Press release

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fischer BWM Fassadensysteme implements large-scale solar facade

A sunny outlook for sustainable energy production

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In order to generate solar power at one of its new production sites in Iggensbach (Bavaria), Fenecon planned to install a large facade solar panel system. The planners and contractors opted for a facade system by fischer BWM Fassadensysteme to securely fasten the photovoltaic modules. The system was developed in cooperation with the module manufacturer Solarwatt to meet the project's requirements.

Fenecon is a leading manufacturer of energy storage solutions and offers systems for private households, commercial use, industrial purposes, energy providers, and vehicle manufacturers. The company's solutions use the OpenEMS-based in-house energy management system FEMS. Based in Deggendorf, Lower Bavaria, Fenecon has been producing large container storage systems from electric vehicle batteries since 2017. The success of this concept soon required production to expand. At the start of the year, the company launched operations at the new CarBatteryReFactory site in Iggensbach, located approx. 30 kilometres northwest of Passau. Storage systems will be produced from zero, first and second-life vehicle batteries at the factory. In addition to the production site, the complex furthermore comprises storage

facilities, development laboratories and offices. The CarBatteryReFactory represents an important step in the industrialisation and large series production of large container storage systems from electric vehicle batteries.

Fenecon planned to generate a large proportion of the energy for its new plant from renewable sources and therefore envisioned suitable roof and facade surfaces for the purpose of generating solar power through photovoltaic modules integrated into the rear-ventilated curtain-wall facade. “The advantage compared to roof and rooftop systems is that the winter yield of solar facades is higher while the electricity generation is also significantly improved in the otherwise less favourable months”, explains Benjamin Orths, who was involved in the project as International Product Manager of facade systems at the fischer Group of Companies.

Gaass Florian GmbH from Grainet, Lower Bavaria, was awarded the contract to carry out the work on the facade using solar modules by our partner Solarwatt from Dresden, Germany. In total, 552 Solarwatt vision GM 3.0 style glass-glass solar modules were installed on a surface of approx. 1,050 square metres, generating a peak output of 204.24 kilowatt peak (kWp). The solar modules have a general technical approval that allows them to be used for solar car park monitoring and facades without requiring additional securing. fischer BWM Fassadensysteme supported the project managers with planning the facade and developed a project-specific fixing solution compatible with other projects in partnership with Solarwatt. “This resulted in a completely secure system suitable in any area such as residential, office and commercial construction, as long as there is an anchor substrate”, Benjamin Orths states. “With our substructure for PV systems, pre-sealed surfaces can be used and existing

facades can be utilised to generate renewable energy". What makes this innovative design so special is that there is no need for any visually unappealing elements such as insertion tracks and brackets, as high-quality architectural facades can be fastened with clasps. This system further enables a distinguished facade while keeping joints to a minimum. At the same time, it constitutes a permanent and restraint-free construction that securely fastens the modules in the facade. The system is easy and convenient to install and disassemble as needed.

Fenecon's new plant has been designed as a steel structure. While the parts of the facade not used for solar energy feature an insulated cassette facade, the PV modules are anchored into the supporting structure by a substructure. Vertical carrier profiles serve as a base structure for the horizontal ATK 103 PV clasp profiles, which were fastened to the vertical profiles with drilling screws. The PV modules were then hooked into the open C-profile of these horizontal elements with the pre-mounted clasps attached to the back. Benjamin Orths emphasises, "We made quick progress thanks to pre-mounting the clasps with special screws that precisely fit the horizontal profile". The size (1780 x 1052 x 40 millimetres) and weight (25.5 kilogrammes) of the PV modules required comprehensive calculations taking into account the weight and wind loads as well as any necessary current regulations and standards.

With the substructure for PV modules, fischer BWM Fassadensysteme facilitates the construction of an aesthetically appealing and safe structure with a sustainable energy source. Thanks to the lasting safety and functionality of the firmly fastened solar facades, solar energy can be converted into electricity for decades without releasing

emissions or using resources. This has resulted in a structure that guarantees future-proof, renewable and environmentally friendly energy generation for generations to come.

Image captions:

Images 1 to 3
Large-scale PV modules: The solar facade of the new production, development, logistics and office building of Fenecon in Iggensbach (Bavaria) makes the building more sustainable and cost-effective to operate through alternative power generation from solar energy. The PV modules were permanently and securely fastened to the facade with a substructure solution by fischer BWM Fassadensysteme.

Image 1: © FENECON GmbH
Images 2 and 3: fischer

Image 4
On the sunny side: Thanks to the Solarwatt PV modules permanently and securely fastened to the facade of its new building, Fenecon will benefit from this alternative form of power generation for decades to come, with the benefit of low operating costs and an improved carbon footprint.

Image: fischer

Images 5 to 7
A building with a distinguished look: The new substructure system for PV modules by fischer BWM Fassadensysteme is fastened with clasps that feature minimal joints and no visible fastening points. The structure is also restraint-free and offers lasting safety.

Images: © FENECON GmbH

The fischer Group of Companies

The fischer Group of Companies, headquartered in Waldachtal in Germany's northern Black Forest, generated sales of 1.16 billion euro in 2023 with a global workforce of around 5,900 employees. The family-owned company operates 52 subsidiaries around the world and exports to around 120 countries. It includes the five divisions: fischer fixing systems, fischer Automotive, fischertechnik, fischer Consulting and fischer Electronic Solutions.

fischer fixing systems is the technological market leader in key areas of fixing technology. fischer offers products that deliver technical perfection to a wide range of customers, from do-it-yourselfers to tradespeople to key account partners.

fischer Automotive manufactures high-quality parts for vehicle interiors. The company is highly competent in the plastics processing segment and is an important partner for the automotive industry. Its range of products includes air vents, cup holders, trays and multi-function components.

With its construction kits, fischertechnik is active in both the toymaking and the educational sector. fischertechnik is one of the last remaining toy makers to exclusively develop and produce in Germany.

fischer Consulting evolved from the competence developed in the company itself, which includes the fischer ProcessSystem with its central aim of permanent improvement for the ultimate benefit of the customer. fischer Consulting advises small and medium-sized businesses, government agencies and major companies on their path towards lean and efficient processes.

fischer Electronic Solutions develops and manufactures custom electronic solutions. The company also develops, produces and distributes custom and capacitive touch systems such as multi-touch solutions made of glass and the corresponding controller units. All electronics are manufactured in-house.

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