

RADIANT

HEATING & COOLING SOLUTIONS

SPECTRUM PLUS





SPECTRUM PLUS

What does Radiant Heating and Cooling signify?

Radiant Heating and Cooling offers heating and cooling solutions that are the informed choice for commercial applications across the UK.

We have invested in world class manufacturing facilities. Our products undergo rigorous testing and are subject to stringent quality control, so you can be assured our products will meet the high standards that you would expect from us.

On top of this we invest heavily in new technology. Our products lead the way in design, performance and energy efficiency. We have a commitment to innovation and continually develop new products which permit our customers to be as competitive as they can, in their market place.

Our success is based on a wealth of engineering knowledge and is backed by a sales and technical team who each have 20-30 years' experience of working in the Heating and Ventilation industry.

We see the role of a supplier as being an integral part of customer's company. We aim to build long term partnerships with our customers and work closely with you: from understanding your needs, to on time deliveries into your site.

We truly believe in good customer service and we want to take the stress out of our customers' lives so you can buy from us in confidence.

SPECTRUM - INNOVATIVE, DISCREET AND ENERGY EFFICIENT HEATING SOLUTIONS

Our revolutionary designs, stringent quality procedures and advanced manufacturing processes, guarantee efficient products, manufactured to the highest quality standards and supplied with our commitment to superior customer service.

Our heating solutions are simple to use whilst being extremely low maintenance. They can be used in any commercial application and are produced to guarantee a durable, strong finish.

The Spectrum range of Radiant ceiling panels is all about people and providing a comfortable environment for occupants. Our Radiant ceiling panels provide an alternative to traditional heat emitters delivering heat directly to those areas where it is required. This creates a more comfortable environment for occupants by creating an even temperature across the room.

With a range of ceiling panels available, RHCS can offer the perfect solution to your heating or cooling requirements.

PRODUCT DESCRIPTION

The Spectrum range of radiant ceiling panels from RHCS provides an alternative to traditional heat emitters.

Radiant panels offer many benefits:

- » Create a more comfortable environment for occupants by creating an even temperature distribution across the room
- » Save energy (up to 30% with a Spectrum system) and money by achieving a higher perceived temperature than the actual room temperature
- » Work well with lower temperature heating systems
- » Provide an efficient solution offering a short heating and cooling time
- » Installed within a ceiling or high on a wall they maximise wall and floor space
- » Silent operation
- » No dust/bacteria dispersal offering a hygienic solution
- » Maintenance free
- » Lower cleaning costs

Spectrum radiant ceiling panels are a perfect choice for retail and educational establishments, theatres, auditoriums, warehousing, sports halls, aircraft hangers, car showrooms and factory facilities.

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SPECTRUM PLUS RADIANT PANEL

The Spectrum Plus is designed for TBAR and plasterboard installations up to nine metres, with higher outputs specifically with health and education projects in mind and 12 mm copper meanders to ensure turbulent flow through the panel.

The Spectrum Plus radiant panel offers a high quality, technical specific solution to this cost sensitive commodity area of the radiant market.

APPLICATION

Spectrum Radiant Ceiling Panels provide the ideal heating solution whatever the size and type of application. They can be particularly effective in large spaces that would be difficult to heat by using traditional methods.

The Spectrum Plus radiant panel is light and robust. It offers market leading performance and comes with an impressive technical specification.

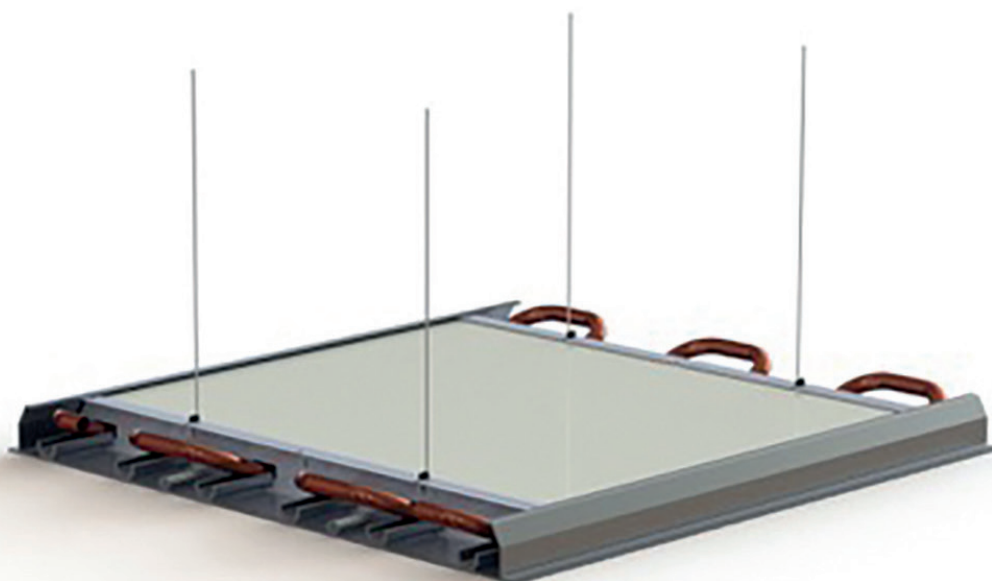
It is manufactured in the UK and available with short lead times.

This model is primarily designed for use within suspended 600mm grid ceilings and can be used within both standard and micro tee ceiling systems.

Panels are available in nominal sizes to replace 600mm ceiling tiles. Two panels can be installed in series for a single hydraulic circuit up to 6m in length using one flexible hose, also available from RHCS, and using one set of valves.

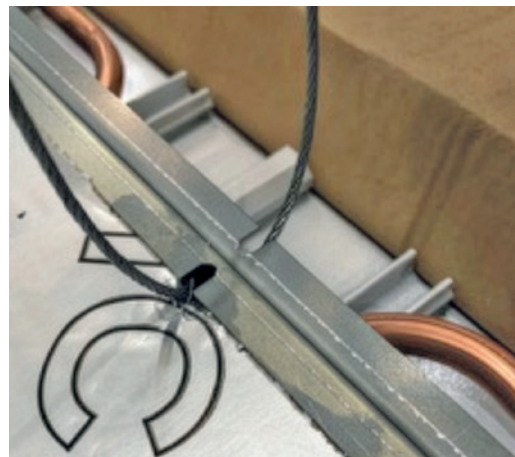
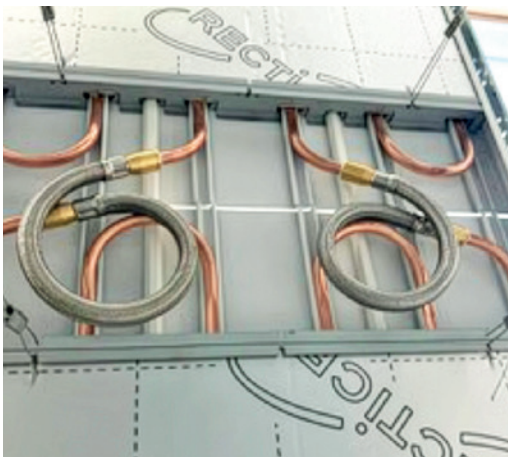
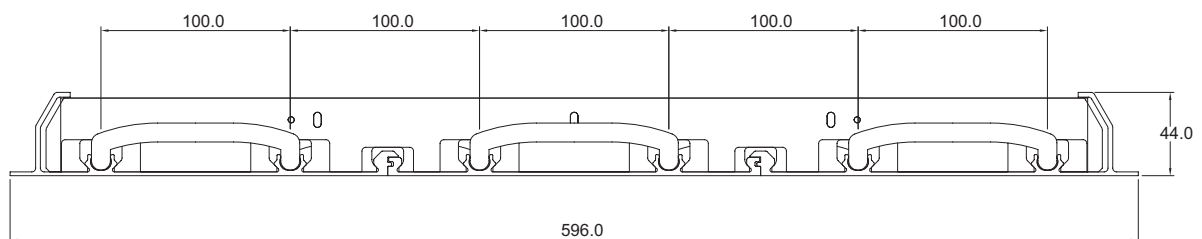
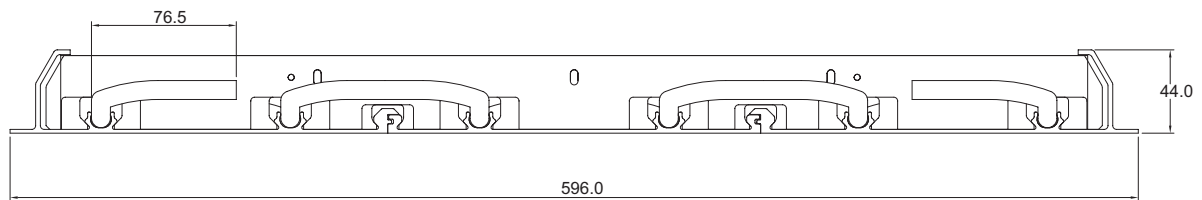
Alternative Application

By using ancillary items it is possible to apply this product into a free hanging, plasterboard ceiling. Information available on request.



DESIGN FEATURES

- » Facia edge profile designed to sit on the T bar without obstruction from any adjacent frame cross member
- » Works within micro T system ceilings
- » High edge profile and interlocking suspension brace system reduces deflection
- » The copper waterways are pressed into the unique pipe carrier reshaping the copper to offer an increased thermal transfer, increased output and quicker response times
- » 12mm waterways assist in achieving turbulent flow on small panels with minimal flow rates
- » Free-hanging version uses additional end cover plates
- » Central joining piece available for module connections giving the appearance of a single panel installation
- » Plasterboard ceiling model achieved using T bar version complete with an additional frame



TECHNICAL SPECIFICATION

The Spectrum Plus is designed with higher outputs specifically for health and education applications.

- » 2mm high grade aluminium extrusion, lightweight, robust, optimum response time.
- » RAL 9016 white powder coat.
- » Outputs to EN 14037.
- » Rigid non fibrous, foil faced insulation to EN13165 fire rating A2.
- » Max operating temperature 90°C.
- » Max test pressure 16 bar.
- » Max operating pressure 10 bar.

Features

- » Suitable for use in Micro T system ceilings.
- » Turbulent flow achieved using 12mm waterways.
- » Each panel individually packaged for protection to site.
- » One piece 6 pass meander to EN13165 for high performance.
- » Tested by WSP Lab Stuttgart to EN14037.

Outputs

DIMENSIONS	LENGTH (9MM)					
	600	1200	1800	2400	3000	3600
A	595	595	595	595	595	595
B	595	1195	1795	2395	2995	3595
C	44	44	44	44	44	44

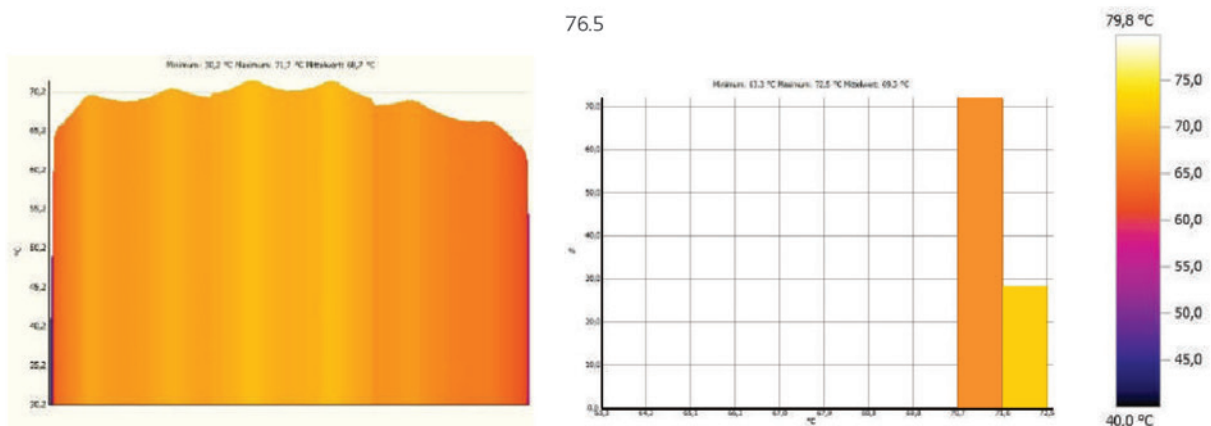
NOMINAL SIZE (MM)	OUTPUT AT ΔT (WATTS)									WEIGHT INCLUDING WATER CONTENT (KG)
	20	25	30	35	40	45	50	55	60	
600 x 600	67	89	110	132	154	177	199	224	253	4.1
600 x 1200	134	179	220	264	308	354	398	448	505	8.1
600 x 1800	202	268	329	396	463	531	598	671	758	12.2
600 x 2400	269	358	439	528	617	708	797	895	1010	16.3
600 x 3000	336	447	549	660	771	885	996	1119	1263	20.3
600 x 3600	403	536	659	792	925	1062	1195	1343	1516	24.4

Water Content 0.934 litres linear metre included in the installed weight

TECHNICAL SPECIFICATION



Copper pressed and reshaped into oval pipe carrier.



Thermal images show temperature. 72% of the surface within 3°C of MWT, 27% within 6°C of the MWT.

PRODUCT SPECIFICATION

The following specification page can be used for specifying RCHS Spectrum radiant panels:

Technical Specification

- » 2mm Aluminium Extrusions with profiled high ridge return edges
- » Minimal linear pattern fascia
- » Multipurpose integral anti-deflection and suspension bar
- » 12mm OD six pass one piece copper meander waterways
- » Reinforced open ended flow and return connections
- » Powder coat paint finish RAL 9016
- » Non-fibrous foil backed insulation to A2class fire rating

Performance

Heating performance independently certified to EN14037

Operating Parameters

- » Max working pressure 10 bar
- » Max operating temperature 90°C
- » Max test pressure 16 bar
- » Weight 6.78 kg/m including water content

Installation

- » All panels to be installed in accordance with the manufacturers recommended methods/guidelines
- » All final connections to panels to be via steel braided flexible hoses

Multi Panel Installation diagram



Panel Type

- T-Bar application
- Free hanging single module
- Free hanging multiple modules
- Plasterboard application, additional plasterboard frames

Triple Panel

- Max Length 3 x 3000mm
- 6600 16, 7200 8, 7800mm. 14 Hanging Positions
- 8400mm, 16, 9000mm 18 Hanging Positions
- 2 x 15mm to 12mm Hoses
- 2 x 12mm to 12mm Hoses

WARRANTY

Radiant Heating and Cooling products are guaranteed for a period of 10 years from date of purchase in respect of defective materials and workmanship.

The system should be designed in accordance with British Standard Code of Practice for Water Based Heating Systems in Buildings.

On completion of the installation, the system should be properly flushed and filled in accordance with the British Code of Practice for the Treatment of Water in Domestic Hot Water Central Heating Systems, Part L of Building Regulations and Good Practice Guidance for Scotland.

Failure to adhere to these standards may invalidate the manufacturer's warranty.



CONTACT DETAILS

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