

Orion Motor Tech DAH-8KWK0-AB

Orion Motor Tech 8kW Portable Diesel Heater User Manual

Model: DAH-8KWK0-AB

Brand: Orion Motor Tech

1. PRODUCT OVERVIEW

The Orion Motor Tech 8kW Portable Diesel Heater is designed to provide efficient and reliable heating for various environments, including workshops, RVs, cars, trucks, boats, and campsites. This versatile heater operates on both 12V/24V DC and 110V AC power sources, offering flexibility for both stationary and mobile use. Key features include a robust design, advanced safety mechanisms, and convenient control options.

TURN ICEBOX INTO SAUNA IN 10 MIN.

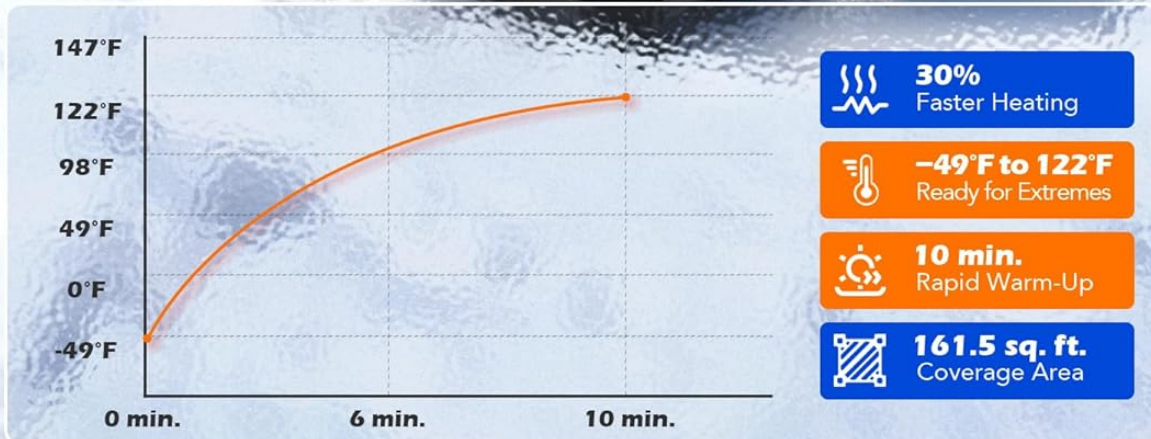


Figure 1: Internal view of the heater demonstrating its rapid heating capability and coverage area.

2. IMPORTANT SAFETY INSTRUCTIONS

Always prioritize safety when operating the diesel heater. Read and understand all safety warnings before use.

- **Flame-Retardant Housing:** The heater is constructed with a flame-retardant housing to minimize fire risks.

- **Overheat Protection:** An automatic shutdown mechanism activates if internal temperatures exceed 500 °F (260 °C), preventing overheating.
- **Real-Time CO Alarm:** An integrated Carbon Monoxide (CO) alarm continuously monitors air quality, providing an alert in case of dangerous CO levels. Ensure the CO alarm is functional before each use.
- **Ventilation:** Always ensure adequate ventilation when operating the heater to prevent CO buildup. Do not use in enclosed, unventilated spaces.
- **Fuel Handling:** Use only diesel fuel. Do not use gasoline or other volatile fuels. Refuel in a well-ventilated area away from ignition sources.
- **Placement:** Place the heater on a stable, non-combustible surface. Maintain a safe distance from flammable materials.

ALL-ROUND SAFETY PROTECTION



FLAME-RETARDANT HOUSING

Stops Sparks
Within 2 Seconds

OVERHEAT PROTECTION

Auto Shutoff
at 518°F

REAL-TIME CO ALARM

Continuous
Safety Checks

Figure 2: Overview of the heater's safety features, including flame-retardant housing, overheat protection, and a real-time CO alarm.

3. COMPONENTS AND CONTROLS

The heater features an intuitive control panel, a remote control, and smartphone app connectivity for convenient operation.

- **Main Unit:** Contains the heating elements, fuel pump, and internal components.
- **Integrated Fuel Tank:** A 1.7-gallon (6.6 L) tank for diesel fuel.
- **Control Panel:** Features a smart display for real-time status and temperature monitoring.
- **Remote Control:** Allows temperature adjustment from a distance of up to 197 ft (60 m).
- **Smartphone App:** Provides control over the heater's functions via Bluetooth, with a range of up to 164 ft (50 m).



WARMTH AT YOUR FINGERTIPS

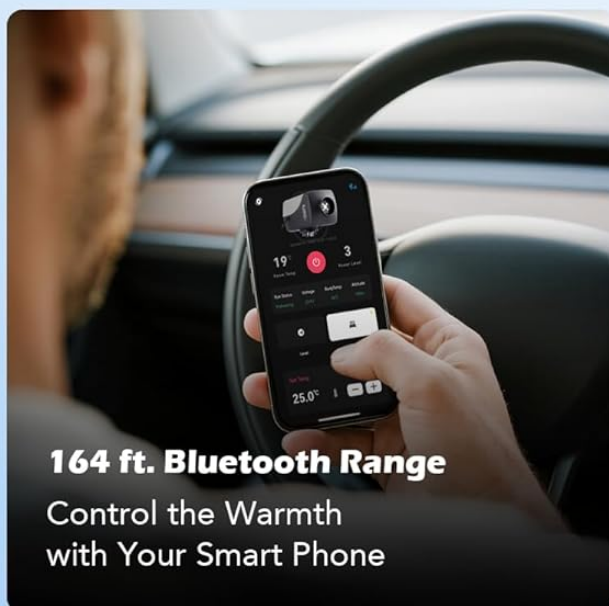


Figure 3: Control options including the smart display, smartphone app, and remote control.

4. SETUP GUIDE

4.1 Power Connection

- **DC Power (12V/24V):** Connect the heater to a compatible 12V or 24V DC power source, such as a vehicle battery. Ensure correct polarity.
- **AC Power (110V):** For home or workshop use, connect the heater to a standard 110V AC outlet using the provided power adapter.

4.2 Fueling

- Open the fuel tank cap.
- Carefully pour clean diesel fuel into the 1.7-gallon (6.6 L) tank. Do not overfill.
- Securely close the fuel tank cap.

4.3 Placement

- Place the heater on a flat, stable, and non-combustible surface.
- Ensure adequate clearance around the heater for proper airflow and to prevent fire hazards.
- Position the exhaust outlet away from any obstructions or flammable materials.

READY FOR ALL SETTINGS

Compatible with 12V/24V DC and 120V AC Power Sources



VEHICLE BATTERY COMPATIBLE

Figure 4: Heater setup in 'Home Mode' (AC power) and 'Camping Mode' (DC power), demonstrating vehicle battery compatibility.

5. OPERATING INSTRUCTIONS

5.1 Starting the Heater

- Ensure the heater is properly connected to a power source and has sufficient diesel fuel.
- Press the power button on the control panel or remote control to turn on the unit.

- The heater will initiate a startup sequence, which may include a brief pre-heating phase.

5.2 Temperature Adjustment

- Use the control panel, remote control, or smartphone app to set your desired temperature. The adjustable temperature range is typically 16 °F to 80 °F (8 °C to 37 °C).
- The smart display will show the current status and set temperature.

5.3 Automatic Operation

- The heater is designed to maintain the set temperature. It will automatically adjust its output or cycle on/off to keep the environment within the desired range.
- The heater operates reliably in extreme conditions, from -49 °F (-45 °C) to 124 °F (51 °C), and automatically adapts to altitudes up to 18,000 feet (5500 meters).

5.4 Shutting Down

- Press the power button to turn off the heater.
- Allow the unit to complete its cool-down cycle before disconnecting power or moving it. This ensures proper component longevity.

WINTER-READY WARMTH



 **-49°F to 122°F**
Operating Temp

 **46°F to 97°F**
Adjustable Temp

 **5000 rpm**
Motor Speed

 **>88%**
Fuel Efficiency

 **0.08–0.1 gal/h**
Fuel Consumption

Figure 5: Performance metrics of the 8kW heater, including operating temperature, adjustable temperature, motor speed, fuel efficiency, and fuel consumption.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your diesel heater.

- **Cleaning:** Periodically clean the exterior of the heater with a soft, damp cloth. Ensure air intake and exhaust vents are free from dust and debris.
- **Fuel Filter:** Check and clean or replace the fuel filter as needed, especially if you notice reduced fuel flow or performance issues.
- **Exhaust System:** Inspect the exhaust pipe for any blockages, damage, or leaks. Ensure it is securely connected.
- **Electrical Connections:** Verify that all electrical connections are secure and free from corrosion.
- **Storage:** When storing the heater for extended periods, ensure the fuel tank is empty and the unit is clean and dry. Store in a cool, dry place.

7. TROUBLESHOOTING

If you encounter issues with your heater, refer to the following common problems and solutions:

- **Heater Not Starting:**
 - Check power connection and ensure sufficient voltage.
 - Verify fuel level in the tank.
 - Ensure the fuel line is not kinked or blocked.
- **Low Heat Output:**
 - Check for proper ventilation; blocked air intake can reduce efficiency.
 - Inspect the fuel filter for clogs.
 - Ensure the set temperature is appropriate for the environment.
- **Unusual Noises or Odors:**
 - Immediately shut down the heater.
 - Inspect for loose components or exhaust leaks.
 - Ensure only clean diesel fuel is used.
- **Error Codes:** If an error code appears on the display, consult the specific error code section in the full product manual (if available) or contact customer support.

8. TECHNICAL SPECIFICATIONS

Specification	Value
Model Number	DAH-8KWK0-AB
Rated Power	8 kW
Power Supply	12V/24V DC or 110V AC

Specification	Value
Fuel Type	Diesel
Tank Capacity	1.7 gallons (6.6 L)
Fuel Consumption	0.08-0.1 gal./hr. (0.3-0.5 L/h)
Adjustable Temperature Range	16 °F to 80 °F (8 °C to 37 °C)
Operating Temperature Range	-49 °F to 124 °F (-45 °C to 51 °C)
Max. Operating Altitude	18,000 ft (5500 m)
Material	Aluminum, Plastic
Dimensions (Package)	49.53 x 39.37 x 31.75 cm; 11.38 kg

FULL-DAY HEAT WITH SINGLE FILL



Figure 6: Comparison of fuel tank capacity, showing the 1.7-gallon tank for extended operation.

9. WARRANTY AND CUSTOMER SUPPORT

Orion Motor Tech products are designed for durability and performance. For specific warranty information, please refer to the documentation included with your purchase or visit the official Orion Motor Tech website.

If you require technical assistance, have questions about operation, or need to report a defect, please contact Orion Motor Tech customer support. Have your model number (DAH-8KWK0-AB) and purchase details ready when contacting support.

You can find contact information on the official Orion Motor Tech website or through your retailer.