TRIDELTA CAMPUS
HERMSDORF

High-Performance Ceramics

MADE IN EUROPE

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MORE THAN A CUP

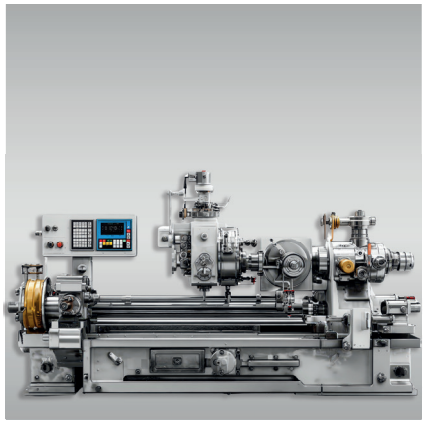
Technical ceramics empower innovations and progress

Did you know?

Every major industrial revolution – from electrification to automation to the digital age – was built on German technical ceramics.
Without high-voltage insulators, ceramic substrates, and advanced functional ceramics, there would be no reliable power grids, no automation, and no Industry 4.0. These “invisible” materials are the silent game-changers that shaped modern industry – and they still hold the key to Europe’s industrial future.

Nikola Tesla – inventor whose innovations made long-distance power transmission and today’s modern electricity supply possible.

Ceramics powering the first wave of automation – Hermsdorf’s materials driving reliability in Europe’s early automotive and electronics industries.



Ceramic innovation for Industry 3.0 – Hermsdorf’s thin- and thick-film ceramics powering control systems, sensors, and the rise of microelectronics in Europe.

Electrification

1900 – Ceramic insulators from Hermsdorf solved the range problem of long-distance alternating current transmission: Tridelta insulators were deployed across Europe for overhead power lines, railway power supply, and switchgear installations.

Automation

1960 – Ceramic carrier plates for resistors, capacitors, circuits, and insulators for tube and transistor technology in early communication electronics made Hermsdorf a supplier for the first wave of automation and mechanical engineering.

Microelectronics

1970 – Thin- and thick-film ceramics served as the basis for hybrid circuits used in controllers, sensors, and automation systems. Hermsdorf supplied the material foundation for microelectronics and Industry 3.0 applications: sensor technology, automation lines, and telecommunications.

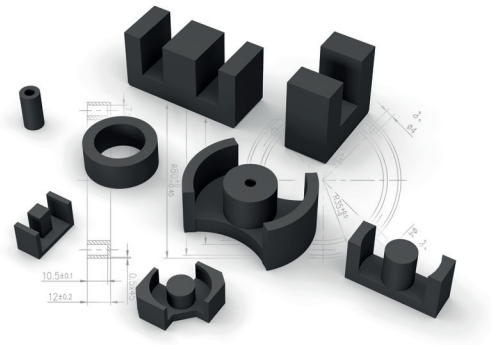
LET THE STORY CONTINUE

100 Years Ahead: An Industrial Vision Powering Europe‘s Future

Champions at Risk?

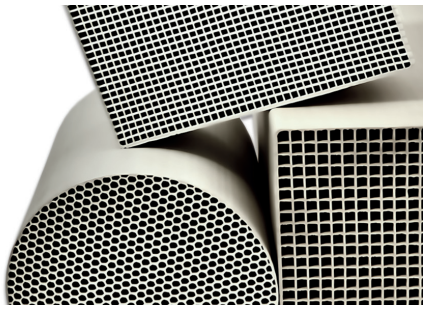
Behind its strength in machinery, chemicals, and pharmaceuticals, Europe faces dangerous dependencies.

Semiconductors and microelectronics – tied to Asia. Digital platforms and AI – dominated by the US and China. Batteries and photovoltaics – reliant on Asian production and raw materials. These domains are critical for the Green Deal, resilience, and Industry 5.0. Without decisive action, Europe remains an export champion – but a follower in the very technologies that define the future.
Technical ceramics and electronics are the key to unlocking Europe’s full industrial potential.
With these industries, we can secure a global lead – turning today’s vulnerabilities into tomorrow’s competitive advantage.



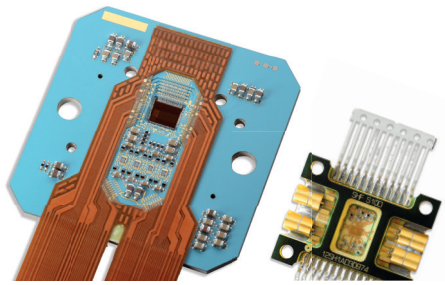
Energy

Technical ceramics and sensor technologies are essiential in modern energy systems: from high-voltage insulators and fuel cell electrolytes to infrared and gas sensors in grid monitoring. They ensure efficiency, safety, and resilience across Europe’s energy infrastructure.



Machinery and Equipment Manufacturing

Technical ceramics and sensor technologies are silent enablers of advanced manufacturing: from wear-resistant components and thermal barriers to embedded sensors for precision automation. They ensure durability, accuracy, and innovation in Europe’s machinery and equipment sector.



Defense

Technical ceramics and sensor technologies are silent enablers of modern defense: from lightweight armor and high-temperature turbine components to radar electronics and infrared sensors. They ensure reliability under extreme conditions and secure Europe’s technological sovereignty.

EUROPE'S MATERIALS MATTER

Europe's future strength depends on what it's made of

Technical ceramics are the backbone of a resilient, sustainable, and autonomous European industry.

	Core technology	Key application	Strategic relevance for europe
TRIDELTA Weichferrite GmbH	Soft ferrites	E-mobility, wind & solar infrastructure, charging systems	Reducing import dependence on Asian ferrites (motors, transformers, inverters)
Qsil Metals	Refractory metals	Medical, Aerospace & Defense, High-Temperature Applications	Recycling for Resource Security and promotion of resilient Supply Chains
Porzellanfabrik Hermsdorf	Heat exchangers, ceramic systems	Thermal management, climate control, process heat	Key to energy efficiency & heat transition, > 95% system efficiency
PI Ceramics	Piezo ceramics	Microelectronics, medical diagnostics, ultrasonic systems	Enabling precision in automation, MedTech, and environmental monitoring
Cera System / SAMSON	Ceramic wear parts	Mechanical engineering, chemical processing	High durability for valves, sensors, and components under aggressive media

These are just a five of more than 50 Companies in the Europes Hightech Epi centre TRIDELTA CAMPUS Hermsdorf. We cooperate with Electronics and Photonic Clusters in East Germany, Europe and beyond.

Let's create the right conditions – awareness, investment, and support – to unlock their full potential and secure Europe's industrial leadership for the next century.

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