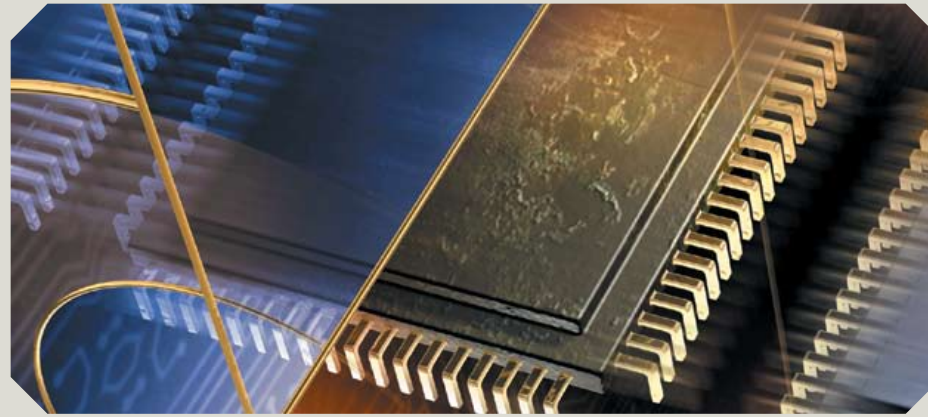


THRIVING ON INNOVATION

Despatch
INDUSTRIES

ELECTRONICS PRODUCT PORTFOLIO

INNOVATIVE TECHNOLOGY FOR SEMICONDUCTOR AND ELECTRONIC COMPONENT MANUFACTURING



RANSCO
A product group of Despatch Industries



◆ Electronics semiconductors and electronic components

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. Tool handling ovens are also available.

Applications

Components • Pre-heating • Bake out • Drying • Pyrolysis (tantalum capacitors) • 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
• Tool handling

Semiconductor front-end • Magnetic annealing • Wafer-level burn-in • Metallic thin film annealing
• Polyimide curing • Photoresist curing • Reliability testing • Thin film processing for touch screen displays

◆ Despatch Innovation Center

- ◆ Test your process prior to purchase
- ◆ Work with our engineers to optimize performance-critical processes
- ◆ Advanced equipment to simulate whatever conditions your application demands





LAC HIGH-PERFORMANCE OVENS

A combination of forced convection and horizontal airflow provides exceptional temperature uniformity and the shortest possible processing time. The result is proven reliability in demanding production and laboratory applications, such as curing, drying, sterilizing, aging, and other process-critical procedures.

LCC/LCD STACKABLE CLEAN PROCESS OVENS

These clean process ovens are designed to save valuable floor space and provide a variety of tailored options for manufacturers based on their specific needs. Typical applications for these ovens include die-bond curing and other semiconductor packaging processes.

The LCC and LCD ovens are affordable solutions which offer the highest standards in HEPA filtration for production environment processes where minimal contamination is essential. Re-circulated airflow is 100% HEPA filtered for operation at ISO Class 5 (Class 100) and better within the oven chamber. A magnehelic™ gauge monitors the HEPA filter pressure drop, indicating when to replace the filter.

PCO₂-14™ POLYIMIDE CURE

The PCO₂-14™ Polyimide Cure solution is a clean process oven designed for polyimide baking and curing applications. It provides temperatures to 350°C.

The PCO₂-14™ optimizes the polyimide cure process for semiconductor wafer devices. It enables short cycle times and a consistent, reproducible cure process for all wafers in the product load.

CONTINUOUS OVENS

Our continuous ovens achieve superior temperature uniformity in all interior parts due to high-volume, vertical air flow. Typical applications include pre-heating, curing, bonding, drying, heat treating and pyrolysis of tantalum capacitors. There are several standard models available as well as large custom models.

RBC STACKABLE BURN-IN

The stackable burn-in chambers offer maximum flexibility for small lot qualification testing, burn-in, reliability testing and research and development. The chamber is designed to maximize throughput and equipment use by allowing the operator to run concurrent tests utilizing different temperatures or cycle times.

CT POLYIMIDE CURING TOOL

The Polyimide Curing Tool features a unique “chamber-in-chamber” design that reduces particulate contamination and oxygen concentration while maintaining fast heating and cooling ramp rates. It has a maximum temperature of 450°C. Typical applications for this tool include curing polyimide coated wafers, BCB bake, photoresist curing and electronic packaging, both device and wafer-level.

RANSCO THERMAL SHOCK CHAMBERS-RTS

Designed for accelerated life cycle testing of semiconductor and electronic devices. Single load or double load capacity allows all tested devices to undergo the same temperature cycle conditions, cycle after cycle. Performs to MIL STD 883C and JESD22.

CRB TOOL HOLDING OVENS

The CRB oven is used to keep semiconductor parts and tooling clean, dry and ready for immediate installation. It is specifically designed for atmosphere controlled storage of parts, tooling and deposition targets.

MAG-ANNEAL TOOLS

Despatch's magnetic annealing tools are used for magnetic annealing processes required to manufacture recording heads for the data storage industry and MRAM devices for semiconductor applications. Used by companies around the world, these tools exhibit a tighter level of process control and monitoring as well as offer greater flexibility than other tools on the market. Superior wafer temperature control uniformity (to better than +/- 1° C) greatly improves product yields. Fast heating and cooling rates also offer significantly lower cycle times than other tools. Additionally, our tools can be equipped to provide deep vacuum levels, temperatures to 500° C, and magnetic fields up to 2.0 Tesla.

AST-3100 AUTOMATED POLYIMIDE CURE

Designed for automated wafer level processing, the Despatch AST-3100 accommodates both 200mm and 300mm wafers. This automated Polyimide Cure Tool increases throughput and eliminates handling errors while conserving valuable floor space. It has a maximum temperature of 350°C.

◆ Capabilities

RAPID HEAT-UP AND COOL-DOWN:

Several of our products feature special options that provide exceptionally fast heat-up and cool-down rates, allowing you to benefit from shorter cycle times, higher throughput, and more efficient operations.

ISO CLASS 5 / CLASS 100: Despatch batch and continuous ovens are available in ISO Class 5 (Class 100) configurations where an ultra-clean processing environment is required. High-temperature HEPA filters remove airborne particulates to ensure the oven chamber has less than 100 particles (0.5 micron or larger) per cubic foot.

INERT ATMOSPHERE: To help reduce oxidation and corrosion, our batch ovens can be equipped with inert atmosphere capabilities. Maintaining a nitrogen or argon atmosphere can reduce oxidation when heating metallic or other oxidizable materials.

OVEN NETWORKS: Multiple batch ovens can easily be linked together in a communications network for centralized control and monitoring. A password security system improves process repeatability by adjusting the amount of operating authority available to the user. The host computer also can record cycle times, temperatures, lot numbers, operator names, and other quality control information.

INTEGRATION: We offer full integration services to ensure seamless operation of your Despatch system – including communication with equipment manufactured by other companies.

CUSTOM DESIGNS: If you have a unique application, Despatch engineers can custom design equipment that meets your special requirements for heat-up times, cool-down times, temperature uniformity, instrumentation, record keeping, space requirements, and other special concerns.

◆ Service and support: global presence, with local expertise

With other thermal equipment providers, service stops after the sale. Not with Despatch. We provide expert technical service, a range of installation options and an extensive parts inventory to all of our customers worldwide. At Despatch, we believe in exceeding customer expectations and going above and beyond what an average equipment manufacturer will provide. Worldwide service, installation, parts and advice – we have you covered!

When your equipment no longer meets your current needs we can work with you to upgrade or refurbish it. We offer three service agreement plans that cover Despatch, Ransco and other brands of industrial thermal processing equipment.



Despatch engineers are experts in designing thermal processing systems to the special demands of the electronics industry. Each system is adapted to your specific process, heat rate, temperature range and feature requirements.

MINNEAPOLIS • SHANGHAI • BERLIN • SINGAPORE • HSINCHU

SERVICE AND TECHNICAL SUPPORT

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