







WHY GRUENBERG DRY HEAT STERILIZATION?

- Low ownership, operation costs
- Validated sterilization
- Sustainable energy, water solution
- Extended cage life
- · Healthier lab work environment
- 50% less space than Autoclave

STERIDRYTM DRY HEAT Sterilization Lower Cost, Lower Energy Use, NO WATER





Thermal Product Solutions (TPS) is a leading American manufacturer of industrial ovens, furnaces, pharmaceutical sterilizers, laboratory ovens, environmental temperature chambers, and stability test chambers. TPS product lines accommodate a comprehensive range of applications and configurations to meet virtually every thermal-processing need. Their facilities are strategically located across the country which allows them to provide customers with efficient and timely service. The TPS family of brands includes Baker Furnace, Blue M, Gruenberg, Lindberg/MPH, Lunaire, Tenney, and Wisconsin Oven.

Gruenberg is a leader in dry heat sterilization technology with an advanced line of sterilizers that eliminate harmful pathogens on animal habitat cages. In addition to the dry heat sterilizer technology, they offer a full line of standard and custom industrial ovens that accommodate temperatures up to 1200°F and are available in a variety of configurations, including cabinet, truck-in, and top-loading models. Gruenberg also offers a comprehensive line of custom pharmaceutical ovens, Class-100 sterilizers; continuous-process and explosion-proof dryers.















Truck-In Sterilizers

Features and Benefits

- · Sustainable: no water and low total energy consumption
- Low cost of ownership and operation
- 50% less space than Autoclave
- Flexible installation and customization options
- · Validated sterilization cycles for assured results
- PrecisionFlo™ Full focused airflow (Patent Pending)
- HEPA Filters
- · Data acquisition capabilities
- Panelized or modular design provides flexible installation and customization options
- · Healthier environment for lab workers
- · Extended cage life
- · Also available in Pass-Thru configuration

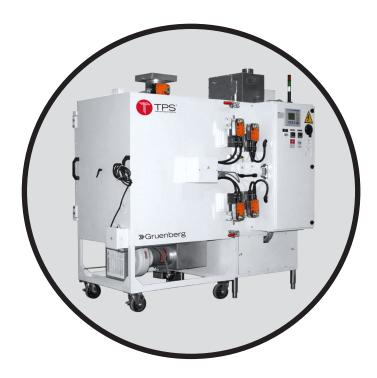


Single Truck Sterilizers

Features and Benefits

- Greener operation with lower total energy consumption
- · Uses only one utility electricity
- Lower total cost of ownership and operation
- Panelized or modular design provides flexible installation and customization options
- · Uniform heat distribution
- Quiet operation (won't disturb staff or noise-sensitive animals)
- · Validated sterilization cycles for assured results
- · Easy-to-use controls and access to cages
- · Also available in Pass-Thru configuration





POD Sterilizers

Features and Benefits

- Green operation with lower total energy consumption
- Economical cost
- · Flexible installation and customization options
- Validated sterilization cycles for assured results
- · Easy to use controls and access to containers
- Conditioning unit can be used with multiple PODs
- Modular design allows for simple rearranging



Cabinet Sterilizers

Features and Benefits

- Green operation with lower total energy consumption
- Lower total cost of ownership
- Flexible installation options
- Flexible design allows customization to suit every application
- Validated sterilization cycles
- Fits into small spaces and through 42" x 84" doorways
- · Modular design for ease of installation
- · Easy to use controls
- · Also available in Pass-Thru configuration





Hold the Steam

Dry heat sterilization systems use forced-air convection technology for reduced energy consumption.

Pharmaceutical, Medical Device and Life Science Research sterilization has recently seen a demand for greener technologies that require less maintenance. This puts the pressure on equipment engineers to develop innovative ways to approach sterilization. While traditional steam autoclaves use water, dry heat sterilization provides an alternative to steam that uses no water, less energy, and requires less maintenance.

Compared with steam, dry heat is a greener technology that eliminates water usage, provides more flexibility for installation locations, and costs less to own and operate.

Modern dry heat sterilization systems using focused forced air convection technology are consistently decreasing the cycle time. Depending on the load configuration and cool down requirements, the typical cycle lasts less than 2.5 hours.

A dry heat sterilizer is 2/3 lighter than an equivalent steam system. Because the dry heat sterilizer can be rigged in place as modules, there are considerably less rigging challenges and costs. The dry heat sterilizer does not need to be pit mounted. All of these benefits lead to a considerably low installed cost.





100% focused forced-air convection technology.

*Patent Pending



Sterilizer Design Possibilities:

- Proof of concept and proof of process
- Development of test platforms and prototype units
- Optimizing production processes
- Process research and testing
- Custom process controls to solve manufacturing challenges

Industries

Solar Energy

Defense and Aerospace

Pharmaceutical

Medical Devices

Automotive

Laboratory

Electronics

Petroleum and Natural Gas

Battery Test Chambers

Machinery

Material Processing

Semiconductors

Telecommunications

Test and Measurement

Composite Curing Ovens

Paints, Inks and Coatings

Rubbers and Plastics

Lab Animal Sciences

Products

Environmental Test Chambers and Rooms

Steady State Chambers and Rooms

Industrial Ovens

Sterilizers and Dryers

Lab Ovens and Furnaces

Battery Test Solutions

Out of Autoclave Solutions

Process Controls

Custom and Standard Ovens

Batch and Continuous Solutions



Baker Furnace, Blue M, Gruenberg, Lindberg/MPH, Lunaire, Tenney, Wisconsin Oven

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