Portable Heaters Safety & Compliance Game Plan



Temporary use of electric, propane or other portable heaters can be a useful way to supplement permanently installed heating systems or warm an outdoor workplace. But while keeping workers warm, comfortable and safe from cold stress is important, portable heaters may also cause fires, explosions, CO poisoning, and other hazards, not to mention OHS penalties, especially when they're used without the company's knowledge and consent. Here's an 8-step Game Plan for creating and implementing a written policy to ensure safe and compliant use of portable heaters at your workplace, whether it's a permanent facility or a temporary site, indoors or outdoors.

Defining Our Terms

Portable heaters (aka space heaters) are compact, movable devices that are not permanently installed which are designed to generate supplemental heat to a small area, like a single room or office on a temporary basis as an alternative or addition to central heating systems, including:

- Electric heaters.
- Fuel-fired heaters that use propane, natural gas, diesel, kerosene, or other combustible fuel.
- Radiant and infrared heaters.

- Temporary construction and industrial heaters.

Step 1. Perform Portable Heater Hazard Assessment

The starting point for hazard assessment is to recognize that all portable heaters don't pose the same hazards. So, avoid generic assessment and focus instead on the risk factors associated with different heater types.

Table 1. Portable Heater Hazards & Risk Factors by Type

Type of Portable Heater	Primary Hazards	Common Risk Factors
Electrical	• Electrical fires. • Ignition of nearby combustibles. • Tip-over events.	• Overloading. • Use of damaged cords or non-approved devices. • Unauthorized use of personal heaters. • Use of residential-grade heaters in industrial settings. • Plugging into non-dedicated circuits. • Placement near combustibles.

Type of Portable Heater	Primary Hazards	Common Risk Factors
Fuel-Fired (Propane, Natural Gas, Diesel, Kerosene)	• Carbon monoxide (CO) exposure. • Nitrogen dioxide (NO2) exposure. • Fire. • Explosion.	• Improper fuel storage and handling. • Inadequate ventilation. • Indoor use of non-vented heaters. • Failure to monitor CO and NO2 levels. • Placement near combustibles.
Radiant and Infrared	• High surface temperatures. • Fire. • Explosion. • Burns.	• Placement near combustibles. • Lack of physical guarding.
Temporary Construction and Industrial	• Fire in partially enclosed or unfinished spaces. • Interaction with dust, vapours, or flammables.	• Rapid deployment without review or inspection. • Lack of coordination between contractors. • Failure to obtain permits. • Lack of hot-work controls.

Step 2. Decide Whether to Allow Portable Heater Use

Next, determine whether to allow workers to use portable heaters at all based on the conditions and hazards at your particular workplace, including but not limited to:

- Presence of flammable or combustible vapours or dusts.
- Proximity to combustible or flammable materials like paper, packaging, or chemicals.

- Clearance from walls, equipment, and furniture.
- Electrical load capacity.
- Ventilation.
- Whether it's safe to leave the heater unattended.

Thus, for example, a total ban may be necessary for warehouses or other facilities dedicated to the storage of flammable or combustible materials. It might also be appropriate to allow some types of heaters while banning others, such as permitting electrical but not fuel-fired heaters that emit CO in enclosed or poorly ventilated sites.

Best Practice: Implement a written OHS policy that bans workers from using personal space heaters unless the company either furnishes or specifically approves the equipment. Establish a mechanism that workers can use to notify and seek your approval of any heaters that you don't provide along with an approval form (hyperlink to approval form) you can use to evaluate the request in accordance with specific criteria. This way you'll have knowledge of and control over the portable heaters at your workplace and will be able to prevent unauthorized uses and equipment likely to create hazards, such as overloading of electrical circuits or use of damaged extension cords.

Step 3. Ensure Portable Heaters Meet Appropriate Equipment Safety Standards

Require all portable heaters used at your workplace to meet CSA, ASHRAE, cUL, or other standards for that particular type of equipment. Heaters should also be equipped with appropriate safety controls, which may include:

- Mechanisms that automatically shut down or reduce power when the heater tips over.
- Thermostats to regulate and keep internal temperatures within safe levels.
- Dedicated electrical circuits.

- Guards to prevent worker contact with heating elements or parts.
- Physical barriers to shield adjacent combustible or flammable materials from heat.
- Hard-wired CO monitoring devices.

Step 4: Set Strict Rules for Portable Heater Placement

Your safety policy should include strict rules about placement, including a requirement that heaters be placed on flat, stable surfaces. Placement must also comply with distance requirements specified in OHS, fire codes, building codes, and other applicable regulations. The portable heater must be far enough from combustible and flammable materials, exit routes, etc., to meet minimum clearance distances but also close enough to portable fire extinguishers to ensure those extinguishers are readily accessible. Prohibit placement of portable heaters:

- In areas where flammable or combustible materials are used or stored.
- In exit routes, corridors, or walkways.
- In shipping areas.
- Under desks.
- Near curtains, boxes, or waste bins.

Step 5: Set Strict Rules for Portable Heater Use, Operation & Maintenance

Require workers to use portable heaters safely, not leave them unattended and turn the equipment off when their shift ends. Rules for electrical heaters should include a requirement that workers:

- Plug directly into wall outlets only.

- Refrain from using extension cords or power bars unless they're specifically rated and approved.
- Refrain from using shared circuits with high-draw equipment.
- Regularly inspect cords, plugs, and other equipment.

Rules for fuel-fired heaters should provide for:

- Safe practices for refueling and fuel storage.
- Ventilation.
- CO monitoring.
- Minimum clearance from combustibles.

Step 6. Provide for Portable Heater Inspection

Specify that portable heaters must be inspected (hyperlink to inspection form):

- Before first use.
- Before being allowed into the workplace when a worker seeks approval to use a personal heater at work.
- On an ongoing and continual basis as necessary and in accordance with manufacturer's instructions.

Any heater that malfunctions or is found to be unsafe should be immediately removed from service, tagged, and not used again unless and until a qualified person makes necessary repairs and certifies the heater as being safe to use.

Step 7. Ensure Emergency Response Plan Accounts for Portable Heaters

Make sure that your emergency response plan and procedures account for portable heater-related events including fires, explosions, fuel spills or leaks, and the activation of CO alarms. Also require workers to immediately report any smoke, overheating, unusual odours, alarms, or other indications of

heater malfunction.

Step 8. Train Workers in Portable Heater Safety

As with any other equipment, you must provide workers with information, instruction, and training on safe use of portable heaters. Such training should cover:

- The kinds of portable heaters that are permitted and prohibited in the workplace.
- The portable heater approval process in place at your site.
- The fire, explosion, CO, and other hazards posed by permitted portable heaters.
- Safe placement and clearance rules.
- Safe use of permitted heaters.
- What to do if a portable heater malfunctions.

Keep records documenting the training you provide and the steps you take to verify that workers actually understand and are capable of applying it.