VACUUM OVENS VO
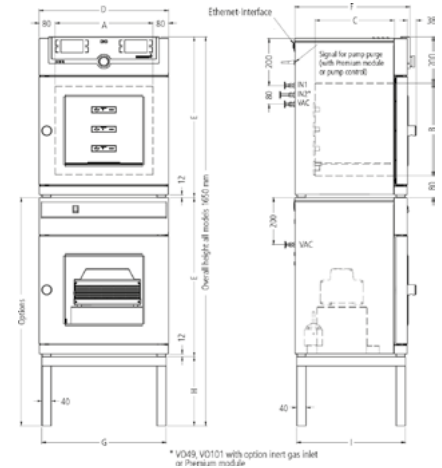
according to DIN 12880:2007-05; EN 61010-1 (IEC 61010-1)

Standard units are safety-approved and bear the test marks: $C\epsilon$ VDE GS EAC MET

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 1.4016 (ASTM 430), rear zinc-plated steel 1.0037 (St37-2), intuitively operated TwinDISPLAY (TFT colour display) with touchscreen
Door:	full-sight glass door, inside spring-loaded, 1 5mm thick glazed panel in safety glass, outside with anti-splitter screen
Connection:	mains cable with plug (German type)
Installation:	4 adjustable appliance feet
Interfaces:	USB Ethernet LAN

Model sizes/Description				29	49	101
Stainless steel interior	Volume		l	29	49	101
	Width	(A)	mm	385		545
	Height	(B)	mm	305	385	465
	Depth	(C)	mm	250	330	400
	Max. number of thermoshelves		number	1	2	
	Max. number of thermoshelves (with premium module)		number	2	4	
	Max. loading of chamber		kg	40	60	
	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 +38 mm)	(F)	mm	400	480	550
Standard equipment	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			●		
	Thermoshelf - aluminium eloxadised material W.-St. 3.3547 (ASTM B209) with integrated large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf MLOP (Multi-Level-Over-temperature-Control) and calibration certificate (Calibration certificate only possible when ordering a new appliance)		number	1		
Temperature	Working temperature range		°C	at least 5 above ambient temperature up to +200		
	Setting temperature range		°C	+20 to +200		
	Setting accuracy		°C	up to 99.9: 0.1 / from 100: 0.5		
	Temperature variation in time (aluminium thermoshelf)		K	≤ ± 0,3		
	Temperature uniformity (surface) at +160 °C/20 mbar (aluminium thermoshelf)		K	≤ ± 2,5		
Pressure (vacuum)	Adjustment range pressure		mbar	5 to 1100		
	Permitted final vacuum		mbar	0.01		
	Maximum leakage rate		bar/h	0.01		
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 G/H/I) Width/Height/Depth		mm	529/450/383	529/290/463	689/130/533
	Electrical load at 230 V, 50/60 Hz		W	820	2020	2420
Packing data	Net weight		kg	55	83	110
	Gross weight (packed in carton)		kg	76	104	135
	Packed dimensions (Width, Height, Depth)			660/870/590		830/1050/800
	Net weight pump module without/with pump		kg	25/41	30/46	41/57
	Gross weight pump module without/with pump (packed in carton)		kg	46/62	51/67	66/82
	Packed dimensions pump module (Width, Height, Depth)		mm	660/870/590		830/1050/800
Order No. Vacuum Ovens				VO29	VO49	VO101

Options	29	49	101
Premium module: comprises the inert gas inlet, extra connectors for thermoshelves, 1 (size 29), 2 (sizes 49/101), an additional thermoshelf (sizes 49/101)		T5	
4 - 20 mA current loop interface (requires option T5) Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring - price per sensor		V6	
Temperature actual value (0 to 210 °C = 4 - 20 mA)	-		V3
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)		H6	
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)		C3	
MobileALERT for 2 alarm notifications; notification by SMS. temperature and vacuum alarm (requires option T5 and H6)	-		C4

Accessories	29	49	101
Thermoshelf - stainless steel material 1.4404 (ASTM 316 L) for especially corrosive material with integrated large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf MLOP (Multi-Level-Over-temperature-Control) and calibration certificate (Calibration certificate only possible when ordering a new appliance)	B00733	B00734	B00735
Thermoshelf - aluminium eloxadised material W.-St. 3.3547 (ASTM B209) with integrated large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf MLOP (Multi-Level-Overtemperature-Control) and calibration certificate (Calibration certificate only possible when ordering a new appliance)	B00741	B00743	B00744
Subframe, tubular steel, black enamelled (for stacking unit consisting of vacuum oven and pump module, total height: 1650 mm, see „further data" and sketch of oven dimensions)	E02030	E02031	E02037
Signal cable (3 m) for control of rotation speed and optimising pump performance by demand-controlled activation of purge of Memmert pump (not required with pump module)		B39410	
Noise-insulated vacuum pump module without pump (exterior dimensions and -material No. s. vacuum oven) with antivibration metal plate at the bottom to accommodate the vacuum pump, incl. full-sight glass door. Socket, signal cable and connecting hose to the vacuum oven	PM29	PM49	PM101
Noise-insulated vacuum pump module, as above, however with built-in pump, 230 V, 50/60 Hz	PMP29	PMP49	PMP101
Vacuum connecting hose (3 m) from oven to Memmert pump incl. optimised connection accessories (partially stainless steel), (not required with pump module)		B04026	
Vacuum pump with chemically resistant 4x diaphragm, pump capacity at atm. pressures: approx. 50 Nl./min = 3,0 m³/h and autom. purge control, 230 V, 50 Hz. Max. guarantee period 2 years (requires acessories B39410 and B04026)		E07509	

Accessories | Software and Connectivity	29	49	101
Basic license for „AtmoCONTROL FDA Edition". Meets the requirements for the use of electronically stored records and electronic signatures as specified in the 21 CFR Part 11 regulation by the US Food and Drug Administration (FDA). For devices with TwinDIS-PLAY only. Respective IQ/OQ documents available in German and English (at no extra charge).		FDAQ1	
FDA integration license for an additional device (up to a maximum of 31 units) into an already purchased FDA basic license.		FDAQ2	
USB User-ID stick (with User-ID licence): Oven-linked authorisation licence (User-ID-programme) on Memory-stick, prevents undesi-red manipulation by unauthorised third parties. When reordering please specify serial number		B33170	
Ethernet connection cable 5 m for computer interface		E06189	
USB-Ethernet adapter		E06192	

Standard equipment included in the standard scope of delivery. Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

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