



146 Series Clean Room Mechanical Convection Ovens

The Blue M Clean Room Mechanical Convection Oven is designed for a number of laboratory and industrial oven applications, including curing polyamide coatings, moisture drying, baking photo-resist coating and various pharmaceutical processes.



▶ General Mechanical Convection Industrial Oven Specifications

- Temperature range: 15°C (27°F) above ambient to 250°C (482°F)
- Control Accuracy: +/- 1.0°C (+/- 1.8°F)
- Resolution: +/- 0.1°C (+/- 0.2°F)
- Workspace capacity: 3.4 to 21.6 cubic feet
- Uniformity: Blue M can provide varying levels of uniformity;

If you have a specific tolerance or specification which must be met, please contact us with your requirements so we can ensure the equipment is designed, tested, and adjusted to meet those requirements

▶ Uniform, Accurate and Reliable Temperature Control

- Available with profiling or single set point temperature controls
- Horizontal air flow assures uniform thermal performance under most loading conditions
- Exclusive Blue M Eterna heating elements - the most reliable available, with heavy-gauge high temperature nickel chromium wire and low-watt density for longer service life
- Air flow switch provided as standard to protect oven and product
- Direct drive, multi-blade, centrifugal blower with high-volume air delivery and dynamically balanced for minimum noise

▶ Oven Features

- All welded and sealed construction assures continuously low particle counts
- Corrosion resistant, stainless steel (type 304) interior
- All-welded, heavy-duty exterior with heavy-gauge, reinforced, cold-rolled steel
- Baked on white powder-coated enamel finish on exterior for long-lasting corrosion protection
- Adjustable inert gas purge system including a flowmeter and supply connection.
- Fiberglass insulation to ensure safe cabinet skin temperature
- Heavy-duty door - double-wall, insulated construction
- Independent, over-temperature protection (high limit controller) included
- Every oven is fully assembled and individually factory tested
- Circuit breaker provided for ground fault protection as standard
- Single or three phase operation available in 50 Hz or 60 Hz
- Exclusive Blue M Re-circulating HEPA Filtered Air Delivery System
 - Removable one-piece stainless steel interior features reinforced 304 stainless steel and removable HEPA filter
 - All re-circulated air is continuously filtered; no use of ambient cleanroom air

| Condensed Specifications | | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Model | 206 (Bench model) | 256 (Bench model) | 336 (Floor model) | 1406 (Floor model) |
| Interior Volume | 3.4 cu. ft. | 4.9 cu. ft. | 9.4 cu. ft. | 21.6 cu. ft. |
| Interior Dimensions WxDxH in(mm) | 16.5 x 18 x 20 (419 x 457 x 508) | 21.5 x 20 x 20 (546 x 508 x 508) | 21.5 x 20 x 38 (546 x 508 x 965) | 44 x 24 x 36 (1118 x 610 x 914) |
| Exterior Dimensions WxDxH in(mm) | 35 x 33 x 51 (889 x 838 x 1295) | 40 x 35 x 51 (1016 x 889 x 1295) | 40 x 35 x 77 (1016 x 889 x 1956) | 63 x 39 x 75 (1600 x 991 x 1905) |
| Machine Footprint | 8.0 sq. ft. | 9.7 sq. ft. | 9.7 sq. ft. | 17.0 sq. ft. |
| Electrical Service | | | | |
| 208 VAC 1 Ph 60 Hz Line current | 3.0 kW 17 | 4.5 kW 26 | 6.0 kW 35 | 6.8 kW 38 |
| 240 VAC 1 Ph 60 Hz Line current | 4.0 kW 20 | 6.0 kW 29 | 8.0 kW 42 | 9.0 kW 44 |
| 208 VAC 3 Ph 60 Hz Line current | 6.8 kW 20 | 9.0 kW 27 | 13.5 kW 40 | 18.0 kW 53 |
| 240 VAC 3 Ph 60 Hz Line current | 9.0 kW 23 | 12.0 kW 31 | 18.0 kW 46 | 24.0 kW 61 |
| 480 VAC 3 Ph 60 Hz Line current | 9.0 kW 12 | 12.0 kW 16 | 18.0 kW 23 | 24.0 kW 31 |

► Available Oven Options

- Clean room stainless steel slotted shelves
- Door switch (disables heat and circulation blower upon door opening)
- 24-hour, 7-day digital process timer
- Temperature recorders (paper or paperless)
- Reverse door hinge
- Floor stands (bench models only)
- Swivel casters with leveling feet
- Programmable controller, Ethernet and USB communications
- Alternative exterior finishes
- CE Mark
- High temperature HEPA filter allowing process temperatures up to 350°C (662°F)
- Clean room packaging for shipment and installation
- Data logging and trending
- Variable frequency drive on circulation blower
- Exclusive, adjustable, semi-pierced duct walls for tuning of air flow
- Electro-mechanical or pneumatic door lock
- Emergency stop
- Light tower assembly with audible alarm
- Maintenance lock-out system
- Main power fused disconnect switch
- Redundant over-temperature protection (high limit controller)
- UL508A labeled control panel
- Adjustable inert gas purge system including a flowmeter, two-way gas control valve, cycle start-up high flow purge, low flow adjustment, chamber pressure gauge and supply connection. This option allows for consistently low oxygen PPM levels within the work chamber

► Exclusive Two-Year Warranty

Blue M warrants the equipment will be free from defects in material and workmanship for a period of two (2) years from the date of shipment (or from the installation date if this service is provided by TPS or a TPS approved partner and the date is approved by TPS). If a TPS Preventive Maintenance Plan is purchased before the end of the standard warranty period, these limited warranties shall be extended by one (1) additional year. If within the warranty period the original purchaser notifies Blue M in writing of an alleged non-conformity, and Blue M determines to its reasonable satisfaction that the product or service is in fact non-conforming, then Blue M shall, at its option and expense, repair or replace the non-conforming product or correct the non-conforming service, either at the original purchaser's facility, or Blue M's. Labor is only included for domestically installed units. Equipment installed outside of the United States (USA) will be one year parts only from date of shipment. For full details, exclusions, and other information on our warranty please go to: <https://www.thermalproductsolutions.com/support/blue-m>



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

Address: 2821 Old Route 15 | New Columbia, PA 17856-9396 | USA
Phone: (570) 538-7200 | Toll Free: (800) 586-2473 | Fax: (570) 538-7380
info@thermalproductsolutions.com

Specifications and Product Information are subject to change without notice.