

Asynt



**memmert**  
Experts in Thermostatics

# Heating and drying ovens

COMMUNICATION. COMFORT. SIMPLY GREAT.



100% ATMOSAFE. MADE IN GERMANY.

[www.memmert.com](http://www.memmert.com) | [www.atmosafe.net](http://www.atmosafe.net)



Vacuum oven VO with TwinDISPLAY  
AtmoCONTROL software

Model sizes:

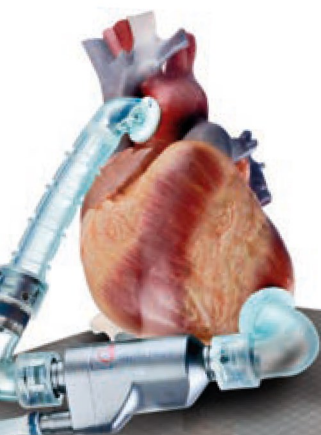
29 / 49 / 101

+20 °C to +200 °C

5 mbar to 1100 mbar

Accessories: lower pump chamber and  
energy-efficient vacuum pump

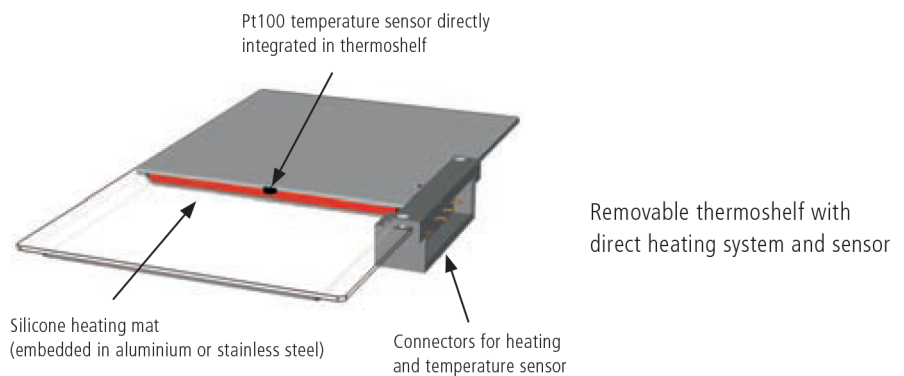
**VACUUM OVEN VO** The high-performance turbo dryer impresses with its many intelligent Memmert features for gentle drying and precise, rapid temperature control: digital pressure control, directly heated and individually controllable thermoshelves, and simple programming via ControlCOCKPIT or AtmoCONTROL software. Combined together, the speed-controlled vacuum pump and the vacuum oven VO are an unbeatable energy-efficient pairing. The pump fits neatly inside the matching lower chamber.





## Unique precision: Memmert VO direct heating

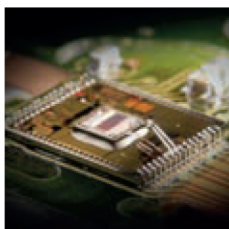
Available only from Memmert: multi-level sensing and heating. For really short heating-up and processing times, heating is provided via individually positionable thermoshelves with integrated shelf heating and sensors. The separate control circuits react precisely to different loads or humidity levels and ensure the setpoint temperature is consistently maintained. Due to the direct contact between the heating and the chamber load, there is practically no loss of heat. Each thermoshelf can be calibrated individually.



Multi-level sensing and heating

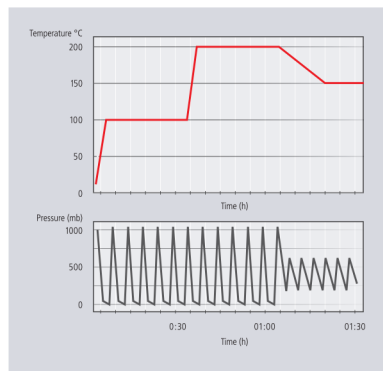
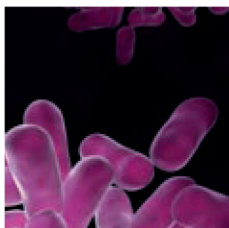
## Optional vacuum pump saves around 70 % energy

The speed-controlled chemically resistant Memmert vacuum pump is automatically detected by each vacuum oven VO. Thanks to intelligent speed control, it controls the setpoint with great precision. The energy efficiency is also obvious, with measurements showing energy savings of around 70 % in ramp mode compared with vacuum pumps that are not controlled; it is even possible to achieve higher savings at constant vacuum levels. The final vacuum level of up to 2 mbar favours a wide range of applications, while pump control (based on individual requirements) significantly extends the service life of membranes. If another vacuum pump or a central vacuum supply is connected, vacuum control is achieved via solenoid valves.



## Turbo drying thanks to vacuum cycles

Digitally controlled vacuum cycles, during which the working chamber is intermittently vented at short intervals, can achieve further significant reductions in drying times. The AtmoCONTROL software makes it quick and easy to program ramps with different temperature and vacuum setpoints.



Example of ramp programming

## Convenience in a package: the Premium Module

The basic version of the vacuum oven VO features a thermoshelf and two thermoshelf connectors (VO29: 1 thermoshelf connector). The Premium Module includes the option for switching to inert gas, a programmable, digitally controlled gas inlet with flow reduction; there is also the MobileALERT option with separate error messages for temperature and pressure as well as (depending on the appliance size) additional thermoshelves and thermoshelf connectors (see the technical data for details).

## VACUUM OVENS VO

according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1)

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

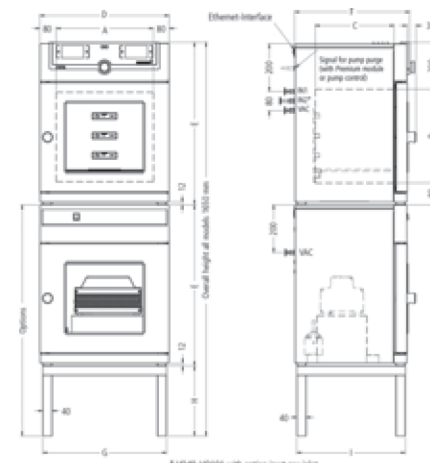
**Interior:** Stainless steel interior, material 1.4404 (ASTM 316 L), hermetically welded, with removable mountings at the sides for cleaning, including thermoshelf guide bars, as well as mounting on top to avoid turbulences

**Housing:** Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour displays) with touchscreen, safety glass door with inner bullet-proof glass and external anti-splinter screen

**Connection:** Mains cable with plug (German type)

**Installation:** 4 feet

**Interfaces:**



Model sizes/Description			29	49	101
Stainless steel interior	Volume	approx. l	29	49	101
	Width	(A) mm	385		545
	Height	(B) mm	305	385	465
	Depth	(C) mm	250	330	400
	Distance between thermoshelves	mm	75		95
	Maximum load per oven	approx. kg	40	60	
	Max. number of thermoshelves	number	1	2	
	Max. number of thermoshelves (with premium module)	number	2	4	
	Max.loading per thermoshelf	kg	20		
Textured stainless steel exterior	Width	(D) mm	550		710
	Height	(E) mm	607	687	767
	Depth (without door handle, depth of handle 38mm)	(F) mm	400	480	550
	Safety glass door: Textured stainless steel frame with spring-loaded safety glass on inside and anti-splinter screen ESG on outside of door		●		
	Door Seal: Endless silicone profile seal		●		
	Standard equipment	Thermoshelves – aluminium eloxadised , mat. 3.3547 (ASTM B209) – with integrated large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf. Further data see stainless steel number inner working chamber	number	1	
Works calibration certificate (measuring point in the middle of the individual shelf for +160 °C at 20 mbar pressure): a separate certificate is prepared for each thermoshelf ordered and shipped together with the vacuum oven		°C	●		
Temperature	Temperature sensors Pt100 Class A in 4-wire circuit individually for each thermoshelf		●		
	Working temperature range	°C	at least 5 above ambient temperature to +200		
	Setting temperature range	°C	+20 to +200		
	Setting accuracy	°C	0.1 for setpoint and actual value		
	Temperature variation in time (to DIN 12880:2007-05) (aluminium thermoshelf)	K	≤ ± 0.3		
	Temperature uniformity (surface) at +160 °C/20 mbar (aluminium thermoshelf)	K	≤ ± 2		
Pressure (vacuum)	Vacuum connection with small flange DN16, and gas inlet with small flange DN 16		●		
	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). Adjustable from 5 mbar up to 1100 mbar. Programmable, digitally controlled inlet for air.		●		
	Pump control: optimised rinsing procedures for the pump membranes as well as signal output for pump ON/OFF		●		
	Rapid air intake for door opening without alteration of selected vacuum setpoint		●		
	Permitted final vacuum	mbar	0.01		
	Maximum leakage rate	bar/h	0.01		
	Control technology	Digital over- and undertemperature monitor		●	
Temperature monitoring band automatically linked to the setpoint (ASF)		●			
Multi-Level-Overtemperature-Protection (MLOP) for each thermoshelf		●			
Monitor relay for reliable heating cut-off in case of fault		●			
Mechanical temperature limiter (TB)		●			
Further data	Subframe tubular steel (extra cost), black enamelled (for stacking unit consisting of vacuum oven and pump module, total height: 1650 mm, see sketch of oven dimensions) Width/Height/Depth	mm	529/450/383	529/290/463	689/130/533
	Electrical load (loading with max. number of thermoshelves) at 230 V, 50/60 Hz	approx. W	420	1020	1220
	Electrical load with premium module (loading with maximum number of thermoshelves) at 230 V, 50/60 Hz	approx. W	820	2020	2420



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