

INSPIRED INNOVATION

Despatch
INDUSTRIES

HEALTHCARE PRODUCT PORTFOLIO

THERMAL PROCESSING TECHNOLOGY FOR PHARMACEUTICAL AND MEDICAL DEVICE MANUFACTURING



◆ Healthcare

Applications

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

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 suffice.

With a large installed base of units in the medical field, the performance of Despatch equipment typically exceeds process requirements for even the most exacting customer needs. Despatch understands the many possible customer applications and can offer custom designed equipment to meet even the most challenging processes.

Medical Devices For medical instrument manufacturers that need to apply polymer coatings to products such as defibrillators, pacemakers, catheters and surgical staples, a Despatch Industries forced convection oven with its uniform airflow provides a consistent coating and curing process. By using the forced convection oven together with forced exhaust, manufacturers realize quicker cool-down times and shorter process cycles. The result is greater productivity with lower cost.

Optical Forced convection ovens from Despatch Industries provide high air flow and tight temperature uniformity ($\pm 1^\circ\text{C}$) as well as rapid cooling. Together, these key attributes provide consistent coating cures, reduced cycle times, and dramatically improved process yields—by as much as 28%—for manufacturers of contact and optical lens.

Pharmaceutical Despatch Industries thermal processing solutions are found in a wide variety of critical applications for the pharmaceutical industry. Many features that are usually optional are standard with Despatch. All our pharmaceutical solutions feature high-performance heating and cooling packages that reduce cycle times and lower costs, durable 316L stainless steel interiors for maximum corrosion resistance, rounded interior corners for easier cleaning, and complete validation support documentation to comply with 21 CFR Part 11 requirements of the FDA.

From R&D to production, Despatch delivers consistent, repeatable performance that adds up to shorter cycle times, higher productivity and lower operating costs.





LBB CONVECTION OVEN

The Despatch LBB oven features a combination of horizontal and vertical airflow that offers excellent temperature uniformity at a moderate price. It is recommended for a variety of laboratory and production applications including drying, curing, annealing and materials testing.

The LBB is designed and manufactured to provide years of dependable service. The fan and heater are top-mounted to prevent damage from spills. When spills do occur, the corrosion-resistant stainless steel interior and nickel plated shelves clean up easily.

LAC HIGH-PERFORMANCE BENCH-TOP OVENS

These ovens use horizontal recirculating airflow to ensure uniform temperatures throughout the oven. A high-volume fan circulates air through perforated, stainless steel walls to create a constant horizontal airflow across all sections of the oven. 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 standard or tailored options for manufacturers based on their specific needs.

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.

SD STERILIZATION AND DEPYROGENATION OVENS

Designed to meet the stringent requirements of the pharmaceutical and medical device industry, these ovens are available in different configurations to meet specific temperature and cycle time requirements. The ovens specialize in short cycle times which allow users more production per shift, more efficient operations and lower operating costs.

LCC/LCD2-14 CLEAN PROCESS

From R&D to clinical trials to small-scale production, these ovens are the perfect solution for sterilization, depyrogenation and drying for life science applications. Despatch's LCC/LCD2-14 clean process ovens offer the ultimate in HEPA filtration for processes where minimal contamination is essential. The ovens maintain ISO Class 5 (Class 100) through the process cycle with ramp rates up to 5°C (9°F) per minute.

In addition to inert atmosphere and air atmosphere configurations, the LCC/LCD2-14 can be configured for Class A environments, with a pressure relief panel, purge timer, and forced exhaust to meet NFPA 86 requirements for processing flammable solvents.

Optional pass-through operation with doors on the front and rear is available.

DEPYROGENATION TUNNELS

Our Class 100 depyrogenation tunnel can sterilize and depyrogenate more than 650 five-ml vials per minute. It features a patented self-sterilizing cool zone, a hermetically sealing exit gate, and near linear cooling capabilities.

RA/RF SERIES OVENS

The RA/RF reach-in ovens feature horizontal recirculating airflow and exceptional temperature uniformity. The result is proven reliability in demanding production and laboratory applications, such as curing, drying, sterilizing, aging, and other process-critical applications.

For applications that include flammable solvents we offer the RF series. These Class A ovens are specially designed to meet NFPA 86 requirements.

CONTINUOUS OVENS

Despatch Continuous Production Ovens are designed for process versatility and reliability. They achieve superior air temperature uniformity on all interior parts due to high-volume, vertical down airflow. The continuous belt design is ideal for large quantities of similar work pieces being processed. Typical applications include pre-heating, curing, bonding, drying and heat treating. Options include Class A models specifically designed for flammable solvents and a HEPA (High Efficiency Particulate Air) filtered model for applications that require Class 1000 cleanliness. There are several standard models available as well as custom models.

Capabilities

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

Validation: At Despatch, we offer thorough validation packages that can help minimize the time and effort required for validation and start-up. We also offer assistance in executing IQ, OQ, and PQ protocols.

ISO Class 5: 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.

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.

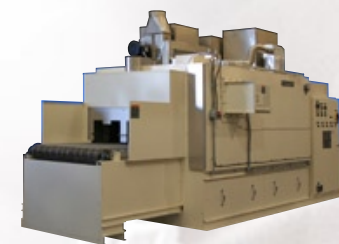
Inert atmosphere: For processes requiring low oxygen atmosphere conditions, our batch ovens are also equipped with inert atmosphere capabilities. Maintaining a nitrogen or argon atmosphere can reduce oxidation when heating materials susceptible to oxidation.

PC Networks: Multiple batch ovens can easily be linked together in a communications network for centralized control and monitoring. A password security system improves process integrity by setting the amount of operating authority available to the operator. The host computer can also data-log process times, temperatures, lot numbers, operator names, and other quality control information.

Custom solutions

If you have a unique application, Despatch engineers can address your custom requirements for heat-up times, cool-down times, temperature uniformity, instrumentation, record keeping, space requirements, and other special concerns. In an increasingly competitive marketplace, the process used to create a product is often as important as the uniqueness of its design. That's why when it comes to evolving an existing application or implementing a first-of-its-kind process, more businesses choose Despatch Industries. No one has more proven success in partnering with customers to deliver complex thermal processing solutions for research and development, product testing and manufacturing. Most important, 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.

- Innovative designs
- Proven experience
- Superior project execution
- World-class quality



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