

Mitigating the Risks of Outdoor Heaters

Outdoor heaters are portable heating appliances designed to provide thermal radiation to outside spaces, such as open-air patios or decks. Also known as patio or umbrella heaters, these appliances can be utilized at various types of businesses (e.g., bars, hotels, restaurants and entertainment venues) to help keep outdoor areas warm and extend their usability throughout the colder months.

Although outdoor heaters can be beneficial, they also come with unique risks. Without proper precautions in place, these appliances could pose significant fire safety concerns and cause serious injuries. As with many heating appliances, outdoor heaters are also subject to specific recommendations from the National Fire Protection Association (NFPA).

With this in mind, it's vital for commercial property owners with outdoor heaters on-site to understand their related hazards and ensure compliance with applicable standards. This article provides more information on the primary risks associated with outdoor heaters and highlights best practices to ensure safe use, in accordance with NFPA recommendations.

Key Risks

There are two types of outdoor heaters: electric heaters and propane heaters. Both types of heaters pose similar hazards, particularly in terms of fire safety. For instance, these appliances could spark fast-spreading fires if placed near flammable materials or other sources of ignition, potentially harming anyone in the vicinity and causing considerable property damage. Poor placement or insufficient securement methods could also prompt

outdoor heaters to tip over and generate extensive fires.

If these appliances tip over in crowded areas, they may strike nearby individuals on their way down, possibly resulting in severe injuries and bodily trauma. Without knowledge of safe handling methods, employees could also experience burn injuries when setting up, adjusting or moving outdoor heaters.

Regarding the risks specific to each type of heater, electric heaters come with elevated electric shock hazards and slip, trip and fall exposures due to their use of power cords. These safety concerns can be especially prevalent if power cords are damaged or placed in areas with heavy foot traffic. On the other hand, propane heaters carry the risk of carbon monoxide poisoning due to their fuel use. These exposures can be heightened by poor maintenance and inadequate ventilation.

Best Practices for Managing Risks

Certain NFPA standards—namely Sections 11 and 69 of NFPA 1 and NFPA 58—outline recommendations that commercial property owners should follow when operating outdoor heaters on-site. While these recommendations are considered voluntary, many federal agencies (i.e., OSHA), state governments and local jurisdictions have implemented them within their own regulations and municipal codes, ultimately making them legally binding.

Here are some key NFPA recommendations regarding electric heaters:

- Select electric heaters that have been listed by a qualified electrical testing laboratory.
- Follow the product manufacturer's instructions on proper clearance, installation and wiring procedures.

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- Place electric heaters in areas where they cannot be easily overturned and at least 3 feet from anything that could burn.
- Set up electric heaters in a way that allows them to be plugged directly into appropriate power receptacles whenever possible. If extension cords must be used:
 - Confirm they possess sufficient current capacity.
 - Plug them directly into approved power receptacles, taps or multiplug adapters.
 - Make sure that each cord serves just one heater at a time and is properly grounded.
 - Don't use spliced, deteriorated or otherwise damaged cords.
- Refrain from using multiplug adapters or extension cords in place of permanent wiring.
- Avoid affixing extension cords and flexible cords to structures; extending them through walls, ceilings, floors, or under doors or floor coverings; and subjecting them to environmental or physical damage.
- Unplug electric heaters when they aren't in use.

Here are some key NFPA recommendations regarding propane heaters:

- Select propane heaters that have been listed by an organization deemed acceptable to the authority having jurisdiction.
- Follow the product manufacturer's instructions on proper clearance, ventilation, lighting, shutdown and storage procedures.
- Have a qualified individual conduct the installation, modification and maintenance of fixed liquid propane systems for propane heaters.
- Don't use propane heaters in enclosed spaces, such as covered patios, decks or tents.
- Set up propane heaters based on commercial property occupancy guidelines. For example, in

assembly occupancies—spaces holding 50 or more people—propane heaters must be at least 5 feet from designated exits. Similar to electric heaters, propane heaters must also be placed in areas where they cannot be easily overturned and at least 3 feet from anything that could burn.

- Keep the hoses for propane heaters as short as possible, clearly visible and protected against potential damage.
- Store the cylinders for propane heaters in a safe, well-ventilated and secure location, away from any ignition sources. This location should offer adequate protection against physical damage, tampering and exposure to extreme temperature fluctuations. Always store cylinders upright with the valve facing upward. Never store them in a building or on the roof of a building. When storing cylinders outdoors, place them:
 - At least 5 feet away from any doorway or opening in a building frequented by others where occupants have two or more means of egress
 - At least 10 feet away from any doorway, opening in a building or section of a building that has just one means of egress
 - At least 20 feet away from any vehicle service station fuel dispenser
- Switch off propane heaters when they aren't in use.

It's important for commercial property owners to be aware that NFPA standards and local fire codes can evolve over time. As such, they should continue to monitor these standards for possible changes, making adjustments as needed to ensure compliance. It may be useful to consult trusted contractors, legal counsel and public officials for specific compliance guidelines.

Additional Safety Considerations

In addition to following NFPA recommendations, commercial property owners should keep their outdoor heaters on regular inspection, cleaning and maintenance schedules to confirm that all parts and

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mechanisms remain in good condition, conducting repairs or making replacements when necessary.

Furthermore, they should train employees on the following safety guidelines for handling these appliances:

- Never use outdoor heaters if they appear damaged.
- Position outdoor heaters on flat and stable surfaces. Secure them in place using any provided devices or materials, such as tie-down straps, stakes, sandbags, water reservoirs or concrete blocks.
- Don't place outdoor heaters or any of their components (e.g., power cords) near walkways or other areas with heavy foot traffic.
- Avoid plugging in or lighting outdoor heaters if you smell smoke or gas.
- Adjust the control knobs on outdoor heaters carefully to avoid overworking the appliances. Aim for slow and gradual adjustments rather than sudden and extreme fluctuations.
- Unplug or switch off outdoor heaters (and disconnect the gas, if applicable) and give them time to cool down before moving them. Never touch their burners or reflectors while they are turned on.
- Follow workplace emergency response procedures if a fire breaks out from an outdoor heater. Depending on the size of the fire, this may entail using a designated extinguisher to put out the flames or evacuating the area and contacting the local fire department for further assistance.

Conclusion

Although they can offer several advantages in different commercial settings, outdoor heaters carry a range of risks. By reviewing their potential hazards and adhering to best practices for risk mitigation, commercial property owners can promote the safe operation of outdoor heaters while minimizing the likelihood of associated fires and injuries.

Even so, incidents involving outdoor heaters may still

occur. As a result, it's imperative for commercial property owners to have adequate insurance coverage in place, thus ensuring proper financial protection against possible losses. It's best to work with trusted insurance professionals to determine specific coverage needs.

Contact us today for additional risk management guidance and insurance solutions.