

Chilled Beams & Ceilings

Frenger Cooling

Multiservice Chilled Beams

Frenger Multiservice Chilled Beams are designed to meet the specific requirements of the professional team. From the overall appearance to the provision of a comfortable working environment for the end user. MSCB's can utilise either passive or active beam technologies.

The MSCB removes the need for the monolithic ceilings that we have become accustomed to in office developments, instead providing visually stunning yet 100% functional building services.

Key Benefits

- Ideal where floor-to-slab height is minimal
- Low running costs - minimal maintenance requirements
- Delivers many services in a single unit - so reducing costs
- Extremely high level of occupancy thermal comfort
- Beam aesthetic can be customised to client requirements

Design Options

The following building services can be integrated within Frenger MSCBs:-

- | | | |
|------------------|-----------------|--------------------------------|
| • Cooling | • Fire alarm | • Acoustic insulation |
| • Up-lighting | • Down-lighting | • Fresh air requirements |
| • Control valves | • Sprinklers | • Power/Compartmental trunking |
| • Heating | • BMS sensors | • Pipework/Ductwork |

Frenger Design Services

At Frenger we have many years experience in the design and manufacture of cooling systems which combine the highest levels of occupancy comfort with class-leading design. In support of this we offer our clients a full lighting design service, CAD drafting and 3D rendering of MSCB's in the environment, climatic simulations and full climatic testing in one of our 3 number BSRIA calibrated Climatic Testing Laboratories in Derby. Frenger also have in-house lighting design, manufacturing capabilities and even 2 Photometric Laboratories

Passive Chilled Beams & Chilled Ceilings

Frenger's "Radiant" passive chilled beams look and operate like no other beam on the market today - it does not use traditional closely-spaced fins, and cools by radiation as well as by convection. Positioned above a perforated metal ceiling system, Radiant Beams deliver unrivalled levels of cooling capacity and occupancy comfort; up to 150w/m² of cooling with no drafts and no noise. Furthermore, Radiant Beams can be used with very small ceiling perforations (2.4mm diameter holes and 28% free area), making it virtually invisible from below.

Frenger have designed, supplied and installed Radiant chilled beam ceilings on many major UK projects, and Radiant Beams were the system of choice for Australia's first major project to utilise passive chilled beam technology.

Active Chilled Beams

The unique technologies employed in Frenger's range of active chilled beams means that they deliver the highest levels of cooling at the lowest available supply-air volumes. Many large projects with cooling requirements in excess of 100w/m² are now utilising Frenger's active beams supplied with fresh air rates of just 1l/s/m².

With the same volume of supply air, cooling capacities in excess of 140w/m² can be realised when Frenger's unique Drypac™ coil coating is added, and where occupancy densities are particularly high (for instance in trading halls), the cooling capacity can reach 300w/m²!

Frenger offer active chilled beams to meet a multitude of needs.

Professor has a 120mm construction depth and is ideal where the ceiling void is restricted. Polaris beams can handle large air volumes (up to 70l/s per beam) and consequently delivers the highest cooling capacities. The Pilot beam has been designed specifically for use in healthcare environments; it is hygienic in operation, simple to access and clean, quiet yet powerful and can be modified on-site in a matter of seconds by a turn of an allen key to deliver different heating/cooling capacities or supply-air volumes.

Drypac™ is a revolutionary upgrade that enables Frenger's active chilled beams to operate below dew point with no risk of condensation. This means that water can be supplied to the beams at just 10°C and exceptional levels of cooling can be delivered.

Drypac™ is currently in use on many large UK projects, and will often work where no other system can.

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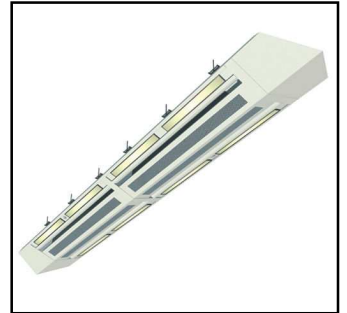
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Active Multiservice Chilled Beam, 55 Baker Street, London



Passive Multiservice Chilled Beam



Active Multiservice Chilled Beam



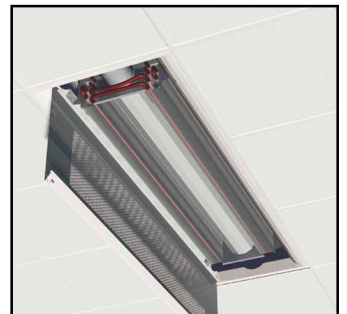
"Radiant" Passive Chilled Beam above Ceiling



"Radiant" Passive Chilled Beam



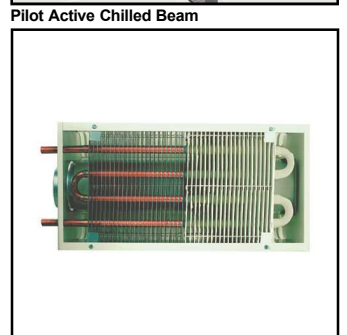
Active Chilled Beam in Ceiling



Pilot Active Chilled Beam



Passive MSCB in Frenger Test Laboratory



Battery with Drypac™ Coating

FRENGER®
systems