

TekSiC Unveils Xforge™ HT: The Next-Generation High-Temperature Induction Heating Furnace for Heat Treatment Applications

Designed for Precision, Performance, and Versatility in High-Temperature (HT) heat treatment applications such as post processing of 3D printed components, sintering, various diffusion treatments, material testing, etc.

Linköping, Sweden – February 18, 2025 – TekSiC is proud to introduce the Xforge™ HT, a groundbreaking High-Temperature Induction Heating Furnace engineered to meet the rigorous demands of industrial manufacturing and research applications. Designed for the commercialization and advancement of high-temperature material technologies, Xforge™ HT enables precise, reliable, and scalable processing for next-generation applications.

With its cutting-edge design and unmatched performance, Xforge™ HT redefines precision heating. Its modular architecture allows for highly customizable configurations, ensuring optimal performance across a diverse range of specialized applications. Whether for advanced material synthesis, heat treatment, or research-driven innovation, Xforge™ HT is the ultimate solution for high-temperature processing excellence.

A Vision for Innovation: The Xforge™ Story

Xforge™ HT is a member of TekSiC's Xforge™ platform. The journey of creating the Xforge™ platform began with a bold vision: to design a furnace that delivers exceptional heating capabilities while maintaining flexibility for a variety of high-temperature applications. TekSiC's engineers faced the challenge of balancing size, power, and modularity. Through extensive research and testing, they developed a compact, highly efficient furnace that ensures consistent and precise heating for a diverse range of materials and processes.

"The Xforge™ HT represents the next step in our evolution as a company," says Joachim Tollstoy, CEO of TekSiC. "This product is a result of our dedication to innovation, designed with the flexibility to meet the specific needs of processes in high temperatures, low pressures, and different ambient gases. We engineered it to provide the highest performance while offering a modular solution that can be customized to each customer's unique requirements."

Key Features of the Xforge™

- **Compact, Modular Design:** The Xforge™ HT showcases an innovative compact and modular architecture, allowing effortless customization while eliminating the need for bulky, one-size-fits-all equipment. Engineered for excellence, Xforge™ HT ensures uncompromised performance.
- **Advanced Heating Performance:** The Xforge™ HT delivers unparalleled high-temperature performance, typically spanning from 250 to 2500°C, with remarkable stability. Each furnace can be tailored to achieve the optimal temperature profile for specific applications, even at higher temperatures, ensuring the best performance and making it ideal for heat treatment of e.g. carbides and refractory metals such as tungsten, niobium, tantalum, and others.

- **Exceptional Versatility:** Engineered for exceptional versatility the Xforge™ HT is capable of generating high-vacuum environments while allowing the controlled introduction of multiple gases. This enables the customers to run processes in various atmospheres, including vacuum, inert gases, or controlled reactive environments.
 - **Quality Tested and Field Proven:** Throughout its development, Xforge™ HT underwent rigorous industrial reliability testing at customer sites over several years, demonstrating its resilience with extreme high-temperature applications. The robust construction and high-quality components of the furnace ensure continuous and energy-efficient operation in addition to easy operation and maintenance. It is CE-marked, certifying compliance with stringent EU health, safety, and environmental standards.
 - **Built in Sweden with Precision Craftsmanship:** Manufactured in Linköping, Sweden — a global hub for semiconductor research and silicon carbide crystal growth — the Xforge™ HT benefits from TekSiC's decades of expertise in material science and system engineering. Each unit is crafted with meticulous attention to detail, ensuring the highest standards of quality and reliability.
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Now Available for Delivery

Xforge™ HT is now available for immediate delivery. Detailed product specifications and application guidelines are available on TekSiC's website at www.teksic.com. The TekSiC team is ready to assist customers in selecting the right configuration for their specific needs. This also includes process simulation and optimization to ensure the most efficient solution.

TekSiC is looking for resellers around the world and interested companies should send their request to sales@teksic.com

About TekSiC

Founded in 2021, TekSiC is a leading innovator in semiconductor materials and related systems, with a focus on silicon carbide (SiC) technologies. Based in Linköping, Sweden, TekSiC traces its roots to the pioneering work of Jöns Jacob Berzelius, the scientist who first synthesized SiC over 200 years ago. With a founding team bringing extensive expertise from semiconductor research, crystal growth, advanced materials science and system engineering, TekSiC is at the forefront of SiC technology development and system engineering for other high temperature material applications.

The company builds on a rich legacy of collaboration with world-class institutes, driving breakthroughs in high-performance materials and applications.

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