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# Heating Precautions

## INTRODUCTION

A potential cause of fire in the workplace stems from the heating system. Fire can be caused by heating that is either inappropriate for the premises or poorly maintained, or from poor housekeeping practices around heating system itself.

## GOOD PRACTICES AND PRECAUTIONS

The owner/occupier of every workplace has a legal responsibility (under the Regulatory Reform (Fire Safety) Order 2005 or Fire (Scotland) Act 2005 to undertake a Fire Risk Assessment. Heating systems and all points noted below should always be considered as part of this assessment.

- The use of portable LPG, paraffin heaters, especially fan assisted space heaters or open bar radiant heaters in the workplace significantly increases the risk of fire. Robust management controls are necessary where these types of heaters are being used. Fixed electric infrared heating appliances or fixed oil/gas fired heat exchangers are recommended as an alternative to the above. If portability remains a requirement then electric linear quartz heaters or oil filled radiators are acceptable alternatives.
- All heating units should be kept clear of storage (in particular combustibles) by one metre, ideally with a barrier or hatched lines of demarcation.

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- Combustible items should not be stored on top of electrical storage heaters. To prevent such storage the heaters should have a sloping wire mesh guard fitted at a minimum distance of 100mm above the heater.
- Boiler rooms should be kept clear of any combustible storage and the door to the boiler room kept locked unless access is required for servicing.
- For oil fired installations, an automatic fire valve should be fitted on the fuel supply line as close to where it enters the building as practicable. The fire valve should be automatically operated by use of a heat sensitive device e.g. a fusible link or fusible solenoid fitted above the burner to the heat exchange unit. Storage of the fuel e.g. oil should be external, in a storage tank with a bund capable of holding 110% of the contents of the tank, or within a double insulated (internally bunded) tank.
- For gas fired installations, a quick action isolation valve on the incoming gas supply to the boiler, installed adjacent to the entrance/exit door to the boiler room should be installed, so that in the event of an emergency the supply can easily be shut off.
- All fuel carrying pipes (including underground) should be regularly inspected and maintained to reduce potential for corrosion and escape of fuel.
- Considerable heat can be generated by the products of combustion that pass to the atmosphere via the boiler flue. Therefore combustible materials should not be kept within 50mm of the heater flue. Where the heater flue passes through a floor, ceiling, wall or partition that contains combustible materials the material should be cut back to provide a 50mm air gap around the flue. Where the heater flue passes through the roof where combustible materials or insulation is present a proprietary fire-resisting sleeve or collar should be fitted.
- All heating systems should be serviced and maintained in line with manufacturer's guidelines.
- Waste fuel heating systems present a higher fire risk and require more specific controls in addition to those noted above:
  - Only proprietary waste fuel heating systems are to be used.
  - The heat exchange unit should preferably be sited external to the building or within an individual fire compartment.
  - Waste fuel is to be kept in a clear designated storage area remote from the heating unit.
  - The fuel loading hatch is to be kept in a secure closed position unless loading fuel.
  - The heating unit must not be overloaded with fuel.
  - The heating unit must not be left to run when the premises are unattended and therefore only sufficient fuel should be loaded to generate heat until close of business.
  - Where a direct feed of waste fuel is present, a suitable automatic fire damper system should be installed on the feed to prevent fire travelling back into the waste fuel store.
  - Where the fuel used is solid, such as wood or wood waste, the heater unit should be extinguished prior to the premises being left unattended, any ash/embers cleared from the heater is to be placed in a metal receptacle, removed from the premises, kept clear of the building by at least 5 metres and doused with water to ensure it is extinguished and disposed of separately from any other combustible waste.

## FURTHER GUIDANCE

**Government Fire Safety Guidance** www.communities.gov.uk/fire/firesafety/firesafetylaw (England & Wales)

**Health & Safety Executive** www.hse.gov.uk