

Portable Electric Space Heaters

Many people use portable space heaters for that little bit of extra heat in a cool room or in the living room while watching TV on a cool night, instead of turning up the heat to warm the entire house.

If you're in the market, choose the type and size of portable electric heater that best suits your purpose, at a price you can afford.

Note that all portable electric heaters are 100 per cent efficient at converting the power they consume into heat.

Convective and Radiant

There are two main types. Convective heaters warm the air, with or without a fan. They are the best choice for those who want to quickly warm a large space, and keep it warm. Convective heater types include electric-element, liquid-filled and ceramic.

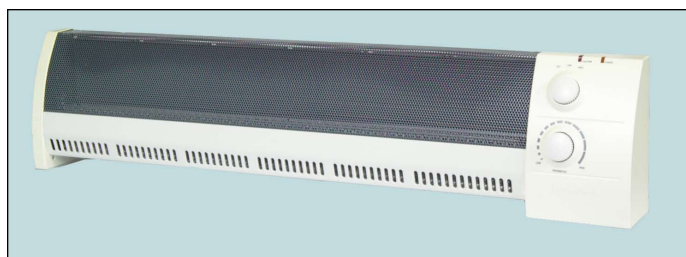
Radiant heaters warm the air and also emit infrared radiation (like the sun) that warms people or objects. They are better suited for small area or spot heating. Radiant heaters include metal-rod and quartz models.

Each type has pros and cons, such as:

- Purchase price
- Size
- Weight
- Sound level produced
- Maintenance costs (for example, replacing burned out heat lamps)
- Durability (fragile quartz tubes)
- Uniformity of the heat source (which affects heater cycling times)
- Temperature of the heat source (higher temperatures increase the risk of burns or fires), and
- The time it takes to get up to temperature

Electric-element heaters

These types of heaters are relatively inexpensive and mechanically simple. Electric-element heaters use fans or natural air currents to move air over heated coils or wire elements inside the heater. Models that use a fan create the same amount of heat as convection-type heaters, but can usually spread the heat to a room faster. With a thermostat that responds quickly to temperature changes, they work just as well as a large heater at keeping a room warm. However, they are not as good at spot heating as a radiant heater would be.



Electric element baseboard heater

Liquid-filled heaters

Liquid-filled heaters use an electric element to heat water or oil, which then warms a radiator. This creates natural convective air currents in the room, and since water and oil hold heat well, the temperature stays steady. Once the fluid is warm, liquid-filled heaters maintain their heat for a long time. However, they do take longer than other styles of heater to warm up. The result is that they are no more efficient than non liquid-filled models.



Ceramic heaters

Ceramic heaters have a fan that moves air through a special conducting ceramic element. The air is then distributed throughout a room. Ceramic heaters are compact, lightweight, and safe because the element never gets hot enough to start a fire. However, small areas of the grille can become hot. These types of heaters are unresponsive to temperature changes and so wide temperature swings can occur.



Ceramic heater

Metal-rod heaters

This type of heater is suitable for a basement or garage because it is good at spot heating. Metal-rod heaters use a heat element placed in front of a shiny reflector that radiates heat. They warm people and objects first, and then the surrounding air. These heaters can be a potential fire hazard because too much heat can be focused in one place.

Quartz heaters

Quartz heaters have an electric element that's inside a quartz glass tube. This radiates heat to warm people and objects, and so these types of heaters are best at spot heating. They can, however, pose a significant fire hazard, and the quartz tube is easily broken.



Quartz heater

Wattage

The wattage of the heater and how long it operates determine operating cost. Heaters vary from 400 watts up to 1 500 watts, the maximum that can be safely operated on a standard 15 amp, 120 volt circuit, which is common in most homes.

At Manitoba Hydro's residential electricity rate, it costs about 6 cents/hour to operate a 1 000 watt heater. Running it 10 hours a day for a month would cost about \$18.

Safety

Safety is always a concern when using electricity. Follow the manufacturer's operating instructions and plug the heater directly into a dedicated electrical outlet. Never use an extension cord and never leave the unit unattended.

Look for safety features such as an automatic shut-off tip over switch, overheat protection, and an enclosure that keeps out curious fingers.

For details on Manitoba Hydro's Power Smart Residential Programs: Telephone: (204) 480-5900 in Winnipeg
Toll-free: 1 888 MB HYDRO (1-888-624-9376)
www.hydro.mb.ca

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