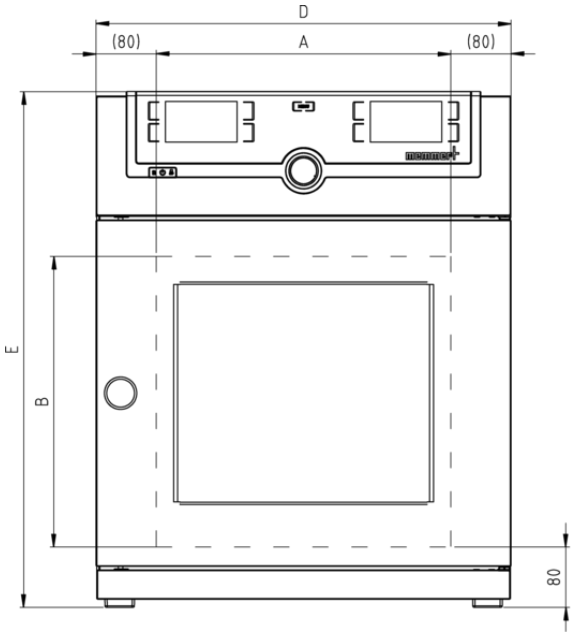
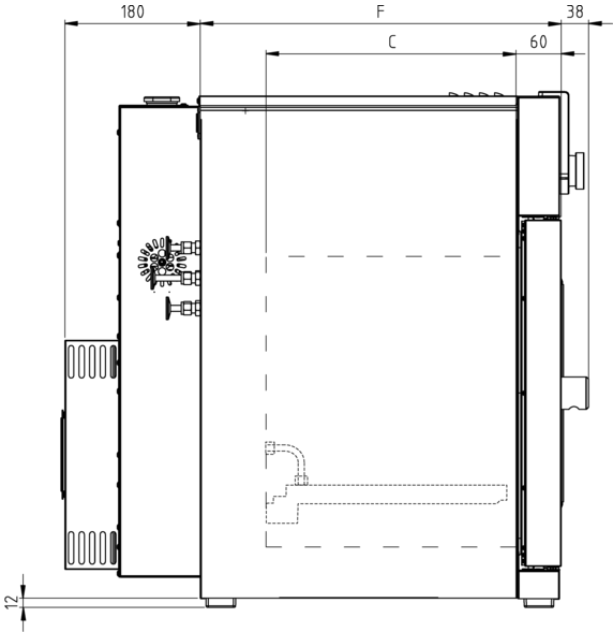
Cooled vacuum oven

VO49cool

For gentle drying of bacteria and starter cultures or simulation of intercontinental flights.

The direct contact between the load and the heatable thermoshelves in the chamber of the 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 sales@memmert.com.





Temperature

Working temperature range	from 5°C (at least 20 below ambient temperature) to +90°C
Setting temperature range	from +5°C up to +90°C
resolution of display for actual values	0.1°C
resolution of display for setpoint values	0,1°C

Pressure (Vacuum)

Vacuum range	5 to 1100 mbar
Pressure control	Digital electronic pressure control for a speed-controlled vacuum pump.Tubing for vacuum, air and inert gas are made of material 1.4571 (ASTM 316 Ti). Programmable, digitally controlled inlet for air.
Permitted final vacuum	0.01 mbar
Maximum leakage rate	0.01 bar/h
Pump control	speed control, optimised rinsing procedures for the pump membranes as well as signal output for pump ON/OFF
Connection	Vacuum connection with small flange DN16, and gas inlet with fresh air supply

Control technology

adjustable parameters	temperature (Celsius or Fahrenheit), pressure (vacuum), programme time, time zones, summertime/wintertime
Language setting	German, English, Spanish, French, Polish, Czech, Hungarian, Italian
ControlCOCKPIT	TwinDISPLAY. Adaptive multifunctional digital PID-microprocessor controller with 2 high-definition TFT-colour displays.
Timer	Digital backwards counter with target time setting, adjustable from 1 minute to 99 days
Function SetpointWAIT	the process time does not start until the set temperature is reached

Communication

Interface	Ethernet LAN, USB
Documentation	programme stored in case of power failure
Programming	AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port

Safety

Temperature control	mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 10°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 is switched off in case of overtemperature, compressor in case of undertemperature
Autodiagnostic system	integral fault diagnostics for temperature control
Alarm	visual and acoustic

Heating concept

Thermoshelves	1 connection for thermoshelves in the rear
VO cooling	Peltier cooling unit ensures a surface temperature distribution with a maximum deviation of ±1 K across the entire temperature range
VO direct heating	fuzzy-supported MLC (Multi-Level-Controlling) microprocessor controller adapting its performance to the volume (local temperature sensing)

Standard equipment

Works calibration certificate	for +10°C/20 mbar
Interior	additional interior mountings of stainless steel, material 1.4404.
Interior	all tubings made of stainless steel, material no. 1.4571
Internals	Cooling- and heating-combination of aluminium, material 3.3547 (ASTM B209), with integrated cooling circuit as well as large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemperature protection. Further data see stainless steel interior.

Stainless steel interior

Material	Hermetically welded stainless steel interior of extremely corrosion-resistant stainless steel, material 1.4404
Volume	49 l
Dimensions	$w_{(A)}$ x $h_{(B)}$ x $d_{(C)}$: 385 x 385 x 330 mm
Max. loading of chamber	20 kg

Textured stainless steel casing

Dimensions	$w_{(D)}$ x $h_{(E)}$ x $d_{(F)}$: 550 x 687 x 430 mm (d +38mm door handle)
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

Electrical data

Voltage	230 V, 50/60 Hz
Electrical load	approx. 500 W

Ambient conditions

Ambient temperature	+5 °C to +40 °C
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.
Humidity rh	max. 80 %, non-condensing
Overvoltage category	II
Pollution degree	2

Packing/shipping data

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	w x h x d: 830 x 1050 x 800 mm
Net weight	approx. 96 kg
Gross weight carton	approx. 119 kg

Standard units are safety-approved and bear the test marks

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