

## Press Release

### CPC - resource-saving and climate-friendly concrete components

(Abstract:) **CPC stands for Carbon Prestressed Concrete - instead of steel as usual, the concrete of CPC panels is reinforced exclusively with prestressed carbon fibres. The high-performance thin concrete elements thus enable material savings of up to 80 percent, depending on the design, and reduce the component's CO2 footprint by up to 75 percent.**



The smaller amount of concrete massively reduces the self-load of the structure, lowers the CO2 footprint and also significantly reduces transport costs. A further CO2 reduction of the component results from the use of significantly smaller quantities of carbon instead of large quantities of steel (factor 30). The thin elements can be manufactured industrially and in large formats and then cut to size. In addition to simple cuts, freely shaped cuts, surface treatments such as milling and brushing, drilling, slot milling or pockets are also possible.

The CPC panels were developed by the Swiss company CPC AG. Holcim Germany or its subsidiary Vetra Betonfertigteilewerke GmbH cooperates with the company in the market launch of the innovative components and further optimises their design (e.g. via concrete technology and composition). In Essen near Oldenburg (Lower Saxony), a state-of-the-art large-scale plant for CPC panels is being built, which will start production before the end of 2022. CPC AG is supplying the technology and the carbon fibres, for the production of which a new plant has been built in Switzerland. "Building more with less, that is our credo. And with CPC we are taking a big step in this direction," comments Thorsten Hahn, CEO Holcim Germany.

#### **Milestone abZ**

"For these innovative concrete elements, a wide range of possible applications is opening up in the construction sector - for example, for filigree and sustainably produced balcony slabs, stairs, bridges and freely designed façade elements. This will interest many planners and architects who are looking for new, more sustainable solutions for their customers," explains Vetra managing director Stefan Gramberg.

With the first general building approval (abZ) for prestressed carbon concrete in Germany, which was granted at the end of 2021, the resource-saving and climate-friendly concrete components with CPC technology can now also be used without complications. The approval includes a complete structural design of the CPC slabs, which can be used to individually design many structural components, such as stair treads, balcony slabs and exterior wall cladding. Modular bridges can also be created easily and in a resource-saving way with CPC panels.



"We want to continue to grow together - with this new building idea for concrete with an incredibly wide range of applications. The exclusive cooperation with the Holcim Germany Group now enables us to further optimise the idea, implement necessary investments and penetrate a significantly larger market with the innovative thin concrete elements," says Prof. Josef Kurath, member of the Board of Directors of CPC AG and also the developer of this novel production method and the associated innovative joining technologies.

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### **About Holcim**

Holcim Germany is one of the leading companies in Germany for innovative, sustainable and digital construction products and solutions. As a pioneer in sustainable construction, Holcim employees develop tailor-made solutions for builders, construction companies, architects and engineers - combined with a clear focus on climate protection and the circular economy. Our mission: building more with less material.

With our services, we are building a climate-neutral future as a reliable partner together with our customers and partners, and thus a world worth living in for all generations. Those who work for Holcim are involved in the climate-friendly transformation of industry, the sustainable design of living, learning and working spaces, the development of durable infrastructure and the future of mobility and energy supply.

Holcim lives diversity: The Group employs around 1,800 people of 36 different nationalities at around 130 locations in Germany and the Netherlands. Holcim Germany is a subsidiary of the world's leading building materials group Holcim Ltd.

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### **About CPC AG**

The CPC concrete elements of CPC AG (Switzerland) are based on the "Carbon Prestressed Concrete" technology, which emerged from a long-term research project at the Zürich university of applied sciences ZHAW. The CPC technology is protected worldwide by patent. Construction projects with CPC concrete slabs have been implemented since 2015. Numerous buildings such as balconies, bridge decks, modular bridges, bicycle stands, jump towers or staircases have already been successfully realised.

**[www.cpcag.ch](http://www.cpcag.ch)**

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