# Vacuum oven

VO500

Drying food, cosmetics, clocks, books, PCBs or injection moulds: Design your own VO vaccuum 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 moulds, 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. If you should require a customised special solution, please contact our technical specialists at myAtmoSAFE@memmert.com.
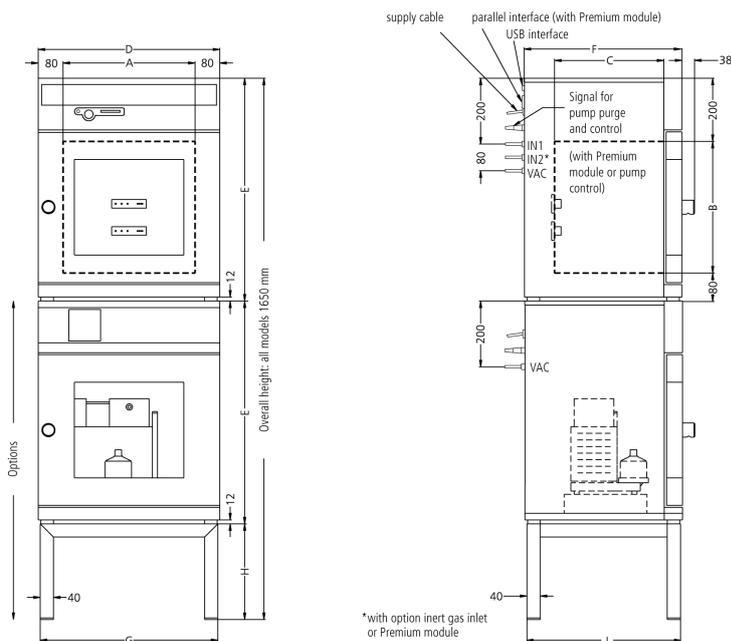
Control of standard components

Temperature	temperature measured through 4-wire Pt100 sensor individually for each thermoshelf
Timer	digital 7-day programme timer with real time clock, precise minute setting, for one set value or start of ramp operation
Timer	integrated timer for tempering and pressure (vacum) profiles of up to 40 ramps, parameters time, pressure and temperature (setpoint 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, programe 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 5 mbar to 1100 mbar - digital (LED)
Vacuum	setting accuracy 1 mbar
Vacuum	one programmable, digitally controlled inlet for air
Vacuum	rapid air intake for door opening (door is blocked under vacuum) - programme reactivation at stored values
Vacuum	vacuum drying process (vacuum cycles) is continued after power failure

Temperature

resolution of display for setpoint 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	programme 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 setpoint 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 setpoint-value (MLOP - Multi-Level-Overtemperature-Protection) switching the heating of the shelf off at about 3°C above setpoint 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

2 connections for thermoshelves in the rear (1st and 3rd level)
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	1 thermoshelf of aluminim, material 3.3547 (ASTM B209) with integrated large-area heating

Stainless steel interior

Dimensions W x H x D in mm	$w_{(A)}$ x $h_{(B)}$ x $d_{(C)}$: 545 x 465 x 400 mm
Volume	101 l
Max. loading of chamber:	60 kg

Textured stainless steel casing

$w_{(D)}$ x $h_{(E)}$ x $d_{(F)}$: 710 x 760 x 550 mm

Electrical data

Voltage	230 V, 50/60 Hz
Electrical load	approx. 2400 W

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: 820 x 970 x 670 mm
Net weight	approx. 110 kg
Gross weight carton	approx. 135 kg

Standard units are safety-approved and bear the test marks