

## **HEATING**

### **Radiators**

Heat the room through a combination of radiation and convection, they are simple and compact. Little maintenance is required and they allow good temperature control.

### **Electric Panel Heaters**

Best suited to applications where heat losses are low or where systems are impractical or uneconomic. Temperature control is very accurate, heaters are easy to relocate if required and they require minimal maintenance. As more electricity is generated from sustainable/renewable sources, they are likely to become more popular.

### **Electric Storage Heaters**

Heaters contain a heavy medium for storing heat provided overnight in the off-peak period. Modern heaters provide good control and are sized to provide 95% of the heating demand from off-peak energy. Combination heaters are available which include an electric panel heater in the same casing, so room temperatures are maintained later in the day when the heat store is exhausted.

### **Convectors**

Hot water pipes within the convection heaters create an upward convection current of hot air within the casing, pulling room air in at the bottom and pushing warm air out at the top. Often employed as a continuous feature along the outside wall of a heated room.

### **Underfloor Heating**

Two types: low temperature hot water systems and embedded electric element systems. Both types comprise a matrix of either plastic pipe work or heating cable embedded between a layer of screed and the floor slab below. This method of heating is particularly suited to public spaces such as foyers, shopping complexes and churches. Provides even heat, clear walls but slower response times.

### **Radiant Heating**

These heating systems are usually used in buildings such as warehouses and industrial units. This is because they are particularly suited to tall spaces as heaters can be located at a high level to provide a radiant output in a downwards direction. Radiant heaters warm people directly without heating the air within the space. Different types of radiant heaters are as follows: gas fired radiant tube

heaters, gas fired plaque heaters, electric quartz heaters, how water radiant strip heating, and hot water radiant panels.

### **Warm Air Unit Heaters**

Typically used in industrial applications, they burn oil, propane or natural gas. These heaters can be free standing wall mounted or suspended from the roof.

### **Boilers**

There are many different types, each of which is suited to a particular application. Types include: atmospheric boilers, forced/induced-draught boilers, modular boilers, condensing boilers, dual-fuel boilers, boiler chimneys, and fan dilution systems.