

PC Series™ Vacuum Oven

It's critical.

When uniform temperature and precise process gas environment are critical, the T-M Vacuum PC Series™ Vacuum Oven fits the bill.

The PC Series vacuum oven maintains accurate temperature control up to 350°C (662°F) with its HTP model. The unique, "Hot Wall" chamber configuration is heated uniformly on all sides with a resistive heater bank assembly to create a precise heating environment while allowing you full use of the interior of the oven.

Both the PC-26 and PC-36 models are fitted with a 23.3cfm dual-stage direct drive mechanical vacuum pumping system and the PC-48 includes a 42.4cfm pump.

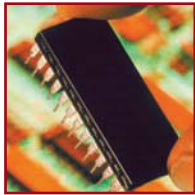
Available in various high-vacuum configurations to fit your needs, PC series ovens are capable of any degree of vacuum from atmosphere to 10⁻⁸ torr.

Standard cycle times can be greatly reduced by utilizing The PC Series Vacuum Oven's efficient circulating process gas cycle. The programmable control system option with stirring fan is a cost-efficient solution for busy processing environments.

The PC Series vacuum oven incorporates varying degrees of automation ranging from our standard PLC control with data logging and graphic HMI to full computer control.

Typical Applications:

- Drying
- Outgassing
- Bake-out
- Custom process
- Purification



Above: Model PC 48 with optional heated shelves and standard PLC controller



The photo detail above shows the all stainless steel chamber interior with inert gas stirring fan and removable sliding shelf configuration.



HIGH-TEMPERATURE | HIGH-VACUUM SYSTEMS



Temperature Capabilities

- 200°C (392°F) continuous
- 350°C (662°F) continues (HTP Model)
- Time to temperature*: 25 minutes under vacuum
35 minutes in atmosphere

Vacuum Pumping Systems

- 23.3cfm two-stage rotary vane mechanical pump package with electro-pneumatic valve (42.4cfm on PC-48 model)

Available:

- Upgraded pumping systems - Mechanical, dry, diffusion, cryogenic, and turbo-molecular
- Mechanically refrigerated, optically-dense, cold trap in roughing line or liquid nitrogen cryotrap in high-vacuum line (for prevention of hydrocarbon contamination)

Vacuum Ranges*

- Mechanical Pump, Standard: atmosphere to 35 microns
- Dry Pump (oil free): atmosphere to 35 microns
- Mechanical / Diffusion Pumps atmosphere to 1.0 X 10⁻⁶ torr
- Mechanical / Cryo Pumps atmosphere to 1.0 X 10⁻⁷ torr
- Mechanical / Turbo Pumps atmosphere to 1.0 X 10⁻⁷ torr

Operating Pressure Range*

- Atmosphere to 10⁻⁸ torr
- Working pressure at maximum temperature: 10⁻⁸ torr to 1 atmosphere

System Control

- Color Touch Panel Operator Interface. PLC allows programmable ramps and soaks, vacuum set points, gas back fills, and automatically executes system overhead functions such as pump downs and vents. Capable of data logging
- +/- 1 degree controllability
- Active graphic vacuum map with instant overview of valve status and vacuum pump conditions on PLC
- Independent programmable digital over-temperature control
- Digital vacuum gauge with a readable range from atmosphere to .001 torr vacuum pressure on PLC
- PLC-controlled cycle timers and counters

Available: Automated Control Systems

- Full PC control system, utilizing PLC, PC and HMI software technology. The system affords superior data acquisition and archiving capabilities.
- Multiple survey thermocouples

Gas Backfill and Circulating/Stirring system

- Inert gas inlet and vent valve for backfill and venting cycles

Available:

- .5-HP stirring fan for gas circulation processes
- Closed-loop, multi-channel, upstream gas flow control with down stream pressure control

Chamber

- All stainless steel construction

Available:

- Custom shelving arrangement
- Heated shelving

Available work zones*

| Model # | Size |
|---------|-----------------------|
| PC-26 | 26" W x 26" H x 26" D |
| PC-36 | 36" W x 36" H x 36" D |
| PC-48 | 48" W x 48" H x 48" D |

Custom chamber sizes and configurations available

- "Hot Wall" chamber configuration with insulated resistive heater bank attached to the exterior of the chamber
- Heated on all six sides, including door (door not heated on HTP model)
- Working pressure: Atmosphere to 10⁻⁸ torr*

Exterior

- Chamber and controls are enclosed in a mild steel epoxy, enamel covered enclosure
- All models available in clean room compatible configurations or in all stainless steel enclosures
- Exterior dimensions:

| Model # | Overall Dimension* | Weight* |
|---------|---------------------------|------------|
| PC-26 | 4'9" W x 3'8" D x 6'11" H | 1800 lbs |
| PC-36 | 5'7" W x 4'6" D x 7'8" H | 3600 lbs |
| PC-48 | 7'4" W x 7'7" D x 8'2" H | 10,000 lbs |

Safety Features

All T-M Vacuum Products, Inc. products are equipped with standard safety features to ensure safe operation.

Please consult T-M Vacuum Products, Inc. (856) 829-2000 for availability and pricing of these or any other option requirements.

* All times and pressures are for clean, dry, empty, out-gassed furnace, starting from ambient pressure and temperature, and may vary. Times and pressures subject to pump size and maximum temperature. Size and weights are approximate.

