



INFRARED SPACE HEATER KEROSENE/ DIESEL HEATER 68,000BTU/HR SPACE WARMER®

MODEL NO: IR20.V6

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear protective gloves



Warning Electricity



Warning: Hot surfaces



Do not cover



Keep in dry area protect from rain



Use in well ventilated areas

1. SAFETY

WARNING! This product is only suitable for well insulated spaces or occasional use.

1.1. ELECTRICAL SAFETY

WARNING! It is the user's responsibility to check the following:

✓ Check all electrical equipment and appliances to ensure that they are safe before using. Inspect power supply leads, plugs and all electrical connections for wear and damage. Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.

Electrical safety information. It is important that the following information is read and understood:

✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.

✓ Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that they are secure.

Important: Ensure that the voltage rating on the appliance suits the power supply to be used and that the plug is fitted with the correct fuse.

✗ **DO NOT** pull or carry the appliance by the power cable.

✗ **DO NOT** pull the plug from the socket by the cable.

✗ **DO NOT** use worn or damaged cables, plugs or connectors. Ensure that any faulty item is repaired or is replaced immediately by a qualified electrician.

If the cable or plug is damaged during use, switch off the electricity supply and remove from use. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Ensure that repairs are carried out by a qualified electrician.

1.2. GENERAL SAFETY

WARNING! A qualified installer is required to install, adjust and, where necessary, convert the appliance for use with other fuel types.

▲ **DANGER!** Risk of carbon monoxide poisoning. Failure to provide proper ventilation could result in serious illness or death.

✓ Consult the appliance manufacturer before replacing parts other than those specified or recommended in the servicing instructions.

✓ When not in use for an extended period, store in a safe, dry area, out of reach of children.

IMPORTANT: This appliance is not intended for persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they **DO NOT** play with the appliance.

✓ Cleaning and user maintenance on the appliance shall not be made by children without supervision.

WARNING! The appliance shall be disconnected from its power source during service and when replacing parts and, if that the removal of the plug is foreseen, it shall be clearly indicated that the removal of the plug has to be such that an operator can check from any of the points to which he has access that the plug remains removed.

✓ Check that the heater is in sound condition and good working order. Take immediate action to repair or replace damaged parts.

✓ Use recommended parts only. Unauthorised parts may be dangerous and will invalidate the warranty.

✓ Only use diesel or kerosene to fuel this heater, in accordance with instructions in this manual and heaters nameplate.

✓ Locate heater on a level and stable surface.

✓ Only use heater in well ventilated areas. Ensure continuous ventilation is provided to the heater operating area via windows and doors etc. If people are not required to be present in the heated area, the volume of air to be heated (m³)/heat output (kW) ratio must be at least 10:1 and people must be advised not to remain in the heated area for prolonged periods. If people are required to be present in the heated area, the volume of air to be heated (m³)/heat output (kW) ratio must be at least 30:1. Ventilation must be to the outside of the premises in which the heater is to be operated. The total open area (m²) must be at least 0.003 times the total heat output (kW). The volume concentration of oxygen (O₂) in the heated room, must always remain above 17%.

✓ Before refuelling, shut down the heater and wait for it to cool down.

✓ All fuel containers are to be located within safe distance from the heater, as per the applicable regulations.

✓ Fuel is to be stored in rooms with insulated floor, so that the fuel cannot penetrate the floor into the open flame below causing fuel combustion.

✓ Fuel storage need to follow all the applicable regulations.

WARNING! DO NOT use the heater near flammable material, liquids, solids, gases or compressed gas cylinders etc.

✗ **DO NOT** stand or place any object less than 2m from the heater output and keep the heater a minimum of 2m from any walls or objects.

✗ **DO NOT** use the heater in closed rooms, living areas, basements or below ground level.

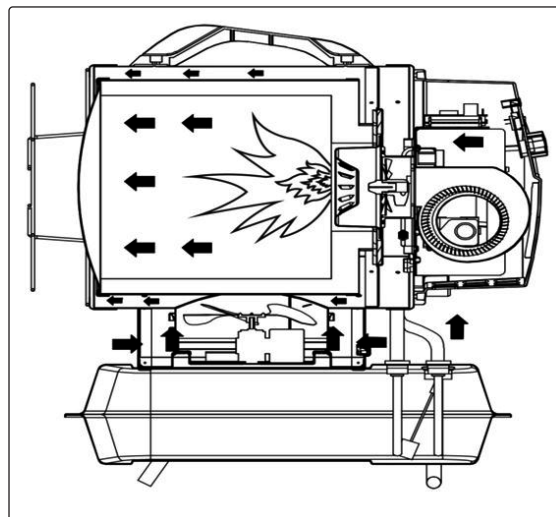
- × **DO NOT** allow untrained persons to operate the heater and **DO NOT** operate the heater without the safety guard.
- × **DO NOT** move or handle the heater when hot, without wearing protective gloves. Never move the heater whilst it is operating.
- × **DO NOT** obstruct the airflow (back of the device) and air intake (front) of the heater.
- × **DO NOT** use the heater with a programmer, timer or any other device that switches the heater on automatically.
- × **DO NOT** leave the heater unattended when in use. Switch the heater off and unplug from the mains before leaving work area. **DO NOT** fill the fuel tank whilst the heater is running or still hot. **DO NOT** over-fill the fuel container. Wipe up any spilt fuel immediately.
- × **DO NOT** obstruct the air inlet (rear) and air outlet (front) of the heater and **DO NOT** use duct work in front or at the rear of the heater.
- × **DO NOT** allow children or animals near the heater when in use, or whilst still hot.
- **WARNING! RISK OF ELECTRIC SHOCK. DO NOT** expose the heater to water spray, rain, dripping water or wind.
- **WARNING! Heater is not located immediately below a socket-outlet.**
- × **DO NOT** operate the heater when you are tired or under the influence of alcohol, drugs or intoxicating medication.
- × **DO NOT** touch the heater outlet or cone when in use, or for a period of time after it's switched off, as these are VERY hot and will take time to cool down.
- × **DO NOT** switch the heater off by disconnecting it from the mains. ALWAYS set the switch on the burner to the 'OFF' position and allow the cooling cycle to finish, before disconnecting from the mains.
- × **DO NOT** use an external fuel tank. Only use the tank that is fitted to the heater, and only fill it when the heater has cooled down.
- × **DO NOT** use "old" or "second-hand" diesel, kerosene, or anything other than clean, fresh, new diesel, kerosene.
- × **DO NOT** use low-quality diesel. Always use high-quality and clean fuel that has been filtered before use. Using any other type of fuel will invalidate the warranty and could cause an explosion, a fire or the unit to malfunction.
- ✓ Ensure that the heater is correctly turned off.
- ✓ Only suitable for clean, fresh, filtered diesel or kerosene.
- ✓ It is dangerous to put your hands or any other thing into the grill, or to apply a considerable shock or force to the heater, as there will be a risk of fire or electric shock.
- × **DO NOT** place any electrical item or heavy material on top of heater. (It may cause malfunctioning or electrical shock, or if the heavy object falls onto the user can cause injuries).
- × **DO NOT** move or transport heater during operation due to the risk of fire or causing burns. Before moving the heater turn the heater OFF, disconnect from mains supply and allow to cool.
- **WARNING! DO NOT** use this heater for another purpose other than heating.
- × **DO NOT** use this heater for drying clothes.
- × **DO NOT** use this heater for keeping pets, animals, or plants warm.
- × **DO NOT** place any inflammable vinyl or plastic goods on top of heater, or cover the heater grill with clothes.
- × **DO NOT** touch any of the heated material such as the grill, burner, etc, while the heater is in operation or just after extinguishing, as the grill and burner are still hot. **DO NOT** touch any of those parts, especially pay attention to keep children away from the hot materials, it may cause serious harm.
- ✓ It is recommended not to use this heater in the highly elevated areas.
- × **DO NOT** use this heater in areas higher than 1,500m altitude from the sea level. The heater needs more ventilation in areas of 700-1,500m altitude from sea level. This is due to the lack of oxygen, there is an increased risk of carbon monoxide poisoning.
- ✓ It is dangerous to turn OFF the heater by taking out the power plug, It may cause a malfunction or electric shock. Please turn OFF using the ON/OFF switch.
- × **DO NOT** use water or other chemicals to clean the heater. (It may cause a fire or an electric shock).
- × **DO NOT** use this heater on unstable surfaces.
- × **DO NOT** use this heater on an inclined surface, the heater may fall over, which can cause a fire or malfunction.
- ✓ Place this instruction manual noticeably near the heater so that, if necessary, the user can always find it easily.

2. INTRODUCTION

Versatile infrared multi-fuel heater designed to run on kerosene or diesel. Clean burning unit suitable for well-ventilated applications. 10.5L Tank allows approximately 6hrs running time, making this unit extremely economical. LED display for ambient and thermostatically controlled temperature. Safety features include automatic overheat safety shut-off and quiet operation. Optional trolley available for easy manoeuvrability, Model No. IR20T.

3. SPECIFICATION

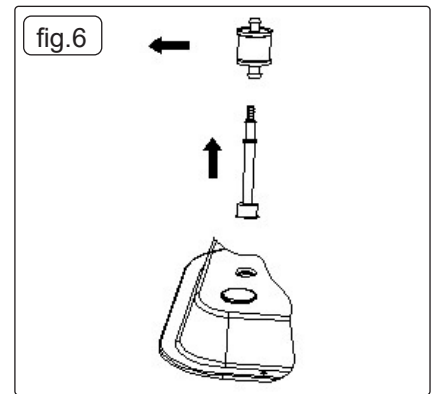
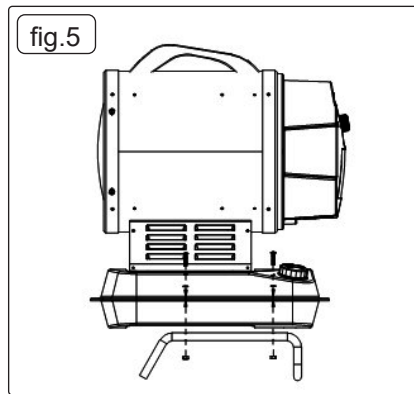
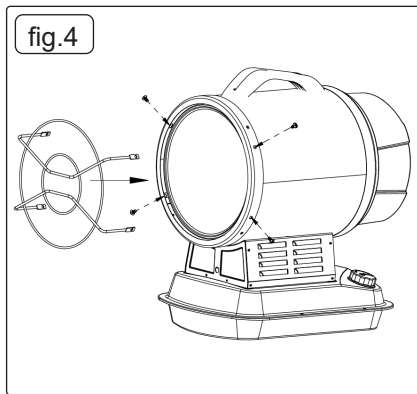
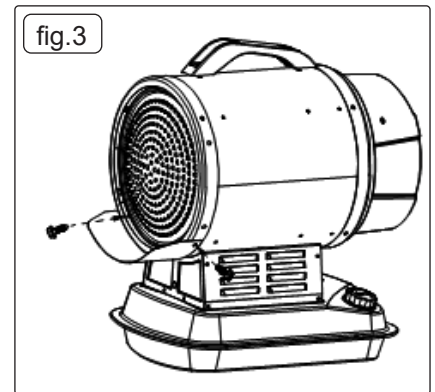
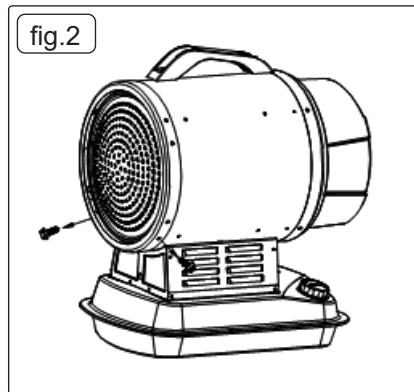
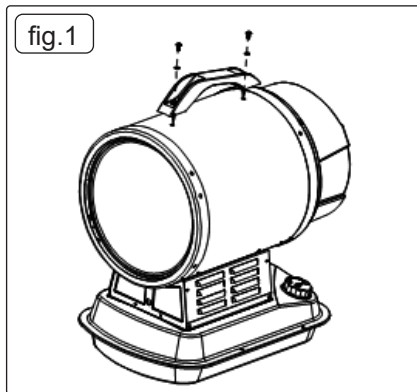
Model No:	IR20.V6
Airflow:	613 m ³ /h
Fuel Tank:	10.5L
Fuel:	Kerosene/Diesel
Fuse Rating:	13A
Heated Area:	100-150m ²
Motor Power:	110W
Nett Weight:	18.2kg
Output:	68,000Btu/hr(20kW)
Plug Type:	3-Pin
Power Supply Cable Length:	1.1m
Running Time per Filling (Maximum):	6hrs
Supply:	230V~50Hz
Transport Wheels:	No
IP Rating	IPX4
Fuel Consumption:	1.6kg/h



4. ASSEMBLY

- 4.1. Unpack the heater and check contents. Should there be any damaged or missing parts contact your Sealey stockist immediately.
- 4.2. Attach top handle (62) by lining up the holes in the handle with the holes in the heat insulation casing (61) (fig.1).
- 4.3. Insert screws around the body protection ring (front) (65) and tighten. (fig.2).
- 4.4. Attach the lower protective plate (67) as illustrated in fig.3. Tighten the two screws through the heat insulation casing (61).
- 4.5. Attach the safety guard (66) using the supplied hardware. (fig.4).
- 4.6. Attach the support frame (3) using the supplied hardware. (fig.5).

Note: The numbers in this section refer to the parts diagram.



5. OPERATION

5.1. FUELLING THE HEATER

- 5.1.1. Although our heaters operate with diesel fuel, when the temperatures are below 0°C, diesel additives are required to maintain the diesel's viscosity. Typically diesel can cloud in freezing conditions and will start to gel.
 - 5.1.2. This appliance is designed to operate safely at a minimum ambient temperature of -20°C and a maximum of 40°C.
- ✗ **DO NOT** use bio-diesel as this fuel will damage your heater's seals and filter.
 - ✗ **DO NOT** use fuel such as, paraffin, benzene, alcohol, white glass, camp stove fuel, paint thinners, or other oil compounds in this heater. These are volatile fuels that can cause a fire or explosion.

5.2. VENTILATION

- 5.2.1. **Use heater only in well ventilated areas.**
- 5.2.2. Always provide a fresh air opening in the heated space of at least 2,800 cm² (3 sq. ft) for each 29 kw / hr. of heater output.
- 5.2.3. Provide a larger opening if more heaters are being used.
- 5.2.4. Minimum Ventilation Opening Needed for this heater is 64cm².

5.3. STARTING THE HEATER (IGNITION)

NOTE: If air has entered the fuel line; possible when new, when left standing for a long period or when the tank level has fallen too low, priming may be necessary. It is preferable to start the heater outdoors for the first time, to allow any oils left over from the manufacturing process and transporting to be burnt off in a safe environment. Run it for 10 minutes on this first burn.

- 5.3.1. Fill the tank with diesel until needle on fuel gauge points to "F". Replace fuel cap and tighten firmly.
- 5.3.2. Connect the heater to a power source.
- 5.3.3. Push the power switch to the "ON" position. The power indicator light will light and heater will ignite.

NOTE: On first ignition or after refueling you may hear a grinding sound just before ignition. This is the fuel pump removing the air from the fuel line. Your heater will start up within seconds. If it does not start repeat start-up procedures with fuel gauge reading at least 1/2 tank.

5.4. STOPPING THE HEATER

- 5.4.1. Turn the power switch to the "OFF" position. Combustion will stop and the Cooling Cycle will begin.
- 5.4.2. When the Cooling Cycle is complete the fan will stop running and it will be safe to unplug the heater.



1. Power indicator light.
2. ON/OFF switch.
3. Temperature control knob.
4. Digital LED display.

NOTE: Unplugging the heater before the Cooling Cycle has been completed may cause overheating, possible damage to the heater and heat plate.

5.5. RESTARTING THE HEATER

- 5.5.1. Wait ten seconds after Cooling Cycle has been completed.
- 5.5.2. Follow all start-up procedures above.

6. MAINTENANCE

- ❑ **WARNING!** Unplug unit from mains power supply ensure heater is cold before opening or servicing heater.
- ❑ **WARNING! DO NOT** tamper with the unit, have an experienced engineer make any necessary adjustment or repairs.

6.1. TRANSPORT SAFETY

To ensure the best maintenance and/or transportation procedure, please observe the following procedure:

- 6.1.1. Empty the fuel tank.
- 6.1.2. If remainders are still present, pour in clean fuel and empty it again.
- 6.1.3. Close the tank filler plug, dispose of the fuel as per the applicable regulations.
- 6.1.4. To ensure proper generator maintenance, keep it leveled to prevent fuel leaks, keep it in a dry place and protect from getting damaged.

6.2. LONG TERM STORAGE

- 6.2.1. Unscrew the fuel cap.
- 6.2.2. Using an approved siphon, remove diesel.
- 6.2.3. Using a small amount of diesel, rinse and swirl the fuel inside the fuel tank.
- 6.2.4. Empty the tank completely.

NOTE: never mix water with fuel, it will cause rust inside the tank.

6.3. STORAGE

- 6.3.1. Store Heater in a dry, well ventilated area. Be sure that the storage area is free of dust and corrosive vapours. Repack the heater in the original packaging and keep user's manual in an easily accessible place.

6.4. FUEL / FUEL TANK

- 6.4.1. Flush tank every 150-200 hours of operation or as needed. **DO NOT** flush with water, use fresh diesel or kerosene only.

6.5. IGNITION DEVICE

- 6.5.1. Clean every 1000 hours of operation or replace as needed. After removing the ignition device, clean the terminals with a wire brush.

6.6. FAN BLADES

- 6.6.1. The fan blades should be cleaned at least once per heating season, depending on conditions.
- 6.6.2. Remove all accumulated dust and dirt with a burst of compressed air.

6.7. NOZZLES

- 6.7.1. Nozzles should be cleaned or replaced at least once per heating season. Contaminated fuel could make this necessary immediately.
- 6.7.2. To clean dirt from nozzle, blow compressed air through nozzle front. It may be necessary to soak nozzle in clean diesel or kerosene to help loosen any particles.

6.8. PHOTOCCELL

- 6.8.1. The photocell should be cleaned at least once per heating season or more depending on conditions, use a cotton swab and water or, alcohol to clean the lens of the photocell. Be certain to reinstall the photocell in proper position.

6.9. FUEL FILTERS FIG 6

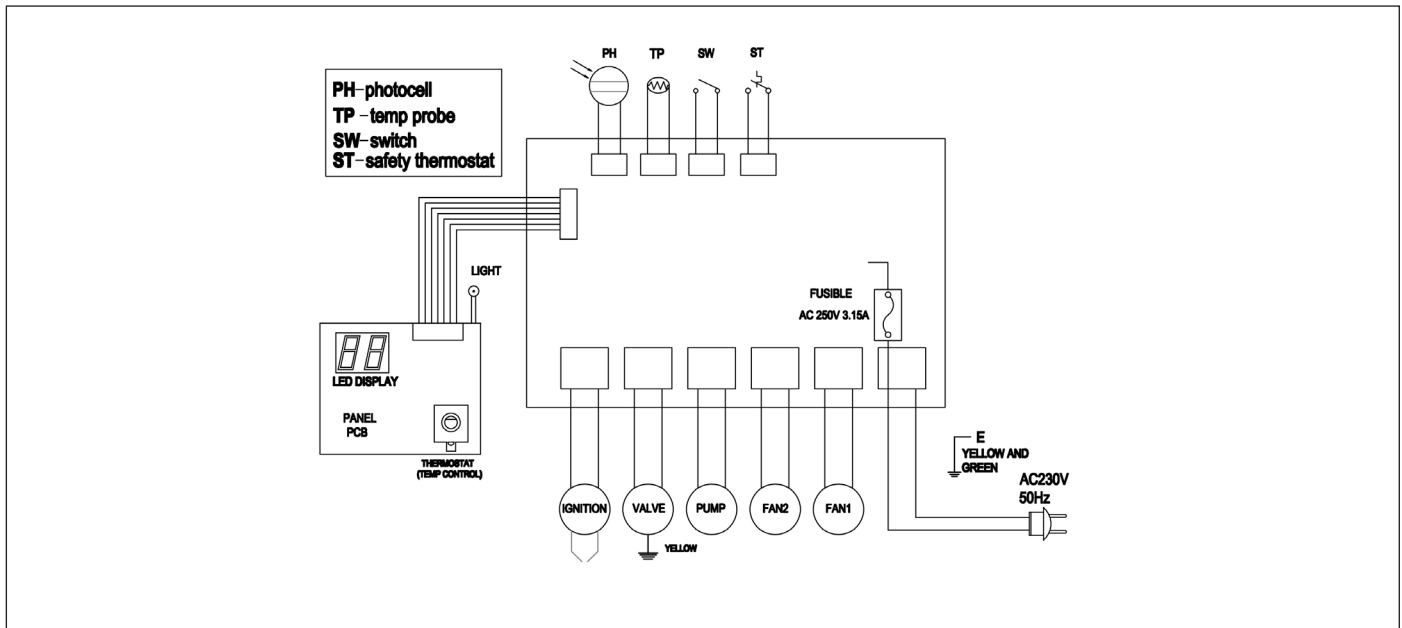
- 6.9.1. The fuel filter and oil filter should be cleaned at least twice per heating season by rinsing it in clean diesel or kerosene. Contaminated or old fuel could make cleaning necessary immediately. See fig.6.
- 6.9.2. Remove the plug on the fuel tank.
- 6.9.3. Remove the oil hose. And clean with fresh fuel.
- 6.9.4. Replace with new oil filter if required.

7. TROUBLESHOOTING

PROBLEM IDENTIFICATION		
PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Heater doesn't work.	<ul style="list-style-type: none"> 1. Heater blocked. 2. The power switch is in the '(O) OFF' position. 3. No power. 4. Electrical cable unplugged. 5. Digital control display error. 6. Wrong thermostat setting. 7. Temperature sensor override. 8. Fuse damaged. 	<ul style="list-style-type: none"> 1. Restart the heater. 2. Turn the switch '(I) ON'. 3. Plug the electrical cable properly into the socket. 4. Plug electrical cable into a socket outlet. 5. <ul style="list-style-type: none"> 1. Restart the heater. 2. Identify the display error. 3. Contact the technical service center. 6. Calibrate the thermostat by setting it than ambient temperature. 7. <ul style="list-style-type: none"> 1. Wait at least ten minutes then try to run ignition again. 2. Contact technical service center. 8. Contact technical service center.
Motor/Pump runs but the flame does not start.	<ul style="list-style-type: none"> 1. No fuel. 2. Ignition device is dirty. 3. Fuel filter is dirty. 4. Nozzle is dirty. 5. Photocell is dirty, damaged or installed improperly. 6. Foreign substances present in the tank. 7. Electrodes are used up or placed at an improper distance. 	<ul style="list-style-type: none"> 1. Turn off the heater, refill the fuel tank then restart the heater. 2. Contact the technical service center. 3. Clean the filter using clean fuel. 4. Clean nozzle. Or replace if needed. 5. Contact the technical service center. 6. Empty and refill the fuel tank with clean fuel. 7. Contact the technical service center.
Fan blocked or spins too slowly.	<ul style="list-style-type: none"> 1. Heater damaged. 	<ul style="list-style-type: none"> 1. Contact the technical service center.

DISPLAY ERRORS		
ERROR	CAUSE	SOLUTIONS
F0	OPERATION ERROR	
	1. The 'I (ON) / (OFF)' switch is turned 'I (ON)' when the heater is plugged in.	1. After disconnecting the heater, see that the switch is in the '(OFF)' position. Plug the heater in and turn the switch '(I) ON.
F1	PHOTOCELL ERROR	
	1. No fuel. 2. Fuel is contaminated. 3. Photocell is dirty or damaged. 4. Fuel filter is dirty. 5. Ignition error.	1. Turn the switch '(O) OFF'. Refill the fuel tank. 2. Turn the switch '(O) OFF'. Empty and refill the fuel tank. Clean the filter using clean fuel, DO NOT damage the filter. 3. Contact the technical service center. 4. See 6.7 in the maintenance section. 5. Contact the technical service center.
F2	TEMPERATURE CONTROL SENSOR ERROR	
	1. Damaged electrical cable. 2. Sensor is damaged.	1. Contact the technical service center. 2. Contact the technical service center.
F3	THERMOSTAT ERROR	
	1. Internal heater overheating. 2. Anti-tilting sensor activated.	1. Turn the heater off, wait until cooled down. 2. Place the heater on a level and stable surface.
LO	1. External temperature below -9°C.	1. Normal condition.
CH	1. Continuous operation (55°C).	1. Normal condition.

Electrical Diagram



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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