Case study

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For immediate release

Canaletto tower balconies incorporate Schöck Isokorb

The Canaletto residential tower at 257 City Road in London is located halfway between Old Street and Angel Stations in Islington, alongside the regenerated City Road Basin. It comprises a 31-storey tower with 190 luxury one, two and three bedroom apartments built to the standards of Code 4 Sustainable Homes Level 4. Among the many residential benefits of Canaletto living is a cinema, restaurant, entertainment centre and a sky terrace on the 24th floor.

The tower is concrete frame and has a curving facade of metal and glass that breaks the volume into a series of three-to-four storey clusters. In turn, each cluster contains grouped balcony terraces, which are a striking feature of the building. The balconies are of steel construction connected to the concrete frame and as always with cantilever construction elements of this nature, one of the early design considerations had to be the prevention of thermal bridging.

Thermal bridge heat losses are in fact responsible for an increasing percentage of the overall building heat loss, due to airtightness and fabric U-values having been improved in UK Building Regulations. Thermal modelling calculations show that for multi-residential projects such as large apartment blocks, thermal bridges could account for 20%-30% of thermal losses, with balcony connections being a major contributor if effective thermal isolation is not included in the design.

One of the most effective methods of combatting thermal bridging is the Isokorb range of thermal break elements from Schöck; and for the high specification

Canaletto project the Isokorb type KS20 offers the ideal solution. It is a concrete-to-steel connectivity module that sits between the outer and inner structural connection points and blocks the outflow of heat through the use of high quality polystyrene insulation foam. There are tension and shear stainless steel bars passing through it, which take the tension and shear forces between the building frame and the balconies, enabling a thermally insulated, load bearing connection to be made between reinforced concrete and steel construction components. The type KS provides a clean and unobtrusive connection detail, minimises on-site assembly time and enables a high level of prefabrication.

The Isokorb range provides a huge selection of solutions for concrete-to-concrete and steel-to-steel, as well as concrete-to-steel – and the entire range offers the security of BBA Certification and LABC Registration. It also comfortably exceeds the requirements of BRE IP1/06 and Part L of the Building Regulations where the temperature factor used to indicate condensation and mould growth risk (f_{RSI}) must be greater than, or equal to, 0.75 for residential buildings.

In addition, there is also compliance with the Government Standard Assessment Procedure, SAP 2012, concerning CO_2 emissions from buildings and respectively heat losses through non-repeating thermal bridges. Here, the lambda values of the Schöck Isokorb enable energy loss in various connective situations to be reduced by as much as 84% to 91%.

For your free copy of the new Thermal Bridging Guide and / or the Schöck Specifiers Guide – contact the company on 01865 290 890 or visit www.schoeck.co.uk

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Main Project Team

Architect:	UNStudio
Main Contractor:	Ardmore
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Notes to the editor

A leading European supplier

Schöck has grown to become Europe's leading supplier of innovative structural load bearing insulation products. The main product is the Schöck Isokorb – a thermal break for various types of cantilever constructions in new buildings and for renovation. Its headquarters are at Baden-Baden in southern Germany and there are subsidiary companies in Great Britain, France, Austria, Switzerland, Italy the Netherlands, Belgium, Poland, Hungary, Russia, Japan, Canada and the USA. Sales teams and partners operate in many other European countries and also Australia and South Korea. Schöck is committed to providing the highest level of technical back up and comprehensive customer service to the construction industry.

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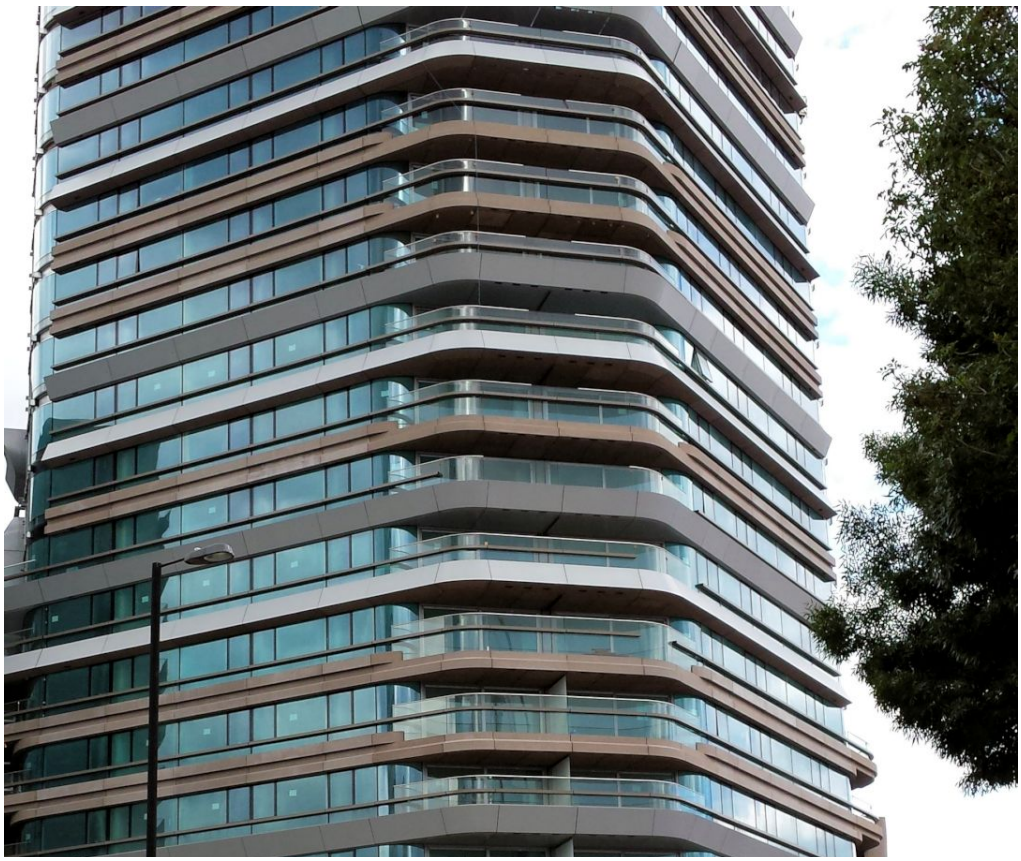

Exterior view of Canaletto tower

The Isokorb type KS20