

Note: If the heater has a fault, the scheduled ON function cannot be used.

Set save exit

This step saves all changes and exits the settings menu.

Steps:

- While in the settings menu, press and hold the "Setting key" for 3 seconds to save and exit.

Indicators after exiting:

- If scheduled ON/OFF is enabled:
 - Alarm icon, "ON", and "OFF" icons flash slowly
- If voice control is enabled:
 - Microphone icon stays ON
- If voice control is disabled:
 - Microphone icon turns OFF

Screen goes off and wakes up

To reduce power consumption and avoid disturbing rest, the screen turns off automatically.

- After 5 minutes of inactivity, the screen enters sleep mode
- To wake the screen, press any key on the panel or any key on the remote control

Error display

When the heater detects a fault:

1. Screen displays "E+ Error Code"
2. Heater automatically shuts down and enters heat dissipation (except fan-related faults)
3. After dissipation:
 - Check the error code
 - Resolve the issue
 - Restart the unit by pressing and holding or briefly pressing the Power On/Off button
4. If the error persists, the system will shut down and display the error again until the issue is resolved

Note:

- During heat dissipation, the heater cannot be restarted
- Fan faults do not affect the heat dissipation process

Heater Fault Code Table

Code	Description	Solutio
E01	High voltage: 24V >32V, 12V >17V	Check the supply voltage.
E02	Low voltage: 24V <18V, 12V <10V	Check whether the power supply voltage and battery are drained or if the power supply wire cable is too thin.
E03	Glow plug cannot be detected	Check whether the glow plug lead is loosely connected or replace the glow plug.
E04	Oil pump cannot be detected	Check whether the oil pump lead is loosely connected or replace the oil pump.
E05	Motor cannot be detected	Check if the motor leads are loosely connected or replace the motor.
E06	Sensor cannot be detected	Check if the sensor lead is loosely connected or replace the sensor.
E07	Shell overheating	Check if the air inlet and outlet are blocked or replace the sensor.
E08	Flame extinguished	Check if the equipment is short of oil or if air has entered the oil pump's oil supply pipe.
E09	Ignition failure	Check whether the oil pipeline delivers oil to the equipment or if the power supply wire cable is too thin.
E10	Ambient temperature is too high	Check the air intake and keep it away from heat sources. Check if the temperature sensor is damaged.

Heater Fault Code Table

Code	Description	Solutio
E11	Temperature sensor failure	Check if the temperature sensor is damaged.
E12	Abnormal communication with panel	Check whether the leads of the screen panel are loosely connected or replace the screen panel.
E13	Mainboard communication anomaly	Check if the mainboard communication leads are loosely connected or replace the mainboard.
E15	Glow plug short circuit	Check whether the lead of the glow plug is short-circuited or replace the glow plug.
E16	Oil pump short circuit	Check whether the oil pump lead is short-circuited or replace the oil pump.
E17	Motor short circuit	Check if the motor leads are short-circuited or replace the motor.
E18	Sensor short circuit	Check if the sensor leads are short-circuited or replace the sensor.

Connecting the Mobile App

Description

You can control the heater and view its data using the mobile app, provided it is connected to the device. Follow these steps:

-First, watch the instruction video on the nord-kapp.com/pages/documents

-Download the NordkApp mobile app.

- Download the Nordkapp app from your app store (search term: Nordkapp-Nordk) or by scanning the QR code (Android). You can also find the Android version directly at this link: <http://nordk.ltd/> If the link doesn't open directly, copy and paste it into your web browser.

1. When the display has been on for one minute, press and hold the "ON" button for 3 seconds to start the device.
2. A device code will appear automatically (6 digits — first 4 digits, then 2 digits).
3. Press and hold the "Settings" button for 3 seconds. A flashing signal icon will appear on the screen → pairing mode is now active.
4. Open the mobile app → go to device pairing → select "Input Binding".
5. Enter the device code shown on the screen → press "Confirm Binding".
6. When the pairing is successful, the code will flash 4 times and the pairing mode will exit automatically.
7. You can also manually exit pairing mode by pressing the "Settings" button for 3 seconds.

Note:

- A working internet connection is required for pairing.
- If the heater encounters a fault, pairing mode will automatically be interrupted.

If you experience issues with pairing, more detailed instructions are provided on the next page

See these instructions if you have a problem connecting

A helpful instruction video about pairing is available at nord-kapp.com, under the [Documents](#) section.

Download the Nordkapp app from your app store (search term: Nordkapp-Nordk) or by scanning the QR code (Android). You can also find the Android version directly at this link: <http://nordk.ltd/>

If the link doesn't open directly, copy and paste it into your web browser and log in as shown in the instruction video.

- Ensure that **the SIM card is inserted correctly** (chip facing the screen). When placed correctly, you should hear a click sound (use a tool if necessary to press the SIM into place). That confirms the SIM is properly installed. **Disable the SIM card's PIN code request** and ensure that the subscription **supports 4G/5G**. **Restart the device after inserting the SIM card**. If the connection still doesn't work, even though the SIM is inserted correctly, try using a different SIM card.
- When the display has been on for one minute, press and hold the "ON" button for 3 seconds to start the device. A device code will appear automatically (6 digits — first 4 digits, then 2 digits). Press and hold the "Settings" button for 3 seconds. A signal icon will begin to flash.
- Open the mobile app, go to the "Input Binding" section, and enter the 6-digit code shown on the control panel.

If the standard pairing method doesn't work, try this alternative:

- In the app, go to "Shared Validation Binding"
- Select "Password Binding"
- Enter the password: 1234
- Then, enter the device code
- Finally, press "Confirm Bind"

Note on pricing:

The app is free for the first two weeks. After that, the subscription cost is €1.99/month.

When the trial period ends, the app will prompt you to confirm the payment.

After completing the payment, close and reopen the app.

Important safety and manufacturer information

Common Mistakes to Avoid

- Cutting power before cooling fan finishes
- Passing exhaust through wall without fireproof insulation
- Intake and exhaust too close together
- Installing muffler upside-down
- Leaving heater unattended on AC without UPS
- Overcomplicated or blocked air ducts

Safety Reminder

- Always follow this guide
- Never use heater if fuel leaks, electrical faults, or abnormal noises occur
- Do not use continuously without breaks
- For concerns, consult the control panel troubleshooting guide or contact support
- Ignoring the instructions can lead to damage to the heater or a safety risk.

Note! We reserve the right to change the manuals. The latest and updated versions can always be found on our website: www.nord-kapp.com/pages/documents

Manufacturer



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