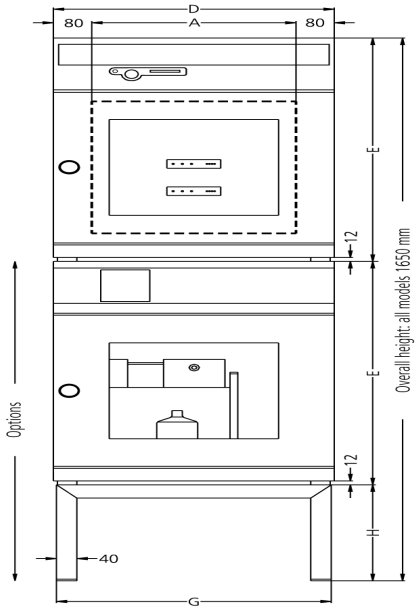
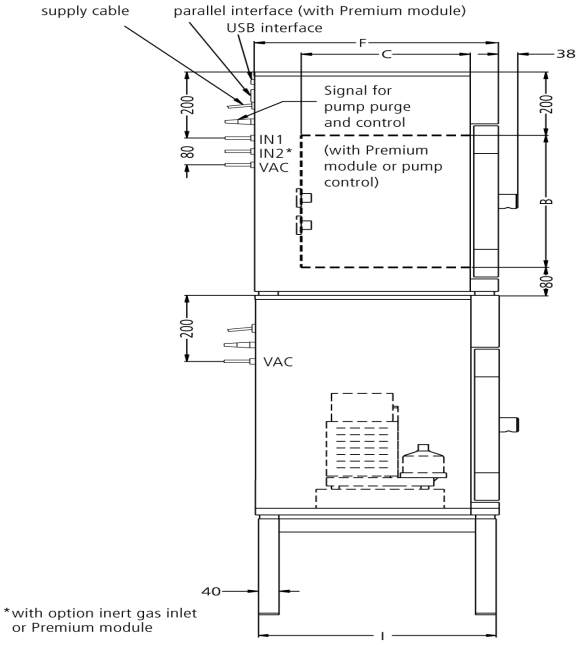
Vacuum oven

VO400

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.





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Temperature

Temperature	temperature measured through 4-wire Pt100 sensor individually for each thermoshelf
Working temperature range	min. 5°C above ambient up to +200°C
resolution of display for actual values	0.1°C up to 99.9°C, 0.5°C from 100°C
resolution of display for setpoint 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

Control of standard components

Vacuum	digital electronic pressure control through solenoid valves
Vacuum	setting accuracy 1 mbar
Vacuum	adjustment range from 5 mbar to 1100 mbar - digital (LED)
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
Vacuum	one programmable, digitally controlled inlet for air
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
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

Control technology

Calibration	three freely selectable temperature and pressure values

Communication

Interface	USB-interface incl. Memmert software "Celsius" for programming and documentation of temperature and pressure
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
Programming	chip-card control incl. 1 MEMoryCard XL with 32 kB storage capacity (max. 40 ramps)
Programming	multifunctional programming via menu on 8-digit alphanumeric digital display (language to be chosen via set-up)

Safety

Temperature control	additional digitally adjustable, electronic micro-processor overtemperature monitor TWW, protection class 3.1 - (max-value for overtemperature, min-value for undertemperature)
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
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
Autodiagnostic system	for fault analysis

Heating concept

VO direct heating	fuzzy-supported MLC (Multi-Level-Controlling) microprocessor controller adapting its performance to the volume (local temperature sensing) for each thermoshelf
Thermo shelves	2 connections for thermoshelves in the rear (1st and 3rd level)

Standard equipment

Scope of delivery	works calibration certificate for +160°C at 20 mbar pressure for each 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
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

Volume	49 l
Dimensions W x H x D in mm	$w_{(A)}$ x $h_{(B)}$ x $d_{(C)}$: 385 x 385 x 330 mm
Max. number of internals	2
Max. loading of chamber	60 kg
Max. loading per internal	20 kg

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Textured stainless steel casing

Dimensions	$w_{(D)}$ x $h_{(E)}$ x $d_{(F)}$: 550 x 680 x 480 mm
Housing	rear zinc-plated steel

Electrical data

Voltage	230 V, 50/60 Hz
Electrical load	approx. 2000 W

Packing/shipping data/Setting Up

Set Up	The distance between the wall and the rear of the chamber must be at least 15 cm. The clearance from the ceiling must not be less than 20 cm and the side clearance from the wall must not be less than 8 cm.
Transport information	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: 670 x 890 x 630 mm
Net weight	approx. 83 kg
Gross weight carton	approx. 104 kg

Standard units are safety-approved and bear the test marks

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