USER MANUAL

HEATER
EUROHEATER 4D

USE, HANDLING AND 1 LINE MAINTENANCE
1. LINE MATERIALS

WARNINGS

Safety Information

- The use and operation of the heater in locations where flammable vapors or gases, or large amounts of dust may form and accumulate (e.g., gas stations, petroleum, fuel, coal, timber or grain storage facilities) is **PROHIBITED**.
- Do not turn on or use the heater in closed, unventilated rooms (e.g., garages). Risk of poisoning and suffocation due to exhaust gases.
- Do not turn on and use the heater if there are flammable particles or liquids in the exhaust outlet.
- Do not use a defective Euroheater. Risk of injury with defective units.

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1 INTRODUCTION

1.1 General

This manual describes the use and operation of Euroheater 4D.
It contains an overview for the user on the safe maintenance and operation of the product.

Before using the product, read this instruction manual for the heater.

1.2 Illustration

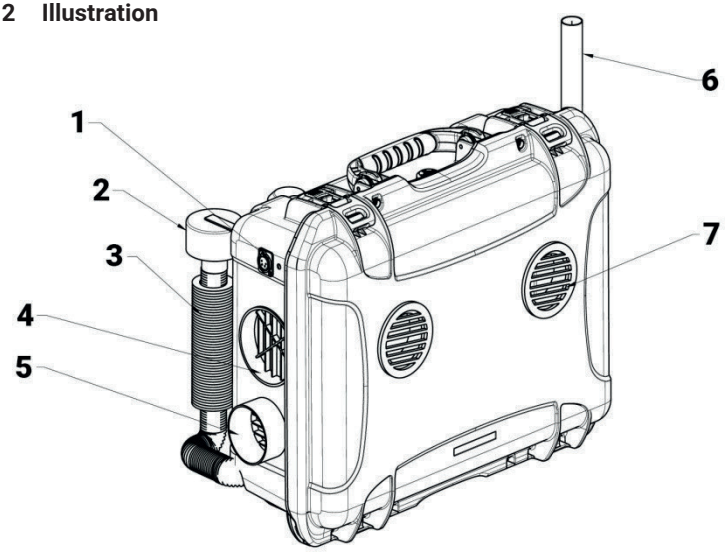


Fig 1-1
Heating unit Euroheater 4D Front

1 Control unit input
2 Air intake filter
3 Muffler air inlet
4 Hot air outlet
5 Return/fresh air inlet
6 Exhaust pipe
7 Air valves

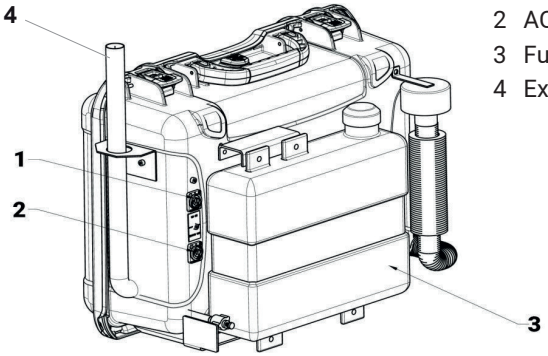
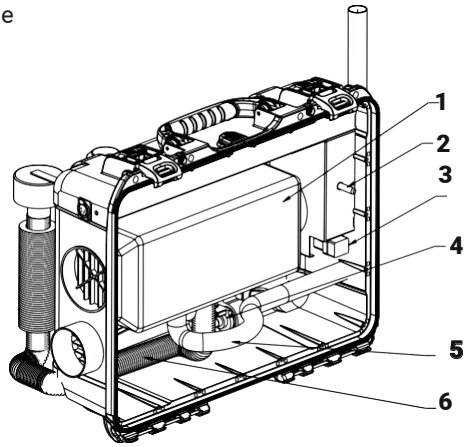


Fig 1-2
Heating unit Euroheater 4D Rear

1 DC Power input, 12V
2 AC Power input, 110V-240V
3 Fuel tank
4 Exhaust pipe

Fig 1-3
Heating unit Euroheater 4D Inside

1 Heating unit
2 AC/DC Toggle switch
3 Fuse box
4 Fuel pump
5 Exhaust pipe
6 Air intake pipe



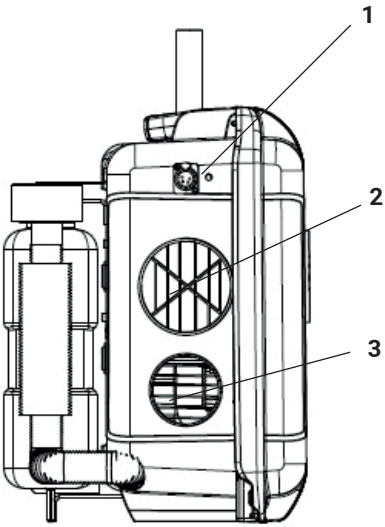


Fig 1-4
Heater unit Euroheater 4D Side

1 Plug control unit
2 Hot air outlet
3 Air circulation inlet /
fresh air outlet

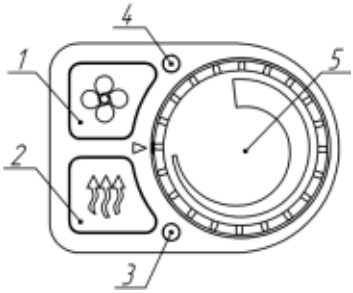
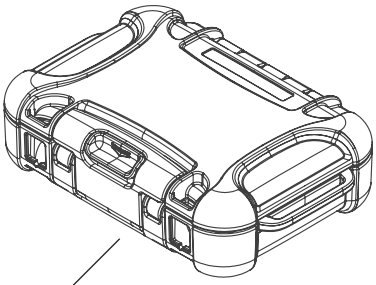


Fig 1-5
Control panel PU-5
and control panel case

1 Ventilation mode on/off button
2 Heater mode on/off button
3 Operation LED indicator light
4 Ventilation mode LED indicator light
5 Air flow regulator
5 Control panel case,
water- and dustproof.



2 TECHNICAL DATA

2.1 Designation

HEATER, EUROHEATER 4D, 4 kW AIR HEATER
SAP NO: 30373507
NSN: 4440-25-163- 6858

2.2 Technical data

Dimensions (L x H x W)	70 x 67 x 67 cm
Weight	16.5 kg
Heating power maximum	4 kW
Heating power low	1 kW
Air hose length-diameter	3.3 m – Ø76 mm
Fuel types	F34, JP8, Diesel, Kerosin
Fuel tank	7.5 liters
Fuel consumption (High power)	0.49 l/h - 15 hours
Fuel consumption (Low power)	0.12 l/h - 62 hours
Operating voltage	12 VDC – 85–264 VAC
Operating temperature	-45°C to +20°C
Max. operating altitude	5400 m
Power consumption (start/stop)	100 W
High power	57 W
Low power	10 W
Airflow (high)	168 m^3/h
Airflow (low)	70 m^3/h

3 CONSTRUCTION AND METHOD OF OPERATION

Euroheater 4D is a portable freestanding heating unit for tents, shelters, cabins, vehicles and vessels. Heat is generated by a multifuel burning plug element. The unit is powered by 12V or 110V-240V.

3.1 Characteristics

The operating mode can be both heating and “cooling” by blowing fresh air. Faster heating can be achieved with the usage of two hoses for air circulation.

Fig 3-1
Ventilation of tent

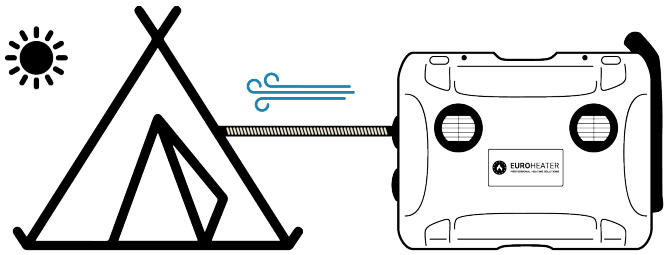
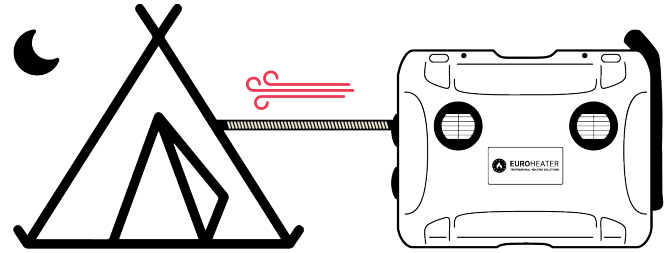


Fig 3-2
Heating of tent



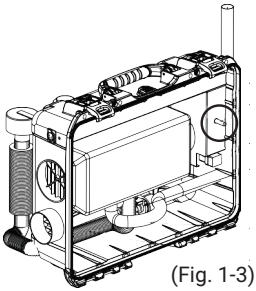
4 OPERATION AND HANDLING

4.1 General

This section describes use and operation of the heater:

Setup and preparation

- Place the heater on a stable, horizontal surface.
- Fill the tank with fuel; Diesel, Kerosene, F34 or JP8.
- Connect to the air pipe.
- Remove all loose cables from the case.



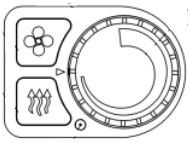
(Fig. 1-3)

Power connection

- Connect to the control box.
- Select the desired power supply using the internal toggle switch (240V or 12V). (Fig. 1-3).
- Connect to desired power supply.

Operation

- Select the desired operating mode on the control panel: **Ventilation mode** or **Heating mode**. (Fig-1-5).
- Select desired power with the potentiometer button.



(Fig. 1-5)

WARNING

- Do not disconnect the power supply from the Euroheater before the cooling process is completed after the device is turned off.
- Do not connect or disconnect the control panel connector while the heater is operating.
- Do not switch the heater back on after it has been turned off. Wait at least 5-10 seconds before turning it back on.
- For safe opetation of the heater, if the unit experiences two consecutive failed starts, contact the service department for troubleshooting information.

Note!

When starting a new factory heater for the first time, you may see Error code 02 due to an unprimed fuel system. Let the heater come to a complete stop before starting. If the error code does not stop after 10 minutes, force stop the control unit until it stops flashing, then restart the heater.

4.2 Control unit

LED indicator in Pos. 3 indicates the heater status:

- Yellow light - heating mode.
- Quickly flashing yellow - under purification.
- Slowly flashing red - error.
- Off - the heater is not in operation.

LED indicator in Pos. 4 indicates ventilation mode status:

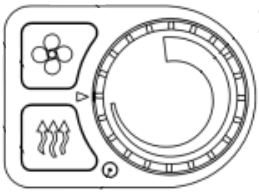
- Green light – the heater is operating in ventilation mode.
- Green flash – ventilation mode off.
- Yellow light – the heater is in heating mode with ventilation function.
- Off – the heater is not in operation, with ventilation mode off.
- When the heater is connected to the chosen power supply, Pos. 4 will show quick green flashes to indicate the connection process.

Control buttons and regulator:

- Button Pos. 1 is used to turn ventilation mode on and off.
- Button Pos. 2 is used to turn the heater on in heating mode (for unlimited time) and to turn off the heater.
- The regulator Pos. 5 is used to:
  - adjustment of fan rotation speed in ventilation mode
  - regulation of the heating power of the heater from “min” to “max” kW in heating mode.

Operating mode features:

- When “Heat” control mode is selected, the heater operates continuously at the selected heating power. When a comfortable temperature is reached, it is recommended to reduce the power, ventilate the room, or turn off the heater.
- Do not interrupt power supply to the heater before the cleaning cycle is completed.



(Fig. 1-5)

5 MAINTENANCE

5.1 General

With the correct start and shutdown procedures, the heater is self-cleaning and requires very little maintenance. Proper operations ensures that sooth are cleared automatically, reducing the need for maintenance and upkeep.

5.2 Repair

Maintenance and repairs should only be carried by trained, qualified personnel! The user can rectify the following error (table 1). For all other malfunctions (table 2) or if the user cannot rectify the error, contact a service center/workshop.

5.2 Diagnostic

TABLE 1

Number of flashes	Error description	Comment - troubleshooting
1	Overheating of heat exchanger	Check the heater's inlet and outlet pipes for free entry and exit of heated air.
2	All attempts to start failed	Check the fuel supply (check the fuel hose). Check the combustion air supply system and the gas exhaust pipe.
3	The burner stops during operation	Check the fuel supply (check the fuel hose). Check the combustion air supply system and the gas exhaust pipe.
8	No communication between control panel and control unit	Check the connecting wires and connectors. Control panel is not receiving data from control unit.
9	Shutdown due to overvoltage	Check the battery, voltage regulator, and power supply cables. The voltage at the power connector should not be higher than 16V.

9	Shutdown due to undervoltage	Check the battery, voltage regulator and power supply wiring. The voltage at the power connector should not be lower than 10V.
10	Ventilation time is exceeded	Check the air intake and exhaust pipe. Remove foreign objects if clogged.
12	Overheating in the control unit area. Overheating via flame detector	Check the heater inlet and outlet pipes for free air in and out. Check the combustion air supply system and the gas exhaust pipe. Repeat the heater cooling start procedure.

*** Note!** If The "Overheating" error appears three consecutive times in a row during start-up or operation of the heater, it will be locked.
The lock is activated due to overheating, regardless of which sensor detected the error. Upon locking, the control panel LED will flash 16 times.
Contact a service center/workshop to unlock the heater.

TABLE 2

Number of flashes	Description of malfunction
4	Glow plug error
5	Flame detector error
6	Error on control unit integrated temperature sensor
7	Error on fuel pump
11	Air blower error. Fan speed is lower than specified. Motor does not rotate. The engine rotates uncontrolled.
17	Internal temperature sensor circuit breaker on the heat exchanger.

6 BASIC MAINTENANCE EQUIPMENT

CABLE 240V
CABLE12V
CONTROL UNIT PU-5 WITH 5 M CABLE
TRANSPORT BAG, HOT AIR HOSE
HOT AIR HOSE
HOSE CLAMP Ø80 MM
FUNNEL, FUEL
PUMP, FUEL
FUSE, ELECTRIC, AUTOMOTIVE BALDE FUZE 25A

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EUROHEATER
PROFESSIONAL HEATING SOLUTIONS

Euroheater AS
Masteveien 8, 1481 Hagan, Norway
post@euroheater.no