

2 Vacuum drying ovens VO

Memmert

Lean perfection, top precision. The Memmert vacuum ovens, based on state-of-the-art technology, have been optimised to fulfil the most stringent demands, beyond merely vacuum control. In addition to direct heating of the shelves and digital control of the vacuum depth (adjustable from 5 mbar to 1100 mbar) these vacuum ovens have a weekly programmer and daily schedule function, protocol timer for temperature and pressure profiles of up to 40 ramps. The 8-digit, alphanumeric display (selection of language via set-up) makes programming easy and is also used for visualizing data during operation. The standard model is delivered with pump control for optimised rinsing procedures for the pump membranes as well as signal output for pump on/off, one thermoshelf made of aluminium, eloxadised, with works calibration certificate for +160 °C at 20 mbar pressure, two connectors for thermoshelves, USB port, software "Celsius" as well as MEMoryCard. An internal datalogging memory with a capacity of 1024kB provides tamper-proof, storage and output of GLP-compliant, archive documentation of all relevant data. For total safety, a multi-level overtemperature protection system is provided, with audiovisual alarm system, protection class 3.1 microprocessor temperature monitor for over- and undertemperature, and additional integral Automatic Safety Function ASF for high and low temperature limits, automatically monitoring the set temperature and warning by an alarm when there is a temperature-related malfunction. Switching off the heating of the thermoshelf concerned when the temperature is exceeded. In addition, the VO series has a TB class 1 mechanical temperature control unit which activates when the actual temperature exceeds 10 °C above the set value.

Proven Memmert quality: premium stainless steel for housing and interior. Interior hermetically welded, material 1.4404 (ASTM 316L). Safety glass door with spring-loaded safety glass on inside and anti-splinter screen ESG on outside of door

Working-temperature range: from + 20 °C up to +200 °C from 5 °C above ambient
 Setting temperature range: +20 °C up to +200 °C
 Power supply: 230 V, 50/60 Hz



9.537 928



Type	Description	Internal volume	External dimensions	Internal dimensions	Weight	PK	Cat. No.
		litres	(W x D x H) mm	(W x D x H) mm			
VO200	incl. 1 thermoshelf, max. 2 connections ** for thermoshelves in the rear	29	550 x 400* x 600	385 x 250 x 305	55	1	9.537 928
VO400	incl. 1 thermoshelf, max. 2 connections ** for thermoshelves in the rear	49	550 x 480* x 680	385 x 330 x 385	83	1	9.537 929
VO500	incl. 1 thermoshelf, max. 2 connections ** for thermoshelves in the rear	101	710 x 550* x 760	545 x 400 x 465	110	1	9.537 932

*Depth without door handle, please add 38 mm
 **with standard equipment

Accessories for Vacuum ovens VO

Option inert gas inlet: Programmable and digitally controlled inlet for inert gas with flow rate reduction

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Premium module: The premium module comprises the inert gas inlet, one printer interface, extra connectors for thermoshelves, one for VO200, two for VO400/500, an additional thermoshelf for model size 400/500 and a drip tray.

Description	PK	Cat. No.
Vacuum pump module cabinet without pump for VO200	1	9.537 933
Vacuum pump module cabinet without pump for VO400	1	9.537 934
Vacuum pump module cabinet without pump for VO500	1	9.537 935
Chemically resistant vacuum pump, capacity 34 NI/min for VO200	1	9.537 936
Chemically resistant vacuum pump, capacity 60 NI/min for VO400/500	1	9.537 937
Thermoshelf, aluminium, eloxadised material 3.3547 (ASTM B209) for VO200	1	9.537 938
Thermoshelf, aluminium, eloxadised material 3.3547 (ASTM B209) for VO400	1	9.537 939
Thermoshelf, aluminium, eloxadised material 3.3547 (ASTM B209) for VO500	1	9.537 940
Thermoshelf stainless steel, material 1.4404 (ASTM 316L) for VO200	1	6.071 767
Thermoshelf stainless steel, material 1.4404 (ASTM 316L) for VO400	1	9.537 941
Thermoshelf stainless steel, material 1.4404 (ASTM 316L) for VO500	1	6.225 112
Option inert gas inlet	1	9.537 942
Premium module for VO200	1	9.537 944
Premium module for VO400	1	9.537 945
Premium module for VO500	1	9.537 946



9.537 947

Vacuum drying ovens VOcool

NEW

Memmert

The cooled vacuum oven VO200cool with its interior volume of 29l and VO400cool with its interior of 49l have a temperature range of +5 °C to +90 °C. For cooling purposes, a compact, energy-saving and extremely precise Peltier cooling unit was integrated. This way, the Memmert cooled vacuum ovens achieve a surface temperature distribution over its entire temperature range with a deviation of max. ±1 K.

Gentle low temperature vacuum drying and storage of micro-organisms or active pharmaceutical components is particularly applied in the food and pharmaceutical industry. Thanks to this process, unstable substances can be dried at moderate temperatures above zero without causing too much damage to the cell structure. Additionally, the cooled vacuum oven VOcool from Memmert can be deployed to easily and cost-effectively simulate storage and transport of pharmaceutical products during intercontinental flights.

Working-temperature range/ setting temperature range:	from +5 °C up to +90 °C
Extended range:	from 0 °C up to +90 °C available on request
Power supply:	230 V, 50/60 Hz; 115 V, 50/60 Hz no extra cost

Type	Description	Internal volume	Internal dimensions (W x D x H)	External dimensions (W x D x H)	Power consumption	Weight	PK	Cat. No.
		litres	mm	mm	W	kg		
VO200cool	incl. 1 thermoshelf, fixed	29	385 x 250 x 305	550 x 650* x 600	400	64	1	9.537 947
VO400cool	incl. 1 thermoshelf, fixed	49	385 x 330 x 385	550 x 730* x 680	500	92	1	9.537 949

*Depth without door handle, please add 38 mm



Vacuum drying ovens, VD, VDL series

Vacuum drying ovens from BINDER dry without residues, without incrustations or oxidation.

BINDER

VD Series: Vacuum drying oven for non-flammable solvents.
VDL Series: Safety vacuum drying oven for flammable solvents.

Equipment:

- Temperature range: room temperature plus 15 °C to 200 °C
- Controller with time-segment and real-time programming
- 2 aluminum expansion racks
- Inert gas connection
- Shatterproof, spring-mounted safety glass panel
- Expanded safety functions (series VDL)

Type	Internal volume	External dimensions (W x D x H)	Internal dimensions (W x D x H)	PK	Cat. No.
	litres	mm	mm		
VD 23	23	515 x 500 x 655	285 x 295 x 285	1	9.883 540
VD 53	53	635 x 550 x 775	400 x 340 x 400	1	9.883 541
VD 115	115	740 x 670 x 900	506 x 460 x 506	1	9.883 542
VDL 23	23	515 x 500 x 655	285 x 295 x 285	1	9.883 531
VDL 53	53	635 x 550 x 775	400 x 340 x 400	1	9.883 532
VDL 115	115	740 x 670 x 900	506 x 460 x 506	1	9.883 533

Accessories for Vacuum drying ovens, VD, VDL series

NEW

Vacuum module to receive vacuum pumps optional with switchable power socket.

BINDER

For model	Dimensions (W x D x H) mm	PK	Cat. No.
VDL 23	515 x 625 x 500	1	6.281 614
VDL 53	635 x 625 x 550	1	6.281 615
VDL 115	740 x 625 x 670	1	6.281 616
VD 23*	515 x 625 x 500	1	6.237 227
VD 53*	635 x 625 x 550	1	6.281 617
VD 115*	740 x 625 x 670	1	6.281 618

* with switchable power socket

1 Vacuum oven 6000

For the careful, rapid drying and heat treatment of temperature sensitive substances and components in the electronics, pharmaceutical, cosmetic and biochemical industries. With electro-polished and internally welded, rectangular chamber made of 1.4571 stainless steel and silicone door seal. Also features analogue pressure display, stainless steel ball valve to control vacuum, rapid air ventilation valve, inert gas connection with pressure relief safety valve for controlled chamber purging and corrosion resistant vacuum fittings. Small flange (DN 25 KF) vacuum fittings are positioned on the rear panel of the cabinet. An overheat cut-out (Class 2) is supplied as standard. 53L models are supplied with two shelves, 128L models are supplied with three shelves.

Thermo Scientific

Type M, with heated jacket, range up to 200 °C.

Heat is conducted from the heated chamber through the shelves to the sample. The shelves are removeable. With Kelvitron® microprocessor temperature controller.

Type P, with heated shelves, range up to 300 °C (up to 400 °C on request).

Tubular heating elements in the shelves heat the sample directly, providing rapid heat-up and processing times. With individual shelf temperature control, a common temperature value is set for all plates. With Digicon® electronic temperature controller.

Options for VT 6000:

- Inert gas connection
- Digital pressure display
- Pressure controller with electronic valve
- Viton door seal - Timers
- Digital sample temperature display
- Variety of temperature controllers
- Analogue interface
- Maximum temperature 400 °C.
- Interface connection for central monitoring
- Temperature documentation
- Calibration certificate

Shelves - further options available on request.

Fully equipped vacuum pump control station vacucenter 1 available as an accessory for Vacutherm 6060 and 6130 ovens.

Choice of 3 different vacuum pumps available according to operating conditions.

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
VT 6060 M	53	744 x 570 x 576	415 x 371 x 345	1	9.883 511
VT 6130 M	128	895 x 750 x 720	495 x 529 x 489	1	9.883 512
VT 6060 P	53	744 x 570 x 576	415 x 371 x 345	1	9.883 513
VT 6130 P	128	895 x 750 x 720	495 x 529 x 489	1	9.883 514
VT 6060 M-BL	53	744 x 570 x 576	415 x 371 x 345	1	9.883 521
VT 6130 M-BL	128	895 x 750 x 720	495 x 529 x 489	1	9.883 522
VT 6060 P-BL	53	744 x 570 x 576	415 x 371 x 345	1	9.883 523
VT 6130 P-BL	128	895 x 750 x 720	495 x 529 x 489	1	9.883 524



Accessories for vacuum drying cabinets 6000

Thermo Scientific

Description	PK	Cat. No.
Sample tray, aluminium 2 mm, HxDxW = 30x415x460 mm for VT 6130	1	4.009 784
Sample tray, stainless steel 1.5 mm, HxDxW = 30x415x460 mm for VT 6130	1	4.009 785
Sample tray, aluminium 2 mm, HxDxW = 30x295x380 mm for VT 6060	1	4.009 786
Flame filter for vacuum tubing	1	7.024 635
Insert with support bracket for VT 6060 M	1	7.024 658
Insert with support bracket for VT 6130 M	1	7.024 659
Sample tray, stainless steel 1.5 mm, HxDxW = 30x295x380 mm for VT 6060	1	7.077 915
Floor stand 780 mm for T/UT 6060, ST/SUT 6060, B 6060 or VT 6060 M/P-BL	1	9.534 066
Floor stand 780 mm for T/UT 6120, ST/SUT 6120 or B 6120	1	9.534 068
Vacuum connection set, stainless steel, for tubing, 10 mm	1	9.883 489

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1 Compact vacuum oven, VT 6025

Thermo Scientific

For the gentle and rapid drying or heat treatment of temperature sensitive substances and components in the electronics, pharmacy, cosmetics and biochemistry fields. With double glazed safety glass door window, very low external casing temperature, freely adjustable overheat cut-out with separate temperature sensor, Kelvitron® microprocessor controlled temperature controller and pull-out, non-tilting shelves with end stops.

External dimensions (W x D x H):	480 mm x 450 mm x 600 mm
Internal dimensions (W x D x H):	300 mm x 307mm x 275 mm
Interior volume:	25L
Usable height above shelf:	120 mm
Nominal temperature:	200 °C
Ultimate vacuum:	1 x 10 ⁻² mbar
Power supply:	230V 50/60Hz
System of protection:	IP 20

Type	PK	Cat. No.
Basic model	1	9.883 480
With stainless steel vacuum ball valve, inert gas connection, seamlessly welded chamber and DN25 vacuum connection	1	9.883 482
As above, with additional digital pressure display and recorder connection	1	9.883 483
As above, with digital pressure display, recorder connection, Digicon®S with analogue interface 0 to 20 mA / 0 to 10 V	1	9.883 484

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2 Vacuum pump cabinet Vacucenter 1

Thermo Scientific

This vacuum pump cabinet can be used with VT 6060 and VT 6130 vacuum drying ovens. It carries the vacuum pump (we offer three different pumps for a broad range of applications) and includes a central power supply and a main switch for both oven and pump.

Specifications

Nominal voltage:	V3N 400, 50/60Hz
Max power rating	
MD12H:	3.37kW
HMD 4C:	3.20kW
Dimensions (W x H x D):	895 x 65 x 900 mm
Weight	
MD12H:	88 kg
HMD 4C:	80 kg
Protection class:	1
System of protection:	IP 20

Type	Flow rate m ³ / hr.	PK	Cat. No.
with diaphragm pump MD12H	9.6	1	9.883 431
with diaphragm pump HMD 4C	3.0	1	9.883 432

Vacuum pumps please see page 1034.