

Portable space heaters are quite often used in retail, factory and warehouse occupations to provide localised heating when full space options are impractical. Although they are a relatively cheap and flexible form of combustion heating they also present specific risks to personnel and property that require careful management.

Principal of Operation

Portable space heaters come in two main types, air forced and radiant and may be fuelled by kerosene, electricity or liquefied petroleum gas (LPG).

Radiant

Typically called patio, panel, plaque or more informally mushroom heaters these work on the simple principle of projecting infra red heat from a heated element or panel without heating the surrounding air.



Air forced

These heaters are commonly referred to as salamander or turbo heaters and are typically fuelled by LPG. Electric or kerosene models are also available. The basic principle of operation is the same for all fuel types. A heating chamber is contained in an open-ended tube with an electric fan at one end. The fan draws in cool air and forces it out at an elevated temperature.



Risk Management

A significant number of fires have occurred when portable space heaters have been placed in close proximity to combustible materials (wood, paper, plastic etc.) or near flammable liquids (solvent, paint). It is critical that, if used, these heaters should be clear of combustible and flammable materials and liquids. Based on manufacturers' guidelines and good risk management practices it is recommended that air forced heaters are kept at least 2 metres clear of combustible materials in any direction and 6 metres from flammable liquids. There should be no flammable materials above a heat source of this nature. When positioning radiant heaters, clearance of at least 1 metre in all directions from combustible materials is recommended and at least 6 metres from flammable liquids.

As LPG is the prevalent fuel source, a gas cylinder is always nearby. These cylinders

should be secured in an upright position to prevent damage by toppling. Prior to use the gas connection and hose should always be inspected for damage.

Portable heaters should be located in a well ventilated area. Heaters can also use up oxygen and create carbon monoxide which could lead to carbon monoxide poisoning and in some cases death. The operating instructions should be consulted to determine the manufacturer's installation recommendations.

When present, any electrical supply lead should be raised from the floor to prevent damage from foot and forklift traffic. As with all portable devices it should be regularly inspected by a qualified individual under a testing and tagging program for portable electrical equipment. Never wrap excessive electrical lead around the heater unit itself.

Alternatives

There are safer options when considering localised space heating. Such options include:

- ▼ fixed overhead gas tube radiant heaters
- ▼ commercial quartz or halogen wall heaters
- ▼ electric panel heaters
- ▼ heat pumps.

All of these alternatives provide a safer option for providing warmth to customers and employees.

For more information:
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