

# Despatch

Thermal Processing Technology

**TW EAE**

## THERMAL PROCESSING TECHNOLOGY SOLUTIONS



Established in 1902, Despatch continues to evolve to meet the complex demands of today's global marketplace, yet the company's dedication to providing innovative thermal processing solutions remains unchanged.

Despatch is a global leader in high performance industrial ovens and other thermal products. Our focused commitment to the electronics, healthcare, materials, transportation and industrial markets has enabled us to become experts in these industries.

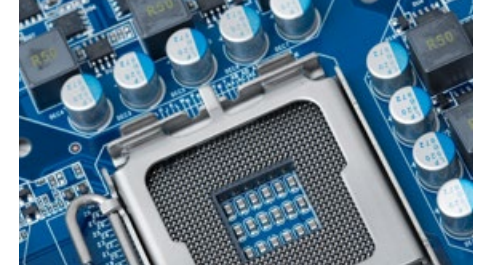
## WHEN FAILURE IS NOT AN OPTION

Manufacturers trust Despatch ovens to deliver the uniform and repeatable thermal processing required for critical components to operate flawlessly and ensure reliable product performance. Despatch never cuts corners, the products we build are manufactured to the highest standards. A Despatch oven is able to deliver invariable, uniform temperature for as long as the oven is in service thanks to its solid build quality.

Despatch has a world-wide network of representatives with a great combination of technical and industry knowledge to help you choose the thermal processing solution that best fits your requirements.

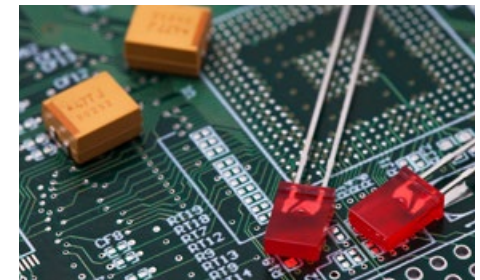
## SHORTER LEAD TIMES

Using proven ITW manufacturing practices, Despatch is able to move products to market much faster, providing the shortest lead times in our industry.



### ELECTRONICS

Despatch is the world's premier supplier for clean process, low oxygen, fast cycle curing of adhesives and polymers used in high-volume semiconductor packaging and assembly. Applications include wafer-level burn-in, die attach curing, and burn-in and reliability testing.



Despatch has successfully addressed the many technical challenges of thermal processing for capacitors, resistors and other electronic components. Applications include preheating, drying, curing, pyrolysis, and ceramic capacitor bakeout.

Despatch has developed a strong reputation in the burn-in market over the last 30 years and has thousands of systems in operation throughout the world. The system's proven reliability and ability to meet uniformity requirements has helped build that reputation.



## HEALTHCARE

Healthcare companies turn to Despatch when only the highest standards of quality equipment will suffice.

Medical device manufacturers use Despatch ovens to apply polymer coatings to products such as defibrillators, pacemakers, catheters and surgical staples.



Optical labs find Despatch ovens well suited for curing optical coatings needed for scratch resistance and tinting. For curing contact lenses a nitrogen atmosphere oven is used to prevent yellowing of the lenses.

Pharmaceutical manufacturers use Despatch LCC cleanroom ovens to sterilize and depyrogenate implements, preparations and glassware. The ovens can be stacked allowing independent batch processing in a small lab. These ovens can comply with USP Chapter and cGMP standards.

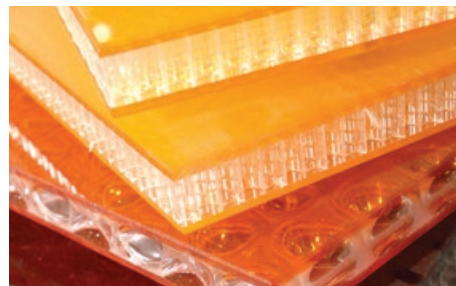


## MATERIALS

Thermal processing of materials is a critical step in manufacturing quality products. The world's top manufacturers rely on Despatch for curing, hardening, drying and heat treating a wide variety of materials including polymers, composites, rubber and textiles.

Despatch provides ovens and systems for composite curing. Applications include curing filament-wound composites used in products such as light weight pressure vessels, and curing the composite components of wind turbine blades. Despatch is an established supplier of composite curing systems for aerospace manufacturers.

Despatch provides laboratory ovens for testing and analyzing materials such as asphalt, polymers, composites, paint and other coatings. Testing is used to define material characteristics, detecting defects and failure susceptibility.



## TRANSPORTATION

Despatch carbon fiber oxidation ovens and composite curing systems provide thermal processing of the materials used for aircraft, automobiles, watercraft, trains and buses.

Despatch has a long history of working with the world's top aerospace companies to provide thermal processing solutions. Our breadth of knowledge in this market is extensive and we have a thorough understanding of the strict temperature uniformity and airflow requirements necessary to produce high performance, advanced materials.



Sophisticated software is utilized to fully control the process and document all process information, providing traceability and validation of part quality.



## INDUSTRIAL

Despatch ovens are used for curing painted finishes, drying solvents and water, and annealing plastics and metals. Whether an application requires batch or continuous processing, Despatch offers the highest quality ovens and furnaces with superior temperature uniformity and the durability to withstand the rigors of an industrial manufacturing environment.



The oil and gas industry relies on Despatch for burn-in and performance qualification testing of down-hole electronic logging equipment. Typical processes include simulation of down-hole, oil well drilling conditions for calibration of tools.

Despatch offers heat treating equipment for the growing fuel cell and energy storage industry. Despatch collaborates with major industry players, providing equipment worldwide.

# Benchtop & Lab Ovens

## LBB CONVECTION BENCHTOP LAB OVENS

These ovens are recommended for a variety of standard laboratory and production applications including drying, curing, annealing, and materials and asphalt testing.

Forced convection and a “uniflow” air circulation pattern provide excellent temperature uniformity.

### STANDARD FEATURES:

- ◆ Temperatures up to 400°F (204°C)
- ◆ Nickel plated shelves- by model rated to 50 or 200lbs (23 or 91kg)
- ◆ Digital control with 3/4 in(1.9cm) LED display
- ◆ 304 stainless steel interior
- ◆ High-limit control
- ◆ UL and C-UL listed

### OPTIONS:

- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port
- ◆ Pass through doors
- ◆ Process timer with audible alarm
- ◆ CE compliant
- ◆ Access ports



## LAC HIGH PERFORMANCE BENCHTOP 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.

### STANDARD FEATURES:

- ◆ Temperatures up to 500°F (260°C)
- ◆ Horizontal recirculating airflow
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Two levels of password security can limit operator access to program parameters
- ◆ Nickel plated shelves rated to 50lbs (23kg )
- ◆ End-of-cycle and high-limit indicator
- ◆ 304 stainless steel interior
- ◆ Modbus communication connection for remote monitoring and recording
- ◆ UL and CL listed

### OPTIONS:

- ◆ Door interlock
- ◆ Access ports
- ◆ Audible and visual alarm
- ◆ CE compliance

**LBB and LAC Ovens  
ship in just 3 days**

## LFC CLASS A BENCHTOP OVENS

The LFC Class A bench-top oven is specially designed to meet NFPA 86 requirements for applications that include flammable solvents or large amounts of moisture removal. They include a pressure relief panel, purge timer and exhaust fan. The LFC uses 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.



### STANDARD FEATURES:

- ◆ 3.8 and 12 cu ft (105 and 340 liter)
- ◆ Temperatures up to 500°F (260°C)
- ◆ Class A - meets NFPA 86 requirements for flammable solvents
- ◆ High limit over-temperature protection
- ◆ Protocol 3™ control with a large LCD display, integrated data logging capabilities and USB port for simple set-up and data export
- ◆ PC interface for remote input, monitoring and recording (RS485 connection)
- ◆ End-of-cycle and high-limit indicators
- ◆ 304 stainless steel interior

### OPTIONS:

- ◆ Door interlock
- ◆ 2 -inch access ports
- ◆ 208V full performance package
- ◆ CE compliance



# Clean Process Ovens

## LCC/LCD HEPA FILTERED BENCHTOP OVENS

The Despatch LCC/LCD stackable clean process ovens are designed to save valuable floor space and provide a variety of tailored options for your specific needs. Typical applications for these ovens include die-bond curing and other semiconductor packaging processes, depyrogenation, sterilization and drying for life sciences. The oven is configured for 220/240 Volts and 50/60 Hz.

For production environment processes where minimal contamination is essential, the LCC and LCD Series ovens offer the highest standards in HEPA filtration. Recirculated airflow is 100% HEPA (High Efficiency Particulate Air) filtered for operation at ISO Class 5 (Class 100) or better within the oven chamber. This oven can also be ordered without HEPA filtration.



### STANDARD FEATURES:

- ◆ LCC temp. up to 500°F (260°C)  
LCD temp. up to 662°F (350°C)
- ◆ Lockable disconnect switch on the control panel for easy servicing
- ◆ Stainless steel interior and exterior with all interior seams continuously welded on the insulation side to protect the chamber from contamination
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Available in air or nitrogen atmosphere configurations (100ppm oxygen capability)
- ◆ Modbus communication connection for remote monitoring and recording
- ◆ Programmable door lock
- ◆ Audible and visual alarms
- ◆ UL and C-UL listed open control panel

### OPTIONS:

- ◆ Three-color process stack light
- ◆ Data acquisition software
- ◆ Silicone free construction
- ◆ Replace HEPA filter with simulation plate
- ◆ Oxygen concentration monitoring system
- ◆ CE compliant



## LCC/LCD2-14 CLEAN PROCESS CABINET OVENS

From R&D to clinical trials to small-scale production, these ovens are the perfect solution for die-bond curing and other semiconductor packaging processes, 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 9°F (5°C) 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 requirements for processing flammable solvents.

Optional pass-through operation with doors on the front and rear is available. A door interlock system prevents unloading until the thermal cycle is complete.

### STANDARD FEATURES:

- ◆ LCC temp. up to 500°F (260°C)  
LCD temp. up to 662°F (350°C)
- ◆ Lockable disconnect switch on the control panel for easy servicing
- ◆ Stainless steel interior and exterior with all interior seams continuously welded on the insulation side to protect the chamber from contamination
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Available in air, nitrogen atmosphere (100ppm oxygen capability) or Class A configurations
- ◆ Modbus communication connection for remote monitoring and recording
- ◆ End-of-cycle and high-limit audible and visual alarms
- ◆ Programmable door lock
- ◆ UL and C-UL listed open control panel

### OPTIONS:

- ◆ Pass-through door configuration
- ◆ Data acquisition software
- ◆ Silicone free construction
- ◆ Replace HEPA filter with simulation plate
- ◆ CE compliant

## Clean Process Ovens Continued

### PCO2-14™ POLYIMIDE CURE

The PCO2-14™ Polyimide Cure solution is a clean process oven designed for polyimide hard baking and curing applications. Many semiconductor manufacturing environment's front-end machines are adapted for polyimide curing. This costly process results in equipment typically not suitable for polyimide curing in terms of cleanliness, inert atmosphere capabilities, cycle time or data acquisition.

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. Despatch designed the PCO2-14™ with a pressure relief system that includes a removable "cold trap", an easy-to-clean condensate trap that helps to prevent polyimide buildup in the oven's exhaust.



#### STANDARD FEATURES:

- ◆ Recirculated air is 100% filtered through a 99.99% HEPA filter for ISO Class 5 (Class 100) or better operation
- ◆ Integrated PC interface with real-time graphics display
- ◆ Oxygen monitor control system
- ◆ 16 kW heater capacity
- ◆ Auto Water Control with a stainless steel water cooling coil
- ◆ Temperatures up to 662°F (350°C)
- ◆ Fast cycle times up to 5°C per min
- ◆ Temperature uniformity of  $\pm 1\%$
- ◆ Maximum 50 lbs (23kg) per shelf with an overall load capacity of 300 lbs (136kg)
- ◆ Oven holds up to 11 shelves



## Production Ovens

### RAD/RFD CABINET OVENS

The RAD/RFD cabinet ovens feature horizontal recirculating airflow and exceptional temperature uniformity. The result is proven reliability in demanding production and laboratory applications, such as curing, drying, stress relieving, aging, ASTM testing, UL testing and other process-critical applications.

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

#### STANDARD FEATURES:

- ◆ Temperatures up to 650°F (343°C)
- ◆ Three models from 4.2 to 35 cu. ft. (119 to 991 liters)
- ◆ Horizontal recirculating airflow
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ RS485 Modbus communication PC interface
- ◆ 304 stainless steel interior
- ◆ 5-year heater warranty
- ◆ End of cycle and high-limit indicators
- ◆ 1 inch access port
- ◆ Audible high-limit alarm
- ◆ UL and C-UL listed open industrial control panel



#### OPTIONS:

- ◆ Unique adjustable louvers
- ◆ PC interface for remote input, monitoring and recording (RS485/422/232)
- ◆ Door switch
- ◆ Chart recorder
- ◆ CE compliant



*The RAD/RFD Benchtop model is a popular laboratory oven due to its small footprint and capabilities.*



## TA/TF TRUCK-IN/WALK-IN OVENS

The TA truck-in/walk-in oven is designed for industrial process versatility and dependability. Typical applications include aging, bonding, curing, drying, baking, heat treating, annealing and stress-relieving.

Despatch's design, manufacturing, quality and innovation ensures industrial ruggedness, excellent process control and dependable operation. The TA oven is ideal for applications involving tight tolerances that do not include the use of any flammable solvents or volatiles.

The TF series is designed to meet NFPA 86 requirements for use with flammables and solvents. These Class A ovens are complete with a pressure relief panel, purge timer and exhaust fan. Each TF oven is specially designed for applications that include flammable solvents or moisture removal.

### STANDARD FEATURES:

- ◆ Shipped fully assembled, wired and tested to minimize installation time. Allows production to begin quickly.
- ◆ Horizontal recirculating airflow
- ◆ Protocol 3™ microprocessor with real time clock and optional PC interface
- ◆ Audible high-limit alarm
- ◆ Disconnect switch and door switch
- ◆ 2 inch test access port
- ◆ Aluminized steel interior
- ◆ UL listed open control panel
- ◆ High volume recirculating fan provides faster, more uniform heating which saves process time and improves product quality
- ◆ Plate floor with truck tracks

### OPTIONS:

- ◆ Insulated floor with truck tracks
- ◆ Chart recorder
- ◆ Adjustable louvers
- ◆ Loading trucks and shelves
- ◆ Rear doors
- ◆ CE compliant

*Backside of  
TFD2-52  
Class A oven*



## HIGH CAPACITY WALK-IN AND TRUCK-IN OVENS

The 476 and 952 cubic foot capacity Despatch TAD/TFD walk-in ovens feature uniflow airflow to ensure uniform temperatures throughout the oven. Each oven is shipped with unitized sections assembled and wired to minimize installation time. Additionally, every oven receives a quality and performance test before shipment so you can count on a reliable start-up and performance consistency.

### OPTIONS:

- ◆ Insulated floor with truck tracks
- ◆ Loading trucks and shelves
- ◆ Proportioning gas fired heater
- ◆ Pneumatic vertical lift doors
- ◆ Rear doors
- ◆ Chart recorder

### STANDARD FEATURES:

- ◆ Temperatures up to 343°C (650°F)
- ◆ Factory tested and shipped in unitized sections for easy installation
- ◆ Despatch unique adjustable louvers
- ◆ Watlow F4T controller
- ◆ Audible high-limit alarm
- ◆ Two-inch test access port
- ◆ Aluminized steel interior with plate floor
- ◆ High volume recirculating fans for faster, more uniform heating
- ◆ Disconnect switch
- ◆ UL and C-UL listed open industrial control panel



## Production Ovens Continued



### COMPOSITE CURING SYSTEMS

Despatch has a long history of working with the world's top aerospace companies to provide custom thermal processing solutions. We have experience in many areas related to carbon fiber composites, from the oxidation of fiber to curing composites. Our breadth of knowledge in this market is extensive and we have a thorough understanding of the strict temperature uniformity and airflow requirements necessary to produce high performance, advanced materials.



Despatch offers complete vacuum bagging systems with unlimited vacuum ports. The ports can be added in sets of 8. Jack panels allow you to connect as many thermocouples as needed for monitoring the curing process. Mold preparation, including preheating, drying and cleaning processes can also be provided.



Despatch composite curing ovens are now available with Focal Point™, a PC-based process control system. Focal Point™ fully controls the curing process and documents all process information, providing traceability and validation of part quality. Focal Point™ offers precise process control with lead-lag temperature control and an advanced recipe editor for programming temperature and vacuum profiles, and for controlling fans and dampers. Focal Point™ software logs all process data in a spreadsheet or database, which can be accessed by a plant computer system.

### COMPOSITE CURING OVEN TECHNOLOGY

- ◆ Available as an add on to standard size Despatch walk-in ovens (52 - 952 cu ft)
- ◆ Full installation and startup services
- ◆ Tight temperature uniformity, standard at  $\pm 5^{\circ}\text{C}$  with capabilities up to  $\pm 2.5^{\circ}\text{C}$
- ◆ Electrically heated or gas fired (direct or indirect)
- ◆ Custom airflow to optimize heat transfer to unique molds

### VACUUM BAGGING SYSTEMS

- ◆ Jack panels allow groups of thermocouples to fully monitor product
- ◆ Vacuum ports can be added in sets
- ◆ Vacuum port monitoring tools can be added to record pressures
- ◆ Vacuum pump and all required components for complete system

### FOCAL POINT PROCESS CONTROL SYSTEM

- ◆ PC-based system
- ◆ Recipe editor to control temperature and vacuum profiles
- ◆ Process data logged on system PC
- ◆ Standard or customized reporting



### PC SERIES CONVEYOR OVENS

The PC Series model ovens achieve superior temperature uniformity in all interior parts due to high-volume, vertical down airflow. Typical applications include pre-heating, curing, bonding, drying and heat treating. There are several standard models available to suit your needs.

#### STANDARD FEATURES:

- ◆ Temperatures up to 500°F (260°C)
- ◆ High volume vertical down airflow for superior temperature uniformity and process reliability
- ◆ Conveyor speed variable from 1"-10" (2.5cm - 25cm) per minute
- ◆ 30.5 to 61 cm (12" to 24") long entrance and exit extensions
- ◆ 4", 6", or 9" (10 cm, 15 cm, 23 cm) high work zone
- ◆ Emergency off switches at each end on larger models

#### OPTIONS:

- ◆ Class A models available
- ◆ HEPA filtered model for applications that require Class 1000 cleanliness.



## Specialty Ovens

### MODIFIED PC SERIES CONVEYOR OVENS

Working with our experienced engineers the PC Series can be modified to meet your specific production needs. The following configurations are available:

- ◆ Temperatures from 500°F (260°C) to 1000°F (538°C)
- ◆ Variable conveyor speeds
- ◆ High volume, vertical down airflow for superior temperature uniformity and process reliability
- ◆ Conveyor extensions on each end provide loading/unloading areas
- ◆ Class A option for handling flammable solvents
- ◆ Conveyor systems including flat wire, mesh belts, monorails, powered rollers, indexing drives, walking beam, powered chain
- ◆ Multiple heating and cooling zones
- ◆ Additional airflow designs such as horizontal or vertical up flow
- ◆ Clean environment air filtration including HEPA filters



### PBC/PNC BURN-IN CABINET OVENS

PBC Burn-in Chambers are engineered specifically for applications such as high dissipation forward bias, high temperature reverse bias, dynamic and static burn-in of IC's, RAM's & ROM's, microprocessors and additional semiconductor devices.

#### STANDARD FEATURES:

- ◆ Temperatures up to 500°F (260°C)
- ◆ Air or nitrogen atmosphere
- ◆ High-volume recirculating fans to maintain uniform temperatures
- ◆ Rear wall is easily disassembled and removed to simplify fixturing of power leads or feed-through boards into oven
- ◆ Traditional horizontal loading
- ◆ Side-to-side horizontal airflow
- ◆ Over-temperature protection control
- ◆ Digital temperature controller with accuracy of  $\pm 2^\circ\text{F}$  ( $\pm 1^\circ\text{C}$ )

#### OPTIONS:

- ◆ Power supply cabinet - standard E.I.A. 19" (48cm) cabinet



### RBC BENCHTOP BURN-IN OVENS

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.

#### STANDARD FEATURES:

- ◆ Temperatures up to 500°F (260°C)
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Over-temperature protection
- ◆ Stainless steel interior
- ◆ High volume recirculation fans ideal for high dissipation applications

#### OPTIONS:

- ◆ Nitrogen atmosphere for minimizing oxidation at high temperatures
- ◆ PC interface for remote input, monitoring and recording
- ◆ Redundant hi-limit
- ◆ CE compliant

### PTC TOP LOADING TEST OVENS

PTC Ovens offer high performance burn-in and qualification testing for down-hole logging equipment. The oven's unique configuration is well suited for heating long and narrow loads such as tubing and extrusions.

#### STANDARD FEATURES:

- ◆ Temperatures up to 500°F (260°C)
- ◆ 2.7, 4, or 12 cubic feet (76.5, 113.3, or 339 liters)
- ◆ 8ft or 12ft (2.4m or 3.7m) chamber length
- ◆ Removable end caps to allow several ovens to be connected end-to-end
- ◆ Horizontal airflow
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Silicone door seals and positive

#### OPTIONS:

- ◆ Non-magnetic, non-metallic models available
- ◆ Front load model available
- ◆ Gas-cylinder door assist latching clamps for security



# Furnaces

## RAF/RFF FURNACES

Despatch RAF furnaces feature horizontal recirculating airflow to ensure exceptional temperature uniformity of  $\pm 5.6^{\circ}\text{C}$  at  $538^{\circ}\text{C}$ . These high performance furnaces deliver temperatures up to  $538^{\circ}\text{C}$  ( $1000^{\circ}\text{F}$ ) and are great for such processes as annealing, aging, stress relieving and other process critical applications.

RFF Class A furnaces are specifically designed to meet NFPA 86 requirements for applications that include flammable solvents. This furnace includes a pressure relief panel, purge timer, and exhaust fan.



*RFF2-35 with optional pneumatic lift door*



### STANDARD FEATURES:

- ◆ Temperatures up to  $538^{\circ}\text{C}$  ( $1000^{\circ}\text{F}$ )
- ◆ 3 models - 4.2, 19 & 35 cu. ft. (117, 552 & 991 liters) capacity
- ◆ Horizontal recirculating airflow
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Audible and visual hi-limit alarm
- ◆ 304 stainless steel interior
- ◆ Disconnect switch on main control panel
- ◆ 5-year heater warranty
- ◆ UL and C-UL listed open industrial control panel

### OPTIONS:

- ◆ Unique adjustable louvers
- ◆ Pneumatic lift door
- ◆ Chart recorder
- ◆ Quench tank solution heaters
- ◆ Access ports for test wires
- ◆ CE compliant

# Software

## PROTOCOL 3™ CONTROLLER

Protocol 3™ is a microprocessor-based temperature and hi-limit controller with large LCD display and real time clock for auto start capability. The LCD display shows temperature readings along with clear, detailed information on oven status. Protocol 3™ features three operating modes for quick and easy operation: Manual mode, Timer mode and Profile mode. The data-logging functionality enables reporting and analyzing and data files can be exported via the controller's USB port.

### STANDARD FEATURES:

- ◆ Large backlit LCD display
- ◆ Six status indicator lights
- ◆ Hi-Limit control included
- ◆ Simple profile creation for multiple set point applications
- ◆ Integrated data logging for obtaining historic process data for analysis
- ◆ USB port for simple configuration set-up and export of data files
- ◆ Multi language capability

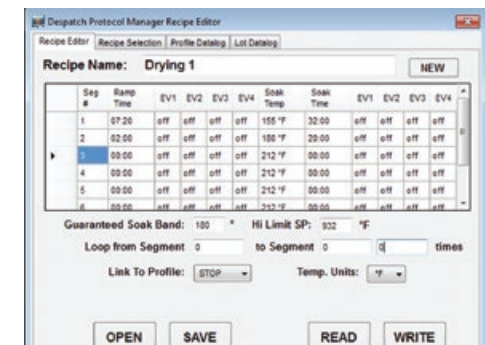


## PROTOCOL MANAGER™ SOFTWARE

Despatch's Protocol Manager monitoring and data acquisition software enables one operator to stop, start, program and monitor as many as 32 ovens from a single personal computer with Protocol Plus™ or Protocol 3™ controllers.

### STANDARD FEATURES:

- ◆ Programming of time and temperature settings, including complex ramp and soak temperature profiles
- ◆ Records operating information including: times, temperatures, set points, lot numbers and operators
- ◆ Quick and easy installation



## Adapted for unique processes

If you have a unique application, Despatch engineers can address your specific requirements for heat-up times, cool down times, temperature uniformity, instrumentation, record keeping, space requirements, and other special concerns.

Despatch partners with customers to deliver complex thermal processing solutions. Our Innovation Resource clients enjoy direct access to highly skilled Despatch engineers for process and product development and evaluation. Customers are provided cost-effective solutions up front—before equipment design begins or purchase commitments are made. This proven approach significantly reduces purchase risk, speeds production, ensures process integrity and saves time and money.

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

*The FCH is a custom, high-performance furnace that delivers temperatures up to 732°C (1350°F). The model shown is a Class A version for applications that involve flammable solvents. The furnace is used for annealing, aging, drying and heat treating applications this furnace.*



## 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.

**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 can also be 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.

# Together in Process Perfection

**ITW EAE** *Electronic Assembly Equipment*

ITW EAE is the Electronics Assembly Equipment division of Illinois Tool Works, Inc. The group brings together the world-leading brands of electronics assembly equipment. Brands with reputations for driving process perfection. Manufacturers need speed, accuracy and repeatability over time in order to produce reliable products. Every product we make is measured by its ability to deliver on this promise. The combined knowledge and experience of the ITW EAE group is sure to drive further innovation and speed the development of next generation technology.



**MPM | Camalot | Electrovert | Vitronics Soltec | Despatch**

## Service and Support: Global Presence, with Local Expertise

Despatch provides 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.

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.

## Equipment installation and training

Our global service team offers a complete range of installation, start-up and testing services. Choose the option that best fits your company's needs: turnkey installation, installation supervision, start-up, testing, validation services.

Our training courses cover a wide variety of subjects, including general operations, gas-fired systems, electrically heated systems, equipment maintenance, preventative maintenance, controller operation and calibration, and temperature uniformity surveys. We offer Operator, Maintenance and Engineering training courses.

### SERVICE AND TECHNICAL SUPPORT

service parts: 1-800-473-7373  
international service/main: 1-952-469-8230  
Hours: Monday - Friday 5:00am - 4:30pm CST  
service@despatch.com  
parts@itweae.com

### GLOBAL HEADQUARTERS

main phone: 1-800-726-0110  
international/main: 1-952-469-5424  
sales: 1-800-726-0550  
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