

Electric Room Heaters

Electric room heaters are classified into two main types: radiation-type or convection-type. They are usually used for local heating of a small to medium area. The power ratings of most common electric room heaters range from 1000 W to 2000 W.

Radiation-type electric room heaters comprise heating elements embedded in quartz protecting tubes with the temperature controlled by thermostats. They are usually installed at high level and kept out of reach. This type of heaters can warm up the area quickly. In addition, radiation-type heaters in the form of infrared down lights are also installed in some modern bath rooms. The power ratings of these heaters are comparatively lower, at about 150 W.

Convection-type electric room heaters either employ natural convection or forced convection to heat up the area. An electric fan is used for the forced convection heater to convey heated air passing through the heating elements to the room. No electric fan is required for the natural convection heater. The most common type of the later is the oil-filled heater. The oil serves as a heating media carrying heat from the heating elements to the radiators. The room air adjacent to the radiators is in turn heated, thereby warming up the room gradually by natural convection.

Whatever the principles of electric heaters employ, they shall comply with the safety requirements stated in the IEC 60335-2-30. A list of electric heaters with certificates of safety compliance can be browsed on EMSD homepage at www.emsd.gov.hk.

As the power consumption of an electric heater is high, consumers should select the type of electric heater carefully to suit their application so as not to overload the fixed electrical installation. In case of doubt, a registered electrical contractor/worker should be consulted.

The Electrical Blog is contributed by the Electrical Division. If you would like to know more about this topic, please contact the Division Hon Secretary, Ir Geoffery L Chan at glchan@hec.com.hk