

A Lot of Innovative Planning Has Gone into the Façade

Drees & Sommer SE and FKN Group jointly develop highly insulating façade elements.

Stuttgart and Neuenstein, Germany, June 10, 2021. Consulting and planning company Drees & Sommer SE is currently building a showcase property for its own use at Obere Waldplätze 12 in Stuttgart. The new building, known as OWP12 due to its location, is designed to meet all modern requirements for eco-friendliness and digital services. OWP12 is now the very first site to use a new type of modular façade, known as *e-coFACE*, produced by façade construction company FKN Fassaden. The company has its headquarters in Neuenstein, Hohenlohe district, in the German federal state of Baden-Württemberg. The design of the façade was developed together with Drees & Sommer engineers. The special feature is the space-saving building shell, designed on the principles of material cycle planning. It is intended to minimize energy consumption and generate energy itself, while also complying with the very high requirements placed on sound insulation.

Video: [New Building OWP 12 Fascination Façade](#)

‘Trying out pioneering construction technologies ourselves to gain key insights for client projects is what we are aiming at in our new building. This also applies to the façade. It has a high level of sound insulation, takes up little space, is very energy efficient and even generates energy itself. Combining all these properties in a façade design is unheard-of; it’s a product that has not been seen on the market until now. Together with the FKN Group, we have now changed that,’ explained Steffen Seidl, Spokesperson of the Executive Board at Drees & Sommer SE.



*Looks good and is highly efficient: the new façade of the FKN Group, developed together with Drees & Sommer.
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Feeder Road Calls for High Degree of Soundproofing in New Construction

According to Drees & Sommer, conventional designs use ever thicker façade structures that take up valuable floor space. Sound insulation is generally achieved through solid and heavy exterior wall components. The new office building OWP12 on the outskirts of Stuttgart, however, is in the immediate vicinity of a busy four-lane feeder road. This not only required a high level of sound and heat insulation, but also a construction method that is as slim as possible and designed to make efficient use of space, as the plot of land is quite small.

The New Façade Is Only 210 Millimeters Thick

The solution is a high-performance façade, which is also fitted with photovoltaic panels on the south and west sides to produce energy: 'By using innovative materials, including sustainable insulation in particular, we have achieved excellent thermal insulation and soundproofing results, and we have done this with a thermal envelope only 90 millimeters thick. Taking into account the photovoltaic panels, the façade implemented for Drees & Sommer has an overall thickness of just 210 millimeters. By contrast, a conventional design would have a total thickness of at least 400 millimeters. The space that we save through this slimline design can be put to good use elsewhere,' reported architect and façade specialist David Schenke from Drees & Sommer.

Non-Combustible, Making it Also Suitable for Multi-Story Buildings

'Our innovative façade system will reach market readiness when it is first installed in the new office building OWP12.

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Based on its fire safety classification, it is also suitable for use in high-rise construction. This is because the panel is not flammable. As a result, the façade can also be installed in buildings more than 20 meters high,' reported Franz Ebert, sales manager at FKN Fassaden. Its suitability for high-rise buildings was also confirmed by the Civil Engineering Materials Testing Institute (MPA BS) at the Technical University of Braunschweig, Germany, and by the granting of general building inspection approval.



The façade can also be installed in buildings with a height of more than 20 meters. ©Drees & Sommer SE

Pollutant-Free, Durable and Recyclable

To minimize resource consumption and waste, Drees & Sommer together with its subsidiary and environmental consulting institute, EPEA, are largely implementing the Cradle to Cradle principle for OWP12, an approach that promotes a systematic circular economy end-to-end. For example, the materials used in the *e-coFACE* façade meet the requirements of the relevant environmental labels such as the German Sustainable Building Council (DGNB), Leadership in Energy and Environmental Design (LEED) and Building Research Establishment Environmental Assessment Methodology (BREEAM). The basic insulation material, *Calostat*, is also certified cradle to cradle. As everything can be deconstructed into components of the same kind, a process that is planned in detail, the materials can be recycled or reused accordingly after their service life.

Other Well-Known Cooperation Partners from the Region

A number of well-known cooperation partners in the region supported Drees & Sommer in the OWP12 construction project.

Just recently, the planning and consulting company presented an innovative module for technical building equipment together with Würth, the world market leader for fastening systems and assembly technology, based in the German city of Künzelsau in the federal state of Baden-Württemberg. This is expected to deliver considerable savings of time and costs in planning, production and assembly.

Designed as a net plus energy building

The four-story building with a gross floor area (GFA) of around 7,000 square meters is costing EUR 22 million. It features a large conference area and zones for employees such as a terrace, a cafeteria and a staff restaurant on the first floor for up to 1,000 people. It will accommodate 200 workplaces when fully operational. The property, designed jointly with SCD Architekten Ingenieure, is intended to be more than just an administrative building; it will also act as a showcase for potential clients.

As a net plus energy building, the new OWP12 property is designed to generate more energy than it consumes during operation. A highly insulating façade design, photovoltaic systems on the roof and on the southern façade, geothermal heat from boreholes, and a greened northern façade all contribute to making it net plus.

OWP12 INNOVATION JOURNEY

In an *OWP12 Innovation Journey*, Drees & Sommer is inviting all those interested to find out about the innovations at the Obere Waldplätze 12 construction site on further dates, presented as a virtual program. On March 24, the technical building services (MEP) module was presented, and on April 22, it was the turn of the modular façade. On June 29, from 13.00 to 14.30 hours, the topic *Cost-effective Processes* will deal with use of the digital methods Building Information Modeling (BIM) and Lean Construction Management (LCM). On July 15, from 13.00 to 14.00 hours, the focus will be on the Cradle to Cradle approach to buildings and sustainable startups. In September or October, the program will cover the greened façade and the technical building services management system, and in October or November, it will deal with future working under pandemic conditions. Anyone wishing to take part is welcome to register with OWP12@dreso.com to receive all the access data.

Videos about the OWP 12 new building (available in German):

[Fassadenplanung und Energiekonzept \(*façade planning and energy concept*\)](#)

[Vorfertigung modularer Bauteile \(*prefabrication of construction modules*\)](#)

[Einbau modularer Bauteile \(*installation of construction modules*\)](#)

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FKN FASSADEN: We Realize Façades for Demanding Architects and Building Owners

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