

Press release

Stuttgart, October 29, 2026

MAHLE commissions the largest photovoltaic-thermal system in Germany to date

- MAHLE plant in Vaihingen an der Enz is making its heat supply almost entirely independent of fossil fuels
- More than 1,000 hybrid modules and a geothermal borehole field across an area of 2,000 square meters
- MAHLE is applying its thermal management expertise to energy technology for the first time
- Hybrid modules are supplied by the Dresden-based startup Sunmaxx
- Reference project for supplying industry with solar power and heat is attracting strong interest from companies in the region

MAHLE has fully commissioned the largest photovoltaic-thermal (PVT) system in Germany to date at its site in Vaihingen an der Enz. The plant can now meet nearly all of its heat demand, previously covered by fossil fuels, with locally generated solar heat. The 2,000-square-meter system consists of more than 1,000 PVT hybrid modules, a geothermal borehole field, and a heat pump. In addition to heat, it also generates solar electricity for the site. The hybrid modules are supplied by Dresden-based startup Sunmaxx. MAHLE contributed its established thermal management expertise from the automotive sector to the development of the cooling plates for the PVT modules. As a reference project for supplying industry with solar-generated electricity and heat, the system is attracting strong interest from companies in the region.

“With our PVT system in Vaihingen, we are creating a unique bridge from proven automotive technology to pioneering energy technology, underscoring the consistent implementation of our sustainability strategy,” said Martin Wellhoeffer, Member of the MAHLE Group Management Board, responsible for the business unit Thermal and Fluid Systems.

With more than 430 kWp of electrical capacity and a projected annual output of 1,086 megawatt-hours (MWh) of thermal energy, the system covers almost the entire heating demand of the site. The geothermal borehole field serves as seasonal thermal storage. Heat stored during the summer is available to the heat pump as a heat source during the winter.

The cooling plates developed by MAHLE are located at the back of the PVT modules. They absorb heat from the solar cells and limit temperature-related power losses. The technology is already used in series production of MAHLE components for electric vehicles and is now being used for the first time to regulate the temperature of PVT modules.

The cooling plate is in full-surface thermal contact with the PV module. This transfers the heat generated in the solar cells across the entire surface to the heat transfer fluid, where it can then be used. Compared with conventional PVT modules that use a rear-mounted finned heat exchanger and are connected to the PV module only at specific points, the full-surface thermal contact provided by the cooling plate used in Vaihingen enables significantly better heat transfer and more efficient use of the heat generated in the solar cells. "We are particularly proud to have installed this forward-looking technology here at the site, using existing structures and without interrupting ongoing operations," said Plant Manager Joachim Wulff.

The MAHLE plant in Vaihingen an der Enz was established in 1979 and employs around 200 people. It is the only MAHLE plant in Europe producing Visco® products such as the Visco® fan and the Visco® pump. These components are used for engine cooling. They automatically and continuously adjust their output to the actual cooling requirements of the engine, helping to reduce fuel consumption and noise emissions while extending engine life.

Note for editors: This press release and the accompanying photo material can be found at <https://newsroom.mahle.com/press/en/>.

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A PVT system supplies the MAHLE plant in Vaihingen an der Enz with solar power and heat, making the plant's heat supply almost entirely independent of fossil fuels.



Around 780 of the more than 1,000 PVT modules are located on the roof of the main building at the MAHLE site in Vaihingen an der Enz.



Martin Wellhoeffer, Member of the MAHLE Group Management Board, responsible for the business unit Thermal and Fluid Systems



Joachim Wulff, Plant Manager at the MAHLE site in Vaihingen an der Enz

Contact persons for MAHLE communications:

Elena Barth

Press Officer

Phone: +49 151 1088 8491

E-mail: elena.barth@mahle.com

Kerstin Cynthia Lau

Head of Media Relations

Phone: +49 173 6180 956

E-mail: kerstin.cynthia.lau@mahle.com

About MAHLE

MAHLE is a leading international development partner and supplier to the automotive industry with customers in both passenger car and commercial vehicle sectors. Founded in 1920, the technology group is working to shape the climate-friendly mobility of tomorrow, with a focus on the strategic fields of electrification and thermal management as well as further technologies to reduce carbon emissions, such as fuel cells and highly efficient internal combustion engines that can also run on biofuels, hydrogen or synthetic fuels.

MAHLE generated sales of €11.3 billion in 2025. Employing some 64,000 people at 127 production locations and 11 technology centers, the company is represented in 28 countries. (as at: 12/31/2025)

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