



Whether the solution is vacuum or atmosphere, batch or continuous, scaling a laboratory process to pilot, or commercial production, the Gasbarre Furnace Group can determine and provide the best solution for long-term success.

INDUSTRIAL THERMAL PROCESSES CAN BE ACCOMPLISHED by a wide range of equipment, with each solution having pros and cons. Clearly, the ultimate long-term success of

a project is critically dependent upon selecting the most effective approach.

Recognizing this need, the Gasbarre Furnace Group has assembled a family of engineered furnace companies. Each dominates in its own markets and product offerings to ensure the customer's specific needs can be met with the best possible solution. This is accomplished by evaluating the commercial, technical, and engineering aspects of each opportunity, selecting the best overall approach, and then providing the resources to execute it.

SINTERITE

Since 1978, Sinterite has been providing quality integrated manufacturing solutions, specializing in customengineered continuous belt and pusher furnaces for engineered materials requiring thermal processes under a variety of atmospheres. Sinterite designs and manufactures continuous and batch furnaces for sintering, brazing, annealing, steam treating, and drying.

Sinterite also offers the exclusively manufactured HyperCooler, a sinter-hardening system that improves variable cooling adjustment and atmosphere stability. In brazing applications, the HyperCooler is used to reduce stainless steel sensitivity.

In addition to its line of custom continuous belt and batch industrial furnaces, Sinterite is a leading manufacturer of fabricated alloy and mild steel products, providing a wide range of fabrication capabilities from powder processing to parts handling to custom projects. All of which can be tailored to meet each customer's needs and applications. The Sinterite manufacturing facility is in St. Marys, Pennsylvania.

C.I. HAYES

Founded in 1905, and a member of the Gasbarre Furnace Group since 2003, C.I. Hayes has been providing innovative solutions and responsive service for over 100 years.



C.I. Hayes offers a diverse line of vacuum and atmosphere furnaces. Batch, as well as modular, in-line approaches, are engineered to suit processes including hardening, annealing, carburizing, brazing, and tempering.

Best known for its expertise in vacuum furnace design and capabilities, C.I. Hayes offers modular heating and quenching (oil or pressure), batch, and continuous vacuum furnaces. Common thermal processes applied include annealing, brazing, carburizing, glass-sealing, hardening, tempering, and sintering.

Featured within its vacuum product line is the C.I. Hayes Single Chamber Vacuum furnace, suited for batch processing for precise thermal recipes, and the Continuous Modular Vacuum furnace, manufactured with independent heating and quenching chambers and designed for smaller workloads that achieve near identical temperature profiles — making it highly productive and highly efficient. In addition, the C.I. Hayes' family of batch oil quench vacuum furnaces include integral sealed oil quenching for small batch tool-room applications to large production workloads with temperature capabilities to 2,400°F.

The C.I. Hayes' line of atmosphere furnaces features high-temperature pusher furnaces, capable of temperatures up to 3,000°F, tube furnaces for processing strand,



belt furnaces. Within the conveyor belt family and known for its distinctive design, the "humpback" conveyor belt furnace is an economical and highly efficient selection in applications that require extremely low dew points. Also in this family, C.I. Hayes offers the "solitaire" conveyor belt furnace with its compact design to accommodate brazing, soldering, and annealing of small pieces, such as valve assemblies and jewelry.

J.L. BECKER

The newest member of the Gasbarre Furnace Group — the J.L. Becker Company — designs, manufactures, and services a full line of heat treating equipment for a wide range of thermal processes, including annealing, quenching, hardening, carburizing, ferritic nitrocarburizing, austempering, nitriding, washing, and tempering. The furnaces include batch and continuous type designs, specializing in tip-up, integral quench, box, and car-bottom furnaces.

Tip-up furnaces can be a single standalone furnace for carburizing or other atmosphere processes or as part of a line with a manipulator and a quench tank for hardening. A product experiencing high demand is the company's internal quench furnaces and companion equipment, as are Batch Austemper lines that have a movable box furnace, which can service multiple salt quench tanks, enabling the processing of different materials to achieve different metallurgical properties. Pit furnaces and box furnaces round out J.L. Becker's batch furnace line.

On the continuous side, the company offers mesh belt furnaces used for annealing, hardening, austempering, carburizing, brazing, or carbonitriding. Frequently, continuous furnaces are employed for high-volume production and can be precisely configured to ensure the installed capacity correctly matches the anticipated production needs, resulting in lower overall cost of operation.

GASBARRE FURNACE GROUP

The alliance of the GFG companies establishes a foundation for leveraging broad equipment capabilities, engineering/technology expertise, understanding of customers' commercial requirements, and the organizational resources needed to provide the best solution for each thermal processing requirement.



