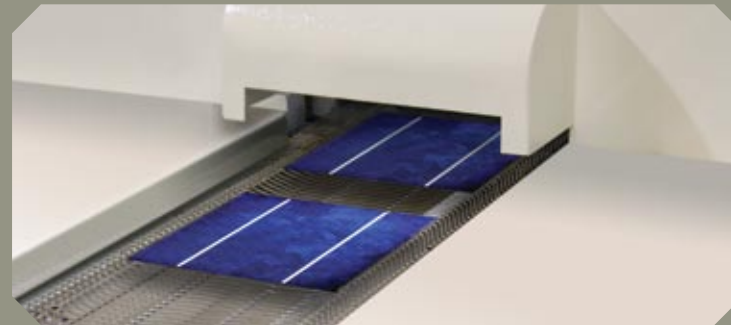


**Despatch**  
INDUSTRIES

# INSPIRED INNOVATION

THERMAL PROCESSING TECHNOLOGY



# INSPIRED INNOVATION

Despatch Industries has specialized in thermal processing for over 100 years and is actively using this technical expertise to provide innovative solutions to critical applications in a broad range of markets and cutting edge technology worldwide.

Our innovations are inspired by our customers. Through collaboration in design and engineering, we observe how our technology can best be applied to your needs, giving you a unique competitive advantage.

Despatch has three dedicated business groups to meet the demands of the rapidly expanding thermal, solar and carbon fiber markets. This focused commitment has allowed us to become experts in these industries.

Our expertise in engineering and manufacturing is backed by our international service and support network. We are truly a global partner that responds locally.

## COMPANY FACTS

**Founded:** 1902

**Global headquarters:**

Minneapolis, Minnesota, U.S.A.

**International offices:**

Shanghai, Berlin, Singapore, Hsinchu, Tokyo

**Ownership:** Privately held

**Primary markets:** Photovoltaics, carbon fiber, healthcare, electronics, energy, materials

**Market presence:** We are market leaders in all of our principal markets

**Certified:** ISO 9001:2008

# OUR PEOPLE

In order to provide customers with the best products and services, we need to be the best. From sales to engineering to manufacturing, the caliber of employees at Despatch is unparalleled in the industry. Our employees have outstanding industry knowledge and expertise. We seek out only the best candidates from around the world to ensure our success – and yours.

We believe in arming our employees with first hand, on-the-ground global experiences. Despatch employees travel to customer sites around the world to see our customers' facilities and gain perspective on their products and applications. Through first-hand experience and on-going training and research, our employees stay educated on industry technology and trends. We make continuing education a priority so as our customers' process and application needs change, we are able to continue to provide solutions that incorporate the most up-to-date technology and information available.

## *Management team:*

*Patrick Peyton, Chairman and CEO • Kevin Rowekamp, CFO • Pam Dewall, Chief Human Resources Officer • Hans L. Melgaard, Vice President & Chief Technical Officer • Steve M. Oman, Director of International Sales • Brian Bunkenburg, Chief Technology Officer for the Solar Group • John Farrell, General Manager - Solar • Christopher Rollag, General Manager - Thermal Technology • Randy Strop, General Manager - Carbon Fiber*



# SOLUTIONS

## THERMAL PROCESSING TECHNOLOGY



Our line of standard products is extensive, including over 250 models of laboratory, production, clean process and specialty ovens. Though categorized as standard, it is common practice for our sales and engineering teams to customize standard model equipment to include customer-specific features. Through flexibility in design and configuration, our customers worldwide are able to achieve the highest levels of consistency and performance. Our customers also enjoy the benefits of increasingly short lead times and fast delivery.

Despatch product specialists are equipped with a great combination of technical and industry knowledge to help you choose the thermal processing solution that best fits your requirements.



# OUR MARKETS

## Despatch Industries: Partnering with the world's best-known, most respected companies

While our efforts are not always visible to consumers, the world's top manufacturers and consumer goods companies rely on Despatch for critical process advancements that revolutionize the way we live. Although our products have a wide applicability across industries, we serve four primary markets:

### ENERGY

**Photovoltaics** • Contact firing and print drying  
• In-line diffusion • In-line doper

**Fuel cells** • Heat treating fuel cell materials for automotive and energy storage

**Fossil fuels** • Calibration tools • Testing down hole drilling equipment • Calibration testing of equipment used in oil exploring

### HEALTHCARE

**Implants** • Drying • Curing

**Parenteral drugs** (Human/veterinarian) • Sterilizing and depyrogenating glassware • Decontaminating materials entering aseptic areas

**Ingestible drugs** • Granulation drying prior to tablet and capsule manufacturing • Tablet coating drying and conditioning

**Medical devices** • Sterilizing medical devices and curing coatings • Curing surgical staples, catheters and medical device coatings

**Ophthalmic** • Curing optical and contact lens coatings

**Optical** • Curing of anti-reflective coatings and hardness coatings

### ELECTRONICS

**Components** • Pre-heating • Bake out • Drying  
• Pyrolysis • Curing • Solder reflow • Annealing

**Data storage** • Magnetically annealing recording heads and aluminum and glass disk drive media • MRAM semiconductor process tools

**Fiber optics** • Adhesive bonding and curing • Telcordia testing and burn-in

#### Semiconductor assembly/wafer-level packaging

• Encapsulant, BCB • CMOS optical and underfill curing sensor processing • Die attach and BGA • B-Stage adhesive curing • Reliability testing • Polyimide curing  
• Burn-in and testing • Thermal shock

**Semiconductor front-end** • Magnetic annealing • Wafer-level burn-in • Metallic thin film annealing • Polyimide curing • Photoresist curing • Reliability testing

### MATERIALS

**Carbon Fiber** • Oxidizing of carbon fiber pre-cursor  
• Drying and curing carbon fiber composite subassemblies

**Aerospace** • Solution heat treating and aging for airplane body and engine parts

**Aluminum** • Solution heat treating and aging for aluminum including wheels, aluminum suspension and engine components

**Industrial Equipment** • Castings, sand cores, industrial material processing and heat treatment

**Composites** • Curing and annealing a wide variety of unique polymer products • Drying, debinding and heat treating a wide range of fibers, woven and non-woven materials, pre-peg and composite materials

# OUR MARKETS

Despatch processes and equipment influence products that touch our lives every day. Knowing this serves to reinforce our dedication to quality and continuous improvement.

## Materials

Despatch oxidation ovens offer the finest technology available in the world today. These ovens are vital in the production of carbon fiber used in components integrated into airplane bodies for a lighter and more fuel-efficient design. The automotive and aerospace industries rely on Despatch equipment for research and testing and heat treating aluminum components. Polymer products are cured and annealed and a variety of other materials are processed with Despatch technology before being integrated into finished products.

## Energy

Our pledge to contribute to making the best and most efficient use of all energy resources is apparent in the products that Despatch supplies to companies in the business of energy. We provide infrared firing and diffusion furnaces to the world's leading solar cell manufacturers so that they can produce the highest efficiency cells. Oil exploration companies test and calibrate their equipment and fuel cell manufacturers cure vital components in Despatch ovens.



# OUR MARKETS

## Electronics

Despatch has been involved in the electronics industry for decades. We have made a recognizable name for ourselves in the semiconductor industry. Despatch equipment performs front-end semiconductor functions like wafer-level burn-in and magnetic annealing, as well as assembly/wafer-level packaging functions such as die attach curing, reliability and burn-in testing and thermal shock. Data storage, micro processor and component companies utilize Despatch equipment for their annealing, drying and pyrolysis needs.

## Healthcare

Despatch equipment plays a pivotal and multi-faceted role in the healthcare industry. Our world-renowned depyrogenation tunnels sterilize vials used for liquid pharmaceuticals. The products we touch in the healthcare industry often have a tremendous impact on people's lives. In addition to pharmaceutical vials, our equipment cures and sterilizes contact lenses and many different life-saving medical and surgical devices. Healthcare companies turn to Despatch when only the highest standards of quality equipment will do.



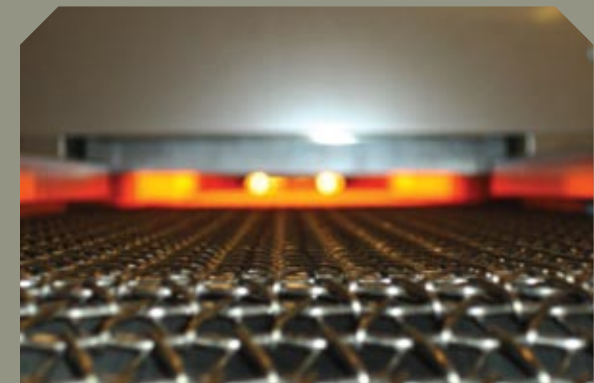
# SOLUTIONS

## THERMAL AND PROCESSING TECHNOLOGY FOR SOLAR PRODUCTION

Despatch Industries is the leading provider of thermal and processing equipment for advanced photovoltaic production, including the world's best-selling metallization firing furnace.

Combining Despatch expertise with that of solar manufacturers inspires flexible, next-generation technology solutions that integrate seamlessly into production lines. An expansive global support network allows Despatch to provide service and technical expertise to customers on a local level.

Industry leaders rely on Despatch equipment for maximum cell efficiency, increased uptime and reduced operating costs. As the industry continues to grow, we will continue to produce innovative equipment that offers our customers the next level of efficiency and production capacity.

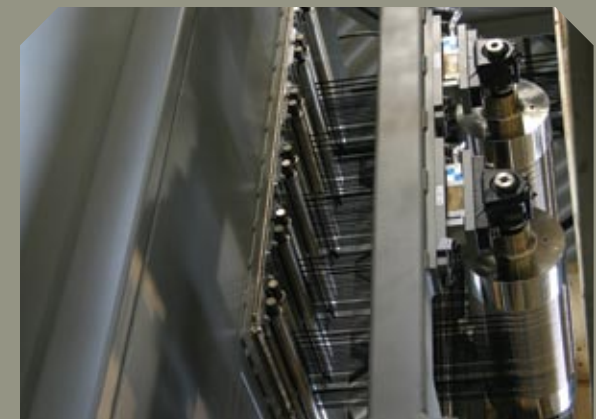
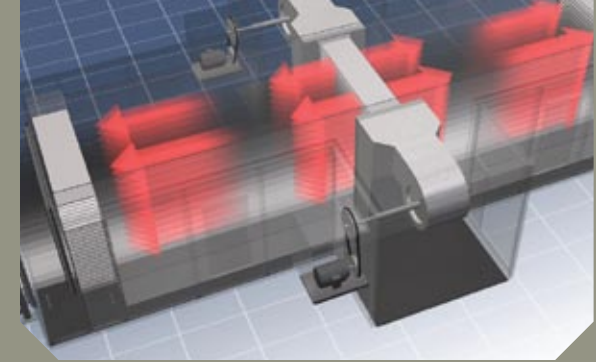


# SOLUTIONS

## PROCESS AND TECHNOLOGY SOLUTIONS FOR CARBON FIBER PRODUCTION

Despatch Industries is the expert in thermal process technology. For more than 40 years, carbon fiber manufacturers have utilized our world-leading oxidation technology to produce the highest quality and most uniform fiber. We offer the experience and knowledge to provide fully integrated lines for small and large tow. Recent Despatch advancements enable our global customers to achieve the lowest cost per kilogram of fiber produced.

Despatch offers an integrated control system for full production lines. This control system allows for accurate, centralized control of temperature and transport drive speeds, higher levels of automation, and increased flexibility. The integrated control system also includes full data-logging and trending and enables the line to run at peak performance with maximum production output.



# SOLUTIONS

## CUSTOM THERMAL PROCESSING TECHNOLOGY

In an increasingly competitive marketplace, the process used to create a product is often as important as the uniqueness of its design. No one has more proven success in partnering with customers to deliver complex thermal processing and environmental simulation solutions for research and development, production and product testing. That's why when it comes to evolving an existing application or implementing a first-of-its-kind process, more global businesses choose Despatch Industries. Our innovative designs are backed by seasoned engineering, manufacturing and project management teams with decades of experience bringing large projects in on time and on budget.



# INNOVATION

## A unique competitive advantage: Despatch Industries Innovation Resources

Despatch provides a unique opportunity for process and product development and evaluation with a simple, singular focus: To provide customers with cost-effective solutions up front—before equipment design begins or purchase commitments are made.

Our clients enjoy direct access to highly skilled Despatch scientists and engineers who are experts at process optimization and helping customers solve complex problems. The Despatch Innovation Center is equipped with process tools and metrology specific to the manufacturing and performance analysis of photovoltaic cells and works with universities, laboratories and leading manufacturers around the world.

This proven approach significantly reduces purchase risk, speeds production, ensures process integrity and saves customers time and money. Despatch Industries has executed over 3,000 Innovation projects that have assisted our customers in developing advanced process technologies in aerospace, energy, electronics and healthcare.



# SERVICE

## Service and support: global presence, with local expertise

As an integrated solution provider Despatch is able to install, set up and optimize your complete carbon fiber line for peak performance. We provide expert technical service and an extensive parts inventory to all of our customers worldwide. Despatch is backed by over 100 years of experience in thermal process application along with a team of carbon fiber experts from around the world. At Despatch, we believe in exceeding customer expectations and going above and beyond what other equipment manufacturers provide. Worldwide service, installation, parts and advice – we have you covered!

### WE'RE HERE FOR YOU, WHENEVER, WHEREVER

Rest assured that when you call our Service Help line, you will be speaking with experienced, knowledgeable personnel, fully capable of assisting you with any equipment questions you may have.

Our network of Certified Service Representatives is spread out across the globe to provide technical support and service to Despatch customers worldwide.

**Contact the Service Department :** USA 1-800-473-7373  
Internationally 1-952-469-8230

**Contact us via email:** [service@despatch.com](mailto:service@despatch.com)

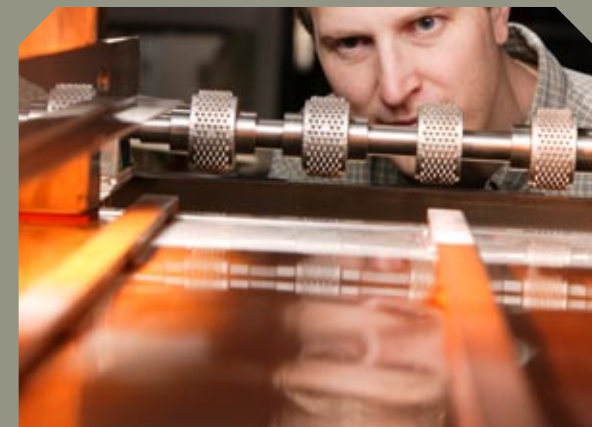
### VALUE-ADDED OPTIONS:

#### **On-Site and Factory Training.**

**Process Optimization.** As new equipment or process steps are added we can optimize your tools to achieve maximum efficiency.

#### **Equipment modifications.**

We provide modifications and upgrades to bring your equipment up-to-date with current technology and operating at peak efficiency.





Despatch

39.7

WARNING

RESTART

HAZARD

RESTART

HAZARD

LCC/LCD SERIES

**VALUE-ADDED OPTIONS:**

- On-Site Training.**
- Calibration.** We can verify uniformity, temperature and humidity or compliance to meet ISO 9000 certification requirements.
- Equipment modifications.** We provide modifications and upgrades to bring your equipment up-to-date with current technology and operating at peak efficiency.

# Despatch

## INDUSTRIES

**At Despatch Industries our mission is to be the world's foremost provider of thermal processing and environmental simulation solutions. At Despatch, we:**

- Strive to be the most innovative, valued and respected partner of the world's leading companies
- Attract and develop talented and committed people by creating a workplace where everyone contributes to our success
- Act with the highest standards of integrity, treating employees and customers with respect
- Encourage a spirit of measured risk-taking balanced with financial discipline
- Embrace change and advance the state of the art by constantly asking: "Can we do it better?"

**MINNEAPOLIS • SHANGHAI • BERLIN • SINGAPORE • HSINCHU • TOKYO**

### GLOBAL HEADQUARTERS

Despatch Industries  
8860 207th Street West  
Minneapolis, MN 55044  
USA

**US toll free:** 1-888-337-7282  
**international/main:** 1-952-469-5424  
**fax:** 1-952-469-4513

[info@despatch.com](mailto:info@despatch.com)  
[www.despatch.com](http://www.despatch.com)

### SERVICE AND TECHNICAL SUPPORT

**service parts:** 1-800-473-7373  
**international service/main:** 1-952-469-8230  
**service fax:** 1-952-469-8193

[service@despatch.com](mailto:service@despatch.com)

© 2010 Despatch Industries. All rights reserved.  
Despatch is a registered trademark of Despatch Industries in the U.S. and other countries. Ransco is a product line of Despatch Industries.