

HCP



Healthcare

Wards, corridors, controlled environments and bathroom areas

radiant heating

Radiant Heating

Radiant heating is an ideal heating solution for healthcare and controlled environments. High level installation maximises the available floor and wall space and the flexibility in which space is used.

Accidental injury to patients, visitors and staff is minimised, as are the chances of damaging terminal heating units.

Energy Saving

Radiant heating systems heat objects rather than air. Therefore energy is not wasted bringing large volumes of air to a comfortable temperature before occupants feel the heating benefits. As a result, internal air temperatures and operational energy usage can be reduced, while still maintaining high comfort levels.

Performance

Radiant heating panels provide a heat output of 521 W/m², based on a temperature differential (ΔT) of 55°C between the air and mean water temperatures. The output is based on tests to the new British and European test standard BS EN 14037: *Ceiling mounted radiant panels supplied with water at temperature below 120°C.*

Infection Control

Flat panels are easy to clean and reduce the cross-infection risks associated with traditional wall-mounted radiator systems, helping to meet Department of Health infection control targets.

Current deep-clean guidance requires the removal of radiator covers and cleaning behind radiators. This is both time consuming and costly.

An anti-bacterial paint finish inhibiting the growth of micro-organisms is available, providing additional assistance in meeting infection control targets.

Air Movement

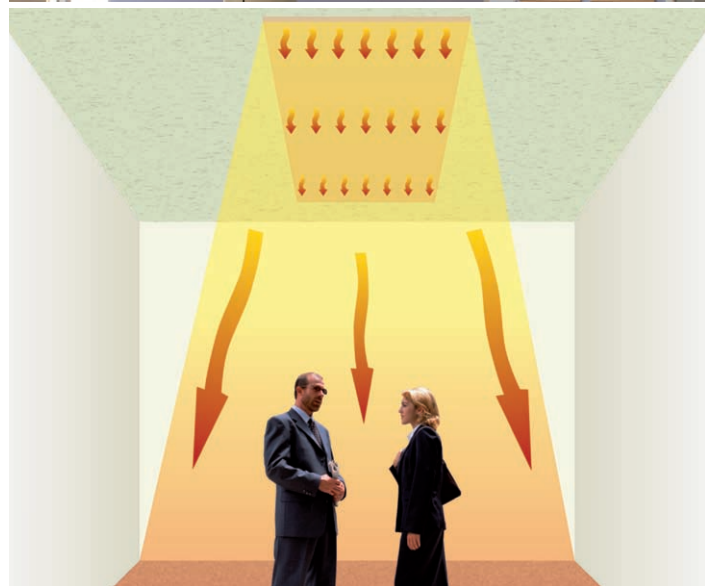
The use of radiant heating reduces air and dust movement and the risk of air-borne diseases, such as legionella. This leads to increased hygiene levels.

Maintenance

Radiant heating panels do not contain moving parts e.g. motorised fans, resulting in minimal maintenance requirements, system downtime and operational costs.

Whole Life Cycle Costs

The combination of reduced energy consumption and maintenance requirements, with competitive initial capital costs, leads to a heating system with one of the lowest whole life cycle costs.



Wards

Radiant heating panels are used extensively in wards to provide patients with a comfortable thermal environment. Panels operate with low noise levels, contributing to a comfortable acoustic environment.

Panels are available in a range of sizes to meet specific requirements and can be integrated within a suspended ceiling or independently surface mounted.

In order to minimise heat losses, panels are typically located above windows, around exterior walls and in bathroom areas.

Mental Health Units

Anti-ligature panels are available for secure locations such as mental health units. Such panels are designed to reduce self-harm opportunities.

HCP's Dutch-fold anti-ligature panels have been recognised by the Construction Products Association for the innovation in the design and manufacture of its radiant heating panels. HCP's design was recognised in the health, safety and security section of the CPA's annual Construction Products Innovation and Achievement title.

Two anti-ligature options exist: surface-mounted and gravity-baton. The choice of panel will depend on the security risk: low, medium or high. Further information is available from the technical department.

Controlled Environments

Radiant heating panels are often specified for laboratories and clean rooms because they are easy to keep clean.

As the heat transfer mode is predominantly radiant, there are fewer draughts reducing unwanted air movement in the space.

This keeps air and dust movement to a minimum, an important consideration where specific air movement regimes are required for infection control and comfort conditions.

Corridors

The benefits of radiant heating are still felt in environments with a high air change rate. Panels are often found in corridors and reception areas.

Radiant heating panels are also effective in combating cold down drafts, a characteristic often associated with full and half height glazing in highly glazed areas.



Integrated Service Panels

Integrated service panels evolved as a result of increased off-site fabrication and modular construction methods.

Prefabricated panels combine a radiant heat source with M&E services such as luminaires, pulse switches, PIR sensors and ventilation points.

Access hatches are often incorporated, allowing easy access to the ceiling void; limiting the risk of damage to the ceiling during construction and when undertaking maintenance operations.

Application

Integrated service panels are suited to modular bathrooms environments. Panels are pre-tested and arrive with pre-integrated services, which simply slot into their pre-defined position within the modular structure.

Typically located centrally in a plasterboard or suspended ceiling, integrated service panels provide patients with a comfortable and functional environment and hospital staff with a surface that is easy to clean and maintain.

Off-site fabrication

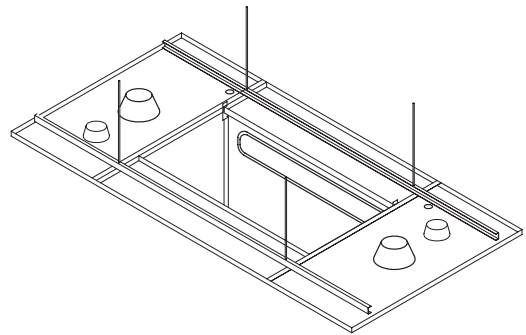
Off-site fabrication reduces build costs, damages and installation times, while increasing build certainty.

The use of integrated service panels leads to reduced program times, improved quality control and improved productivity.

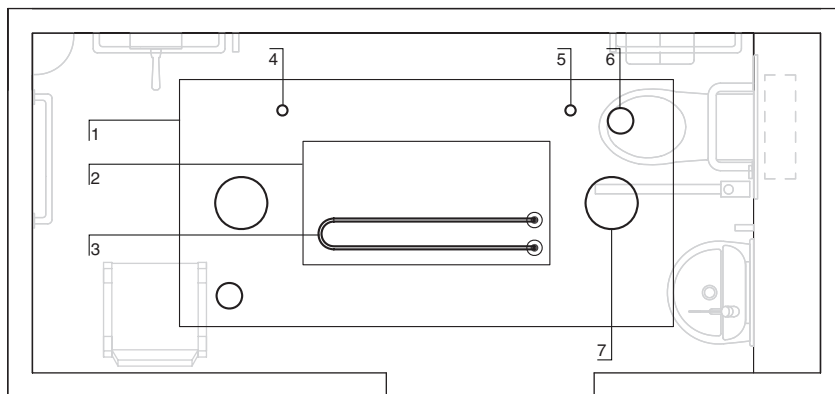
Design & Performance

Integrated service panels are designed to incorporate project-specific requirements and are available in a range of different widths and lengths. Radiant heating panels provide a heat output of 521 W/m², based on a temperature differential (ΔT) of 55°C between the air and mean water temperatures.

Polyester powder coated aluminium panels are suitable for use in damp environment and are ISO 9227 compliant to achieve a 1,000 hour salt-spray test.



Plan drawing: Ensuite featuring integrated service panel



1. Radiant heating service panel
2. Service hatch
3. Heating element
4. PIR sensor
5. Pulse switch
5. Ventilation point
6. Luminaire