

Press release

Stuttgart/Dresden, January 20, 2025

MAHLE builds Germany's largest PVT system with hybrid modules from Saxony

- MAHLE decarbonizes its plant in Vaihingen-Enz (Germany)
- Sunmaxx supplies more than 1,000 type PX-1 PVT modules, which generate power and heat at the same time
- Solar heat generation sufficient for extensive independence from fossil fuels

MAHLE is decarbonizing its production site in Vaihingen-Enz (Baden-Württemberg / Germany) with a state-of-the-art photovoltaic thermal (PVT) plant. It uses more than 1,000 PVT modules from Sunmaxx, a leading European manufacturer of PVT hybrid modules. MAHLE is strategic investor and development partner of Sunmaxx. Germany's largest photovoltaic thermal plant is being built on an area of almost 2,000 m². It will supply the MAHLE plant with green electricity and overall, more than 430 kilowatt-peak (kWp) of electrical power and approximately 1.2 gigawatt-hours (GWh) of thermal energy generated annually are involved. This could cover the annual heating needs of about 100 single-family houses. The first hybrid modules of Sunmaxx will be installed from February 2025, and the plant is scheduled to go into operation in July 2025.

"Our joint project shows that the switch to regenerative solutions is worthwhile due to the increasing costs for energy and process heat. The decarbonization of the plant in Vaihingen-Enz serves as a reference project for other sites and makes an important contribution to achieving climate neutrality of our company by 2040", said Jumana Al-Sibai, member of the MAHLE Group Management Board and responsible for the Thermal and Fluid Systems business unit. The MAHLE locations in Germany have been climate-neutral since 2021.

Unlike pure PV modules, PVT modules deliver electricity and heat simultaneously. They can serve as the sole heat source for heat pumps, but in combination with a heat storage show their greatest effect. For the sustainable heating supply of the MAHLE site near Stuttgart, a geothermal field has been selected as a heat storage facility to store the heat energy



generated in summer by PVT for heating operation during the winter months. Thanks to the regeneration by the PVT modules, significantly fewer drill meters are required than for pure geothermal systems.

After the changeover, MAHLE will benefit from very competitive electricity and heat prices. With the PVT modules from Sunmaxx, the MAHLE site is almost completely detached from natural gas and makes its infrastructure largely independent of fossil fuels. "Due to PVT, the energy costs can be scaled and thus planned. Unlike gas, for example, no increase is to be expected in the next thirty years. MAHLE is showing: Projects like this are an opportunity for industrial companies to keep their energy expenditures constant and represent a cost-effective solution to achieve their climate goals," explains Wilhelm Stein, CEO of Sunmaxx.

Help for editors: This press release and the accompanying photo material can be found at https://newsroom.mahle.com/press/de/.

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Pleased with the first PVT modules for the MAHLE site in Vaihingen-Enz: (from left to right) Andreas Eilemann (left), MAHLE Director Sustainability & Digitalization Thermal and Fluid Systems, plant manager Joachim Wulff and Johannes Diem, Head of Business Innovation, Startup Cooperation & Venture Capital at MAHLE



Jumana Al-Sibai, member of the Management Board of the MAHLE Group and responsible for the Thermal and Fluid Systems business unit



Wilhelm Stein, CEO of Sunmaxx



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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 on the climate-neutral mobility of tomorrow, with a focus on the strategic areas of electrification and thermal management as well as further technologies to reduce carbon emissions, such as fuel cells or highly efficient, clean combustion engines that also run on renewable fuels, such as hydrogen. Today, one in every two vehicles globally is equipped with MAHLE components.

MAHLE generated sales of almost EUR 13 billion in 2023. Employing more than 72,000 people at 148 production locations and 11 technology centers, the company is represented in 29 countries. (Last revised: 12/31/2023)

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About MAHLE New Ventures

MAHLE New Ventures GmbH was founded in 2022. It bundles all start-up activities and start-up teams at MAHLE under one roof and, in doing so, takes account of the growing importance of internal corporate start-ups and venture capital (VC) investments in external start-ups. MAHLE New Ventures has been a lead investor at Sunmaxx since 2022.

About Sunmaxx PVT

Sunmaxx is the world's leading developer and manufacturer of PVT hybrid modules. Sunmaxx is the first company to succeed in transferring PVT modules to industrial mass production. As a result, Sunmaxx is able to offer its extraordinarily powerful PVT modules cost-effectively and to a high quality standard. With an annual production volume of 50 MW, Sunmaxx is one of the most important suppliers for decarbonization projects in Germany and Europe—from private single-family homes and municipal heat planning through to large industrial plants with process heat.