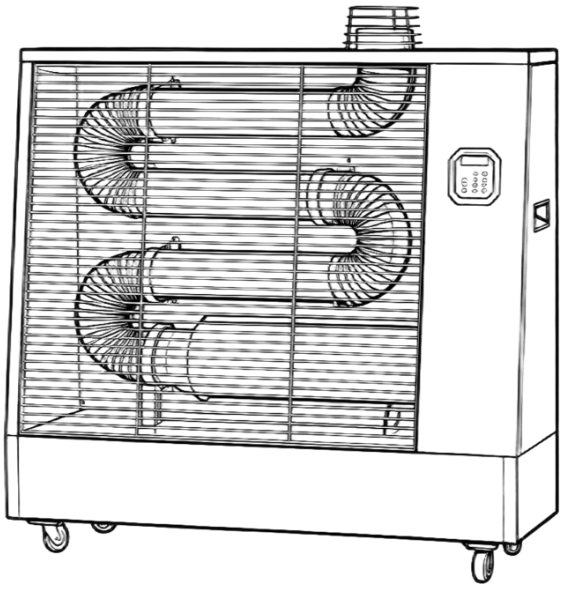
Pro-Tech TOOLS

Pro-Tech TOOLS Diesel Infrared Heater



Instructions for use

Translation of the original instructions

Please read the instructions carefully before use and use the product correctly.
Once you have read this user manual, keep it in a safe place so that the operator can refer to it at any time.
Before use, it is essential to fully understand the contents of the 'Safety Precautions' section to ensure the product is used correctly.
This product is designed for a standard voltage of 220–240 V AC at a frequency of 50 Hz; no other voltage may be used. The company reserves the right to the final interpretation of the specifications and the content of these instructions for use.

Advantages of this product

1. Use of far-infrared radiation, function for indoor and outdoor space heating.
-Space required for the horizontal transfer of thermal energy over long distances using far-infrared radiation and direct conduction.
-Unlike conventional heating equipment, which circulates heat via a fan, the function of far-infrared radiation with super-radiation, permeability, extraction and resonance makes the heating environment more comfortable and healthier.
2. A filter element is used to remove odours, and a device is provided to remove residual oil from the pipes.
The unit is equipped with a system that, when the heater is switched on, drains any oil remaining in the oil pipe back into the oil tank.
3. It emits a large amount of thermal radiation over a long distance.
-Far-infrared radiation promotes human metabolism, and the transmission of far-infrared thermal energy further enhances the sensation of warmth. Compared to a heating device of the same power. The heat transfer rate is high, enabling instant
heating, and the even distribution of thermal energy allows for transmission over long distances, helping to save on heating costs.
4. Safety features
-The unit utilises various safety devices to prevent installation accidents.
(Overheating protection, safety device against safety device failure, device against safety device reverse operation, safety device against ignition, combustion control device, oil pressure reduction device, explosion prevention device, overheating protection device, etc.)
5. Fittable castors for easy handling
-Wheels can be attached to the heater for easy relocation.
6. User-friendly touchscreen control panel
-User-friendly touch control panel.
7. Sleep timer function
8. Time/temperature selection function

Safety precautions

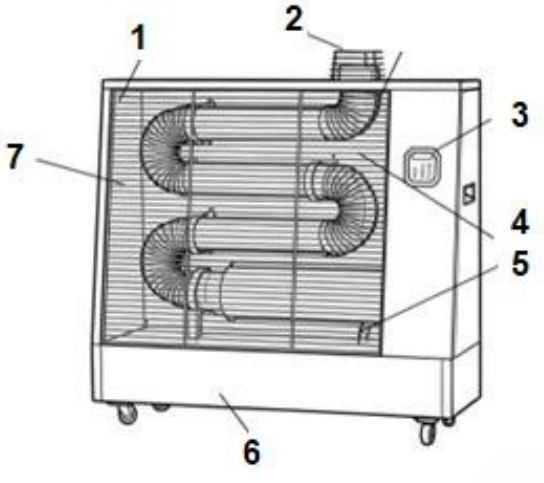
- Failure to observe the relevant safety precautions may result in serious personal injury or significant damage to property.
- Use of flammable fuels such as petrol (may cause a fire).
- Do not store hazardous equipment, such as pressurised containers, near the heater (this may cause an explosion).
- Do not use flammable materials or gas near the heater (this may cause an explosion or fire).
- Heaters should not be used on uneven surfaces (tipping over may cause a fire or malfunction).
- Do not dismantle the appliance for maintenance purposes.
- The safety net does not fully protect children and elderly people. (Ensure their safety and supervision).
- Ventilate the room once or twice an hour; children and elderly people should not use the appliance for prolonged periods.
- Simply pulling the plug is not sufficient. (This may cause malfunctions or electric shock; always press the power button to switch the appliance off).
- Do not clean the heater by spraying it with water, petrol, paint thinner or alcohol, as this may cause the appliance to malfunction or catch fire.
- Ensure adequate ventilation; do not use the appliance in enclosed spaces, confined areas, or places that cannot be ventilated (which may lead to gas poisoning).
- Refuel only when the appliance is switched off.
- Do not use damaged power plugs or loose sockets with poor contact, and do not touch plugs with wet hands (which may cause electric shock, a short circuit, or ignition).
- Be careful of water inside the product (do not pour water over the product whilst in use, as this may lead to fire or electric shock
- Do not move the product whilst it is in use (this may cause burns or a fire; you must switch off the machine and disconnect the power supply until the temperature of the device has dropped).
- Do not use before going to bed or when leaving the room (failure to ventilate for a prolonged period may cause a lack of oxygen).
- Do not use it for purposes other than heating (e.g. drying laundry and other uses may cause a fire).
- Do not touch high-temperature parts during use (the surface of the product is hot during operation or after switching off; do not touch it directly).
- Use a 230 V AC socket.
- Remove dust from the power plug in good time and insert it firmly.

- Do not splice the power plug or use a multi-socket adapter (risk of electric shock or fire).
- Do not twist the cables or place heavy objects on them (risk of electric shock or fire).
- You must use sockets with an earth wire.
- Do not use this product in shower cubicles, bathrooms, swimming pools, etc. (risk of electric shock).
- Do not place flammable items such as curtains, carpets, toilet paper or other flammable materials on this product.
- Do not insert any objects into the appliance, and do not strike or touch it after use (this may cause a fire or electric shock).
- Do not place flammable items, such as plastic bags, on the product, nor cover it with any objects (this may result in a fire or burns).
- Keep it away from hot and damp places and store it in a dry indoor location.
- Check for oil leaks; if any are found, remove them immediately (this may cause a fire).
- Do not place household appliances near the heater (high temperatures may damage the appliance).
- After long-term storage and before use, clean the appliance of dust in good time (excessive dust can cause a fire).
- Use standard channels to purchase standard diesel fuel (poor-quality diesel may lead to incomplete combustion or equipment failure)
- Do not touch the ventilation opening or the protective mesh (soot may form).
- Disconnect the appliance from the mains in the event of a storm or if it is not used for a prolonged period (this may result in electric shock, current leakage or fire).
- When refuelling, do not pour foreign objects or other liquids into the tank.
- Do not use in areas contaminated with oil.
- If the device is not used for a prolonged period, drain the diesel from the fuel tank and store it in a cool, dry place. If the device is not used for a prolonged period, the nozzle may become blocked or the control board may be damaged by moisture.
- A situation involving overfilling or accidental spillage of diesel around the fuel tank, resulting in dripping, should not be confused with a fuel tank leak.
- Depending on the condition of the product (damaged nozzles, fuel quality issues, etc.), a minor explosion may sometimes occur.
- If the surface of the power cable is damaged, contact the service department for a replacement. (This may result in electric shock or fire.)
- You may smell fuel when switching on the heater for the first time. The oil heater may smell of fuel when switched on or off.

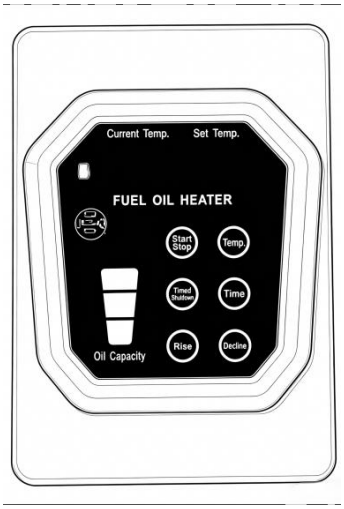
Safety precautions and installation procedures

- Install in a location with convenient access to the mains supply and good ventilation.
- Avoid direct sunlight and do not install in areas with flammable gases. (This may cause malfunction or a fire.)
- Install in a visible location (for safety reasons).
- Do not use in locations where the temperature is too high.
- Use a standard socket to connect to the mains.
- Ensure a safe distance when in use: The left and right sides of the heater, as well as the rear, should be at least 20 cm away from walls and all surrounding objects. The front and top of the heater should be at least 1.5 m away from walls and all surrounding objects.
- Install on a level floor and engage the brake wheel.
- The base is fitted with a universal swivel castor which does not have a brake and will roll downhill on sloping ground.

Construction



1. Side reflector
2. Exhaust vent
3. Control panel
4. Internal reflector
5. Bottom reflector
6. Fuel tank
7. Protective mesh cover



Control panel

1. (START/STOP) POWER BUTTON
Turns the power on and off, starts and stops the unit.
2. (TEMP) THERMOSTATIC CONTROL
Press the temperature setting button and use the ‘up’ and ‘down’ buttons to set the desired temperature.
3. TIMER OPERATION
Heating time: set the duration of the heating cycle.
4. (RISE/DECLINE) ARROW BUTTONS FOR SETTING FUNCTIONS
These buttons are used to set the desired temperature and the length of the heating cycle.
5. TIMER SHUT-OFF
This button activates or deactivates the timer switch-off function.

Instructions for use

Start-up

1. Press the “START/STOP” button to switch on. The heater will start after a beep sounds. To switch off, press the START/STOP button again.
2. Press the “Temp”/“Time” button to select the temperature and heating cycle. The temperature can be set between 0–40 °C. The heating cycle can be set between 5–25 minutes (30 minutes per cycle).
3. Press the “RISE”/“DECLINE” adjustment button to set the desired temperature and time. Set the temperature higher than the room temperature. The temperature is adjusted in 1 °C increments. The heating duration is adjusted in 5-minute increments.

NOTE!
Once activated, the heater’s default operating mode is thermostat-controlled operation. The heater can also be set to continuous operation. In this case, the heating cycle is not taken into account.

TIMED SWITCH-OFF

If you want the heater to switch on and off automatically, you can use the switch-off timer. Activate the switch-off function by pressing the TIMER button. Then use the arrows to select the desired switch-off delay. The minimum delay is 1 hour and the maximum is 24 hours. When the appliance is switched off, all timer functions are reset and must be set again if required.

Please note
When refuelling for the first time or when the fuel level in the tank is low, the electronic pump may easily draw in air. In the event of an ignition failure, run the heater continuously until it ignites (usually 3 to 5 times; the solenoid valve will switch off automatically).

Switching off the heater

1. During operation, press the on/off button
2. To cool the burner after it has gone out, the fan motor will continue to run for 5 minutes.
3. Once the fan motor has come to a complete stop, disconnect the power cable.

Safe diagnostic procedure

CAUTION! If the heater switches off due to the activation of safety systems, thoroughly ventilate the heated space to remove all exhaust gases or fuel vapours. If an exception occurs, analyse the cause and take corrective action.

FAULT DESCRIPTION	POSSIBLE CAUSE	CORRECTIVE ACTION
E1 BURNER FAULT The heater attempts to start twice and then displays this error message.	There is air in the fuel pump	Try this 3 to 5 times, Automatic vent with solenoid valve
	The fuel filter is blocked.	Check the condition of the fuel filter and replace it if it is not completely yellow.
	The fuel filter and nozzle are blocked.	If the fuel filter has been replaced and the appliance still cannot be activated, the nozzle is most likely also clogged and must be replaced.
E2 FLAME SENSOR FAULT	The flame sensor detects light before the burner is activated	Ensure that the flame sensor is correctly positioned. The sensor may also be damaged.
E3 TEMPERATURE SENSOR FAULT	The temperature sensor is likely to be damaged.	The heater can still be used in timed switching mode, or the temperature sensor needs to be repaired.
E4 IMPACT OR TILT ERROR	If the unit is tilted by more than 30° or has been subjected to a strong impact or vibration. The heater is deactivated by the safety systems	Adjust the heater
E5 OVERHEATING ERROR	When the temperature at the top of the heating element exceeds 105 °C. The heater is switched off by the safety systems	The device will restart automatically once it has cooled down.
E6 FUEL LEVEL SENSOR	The fuel indicator light is on. The fuel will soon run out or the tank is empty.	Top up with diesel or paraffin.

Daily checks, maintenance and precautions

■ Check for fuel leaks

- If fuel is leaking from the fuel tank or other parts, contact the service centre.
- Clean up any fuel that has accidentally spilled during refuelling.

■ Clean the filter inside the filler neck regularly (the fuel filter can be cleaned by soaking it in clean kerosene). Cleaning the flame sensor (CdS photocell)

- The flame sensor probe is unresponsive due to carbon deposits on its surface.
-Remove the photocell mounted under the engine.
-Clean the carbon deposits on the photocell probe with a clean cloth and return it to its original position.
-Check that the photocell is fully inserted.

Regular inspection and cleaning reduce the need for maintenance and keep your heaters in good working order. If the power cable needs replacing, this must be carried out by the manufacturer or their representative to avoid safety risks.
Unplug the unit from the mains before carrying out any adjustments, servicing or maintenance.
-Keep the heater clean, particularly the motor grille and fan blades.
-Store the heater in a dry, clean and safe place out of the reach of children.
-The heater should be inspected by a qualified technician at least once a year.
-Check the fuel pipe and its screw connections frequently
- Repairs must only be carried out by a properly trained and qualified person.

Technical specifications

Model	DH-15E	DH-20E
Heat output	13 kW	16 kW
Fuel type	Diesel, Kerosene	Diesel, Kerosene
Fuel consumption	1.03 L/h	1.26 L/h
Power supply	220–240 V, 50 Hz	220-240V~50Hz
Motor power	120W	120W
Protection rating	IPX4	IPX4