

MAGNOTHERM returns to Chillventa showcasing the high-capacity ‘STELLAR’ development, following recent success for magnetic cooling in industry

Darmstadt, September 1, 2026 – Demand for magnetic cooling continues to accelerate. In 2024, MAGNOTHERM launched the 1 kW ECLIPSE platform at Chillventa. Today, the evolved system now cools produce in live retail environments across Germany. At Chillventa 2026, running October 13 to 15 in Nuremberg at Hall 9, Stand 115, MAGNOTHERM returns with the next development and first public showcase of the STELLAR platform, with a step toward higher cooling capacities using superconductor magnet technology. The system in development is supported by further groundbreaking work in lanthanum-iron-silicon (La-Fe-Si) magnetocaloric material production and presentation of the updated ECLIPSE following its successful industry introduction.

ECLIPSE moves from pilot to practice with REWE Group

Since MAGNOTHERM’s 2024 Chillventa attendance, a key pilot project has been underway with leading supermarket chain REWE Group. Following initial model store testing, the ECLIPSE system, integrated into a top loader configuration, has begun live store rollout, placing the value of refrigerant-free cooling directly into the hands of end operators.

With initial 15% efficiency gains measured against comparable R290 equipment, the device has continued to evolve, featuring a significantly reduced footprint and near silent operation. The project supports REWE’s climate and efficiency goals and marks the first widespread deployment of refrigerant-free cooling equipment within supermarket retail. ECLIPSE makes its return to Chillventa, showcasing its technical evolution and offering insights from the pilot project, where further performance results are expected in the coming months, as more devices take to the stores.

STELLAR Magnetic Cooling, Superconducted.

MAGNOTHERM is delighted to present STELLAR, a significant milestone in the development of magnetic cooling technology, at Chillventa 2026. STELLAR takes magnetic cooling into higher capacities, using superconducting magnet technology in a modular format, serving high impact sectors including data centres, HVAC, and industrial processing.

Magnetic cooling systems depend on two core variables, magnetocaloric material and magnetic field. Also featuring at Chillventa, MAGNOTHERM’s lanthanum-iron-silicon material is mass-production ready, optimised, and configurable for end application. Focus therefore shifts to magnetic field. Here, an increase from 1 T to 5 T field strength unlocks a 100x power gain factor, a step which STELLAR takes using high temperature superconducting tape. Made increasingly available via the fusion energy economy, this field generation technology delivers the required performance, without compromising system weight or scale.

With the technical foundation set, the STELLAR vision takes a modular approach with 125 kW+ units, built for indoor or outdoor installation and near silent operation. Expanding the core magnetic cooling value proposition, the platform anticipates further

advantages, with up to 50% efficiency gains in part-load, the ability to recover electricity during periods where active cooling is not required, and no local water consumption, with the system meeting higher demand by ramping up magnetic field strength.

The STELLAR vision and roadmap take centre stage at Chillventa, offering a view into the future of the technology and its widespread application across critical cooling sectors. MAGNOTHERM welcomes journalists, industry experts, and visitors to Hall 9, Stand 115, from October 13 to 15, to experience STELLAR, ECLIPSE, and LaFeSi material in person.

About MAGNOTHERM

MAGNOTHERM, founded in 2019 as a spin-off from the Technical University of Darmstadt, is a dynamic company with world-leading expertise in magnetic cooling and magnetocaloric materials. The international deep-tech company has channelled its intensive pioneering work in magnetocalorics into the development of magnetic refrigeration technology to market-ready cooling products. The core principle behind magnetic cooling is a compressor-free, refrigerant-free process. The climate-tech company offers sustainable cooling solutions configured for use in data centre cooling, food and beverage retail, industrial process cooling, HVAC and beyond.

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