

Beamed to the future

Following the release of its guide to chilled beam technology, the Chilled Beam and Ceiling Association is on a mission to promote the technology

Market awareness is key in any industry, and in the past year the Chilled Beam and Ceiling Association (CBCA), which represents a select group of chilled product manufacturers, has been making strides to increase market awareness of the technology.

Of course, we've been busy with the typical projects such as monitoring standards, technical applications and contributing to British/European Standards and government white papers. However, the downturn in the market has dictated a dramatic shift in priorities for the organisation – the need to promote the product and its benefits in economically prudent times.

With expenditure under closer scrutiny than ever, and energy efficiency for carbon reduction a priority, what do you specify to meet cooling demands in buildings while satisfying Part L requirements, a demanding client and a supply chain all eager to make a profit?

In the past eight years chilled beams and ceilings took significant market share from the industry's favoured air conditioning technology, fan coil units. The water cooling non-fan-assisted chilled technology made the 2010 regulations for 25 per cent improvement in energy efficiency a realistic goal for specifiers.

However, the recession has put the focus on lowest cost, and specifying 'what you know' has been a priority for project teams. Fan coil manufacturers have also begun to catch up, with products that address energy efficient performance criteria, re-educating and steering products for use in a variety of sectors.

In truth, the CBCA has not reacted quickly to the changing market trends, along with the

enhanced capital allowance (ECA) scheme and changes in building regulations. The market is aware of chilled beam, and ceiling technology, and want to specify chilled products. However, we recognise that barriers to specification do exist.

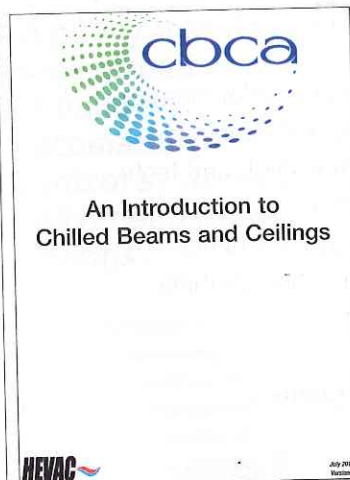
Unfortunately the government-recognised suppliers of building energy efficiency/consumption modelling software packages for engineers' Part L compliance energy calculations do not fully incorporate chilled products. Generic active chilled beams are included, but are classed as a "fan coil unit without a fan"; neither chilled ceilings or passive chilled beams are available to select within this software.

Some project teams may believe that using chilled beams/ceilings and specifying performance requirements means all systems are bespoke to the relevant building and have to be tested accordingly. This is not the case, as a variety of standard chilled beams and ceilings are available for specification.

Overcoming scepticism

Proving performance is key to decision making, regardless of how complex the application of the product, and there are various ways to do this. Chilled beam and ceiling products have been oversold to project teams by certain manufacturers giving incorrect performance and thermal comfort information and advice, meaning some engineers are sceptical about the technology.

These are the issues the CBCA is currently addressing. Chilled technology has still not achieved its full potential and can be overlooked for projects where it would be the most suitable system. Lack of knowledge and understanding across the building sector has



flagged up the need for a better flow of information between suppliers, consulting engineers, architects and contractors.

The CBCA has now taken a proactive role in ensuring it is communicating the facts regarding chilled beams and ceiling to the market. Often it is left to individual manufacturers to demonstrate compliance or prove the facts regarding their products. These individuals have come together under the CBCA to ensure that the market receives 'factual information' on the various products and services we supply.

In August of 2012 the CBCA launched *An Introduction to Chilled Beams and Ceilings* as a free download from the CBCA section of the FETA website (www.feta.co.uk).

The guide provides a comprehensive overview of the main features of the chilled technology along with the key selection criteria, design decisions and practical steps for installation, commissioning and maintenance. It is designed to be practical, providing a valuable working introduction for the non-specialist. It also serves as a generic overview that provides sufficient information

to address key considerations.

The most important element of the document for many will be the agreed performance and characteristic tables for chilled ceilings and active and passive chilled beams. CBCA members have agreed the realistic performance levels and limitations, thus ensuring that chilled ceiling and beam technology is applied correctly at the design stage to achieve good occupancy comfort with low 'draft ratings', all in accordance with BS EN ISO 7730.

The CBCA, through its members and by promoting this publication to the market, hopes specifiers and project teams will recognise the CBCA, and develop more knowledge about chilled technology leading to the increased use of the products.

Further publications

There is also planned engagement by the CBCA throughout 2013, with technical fact sheets that will explore in detail subjects covered in the guide. The first, on occupant comfort, to be read in accordance with ISO 7730, is due to be released shortly.

Project case studies of CBCA member completed projects will be published along with post-occupancy studies showing how chilled beams and ceilings have succeeded commercially. There will also be seminars bringing together project teams to discuss the technology and market research covering exactly how and where chilled products are being specified and used.

To download the CBCA Guide go to www.feta.co.uk/associations/hevac/specialist-groups/chilled-beams--ceiling-association/

Andrew Jackson is chairman of the CBCA