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Case study.

**Energy-efficient and futuristic façade design**

**Robust and free of thermal bridges: Schöck Isolink secures spectacular external wall at Eatrenalin in the Europa-Park adventure resort**

**Baden-Baden, December 2022Dezember 22 – Step into the most exciting gastronomic experience in the world Located next to the 4-star superior Hotel Krønasår in the Europa-Park adventure resort, Eatrenalin is a new destination promising to dazzle all the senses. The futuristic and spectacular façade was designed by atelier 522 from Markdorf, Germany. The façade is almost ten metres high and clad in overlapping "scales" that are gathered up above the entrance like an open theatre curtain. This unusual modern façade structure is fastened with Schöck Isolink elements, which also makes it particularly energy efficient.**

Eatrenalin promises visitors a new dimension of culinary experience that combines gastronomic excellence with multi-sensory marvels. Guests are plunged into a futuristic gastronomic experience with projected light effects and images, scents, smells and a myriad of flavours. This modern interpretation of food and adrenaline is also reflected in the restaurant’s unique name. The location of the futuristic restaurant concept next to the 4-star superior Hotel Krønasår and the YULLBE virtual reality experience centre was carefully chosen.

**Unparalleled gastronomic experience and façade system**

The owner set high standards for the design of this new sensational building. "We embodied the futuristic concept in the façade using the image of a theatre curtain opening in a curve as if gathered up by an invisible hand. It invites visitors to peer into the future of the culinary arts", explains Moritz Josch, project manager at atelier 522. "The aluminium façade elements and exclusive, scaled finish have a harmonious appearance as if cast in a single piece. At the same time, the overall look is clean, ambiguous and minimalist, symbolising human limitations."

In addition to the sophisticated cladding, the building was designed as a KfW Efficiency House 55, meaning that it had to meet stringent energy specifications. To achieve these standards, heat losses from the fastening of the rainscreen cladding façade had to be reduced to a minimum. "The insulation of the façade could not be too thick, otherwise the design would not have been feasible. At the same time, it had to be efficient enough to meet KfW55 requirements", explained David Studer, principal representative and project manager of Eatrenalin.

**Fastening without thermal bridges**

Dipl.-Ing. (FH) Frank Brohammer, who is a civil engineer and specialist engineer for energy efficiency and works at Isenmann Ingenieur GmbH in Haslach im Kinzigtal, Germany, provided the solution. He selected the rod-shaped Schöck Isolink façade fastener to provide a stable energy-efficient façade fixing. "The Isolink has significantly better thermal transmittance values than wall brackets made of aluminium or stainless steel; in purely mathematical terms, it is a fastener without any thermal bridge effect", explains Frank Brohammer. "The actual thermal transmittance values guaranteed that our plan would receive the KfW55 subsidy required by the builder."

**Schöck Combar: The key to energy-efficient fastening**

Conventional metal wall brackets lose large amounts of energy due to the material. In contrast, the Schöck Isolink meets the highest thermal insulation requirements and is certified as a passive house component. The façade fastener is made of the glass-fibre composite material Schöck Combar. This has exceptionally low thermal conductivity about 15 times lower than that of stainless steel and about 300 times lower than that of aluminium. These values astonished Jacques Otter, project manager at the Chaudronnerie du Ried. The company based in Saasenheim in Alsace, France, specialises in metal construction and was entrusted with making the façade cladding.

Jacques Otter whipped out a pencil and paper and did a comparative calculation: "There it was in black and white: a classic construction with stainless steel brackets would need 220 millimetres of insulation to achieve the required thermal transmittance of 0.18 W/(m²K). And structures with aluminium brackets would need even more – 250 millimetres of insulation. However, we would then have had a hard time creating the curved façade". By using Schöck Isolink, the insulation could be reduced to 160 millimetres and nothing else stood in the way of creating the façade the owner wanted.

**Challenge: overlapping façade cladding**

The cladding was designed as a rainscreen cladding façade. "The façade elements are 4 millimetres thick, attached at the rear and are braced", explains Jacques Otter. The individual façade elements are made of powder-coated aluminium in the colour RAL 9007 grey aluminium. A total of 210 façade elements with different dimensions, averaging 2.44 square metres per panel, were fixed to the façade. The panels cover an area of 513 square metres with an unrolled length of 54 metres over two rounded corners and a height of 9.5 metres.

To construct the slanted cladding of overlapping "scales", the elements were installed in an overlapping and offset pattern, similar to shingles or bricks. The curved entrance area was completely manufactured and pre-assembled in the factory hall on a steel beam-and-column construction.

**Outstandingly practical: quick and easy assembly**

The French façade builders were impressed by both the energy efficiency of the Schöck Isolink type F and by just how easy it was to install the rainscreen cladding façade. "We asked Schöck for support because it was our first project using Isolink, but quickly realised just how easy it is to use. It took us only three days to install the Isolink elements", explains Jacques Otter.

They are installed in the same way as bonded anchors. First, a hole is drilled and cleaned. A 2-component composite mortar approved by the building authorities is injected into the hole and then the Isolink element is fitted. Next, the thermal insulation is simply slotted onto the rod-shaped anchors without pre-cutting the material or needing any tools. The substructure and façade elements are then fixed on top.

"We then fastened the rear suspension and bracing profiles made from folded aluminium laser-cut elements using aluminium welding studs. In the straight areas, the panels were hung on vertical rails. In the curved entrance area, they were fitted on a substructure shaped like a Christmas tree that we created especially for this purpose", explains Jacques Otter. In this way, around 750 Isolink units were installed in the 160-millimetre-thick insulation.

**Future-oriented construction with Schöck Isolink**

The Eatrenalin façade shows how the highest standards of aesthetic design and energy efficiency can be combined in a particularly spectacular way.

*6633 characters (including spaces)*

**Project information**

**Construction period:** 2021 – 2022

**Principal:** Europa-Park GmbH & Co Mack KG, 77977 Rust, Germany

**Operator:** Eatrenalin Rist/Germany GmbH

**Architect:** atelier 522, 88677 Markdorf, Germany

**Engineering consultants:** Isenmann Ingenieur GmbH, 77716 Haslach im Kinzigtal, Germany

**Façade engineer:** Chardonnerie du Ried, 67390 Saasenheim, France

**Product:** Schöck Isolink type F

**Images**

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_1]**

Ein Bild, das Text, Himmel, draußen, Straße enthält.

Automatisch generierte Beschreibung

*The futuristic façade of Eatrenalin in the Europa-Park adventure resort.*

*Photo: Moritz Bernoully*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_2]**

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*A challenge for planners: above the entrance to Eatrenalin, the overlapping scales are gathered up like an open theatre curtain.*

*Photo: Moritz Bernoully*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_3]**

Ein Bild, das drinnen, Küche, weiß enthält.

Automatisch generierte Beschreibung

*It was important to the architects that the aluminium façade should have a harmonious appearance as if cast in a single piece.*

*Photo: Moritz Bernoully*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_4]**

Ein Bild, das Himmel, draußen enthält.

Automatisch generierte Beschreibung

*To construct the slanted cladding of overlying scales, the elements were installed in an overlapping and offset pattern similar to those used for shingles or bricks.*

*Photo: Chardonnerie du Ried*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_5]**

Ein Bild, das Himmel enthält.

Automatisch generierte Beschreibung

*Freedom of design and energy efficiency: by using Schöck Isolink, the insulation could be reduced to 160 millimetres thick and thus meet KfW55 requirements.*

*Photo: Chardonnerie du Ried*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_6]**

Ein Bild, das Text enthält.

Automatisch generierte Beschreibung

*The scaled façade cladding on Eatrenalin was designed as a rainscreen cladding façade using Schöck Isolink elements.*

*Drawing: Chardonnerie du Ried*

**[Schoeck\_Eatrenalin-Europa-Park-Rust\_7]**

Ein Bild, das Metallwaren, Schraube enthält.

Automatisch generierte Beschreibung

*Schöck Isolink type F for the rainscreen cladding façade. This element is used as a fastener in insulated and non-insulated substructures made of concrete or masonry without creating thermal bridges. It is also used when renovating old façades with external thermal insulation composite systems.*

*Photo: Schöck Bauteile GmbH*

**About Schöck:**

Schöck Bauteile GmbH is a company of the international Schöck Group that has more than 1100 employees and is active in over 40 markets. It has its headquarters in Baden-Baden at the feet of the Black Forest where the company's success story began in 1962. Company founder Eberhard Schöck used his knowledge and experience of building sites to develop products that simplify the construction process and solve the physical problems of construction work. This mission has remained the foundation of the company’s philosophy to this day, a philosophy that has allowed Schöck to become the leading provider of reliable and innovative solutions to reduce thermal bridges and impact sound, for thermally insulating façade connections and reinforcement technology. Schöck products facilitate a more rational approach to construction and safeguard the construction quality in the long term. Our focus is on the building-physical benefits and energy efficiency. Schöck is driving the digitalisation of the work flow from planning to the building site to support the construction work of tomorrow.

**For any questions, please contact:**

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