

**PRESSEMITTEILUNG**

* **The world's fastest heating/cooling press from WICKERT is in use at Chemnitz University of Technology**
* **Institute for Lightweight Structures utilizes the system to process high-performance polymers for industrial-scale applications**

*Landau/Germany, April 22, 2025.* Since 2024, the world’s fastest heating/cooling press has been in operation at the Institute of Lightweight Structures (IST), part of the Faculty of Mechanical Engineering at Chemnitz University of Technology. With its extremely high tempering speeds, the WICKERT WKP 3000 S enables scientists to process high-performance thermoplastics such as PEEK in record time.

The team led by Prof Dr Wolfgang Nendel is researching how structural components and hybrid components made of plastic and metal can be manufactured using near-series production processes. The focus is on structural parts for the aerospace and automotive industries, components for electromobility, and hybrid plastic-metal products.

**Press technology for lightweight structural components**

The new hydraulic press from WICKERT achieves peak temperatures of up to 450° C across the entire pressing area of 600 x 600 mm. It currently delivers unmatched heating rates of 55 K/min and cooling rates of up to 100 K/min. The maximum deviation over the entire surface is less than 5° C.

The WKP 3000 S reaches its full press force of 3,000 kN in under one second. The plane parallelism of less than 0.1 mm and a maximum lateral offset of 0.02 mm enable processing at the highest level of precision.

“The WICKERT press puts us at the cutting edge of technology,” explains Nendel. “In particular the extreme speeds of temperature control have incredible added value in research. This allows us to design test series much more effectively and create many more samples in the shortest possible time.” A production cycle that takes a few minutes on the Wickert press would take over an hour on a normal press.

**Numerous applications for industry**

Research at Chemnitz University of Technology focuses on structural components for aerospace, the automotive sector, and electromobility. Typical applications include tanks for hydrogen systems, battery carriers for electric vehicles, crash-relevant parts for car front and rear ends, and drainage and manhole systems for the construction industry.

Another field of research concerns thermoplastic CFRP profiles for aircraft components. The scientists are investigating how these high-performance plastics can be processed in cost-effective large-scale production. The focus here is on materials that can replace standard polymers such as PP and PE as well as engineering plastics such as PA, PC, POM and PET when they reach their performance limits.

**About Wickert Maschinenbau GmbH**

Wickert Maschinenbau GmbH is a medium-sized, family-owned company based in Landau in der Pfalz. It develops and produces complex, fully automated systems that are then integrated in its hydraulic presses. All machines and systems have a modular structure and feature pressing forces of between 20 and 100,000 kN, with a customer-specific layout in each case. The provided systems are used to process elastomers, composites, plastics and powder materials. The presses are used in the production of pharmaceutical sealing plugs, as well as the production of safety parts in automotive brake systems and bi-polar plates for fuel cells. Other applications for Wickert presses include e-mobility, laboratories and research facilities.

Stephanie Wickert and Stefan Herzinger act as partners and managing directors of the family-owned company, founded in 1901, which is supported by an Advisory Board chaired by Hans-Joachim Wickert. Wickert manufactures exclusively in Germany's Landau/Pfalz region, from where it supplies customers in Europe, America and Asia. In 2023, 200 employees generated a turnover of around € 41 million.

**Photos:**

Ein Bild, das Kleidung, Person, Mann, Maschine enthält.

Automatisch generierte Beschreibung

Photo 1:

The team led by Prof Dr Wolfgang Nendel (second from right) uses the new WKP 3000 S to investigate the use of high-performance thermoplastics, in particular PEEK and its derivatives (Photo: WICKERT).

Ein Bild, das Maschine, medizinische Ausrüstung, Im Haus, Forschungsinstrument enthält.

Automatisch generierte Beschreibung

Photo 2:

The WKP 3000 S achieves a peak temperature of 450°C with a heating rate of 55 K/min – currently unmatched on the market. Cooling is nearly twice as fast, reaching rates up to 100 K/min. The system builds its full press force of 3,000 kN in under one second (Photo: WICKERT).

**You can also download the text of the press release as a Word document and the images in print quality from the page** [**https://www.auchkomm.com/aktuellepressetexte#PI\_608**](https://www.auchkomm.com/aktuellepressetexte#PI_608)

**Contact**

**Wickert Maschinenbau GmbH**

Steve Büchner

Sales Engineer / Deputy Head of Marketing

Wollmesheimer Höhe 2, D-76829 Landau

Phone: +49 6341 9343 93, E-Mail: [s.buechner@wickert-presstech.de](mailto:s.buechner@wickert-presstech.de)

For more **information** go to <https://www.wickert-presstech.de/en/>

**Please send a voucher copy:**

auchkomm Unternehmenskommunikation, F. Stephan Auch, Hochstraße 11, D-90429 Nuremberg, Germany, [fsa@auchkomm.de](mailto:fsa@auchkomm.de) , [www.auchkomm.de](http://www.auchkomm.de)