

Press Kit - Deutsche Version

(English Version Follows Below)

Kurzvorstellung

MAGNOTHERM wurde im Jahr 2019 gegründet. Als junges Unternehmen verfügt unser internationales Team von ca. 40 Personen mit Hauptsitz in Darmstadt, nahe Frankfurt, über weltweit führende Expertise in magnetischer Kühlung und magnetokalorischen Materialien.

MAGNOTHERM hat sich zum Ziel gesetzt, einen signifikanten Beitrag zur Bekämpfung des Klimawandels zu leisten und die oft unterschätzte Kühlindustrie zu revolutionieren, die derzeit für mindestens 7% der weltweiten CO₂-Äquivalent-Emissionen verantwortlich ist. Wir entwickeln und vertreiben Produkte und Technologien, die die Zukunft der Kühlung darstellen. Unsere Technologie ermöglicht das Kühlen mit niedrigem Druck und ist bis zu 30% effizienter im Energieverbrauch als die derzeitigen Gaskompressionskühlsysteme. Zugleich ist unsere Technologie nicht explosiv, nicht entflammbar und leicht zu warten. Wir entwickeln unsere saubere Kühltechnologie für den gewerblichen Markt in Europa und darüber hinaus. Hiermit wollen wir der weltweit rasch wachsenden Nachfrage nach kosteneffizienten und nachhaltigen Kühlanwendungen nachkommen und den politischen Entscheidungsträgern einen alternativen Weg zur Gaskompressionskühlung aufzeigen, die sich mittlerweile seit fast zwei Jahrhunderten nicht verändert hat.

Beschreibung der Technologie

Magnetokalorische Materialien sind das Herzstück unserer Technologie. Indem diese Materialien Magnetfeldern ausgesetzt und magnetisiert werden, wird das Material sofort erhitzt. Diese Wärme wird mit einer Kühlflüssigkeit auf Wasserbasis abtransportiert und die Wärme über einen Wärmetauscher an die Umgebung abgegeben. Anschließend wird das Material entmagnetisiert, wodurch seine Temperatur sinkt. Nun wird die Kälte mit der Kühlflüssigkeit abtransportiert und durch die Kühlkabine gepumpt, sodass dort die gewünschten Temperaturen erreicht werden. Der Prozess wird anschließend wiederholt, um die Temperatur im geeigneten Kühlbereich zu halten.

Heutige und zukünftige Produkte

MAGNOTHERM arbeitet seit 2019 an der Entwicklung einer kommerziell nutzbaren magnetokalorischen Kühlung. Nach dem Bau verschiedener Forschungsgeräte und Kühlprototypen hat MAGNOTHERM mit POLARIS den weltweit ersten magnetischen Getränke Kühler entwickelt, der Getränke auf erfrischende 5 °C herunterkühlen kann. Dieses Gerät verbraucht eine vergleichbare Menge an Energie wie die marktüblichen Geräte und beinhaltet gleichzeitig keine klimaschädlichen Chemikalien oder Risiken wie Entflammbarkeit und Explosivität. Es beweist, dass Kühlen sowohl sicher als auch sauber sein kann. Der nächste Schritt auf dem Produktplan von MAGNOTHERM ist ein Doppeltür-Kühlgerät für den Masseneinzelhandel, wo bisher die kommerzielle Kompressor Technologie verwendet wird. Dies wird den Wendepunkt für die breite Einführung der magnetokalorischen Kühlung einleiten.

Fakten:

- Je mehr wir kühlen, desto wärmer wird es.
- 20% des Stromverbrauchs von Gebäuden entfallen auf die derzeitige Gas-Kompressionskühlung und -Kühltechnologie, bei Supermärkten sind es sogar 50% des Stromverbrauchs.
- Mindestens 7% der globalen Treibhausgasemissionen stammen von heutigen Kühlgeräten.
- Bis 2060 werden 460 Gt CO₂ ausgestoßen, wenn wir ohne Veränderungen weiterkühlen.
- Die Kühltechnologie von MAGNOTHERM reduziert die direkten Treibhausgasemissionen um 100% und erhöht die Energieeffizienz um bis zu 30%.
- Unser Hauptsitz befindet sich in Darmstadt, Deutschland, mit weltweiter Distribution.
- Unser Team besteht aus ca. 40 Personen aus der ganzen Welt.

Was kommt als Nächstes?

Wir sehen eine Chance für MAGNOTHERM, seine Technologie als Game Changer für Kühltechnologie zu etablieren.

Unsere Ziele sind:

1. Magnetokalorische Kühlung für B2B-Kunden sowie Verbraucher sichtbar und zugänglicher zu machen durch unsere Showroom-Produktlinien POLARIS und ECLIPSE: Dies wird auch politischen Entscheidungsträgern helfen, Normen und Vorschriften zu aktualisieren.
2. Die Technologie im kommerziellen Sektor zu etablieren.
3. Die Technologie auf weitere Anwendungen wie Serverkühlung und andere zu übertragen.

Ausgewählte Links zur Berichterstattung:

- [Frankfurter Allgemeine](#): Magnettechnik für die kühle Dose
- [Lebensmittel Zeitung](#): Wie ein Startup Kühlung ohne Gase ermöglichen will
- [Lebensmittel Zeitung](#): Edekaner Patschull im Interview: "Der Praxistest verläuft bislang völlig problemlos"
- [TechCrunch](#): Magnets and water net Magnotherm \$6.9M seed round to kill hazardous refrigerants
- [brand eins](#): Heiß, kalt, heiß, kalt
- [Frankfurter Allgemeine](#): 6,3 Millionen Euro für magnetischen Kühlschrank
- [Forbes.at](#): 30 under 30, Timur Sirman
- [Frankfurter Allgemeine](#): Gefriertruhe ohne gefährliche Gase
- [Frankfurter Rundschau](#): Kühlung mit Magnetfeldern: Darmstädter Unternehmen ist Frankfurter Start-up des Jahres

Social-Media-Handles

- Instagram: [@magnotherm](#)
- LinkedIn: [MAGNOTHERM](#)
- Hashtags: [#magnotherm](#) [#nextgenerationcooling](#) [#magnoteam](#)

Biografien der Führungsteams:

- **Timur Sirman:** CEO, Master of Science, Engineering and Management an der TU Darmstadt 2018, Wissenschaftlicher Mitarbeiter an der TU Darmstadt, er/ihn
- **Max Fries:** COO, Doktor der magnetokalorischen Materialien an der TU Darmstadt 2017, Wissenschaftlicher Mitarbeiter an der TU Darmstadt, er/ihn
- **Nadia von Oesterreich:** Head of People and Culture, Strategic Design and Management at Parsons School of Design in New York City, sie/ihr
- **Dimitri Benke:** CTO, Doktorand an der TU Darmstadt, Wissenschaftler an der TU Darmstadt, er/ihn
- **Jeffrey Pickett:** CPO, Master of Science, Global Innovation Design vom Imperial College London, COO Augmented Thinking, er/ihn

Wichtige Berater:

- **Prof. Dr. Oliver Gutfleisch:** Professor an der TU Darmstadt, Experte für Magnete und magnetokalorische Materialien
- **Dr. Tino Gottschall:** Gruppenleiter am Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Experte für Magnete und Wasserstoff

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- Marketing: Abby Kreckel, kreckel@magnotherm.com
- Geschäftsentwicklung: info@magnotherm.com
- Anfragen zu Investitionen: Timur Sirman, Kontakt auf Anfrage an info@magnotherm.com

Press Kit - English Version

Media Assets

Choose from a selection of images, text, and logos that you are free to use in your coverage about MAGNOTHERM. (Don't forget to credit us.)

Boilerplate

Founded in 2019, MAGNOTHERM is a young company headquartered in Darmstadt, near Frankfurt. Our international team of over 40 experts has world-leading expertise in magnetic cooling and magnetocaloric materials.

MAGNOTHERM aims to make a significant contribution to reversing the climate crisis and revolutionising the cooling industry, currently responsible for at least 7% of global CO₂ equivalent emissions, by developing technology which represent the future of refrigeration and cooling. Our technology allows cooling and heating with low pressure and is up to 30% more energy efficiency than current gas compression systems, whilst being non-explosive, non-flammable, and low maintenance. cost-effective and sustainable cooling applications, and offer a path forward for policy makers to help transition away from gas compression cooling, a technology which hasn't changed for nearly two centuries.

Facts:

- The more we cool, the warmer it gets.
- 20% of buildings' electricity consumption is due to current gas-compression refrigeration and cooling technology, which for supermarkets jumps to a whopping 50% of electricity consumption.
- More than 7% of annual global greenhouse gas emissions come from today's cooling appliances.
- 460 Gt of CO₂ will be emitted by 2060 if we continue cooling without change.
- MAGNOTHERM's cooling technology reduces direct greenhouse gas emissions by 100% and increases energy efficiency by up to 30%.
- We are headquartered in Darmstadt, Germany with worldwide distribution.
- Our team consists of over 40 people from across the world.

What's Next?

We see an opportunity for MAGNOTHERM to establish its tech as a game changer for the cooling industry.

Our goals are to:

1. Make magnetocaloric cooling visible and more approachable to B2B-clients as well as consumers via our showroom products POLARIS and ECLIPSE: this will also support policy makers in updating norms and regulations.
2. Establish the technology in the commercial sector.
3. Transfer the technology into additional applications such as server cooling and others.

Description of Technology:

Magnetocaloric materials are at the heart of our technology. By exposing these materials to magnetic fields and magnetising them, the material is instantly heated. This heat is dispersed using a water-based cooling fluid. The material is then demagnetised, reducing its temperature. The material cools down a fluid which is then pumped throughout the cooling application to reach the desired temperature. The process is repeated to maintain the temperature in the required range of cooling.

Current and Future Products:

MAGNOTHERM has been working since 2019 to build commercial-ready magnetocaloric refrigeration. After building various research devices and cooling prototypes, MAGNOTHERM developed POLARIS, the first ever magnetic beverage cooler that can chill drinks down to a refreshing 5°C. This device uses a comparable amount of power to the market equivalent while eliminating climate damaging chemicals and risks such as flammability and explosivity. It proves that cooling *can* be both safe and clean. The next step on MAGNOTHERM's product roadmap is ECLIPSE 2D, a double door refrigeration device to service mass retail spaces where commercial compressor technology is already present. This will usher in the tipping point for widespread adoption of magnetocaloric cooling. The cooling unit that is integrated into the 2D ECLIPSE, is flexibly designed to integrate into various other applications.

POLARIS:

Small and flexible beverage cooling device. Available now for purchase or rental.

ECLIPSE 2D:

Commercial double door cooling unit launched 7.11.2024, available to pre-order.

Social Media Handles:

Instagram: [@magnotherm](#)

LinkedIn: [MAGNOTHERM](#)

Hashtags: [#magnotherm](#) [#nextgenerationcooling](#) [#magnoteam](#)

Contact Information:

Marketing and Sales Inquiries: Abby Kreckel, kreckel@magnotherm.com

Investment Inquiries: Timur Sirman, contact by request to info@magnotherm.com

Leadership Bios:

Timur Sirman

CEO, Master of Science, Engineering and Management at TU Darmstadt 2018, Scientific researcher TU Darmstadt, he/him

Timur is responsible for overseeing investment and outreach processes. Timur is responsible for business development, finance and operations. He is an alumnus from TU Darmstadt (Bachelor's) and TU Berlin (Master's). He has gained profound experience in entrepreneurship and management.

Max Fries

COO, PhD in magnetocalorics from TU Darmstadt 2017, Researcher TU Darmstadt, he/him

Max ensures the internal team is organized and the teams are focused on the correct priorities, using his vast knowledge of magnetocalorics to guide the company. Max is responsible for the technical development as well as cooperations. He's an expert in the field of magnetocaloric materials and magnetic cooling devices.

Dimitri Benke

CTO, PhD candidate at TU Darmstadt, Scientist TU Darmstadt, he/him

Dimitri leads the technical aspect of the company, ensuring innovative new development move forward. He is an expert in permanent magnets, magnetic field simulations and magnetocaloric cooling devices. Dimitri studied physics at Technical University Dresden before joining the research group of Prof. Oliver Gutfleisch to pursue his PhD studies in the fields of magnetic cooling.

Jeffrey Pickett

CPO, Master of Science, Global Innovation Design from Imperial College London, COO Augmented Thinking, he/him

Jeffrey oversees leading the production team and owning the products developed at the best quality. Jeff is responsible for the system design, components and integration. He is an alumnus of TU Darmstadt in mechanical engineering and management as well as from Imperial College London and Royal College of Arts in Global Innovation Design. Before joining MAGNOTHERM Solutions, he pursued his own startup in the field of augmented thinking.

Nadia von Oesterreich

Head of People and Culture, Strategic Design and Management at Parsons School of Design in New York City, she/her

Nadia is responsible for developing and implementing strategies to foster a positive company culture, support employee growth and prepare our company for future expansion. She oversees human resources, including hiring, professional development and daily operations. With her extensive experience in strategic design, leadership coaching, and passion for cultural transformation, Nadia ensures that our company remains an attractive workplace and promotes an inclusive and productive work environment. Before joining our startup, she worked in Business Innovation and UX Community Management at Deutsche Bahn, as well as many other freelance and non-profit positions.

Key Advisors:

Prof. Dr. Oliver Gutfleisch

Professor at TU Darmstadt, Magnets and magnetocalorics expert

Oliver is a pioneer in the fields of magnetic cooling and permanent magnets. He is one of the most cited scientists worldwide in this field and holds numerous patents. His international recognition in magnetic cooling can be seen in the organisation of the most important conference in this field (Thermag) at TU Darmstadt in 2018. Oliver also received the prestigious ERC Advanced Grant in the field of magnetic cooling in 2017. Furthermore, due to his role as scientific director of the Fraunhofer Institute IWKS, he provides good advice in the application of recycled magnets. In 2006 Prof. Gutfleisch and his partners founded the company evico magnetics GmbH, which has been successful on the market since then. At MAGNOTHERM, Oliver advises the team on technological, organizational and strategic level.

Dr. Tino Gottschall

Group leader at Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Magnets and Hydrogen expert

Tino is a leading scientist at the Helmholtz Centre Dresden-Rossendorf. He has extensive experience in magnetic cooling and is regarded as a young offspring scientist. Tino has published numerous, often quoted scientific papers and holds two patents on magnetic cooling. He advises MAGNOTHERM on the technological development and device improvement.

Select Links to Press Coverage

- [Frankfurter Allgemeine](#): Magnettechnik für die kühle Dose
- [Lebensmittel Zeitung](#): Wie ein Startup Kühlung ohne Gase ermöglichen will
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Additional Content:

Brand Language: MAGNOTHERM's Manifesto

Our planet is changing, and humanity must adapt to this change. All areas of life require new answers, from cultural, political, social, and technological. Every citizen of the globe is faced with the challenge of seeking new solutions for a standard, viable, and sustainable future.

MAGNOTHERM aims to make a significant contribution to this change. We develop and distribute the future of cooling technology, an industry currently responsible for nearly a tenth of global CO2 equivalent emissions. We offer a path to help the world transition from gas-vapor compression technology to a more energy-efficient, lower environmental impact, simple to maintain, magnetocaloric technology.

Brand Language: Our Mission:

We believe in science.

We believe that climate change is real, and human made.

We embrace the Green Transition.

We believe in next generation cooling to build a better world for future generations.

As the global temperature keeps increasing, so too will the need for refrigeration. MAGNOTHERM offers a sustainable solution to disrupt and revolutionize cooling technology. Our vision is to utilize the magnetocaloric effect to provide climate-friendly methods of cooling, and to explore applying the technology to additional applications.

Our technology aims to decarbonize the cooling industry and improve energy efficiency by 30%. Our gas-free technology has 0 Global Warming Potential and can mitigate 11 Gigatons of CO₂eq emissions by 2050. We want to be part of the solution and offer a path to reach sustainable development goals.

Our vision:

The more we cool, the warmer it gets.

20% of buildings' electricity consumption is due to current gas-compression refrigeration and cooling technology, which for supermarkets jumps to a whopping 50% of electricity consumption.

At least 7% of global greenhouse gas emissions come from today's cooling appliances.

460 Gt of CO₂ will be emitted by 2060 if we continue refrigerating without any changes.

MAGNOTHERM challenges these numbers by supplying cooling technology that reduces direct greenhouse gas emissions by 100% and increases energy efficiency by up to 30%. In essence, we provide the new generation of cooling appliances.

