

# Solution Providers for the Healthcare Sector

The healthcare market is long established as one of the UK's largest capital construction sectors - nearing £3bn in value by 2018. Government funding is aimed, understandably, at building new hospitals to satisfy the growing need for health care but is also placing significant emphasis on improving the efficiency of current building stock, whilst delivering cost savings.

There are many key factors that shape the development of healthcare facilities today. Whether the requirement is to meet industry

regulations and guidelines or to deliver a comfortable, healthy environment for patients, ensuring the correct decisions are made today can ensure many years of customer satisfaction.

With the ability to provide compliant, energy-efficient solutions compatible with Building Maintenance Systems, Zehnder understands the challenges faced by specifiers when designing indoor climate systems for healthcare buildings. Whether it be radiant heating and cooling panels, radiators or simply design inspiration, Zehnder has a range of solutions for any project.



## Considerations

Ensuring that the concerns detailed below are at the forefront of design considerations will ensure that requirements are at least met in the planning phase and where possible exceeded. This will contribute towards a project that runs smoothly throughout its lifecycle, ensuring the appropriate solutions are chosen, through to the delivery of a healthcare facility that functions as stipulated in the design.

## Health & Safety

Providing both a healthy and safe environment is paramount to all stakeholders within the care sector. For those both delivering and receiving personal care need to do so in safe surroundings and in an environment that is both comfortable for the patient and likely to aid recovery, rather than impair. Radiant heating and cooling (RHC) ceiling panels, when specified with an anti-microbial coating, inhibit bacterial growth such as E.coli and MRSA on their surface, helping to prevent spread of infection and illness. In addition, being located in the ceiling eliminates any issues with blood and body substance spills that will require floor cleaning, potential impact to heating solutions such as underfloor heating and also potential spread of bacteria at certain temperatures.



The issue of indoor air quality is never out of the news today. Distribution of heat via water, as with RHC panels, rather than air will eliminate the transfer of dust and other air pollutants, such as mould, fungi, bacterium and viruses that can impact a person's health.

The provision of climate solutions that are out of arms reach in healthcare environments, will reduce likely interference, potential damage that could ensue, particularly in thoroughfares where there is a high degree of traffic. Also considering the limited room and floor space in NHS Hospitals, protecting patients from coming into contact with relatively high temperature heating applications can prevent severe injuries.

For the health organisation, freeing up valuable wall and floor space will ensure that additional support services, such as medical equipment and beds can ensure the best utilisation of scarce space.

### Key Factor



Specifying an anti-microbial coating on radiant ceiling panels inhibits the growth of bacterial organisms such as E.Coli and MRSA.

## Maintenance

Planned maintenance and associated costs can be seen as a nuisance and will be determined by the heating system that is installed. The ability to almost eliminate this work, through easy to clean and service protocols, will provide both a financial cost saving for the healthcare facility and ensure equipment is functioning without disruption to care services.

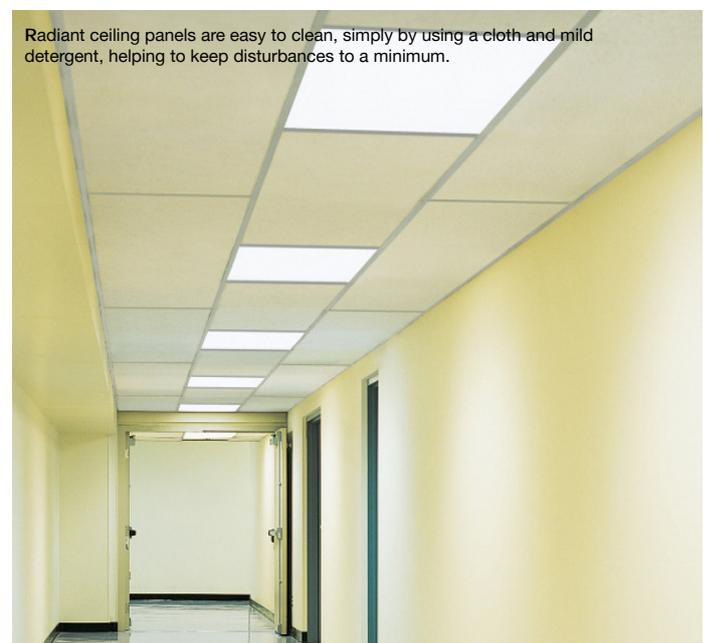
Radiant ceiling panels can easily be cleaned with a cloth and mild detergent. With no moving parts, they require maintenance that can be associated with the operation of fans in air conditioning units, that can be both costly and timely to carry out and the ensuing disturbance they can cause.

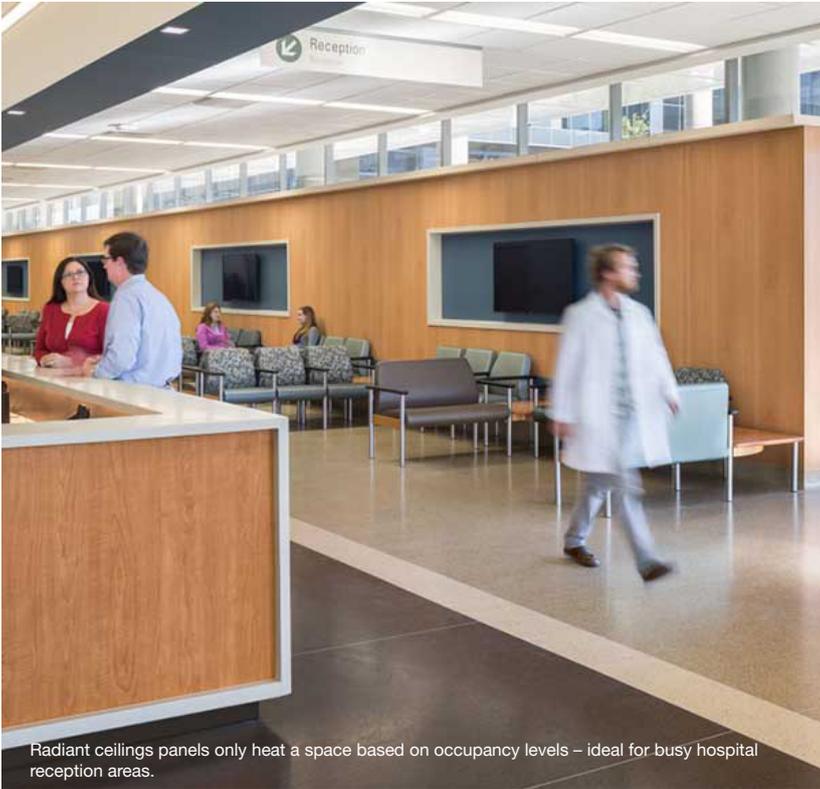
This disturbance, which may result in hospital wards being vacated, also extends to underfloor heating should any issues arise, which may result in the floor having to be taken up. With ceiling panels, as they are both out of arms reach and single panels can be replaced more easily, disruption will be kept to a minimum.

### Key Factor



With no moving parts, radiant ceiling panels can easily be maintained by cleaned with a cloth and mild detergent.





Radiant ceilings panels only heat a space based on occupancy levels – ideal for busy hospital reception areas.

## Adaptability

Should a building or heated space require a change of use – either completely or a restructure, for instance moving of hospital beds, radiant ceiling panels can easily be manipulated within a ceiling grid to supply heating or cooling as required. Underfloor heating may require the floor boards taking up and additional work carried out – both costly and timely.

RHC panels are perfectly suited to transitory areas, such as long corridor runs and reception areas, only heating spaces based on human occupancy and activity. They can also be supported by radiators to provide ‘local’ heating as required, for sedentary areas such as reception areas and service desks.

In addition, ceiling panels can provide both heating and cooling simultaneously, based on a building’s requirements, so offer an energy efficient solution without any adaptation required to the panels.

## Key Factor



Radiant ceiling panels can easily be manoeuvred in a ceiling grid, so if a building’s use is altered, they can comfortably cater for heating and cooling requirements with minimal maintenance.

## Regulations and Guidelines

Ensuring compliance to mandatory industry regulations, in addition to voluntary, best practice standards is essential to meet a building’s performance criteria and to meet specific industry targets.

For NHS, public health and social care organisations adopting a Sustainable Development Management Plan (SDMP) will help satisfy certain requirements, such as the Public Services (Social Value) Act 2012 which stipulates to ‘Improve the environment in which care, or the functions of your organisation are delivered, for service users and staff’. This is supported by the Health and Social Care Act 2012 that details prevention and control of infections.

Specifying climate control solutions that contribute towards a safe and healthy environment, that support the well-being and recovery of patients while helping to meet a health organisation’s targets should always be recommended as a matter of course.



Sustainable Development Management Plan (SDMP) Guidance for Health and Social Care Organisations

The formal guidance for writing an SDMP for NHS, public health and social care organisations

January 2017

Sustainable Development Unit  
Working across the NHS, Public Health and Social Care system

## Key Factor



Working with industry leading manufacturers will ensure that optimum solutions are delivered and that you will comply with regulations.



## Energy Efficiency

Although capital investment in the healthcare market is considerable, significant emphasis has been placed on improving the efficiency of building stock, while delivering cost savings. A Sustainable Development Management Plan (SDMP) emphasizes the need for sustainable solutions, providing longevity, low running costs and a return on investment.

RHC ceiling panels will only heat the objects and occupants with a space, rather than the space itself – so they prove efficient in operation. In addition, they are responsive to heat demand and with short heat up times, are particularly effective at distributing heat.



Provision of heat through water based heating systems also provides a more cost effective solution when compared with air heated systems – heating water is cheaper than heating air. Air heated systems may offer short term unit cost gains, but will not provide a sustainable, cost effective investment over the next few decades, as running and maintenance costs will be significantly higher per year.

## Key Factor



Delivering a heating system that is responsive and effective in heating and cooling buildings based on their use, will help deliver an energy efficient solution.

## How we can help

Regardless of the project you are working on, whether a hospital or medical practice we have a range of solutions to assist. At Zehnder, our name is synonymous with innovation and delivering exceptionally high quality, high performance indoor climate solutions. Contact us to find out how we can help.

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