

# ALUMINIUM & ARCHITECTURE

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## SKYLOOP STUTTGART

A VISUAL EXCLAMATION MARK  
FOR AIRPORT CITY

ALUMINIUM SYSTEMS   
**HUECK**  
GERMAN ENGINEERING SINCE 1814



# A GLIMMERING SOLITAIRE AT THE AIRPORT

With the striking “SkyLoop” office building, Stuttgart Airport City now features an unmistakable new entrance. Designed by Berlin-based architectural firm Hascher Jehle, the spectacular complex consists of three interconnected structures. Of these, the two larger, ring-shaped building sections feature lushly planted inner courtyards and form a horizontal figure of eight from a bird’s-eye view. Hueck collaborated closely with FKN Fassaden GmbH & Co. KG to create the aluminium/glass façade, which is made up of small parts and shimmers in numerous shades of blue and green.



The elegant office complex running along Flughafenstraße is the “flagship” of the new Airport City development on the north side of the airport. A construction period of just under three years has led to a three-part office complex, with a gross floor area totalling 40,000 square metres, emerging on this 16,500-square-metre site. The largest section of the complex is currently being used by the auditing firm Ernst & Young.

## A SPECTACULAR COMPLEX MADE UP OF RING-SHAPED STRUCTURES

The property’s developer, Stuttgarter Flughafen GmbH, had previously invited a total of 19 architectural firms to participate in the competition. It was ultimately the runner-up design by Berlin’s Hascher Jehle Planungsgesellschaft mbH that was realised,

with the architects planning a spectacular solitaire of three interlocking, ring-shaped structures of different heights and sizes. The rooms in the two larger buildings with six and seven storeys respectively are arranged around the inner courtyards, and the smaller, four-storey building section with a multi-storey atrium houses conference rooms, a canteen and a bistro with a roof terrace. This design was chosen in particular because of its extraordinary glass/aluminium façade, which shimmers in various shades of blue and green as it hugs the dynamic curves of the building’s contours. Delicate elevation widths and slender, very high window elements lend a rhythmic effect to the outside appearance.

## SOPHISTICATED ALUMINIUM/ GLASS FAÇADE

FKN Fassaden GmbH & Co. KG of Neuenstein was commissioned by the general contractor, Ed. Züblin AG, Stuttgart Directorate, to fabricate the aluminium/glass façade, which measures approximately 20,000 square metres. In total, the metalworking company fabricated and assembled 13,000 square metres of element façade with 1,100 windows, as well as 4,100 square metres of mullion-transom façade with 200 windows and 2,000 square metres of ventilated façade made of modified Hueck aluminium profiles. “The aim here was, of course, for all façade areas to have the same refined appearance and the same slender elevation widths,” explains Thomas Neumann, who is responsible for Hueck’s southern property sales division. “In light of the extremely demanding logistics involved in manufacturing and installation, it was also necessary to achieve this using as few different profiles as possible.” At the same time, there were stringent requirements for the thermal insulation properties and – given the proximity to the airport – soundproofing.

On the ground floor, these requirements were met with a standard Hueck Trigon 50 mullion-transom construction. “Here, we were able to work with a classical series profile that was adapted to the property’s special structural requirements simply by slightly increasing the profile depth,” says Neumann. For the

## BRIEF INFO

### CLIENT:

Flughafen Stuttgart GmbH

### GENERAL CONTRACTOR:

Ed Züblin AG, Stuttgart Directorate

### DESIGN ARCHITECT:

Hascher Jehle  
Planungsgesellschaft mbH, Berlin

### PLANNING ARCHITECT:

BFK Architekten, Stuttgart

### FAÇADE PLANNING:

Gerhard Weber & Partner, Argenbühl

### METALWORK:

FKN Fassaden GmbH & Co. KG, Neuenstein

### HUECK CONSTRUCTIONS:

Trigon Unit L, Trigon 50, Lambda 77 L IF



**Slender elevation widths:**

All façade sections have the same refined appearance.

element façade on the upper floors, on the other hand, the standard Hueck system was too wide for the very slender profiles that were stipulated. In order to allow for the 65 mm elevation widths that the design concept specified for the projecting, coloured aluminium pilaster strips, Hueck worked closely with FKN to develop a special construction based on Hueck's Trigon Unit L façade system especially for this property. "At the same time, however, this also had to be very stable so that, for example, the 2.70-metre-high pilaster strips didn't bulge and affect the running of the sun-protection louvres," says Neumann.

**STRICT DESIGN REQUIREMENTS**

However, it was the high and, at the same time, extremely slender windows in particular that confronted the systems provider and metalworking company with a whole series of design challenges. "On the one hand, we had these slender elevation widths that the architects had stipulated and, on the other hand, extremely slender, floor-to-ceiling block windows that were supposed to allow natural ventilation by means of side-hung sashes," explains Neumann. With a width of just 365 mm, these windows had a height of 3.50 metres on the ground floor and 2.70 metres on the upper floors. The planners had also stipulated concealed fittings with a view to achieving a very modern, minimalist window appearance. "With these dimensions and sash weights of 100 and 75 kilograms respectively, the design requirements were extremely challenging," recalls Neumann. In cooperation with the fittings manufacturer, Hueck's property development team developed a special profile with an integrated sash based on Hueck's Lambda 77 L IF window system. This solution not only does away with the high sash weights but also satisfies the special dynamics of the high, slender sashes. "Accommodating the fittings components within a space of just 365 mm was a real challenge," says Neumann. The special construction features a Eurogroove and combines the fitting system with a special rebate hinge, whose special cushioned opening limiter is adapted to the low sash width.

**A CONSIDERABLE LOGISTICAL CHALLENGE**

The project also placed enormous logistical demands on the metalworking company FKN. "The large number of different radii meant that none of this façade's total of 1,300 different elements were alike. And each of them also had to go exactly in the right place," explains Martin Hald, the FKN project manager responsible for the work. "In order to satisfy the building's demanding geometry, we worked in a double grid system with 2.70-metre-wide elements that were bent in the middle to correspond to the specific radius." This was further complicated not only by the corresponding sun-protection louvre but also by the powder-coated aluminium pilaster strips in five different colours, whose arrangement had been precisely specified by the architects. "This meant that each individual element, including the sunshade, had to match not only the respective radius for that location, but also the specified colour pattern," says Hald. "As part of this, the aluminium pilaster strips at the edges of each element always had to match the colour of the respective connecting elements." In order to com-





ply with the tight schedule, the elements were fabricated and supplied “just-in-time” in accordance with the assembly sequence. To ensure that things went smoothly, this required close cooperation between all parties. “For us as metalworkers, the constructive partnership with Hueck was once again a great help in this project,” Hald recalls. “The fact that an expert contact was on hand immediately when problems occurred meant that we were generally able to solve issues quickly and unbureaucratically.” ➤

**03**  
**Blue and green shades:**  
The façade’s special effect is created by projecting, coloured aluminium pilaster strips.

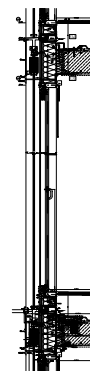
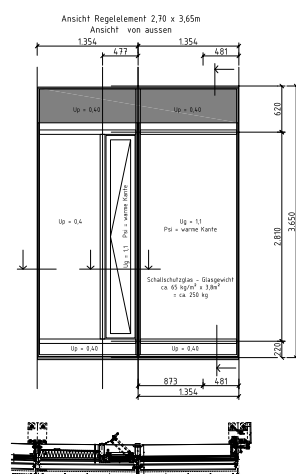
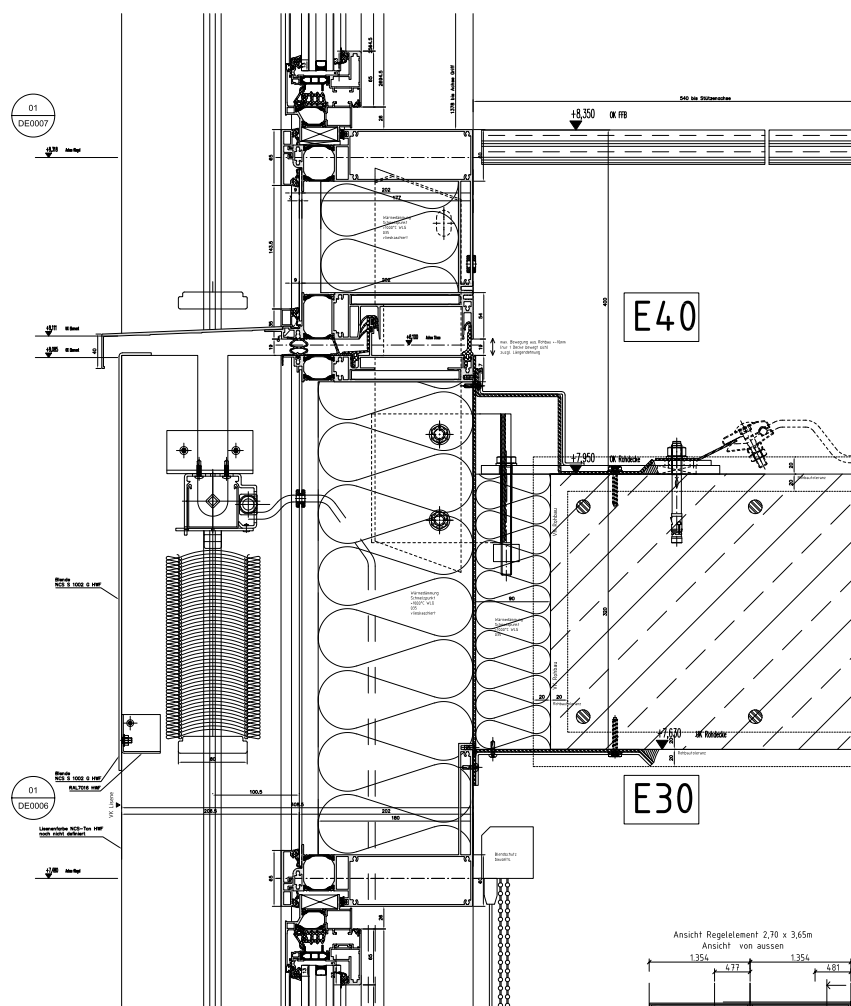






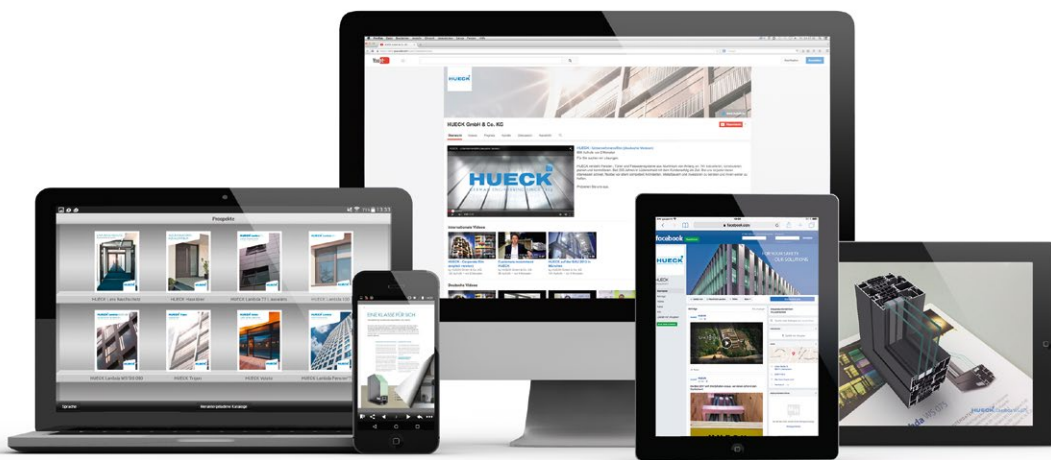
It was above all the extremely slender floor-to-ceiling block windows with concealed fittings that placed exceptional demands on the special construction.





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