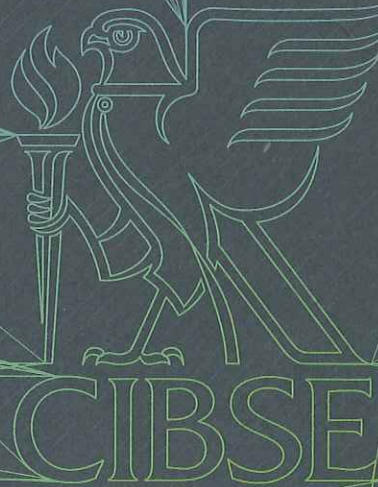


CIBSE BUILDING
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**WINNERS'
BROCHURE**

Engineering for a low carbon
built environment

www.cibseawards.org

Wednesday 9 February
Grosvenor House
London

ENERGY-USING PRODUCT

WINNER

ZEHNDER CARBOLINE RADIANT HEATING AND COOLING PANEL

»The Zehnder Carboline radiant heating and cooling panel sets a new standard in efficient temperature control. Using innovative material technology which incorporates the use of expanded natural graphite, it combines outstanding performance with superior energy efficiency.

»Developed specifically for Zehnder, it is the first radiant panel sold in the UK to use this innovative material technology. The physical and mechanical characteristics of expanded graphite make it the obvious choice; it has excellent thermal conductivity, a low density and is non-corrosive – ideal for use in ceiling-mounted heating and cooling panels. Moreover, being non-flammable and resistant to ageing it is also the perfect material for use in buildings.

The panel is made from copper pipes that are embedded into a compressed graphite panel which is then firmly bonded to a galvanised sheet-steel cassette. Unlike existing products that can have significantly varying temperature profiles, the Zehnder Carboline achieves excellent temperature consistency over the whole panel surface.

“THEY GAVE CLEAR EVIDENCE TO SHOW HOW THEIR PRODUCT COMPARES WITH OTHERS. THIS IS A WORTHY WINNER.”

JUDGES' COMMENTS

The excellent thermal conductivity properties of the natural expanded graphite also mean that the Carboline is extremely efficient; it can exchange 95% of the heat/coolness from the water running through the copper tubes, whereas a standard panel can only achieve 80-84%. The combination of even temperature distribution and extremely efficient heat transfer also makes the reaction time, under alternating cooling or heating loads, much faster than any of its rivals, ensuring greater levels of energy efficiency and creating a fully controllable system.

Manufactured from natural graphite, a naturally occurring material and an inorganic modification of carbon, the Carboline is 100% recyclable, making it a fully sustainable heating and cooling solution. Its high efficiency and exceptional controllability mean



zehnder

SHORTLISTED

- »A.O. Smith Water Products Company
- »Jayhawk International Ltd
- »Long Vision (HK) Trading Company Limited
- »PhotonStarLED Ltd. (EcoStar)
- »PhotonStarLED Ltd. (SmartNemesis)

that it uses less energy and consequently produces fewer emissions than standard radiant heating and cooling panels. The Carboline can also operate at lower water temperatures, enabling the use of renewable energy resources such as solar, ground- and air-source heat pumps, further enhancing its overall ability to achieve carbon reductions as part of building services.

Award sponsor

