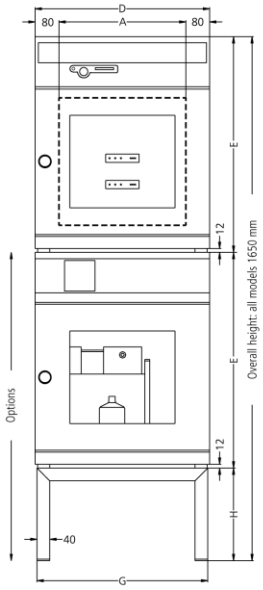
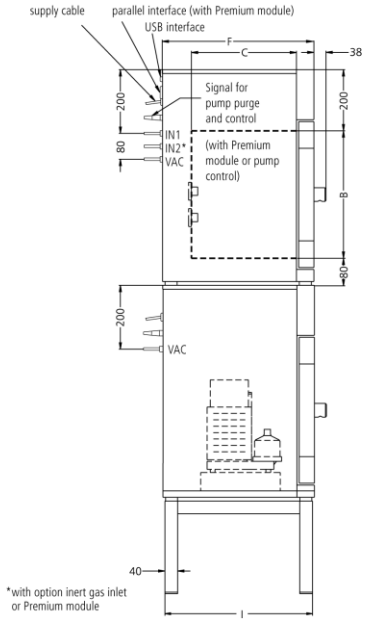
## Vacuum oven

# VO500

Drying food, cosmetics, clocks, books, PCBs or injection molds: Design your own VO vacuum oven according to your wishes!

The direct contact between the load and the heatable and removable thermoshelves in the chamber of the Memmert vacuum oven ensures rapid and uniform temperature control of food, cosmetics, watches, books, PCBs or injection molds, without the loss of heat.
On this page, you can find all the essential technical data on our vacuum drying oven. Our customer relations team will be pleased to help if you want further information.





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## Control of standard components

| | |
|---|---|
| **Temperature** | temperature measured through 4-wire Pt100 sensor individually for each thermoshelf |
| **Timer** | digital 7-day program timer with real time clock, precise minute setting, for one set value or start of ramp operation |
| **Timer** | integrated timer for tempering and pressure (vacuum) profiles of up to 40 ramps, parameters time, pressure and temperature (set point dependent) individually adjustable for each segment from 1 min. up to 99 hrs |
| **Controller** | digital display of all set parameters, such as temperature, weekdays, time, pressure, program status and set-up values |
| **Controller** | separate LED-symbol for each thermoshelf in operation |
| **Controller** | digital display of actual temperature for each thermoshelf individually |
| **Vacuum** | digital electronic pressure control through solenoid valves |
| **Vacuum** | adjustment range from 10 mbar to 1100 mbar - digital (LED) |
| **Vacuum** | setting accuracy 1 mbar |
| **Vacuum** | digital display of actual pressure from 5 mbar up to 1100 mbar |
| **Vacuum** | one programmable, digitally controlled inlet for air |
| **Vacuum** | rapid air intake for door opening (door is blocked under vacuum) - program reactivation at stored values |
| **Vacuum** | vacuum drying process (vacuum cycles) is continued after power failure |

**Premium Module:** comprises the inert gas inlet (programmable and digitally controlled inlet for inert gas with flow rate reduction), one printer interface, and a drip tray

## Temperature

| | |
|---|---|
| **resolution of display for set point values** | 0.1°C up to 99.9°C, 0.5°C from 100°C |
| **resolution of display for actual values** | 0.1°C up to 99.9°C, 0.5°C from 100°C |
| **resolution of display/setting accuracy** | 0.5°C up to 99.9°C, 1°C from 100°C |
| | min. 5°C above ambient up to +200°C |

## Control technology

| | |
|---|---|
| **Calibration** | three freely selectable temperature and pressure values |

## Communication

| | |
|---|---|
| **Programming** | multifunctional programming via menu on 8-digit alphanumeric digital display (language to be chosen via set-up) |
| **Documentation** | integrated ring memory as data logger for GLP-conforming long-term documentation of all relevant parameters - 1024 kB |
| **Documentation** | program stored in case of power failure |
| **Interface** | USB-interface incl. Memmert software "Celsius" for programming and documentation of temperature and pressure |
| **Programming** | chip-card control incl. 1 MEMoryCard XL with 32 kB storage capacity (max. 40 ramps) |

## Safety

| | |
|---|---|
| **Autodiagnostic system** | for fault analysis |
| **Temperature control** | additional digitally adjustable, electronic micro-processor overtemperature monitor TWW, protection class 3.1 - (max-value for overtemperature, min-value for undertemperature) |
| **AutoSAFETY** | additionally integrated over- and undertemperature protection "ASF", automatically following the set point value at a preset tolerance range, alarm in case of over- or undertemperature, heating of the individual shelf is switched off in case of overtemperature |
| **Temperature control** | automatic overtemperature protection for each thermoshelf following the set point-value (MLOP - Multi-Level-Overtemperature-Protection) switching the heating of the shelf off at about 3°C above set point value |
| **Temperature control** | mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 20°C above nominal temperature |

## Heating concept

| |
|---|
| **4 connections for thermoshelves in the rear** |
| **fuzzy-supported MLC (Multi-Level-Controlling) microprocessor controller adapting its performance to the volume (local temperature sensing) for each thermoshelf** |

## Standard equipment

| | |
|---|---|
| **Scope of delivery** | works calibration certificate for +160°C at 20 mbar pressure for each additionally supplied thermoshelf together with the vacuum oven |
| **Door** | full-sight glass door, inside spring-loaded, 15 mm thick glazed panel in safety glass, outside with anti-splitter screen |
| **Housing** | rear zinc-plated steel |
| **Interior** | hermetically welded stainless steel interior of extremely corrosion-resistant stainless steel, material 1.4404 |
| **Interior** | additional interior mountings of stainless steel, material 1.4404 (removable for cleaning), consisting of mounting at the sides with guide bars for thermoshelves and on top (diffusor) to avoid turbulences when aerating |
| **Interior** | all tubings made of stainless steel, material no. 1.4571 |
| **Internals** | 2 thermoshelves of aluminum, material 3.3547 (ASTM B209) with integrated large-area heating |

## Stainless steel interior

| | |
|---|---|
| | $w_{(A)}$ x $h_{(B)}$ x $d_{(C)}$: 21.5″ x 18.3″ x 15.8″ |
| | Volume 101 l |
| | Max. loading of chamber: 88 |


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## Textured stainless steel casing

| | |
|---|---|
| | $w_{(D)}$ x $h_{(E)}$ x $d_{(F)}$: 28″ x 29.9″ x 21.7″ |

## Electrical data

| | |
|---|---|
| | 230 V (+/- 10%), 50/60 Hz / approx. 10.4 amps |

## Packing/shipping data

**the appliances must be transported upright**

| | |
|---|---|
| **Customs tariff number** | 8419 8998 |
| **Country of origin** | Federal Republic of Germany |
| **WEEE-Reg.-No.** | DE 66812464 |
| | Dimensions approx. incl. carton B x H x T: 32.7” x 41.3” x 31.5” |
| | Net weight approx. 243 lbs |
| | Gross weight carton approx. 298 lbs |

## Standard units are safety-approved and bear the test marks


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