



# ELECTRIC AVENUE

Richard Brown, from Electrorad, answers some questions about the direction of the UK electric heating market, outlining the opportunities for electrical contractors.

**Q: Is the UK Electric heating market growing, and if so, why?**

We have seen substantial growth in the electric heating market recently and there are a number of reasons for this. With new dwellings being designed and constructed to be very energy efficient in terms of low heat loss, electric heating is not expensive to run and is a relatively low cost installation option. Electric heating offers great controllability, 100% conversion of energy input to heat output, zero maintenance, no flue requirement, no danger of carbon monoxide and for social and private landlords annual inspections are not required.

The biggest market we see is the storage heater replacement market. Many individuals and organisations are looking



for a better looking, more controllable option which can provide instant radiant and convection heat just like a regular central heating system. Electric heating is set to keep growing in demand as more renewable methods of electricity production are brought on line and the carbon content of grid electricity is reduced.

**Q: What are the different types of Electric Heating available?**

There are the traditional electric heating options available i.e. Night storage heaters

and convector panel heaters and then there are the newer options of electric radiators, electric boilers and underfloor electric heat mats. Each has its own merits when used correctly and for the right applications.

**Q: How do you calculate the size and number of electric radiators you need for an installation?**

Calculations should be done based on the heat loss of each room that requires heating. This calculation takes into account the U values (Heat loss factor) of

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Electric radiators are available in different heights



The Digi-line steel electric radiator

the materials used in the building, the air changes due to ventilation, the internal temperature requirement and an assumed external temperature (usually  $-3^{\circ}\text{C}$  for design purposes). Overload factors must then be applied to ensure the room temperature can be increased quickly when required. It is always better to have too much power than too little with electric heating, as the thermostats will ensure that only the power needed is actually used to maintain a set point temperature.

Electrorad offers a heating design service working from architect plans and U values. If U values are not known, some basic assumptions can be made to still ensure the correct radiator is specified.

### **Q: Can Electric Heating Systems be as accurately controlled as gas central heating?**

The controllability of electric heating is typically better than gas central heating systems. Panel heaters and electric radiators are particularly good for controllability, allowing you to control every room individually for time of use

and temperature required.

This in turn allows you to have absolute control over room by room energy usage. Each individual electric radiator or panel heater will usually have a built in electronic room thermostat with 7 day / 24 hour programming and the ability to set comfort and economy temperatures.

The only controls usually installed with a gas boiler system are a central thermostat and programmer, which switches the boiler off at the set point temperature, but this can only be sensed in one room – usually the hall. It cannot control individual room temperatures or energy usage as you can with electric radiators.

Thermostatic radiator valves can improve things for a gas central heating system but they are usually not programmable, mostly quite inaccurate and typically not used.

### **Q: What are the options available from Electrorad?**

Electrorad offers three ranges of electric radiators – Vanguard, Digi-Line & Aeroflow.

Vanguard is an aluminium radiator with a European design. Internally it is filled with oil, it has an electric element immersed within the fluid which is 100% efficient in transfer of heat to the oil,

which then transfers to the surface area of the radiator creating even heat across the whole surface. It has a digital electronic chrono-proportional thermostat and 7 day/ 24hr programming.

Digi-Line is a steel electric radiator which looks like a regular UK central heating radiator. Inside it is filled with oil and sealed, so top ups or bleeding is not required. Each radiator has a digital electronic dual-proportional band room thermostat and built in radio frequency receiver which can be paired with a RF central programmer to create a central heating system. It is available in single panel and double panel variants and in 500 & 300mm heights.

Aeroflow is a steel construction radiator with electrical elements embedded within fireclay heat plates. The heat from the elements is transferred through the fireclay and to the radiant surface area. Convection fins both sides of the heat panel ensure an even heat distribution in to the room. Each radiator has a chrono-proportional room thermostat and a 7 day / 24hr programming system.

**For more information circle readerlink 102**

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