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## Sunster 8KW All-in-One Diesel Heater

# Sunster 8KW All-in-One Diesel Heater User Manual

Model: 8KW All-in-One Diesel Heater

## 1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Sunster 8KW All-in-One Diesel Heater. Please read these instructions thoroughly before installation and operation to ensure proper function and to prevent damage or injury. Keep this manual for future reference.

## 2. SAFETY INFORMATION

Your safety is paramount. Observe all warnings and precautions.

- **Professional Installation:** It is recommended to have the heater installed professionally, especially when dealing with exhaust systems.
- **Exhaust Gas:** Always ensure exhaust gases are discharged externally and away from any enclosed spaces to prevent carbon monoxide poisoning.
- **Clearance:** Maintain adequate clearance around the heater, especially for exhaust vents, to prevent overheating and fire hazards. Consider using a longer exhaust pipe and a through-hull unit if installing near walls or in confined spaces.
- **Overheating Protection:** The heater is equipped with multiple protections against overheating ( $\approx 270\text{ }^{\circ}\text{C}$ ), short circuit, overvoltage, and reverse connection. Do not bypass these safety features.
- **Ventilation:** Ensure proper ventilation in the area where the heater is operating.
- **Fuel Handling:** Handle diesel fuel with care, away from open flames and ignition sources.

## 3. PACKAGE CONTENTS

Verify that all components are present in your package:

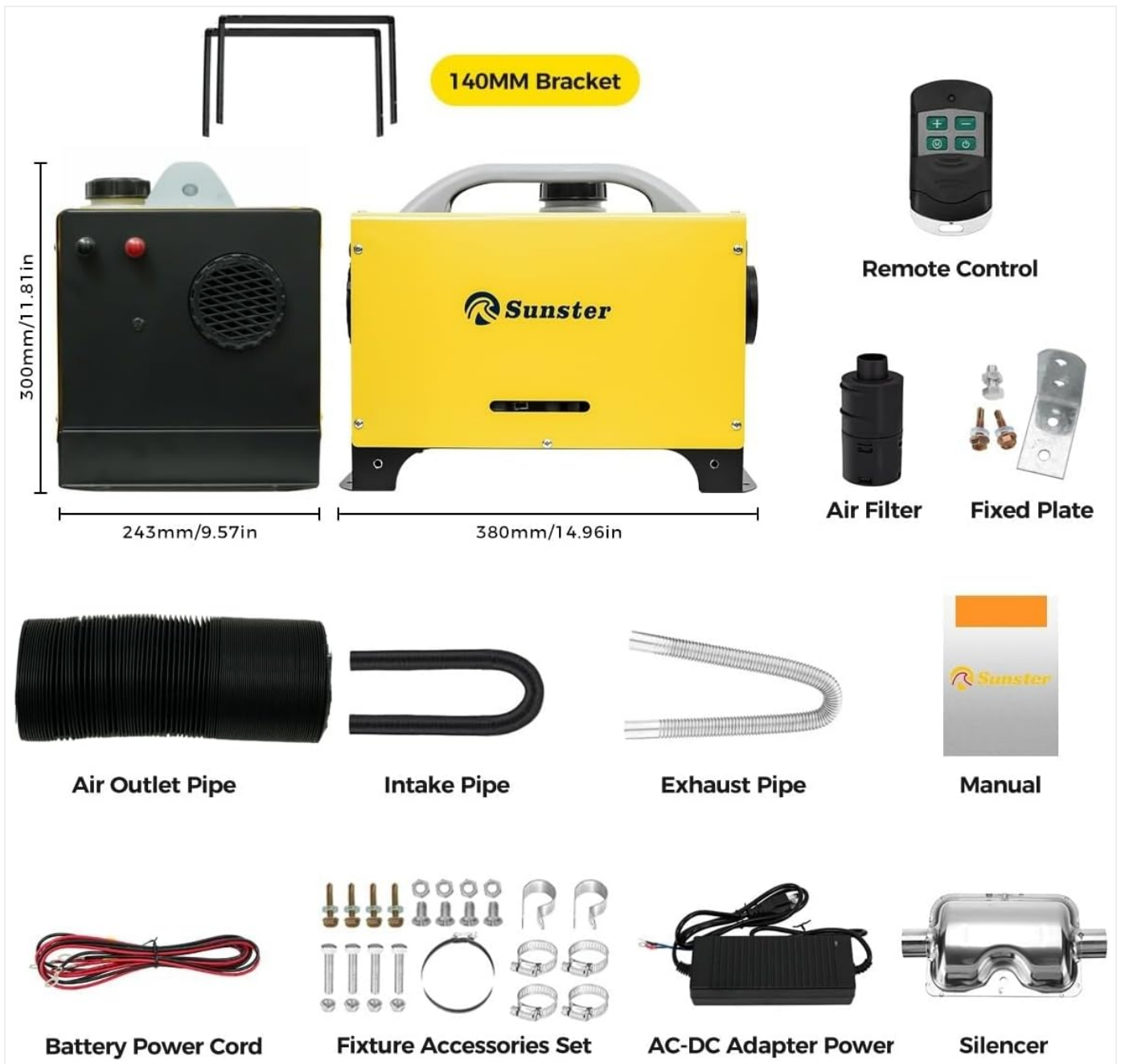


Figure 3.1: Sunster 8KW All-in-One Diesel Heater and Included Accessories. This image displays the main heater unit, remote control, power adapter, air filter, fixed plate, air outlet pipe, intake pipe, exhaust pipe, user manual, battery power cord, fixture accessories set, AC-DC adapter, and silencer, along with key dimensions.

- Sunster 8KW All-in-One Diesel Heater (with LCD display)
- Remote Control
- AC Power Supply Adapter
- Installation Accessories (including 140mm base bracket, fixture set, clamps)
- Air Filter
- Fixed Plate
- Air Outlet Pipe (flexible and stretchable, 2m/6.5ft)
- Intake Pipe
- Exhaust Pipe
- Battery Power Cord
- Silencer
- User Manual

## 4. PRODUCT OVERVIEW

The Sunster 8KW All-in-One Diesel Heater is designed for efficient and portable heating in various environments, including trucks, vans, RVs, trailers, campers, garages, and outdoor settings. It features a robust aluminum construction and a built-in combustion system.



Figure 4.1: Internal Components of the Diesel Heater. This diagram illustrates the air inlet, air fan, flame retardant impeller, combustion chamber, ignition plug, heating zone, air outlet, safety plug, and smart motherboard, highlighting the energy-saving fuel pump and aluminum body design.

### Key Features:

- **Efficient Heating:** Provides stable output temperatures from 8-36 Å°C (46.4-96.8 Å°F) with sandblasted aluminum heat exchangers for rapid heating.
- **Dual Power Supply:** Compatible with 12V/24V DC (vehicle battery) and 110-240V AC (household power) with automatic switching.
- **Low Fuel Consumption:** Operates efficiently with a fuel consumption of 0.11-0.48 L/H.

- **Low Noise Operation:** Equipped with advanced mufflers and fuel pumps to maintain a noise level of approximately 75dB.
- **Intelligent Control:** Features an LCD screen and remote control for 24-hour timing, temperature/gear regulation, and language switching (German, English, Russian).
- **Multiple Protections:** Includes safeguards against overheating, short circuit, overvoltage, and reverse connection.

## 5. SETUP AND INSTALLATION

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Follow these steps for proper setup and installation of your diesel heater.

### 5.1 Mounting the Heater

- The heater comes with a 140mm base bracket for easier installation and to help prevent exhaust gas blockages.
- Position the heater on a stable, level surface. Ensure there is sufficient clearance around the unit, especially for the exhaust outlet.
- Secure the heater using the provided fixture accessories set and fixed plate.

### 5.2 Connecting Power



Figure 5.1: Dual Power Supply Options. This image demonstrates the heater's adaptability to both AC 110-240V standard outlets and DC 12V/24V vehicle battery power, making it suitable for various applications including backup power.

- The heater supports dual power input: 12V/24V DC and 110-240V AC.
- For DC power, connect the battery power cord to your vehicle's 12V or 24V battery terminals, observing correct polarity.
- For AC power, use the provided AC power supply adapter and plug it into a standard 110-240V outlet. The heater will automatically switch between power sources.

### 5.3 Exhaust and Air Duct Connections

# RAPID ASSEMBLY FOR SAFER HEATING



Figure 5.2: Exhaust and Air Outlet Assembly. This image highlights the rapid assembly process for the exhaust system, including the silencer and the flexible air outlet pipe, ensuring safer heating.

- Connect the intake pipe to the air inlet on the heater.
- Attach the exhaust pipe to the exhaust outlet. Install the silencer onto the exhaust pipe to reduce noise.
- Connect the flexible air outlet pipe to the hot air outlet. Direct the hot air as needed.
- **Important:** Ensure the exhaust pipe is routed safely and discharges outside. Consider using a longer exhaust pipe if the standard length places the exhaust too close to flammable materials or enclosed spaces. A through-hull unit is recommended for permanent installations to prevent fire hazards.

## 6. OPERATION

Operating your Sunster diesel heater is straightforward using the LCD control panel or the remote control.

### 6.1 Filling the Fuel Tank

- Locate the fuel tank cap on top of the unit.

- Carefully fill the tank with diesel fuel. The tank has a capacity of 5 liters (approximately 1.3 gallons).
- Do not overfill. Securely close the fuel cap after filling.

## 6.2 Using the Control Panel and Remote



Figure 6.1: LCD Control Panel and Remote Control. This image displays the color LCD screen with its 24-hour timing function, temperature/gear regulation, and language switching options (German, English, Russian), alongside the remote control.

- **Power On/Off:** Press the power button on the LCD panel or remote to turn the heater on or off.
- **Temperature Adjustment:** Use the up/down arrows to set your desired temperature. The heater maintains a constant temperature within the range of 8-36 °C (46.4-96.8 °F).
- **Timing Function:** Utilize the 24-hour timing function to schedule heating periods.
- **Language Settings:** The LCD panel supports language switching between German, English, and Russian. Refer to the specific instructions in the included manual for changing language settings.
- **Remote Control:** The remote allows for convenient operation from a distance. Ensure batteries are installed correctly.

## 6.3 Operating Tips

- For optimal performance and to prevent carbon buildup, it is recommended to run the heater at or near its maximum output whenever possible. Avoid prolonged operation at very low settings.
- The heater is designed for low noise operation (≈ 75dB), ensuring minimal disturbance.
- One gallon of diesel can provide heating for approximately one night, depending on settings and ambient conditions.

## 7. MAINTENANCE

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Regular maintenance ensures the longevity and efficient operation of your diesel heater.

- **Preventing Clogging:** To avoid fuel system clogging, operate the heater at higher output settings regularly. Prolonged use at the lowest setting can lead to carbon buildup.
- **Cleanliness:** Keep the exterior of the heater clean and free from dust and debris.
- **Air Filter:** Periodically inspect and clean or replace the air filter to ensure proper airflow.
- **Exhaust System:** Check the exhaust pipe and silencer for any blockages or damage. Ensure exhaust gases can flow freely.
- **Fuel Quality:** Use clean, high-quality diesel fuel to prevent issues with the fuel pump and combustion chamber.

## 8. TROUBLESHOOTING

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The Sunster diesel heater includes intelligent constant temperature control and real-time warning systems. If an issue arises, the LCD display may show error codes.

# ALWAYS SECURELY PROTECT ANYWHERE & EVERYWHERE



Figure 8.1: Heater Protection Features. This image highlights VDE certification, protection against temperatures exceeding 280°C (536°F), and short-circuit protection, ensuring safety during operation.

- **Error Codes:** Refer to the specific troubleshooting section in the included user manual for a list of error codes and their corresponding solutions.
- **No Heat Output:** Check fuel level, power connection, and ensure the air intake and exhaust are not blocked.
- **Unusual Noise:** Inspect the fan for obstructions or damage. Check the silencer and exhaust pipe for loose connections or blockages.
- **Heater Shuts Off:** This could indicate an activation of a safety protection feature (e.g., overheating, low voltage). Check for obstructions, proper ventilation, and power supply.

If you encounter persistent issues not covered in the manual or error codes you cannot resolve, please contact customer support.

## 9. SPECIFICATIONS

Feature	Specification
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Feature	Specification
Brand	Sunster
Model Name	8KW All-in-One Diesel Heater
Wattage	8 KW
Output Wattage	8 Kilowatts
Fuel Type	Diesel
Voltage	12V/24V DC & 110-240V AC
Tank Volume	5 Liters
Fuel Consumption	0.11-0.48 L/H
Noise Level	± 75dB
Material	Aluminum, Plastic
Item Weight	22.7 pounds
Package Dimensions	18 x 14 x 11.5 inches
Special Features	Multiple Protection, Quiet operation, Robust Aluminum Construction, Universal Dual Power Input
Recommended Uses	Camping, Residential, Truck, Van, RV, Trailer, Camper

## 10. WARRANTY

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The Sunster 8KW All-in-One Diesel Heater comes with a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects under normal use. Please retain your proof of purchase for warranty claims.

## 11. CUSTOMER SUPPORT

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For technical assistance, warranty claims, or any questions regarding your Sunster 8KW All-in-One Diesel Heater, please contact Sunster customer support. Refer to the contact information provided on the product packaging or the official Sunster website.

