



WISCONSIN OVEN



HIGH PERFORMANCE **COMPOSITE CURING OVENS**

Vacuum Bag, Filament Wound, and Honeycomb Block Heating Technology





THE PREMIER CHOICE IN COMPOSITE CURING

Wisconsin Oven manufactures world-class industrial ovens trusted by the aerospace industry's leading names. The majority of our business comes from repeat customers, a testament to the enduring quality and reliability of our solutions. With over 10,000 pieces of equipment shipped worldwide, we possess the experience and global reach to meet the demands of even the most demanding composite applications.



Unsurpassed temperature uniformity:

We perform uniformity testing on every oven prior to shipment, ensuring consistent curing and part quality, reducing scrap and rework. Experts at AMS2750, BAC5620, and CQI-9 compliance.



Exceptional customer service:

Dedicated team provides comprehensive support, from pre-sale consultation to startup, training, and full turnkey installation.



Scalable solutions: We offer the widest range of ovens available for vacuum bag, filament wound, and honeycomb curing.



Cost effective: Vacuum bag cure ovens require a much lower capital investment than autoclaves.



Energy efficiency: Innovative, patented designs minimize energy consumption, lowering operating costs. E-Pack™ energy efficiency packages offered.



WOW™ Warranty: Our ovens are built to last, standard oven lines are backed by our Exclusive and Unprecedented 3-Year or 5-Year warranty.



Advanced control systems: Intuitive interfaces and comprehensive data acquisition capabilities simplify operation and optimize curing cycles.



Factory tested: Equipment is adjusted and tested at the factory PRIOR to shipment to reduce installation and start-up time.



VACUUM BAG TECHNOLOGY

Wisconsin Oven offers specific features and options for vacuum bag composite curing:

Air recirculation system: Our highly engineered air distribution systems provide uniform temperature throughout the oven so there are no dead spots that remain unheated.

Control and data acquisition system: Monitors and controls the temperature, vacuum, and other important process parameters. System gathers and records part and air temperature as well as vacuum.

Thermal overdrive: Shortens cure time by temporarily setting the oven air temperature higher than the part cure temperature to accelerate the heating rate.

Vacuum pumps: In order to maximize throughput, we select the pump to draw the necessary vacuum and provide sufficient displacement to accommodate the shape and complexity of the part being molded.



Vacuum Pump and Piping System



FILAMENT WINDING TECHNOLOGY

Wisconsin Oven offers a variety of innovative solutions that work in conjunction with your filament winding equipment:

Mandrel rotators that couple with the mandrel to rotate the part during the curing process.

Traveling load carts equipped with rotators to allow rotation while staging the load prior to heating.

Automatically coupled rotators that can engage from the oven side or rear.

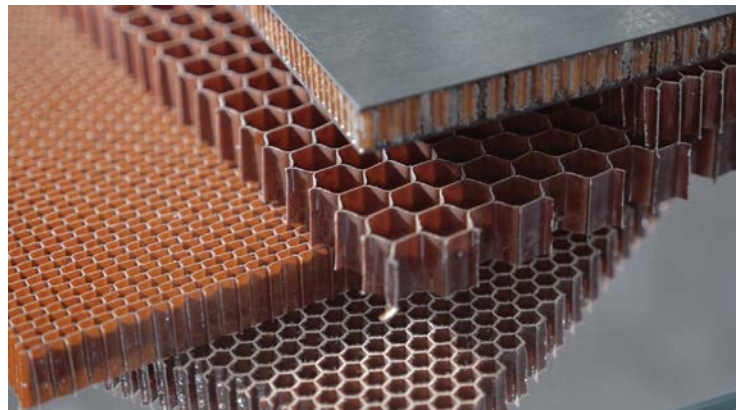
Multi-rotators to handle up to 16 mandrels simultaneously.

Extreme duty rotators for large mandrels over 40 feet long.

Top load designs to save floor space without a load cart being necessary.

HONEYCOMB BLOCK CURING

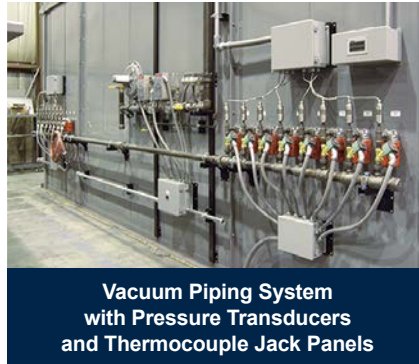
Wisconsin Oven manufactures ovens for curing honeycomb composite blocks after resin dipping. These ovens are designed with specific features to optimize curing of the resins that bond the composite structure. This includes supply duct designs that distribute the air uniformly through the blocks, hot oil as the heat source, and LFL (Lower Flammable Limit) monitors to help protect against fire or explosion. In addition, we manufacture ovens for drying moisture from honeycomb material, and for high temperature processing of the blocks, up to 1,250F (676C).





COMPOSITE CURING OPTIONS

- **Wisconsin Oven Premium Control System (WPCS)**, which has the capability to monitor, control and generate reports on temperature, vacuum and other variables
- **DataSense™ Technologies Industrial IoT System** for predictive maintenance to reduce unplanned downtime
- **Vacuum piping and accessories** such as vacuum pumps, pressure transducers, thermocouple jack panels, filters, traps, and others
- **Zone control** to provide more accurate temperature control
- **Chart recorders** and data acquisition
- **Controlled cooling capability** using high capacity exhaust systems with pressure control and motorized inlet and outlet dampers
- **EPack™** energy efficiency package
- **Wide variety of rotation systems** for curing filament wound parts
- **Interior lights and windows** to allow operators to see inside during the curing process, and perform the layup inside the oven if desired
- **Enhanced safety features** such as door safety latches for vertical lift doors, trapped personnel pull cords, light curtains, and others
- **AMS2750, CQI-9, and BAC5620 compliance** validated by testing prior to shipment
- **Many other options** available upon request



Vacuum Piping System
with Pressure Transducers
and Thermocouple Jack Panels



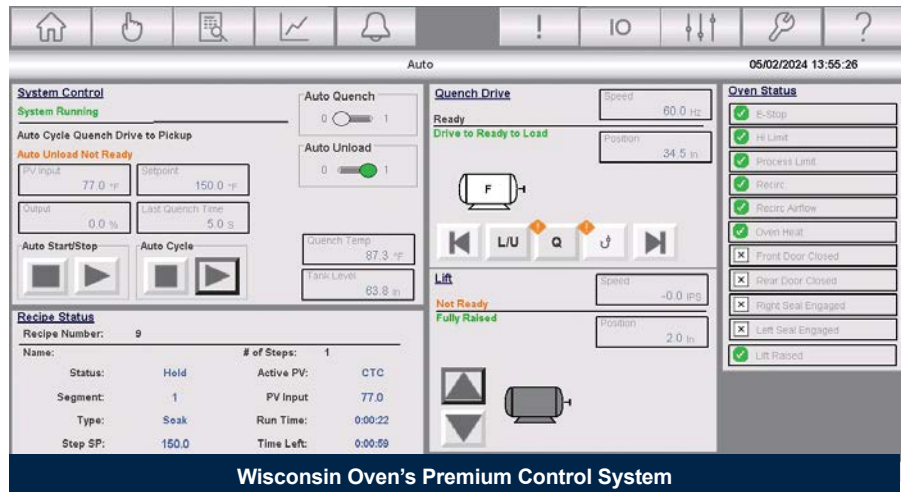
Interior Supply
and Return Ducts
with Interior Lighting



Rotator System for
Filament Wound Mandrels



Window in Door
for Interior Viewing



Wisconsin Oven's Premium Control System



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Thermal Product Solutions, LLC

Wisconsin Oven is owned by Thermal Product Solutions ("TPS"), a leading American manufacturer of industrial ovens, furnaces, pharmaceutical sterilizers, laboratory ovens, environmental temperature chambers, and stability test chambers. TPS brands include Baker Furnace, Blue M, Gruenberg, Tenney, Lindberg, Lunaire, MPH, and Wisconsin Oven. www.thermalproductsolutions.com

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