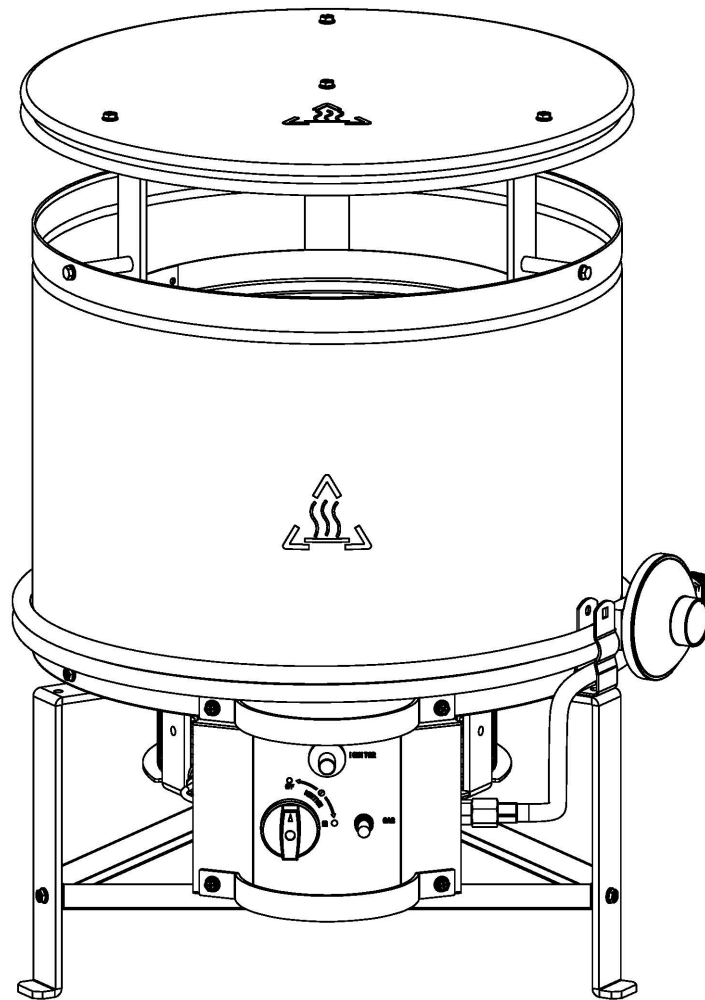




# ELITE INDUSTRIAL SPACE HEATER

## BH25



**OPERATING INSTRUCTIONS**

**PLEASE READ BEFORE USE**

## Operating Instructions.

Thank you for purchasing an Elite product, manufactured to a high standard, this product will, if used in accordance to these operating instructions, labels affixed to the product and properly maintained, provide you with many years of reliable service.

Propane gas cylinders are not supplied with the unit.

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



**Read user instructions**



**DO NOT COVER**



**Caution: Hot Surface**

NOTE: This product should not be used as a primary permanent source of heating. This is a portable heating solution offering high output temporary heat.

This heater is not intended to be used for domestic use for the heating of habitable areas.

This heater is not intended to be used to reach and maintain a certain level of human thermal comfort within an enclosed space in which the heater is situated.

This heater is not intended for warming animals or livestock.

## **SAFETY.**

**ENSURE** gas cylinders are stored in accordance with relevant regulations.

**ENSURE** only propane gas is used.

**ENSURE** the heater and gas cylinder is located on a flat level surface.

**ENSURE** the gas cylinder is used in the correct orientation with the valve at the top. Secure cylinder in position to prevent damage and movement.

**ENSURE** nothing is positioned directly in front or passes by the heater. Maintain a 1 metre exclusion zone immediately around the heater.

**ENSURE** only the supplied hose and regulator is used.

**ENSURE** the heater is used in a well ventilation area, as outlined within the operating instructions, the ventilation shall be continuous and free of obstruction. The ventilation shall be routed to an outside area in free air.

**ENSURE** the heater is kept clean and in good working order.

**ENSURE** the heater is turned off at both the control knob and the gas cylinder when not in use.

**ENSURE** the gas hose is in good condition, free from kinks and twists and is not routed on walkway that may present a trip hazard and potential damage. If any damage is noted replace immediately before use.

**ENSURE** the gas hose is not in contact with any hot surfaces on the heater. Fully unwind the hose from the heater before use. Allow the heater to cool BEFORE winding the hose back around the heater.

**ENSURE** the heater is thoroughly cooled before handling or storage.

**ENSURE** the heater is stored in a safe, dry location preferable in the original packaging and disconnected from the gas cylinder if not to be used for a significant amount of time.

**WARNING** – DO NOT use in basements or below ground level.

**WARNING** – If you smell gas either before or during use either turn off immediately or DO NOT switch on. Switch off both the heater control knob and the gas valve on the cylinder. Ventilate the area, detect the source of the gas leak and rectify.

**WARNING** – If the heater is used for prolonged periods it may be noted that ice forms on the gas cylinder DO NOT use the heater to de-ice the gas cylinder.

**WARNING** – NOT FOR DOMESTIC USE. Do not use in high rise flats, basements or below ground level or in leisure vehicles (mobile homes, caravans or tents). If used in a public area ensure national regulations are adhered to and adequate protect from unauthorised operation of the heater is implemented.

**DO NOT** use the heater if any parts are damaged. Immediately remove from service, repair or replace parts. Use an authorised service agent or the manufacturer only.

**DO NOT** modify the heater or operate a heater which has been modified from its original design.

**DO NOT** allow untrained, children or person with learning difficulties to operate the heater.

**DO NOT** use the heater outside or a wet environment such as swimming pools

**DO NOT** operate the heater without any guarding supplied.

**DO NOT** operate the heater within 3 metres of the cylinder

**DO NOT** leave the heater unattended whilst in use.

**DO NOT** use the heater within a potentially explosive environment

**DO NOT** use duct work to direct heat. **DO NOT** restrict air on the inlet or exit.

**DO NOT** move whilst on or immediately after switching off.

**DO NOT** use the heater near flammable, combustible or explosive materials. This may include solids, liquids or gases.

## **RISK OF CARBON MONOXIDE POISONING**

Carbon Monoxide (CO) is toxic.

Carbon monoxide can build up in a confined area and failure to provide adequate ventilation can be fatal

Early symptoms include

- Headache
- Dizziness
- Nausea
- Dry mouth and sore throat

Pregnant women, persons with certain medical conditions, persons under the influence of alcohol and at high altitude are more susceptible to carbon monoxide poisoning.

Should anyone present with these symptoms immediately move to outside for fresh air and if deemed necessary consult medical advice. Turn the heater off immediately and service before reuse.

**We recommend the use of a carbon monoxide detector in use.**

### **1. Introduction**

The industrial space heater is a non-domestic, free standing, high output convector heater for use with propane at 0.7 bar pressure. It is designed for heating large volume spaces such as warehouses, small factories, and it is ideal for drying out buildings after water damage. The heater is fitted with Piezo ignition and a flame supervision device, it is also fitted with a hose tail end suitable for fitting to 6.3 bore HP rubber hose to BS EN 16436-1

The heater should be used in accordance with these instructions and any warning affix to the unit.

### **2. Ventilation and free space**

Use only in a well-ventilated area. The minimum room size for the space heater should not be less than 250 m<sup>3</sup> (8750 ft<sup>3</sup>) with a free ventilation area of more than 625<sup>2</sup>cm (97in<sup>2</sup>) divided equally between high and low levels. The values for required ventilation only relate to this product, therefore any other gas appliances and occupants also within the room need to be taken into consideration and adjusted accordingly.

### **3. Positioning**

Fully unwind the gas hose from the heater before use. Position the heater so that it cannot overheat the gas cylinder (3m minimum distance), care should be taken to ensure any other combustible surfaces/walls is at least 1000 mm minimum distance from the heater. To avoid overheating the floor, use only on a non-combustible surface. DO NOT twist or kink the flexible hose as this will restrict flow.

Do not use aerosols, paints, glues or other flammable liquids or vapours in the same room as the heater. Ensure that the heater is positioned away from pedestrian walkways or any other routes that may cause an obstruction and therefore present a hazard. If used in a public domain ensure a suitable guard is positioned around the heater to protect people from hot surfaces. Do not use in basements or below ground level where ventilation maybe compromised.

### **4. Using the heater**

To use the space heater, a high pressure propane regulator, either pre-set to 0.7 bar and at least 3.5 m of orange 6.3 bore H P hose to BS EN 16436-1 must be used and is already fitted to the heater

#### **4.1. Connection to the gas supply**

1. Ensure the hose to regulator and hose connections are secured with suitable hose clips. Ensure the date on the hose is within the defined period of use and visually inspect the hose to ensure it is free from any damage or signs of deterioration.
2. Check the regulator connection and the inside sealing face of the cylinder valve are clean and undamaged, connect the regulator to the cylinder and spanner tighten the nut. It has a left hand thread.
3. Check that the hose is not twisted or kinked and is secured to the fittings at both ends with the appropriate clips and that all the gas connections are tight. Turn on the gas at the cylinder valve . The flame supervision device should prevent gas flow to the burner; if not, turn off the gas and consult your dealer.
4. Check for gas leaks using a soap solution or a specialist spray design for this purpose. Do not ignite the heater if gas is leaking. Immediately turn off the cylinder valve and disconnect, clearly mark the appliance as defective and remove from service. Arrange remedial repair to be conducted by a competent person, suitable qualified service agent or the manufacturer as soon as possible.

#### **WARNING: NEVER SEARCH FOR LEAKS WITH A NAKED FLAME.**

5. When changing gas cylinders always ensure that there are no naked flames present in the area. Check that the cylinder valve is closed before disconnecting or reconnecting the heater.

## 4.2. Lighting the heater

**Note:** - When lighting the heater for the first time from new, do so in a well-ventilated area or open space to allow any fumes from the protective finish to disperse.

- Turn the Control Knob to "OFF" position. **Fig. 1.**
- Ensuring there is sufficient gas in the gas cylinder, and that it is correctly connected to gas cylinder and leak free,
- Turn on the gas supply at the regulator and check all fittings and connections for gas leaks, by smell, and if necessary, using a mild soap and water solution or a specialist detection spray. NEVER use a match to check for gas leaks.
- Rotate the control knob clockwise to the 'ignition' position. **Fig. 2.**
- Press and hold the "GAS" button IN, whilst repeatedly pressing the Piezo "IGNITOR" until the heater ignites, this may require repeated operation until the gas is ignited.
- Continue to hold IN the "GAS" button for approx. 1 minute and then release. The burner should remain alight. If not, repeat the ignition sequence again holding the flame "IGNITOR" button in for a little longer. If the burner does not remain lit, consult your dealer or the manufacturer.
- With the heater on, turn the control knob between the "ignition" and the "High" position to set the desired power output. **Fig. 3.**

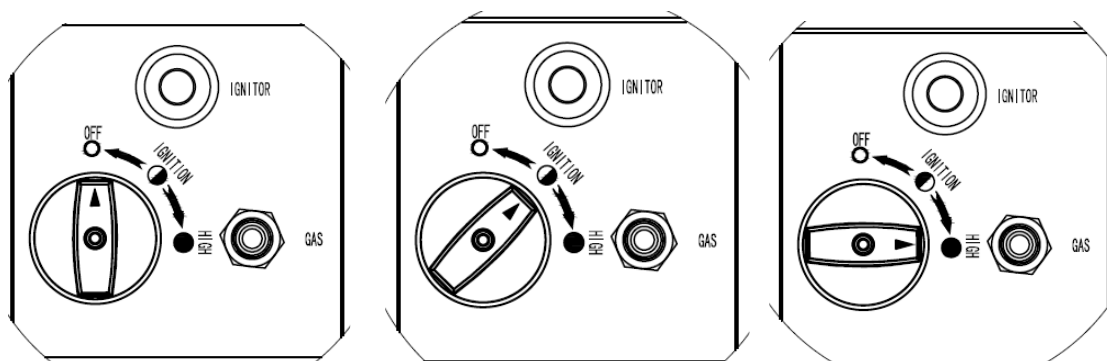


Figure 1. Off Position

Figure 2. Ignition Position

Figure 3. High Position

**WARNING: BEFORE STARTING THE HEATER, YOU MUST ENSURE THAT THE MINIMUM VENTILATION REQUIREMENTS ARE OBSERVED TO AVOID THE RISK OF CARBON MONOXIDE POISONING.**

**NOTE: THIS HEATER IS FITTED WITH AN ADDITIONAL SAFETY DEVICE THAT ENSURES THE PRODUCT WILL OPERATE ON A FLAT LEVEL SURFACE.**

**NOTE:** If a new gas cylinder has been connected, it may take some time for the gas line to be purged of air. Press the Piezo "IGNITOR" button every 10-15 seconds until the heater ignites.

**NOTE:** In cases where long runs of gas supply lines have been installed ahead of the appliance, it may be necessary to bleed trapped air out of supply lines before lighting heater. New installations generally require bleeding of supply lines. It could take several minutes before the heater can be lit, depending upon the length of the supply line.

### 4.3. Turning off the heater

- Close the propane supply cylinder valve until the flame extinguishes.
- Turn the knob anticlockwise to the OFF position . **Fig. 1.**

**If you are in any doubt about the use of the space heater, turn off the gas at the cylinder valve and consult your dealer or manufacturer.**

### 5. Care of the heater

The industrial space heater is designed and manufactured to withstand tough conditions; this quality product will give reliable service when periodically cleaned and maintained in accordance with these instructions.

See the *Maintenance and Servicing* section for routine maintenance details. Your dealer can arrange for servicing to be done by trained agents who will ensure that the heater remains safe and efficient.

### 6. Technical data

Jet Size	Operating Pressure (bar)	Heat Input		Gas Consumption		Dimensions (m)			Min. size of room (m <sup>3</sup> )	Vent area (cm <sup>2</sup> )
		kW	Btu/h	Kg/h	Dm <sup>3</sup> /h	H	W	D		
1.2 (mm)	0.7	15	50000	1.07	651	0.60	0.43	0.43	250	625
		25	84000	1.79	921					

## Maintenance and servicing

### 7. Routine maintenance

The following routine maintenance checks should be carried out at the beginning of each heating season or if the heater has not been used for a period of more than 12 months.

- 7.1. Cleaning:** Ensure the heater is fully cooled before any maintenance of cooling. Wipe exposed metal surfaces with a clean damp cloth.
- 7.2. Burner:** Occasionally, especially if the heater has not been used for a prolonged period of time (exceeding 12 months) use a high pressure airline to blow through the gas mixing tube and into the ignition well to remove any dust or debris.
- 7.3. Operation:** Light the heater in accordance with the operating instructions and ensure that it ignites and burns correctly. The burner is designed to operate without the normal type of flame ports, ignition takes place within a well in the top plate of the burner and at full rate the flame should extend beyond the edge of the circular shaped top plate and cover the tip of the thermocouple.
- 7.4. Controls:** Check that the flame supervision device functions correctly and that the thermocouple will hold the flame supervision device open within 10 seconds of lighting the heater. The flame supervision device should close within 90 seconds after the heater is turned off. Check the thermocouple connection to the flame supervision device; it should be finger tight plus half a turn.
- 7.5. Tilt Switch.** There is an additional safety device in the form of an orientation specific micro-switch that will close the flame supervision device in the event of the unit is either knocked over or not used a level surface. If the unit does not remain lit although there is gas and the unit ignites check the function and connections of this device, located behind the control panel.

### 8. Servicing:

**Important:** Servicing should only be carried out by trained and competent service agents, authorised dealer or the manufacturer. After the servicing or replacement of any part check for gas leaks and correct operation before returning the heater for use.

#### 8.1. Gas Jet

1. This part is not serviceable part.
2. Maintain by cleaning dirt and debris from the burner using compressed air.



**8.2. Spark electrode:** To replace the spark electrode.

1. Remove the HT lead from the spark electrode connector.
2. Unscrew and remove the spark electrode from the burner.
3. Check and remove any obstructions from the ignition well in the burner.
4. Insert the new electrode ensuring this is fully inserted, there is a shoulder profile on the spark electrode.
5. Reverse the above procedure to reassemble.

**8.3. Igniter & lead:** To replace the igniter and HT lead.

1. Remove the HT lead from both the electrode connector and the igniter connector.
2. Remove back nut to remove the igniter.
3. Reverse the above procedure to reassemble.

**8.4. Thermocouple & locknuts:** To replace the thermocouple and locknut.

1. Disconnect the thermocouple from the flame supervision device.
2. Remove top locknut and thermocouple from the burner, remove the thermocouple.
3. Remove one locknut from new thermocouple and use the old thermocouple as a guide to align the locknuts. Position new thermocouple in the burner so that the tip of the thermocouple is 10 mm above the lip of the burner. Secure into position with second locknut.
4. Reconnect thermocouple to flame supervision device. The nut should be finger tight plus half a turn.

**8.5. Flame Supervision Device:** To replace the flame supervision device and its locknuts.

1. Remove the hose connector from the inlet side of the flame supervision device.
2. Disconnect the supply tube between the flame supervision device and the gas flow valve.
3. Disconnect the thermocouple from the flame supervision device.
4. Remove front locknut and the valve support bracket, withdraw the flame supervision device from the heater.
5. Remove one locknut from new flame supervision device, ensure that the second locknut is screwed down to the end of the thread and position the device in the location hole. Reassemble in reverse order.

Note: The thermocouple connection should be finger tight plus half a turn.

**9. Repairs:** repairs should be carried out only by those who are suitably qualified to do so. Upon a repair being needed, please contact your dealer who will be able to advise you on the appropriate action to take.



**ENVIRONMENTAL PROTECTION:** Please recycle any unwanted materials as opposed to disposing them as general waste. It is recommended the original is retained and used to store the product when not in use for prolonged periods of time. If this is not applicable ensure the materials are sorted and recycled in accordance with local regulations.



**SPECIFICATION CHANGE:** It is our policy to continually improve products to ensure these meet the rigours of the industry we serve. Therefore as such we reserve the right to alter specifications, data and components parts without prior notice.

**WARRANTY:** All Elite products come with a 1 year warranty from date of purchase, proof of which will be required in the event of any claim.

**IMPORTANT:** No liability will be accepted for the incorrect use of this product.

**SALES:**

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