Schöck makes thermally efficient balcony retrofit a reality

The debate over the environmental, sociological and financial pros and cons of whether to demolish or renovate older housing stock will undoubtedly continue. However, increasingly it appears renovation and refurbishment will remain one of the most significant contributors to progress in terms of energy efficiency and environmental preference. With many renovated and refurbished buildings, the retrofitting of balconies, or the replacement of old thermally inefficient balconies, is in demand. Balconies aesthetically transform living space and exterior appearance and are an anticipated add-on for contemporary living accommodation, especially in city centres.

The dedicated solution from Schöck for verifiable energy efficient balcony renovation and refurbishment is the Isokorb type R – a ready-to-install component which allows residents to remain in the building during external renovation, with no damage risk to internal finishes and decoration.

The installation method is that drill holes are first marked with a template in position on the face of the building. Holes are then drilled into the concrete slab, adhesive injected and the type R load-bearing reinforcing rods slipped into position and anchored by means of the pre-injected adhesive. Structural screed is poured into a special pocket between the type R and the concrete slab to ensure a perfect contact between the two structural elements. Once both the mortar and the screed are cured the structure is ready for the new balcony to be connected

There are two main variants of the type R. The first is the Isokorb type RK, a load-bearing thermal insulation element for cantilever balconies with a reinforced concrete slab, or supported pre-cast concrete slab balconies. The second being the Isokorb type RKS, designed to minimise thermal bridges at concrete-to-steel connections during renovation. As a load bearing thermal insulation element, the Schöck Isokorb type RKS transfers negative moments and positive shear forces, allowing enormous scope for design.

Unlike new-build, product selection for renovation is subject to certain restrictions. The solution will very much depend on the specific project requirements, the existing building and its structure, as well as the development of customised design proposals. The Schöck design team is on hand to provide extensive technical support on all these issues, for architects, developers, support structure specialists and contractors. This includes product selection advice for the different options; building physics detail; framework conditions; methods for undertaking a building inventory; dimensioning examples and a comprehensive checklist.

All solutions meet full compliance with the relevant UK building regulations and offer BBA Certification and LABC Registration. When the Isokorb products are incorporated into residential buildings, the required fRsi value – the temperature factor used to indicate condensation risk that must be equal to or greater than 0.75 – is always comfortably met. The range also complies with the Government Standard Assessment Procedure, SAP 2012, concerning CO2 emissions from buildings and respectively heat losses through non-repeating thermal bridges.

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

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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An example of a finished retrofit installation

The Isokorb type RKS

The Isokorb type RK

The Isokorb type RKS being installed